

DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

Zoning Law Amendments for the Proposed Community Business District

Town of Warwick
Orange County, NY

STATE ENVIRONMENTAL QUALITY REVIEW ACT (SEQR)

Draft Generic Environmental Impact Statement:
Zoning Amendments for the Proposed Community Business District

Lead Agency	Town Board of the Town of Warwick Town Hall, 132 Kings Highway Warwick, NY 10990 Contact: Michael Sweeton, Supervisor Phone: 845.986.1120
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Draft GEIS Preparers	GREENPLAN, INC. 302 Pells Road Rhinebeck, New York 12572 Contact: J. Theodore Fink, AICP Phone: 845.876.5775

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Executive Summary

The Town Board of the Town of Warwick intends to adopt Zoning Law amendments to implement several recommendations of the Town's 2008 *Comprehensive Plan*. The recommended action addresses an identified need for an alternative pattern of development in the Route 94/Warwick Turnpike area of the Town of Warwick. Much of this area was designated for Designed Shopping (DS) and Office Industrial Park (OI) development in the 1970's and later in the Town's 1987 *Comprehensive Plan*. The form of development prescribed at that time is considered to be conventional suburban highway strip development. In both the Town's 1999 and 2008 *Comprehensive Plans*, this area was recommended for a review of its continued "*appropriateness*" in light of new recommendations to avoid the proliferation of strip commercial development, which residents' want to prevent, and to find a place in the community where Warwick's fair share of balanced housing needs can be encouraged. There are viable planning techniques that can be used to assure that Warwick achieves a balance between commercial enterprises, which provide employment and increase tax ratables and with housing that meets the present and future needs of the elderly, young households, families of moderate income, and small families.

The *Comprehensive Plan* recommends that the Town Board explore the options available for how the Town can provide an area with a more traditional neighborhood, such as those where residents can live and work without relying on a car for all movements. While the three Villages in Warwick all provide walkable neighborhoods, there are no locations in the Town where this is possible. Warwick's *Comprehensive Plan* is based upon "state-of-the-art" planning techniques and is a "smart growth" planning strategy. In fact, in 2005, the New York State Association of Realtors awarded the Town of Warwick its first ever "Smart Growth" award for its forward-thinking planning and the State of New York uses Warwick as a model of a "Quality Community."

One of the hallmarks of smart growth is a high priority on the development of walkable neighborhoods. Except for Warwick's Traditional Neighborhood Overlay (TN-O) District, which only functions in concert with an Intermunicipal Agreement with the Village of Warwick, there are few other opportunities in the Town where this and other smart growth

goals can be achieved. A new Zoning District, entitled the Community Business (CB) Zoning District has been developed to address the need for a neighborhood where mixed residential and commercial land uses can be developed while meeting the Town's need for workforce housing.

Smart Growth emerged in the 1990's in response to the proliferation of suburban style zoning regulations throughout the nation over the previous 50 years. These zoning regulations may have been well intended but they were also producing auto-dependent neighborhoods and more big-box developments than most communities were willing to accept, thereby reversing centuries of community development based upon walking from home to work, schools and shopping. A divergent coalition of 32 organizations, called the Smart Growth Network, came together to support smart growth by adopting a set of ten principles. The coalition represents the interests of organizations as diverse as the National Association of Home Builders, American Planning Association, Institute of Transportation Engineers, National Association of Realtors, National Wildlife Federation, the National Trust for Historic Preservation and the Natural Resources Defense Council. Even government and government organizations like the US Environmental Protection Agency, the National Oceanic and Atmospheric Administration, the State of Maryland, the National Association of Counties, United States Conference of Mayors and the California Local Government Commission have all agreed upon and adopted the ten smart growth principles.

What is Smart Growth? The Smart Growth Network defines smart growth¹ as:

Development that serves the economy, community and the environment. It provides a framework for communities to make informed decisions about how and where they grow. Smart growth makes it possible for communities to grow in ways that support economic development and jobs; create strong neighborhoods with a range of housing, commercial, and transportation options; and achieve healthy communities that provide families with a clean environment. In so doing, smart growth provides a solution to the concerns facing many communities about the impacts of the highly dispersed development patterns characteristic of the past 50 years. Though supportive of growth, communities are questioning the economic costs of abandoning infrastructure in the city and rebuilding it farther out. They are questioning the necessity of spending increasing time in cars locked in traffic and traveling miles to the nearest store. They are questioning the practice of abandoning brownfields in older communities while developing open space and prime agricultural land and thereby damaging our environment at the suburban fringe. As these quality-of-life issues become increasingly important for American communities, local and state policymakers, planners, developers, and others are turning to smart growth as one solution to these challenges.

¹ Smart Growth Network and International City/County Management Association, *Getting to Smart Growth*, Washington, D.C., 2002.

The Smart Growth Network’s ten principles articulate the goals of smart growth. The principles help communities recognize and value what smart growth is and help them identify ways to implement it. They are as follows:

Smart Growth Principles

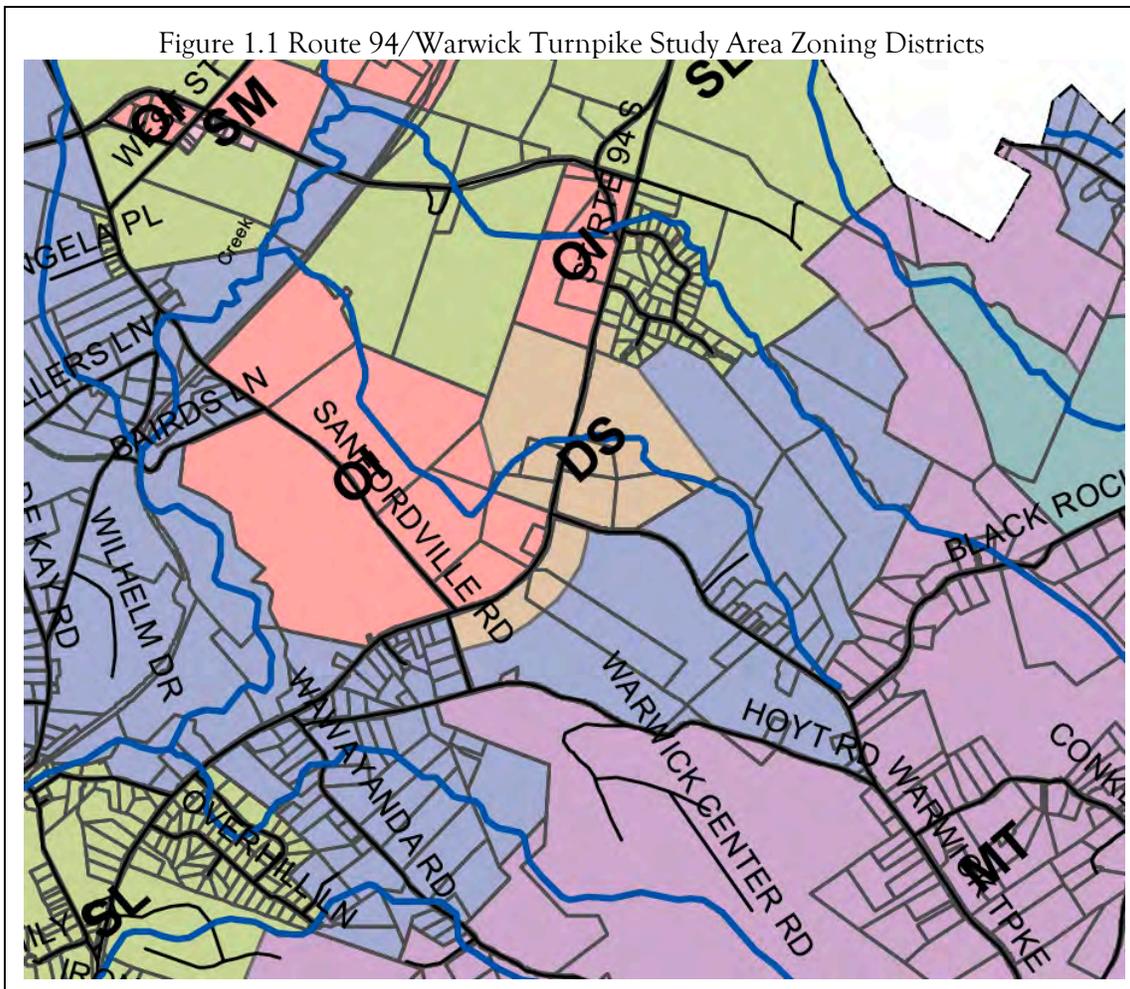
- 1) Mix land uses
- 2) Take advantage of compact building design
- 3) Create a range of housing opportunities and choices
- 4) Create walkable neighborhoods
- 5) Foster distinctive, attractive communities with a strong sense of place
- 6) Preserve open space, farmland, natural beauty and critical environmental areas
- 7) Strengthen and direct development towards existing communities
- 8) Provide a variety of transportation choices
- 9) Make development decisions predictable, fair and cost effective
- 10) Encourage community and stakeholder collaboration in development decisions

Warwick’s 2008 *Comprehensive Plan* incorporates most if not all of the 10 smart growth principles. However, the current DS and to a lesser extent, OI commercial Zoning Districts in the Study Area, will not result in meeting the Town’s adopted smart growth goals in the 2008 *Plan*. Therefore, the Town Board has studied, analyzed and addressed an action to create a new Zoning district where most of the smart growth principles can be implemented, by preparing this Generic Environmental Impact Statement (GEIS) under the State Environmental Quality Review Act (SEQR).

The proposed amendments to the Town’s Zoning Law, would refine existing uses and regulations and establish new uses and regulations within the area surrounding the intersection of State Route 94 and County Route 21 in the Town. Adoption of the proposed Zoning amendments would implement the recommendations of the Town’s 2008 *Comprehensive Plan* and would address the need recognized therein for greater control in the way the Town’s primary retail area is designed and developed in a more traditional form and less auto dependent manner. The Town Board has sole authority to adopt the proposed Zoning amendments. The Zoning amendments, which include both text and map amendments, are proposed for adoption under § 265 of New York State Town Law, Article VI of the Town of Warwick Zoning, and Section 10 of the New York State Municipal Home Rule Law.

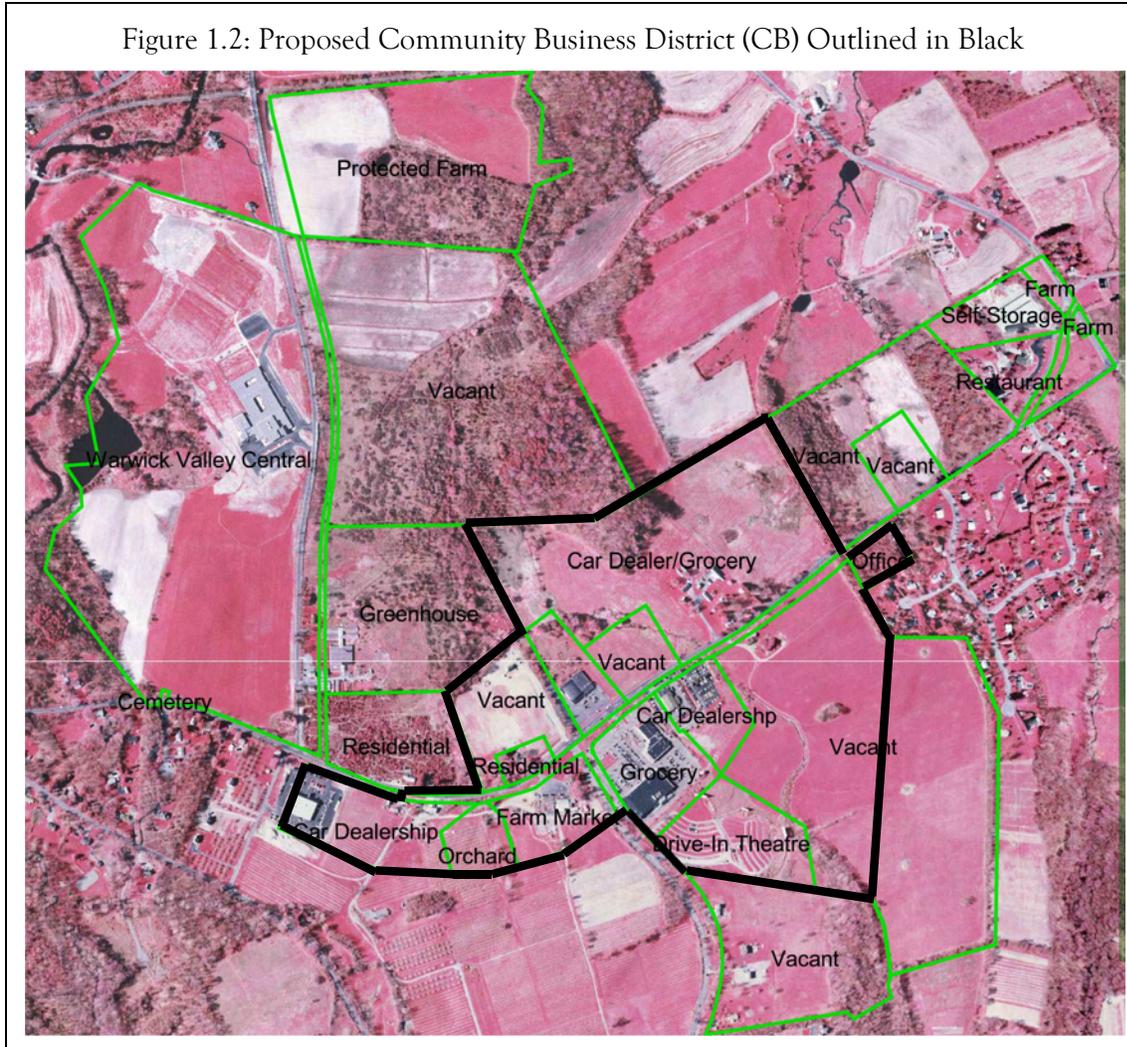
The general Study Area for the DGEIS is shown on Figure 1.1, which identifies Zoning Districts in the Study Area and surrounding areas south of the Village of Warwick. Adoption of the proposed Zoning amendments would apply within a new Community Business (CB)

Zoning District. The CB district has been designed to replace the Town’s Designed Shopping (DS) Zoning District in this area as well as two parcels within the Town’s Office and Industrial Park (OI) Zoning District. The DS District’s current purpose is “to allow community-scale commercial uses that rely heavily on automobile and truck access and that would not be compatible with a traditional hamlet neighborhood area.” The Town Comprehensive Plan, adopted on November 20, 2008, recommends that the Town Board consider rezoning the DS and portions of the Office and Industrial Park (OI) Districts to address the need for a priority growth center as an alternative to the existing “auto oriented suburban style” commercial zones. The Plan notes the need for an examination of mixed uses, neighborhood shopping, specialty stores “with innovative architectural designs fitting into the surrounding community and not disrupting traffic flow.” The configuration of the proposed CB Zoning district is identified on Figure 1.2. A No Action Alternative is identified in Chapter 4.



Adoption of the Zoning amendments will provide for a number of new and revised land use controls to guide growth and development of the Town in the Study Area. Readers are

encouraged to consult the full text of the proposed Zoning amendments to obtain a complete understanding of all the proposed changes.²



A summary of the amendments is as follows:

1. All references in the Zoning Law, to Designed Shopping (DS) District, are replaced by the Community Business (CB) District.

² See Appendix A.

2. The Zoning Map has been proposed to be amended by replacing the DS District with the CB District. Two parcels at the northwesterly portion of the intersection of Route 94 and Warwick Turnpike, identified as S-B-L 51-1-28.1 and 51-1-28.222 and which are currently zoned OI, have been proposed to be rezoned to CB.
3. A purpose of the proposed CB District will be to replace the DS District as a place for commercial uses that rely heavily on automobile traffic. The CB purpose would be as follows: *“The purpose of the Community Business District is to provide a place for attractive development of business activities that serve community needs and to promote a place in the Town where affordable housing can be integrated with businesses in a traditional manner. A limited number of curb cuts along NYS Route 94 are required by the Town’s Marginal Access Road standards, to minimize conflicts with through traffic and to conserve the capacity of the roadway, while providing linkages between business establishments on adjacent parcels. Careful review of both site and architectural elements is required in this district to enhance the overall quality of site development and promote architectural design that is compatible with the overall historic character of the Village and Town of Warwick.”*
4. The uses permitted in the proposed CB District have been expanded by including “Two-story Mixed Use Building,” a “Country Inn,” a Conference Center,” and a “Medical or dental clinic” as Special Permit Uses.
5. Special Conditions for the Two-story Mixed-Use Building include the following:
 - (a) All uses shall fully comply with the Town of Warwick’s Marginal Access Requirements found in § 164-42.F of the Zoning Law.
 - (b) Ground floor uses in a Two-Story Mixed Use Building are limited to retail stores, banks, personal service establishments, service establishments, eating and drinking places, delicatessens, coffee shops, luncheonettes, and business and professional offices.
 1. All buildings and the site shall be designed to comply with the Town of Warwick’s Design Standards for architecture, building, landscaping, human scale lighting, and a pedestrian friendly environment as illustrated in Appendix A of the Zoning Law.
 2. Retail uses including banks, eating and drinking places, delicatessen, coffee shops and luncheonettes shall not exceed thirty-three and three tenths percent (33.3 %) of the floor area of a building. Business and professional offices, personal service establishments, and service establishments shall not exceed 33.3 and three tenths percent (33.3 %) of the floor area of a building.
 - (c) Second floor uses are limited to one and two bedroom apartments (800 to 1400 square feet), business and professional offices and live/work units.

1. Residential uses including studios, one and two bedroom apartments and live/work units shall not exceed thirty-three and three tenths percent (33.3 %) of the floor area of a building.
 2. Two bedroom apartments shall not exceed 25 percent of the total number of dwelling units in a building.
- (d) Special Bulk Regulations apply in the CB Zoning District for Two-Story Mixed-use Buildings. In the event of a conflict with the Table of Bulk Requirements, this section shall apply as follows:
1. A minimum floor area of 4,000 square feet and a maximum floor area of 75,000 square feet. Delicatessens, coffee shops or luncheonettes may be located in a building with less than a 4,000 square foot floor area, but only if no other similar uses are located within 1,000 feet of the proposed new use to prevent a proliferation of like uses, concentrated in one area.
 2. The minimum lot area shall be three (3) acres for new Two Story Mixed Use Buildings. Multiple special permit uses may occupy a lot without the necessity of a minimum requirement of three (3) acres for each use.
 3. The maximum lot coverage shall be 40 percent.
 4. Buildings shall have a minimum of two (2) stories and a maximum of three (3) stories.
- (e) The Town Board has determined, consistent with § 261-b of New York State Town Law and the Town of Warwick Comprehensive Plan, that it is appropriate to make adjustments to permissible density and area requirements for Two-story Mixed-Use Buildings in the CB District for the specific purpose of construction of a community benefit in the form of a Marginal Access Road at a minimal cost to residents and taxpayers of the Town. The purposes of granting a density bonus include the following:
1. Reclaim existing auto-oriented shopping strip developments by incrementally redesigning and transforming the strip into a walkable and/or bikable retail, office and residential area that will always be secondary to the Village of Warwick as the primary retail and civic center for the community.
 2. Help to unify the streetscape of Route 94 with generous landscaping, continuous street trees and if possible, planted medians, reminiscent of a boulevard.
 3. Fill in the front of the large parking areas wherever possible by replacing them with buildings. Site new buildings back from the road and buffer the buildings with trees, berms, landscaping, and other natural elements

- to protect the viewsapes and compliment the agricultural and other open spaces surrounding the commercial area as shown on the illustrations in Appendix A.
4. Create pedestrian and bicycle networks through sidewalks, bicycle paths, trails and crosswalks, in order to create connections to shared parking, public transportation and between stores and nearby housing in the RU and SL districts.
 5. Enhance and diversify the local tax base by generating additional revenues to meet the costs of municipal and educational services.
- (f) Additional infill development density, on existing developed properties within the CB District, is available provided the following additional requirements are met:
1. Within the CB District, no application for Site Plan approval, Special Use Permit approval, and/or Subdivision approval shall be approved unless the standards applicable to infill development in § 164-47 of the Zoning Law [i.e. TN-O District standards and Appendix A of the Zoning Law] have been incorporated into the development designs to the greatest extent practicable. The Planning Board, as a condition of such approval, is empowered to modify the Area and Bulk Regulations found in the Table of Bulk Requirements and herein at §164-46.J(79)(d) and may impose modifications that would have to be incorporated into the proposed action to merit a determination of consistency with the standards and guidelines set forth herein. The Planning Board's findings shall include a rationale for any waiver or modification granted to a specific standard. The Planning Board may, in granting waivers or modifications to these standards, incorporate such reasonable conditions as will, in its judgment, substantially secure the objectives of the requirements so waived.
 2. Projects deemed consistent with the infill standards, by the Planning Board, are eligible for an increase in density of fifty percent (50%) over the minimum requirements herein at §164-46.J(79)(d). Any increase in density granted shall comply with the Zoning Law's building limitations for infill retail use. Nothing herein shall prevent the development of multiple buildings to achieve the density permitted, provided each individual building complies with the building limitations.
 3. The marginal access road shall be constructed and dedicated to the Town of Warwick in accordance with the Illustrative Concept Plan developed for the Route 94 Corridor.
 4. All projects within the CB District shall fully comply with the Town's

Stormwater Management requirements and proper provisions shall be made for water supply and sewage disposal in accordance with Town of Warwick and Orange County Department of Health requirements. This may include connection to the municipal wastewater treatment system and/or community water supply system if such exists at the time of approval.

5. The Planning Board remains responsible for determining the adequacy of parking and may require a parking study by a qualified parking consultant, to accommodate the infill allowance requirements. Shared parking and other methods may be used to satisfy the parking requirements.
 - (g) All subdivisions of land within the CB district shall be subject to the Site Plan requirements of § 164-46 of the Zoning Law.
 - (h) All developments shall be subject to the Town of Warwick's and/or the United States Environmental Protection Agency's "Low Impact Development" strategies (whichever is more stringent) for the area's stormwater management system to enhance and protect surface and ground water quality, maintain the integrity of aquatic resources, wildlife habitats and ecosystems, and preserve the physical integrity of the District's wetlands and tributaries.

6. The Town's *Design Guidelines* have been converted into Design Standards to be used by the Planning Board for illustrating mandatory architectural, site design and other features that future land use development will be required to adhere to in the proposed CB Zoning District.

7. Special conditions that conference centers as well as hotels and health spas and health resorts will be required to adhere to include the following:
 - a. "The use shall be found to be in harmony with the Town of Warwick *Comprehensive Plan*.
 - b. The minimum lot area shall be ten (10) acres for the first 40 guest rooms, plus an additional one half (½) acre for each additional guest room. The maximum number of rooms in a conference center shall be 80.
 - c. Access shall be from a State or County highway.
 - d. Specific plans for parking shall take into consideration the rural and scenic resources of the site and community. Use of alternative paving materials and alternative transportation, such as grassed parking areas and shuttle services, is encouraged to protect such resources.
 - e. New construction shall be sited so as to have a minimum impact on fields, water

features and woodlands. Major regrading, clear cutting or changing of topography shall not be permitted.

- f. Specific plans for public address systems, amplified music, and/or outdoor lighting shall be submitted to and approved by the Planning Board, including the specific hours of operation for such facilities. Approval shall be preceded by a clear demonstration by the facility owner and/or operator that the features are both essential and will create no adverse effect on nearby residential properties, will be in compliance with the Town of Warwick Noise Regulations and will be in harmony with the rural and scenic character of the Town. The specific plans for public address systems, amplified music, and/or outdoor lighting shall be subject to such additional restrictions deemed appropriate by the Planning Board.”
8. The Planning Board will be authorized to require that parking be provided behind or to the side of all new principal buildings in the LB, CB and TN-O Districts.
9. The requirements for signs in the proposed CB District would be changed from the current DS District requirements so that future signage is more in keeping with Warwick’s rural character.

SUMMARY OF IMPACTS AND MITIGATION

The overall goal of the *Town of Warwick Comprehensive Plan* has consistently been to protect Warwick’s rural quality and its natural environment. In 1987, when Town residents were first asked to rate the importance of certain issues, the highest priority was given to “maintaining the Town’s rural character.” This basic goal has been reiterated in subsequent public surveys, visioning sessions, meetings and workshops as described in the 1999 *Comprehensive Plan* and again in the 2008 *Comprehensive Plan*. In addition to maintaining the rural character of the Town, residents want to control the rate and design of new development.

The proposed Zoning amendments are consistent with New York State Town Law’s mandate that “*All town land use regulations must be in accordance with a comprehensive plan adopted pursuant to this [§ 272-a] section.*” The Zoning amendments reflect the wishes of Town residents that certain actions needed to be taken to protect the Town’s rural character while also accommodating economically viable businesses in the Town and the growing residential housing market, including those members of the community in need of workforce housing, such as police, fire, school-teachers and other service personnel. The proposed Zoning amendments respond to residents’ desires to achieve these broad goals.

No significant adverse impacts were identified. In fact, a number of beneficial impacts were identified as a result of the proposed action, as discussed in Chapter 3.

ALTERNATIVES

The “No-Action” alternative has been examined in relation to the proposed action. This alternative would occur if the Town Board did not adopt the proposed revisions to the Town's Zoning Law as recommended in the *Comprehensive Plan*.

The No Action alternative would mean that the Town’s primary retail area would remain “stuck” in the type of suburban thinking that prevailed and, at that time, seemed appropriate for rural areas in the 1970’s and 1980’s, where single purpose commercial districts were developed separate and apart from residential areas and were entirely dependent upon trips by the automobile.

PROJECT LOCATION

The proposed Study Area is the Route 94/Warwick Turnpike area of the Town of Warwick, Orange County, New York, as shown on Figures 1.1 and 1.2 and as Illustrated on the Concept Plan shown in Figure 2.1.

IMPLEMENTATION

The Town Board of the Town of Warwick has sole authority to adopt the proposed Town of Warwick Zoning Law amendments. Amendments to the Zoning Law are proposed for adoption under §265 of New York State Town Law, §164-60 of the Town of Warwick Town Code, as well as §10 of the New York State Municipal Home Rule Law.

Under §164-60 of the Warwick Town Code, all proposed Zoning amendments must be referred to the Planning Board for an advisory report prior to the public hearing. The Orange County Department of Planning has review and recommendation responsibility on the proposed amendments to the Zoning Law, under § 239-m of the General Municipal Law, but no approval authority.

Description of the Action

DESCRIPTION OF THE ACTION

The Town Board of the Town of Warwick intends to adopt Zoning Law amendments to implement several recommendations of the Town's 2008 *Comprehensive Plan*. The recommended action addresses an identified need for an alternative pattern of development in the Route 94/Warwick Turnpike area of the Town of Warwick. Much of this area was designated for Designed Shopping (DS) and Office Industrial Park (OI) development in the 1970's and later in the Town's 1987 *Comprehensive Plan*. The form of development prescribed at that time is considered to be conventional suburban highway strip development. In both the Town's 1999 and 2008 *Comprehensive Plans*, this area was recommended for a review of its continued "*appropriateness*" in light of new recommendations to avoid the proliferation of strip commercial development, which residents' want to prevent, and to find a place in the community where Warwick's fair share of balanced housing needs can be encouraged. There are viable planning techniques that can be used to assure that Warwick achieves a balance between commercial enterprises, which provide employment and increase tax ratables and with housing that meets the present and future needs of the elderly, young households, families of moderate income, and small families.

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goals can be achieved. A new Zoning District, entitled the Community Business (CB) Zoning District has been developed to address the need for a neighborhood where mixed residential and commercial land uses can be developed while meeting the Town's need for workforce housing.

This Draft GEIS has been prepared in a generic format because adoption of the proposed amendments to the Zoning Law will have a wide application, will affect several properties, and will have generic or common effects.

PROJECT PURPOSE AND NEED

A . Background and History

As discussed above, much of the Study Area was designated for Designed Shopping (DS) and Office Industrial (OI) development in the 1970's and later confirmed to remain as such in the Town's 1987 *Comprehensive Plan*. In the Town's 1999 *Comprehensive Plan*, this area was recommended for a review of the continued "appropriateness" of these two Districts. This recommendation was repeated in the Town's 2008 *Comprehensive Plan* because of residents' desires to prevent the proliferation of strip commercial development in the Town, prescribed principally by the DS District.

In 2005, St. Anthony's Community Hospital presented the Warwick Town Board with conceptual plans for a new hospital, medical office buildings, retail uses, and associated parking on three parcels of land, including the Miller Farm, in the vicinity of Route 94/Warwick Turnpike. At that time, the hospital had proposed expanding its current facility as part of its long-range plan. The hospital's current location in the center of the Village of Warwick was not deemed ideal for several reasons. Many of the hospital's patients come from the south and must cross an at-grade active railroad crossing to arrive at the facility and the potential for expansion within the Village was limited by available land area. Expanding the hospital in the Route 94/Warwick Turnpike vicinity was viewed as a potentially ideal location for the facility to be in closer proximity to its patient base. However, the existing zoning in the Route 94/Warwick Turnpike area would not permit a hospital at this location. The hospital expressed an interest in partnering with the Town to explore alternative plans for lands in this area, both to meet the hospital's needs and to fulfill the recommendation of the *Comprehensive Plan* that the zoning designations for exclusive retail uses in this area be reviewed and possibly amended. It was not expected that the then current DS and OI commercial zoning districts would result in meeting the 1999 Plan's goals to prevent strip commercial development along Route 94.

The Town Board determined that it would re-examine the Zoning designations in this area and issued a Positive Declaration in December of 2005 on two actions, amendments to the Town's 1999 *Comprehensive Plan* and the 2002 Zoning Law. Scoping for the DGEIS was accomplished in January and February of 2006 and work began on preparation of the DGEIS. However, the

St. Anthony's Community Hospital relocation proposal did not advance further and plans for a new "Priority Growth Center" on the Miller Farm and adjoining parcels were shelved.

Other development proposals were submitted to the Town Planning Board within the Study Area, based upon the current DS and OI Zoning Districts. These included the Meadowcrest project, which received approval and has been built, the Homarc project, which is under review of a Draft EIS by the Planning Board, and the Fairgrounds project, which received approval for a supermarket, a sewage treatment plant and water supply system (which are under construction), and for additional retail development on the site, which is currently under review by the Planning Board.

Following adoption of an Update to the 1999 *Comprehensive Plan* in 2008, the Town Board determined that it would again pursue plans for amending the Zoning districts and regulations in place for the Study Area. The proposed Zoning Amendments are based upon the smart growth concept of encouraging mixed uses of retail, office and residential (i.e. allowance for second story apartments and live/work units but not single family dwellings), encouraging infill development on already developed parcels, and creation of new Town roads parallel to Route 94, with pedestrian and bicycle amenities throughout as an alternative to the single use auto-dependent Zoning that is currently prescribed for the area.

Therefore, the Town Board has proposed to study, analyze and address the Zoning Law amendments by preparing a Generic Environmental Impact Statement under § 272-a(8) of Town Law and 6 NYCRR 617.10(b), the implementing regulations for the State Environmental Quality Review Act.

B. 2008 Comprehensive Plan

The Town Board adopted a new and updated *Comprehensive Plan* in 2008. The *Plan* had some specific recommendations for the Route 94 Study Area. They are as follows:

The Town should consider the need for a priority growth center in the Route 94/Warwick Turnpike area such as a TND development. While much of this area is designated for Designed Shopping (DS) and Office Industrial (OI) development, it was also recommended in the 1999 Plan for a review of its "appropriateness." This was because of residents' desires to prevent the proliferation of strip commercial development; the 1999 Plan instead recommended allowing for neighborhood shopping, village main street specialty stores, and for "small retail centers with innovative architectural designs fitting into the surrounding community and not disrupting traffic flow." It is not expected that the current DS and OI commercial zoning will result in meeting some of the adopted Plan goals. Therefore, the Town should consider whether it will continue to study, analyze and address these issues in the Generic Environmental Impact Statement that was authorized by the Town Board, when it adopted a Positive Declaration to study the issue in 2005 to "address an identified need for a priority growth center in the Route 94/Warwick Turnpike area of the Town of Warwick...With regard to the DS zone on Route 94 south of the Village of Warwick, every

effort should be made to continue the viability of the Village of Warwick. Any development in that area should respect, enhance and compliment the economic vitality of the Village. This is especially important if the Town goes forward with any proposal to create a TND in that area.

In all public meetings, opinions have been strongly expressed that alternatives to conventional strip-malls should be developed for all commercial zones. Strip-malls are seen as destructive to the rural character of the community and incompatible with the scenic beauty of highways. Small retail centers with innovative architectural designs fitting into the surrounding community and not disrupting traffic flow should be encouraged and the Town should consider amending the Zoning regulations to accommodate these factors... new commercial centers in the existing DS zone can be developed so that they have minimal impact on the adjacent existing roads, both in terms of circulation and aesthetic quality, while maintaining overall project density. New commercial development could be set back from the existing road network except in the hamlets, where buildings could be placed near the streets to further conceal the parking and to link the site to the streetfront and sidewalk systems. Streetscape improvements could be addressed to ensure community character is preserved and protected. Site design could be pedestrian friendly incorporating internal walkways or sidewalks, as well as benches and public spaces, shade, covered walkways, arcades, awnings, human-scale lighting, and other amenities that provide a sense of public interest and public space. All parking areas should be at the rear and sides of buildings and developers of large projects could be allowed to postpone full construction of the parking lot until demand is evident. A performance bond can ensure proper compliance. Access could be provided, ideally, by frontage on secondary roads that would limit the number of curb cuts into the highways and provide a visual buffer. Generous landscaping and tree planting requirements, both inside and at the periphery of the site could be strengthened. Architecture should fit the community. Illustrated architectural design guidelines based on Town standards, patterns, and preferences could be developed. To prevent the degradation of roadside aesthetic quality, the current limitations on signage should be continued and strengthened.

The recently approved Fairgrounds project on Route 94, which consists of a supermarket and an automobile dealership, includes the creation of a sewage treatment plant with the potential for future expansion. The Town should consider the potential for limited growth in this area, afforded by the new infrastructure, and should continue to maintain a dialogue with the Village of Warwick to ensure Village Main Street revitalization efforts are not impeded by commercial development in the DS and OI zones.”

So that resident’s could envision how such a mixed-use development would appear in the Study Area, an artist was commissioned to illustrate existing and potential future development in the area that would be based upon the proposed CB District. The artist’s Illustrative Plan can be found below and is posted in a larger scale board at Town Hall.

Figure 2.1 Artist's Illustrative Plan of the Route 94 Corridor



The Illustrative Plan shows areas for potential new Town streets, mixed-uses, infill on already developed parcels, park and recreation areas, and parking. It should be emphasized that this plan is not a representation of what is currently under application and review by the Town Planning Board nor is it a Plan that has obtained any official sanction by either the Town Board or the Planning Board. However, it is an artist's conception of how vacant and developed parcels, based upon the *Comprehensive Plan's* recommendation to "build-out" the Town's primary retail center with a small-scale priority growth center, can be developed as an alternative to a continuation of the strip commercial development which is presently occurring in this area and which is currently prescribed by the Zoning Law.

What is Build-out Analysis?

The analysis of potential environmental impacts analyzed in this DGEIS is based upon an examination of the potential build-out of the DS and applicable OI Zoning District parcels in

the future, absent any change in the Zoning Law. The analysis of impacts is also based upon a comparison of the potential build-out of the same parcels, if they were rezoned to the proposed Community Business (CB) Zoning District.

Build-out analysis is a planning tool that estimates the impact of cumulative growth upon a town's land areas once all the developable land has been consumed and converted to uses permitted under the current regulatory framework. A build-out analysis provides a peek into the future by examining probable future development intensities and patterns. It helps residents to visualize the patterns of growth permitted by the Zoning and is a "test" to see if the goals of the community's *Comprehensive Plan* are working. For example, if a community priority is to allow for small scale commercial development, consistent with the character of the community, and to provide for the housing needs of all of its citizens, but the Zoning regulations only allow for big box retail development segregated from all other uses, then auto-oriented shopping plazas are likely to be built and the goal will not be attained, unless changes are made.

A build-out analysis assists residents and decision-makers to understand, ahead of time, the impacts development may eventually have on the community. It identifies increased fiscal expenditures for public services and infrastructure that may need to be built, expanded or improved to accommodate growth, and can help Town officials estimate the costs and revenues required by local government. It also helps to identify other impacts such as traffic congestion, loss of community character, and impacts to natural resources such as groundwater and surface water. A build-out analysis helps in the selection of policy alternatives to accommodate or mitigate new development that will occur, but more in line with community goals. It can also foster identification of appropriate land uses and densities in the community.

A build-out analysis of the Study Area was undertaken by the Town of Warwick to assess the impacts of the current DS and OI Zoning in the immediate Route 94/Warwick Turnpike area contrasted with the proposed Community Business Zoning District alternative.

Build Out Analysis Summary

The build-out analysis indicates that the current Zoning would permit the development of approximately 312,385 square feet of new retail space in the Study Area. In comparison, if the existing Zoning were amended as proposed, the total number of dwelling units could increase by 218 one bedroom apartments and 41 two-bedroom apartments. Retail square footage would increase by approximately 232,316 square feet and office space could increase by 232,316 square feet as well. According to the Traffic Impact Study (see below and Appendix E), the impacts of this build-out, whether existing or proposed or even if no development were to occur within the Study Area, would lead to the need for traffic modifications to be made in the Route 94 corridor, regardless of whether the existing Zoning was retained or the proposed Zoning was enacted. Owing to background traffic increases happening elsewhere in Warwick and outside the Town of Warwick, regardless of whether any additional

development occurs in the corridor, it is virtually inevitable that some improvements will need to be made by the NY State DOT in the future.

If the Town does nothing to refine its current planning and zoning practices, the consequences will likely take the form of additional auto-oriented sprawl development of big box retail stores. This has the potential to change the character of this part of the community for 100 years or more. The proposed build-out, while resulting in additional office, retail and residential development, if carried out in accordance with the Design Standards and other planning tools recommended herein, have the potential to create new development that will be consistent with the character that residents desire, while providing goods, services, employment opportunities and affordable housing that is desired by the community. The steps used in creating the build-out analysis are described next.

Steps in the Build-out Analysis Process

The steps to undertaking a build-out analysis are relatively straightforward. First, lands that are encumbered with a conservation easement (if any) are deducted from the gross acreage under study. On the remaining acreage, lands not suitable for development are subtracted. This includes lands that are subject to environmental constraints that, by their very nature or due to laws restricting development (like wetlands), are not likely to be developed in the future. Different constraints are deducted depending on the requirements of the regulations under study. An additional deduction is made to account for development-related infrastructure (such as roads and drainage) and inefficiencies in lot layout. The result is a net buildable acreage. Existing development is deducted from this acreage. The Zoning regulations are then applied as if all lands both suitable and available for development were to be developed with their 'highest and best' use. In this way, a reasonable estimate of potential new development can be made. The last step is to translate the estimate of potential new development into important trends such as traffic, impacts on retail sales in the Village and the cost of providing community services, such as fire and police protection, ambulance service and public works for this added development.

If this area eventually builds out in the way it has been shown on the Illustrative Plan, then the following additional development would be achievable under the proposed Zoning:

- 218 One-bedroom Second floor Apartments above retail or office space
- 41 Two-bedroom Second floor Apartments above retail or office space
- 232,316 Square feet of Retail Space
- 232,316 Square feet of Office Space

The exact mix of land uses will be based on market demand. The figures cited however, were assumptions that the CB District Build-out analysis has been based upon.

Marginal access roads would allow for future connections to parcels within the Study Area, as originally envisioned in the Town's 1987 Comprehensive Plan and 1989 Zoning Law. Within

the Study Area itself, a grid pattern of streets is shown throughout. The artist's Illustrative Plan assumes use of the Design Standards, which are proposed to be incorporated into the Zoning Law. These Standards generally include:

1. Focus on form, and not strictly a single use, which is auto dependent.
2. Build to the street.
3. Hide the parking.
4. Create great public spaces.
5. Streets must be pedestrian-scaled and multimodal.
6. Encourage and provide for street level activities.
7. Building facades should generally have a base, a middle, and a top.
8. Money should be spent on the building façades, not the parking lot.
9. The neighborhood should be compact, pedestrian-friendly, and mixed-use with residences on the second story of buildings.
10. People should be able to park once and walk to all destinations in the neighborhood.

C. Proposed Zoning Amendments

The Study Area is currently zoned Design Shopping District (DS) and two parcels in the Study Area within the Office and Industrial Park (OI) District have been included for rezoning to CB. The proposed action would rezone all of the lands currently zoned DS and the two subject parcels zoned OI to the proposed Community Business (CB) District. The proposed Zoning District changes are shown on Figure 1.2.

The major changes proposed for the CB District is an allowance for Two-story Mixed-Use Buildings, emphasis on pedestrian amenities rather than convenience for autos, use of Design Standards as mandatory for new development within the CB District, development of parallel streets in a grid layout of Town roads to create a deeper rather than linear form of development, and the addition of second-story apartments above retail/office to introduce the potential for affordable housing opportunities for workers in this area and others who are squeezed out of living opportunities in the almost exclusive single family housing market in the Town. Live-work and office uses would be required to create a viable mix of land uses in close proximity to each other. This type of building was traditional in the Town's hamlet and crossroad locations prior to the advent of Zoning. Currently, one accessory apartment is allowed by Special Use Permit only in the Town's LB District.

The new provisions would expand the opportunities for affordable housing in the Town, based on the assumption that smaller one and two bedroom rental apartments are far more affordable to Warwick's work force than the current (February 2010) median of \$335,000 for a single family home. Ground floor uses would be limited to retail stores, banks, personal

service establishments, service establishments, eating and drinking places, delicatessens, coffee shops, luncheonettes, and business and professional offices. Second floor uses would be limited to one and two bedroom apartments (800 to 1400 square feet) with no more than 25 percent of the units two-bedroom, business and professional offices and live/work units.

Specific provisions would apply to protect the character of the community such as generous landscaping like street trees, sidewalks and pedestrian amenities, bicycle facilities, parking hidden and separated from building entrances (except for on-street parking), and grid streets to create a small-scale priority growth center. Also, bonuses of up to 50% would be granted for existing development's that provide new "infill" projects, on existing developed properties within the CB District, that follow the Town's Design Standards and use low impact development practices, as the Town Board has determined that it is appropriate to encourage such uses and practices. In cases where density bonuses would be available, the extent of additional development is considered marginal to a generic environmental analysis of potential impacts. Site-specific environmental review must be conducted by the Planning Board, prior to issuance of any Special Use Permit that includes a bonus, to ensure that adequate resources, environmental quality and public facilities, including adequate transportation, water supply, waste disposal and fire protection are available or could be expanded to accommodate such infill development. It is expected that the sewage treatment system under construction for the Fairgrounds project will form the basis for a Town operated community sewage disposal system in the District. A community water supply system can similarly be developed based upon the system constructed by the Fairgrounds or other development in the Study Area. Most of the Study Area is underlain by an extensive aquifer that is likely to be able to support significant growth.

Therefore, in terms of the areal extent of potential new development which would be allowed in the proposed CB District, there will not be an increase in the overall acreage of land being developed commercially, compared with what could (and would eventually) be developed under existing DS and OI regulations.

Examples of similar two-story mixed use projects that will be encouraged by the Town's proposed Zoning Amendments can be seen in the following photographs:



Chain store designed to resemble three stores



Two-story mixed-use buildings with apartments above



Two-story mixed-uses with street trees, human scale lighting, and pedestrian amenities



Retail center set back from main highway but with a building design characteristic of a rural community

D. Public Need

The current DS and to a lesser extent the OI Zoning Districts in the Study Area prescribe a form of land use development premised upon exclusive access by cars. This is because there is no allowance for residential development, meaning that all trips made to businesses that locate there, must be made by vehicle alone. This pattern of development strictly segregates land uses and is not sustainable because they do not allow for the creation of more traditional neighborhoods where all trips could be made by a five to ten minute walk, as they did before cars became prevalent. Continuation of existing Zoning regulations in the Study Area would continue the proliferation of strip commercial development, which is likely to create future traffic congestion, adverse impacts to community character, and other negative impacts associated with auto-oriented sprawl style development. These zoning designations are not consistent with the existing *Comprehensive Plan* and Zoning Law recommendations for the Town to pursue all viable means to create alternatives to auto-oriented strip commercial development and to prevent sprawl. The Town developed a policy to control sprawl in its

1999 *Comprehensive Plan* and 2002 Zoning Law and reinforced that policy in the 2008 *Comprehensive Plan*.

