TOGETHER WE CAN GROW BETTER

SMART GROWTH

FOR A SUSTAINABLE CONNECTICUT CAPITOL REGION

A PROJECT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY
SMART GROWTH IMPLEMENTATION ASSISTANCE PROGRAM &

THE CONNECTICUT CAPITOL REGION COUNCIL OF GOVERNMENTS

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Founded in 1970, EPA leads the nation's environmental science, research, education and assessment efforts. The mission of the Environmental Protection Agency is to protect human health and the environment. EPA's Smart Growth Program helps communities improve their development practices by working with local, state, and national experts to discover and encourage successful, environmentally-sensitive development strategies.

For more information: http://www.epa.gov/smartgrowth

CAPITOL REGION COUNCIL OF GOVERNMENTS

The Capitol Region Council of Governments (CRCOG) is the largest of Connecticut's 15 regional planning organizations. CRCOG was established under the Connecticut General Statutes in 1978 as a voluntary association of municipal governments serving the City of Hartford and 28 surrounding suburban and rural communities. CRCOG is governed by the chief elected officials of the 29 metro Hartford municipalities. The region is 760 square miles in size and houses approximately 741,303 residents. CRCOG is dedicated to expanding the concept of voluntary cooperation among its member municipalities as the means to successfully respond to many of the region's pressing governmental and public challenges. CRCOG members recognize that the future of individual municipalities is tied to the future of the region as a whole and have collaborated for more than 30 years on a wide range of projects.

For more information: http://www.crcog.org/index.html

ABOUT THE AUTHORS

Jonathan Rose Companies is a green real estate policy, planning, development, owner's representative, and investment firm whose mission is to repair the fabric of communities while preserving the land around them. The firm works with cities, not-for-profit organizations and private clients to develop creative solutions to real estate challenges. A leading green urban solutions provider, we understand buildings, neighborhoods, cities, regions, and the nation as complex, adaptive, and interdependent systems. Our goal is to help metropolitan regions become more resilient, competitive, and equitable. We believe that our integrated, multi-disciplinary approach to policy and practice is the key to achieving transformative change. Founded in 1989 by Jonathan F.P. Rose as a mission-based practice, the firm is recognized for its ability to achieve visionary goals through practical strategies and affordable green urban solutions. Jonathan Rose Companies has offices in the East Coast, Southwest, and Rocky Mountain regions.

For more information: http://www.rosecompanies.com

Wallace Roberts and Todd is a collaborative practice of city and regional planners, urban designers, landscape architects, and architects who create vibrant, imaginative, and sustainable places at many scales. Our work reinforces the integrity of cities and regions and seeks to enhance their quality of life—whether retaining a community's identity and sense of place, promoting more sustainable suburban patterns, protecting urban communities from sprawl, integrating nature into urban patterns, or revitalizing city centers. Successful plans give tangible expression to the aspirations and values of citizens, and we employ a range of techniques to engage community members so that the planning process reflects their priorities and builds consensus. Urban design is the crucial middle scale between large-scale planning and the design of individual sites. Urban design frameworks organize and guide the efforts of designers and developers of public space and individual private parcels so that these works contribute to the larger collective task of community building. We believe that development patterns are most successful when they acknowledge the vital function of public space networks, environmental systems, building typologies, and the many economic factors that affect them.

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EPA FACTS & FIGURES

In July of 1970, the White House and Congress worked together to establish the EPA in response to the growing public demand for cleaner water, air and land. Prior to the establishment of the EPA, the federal government was not structured to make a coordinated attack on the pollutants that harm human health and degrade the environment. The EPA was assigned the daunting task of repairing the damage already done to the natural environment and to establish new criteria to guide Americans in making a cleaner environment a reality.

CONTENTS

EXECUTIVE SUMMARY

This report is a guide for small towns, urban centers, and metropolitan regions across America that are looking for ways to grow and develop that respond to changing demographics, market forces, and environmental challenges. It reflects an awareness that our land use and development patterns are tied to global climate change as much as they are to our daily quality of life. But on a more tangible level, this report outlines the processes that planners, developers, and community leaders should consider in planning their neighborhoods, town centers, and regions. It focuses on the Connecticut Capitol Region as an example of a region striving for ways to grow smarter, locally and regionally, increase its economic competitiveness, while continuing to provide livable, affordable, distinctive neighborhoods for its residents, businesses, and institutions.

The story of the Hartford capitol region in Connecticut can be seen in many other metropolitan regions around the country. Covering 760 square miles, the Hartford region contains a diverse mix of 29 urban, suburban, and rural municipalities including the State's capitol. Its population of 735,000 residents includes a broad representation of age and household income levels. However, in the last few decades, the region has also seen a considerable shift in its demographics, household and land use patterns. There has been a major decrease of its 25-34 year old population which reflects the 30 percent loss throughout the State of Connecticut between 1990-2006, the highest percentage in the country. The primary reason for this drop is an outmigration of this younger demographic group due to a lack of housing choices that are affordable, convenient and desirable. Housing that is affordable and also conveniently connected to jobs, transportation, and quality neighborhood services became increasingly scarce, while median home prices in the State continued to rise. Meanwhile, recent trends have shown that younger homebuyers and empty-nesters are rejecting large-lot suburban homes for smaller homes in compact, walkable communities. This marked decrease in its young workforce sector represents a real risk to a loss in the region and state's economic competitiveness.

With such challenges and opportunities in mind, in 2008 the U.S. Environmental Protection Agency partnered with the regional entity, the Connecticut Capitol Region Council of Governments (CRCOG), to consider how the state affordable housing program, Home Connecticut, could be used to support more smart growth development throughout the state. EPA and CRCOG looked at different examples of potential redevelopment, reinvestment and revitalization in four distinct municipalities in the region. That work resulted in the development of guidelines to be applied to neighborhoods, town centers and the region. It also resulted in this report, which represents the efforts of a team that included CRCOG, EPA, localities in the Hartford region, and consultants engaged to examine these planning and development models within a local and regional smart growth context.

Whether taken in part or in whole, this report is intended for individuals and entities that are involved in the planning, design, financing, development, and regulatory decisions about their town centers, neighborhoods, and regions.

Chapter I: Smart Growth for a Changing Country and a Changing Climate provides an economic and market-based overview for smart growth development in the country;

Chapter II: The Case for Smart Growth in the Connecticut Capitol Region brings a closer perspective of Hartford and its 28 surrounding municipalities;

Chapter III: Smart Growth Planning and Development includes distinct examples of redevelopment and reinvestment examples in the Capitol Region to illustrate a smart growth planning and development process;

Chapter IV: Implementation and Next Steps – Towns & Cities includes strategies, incentives and other actions for local municipalities in guiding smart growth development within their jurisdictions;

Chapter V: Implementation and Next Steps – Regional & State Level Collaboration focuses on the critical importance of coordination at the regional level and the role of state level agencies in encouraging and supporting regional collaboration.

In addition, appendices of this report contain detailed supplemental information about the specific sites included in Chapter IV, including Site Briefing Books and zoning analyses. Information regarding EPA's Smart Growth Implementation Assistance Program which provided the funding for the technical assistance to the Capitol Region Council of Governments can also be found in Appendix A.

Taken together, this comprehensive document demonstrates that actions at all levels of government and with private and nonprofit sector partners – whether rooted in the desire to create more affordable housing, or any other public investment – can yield necessary and desirable changes in land use and development patterns. They are not only critical from an environmental and climate change perspective, but are increasingly important if communities, towns, and regions want to increase their economic competitiveness by growing their workforce, providing quality jobs, and creating homes and neighborhoods that are affordable, healthy and livable.

INTRODUCTION

What does the future hold for the cities, towns, and neighborhoods of the Connecticut Capitol Region? How can the region best plan and develop for the challenges and opportunities that the future will bring? The answers to these questions will guide the region's growth, development, and quality of life for a long time. When it comes to the quality of peoples' lives, there are perhaps no variables more critical than the what, how, and where of development.

Faced with significant demographic changes, and an increasingly resource-constrained world, Connecticut residents and leaders are beginning to more carefully consider their communities' impacts on their environment, their lifestyle, and their health. The links between how their communities develop and the cost and quality of their homes, the duration and ease of their commutes, their job opportunities, places to eat and play, their taxes, school quality, and their health are increasingly clear.

Connecticut communities are wondering if their future needs would be best met by developing as they have for the past several decades: building further and further away from town centers, separating homes from jobs, and building places that force people to rely on cars to get around. Like other regions and communities across the country, the state of Connecticut has realized that this pattern is no longer sustainable in the face of rising energy costs, the needs of a growing and changing populace, and the onset of global

climate change. The state has committed to more sustainable development by establishing the Office of Responsible Growth in October 2006 and passing Public Act No. 09-192, Connecticut's Green Building Law, in January 2009.

The Capitol Region Council of Governments (CRCOG) has adopted smart growth and sustainability as core elements of its mission. The largest of Connecticut's 15 regional planning organizations, CRCOG serves the city of Hartford and 29 surrounding suburban and rural communities. The region is 760 square miles with a population of approximately 735,000 people.

CRCOG recognizes the potential for smart growth approaches to leverage the unique assets of the region, expand economic opportunities, support more resilient communities, and improve the quality of life in towns and neighborhoods. CRCOG is committed to promoting and following the ten smart growth principles as the framework for its sustainable approach to growth:

Smart Growth Principles[1]

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

1 Developed by the Smart Growth Network, http://www.smartgrowth.org

Recent efforts by the state present new opportunities to implement smart growth practices. In particular, the state has encouraged regional, collaborative planning and created incentives to develop affordable housing connected to transit and job centers through the HOMEConnecticut program. The HOMEConnecticut program (authorized by the Housing for Economic Growth legislation in 2007) provides a total of $4 million in financial incentives to municipalities to enact incentive housing zones that encourage affordable housing development. Planning grants are awarded to communities to create these zones, and additional financial awards are made for units once permitted and constructed.

To capitalize on these opportunities and to enhance its member municipalities' planning efforts, CRCOG, along with a steering committee of four of its member municipalities and other partner agencies, solicited assistance from the U.S. Environmental Protection Agency's (EPA) Smart Growth Program. CRCOG was selected for assistance under EPA's Smart Growth Implementation Assistance Program (SGIA), which provides technical support for policy analysis and public participation processes (see Appendix A for more information about the SGIA program). CRCOG requested help in developing and promoting model smart growth guidelines to help better target state affordable housing resources in municipalities throughout the Capitol Region.

"TOGETHER WE CAN GROW BETTER"

In partnership with EPA, CRCOG convened a workshop on May 16, 2009, with residents, planners, decision-makers, and developers from Hartford and the surrounding region. The objectives of the workshop were to:

- Promote smart growth planning principles and illustrate how smart growth development can benefit the communities of the Capitol Region;
- Discuss and gather feedback for the

development of user-friendly smart growth guidelines designed to be transferable to localities throughout the state and the nation for use in smart growth planning efforts; and

- Develop ideas and conceptual drawings for potential projects on three model redevelopment sites in the Capitol Region, in the towns of Manchester, Bloomfield, and South Windsor, that would reflect the approaches and suggestions laid out in the smart growth guidelines. Additionally, the smart growth planning effort already underway in Tolland, CT was presented during the workshop for participant input.

Technical support for the workshop was provided by a team of national smart growth experts assembled and funded by EPA. The team met with planning staff for each of the four model redevelopment sites during site visits prior to the workshop.

ABOUT THIS REPORT

In addition to summarizing the outcomes of the workshop, this report:

- Provides economic and market-based justifications for smart growth development in the Connecticut Capitol Region and the nation;
- Outlines a general smart growth planning and development process;
- Illustrates the application of this process through three model redevelopment sites in the Capitol Region; and
- Provides next steps and implementation recommendations, including policy and regulatory changes for each of the three model sites and for the region.

Vibrant Walkable Street

CHAPTER I
BENEFITS OF SMART GROWTH IN A CHANGING WORLD

Communities across the country wrestle with the complicated task of ensuring that growth and development responds to the needs of current and future residents, particularly within a context of economic and environmental challenges. This chapter provides a framework for understanding the demographic changes that will shape growth and development, as well as the particular challenge – and opportunity -- presented by the effects of climate change. It concludes with a broader examination of the economic, environmental, and community benefits that smart growth development can provide.

DEVELOPMENT PATTERNS IN A CHANGING COUNTRY

Between 2009 and 2050, the U.S. population is projected to grow from 306 million people to 439 million people. During this time, one estimate projects that 89 million homes and 190 billion square feet of new offices, institutions, stores and other non-residential buildings will be built. Two-thirds of the total development on the ground in 2050 will be built between now and then. [2]

As the nation grows, the character of American households will change as well. The lifestyles and needs of the baby boomer generation are changing dramatically as they age into retirement. The children of the boomer generation have entered the workforce and are buying homes and starting families. Right on the heels of these families comes a large wave of young Americans called the "millennials."

2 Urban Land Institute. "Growing Cooler; The Evidence on Urban Development and Climate Change", 2008.

As communities imagine and plan for the future, they will have to adapt to Americans' changing market preferences. After decades of widespread suburban development, development patterns in much of the United States separate homes from workplaces and the services and amenities people require in their daily lives. In addition to undeveloped open spaces and prime agricultural soils becoming scarce, the reliance on the automobile as the primary mode of transportation has led to American families spending as much or more on transportation as they spend on housing.[3]

Recent surveys suggest that Americans are concerned about traffic congestion, the loss of farmland and critical bio-regions (watersheds, wetlands, and natural resources that sustain and protect life) to development, the loss of community character, and the burdens of a growing reliance on the automobile.[4] Americans understand that something has to give; that a future of rising energy costs and growing commute times can only amount to the consumption of time and money better spent on something other than sitting in traffic. They are looking for communities that offer a more appealing lifestyle, that do not require a car to get around, that protect farms and natural lands, and that offer a variety of housing options.

According to a survey on growth and transportation conducted by the National Association of Realtors, 75 percent of Americans support improving public transportation and creating communities that reduce the amount of time that people must spend in the car.[5] Americans are looking for alternatives to the status quo and are increasingly choosing to live in well-connected places that are more efficient and healthier, that offer more choices and opportunities, and are better for the environment. They are looking for places designed to use resources more efficiently while simultaneously improving the quality of their lives.

DEVELOPMENT PATTERNS IN AN ERA OF CLIMATE CHANGE

In addition to adapting to the evolving market preferences of the American household, communities also face the challenges of a changing climate. Greenhouse gas accumulations from human activities are contributing to global warming with potentially catastrophic consequences. In its Global Warming Act (PA 08-98), the state of Connecticut established an intermediate goal requiring greenhouse gas emissions reductions to 10 percent below 1990 levels by 2020. To achieve this goal, Connecticut communities must understand the interrelated effects of regional transportation planning, development patterns, and land conservation. How and where communities build their homes, schools, stores, and workplaces will have a tremendous impact on whether they meet their climate change objectives.

Transportation

Transportation accounts for one-third of CO2 emissions in the United States.[6] While most attention to date has focused on reducing transportation-related CO2 emissions by developing less-polluting cars and lower-carbon fuels, the gains from these technological solutions have been largely canceled out by the increased driving attributed to conventional development patterns. In fact, if current development patterns do not change, miles driven in the United States will rise by 48 percent by 2030 and 102 percent by 2050.[7] It will be impossible to meet target reductions in CO2 emissions without reducing the amount we drive.

Development

3 Center for Housing Policy. "A Heavy Load: The Combined Housing and Transportation Burdens of Working Families", 2006.

4 National Association of Realtors and Smart Growth America. "2007 Growth and Transportation Survey", 2007.

5 *Ibid.*

6 Urban Land Institute. "Growing Cooler; The Evidence on Urban Development and Climate Change", 2008.

7 Ibid.

In 2006, the U.S. residential sector accounted for more than one-fifth of the nation's energy use and produced more than one-fifth of its CO2 emissions.[8] Households that live in conventionally built, single-family, detached houses consume 35 percent more energy for space heating and 21 percent more energy for space cooling compared to otherwise comparable households living in multifamily housing.[9] By providing affordable housing options using smaller lots and attached and multifamily unit types, smart growth development can help reduce residential energy use, which saves residents money on energy bills in addition to reducing carbon dioxide emissions.

