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Combating Suburban Sprawl in the Capital District: An Outline for Regional Sustainable Development

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Combating Suburban Sprawl in the Capital District: An Outline for Regional Sustainable Development

By

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Submitted in partial fulfillment of the requirements for Honors in The Department of Environmental Science, Policy and Engineering

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Abstract

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Urban centers in America have commonly been plagued by high rates of pollution, decaying infrastructure, and the overall image of being undesirable places to live. Beginning in the second half of the twentieth century, masses of people vacated the cities that they called home, for literally greener pastures, settling in outlying, low-density living areas that became known as the suburbs. Suburbanization has particularly impacted the land use pattern in the Capital District of New York State, as countless suburbs developed away from the region's urban centers of Albany, Schenectady and Troy.

Recently people have moved back into the Capital District's urban areas to work and live, however, the adverse suburban impact of sprawl remains firmly intact. To mitigate the impacts of sprawl, sustainable regional policy-making must be promoted. While every policymaker envisions the concepts of sustainability and smart growth differently, this study examines specific public policies that have both fostered sprawl and the policies that are geared towards reigning in the problem that has long saddled the Capital District. Policies promoting sustainability have already been implemented in areas like Portland, Oregon.

Ultimately, a regional urban sustainability outline will be developed for the Capital District. In crafting the plan, numerous variables will be taken into account:

political, cultural, economic, and social. It is imperative that cities and the communities that surround them are structured in a way that nourishes environmentally responsible behavior and overall quality of life.

TABLE OF CONTENTS

List of Maps	v
Introduction	7
A. The Downturn of Urban Areas	7
B. Signs of Progress	10
C. The Importance of Portland and Seattle as Models of Urban Sustainability	11
Literature Review	17
Chapter One: An Analysis of the Problem: Policies That Have Fostered Suburbanization and Sprawl	24
Chapter Two: Sustainable Policies Instituted in Other American Metropolitan Areas	41
A. Seattle and Portland, Oregon Revisited	45
B. Minneapolis-Saint Paul, Minnesota	53
C. New York City and New Rochelle, NY	54
Chapter Three: The Promise of Regionally Focused Policies	60
Chapter Four: Framework for Regional Sustainability in the Capital District	77
Chapter Five: Conclusion	86
References	90

LIST OF MAPS AND FIGURES

Map 1: Capital District Land Use Development in 1954 since 1945	34
Map 2: Capital District Land Use in 1964	35
Map 3: Capital District Land Use in 1974	36
Map 4: Capital District Land Use in 1984	37
Map 5: Capital District Land Use in 1994	38
Map 6: Capital District Land Use in 2006	39
Figure 1: Traffic Volumes and Mass Transit Ridership in New York City 1993-2009	56
Map 7: Status Quo Growth Trend	72
Map 8: Concentrated Growth Trend	73
Map 9: Trend Hyper-Growth	74
Map 10: Concentrated Hyper-Growth	75

INTRODUCTION

Climate change or as it is alternatively referred to as “global warming,” is the principal environmental problem of the twenty-first century and its progression is enhanced everyday by careless human activity. Humans contribute to climate change most substantially by their dependence on fossil fuels, which are used to accommodate ever-increasing energy demands. David Owen supports that notion, stating, “The most devastating damage that humans have done to the environment has arisen from the burning of fossil fuels...” (Owen 2009, 2). No other country emits carbon dioxide, a greenhouse gas, at a greater rate per capita than the United States, which is explicit evidence of an energy consumption problem. The United States could have avoided the unfortunate distinction of being the world’s preeminent energy consumer, if not for many flawed policies that had been implemented throughout the country which have ignored environmental concerns.

A. The Downturn of Urban Areas

Prior to the start of World War II, the foundation of America had been built upon urban centers, which were relatively well laid out. That practice, however, changed for the worse in the aftermath of the war. A mass exodus ensued, as once the war ended, a greater proportion of the American population experienced prosperity, which provided people the means to explore life outside of urban areas. Many people had reached the conclusion that urban areas were ultimately less desirable places to live, as they had been geared more towards economic development than civic spaces. Economic growth encouraged the physical growth of urban areas and as James

Howard Kunstler observed, “American cities flourished almost solely as centers for business, and they showed it” (Kunstler 1993, 33).