The proposed action would permit a small-scale priority growth center in the Study Area location, which would allow for a more functionally cohesive, mixed-use, less auto-reliant neighborhood. The Pace University Land Use Law Center and the Yale School of Forestry and Environmental Studies, in their publication entitled “Breaking Ground: Planning and Building in Priority Growth Districts [PGD], A Guide for Local Leaders” describes a priority growth center as a:

“Specially selected areas where, through the comprehensive planning process, a community has determined that growth is desirable, compatible with existing uses, and can be implemented in a manner that will enhance the larger community by providing needed housing alternatives, preserving open space, and adding retail, commercial and community uses that support the tax base. PGDs should be served by existing community water and sewer facilities or located where such facilities can be readily provided. PGDs should incorporate traditional neighborhood design concepts that emphasize creating a sense of place in the form of a community or neighborhood center. They should provide a variety of housing types in a cohesive, pedestrian friendly environment, include services and employment opportunities within walking distance from homes, and be designed to respect the district’s natural features. In sum, PGDs can accommodate a community’s future growth in a manner that minimizes sprawl and creates an opportunity to maximize the preservation of open space both within the district and in other areas of the community.”

Because the Village of Warwick is deemed the civic, retail and cultural center of the community together with the Villages of Florida and Greenwood Lake, the *Comprehensive Plan* was careful to recognize its importance as follows: “With regard to the DS zone on Route 94 south of the Village of Warwick, every effort should be made to continue the viability of the Village of Warwick. Any development in that area should respect, enhance and compliment the economic vitality of the Village. This is especially important if the Town goes forward with any proposal to create a TND in that area.” While the Town has not proposed a TND in the Study Area location, the proposed CB District has the potential to create a more livable and attractive place that is environmentally, socially and fiscally sound. By creating a walkable, mixed-use neighborhood, the proposed action would reduce traffic generation by “capturing” trips between uses within the mixed-use district. Walkable neighborhoods would also encourage healthier levels of activity and social interaction. The Chapter 3 subsection on Transportation provides greater details on the advantages (including reductions in trips generated) of a mixed-use neighborhood over a single purpose auto-dependent commercial strip.

The proposed amendments for a mixed-use neighborhood would facilitate the efficient and predictable capital planning for roads, stormwater management facilities, community water and sewer utilities, and other Town services. In the long run, the use of shorter, narrower, roads, shorter utility distribution systems, and community stormwater management of water quality facilities would reduce infrastructure costs. Moreover, central utility systems are more

effective than individual septic, well and stormwater management systems, and provide numerous positive environmental and economic benefits. With the establishment of water and sewer facilities for the Fairgrounds project within the Study area, the Town now has the potential to serve additional development in this area with community services, paid for exclusively by the direct beneficiaries of those services.

The CB District addresses public need, as expressed in the Town *Comprehensive Plan*, by:

1. Reclaiming an existing auto-oriented shopping strip by incrementally redesigning and transforming the strip into a compact and walkable retail, office and residential area that is designed to be secondary to the Village of Warwick as the primary retail center for the community.
2. Restricting further development of the highway frontage on Route 94 by limiting the commercial district to its existing Route 94 frontage and consolidating the multiple entrances along this highway by connecting existing and future businesses with internal service streets (i.e. marginal access roads).
3. Helping to unify the streetscape of Route 94 with generous landscaping, continuous street trees and if possible, planted medians, reminiscent of a boulevard. Roundabouts at selected intersections would also be proposed provided the New York State Department of Transportation is willing to commit the necessary resources to design and construction of such alternatives to signalization.
4. On both sides of Route 94, fill in the front of the large parking areas by replacing them with buildings. Site the new buildings on the proposed marginal access roads and buffer the buildings with trees, berms, landscaping, and other natural elements to protect the viewsapes and compliment the open space areas on both sides of Route 94.
5. Using “Low Impact Development” strategies for new development as well as redevelopment of the existing development’s stormwater management systems to enhance and protect surface and ground water quality, maintain the integrity of aquatic resources and ecosystems, and preserve the physical integrity of the District’s wetlands and tributaries, which hold importance for State and Federal endangered species known to exist in the area.
6. Create pedestrian and bicycle networks through sidewalks, pedestrian amenities, bicycle paths, trails and crosswalks, in order to create connections to shared parking, public transportation and between stores, offices and nearby housing, both existing and future, in the adjoining Suburban Residential Low Density (SL) and Traditional Neighborhood Overlay (TN-O) districts.
7. Enhance and diversify the local tax base by generating additional revenues to meet the costs of municipal and educational services.
8. Provide for new development close to services and along a public transit bus line, while

simultaneously protecting the greenbelts around the Village and Study Area as treasured open space, free of development.

Finally, the proposed CB District would permit a greater range of housing types to be provided in the Town, which would assist the Town in meeting its goal of providing for a diversity of housing options. At present, apartments above commercial uses are only permissible in a limited capacity within the Town’s Local Hamlet Business (LB) Districts and then only as a Special Permit Use in a case where the owner of the building is an occupant of the structure.

E. Objectives of the Project Sponsor

The objective of the Town Board, as project sponsor, is to amend the Zoning law to permit the development of a compact, pedestrian-friendly, mixed-use neighborhood with some of the design features of a traditional neighborhood in the Study Area. Since some of the existing DS District has already been developed with big box auto-oriented commercial developments, it is not possible to fully achieve a traditional neighborhood development (TN-O), as that term is defined in Section 164-47 of the Zoning Law. Rather, the current proposal attempts to reclaim an existing shopping strip center by committing to a long-term redesign program that gradually transforms the strip into a mixed use sub-center with each successive application for site plan approval. A further objective is to bring the existing Zoning into conformance with the recommendations of the *Comprehensive Plan* to create an alternative to auto-oriented strip commercial development and to prevent sprawl. The following graphics, prepared by the Dutchess County Department of Planning and Development, illustrates how an existing strip center can be reclaimed. The illustrations were prepared as part of the Dutchess County Greenway Compact. It should be noted that Orange County has been developing its own participation in the Greenway Compact program, as authorized by the County Legislature in 2001.





There are several principles that should be followed in any attempt to reclaim an existing commercial strip into a more pedestrian oriented mixed-use neighborhood as illustrated above. The proposed Zoning regulations for the CB District, have been prepared in an attempt to address these principles to the greatest extent practicable:

1. Restrict development of outlying highway frontage and limit existing commercial districts in length;
2. Consolidate entrances along the road to a few main driveways with internal service (i.e. marginal access) streets based on a block system to connect businesses in between;
3. Help unify the streetscape with continuous street trees, high quality landscaping, and, where possible, planted medians to prevent unlimited left hand turns;
4. Build sidewalks and crosswalks throughout the area to create connections to shared parking, public transportation, walking between stores, offices and to nearby housing;
5. Fill in the fronts of large parking lots with small, closely spaced or attached storefronts to build a street frontage with courtyard parking behind;
6. With buildings up front, attractive architecture, wall signs and sidewalks can be featured along the frontage, not parking lots and pole signs;
7. Encourage a mix of housing and other uses adjacent to the shopping to begin to build a walkable neighborhood rather than a strictly commercial driving district.

PROJECT LOCATION

The proposed Study Area is the Route 94/Warwick Turnpike area approximately one mile southwest of the Village of Warwick in the Town of Warwick, Orange County, New York. Route 94 is the primary east-west transportation corridor extending from the north through the Village of Warwick towards the New Milford area to the west, and the communities in and around Vernon in Sussex County in New Jersey to the south. The Study area is currently zoned DS and two parcels, proposed to be rezoned to CB, are zoned OI. The site location is identified on Figure 1.1, and the proposed Study Area and the proposed CB Zoning Districts are identified on Figure 1.2.

Existing land uses in the Study Area include a mix of agricultural uses with associated residences and outbuildings, commercial uses, wooded land, wetlands, and single-family

homes. Agricultural lands predominate in the Study Area. In the vicinity of the intersection of Route 94 and Warwick Turnpike are an existing auto dealership (Kaytes Ford), a drive-in movie theatre, and a shopping center anchored by a Shop-Rite. Pennings Orchards and Farm Market is located a short distance to the west. The Frontier Lanes bowling center are located northwest on the opposite side of Route 94.

The Fairgrounds project was approved by the Planning Board in 2006, which resulted in a two lot subdivision of a former farm. A Price Chopper Supermarket, built on Lot 1, is expected to open in the Spring of 2010, with additional development planned for Lot 2 in the future. Construction of the supermarket includes construction of a sewage treatment system and a water supply system designed to meet the needs of the Fairgrounds project but planned so that future expansion may be possible to accommodate additional development. The Planning Board received an application for development of Lot 2 and has been reviewing proposed Site Plan alternatives since that time.

A parcel to the west of the Fairgrounds site has been proposed for a mixed retail and office building (Homarc), and this project is currently undergoing review of a Draft Environmental Impact Statement by the Planning Board. Agricultural uses prevail to the north and west of the Study Area, and a residential subdivision of approximately 46 homes is located immediately to the east. Scattered residences and wooded lands are located to the south. Farms preserved in perpetuity, that border the Study Area to the North and East, include the Raynor, Sayre and Sweetman Farms, forming a planned greenbelt around the Village of Warwick along Route 94.

IMPLEMENTATION

The Town Board of the Town of Warwick has sole authority to adopt the proposed Town of Warwick Zoning Law amendments. The amendments to the Zoning Law are proposed for adoption under §265 of New York State Town Law, §164-60 of the Town of Warwick Town Code, as well as §10 of the New York State Municipal Home Rule Law.

Under §164-60 of the Warwick Town Code, all proposed zoning revisions must be referred to the Planning Board for an advisory report prior to the public hearing. The Orange County Department of Planning and Development has review responsibility on the proposed revisions to the Zoning Law under §239-m of the General Municipal Law, but no approval authority.

Existing Setting, Impacts & Mitigation

This section of the Draft GEIS describes the existing environmental conditions of the Study Area, potential impacts of the proposed action, and mitigation measures. The level of detail provided in the descriptions is reflective of the generic impacts anticipated as part of the actions. A generic format has been chosen because adoption of the proposed amendments to the Zoning Law will have a wide application, will affect several sites, and will have generic or common effects.

LAND USE AND ZONING

Existing Environmental Setting

The Study Area is located along NYS Route 94 near the intersection of Warwick Turnpike approximately one mile southwest of the Village of Warwick in the Town of Warwick, Orange County, New York, as depicted on Figure 1.1. Route 94 is a two lane State road connecting Warwick with Interstate 80 and Vernon, New Jersey to its south and continuing through the Villages of Warwick and Florida to the north, where it connects with Route 17 in Chester and further with Interstate 84 in New Windsor. Warwick Turnpike connects with Upper Greenwood Lake in New Jersey while County Route 1 connects with the Hamlets of Edenville and Pine Island in the Town.

Existing land uses in the Study Area include a mix of agricultural uses with associated residences and outbuildings, commercial uses, wooded land, wetlands, single-family homes, and the Warwick Valley High School. Agricultural lands prevail to the north and west of the Study Area. A small residential subdivision is located to the east, and scattered residences and wooded lands are located to the south. Existing commercial uses include a shopping center anchored by a grocery store, a second grocery store under construction, an auto dealership, real estate office and vacant parcel surrounding this office, a farm market and associated orchard,

bowling alley, and drive-in movie theatre. Vacant lands consist of the Miller Farm, a commercial lot where a grocery store is under construction and an adjoining lot that has been proposed for additional retail development and with shared access with the grocery store under construction. Adjoining this vacant lot is another vacant parcel that has been proposed for a ±29,000 two story retail and office development. The geographic relationship of these uses to one another is shown in Figure 1.2, which identifies the proposed CB District.

The lands within and surrounding the proposed Study Area are currently zoned into five districts: Design Shopping (DS), Office and Industrial Park (OI), Rural District (RU), Suburban Residential Low Density (SL), and Traditional Neighborhood Overlay (TN-O) District.

The purposes of these districts are articulated in § 164-31 of the Town's Zoning Law as follows:

***DS** - The purpose of the Design Shopping District is to allow community-scale commercial uses that rely heavily on automobile and truck access and that would not be compatible with a traditional hamlet neighborhood area.*

***OI** - The purpose of the Office and Industrial Park District is to allow for the continuation of viable agricultural uses and the development of planned office and light industrial uses such as the airport and light industry, that might negatively affect residential areas and are best segregated from other land uses.*

***RU** - The purpose of the Rural District is to maintain the Town's historic pattern of rural and agricultural settlements, characterized by large expanses of open space and unspoiled views from the road, a scattering of residences, farms, and small businesses, and clustered development surrounded by open space.*

***SL** - The purpose of the Suburban Residential Low Density District is to maintain the character of existing suburban density residential developments and to allow a limited extension of suburban growth patterns. The SL District is one of three districts designated to receive "developments rights", transferred from the APO District.*

***TN-O** - The purpose of the Traditional Neighborhood Overlay District is to maintain the traditional scale, density and character of the areas surrounding the Town's villages and hamlets. The TN-O District encourages development of fully integrated, mixed-use pedestrian oriented neighborhoods designed to minimize traffic congestion, suburban sprawl, infrastructure costs, and environmental degradation. Use of the overlay district in areas long ago designated for more compact development will allow for the creation of receiving zones for development rights transferred from the Town's APO District.*

The TN-O District is governed by a special set of regulations found in Section 164-47 of the Zoning Law and such regulations are invoked under a Transfer of Development Rights Program. Therefore, the uses permissible in the TN-O District have been omitted from the list found under Table 3.1 in the Potential Impacts section below.

Proposed Land Use Categories

The proposed Community Business (CB) District, which has been proposed to replace the DS Zoning District and to apply to two parcels currently Zoned within the OI District, include the general land use categories of residential, commercial, civic, and institutional. The Illustrative Plan and Build-out analysis to accompany the Plan indicates that a total of approximately 218 one-bedroom apartments and 41 two bedroom apartments above retail and office uses could be potentially developed in the future under the proposed Zoning. The commercial space that could potentially be achievable in the proposed CB District would account for approximately 232,316 square feet each of retail and office space.

The Illustrative Plan represents the best estimate of potential residential and commercial development, based upon the Study Area's natural features and level of current and future development under the proposed CB District. The Illustrative Plan is not based upon site engineering and it is likely that any future development proposals would alter the number of units and the commercial and/or office space. However, for the purposes of this generic environmental evaluation, it is believed these build-out assumptions fairly describe the development potential of the Study Area.

The proposed land uses embodied in the proposed CB District are both compatible and consistent with existing and surrounding uses. In the area immediately surrounding the parcels identified, there are existing commercial, office and residential uses, many developed under the older conventional suburban model discussed above. The difference is that the proposed CB District would reconfigure the pattern of development from its current form of "strip commercial" to a more compact pattern of development that is designed to be consistent with the Town's adopted *Comprehensive Plan* goals as follows:

Residential Goals:

- ◆ *Concentrate denser residential development around the villages and the hamlets, and maintain rural densities in the remainder of the Town*
- ◆ *Stimulate a diversity of housing types and increase the stock of affordable dwellings*
- ◆ *Encourage a mixed-use pattern of development, where appropriate, in and around the hamlets and adjacent to the villages*

Commercial Development Goals:

- ◆ *Provide for commercial development next to existing commercial and industrial uses*
- ◆ *Encourage alternatives to typical modern highway oriented commercial development*
- ◆ *Assure that the Village and hamlet centers remain as the focus for retail and service industry development*

Sprawl, particularly in the form of "big box" development, which has and is likely to continue in this Route 94 corridor without any changes to existing regulations, devotes much of the land to large rectangular buildings surrounded by asphalt parking. In the Route 94 Study

Area, the land is zoned to produce a series of these "big box" developments along the roadway which results in "strip commercial" spreading in a linear manner. However, with a district, such as the proposed CB Zone, the linear nature of the commercial expansion would be eliminated by integrating it into a grid system of streets, mixing limited residential with other land uses such as office, recreation, and smaller scale retail. Parking for individual businesses can be greatly reduced with shared parking arrangements that provide convenience, because other land uses are in closer proximity than are currently permitted in the Town. A neighborhood designed in this way reduces the focus of the development pattern from accommodating cars to adjusting to a more human scale and pedestrian-friendly approach. Pedestrian and bicycle circulation systems are given greater importance than vehicular circulation patterns. When combined, these design techniques virtually eliminate the possibility of big box and strip commercial from continuing in the area. Additionally, incorporating a more traditional style of neighborhood in this area can help reclaim an existing strip.

Conformance with Regional Plans

The Hudson River Valley Greenway

The Hudson River Valley Greenway (Greenway) is a State agency devoted to promoting regional strategies to protect the natural, cultural, historic, scenic and recreational qualities of the Hudson River Valley while allowing for compatible economic development. Participation in the Greenway can occur in two ways. Individual communities can pass a resolution stating they are a Greenway Community and agree to promote the five broad criteria outlined below. The Town of Warwick became a Greenway Community in 1998. At the County level, a more regional approach involves the development of a Greenway Compact. Counties develop the Compact to identify more specifically how the five criteria can be integrated into community planning. Participation is voluntary to preserve a community's "home rule" rights but joining the Greenway includes opportunities for grants and technical assistance. Orange County is one of the six counties who have agreed to develop a Compact, however, it is still in the development stage.

Without a specific set of regional guidelines to compare this proposed action, the analysis will evaluate the Greenway's Criteria³:

1. ***Natural and Cultural Resource Protection:*** *Protect, preserve and enhance natural and cultural resources including natural communities, open spaces, historic places, scenic areas and scenic roads.*

The proposed amendments, which call for small scale mixed use neighborhood

³ The criteria can be found at the Hudson River Valley Greenway website available on the Internet at <http://www.hudsongreenway.state.ny.us/commcoun/commcoun.htm>.

development instead of strip commercial development, are targeted for an area where growth is anticipated by both the Town and Orange County. This area is in close proximity to the Village of Warwick and by directing Town growth in a compact form will assist in preserving and protecting the Town's natural and cultural resources.

2. **Regional Planning:** *Encourage communities to work together to develop mutually beneficial regional strategies for natural and cultural resource protection, economic development, public access and heritage and environmental education.*

The Town of Warwick seeks to work with the Village of Warwick to ensure that retail development in this location of the Town does not detract from or impact the Village in a negative way. The Town acknowledges and respects the Village's long-standing position as the retail center of the Town and supports the Village's efforts to maintain a vibrant center. Additional analysis including the fiscal impacts and a retail market study have been conducted as part of this DGEIS to determine the potential impacts to the Village and the results of such studies can be found below.

3. **Economic Development:** *Encourage economic development that is compatible with the preservation and enhancement of natural and cultural resources with emphasis on agriculture, tourism and the revitalization of existing community centers and waterfronts.*

The historic rural character of the Town has been farmland surrounding smaller Village and hamlet areas. These goals continue to be a vision and desire for the Town. However, suburban style Zoning Regulations were implemented in the 1970's and 1980's and such regulations are no longer consistent with resident's current vision nor that of the Greenway's principles. The proposed CB District recommends altering the existing regulations so that strip style commercial development is no longer a possibility for this section of Route 94. This would complement the land use patterns found in the Village and centers a neighborhood on an existing strip commercial area seeking instead to reclaim the strip as a walkable mixed use asset for the community, secondary to the Village as the commercial center of Warwick.

4. **Public Access:** *Promote increased public access to the Hudson River through the creation of riverside parks and the development of the Hudson River Valley Greenway Trail System with linkages to the natural and cultural resources of the Valley.*

The proposed action is not along the Hudson River, however, the Illustrative Plan does include linear walkways throughout future development that will occur incrementally, which have the potential to include paths along tributaries to the Wawayanda Creek and perhaps, the Creek itself.

5. **Heritage and Environmental Education:** *Promote awareness among residents and visitors about the Valley's natural, cultural, scenic and historic resources.*

This is not an aspect of the current proposed action. However, by seeking to promote a smart growth strategy in the Study Area, the Town can use this as an opportunity to demonstrate that compact development, akin to traditional development patterns that

were prevalent before the advent of the automobile, can again become the basis for sound planned development.

Orange County Comprehensive Plan

The Orange County *Comprehensive Plan: Strategies for Quality Communities* (OCCP) was adopted by the County Legislature in April of 2003. The document offers guidance for municipal, county and state officials on land use issues by providing a regional context for decision making and offers technical, financial and infrastructure related resources. The OCCP also provides an analysis of trends, assets and challenges facing Orange County communities. Importantly, it documents trends in demographics, transportation and environmental issues.

The OCCP describes a vision for the future of land use in Orange County by describing priority growth areas and the "urban and rural concept". These complementary ideas call for the development to occur in existing centers (hamlets, villages and cities) or adjacent to these areas where infrastructure can easily be extended. The OCCP is based upon similar smart growth principles which guided the development of the Illustrative plan for the Route 94 corridor. The principles⁴ are described as follows:

BALANCE - *balancing the needs of the economy, the environment, and the community.*

EQUITY - *insuring that all citizens share in a positive future.*

AFFORDABILITY - *diversity and choice in housing – ideally with proximity to work, schools, transportation and commerce.*

QUALITY OF DESIGN - *promotion of compact, efficient land development including a greater mix of land uses, density and diversity in housing, complementary land conservation, urban and village infill development, and connections among different modes of transportation.*

CONCURRENCY - *defining a regional context for the County's future by insuring that county, municipal, and private sector efforts communicate and share goals.*

PARTNERSHIP - *working together among all levels of government and with all civic and community interests.*

PREDICTABILITY - *providing support to projects and actions that are consistent with these principles.*

The OCCP includes a map of priority growth areas showing the Village of Warwick as a community center and the Route 94 corridor as "general area of preference for future development to maximize efficiency of infrastructure and services to minimize open space losses." The OCCP also defines the major roadways as a set of corridor types. Corridors are described as "linear

⁴ The Orange County Comprehensive Plan (2003), p. 13. Available on the Internet at <http://www.orangecountygov.com/documentView.asp?docID=353>.

organizing elements that act as linkages between the other structural land use elements connecting traditional downtown centers, hubs, activity nodes, natural areas and residential areas."⁵ While there are several corridor types discussed, the Route 94 Study Area, which is the focus of this DGEIS, is described as a "mixed use corridor" and described as "currently identified by a mix and range of land uses, these corridors have the potential for an additional mix of development as well as in-fill development. While additional development is anticipated, quality of design is important in addressing road access, corridor transportation capacity, and roadside appearance as well as in avoiding conflict with current land uses."⁶

The description of a mixed-use corridor accurately describes the current state of the Route 94 area which is being considered for a more traditional neighborhood. The application of smart growth principles and traditional neighborhood design elements are anticipated to improve the overall quality of development in this area. The proposed amendments to the Zoning Regulations are intended to ensure that additional development in this area does not erode the transportation network or the visual quality of the neighborhood. Therefore, the proposed action is believed to be consistent with the OCCP.

Potential Environmental Impacts

As noted below, the proposed land uses (residential, commercial, hospitality and recreation) are consistent with current land use regulations that exist in the Study Area with the exception of the hospitality use. However, the proposed action does create some implications for this area in terms of land use, which can be categorized into the following impacts: form and intensity.

Form

The current pattern of land use being promoted by the existing land use regulations has resulted in big box sprawling type development which segregates uses along the road corridor. In the alternative, the proposed action calls for compact development which integrates land uses, creates a network of interconnected streets, is pedestrian friendly and fits a greater amount of development on a given site for a more efficient use of infrastructure and existing services.

The most substantial change in land use is the allowance for a greater amount of residential density in the Study Area, especially since no residential development is currently permitted in either the DS or OI Zoning Districts. Under existing zoning, residential uses are not permitted as of right or by special permit in the DS and OI zones. In the RU zone, where single-family and two family are permitted as of right and townhouses are permitted as a special use, the

⁵ Ibid, p. 42.

⁶ Ibid, p. 42.

minimum lot size is 4 acres unless a cluster is proposed and the minimum is reduced to 3 acres.

Existing uses permitted or specially permitted in the DS, OI, SL and RU Zoning Districts are compared with the uses proposed for the new CB District in Table 3.1 below. Proposed new uses are illustrated in *italic* typeface and uses to be deleted are illustrated by ~~strikethrough~~:

Table 3.1 Existing Permitted Uses and Proposed CB District Uses					
	OI	DS	RU	SL	CB
Permitted Uses:					
Class 1 Home Occupation			√	√	
Commercial Ag Operations	√	√	√	√	√
One Family			√	√	
Town of Warwick Uses & Buildings	√	√	√	√	√
Two Family			√	√	
Special Permitted Uses:					
Adaptive reuse of nonresidential agricultural structures	√	√	√	√	√
Animal & veterinary hospitals	√		√	√	√
Annual membership clubs providing outdoor recreational facilities such as private playgrounds, golf clubs, swimming pools, tennis courts, fishing and hunting preserves, and trap and skeet shooting	√		√		
Bowling alleys, dance halls, physical fitness studios, ice skating rinks and similar commercial recreation in fully enclosed structures	√	√			√
Bulk storage, including warehouses; oil, gasoline & gas storage	√				
Cabins			√		
Camping ground for recreational vehicles; camping and travel trailer camps			√		
Camps			√		
Cemeteries			√	√	
Class 2 Home Occupation			√	√	
Clubs & fraternal lodges	√			√	
Commercial garages & parking lots	√	√			
Commercial group of motor vehicle uses	√				
Commercial lumbering & sawmill operations	√		√		
Community recreational facilities & buildings, club houses, etc	√		√	√	√
Conversion of a 1 Family to 2 Family			√	√	

Table 3.1 Existing Permitted Uses and Proposed CB District Uses					
	OI	DS	RU	SL	CB
Conversion of existing residential structures to hotels or motels, residential hotels or tourist homes	√				
<i>Country Inn</i>					√
Dance instruction studios, physical fitness studios & similar commercial recreation activities in fully enclosed structures		√			
Dog kennels	√		√		
Dorms for Migrant Workers	√	√	√	√	√
Drive-in theatres	√	√			√
Eating & drinking places, but excluding drive-in restaurants and fast-food restaurants	√				
Eating & Drinking places, delicatessens, coffee shop and luncheonette					√
Eating & drinking places, drive-in restaurants and fast-food restaurants		√			
Extractive operations involving sand pits, gravel banks, removal of top soil and fill, quarries, mines and other extractive activities excluding fissionable materials	√		√		
Farm Markets	√	√	√	√	√
Golf courses which may include golf driving ranges	√		√	√	
Guest House			√		
Heliports	√				
<i>Hotels & motels, Conference Center, tourist cabins, health spas, health resorts</i>					√
Hotels, motels, tourist cabins, health spas, health resorts & tourist homes	√		√	√	
Indoor recreation establishments and/or sport such as tennis & skating	√	√	√		
Institutions of higher learning, public libraries, museums & state-accredited private schools			√	√	√
Kiddy lands		√			√
Manufacturing, assembling, converting, altering, finishing, fabricating, cleaning or any other processing, packing, packaging or repackaging of products or materials	√				

Table 3.1 Existing Permitted Uses and Proposed CB District Uses					
	OI	DS	RU	SL	CB
Manufacturing, assembling, converting, altering, finishing, fabricating, cleaning or any other processing, where goods so produced or processed are to be sold primarily on the premises	√	√			√
Manufacturing, processing, assembling of agricultural products	√	√	√	√	√
<i>Medical or dental clinic</i>					√
Miniature golf, batting cages & golf driving range	√	√			√
Mobil Home Court				√	
Mobile homes to house farm workers	√	√	√	√	√
Mortuaries & funeral parlors	√				
Motor vehicle junkyard and/or dismantling, crushing & recycling operations	√				
Motor vehicle laundries	√				
Motor vehicle repair shop	√				
Motor vehicle sales		√			√
Motor vehicle sales & service		√			√
Motor vehicle service stations	√				
Municipally owned &/or operated public airports; airport, airline & express offices, aircraft repair facilities	√				
Nursery schools			√	√	√
One Family			√		
Outdoor amusement establishments such as game farms, skating rinks, museum villages, swimming pools, beaches, fishing and hunting preserves, ski, toboggan and snowmobile areas, and similar commercial amusement establishments	√	√	√		
Outdoor sales lot for boats & travel & camping trailers	√				
Personal service establishments		√			√
Philanthropic or eleemosynary institutions, convalescent or rest homes, hospitals or sanatoriums for general medical care			√	√	√
Places of worship, parish houses, convents & monasteries	√		√	√	
Printing	√	√			√
Private landing strips	√				
Professional & business offices	√	√			√

Table 3.1 Existing Permitted Uses and Proposed CB District Uses					
	OI	DS	RU	SL	CB
<i>Public libraries, business services</i>					√
Public parks and playgrounds			√	√	
Railroad, public utility, rights-of-way and structures necessary to serve areas within the town	√	√	√	√	√
Railway or bus passenger station, communications office, express office, transportation terminal	√				
Research, design & development laboratories	√				√
Retail stores, banks, & convenience stores & drive-in uses		√			√
Sales & storage of lumber & building materials & equipment	√				
Scrap iron, scrap paper or rag storage, sorting or bailing	√				
Secondary use of agricultural wastes	√	√	√	√	√
Service establishments furnishing services, other than of a personal nature including a laundrette	√	√			√
Service of farm machinery	√				
Single Family - if part of a subdivision of 10+ lots			√	√	
Storage & sale of feed, fertilizer, manure & other agricultural products	√	√	√	√	√
Theaters except drive-in theaters		√			
Town Uses & Buildings	√	√	√		√
Townhouses			√	√	
<i>Two-story Mixed-Use Building</i>					√
Warehouses	√				
Warehouses, self storage	√				
Wholesale sales & storage	√				
Wholesale sales or storage	√				
Wireless communication facilities	√	√	√		√

Proposed Mitigation Measures

Since no significant adverse environmental impacts resulting from the proposed CB Zoning District, no mitigation measures are necessary.

Existing Environmental Setting

The eastern portion of Orange County is a complex of folded and faulted rock, which is predominately metamorphic. Moderately affected by glaciation, the area is largely covered with glacial till. As glacial ice melted, flowing water deposited sand and gravel in many locations. The topography of the Study Area slopes gradually upward from Route 94, where slopes are generally 3-8 percent, to slopes of 8-15 percent in the central and south portions of the property. Steep slopes (35-45 percent) are found along the tributary streams. The Study Area is just beyond the western edge of the Hudson Highlands.

Soils found in the Study Area are described in the Soil Survey of Orange County as follows:

Swartswood and Mardin (SXD) very stony soils. These deep, well-drained and moderately well-drained soils (Hydrologic Group C) formed in glacial till. Slope ranges from 35-45 percent. Generally not suited for crop production because of very steep slopes and large stones at the surface, these acidic soils exhibit low organic matter content and rapid runoff. Erosion is a serious hazard if plant cover is removed. Depth to bedrock is greater than 60 inches; depth to (perched) water table is 1.5 to 2.0 feet.

Mardin (MdB, MdC) gravelly silt loam. These deep, moderately well-drained soils formed in glacial till derived from sandstone, slate and shale. MdB is 3-8 percent slope; MdC is 8-15 percent slope. Included within this mapping unit are small areas of Erie soils (poorly drained) at the foot of slopes and along drainageways. Erosion is a hazard, especially where vegetation has been removed. Natural organic matter content is low, and these acidic soils are moderately suited for crops. Seasonal wetness, slope, and slow permeability through the frangipan layer are also characteristic of Mardin soils. Depth to bedrock is greater than 60 inches; depth to high water table (perched) is 1.5-2.0 ft. Limitations for construction include seasonal wetness, slope, and slow permeability in the frangipan.

Scio (ScB) silt loam, 3-8 percent slopes. This deep, moderately well drained soil (Hydrologic Group B) formed in glacial lake deposits of silt and fine sand. Included with this soil in mapping are small areas of well drained Unadilla soils on knolls, and poorly drained Raynham or Canandaigua soils in depressions. Surface layers of this soil are acid to strongly acid; it is suited to cultivation but is susceptible to erosion where vegetation cover is removed, and on long slopes. Depth to bedrock is greater than 60 inches and depth to high water table is 1.5-2.0 ft. Seasonal wetness may be a limitation for construction; pollution of the water table by effluent from septic tank absorption fields is a hazard because of rapid permeability in the substratum.

Hoosic (HoB, 3-8 percent slope and HoC, 8-15 percent slope) gravelly sandy loam. Hydrologic Group A. This is a deep, somewhat excessively drained soil formed in glacial outwash deposits characterized by a high sand and gravel content. Included within this mapping unit are small areas of well drained Chenango, Oakville, and Castile soils, and poorly drained Fredon soils in depressions. Natural organic matter content is low, as is runoff potential. The surface layer is very acidic. This soil is suited for cultivation though it is characterized by low moisture in summer. Pollution of the water table by septic effluent is a hazard because of the rapidly permeable substratum. Depth to bedrock is greater than 60 inches; depth to high water table is greater than six feet.

Middlebury (My) silt loam. This is a deep, moderately to somewhat poorly drained soil formed in silty alluvial deposits. It is found on flood plains and is fairly level, with slopes less than 3 percent. Included with this soil are small areas of poorly drained Wayland soils, and a few higher spots of well drained Tioga soils. Hydrologic Group B; depth to water table is 0.5-2.0. This soil is commonly flooded in spring.

Pittsfield gravelly loam (PtB), with slopes 3-8 percent. This deep, well drained soil formed in glacial till derived from limestone and schist. Hydrologic Group B; depth to water table is more than six feet, and permeability is moderately rapid.

Most Study Area soils are non-calcareous (pH of all layers is less than or equal to 6.5) except for: Scio soils (pH of one of multiple soil layers is above 6.5); Middlebury soils; and Pittsfield soils.

Potential Environmental Impacts

Potential adverse environmental impacts are related to erosion and disturbance of steep slope areas. No construction activities are proposed in conjunction with the proposed Zoning Amendments. Future development activities, based upon either existing or proposed Zoning regulations in existence at that time, will be subject to the stormwater management controls promulgated by the New York State Department of Environmental Conservation and by local stormwater management regulations administered and enforced by the Town of Warwick. Such controls have been designed to reduce or avoid adverse impacts to soils and slope areas to the greatest extent practicable. Erosion and sediment controls will be subject to site-specific environmental reviews under SEQRA by the Planning Board for all development activities subject to Planning Board reviews, unless another agency has been designated Lead Agency on a project involving the Town Planning Board. The Town Building Department administers and enforces erosion and sediment controls for development activities that do not require Planning Board approval. Of particular concern for any development activities is to avoid

disturbance of the Swartswood and Mardin soils; erosion from development activities on adjacent areas should be carefully controlled at such time when they have been approved and are subject to Town oversight.

Soils along Route 94 (Hoosic and Scio), which are characterized by a rapidly permeable substratum, present a potential water table pollution hazard (due to septic effluent). Septic systems are envisioned as avoidable due to the Town's plans to create community services for the Study Area based upon the sewage treatment system established for the Fairgrounds project. While effluent discharge for this treatment system is subsurface, when the system was approved, it was designed as a hybrid system with standard sewage treatment and then discharge to the ground due to a lack of a suitable surface water effluent discharge location on the Fairgrounds site. Thus, as long as future development in the Study Area relies on the system developed for the Fairgrounds project, whether under existing capacity or through expansion under future State and Federal permits for discharge, groundwater impacts can be reasonably avoided. However, if sewage treatment of future development within the Study Area is dependent upon septic systems discharge and treatment, such systems should avoid Hoosic and Scio soils to the greatest extent practicable.

Proposed Mitigation Measures

No adverse impacts have been identified as a direct result of the proposed Zoning Amendments. However, future construction activities should avoid steep slope areas of 15 percent and more to the greatest extent practicable. Structures that are constructed in areas where the soils exhibit seasonal wetness should be planned with adequate measures to ensure dry basements and proper drainage. Hoosic and/or Scio soils should be avoided in the future for septic system discharge unless such soils can be demonstrated to avoid adverse impacts on groundwater.

WATER RESOURCES

Existing Environmental Setting

Surface Water Resources

The Study Area is located within the Pochuck Creek watershed. Several tributaries in the Study Area flow into Wawayanda Creek within the area. Wawayanda Creek in turn flows into the Pochuck Creek. The streams connect agricultural and forested open lands with State and Federal wetlands; the Wawayanda Creek, serves as a corridor between these areas. Hydrologic connections exist between the streams, wetlands, the Wawayanda Creek, and the larger Pochuck watershed. The condition of the headwater tributaries in the Study Area are an important component of the larger watershed system both in terms of water quality and water supply. Current conditions of the Study Area streams, including bog turtle habitat downstream, indicate that current water quality is probably good.

Because of the topography, and the types of soils generally found in the Study Area, wetlands present are found in small depressions or along riparian corridors. According to the USGS Topographic maps, the elevation generally decreases from south to north, and the lowest portions lie along the tributary streams and in small depressions that may contain wetlands. Some of the smaller wetlands may be vernal pools. A large wetland complex is found on the north side of Route 94. The stream that traverses this wetland has been documented as bog turtle habitat based upon correspondence from U. S. Fish and Wildlife Service and the N.Y. Natural Heritage Program as part of the Fairgrounds SEQR review process. To accurately describe and identify all wetlands that may be present in the Study Area, full wetland delineations must be conducted prior to development activities. All wetlands regardless of size, type and jurisdictional status can then be depicted on a site map with potential adverse impacts and appropriate mitigation measures identified, including avoidance and adherence to the recommendations of the US Fish and Wildlife Service's *Bog Turtle Recovery Plan*.

Ground Water Resources

A principal aquifer is located adjacent to the Miller property on the north side of Route 94. The stream on the Miller property flows into wetlands that overlie the aquifer just north of Route 94. Principal aquifers are defined as aquifers known to be highly productive or whose geology suggests abundant potential water supply, but which are not intensively used as sources of water supply by major municipal systems at the present time. Therefore this aquifer could represent a future source of water supply for Study Area development activities.

Potential Environmental Impacts

Water resources in the Study Area should be managed as part of the watershed (i.e. a larger system) to maintain water quality and supply and to account for cumulative impacts of individual development activities. Potential adverse impacts of future development activities, regardless of whether the No Action alternative is selected or if the Town Board decides to pursue the proposed Zoning Amendments, include the amount of impervious surface cover from developed areas, and the rate and composition of specific stormwater runoff contaminants. By coordinating development in the Study Area and prescribing a specific set of Design Standards in the Zoning Law that new development must adhere to, adverse impacts on surface and ground water quality can be avoided or reduced to the greatest extent practicable. The Town has proposed that new development in the Study Area, as envisioned by the Illustrative Plan, be subject to state-of-the-art planning and engineering techniques for avoiding adverse impacts to water resources. These include the following Watershed Assessment and other techniques:

- Identify percent impervious cover onsite (pre- and post- construction)
- Identify the primary stormwater pollutants of concern
- Define pollutant loading in streams and wetlands (including offsite) as a result of the action

- Identify potential impacts on wetland hydroperiod or stream flow
- Locate stormwater management facilities at least 100 feet from aquatic resources

The potential impacts of future development are addressed further below:

Stormwater runoff and impervious cover

Potential impacts to water quality and supply are primarily associated with the amount of impervious cover present within the watershed. The tributaries to the Wawayanda Creek are most vulnerable to adverse water quality impacts associated with development in close proximity to the stream. The introduction of large additional areas of impervious cover within the stream's drainage could incur adverse water quality and supply impacts within the Wawayanda Creek subwatershed and potentially within the Pochuck Creek watershed as well.

By replacing existing vegetative cover with a significant area of impervious surfaces, the natural functions of the watershed to allow precipitation to filter through the soil, replenish groundwater, and maintain stream flow will be affected. Along with this increase in overland runoff is an increase in the potential for downstream flooding, as well as changes to the hydroperiod of the large wetlands within the Study Area.

Recent research shows a very strong correlation between increases in impervious cover and decreased water quality/increased flood potential. Impervious surfaces increase the volume of runoff and its pollutant load. For example, a one-acre parking lot can produce 16 times more stormwater runoff than a one-acre meadow (NYSDEC *Stormwater Design Manual*). Evaluation of potential impacts from the increase in percent cover on a site can be accomplished by calculating probable stormwater pollutant loading for specific common contaminants pre- and post-construction. It is essential that the pollutant load for future development within the Study Area include both pre- and post-development for individual pollutants (NYSDEC *Stormwater Management Design Manual*) be calculated and reviewed. These include BOD, COD, TSS, TDS, total phosphorus, total nitrogen (including Nitrates/nitrites), lead, copper, zinc and cadmium. The Simple Method (Scheuler, T. *Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs*. Washington, D.C.: Metropolitan Washington Council of Governments, 1987), or a comparable professionally accepted method, should be used for this purpose; but the same method must be used for all calculations. This will provide some information regarding the extent of water quality impacts expected to result from proposed development. Oil and grease and chlorides (i.e. road salt) are other common constituents of stormwater runoff that should also be considered during future site specific impact assessments.

Erosion

Erosion and subsequent siltation are other potential adverse impacts that require mitigation from future development activities. Some stormwater contaminants adhere to soil particles and are carried downstream. Disturbed areas that are not revegetated in a timely manner facilitate the spread of invasive plant species—and these can also be distributed to wetlands and streams via seeds carried by stormwater runoff.

To function optimally, stormwater facilities must be planned well, be constructed exactly as planned, and be maintained on a regular basis. Even at optimal function, no facility can remove all stormwater contaminants. NYSDEC's *Stormwater Design Manual* documents the maximum percent removal of nitrogen and phosphorus to be expected from specific stormwater management facilities. The only other effective means of reducing the pollutant load once treatment has been maximized is to reduce the amount of impervious cover.

Oil, grease and road salt are among the other common constituents of stormwater runoff that must be considered. Some of these, like road salt (including melt from snow piles), cannot be removed by stormwater management facilities and will be washed into receiving waters. Where snow is plowed and piled, the concentration of contaminants such as road salt can be quite high. The impact of road salt alone on aquatic systems is proven, and the cumulative effects on freshwater plants and animals can be severe. Also, road salts may affect other stormwater contaminants, enhancing the toxicity and adverse environmental impacts of stormwater runoff. And this will be true on a watershed level, not just on a development site. To reduce the negative impacts associated with road salt that washes into wetlands and watercourses from paved surfaces, salt-laden runoff must be spread over a larger vegetated area. Effectively planned and vegetated buffers may serve this purpose.

The potential impacts of these contaminants may extend to groundwater as well. The Town of Wallkill in Orange County recently cited a trucking company for salt contamination of residential wells where salt levels reached a level that threatened residents' health.

Compliance with the design guidelines in the NYS *Stormwater Management Design Manual* does not ensure that water quality will be fully protected. In fact, the design of stormwater management facilities may have additional impacts on wetlands and watersheds, and these may be assessed and mitigated. These impacts include: changes to hydroperiod and seasonal availability of water in wetlands and streams (especially during drought years), introduction of invasive species, buffer disturbance, and pollutant loading impacts on receiving waters (wetlands and watershed in this case). In addition, if stormwater management facilities are not designed and built perfectly, and if they are not maintained scrupulously over time, their efficiency will decrease and more pollutants will reach receiving waters.

It is not possible to capture 100 percent of all stormwater throughout an entire site, even with well-designed and optimally functioning stormwater management facilities. Therefore, effective mitigation of impacts begins with proper planning design and site layout is needed during each site-specific SEQR review.

Proposed Mitigation Measures

The proposed Zoning Amendments, or others recently enacted by the Town Board in other Zoning Amendment actions, have incorporated Mitigation Measures for all new development in the Study Area. This includes what must be described before a Stormwater Pollution Prevention Plan (SWPPP) is developed. A SWPPP is not intended to serve as a mitigation plan, or to cancel the need for other on-site mitigation measures. However, the SWPPP itself

may incur impacts on the water quality and supply to wetlands and streams both onsite and downstream, unless properly designed, developed, constructed, and maintained.

Erosion and Sediment control

A double row of silt fence should be installed around all wetlands and streams to protect water quality during construction. This fencing must be maintained regularly to ensure optimum function.

All disturbed areas must be reseeded as soon as grading is complete; soil stockpiles must be effectively protected from erosion by covering or seeding.