Land Conservation

Forests, wetlands, open space, and prime agricultural land are critical resources for ecosystems, habitat, clean air, clean water, and healthy and abundant food. The development patterns of the last 50 years have destroyed these resources at an alarming rate. In Connecticut alone, 160,000 acres of previously undeveloped forest and agricultural land were lost between 1985 and 2006.[10] During the same time, all of the towns in the Capitol Region lost agricultural land, with nearly 30 percent of the region's towns losing between 965 and 1,840 acres.[11] Seventy percent of the Capitol Region is either already developed or constrained by environmental conditions or protections. Approximately 127,000 acres of undeveloped available land remain, most of which is predominantly agricultural. [12]

8 Energy Information Administration (EIA), Annual Energy Review 2006, 2007.

9 Urban Land Institute. "Growing Cooler: The Evidence on Urban Development and Climate Change", 2008.

10 University of Connecticut. "Connecticut's Changing Landscape", http://clear.uconn.edu/projects/landscape/index.htm.

11 Regional Plan Association New York. "Growing Economy, Shrinking Emissions; A Transit-Oriented Future for Connecticut's Capital Region" Regional Plan Association New York, NY July 2009.

12 *Ibid.*

THE BENEFITS OF SMART GROWTH DEVELOPMENT

Smart growth communities create vibrant and healthy places for people. They offer many environmental, economic, and social benefits and create new opportunities for people to improve the quality of their lives. In particular, environmental benefits are closely linked to improved livelihoods as people reap the cumulative benefits of smart growth over time. As communities achieve optimal density levels, infrastructure improvements like transit systems or alternative green energy solutions become viable and preferable, further improving the communities. Given the scale and nature of infrastructure and building investments, smart growth developments are built for long-term resiliency and provide benefits and renewal opportunities for generations. Following are some specific areas in which smart growth can provide significant community and household benefits.

Climate Change

The causes of climate change are varied, but as noted they are generally rooted within the complex and interrelated systems of our built environment. By considering effective and holistic improvements to that system that reduce energy consumption, VMT and their related emissions, smart growth planning and development can create significant climate change benefits. Given the projections for population growth and the country's dramatically changing demographics, major investments in new development and construction are likely to occur between now and 2050. Because smart growth land use development requires a shift in investments that are likely to occur anyway, they represent a highly cost effective means of achieving positive climate change benefits.

Furthermore, smart growth approaches that conserve forests and support sustainable agriculture activities can help mitigate climate

change through sequestration of greenhouse gases in vegetation. The strategic conservation of land also creates a bulwark against conventional sprawling development patterns, creating de facto growth boundaries that focus limited resources on revitalizing existing downtowns and neighborhoods, reducing automobile trip distances.

Studies show that smart growth approaches have the potential to deliver significant climate change benefits. Selected findings include the following:

- An EPA funded study found that more compact development along with complimentary pricing strategies could reduce CO2 emissions by 18-24% by 2050. [13]
- Another study estimated that if the U.S. shifted 10% of new housing starts to smart growth development over the next 10 years, Americans would save 4.95 billion gallons of gasoline and $220 billion in household and transportation expenses. [14]
- HUD estimates that there are approximately five million acres of abandoned industrial sites that could be redeveloped, thereby reducing development pressure on open space that otherwise serves critical sequestration functions. [15]

Economic Resiliency

Under the conventional segregated single use development model, each new shopping center or mall effectively cannibalizes the last as witnessed in many suburbs and small towns in Connecticut and across the nation. Many former developments are left empty and blighted as new shopping centers are developed on open space or agricultural land. These developments require significant infrastructure investments but rarely enhance consumer choice or are meaningfully integrated into the fabric of a community. Often the same collection of retail tenants and grocery stores simply move from one development to the next, a homogenous collection of uses bound by a fragile economic codependency where the failure of one tenant can easily undermine the entire development.

Alternatively, new smart growth development reinforces and invigorates existing mixed-use development. Additional retail enhances consumer choice while new housing supports retail with additional foot traffic. Commercial development provides more job opportunities, which in turn can enhance markets for new housing. Increasing the depth and diversity of uses enhances their ability to be mutually supportive of one another. With smart growth, the protection of farms from development not only gives nearby residents more local food options, it also protects an important economic sector. While no community is entirely immune to recession, those communities that establish a mutually supportive economic framework have a far better chance at weathering a downturn.

A number of studies and plans reveal significant economic savings associated with smart growth approaches, making them better public investments. Two planning efforts in particular reveal the ability of smart growth approaches to create long-term economic savings for the communities. The "Envision" projects undertaken by Salt Lake City in 1999 and Austin, Texas in 2003. Both analyses tested growth scenarios at four levels of compactness.

- In Austin, the "business as usual" scenario was estimated to result in more than $10.6 billion in costs for new infrastructure over 30 years. The cost of infrastructure bill in the most compact smart growth scenario would cost two-thirds less than the "business as usual"

13 Urban Land Institute. "Moving Cooler; An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emissions", July 2009

14 Location Efficiency as the Missing Piece of The Energy Puzzle: How Smart Growth Can Unlock Trillion Dollar Consumer Cost Savings, American Council for an Energy Efficient Economy, Washington DC, August 2004

15 HUD website, http://www.hud.gov/offices/cpd/economicdevelopment/programs/bedi/bfieldsfaq.cfm

conventional, dispersed pattern of growth. [16]

- In Salt Lake City, the smart growth scenario was projected to use 38 percent less land and save $15.7 billion in infrastructure costs over 23 years compared to the "business as usual" approach.[17]

Smart growth approaches emphasize the use of compact development, thereby reducing development pressure on the urban fringe where open space frequently serves vital ecological functions. Such compact development leads to lower per capita stormwater runoff, thereby reducing the need for costly, single-purpose infrastructure improvements to absorb more growth. The design of smart growth communities also emphasizes the use of natural features through green infrastructure techniques which incorporate street and building elements that slow, filter, and redirect water to minimize runoff. Together, these approaches can reduce the impact of growth on development on already-burdened infrastructure systems, and on the nation's already-impaired rivers, streams, lakes, and oceans. A number of studies have documented these benefits:

- A 2006 EPA report demonstrates that low-density development (one house per acre) not only consumes far more land per unit than does more compact development (at eight units per acre); it would also generate five times as much stormwater runoff over all as would the same number of units developed more compactly (1.496 billion cubic feet/yr of runoff at one unit/acre versus 396 million cubic feet/year at eight units/acre).[18]
- Since 2006, Philadelphia has been using policies and demonstration projects throughout the city to help promote green infrastructure in the planning and development of the city. These new innovative policies and projects have drastically reduced CSO inputs and have saved the city approximately $170 million.[19]

Housing Affordability

Smart growth supports a range of housing types -- at varying sizes and costs – to create more housing options than are conventionally available. It also recognizes the intrinsic connection between the cost of housing and transportation costs. The true cost of housing is more than just the rent or mortgage payment; it also must include the cost associated with the mix of transportation choices available at that location. The average American working family spends roughly 30 percent of its household income on transportation.[20] Walkable and bikeable communities with good transit connections give people options that can help them spend less on transportation, by some estimates reducing the cost of transportation by almost 50 percent.[21] By reducing the need for driving, people can spend less on gas and automobile maintenance. The value of this benefit will rise along with the cost of gasoline. Additionally, green building practices, combined with more compact residential development, create energy efficiencies that can significantly reduce household energy usage and cost. Townhomes that employ simple green building practices save almost 40 percent on energy consumption compared to conventional, detached, single-family homes. These savings jump to almost 60 percent for households that live in green multifamily buildings. [22] Smart growth development is not only good for our environment; it is good for our wallets.

Opportunity and Choice

Fundamentally, smart growth is about creating new opportunities for people and expanding their choices for transportation, housing, entertainment, education, civic and cultural amenities, open

16 REFERENCE NEEDED
17 REFERENCE NEEDED
18 EPA, "Protecting Water Resources with Higher-Density Development", 2006.

19 EPA Green Infrastructure webpage, http://cfpub.epa.gov/npdes/greeninfrastructure/gicasestudies.cfm#Municipal
20 Center for Neighborhood Technology. "Housing + Transportation Affordability Index" www.htaindex.cnt.org 2008.
21 TOD 101, Reconnecting America and Center for TOD, 2007
22 Figures based on Household Energy Consumption and Expenditures – DOE 2005 and Energy Star Rated savings.

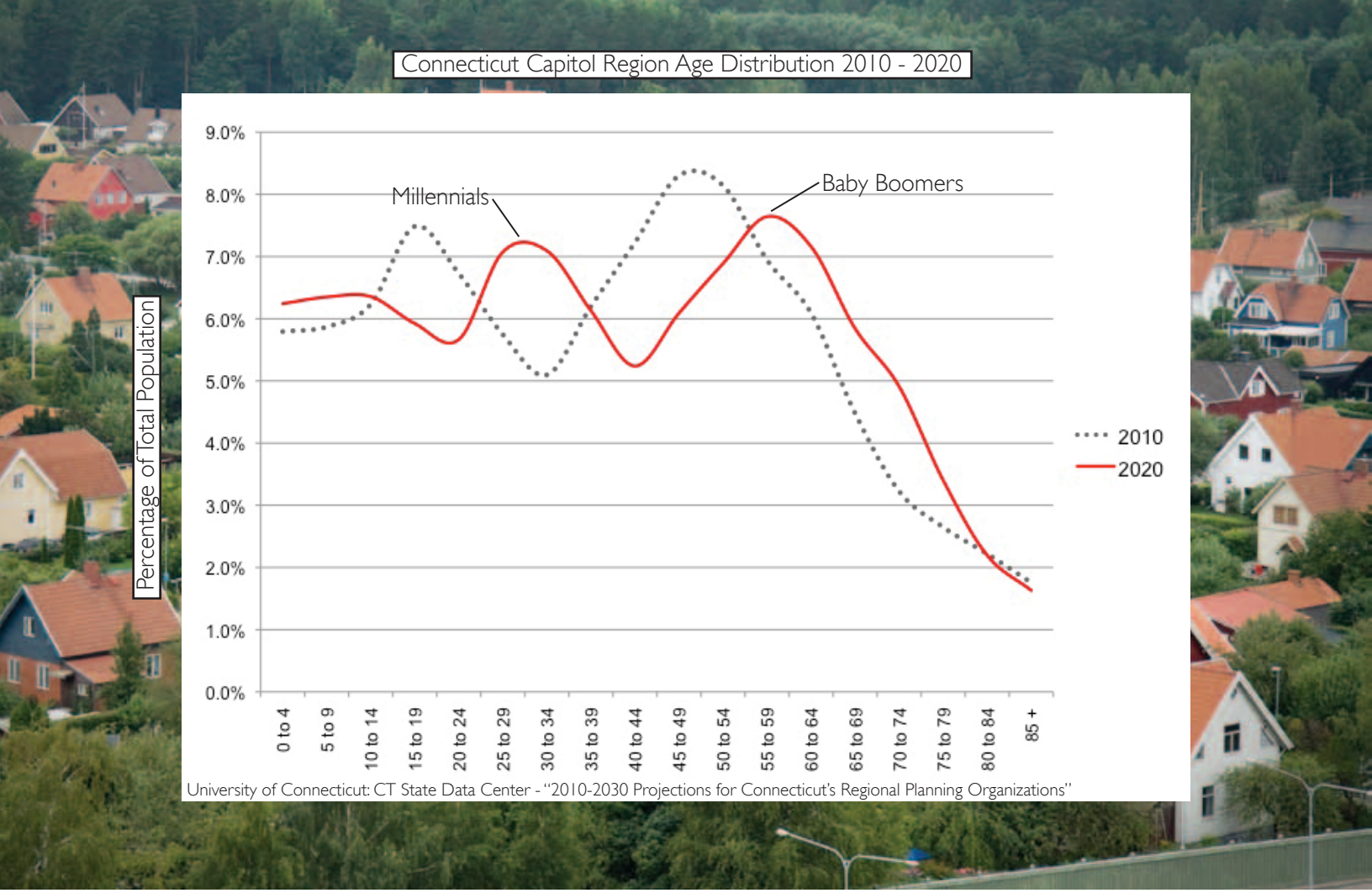
spaces, as well as the services necessary to lead a comfortable, healthy and convenient life. Smart growth approaches accomplish this by promoting the development of a mutually supportive mix of uses, including housing and job opportunities that are well connected to a variety of sustainable transportation options.

Health and Wellbeing

Smart growth development increases the opportunities for people to live an active lifestyle by encouraging more walking and less driving. The American Academy of Pediatrics has recognized this link, issuing a policy statement in June 2009 which encourage the development of more smart growth neighborhoods because of the opportunities they provide to increase children's physical activity and therefore improve their health. [23]

Further, providing attractively landscaped open spaces and parks while reducing energy use and carbon emissions also improves air quality. Green building practices can create healthier, more comfortable buildings by improving indoor air quality, allowing proper ventilation, and using natural light. Smart growth and the preservation of critical environmental lands also protects habitat and provides places for people to relax and soak in the sights and sounds of nature.

23 Pediatrics, "The Built Environment: Designing Communities to Promote Physical Activity in Children", June 2009



CHAPTER II

THE CASE FOR SMART GROWTH IN THE CONNECTICUT CAPITOL REGION

Between 2010 and 2030, the number of households in the Connecticut Capitol Region is projected to grow by 6.5 percent, yet during the same timeframe, the population is expected grow by only 4 percent.[24] This implies that household sizes will get smaller, but also that the region will be defined more by the evolving character of its population than by its size. U.S. Census projections reveal three major demographic stories that will characterize the future of the Capitol Region.

Together these stories build a compelling case for smart growth development in the region.

- There is an oncoming wave of active, aging baby boomers.
- There has been an ongoing outmigration of 24 to 35-year-olds since the early 1990s.
- There is great potential, as well as a tremendous need, for the region to retain the large cohort of millennials who will be entering the job and housing market just as Capitol Region baby boomers are retiring.

24 Regional Plan Association New York. "Growing Economy, Shrinking Emissions; A Transit-Oriented Future for Connecticut's Capital Region" Regional Plan Association New York, July 2009.

Active, aging baby boomers

As the largest cohort in the Capitol Region for the last 40 years, the baby boom generation will expect towns and cities to adapt to their changing needs and demands. In particular, baby boomers want to live in places that can provide:

- Convenient choices: Retired baby boomers will continue to be active. They will look for communities that offer a diverse collection of housing, services, shopping, cultural amenities, and conveniences.
- Mobility and walkability: 89 percent of older Americans want to "age in place" in communities that can enhance their mobility and independence.[25] They will look for communities that do not require an automobile, are linked to transit, and are compact and walkable.
- The ability to downsize: As empty nesters, baby boomers will want homes that require less maintenance than the large-lot suburban housing they may have lived in when they had children at home.
- Vibrant community: Baby boomers will reject the isolation that conventional, automobile-dependent development can impose on them as they age and opt for more diverse and vibrant communities.

Stemming the outmigration

Between 1990 and 2006, Connecticut lost 30 percent of its 25- to 34-year-old population, a higher percentage than any other state.[26] The primary factor for this outmigration is a critical lack of housing choices that are affordable, convenient, and desirable. Housing that is affordable to younger, entry-level workers is simply not available. Recent years have seen the "affordability gap" widen. Between 2000 and 2005, median house prices jumped 64 percent while personal income rose just 19 percent.[27] Meanwhile, recent trends have shown that given the choice, younger homebuyers are rejecting large-lot suburban sprawl for smaller homes in compact, walkable communities.[28] As the baby boomers retire, if the outmigration of younger workers is not mitigated, the Capitol Region will likely experience a significant reduction in the regional workforce, negatively impacting the region's economic competitiveness. Businesses will be unable to meet their labor demands, and the region could face reduced tax revenues just as the aging population demands an increase in services. It will be critical for the region to capitalize on the potential of its future generations by planning to meet their needs for affordable housing and desirable neighborhoods today and continuing to support efforts such as the HOMEConnecticut program.

Retaining the millennials

Within the next decade, just as the bulk of Capitol Region baby boomers are retiring, the generational cohort known as the millennials (those born between the early 1980s and the early 2000s) will enter the workforce. They will choose to enter the job and housing market in the Capitol Region if local communities can provide:

- Convenient choices: Not unlike the 25- to 34-year-olds that left Connecticut before them, millennials will be looking for compact, walkable communities that provide an array of shops, restaurants, services, and cultural amenities.
- Affordable living: Rising fuel costs coupled with increases in traffic congestion will push this generation to reduce their housing cost burdens by seeking out affordable housing in communities that are well connected by transit.

25 "Aging in Place and Naturally Occurring Retirement Communities", Statement before the Senate Committee on Health, Education, Labor and Pensions Subcommittee on Retirement Security and Aging, May 16, 2006.

26 Gittell, Ross. "The Declining Young Adult Population in New England" University of New Hampshire Carsey Institute. Winter 2007.