Since the U.S. rose to the status of an economic superpower following World War II, cities of all shapes and sizes became largely vacated by the high and middle social classes of America and were left to decay while being populated by the working-class and poor. Due to this outward growth trend, hundreds of cities have evolved into large, sprawling metropolitan areas. New York City, for example, experienced a period of decline where damning societal stigmas were developed, that pegged cities as an unpleasant place to live. Unfortunately, these societal developments had a profound negative impact on the environment, which until recently went largely unnoticed.

Departing from urban life was made increasingly possible by the automobile, which had become more affordable for families to purchase. As a direct reaction to the rise of the automobile and pressure from automobile manufacturers, upgrades were made to numerous roadways, culminating with the implementation of the Interstate Highway System in the 1956. The dependency on the automobile in America for transport has been incredibly shortsighted, as “the largest source of greenhouse gas emissions comes from vehicles and power plants” (Yaro and Kooris 2008, 29). Compounding this problem was irresponsible land use policy. A propensity for unchecked urban growth resulted, as low-density communities began to rapidly spread outside of cities in a pattern that became known eventually as “urban sprawl.” People began to disperse from the cities and residential developments began to spread onto undeveloped land in outlying areas as a result. These low-

density populations sprouted to create communities commonly known as “suburbs.” As masses of people continued to move outside of the urban centers, suburbanization increased significantly, as effective land use policy had not been implemented. Essentially, it became difficult to identify where an urban area terminated, as widespread growth engulfed cities for miles beyond its central or downtown area. Consequently, automobile travel multiplied alongside the number of power plants on-line to exacerbate the problems of suburban land use, as an even greater volume of pollutants and greenhouse gases were discharged into the atmosphere.

Unfortunately, societal beliefs reinforced the suburbanization movement over time and encouraged more people to inhabit such communities. People have commonly valued suburbs for the relative safety and overall quality of life that such communities provide. For example, there are larger plots of land, lower home costs, more open areas for recreation and generally better quality schools (Burchell et al. 2005, 126). Additionally, although the suburbs were ultimately found to be contributing to pollution, the areas offered high relative environmental quality as pollution levels were much lower than those in the city. For many people, however, pollution was an afterthought, as they simply wanted a departure from the “hustle and bustle” of life inside the cities.

Today, it can be argued that cities are capable of providing a similarly high quality of life as well, if policies promoting sustainable urban development are implemented. As Kent Portney stated, city governments, “...must come to realize that high rates of economic growth do not necessarily translate into making the city a desirable place to live” (Portney 2009, 228). Americans have long embraced the

suburban lifestyle and the amenities that a suburban community offers are difficult for people to ignore in deciding where to ultimately settle. Therefore, as Portney argued, the first step necessary in achieving sustainable urban areas is to recalibrate cities into attractive places to both live and work. City-initiated revitalization efforts would bring about growth, but with specific policies that place an emphasis on insightful planning, it could occur in a manner that is sustainable.

B. Signs of Progress

Today, there is evidence of progress, as cities throughout America have shown a desire to build for the future through smart planning initiatives that will hasten the revitalization of urban communities. Urban planners and government officials seem to have heeded the advice of Kent Portney to attempt the creation of desirable urban living communities. For example, New York City has implemented many sustainability initiatives in attempt to catalyze its ongoing revitalization efforts. As a result, New York City has seen influxes of people relocated from the suburbs over the past twenty years. While the ideal model of sustainable urban areas may exist in Europe, such a model would be inapplicable in the U.S. as the characteristics of American and European urban areas are fundamentally different. The fundamental difference exists quite simply: European cities are much older and were built compact without the influence of the automobile while with few exceptions, American cities were largely reconfigured around the aforementioned automobile, the use of which has exponentially increased over time.