Buffers

To mitigate impacts on water quality and hydroperiod, wetlands and streams will require vegetated buffers. Scientific research has documented a relationship between buffer features (such as size, vegetative composition, bank slope, and soil characteristics) and effective mitigation of adverse impacts. A compilation of research study results by the Environmental Law Institute's "Conservation Thresholds for Land Use Planners" (CTLUP) recommends the following requirements for buffers:

Based on the majority of scientific findings, land use practitioners should plan for buffer strips that are a minimum of 25 meters [~82 feet] in width to provide nutrient and pollutant removal; a minimum of 30 meters [~98 feet] to provide temperature and microclimate regulation and sediment removal; a minimum of 50 meters [~164 feet] to provide detrital input and bank stabilization; and over 100 meters [~328 feet] to provide for wildlife habitat functions. To provide water quality and wildlife protection, buffers of at least 100 meters are recommended.

A 300 foot buffer is recommended for streams that flow through the Study Area. The reasons for this include: 1) The presence of stormwater constituents like road salt, that cannot be removed regardless of how well stormwater management facilities are designed, constructed and maintained; 2) The sensitive nature of downstream wetlands and streams; 3) The presence of bog turtles in the watershed; and 4) The high percentage of impervious cover that may be needed to build-out the Illustrative Plan. Due to the proposed Mitigation Measures that have been incorporated into the Zoning Amendments, the proposed Illustrative Plan build-out can be expected to be substantially less than the existing build-out under the current DS Zoning District. This is because of the far greater impervious surfaces to be expected with the sprawling big-box development, prescribed by existing Zoning, that requires more extensive parking areas.

All stormwater management facilities should be located outside wetland and stream buffers. Because these areas are naturally low-lying, they will tend to collect stormwater runoff and its load of pollutants. Outflows from any stormwater management facilities, such as retention basins, should discharge into the buffer, not directly into the stream or wetland. This will

allow salt and other remaining pollutants in runoff to disperse across a vegetated surface and thus decrease harmful effects to the wetland and stream ecosystems.

Protection of the integrity of buffers around all wetlands and watercourses is especially significant. Essential functions and values provided by intact and appropriately vegetated buffers along streams include but are not limited to: flood control, floodplain protection, gradual release of flood flows within watersheds, nutrient and pollutant removal, water quality improvement through filtration of overland runoff, bank stabilization, natural areas protection, habitat (upland, aquatic, and corridor) protection, temperature and microclimate regulation (e.g. from shade), detrital input as source of food and energy for aquatic organisms.

The Environmental Law Institute's recommendations for the size of buffers, based on the scientific findings cited in its publication *CTLUP*, are as follows:

- While the width of the buffer is important, its ability to provide a variety of functions is also determined by vegetation composition, extent of buffers, and level of protection. Maintaining a diverse array of species and vegetation structure (e.g. herbaceous ground cover, understory saplings, shrubs and overstory trees) is recommended for optimum buffer functions to protect water quality and provide habitat. "To ensure that buffers function adequately, all major sources of disturbance and contamination should be excluded from the buffer zone." These include but are not limited to: impervious surfaces, forest clear cutting, septic tank drain fields, heavy construction, and application of pesticides and fertilizers.
- While individual site conditions vary, in general, buffers of *at least* 100 feet are recommended for water quality protection. *CTLUP* states "Land use planners should strive to establish 100-meter [\sim 328 feet] wide riparian buffers to enhance water quality and wildlife protection."
- Larger buffer widths may be required in the following circumstances: for adequate protection of pristine wetlands and watercourses; protection of these resources in close proximity to high impact (or density) development, and in areas with steep banks, highly erodible soils, or sparse vegetation.

Low-impact development (LID) planning

For future development subject to either the existing or proposed Zoning Amendments, every possible effort should be made to incorporate the techniques associated with low-impact development (LID) planning, which strives to allow natural infiltration to occur as close as possible to the original area of rainfall, thus minimizing the need for construction of extensive stormwater facilities, the concentration of stormwater contaminants into small areas onsite, and the diversion of water offsite or otherwise away from direct replenishment of groundwater onsite.

LID, which has been addressed in Warwick through separate Zoning Amendments enacted recently by the Warwick Town Board, also offers a more cost effective way to address storm

water management through site design modifications and best management practices. These are summarized as follows:

1. Maintain and improve site hydrology. This includes maintaining predevelopment hydrology (peak flow, volume, time of concentration); improving aesthetics and providing recreation resources; identifying sensitive areas (streams/buffers, wetlands, steep slopes, floodplains, woodlands, highly permeable soils); protecting natural conditions (retaining natural features, producing least hydrologic impact, minimize site disturbance); evaluating site layout alternatives to reduce, minimize and disconnect impervious areas.
2. Focus on small areas such as micro-sub-basins, small storm events, and small best management practices.
3. Control stormwater at its source by, for example, controlling hydrologic impacts at the source, and distributing stormwater controls throughout the site (using many small practices rather than one or two larger ones). Use natural, nonstructural methods for stormwater management, minimizing storm sewers and large basins.

To specifically address reducing impervious surfaces, recommendations include but are not limited to, the following:

- disconnect roof drains
- direct flow from impervious areas to vegetated areas or infiltration areas
- encourage sheet flow through vegetated areas
- break up flow directions from large paved areas
- consider alternative road layouts
- reduce sidewalks, driveway size, and on-street parking
- use of permeable pavement surfaces

The use of LID design can address a variety of project impacts. A well designed low impact system can: intercept rainwater, protect ecological functions and habitats, store runoff, provide filtration for pollutant removal, provide infiltration for groundwater recharge, provide improved aesthetics, and incorporate recreational opportunities where appropriate. The Illustrative Plan for the Study Area present numerous possibilities for incorporating LID. Thus, no further mitigation measures are necessary. Each of the above measures should be considered by the Planning Board or other Lead Agency during the review of development projects proposed in the Study Area.

Existing Environmental Setting

1. Habitats

The Study Area lies within an area of the mid Hudson Valley that supports regionally significant habitats and a significant variety of wildlife species, i.e., high biological diversity. This is due to a number of factors that are described in detail in the *Southern Wallkill Biodiversity Plan: Balancing Development and the Environment in the Hudson River Estuary Watershed*, and are summarized as follows:

1. Diverse geology and soil types, supporting diverse habitats.
2. The “ecological crossroads” when the last glaciers receded from this area, plants and animals that repopulated the region came from a number of routes (Wallkill Valley, Atlantic Coastal Plain, Midwest via the Mohawk Valley) which converged in the mid and lower Hudson Valley.
3. Despite development pressures, large tracts of relatively undisturbed habitat remain.
4. Agriculture has maintained many important grasslands and other open habitats.
5. Biodiversity includes species that are widespread and those that are declining in the Wallkill Valley and the Northeast. The conservation value of these species extends beyond the Town to the region.

The following general habitat types are indicated in the Study Area and are described below:

a. Agricultural land

Most of the acreage in the Study Area is agricultural land, consisting of meadow and row crops (corn). Depending on its condition, and type of crops grown, the area may have value for some grassland bird species and migrating shorebirds. If the fields have been planted in field crops such as alfalfa, wheat, timothy or oats, a variety of species such as grasshopper sparrow, vesper sparrow, bobolink, northern harrier and upland sandpiper may use these areas at various times of the year. Hayfields, mowed grassland, and pasture can serve as critical habitat for grassland-breeding birds. Row crops such as corn support fewer species in comparison.

b. Steep forested ravine

A forested ravine is found along the western edge of the Study Area in the Miller Farm area, and may support species found elsewhere within the Hudson Highlands. Although this forested area comprises a relatively small area, it continues to the south and is part of a larger forested system that has so far seen relatively little development. Significant natural communities that may be found within this area include acidic talus slope woodland, Appalachian oak-hickory forest, and hemlock-northern hardwood forest. Depending on the composition and quality of this forested area, a buffer may be required to protect its biological resources. A large number of species of plants and animals of conservation concern may be associated with this area.

c. Perennial stream and its associated vegetated buffers

A stream flowing through the Study Area from Black Rock Road near Round Hill joins the Wawayanda Creek just east of Sanfordville Road. Round Hill lies at the western edge of the Hudson Highlands, a regionally significant forested area that supports a large number of rare

plant and animal species. The stream may serve as a corridor between this area and the Wawayanda Creek; wetlands and fields along the creek support some of the most important biodiversity in the southern Wallkill Valley. Therefore, the water quality of this tributary, and its continued water supply, are important components of the larger watershed system and the habitats it supports. The stream connects forested open land south of the Miller parcel with extensive wetlands northwest of the parcel, thus serving as a corridor between these areas. As the stream leaves the forested ravine, its vegetated buffer becomes quite narrow.

While no development is planned as part of the proposed Action (i.e. the proposed Zoning Amendments) as development is proposed in this area, the stream should be surveyed for bank condition, siltation, bottom condition, macroinvertebrates, and general water quality parameters. Physical assessment of stream corridor habitat includes measures of physical habitat quality including water temperature, turbidity, algal growth, riffle size, substrate size and embeddedness, shelter for fish (if present), flow pattern, channel alteration, streambank cover and stability, and riparian vegetation. These are further described in Chapter Five of the United States Environmental Protection Agency's *"Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates and Fish."* Water quality assessment using benthic macroinvertebrates should be conducted for the stream at appropriate locations during any development reviews. Once this study has been completed, an understanding of the quality of the stream habitat can be determined and described, and adequate buffer size and vegetation can be planned for future development.

d. Wetlands

Soil types within the Study Area may contain small inclusions of other soils that are somewhat poorly-to-poorly drained, especially in shallow depressions or drainageways. A full wetland delineation should be conducted at the time any application for development approval is sought in the Study Area, so that all wetlands regardless of size, type and jurisdictional status can be depicted on a site map and their value as habitat (including possible vernal pool status) can be further ascertained.

2. Species of conservation concern

Based on the habitats described in the previous section, a number animal species of conservation concern may use the Study Area during certain seasons, at some stage of their life cycles, or as a travel corridor (for instance the streams).

For purposes of this discussion, "species of conservation concern" includes:

- Plants and animals listed as Endangered or Threatened under the federal Endangered Species Act
- Animal species listed as Endangered, Threatened, or Special Concern under New York State Environmental Conservation Law
- Plant species listed as Endangered, Threatened, Rare, or Exploitably Vulnerable under New York State Environmental Conservation Law

- Bird species listed as “Migrants in Jeopardy,” or “Partners in Flight Watchlist” by reference to Hudsonia’s “*Biodiversity Assessment Manual*” on file in the Town Building Department offices
- Animal species listed as “development-sensitive focal species” in the “*Southern Walkkill Biodiversity Plan*” by the Metropolitan Conservation Alliance and on file in the on file in the Town Building Department offices.
- Birds listed without any formal protected status are listed as development-sensitive species in the “*Southern Walkkill Biodiversity Plan*” by the Metropolitan Conservation Alliance.

Many of the species of conservation concern are restricted to specialized habitats with particular physical or biological features. If appropriate habitat is present onsite, it is assumed that species known to use that habitat are present or could be present in the future.

According to the New York State Breeding Bird Atlas (Blocks 5456B and 5456D), the following species of birds of conservation concern have been observed in the Study Area vicinity:

Common name	Scientific name	US ⁷	NYS ⁸	MIJ ⁹	MIG ¹⁰	PIF ¹¹
Sharp-shinned hawk	Accipiter striatus		SC			
Cooper’s hawk	Accipiter cooperii		SC			
Red-shouldered hawk	Buteo lineatus		SC		x	
Barred owl	Strix varia					
Pileated woodpecker	Dryocopus pileatus					
American woodcock	Scolopax minor					x
Eastern wood peewee	Contopus virens			x		
Great-crested flycatcher	Myiarchus crinitus			x		
Least flycatcher	Empidonax minimus					
Willow flycatcher	Empidonax trailii					
Eastern kingbird	Tyrannus tyrannus					
Veery	Catharus fuscescens			x		
Wood thrush	Hylocichla mustelina			x		x
<u>Warblers:</u>						

⁷ Federally listed as threatened (T) or endangered (E).

⁸ State listed as threatened (T) or endangered (E) or special concern (SC)

⁹ Migrants in Jeopardy. North American migratory bird species at particular risk due to loss of wintering habitat in mature neotropical forests.

¹⁰ Migratory nongame birds of management concern in the northeast. These species have experienced population decline due to habitat degradation, human disturbance, and contaminants. Ref. Hudsonia’s “Biodiversity Assessment Manual.”

¹¹ Partners in Flight. Birds not listed as federally endangered that are at particular risk due to low population size, small range, declining population, loss of habitat, nest parasitism and other factors. Compiled by Colorado Bird Observatory, American Bird Conservancy, Partners in Flight, U.S. Fish and Wildlife Service. Check Audubon website for updates to the list.

Common name	Scientific name	US ⁷	NYS ⁸	MIJ ⁹	MIG ¹⁰	PIF ¹¹
Blue-winged	Vermivora pinus			x		
Black-and-white	Mniotilta varia					
Black-throated green	Dendroica virens			x		
Prairie	Dendroica discolor					x
Worm-eating	Helmitheros vermivorum			x		x
American redstart	Setophaga ruticilla			x		
Ovenbird	Seiurus auropilla			x		
Louisiana waterthrush	Seiurus motacilla			x		
Scarlet tanager	Piranga olivacea			x		
Eastern towhee	Pipilo erythrophthalmus					
Field sparrow	Spizella pusilla					
Savannah sparrow	Passerculus sandwichensis					
Grasshopper sparrow	Ammodramus savannarum		SC			
Rose-breasted grosbeak	Pheucticus ludovicianus					
Bobolink	Dolichonyx oryzivorus					x
Eastern meadowlark	Sturnella magna					
Baltimore oriole	Icterus galbula					

Reptiles and amphibians of conservation concern that may be found in the Study Area at some stage of their life cycle include the following: Blue-spotted salamander, Jefferson salamander, marbled salamander, southern leopard frog, spotted turtle, wood turtle, eastern box turtle, and eastern hognose snake. Surveys should be conducted during Site-specific SEQR reviews by the Lead Agency for these reptile and amphibian species to determine whether they use a particular site, and whether or not they will be affected by future proposed development.

The bog turtle, (listed as state-endangered and federal-threatened), is found in the Wawayanda Creek watershed, including the wetlands that lie west-northwest of the Fairgrounds property. Since the tributary that flows through this wetland system, the quality of its water is important to species that use adjacent downstream properties.

Because much of the Study Area has been disturbed for agriculture and currently supports crops, such areas are not likely to support plants of conservation concern except potentially in the ravine/forested area along the stream that flows through the Study Area. Since this area is not isolated, but is part of an extensive forested area south of the Miller property, the extension of rare species into the Study Area along the stream is possible. The Hudson Highlands support a large number of protected plants. These species will require field evaluation in the future as to their presence on a particular site and potential impacts to them.

3. Biodiversity

According to the *Southern Wallkill Biodiversity Plan*, portions of the Study Area lies between two areas identified as “important biodiversity areas of the southern Wallkill region” the western

Wawayanda Creek area, and the west Highlands corridor. Both of these areas support a large number of species of conservation concern. The Biodiversity Plan describes the Wawayanda Creek system as follows:

These wetlands and fields along Wawayanda Creek contain some of the most important biodiversity in the entire Southern Wallkill Region, for a variety of taxa. Impacts to wetlands and other habitats in this area should be minimized to the greatest extent possible.

The Biodiversity Plan also describes the West Highlands Corridor:

In addition to the wildlife habitats provided by the extensive forests along this ridge, the Natural Heritage Program has identified numerous significant ecological communities. Preservation efforts in the Highlands should continue in order to conserve these habitats.

The Orange County Open Space Plan also includes information regarding the biodiversity value of this area. It describes the forested portions of the Study Area as regionally significant with a high priority for protection. The County Plan also identifies the Wawayanda Creek as representative of a healthy stream ecosystem that warrants special protection: “Protection of these priority water bodies can be accomplished through land use regulations throughout the watershed as well as creating or maintaining vegetative buffers along the water body itself. It is of utmost importance to ensure a maximum of natural land cover within these watersheds and minimize the amounts of runoff and other pollutants that are discharged into the ground or on the ground surface.”

Potential Environmental Impacts

Increase in invasive species

The proposed action will not, by its very nature have any potential adverse impacts on Terrestrial and Aquatic Habitats. However, future actions that may occur regardless of the existing build-out or the build-out that could occur based upon the proposed Zoning Amendments, could lead to individual development actions that propose disturbance of habitats by construction activities. Such disturbances can lead to habitats that are more vulnerable to colonization by invasive plant species. The following species have been identified as priorities for management, as they have the potential to cause economic or environmental harm. Their presence and abundance on a project site will be likely to change after the site is developed. These may include:

- Tree of heaven (*Ailanthus altissima*)
- Garlic mustard (*Alliaria petiolata*)
- Japanese barberry (*Berberis thunbergii*)
- Black swallow-wort (*Cynanchum louiseae*)
- Giant hogweed (*Heracleum mantegazzianum*)
- Purple loosestrife (*Lythrum salicaria*)

Japanese stiltgrass (*Microstegium viminum*)

Common reed (*Phragmites australis*)

Mile-a-minute vine (*Polygonum perfoliatum*)

Multiflora rose (*Rosa multiflora*)

Japanese knotweed (*Polygonum cuspidatum*)

Decrease in species that are sensitive to development (i.e. decrease in biodiversity)

Intensive development of the Study Area in the future may result in the loss of habitat for any of the species listed or discussed in the previous sections. This habitat loss may be direct, through removal of vegetation, grading and construction of impervious surfaces. Or, it may be indirect, such as the degradation of water quality in the streams and wetlands that flow to the Wawayanda Creek.

Loss of habitat for specific species of conservation concern

Depending on the results of further field evaluation, for habitat suitable for specific species of plants and animals considered to be of conservation concern, as part of a site-specific SEQR environmental review for future development projects, these may be subject to additional impacts that may require mitigation measures. This cannot be predicted until such time as a specific development proposal is proposed and the SEQR review process, as described herein, is undertaken.

Proposed Mitigation Measures

There have been no adverse impacts on Terrestrial and Aquatic Ecology identified for the proposed action. However, future development that may be proposed in compliance with the development controls in place in the Study Area should adhere to the following mitigation measures.

Goals for control of invasive species include containment (preventing them from spreading), reduction (reducing the size of invasive populations), and restoration of disturbed areas with native species plantings to discourage re-invasion. All disturbed areas are susceptible to spread of invasive species. Minimization of areas of disturbance on construction sites should be encouraged, as invasive species tend to proliferate in these areas at the expense of native species.

Avoidance of impacts to habitats that are likely to support species of conservation concern constitutes the most effective mitigation. This can be accomplished through the protection of adequately vegetated (i.e. native species) buffers along streams, wetlands (depending on the results of the wetland delineation), and along the edges of forested areas, especially any identified forested ravines. The edges of this habitat type may be more susceptible to human

encroachment (including noise, lights, construction activity, invasive species) and may require generous vegetated buffers of native species for protection.

Protection of water quality in Study Area streams is essential for protection of the integrity of the watershed—e.g. water quality and supply—including the aquifer on the north side of Route 94. This refers particularly to stormwater runoff and its pollutant load including road salt.

Minimization of impervious cover is an essential component for water quality and habitat protection. This can be accomplished by using planning techniques that incorporate Low Impact Development design, such as those incorporated into the Town’s Zoning regulations.

TRANSPORTATION

Existing Environmental Setting

The car is the predominant mode of travel in the Town of Warwick. As commonly occurs in rural communities, a network of smaller Town roads serves most residential areas, while County and State collector and arterial roads collect traffic from Town roads and provide access to other communities and larger State highways. Route 94 is a major North-South route through the Town, connecting New Windsor and Interstate 84 at the Hudson River in Orange County with Interstate 80 and points south/southwest in New Jersey.

Public Transit

Regularly scheduled bus transportation in the Town of Warwick is provided by an Inter-Municipal Bus Service through Warwick Transit, which provides services to the Towns of Blooming Grove, Wallkill, Monroe/Harriman, and Goshen and the Villages of Greenwood Lake, Florida, and Warwick. Service through Warwick Transit is available to County Route 21 in the Study area as well as to the Galleria Mall, Vails Gate, and Adams Fairacre Farms in New Windsor.

The Warwick Transit Dial-A-Bus Service also operates within the Town borders, Monday through Friday, from 8:30 am to 5:00 pm. Reservations are required to use the service and can be made by calling a phone number Monday through Friday between 9:00 am and 1:00 pm. Reservations must be made at least 24 hours in advance and are accepted up to one week prior to service. During the week, the bus will pick up and drop off passengers curbside at the requested location. The Dial-A-Bus Service does not travel outside the Town limits to neighboring communities.

New Jersey Transit provides daily bus service from Warwick to New York City through a number of other New York State and New Jersey destinations. The closest rail passenger service is in the adjoining Town of Tuxedo, which provides connecting service from Port Jervis to New York City via PATH trains in Hoboken, NJ.

Pedestrian and Bicycle Facilities

Sidewalks are found in the Village of Warwick but none are available in the Study Area. The Town has a few off-road dedicated hiking, biking and walking trails, including the Appalachian Trail, but none are found in the Study Area. Bicycle routes exist on a network of Town, Village, County and State roads, but these are simply trail blazed “share-the-road” routes along existing roads rather than dedicated lanes in the public right-of-way.

Automobile Traffic

The vast majority of transportation in the Study Area is by the automobile. As a result, a Traffic Study was completed, the purpose of which was to examine the roadway infrastructure of NYS Route 94/Warwick Turnpike at certain key intersections relative to potential traffic impacts associated with the current Zoning regulations compared to the proposed Zoning Amendments. The full Traffic Impact Study can be found in Appendix E and in Volume 2 of the DGEIS, which contains the Traffic Study Appendices and worksheets.

The Route 94 Study Area, which is the focus of the Traffic Analysis, extends along Route 94 from County Road 21 (Warwick Turnpike), on the west to County Road 1A on the east. The proposed Zoning, which is the basis for this Analysis, assumes the following potential build-out may occur as a result of the proposed Amendments:

- Approximately 260,319 sq. ft. of retail space;
- Approximately 260,319 sq. ft. of office space;
- Approximately 244 1-bedroom units of up to 1000 sq ft;
- Approximately 47 2-bedroom units of up to 1400 sq ft.

Comparison to the current Zoning, that has been estimated to occur absent any changes to the current DS Zoning District, will eventually result in approximately 312,385 sq ft of retail space. This build-out estimate has been used with the understanding that although some of this retail use could also be office use; the reality of traffic generation, from a worst-case assessment standpoint, is better served with retail as the generator. The intersections deemed to be critical from a potential traffic impact perspective are the following:

- NYS Route 94 and CR 21;
- NYS Route 94 and the existing driveway at Shop Rite shopping plaza;
- NYS Route 94 and The Fairgrounds shopping plaza driveway;
- NYS Route 94 and CR 1A, Pelton Road.

The analysis focuses on capacity of the identified intersections and with the knowledge that Route 94 must carry the land-use generation of this immediate area along with the through traffic generated by uses beyond this section of Route 94. However, it is important to engage the concept of access management that promotes the establishment of “service” roadways (in

the Town Zoning Law, the Marginal Access Roads) connecting adjacent land-uses so as to create a secondary path that allows multi-use/destination shopping between and among a series of consumer services. The service roads act as collectors funneling shoppers and others to clearly defined signalized access points to the main thoroughfare, in this case Route 94. Therefore, although this analysis cannot implement or utilize the benefits of such design, it clearly is the proper long-term objective and will lessen the over-all traffic burden on Route 94. What is presented in this Analysis is a worst-case scenario absent any benefit to be accrued by implementation of reasonable access management in the form of service roadways (i.e. the proposed marginal access roads that will be required of new development). Similarly, although signalization of specific intersections is the mechanism used to increase capacity in this Analysis, it clearly is not the only means of accomplishing that goal. Roundabouts and other forms of intersection improvements may be better alternatives; such issues must be explored when more specific development proposals are advanced.

As a common design year goal, all traffic volumes have been projected to the year 2014; thus full build-out under both existing zoning and the proposed zoning have been applied fully to the design year. This Analysis relies on data collected in prior traffic studies, most notably a study conducted by John Collins Engineering, PC, for The Fairgrounds development in 2004. This study tabulated traffic volumes for the PM and Saturday peak traffic hours at a number of intersections along Route 94. Those intersections included the four key intersections, which are the focus of this analysis.

The NYSDOT indicated a traffic growth of 0.5% to 1.0% per year over the last four to five years and predicted this trend to continue for the foreseeable future. Therefore, the Collins report data was adjusted to reflect 2009 activity, Existing conditions, and then projected forward to the year 2014, the design year, by 1.0% per year, for a total of 5%¹² to account for background growth. Thus 2014 is both the No-Build and Build timeframe.

Potential Environmental Impacts

A Traffic Impact Analysis was prepared to assess the potential traffic implications of the proposed Zoning Amendments and to contrast the traffic that could be generated by such development with traffic that would be likely to be generated by the existing Zoning, if all lands in the Study Area were eventually developed under the DS District regulations. The results of the full Traffic Impact Analysis can be found in Appendix E of the DGEIS. The traffic analysis was prepared using a methodology recommended by the New York State Department of Transportation.

¹² Normally given the degree of estimation, growth is not compounded for forecast purposes.

The generation analysis for a theoretical build-out provides the anticipated traffic impact that can be expected as a result of that development. The Institute of Transportation Engineers (ITE) provides traffic and transportation professionals with a source document as a guide to trip generation rates for all land uses and Building types. This document, the “Trip Generation Manual”, (7th Edition),¹³ is updated periodically and details rates developed for the average weekday, as well as Saturday and Sunday, during the peak hours of the generator and during the peak hours of the adjacent roadway traffic. This document was utilized for the Analysis.

The capacity analysis methodology is based upon the 2000 Highway Capacity Manual¹⁴ using SYNCHRO Traffic Signal Software by Trafficware.¹⁵ The results of the capacity analysis of Route 94 at County Route (CR) 21 (Warwick Turnpike) and Route 94 and the ShopRite Plaza driveway show unacceptable conditions under either the existing Zoning or the proposed Zoning Amendments alternative and will require mitigation to function efficiently in the future regardless of changes to the Zoning regulations. Signalization is the mitigation that results in an acceptable level-of-service in the No-Build and Build scenarios, but as noted above, may not be the only alternative available (such as roundabouts, increased public transit or traffic calming).

The intersections of Route 94 at The Fairgrounds and Route 94 at CR 1A operate acceptably in the No-Build conditions. However, Route 94 at CR 1A cannot accept either the existing Zoning or the proposed Zoning Amendments alternative without the addition of turn lanes on all approaches. Route 94 at The Fairgrounds will continue to operate well in either Zoning scenario. Reference is made to Table 3 on page 40 of the Traffic Impact Analysis in Appendix E for a summary of traffic mitigation recommendations.

It is clear from this Analysis that the Route 94 Study Area will need to have its infrastructure upgraded as background traffic increases. However, the proposed Zoning alternative is fairly consistent with the infrastructure needs associated with the current Zoning regulations. In both cases, the absence of the application of pass-by credit or the access management concept of service roads (i.e. the proposed marginal access roads) over-states impacts. These conservative actions present a worst-case set of conditions for both Zoning alternatives (i.e. the current build-out contrasted with the build-out under the proposed Zoning Amendments).

¹³ Trip Generation Manual, 7th Edition, Institute of Transportation Engineers, 2004.

¹⁴ Special Report 209, 2000, published by the Transportation Research Board, National Research Council, Washington, D.C.

¹⁵ SYNCHRO 6, Traffic Signal Software, Trafficware Corporation, 2003.

It is important to understand that two of the four locations reviewed will experience unacceptable operating conditions in 2014 without any further local growth in the Study Area, and are in fact, suffering less-than desirable conditions currently. This situation will result simply from the external background growth that will place additional traffic volumes on Route 94, a State highway connecting points in New Jersey with points in New York State north of Warwick. Thus, mitigation will be necessary to maintain safe operating conditions absent any further local controlled growth. Therefore, given these conclusions, the proposed Zoning Amendments do not create infrastructure needs that will not otherwise be necessary with current Zoning regulations as growth occurs in the near term.

Proposed Mitigation Measures

No significant adverse impacts have been identified as a result of the proposed Zoning Amendments and therefore, no mitigation measures that are specific to the proposed action are necessary. In terms of mitigation, however, it must be noted that the proposed Zoning Amendments have been specifically designed to reduce traffic levels on area highways. The ITE's methodology, which was used in the Traffic Analysis, is designed "*for single-use developments where virtually all access is by private automobile.*"

The ITE is currently in the process of updating its *Trip Generation Manual* to include trip generation rates for mixed-use developments (such as the proposed CB District), which are anticipated to generate significantly fewer trips than conventional suburban auto-dependent developments. Furthermore, in the Study Area of the proposed CB District, installation of sidewalks will be a requirement for development in the District, and new roads will be required to be interconnected, which will shorten the distance between activity points and encourage walking and bicycling. Provision of bicycle racks and other bicycle amenities will be incorporated into the Design Standards. These provisions will improve pedestrian and bicycle facilities in the Town, and this can be considered a beneficial impact without the need for mitigation.

Any mitigation measures developed in conjunction with the New York State DOT for Route 94 must include the potential for separate bicycle and/or walking paths parallel to Route 94 so that the Village of Warwick can be connected with the Study Area for pedestrians and bicyclists. Both the Town and the Village should undertake all measures within their respective power to ensure that the community's goals of providing alternatives to vehicular transportation, at all opportunities, can be realized.

Police and Fire/Emergency Protection Existing Environmental Setting

The Town of Warwick provides police protection services to the project area. The Town's Department of Police is headquartered along Kings Highway (County Route 13) approximately one mile north of the Village and three miles from the project site. The Department consists of 33 full-time and six part-time police officers, plus civilian support personnel at police headquarters. It operates seven days a week, 24 hours a day.

Police Department personnel are generally deployed in four areas of the Town with all units ready and able to respond to emergencies. There are generally two patrol cars stationed in the Village of Warwick at any one time, with additional cars stationed in Greenwood Lake, Pine Island, and outside the Village of Warwick. The Police Department also dispatches police, fire and ambulance calls via its Communications Division.

The Study Area falls within the service area of the Warwick Fire District, which also serves the Village of Warwick and other central Warwick areas. The fire districts and companies that service the Study Area have signed a mutual aid agreement whereby fire chiefs can request the participation of neighboring and nearby fire districts during fire events in their service area. The Warwick Fire District lies within mutual aid district #6, which also includes the Warwick #2 (Greenwood Lake), Mid-Orange Correctional Facility, Florida and Pine Island Fire Districts.

According to Assistant Chief Frank Corkum Jr. of the Warwick Fire Department¹⁶ apparatus that the Fire District would use to respond to potential alarms at in the Study Area include two 1,500 gallons per minute (gpm)/1,000 gallon pumpers; one 3,500 gallon tanker; one 95-foot Tower Ladder and one rescue truck. Additionally, the Fire District has one engine in reserve that is available to respond if needed. The District's personnel include 75 OSHA qualified firefighters, as well as another 50 trained support personnel.

Warwick Community Ambulance Service, Inc. provides emergency medical care and ambulance services in the project area. This Corps is NYS-certified and is located approximately one mile from the project site. All members of the Corps are volunteers and most are trained as EMT-D (Emergency Medical Technicians - Defibrillator). The district participates in the State and County 911 Emergency System and offers reciprocal aid to other corps in the Orange County and northern New Jersey area. The Corps has 25 Emergency Medical Technicians and approximately 15 first aid/drivers, and operates three ambulances, all

¹⁶ Correspondence dated June 23, 2004 in Appendix C of The Fairgrounds Draft Environmental Impact Statement, prepared by Tim Miller Associates, Inc., January 19, 2005

equipped with defibrillators and other necessary equipment. Response time is approximately six minutes on average.

Police and Fire/Emergency Protection Potential Environmental Impacts

The Warwick Police District has adequate resources to provide police protection for the proposed Route 94 Study Area. According to Police Chief Thomas McGovern, Jr.,¹⁷ the average police response time to an emergency situation in the Study Area would be approximately two minutes. No adverse impacts to police protection is anticipated as a result of the action.

The Warwick Fire District has adequate resources to provide fire protection for the proposed CB District. Response time to the Study Area would be between three and five minutes, with the closest station located 2.2 miles away. Apparatus from all three of the Fire District's stations would answer alarms at the proposed CB District. Response times to the District would be expected to be relatively low due to the close proximity of the nearest stations.

Warwick Community Ambulance Service, Inc. would be able to provide emergency services to the proposed CB District. Therefore no significant impacts to the Ambulance Corps are anticipated.

Police and Fire/Emergency Protection Proposed Mitigation Measures

No adverse impacts on police and fire/emergency protection has been identified and therefore no mitigation is required.

CULTURAL RESOURCES

Existing Environmental Setting

The geological setting of the Study Area is in the Upper Cambrian Wappinger Group including Fishkill limestone and dolostone. The depth to bedrock is generally greater than six feet. A Phase 1 Cultural Resource Survey, including a Phase 1A Literature Search and Sensitivity Assessment and a Phase 1B Survey, was conducted within the Study Area during the review of a proposed subdivision of the Miller Farm on the south side of Route 94. The study

¹⁷ Correspondence dated May 5, 2004 in Appendix C of The Fairgrounds Draft Environmental Impact Statement, prepared by Tim Miller Associates, Inc., January 19, 2005.

was prepared by BTK Associates, Inc. in June 2005. Additional Phase 1 Survey work was carried out for the proposed Orchard Valley Subdivision, proposed for a portion of the Pennings Farm on Route 94 and Warwick Turnpike. Both studies have identified a high potential for prehistoric and historic sensitivity within the Study Area.

A summation of the findings of the Miller Farm Phase 1 review have been included herein. The review included background research, analysis of previous cultural research surveys in the vicinity, historic research, and a pedestrian reconnaissance. Site file reviews were conducted to identify known archaeological and historic sites and National and State Registers of Historic Places properties within two miles of the Study Area. This research was conducted in order to assess the potential for prehistoric and historic cultural resources within the proposed project area. This sensitivity assessment also analyzed previous land uses, previous impacts, and slope of the project area. Previously documented prehistoric and historic sites within a two-mile radius of the Study Area were identified. Based on this research and a visual inspection of the property, the potential of the project area for containing undiscovered prehistoric and historic cultural resources was assessed.

There are 11 previously documented prehistoric sites, collectively ranging in age from the Archaic through Contact period, that are present within a two-mile radius of the project area. There are five site reports from directly across Route 94 from the Miller Farm. The well-known Contact village of Mistucky is a short distance to the northeast. Also within the Study Area is a prehistoric rock shelter site. Curtie Cantine Brook bisects the Miller Farm and would have provided a year-round source of drinking water.

The lands in the vicinity of the project area were initially settled in the late 18th and early 19th centuries. By 1805, the earliest available historic map indicates that several farmsteads were in the vicinity and the project area was settled and under cultivation. Cartographic and documentary evidence indicates that late 19th and 20th Century use of the project area was primarily agricultural. Two historical architectural resources, a barn and springhouse, are located near Route 94. An historic cemetery, dating from at least 1816, is present on a knoll.

Due to the identification of a 19th century farmstead within the Miller Farm and the potential for other associated historic sites, much of the project area was evaluated as having the potential for containing or having once contained prehistoric sites. A Phase 1B Cultural Resource Investigation survey was therefore conducted.

The Phase 1B archaeological survey divided the project impact zone into two test areas. Area 1 is a plowed, gently sloping cornfield in the southeast corner of the Miller property. It is bounded on the north by alfalfa fields, which includes an historic cemetery, by farm fields on the east and south, and by a ravine, the Curtie Cantine Brook, and Area 2 on the west. Area 1 was plowed and disked, and after it had received sufficient rain, systematically visually inspected and surface collected. Historic finds from the surface collection were limited to a button, a bullet and a few ceramic shards. These finds are not considered significant. Sixteen prehistoric lithics were found in Area 1. The only temporally diagnostic find was a Brewerton Side Notched-like projectile point, believed to date to c. 3,000 to 2,000 B.C. Other notable

finds include a large quartz crystal and a chert scraper. The remaining finds were associated with the lithic reduction process. Additional investigations of these locations was recommended. A farm animal-watering trough and a dump were not considered significant.

Area 2, a gently sloping alfalfa field located south of the Warwick Drive-In property, was examined with systematic interval shovel testing over all but the steepest sections. No significant cultural material was found and no further investigations were recommended in Area 2.

Potential Environmental Impacts

Given the proximity to drinking water, chert sources and other pre-historic sites, the relatively flat areas of well-drained soils within the Study Area have the potential to contain prehistoric sites. Any other potential historic deposits that may be identified would be derived from agricultural activities or from peripheral, off-site activities.

If construction is proposed within the Study Area, an in-depth cultural resource investigation should be undertaken well in advance to assess any potential adverse impacts on cultural resources. Consideration should be given to providing permanent protection for any resources identified.

Furthermore, any examples of 18th or 19th Century architecture within the Study Area should be incorporated into the development plans so that identified and inventoried historic structures or other historic resources are not impacted by proposed development activities.

Proposed Mitigation Measures

No adverse impacts have been identified as a result of the proposed Zoning Amendments. Therefore, no mitigation measures are necessary other than the identified need for conducting cultural resource studies on all properties within the Study Area during the SEQR review processes.

ECONOMIC AND FISCAL CONSIDERATIONS

Existing Environmental Setting

This section analyzes the potential municipal and school fiscal implications of the proposed rezoning of lands along the Route 94 corridor in the Study Area. Since this is a Draft Generic EIS, the analysis does not rely on specific project data, rather the study focuses on what likely outcomes would be if the entire area proposed for rezoning is completely built-out under the proposed changes. This analysis does not factor in the phasing of any project proposals on particular parcels of land and it should be recognized that it is unlikely the entire build-out will occur at once or even in a short-term timeframe of less than 10 years. As such, the fiscal

impacts can only be addressed in a broad manner and as project proposals are brought to the Town, it is envisioned that a more detailed analysis would occur at that time.

There are several parcels involved in the rezoning proposal. These parcels are currently zoned as Designed Shopping (DS) and Office/Industrial (OI). Both of the current zones allow large scale retail development and in fact, these parcels in this area are in the process of being developed with "big box" style growth or have been proposed for such development.

The proposed CB district also allows for retail uses to be located in this area, however, it requires a mix of retail, office and residential to transform this auto-centric corridor into a more walkable mixed use center. This proposal seeks to implement the goals of *Comprehensive Plan* whereas the existing zoning has not produced result consistent with these goals. Table 3.2 describes the potential build-out of the proposed rezoning.

# of Parcels	9
# of Acres	91
Total Retail Sq Ft	260,319
Total Office Sq Ft	260,319
Total 1 Bedroom Units	241
Total 2 Bedroom Units	43
Total new residents ¹⁸	452
Total new school age children ¹⁹	21

¹⁸ Based upon a multiplier of 2.1 persons/household for 47 two bedroom apartments and a multiplier of 1.5 persons/household for 244 one bedroom apartments. These multipliers were taken from *Draft Environment Impact Statement* for the *Carvel Property Development* Appendix 14.1 Resident Populations Methodology August 2006, Table A-2, page 4 (Original data source was US Bureau of the Census/HUD American Housing Survey 1987 with data for the Northeast Region of the US). Data on bedroom distributions by type from the *American Housing Survey for NYC Metro Area 2003* which includes Orange County (Table 2-24, page 47) was also utilized. **Note:** The 1.5 persons/household was estimated by GREENPLAN, Inc. because there was no data available for this type of unit in the 1987 or 2003 *American Housing Survey*.

¹⁹ Based upon a multiplier of .2 school age children/household for the two bedroom units and .05 school age children/household for the one bedroom units. These multipliers were also taken from the same sources as noted in the footnote above however; the multiplier for two bedroom units was adjusted to be 50% higher than the Carvel DEIS to be more reflective of the increased housing prices since 1987 which is likely to increase the relative number of children. **Note:** The .05 school age children/household was estimated by GREENPLAN, Inc. because there was no data available for this type of unit in the 1987 or 2003 *American Housing Survey*.

Municipal

The adopted 2010 Town of Warwick budget covering town-wide, town outside village and special district functions is \$26,034,589. This budget covers municipal costs (defined in broad terms) for general government, transportation, public safety, highways, special districts (lighting, sewer, water, fire, ambulance, and park). Revenue to cover budget expenditures is derived from local, state and federal sources. Table 3.3 summarizes the 2010 budget:

Townwide General Fund	
General Government	\$ 2,071,892
Public Safety	193,387
Transportation	854,314
Economic Development	78,950
Culture & Education	338,577
Home & Community	28,150
Fringe Benefits	1,153,040
Debt Service	260,575
Interfund Transfers	86,919
Transfers to Capital	15,000
Subtotal	5,080,804
Town Outside Village General Fund	
General Government	268,750
Public Safety	247,752
Health	2,200
Transportation	10,000
Home & Community Service	235,607
Fringe Benefits	165,349
Transfers to Police Fund	4,051,157
Subtotal	4,980,815
Highway	
Bridges/Drainage	285,175
Machinery	693,580
Debt Service	64,625
Employee Benefits	207,778
Subtotal	1,251,158
Highway Outside Village	
General Repairs	1,163,888
Personal Services	240,000
Road Maintenance	475,000
Employee Benefits	762,936

Table 3.3: Town of Warwick 2010 Adopted Budget	
Debt Service	-
Brush & Weed	304,600
Snow Removal	618,546
Central Garage	8,000
Bridges & Repairs	15,000
Machinery	70,000
Subtotal	3,657,970
Police	6,487,929
Special Districts & Capital	
Recycling (Garbage)	536,677
Fire Districts (4)	2,532,901
Lighting Districts (2)	38,800
Sewer District (1)	456,094
Water Districts (5)	361,384
Park District (1)	33,850
Ambulance (3)	585,505
Beach Recreation	58,602
Community Development	33,000
Capital	
DPW - Dial a bus	30,000
Projects	900,000
Parks	10,000
PDR	1,756,000
Community Preserve	405,000
Water Districts (3)	50,000
Landfill Closure	3,000
Subtotal	7,790,813
PDR Program	836,257
Less Police Transfer	(4,051,157)
Total Budget	\$ 26,034,589

A fiscal analysis examines both the revenue and costs associated with a particular proposal. On the revenue side, the nine parcels involved in analysis are providing money to the town based on the property taxes paid. Table 3.4 describes the 2009 assessed value and property taxes for each parcel:

Table 3.4: 2009 Assessed Value and Property Tax

Study Area Parcels (S-B-L)	Current Land Use	Acres	Assessed Value ²⁰	School Tax	Town Tax	County Tax	Fire & Ambulance Tax	Annual Tax on Property
51-1-5.231	Vacant	5.1	63,000	8,337	1,049	1,517	307	\$11,210
51-1-41	Agriculture	38.0	253,100	33,493	4,214	6,095	1,233	\$45,034
51-1-5.3	Drive-In	11.4	112,500	14,887	1,873	2,709	548	\$20,017
51-1-28.222	Vacant	1.9	30,500	4,036	508	734	149	\$5,427
51-1-2	Bowling Alley	5.5	235,500	31,164	3,921	5,671	1,147	\$41,903
51-1-6.11	Auto Dealer	6.0	239,100	31,640	3,981	5,758	1,164	\$42,543
51-1-28.21	Agriculture	4.0	22,500	2,977	375	542	110	\$4,003
51-1-28.1	Office	11.5	45,100	5,968	751	1,086	220	\$8,025
51-1-36	Farm Market	7.6	151,800	20,088	2,527	3,655	739	\$27,010

The tax rates for school, town, county and fire/ambulance per \$1000 of assessed value are respectively \$132.33, \$16.65, \$24.08 and \$4.87. Total revenue generated by these parcel is \$205, 171.

The total cost to service these nine parcels was reflected in the total budget for 2010. As noted above, the total Town budget, including Town outside Village, was \$26,034,589. To isolate the costs of each parcel is beyond the scope of a generic review. Costs will generally fall into the following categories: highway, emergency services (police/fire/ambulance) and general government. There were no costs associated with the town PDR program or any water or sewer district.

Warwick Valley Central School District

The Warwick Valley Central School District’s total budget for the 2009-2010 school year is \$77,853,468. Total Student enrollment for 2009-2010 year is 4,282 and the total capacity for all schools is 4,881 students. All of the school buildings are utilized under their current capacity.

²⁰ Data obtained from the Town of Warwick Assessor's Office.