27 DataCore Partners LLC "A Crisis In The Making; The Need For Affordable Housing in Connecticut" December 2005.

28 Belden Russonello & Stewart. National Survey on Communities. Washington, D.C.: National Association of Realtors and Smart Growth America, October 2004.

- Quality, not quantity: Based on a recent market survey, demand for smaller, more efficient, and better-designed homes will exceed demand for large-lot housing.[29] Millennials will not sacrifice the community-based amenities offered by compact, mixed-use development simply for additional square footage.

THE CAPITOL REGION AS A REGIONAL MARKETPLACE

Demographic projections and complementary market preferences suggest that the baby boomer generation and the millennial generation will converge in the next decade to become a powerful market for smart growth development in the Connecticut Capitol Region. Like many of the small towns and cities around the United States, the communities of the Capitol Region have witnessed stagnant population growth and economic development in the last several decades. However, many of these communities have the significant advantage of being located in a region with strong identities linked to historic resources, agriculture, forestry, and parks. Additionally, many of the traditional, compact, small town centers in the region already possess the infrastructure to accommodate development. As such, the region is particularly well positioned to meet the oncoming demand for smart growth development.

A collective plan for the Capitol Region that uses a regional marketplace approach would maximize opportunities to create comprehensive and integrated regional economic development strategies, including critical infrastructure investments like regional transit networks. Leveraging the potential of existing infrastructure, and fully capturing the benefits of smart growth would encourage the region's town centers to develop higher densities with a mix of uses and affordable housing as described by the recent HOMEConnecticut legislation. The companion document to this publication, Smart Growth Guidelines for Sustainable Design and Development, along with the planning and development process outlined in the following pages, provides the region with tools to make effective and sustainable design, development, and policy decisions that are consistent with smart growth planning principles.

Volatile energy costs, global climate change, and the shifting market preferences in Connecticut and the nation will require changes in our current development patterns if our communities are to remain resilient, healthy, and equitable. Smart growth development can help Connecticut Capitol Region communities capitalize on future opportunities to build healthier, efficient, convenient, and vibrant places that not only meet market demands, but also thrive while reducing the environmental impacts on our changing climate.

29 Belden, Russonello, and Stewart. "National Survey on Communities", National Association of Realtors and Smart Growth America, October 2004.

Working Groups at the "Together We Can Grow Better" Workshop

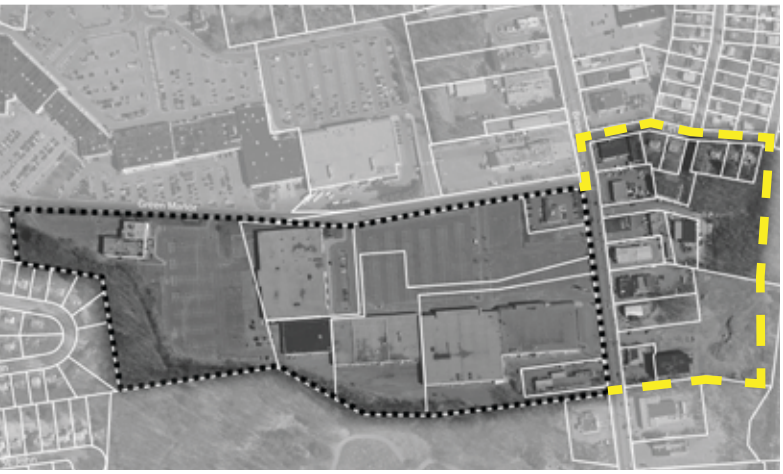
CHAPTER III
SMART GROWTH PLANNING AND DEVELOPMENT

It can be challenging for planners, developers, and residents to identify the right strategies for creating more affordable, sustainable communities given the complex economic and environmental challenges they face. CRCOG recognized this challenge, and using the HOMEConnecticut program as a catalyst, enlisted EPA's help to develop smart growth planning and development tools that would help demystify smart growth implementation and lead to the kind of results that Connecticut communities desire: enjoyable walkable neighborhoods that provide more affordable housing, more transportation choices, better use of public infrastructure investments, and better environmental outcomes.

The EPA team began by developing the companion to this document, the *Smart Growth Guidelines for Sustainable Design and Development.* This user friendly set of guidelines is organized into three categories: I. Site Selection-Prosperous Smart Growth Locations, II. Neighborhood Plan-Placemaking, III. Design and Construction – Green Building and Infrastructure. The guidelines follow the design and development process in both scale and continuity, and provide a decision-making framework for Connecticut communities focused on smart growth planning and development strategies. The Smart Growth Guidelines for Sustainable Design and Development can be found in Appendix E.

The second part of this process was dedicated to outlining a straight-forward smart growth planning and development process that Connecticut communities could use as a model

South Windsor Town Center
Residential development on the site would promote transit use because it is adjacent to regional bus lines. The site presents a significant infill development opportunity that takes advantage of existing infrastructure capacity. The introduction of compact, mixed-use development on the site would enhance the existing commercial, retail, and residential uses. The site is near community-oriented uses and services, including a grocery store, a pharmacy, and municipal facilities, which would encourage residents to walk. Development at the South Windsor Town Center will direct growth into the town and away from nearby undeveloped agricultural land and open space.



Manchester Parkade
The redevelopment site has multiple access points to existing infrastructure, is contiguous with existing development, and would reuse a greyfield (abandoned or underused) site. Adjacent wetlands could be preserved and restored to become a community open space amenity. The site is well located to take advantage of local and regional transit routes. Compact, mixed-use development will encourage residents to walk in the development and to adjacent neighborhoods by providing connections to open space amenities and community-oriented uses and services.

for their own endeavors. Strategies for site selection, conceptual plan development, and implementation were developed as test cases for example redevelopment sites throughout the CRCOG region. Each selected site is characterized by unique development challenges, as well as opportunities to create more compact, mixed income housing that could be supported by HOMEConnecticut resources.

The Together We Can Grow Better workshop, convened by CRCOG, provided the EPA team with the opportunity to collaborate with local builders, planners, and residents to develop conceptual drawings and ideas for potential projects on each of the example sites. The remainder of this report describes the general phases of a smart growth planning and development process and illustrates the application of this process using the results of the workshop.

LOCATION AND SITE SELECTION

Real estate development necessitates large investments of capital, land, and natural resources and typically has significant and lasting impacts on local and regional landscapes. Both the benefits and costs of these impacts depend on the location, shape, and character of development. If planned and implemented well, investments can catalyze economic growth and form or reinforce the foundations upon which communities become sustainable places of enduring value. However, if investments are planned and implemented in a vacuum without a cohesive strategic plan for the region or community, they risk providing only short-term gains for a few, while simultaneously burdening the community at large with the long-term costs and consequences of irresponsible resource management.

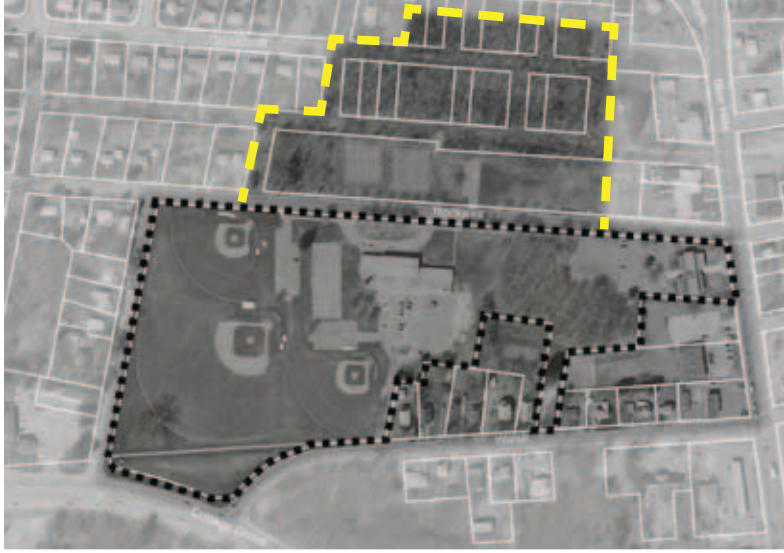
One significant variable that can help determine long-term development success and sustainable resource management is the fundamental decision about where to develop. In order to best provide the amenities and opportunities that smart growth development patterns generate,

this decision needs to be considered at both the regional and local levels. Regions must carefully coordinate complex local interests and limited resources to prioritize development in locations that use resources like water, energy, and labor most effectively and can best capitalize on or enhance regional infrastructure investments like transit systems, electric grids, and water and waste management systems. Communities in these locations should establish a framework to prioritize development on sites that are well situated to capitalize on local and regional assets and to accommodate the mix of uses, housing types, and densities necessary to create beautiful compact neighborhoods. The coordination of smart locations at the regional scale with smart development sites at the local scale is a critical component of any smart growth planning and development process.

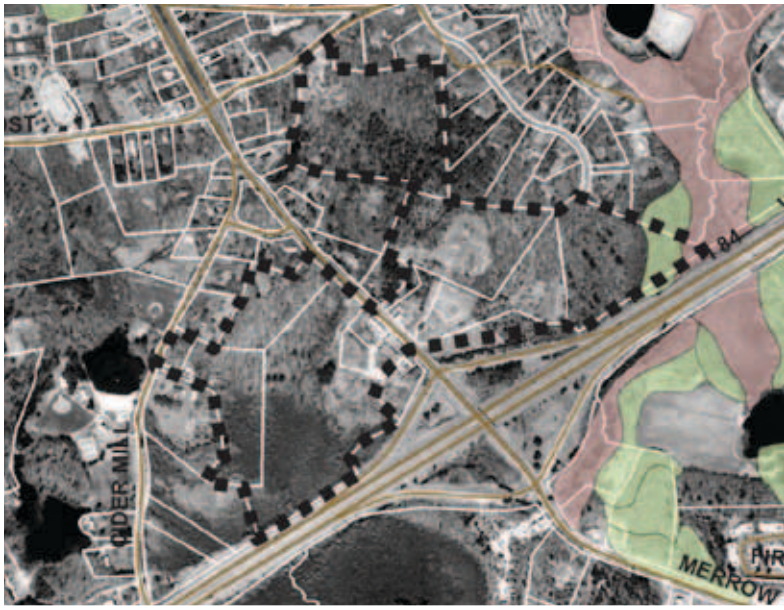
Three redevelopment sites in the Capitol Region were selected as models to illustrate a smart growth planning and development process. As mentioned previously, smart growth planning efforts were already well underway at the Tolland CT, site. As a small-town, rural adjacent greenfield site, it is included here as an instructive smart growth site selection example. While each site meets the guidelines for site selection set forth in the Smart Growth Guidelines, they were also chosen to illustrate how the smart growth planning and development process can be applied to a variety of project types. It is not uncommon to expand or contract a planning study area after an intitial period of site analysis. In all three cases, the site selection delineated by the black dashed line was expanded after initial analysis to include the area delineated by the yellow dashed line. The sites and their project types are:

South Windsor Town Center - South Windsor, CT
The retrofit of an underused suburban shopping center into a new mixed-use town destination.

Manchester Parkade - Manchester, CT
The redevelopment of a defunct shopping center



Rockwell Neighborhood Center
The site includes an active recreational area and is located in an established residential neighborhood connected to regional and local bus transit lines. The site presents opportunities to enhance an already active recreational area, offer residents new affordable housing options by capitalizing on residential infill capacity, and enhance existing neighborhood transit connectivity.



Tolland Village Area
The redevelopment site is located at the intersection of Tolland thoroughfare Merrow Road, and Interstate 84. The site is well positioned to become a strategic gateway to the existing historic Tolland town center. By focusing new development on this "gateway area," the town will preserve the character of the existing Historic District. The site offers the potential to create a vibrant mix of complementary uses arranged in compact and attractive districts, creating walkable neighborhoods while preserving environmentally sensitive areas and protecting natural resources.

into a new predominantly residential mixed-use district.

Rockwell Neighborhood Center - Bloomfield, CT
The enhancement of an existing residential neighborhood and recreational center with infill residential development.

Tolland Village Area - Tolland, CT
A new mixed-use town center development along a major arterial road within a predominantly rural setting.

SITE OPPORTUNITIES & CHALLENGES

Once an appropriate development site is identified, a data gathering and analysis phase should be undertaken by planners to identify and catalogue the opportunities and challenges that the site presents before design gets underway. The data a typical planning process might include are:

- Site documentation: maps, plans, photographs, history, ownership, environmental and other physical conditions;
- Relevant local and regional planning documents;
- Zoning, site and site-adjacent conditions, amenities, or pending development proposals;
- Neighborhood indicators and current demographic data; and
- Key findings that affect the marketability and redevelopment potential of the project site.

Once the relevant data is gathered, it can then be analyzed by planners. A typical development analysis might include:

- Market-based economic analysis for residential and non-residential uses;
- Infrastructure capacity and needs assessment;
- Environmental conditions, challenges, and opportunities;
- Circulation and open space analysis;
- Transit availability and needs assessment;
- Development feasibility analysis;
- Best practices of similar projects; and
- Site-specific highest and best use analysis.

To determine site-specific opportunities and challenges for each of the four model redevelopment sites, a data gathering and analysis phase was carried out by planners prior to the "Together We Can Grow Better" CRCOG workshop. Much of the documentation and analysis listed above was assembled into site briefing books for the workshop attendees. These briefing books can be found in Appendix D.

SITE VISION

The most exciting phase of the planning process occurs when developers and communities work with urban design professionals to explore and define new possibilities for a project site. After an honest and comprehensive assessment of the site's opportunities and challenges, the parties involved must answer the following questions: What is possible? And given these possibilities, what kind of place do we want this site to be?

The answers should define a vision that is well documented and illustrated through drawings and narratives, including proposed development programs, land use plans, road layout maps, architectural design guidelines, sustainability plans, street sections, parking counts and configurations, and an open space plan illustrating parks, walkways, and bikeways. The planners should clearly diagram the site's connections to existing infrastructure, civic and cultural amenities, and the needs of everyday life, like grocery stores, pharmacies, banks, and restaurants. Perspective views of proposed buildings and site amenities can help to articulate the shape and character of the site vision.

Planning discussions that revolve around oversimplified planning parameters like density statistics often hinder what should be a creative process designed to address the factors that actually affect the quality of residents' lives. It is the responsibility of planners and designers to create forums where stakeholder discussions

reveal the community's aspirations, needs, and objectives that lead to planning decisions designed to make life healthier, easier, and more cost effective. Density statistics become less relevant and needlessly foreboding when design, livability, and choice are the operating mechanisms by which plans are created. Additionally, opposition wanes when residents see the positive impacts on the community of well-designed projects that increase density.

Developing compact, mixed-use, walkable communities can be a complicated process and generally requires a variety of stakeholders to reach consensus around a site vision. Fostering meaningful venues for civic engagement, where the concerns and aspirations of stakeholders can be clearly articulated, documented, and applied to the site visioning process, is a crucial step on the road to building stakeholder consensus. Achieving a strong stakeholder consensus is particularly helpful when developers or municipalities are required to navigate the political and bureaucratic complexities of changing land use and zoning policies.

The three site visions developed for the model redevelopment sites were designed to address the neighborhood plan and placemaking objectives and guidelines set forth in the Smart Growth Guidelines for Sustainable Design and Development. (The scale of the effort did not permit the team to explore the building design elements, but some discussion of infrastructure is included here.) Each site concept addresses neighborhood fabric and composition; community streets; nature and open space; and equity, diversity, and affordability by:

- Creating a **walkable neighborhood** with new street connections and enhanced pedestrian safety measures to encourage walking and reduce dependence on the automobile;
- Establishing or reinforcing **activity centers** by adding market-appropriate mixed-use infill development, increasing residential densities, providing good access to transit, and creating pedestrian-friendly amenities and public spaces; and
- Developing a system of **neighborhood parks** that provide outdoor recreation opportunities and connections to natural systems and encourage a healthy lifestyle for residents.

The following sections contain site date, conceptual site designs and analysis for the South Windsor, Manchester Parkade, and Rockville Neighborhood Center sites. Plans that were presented for the Tolland Gateway site are attached in Appendix C.