C. The Importance of Portland and Seattle as Models of Urban Sustainability

While New York City, as the nation's largest city, is viewed as a benchmark for the progress of urban revitalization and subsequent repopulation, other urban areas have led the way with innovative and effective policy solutions to quell the spread of urban sprawl. A particular urban center in America, Portland, Oregon, has been committed to numerous sustainable policy initiatives ahead of its fellow American cities. Portland has a population of about 583,000 people per the 2010 Census data and can be classified as a mid-sized American city. The city of Portland has stood out due to the combination of "...high levels of civic participation..." as well as, "...the city's leadership in developing innovative programs reinforced by a system of city departments, agencies, commissions, citizen groups, and individuals" (Karlenzig 2008, 355). Within Portland, there exists an urban growth boundary, albeit controversial, that has been instituted since 1980 and places a limit on where density intensive development may occur. Additionally, a sound infrastructure has been implemented most notably through a light-rail system, which functions to connect the city with its regional suburbs and reduces the impact of automobiles.

Another iconic city in terms of its success with sustainable urban policy is Seattle, Washington. Portland and Seattle have each been spurred into progressive urban policies via high levels of citizen participation. The urban sustainability movement within Seattle began with a resident initiated non-profit organization known as, Sustainable Seattle Incorporated. Eventually, as the organization began to discuss its plans for initiating policy within Seattle, the city government became involved and an action plan was developed called, *Toward a Sustainable Seattle*. The

action plan was comprised of over thirty policies that focused particularly on land use issues.

In acknowledging the relative successes of sustainable urban initiatives in city centers such as Portland and Seattle, it is important to highlight the impact of such policies on a regional scale. Ultimately, Metropolitan Statistical Areas delineate urban areas and generally consist of two or three cities. Portland, for example is a part of the Portland, Vancouver, Washington, and Hillsboro Metropolitan Statistical Area. Regionally focused policies more accurately take into account the impact of suburbs and other outlying areas from which many people commute to and from into a city everyday. Additionally, a regional approach to sustainability initiatives allows for more flexibility in policy choices and if implemented properly, offers broad benefits to a larger geographic area, notably increased energy efficiency. Most importantly, the policies can have a direct impact on improving urban centers in United States, which have long been neglected.

Thus, the first problem that must be tackled is the low-density growth that has developed outside of cities, which has fostered the spread of suburban sprawl. Since suburban areas are not going to disappear from the American landscape anytime soon, the best approach is to reduce the impacts of commuting between suburban areas and the urban centers, while imposing restrictions on the growth of further suburbs. As Michael Breheny points out, since people and businesses have largely chosen to locate in decentralized, suburban environments, a shift towards policies which promoted centralization would have great social and economic “consequences” as the dynamics of towns and cities would be transformed. Thus he stated, “In order

for these consequences to be acceptable, containment policies will need to be demonstrably successful in reducing transport energy consumption” (Breheny 1995, 99).

A light-rail system offers a great deal of potential in connecting regional suburbs to urban centers while decreasing transport energy consumption. Particularly, a light-rail system would function well carrying passengers along already existing Interstate Highway routes. A light-rail initiative that effectively functioned alongside highways would greatly reduce automobile traffic and overall dependence on the automobile. Additionally, a high-speed rail could be connected to the light rail system in order to inter-connect to more distant urban areas outside of the metropolitan region. Such an extensive rail network would effectively reduce greenhouse gas emissions such as carbon dioxide, since a large volume of passengers could be handled that otherwise would be traveling in single automobiles. Additionally, traffic congestion during peak transit times would be greatly reduced which would increase quality of life within cities.

Another policy that could productively inhibit the growth of suburban areas as well as reduce greenhouse gas emissions would be to charge a commuter fee for parking. Such a proposal would raise the economic costs to commute in an automobile and encourage people to make use of mass transit commuting options. Commuting automobile traffic would be further discouraged by a reduction in the availability of urban parking spaces. People would have no choice but to utilize alternative transit options, for automobile parking would be nearly impossible. Perhaps, an even more desirable outcome would be a trend for people to move from

the suburbs and into the urban centers where they work, to avoid a time and money consuming commute altogether.

Under such a scenario, where people would work as well as live in the urban center, the areas could feasibly evolve into “urban villages,” where the commercial and residential sects of a city are immersed into one. In essence, all of the resources one uses and needs would be in a centralized area. There would be no urgent need for the use of an automobile, as essential needs such as a supermarket would be located within a short distance either accessible via walking or mass transit. In theory, one would work, shop, and enjoy leisure and recreation within close proximity to their living space. There would also be open, public space where people can interact with one another, which is central for a feeling of a community similarly found in suburban neighborhoods. Ultimately, people would gain more than they lost in re-urbanizing their lifestyles, saving on transportation costs and benefitting from a cleaner environment.