Potential Environmental Impacts

Municipal

To examine potential impacts of the proposed rezoning, a build-out analysis was prepared which looked at the potential development for the area under existing Zoning and the proposed Zoning. Table 3.5 summarizes the results of the build-out.

Table 3.5: Comparison of Build-Out Existing vs. Proposed Zoning		
	Existing	Proposed
# of Parcels	9	9
# of Acres	91	91
Total Retail Sq Ft ²¹	626,070	260,319
Total Office Sq Ft	N/A	260,319
Total 1 Bedroom Units	N/A	241
Total 2 Bedroom Units	N/A	43
Total new residents	N/A	452
Total new school age children	N/A	21

The potential revenue was estimated based on the tax rates noted above and compared as shown in Tables 3.6 and 3.7 below. The proposed rezoning anticipates revenues of \$2,338,890 which is more than double the estimate for build-out under existing Zoning which totals \$1,010,642.

Table 3.6: Estimated Revenues for Build-Out – Existing Zoning							
Study Area Parcels (S-B-L)	Potential New Sq Ft (Retail)	Assessed Value ²²	School Tax	Town Tax	County Tax	Fire & Ambulance Tax	Annual Tax on Property

²¹ This figure represents the estimated square footage of existing development plus potential new development.

²² Estimated assessed value provided by the Town of Warwick Assessor's Office.

Table 3.6: Estimated Revenues for Build-Out – Existing Zoning							
Study Area Parcels (S-B-L)	Potential New Sq Ft (Retail)	Assessed Value ²²	School Tax	Town Tax	County Tax	Fire & Ambulance Tax	Annual Tax on Property
51-1-5.231	24,270	485,000	64,180	8,075	11,679	2,362	\$86,296
51-1-41	194,160	3,107,000	411,149	51,732	74,817	15,131	\$552,829
51-1-5.3	48,540	971,000	128,492	16,167	23,382	4,729	\$172,770
51-1- 28.222	21,145	423,000	55,976	7,043	10,186	2,060	\$75,264
51-1-2 ²³	N/A	235,500	31,164	3,921	5,671	1,147	\$41,903
51-1-6.11 ⁶	N/A	239,100	31,640	3,981	5,758	1,164	\$42,543
51-1-28.21 ⁶	N/A	22,500	2,977	375	542	110	\$4,003
51-1-28.1 ⁶	N/A	45,100	5,968	751	1086	219	\$8,025
51-1-36 ⁶	N/A	151,800	20,088	2,527	3,655	739	\$27,010
Total Revenue			\$751,634	\$94,572	\$136,774	\$27,662	\$1,010,642

²³ These five parcels contain existing development and no new development was assumed.

Table 3.7: Estimated Revenues for Build-Out – Proposed Zoning

Study Area Parcels (S-B-L)	Potential New Sq Ft (Retail & Office)	New 1-bed units	New 2-bed units	Assessed Value ²⁴	School Tax	Town Tax	County Tax	Fire & Ambulance Tax	Annual Tax on Property
51-1-5-231	50000	23	4	1,203,000	159,193	20,030	28,968	5,859	\$214,050
51-1-41	50000	23	4	1,203,000	159,193	20,030	28,968	5,859	\$214,050
51-1-5-3	50000	23	4	1,203,000	159,193	20,030	28,968	5,859	\$214,050
51-1-28-222	50000	23	4	1,203,000	159,193	20,030	28,968	5,859	\$214,050
51-1-2	69597	32	6	1,920,000	254,074	31,968	46,234	9,350	\$341,626
51-1-6-11	45037	21	4	1,330,000	175,999	22,145	32,026	6,477	\$236,647
51-1-28-21	75000	35	6	1,830,000	242,164	30,470	44,066	8,912	\$325,612
51-1-28-1	56005	26	5	1,353,000	179,042	22,527	32,580	6,589	\$240,739
51-1-36	75000	35	6	1,900,000	251,427	31,635	45,752	9,253	\$338,067
Total Revenue					\$1,739,478	\$218,864	\$316,532	\$64,016	\$2,338,890

²⁴ Estimated assessed value provided by the Town of Warwick Assessor's Office

Estimating the potential costs associated with a rezoning is more difficult in comparison to estimating revenues. For this proposal, it was determined that the interview method was best suited to address what the likely potential municipal costs would be as a result of the proposed Zoning Amendments. A series of questions was submitted to each major functional department of the Town including the Supervisor and Highway Superintendent²⁵, Police Chief, Fire Chief and Captain of Warwick Community Ambulance Service. Copies of correspondence can be found in Appendix C.

For each department head interviewed, no costs which would not be offset by revenues generated were identified. Each emergency services department acknowledged there would be a likely increase in the number of calls they would be required to respond to, however, none of the departments indicated they would need additional staffing with the exception of the Police department, which noted they are currently operating with three full-time officer vacancies. None of the departments indicated they would require new equipment or facilities to serve the potential build-out of the proposed CB District.

The impacts raised by police, fire and ambulance services relate to project specific impacts which would be addressed at the time of any application proposal submission to the Town Planning Board. Examples of these non-fiscal impacts include adequate water supply for fire suppression, adequate travel lanes for emergency vehicles, and configurations of roadways.

Warwick Valley Central School District

The proposed Zoning Amendments could generate approximately 21 new school age children. This represents a 0.5% increase in total enrollment as reported for the 2009-2010 school year. This estimate does not generate a concern for surpassing existing capacity in the district.

For the per pupil cost, the total enrollment (4,282) is divided by the total budget (\$77,853,468). For the 2009-2010 school year, the total cost per student is \$18,182. For the purposes of evaluating impact, this analysis assumes the total cost to the taxpayers of the Town of Warwick is based solely upon that portion of the school district revenues, which are obtained from the local property tax. This reduces the per pupil cost to \$11,549 ($\$49,451,828/4,282$) and assumes the additional revenues obtained from state and federal aid remain constant. Therefore the total cost to educate the 21 additional children would be \$242,524. Estimated revenues of \$1,739,478 as described in Table 3.7 indicate there is a surplus to the school district.

²⁵ Personal interviews were conducted by Ted Fink from GREENPLAN, Inc. with Ben Astorino, Deputy Highway Superintendent on November 9, 2009 and with Supervisor Sweeton via email.

Proposed Mitigation Measures

Municipal

The only potential impact identified during this analysis is a pre-existing staffing issue with the Police Department. This issue is likely to require resolution regardless of whether the proposal for the CB District Zoning Amendments is adopted by the Town Board. Therefore, no significant fiscal impacts have been identified and no mitigation is required.

Warwick Valley Central School District

The proposed CB District Zoning Amendments is likely to result in sufficient revenues to cover the costs of educating the estimated 21 additional school age children. No significant impact to the Warwick Valley Central School District has been identified and no mitigation is required.

RETAIL MARKET CONSIDERATIONS

Existing Environmental Setting

A Retail Market Analysis was prepared for the Draft GEIS prepared in the 2004 and 2005 timeframe, but that was never completed for the reasons identified under Background and History above in Chapter 2 of this DGEIS. The Retail Market Study has now been updated. The purpose of the retail market analysis, prepared in 2004, remains the same in this current study; however, local market conditions have changed considerably due to the downturn in the national economy that became apparent in 2008. The intent of this 2009-2010 study is to update and expand upon the 2004 market analysis and re-evaluate the potential impacts of a mixed use Community Business (CB) District as a replacement for the Design Shopping (DS) zone and as an alternative to the current DS and Office/Industrial (OI) Zoning District in relation to the current economic environment. The additional purpose is to evaluate the potential impacts of the proposed CB Zoning District on the existing Village of Warwick business community, individually or collectively; and to examine its location in relation to the Village-Town Inter municipal Agreement. These issues must also be evaluated to reflect new provisions in the Village's recently amended Zoning Law. Further, the Town's updated 2008 *Comprehensive Plan* reaffirms the importance of working cooperatively with its villages to encourage commercial development that will enhance the area's rural character and will not negatively impact the Village's downtown economy.

This analysis will evaluate the amount of retail space that can be supported by the existing and potential future population using consumer spending pattern data and sales per square foot of existing retailers. The analysis begins by examining existing land use regulations for commercial uses for the Town and Village of Warwick in the context of the Study Area's existing zoning districts and zones nearby. The primary and secondary trade areas and their socio-economic conditions of the trade area will be identified. While the 2004 study only

considered a five-mile radius for the trade area, in the 2009-2010 market study the primary market area includes a three-mile radius and the secondary market area extends to a five-mile radius.

The consumer spending patterns are then analyzed to identify which products are in demand and existing land use patterns, i.e. the existing retail businesses in the trade area are inventoried. A comparison of the supply (existing retail businesses) and demand (estimates of future demand) will be examined. Finally, the retail market analysis will examine the results of the supply/demand study against the potential CB uses to determine whether any impacts can be anticipated.

The Study Area under consideration for this rezoning is located in the southern end of the Town of Warwick on State Route 94 at Warwick Turnpike approximately two miles southwesterly of the Village of Warwick downtown. Surrounding land uses include preserved farmland to its north and east; single family residential development, Warwick School District property are to its south and west. Zoning in the immediate area of the site is Suburban Residential Low Density (SL) and Rural (RU). From a land use perspective, the pastoral environmental setting was the inspiration for proposing the rezoning of this area for the CB District. The analysis, which follows, will present the rationale, from an economic perspective, for creating a planned mixed-use area with design standards to minimize impact more effectively than the current DS zoning allows.

Town of Warwick Non-Residential or Mixed-Use Zoning

The purpose of the Community Business District is to provide a place for attractive development of business activities that serve community needs and to promote a place in the Town where affordable housing can be integrated with businesses in a traditional manner. A limited number of curb cuts along NYS Route 94 are required by the Town's existing Marginal Access Road standards (which have not been proposed for modification), to minimize conflicts with through traffic and to conserve the capacity of the roadway, while providing linkages between business establishments on adjacent parcels. Careful review of both site and architectural elements is required in the proposed CB District to enhance the overall quality of site development and promote architectural design that is compatible with the overall historic character of the Village and Town of Warwick.

The CB District encourages development of mixed-use pedestrian oriented neighborhoods designed to minimize traffic congestion, suburban sprawl, infrastructure costs, and environmental degradation. With the above in mind, it can be presumed that the scale of the uses allowed in the CB district are more consistent with the overarching goal to maintain the Town's rural character and promote pedestrian-friendly commercial areas to serve surrounding neighborhoods than the existing DS and OI zones. In fact the stated purposes of the OI and the DS districts in the Zoning Law indicate that they are intended to support more intense uses as shown in the italicized text below:

- The purpose of the Office and Industrial Park District is to allow for the continuation of viable agricultural uses and the *development of planned office and light industrial uses such as the airport and light industry, that might negatively affect residential areas and are best segregated from other land uses.*
- The purpose of the Designed Shopping District is to *allow community-scale commercial uses that rely heavily on automobile and truck access and that would not be compatible with a traditional hamlet neighborhood.*

Another district that allows commercial development similar to the TN-O is the LB (Local Hamlet Business District). Its purpose “*is to encourage increased pedestrian-oriented commercial and retail activity in the Town’s hamlets and create a location where greater flexibility is provided for mixed use of commercial and residential uses within individual structures to provide a variety of housing options and lower business costs.*”

Table 3.8 (Excerpt of Permitted Uses in the TN-O, OI, LB, DS and CB Town of Warwick Zoning) lists non-residential uses and indicates in which districts they are allowed either “As of right” (P) or as a “Special Use” subject to certain conditions (S). The CB and TN-O districts apply design and size limitations that are more restrictive than those applied to the DS and OI zoning districts. The only use permitted as of right in the CB district is “Commercial agricultural operations... Keeping, breeding and raising of cattle (including dairies), sheep, goats, pigs and horses.” Non-residential Special Permit Uses proposed to be allowed in the CB District are:

- Dormitory accommodations for housing migratory agricultural workers
- Farm markets & retail establishments of 4,000 sq. ft. or more devoted primarily to sale or production of farm & food processing supplies
- Manufacturing, assembling, converting, altering, finishing, cleaning or processing products where goods...are sold primarily on premises
- Secondary use of agricultural wastes
- Storage & sale of seed, feed, fertilizer, manure & other agricultural products
- Animal hospitals, veterinary Kennels
- Bowling alleys, dance halls, physical fitness studios and similar commercial recreation activities in fully enclosed structures
- Business and professional offices
- Commercial garages or parking lots
- Commercial group of motor vehicle use Nos. 48-51
- Dance instruction studios, physical fitness studios and similar commercial recreation activities in fully enclosed structures
- Hotels & motels, Conference Center, tourist cabins, health spas, health resorts
- Personal service establishments
- Retail stores, banks, convenience stores and drive-in uses
- Theaters including drive-in theaters
- Indoor recreation establishments and/or sports, such as tennis & skating
- Nursery schools

- Printing
- Service establishments ... other than of a personal nature, including launderette
- Eating & drinking places, delicatessen, coffee shop, and luncheonette
- Outdoor amusement (e.g. game farms, skating, museum villages, pools, beaches, fishing, hunting, ski, snowmobile, similar establishments)

TABLE 3.8: TOWN OF WARWICK PERMITTED NON-RESIDENTIAL USES					
Uses Permitted as of Right (P) or Special (S) Subject to Use Group & Special Conditions	TNO	OI	LB	DS	CB
13. Building housing a farm stand for display and sale of agricultural and nursery products grown primarily on land that is considered part of the same farming operation.	S		S		
14. Commercial agricultural operations: b. Keeping, breeding and raising of cattle (including dairies), sheep, goats, pigs and horses.		P		P	P
15. Dormitory accommodations for housing migratory agricultural workers		S		S	S
16. Farm markets & retail establishments of 4,000 sq. ft. or more devoted primarily to the sale or production of farm & food processing supplies		S	S	S	S
19. Manufacturing, assembling, altering, finishing, converting, fabricating, cleaning or any other processing, packaging or repackaging of agricultural products or materials		S		S	S
20. Secondary use of agricultural wastes		S		S	S
21. Storage & sale of seed, feed, fertilizer, manure & other agricultural products		S		S	S
25. Animal hospitals, veterinary Kennels		S			S
27. Bowling alleys, dance halls, fitness studios & similar commercial rec. activities in enclosed structures	S	S	S	S	S
28. Bulk storage, including warehouses; oil, gasoline and gas storage		S			S
29. Business and professional offices	P	S	S	S	S
30. Commercial garages or parking lots	S	S	S		S
31. Commercial group of motor vehicle use Nos. 48-51		S	S		S
32. Commercial lumbering and sawmill operations		S			
33. Conversion of existing residential structures to hotels or motels, residential hotels or tourist homes		S	S		
34. Dance instruction studios, fitness studios and similar commercial rec. activities in enclosed structures	S			S	S
35. Dog kennels		S			

TABLE 3.8: TOWN OF WARWICK PERMITTED NON-RESIDENTIAL USES

Uses Permitted as of Right (P) or Special (S) Subject to Use Group & Special Conditions	TNO	OI	LB	DS	CB
36. Drive-in theaters		S		S	S
37. Eating & drinking places, but excluding drive-in and fast-food restaurants	P	S	S		
38. Eating and drinking places, drive-in restaurants and fast-food restaurants				S	S
39. Extractive operations involving sandpits, gravel banks, removal of topsoil & fill, quarries, mines or other extractive activities excluding fissionable materials		S			X
40. Residential hotels and tourist homes	S		S		
41. Hotels & motels, tourist cabins, health spas & resorts, & tourist homes		S			S
Country Inn (allows 6 to 12 guest rooms; accessory low impact facilities allowed e.g., pool, tennis).					S
43. Manufacturing, assembling, converting, altering, finishing, fabricating, cleaning or any other processing, packing, packaging or repackaging of products or materials		S			
44. Manufacturing, assembling, converting, altering, finishing, cleaning or other processing of products where goods...are to be sold primarily on premises	S	S	S	S	S
45. Miniature golf, batting cages and driving range facilities		S		S	S
46. Mortuaries and funeral parlors	P	S	S		
47. Motor vehicle junkyard &/or dismantling, crushing & recycling operation		S			
48. Motor vehicle laundries		S	S		
49. Motor vehicle repair shop		S	S	S	S
50. Motor vehicle service stations	S	S	S		
51. Motor vehicle sales			S	S	S
52 Motor vehicle sales and services				S	S
54 Outdoor sales lot for boats and travel and camping trailers		S			
55. Personal service establishments	P		S	S	S
56. Printing	S	S	S	S	S
57. Research, design and development laboratories		S			S
58. Retail stores, banks, convenience stores and drive-in uses				S	S
59. Retail & rental shops, banks, excluding auto, vehicular & mobile home retail & rental; no gas sales	P		P		

TABLE 3.8: TOWN OF WARWICK PERMITTED NON-RESIDENTIAL USES					
Uses Permitted as of Right (P) or Special (S) Subject to Use Group & Special Conditions	TNO	OI	LB	DS	CB
60. Sales and storage of lumber and building materials and equipment		S			
61. Scrap iron, scrap paper or rag storage, sorting or baling		S			
62. Service establishments furnishing services, other than of a personal nature, including launderette	S	S	S	S	S
64. Service of farm machinery		S			
67. Theaters except drive-in theaters	P		S	S	
Theaters including drive-in theaters					S
Two-story mixed-use building					S
69. Warehouses		S			
70. Warehouses, self-storage		S			
71. Wholesale sales and storage	S	S	S		
72. Wholesale sales or storage		S			
81. Golf courses which may include driving ranges		S			
82. Heliports & 86. Municipally owned &/or operated airports; airport, airline, & express offices; aircraft repair facilities		S			
83. Indoor recreation establishments and/or sports, such as tennis & skating	P	S		S	S
87. Nursery schools	S		S		S
88. Outdoor amusement establishments such as game farms, skating rinks, museum villages, swimming pools, beaches, fishing & hunting preserves, ski, toboggan & snowmobile areas, & similar establishments		S		S	S

P: Permitted Use S: Special Use All uses in the TN-O, DS and LB Districts shall be subject to § 164-46J (53), (129), and (145).

Village of Warwick Non-Residential Zoning

The Village adopted its current Zoning Law on February 17, 2009 after thorough review and substantial amendments to incorporate recommendations put forth in the *Comprehensive Plan*, which was updated and adopted in 2002. Only the non-residential districts that are comparable to the Town’s non-residential districts and the TND (Traditional Neighborhood Design) overlay district, which is similar to the Town’s TN-O (Traditional Neighborhood

Overlay) district, are addressed in this analysis. The intent of each of these districts are stated in the Zoning Law as shown below.

- The purpose of the Central Business District is to allow development and redevelopment of parcels for retail, office and mixed use developments such as second and third floor apartments over retail uses. It is intended to encourage pedestrian oriented businesses and to strengthen the existing Village core.
- The purpose of the General Commercial District is to allow for development and redevelopment of parcels for retail, office and mixed use developments such as second and third floor apartments over retail uses. This district allows for uses which are more automobile oriented such as gasoline stations.
- The purpose of the Traditional Neighborhood Design Overlay District is to allow for the development of new neighborhoods and the revitalization and expansion of existing neighborhoods, consistent with Village settlement patterns. This includes a mix of housing and commercial uses utilizing pedestrian-oriented design concepts.
- The purpose of the Light Industrial District is to allow for appropriately scaled business operations which are not well suited for residential neighborhood environments such as manufacturing or research and design facilities.

The relevant excerpts from the Village Use Table are shown in the right portion of the Table 3.9 and show whether the use is allowed in a district as of right (P), subject to Planning Board approval on meeting specified conditions (C) or subject to Village Board approval as a special use (S) is indicated in the respective district column. All uses denoted by an asterisk (*), including all special permit uses and conditional uses, also require Site Plan approval by the Planning Board. The left portion of Table 3.9 shows similar uses and zoning districts for the Town of Warwick from Table 3.8 in order to identify overlapping allowable uses within the Town and the Village commercial or mixed-use districts that may impact the economic health of either the Village Downtown or Town.

The non-residential uses that are allowed in any of the Village commercial districts either as of right or as a conditional use that are not allowed in the Town's CB District are: car washes, manufacturing assembly finishing, research and design facilities, contractor's storage yard, and warehouses. These are uses that are currently permitted either in the existing DS or OI zone. Although the retail and service uses that would typically be found in a neighborhood or village downtown area are permitted in the proposed CB District, the fact that the CB provides for design standards and size limitations that do not currently exist in the DS and OI zones indicates that there will be less impact on the overall retail and service activity in the Village than that which currently exists.

CHAPTER 3 EXISTING SETTING, IMPACTS & MITIGATION

TABLE 3.9: TOWN OF WARWICK VIS-A-VIS VILLAGE OF WARWICK PERMITTED NON-RESIDENTIAL USES										
TOWN OF WARWICK USES	TNO	OI	LB	DS	CB	VILLAGE OF WARWICK USES	TND	LI	GC	CB
87. Nursery schools	S		S		S	Nursery school (b §145-120)	P*		C*	C*
						Day care			C*	C*
13. Building housing a farm stand for display and sale of agricultural and nursery products grown primarily on land that is considered part of the same farming operation.	S		S			Buildings, or stands for agricultural product sales			P*	P*
						<i>Specified in TND: Open market</i>	P*			
29. Business and professional offices	P	S	S	S	S	Business/Professional/Govt. offices	P*	P*	P*	P*
						<i>Specified in TND: Live-work</i>	P*			
46. Mortuaries and funeral parlors	P	S	S			Funeral homes/Mortuaries	P*	P*	P*	P*
58. Retail stores, banks, convenience stores and drive-in uses				S	S	Banks		P*	P*	P*
59. Retail & rental stores, banks, excluding automotive, vehicular and mobile home retail and rental stores; and no gasoline sales	P		P			Retail stores	P*	P*	P*	P*
<i>Specified in CB: Eating & drinking places, deli, coffee shop, luncheonette</i>					S	<i>Specified in TND: Display gallery</i>	P*			
37. Eating & drinking places, but excluding drive-in and fast-food restaurants	P	S	S			Eating/Drinking establishments	P*	P*	P*	P*
38. Eating and drinking places, drive-in restaurants and fast-food restaurants				S	S					
62. Service establishments furnishing services, other than of a personal nature, including a launderette	S	S	S	S	S	Service establishment other than of a personal nature		P*	P*	P*
						Outlets for laundries/cleaning		P*	P*	P*
67. Theaters except drive-in theaters	P		S	S		Theatres/Cinemas		P*	P*	P*
Theaters including drive-in theaters					S					
56. Printing	S	S	S	S	S	Newspaper printing		P*	P*	P*
44. Manufacturing, assembling, converting, altering, finishing, fabricating, cleaning or other processing of products where goods...are to be sold primarily on premises	S	S	S	S	S	Manufacturing for sale on premises			C*	C*
41. Hotels & motels, tourist cabins, health spas or resorts, & tourist homes		S			S	Hotels/Motels		C*	C*	C*
Country Inn					S					
40. Residential hotels and tourist homes	S		S			<i>Specified in TND: Inn, up to 50 rms; Bed&Breakfast</i>	P*			
50. Motor vehicle service stations	S	S	S			Gasoline service station		C*	C*	C*
52 Motor vehicle sales and services				S	S	Auto sales and service, including repair		C*	C*	C*
48. Motor vehicle laundries		S	S			Car washes		C*	C*	
43. Manufacturing, assembling, converting, altering, finishing, fabricating, cleaning or any other processing, packing, packaging or repackaging of products or materials		S				Manufacturing/assembly/finishing		P*		
57. Research, design and development laboratories		S			S	Research and design facilities		P*		
60. Sales and storage of lumber and building materials and equipment		S				Contractor's storage yard		C*		
27. Bowling alleys, dance halls, physical fitness studios and similar commercial recreation activities in fully enclosed structures	S	S	S	S	S	Indoor Recreation (e.g. batting cages, tennis courts)		P*		
69. Warehouses		S				Warehouse		S*		

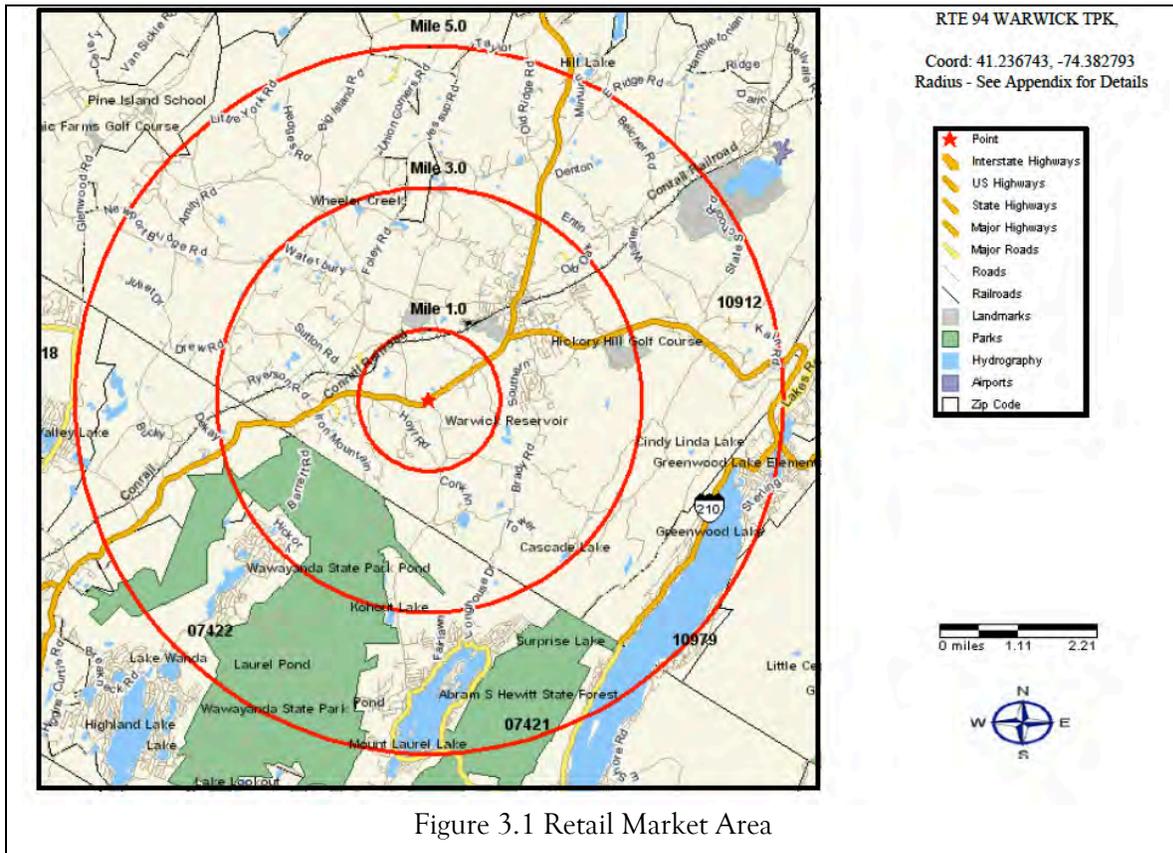
Trade or Market Area

The trade or market area is defined as the geographic area from which a commercial district is most likely to draw its consumers. The trade area for a Village business district can sometimes be difficult to define because consumers typically extend beyond the neighborhoods associated with the business district. This is particularly true for the Village of Warwick due to the relatively strong tourism industry. Warwick's proximity to New York City and its densely populated suburbs, make retail trade more complex than the typical village commercial district due to the many urban dwellers that are attracted to the area for a day in the country.

Effective buying income reports obtained from Nielson Claritas, estimated 2008 and projected 2013 socio-economic data for the one mile, one to three mile and three to five mile radii of State Route 94 and Warwick Turnpike. The 5 mile study area used in the prior draft 2004 market analysis is appropriate for the existing DS and OI zoning given the intent to allow more intense uses found in a Community Shopping Center. However, to meet its intent of being compatible with the existing Village and the Town business community, CB zoning may allow similar uses to those allowed by DS but also permits housing and must meet design standards that will alleviate traffic congestion and enhance the traditional small town character.

Therefore, the primary market area considered in this study is a three-mile radius to arrive at a more realistic demand for the potential retail and service uses. In order to assess whether the estimated demand in the primary market area could support additional retail uses that may compete with the Village Downtown, a one mile sub-market area was also obtained to consider demand in the immediate vicinity of the subject site. The secondary market area takes in the three to five mile radius because there are potential customers from beyond the primary market due to the site's location on a State Highway and its close proximity to the Village of Warwick downtown area. The Retail Market Area is shown on Figure 3.1 below.





Trade Area Socio - Economic Characteristics

Tables 3.10 and 3.11 display the estimated population, numbers of households and families, median effective buying income and median housing values for the primary market area (three mile radius) and the immediate one-mile radius within, along with the secondary market area (three to five miles) and the Total five mile radius. According to the 2000 Census the population within the five mile radius of the site was 27,159 in 9,554 households, amounting to 2.84 persons per household.

As shown in Table 3.10, the estimated 2008 population is 28,169 in 10,087 households, indicating a moderate population increase of 4 percent and somewhat smaller 2.77 persons per household size. Table 3.11 shows that the population is expected to increase about 3 percent to 28,943 by 2013 and household will be about the same as 2008 with 2.79 persons per household. Although the 2008 population of the primary trade area is less than half of the total at an estimated 11,310, within that three mile radius are the 558 people within one mile of the site with the highest median income (\$88,750) and the highest median housing value (\$385,106) of all three sub-areas. This is also expected to be the case in 2013 when the

projected primary trade area population 11,378 will include 574 with median income of \$100,033 (nearly 110% of the median income for the total area) and median housing value of \$450,000 (approximately 113% of the area median housing value). According to the U.S. Census Bureau, the estimated 2008 median household income was \$71,678 in Orange County, New York. Therefore, the primary and secondary trade areas include households with incomes considerably higher than the county-wide median and households that are among the highest income in the County concentrated within one mile of the site.

Table 3.10: 2008 Estimated Socio Economic Characteristics of Primary (3 Mile Radius) and Secondary (3 to 5 Mile Radius) Trade Areas Route 94 at Warwick Turnpike, Warwick, NY 10990

Description	Radius 1	% of	Radius 2	% of	Radius 3	% of	Total
2008 Demographic Totals	0 - 1 mile	5 Mile	1 - 3 miles	5 Mile	3 - 5 miles	5 Mile	0-5 Miles
Population	558	1.98%	10,752	38.17%	16,859	59.85%	28,169
Households	192	1.90%	4,003	39.68%	5,892	58.41%	10,087
Families	155	2.10%	2,849	38.56%	4,384	59.34%	7,388
Group Quarters Population	2	0.28%	199	28.03%	509	71.69%	710
Housing Units	202	1.82%	4,141	37.29%	6,761	60.89%	11,104
2008 Average Household Size	2.9		2.64		2.78		2.79*
2008 Median Age	39.35		39.4		37.87		38.87*
2008 Median Household Income	\$88,750	108.22%	\$78,072	95.20%	\$79,203	96.58%	\$82,008*
2008 Median Owner-Occupied Housing Value	\$385,106	113.03%	\$342,374	100.48%	\$294,690	86.49%	\$340,723*

Source: Prepared October 1, 2009 by Claritas, Inc.; Site Reports for Town of Warwick, NY as ordered by GREENPLAN, Inc.

Table 3.11: 2013 Projected Socio Economic Characteristic of Primary (3 Mile Radius) and Secondary (3 to 5 Mile Radius) Trade Areas Route 94 at Warwick Turnpike, Warwick, NY 10990

Description	Radius 1	%	Radius 2	%	Radius 3	%	Total
2013 Demographic Totals	0 - 1 miles		1 - 3 miles		3 - 5 miles		0-5 miles
Population	574	1.98%	10,804	37.33%	17,565	60.69%	28,943

Table 3.11: 2013 Projected Socio Economic Characteristic of Primary (3 Mile Radius) and Secondary (3 to 5 Mile Radius) Trade Areas Route 94 at Warwick Turnpike, Warwick, NY 10990

Description	Radius 1	%	Radius 2	%	Radius 3	%	Total
2013 Demographic Totals	0 - 1 miles		1 - 3 miles		3 - 5 miles		0-5 miles
Households	199	1.90%	4,048	38.74%	6,201	59.35%	10,448
Families	160	2.10%	2,881	37.78%	4,585	60.12%	7,626
Group Quarters Population	1	0.14%	202	28.13%	515	71.73%	718
Housing Units	209	1.81%	4,188	36.30%	7,139	61.88%	11,536
2013 Average Household Size	2.88		2.62		2.75		2.77
2013 Median Age	40.69		40.22		38.72		39.87
2013 Median Household Income	\$100,033	109.33%	\$86,945	95.03%	\$87,500	95.64%	\$91,493
2013 Median Owner-Occupied Housing Value	\$450,000	112.56%	\$396,537	99.18%	\$352,801	88.24%	\$399,799

Source: Prepared October 1, 2009 by Claritas, Inc.; Site Reports for Town of Warwick, NY as ordered by GREENPLAN, Inc.

Income Distribution

Effective Buying Income (EBI) is defined as a measurement used in marketing equivalent to disposable or net income after taxes. The 2008 EBI estimated distribution and 2013 EBI projected distribution for the primary and secondary trade areas were provided by Nielson Claritas and are displayed in Tables 3.12 and 3.13, respectively.

Table 3.12: Effective Buying Income 2008 Report Route 94 at Warwick Turnpike, Warwick, NY 10990

Description	Radius 1	% of	Radius 2	% of	Radius 3	% of	Total
2008 Effective Buying Income (EBI) Distribution	0 - 1 miles	Radius 1	1 - 3 miles	Radius 2	3 - 5 miles	Radius 3	0-5 miles
EBI less than \$15,000	8	4.17	369	9.22	375	6.36	752
EBI \$15,000 - \$24,999	8	4.17	323	8.07	429	7.28	760
EBI \$25,000 - \$34,999	18	9.38	418	10.44	499	8.47	935
EBI \$35,000 - \$49,999	30	15.63	594	14.84	964	16.36	1,588
EBI \$50,000 - \$74,999	53	27.60	927	23.16	1,577	26.77	2,557

Table 3.12: Effective Buying Income 2008 Report Route 94 at Warwick Turnpike, Warwick, NY 10990

Description	Radius 1	% of	Radius 2	% of	Radius 3	% of	Total
2008 Effective Buying Income (EBI) Distribution	0 - 1 miles	Radius 1	1 - 3 miles	Radius 2	3 - 5 miles	Radius 3	0-5 miles
EBI \$75,000 - \$99,999	41	21.35	726	18.14	1,150	19.52	1,917
EBI \$100,000 - \$149,999	23	11.98	453	11.32	705	11.97	1,181
EBI \$150,000 - \$249,999	6	3.13	111	2.77	122	2.07	239
EBI \$250,000 - \$499,999	3	1.56	37	0.92	43	0.73	83
EBI \$500,000 or more	3	1.56	46	1.15	28	0.48	77
	193	100%	4004	100%	5,892	100%	10,092
2008 Est. Average Effective Buying Income	\$81,045		\$70,625		\$68,761		
2008 Est. Median Effective Buying Income	\$65,278		\$58,041		\$60,765		

Source: Prepared October 1, 2009 by Claritas, Inc.; Effective Buying Income 2008 Reports for Town of Warwick, NY as ordered and further aggregated by GREENPLAN, Inc.

Table 3.13: Effective Buying Income 2013 (5 Year Est. Forecast) Route 94 at Warwick Turnpike, Warwick, NY

Description	Radius 1	% of	Radius 2	% of	Radius 3	% of	Total
2013 Effective Buying Income (EBI) Distribution	0 - 1 miles	Radius 1	1 - 3 miles	Radius 2	3 - 5 miles	Radius 3	0-5 miles
EBI less than \$15,000	7	3.52	317	7.83	353	5.69	677
EBI \$15,000 - \$24,999	6	3.02	313	7.73	386	6.22	705
EBI \$25,000 - \$34,999	13	6.53	338	8.35	483	7.79	834
EBI \$35,000 - \$49,999	28	14.07	561	13.86	916	14.77	1,505
EBI \$50,000 - \$74,999	48	24.12	834	20.60	1,506	24.29	2,388
EBI \$75,000 - \$99,999	45	22.61	771	19.05	1,253	20.21	2,069
EBI \$100,000 - \$149,999	34	17.09	621	15.34	965	15.56	1,620
EBI \$150,000 - \$249,999	8	4.02	163	4.03	210	3.39	381
EBI \$250,000 - \$499,999	4	2.01	65	1.61	77	1.24	146
EBI \$500,000 or more	5	2.51	65	1.61	52	0.84	122
	198	100%	4,048	100%	6,201	100%	10,447
2013 Est. Avg. Effective Buying Income	\$92,615		\$80,747		\$77,498		
2013 Est. Med. Effective Buying Income	\$73,214		\$64,835		\$65,975		

Source: Prepared October 1, 2009 by Claritas, Inc.; Effective Buying Income 2013 Reports for Town of Warwick, NY as ordered and further aggregated by GREENPLAN, Inc.

Consumer Spending Patterns

The estimates of consumer spending patterns for the primary and secondary trade areas were provided by Claritas in order to evaluate the estimated 2008 and projected 2013 consumer demand for existing and future retail and service establishments in the Town and the Village of Warwick. Claritas uses the most recent U. S. Economic Census along with State sales tax data to arrive at estimates of total spending for consumer goods and services. For each trade area the Consumer Spending Report aggregates total expenditures by category as well as average household expenditures estimated for the most recent year and a projected estimate for five years hence. The strength of consumer demand is indicated further by Claritas' calculation of the Market Index to the United States for each category and both years considered in the report. This index represents the level of consumer spending in a specific trade area in relation to the national average consumer spending for the respective product or service category. A Market Index of 1.0 indicates that the trade area's average household expenditure is equivalent to the national average household expenditure. If the Index is more than 1.0, estimated consumer demand is higher than the national average demand by the percentage over 1.0 and indicates that stores with that product or service may be more successful in that area. Success also depends on existing supply and other factors to be addressed in the "Gap Analysis" section of this report. Conversely, a Market Index less than 1.0 indicates that estimated demand is less than the national average and may be insufficient.

When comparing more than one trade area, as in this study, the most useful estimates from the Consumer Spending Pattern Report are the average household expenditures and the Market Index. In order to illustrate differences in consumer spending patterns, if any, among the immediate one-mile area (Radius 1), the primary market area (Radius 2), and the secondary market area (Radius 3). These estimates for 2008 were taken from the individual reports for each of the three areas and tabulated in Table 3.14 to easily identify consumer demand in each category and facilitate the analysis.

TABLE 3.14: Average Household Expenditures and Market Index to US Average, SR 94 & Warwick Turnpike Trade Area

RETAIL CATEGORY	AVERAGE HOUSEHOLD EXPENDITURES			MARKET INDEX TO USA		
	Radius 1	Radius 2	Radius 3	Radius 1	Radius 2	Radius 3
Total Apparel	6,986	6,223	6,459	1.49	1.33	1.38
Woman's	2,030	1,742	1,830	1.56	1.34	1.41
Men's	1,376	1,222	1,289	1.48	1.31	1.39
Girl's	391	358	380	1.28	1.17	1.25
Boy's	309	283	297	1.29	1.18	1.23
Infant's	113	113	123	1.02	1.02	1.11
Footwear (excluding infants)	685	600	642	1.38	1.21	1.29
Other Apparel Prods/Services	2,082	1,906	1,898	1.61	1.47	1.46
Sports & Recreation	2,235	1,975	2,021	1.48	1.31	1.34

TABLE 3.14: Average Household Expenditures and Market Index to US Average, SR 94 & Warwick Turnpike Trade Area						
RETAIL CATEGORY	AVERAGE	HOUSEHOLD	EXPENDITURES	MARKET	INDEX	TO USA
	Radius 1	Radius 2	Radius 3	Radius 1	Radius 2	Radius 3
TV, Radio & Sound Equipment	2,646	2,424	2,512	1.31	1.20	1.25
Reading Materials	746	707	675	1.43	1.35	1.29
Travel	2,487	2,270	2,254	1.53	1.40	1.39
Photographic Equipment	174	153	159	1.64	1.45	1.50
Total Food at home	7,965	7,340	7,587	1.26	1.16	1.20
Cereal Products	366	340	351	1.26	1.17	1.21
Bakery Products	869	802	824	1.36	1.26	1.29
Fish & Seafood	197	183	186	1.40	1.30	1.32
Meats (All)	1,465	1,345	1,397	1.25	1.15	1.19
Dairy Products	884	817	843	1.31	1.21	1.25
Fresh Milk & Cream	204	189	196	1.21	1.12	1.16
Eggs	74	70	71	1.14	1.07	1.10
Other Dairy Products	606	558	576	1.37	1.26	1.30
Fruits & Vegetables	971	902	917	1.29	1.20	1.22
Juices	276	258	263	1.41	1.32	1.34
Sugar & Other Sweets	497	455	470	1.32	1.20	1.24
Fats & Oils	73	68	70	1.22	1.13	1.17
Nonalcoholic Beverages	860	791	829	1.20	1.10	1.15
Prepared Foods	1,507	1,379	1,437	1.17	1.07	1.12
Total Health Care	4,860	4,531	4,311	1.13	1.06	1.01
Medical Services	2,453	2,266	2,255	1.29	1.19	1.19
Prescription Drugs	2,197	2,075	1,868	.99	.93	.84
Medical Supplies	209	191	189	1.33	1.21	1.20
Total Household Textiles	913	814	825	1.53	1.37	1.39
Domestic Textiles	396	354	361	1.45	1.30	1.33
Window & Furniture Covers	516	459	463	1.60	1.43	1.44
Total Furniture	1,174	1,050	1,068	1.46	1.31	1.33
Bedroom Furniture	309	279	285	1.40	1.26	1.29
Living/Dining Room Furniture	532	473	478	1.50	1.33	1.35
Other Furniture	333	298	305	1.46	1.31	1.34
Major Appliances	462	407	427	1.42	1.25	1.32
Small Appliance/Houseware	1,009	878	894	1.50	1.31	1.33
Misc Household Equipment	728	631	660	1.45	1.25	1.31
Personal Care Products & Services	1,347	1,249	1,272	1.27	1.17	1.20
Personal Expenses & Services	2,490	2,272	2,226	1.48	1.35	1.32
Smoking Prods/Supplies	1,017	974	1,124	1.20	1.15	1.33
Total Education	2,561	2,340	2,269	1.53	1.40	1.35
Room & Board	182	158	157	1.57	1.36	1.35
Tuition/School Expenses	2,379	2,182	2,112	1.53	1.40	1.35
Pet Expenses	765	619	663	1.46	1.18	1.26
Day Care	475	420	434	1.52	1.35	1.39
Contributions (All)	3,103	2,778	2,524	1.65	1.48	1.35
Housekeeping Supplies	497	449	464	1.37	1.24	1.28
Total Food Away From Home	6,761	6,245	6,429	1.35	1.25	1.28
Breakfast & Brunch	534	499	512	1.24	1.16	1.19
Dinner	2,044	1,892	1,934	1.43	1.32	1.35
Lunch	1,866	1,718	1,778	1.31	1.21	1.25
Snacks & Nonalcoholic beverages	855	788	835	1.30	1.20	1.27
Catered Affairs	125	111	111	1.60	1.43	1.42
Food & Nonalcoholic beverages on Trips	1,339	1,236	1,259	1.36	1.25	1.28
Total Alcoholic Beverages	1,841	1,719	1,732	1.31	1.22	1.23
Alcoholic Beverages at Home	1,182	1,100	1,110	1.26	1.17	1.18
Alcoholic Beverages Away from Home	659	619	622	1.40	1.32	1.33
Household Services	763	771	761	1.31	1.33	1.31

RETAIL CATEGORY	AVERAGE	HOUSEHOLD	EXPENDITURES	MARKET	INDEX	TO USA
	Radius 1	Radius 2	Radius 3	Radius 1	Radius 2	Radius 3
Household Repairs	2,008	1,675	1,728	1.73	1.44	1.49
Total Housing Expenses	1,729	1,638	1,674	1.34	1.27	1.30
Fuels & Utilities	508	487	497	2.49	2.38	2.43
Telephone Services	1,221	1,150	1,177	1.12	1.06	1.08
Total Transportation Expenses	10,653	8,742	9,424	1.42	1.16	1.25
New Autos/Trucks/Vans	4,329	3,871	3,943	1.46	1.30	1.33
Used Vehicles	2,435	1,740	2,096	1.32	.94	1.14
Boats & Outboard motors	524	310	387	1.80	1.07	1.33
Towing Charges	7	7	8	.83	.85	1.03
Gasoline	2,997	2,463	2,666	1.38	1.13	1.23
Diesel	27	20	22	1.67	1.24	1.39
Rented Vehicles	335	330	301	1.57	1.55	1.41
Automotive Maintenance/Repair/Other	2,640	2,223	2,398	1.40	1.18	1.27
Total Specified Consumer Expenditures	\$71,038	\$63,515	\$64,974	1.39	1.24	1.27

Source: Claritas, Inc., Consumer Spending Patterns 2008 as ordered for Market Area by GREENPLAN, Inc.; Table Format prepared by GREENPLAN, Inc. December, 2009.