Office Buildings


Gazebo


Strip Retail & Supermarket


Senior Living Center

EXISITING SITE DATA

Location	1739 Ellington Rd South Windsor CT
Site Size	939,500 sf 21.5 acres
Zoning	Restricted Commercial
Ownership	Private Owner

SITE OPPORTUNITIES

- Existing infrastructure is in place
- Good access to Ellington and Buckland, both well-traveled state roads
- Direct access to transit on both Ellington and Buckland
- Existing mix of uses and services, including retail, commercial, and adjacent residential uses
- Site is composed of few private owners
- Near civic uses, including the South Windsor public library and the town hall and municipal center

SITE CHALLENGES

- Adjacent to low-density residential neighborhoods (approximately 1.4 units/acre) that may be resistant to increased densities
- Current zoning restricts residential developmentand building height
- Some of the existing retail is currently underperforming

Existing Site Plan

SOUTH WINDSOR

SITE OVERVIEW

Located at the intersection of Ellington Road and Buckland Road, this 25-acre shopping center site is a hub for commercial activity in the community. The site is near the town hall and municipal center. Currently, the site contains a supermarket that performs well, office buildings, a bank, and several average and underperforming retail tenants. Adjacent to the site on the western edge is a relatively new four-story senior living center. The site is served by the #92 CT Transit bus route with direct service to several regional shopping destinations and connecting service to downtown Hartford.

Though a common suburban development type, shopping centers of this kind are increasingly at risk for failure, as new shopping centers built at the periphery can cannibalize the existing ones. Site strategies should consider infill solutions that make the shopping center more economically resilient and establish the town center as a long-term, mixed-use, South Windsor destination.

For more site information see:
Appendix D - Site Briefing Books

South Windsor Mixed Use Town Center - Concept Site Plan - *Wallace Roberts & Todd, LLC with Jonathan Rose Co.*

SOUTH WINDSOR

SITE VISION

The goals of this site are to establish it as the town center destination for South Windsor by creating a vibrant, compact, walkable, mixed-use area that is well connected to adjacent neighborhoods and to CT Transit routes. In doing so, the land values will be maximized by reconfiguring current site layout inefficiencies to unlock infill development potential without compromising the value of existing uses and infrastructure. Furthermore, new multi-family housing will increase the range of affordable housing options for the community. Shaping new public spaces and pedestrian-friendly streets to create both a destination and a home for current and future residents of South Windsor will be a core element of this site.

PROJECT DATA

USES

- Retail
- Office
- Mixed Use
- Civic
- Residential

DEVELOPMENT PROGRAM

Residential 120 Units	32 Units/Acre 291,325 s.f.
Commercial	30,000 s.f.
Retail	194,975 s.f.
Civic	15,700 s.f.
Total	**532,000 s.f.**
Landscaped Open Space & Parks	148,000 s.f.
Parking	733 on-site spaces

PROJECT FEATURES

- New Community Building
- Town Square
- Mixed Use Common
- Main Street

Policy and design interventions to achieve this vision include the following:

WALKABLE NEIGHBORHOOD

- Reconfigure the site to create a new block system that better connects streets to encourage walking within the site and to adjacent neighborhoods and to reduce driving

.

- Establish a new east-west Main Street with parallel parking at the north end of the site parallel to Ellington Road.
  - Connect the new street to the existing shopping center access points to the east at Buckland Road and to the west at Ellington Road to provide a connection across the site.
  - Infill existing office buildings with new mixed-use buildings providing retail, office, and residential uses on both the north and south sides of the new street.
  - Orient new buildings along the new east-west axis to maximize opportunities for natural solar heating and cooling.

- Create a new pedestrian-friendly face for Ellington Road.
  - Create a new, attractively landscaped sidewalk along Ellington Road.
  - Provide new signalized crosswalks across Ellington Road with "press-to-walk" buttons to enable safe, rapid road crossing.
  - Provide north-south pedestrian-friendly connections to the new Main Street and the existing shopping center.
  - Site new buildings along Ellington Road that fit in with the character of the buildings across the street.
  - Infill the existing bank, offices, and senior living center on the west side of the site with new mixed-use buildings.

- Provide green parking solutions that meet parking demand but do not dominate the pedestrian experience.
  - Redesign the existing shopping center parking lot so that it is no longer the primary visual component of the site, without reducing overall site parking capacity.

South Windsor Town Center Walkability & Circulation Diagram

Pedestrian Route
Transit Route
Automobile Route

Example Ground Floor Retail

Example Walkable Mixed-Use Street

Wallace Roberts & Todd, LLC

South Windsor Mixed Use Town Center - Bird's Eye View *- Wallace Roberts & Todd, LLC*

- Locate new parking along Ellington Road in the side yards of new buildings rather than along the street frontage.
- Relocate parking behind the existing bank, offices, and senior living center, and redesign it as green parking with permeable paving.

ACTIVITY CENTERS

- Create a pedestrian-oriented mix of uses to encourage walking, increase consumer choices, and establish the development as the vibrant town center destination for South Windsor residents.
  - Leverage the existing commercial market and automobile and transit access by requiring mixed-use buildings and discouraging automobile-oriented uses (e.g., car repair services, car wash, drive-through banks, fast-food).
  - Increase residential density along and close to Ellington Road to maximize opportunities to reduce local driving and to support and enhance the retail and commercial market.
  - Integrate a new community facility at the corner of Ellington and Buckland that suits the character of the historic village center.
- Enhance access to housing and transportation.
  - Position the town center as an express transit hub for the community, connecting to higher-density centers in the region, such as Hartford and other regional destinations, including South Windsor's Promenade Shops at Evergreen Walk.
  - Justify and increase transit service to give residents better access from their homes to jobs and services in the region.

NEIGHBORHOOD PARKS

- Create public parks and streetscape amenities that provide redundant systems to detain and infiltrate stormwater
- Use pervious paving for sidewalks, roads, and parking areas to protect water quality and create a connected civic realm.
- Create a central green space, the Mixed-Use Common, that integrates rain gardens to

detain and infiltrate stormwater.

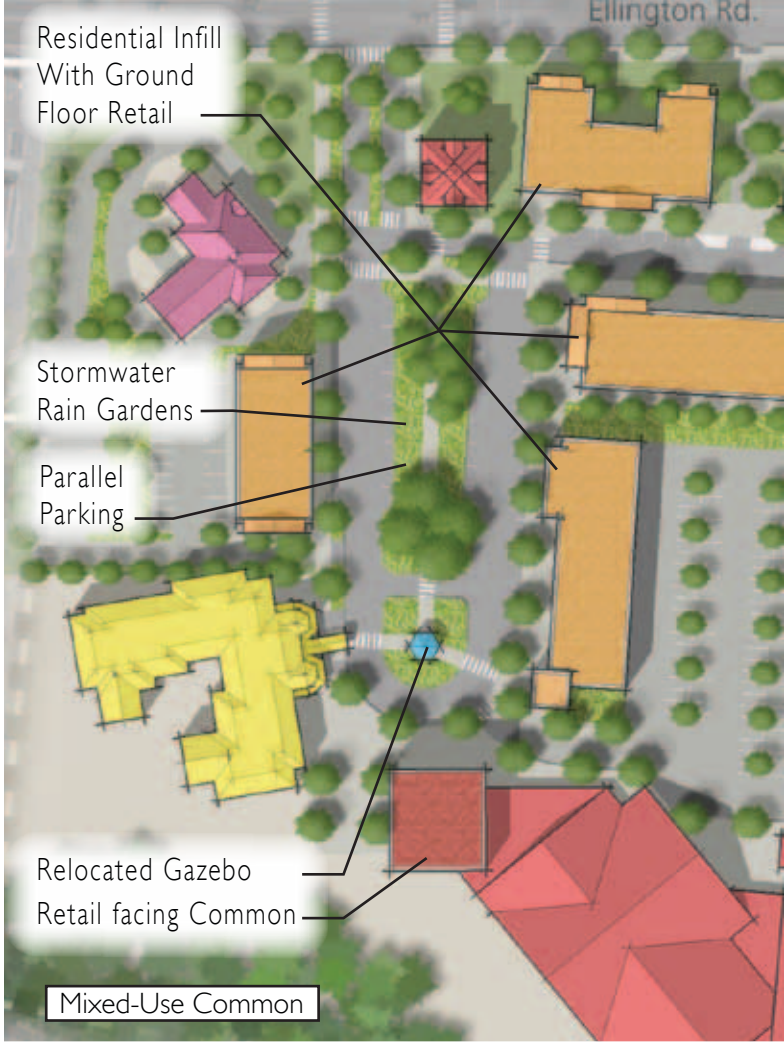
- Create a new green space between the new north-south loop streets.
- Create a new green space between the senior living center and the redeveloped shopping center.
- Relocate the existing gazebo at the end of the new north-south street to provide a place for gathering for the residents of the existing senior living center.

• Create a town square park that uses rain gardens to detain and infiltrate stormwater.

- Create a new park at the corner of Ellington and Buckland Roads that reinforces the historic "five points" center of the village and provides enhanced pedestrian walks and crosswalks.

• Integrate rain gardens in bio-swales along streets and sidewalks adjacent to parking lots to provide redundancy in stormwater management and create a more attractive pedestrian environment.

- Create a rain garden park buffer along the east-west axis in the middle of the site to provide stormwater infiltration.
- Provide rain gardens in pedestrian bulb-outs along new north-south and east west streets.



Mixed-Use Common


Example Cafe on Mixed-Use Common
Wallace Roberts & Todd, LLC


Example Walkable Mixed-Use Street
Wallace Roberts & Todd, LLC

Abandoned Shopping Center

Broad Street

Wooded Stream Corridor

Abandoned Shopping Center

EXISITING SITE DATA

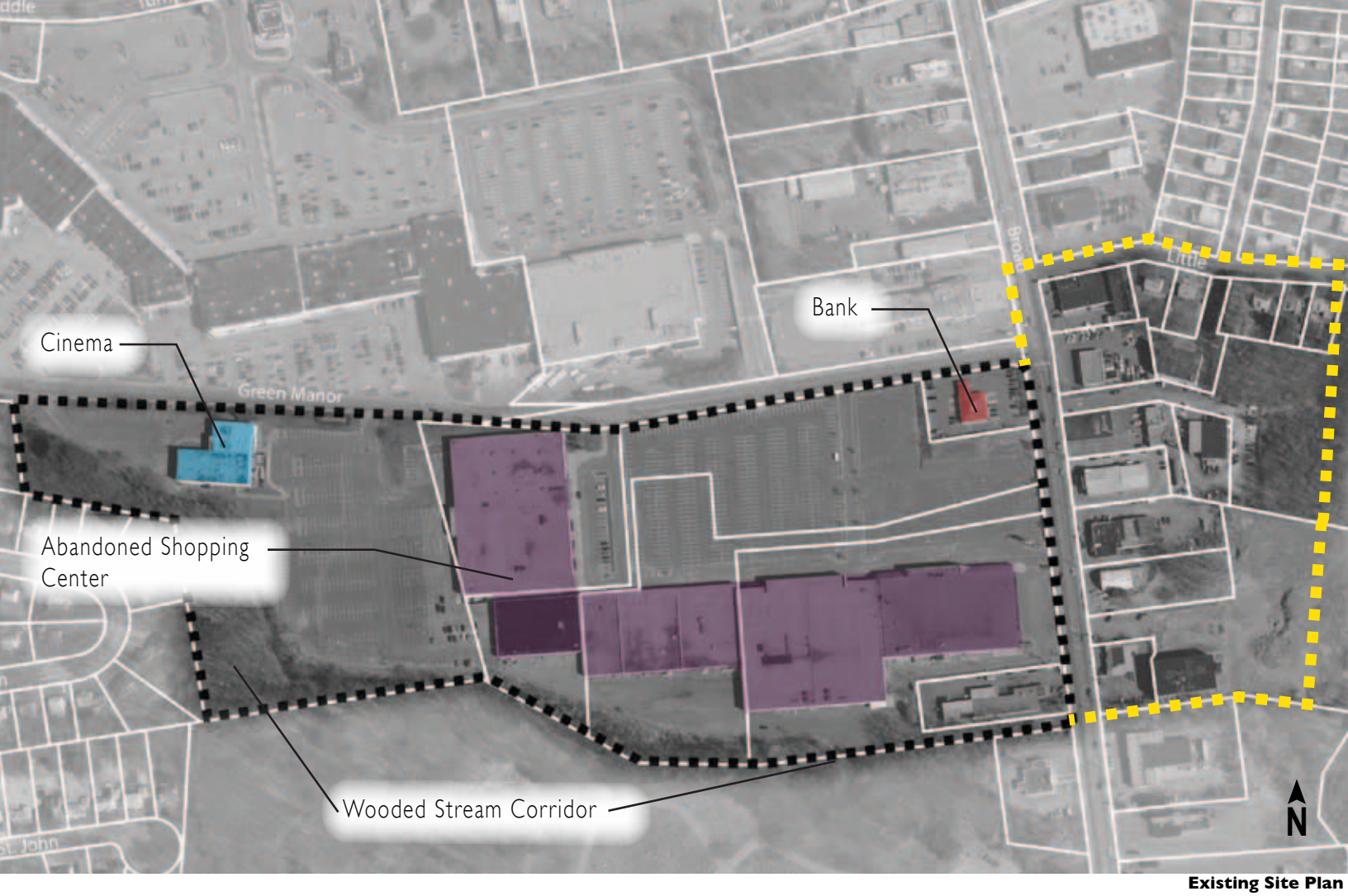
Location	Broad St. & Green Manor Blvd Manchester, CT
Site Size	1,964,000 sf - 27 acres
Zoning	General Business Zone with a Design Overlay
Ownership	Private Owner

SITE OPPORTUNITIES

- Large previously developed site provides significant redevelopment opportunity
- Few private owners
- Infrastructure is in place
- Site is surrounded by a mix of uses and services, including retail, commercial, and residential, that could support additional mixed-use development
- Site is within a walkable quarter-mile of transit
- Site is within half a mile of a public elementary school and near a city park
- Adjacent stream corridor could be restored and preserved as a natural amenity for future development

SITE CHALLENGES

- Existing buildings are not in good condition and would likely need to be demolished
- Current zoning restricts residential development and building height
- Portions of the site are within the floodplain of the stream corridor to the south



Existing Site Plan

MANCHESTER PARKADE

SITE OVERVIEW

The Manchester Parkade site is on Broad Street, a main commercial thoroughfare in the town of Manchester and contains an abandoned 250,000 square foot strip mall. To the north is the shopping center that replaced the now vacant development on the Parkade site. The center contains a supermarket and several other retail tenants and services. There are a variety of commercial and industrial uses along Broad Street. The site is near a public elementary school, athletic fields, and Center Springs Park. The surrounding residential neighborhoods are predominantly detached single-family homes with pockets of low-rise multifamily housing. A wooded stream corridor runs along the southern border of the site. The site is served by the #88 CT Transit bus route with direct service to downtown Hartford.

The town's redevelopment agency has prepared studies and a plan emphasizing the need for a mix of uses along the entire Broad Street corridor. The corridor's central location in Manchester is walkable and within half a mile of three bus routes. Streetscape improvements and reconstruction projects are currently planned for the corridor. Site strategies should be informed by and build upon existing planning efforts to place mixed-use development on the site.

For more site information see:
Appendix D - Site Briefing Books

Manchester Parkade - Green Residential District - Concept Site Plan - *Wallace Roberts & Todd, LLC with Jonathan Rose Co.*

MANCHESTER PARKADE

SITE VISION

Recasting the Parkade site as a vibrant, mixed-use, mixed-income, green, residential district will capitalize on the natural open space to the south of the site. Preserving that area as a wetlands park will create an amenity that can be enjoyed by district residents and neighbors alike. Establishing the district as a vibrant regional transit stop will capitalize on and support the planned Broad Street corridor revitalization with a new transit boulevard. An array of housing types and sizes will increase the affordable housing options for the community. Finally, shaping new public spaces and pedestrian-friendly streets will create a comfortable, healthy, and affordable home for future residents of the district.

PROJECT DATA

USES

- Mixed Use
- Civic
- Residential

DEVELOPMENT PROGRAM

Residential 497 Units	34 Units/Acre 1,155,500 s.f.
Retail	91,400 s.f.
Civic	31,200 s.f.
Total	**1,278,100 s.f.**
Landscaped Open Space & Parks	827,000 s.f.
Parking	1,322 on-site spaces

PROJECT FEATURES

- Green Manor Boulevard
- Wetlands Park/Trail
- Neighborhood Square
- Transit Boulevard
- Entertainment Center

Policy and design interventions to achieve this vision include the following:

WALKABLE NEIGHBORHOOD

- Take advantage of the empty site to create a new block system with more street connections to encourage walking both within the site and to adjacent neighborhoods.

- Create two new east-west streets to improve connections, create passive solar street frontages, and address service access for retail uses to the north.
  - Realign Green Manor Boulevard to become a parkway street along the stream corridor to the south, and convert it to a service road that serves both new development and the existing shopping center to the north.
  - Create new local streets that bisect the site, creating north-south block frontages that do not exceed a pedestrian-friendly width of 300 feet.
  - Create and reinforce connections to existing residential neighborhoods by providing crosswalks across Broad Street.