“Green” or sustainable urban areas are best defined as places that “...strategically embrace development of renewable energy, less-polluting fuels, widely available local food, efficient public transit, innovative treatment of wastes, polluted land and water, walkability, sufficient affordable housing, and green buildings” (Karlenzig 2008, 346). Initiatives to tackle global climate change in American urban areas are vital to curbing the immense amounts of energy that the nation consistently consumes. Policymakers should look no further than the evidence of New York City, the largest urban center in the nation, which is solely responsible for State of New York to hold the distinction of having the lowest energy use per

capita in the country. Although a considerable amount of energy is still consumed, cities use less energy if they have reasonable density and as such, they warrant investment to quell the severity of climate change and mitigate the impact of an inevitable energy crisis in America.

Certainly, many regional urban areas in the U.S. must reevaluate public policy in regards to urban sustainability. This study, however, will focus on constructing a regional sustainability outline for the Capital District of New York State. This region is comprised geographically of the cities of Albany, Troy and Schenectady, otherwise known as the Albany-Schenectady-Troy Metropolitan Statistical Area established by the U.S. Census Bureau. Today, the automobile characteristically dominates the area, as its existing infrastructure dictates. Highways such as Interstate 87 or “the Northway” and Interstate 90 carry traffic in all directions between Albany, Schenectady, Troy, and further north to Saratoga Springs. Thus, the expansive highways enable people to commute from their suburban residences many miles outside of the cities where many work.

Signs of progress however do exist. The Capital District Regional Planning Commission (CDRPC), a non-governmental organization, established a strategic plan in 2004 that explicitly stated “...policies on land use, economic development, and related topics applicable to sustainable development in the 21st century” was an “urgent” priority (*Capital District Regional Planning Commission Strategic Plan* 2004, 19). Although the CDRPC is unable to implement planning policy, its mission is to promote intergovernmental cooperation between the four counties (Albany, Rensselaer, Saratoga, Schenectady) in the Capital Region, as well as the state and

federal governments to create regional planning initiatives. Certainly there exists great potential to implement cohesive regional planning under the guidance of the CDRPC.

Implementing any type of regional level initiative requires coordination at multiple levels of government and can potentially become quite complicated. In addition to examining past sustainable initiatives implemented within the Capital Region, political impacts must be taken into account in drafting practical policy suggestions. Ultimately, the Capital Region has been plagued by many of environmentally harmful practices typical of many other American urban areas. Yet the area holds great potential as a model of sustainable urban development, if well researched and planned initiatives are implemented.

Literature Review

Modern society must inevitably confront a critical environmental issue that threatens both current and future generations of the world's population. Global warming is an issue that has received a great deal of attention from the media and the scientific community. It is a phenomenon caused by the release of greenhouse gases, which are released as a direct result of human activities, notably fossil fuel emissions and deforestation. Greenhouse gases are comprised mainly of carbon dioxide, methane, and water vapor that combine to trap heat in the atmosphere. Thus, the temperatures throughout the surface of the Earth are rising annually and will cause potentially devastating results to the Earth and all of its inhabitants.

While there is substantial scientific evidence supporting the validity of both sides of this issue, they remain subject to controversy, particularly within American society. Principally, the controversy surrounding climate change is a political one. Former Vice President Al Gore was the mainstream messenger who warned the public of the consequences that would ultimately result from unmitigated climate change. Because a prominent Democratic politician had raised the issue, global climate change became dangerously political. Skeptics organized on the political right to belittle scientific evidence that supported climate change.

One of America's most powerful lobbies is the energy industry, such as large oil corporations, and their most reliable allies happen to comprise the political right of American politics. Since climate change is exacerbated by fossil fuel emissions, the viability of energy companies is at risk unless they fundamentally change the commodities they invest in. Therein lies the dynamics of the controversy,

complicated by science and politics. Dana R. Fisher summed up the conflict by citing McCright and Dunlap who "...conclude that 'the conservative movement and especially the conservative think tanks appear to have successfully affected our nation's policy-making...'" (Fisher 2006, 471-472). America has been structured around a lifestyle that promotes excessive energy use since the mid-twentieth century. No matter one's politics, harmful emissions are released into the atmosphere and if the emissions do not cause climate change, our energy dependence certainly degrades the environmental quality of life. A focal point of the excessive energy use has been in the hundreds of regional urban areas or metropolitan areas that exist in the United States.