The estimated projections for 2013 were not included in Table 3.14 because the Market Index in each category was virtually the same as its 2008 counterpart. The only categories in the primary trade area or the area within one mile of the site with a Market Index less than 1.0 are prescription drugs, towing charges and used vehicles. The prescription drugs category is the only one with a Market Index less than 1.0 in the secondary trade area. The higher disposable income of the households within one mile of the site is apparent in the considerably higher average household Total Consumer Expenditures and the bottom line Market Index which, at 1.39, is at least 0.12 higher than the primary and secondary market areas.

The average household expenditures and market index of the categories with a 1.50 Market Index or higher are highlighted in bold in Table 3.14 and all are highest in the immediate one mile area (Radius 1) of the site. These categories include Women's Apparel and Other Apparel, Travel, Photographic Equipment, Total Household Textiles, Window and Furniture Covers, Living/Dining Room Furniture, Small Appliance/Houseware, Day Care, Contributions, Catered Affairs, Total Education, Fuel & Utilities, Diesel Fuel, Boats & Outdoor Motors, and Rented Vehicles.

The socio-economic characteristics and consumer spending patterns of the Warwick area indicate that the both the Primary and Secondary trade areas include a large number of households with incomes above the area median household income. The immediate area within one mile (Radius 1) of the SR 94 and Warwick Turnpike site included the highest income households. The highest Market Index of the three sub-market areas considered in the 45 categories for which estimated spending was reported in Radius 1. Furthermore, the Market Index for nearly all categories in the three trade areas was at least 1.25 (or 25 points higher than the national average per household expenditures) which indicates strong consumer demand. These initial findings point to a positive outlook for retail and service establishments

in the area that lead to closer scrutiny of whether the demand is being met by the existing supply of consumer goods and services. The next section of this report compares the estimated demand against the supply to identify specific demands that exceed the supply and types of stores that could be added to the market area to satisfy unmet demand.

SUPPLY-DEMAND ANALYSIS

Another term for supply / demand analysis is “gap analysis” which refers to the instances where demand exceeds supply with the “gap” being the unmet demand represented by the estimated dollar amount of demand exceeding supply. The analysis of potential impact on the retail / service business community of Warwick begins with an inventory of the existing establishments in the Town and Village of Warwick. This inventory provides the basis of the supply estimate to calculate the difference. The data from the 2004 study was based on a list that the Town Assessor provided which was checked in a field study by GREENPLAN, Inc. The inventory of businesses was then categorized according to retail categories and the Assessor’s list identified the approximate square foot area of each business establishment according to its address. The square footages were then aggregated for each retail category and subtotals for each category are shown in separate sections of Table 3.6 for the Town of Warwick, the Village of Warwick, and the Total of both. For this current study the establishments were checked by address against current addresses in the Yellow Pages website which allows reverse address lookup. There were no changes in occupancy identified; however, even if there were any undetected changes, it was assumed that the square footages would not be significantly different for the individual categories or for total retail square /footages.

Supply: Existing Retail Business in Warwick

The second column in Table 3.15 lists the Sales per Square Foot for the respective category as reported for Community Shopping Centers in the Urban Land Institute’s most recent edition of Dollars & Cents of Shopping Centers: 2008. This periodic publication reports trends in neighborhood, community and regional shopping centers including estimated sales per square foot for stores in each type of center and is considered the industry standard for such data. The result of multiplying the square footage by sales per square foot is the Supply in each category expressed as a dollar amount. This methodology differs from the 2004 study in that most of the Supply figures were obtained from the Claritas Business Facts: Retail SIC Summary, 2003 for the 5 Mile trade area and sales per square foot was only used to estimate supply for Children’s Apparel because that category was not included in the 2003 Claritas Retail Summary.

It is important to use the sales per square foot methodology to present a clearer sense that the stores included in the Supply estimate are within the Town or the Village of Warwick because the primary purpose of this study is to evaluate the potential impact on the Warwick business community, particularly in the Village. The Town Comprehensive Plan has been updated to reaffirm their commitment to consider impacts on Village Downtown in land use and zoning

actions. The Village has recently amended its Zoning Law with measures to preserve community character. Furthermore, both the Town and the Village are bound by the Intermunicipal Agreement to consider the impacts of their decisions on the other municipality. Relating the supply estimate to the square footage separately for the Village and for the Town is necessary to identify potential impact of the TN-O zoning, specifically, on the Village Downtown. These calculations are displayed in Table 3.15 for the Town, the Village and the combined Total of both.

TABLE 3.15: ESTIMATED SUPPLY OF EXISTING RETAIL / SERVICE ESTABLISHMENTS BY CATEGORY IN TOWN OF WARWICK, VILLAGE OF WARWICK AND COMBINED TOTAL, 2008-2009									
Retail Category	2008 Sales per Sq Ft	TOWN SUPPLY ESTIMATE			VILLAGE SUPPLY ESTIMATE			TOTAL SUPPLY ESTIMATE	
		TOWN Stores	Square Footage	TOWN Supply	VILLAGE Stores	Square Footage	VILLAGE SUPPLY	TOTAL Sq. Ft.	TOTAL SUPPLY
Appliances	\$302.20	1	1,980	\$598,356	-	-		1,980	\$598,356
Auto Supply	\$237.92	1	931	\$221,504	1	2,984	\$709,953	3,915	\$931,457
Books	\$246.02	-	-	\$0	3	9,844	\$2,421,821	9,844	\$2,421,821
Building Materials	\$388.65	5	14,548	\$5,654,080	1	4,400	\$1,710,060	18,948	\$7,364,140
Children Wear	\$240.37	1	3,993	\$959,797	-	-		3,993	\$959,797
Crafts	\$132.58	-	-	\$0	1	2,676	\$354,784	2,676	\$354,784
Drug Store	\$429.07	3	5,562	\$2,386,487	2	20,035	\$8,596,417	25,597	\$10,982,905
Eating & Drinking	\$278.42	26	76,310	\$21,246,230	22	46,601	\$12,974,650	122,911	\$34,220,881
Electronics	\$302.20	-	-		2	5,889	\$1,779,656	5,889	\$1,779,656
Family Clothing	\$268.71	-	-		1	1,652	\$443,909	1,652	\$443,909
Flooring	\$451.30	1	1,600	\$722,080	1	1,379	\$622,343	2,979	\$1,344,423
Food Store	\$412.21	6	13,182	\$5,433,752	2	4,954	\$2,042,088	18,136	\$7,475,841
Gas Station	\$1,321.30	4	22,393	\$29,587,871	3	4,776	\$6,310,529	27,169	\$35,898,400
Gift, novelty	\$170.42	2	4,338	\$739,282	4	5,542	\$944,468	9,880	\$1,683,750
Hardware	\$144.44	-	-		1	13,271	\$1,916,863	13,271	\$1,916,863
Hobby & Toy	\$219.85	-	-		5	11,548	\$2,538,828	11,548	\$2,538,828
Home Furnishings	\$209.28	1	1,508	\$315,594	5	11,630	\$2,433,926	13,138	\$2,749,521
Jewelry	\$303.37	-	-		2	2,145	\$650,729	2,145	\$650,729
Liquor	\$396.27	3	6,162	\$2,441,816	3	3,628	\$1,437,668	9,790	\$3,879,483
Misc Retail	\$247.53	4	8,532	\$2,111,926	2	1,856	\$459,416	10,388	\$2,571,342
Music, Video	\$165.63	1	1,000	\$165,630	2	8,963	\$1,484,542	9,963	\$1,650,172

**TABLE 3.15: ESTIMATED SUPPLY OF EXISTING RETAIL / SERVICE ESTABLISHMENTS BY CATEGORY
IN TOWN OF WARWICK, VILLAGE OF WARWICK AND COMBINED TOTAL, 2008-2009**

		TOWN SUPPLY ESTIMATE			VILLAGE SUPPLY ESTIMATE			TOTAL SUPPLY ESTIMATE	
Optical	\$363.60	2	2,000	\$727,200	1	1,555	\$565,398	3,555	\$1,292,598
Pet Store	\$197.74	1	1,000	\$197,740	-	-		1,000	\$197,740
Shoes	\$189.77	1	1,980	\$375,745	-	-		1,980	\$375,745
Sporting Goods	\$220.87	-	-		2	4,975	\$1,098,828	4,975	\$1,098,828
Supermarket	\$485.75	1	48,164	\$23,395,663	-	-		48,164	\$23,395,663
Woman's Clothing	\$220.84	2	2,470	\$545,475	2	8,772	\$1,937,208	11,242	\$2,482,683
Totals		66	217,653	\$97,826,228	68	179,075	\$53,434,084	396,728	\$151,260,312

Source: Sales per Square Foot from Dollars & Cents of Shopping Centers: 2008, Urban Land Institute; Inventory from Town of Warwick Assessor, categorized, updated and Supply estimated by GREENPLAN, Inc. 2004 and December, 2009.

As shown in the Table 3.15, the total 134 establishments in the inventory are evenly distributed, with 66 stores in the Town and 68 stores in the Village. However, the Town portion (217,653 square feet) of total retail area (396,728 square feet) is over 38,000 square feet more than the Village portion (179,075 square feet). This is primarily due to the one 41,864 square foot supermarket in the Town which also accounts for \$23,395,663 of the Town’s estimated total Supply of \$97,826,228 and the combined total estimated Supply of \$151,260,312 found in the bottom right cell of Table 3.15.

The largest category of establishments is Eating and Drinking places with 26 restaurants (76,310 square feet) amounting to a Supply estimate of \$21,246,230 in the Town and 22 restaurants (46,601 square feet) that amount to a \$12,974,650 Supply estimate in the Village. Restaurants account for \$34,220,881 or nearly one-quarter (23%) of the combined total Supply estimate. The category that tends to skew the total Supply most significantly is Gas Stations due to the fact that its estimate results from an extremely high \$1,321.30 in sales per square foot. This is the reason that with a combined total square footage of 27,169 (about one-fifth of the total restaurant area), the Gas Station Supply estimate of \$35,898,400 is slightly more than that of Eating and Drinking places and accounts for another one-quarter of the combined total Supply estimate.

The remaining half of the combined Total Supply estimate consists of the other 25 categories 19 of which are represented by 43 establishments in the Village and with 17 categories represented by 36 establishments in the Town’s retail mix. Retail categories, other than Gas Stations and Restaurants, that account for at least \$2,000,000 of the Town’s \$97,826,228 Supply estimate are Building Materials, Food Stores, Liquor Stores, Drug Stores, and Miscellaneous Retail. The most significant retail uses in the Village, other than Restaurants and Gas Stations, are Drug Store, Hobby & Toys, Books, Home Furnishings, Food Store, Women’s Clothing, Hardware, Electronics, and Building Materials. Because of the more

concentrated Downtown commercial area and smaller spaces than in the Town, a slightly smaller amount was used to consider significance and, individually, these categories accounted for at least \$1,500,000 of the Village’s \$53,434,084 estimated Supply.

Demand: Estimated Consumer Demand in Warwick Primary and Secondary Trade Areas

The total expenditures for each of the consumer products or services were estimated by Claritas in the Consumer Spending Pattern (CSP) report for 2008 (and 2013 projections). Individual reports were prepared for the area within one mile of NYS Route 94 and Warwick Turnpike (Radius 1), the remaining one to three mile portion of the Primary Trade Area (Radius 2) and the Secondary Trade Area within three to five miles of the site (Radius 3). The CSP total estimates were used to estimate Demand for the most closely related category in the Supply estimates. In most cases the retail category in the CSP report was a close enough match to the category used in the Supply inventory, but in some cases, assumptions had to be made with respect to where a particular CSP category for “Demand” corresponded most closely to a category used for “Supply”. For example, Total Food at Home demand fit in the Food Store and the Supermarket categories of Supply. While this Demand estimate was used alone for Food Stores, it was combined with Personal Care Products, Housekeeping Supplies and Smoking Products to account for the typical inclusion of these additional goods in supermarkets.

In other cases there were certain specialty shops in the Supply inventory, such as Jewelry or Hobby / Toy stores for which there were no easily identifiable category in the CSP estimated Demand; therefore, no reasonable Demand could be estimated in those specific categories as indicated by “N/A” in the Supply – Demand Gap Analysis charts prepared for the market area segments. Table 3.16 displays the calculations and the resultant “gap” between Total Supply (including the Town and Village stores) and Primary Trade Area Demand and the gap between Total Supply and Total Primary and Secondary Trade Area Demand. Table 3.17 identifies which Consumer Spending categories were used to estimate Demand for each of the retail inventory categories used to estimate Supply.

TABLE 3.16: TOWN & VILLAGE OF WARWICK SUPPLY – TOTAL PRIMARY & SECONDARY TRADE AREA DEMAND*

Retail Category	Town Sq Ft	Village Sq Ft	TOTAL SUPPLY	DEMAND 0-3 MILES	SUPPLY - DEMAND 0-3 MILES	TOTAL SUPPLY	TOTAL DEMAND 0-5 MILES	SUPPLY- DEMAND 0-5 MILES
Appliances	1,980	-	\$598,356	\$1,718,000	(\$1,119,644)	\$598,356	\$4,237,000	(\$3,638,644)
Auto Supply	931	2,984	\$931,457	\$9,404,000	(\$8,472,543)	\$931,457	\$23,536,000	(\$22,604,543)
Books	-	9,844	\$2,421,821	\$2,973,000	(\$551,179)	\$2,421,821	\$6,952,000	(\$4,530,179)
Building	14,548	4,400	\$7,364,140	N/A	N/A	\$7,364,140	N/A	N/A

TABLE 3.16: TOWN & VILLAGE OF WARWICK SUPPLY – TOTAL PRIMARY & SECONDARY TRADE AREA DEMAND*

Retail Category	Town	Village	TOTAL	DEMAND	SUPPLY -	TOTAL	TOTAL	SUPPLY-
	Sq Ft	Sq Ft	SUPPLY	0-3 MILES	DEMAND	SUPPLY	DEMAND	DEMAND
	Town & Village			0-3 MILES		0-5 MILES		0-5 MILES
Materials								
Children Wear	3,993	-	\$959,797	\$3,175,000	(\$2,215,203)	\$959,797	\$7,889,000	(\$6,929,203)
Crafts	-	2,676	\$354,784	N/A	N/A	\$354,784	N/A	N/A
Drug Store	5,562	20,035	\$10,982,905	\$9,985,000	\$997,905	\$10,982,905	\$36,221,000	(\$25,238,095)
Eat & Drink	76,310	46,601	\$34,220,881	\$28,900,000	\$5,320,881	\$34,220,881	\$70,447,000	(\$36,226,119)
Electronics	-	5,889	\$1,779,656	\$10,209,000	(\$8,429,344)	\$1,779,656	\$25,012,000	(\$23,232,344)
Family Clothing	-	1,652	\$443,909	\$16,224,000	(\$15,780,091)	\$443,909	\$54,278,000	(\$53,834,091)
Flooring	1,600	1,379	\$1,344,423	N/A	N/A	\$1,344,423	N/A	N/A
Food Store	13,182	4,954	\$7,475,841	\$30,911,000	(\$23,435,159)	\$7,475,841	\$75,614,000	(\$68,138,159)
Gas Station	22,393	4,776	\$35,898,400	\$10,518,000	\$25,380,400	\$35,898,400	\$26,358,000	\$9,540,400
Gift, novelty	4,338	5,542	\$1,683,750	N/A	N/A	\$1,683,750	N/A	N/A
Hardware	-	13,271	\$1,916,863	\$6,372,000	(\$4,455,137)	\$1,916,863	\$15,526,000	(\$13,609,137)
Hobby & Toy	-	11,548	\$2,538,828	N/A	N/A	\$2,538,828	N/A	N/A
Home Furnishings	1,508	11,630	\$2,749,521	\$7,861,000	(\$5,111,479)	\$2,749,521	\$19,012,000	(\$16,262,479)
Jewelry	-	2,145	\$650,729	N/A	N/A	\$650,729	N/A	N/A
Liquor	6,162	3,628	\$3,879,483	\$4,629,000	(\$749,517)	\$3,879,483	\$11,167,000	(\$7,287,517)
Misc Retail	8,532	1,856	\$2,571,342	N/A	N/A	\$2,571,342	N/A	N/A
Music, Video	1,000	8,963	\$1,650,172	N/A	N/A	\$1,650,172	N/A	N/A
Optical	2,000	1,555	\$1,292,598	N/A	N/A	\$1,292,598	N/A	N/A
Pet Store	1,000	-	\$197,740	\$2,625,000	(\$2,427,260)	\$197,740	\$6,534,000	(\$6,336,260)
Shoes	1,980	-	\$375,745	\$2,532,000	(\$2,156,255)	\$375,745	\$6,312,000	(\$5,936,255)
Sporting Goods	-	4,975	\$1,098,828	\$8,334,000	(\$7,235,172)	\$1,098,828	\$20,243,000	(\$19,144,172)
Supermarket	48,164	-	\$23,395,663	\$42,155,000	(\$18,759,337)	\$23,395,663	\$103,709,000	(\$80,313,337)
Woman's Clothing	2,470	8,772	\$2,482,683	\$7,363,000	(\$4,880,317)	\$2,482,683	\$18,147,000	(\$15,664,317)
Totals	217,653	179,075	\$151,260,312			\$151,260,312		

*Total Supply (Sq. Ft. * Sales per Sq. Ft.) – Demand (2008 Consumer Spending Total Expenditure) = Gap defined as Oversupply or (Undersupply) of Respective Store Type.
 Sources: Sales per Sq. Ft. from Urban Land Institute, Dollars & Cents of Shopping Centers 2008; Claritas, Inc., Consumer Spending Patterns 2008 as ordered for Market Area by GREENPLAN, Inc.; Calculations of Supply, Demand and Gap and Table Format prepared by GREENPLAN, Inc. December, 2009.

TABLE 3.17: SUPPLY (RETAIL INVENTORY) CATEGORIES RESPECTIVE TO (CONSUMER SPENDING) CATEGORIES USED TO ESTIMATE DEMAND

SUPPLY	DEMAND (One Category)	SUPPLY	DEMAND (More than One Category)	SUPPLY	DEMAND
APPLIANCES:	Major Appliances	CHILDREN WEAR	Girls, Boys, Infants Clothing	BUILDING MATERIALS	N/A
AUTO SUPPLY	Auto Repair/Service/Other	FAMILY CLOTHING	Girls; Boys; Infants; Men's; Women's	FLOORING	N/A
BOOKS	Reading Material	GAS STATION	Gasoline; Diesel; Towing charges	CRAFTS	N/A

TABLE 3.17: SUPPLY (RETAIL INVENTORY) CATEGORIES RESPECTIVE TO (CONSUMER SPENDING) CATEGORIES USED TO ESTIMATE DEMAND

SUPPLY	DEMAND (One Category)	SUPPLY	DEMAND (More than One Category)	SUPPLY	DEMAND
ELECTRONICS	TV Radio & Sound Equipment	HARDWARE	Misc. Household Equipment; Small Appliance /Houseware	GIFT, NOVELTY	N/A
FOOD STORE	Total Food at Home	HOME FURNISHING	Total Furniture; Total Household Textiles	HOBBY & TOY	N/A
LIQUOR	Alcoholic Beverages at Home	DRUG STORE	Prescription Drugs; Medical Supplies;	JEWELRY	N/A
PET STORE	Pet Expenses		Personal Care Products; Smoking Products	MISC RETAIL	N/A
SHOES	Footwear	EATING & DRINKING	Total Food Away From Home;	MUSIC, VIDEO	N/A
SPORTING GOODS	Sports & Rec		Alcoholic Beverage Away From Home	OPTICAL	N/A
WOMEN'S CLOTHING	Women's	SUPERMARKET	Total Food at home; Personal Care Products;		
			Smoking Products; Housekeeping Supplies		

The first shaded column in Table 3.18 identifies the differences between existing Total Supply and Primary Market Area Demand for each of the retail establishment categories. The categories in which there is an oversupply when only the Primary Market Area Demand is considered are Drug stores (\$997,905) and Eating and Drinking establishments (\$5,320,881).

TABLE 3.18: SUMMARY OF TOWN & VILLAGE OF WARWICK SUPPLY vs. DEMAND GAP and POTENTIAL NEW SQ. FT. WITH SUFFICIENT PRIMARY OR TOTAL TRADE AREA DEMAND*

Retail Category	TOTAL SUPPLY Town & Village	DEMAND 0-3 MILES	SUPPLY - DEMAND 0-3 MILES	Sales/ Sq Ft	NEW SF 0-3 Mi .	TOTAL DEMAND 0-5 MILES	SUPPLY- DEMAND 0-5 MILES	NEW SF 0-5 Mi .
Appliances	\$598,356	\$1,718,000	(\$1,119,644)	\$302.20	3,705	\$4,237,000	(\$3,638,644)	12,037
Auto Supply	\$931,457	\$9,404,000	(\$8,472,543)	\$237.92	357,190	\$23,536,000	(\$22,604,543)	95,009
Books	\$2,421,821	\$2,973,000	(\$551,179)	\$246.02	2,240	\$6,952,000	(\$4,530,179)	18,414
Children Wear	\$959,797	\$3,175,000	(\$2,215,203)	\$240.37	9,216	\$7,889,000	(\$6,929,203)	28,827
Drug Store	\$10,982,905	\$9,985,000	\$997,905	\$429.07	0	\$36,221,000	(\$25,238,095)	58,820
Eat & Drink	\$34,220,881	\$28,900,000	\$5,320,881	\$278.42	0	\$70,447,000	(\$36,226,119)	130,113
Electronics	\$1,779,656	\$10,209,000	(\$8,429,344)	\$302.20	27,893	\$25,012,000	(\$23,232,344)	76,877
Family Clothing	\$443,909	\$16,224,000	(\$15,780,091)	\$268.71	58,725	\$54,278,000	(\$53,834,091)	200,343
Food Store	\$7,475,841	\$30,911,000	(\$23,435,159)	\$412.21	56,852	\$75,614,000	(\$68,138,159)	165,300
Gas Station	\$35,898,400	\$10,518,000	\$25,380,400	\$1,321.30	0	\$26,358,000	\$9,540,400	0
Hardware	\$1,916,863	\$6,372,000	(\$4,455,137)	\$144.44	30,844	\$15,526,000	(\$13,609,137)	94,220
Home Furnishings	\$2,749,521	\$7,861,000	(\$5,111,479)	\$209.28	24,424	\$19,012,000	(\$16,262,479)	77,707
Liquor	\$3,879,483	\$4,629,000	(\$749,517)	\$396.27	1,882	\$11,167,000	(\$7,287,517)	18,390
Pet Store	\$197,740	\$2,625,000	(\$2,427,260)	\$197.74	12,275	\$6,534,000	(\$6,336,260)	32,043
Shoes	\$375,745	\$2,532,000	(\$2,156,255)	\$189.77	11,362	\$6,312,000	(\$5,936,255)	31,281
Sporting Goods	\$1,098,828	\$8,334,000	(\$7,235,172)	\$220.87	32,758	\$20,243,000	(\$19,144,172)	86,676
Supermarket	\$23,395,663	\$42,155,000	(\$18,759,337)	\$485.75	3,862	\$103,709,000	(\$80,313,337)	165,339
Woman's Clothing	\$2,482,683	\$7,363,000	(\$4,880,317)	\$220.84	3,705	\$18,147,000	(\$15,664,317)	12,037
Totals	\$151,260,312			217,653				

These amounts represent the estimated consumer expenditures that, theoretically, must exist in the Primary Market to justify the existing square footage that exceeds the space that meets the existing demand based on the sales per square foot estimate.

The second shaded column in Table 3.18 identifies the differences between existing Total Supply and Total Market Area Demand for each of the retail establishment categories. Gas Stations are the only category in which there is an oversupply when the entire Market Area (five mile radius) Demand is considered. The \$9,540,400 amount represents the estimated consumer expenditures that, theoretically, must exist in the Total Market Area to justify the existing square footage exceeding the space that meets existing demand based on the sales per square foot estimate.

In order to determine how much additional space could justifiably be added without causing negative impacts on the existing Town and Village of Warwick Trade area, the undersupply (indicated by negative amounts) in Table 3.17 are divided by the respective Sales per Square Foot. The results of calculations are summarized in Table 3.18 for all store types in which there was an undersupply and are tabulated in the shaded columns entitled “New SF”. The numbers in these columns indicate the additional square footage that could be added to satisfy the unmet demand (undersupply) in the respective Market Area, without creating negative impact on the existing business community within the Total Market Area. The categories in which unmet demand justifies the most retail floor area (over 24,000 Sq. Ft.) are Auto Supply, Electronics, Family Clothing, Food Stores, Hardware, Home Furnishings, and Sporting Goods.

Demand: Estimated Consumer Demand in Warwick Primary Trade Area Related to Supply in Village

The final question to be answered is whether or not the proposed CB zoning of the Study Area will impact the character and existing business community in the nearby Village of Warwick. This section addresses that question by applying the methodology described in the preceding section to include only the Primary Trade Area Demand and only the Village of Warwick Supply. Table 3.19 displays the calculations and the resultant “gap” between Village of Warwick Supply and Primary Trade Area Demand and the gap between Village Supply and Primary Trade Area Demand. Table 3.20 identifies which Consumer Spending categories were used to estimate Demand for each of the retail inventory categories used to estimate Supply.

The first shaded column in Table 3.19 identifies the differences between existing Village Supply and Demand within one mile of the subject site for each of the retail establishment categories. The categories in which there is an oversupply when only considering Demand in this Sub-market of the Primary Area are Auto Supply, Books, Drug stores, Eating and Drinking establishments, Electronics, Food Stores, Gas Stations, Hardware, Home Furnishings, Liquor, Sporting Goods, and Women’s Clothing. These positive dollar amounts represent the estimated consumer expenditures that, theoretically, must exist within one mile of the site

Market to justify the existing square footage in excess of existing Village retail space that meets demand.

The second shaded column in Table 3.19 identifies the differences between existing Village Supply and Primary Market Area Demand for each of the retail establishment categories. Drug Stores, Eating and Drinking Establishments, and Gas Stations are the categories in which there is an oversupply when the Primary Market Area (three mile radius) Demand is considered. The positive dollar amounts represent the estimated consumer expenditures that, theoretically, must exist in the Primary Market Area to justify the existing square footage in excess of the existing Village Supply.

In order to determine how much additional space could justifiably be added without causing negative impacts on the existing Village of Warwick business community, the undersupply (indicated by negative amounts) in the shaded columns of Table 3.19 are divided by the respective Sales per Square Foot. The results of calculations are summarized in Table 3.21 for all store types in which there was an undersupply and are tabulated in the shaded columns entitled “New SF”. The numbers in these columns indicate the additional square footage that could be added to satisfy the unmet demand (undersupply) in the respective Market Area, without creating negative impact on the existing Village business community. If there is an existing oversupply there is no justification for additional retail space which is indicated by a “0” in the “New SF” column. The categories for which there was no available Demand Estimate were eliminated from Table 3.21.

Due to the existing relatively low residential density within one mile of the site there are very few categories in which unmet demand could justify additional space. These categories are Appliances (295 SF), Children’s Wear (649 SF), Family Clothing (3,339 SF), Pet Store (743 SF), Shoes (696 SF), and Supermarket (4,278 SF); however, the amount of New Square Feet is considerably less than the minimum size that would be considered for any new store.

The Primary Trade Area includes the Village because it is within three miles of the site and Demand within that area is critical to the economic well-being of the Village. The only categories in which there is an oversupply are Drug Stores, Eating and Drinking Establishments and Gas Stations. The categories that have sufficient Demand from the Primary Trade Area to justify additional space are Auto Supply (35,611 SF), Books (2,240 SF), Children’s Wear (9,216 SF), Electronics (27,893 SF), Family Clothing (58,725 SF), Food Store (56,852 SF), Hardware (30,844 SF), Home Furnishings (24,424 SF), Liquor (1,891 SF), Pet Store (12,275 SF), Shoes (11,362 SF), Sporting Goods (32,758 SF), Supermarket (38,619 SF), and Women’s Clothing (22,099 SF). Although most of these are stores that would be suitable for the CB district, this analysis indicates that Demand in the Primary Trade Area is sufficient and that the proposed CB zoning will not impact the character of the Village and its existing retail business.

TABLE 3.19: VILLAGE OF WARWICK SUPPLY – PRIMARY TRADE AREA DEMAND*

Retail Category	No. of Stores	Square Footage	VILLAGE SUPPLY	SUBMARKET (0 to 1 Mile) Demand	Village Supply -Submarket Demand	VILLAGE SUPPLY	PRIMARY (0-3 Mile) Demand	Village Supply – Primary Demand
Appliances	-	-		\$89,000	(\$89,000)		\$1,718,000	(\$1,119,644)
Auto Supply	1	2,984	\$709,953	\$507,000	\$202,953	\$709,953	\$9,404,000	(\$8,472,543)
Books	3	9,844	\$2,421,821	\$143,000	\$2,278,821	\$2,421,821	\$2,973,000	(\$551,179)
Building Materials	1	4,400	\$1,710,060	N/A	N/A	\$1,710,060	N/A	N/A
Children Wear	-	-		\$156,000	(\$156,000)		\$3,175,000	(\$2,215,203)
Crafts	1	2,676	\$354,784	N/A	N/A	\$354,784	N/A	N/A
Drug Store	2	20,035	\$8,596,417	\$916,000	\$7,680,417	\$8,596,417	\$9,985,000	\$997,905
Eat & Drink	22	46,601	\$12,974,650	\$1,425,000	\$11,549,650	\$12,974,650	\$28,900,000	\$5,320,881
Electronics	2	5,889	\$1,779,656	\$508,000	\$1,271,656	\$1,779,656	\$10,209,000	(\$8,429,344)
Family Clothing	1	1,652	\$443,909	\$1,341,000	(\$897,091)	\$443,909	\$16,224,000	(\$15,780,091)
Flooring	1	1,379	\$622,343	N/A	N/A	\$622,343	N/A	N/A
Food Store	2	4,954	\$2,042,088	\$1,529,000	\$513,088	\$2,042,088	\$30,911,000	(\$23,435,159)
Gas Station	3	4,776	\$6,310,529	\$580,000	\$5,730,529	\$6,310,529	\$10,518,000	\$25,380,400
Gift, novelty	4	5,542	\$944,468	N/A	N/A	\$944,468	N/A	N/A
Hardware	1	13,271	\$1,916,863	\$334,000	\$1,582,863	\$1,916,863	\$6,372,000	(\$4,455,137)
Hobby & Toy	5	11,548	\$2,538,828	N/A	N/A	\$2,538,828	N/A	N/A
Home Furnishings	5	11,630	\$2,433,926	\$401,000	\$2,032,926	\$2,433,926	\$7,861,000	(\$5,111,479)
Jewelry	2	2,145	\$650,729	N/A	N/A	\$650,729	N/A	N/A
Liquor	3	3,628	\$1,437,668	\$227,000	\$1,210,668	\$1,437,668	\$4,629,000	(\$749,517)
Misc Retail	2	1,856	\$459,416	N/A	N/A	\$459,416	N/A	N/A
Music, Video	2	8,963	\$1,484,542	N/A	N/A	\$1,484,542	N/A	N/A
Optical	1	1,555	\$565,398	N/A	N/A	\$565,398	N/A	N/A
Pet Store	-	-		\$147,000	(\$147,000)		\$2,625,000	(\$2,427,260)
Shoes	-	-		\$132,000	(\$132,000)		\$2,532,000	(\$2,156,255)
Sporting Goods	2	4,975	\$1,098,828	\$429,000	\$669,828	\$1,098,828	\$8,334,000	(\$7,235,172)
Supermarket	-	-		\$2,078,000	(\$2,078,000)		\$42,155,000	(\$18,759,337)
Woman's Clothing	2	8,772	\$1,937,208	\$390,000	\$1,547,208	\$1,937,208	\$7,363,000	(\$4,880,317)
Totals	68	179,075	\$53,434,084			\$53,434,084		

Total Supply (Sq. Ft. Sales per Sq. Ft.) – Demand (2008 Consumer Spending Total Expenditure) = Gap defined as Oversupply or (Undersupply) of Respective Store Type.
 Sources: Sales per Sq. Ft. from Urban Land Institute, Dollars & Cents of Shopping Centers 2008; Claritas, Inc., Consumer Spending Patterns 2008 as ordered for Market Area by GREENPLAN, Inc.; Calculations of Supply, Demand and Gap and Table Format prepared by GREENPLAN, Inc. December, 2009.

CHAPTER 3 EXISTING SETTING, IMPACTS & MITIGATION

TABLE 3.20: SUPPLY (RETAIL INVENTORY) CATEGORIES RESPECTIVE TO (CONSUMER SPENDING) CATEGORIES USED TO ESTIMATE DEMAND

SUPPLY	DEMAND (One Category)	SUPPLY	DEMAND (More than One Category)	SUPPLY	DEMAND
APPLIANCES:	Major Appliances	CHILDREN WEAR	Girls, Boys, Infants Clothing	FLOORING	N/A
AUTO SUPPLY	Auto Repair/Service/Other	FAMILY CLOTHING	Girls; Boys; Infants; Men's; Women's	CRAFTS	N/A
BOOKS	Reading Material	GAS STATION	Gasoline; Diesel; Towing charges	GIFT, NOVELTY	N/A
BUILDING MATERIALS	Household repairs	HARDWARE	Misc. Household Equipment; Small Appliance /Houseware	HOBBY & TOY	N/A
ELECTRONICS	TV Radio &Sound Equipment	HOME FURNISHING	Total Furniture; Total Household Textiles	JEWELRY	N/A
FOOD STORE	Total Food at Home	DRUG STORE	Prescription Drugs; Medical Supplies;	MISC RETAIL	N/A
LIQUOR	Alcoholic Beverages at Home		Personal Care Products; Smoking Products	MUSIC, VIDEO	N/A
PET STORE	Pet Expenses	EATING & DRINKING	Total Food Away From Home;	OPTICAL	N/A
SHOES	Footwear		Alcoholic Beverage Away From Home		
SPORTING GOODS	Sports & Rec	SUPERMARKET	Total Food at home; Personal Care Products;		
WOMEN'S CLOTHING	Women's		Smoking Products; Housekeeping Supplies		

TABLE 3.21: SUMMARY OF VILLAGE OF WARWICK SUPPLY vs. DEMAND GAP and POTENTIAL NEW SQ. FT. WITH SUFFICIENT PRIMARY TRADE AREA DEMAND*

Retail Category	VILLAGE SUPPLY	DEMAND SUBMARKT (0 to 1 Mile)	Village Supply-Submarket Demand	Sales/ Sq Ft	NEW SF 0-1 Mile	PRIMARY Demand 0-3 Miles	Village Supply – Primary Demand	NEW SF PRIMARY
Appliances		\$89,000	(\$89,000)	\$302.20	295	\$1,718,000	(\$1,119,644)	3,705
Auto Supply	\$709,953	\$507,000	\$202,953	\$237.92	0	\$9,404,000	(\$8,472,543)	35,611
Books	\$2,421,821	\$143,000	\$2,278,821	\$246.02	0	\$2,973,000	(\$551,179)	2,240
Children Wear		\$156,000	(\$156,000)	\$240.37	649	\$3,175,000	(\$2,215,203)	9,216
Drug Store	\$8,596,417	\$916,000	\$7,680,417	\$429.07	0	\$9,985,000	\$997,905	0
Eat & Drink	\$12,974,650	\$1,425,000	\$11,549,650	\$278.42	0	\$28,900,000	\$5,320,881	0
Electronics	\$1,779,656	\$508,000	\$1,271,656	\$302.20	0	\$10,209,000	(\$8,429,344)	27,893
Family Clothing	\$443,909	\$1,341,000	(\$897,091)	\$268.71	3,339	\$16,224,000	(\$15,780,091)	58,725
Food Store	\$2,042,088	\$1,529,000	\$513,088	\$412.21	0	\$30,911,000	(\$23,435,159)	56,852
Gas Station	\$6,310,529	\$580,000	\$5,730,529	\$1,321.30	0	\$10,518,000	\$25,380,400	0
Hardware	\$1,916,863	\$334,000	\$1,582,863	\$144.44	0	\$6,372,000	(\$4,455,137)	30,844
Home Furnishings	\$2,433,926	\$401,000	\$2,032,926	\$209.28	0	\$7,861,000	(\$5,111,479)	24,424
Liquor	\$1,437,668	\$227,000	\$1,210,668	\$396.27	0	\$4,629,000	(\$749,517)	1,891
Pet Store		\$147,000	(\$147,000)	\$197.74	743	\$2,625,000	(\$2,427,260)	12,275
Shoes		\$132,000	(\$132,000)	\$189.77	696	\$2,532,000	(\$2,156,255)	11,362
Sporting Goods	\$1,098,828	\$429,000	\$669,828	\$220.87	0	\$8,334,000	(\$7,235,172)	32,758
Supermarket		\$2,078,000	(\$2,078,000)	\$485.75	4,278	\$42,155,000	(\$18,759,337)	38,619
Woman's Clothing	\$1,937,208	\$390,000	\$1,547,208	\$220.84	0	\$7,363,000	(\$4,880,317)	22,099
Totals	\$53,434,084							

Potential Environmental Impacts

There were categories of stores found in the Town and in the Village for which a reasonable demand estimate was not available (Flooring, Crafts, Gift/Novelty, Hobby & Toy, Jewelry, Miscellaneous Retail, Music/Video, and Optical) and these were excluded from the analysis. However, most of these types of establishments are so unique or include such variety that their success in a particular area is determined by many factors other than “Gap” analysis. The conclusions that can be drawn from this study are that the proposed CB zoning in the Study Area will only permit any large scale, traffic generating stores justified by the Total Market Area (five mile radius) Demand as Special Permit uses. Furthermore, the CB zone imposes design standards and special conditions on these uses to limit their impact. These large stores could be allowed as currently zoned without specific design standards, in either the DS or OI district, and could impact the existing business community in both the Town and the Village. The Primary Market Area analysis to consider the impact on the Village indicated that sufficient Demand exists within three miles of the site to support additional retail space.

Given the establishments intended for the CB District, and the estimated demand in the market segments considered in this report, the proposed rezoning will have no significant adverse impact on the existing retail / service mix in, or the historic character of, the Town or the Village of Warwick. In fact, the rezoning will alleviate these risks that exist as the Study Area is currently zoned because the proposed zoning requires certain design standards and use limitations that do not currently apply to the DS and OI zones.

Proposed Mitigation Measures.

No significant adverse impacts were identified on retail market conditions, therefore, no mitigation measures are necessary.

Unavoidable Adverse Impacts

The Town Board of the Town of Warwick, through the preparation of this Draft GEIS, has not identified any unavoidable adverse environmental impacts that would result from the adoption of proposed amendments to the Zoning Law.

Alternatives

The “No-Action” alternative has been examined in relation to the proposed action. This alternative would occur if the Town Board did not adopt the proposed revisions to the Town's Zoning Law. The Town Board retains the authority to consider taking no action with respect to the proposed Zoning Amendments. A decision to take No Action would mean that the 2008 *Comprehensive Plan* recommendations would not be implemented and that the existing Zoning regulations for the DS District would remain in place. The No Action Alternative would be contrary to the expressed wishes of Town residents to avoid sprawl and big-box developments in the Town's principal non-residential Zoning District.

Resource Commitments

The adoption of the proposed amendments to the Zoning Law will not, in itself, entail a direct commitment of resources other than a limited number of person hours required for the administration of the Zoning Law. Human resources, in terms of person hours, would be irreversibly committed upon enactment of the action. These will principally involve a need for the Town of Warwick Planning Board and Zoning Board of Appeals to review additional documentation provided by applicants for new developments within the Study Area and may involve training the Planning Board in the use of the Design Standards as well as working more concertedly with the Town's Architectural Review Board to ensure that the Illustrative Plan envisioned by the Town Board is realized.

Growth Inducing Aspects

The Proposed Action is intended to establish a vision for the future of the Study Area within the Town of Warwick (through implementation of the 2008 *Comprehensive Plan*) and to manage new development in a manner that is consistent with the vision (through the proposed Zoning Law). The Proposed Action in itself will not result in new development and will not result in conditions that will make development any more, or any less, likely to occur within the Town of Warwick. The Proposed Action simply modifies the permitted uses and the permitted or desired configuration of new development.

Future development permitted by the Proposed Action would likely generate additional residential population and some additional demands on community services due to the introduction of mixed-uses in the study Area. The Proposed Action will provide a place in the community where a greater diversity of housing styles and income levels can be served, thereby benefitting residents that may work in the Town but that are forced to find housing elsewhere that may be more affordable.

To the extent that the Proposed Action eliminates potential development that wishes to locate in Warwick in a suburban style sprawling “big-box” configuration, market demand for that type of development may cause increased interest in development in neighboring communities that permit highway oriented sprawl development. However, the Proposed Action does include a land use strategy based on well-considered plans for local and regional growth management that includes a mixed-use area where new residential and commercial development will be encouraged (and permitted densities are increased over existing permitted levels to further create incentives for building out a grid street system) to minimize the amount of development that would occur distant from existing centers. It should also be noted that the Proposed Action was developed based upon recommendations for the Study Area by the Orange County Department of Planning and includes recommendations for reducing impacts on the Village of Warwick.

Use and Conservation of Energy Resources

Since no land development activities are being authorized by the proposed action, it is not possible to discuss direct methods of conserving energy. However, potential energy types and sources to construct and serve future development can be identified. During construction of future development in the Study Area, gasoline and diesel fuel would be used for power equipment and various construction vehicles. Once construction was completed and the buildings were occupied, energy would be required for heating, air conditioning, and the use of various appliances and electrical equipment. Conventional sources of energy would include electricity, heating oil or natural gas. Future development would cause increased consumption of these non-renewable and diminishing energy resources, which would need to be supplied by local energy suppliers.

In order to conserve energy, future development should be designed and built in conformance with the energy conservation regulations of the New York State Energy and Building Codes, the US EPA's Energy Star program and the US Green Building Council's Leadership in Energy and Environmental Design (LEED) program or an equivalent program. Energy conservation measures should include sufficient building insulation to conserve heating and cooling usage, energy efficient heating and cooling systems and appliances, and energy conscious layout of interior spaces, windows and doors. Use of energy conservation measures, such as wind, solar and geo-thermal heating and cooling, should be required by the Planning Board.

Appendices

Appendix A: Proposed Amendments to the Zoning Law

Appendix B: List of Interested Agencies

Appendix C: Correspondence

Appendix D: Randall Arendt Suggestions for CB District
Modifications

Appendix E: Traffic Impact Study

Appendix A:

Proposed Zoning Amendments

Amendments Proposed to the Town of Warwick Zoning Law Route 94 Corridor October 7, 2009

The following are amendments, proposed by the Town Board of the Town of Warwick, to the 2002 *Zoning Law of the Town of Warwick, New York*. Such amendments are being considered in response to the recently updated 2008 Town of Warwick Comprehensive Plan:

Sections (§)	Proposed Modification
164-22	In the definition for “Use, Principal” in subparagraph “(3)”, replace the reference to “Designed Shopping” with “Community Business”.
164-30	Replace the District Label for “DS” with “CB”. Replace the Zoning District “Design Shopping” with “Community Business”.
164-31.I	Replace the existing paragraph “I” with the following new paragraph: “CB. The purpose of the Community Business District is to provide a place for attractive development of business activities that serve community needs and to promote a place in the Town where affordable housing can be integrated with businesses in a traditional manner. A limited number of curb cuts along NYS Route 94 are required by the Town’s Marginal Access Road standards, to minimize conflicts with through traffic and to conserve the capacity of the roadway, while providing linkages between business establishments on adjacent parcels. Careful review of both site and architectural elements is required in this district to enhance the overall quality of site development and promote architectural design that is compatible with the overall historic character of the Village and Town of Warwick.”
164-32.A	Amend the “Town of Warwick Zoning Districts” map by replacing the “DS - Designed Shopping” Zoning District wherever it appears with the “CB - Community Business” Zoning District. Replace the “Zoning District Purposes” text on the “Town of Warwick Zoning Districts” map with the following new text: “CB The purpose of the Community Business District is to provide a place for attractive development of business activities that serve community needs and to promote a place in the Town where affordable housing can be integrated with businesses in a traditional manner. A limited number of curb cuts along NYS Route 94 are required by the Town’s Marginal Access Road standards, to minimize conflicts with through traffic and to conserve the capacity of the roadway, while providing linkages between business establishments on adjacent parcels. Careful review of both site and architectural elements is required in this district to enhance the overall quality of site development and promote architectural design that is compatible with the overall historic character of the Village and Town of Warwick.”
164-40.F and M	In the Table of Use Requirements, amend the column titled “DS” by replacing it with a column titled “CB” and replace the uses identified by “P” for permitted, “S” for special permit use, and “A” for accessory use with the uses identified in Attachment “A”.