- Integrate the site with the existing and future commercial development to the north by aligning new north-south streets with existing streets.
  - Align north-south street connections with shopping center access roads to the north.
  - Locate central north-south street connection to create block perimeters that do not exceed 1,800 feet.

- Create a pedestrian- and bicycle-friendly street environment that takes advantage of the natural open space to the south of the site.
  - Provide new signalized crosswalks across Broad Street with "press-to-walk" buttons to enable safe, rapid road crossing.

Manchester Parkade
Walkability & Circulation Diagram

Pedestrian Route
Transit Route
Automobile Route
Wetlands Park / Trail

Example Neighborhood Square
Wallace Roberts & Todd, LLC

Example Residential Street
Wallace Roberts & Todd, LLC

Manchester Parkade - Green Residential District - Bird's Eye View *- Wallace Roberts & Todd, LLC*

- Exceed minimum sidewalk width standards along the new Green Manor Boulevard to create a continuous public promenade.
- Provide amenities along Green Manor Boulevard (e.g., playgrounds, street furniture, bicycle racks).
- Connect pedestrian, bicycle pathways and sidewalks to the existing upland trail system along the new Green Manor Boulevard.

ACTIVITY CENTERS

- Develop a transit-oriented, mixed-use neighborhood center that encourages walking, increases consumer choices, enhances existing markets, and is integrated with the adjacent natural open space amenities.

- Require a pedestrian-oriented mix of uses, including new residential units, to encourage walking and reduce driving.
  - Capitalize on existing commercial market and transit access by requiring mixed-use buildings, and discouraging auto-oriented uses (auto repair services, car wash, banks, fast-food, etc.)
  - Increase residential density to provide a variety of housing options.
  - Support and expand the existing cinema to create an entertainment center.

- Enhance access to housing and transportation choices.
  - Create a transit boulevard that balances pedestrians, bicyclists, transit users, local drivers, and through travel with dedicated bicycle and pedestrian lanes, pedestrian areas of refuge, transit shelters, and pull-off dedicated bus lanes with pull-outs.
  - Increase transit service frequency to improve accessibility to jobs, stores, and other services in the region.

- Position the development as an express transit stop connecting to higher-density centers in the region, including Hartford and other regional destinations such as Manchester's Main Street.
- Provide sidewalks, crosswalks, and connections to trails to encourage walking and bicycling.

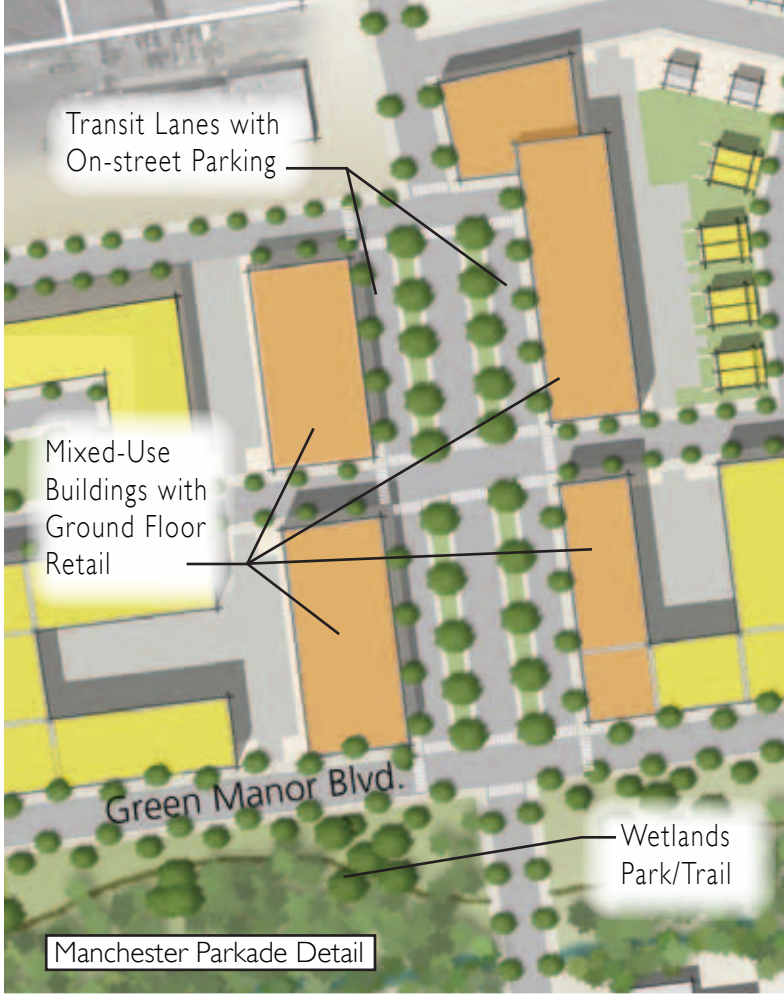
• Provide green parking solutions that meet parking demands while enhancing the pedestrian experience.
  - Create redesigned green parking with permeable paving behind buildings that face Broad Street, with parallel parking along the local lanes of the transit boulevard.
  - Relocate parking areas behind apartment buildings and along the new service road at the north side of the site.

NEIGHBORHOOD PARKS

• Create public parks and streetscapes that integrate stormwater detention and infiltration, use pervious paving for sidewalks, roadways, and parking, to protect water quality and create a connected system of public green space.

• Create a new Neighborhood Square that uses rain gardens to detain and infiltrate stormwater.
  - Create a new park at the intersection of the eastern north-south street and the central east-west street.
  - Design the park to maximize opportunities for water filtration and redundancy in stormwater management.

• Create a wetlands park along the stream corridor that integrates trails connecting to adjacent neighborhoods and regional park systems to encourage recreation, raise environmental awareness, and protect water resources.
  - Create wetlands with native plants at low points along the new Green Manor



Manchester Parkade Detail


Example Wetlands Park/Trail


Example Transit Boulevard

Wallace Roberts & Todd, LLC

Boulevard to filter stormwater before it enters natural wetlands or the stream.

- Integrate pathways into the existing upland trail and and develop a signage system to educate people about wetlands and natural habitats.

- Integrate rain gardens in bio-swales along streets and residential courts closest to the stream corridor to create distinctive places and provide redundancy in stormwater management.
  - Create a rain garden park along the central north-south street.
  - Create bio-swales along mid-block courts in the central block along the new Green Manor Boulevard.

- Create a woodland buffer along the stream corridor to improve water quality and enhance the habitat corridor.
  - Provide a native species woodland buffer along the stream corridor to stabilize the stream banks and protect the stream from runoff that contains pollutants and fertilizers
  - Restore stream banks to prevent further erosion along the property line.


Chapel St. at Cottage Grove Rd.


Existing Residential


Baseball Fields


Baseball Fields

EXISITING SITE DATA

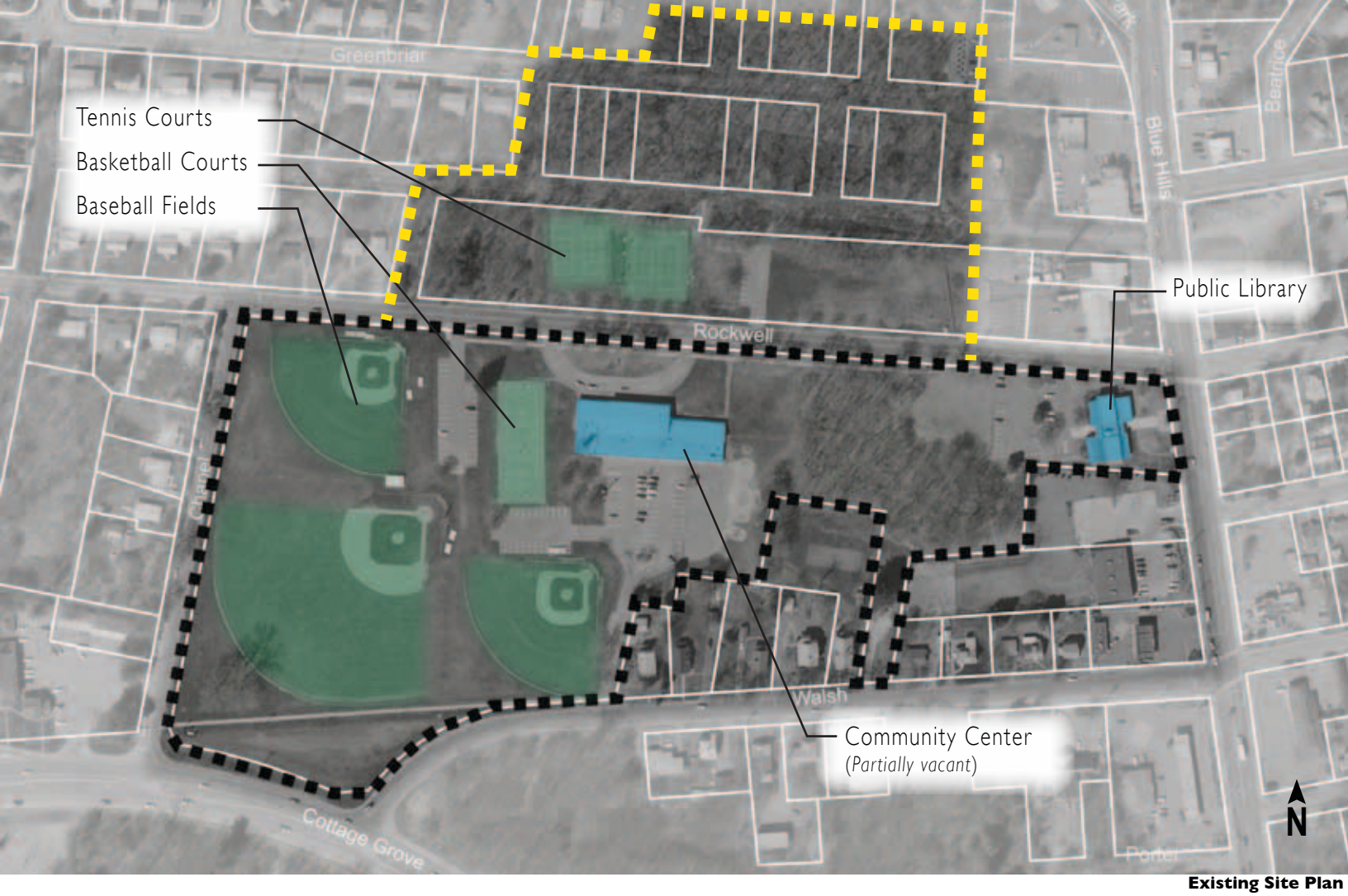
Location	73 Rockwell Ave Bloomfield, CT
Site Size	1,119,000 sf - 25 acres
Zoning	R10 - Residential Zone and Gateway Zone
Ownership	Town of Bloomfield

SITE OPPORTUNITIES

- Direct access to recreation facilities, community center, and a public library
- Employment and industrial center within half a mile of the site
- Site is surrounded by an established residential neighborhood
- Significant developable open land owned by the town
- Direct access to transit
- Walking distance to retail and commercial uses
- Local high school and middle school are within one mile of the site

SITE CHALLENGES

- Adjacent residential neighborhoods are low density and might be resistant to increased density
- Current zoning does not permit higher residential densities
- County data indicate poorly drained soils on the site
- Existing recreational uses are popular and would need to be retained



Existing Site Plan

ROCKWELL NEIGHBORHOOD CENTER

SITE OVERVIEW

This 9-acre site contains a public school facility now being partially used as a community center and recreational facilities, including three baseball fields, two basketball courts, and several tennis courts. The site is nestled in a residential neighborhood composed primarily of detached single-family houses. The site is accessed by two residential streets, Rockwell Avenue to the north and Chapel Street to the west, as well as a well-traveled state road Route 218 to the south. Blue Hills Avenue, a well-traveled commercial street runs along the western edge of the site. A public library is adjacent to the site along Blue Hills Avenue to the west of the site. The site is served by CT Transit bus routes 50, 52, and 54 with direct service to downtown Hartford and other regional destinations.

The site is currently dominated by a popular neighborhood recreational center. Site strategies should retain as much of the recreational infrastructure as possible and be sensitive to the character of the surrounding neighborhood. By capitalizing on existing site capacity for residential infill, incorporating housing options at a range of sizes and price points, and enhancing the existing community asset, the neighborhood center is reinforced as a sustainable place with enduring value.

For more site information see:
Appendix D - Site Briefing Books

Rockwell Neighborhood Center - Concept Site Plan - *Wallace Roberts & Todd, LLC with Jonathan Rose Co.*

ROCKWELL NEIGHBORHOOD CENTER

SITE VISION

Enhancing the already vibrant energy of an existing neighborhood recreational center with sensitive infill residential development will increase neighborhood connectivity, walkability, and residential density through the introduction of a new network of pedestrian-friendly residential streets. The goal is also to provide an affordable mix of new housing options, including townhomes; small-lot, single-family, detached homes; single-family twin homes; and accessory dwelling units (e.g., "granny flats" or "mother-in-law suites"). Additionally, by improving the existing recreational uses with a refurbished and redesigned community center, and enhanced vehicular, and pedestrian access the site becomes more effective as an easy to access neighborhood center.

PROJECT DATA

USES

Residential Civic

DEVELOPMENT PROGRAM

Residential 138 Units	15 Units/Acre 193,200 s.f.
Civic	36,200 s.f.
Total	**229,400 s.f.**
Landscaped Open Space & Parks	243,575 s.f.
Parking	430 on-site spaces

PROJECT FEATURES

- Refurbished Community Center
- Recreational Fields and Facilities
- Diverse and expanded housing choices

Policy and design interventions to achieve this vision include the following:

WALKABLE NEIGHBORHOOD

- Create a new residential block system that creates better connections within the neighborhood, to adjacent neighborhoods and to the recreational facilities.
  - Extend Greenbriar Drive to the east to create a new east-west connection and to provide opportunities for north-south connectivity.
  - Create a new north-south street between the extension of Greenbriar Drive and Rockwell Road at the eastern end of the site.
  - Create a new central north-south street west of the eastern north-south street, connecting Greenbriar Drive to Walsh Street.
  - Extend Victor Street across Rockwell Avenue through the existing park towards Walsh Street with a T-intersection at the new central north-south street.
  - Include parallel parking on streets to create a buffer between pedestrians and moving cars.

ACTIVITY CENTERS

- Reuse, repurpose, and redesign existing community center and recreational facilities to accommodate new infill housing.

- Renovate the existing recreation center building and add a new drop-off road parallel to Rockwell Road.
  - Provide parallel parking along all new streets.
  - Provide playgrounds next to the center.

- Create green alleys and green parking lots that reduce runoff by using permeable paving and

Rockwell Neighborhood Center Walkability & Circulation Diagram

Pedestrian Route
Transit Route
Automobile Route

Example Residential Street

Baseball Fields

Rockwell Neighborhood Center - Bird's Eye View - *Wallace Roberts & Todd, LLC*

natural drainage landscapes.

- Increase on-street parking to support the integration of denser housing.

- Increase residential density to maximize opportunities for reducing local driving, at the same time, provide a variety of affordable housing options.
  - Locate townhouses along the north-south streets north of Rockwell Road to maximize density while fitting in with the single-family character of the neighborhood.
  - Locate accessory dwelling units at the alley ends along Greenbriar Drive to transition from townhouses to the single-family neighborhood along Greenbriar Drive.
  - Locate two-family houses, designed to fit with the character of the single-family neighborhood, along Greenbriar Drive, Rockwell Avenue, and the new central north-south street.
- Enhance transportation choices.
  - Provide a transit shelter and bicycle facilities at the existing bus stop with sidewalks and crosswalks to encourage walking, biking, and transit use.
  - Increase service frequency to give residents more access to jobs and other retail services.

CHAPTER IV
IMPLEMENTATION AND NEXT STEPS TOWNS & CITIES

Each of the visions laid out in the previous chapter would require significant action and, in some cases, policy change. This chapter provides an overview of the next steps that the towns and cities with these sites could take to begin implementing these visions. It also illustrates the types of actions that would be required of municipalities across Connecticut or beyond to create the mixed-income, compact communities that these visions illustrate. It concludes with a discussion of the importance of public/private partnerships in implementing a vision and offers suggestions on how to increase municipal capacity to make these partnerships more effective.