As noted in the previous section, urban areas began to fundamentally erode in the aftermath of World War II, a period of major societal transition in America. Cities became largely neglected as living spaces and were viewed as a center of industry. James Howard Kunstler asserted in *The Geography of Nowhere*, "the historic pattern was also harmed by the postwar notion that people shouldn't live in the place where business was" (Kunstler 1993, 141). Kunstler further noted that the increased availability of the automobile enabled more people to follow through on the trend to move outside of cities. Consequently, since the mass movement of people into outlying areas surrounding cities happened so quickly, little attention was paid to land planning since it would hinder the movement. Suburbanization, as the movement became known, swept through America from the 1950s until at least the mid-1990s.

Kunstler suggested that suburbanization has been extremely shortsighted as, "in almost all communities designed since 1950, it is a practical impossibility to go

about the ordinary business of living without a car” (Kunstler 1993, 114). The federal government had exacerbated the problem by funding highways or freeways that would cut off urban neighborhoods, which helped make them even more undesirable places to live (Kunstler 1993, 125). Although the prevalence of automobiles and the subsequent development of the Interstate Highway System helped Kunstler highlight the failures of shortsighted urban planning within the U.S., he analyzed the urban planning policies of one city in particular to provide hope for sustainable urban areas.

Portland, Oregon, Kunstler acknowledged, had developed unlike many other cities in America with intelligent planning. The center city area is well laid out in a blocked grid and perhaps most importantly, the planners “...showed respect for limits” (Kunstler 1993, 202). There was a relatively dense population, but it was planned to not overload the capabilities of its infrastructure. Unlike the majority of other urban areas in the U.S., the planners in Portland took the future composition of the city into consideration. Included within the urban plan were policies that sought to decrease the dependency on automobiles, as light-rail and bus services were developed to serve the area around Portland (Kunstler 1993, 203-204). Portland, therefore, is an exception to the overall quality of urban planning in the U.S., in terms of promoting sustainability.

Ultimately, Kunstler believed that in addition to the suburbanization made possible by the automobile, zoning policies that have been implemented in many American urban areas have mandated the development of urban sprawl (Kunstler 1993, 264). Urban sprawl can best be defined as “...development at a low relative density...” that can become extremely costly to maintain as a practice, which

suggests that it is an unsustainable practice (Burchell et al. 2005, 13). Similarly to Kunstler, Burchell et al. argued in *Sprawl Costs: Economic Impacts of Unchecked Development*, that the growth of sprawl was caused principally by federal and state policies in the aftermath of World War II that promoted suburban growth (Burchell et al. 2005, 15). The Federal Interstate Highway System, which had began in 1956, was a major culprit in creating sprawl as in addition to major highways, the policy resulted in perimeter roads that ably served commuting via automobiles.

Burchell et al. does not denounce sprawl entirely, as the authors acknowledge that sprawl has benefited many suburban residents valuably. Sprawl has provided many people with households that they desire, such as a single family home with a large yard. Additionally, it has resulted in larger lots to build homes, which in turn creates more open space for recreation and gardening, among other activities. Further, Burchell et al. stated, “some urban economists have argued that sprawl has actually prevented some traffic congestion that would have arisen if new development had occurred in more compact, higher-density forms” (Burchell et al. 2005, 133). Perhaps, one of its most overlooked consequences, is the fact that sprawl has resulted in the development of better quality schools, as there are fewer students from low-income, urban households.

Nonetheless, Burchell et al. suggests policies should be implemented in support of urban sustainability. Urban boundaries were discussed in particular, as the states of Florida, Oregon, and Washington have all experimented with urban boundaries and achieved success with controlling outward growth. In Florida, the measure worked to protect urban development from encroaching on the Everglades,

whereas in Oregon, it protected farmland. Burchell et al. concluded that such policies encourage compact growth, which reduces the excessive takeover of open land for development around urban areas (Burchell et al. 2005, 151). Urban boundaries are mentioned specifically as a policy tool to reduce the costs of sprawl, however, such boundaries do not work without supplemental policies. Therefore, Burchell et al. suggested implementing impact fees, peak hour tolls, overall improvements to transit systems, and mixed-use development. These policies would theoretically work in concert with one another to discourage urban sprawl.