Sections (§)	Proposed Modification
164-40.H and N	Amend the Table of Bulk Requirements as shown on Attachment “B”.
164-42.F(3)(a)	Replace the reference to “Designed Shopping Center” in the sentence with “Community Business.”
164-43.1.G(4)	Replace the title of the District from “Designed Shopping Center District” with “Community Business District”.
164-43.1.G(4)(b)	Replace the paragraph with the following new paragraph: “Such sign shall be a wall or a projecting sign. Freestanding signs may not be displayed by individual establishments located within a center. Wall signs (with or without borders) may be as large as one (1) square foot per one (1) linear feet of an establishment’s front building wall length or a maximum of forty (40) square feet, whichever is less. Such sign shall be located on the establishment’s principal façade, fascia, or eve.
164-43.1.G(4)(d)[1]	Replace the first sentence with the following: “Monument signs no larger than forty (40) square feet in area consisting of a maximum of twenty (20) square feet in area per face, with a height maximum of eight (8) feet from the mean ground surface (including the base) to the top of the sign.”
164-43.2.A(4)	Replace the third sentence with the following: Within the LB, CB, and TN-O Zoning Districts, the Planning Board is authorized to require all off-street parking be located behind or to the side of the principal building(s) and to reduce applicable front yard setbacks to allow placement of buildings nearer to the street, when parking is provided wholly at the rear of buildings and to link the site to the street front and sidewalk systems, whether existing or planned.”
164-46.J(53)	Replace the sentence with the following: “The Town of Warwick Design Standards can be found in Appendix A of the Zoning Law.”
164-46.J(73)	Replace the two references to “designed shopping center” with “Community Business District” in the paragraph in both places where it appears.
164-46.J(74)	Replace the reference to “designed shopping center” with “Community Business District” where it appears.
164-46.J(75)	Replace the reference to “designed shopping center” with “Community Business District” where it appears.
164-46.J(76)	Replace the reference to “designed shopping center” with “Community Business District” where it appears.
164-46.J(78)	Replace the reference to “designed shopping center” with “Community Business District” where it appears.
164-46.J(79)	Replace “Reserved” with Attachment “B”.
164-46.J(126)	Replace the reference to “designed shopping center” with “Community Business District” where it appears.
164-46.J(128)	Replace the reference to “designed shopping center” with “Community Business District” where it appears.
164-46.J(129)	Replace the reference to “Designed Shopping Center” with “Community Business” where it appears.
164-46.J(138)	Replace “Reserved” with the following: “A Country Inn shall include a minimum of six (6) guest rooms and a maximum of twelve (12) guest rooms. Accessory recreational uses for guests may include tennis, swimming pools, and similar low impact facilities.

Sections (§)	Proposed Modification
164-46.J(139)	<p>Replace “Reserved” with the following: “Conference Centers, Hotels and motels, Health spas and Health resorts in the CB District shall comply with the following special conditions:</p> <ul style="list-style-type: none"> (a) The use shall be found to be in harmony with the Town of Warwick <i>Comprehensive Plan</i>. (b) The minimum lot area shall be ten (10) acres for the first 40 guest rooms, plus an additional one half (½) acre for each additional guest room. The maximum number of rooms in a conference center shall be 80. (c) Access shall be from a State or County highway. (d) Specific plans for parking shall take into consideration the rural and scenic resources of the site and community. Use of alternative paving materials and alternative transportation, such as grassed parking areas and shuttle services, is encouraged to protect such resources. (e) New construction shall be sited so as to have a minimum impact on fields, water features and woodlands. Major regrading, clear cutting or changing of topography shall not be permitted. (f) Specific plans for public address systems, amplified music, and/or outdoor lighting shall be submitted to and approved by the Planning Board, including the specific hours of operation for such facilities. Approval shall be preceded by a clear demonstration by the facility owner and/or operator that the features are both essential and will create no adverse effect on nearby residential properties, will be in compliance with the Town of Warwick Noise Regulations and will be in harmony with the rural and scenic character of the Town. The specific plans for public address systems, amplified music, and/or outdoor lighting shall be subject to such additional restrictions deemed appropriate by the Planning Board.”

Attachment A

Residential Uses	CB
Two-story Mixed-use Building	S (53) (79) (112) (147)
Agricultural Uses	CB
Commercial agricultural operations: Raising of field, greenhouse, and garden crops; sod, vineyard and orchard farming; the maintenance of nurseries. Keeping, breeding and raising of cattle (including dairies), sheep, goats, pigs and horses. Keeping, breeding and raising of fish or fowl. Energy production involving solar, wind, biomass, hydropower or other alternative non-fossil fuel source produced on the farm.	P (d) (19)
Dormitory accommodations for housing migratory agricultural workers	S (21)
Farm markets and retail establishments of 4,000 square feet or more devoted primarily to the sale or production of farm and food-processing supplies	S (bb) (3) (152)
Manufacturing, assembling, altering, finishing, converting, fabricating, cleaning or any other processing, packaging or repackaging of agricultural products or materials	S (ll) (3) (85) (86) (97)
Secondary use of agricultural wastes	S (19)
Storage and sale of seed, feed, fertilizer, manure and other agricultural products	S (h) (19)
Use of mobile homes on farms to house tenant & migrant farm laborers	S (20) (141)
Business Uses	CB
Animal hospitals, veterinary kennels	S (i) (2) (14) (102)

Business Uses	CB
Adaptive reuse of nonresidential agricultural structures	S (cc) (120)
Bowling alleys, dance halls, physical fitness studios ice skating rinks, and similar commercial recreation activities in fully enclosed structures	S (kk) (53)
Business & professional offices	S (53) (79)
Country Inn	S (hh) (53) (125) (138)
Eating & drinking places, delicatessen, coffee shop, and luncheonette	S (53) (79)
Extractive operations involving sandpits, gravel banks, removal of topsoil and landfill, and quarries, mines or other extractive activities excluding fissionable materials	X (140)
Hotels & motels, Conference Center, tourist cabins, health spas, health resorts	S (j) (53) (97) (103) (139)
Manufacturing, assembling, converting, altering, finishing, cleaning or any other processing of products where goods so produced or processed are to be sold primarily on the premises	S (kk) (53) (55-56)
Miniature golf, batting cages & driving range facilities	S (kk)
Motor vehicle sales	S (kk) (53) (57) (65) (68)
Motor vehicle sales & services	S (kk) (53) (65) (77-78)
Public libraries, business services	S (53) (79)
Personal service establishments including medical or dental clinic	S (53) (79)
Printing	S (kk)
Research, design & development laboratories	S (kk) (53) (81) (97) (124) (127) (131-137) (145)
Retail stores, banks, & convenience stores	S (53) (79)
Service establishments furnishing services, other than of a personal nature, including a laundrette	S (53) (79)
Theaters including drive-in	S (kk) (43)

General Uses	CB
Community recreational facilities and buildings, club houses, etc.	S (111)
Institutions of higher learning, public libraries, museums, state-accredited private schools	S(k) (25) (104)
Kiddy lands	S (kk)
Nursery schools	S (53) (104)
Convalescent or rest homes, hospitals or sanatoriums for general medical care	S (g, k) (26)
Railroad, public utility, rights-of-way & structures necessary to serve areas within the town	S (31)
Town of Warwick uses & buildings	P
Wireless telecommunications facility	S (153)

Attachment B

- (79) The Town Board has determined that it is appropriate to provide a place in the community for attractive development of business activities, that serve community needs and promote a place where affordable housing can be integrated with businesses in a traditional manner. Specific uses identified in 164-46.J(79)(b) and (c) herein are permitted in Two-Story Mixed Use Buildings, subject to the issuance of a Special Use Permit that meets the following additional special conditions:
- (a) All uses shall fully comply with the Town of Warwick's Marginal Access Requirements found in § 164-42.F of the Zoning Law.
 - (b) Ground floor uses in a Two-Story Mixed Use Building are limited to retail stores, banks, personal service establishments, service establishments, eating and drinking places, delicatessens, coffee shops, luncheonettes, and business and professional offices.
 - 1. All buildings and the site shall be designed to comply with the Town of Warwick's Design Standards for architecture, building, landscaping, human scale lighting, and a pedestrian friendly environment as illustrated in Appendix A of the Zoning Law.
 - 2. Retail uses including banks, eating and drinking places, delicatessen, coffee shops and luncheonettes shall not exceed thirty-three and three tenths percent (33.3 %) of the floor area of a building. Business and professional offices, personal service establishments, and service establishments shall not exceed 33.3 and three tenths percent (33.3 %) of the floor area of a building.
 - (c) Second floor uses are limited to one and two bedroom apartments (800 to 1400 square feet), business and professional offices and live/work units.
 - 1. Residential uses including studios, one and two bedroom apartments and live/work units shall not exceed 33.3 and three tenths percent (33.3 %) of the floor area of a building.
 - 2. Two bedroom apartments shall not exceed 25 percent of the total number of dwelling units in a building.
 - (d) Special Bulk Regulations apply in the CB Zoning District for Two-Story Mixed-use Buildings. In the event of a conflict with the Table of Bulk Requirements, this section shall apply as follows:
 - 1. A minimum floor area of 4,000 square feet and a maximum floor area of 75,000 square feet. Delicatessens, coffee shops or luncheonettes may be located in a building with less than a 4,000 square foot floor area, but only if no other similar uses are located within 1,000 feet of the proposed new use to prevent a proliferation of like uses, concentrated in one area.

2. The minimum lot area shall be three (3) acres for new Two Story Mixed Use Buildings. Multiple special permit uses may occupy a lot without the necessity of a minimum requirement of three (3) acres for each use.
 3. The maximum lot coverage shall be 40 percent.
 4. Buildings shall have a minimum of two (2) stories and a maximum of three (3) stories.
- (e) The Town Board has determined, consistent with § 261-b of New York State Town Law and the Town of Warwick Comprehensive Plan, that it is appropriate to make adjustments to permissible density and area requirements for Two-story Mixed-Use Buildings in the CB District for the specific purpose of construction of a community benefit in the form of a Marginal Access Road at a minimal cost to residents and taxpayers of the Town. The purposes of granting a density bonus include the following:
1. Reclaim existing auto-oriented shopping strip developments by incrementally redesigning and transforming the strip into a walkable and/or bikable retail, office and residential area that will always be secondary to the Village of Warwick as the primary retail and civic center for the community.
 2. Help to unify the streetscape of Route 94 with generous landscaping, continuous street trees and if possible, planted medians, reminiscent of a boulevard.
 3. Fill in the front of the large parking areas wherever possible by replacing them with buildings. Site new buildings back from the road and buffer the buildings with trees, berms, landscaping, and other natural elements to protect the viewsapes and compliment the agricultural and other open spaces surrounding the commercial area as shown on the illustrations in Appendix A.
 4. Create pedestrian and bicycle networks through sidewalks, bicycle paths, trails and crosswalks, in order to create connections to shared parking, public transportation and between stores and nearby housing in the RU and SL districts.
 5. Enhance and diversify the local tax base by generating additional revenues to meet the costs of municipal and educational services.
- (f) Additional infill development density, on existing developed properties within the CB District, is available provided the following additional requirements are met:
1. Within the CB District, no application for Site Plan approval, Special Use Permit approval, and/or Subdivision approval shall be approved unless the standards applicable to infill

development in § 164-47 of the Zoning Law [i.e. TN-O District standards and Appendix A of the Zoning Law] have been incorporated into the development designs to the greatest extent practicable. The Planning Board, as a condition of such approval, is empowered to modify the Area and Bulk Regulations found in the Table of Bulk Requirements and herein at §164-46.J(79)(d) and may impose modifications that would have to be incorporated into the proposed action to merit a determination of consistency with the standards and guidelines set forth herein. The Planning Board's findings shall include a rationale for any waiver or modification granted to a specific standard. The Planning Board may, in granting waivers or modifications to these standards, incorporate such reasonable conditions as will, in its judgment, substantially secure the objectives of the requirements so waived.

2. Projects deemed consistent with the infill standards, by the Planning Board, are eligible for an increase in density of fifty percent (50%) over the minimum requirements herein at §164-46.J(79)(d). Any increase in density granted shall comply with the Zoning Law's building limitations for infill retail use. Nothing herein shall prevent the development of multiple buildings to achieve the density permitted, provided each individual building complies with the building limitations.
 3. The marginal access road shall be constructed and dedicated to the Town of Warwick in accordance with the Illustrative Concept Plan developed for the Route 94 Corridor.
 4. All projects within the CB District shall fully comply with the Town's Stormwater Management requirements and proper provisions shall be made for water supply and sewage disposal in accordance with Town of Warwick and Orange County Department of Health requirements. This may include connection to the municipal wastewater treatment system and/or community water supply system if such exists at the time of approval.
 5. The Planning Board remains responsible for determining the adequacy of parking and may require a parking study by a qualified parking consultant, to accommodate the infill allowance requirements. Shared parking and other methods may be used to satisfy the parking requirements.
- (g) All subdivisions of land within the CB district shall be subject to the Site Plan requirements of § 164-46 of the Zoning Law.
- (h) All developments shall be subject to the Town of Warwick's and/or the United States Environmental Protection Agency's "Low Impact

Development” strategies (whichever is more stringent) for the area’s stormwater management system to enhance and protect surface and ground water quality, maintain the integrity of aquatic resources, wildlife habitats and ecosystems, and preserve the physical integrity of the District’s wetlands and tributaries.

Appendix B:

List of Interested Agencies

This DGEIS has been filed with and/or a Notice of Completion of the DGEIS and Notice of Public Hearing has been filed with the following agencies and is available online:

Town Supervisor Michael Sweeton
Town Board of the Town of Warwick
Town of Warwick Planning Board
Town of Warwick Conservation Advisory Board
Town of Warwick Architectural Review Board
Village of Warwick Board of Trustees
Orange County Planning Department
NYS Dept. of Environmental Conservation
United States Fish & Wildlife Service
Environmental Notice Bulletin
enb@gw.dec.state.ny.us
<http://www.townofwarwick.org/>

Appendix C:

Correspondence

WARWICK FIRE DEPARTMENT

CHIEF - GREGG SNIGUR
chief636@warwick.net

1st ASSIST. CHIEF - DAN SCHWEIKART
schweikartdan@warwickfire.com

2nd ASSIST. CHIEF - JOE SMITH SR.
jsmith@warwickfire.com

SAFETY OFFICER - CHRIS GARDNER
cgardner@warwickfire.com



PRESIDENT - JEFF SCHADT
jschadt@warwickfire.com

VICE PRESIDENT - TOM GOVE
tgove@warwickfire.com

SECRETARY - DEB SCHWEIKART
schweikartdeb@warwickfire.com

TREASURER - BRIAN WOOD
bwood@warwickfire.com

Jan. 15, 2010

Greenplan Inc.
Environmental Planners
320 Pells Rd.
Rhinebeck, NY 12572-3354
Attn: J.Theodore Fink, AICP

Subject: Town of Warwick Zoning Change (Letter dated 12/1/09)

Dear Mr. Fink,

Upon a review of the zoning change proposal and the accompanying diagrams, and after subsequent discussions with my Assistant Chiefs and the Board of Fire Commissioners, I believe the overall effect of the zoning change on the Warwick Fire Department will be minimal. Our chief concern in either case would be water supply in the event of a fire, and I would inquire of the developers if they have any plans for hydrants and the construction of a tower or the development of other sources of water to feed those hydrants. Right now, our Engines carry 1,000 gallons of water and we have one tanker in Town with 3,500 gallons of water. While other tankers would respond from neighboring Districts under our mutual aid agreements, the water immediately available would be expended quickly in the event of a large incident.

Other issues, although not of major concern, would be the increase in the number of calls the Fire Department would have to handle, and the assurance, during the final planning stages of any development, that our apparatus would have access to all of the roads and buildings being constructed (i.e., enough room at intersections so that our apparatus will be able to make turns, width of roads, and limited parking so our apparatus will be able to operate unimpeded and gain access to the structures).

We believe that the change in zoning will not present any fiscal impact beyond what will be covered by the additional taxes collected from the new residents. We look forward to working with the planning board as the design progresses, so we can provide the same high level of fire protection for our new residents, as we do for the current residents of the Town of Warwick.

Sincerely,

Gregg Snigur

Chief

Warwick Fire Department

George Schick

Chairman, Board of Fire Commissioners

Warwick Fire District



WARWICK COMMUNITY AMBULANCE SERVICE, Inc.

Post Office Box 315
Warwick, New York 10990-0315
Fax : (845) 987-9943
E-mail : firstaid@warwick.net
Voicemail : (845) 986-4136



CIVIL OFFICERS

Joyce Predmore
President

Julie Desrats
Vice President

Leah Schick
Treasurer

Patricia Mills
Recording Secretary

Kathleen McCormick
Financial Secretary

Jennifer McGloin
Loan Equipment

Clara Mazzella
Compliance Officer

Karen Kaytes
Quality Improvement

LINE OFFICERS

Frank Cassanite, Jr.
Captain

Robert Lemin
1st Lieutenant

Jo Ann Cheney
2nd Lieutenant

January 7, 2009

GREENPLAN, Inc.
J.Theodore Fink, AICP
302 Pells Road
Rhinebeck, NY 12572

Ted,

Sorry for the delay with this information, but I needed to review this with our team. I can now answer the questions that have been asked.

- Question 1 – How would each scenario impact our budget? – **The increased property use will increase our budget thru the tax that we collect.**
 - Will we need new employees? – **Increased population increases the need for more volunteers**
 - New equipment? – **Present equipment will work**

- Question 2 – Will this push us over the threshold for level of service? – **NO**
 - Population increase? – **Your figures are actually in correct because this project is in an area that is within our covering district, not the entire town, increased population should be calculated that way.**

- Question 3 – **Increased traffic flow on Rt 94, how is it to be handled, will there be more traffic lights, turn lanes into commercial areas? This portion of planning when it gets to that stage is something we want to review.**

Respectively submitted,

Frank Cassanite Jr.
Captain

TOWN OF WARWICK

DEPARTMENT OF POLICE

132 Kings Highway
Warwick N.Y. 10990
(845) 986-3423

Thomas F. McGovern, Jr. N.A.
Chief of Police

08 January 2010

J. Theodore Fink, AICP
Greenplan Inc.
302 Pells Road
Rhinebeck, NY 12572-3354

Re: Town of Warwick Zoning Changes

Dear Mr. Fink:

I have enclosed copies of the calls for service, which this agency received and dispatched for police, fire or medical services to the Rte 94 corridor area (south of the Village of Warwick to the NJ border) during 2009.

The route described is outlined in orange on the enclosed map. The Village is highlighted in yellow. The blue semi-circle represents approximately a one-mile radius from the intersection of Rte 94 South and Warwick Turnpike.

Emergency Services responded to a total of 945 calls in that area during 2009: 914 Police, 24 Ambulance and 7 Fire. Many of these calls require more than one unit to control. These numbers only represent calls on Rte 94 itself, not the surrounding side streets and commercial locations. To search them all and include that data would be a monumental task.

Using the numbers provided (464 new residents, 22 school age children and a large increase in commercial space) I have to estimate that: 450 of these people probably have at least one vehicle. School busses will be stopping in areas they currently do not. Traffic through those areas will be heavier. Traffic on side roads within the blue circle, including the village, will become heavier. Speeding and other violations will pop up on side roads as motorists attempt to circumvent traffic. Complaints about violations will increase for residents of the side roads within that circle. Traffic accidents will increase in number on both Rte 94 and on the side roads.

My department is currently operating with three full time officer vacancies. There are no plans to fill those vacancies in F/Y 2010. Increases in the calls for service will delay response by police if we are already operating on limited staffing. Fire and Ambulance volunteers may also be similarly impacted. I am unaware of any formula to successfully predict what emergencies we can expect as a result, but as you review the data I think you will see that it's a busy two miles and there are some intersections and traffic patterns that need additional controls and restrictions. Our workload will increase beginning at the dispatch function all the way to the end of the event.

I hope this will be useful in your DGEIS document.

Please contact me if there is any additional data we may be able to provide.

Sincerely,

A handwritten signature in blue ink that reads "Thomas F. McGovern Jr." in a cursive style.

Thomas F. McGovern Jr.
Chief

TFM/km

Appendix D:

Randall Arendt (Rural By Design author) Recommendations

Randall Arendt, FRTPI, ASLA (Hon.)
43 Prospect Avenue
Narragansett, RI 02882
(401) 792-8200
rgarendt@cox.net
www.greenerprospects.com
"Designing with Nature for People"

Review Memo

To: Michael Sweeton, Warwick Town Supervisor

From: Randall Arendt

Date: August 28, 2009

Subject: Constructive Comments on the Proposed Local Law Regarding the *Community Business Zone*

As requested, I have reviewed Warwick's proposed Local law pertaining to the new Community Business Zone (CBZ), with respect to achieving its legislative intent and also achieving the stated purposes of the of the Comprehensive Plan.

With regard to the legislative intent (Section 1), I note that the proposed code amendment is specifically supposed to *"carry forward the thoughts and goals of the recently adopted Comprehensive Plan"*, particularly *"prevention of proliferation of strip commercial development and ... encouraging neighborhood shopping, village type main street specialty stores, and small retail centers which fit into the surrounding community."*

I understand that the geographical area of the new proposed Community Business Zone would not be significantly different than that of the existing Design Shopping Zone (DS), with the exception of two additional parcels which would be included in the new district.

Therefore, in terms of the areal extent of potential new development which would be allowed, there should not be an appreciable increase in the overall acreage of land being developed commercially, compared with what could (and would eventually) be developed under existing regulations..

And in the absence of increased floor area ratios or other means of intensifying the new development, it should not represent a significant increase in commercial floorspace beyond that which is already currently permitted on that ground at this time.

One new purpose for the new CBZ is described as follows: *"to provide a place for attractive development of business activities servicing community needs and to promote a place in the Town where affordable housing can be integrated with businesses in a traditional manner."*

As the key words *"community needs"* and *"in a traditional manner"* are not further defined or elaborated upon, one cannot be totally certain what the real intent is. But if they mean something like "normal basic and specialty retails as found in most communities like Warwick", and affordable housing "located above or behind retail and service buildings as in older downtowns", then we have an understanding on how to judge how closely the proposed Local Law might achieve what its authors intended.

One concern that I understand has been expressed is that the proposed zoning change would sap the economic vitality of the historic central business district (CBD).

One criterion for examining this concern would be to compare the uses permitted in the new CBZ with those currently permitted in the existing DS zoning district. If they do not differ significantly, there should be no significant change in creating the CBZ district, in terms of impacts on the downtown Village shopping district. If there are significant changes in the kinds of uses permitted in the proposed CBZ, and if the new CBZ would for the first time allow uses that are especially vital to the Village center, the potential impact of that kind of zoning change should be further discussed to examine the potential for negatively impacting the Village center shops.

I could discuss this issue better when we meet in early September.

It is noted, with interest, that the new Local Law addresses the issue of visual character. In Section 164.31.1, it states that "*Careful review of both site and architectural elements is required to enhance the overall quality of site development and to promote architectural design that is compatible with the overall historic character of the Village and Town of Warwick.*" However, I did not see much in the way of building design standards, from an architectural perspective, except some very general recommendations in the *Design Guidelines* booklet adopted in 2002. The Town might wish to supplement the wording in that booklet with the model ordinance language contained in my fourth book, *Crossroads, Hamlet, Village, Town* (appended to the end of this memo, FYI). These standards might be helpful as applicants decide how to handle the exterior design of the Two-Story Mixed-Use Buildings, which appear to be one of the foundation stones of the proposed new Local Law.

Two-Story Mixed-Use Buildings: I endorse the emphasis on such structures, and would encourage most of them to reach 2-1/2 stories in height. The below left photo, from Camden ME, illustrates how a chain drug store (with a very large first floor footprint) can be accommodated in a new building that appears to be three structures of varying heights. On the right is a mixed-use building in Springvale ME.



I would be careful about allowing restaurants and places serving alcohol occupy the first floor, having worked above a KFC for eight years in an office reeking of fried chicken aromas. Residential uses are compatible with many retail uses, but usually not with food/drink uses open past 8 pm.

I also wonder about the wisdom of limiting residential to only one-third of a mixed-use building's floorspace, preventing an entire second floor of flats above quite shops and offices. This appears to be micro-managing something better left to the market to decide.

I also am doubtful of the need to require three acres (about 130,000 sq. ft.) of land for a single two-story mixed-use building, which can be as small as 4,000 sq. ft. (typically involving a 2000 sf. ft. footprint). This appears to be a standard that advertently mandates sprawl.

I would like to learn more about the Town's objectives in setting a minimum building size of 4,000 sq. ft. I agree with this in principle, but am not clear whether it is a general rule for the CBZ, or whether it is a specific rule for

two-story mixed-use buildings. If the latter, fine. If the former, then I wonder why a two-story or three-story building with a footprint of 1,000 sq. ft. would be so out of place as to be prohibited. The town of Davidson NC requires a minimum of two stories for new commercial or mixed-use construction, and is very proud of the new brick CVS which resulted from its regs (shown below). I am not sure of its dimensions, but if it measured 60 x 60, it would contain only 3600 sq. ft and would not meet Warwick's minimum standards. Ditto for any one of the buildings in the streetscape from Haile Village, Gainesville, FL, on the right.



If the 4000 sq. ft. minimum was selected to reduce the risk of smaller businesses moving from the Village into the CBZ, the experience of one community near where I live might be relevant. When the new South County Commons mixed-use development (SCC) was being considered by the South Kingstown (RI) Planning Board about ten years ago, for a location along Rt. 1, many people expressed concerns that it would negatively impact the small businesses in downtown Wakefield Village. However, experience over the past decade has proven those fears to have been unfounded. To my knowledge, not a single business re-located, and not a single retail or service premise at SCC approaches the 4000 sq. ft. size, except for the cinema and Hampton Inn. All the shops are normal size for downtowns and suburban centers.

Before adopting a new minimum floorspace regulation, it would be helpful to know the full range of various business types that would be able to occupy at least 4000 sq ft. One concern is that this threshold might be higher than many businesses could reach, and that it might be difficult for the CBZ to thrive and prosper with that kind of restriction. If it has not done so already, one idea might be for the Town to survey the businesses locally and in surrounding communities in Orange County, and make a list of the specific businesses that occupy 4000 sq. ft. or more.

Another concern is that the 4000 sq. ft. threshold might have an unintended and opposite effect. It is possible that the larger retail units meeting that minimum size might wield more purchasing power or enjoy greater operating efficiencies, enabling them to compete more effectively with small shops in the Village, posing a greater threat to them than less-large units would.

The restriction on deli's; coffee shops, and luncheonettes being located in smaller buildings closer than 1000 feet from each other also strikes me as micro-managing, and a potential threat that is possibly not worth worrying about. However, I have an open mind, and would like to learn more when we meet to discuss this memo.

The discretionary density bonus which the Town Board would be authorized to grant, to encourage developers to create marginal access roads, plant trees, build sidewalks, and provide bikepaths is very admirable in its intent. All are very worthy objectives. I would like to see more detail in the ordinance describing the range of density increases that would be potentially available, and a description of how decisions regarding the determination of the bonus amount would be related to the scale of improvements provided by applicants. Guidelines or criteria should ideally be written into the proposed Local Law to assist the Town Board in reaching those decisions and to help assure a high degree of consistency and proportionality.

Signage: I note that Section 164-43.1.G(4)(b) would add the following language effectively eliminating new free-standing signs and requiring new signage to be attached to buildings in a flush or projecting manner: *"Such sign shall be a wall or a projecting sign. Freestanding signs may not be displayed by individual establishments located within a center. Wall signs (with or without borders) may be as large as one (1) square foot per one (1) linear feet of an establishment's front building wall length or a maximum of one hundred (100) square feet, whichever is less. Such sign shall be located on the establishment's principal façade, fascia, or eve."* I do agree that this thrust of this change represents an important improvement, as free-standing signs are not traditional in commercial centers. If the visual character of the highway corridor is desired to be similar to that of traditional downtowns, this is a very appropriate change. I am attaching two examples of wall signs attached to special architectural features specifically designed to provide elevated locations that increase their visibility. One is on a new silo constructed as part of Publix Supermarket in rural Milton GA. The other is a *faux* silo built as part of a barn-like retail center in Waitsfield VT. In both cases, the buildings were situated well back from the highway, and the higher sign placement was deemed to be needed by the developer (to improve visibility) and acceptable by local officials.



Regarding the issue of sign size, I would be inclined to suggest a sliding scale of some sort, to prevent a very long building of 100 feet having a single sign measuring 100 sq. ft. in area. I would be inclined to say that principal facades longer than say 60 feet should be limited to signage not exceeding one sq. ft. per 1.5 lineal feet of façade length. Or, perhaps, this issue could be dealt with by requiring signage covering more than a certain area (say 40 sq. ft.) to be displayed in more than one sign, no one of which may exceed that area.

Front Setbacks and Greenspace Potential: While I normally advocate the idea of short front setbacks (sometimes expressed as a maximum setback) to support the creation of traditional streetscapes, the Waitsfield example pictured below features a particularly deep setback. Although this came about due to the need to utilize the best soils for septic disposal close to the highway, it serendipitously created a very rural "village green", which could be an attractive "gateway" feature at either end of a mixed-use highway corridor. Or it could be a non-gateway feature in the middle of the corridor. Such green spaces can also provide the platform for events such as afternoon or evening concerts, and places for local garden clubs to conduct plant sales, or for the Boy Scouts to sell Christmas trees.



Another consideration relating to limiting front setbacks, drawing building closer to the street, is whether to allow for alcoves, as illustrated below. I like alcoves, as they are a great way to reduce the massing of large buildings, breaking them into smaller visual components. They also can be landscaped to create very pedestrian-friendly spaces, with shrubs, trees, benches, and fountains, as shown in Southern Pines NC, Kent CT, and Kansas City.



Monument Signs: I note that Section 164-43.1.G(4)(d)[1] states *“Monument signs no larger than forty (40) square feet in area consisting of a maximum of twenty (20) square feet in area per face, with a height maximum of eight (8) feet from the mean ground surface (including the base) to the top of the sign.”* I support this in general, but would suggest that perhaps there should be two sets of area limits: One would be for the area covered by the lettering and images only, and the other would be for the entire sign surface. For example, in the below photo, the sign covers only a fraction (about half) of the total monument area. In this particular example, it is fairly easy to distinguish the masonry monument supports from the metal and plastic sign boards. But in other cases, the distinction might not be as easily drawn, when the entire structure is of the same material. In such cases, (where everything might be of brick, with lettering and logos fastened to the masonry surface), does the Town wish to consider the total area as signage, or only the area bounded by the lettering and images?



Location of Parking: Section 154.42.2.(A)4 contains the following wording: “*the Planning Board is authorized to require all off-street parking be located behind or to the side of the principal building(s) and to reduce applicable front yard setbacks to allow placement of buildings nearer to the street, when parking is provided wholly at the rear of buildings and to link the site to the street front and sidewalk systems, whether existing or planned.*” While this is admirable in the sense that it specifically empowers the Planning Board to require front parking, it does not either set criteria for when such locations should be required or when waivers are permissible, nor does it even establish a general rule that parking shall generally be situated to the side or rear of buildings.

The lack of a general standard worries me most, as the wording, as it now stands, could be read to imply that front parking is perfectly fine in most cases, but that the Planning Board is authorized to require it to be located behind shops when it deems appropriate. From a legal viewpoint, whenever discretionary authority is conferred, it is my understanding that local laws should provide guidance as to when those rules are to be applied and when they may be waived (under “equal protection” concerns, to prevent arbitrary and capricious decision-making). I would favor a general rule requiring rear parking, but allowing for exceptions to be made by the Planning Board in certain instances, should be described or articulated (perhaps in a list beginning with the phrase “such as”). When front parking is permitted, is the totality of parking to be permitted in front, or only a small percentage, perhaps for handicap access? Furthermore, are those exceptional front parking spaces to be allowed to be perpendicular or angled, or must they be parallel? Lastly, are such front parking spaces (if any) to be separated from the highway by a planting strip (and, if so, of what width and depth, and how are they to be planted: with low shrubs, or with proper shade trees?).

Design Standards: I read with great interest Section 164-46.J(53), which informs readers that “*Use of The Town of Warwick Design Standards is mandatory.*” If that sentence refers actually to the Town’s *Design Guidelines* adopted in 2002 (a copy of which I have recently read), I support this requirement totally. (Parenthetically, if those guidelines become mandatory, they no longer remain mere guidelines to be voluntarily respected or ignored in the CBZ – they become a set of official review standards with which all applicants must comply.) I would hope that making these guidelines mandatory without changing their name might not unintentionally create the basis for a potential legal challenge. Please consult your Town Attorney for an opinion on this question. And since the 2002 *Design Guidelines* contain guidelines for hamlet development – both commercial and residential – which guidelines specifically are to be applied to applications for development in the CBZ? If the signage guidelines in Chapter 3 conflict with the signage requirements in the zoning ordinance, which are to be used? Sometimes it is not an issue of which is stricter, for they might differ in other ways as well. To avoid confusion, I suggest the Town consider extracting those specific guidelines it wishes to employ in the CBZ and to plug them into the new Local Law. That effort might reveal certain inconsistencies or grey areas that could be addressed at the time the *Guideline* language is being examined word by word, and massaged to better fit into a zoning format. For example, guideline language uses “should” where zoning uses “shall”, a big difference.)

If I have misinterpreted all this, and if the Town has another set of *Design Standards* which I have not yet seen, I would like to examine them to determine if any issues might have been better addressed in the 2002 *Design Guidelines*. In which case parts of the 2002 *Design Guidelines* might profitably be added to either the Design Standards and/or to the new Local Law.

Architectural Issues: The only place I saw those addressed, besides the intent or purposes section, is in the 2002 *Design Guidelines*. As there is a rather large difference between the wording of standards (“shall”) and guidelines (“should”), I wonder how the Town would be dealing with architectural issues in the CBZ. If the answer is “as standards”, then the *Guidelines’* “should” language might need to be re-written for inclusion in the new Local Law as standards for applicants to follow, not simply nice wording to look at and consider.

Sometimes design solutions are very simple, as in the below examples of reversing the usual front positioning of garage doors and asphalt pads on auto repair shops, and gasoline pumps. In the first example, the building form was simply rotated 180 degrees, with the formerly rear façade articulated like a front façade. The huge (often open) doors, asphalt area, and car storage can all be hidden behind (as shown in this example from Bethlehem CT). Similarly, gas pumps can be located at the rear as well, pictured here along Rt. 138 in Kingston RI. As long as there is a gas sign out front, no one can persuasively argue that the passing public would be unaware they can purchase fuel on the premises. I mention (and illustrate) these successes as examples which could be added to the Town’s Design Standards or Guidelines. (The Kingston example makes the point far better than the Rhinebeck example in the DG booklet, as the pumps in the latter are not concealed behind the buildings, but are simply set back at a greater distance from the highway, from which they are easily seen.)



Taking Advantage of Sloping Terrain: The Town could encourage commercial and mixed-use developers to build into sloping terrain so that two-story buildings can be constructed without the need for elevators. Each side can be accessible at ground level, as shown here in two front and back photos from Virginia.



Greater Emphasis on Street Trees along Highway Corridors: If the DG booklet is being incorporated into the new Local Law by reference, I suggest increasing its emphasis on planting street trees along highway corridors, not only in village centers, adding photos where there are currently none. I do believe that consistent street tree planting is one of very most important visual improvements that can be made, both at the street edges and also as potential boulevard medians down the middle. The examples below are from the Rt.900 corridor in Renton WA (a typical strip, transformed by shade tree planting undertaken by the municipality – something every local government can do within the public ROW, without waiting for each business to conform). I encourage every town to lead more by example, in addition to adopting code language for others to follow. Such planting would jump-start the corridor improvement process, gaining height and fullness every year.



Medians and Roundabouts: In addition to planting the highway edges, the Town could work with DOT to plan and implement treed median strips along the length of the DBZ corridor. Such medians (and roundabouts) help to calm traffic and beautify the community. I would hope that the Town's *Design Guidelines* could be expanded to encompass activities that the public sector could participate in. Pictured here is the decades-old highway median in Lodi CA (a blue-collar town in the Central Valley), and a new roundabout in Pinehurst NC. Roundabouts are particularly useful as a gateway feature, slowing traffic and notifying visitors they are now leaving the open highway and entering a special place.



Moveable Letter Signs: With the *DG* booklet encouraging wood and metal instead of plastic, merchants desiring signs with moveable lettering might not be aware of how they might satisfy both their needs and the Town's requirements. Below are pictured typical signage of this genre, contrasted with an alternative made of posts and beams, exterior grade plywood, indoor/outdoor carpet, and vinyl letters held in place with velcro tabs, a win-win solution.



APPENDIX

Architectural Design Guidelines

(from *Crossroads, Hamlet, Village, Town*, APA Planning Advisory Service Report
by Randall Arendt, 2nd. Edition, 2004.)

Commentary: Because architectural traditions and taste vary widely across the country, architectural design guidelines are not included in the model ordinance regulations, but suggested text is provided here. Each municipality must decide what types of regulations may be appropriate for its circumstances, and should insert its own requirements in Section 204.

Readers may be surprised to learn that, although architectural design standards are usually not enforceable outside designated historic districts, in this case they are defensible because the Village Design Overlay District is (a) purely optional and (b) offers density incentives.

The use of the words “should” and “may” is purposeful; when “shall” is not used, the standard is a voluntary guideline rather than a requirement.

- a. Massing. All new construction shall be of similar scale and massing as buildings shown in [source document or reference for design guidelines]. To harmonize with the traditional scale of commercial buildings in historic hamlets and villages, the massing of larger commercial buildings shall be de-emphasized using (but not limited to) one of the following methods:
 - 1) The use of projecting and recessed sections, to reduce their apparent overall bulk. Facade breaks shall be at least three (3) feet in depth. Such breaks in facades and roof lines shall occur not more frequently than the width of two historic shopfronts (approximately 25 feet each).
 - 2) New commercial buildings shall not contain more than 3,500 square feet (above grade), and those with more than 1,500 square feet of floor space (above grade) shall be at least 1-1/2-stories in height.

Commentary: This maximum building size threshold is intended to help produce traditional downtown streetscapes, rather than accommodating the construction of shopping centers with “village” residential areas attached to them. However, this maximum size threshold may be significantly increased in locations capable of supporting major retail uses (such as highway intersections), when such uses are permitted under local zoning and also provided for in the Comprehensive Plan.

- 3) Storefront buildings fronting on the same street and located on the same block shall be attached, or located not more than fifteen (15) feet apart, except when separated by a “pocket park” or a common, green or square.
- 4) Storefront buildings shall have at least 60 percent of their front facade coincident with their street frontage, including frontage onto courtyards.
- b. Architectural Style and Detail.
 - 1) Buildings may be either traditional in their architectural character or a contemporary expression of historically traditional styles and forms, respecting the scale, proportion, character, and materials of shops as shown in [source document or reference for design guidelines].
 - 2) Buildings shall articulate the line between the ground and upper levels with a cornice, canopy, balcony, arcade or other architectural feature.
 - 3) The use of special architectural elements, such as but not limited to towers, turrets and corner cut-offs, is encouraged at major street corners to accent structures and provide visual interest. These elements shall be in scale with the overall structure.
- c. Main Entrances.
 - 1) As one of the most important parts of the facade, the main entrance shall be easily identifiable. Doors and entryways shall follow a traditional storefront

design (usually recessed) and shall be compatible with the architectural style of the structure.

- 2) Main entrances shall be from the front sidewalk, except in courtyard designs. Secondary entrances may open to a rear parking lot.
 - 3) When a building is located on a corner, the entrance shall be located on the corner with an appropriate building articulation, such as a chamfered corner, turret, canopy or other similar building feature.
- d. Rear Entrances and Facades. When rear parking is provided, the provision of secondary rear entrances and pleasing rear facades is strongly encouraged. The design of the rear entrances and facades should be appropriately detailed to provide an attractive appearance, but should not be overly embellished to compete with the main storefront.
- 1) The following requirements shall be met:
 - a) Adequate lighting shall be provided for security, pedestrian safety and decorative purposes.
 - b) Trash and service areas, utility lines, mechanical equipment and meter boxes shall be appropriately screened from customer entrances.
 - 2) The following guidelines should be followed:
 - a) Planters, awnings and landscaping may be used to identify rear entrances as well as improve the appearance of the structure.
 - b) Rear entrances should be marked by attractive signs. Signs should be modestly scaled to fit the character of the more utilitarian rear facade.
 - c) Windows and/or display cases shall be used to attract shoppers.
- e. Windows.

Commentary: Windows are of critical importance in storefront design. Windows create a visual rhythm of structural openings and provide views of the interior.

- 1) The front elevation of commercial and office buildings shall provide a minimum of 60 percent and a maximum of 85 percent transparency (windows) at ground level. One side elevation shall provide at least 30 percent transparency. Transparency on other elevations is optional. Transparency is measured in lineal fashion; for example, a 100-foot long building shall have at least 60 feet in length of windows. Transparency shall be measured flush with the building wall.
 - 2) Buildings shall include large front windows on the ground level, with sills between 12 and 18 inches above sidewalk level and lintels 9 to 12 feet above sidewalk level.
 - 3) Clear glass (providing a minimum of 88 percent light transmission) shall be used on ground floor windows. Tinted glass providing a minimum of 50 percent light transmission shall be limited for use only in transoms and windows above the ground floor. The use of bronze tinted or reflective glass is prohibited. The use of transom windows is strongly encouraged.
 - 4) If aluminum window frames are used they shall be either factory coated or anodized a dark color. Bare aluminum or gold color window frames are prohibited.
 - 5) If shutters are used, appropriate hardware (hinges, pulls, etc.) shall be used. Shutters shall be proportioned to cover one-half the width of the window.
 - 6) Display cases on the rear elevation of buildings may project 18 inches.
- f. Roofs.
- 1) Roofs shall be pitched with overhanging eaves, or flat with articulated parapets and cornices. Desired roof materials include slate (either natural or manmade), shingle (either wood or asphalt

composition), and metal formed to resemble "standing seams." Roof color shall be traditional, within the range of colors found on buildings shown in [source document or reference for design guidelines]. Specifically excluded are white, tan, or blue shingles, and corrugated metal. The use of fascias, dormers, and gables is encouraged to provide visual interest. All gables shall be functional.

Commentary: Regional variations should be accommodated and encouraged. For example, in parts of California and the Southwest, red clay tiles are traditional and, therefore, appropriate.

- 2) Gas station canopies shall have pitched roofs and the lighting shall be from luminaries recessed into the ceilings of said canopies, so that the lighting elements themselves are not visible from or beyond the lot lines. Gas station canopy ceilings shall be limited to a maximum height of 15 feet.
- 3) The construction of open colonnades or other structures over a public sidewalk adjoining storefront buildings shall be permitted subject to an appropriate easement over the public right-of-way. Such easements shall assign legal liability to the owners of such structures and shall hold the [name of local government] harmless.

Commentary: Easements granting permission to extend structures over public rights-of-way and containing language assigning legal liability to the owners of such structures are highly recommended any time the public right-of-way is encroached upon.

g. Awnings.

Commentary: The color and pattern of awnings affect the entire building and therefore should be carefully chosen. A facade with minimal architectural detailing can be enhanced with bright colors and pattern, while a more decorated facade may be complemented with a plain, subtle shade. The shape of awnings should be designed to fit the building's architecture and relate to other awnings that exist along the street. The cumulative effect of all of the awnings along the street should be considered prior to adding a new one.