OVERVIEW: REVIEW AND REVISE LAND USE POLICY

After a clear vision for the site has been defined by planners, municipalities will have to shape land use policies and regulatory frameworks to make the new vision possible and encourage developers to implement the vision as defined. The importance of this step cannot be overstated. The vast majority of today's conventional municipal zoning codes have evolved over the last several decades to make it virtually illegal to develop compact, walkable, mixed-use neighborhoods. Therefore, most municipalities would have to change existing zoning regulations to accommodate the higher densities, the mixing of land uses, and the massing and site disposition of new buildings required to develop compact, walkable, mixed-use neighborhoods.

Policy makers can generally approach these changes in two ways. One approach is to simply

propose and adopt the required changes to the existing zoning code. Often this is easier said than done, as fundamental zoning changes made to landowners' properties can be laborious and fraught with both legal and political hurdles. The advantage of this approach is that adopting a new zoning code effectively makes smart growth development the default. Given the challenges of this approach, many municipalities have chosen to adopt voluntary zoning overlays for sites or districts that they wish to develop with smart growth planning principles. While the underlying existing zoning remains, the new overlay zoning code can provide the necessary entitlements for smart growth development.

Because adherence to an overlay zoning code is voluntary, municipalities still risk getting conventional development that is inconsistent with smart growth development principles. To encourage developers to build compact, walkable, mixed-use development, municipalities can offer incentives that are contingent on a developer's adherence to the new zoning.

Examples of incentives that would make the new overlay zoning more attractive and valuable to developers include:

- Tax abatements or incentives;
- Discounted prices for publicly owned properties;
- Fee reductions for permits and expedited entitlement processes;
- Density bonuses;
- Tax increment financing[30] ; or
- Public financing assistance for infrastructure improvements like streetscapes, landscape, open space, or parking.

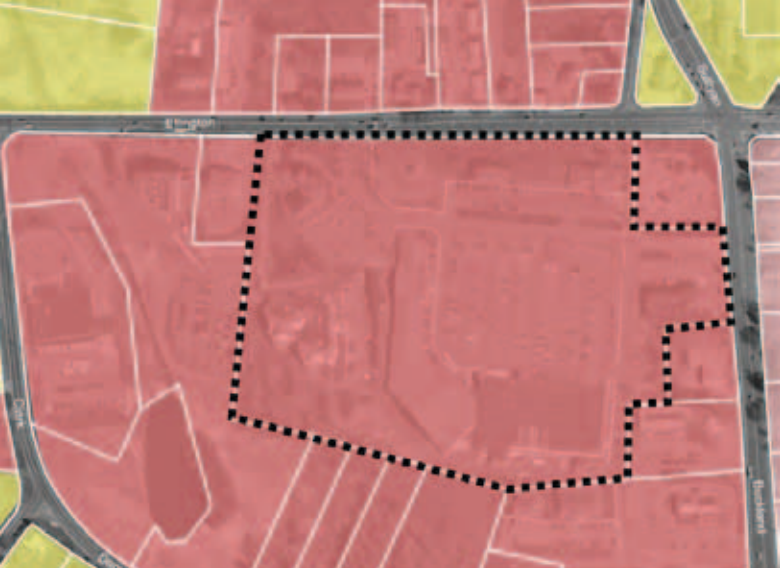
30 Tax increment financing (TIF) is an economic development tool that allows municipalities to earmark property tax revenue from increases in assessed values within a geographically defined TIF district.

Incentives can be carefully calibrated to encourage the specific type of development that communities want. For example, if the vision for a neighborhood includes affordable housing, municipalities can offer developers bonuses in allowable densities for including a certain percentage of affordable housing units in their development, as the HOMEConnecticut program does. By increasing what the developer is allowed to build on a given site, this incentive can effectively increase the value of the site.

Because policy change can be so time consuming, it is generally more efficient and effective for municipalities to plan for and make policy changes proactively and comprehensively rather than reactively and site by site. The Smart Growth Guidelines for Sustainable Design and Development can give towns and cities a starting point for making planning and development decisions. Ultimately, municipalities need to conduct a thorough audit of their codes and ordinances and then revise them accordingly to allow the type of development described in this report. Code Audits can identify particularly problematic regulatory issues, which can then be addressed through code revision efforts or development of incentives. The EPA website has several code audit and smart growth scorecard tools to assist municipalities as they undertake this effort. http://www.epa.gov/dced/scorecards/index.htm

SITE-SPECIFIC ZONING AND POLICY ANALYSIS FOR THE THREE REDEVELOPMENT SITES

A detailed zoning analysis was conducted for each of the three redevelopment sites to determine the specific regulatory changes and incentives that might be required to implement the smart growth visions developed for each site. These findings are summarized below, with specific zoning changes for each site. See Appendix B for detailed analysis and in-depth strategies for changing the policy and regulatory frameworks.



South Windsor Town Center
Existing Zoning

- RC - Restricted Commercial
- GD - Buckland Road Gateway Development
- RR - Rural Residential

Potential Zoning Amendments

The entire site is currently zoned RC Restricted Commercial. The RC zoning district generally allows the type of development illustrated in the South Windsor Town Center concept with a few notable exceptions. To implement the development concept as designed, the town would have to make the following specific changes to the underlying zoning:

- Allow building heights of up to four stories or 50 feet;
- Increase flexibility for mixing commercial and residential units;
- Increase allowable residential density to 15 units per acre;
- Allow a variety of residential unit types;
- Amend setback requirements to allow pedestrian-friendly building disposition;
- Allow shared parking, and provide parking credits for on-street parking and transit use; and
- Allow outdoor dining.

General Design Regulations

Communities could require the following design features for development to receive site plan approval on each of the four sites:

- Parking and loading areas at the side or rear of buildings or between buildings and screened from public streets;
- Pedestrian and bicyclist amenities (e.g., bike racks, street lamps, water fountains, benches) near building entrances;
- Transit stops on transit corridors provided in appropriate locations where none exist;
- 8-foot minimum sidewalk width on both sides of the street;
- Provide street curb bulb-outs for pedestrians at crosswalks;
- Crosswalks at all intersections and signalized at major intersections;
- A minimum preserved tree canopy of 20 percent;
- A minimum contiguous open space requirement of 30 percent;
- New buildings and street blocks oriented along the east-west axis to take advantage of natural solar heating and cooling;
- Streets and sidewalks connected on the interior of the development and with the existing road network;
- Buildings oriented toward the street and sidewalk with front facades and entrances facing the sidewalk or pedestrian space, but not facing a parking lot; and
- Trash receptacles at strategic locations in the development.

Development Incentives

Development incentives could be incorporated into the regulatory frameworks of each municipality to promote the sustainable development practices outlined in the Smart Growth Guidelines for Sustainable Design and

Development. For example, a density bonus of five units per acre and a height bonus (for South Windsor and Manchester) of two stories (up to 6 stories and 70 feet) could be offered in exchange for provision of:

1. A combination of three of the following elements:

- 20 percent of the housing units affordable to residents earning 80 percent of the area median income or less;
- All new residential buildings designed as ENERGY STAR Qualified Dwelling Units and installed with water-efficient fixtures;
- All new non-residential buildings designed to comply with industry standards such as ANSI/ASHRAE/IESNA and installed with water-efficient fixtures;
- Stormwater management best practices (e.g., bioswales, pervious pavement, rain gardens, integration of stormwater detention capacity with vegetative buffer areas and open space); or
- Green roofs on all new buildings.

Or

2. Installation of non-polluting, renewable energy generation technologies such as solar, wind, or geothermal capacity in all new buildings.

PUBLIC/PRIVATE PARTNERSHIPS AND THE ROLE OF THE MUNICIPALITY

Real estate development requires the use of land, generally requires investments in public infrastructure, and can significantly affect the long-term health, well-being, and economic resiliency of the communities where development occurs. Development implementation requires a complex marriage between developers and communities where public resources, private investment, and long-term risk become inherently intertwined. Put simply, real estate development does not just

Manchester Parkade
Existing Zoning

- RA - Single Family Residential
- RR - Rural Residential
- RB - 1 & 2 Family Residential
- GB - General Business
- Design Overlay Zone

Potential Zoning Amendments

The entire site is currently zoned GB-General Business, which is described as a commercial overlay for general public shopping convenience. The site is also in the Design Overlay Zone, which establishes design standards for previously undeveloped areas. The current zoning does not allow for the mix of uses and densities illustrated in the Manchester Parkade concept plan. Additionally the Design Overlay District is limited to architectural and façade treatments that do not adequately capture the green design features in the Smart Growth Guidelines for Sustainable Design and Development. To implement the development concept as designed, the town would need to make the following specific changes to the underlying zoning:

- Allow building heights of up to four stories or 50 feet;
- Increase flexibility for mixing commercial and residential units;
- Increase allowable residential density to 20 units per acre;
- Allow a variety of residential unit types;
- Amend setback requirements to allow pedestrian-friendly building disposition;
- Allow shared parking, and provide parking credits for on-street parking and transit use; and
- Allow outdoor dining.

Rockwell Neighborhood Center
Existing Zoning

- RC - Restricted Commercial
- GD - Buckland Road Gateway Development

Potential Zoning Amendments

The town of Bloomfield is in the final draft state of rewriting its zoning ordinance. This analysis uses the draft updated zoning ordinance. The majority of the site is currently R-10 Residential. There is also a small portion of the site zoned GWD – Blue Hills Gateway District, which encompasses the library and a portion of the residential development on the concept site plan. The current zoning does not allow either the residential densities or the mix of residential unit types that are illustrated in the concept site plan. To implement the development concept as designed, the town would have to make the following specific changes to the underlying zoning:

- Include semi-detached, attached, and detached accessory dwelling units as allowable residential unit types;
- Increase allowable residential density to 20 units per acre;
- Decrease minimum lot size to 2,000 square feet;
- Increase maximum allowable building height to 3 stories; and
- Allow recreational fields, athletic courts, and civic uses such as the community center.

require a public/private partnership; real estate development is a public/private partnership.

It is crucial that municipalities acknowledge their role in this partnership and proactively develop the capacity to interact effectively with developers. Doing so can ensure that the needs of both the community and developer are met equitably in a manner that maximizes the potential for success and to the fullest extent possible mitigates risk.

Municipalities can choose to develop advisory capacity in house or to contract with real estate professionals that have expertise in facilitating public/private partnerships. Either course of action should provide municipalities with capacity in the following areas:

Conducting disciplined economic, market, and financial analyses

Municipalities are most empowered to fruitfully engage the development industry when they possess meaningful and up-to-date information about the parcels and properties in their community. Advisors should be able to conduct analyses to determine the highest and best use of a site, quantify land values, and have a deep knowledge of the local economy and market trends. This information can help policy makers as they approve land use plans, site plans, and redevelopment plans; consider zoning changes; provide leverage for communities during land transactions; provide benchmarks for developer assumptions; and prioritize infrastructure investments.

Managing and negotiating development incentives

Development incentives can be powerful tools to ensure that the vision and high standards expressed in a community master plan are realized. Knowledgeable real estate advisors can facilitate negotiations between developers and municipalities to ensure that incentives achieve positive outcomes.

Ensuring meaningful and productive civic engagement

Advisors should be able to plan and conduct meaningful civic engagement processes that are transparent, engage a wide range of stakeholders, gather input from residents, and use residents' concerns and ideas to improve the development. Additionally, the community should create mechanisms, such as newsletters, web sites, or regular meetings, to inform residents and other stakeholders of progress on the project and opportunities for input and, wherever possible, demystify the complexities of development.

Attracting and selecting high-quality developers
High-quality development requires high-quality developers. Advisors should have the capacity to conduct a thoughtful and thorough process for the solicitation of proposals and qualifications from developers that intend to build in a manner consistent with the values and objectives established by a community master plan. Advisors must possess a fundamental understanding of what the community wants and be able to ask the right questions to clearly assess a developer's capacity to deliver on those wishes.

Insuring that development proposals meet the expectations of the community
Advisors should have the capacity to effectively and efficiently review pending development proposals to insure that they meet the values and objectives established by a community master plan.

Establishing predictability but maximizing flexibility
Given the scale of investment that real estate development requires, developers and investors place great value on predictability. Surprise changes, whether brought on by the market, shifting political winds, or an unwieldy municipal entitlement process, more often than not lead to losses that can jeopardize the successful completion of a development project. The creation of a thoughtful, comprehensive master plan with clear and straightforward regulations will create predictability for both developers and the community. At the same time, it is critical that plans, phasing strategies, and regulations are not so rigid that they do not allow the adjustments required to take advantage of shifting markets and economies. Advisors can help create and manage an entitlement and project review process that balances market-driven developer needs against community desires both to reduce surprises and to make development standards flexible enough to accommodate market changes.

Municipalities should carefully consider when to conduct a master planning process. Given the high stakes of development and the importance for communities to have a vision in place for the future of their towns and neighborhoods, master planning is most effective when conducted before developers are solicited. This offers communities the opportunity to generate a clear vision for their future, free of the influences that the singular interests of a specific developer might incur. While it is in the interest of municipalities to create plans that are financially and economically viable to encourage development, an independent planning process can ensure that the voice of the community is expressed in a clear and unadulterated manner. Communities that undertake this effort position themselves well by providing the development industry with predictable and well-supported opportunities for future development.

Downtown Hartford, CT

CHAPTER V

IMPLEMENTATION AND NEXT STEPS

REGIONAL AND STATE LEVEL COLLABORATION

Planning efforts are most effective when conducted and implemented from the ground up and from the top down. This chapter discusses how to extend the momentum towards sustainability and smart growth that has begun at the state and regional level. Leadership is required at more than just one state office or one regional council of governments. Opportunities exist across the spectrum for regional and state collaboration to create a more productive and supportive climate in which local action can succeed.

Successful smart growth implementation requires excellence and attention to detail at every scale of the built environment, from the manner in which a sidewalk or street lamp is designed, to the layout and management of a regional rail network. It is critical that state and regional planning agencies are proactively involved with local municipalities to form effective partnerships and develop strategies for smart growth implementation.

The capacity of local governments to implement best practices and processes requires state and regional support and enforcement. Leadership by state and regional agencies can create a fertile context to achieve meaningful change, particularly when consistent smart growth principles and priorities are reflected in funding and programmatic initiatives. To this end, the following strategies are offered as possible next steps for both the state and the region. All would contribute to a better regulatory environment for Connecticut communities to achieve more environmentally, socially, and economically sustainable development.

REGIONAL ACTION (CRCOG)

Expand Technical Assistance Efforts

Much can be done to replicate the success and momentum created by CRCOG's "Together We Grow Better Workshop" and it associated technical assistance efforts. While the actions that follow are targeted to CRCOG, they could also be replicated by other COGs through the state and region. Additional technical assistance efforts could include:

- Develop follow-on workshops to apply smart growth guidelines to other communities in the region, using on-site technical assistance and/or a workshop format to evaluate and conceptually plan for other proposed sites.
- Support the development of model codes based on smart growth guidelines for endorsement by CRCOG (or other regional or state) authorities, and/or provide targeted assistance to localities seeking to codify guidelines.
- Share smart growth guidelines and lessons learned from the process of developing them with other metropolitan planning organizations (MPOs) and regional planning organizations and with other organizations in the state, including the Connecticut Chapter of the American Planning Association and the Home Builders Association of Connecticut.

Realign organizational structure to emphasize role of sustainability

Sustainability, smart growth, and green building have, through this process, clearly emerged as critical issues of concern for CRCOG. Staff and stakeholders of CRCOG recognize that these concepts must be woven throughout all future growth and development if Connecticut is indeed to "grow better." Organizational changes can help to institutionalize the importance of those issues, and provide the opportunity to reach out to and engage with other stakeholders, as well. Such efforts could include:

- Establish a CRCOG Sustainable Communities Initiative that would establish sustainable communities goals, establish a Capitol Region Committee on Sustainability, and identify opportunities for integrating activities to support sustainable communities in the region.
- Advance state-wide discussion of regional planning, including partnering with OPM, CHFA, ConnDOT, DEP, and DECD and federal agencies (U.S. EPA, U.S. HUD, and U.S. DOT) to develop a Sustainable Communities Partnership to facilitate planning at the state level.

STATE LEVEL

The conventional approach to development is due in large part to the single-focus administration of federal and state funds, which complicate community efforts to mix housing development with transit planning, pedestrian amenities with environmental protection, and the like. Yet creating better connections between and across state agencies offers the possibility not only to use public dollars more efficiently, but also to target them to visible, measurable projects that demonstrate the benefits of a more sustainable approach to growth and development. Such efforts could include:

Enhance cross-agency work

- Create an interagency smart growth cabinet to establish integrated planning and policy strategies. The cabinet would include representatives from all governmental agencies that have a stake in land use and development, including but not limited to the Connecticut Housing Finance Authority and the Departments of Transportation, Environmental Protection, and Agriculture.
- Establish a Transit District program that encourages cities to develop compact, mixed-use development around existing and planned transit stops. The program would have interagency policy integration via the smart growth cabinet. For example, potential Low Income Housing Tax Credits

(LIHTC), HOMEConnecticut, or brownfield development remediation funding could be prioritized for developments within approved transit districts.