In *Growing Green Cities: Urban Sustainability in the Twenty-First Century*, Eugenie L. Birch and Susan M. Wachter continued to build upon the idea that urban sustainability must be developed. They dismissed the flawed planning that plagues many urban areas built extensively after World War II, stating, “newer, rapidly growing, spread-out cities have little parkland, rely heavily on automobiles, and accommodate their growth through greenfield conversion under zoning ordinances legislating low-density, large-lot sites and single uses” (Birch and Wachter 2008, 3). Birch and Wachter, however, acknowledged the efforts being made specifically by state and local government agencies to create urban greening projects. The term “greening” could obviously be interpreted to have different meanings. But greening is essentially another expression for sustainability, as Birch and Wachter envision utilizing policies that promoting open space as well as investments in mass transit. Perhaps most telling was how a “green city” was defined in the twenty-first century as “...an ideal, yet to be attained by any urban place in the world but certainly achievable in the twenty-first century” (Birch and Wachter 2008, 3). Certainly, there

is evidence that many urban areas in America are attempting to become green cities with the initiation of the U.S. Mayors Climate Protection Agreement. Nearly 600 mayors have signed onto the agreement and each will attempt to reduce carbon emissions in their respective city by 7% (Birch and Wachter 2008). Thus the collection of articles within the book, some of which Birch and Wachter did not write, serve, as a reference to initiating substantial policies that will have to be developed to promote urban sustainability.

Urban governments are beginning to develop frameworks that focus on recalibrating cities to become more environmentally friendly, which would make them significantly more attractive residential communities. Kent E. Portney further supports the idea that cities have begun to change their mindset towards sustainability, as suggested by the development of the U.S. Mayors Climate Protection Agreement. The concept of sustainability has evolved rapidly as a concept, particularly within cities where it had been previously been deemed an unaffordable luxury to pursue. The article, “Sustainability in American Cities: A Comprehensive Look at What Cities Are Doing and Why” supported the prevalent notion among scholars that cities had deteriorated socially and economically. Portney contended the idea, however, that environmental degradation was acceptable within cities if it resulted in economic development. He stated, “...many local governments have come to realize that they do not have to accept high levels of environmental degradation in order to sustain a healthy economy” (Portney 2009, 1). Cities are no longer content with developing one dimensionally as they had in the past, which resulted in a mass exodus of people into the suburbs.

Portney provides evidence for the numerous urban areas within the U.S. that have initiated extensive plans for increased urban sustainability. Portland, which has been cited by many scholars for being the model for urban sustainability within the U.S., has implemented a regionally scaled plan. The state of Oregon, in which Portland is situated, has statewide implemented growth management policies that have pushed the city to work in collaboration with its surrounding areas. Portland is known to promote participatory action amongst its residents and therefore is able to have a productive dialogue regarding plans for sustainability. In particular, advisory panels were created and comprised of citizens who gave input on initiatives involving sustainable economic development and education.

Certainly it is evident that extensive research has been completed on the potential of urban and regional sustainability initiatives to combat sprawl. Locally within the Capital District, where automobiles and sprawling suburban areas reign supreme, it may appear that the potential for regional sustainability is low, but that is simply not the case. In fact, as this project will examine, the potential is great, so long as the region's planning professionals and commissions such as the Capital District Regional Planning Commission are able to implement their varied sustainability policies, which are designed to effectively mitigate sprawl.

CHAPTER ONE: An Analysis of the Problem: Policies That Have Fostered Suburbanization and Sprawl

Today, sprawl is an ever-increasing problem in America. But for nearly a century, people were oblivious to the burgeoning problem, which had been developing right before their eyes. Certainly it is understandable why people left American cities en masse throughout the twentieth century. Cities simply were no longer being invested in to serve as suitable living spaces. Instead they had become overtaken by rapid industrialization, as less regard had been given to urban living conditions. Workers flocked to the many factories supported by industrialization and as a result, overcrowding resulted. Factory conditions had been poor and those conditions ultimately poured out onto city blocks. The majority of urban residents however, had no outlet to vacate the cities for the undeveloped and more desirable living spaces until federal urban policy was more substantially developed, which occurred principally in the aftermath of World War II.