- 1) Awnings may be constructed from heavy canvas, matte finish vinyl or fabric. Metal, plastic, shiny vinyl and plexiglas awnings are prohibited.
- 2) A minimum eight-foot vertical clearance between the sidewalk and the lowest part of the awning shall be maintained.
- 3) Awnings shall break at the vertical divisions of the structure (i.e. the break between the display windows and the entrance).

Commentary: The vertical break is to eliminate long expanses of awnings that can have a monotonous appearance.

- 4) The highest point of a storefront awning shall not be higher than the midpoint between the second story window sills and the top of the first floor storefront window or transom.

Commentary: This height limit maintains the proper proportion of awning size to storefront area and leaves a comfortable space between the top of the awning and any windows above.

- 5) Awnings shall not be illuminated on the interior.

Commentary: Many excellent design publications provide the interested reader with additional detailed information. A number of new urbanist communities have published very noteworthy design guidebooks, including Celebration (near Orlando, Florida) and Hidden Springs (near Boise, Idaho). In lieu of reference to a book from another community, a local government can develop its own set of design guidelines incorporating photos and line drawings that can be used to help applicants understand better the kind of buildings that the community wants in its village subdivisions.

h. Building Materials.

- 1) Exterior wall materials may include stucco, clapboard (including wood, vinyl or aluminum imitation clapboard siding), native stone, or brick of a shape, color, and texture very similar to that found in the historic villages and towns in [name of applicable jurisdiction].
- 2) Specifically prohibited shall be metal buildings, brick that is white, tan, spray-painted, or used, and "T-111" plywood siding. Except on side or rear walls, all forms of concrete block shall be prohibited, unless rendered with a smooth or stuccoed masonry coating. Split-face aggregate concrete block may be used on side or rear walls without such rendering.
- 3) The number of different wall materials shall be kept to a minimum, preferably no more than two.
- 4) Commercial grade windows and doors shall be used, with wood encouraged. Varnished exterior finishes are prohibited. Minor paneled surfaces shall be of "MDO"(medium-density overlay) plywood.

Commentary: Varnished wood is nontraditional on building exteriors and requires exceptionally high maintenance (typically annual sanding and recoating). Medium-density overlay (MDO) plywood boards are factory-finished with surfaces that are exceedingly smooth and durable, with excellent long-term resistance to cracking. For double-sided surfaces (such as hanging signs), double-sided MDO or HDO (high-density overlay) is strongly recommended.

- 6) Wooden storefronts shall be elevated four (4) inches above the sidewalk on a masonry plinth (typically concrete or granite) to protect it from moisture and rot.

i. Color.

Commentary: Color need not be based on historical precedents, but should generally be coordinated with the overall character of the streetscape. If a bright accent color is desired, it should be added in the form of awnings, signage or by painting to accent architectural detail (i.e. cornices, window sills, columns and similar features, rather than applied to walls or roofs.

Appendix E:

Traffic Impact Study Volume 1

Traffic Impact Study Volume 2 is available in the Office of the Town Supervisor. Volume 2 contains Appendices 1, 2, and 3 to the Traffic Impact Analysis

Engineering Report
WARWICK TRAFFIC ANALYSIS
ROUTE 94 PRIORITY GROWTH CENTER
TOWN OF WARWICK
ORANGE COUNTY, NEW YORK

January 2010

PREPARED FOR:

GREENPLAN, INC.
ENVIRONMENTAL PLANNERS
352 PELL'S ROAD
RHINEBECK, NEW YORK 12572

PREPARED BY:

WILLIAM D. FITZPATRICK PE, PTOE
FITZPATRICK ENGINEERING, LLC
26 Julia Drive
Hyde Park, NY 12538

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1.0 EXECUTIVE SUMMARY

The purpose of this traffic analysis is to examine the roadway infrastructure of NYS Route 94/Warwick Turnpike at certain key intersections relative to potential traffic impacts associated with current zoning regulations compared to a set of proposed zoning actions as set forth in the Final Scoping Document prepared by the Town of Warwick for the State Environmental Quality Review Act (SEQR) process.

The Route 94 Priority Growth Center as defined, and which is the focus of this Analysis, extends along Route 94 from County Road 21, Warwick Turnpike, on the west to County Road 1A on the east.

The proposed zoning which is the basis for this Analysis consists of the following:

- Approximately 260,319 sq ft of retail space;
- Approximately 260,319 sq ft of office space;
- Approximately 244 1-bedroom units of 1000 sq ft;
- Approximately 47 2-bedroom units of 1400 sq ft.

Comparison to the current zoning of approximately 312,385 sq ft of retail has been utilized with the understanding that although some of this retail use could also be office use; the reality of traffic generation for a worst-case assessment is better served with retail as the generator.

The intersections deemed to be critical from a potential traffic impact perspective are the following:

- NYS Route 94 and CR 21;
- NYS Route 94 and the existing driveway at Shop Rite shopping plaza;
- NYS Route 94 and The Fairgrounds shopping plaza driveway;
- NYS Route 94 and CR 1A, Pelton Road.

This analysis focuses on capacity of the identified intersections and with the knowledge that Route 94 must carry the land-use generation of this immediate area along with the through traffic generated by uses beyond this section of Route 94. However, it is important to engage the concept of access management that promotes the establishment of “service” roadways connecting adjacent land-uses so as to create a secondary path that allows multi-use/destination shopping between and among a series of consumer services. The service roads act as collectors funneling shoppers to clearly defined signalized access points to the main thoroughfare, in this case Route 94. Therefore, although this analysis cannot implement or utilize

the benefits of such design, it clearly is the proper long-term objective and will lessen the over-all traffic burden on Route 94. What is presented in this Analysis is a worst-case scenario absent any benefit to be accrued by implementation of reasonable access management in the form of service roadways. Similarly, although signalization of specific intersections is the mechanism used to increase capacity in this Analysis, it clearly is not the only means of accomplishing that goal. Roundabouts and other forms of intersection improvements may be better alternatives; such issues must be explored when more specific development proposals are advanced.

As a common design year goal, all traffic volumes have been projected to the year 2014; thus full build-out under both existing zoning and the proposed zoning have been applied fully to the design year.

This Analysis relies on data collected in prior traffic studies, most notably a study conducted by John Collins Engineering, PC, for The Fairgrounds development in 2004. This study tabulated traffic volumes for the PM and Saturday peak traffic hours at a number of intersections along Route 94. Those intersections included the four key intersections which are the focus of this analysis.

The NYSDOT indicated a traffic growth of 0.5% to 1.0% per year over the last four to five years and predicted this trend to continue for the foreseeable future. Therefore, the Collins report data was adjusted to reflect 2009 activity, *Existing* conditions, and then projected forward to the year 2014, the design year, by 1.0% per year, or a total of 5%¹ to account for background growth. Thus 2014 is both the *No-Build* and *Build* timeframe.

The generation analysis for a theoretical build-out provides the anticipated traffic impact that can be expected as a result of that development. The Institute of Transportation Engineers (ITE) provides traffic and transportation professionals with a source document as a guide to trip generation rates for all land uses and Building types. This document, "Trip Generation Manual"², 7th Edition, is updated periodically and details rates developed for the average weekday, Saturday and Sunday, during the peak hours of the generator and during the peak hours of the adjacent roadway traffic. This document was utilized for this Analysis.

The capacity analysis methodology is based upon the 2000 Highway Capacity Manual³ using SYNCHRO Traffic Signal Software by Trafficware⁴.

¹ Normally given the degree of estimation, growth is not compounded for forecast purposes.

² Trip Generation Manual, 7th Edition, Institute of Transportation Engineers, 2004.

³ Special Report 209, 2000, published by the Transportation Research Board, National Research Council, Washington, D.C.

⁴ SYNCHRO 6, Traffic Signal Software, Trafficware Corporation, 2003

The conclusions of the analyses and review process are summarized as follows.

The results of the capacity analysis of Route 94 at CR 21 and Route 94 and the Shop Rite Plaza driveway show unacceptable conditions under either zoning alternative and will require mitigation to function efficiently in the future regardless of zoning generation. Signalization is the mitigation that results in acceptable level-of-service in the *No-Build* and *Build* scenarios.

The intersections of Route 94 at The Fairgrounds and Route 94 at CR 1A operate acceptably in the No-Build conditions. However, Route 94 at CR 1A cannot accept either zoning alternative without the addition of turn lanes on all approaches. Route 94 at The Fairgrounds will continue to operate well in either zoning application.

Reference is made to Table 3 on page 40 for a summary of mitigation recommendations.

It is clear from this Analysis that the Route 94 Priority Growth Center will need to have its infrastructure upgraded as background traffic increases. However, the proposed zoning alternative is fairly consistent with the infrastructure needs associated with the current zoning regulations. In both cases, the absence of the application of pass-by credit or the access management concept of service roads over-states impacts. These conservative actions present a worst-case set of conditions for both zoning alternatives.

It is also important to understand that two of the four locations reviewed will experience unacceptable operating conditions in 2014 without any further local growth, and are in fact, suffering less-than desirable conditions currently. This situation will result simply from the external background growth that will place additional traffic volumes on Route 94, a state highway. Thus mitigation will be necessary for safe operating conditions absent any further local controlled growth.

Therefore, given these conclusions, the proposed zoning regulations do not create infrastructure needs that will not otherwise be necessary with current regulations as growth occurs in the near term.

2.0 INTRODUCTION

2.1 Project Description and Location

The purpose of this traffic analysis is to examine the roadway infrastructure of NYS Route 94/Warwick Turnpike at certain key intersections relative to potential traffic impacts associated with current zoning regulations compared to a set of proposed zoning actions as set forth in the Final Scoping Document prepared by the Town of Warwick for the State Environmental Quality Review Act (SEQR) process. The Route 94 Priority Growth Center is to be assessed within a Draft Generic Environmental Impact Statement (DGEIS) and this traffic analysis will be a component of that assessment and as such will provide an objective, factual foundation for traffic operational decisions. The comparison to the current zoning regulations is presented to simply provide a basis for evaluation and a possible understanding of future infrastructure alternatives.

The Route 94 Priority Growth Center as defined, and which is the focus of this Analysis, extends along Route 94 from County Road 21, Warwick Turnpike, on the west to County Road 1A on the east.

The proposed zoning which is the basis for this Analysis consists of the following:

- Approximately 260,319 sq ft of retail space;
- Approximately 260,319 sq ft of office space;
- Approximately 244 1-bedroom units of 1000 sq ft;
- Approximately 47 2-bedroom units of 1400 sq ft.

Comparison to the current zoning of approximately 312,385 sq ft of retail has been utilized with the understanding that although some of this retail use could also be office use; the reality of traffic generation for a worst-case assessment is better served with retail as the generator.

The intersections deemed to be critical from a potential traffic impact perspective are the following:

- NYS Route 94 and CR 21;
- NYS Route 94 and the existing driveway at Shop Rite shopping plaza;
- NYS Route 94 and The Fairgrounds shopping plaza driveway;
- NYS Route 94 and CR 1A, Pelton Road.

This analysis focuses on capacity of the identified intersections and with the knowledge that Route 94 must carry the land-use generation of this immediate area along with the through traffic generated by uses beyond this section of Route 94. However, it is important to engage the concept of access management that promotes the establishment of “service” roadways connecting adjacent land-uses so as to create a secondary path that allows multi-use/destination shopping between and among a series of consumer services. The service roads act as collectors funneling shoppers to clearly defined signalized access points to the main thoroughfare, in this case Route 94. Therefore, although this analysis cannot implement or utilize the benefits of such design, it clearly is the proper long-term objective and will lessen the over-all traffic burden on Route 94. What is presented in this Analysis is a worst-case absent any benefit to be accrued by implementation of reasonable access management in the form of service roadways. Similarly, although signalization of specific intersections is the mechanism used to increase capacity in this Analysis, it clearly is not the only means of accomplishing that goal. Roundabouts and other forms of intersection improvements may be better alternatives; such issues must be explored when more specific development proposals are advanced.

As a common design year goal, all traffic volumes have been projected to the year 2014; thus full build-out under both existing zoning and the proposed zoning have been applied fully to the design year.

Figure 1 illustrates the Route 94 Priority Growth Center location relative to the surrounding area and Figure 2 shows the key intersections. Figure 3 shows the zoning parcels and Figure 4 depicts an artist’s rendering of the Route 94 Priority Growth Center segment of Route 94.

Figure 1: Area Map

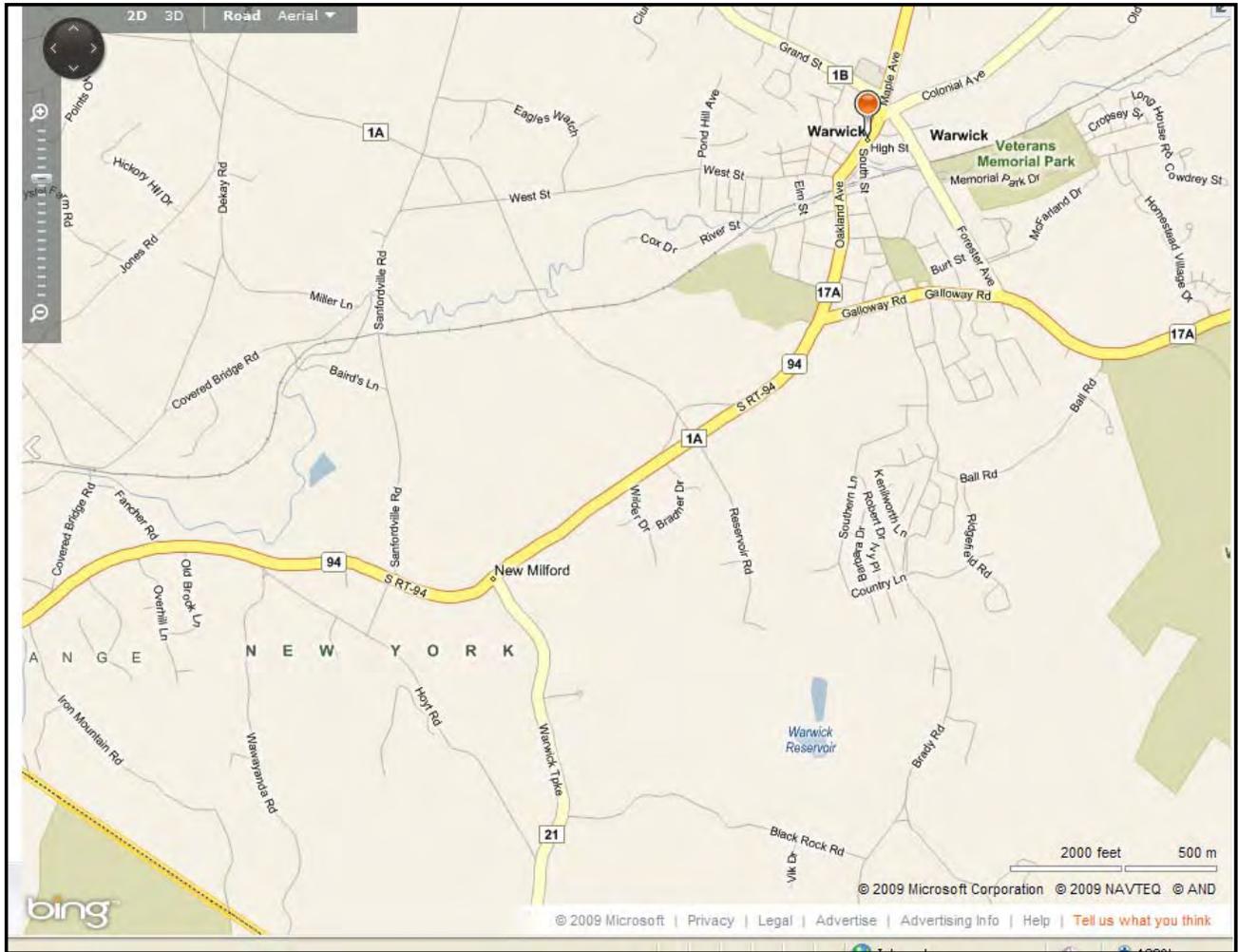


Figure 2: Corridor with Key intersections



Figure 3: Aerial Map with Zoning

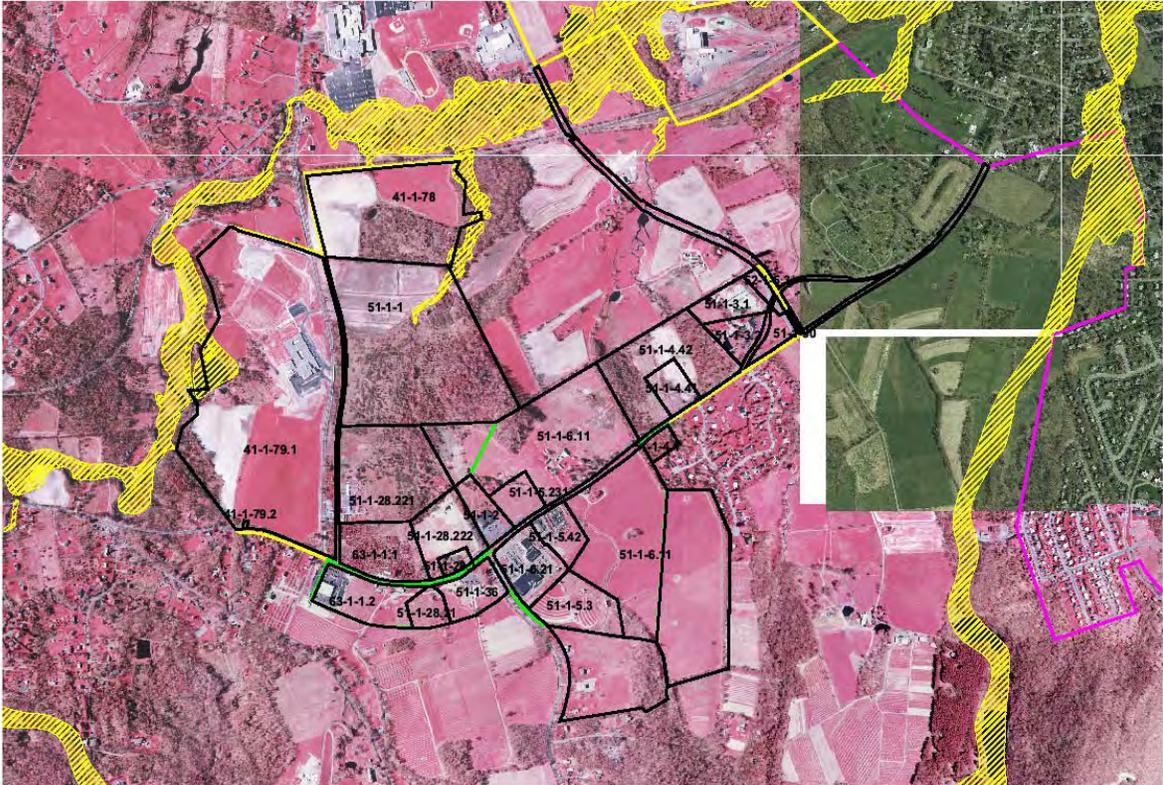


Figure 4: Artist's Rendering



2.2 Scope and Methodology of Analysis

This Analysis relies on data collected in prior traffic studies, most notably a study conducted by John Collins Engineering, PC, for The Fairgrounds development in 2004. This study tabulated traffic volumes for the PM and Saturday peak traffic hours at a number of intersections along Route 94. Those intersections included the four key intersections which are the focus of this analysis. The counts were taken between the hours of 2:00 PM and 6:00 PM on a typical weekday and 11:00 AM and 2:30 PM on a typical Saturday⁵. The highest 60 minutes of traffic flow is than used to measure efficiency of traffic flow. In this case the highest flows occurred between 5:00 PM and 6:00 PM on the weekday and 11:45 AM and 12:45 PM on Saturday.

For purposes of assessing zoning generation and the land-uses involved, these hours reflect the proper timeframes for analysis and correspond with observed and historical peak hour activity and were therefore used in this Analysis. Furthermore, the New York State Department of Transportation (NYSDOT)⁶ was consulted relative to an historic growth rate for this geographic area and a forecast for the timeframe of this Analysis. The NYSDOT indicated a traffic growth of 0.5% to 1.0% per year over the last four to five years and predicted this trend to continue for the foreseeable future. Therefore, the Collins report data was adjusted to reflect 2009 activity, *Existing* conditions, and than projected forward to the year 2014, the design year, by 1.0% per year, or a total of 5%⁷ to account for background growth.

The methodology utilized provides for analysis of capacity at the key intersections under existing traffic flows and geometric conditions. Capacity is than again measured in the design year using the background growth rate to increase traffic volumes, but without any additional land-use generation from the immediate zoning parcels. These traffic volumes constitute the anticipated *No-Build* conditions for 2014 (i.e. traffic conditions without influence from the zoning parcels). The *No-Build* volumes are than increased by the traffic which would be generated by the zoning...in this case both zoning alternatives, existing zoning and the proposed zoning. This addition or surcharge of activity provides the *Build* volumes.

A comparison of roadway capacity under *Existing*, *No Build*, and *Build* conditions than measures the sufficiency of the roadway infrastructure to address growth, both background (non-local) and local zoning generated activity. It is plausible to skip the *No-Build* scenario in a full build-out focused analysis, but having the *No-Build* information allows for an assessment of a “null” alternative relative to local growth,

⁵ Weekend traffic normally exhibits heavier traffic flows mid-day Saturday in comparison to Sunday flows; the traffic engineering profession therefore measures capacity using Saturday activity unless there are extenuating circumstances.

⁶ Planning and Program Management Group, New York State Department of Transportation, Region 8.

⁷ Normally given the degree of estimation, growth is not compounded for forecast purposes.

which is always informative relative to “independent” (non-local) growth and its affect on the local roadways.

For purposes of this Analysis, within this section of Route 94, Route 94 is assumed oriented in an east-west direction. Where the capacity software has assigned a slightly different directionality, said orientation is refined to east-west in the summary tables.

Based on the comparison of capacity analyses of the key intersections under *Existing*, *No-Build*, and than the two zoning alternatives for *Build* conditions, a determination can be made as to potential impact of the alternatives and the ability of the infrastructure to accommodate the *No-Build* and *Build* conditions.

Mitigation actions are identified, as necessary, to maintain efficiency of traffic flow.

3.0 EXISTING AND PROJECTED TRAFFIC CONDITIONS

3.1 Roadways and Intersections

NYS Route 94, a State-owned and maintained roadway, traverses generally east/west through Orange County. To the east and north Route 94 serves the Villages of Warwick and Florida. To the west and south Route 94 extends into Vernon, New Jersey. Throughout its length, Route 94 is essentially a two lane roadway for commercial, retail, residential, and commuter activity. The Route 94 Priority Growth Center section carries an Annual Average Daily Traffic⁸ (AADT) of approximately 7,020 (2008). To the east within the Route 17A overlap the AADT rises to 11,820 (2008). The subject section of Route 94 is posted at 55 mph. The pavement and shoulders for this section of Route 94 are in good condition; there are no planned improvements by the NYSDOT in the near term. All signing and pavement markings are in accordance with the NYS Manual of Uniform Traffic Control Devices. In this section of Route 94 there is a traffic signal on Route 94 at the Fairgrounds and at CR 1A.

NYS Route 17A is a State-owned and maintained roadway, traverses from Route 6 to the north to Route 17 to the east and south. East of the Route 94 Priority Growth Center Route 17A enters Route 94 from the east and overlaps with it to the north through the Villages of Warwick and Florida. Throughout its length, Route 17A is essentially a two lane roadway for commercial, retail, residential, and commuter activity. Within the Route 17A/94 overlap the AADT is 11,820 (2008). Within the Village of Warwick the speed limit is posted at 30 mph. The pavement and shoulders are in good condition; there are no planned improvements by the NYSDOT in the near term. All signing and pavement markings are in accordance with the NYS Manual of Uniform Traffic Control Devices.

County Road 21, Warwick Turnpike, has a north/south orientation with Route 94 as its northerly terminus. Warwick Turnpike is an Orange County owned and maintained roadway that services residential areas through Upper Greenwood Lake and into Sussex County in New Jersey. The roadway is generally a two lane roadway with a posted speed limit of 45 mph. The pavement and shoulders are in fair to good condition. All signing and pavement markings are in accordance with the NYS Manual of Uniform Traffic Control Devices.

County Road 1A, Pelton Road, has a north/south orientation with Route 94 as its southerly terminus. Pelton Road is an Orange County owned and maintained roadway that services other areas to the north in the Town of Warwick. The

⁸ New York State Department of Transportation, *2003 Traffic Data Report for New York State*, web site resource.

roadway is generally a two lane roadway with a posted speed limit of 40 mph. The pavement and shoulders are in fair to good condition. All signing and pavement markings are in accordance with the NYS Manual of Uniform Traffic Control Devices.

The following intersections were analyzed relative to operating characteristics. These characteristics define the parameters used in the capacity analysis for each location.

NYS Route 94 and CR 21, Warwick Turnpike

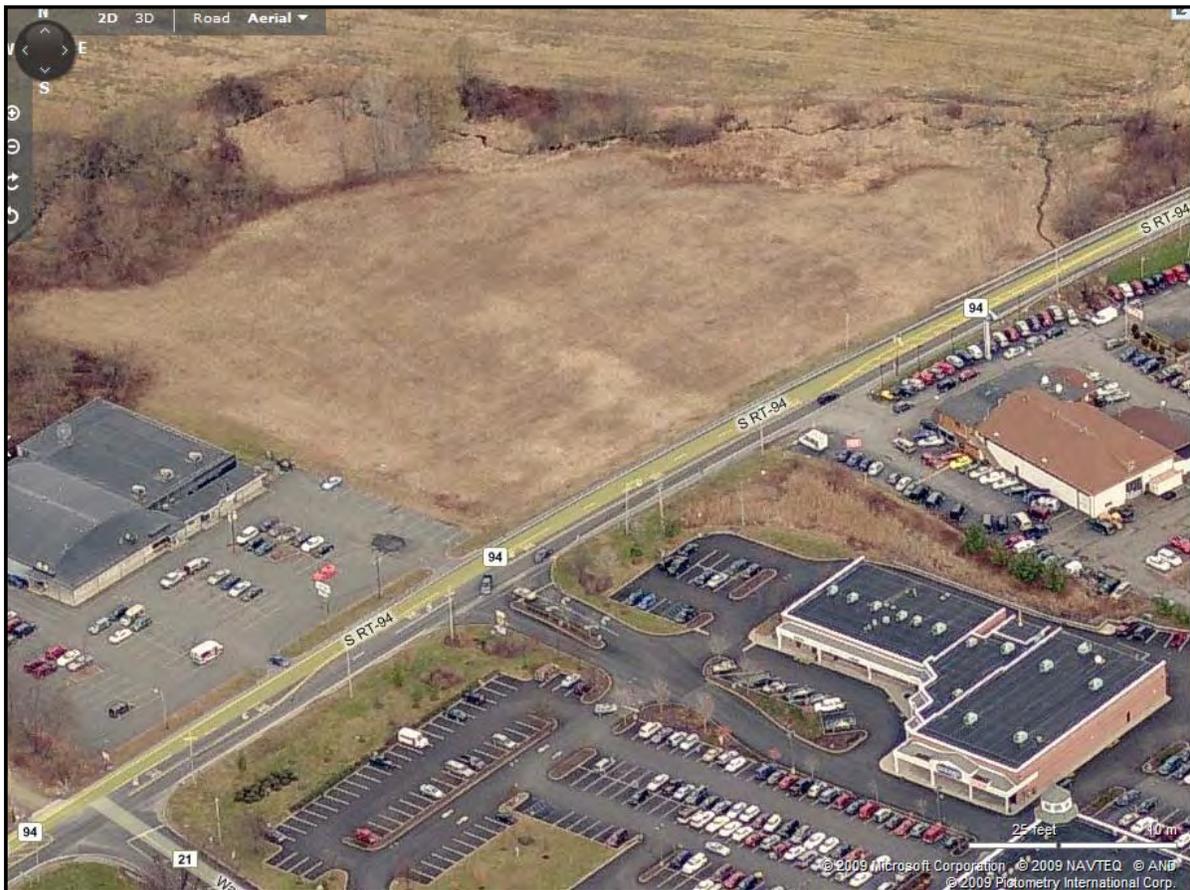
This three-way intersection is not signalized and is controlled by a stop sign on CR 21. This intersection consists of Route 94 (east/west) and CR 21 entering from the south. The Route 94 eastbound approach consists of a single lane. The Route 94 westbound approach consists of a dedicated left-turn lane, and a through lane.

The CR 21 approach has a dedicated left-turn lane and a separate dedicated right-turn lane. Sight lines are very good in all three directions (in excess of 550 feet). All guide signing, regulatory signing (lane designations), and pavement markings are in place.



NYS Route 94 and the existing driveway at Shop Rite Retail Plaza;

This unsignalized intersection is formed by Route 94 in an east/west direction and the driveway to the Shop Rite Plaza intersecting from the south. Opposite the Shop Rite Drive is a private drive which is one-way into a retail property; there is no traffic entering Route 94 from this driveway. A stop sign controls the entering Shop Rite driveway traffic, which consists of a dedicated left-turn lane and a separate dedicated right-turn lane. The eastbound and westbound Route 94 approaches each have a single lane for through and right-turn movements and a dedicated left-turn lane for turning movements. Sight lines for motorists exiting are good (i.e. in excess of 750 feet both left and right).



NYS Route 94 at The Fairgrounds Retail Plaza

For purposes of this Analysis, this location is assumed as proposed in the John Collins' Traffic Impact Study for The Fairgrounds proposal. Although this development is not yet completed, the proposed geometry and the traffic generation are both adopted in their entirety. The geometric modifications are necessary for safe and efficient traffic flow. The following description is reflective of this assumed set of conditions⁹. This signalized intersection is formed by Route 94 in an east/west direction and the driveway to the Fairgrounds Plaza intersecting from the north. A 3-color traffic signal controls the entering Fairgrounds driveway traffic, which consists of a dedicated left-turn lane and a separate dedicated right-turn lane. The eastbound Route 94 approach has a single lane for through movements and a dedicated left-turn lane for turning movements. The westbound Route 94 approach has a single lane for through movements and a dedicated right-turn lane for turning movements. Sight lines for motorists exiting are good (i.e. in excess of 750 feet both left and right).

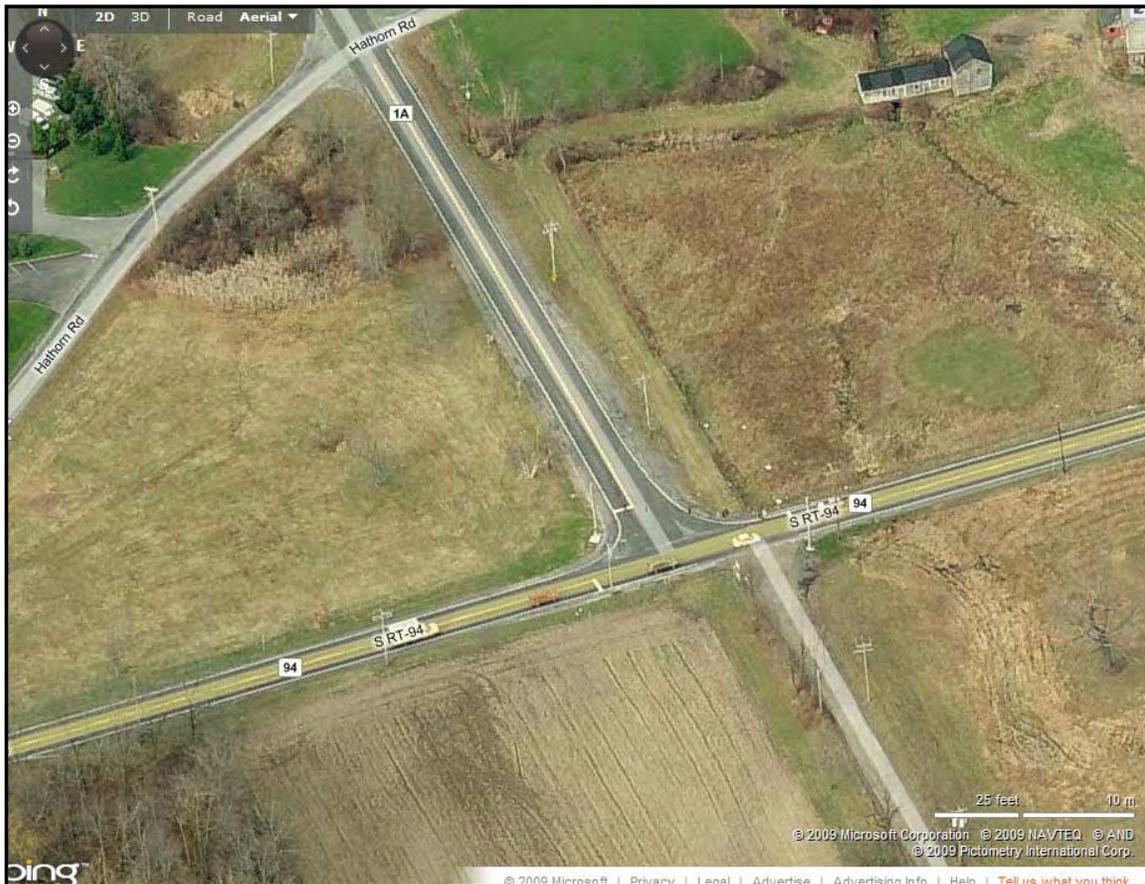


⁹ This assumption allows this Analysis to be relevant as intersection conditions start to reflect the proposed geometry and traffic flows contained in the Collins' Study. Thus the conclusions of this Analysis will not be dependent upon the transitory nature of this location's conditions.

NYS Route 94 at CR 1A, Pelton Road

This three-way intersection is controlled by a 3-color traffic signal. This intersection consists of Route 94 (east/west) and CR 1A entering from the north. The Route 94 eastbound approach consists of a single lane as does the Route 94 westbound approach.

The CR 1A approach has a single lane for all movements. Sight lines are very good in all three directions (in excess of 600 feet). All guide signing, regulatory signing, and pavement markings are in place.



3.2 Existing Vehicular Volumes

As noted previously, traffic volumes at the aforementioned locations for the 2009 PM and Saturday peak hours were documented and Figures 5 and 6 summarize the vehicle movements at each key intersection for the weekday PM, and Saturday Mid-Day peak hours, respectively. The volumes shown at the Route 94 and The Fairgrounds reflect full build-out of this development as proposed in 2004.

Figure 5: Existing AM Volumes – 2009

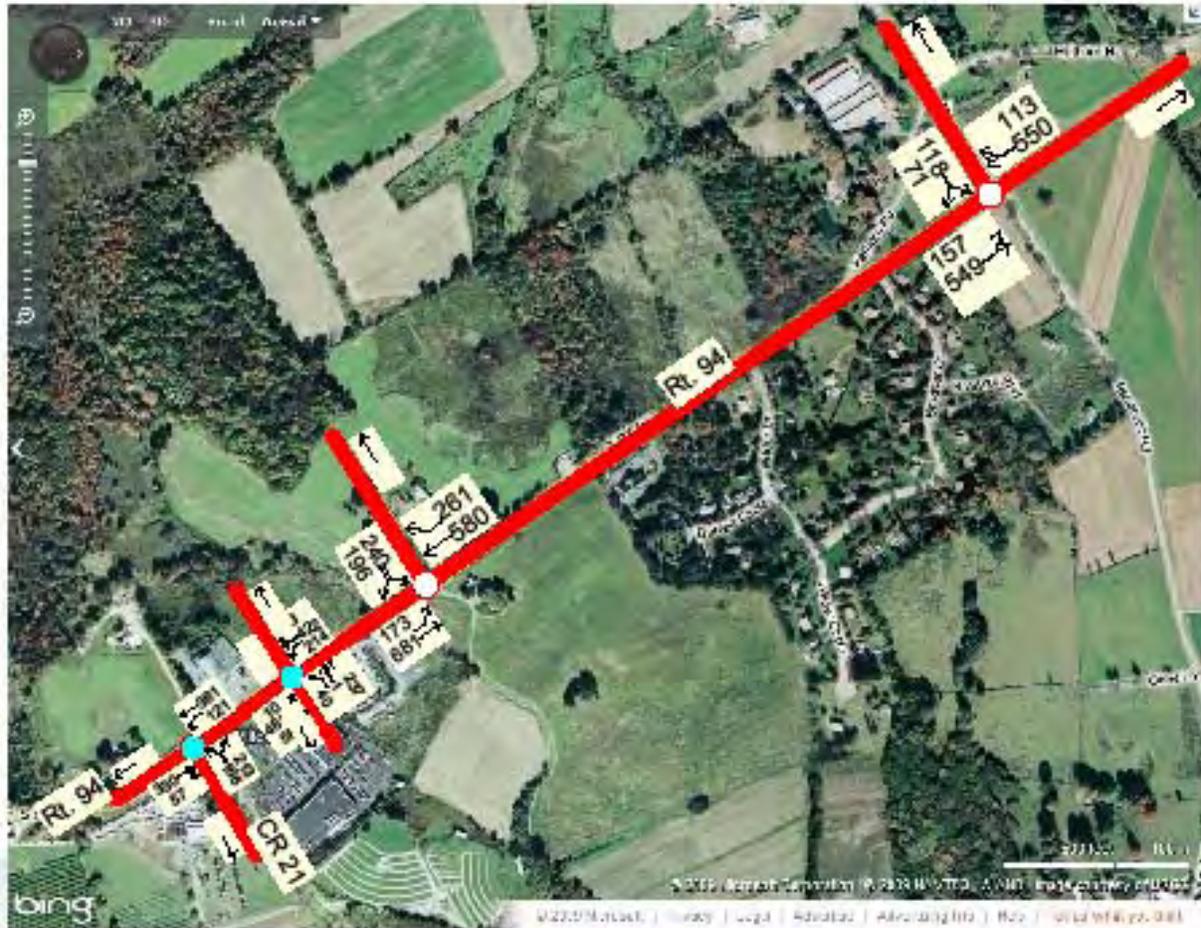
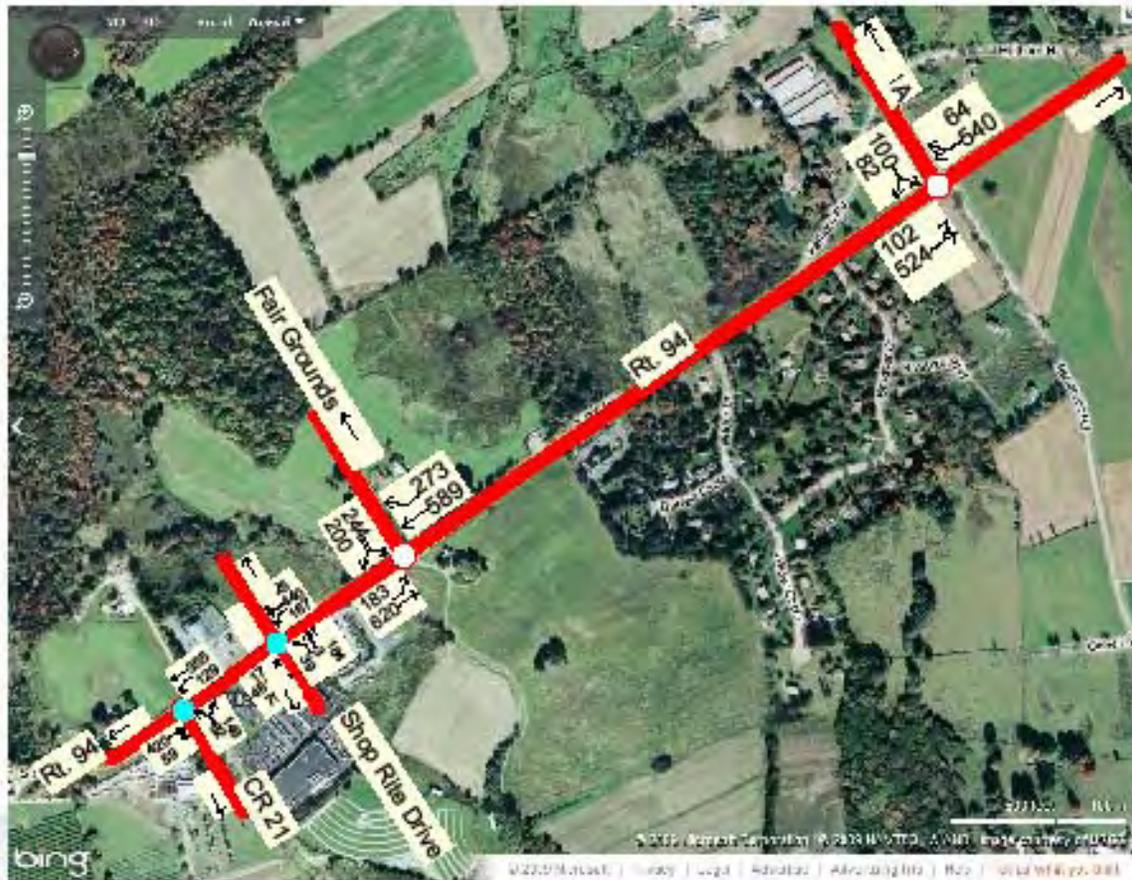


Figure 6: Existing SAT Volumes – 2009



3.3 Projected *No-Build* Vehicular Volumes

As noted previously, traffic volumes at the aforementioned locations for the PM and Saturday peak hours were projected forward to 2014 and Figures 7 and 8 summarize the *No-Build* vehicular volumes at each key intersection for the weekday PM, and Saturday Mid-Day peak hours, respectively.