Strengthen efforts with Individual agencies

In addition to the benefits that are possible by closer collaboration among state agencies, a number of benefits can be achieved by incremental change within each agency as well.

- Office of Policy and Management (OPM):
  - Continue to fund the HOMEConnecticut program and adopt the Smart Growth Guidelines for Sustainable Design and Development as recommended practice for use of HOMEConnecticut funds.
  - Develop technical assistance resources to help localities understand, implement, and (if appropriate) codify guidelines to shape smart growth development decisions.
  - Explore smart growth guidelines to inform other state funding resources (e.g., for infrastructure repair/upgrade or transportation), and issue guidance or statement of recommended practice accordingly.
- Connecticut Housing Finance Authority (CHFA) – Evaluate how Low Income Housing Tax Credit (LIHTC) Qualified Allocation Plan supports the development of affordable housing in compact, mixed-income, mixed-use communities connected to transit.
- Connecticut Department of Transportation (ConnDOT) – Engage CRCOG in a discussion about regional partnerships and how the smart growth guidelines could inform state investments in transportation infrastructure and transit service to create sustainable communities.
- Connecticut Department of Environmental Protection (DEP) – Engage CRCOG in a discussion about regional partnerships and how the guidelines could inform state investments in land conservation strategies, brownfields, and sewer and water infrastructure to create sustainable communities.
- Department of Economic and Community Development (DECD) – Engage CRCOG in a discussion about regional partnerships and how the guidelines could inform state investments to create sustainable communities and revitalize existing downtowns, main streets, and neighborhoods.

CONCLUSION

The communities of the Connecticut Capitol Region and the nation at large stand at a crossroads. One path embraces the continued spread of conventional, automobile-dependent development, suggesting a future of rapid natural resource consumption, global climate change, and a population ill-equipped to respond to changing demographics or to manage the inevitable rising energy costs.

The other path embraces a sustainable future where environmental needs, as well as the housing, working, and living needs of people, are embraced as complementary and mutually supportive. By seeking to institutionalize the planning and development concepts and make real the visions of the four communities described in this report, communities can better support the kind of compact, mixed-income, environmentally sound developments that take a more sustainable approach to growth. This approach would preserve both natural resources and the beauty of the remaining natural landscape, foster more economically and environmentally resilient communities, and finally make housing more affordable, healthier, and accessible for all Connecticut residents.

APPENDIX A
EPA'S SMART GROWTH IMPLEMENTATION ASSISTANCE (SGIA) PROGRAM

Communities around the country want to foster economic growth, protect environmental resources, and plan for development. In many cases they need additional tools, resources or information to achieve these goals. In response to this need, the Environmental Protection Agency's Development, Community, and Environment Division (DCED) launched the Smart Growth Implementation Assistance Program in 2005 to provide technical assistance through contractor services to selected communities. EPA assembles teams of specialized consultants, bringing together expertise that meets a particular community's needs. While working with community participants to understand their aspirations for development, the teams bring experience from working in other parts of the country to provide best practices for consideration by the assisted community. The goal of the program is to help participating communities attain their goals, while also producing a resource (such as a report or a set of guidelines) that can be useful to a broad range of communities facing similar challenges.

The Smart Growth Implementation Assistance Program is designed to help communities achieve growth that supports economic, community, and environmental goals. People in communities around the country are frustrated by development that gives them no choice about driving long distances between where they work, live and shop; that requires costly public expenditures to extend sewers, roads and public services to support new development; that uses up natural areas and farmland for development while land and buildings lie empty in already developed areas; and that makes it difficult for working people to rent or buy a home because of development that focuses only on one or two costly housing types. Smart growth strategies create new neighborhoods and maintain existing ones that are attractive, convenient, safe, and healthy. They foster design that encourages social, civic, and physical activity. They protect the environment while stimulating economic growth. Most of all, they create more choices for residents, workers, visitors, children, families, single people, and older adults—choices in where to live, how to get around, and how to interact with the people around them. When communities undertake this kind of planning, they preserve the best of their past while creating a bright future for generations to come.

More information about the program, including information on how to apply and links to reports from past SGIA recipients, can be found at http://www.epa.gov/smartgrowth/sgia.htm.

APPENDIX B
ZONING ANALYSIS

Zoning is the most effective tool that communities have to guide and manage land development. While zoning has its limitations in the regulatory context, it is the best tool available for controlling the use, density, and intensity of land. Zoning can even provide incentives to encourage sustainable development practices such as those illustrated in the three site design concepts for the towns of Bloomfield, Manchester, and South Windsor.

This analysis examines the existing zoning regulations in each of these three Connecticut towns for consistency with the proposed site visions presented in Chapter 5. The consistency analysis considers the permitted use of land, the permitted density, bulk and area requirements, parking requirements, and standards for the design of sites and structures. Finally, options are provided to incorporate standards into the zoning regulations that promote sustainable development consistent with the design concepts proposed for each of the three sites. The options also suggest how to incorporate the design guidelines described in the Smart Growth Guidelines for Sustainable Design and Development, providing a mix of required standards and incentives for optimum green design.

SITE 1 – ROCKWELL NEIGHBORHOOD CENTER, BLOOMFIELD, CT

A. EXISTING ZONING

The town of Bloomfield's rewrite of its zoning ordinance is in the final draft stage. This analysis uses the draft updated ordinance. As indicated on the zoning map, the majority of the Rockwell Neighborhood Center site is zoned R-10 Residential. There is also a small portion of the site zoned GWD Blue Hills Gateway District, which encompasses the library and some proposed twin housing development.

1. Permitted Uses

The R-10 Residential zoning district permits single-family dwelling units, two-family dwelling units, and open space. Two-family dwelling units must have a minimum lot size of 15,000 square feet. Accessory apartments are allowed by special permit but must be occupied by elderly persons related to the primary resident and must be attached to the primary dwelling.

The ordinance does not specifically list recreation facilities or community centers as permitted or special permit uses in the R-10 district but does allow "municipal lands and facilities of the Town of Bloomfield." Presumably this type of use includes recreation facilities and the community center.

The GWD district, which encompasses the existing library and some of the proposed twin housing development, allows mostly small-scale commercial and office development by site plan approval. Multifamily dwelling units are permitted by special permit. The district does not specifically list single-family dwellings as a permitted or special permit use but does require residential densities to be no more than four dwelling units per acre, which is too low to accommodate the twin units proposed in the concept site design.

2. Bulk and Area Requirements

The R-10 district requires a minimum lot size of 10,000 square feet, a minimum lot width of 100 feet, and a maximum building coverage of 20 percent. Yard requirements are 25 feet in the front, 10 feet on the side, and 25 feet in the rear. These area and bulk requirements preclude development of the attached and semi-detached dwelling units proposed for this site. In addition, the maximum height is 35 feet with a two-story maximum, which prohibits development of the proposed three-story townhouses. The GWD district front and side yard requirements and maximum building coverage of 25 percent would prohibit the proposed residential development program as well.

3. Parking Requirements

The parking requirement for single-family dwellings is two spaces per unit. The proposed development program can be accommodated under this requirement. The zoning ordinance does not restrict the use of alleys for parking access for townhouses. There are no specific requirements for recreation facilities or community centers.

4. Design Standards

The updated ordinance includes design guidelines that apply to proposed development in any business or special zone and to principal uses allowed by special permit in any residential zone. The design guidelines include standards for building orientation, building massing, context with adjoining properties, scale, landscaping, parking design, architectural features, façade treatment, building materials, screening of mechanical equipment, signage, and lighting. In comparison with the Smart Growth Guidelines for Sustainable Design and Development, they are fairly general and do not address key features of sustainable design, such as transit and bicycle amenities, streetscaping, and building orientation for solar access.

B. Potential Zoning Changes to Promote Sustainable Design

Neither the current zoning ordinance nor the updated draft zoning ordinance for the town of Bloomfield include a residential district that allows residential densities of higher than around four units per acre by right. The R-10 zoning district is the highest density residential district in the town, and it requires a 10,000 square foot minimum lot size and a side yard requirement that precludes attached units.

A new overlay zone for the Rockwell neighborhood site could allow increased density and flexibility in design while applying additional design standards and incentives to promote sustainable development practices like the proposed Rockwell neighborhood design. Under the new overlay district, the following features could be permitted by site plan approval:

- Semi-detached and attached dwelling units;
- A minimum lot size of 2,000 to 3,000 square feet;
- Higher density residential development up to 10 units per acre, with an additional five units per acre permitted with green design features listed below;
- A maximum height of three stories;
- Detached accessory dwelling units; and
- Recreation fields, courts, and community centers.

ZONING ANALYSIS

To receive site plan approval, the minimum required design features could be:

- Designed as a planned unit development with a minimum parcel size of three acres;
- Parking and loading areas on the side or at the rear of dwellings or accessed by rear alleys;
- Bicycle racks at recreation facilities and transit stops;
- Transit stops on transit corridors provided in appropriate locations where none exist;
- 8-foot minimum sidewalk width on both sides of the street;
- Crosswalks at all intersections;
- Street furniture (e.g., benches, street lamps);
- A minimum preserved tree canopy of 20 percent;
- A minimum contiguous open space requirement of 30 percent;
- New buildings and street blocks oriented along the east-west axis to take advantage of natural solar heating and cooling;
- Streets and sidewalks connected on the interior of the development and with the existing road network; and
- Buildings oriented toward the street and sidewalk with front facades and entrances facing the sidewalk or pedestrian space.

To promote sustainable green design, a density bonus of five units per acre could be allowed in exchange for provision of:

1. A combination of three of the following elements:
   - 20 percent of the housing units affordable to residents earning 80 percent of the area median income or less;
   - All new residential buildings designed as ENERGY STAR Qualified Dwelling Units and installed with water-efficient fixtures;
   - Stormwater management best practices (bioswales, pervious pavement, rain gardens, integration of detention capacity with buffers and open space); or
   - Green roofs on all new buildings.

Or

2. Installation of non-polluting, renewable energy generation technologies such as solar, wind, or geothermal capacity in all new buildings.

SITE 2 – MANCHESTER PARKADE SITE

A. Existing Zoning

The entire Manchester Parkade site is zoned GB General Business, which is described as a commercial trade area for general public shopping convenience. The Parkade site is also in the Design Overlay Zone, which establishes design standards for previously developed areas.

1. Permitted Uses

The GB zoning district allows retail, restaurants, taverns, office, hotel, municipal parking lots, theaters, and recreation facilities and clubs by right. Warehousing, light industrial, self storage, drive-through restaurants, automobile sales, gas stations, schools, and places of worship are permitted by special exception. Multifamily historic mill conversions are also permitted by special exception. All other residential uses are specifically prohibited from the GB district.

2. Bulk and Area Requirements

The GB district allows a maximum height of 40 feet and a maximum of three stories. Accessory structures have a maximum height of 18 feet. The minimum front yard is 25 feet, and there is an 8-foot buffer requirement from adjoining residential districts. Many aspects of the proposed design for the Manchester Parkade site would not comply with the height limitations and front yard requirement, although the Design Overlay Zone allows a waiver of the front yard requirement.

3. Parking Requirements

Parking requirements are specified for each use and do not consider shared parking, public parking, transit credits, or on-street parking. The parking requirements also do not address parking as part of an overall mixed-use plan, except that it does allow an overall requirement for shopping centers. In general, the parking requirements could be more flexible to accommodate the proposed Parkade site design.

4. Design Standards

The Manchester Parkade site is in the Design Overlay Zone, which establishes design standards in previously developed areas to ensure architectural and historical compatibility with the area's distinctive character. The design standards include the following elements:

- Standards for rehabilitated or altered structures;
- Building heights compatible with existing adjacent buildings;
- Relationship of building width to height compatible with adjacent buildings;
- Similar form and ornamental detail to adjacent buildings;
- Porches and other projections; and
- Exterior façade materials compatible with adjacent buildings.

In comparison with the Smart Growth Guidelines for Sustainable Design and Development, these standards are fairly general and do not address the key features of sustainable design, such as transit and bicycle amenities, streetscaping, and building orientation for solar access.

B. Potential Zoning Changes to Promote Sustainable Design

The current zoning district generally does not allow the mix of uses and densities proposed for the Manchester Parkade site design. In addition, the Design Overlay District is limited to general architectural and façade treatments that do not capture the design features highlighted in the Smart Growth Guidelines for Sustainable Design and Development. To achieve the best site and building design and create incentives for green building techniques consistent with the proposed development program and sustainable design guidelines, an effective approach could be to create a new overlay zone. The new overlay zone would replace the existing Design Overlay Zone, since it does not make sense to add an overlay on top of an existing overlay. The new zone could allow the following features by site plan approval:

- Mixed residential and commercial uses with no limit on the number or type of residential units;
- Higher density residential development up to 20 units per acre, with additional five units per acre permitted with green design features
- Building heights up to four stories (50 feet), and an additional two stories permitted with incentives (up to 70 feet);
- Flexibility in setback requirements;
- Shared parking;
- Parking credits for on-street parking and transit; and
- Outdoor dining.

To receive site plan approval, the minimum required design features could be:

- Designed as a planned unit development with a minimum parcel size of 10 acres;
- A mix of residential and commercial uses to promote walkability;
- Parking and loading areas on the side or at the rear of buildings or between buildings and screened from public streets;
- Pedestrian and bicyclist amenities (e.g., bike racks, street lamps, water fountains, benches) near building entrances;
- Transit stops on transit corridors provided in appropriate locations where none exist;
- 8-foot minimum sidewalk width on both sides of the street;
- Street curb bulb-outs at crosswalks;
- Signalized crosswalks at all intersections;
- Street furniture (e.g., benches, street lamps);
- A minimum preserved tree canopy of 20 percent;
- A minimum contiguous open space requirement of 30 percent;
- New buildings and street blocks oriented along the east-west axis to take advantage of natural solar heating and cooling;
- Streets and sidewalks connected on the interior of the development and with the existing road network;
- Buildings oriented toward the street and sidewalk with front facades and entrances facing the sidewalk or pedestrian space, but not facing a parking lot; and
- Installation of litter receptacles at strategic locations in the development.

To promote sustainable green design, a density bonus of five units per acre and a height bonus of two stories (up to six stories and 70 feet) could be allowed in exchange for provision of:

1. A combination of three of the following elements:

- 20 percent of the housing units affordable to residents earning 80 percent of the area median income or less;
- All new residential buildings designed as Energy Star Qualified Dwelling Units and installed with water-efficient fixtures;
- All new non-residential buildings designed to comply with ANSI/ASHRAE/IESNA industry standards and installed with water-efficient fixtures;
- Stormwater management best practices (e.g., bioswales, pervious pavement, rain gardens, integration of detention capacity with buffers and open space); or
- Green roofs on all new buildings.

Or

2. Installation of non-polluting, renewable energy generation technologies such as solar, wind, or geothermal capacity in all new buildings.

SITE 3 – SOUTH WINDSOR TOWN CENTER

A. Existing Zoning

The entire South Windsor Town Center Site is currently zoned RC Restricted Commercial, which includes pedestrian-scaled neighborhood commercial uses mixed with a limited range of residential uses.

1. Permitted Uses

The RC district requires either a special exception or site plan approval for any development. The following uses are permitted by site plan approval:

- Single-family dwelling occupied by owner in conjunction with a permitted commercial use;
- Liquor store;
- Office;
- Retail;
- Personal service shops;
- Hotel;
- Public garage; and
- Riding stables.

The following uses are permitted by special exception:

- Assisted living facilities;
- Senior residence;
- Municipal facilities; and
- Day care facilities.

Mobile food vendors are permitted by zoning permit approval.

All of the commercial and office zoning districts in South Windsor, including the RC district, allow mixed-use development by special exception. Dwelling units must be located above commercial uses, and only one level of dwelling units is allowed (each dwelling unit may have multiple stories, but a separate unit may not be located above another unit.) The RC allows a maximum of 25 dwelling units total. A mix of unit sizes is required; however, three-bedroom units are not permitted.

2. Bulk and Area Requirements

The RC district requires a minimum lot size of 30,000 square feet, minimum lot frontage of 150 feet, and a 65-foot minimum front yard. Side and rear yard requirements may be waived along common boundaries of consolidated lots. The maximum height is 45 feet and three stories, the maximum impervious coverage is 60 percent, and the maximum lot coverage is 25 percent. In general, the proposed town center development is consistent with the bulk and area requirements except for the maximum height restrictions and possibly the maximum building coverage requirement.