The government implemented numerous policies from which they could alleviate the pressure placed upon its densely populated urban areas. Each policy, however, ultimately promoted sprawl. First, the government distributed funds to the overcrowded cities to build public housing projects. Since there was little land available in the cities to build, the federal housing initiative began "...a building boom of middle-income housing on outlying land" (Nivola 1999, 22). Further, the Federal Housing Administration (FHA), distributed more loans "...for new construction..." than for "...repairs of existing structures..." which ultimately "...funneled loans to suburban locations" (Nivola 1999, 22). What had begun as an

initiative to improve American urban areas, ended up providing more incentives for suburban living.

Urban infrastructure became largely ignored. A mass transit system, albeit imperfect, already existed in many cities and it certainly could have been reinvested in and expanded. Cities such as Boston and New York City each had active subway systems in the early 1900s, which increased the number of people that could effectively be transported throughout the city. Additionally, the subways signified national progress in mass transit, as the subways were marked as an improvement upon the early streetcar systems, which began to congest roadways as urban populations increased. Whereas Boston and New York City increased their mass transit capacity, small cities lost their mass transit systems altogether.

Instead of building upon the foundations of mass transit, however, once streetcar lines began to be controversially dismantled in U.S. cities after they were acquired by the National City Lines company, the writing was on the wall for which mode of transportation the United States was going to invest its future in: the automobile. Mass transit usage, “In 1945...accounted for approximately 35 percent of urban passenger miles traveled” however, “by 1994, the figure had dwindled to less than 3 percent...” (Nivola 1999, 15). National City Lines had been acquired by a conglomerate of General Motors and other companies involved in the “Highway lobby,” after electric utility companies had to sell their interests in streetcar systems. After taking apart the tracks that many American cities once relied on for transportation, GM and its partners in National City Lines introduced buses as the new mode of urban transportation. Instead of reinvesting in rail transport, a mode of

transportation that would have placed limits on low-density development outside of cities, the U.S. set its sights on the automobile and highways that would know no limits to creating sprawl. Once the long-awaited implementation of a Federally supported national highway system began, it spearheaded the clearance of channels to life outside of cities for millions more of Americans.

Building an extensive network of highways throughout the nation was a monumental undertaking for the Federal government, though its foundation had been laid incrementally before it was passed as the Federal Aid Highway Act of 1956. In 1914, the American Association of State Highway Officials (AASHO) was founded and though it received little attention, Earl Swift noted its future importance for highway development in America, stating that, “it was a turning point...” (Swift 2011, 41). After all, prior to 1914, the U.S. Federal government shied away from investing in road building initiatives and instead invested its transportation infrastructure in the railroad. While the 1914 put investment in an American highway system on the national radar, the most significant highway legislation was passed in 1921. Swift asserted,

The Federal Highway Act of 1921, signed into law that November 9, was the foundation for modern highway building in the United States; it remains the single most important piece of legislation in the creation of a national network-far more so than the later interstate highway bill, which would not have been possible, or necessary, without it (Swift 2011, 74).

This original bill allowed Americans to get their first sense of what life would be like with greater access and freedom to open space. Swift noted that exploring the first highways “...became popular recreation for couples and families, who struck out from the cities in search of elbow room, fresh air, a closer acquaintance with nature”

(Swift 2011, 90). For the first time, the traditional boundaries of American settlement were being significantly stretched beyond cities. Finally, the U.S. invested fully on an automobile based transportation infrastructure as the 1956 legislation allocated \$25 billion in federal funds to be put forth what is known as the Interstate Highway System.

The framework outlined in the highway project would ultimately compound the problem of sprawl, as even before the 1956 Interstate Highway System legislation, "...between 1950 and 1955, the suburban populations of the country's 168 metropolitan areas grew by almost 28 percent, while those of the central cities grew by less than 4 percent" (Swift 2011, 215). Few originally recognized how fundamentally flawed the highway system would be in relation to its impact on American cities. Among the most prominent critics of the investment in a national highway network was Lewis Mumford, who believed that these highways would devastate cities.