Figure 7: *No-Build* PM Volumes – 2014

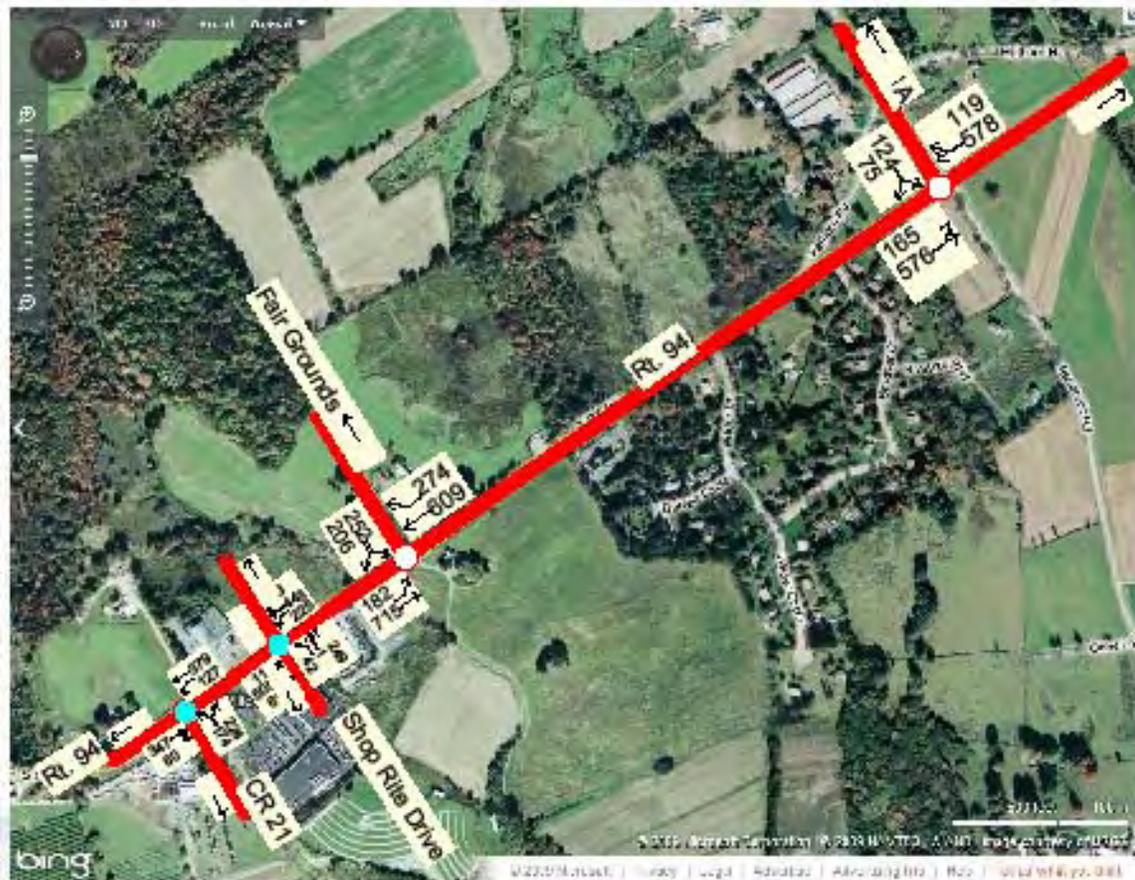
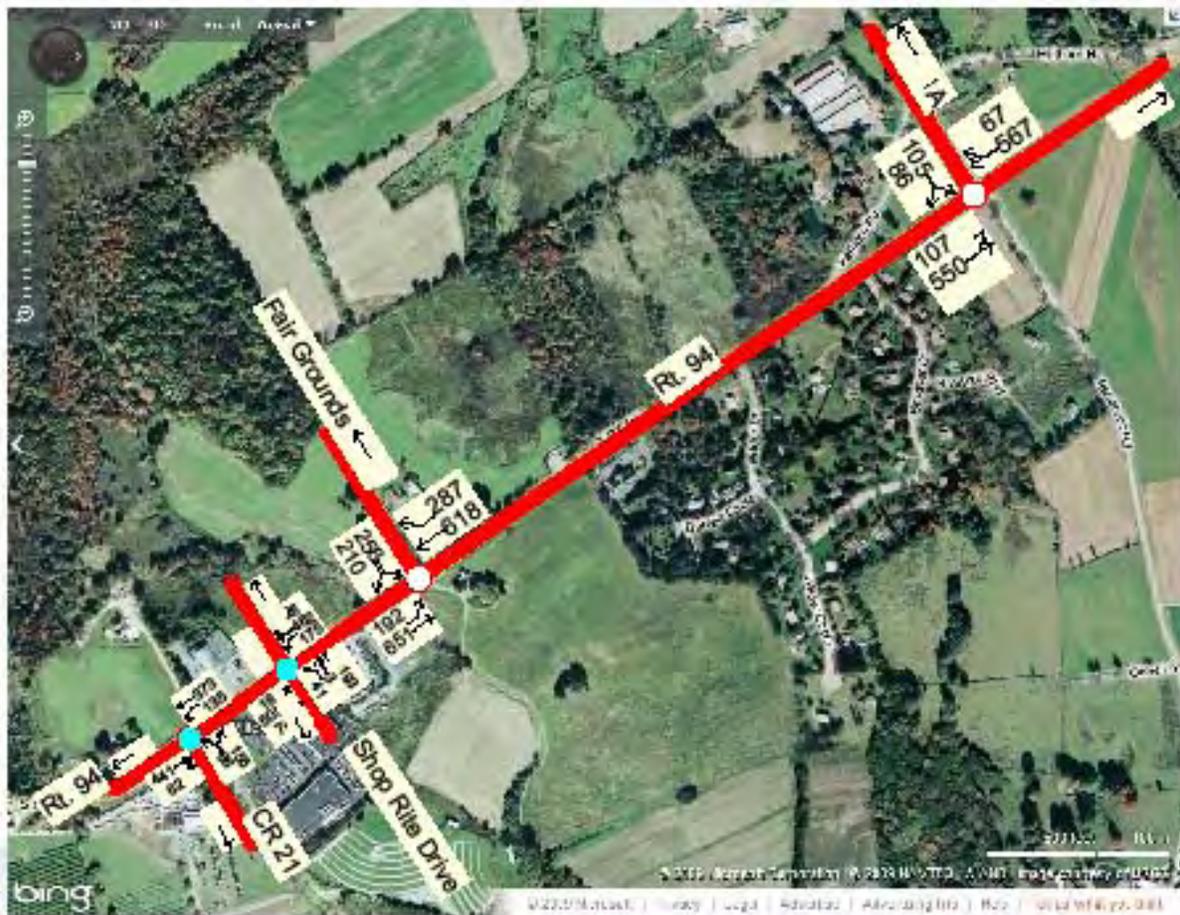


Figure 8: No-Build SAT Volumes – 2014



4.0 ZONING GENERATED TRAFFIC CONDITIONS

4.1 Zoning Generated Vehicular Volumes

The generation analysis for a theoretical build-out provides the anticipated traffic impact that can be expected as a result of that development. The Institute of Transportation Engineers (ITE) provides traffic and transportation professionals with a source document as a guide to trip generation rates for all land uses and Building types. This document, "Trip Generation Manual"¹⁰, 7th Edition, is updated periodically and details rates developed for the average weekday, Saturday and Sunday, during the peak hours of the generator and during the peak hours of the adjacent roadway traffic.

The Institute of Transportation Engineers defines a trip or trip end as "*A single or one-direction vehicle movement with either the origin or destination (exiting or entering) inside a study site. For trip generation purposes, the total trip ends for a land use over a given period of time are the total of all trips entering and all trips exiting a site during a designated time period.*"¹¹

Since these generated trips represent vehicles entering or exiting a site at its driveways, they are appropriate in determining the total traffic to be accommodated by the site driveways.

The ITE document also addresses the issue of *Pass-by* trips in reference to generated volumes. *Pass-by* trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion¹². In other words, motorists already on the adjacent roadway network will be attracted to stop at the proposed development as part of one multi-purpose trip. Therefore, a certain percentage of site generated trips would exist on the adjacent roadway network with or without the proposed action. **It is important to note that for this zoning analysis no application of pass-by traffic was credited. The resulting capacity levels-of-service will therefore be over-stated; however, this presents a worst-case scenario which is appropriate for this "discussion" of zoning alternatives.** As previously stated, the concept of internal service roads have also not been incorporated into the analysis further creating a worst-case approach to analysis.

The proposed zoning which is the basis for this Analysis consists of the following:

- Approximately 260,319 sq ft of retail space;

¹⁰Trip Generation Manual, 7th Edition, Institute of Transportation Engineers, 2004.

¹¹ Trip Generation, 7th Edition, User's Guide, Institute of Transportation Engineers, 2004.

¹²Trip Generation Handbook, 2nd Edition, Institute of Transportation Engineers, 2004

- Approximately 260,319 sq ft of office space;
- Approximately 244 1-bedroom units of 1000 sq ft;
- Approximately 47 2-bedroom units of 1400 sq ft.

Comparison to the current zoning of approximately 312,385 sq ft of retail has been utilized with the understanding that although some of this retail use could also be office use; the reality of traffic generation for a worst-case assessment is better served with retail as the generator.

The software program “Trip Generation” by Microtrans¹³ was used to estimate traffic activity resulting from the zoning alternatives as shown in Table 1.

¹³ Trip Generation, by Microtrans, Version 6, 2008.

Table 1: Trip Generation for Warwick Traffic Analysis

COMPARISON OF EXISTING ZONING TO PROPOSED ZONING USING ITE TRIP GENERATION

Zoning	Land-Use	Variable	PM Volumes*	SAT Volumes*
Existing	Retail	312,385 Square Feet	982	1216
Total			982	1216
Proposed	Retail	260,319 Square Feet	857	1063
	Office	260,319 Square Feet	370	80
	Residential	291 Condo Units	136	135
Total			1363	1278

* Volumes added to adjacent streets

4.2 Vehicle Arrival and Departure Distributions

The distribution of the build-out generated vehicular traffic normally follows the distribution of the existing volumes at the locations monitored during the manual counts. It is anticipated that the resulting distribution of the future zoning land uses will be consistent with and not change the current traffic patterns.

The key intersections subjected to analysis which involved all public roads (Route 94 at CR 21 and Route 94 at CR 1A) were increased by the zoning generation on all approaches. The private drive intersections (Route 94 at Shop Rite and Route 94 at The Fairgrounds) were increased on the public road approaches.

The zoning alternatives' generated volumes, both for the existing and proposed zoning, when added to the corresponding *No-Build* volumes provide the anticipated 2014 *Build* volumes as summarized in Figures 9, 10, 11, and 12 for the weekday PM and Saturday peak hours, respectively.

Figures 13 and 14 are the *Build* volumes but relate to those capacity analyses which reflect the appropriate mitigation in the form of three-color traffic signals at Route 94 at CR 21, Route 94 at the Shop Rite Drive, and modified lane designations and phasing at Route 94 at CR 1A.

Figure 9: PM Build Volumes – Existing Zoning – 2014

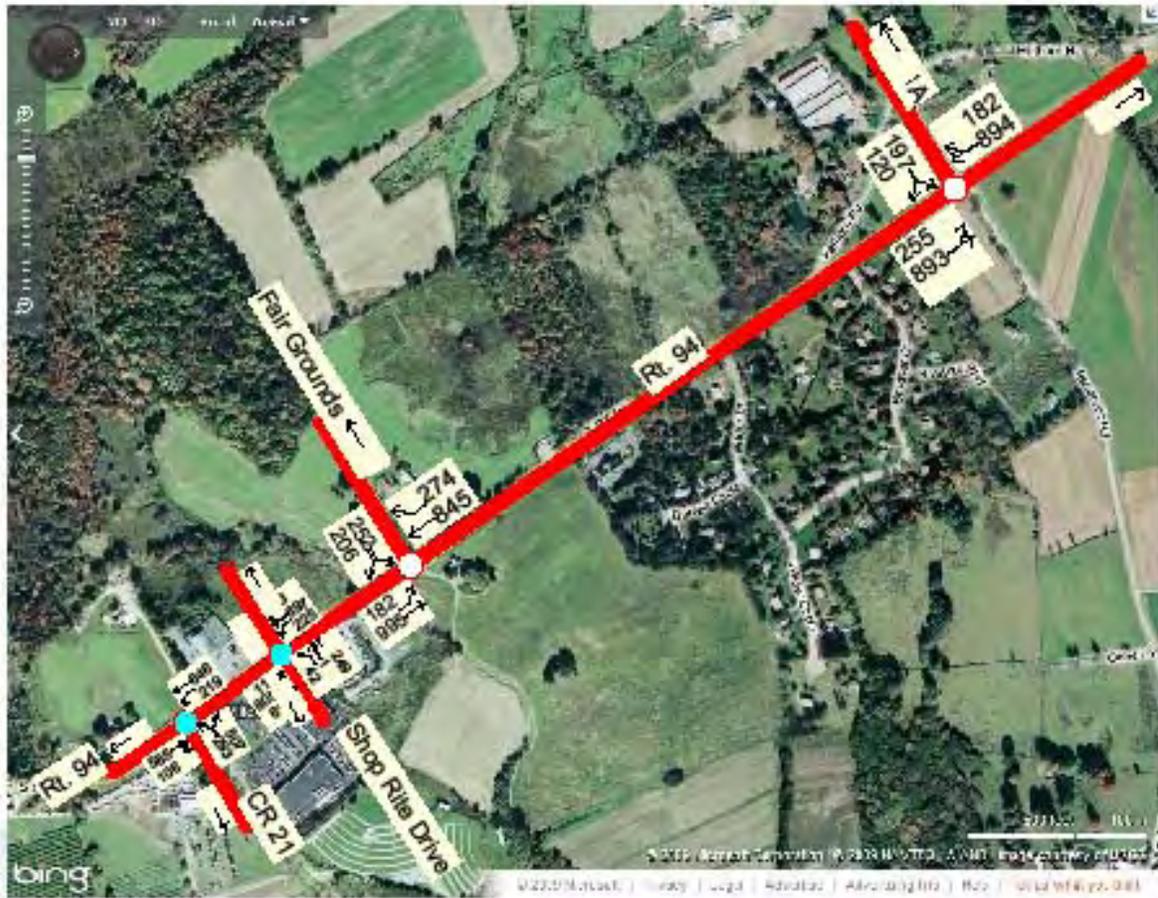


Figure 10: SAT Build Volumes – Existing Zoning - 2014

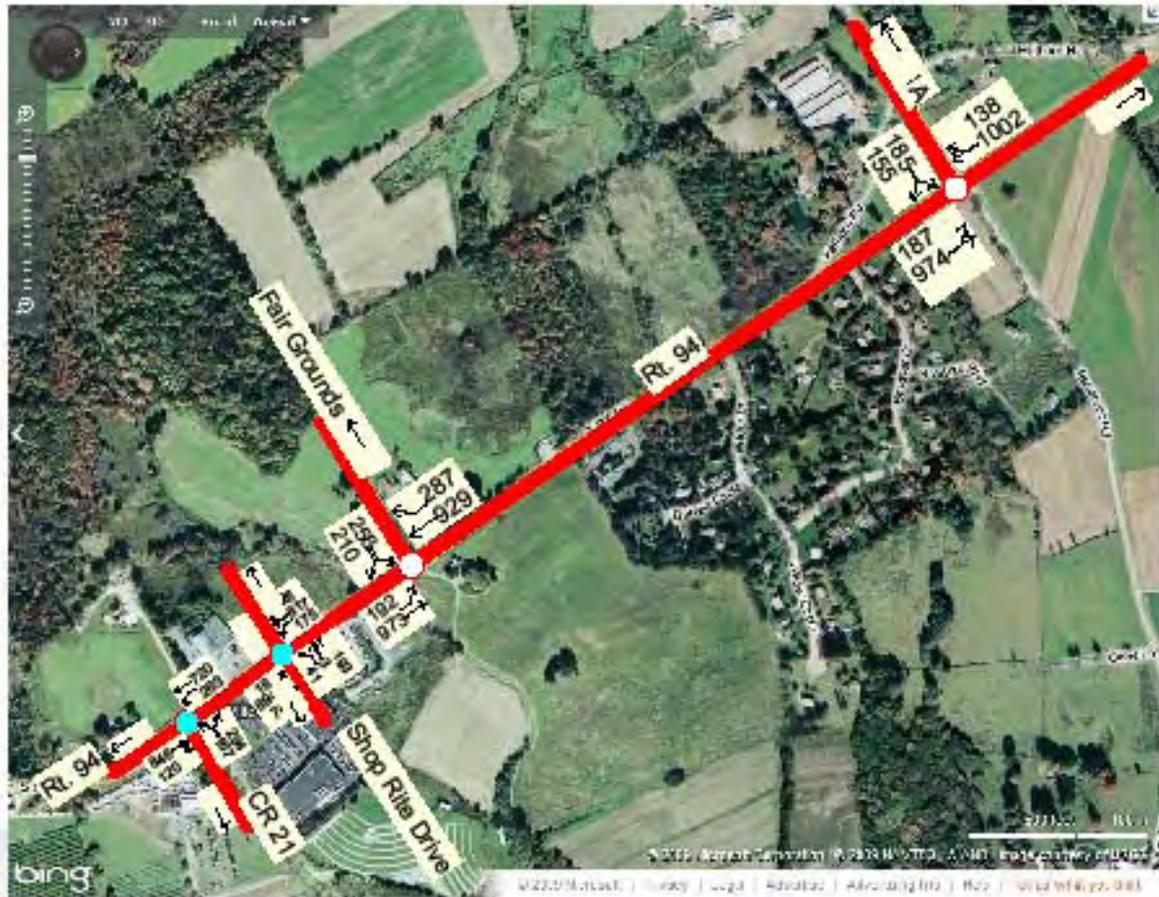


Figure 11: PM Build Volumes – Proposed Zoning – 2014

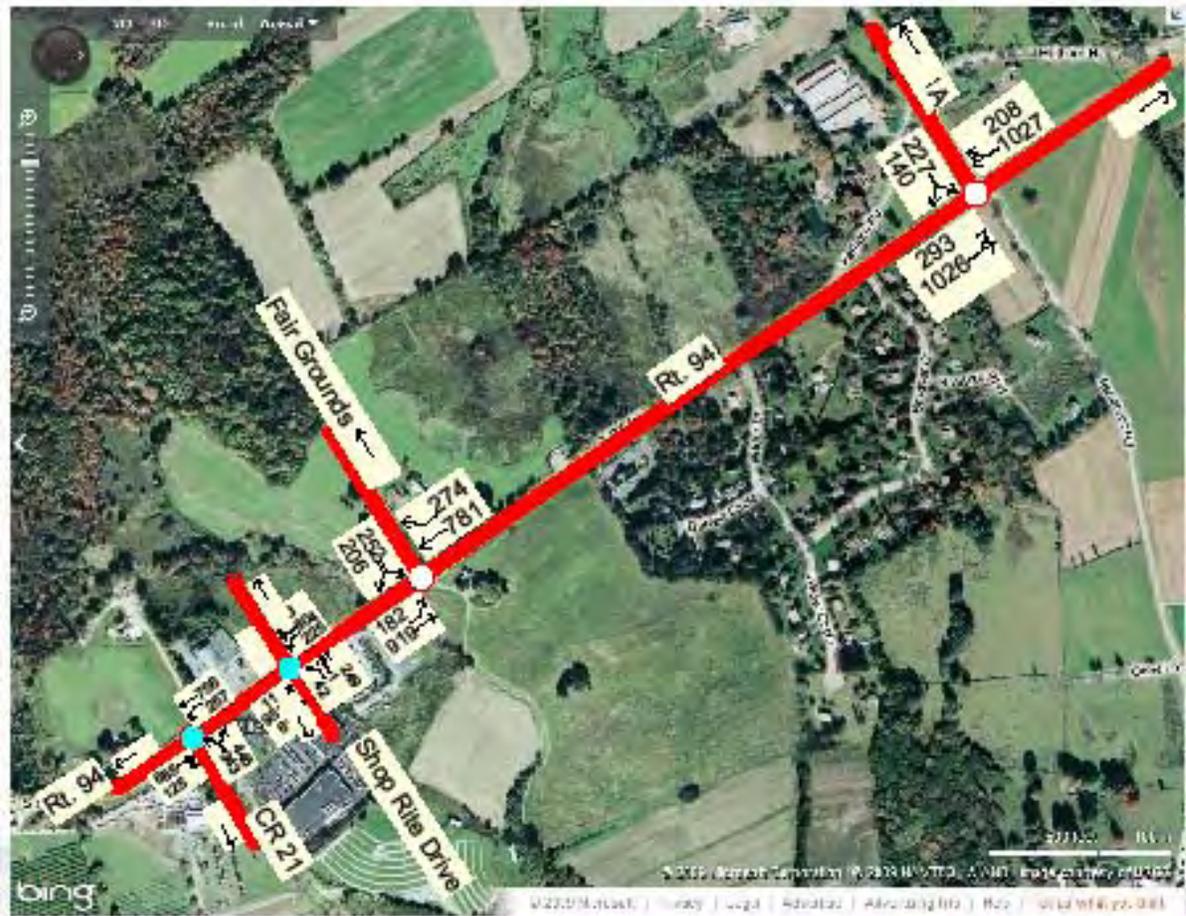


Figure 12: SAT Build Volumes – Proposed Zoning – 2014

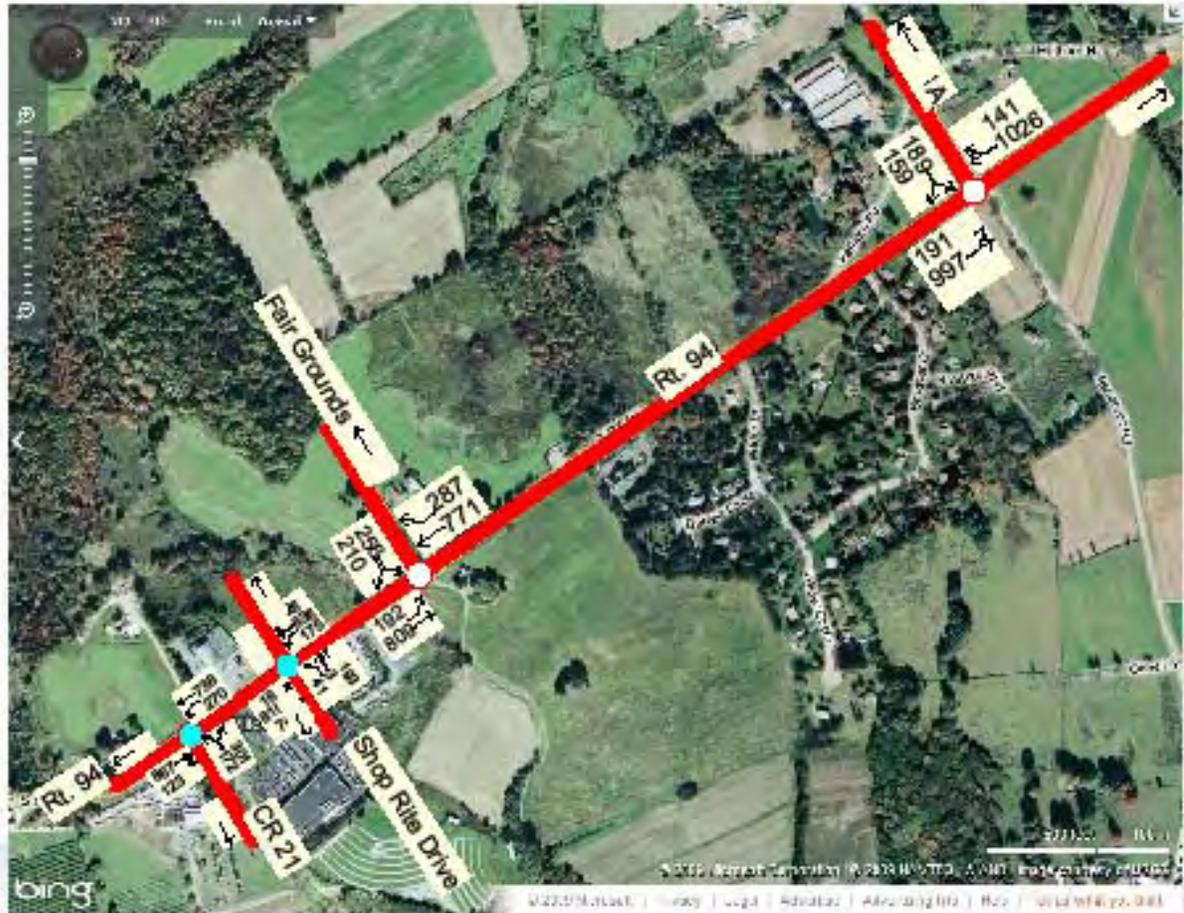


Figure 13: PM Build Volumes – Proposed Zoning with Mitigation– 2014

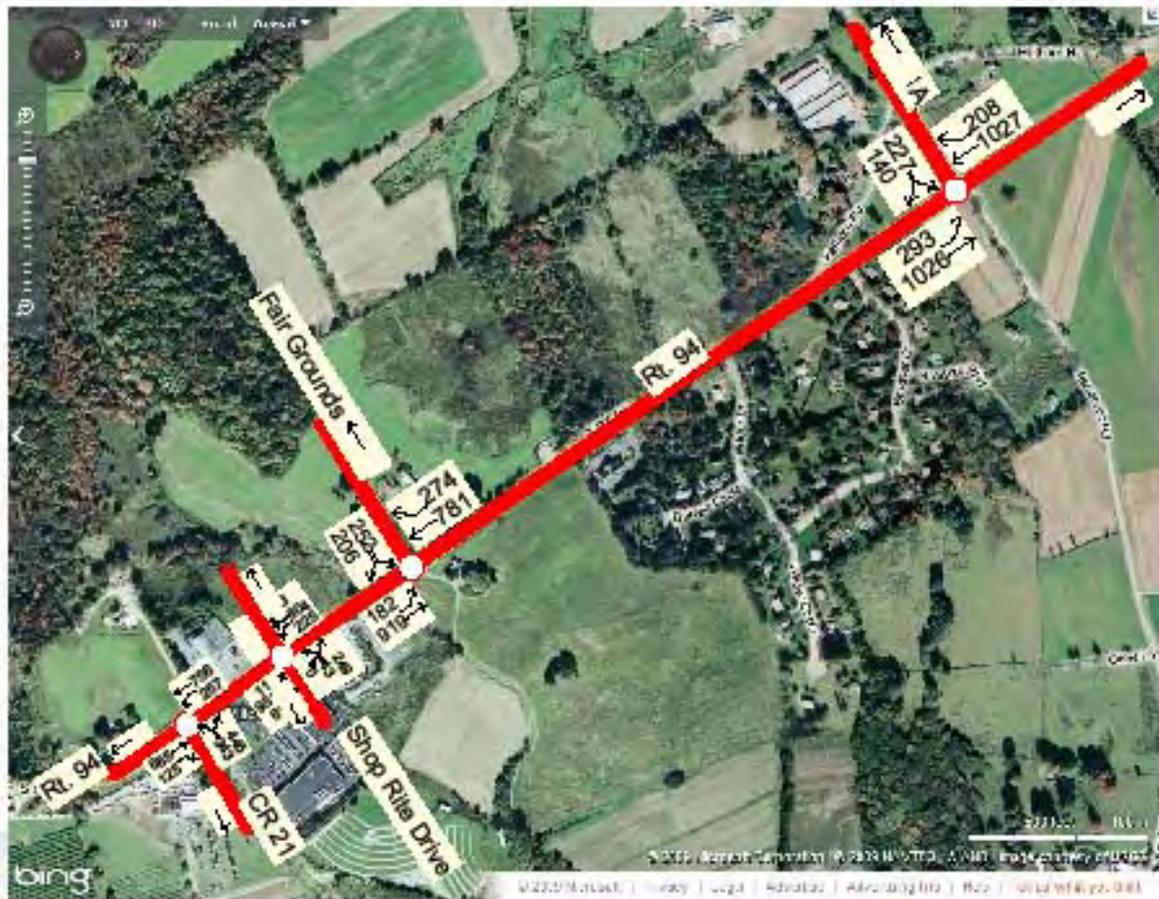
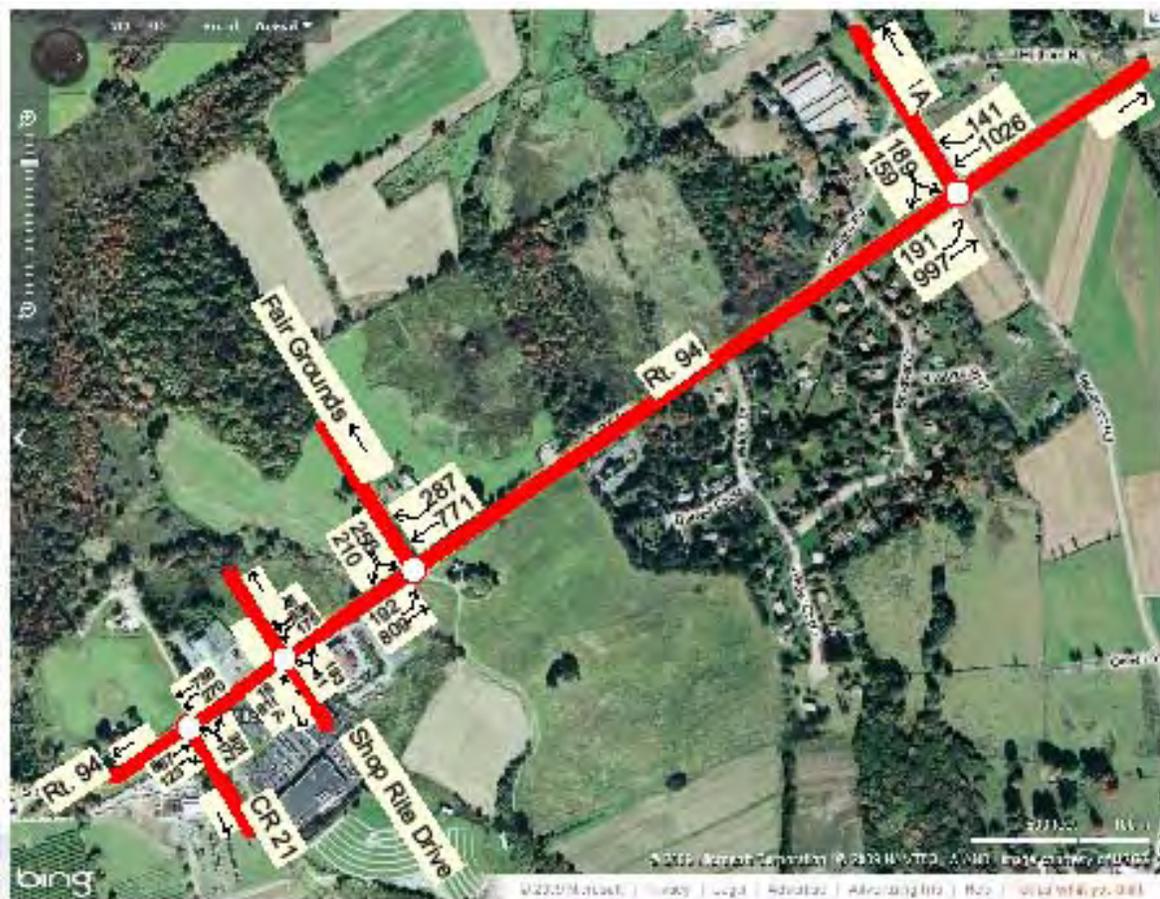


Figure 14: SAT Build Volumes – Proposed Zoning with Mitigation– 2014



5.0 ANALYSIS

5.1 Capacity/Levels-of-Service (LOS)

The capacity analysis methodology is based upon the 2000 Highway Capacity Manual¹⁴ using SYNCHRO Traffic Signal Software by Trafficware¹⁵.

The terminology used in identifying traffic flow conditions is “levels-of-service” (LOS). A LOS A represents the best condition and a LOS F represents the worst condition. A LOS C is generally used as a design standard while an intersection LOS D is acceptable during peak periods given that all approaches have LOS D or better. LOS E represents an operation at or near capacity. In order to identify a signalized intersection’s level-of-service, the average amount of vehicle delay is computed for each approach to the intersection as well as for the over-all intersection. For unsignalized intersections, the average vehicle delay is computed for each critical movement to the intersection, which are normally the stop or yield controlled approaches along with the left-turns from the main roadways. Appendix A, Tables 4 and 5, summarize the level-of-service criteria for signalized and unsignalized intersections, respectively.

Each key location was analyzed during the weekday PM and Saturday Mid-Day peak hour using *Existing*, *No-Build* and *Build* traffic volumes. As noted previously, the *Build* analyses include both zoning alternatives, existing and proposed. Mitigation is also provided and shown under the proposed zoning *Build* scenarios, however, **it must be noted that the mitigation recommended would be necessary for either zoning alternative.**

It is also important to understand that two of the four locations reviewed will experience unacceptable operating conditions in 2014 without any further local growth, and are in fact, suffering less-than desirable conditions currently. This situation will result simply from the external background growth that will place additional traffic volumes on Route 94, a state highway. Thus mitigation will be necessary for safe operating conditions absent any further local controlled growth.

The results of the capacity analyses are summarized in Table 2 below followed by a synopsis of the results for each location.

¹⁴ Special Report 209, 2000, published by the Transportation Research Board, National Research Council, Washington, D.C.

¹⁵ SYNCHRO 6, Traffic Signal Software, Trafficware Corporation, 2003

Table 2: Summary of Capacity Analyses

(Note: Although the Computer Analysis assigns orientation according to magnetic north relationship at each intersection, each set of results below is specified by the east-west orientation specified for this Analysis.)

Level-of-Service / Estimated Average Delay (seconds per vehicle) with [V/C Ratio]								
INTERSECTION	PEAK HOUR	APPROACH	EXISTING VOLUMES 2009	NO-BUILD VOLUMES 2014	EXISTING ZONING		PROPOSED ZONING	
					BUILD VOLUMES 2014	BUILD VOLUMES with MITIGATION 2014	BUILD VOLUMES 2014	BUILD VOLUMES with MITIGATION 2014
Route 94 at CR 21	PM	NB WB LEFT	E / 36.1 [.81] A / 2.2 [.12]	E / 47.5 [.92] A / 2.2 [.12]	F / *** [5.57] B / 10.8 [.28]	F / *** [44.53] B / 12.3 [.36]	D / 42.8 EB: E / 56.9 [.72] WB: B / 15.9 [.75] NB: E / 62.8 [.91]	
	SAT	NB WB LEFT	C / 23.1 [.47] A / 2.4 [.13]	D / 26.4 [.54] A / 2.4 [.14]	F / *** [51.32] B / 14.5 [.43]	F / *** [40.59] C / 15.1 [.45]	D / 46.4 EB: E / 75.5 [.80] WB: B / 15.9 [.77] NB: D / 50.5 [.85]	

Level-of-Service / Estimated Average Delay (seconds per vehicle) with [V/C Ratio]									
INTERSECTION	PEAK HOUR	APPROACH	EXISTING VOLUMES 2009	NO-BUILD VOLUMES 2014	EXISTING ZONING	PROPOSED ZONING			
						BUILD VOLUMES 2014	BUILD VOLUMES 2014	BUILD VOLUMES with MITIGATION 2014	
Route 94 at Shop Rite Drive	PM	NB WB Left EB Left	E / 42.7 [.80] A / 3.2 [.27] A / 0.2 [.01]	F / 60.0 [1.04] A / 0.2 [.01] A / 3.3 [.25]	F / *** [15.91] B / 12.4 [.34] B / 12.1 [.02]	F / *** [22.98] B / 12.4 [.02] B / 13.9 [.38]	C / 30.9 EB: D / 35.5 [.73] WB: C / 28.8 [.72] NB: E / 62.3 [.62]		
			SAT	NB WB Left EB Left	E / 40.5 [.70] A / 2.5 [.30] A / 0.3 [.02]	F / 56.6 [.91] A / 2.6 [.20] A / 0.3 [.02]	F / *** [51.30] B / 12.6 [.29] B / 14.8 [.05]	F / *** [12.0] B / 11.9 [.27] B / 13.1 [.04]	C / 34.8 EB: B / 16.1 [.75] WB: D / 53.9 [.59] NB: D / 46.0 [.28]
Route 94 at Fairgrounds Drive (full build-out)	PM	Overall EB WB SB	B / 12.7 A / 9.3 [.60] B / 11.6 [.64] C / 21.7 [.68]	B / 13.5 B / 10.2 [.63] B / 12.5 [.67] C / 22.2 [.70]	C / 25.2 C / 23.7 [.88] C / 27.7 [.93] C / 22.8 [.70]	C / 20.7 C / 20.1 [.82] C / 20.7 [.86] C / 22.2 [.70]	NA		
			SAT	Overall EB WB SB	B / 12.8 A / 8.9 [.53] B / 11.8 [.65] C / 21.8 [.69]	B / 13.6 A / 9.9 [.60] B / 12.6 [.68] C / 22.3 [.71]	C / 33.7 C / 24.0 [.87] D / 46.7 [.87] C / 23.7 [.71]	B / 20.0 B / 19.0 [.87] B / 19.9 [.85] C / 22.3 [.71]	NA

Level-of-Service / Estimated Average Delay (seconds per vehicle) with [V/C Ratio]								
INTERSECTION	PEAK HOUR	APPROACH	EXISTING VOLUMES 2009	NO-BUILD VOLUMES 2014	EXISTING ZONING		PROPOSED ZONING	
					BUILD VOLUMES 2014	BUILD VOLUMES with MITIGATION 2014		
Route 94 at CR 1A	PM	Overall EB WB SB	C / 20.8 C / 31.4 [.93] A / 6.9 [.56] C / 29.6 [.62]	C / 33.4 E / 58.5 [1.04] A / 7.4 [.58] C / 30.7 [.65]	F / **** F / **** [7.34] C / 33.5 [.93] E / 73.3 [.92]	F / **** F / **** [22.05] F / 81.8 [1.07] F / 126.2 [1.06]	D / 43.5 D / 38.1 [1.07] D / 44.3 [.98] E / 60.0 [.94]	
Signalized	SAT	Overall EB WB SB	B / 10.2 A / 9.3 [.64] A / 6.2 [.50] C / 27.0 [.60]	B / 11.3 B / 11.1 [.70] A / 6.5 [.53] C / 27.9 [.62]	F / **** F / **** [11.07] F / 83.6 [.98] F / 135.9 [.96]	F / **** F / **** [21.18] D / 54.5 [1.00] F / 90.2 [.98]	C / 33.7 C / 24.4 [.91] D / 44.3 [.98] C / 30.4 [.70]	

The following is an evaluation of the results of the capacity analysis for each location:

NYS Route 94 and County Road 21, Warwick Turnpike

This location is currently unsignalized and therefore suffers from long delays for traffic egressing (exiting) from CR 21 especially in the PM peak hours. The left-turns are particularly problematic which is normal for an unsignalized intersection entering a state highway. Without application of any zoning alternative volumes, in 2014 (No-Build) simply due to non-local background traffic increases the CR 21 traffic will have an increasing difficult time in accessing Route 94, even during weekend activity. When the traffic from either zoning alternative is factored in (Build scenarios) the deterioration becomes unacceptable, LOS F. The necessary mitigation can be applied in the form of a three-color signal with appropriate phasing, and inclusion of an eastbound right-turn lane. These actions will improve over-all LOS to D. Delays will still be evident on CR 21 but over-all operation will be markedly improved. Other possible mitigation may be explored such as a roundabout but a two-lane roundabout will be necessary to accommodate the Route 94 volumes.

Therefore, this intersection will operate essentially the same regardless of the zoning alternative chosen, and mitigation will be necessary under either zoning scenario. It should be noted again that the absence of the application of pass-by credit or the access management concept of service roads over-states impacts. This conservative action presents a worst-case set of conditions.

NYS Route 94 at Shop Rite Plaza Driveway

This location is currently unsignalized and therefore suffers from long delays for traffic egressing (exiting) from the Plaza especially in the PM peak hours (LOS E). The left-turns are particularly problematic which is normal for an unsignalized intersection entering a state highway. What is not normal is the absence of a three-color traffic signal at a retail plaza that has an operating supermarket of significant size. Without application of any zoning alternative volumes, in 2014 (No-Build) simply due to non-local background traffic increases the CR 21 traffic will have an increasing difficult time in accessing Route 94, even during weekend activity. In fact, the traffic exiting the Plaza will have a LOS F. When the traffic from either zoning alternative is factored in (Build scenarios) the deterioration becomes even more unacceptable, with a very poor LOS F and extensive delays. The necessary mitigation can be applied in the form of a three-color signal with appropriate phasing, and inclusion of an eastbound right-turn lane. These actions will improve over-all LOS to C. Delays will still be evident on CR 21 but over-all operation will be markedly improved. Other possible mitigation may be explored such as a

roundabout but a two-lane roundabout will be necessary to accommodate the Route 94 volumes.

Therefore, this intersection will operate essentially the same regardless of the zoning alternative chosen, and mitigation will be necessary under either zoning scenario. It should be noted again that the absence of the application of pass-by credit or the access management concept of service roads over-states impacts. This conservative action presents a worst-case set of conditions.

NYS Route 94 at The Fairgrounds Plaza Driveway

This intersection, as noted previously, is analyzed in its proposed set of conditions upon completion of full build-out of The Fairgrounds, i.e., with signalization and turn lanes, and therefore exhibits acceptable levels-of-service over-all and on all approaches during Existing, No-Build, and both Build scenarios.

Therefore, this intersection will operate essentially the same regardless of the zoning alternative chosen, and mitigation will be necessary under either zoning scenario. It should be noted again that the absence of the application of pass-by credit or the access management concept of service roads over-states impacts. This conservative action presents a worst-case set of conditions.

NYS Route 94 at County Road 1A, Pelton Road

This intersection is currently signalized but lacks any specific turning lanes. Under the Existing and No-Build set of conditions the current lane configuration is adequate and over-all LOS is sufficient at C in the PM peak hours and B on weekends. However, when either zoning alternative is applied, the intersection fails entirely. The mitigation that is necessary is the addition of turning lanes on all approaches; a left-turn lane on eastbound Route 94, a right-turn lane on westbound Route 94, and separate left and right-turn lanes on CR 1A. Even with these actions the eastbound and southbound left turns will still have significant delays.

Therefore, this intersection will operate essentially the same regardless of the zoning alternative chosen, and mitigation will be necessary under either zoning scenario. It should be noted again that the absence of the application of pass-by credit or the access management concept of service roads over-states impacts. This conservative action presents a worst-case set of conditions.

It should be noted also that signalization of intersections on this Route 94 corridor will also require exploration of a coordinated signal system depending upon details of individual development proposals.

Table 3 is a summary of the capacity analyses for all conditions and the resulting infrastructure requirements.

Table 3: Summary of Mitigation Recommendations

Infrastructure Mitigation Recommendations							
				EXISTING ZONING		PROPOSED ZONING	
INTERSECTION	PEAK HOUR	EXISTING CONDITIONS 2009	NO-BUILD CONDITIONS 2014	BUILD CONDITIONS 2014	BUILD CONDITIONS with Mitigation	BUILD CONDITIONS 2014	BUILD CONDITIONS With Mitigation
Route 94 at CR 21 Unsignalized	PM	Barely Acceptable	Barely Acceptable	Unacceptable	Acceptable with Signal	Unacceptable	Acceptable with Signal
	SAT	Acceptable	Acceptable	Unacceptable	Acceptable with Signal	Unacceptable	Acceptable with Signal
Route 94 at Shop Rite Drive Unsignalized	PM	Barely Acceptable	Unacceptable	Unacceptable	Acceptable with Signal	Unacceptable	Acceptable with Signal
	SAT	Barely Acceptable	Unacceptable	Unacceptable	Acceptable with Signal	Unacceptable	Acceptable with Signal
Route 94 at Fairgrounds Drive (full build-out) Signalized	PM	Acceptable	Acceptable	Acceptable	NA	Acceptable	NA
	SAT	Acceptable	Acceptable	Acceptable	NA	Acceptable	NA
Route 94 at CR 1A Signalized	PM	Acceptable	Acceptable	Unacceptable	Acceptable with Lanes	Unacceptable	Acceptable with Lanes
	SAT	Acceptable	Acceptable	Unacceptable	Acceptable with Lanes	Unacceptable	Acceptable with Lanes

6.0 SUMMARY AND CONCLUSIONS

This Traffic Analysis has analyzed the impact of a full traffic build-out associated with the proposed zoning for the Route 94 Priority Growth Center and compared the results to implementation of the current zoning regulations for this section of Route 94. The following findings are the result of this analysis and are meant to provide a foundation for the local decision making process.

The results of the capacity analysis of Route 94 at CR 21 and Route 94 and the Shop Rite Plaza driveway show unacceptable conditions under either zoning alternative and will require mitigation to function efficiently in the future regardless of zoning generation. Signalization is the mitigation that results in acceptable level-of-service in the *No-Build* and *Build* scenarios.

The intersections of Route 94 at The Fairgrounds¹⁶ and Route 94 at CR 1A operate acceptably in the No-Build conditions. However, Route 94 at CR 1A cannot accept either zoning alternative without the addition of turn lanes on all approaches. Route 94 at The Fairgrounds will continue to operate well in either zoning application.

It is clear from this Analysis that the Route 94 Priority Growth Center will need to have its infrastructure upgraded as background traffic increases. However, the proposed zoning alternative is fairly consistent with the infrastructure needs associated with the current zoning regulations. In both cases, the absence of the application of pass-by credit or the access management concept of service roads over-states impacts. These conservative actions present a worst-case set of conditions for both zoning alternatives.

It is also important to understand that two of the four locations reviewed will experience unacceptable operating conditions in 2014 without any further local growth, and are in fact, suffering less-than desirable conditions currently. This situation will result simply from the external background growth that will place additional traffic volumes on Route 94, a state highway. Thus mitigation will be necessary for safe operating conditions absent any further local controlled growth.

Therefore, given these conclusions, the proposed zoning regulations do not create infrastructure needs that will not otherwise be necessary with current regulations as growth takes place in the near term.

¹⁶ Analysis assumed full build-out of The Fairgrounds as proposed in 2004.

APPENDICES

Appendix A: Level-of-Service Criteria

Table 4: Signalized Level-of-Service

LOS	Control Delay Per Vehicle (seconds)
A	Less than or equal to 10
B	Greater than 10 and less than or equal to 20
C	Greater than 20 and less than or equal to 35
D	Greater than 35 and less than or equal to 55
E	Greater than 55 and less than or equal to 80
F	Greater than 80

Table 5: Unsignalized Level-of-Service

LOS	Control Delay Per Vehicle (seconds)
A	Less than or equal to 10
B	Greater than 10 and less than or equal to 15
C	Greater than 15 and less than or equal to 25
D	Greater than 25 and less than or equal to 35
E	Greater than 35 and less than or equal to 50
F	Greater than 50