3. Parking Requirements

Parking requirements are generally prescribed for each individual use. Residential uses are required to have two spaces per unit, and assisted living facilities must have one space per two dwelling units. Shared parking is permitted by approval by the Planning Commission in mixed-use developments.

4. Design Standards

Mixed-use development in commercial/office zoning districts is subject to the following design criteria:

- Pedestrian circulation must be designed to encourage use by residents;
- Appropriate street furniture (e.g., benches, planters) should be provided; and
- Adequate lighting in pedestrian and parking areas is required.

All development in the RC zone is subject to review by the Architectural and Design Review Committee and must comply with the following design criteria:

- Setbacks and yards in excess of zoning restrictions are encouraged;
- Parking areas shall be treated with decorative elements, building wall extensions, and plantings to screen from public streets;
- Height and scale of building shall be compatible with adjoining buildings;
- New utilities shall be underground;
- Landscape transition to adjoining properties shall be provided;
- Harmonious massing and texture is required;

- Existing vegetation and topographic features shall be preserved;
- New plantings shall have uniform design;
- Materials shall be compatible with surroundings and durable;
- Mechanical equipment shall be screened;
- Monotony of design shall be avoided; and
- Signs shall have good scale and proportion and shall be designed as an integral architectural element of the building.

The architectural and design review process does have design standards that address site design in addition to building design, but they do not fully address the key neighborhood design features for sustainable development, such as building orientation for solar access, bicycle amenities, and transit access.

B. Potential Zoning Changes to Promote Green Design

The RC zoning district seems to generally allow the type of development proposed in the town center neighborhood design with a few exceptions. Primarily, the requirements do not allow much flexibility in residential density and building height. A modification to the existing RC district would create less confusion than creating a new overlay district. In order to encourage development such as the proposed town center, the RC district could be modified with a new "mixed-use incentive" section that increases flexibility in design in exchange for enhanced features such as those described in the Smart Growth Guidelines for Sustainable Design and Development. Under the mixed-use incentive standards, the following features could be permitted by site plan approval:

- Mixed residential and commercial uses with no limit on the number or type of residential units;
- Higher density residential development up to 15 units per acre, with an additional five units per acre permitted with green design;
- Building heights up to four stories (50 feet), with an additional two stories permitted with incentives (up to 70 feet);
- Flexibility in setback requirements;
- Shared parking;
- Parking credits for on-street parking and transit; and
- Outdoor dining.

To receive site plan approval, the minimum required design features could be:

- Designed as a planned unit development with a minimum parcel size of 10 acres;
- A required mix of residential and commercial uses to promote walkability;
- Parking and loading areas located to the side or rear of buildings or between buildings and screened from public streets;
- Amenities such as bike racks and walking amenities (water fountains, benches, street lamps, etc.) near building entrances;
- Transit stops on transit corridors provided in appropriate locations where none exist;

- 8 feet minimum sidewalk widths on both sides of the street;
- Provide street curb bulb-outs for pedestrians at crosswalks.
- Signalized crosswalks provided at all intersections;
- A minimum preserved tree canopy of 20 percent;
- A minimum contiguous open space requirement of 30 percent;
- New buildings and street blocks oriented along the east-west axis to take advantage of natural solar heating and cooling.
- Streets and sidewalks connected on the interior of the development and with the existing road network.
- Buildings oriented toward the street and sidewalk with front facades and entrances facing the sidewalk or pedestrian space, but not facing a parking lot;
- Installation of litter receptacles at strategic locations in the development.

To promote sustainable green design, a density bonus of five units per acre and a height bonus of two stories (up to six stories and 70 feet) could be allowed in exchange for provision of:

1. A combination of three of the following elements:
   - 20 percent of the housing units affordable to residents earning 80 percent of the area median income or less;
   - All new residential buildings designed as ENERGY STAR Qualified Dwelling Units and installed with water-efficient fixtures;
   - All new non-residential buildings designed to comply with ANSI/ASHRAE/IESNA standards and installed with water-efficient fixtures;
   - Stormwater management best practices (e.g., bioswales, pervious pavement, rain gardens, integration of detention capacity with buffers and open space); or
   - Green roofs on all new buildings.

Or

2. Installation of non-polluting, renewable energy generation technologies such as solar, wind, or geothermal capacity in all new buildings.

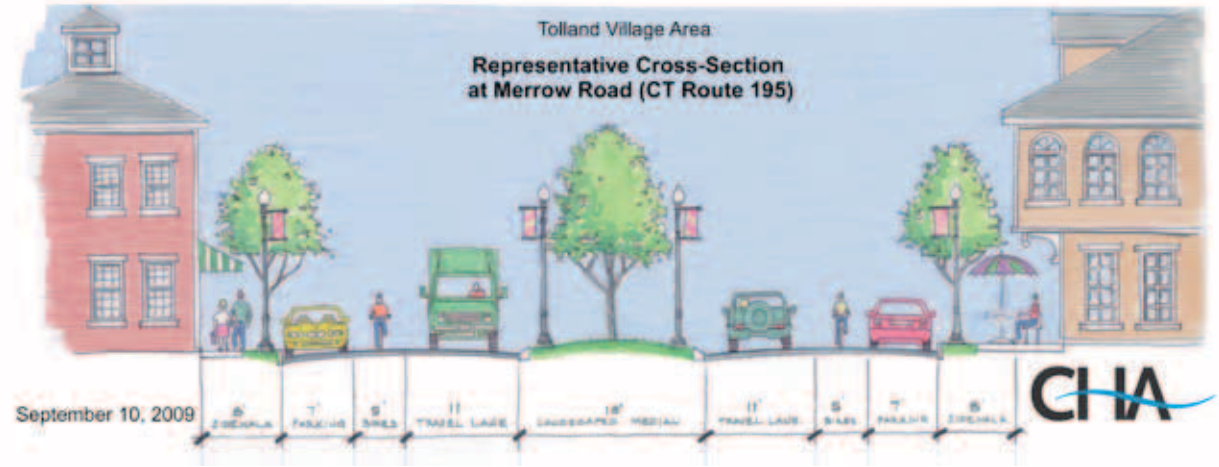
APPENDIX C
TOLLAND VILLAGE AREA

The Tolland Village Area planning study was supported by a HOME CT Technical Assistance Grant. Conceptual site plans, precedent photographs, and depictive drawings generated during that planning effort, and presented at the "Together We Can Grow Better Workshop" are included in this appendix. The following development vision statement is an excerpt from zoning language drafted during the planning effort:

The Tolland Village Area designated on the Zoning Map is an area of special interest to note an innovative development plan that is being developed that will create a gateway to Tolland's historic town center. The development will consist of architecture and land use patterns that are based on a traditional New England village. Accordingly, the development will complement existing land uses surrounding the Tolland Green and Historic District and adjacent residential development. It will also provide for a mix of complementary land uses arranged in compact and attractive districts in order to optimize developability and create walkable neighborhoods while preserving environmentally sensitive areas and protecting natural resources.

The development vision will echo the principles of Smart Growth and New Urbanism, tools that guide the form of the built environment in order to create and protect development patterns that are compact, walkable and mixed use and to ensure that development enhances the economic base of town and the quality of life of residents. The vision for the Tolland Village Area

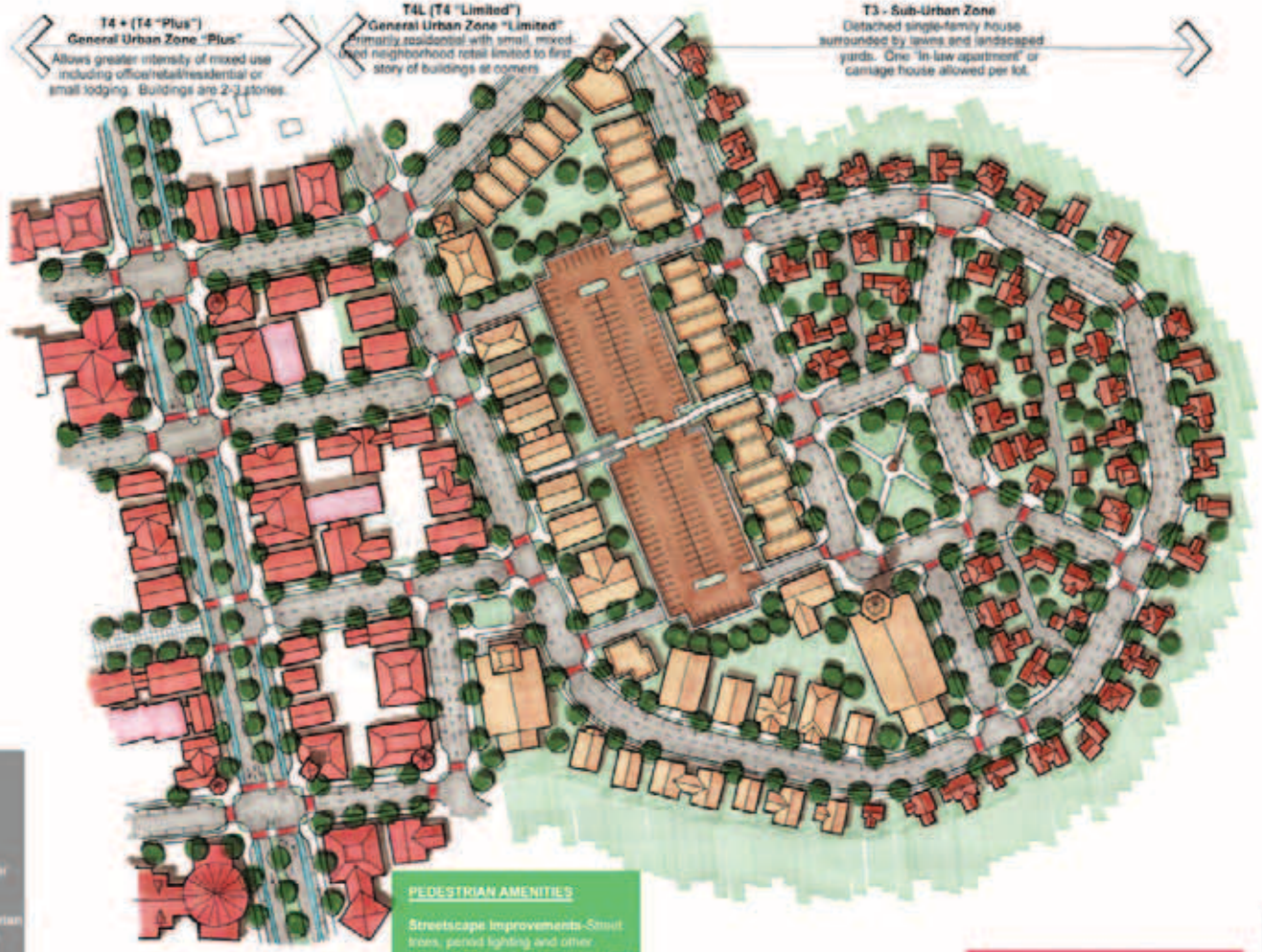
- Preserve the character in areas near the Historic District.
- Plan for more intense development in the "gateway area" adjacent to Interstate 84.
- Provide for transitional use and density between these areas.
- Establish and maintain buffers to adjacent residential development.
- Protect important natural resources.
- Provide guidelines so that development is consistent with New England village architecture.
- Provide safe streets for motorists, pedestrians and bicyclists.
- Incorporate park-like spaces and/or greenways.
- Enhance the gateway to the National Historic Register Tolland Green.
- Obtain broad public support.
- Protect important natural resources (especially surface and groundwater).



T4 + (T4 "Plus")
General Urban Zone "Plus"
Allows greater intensity of mixed use including office/retail/residential or small lodging. Buildings are 2-3 stories.

T4L (T4 "Limited")
General Urban Zone "Limited"
Primarily residential with small, mixed-used neighborhood retail limited to first story of buildings at corners

T3 - Sub-Urban Zone
Detached single-family house surrounded by lawns and landscaped yards. One "In-law apartment" or carriage house allowed per lot.



ARCHITECTURE & MIX OF USES

Traditional Architecture: buildings designed with a human scale and with massing, form and materials that echo Toland's historic vernacular

Street Wall: Densely spaced buildings to be 2-3 stories and close to the edge of the sidewalk to define the street

Walkable Commercial Center with stores and shops on ground level, professional offices & apartments above

New Housing Types: T-4L zone to allow a broad range of housing types such as townhomes, condos, and small apartment buildings

Gateway Building: Buildings at prominent corners should have distinctive vertical elements

Village Anchor: possible site for civic building, church or school

"COMPLETE STREETS"

Tree-lined Median to provide boulevard effect, calm traffic and provide pedestrian refuge island

Narrow Travel Lanes provide shorter crosswalks and slows traffic

Intersections designed for pedestrian safety include curb extensions, high visibility crosswalks, small curb radii, and lighting

Modern Traffic Roundabouts improve traffic flow and safety and create attractive gateways

Consolidate Driveways and prohibit drive-through lanes to improve walkability as well as pedestrian and bicycle safety

PEDESTRIAN AMENITIES

Streetscape Improvements-Street trees, period lighting and other pedestrian amenities to provide shade benches, visual interest and vertical enclosure

Village Square- venue for civic gatherings, ceremonies, outdoor markets or festivals

Courtyards & Sidewalk Cafes for social gatherings, outdoor dining, and venues for murals, sculptures, and fountains

PARKING

On-Street Parking buffers pedestrians and calms traffic

Parking Structures with liner buildings to hide garages from streets

Small, Off-street Parking lots to be screened and located to the rear of buildings

ALTERNATIVE TRANSPORTATION

Bus Transit: Provide bus pull-outs and shelters, provide park-n-ride lot(s)

Multi-Use Trails to connect village with Green Street & Crandall Park

Bicycle Lanes: Go environmentally friendly. Provide bike lanes on connector streets to Green Street

ENVIRONMENTAL IMPROVEMENTS

Protected Wetlands, Stream & Wildlife Corridors

Protected Open Space and woodland buffers to adjacent neighborhoods

Reduced Pavement: Compact mixed-use development requires only 50% of usual parking which greatly reduces negative impacts due to stormwater runoff and and pavement heat sink effect

Stormwater be treated on-site through underground, state-of-the-art water quality improvement systems

WALKABILITY

New Streets create short, interconnected blocks to improve walkability, improve natural surveillance, and facilitate traffic flow

Provide street and sidewalk connections to adjoining residential neighborhoods to improve walkability and natural surveillance

Alys hide garages, utilities & garbage collection & improve walkability by removing driveways from main streets

Issue Date: 09-10-09
Project No.: 19693
Scale: As Noted

Toland Village Area
Design Strategies Plan

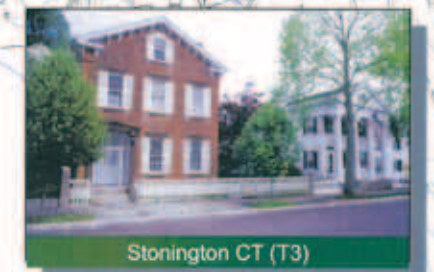

Stonington CT (T3)


Stonington CT (T3)


Stonington CT (T3)

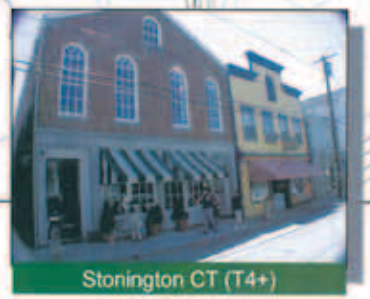

Stonington CT (T3)


Stonington CT (T3)


Stonington CT (T3)


Stonington CT (T3)


Stonington CT (T4L)


Stonington CT (T4+)


Stonington CT (T4+)


Stonington CT (T4+)

LEGEND

- Building Commercial Buildings
- Open Space Buffer
- Proposed Public Square
- Proposed Street
- Future Street
- Proposed Parking Structure
- Proposed Commercial Building with Parking Beneath
- T3 (Detached, Single Family Homes)
- T4L (Limited Mixed-Use, Primarily Residential)
- T4+ (Mixed-Use Intensity, Mixed Use)

Tolland Gateway & South Green Area Study

Strategic Plan 2

Issue Date: 05-11-09
Project No: 19693
Scale: As Noted

APPENDIX D
SITE BRIEFING BOOKS

APPENDIX E
SMART GROWTH GUIDELINES FOR SUSTAINABLE DESIGN & DEVELOPMENT