Highway building essentially was a disinvestment in urban areas. Suburban development grew exponentially as each carload carried people off to settle into these increasingly accessible open areas outside America's decaying urban areas. The findings of Robert C. Paehlke that, "historically, inner cities in North America have had a higher concentration of social problems and related public costs..." affirm Mumford's fears (Paehlke 2010, 252). Members of the higher social classes could afford vehicles and thus utilized the highways as an outlet to residency in the suburbs. Paehlke described such behavior as a "flight from inner cities..." that helped to expedite "...the deterioration of inner city infrastructure" (Paehlke 2010, 252). Such

is evidence of the inequity in development occurring in America between its cities and suburbs.

Soon, many began to share Lewis Mumford's worries about how cities would fare when highways began to be constructed within a city's limits. It simply seemed as if the federal government had undertaken the project haphazardly without a proper assessment of its adverse impacts. Notably, as highway loops developed within cities, they originally bounded the growth around a city. Swift, however, cautioned, "...before long the circumferentials, and the radial interstates shoving their way into the central cities, enabled the burbs to push farther from the center, much farther..." (Swift 2011, 217). Such developments alarmed urban planners and they "...called for a halt to urban highway building until the affected cities had time to plan for them in detail, something none had done" (Swift 2011, 241). Even the man who eventually would have his name permanently attached to the Interstate Highway System, President Dwight D. Eisenhower, was concerned with the impact the highways would have on cities. Privately, the President had agreed with concerned urban planners and instructed that he wanted cities to have responsibility for routing the highways within its boundaries.

Nowhere was there a more practical example of the adverse impact that the highway system had on cities than in San Francisco. California State highway planners had decided to route a section of Interstate 480 along the waterfront and upon completion of the roadway, the planners realized that it interrupted the entire historic waterfront of San Francisco, including the famous Ferry Building. It was a planning gaffe that would plague the entire image of the Interstate Highway System,

as it seemed to prove Lewis Mumford right; the government had no foresight as to the impact that the highway system would have on cities and land use in the areas surrounding them.

The creation of the Interstate Highway System worked in tandem with another government policy initiative that has helped to progress the problem of sprawl. Automobiles, which of course are driven on the highways, are fueled by gasoline. Gasoline has additionally fueled the growth of highways, as the funds generated from federal gas taxes were used strictly for the building of roads for many years. In fact, “By 1925 forty-four states and the District of Columbia raised about \$150 millions annually from gasoline taxes, and in 1929 New York became the last state to impose such a levy” (Gutfreund 2004, 28). Although the tax rate on gasoline was originally quite low for the time, around one cent per gallon, they quickly increased in many states to about four cents per gallon. The funds were used directly to subsidize roadways that would promote sprawling suburban growth. Gutfreund supports this view stating,

The distribution of revenue raised by these levies was influenced by the anti-urban provisions of the federal mandates, so that even though urban residents paid about three-quarters of all state gas taxes, only 5 percent of the state funds were spent in cities, and then only on extensions of primary routes through the unpopulated sections of municipalities” (Gutfreund 2004, 28).

While this statement reveals how suburban development was subsidized in part through gasoline taxes, most citizens did not realize where some of the money they spent on gasoline went. Though the taxes were too small to be noticed, urban residents who paid the majority of gas taxes were helping fund an investment that was antithetical to the quality of life in the areas they inhabited.

Today, although gasoline prices have continually increased in the past decade due to both global and environmental issues, the price remains much lower than what the true cost of gasoline is, if external costs of its production were taken into account. It is quite clear that "...compared to every other industrial country, the cost of driving in the United States is a bargain..." (Nivola 1999, 17). As a result, the United States has become dangerously dependent upon fossil fuels as the automobile and highway permeated landscape that has been constructed requires large amounts of gasoline. Thus, gasoline remains taxed at a relatively low rate, which enables the commodity to remain affordable to the majority of the country. In addition to increased political popularity, keeping the price of gasoline artificially low maintains the way of life for the countless sprawling, suburban communities in America. Without subsidized, low gas taxes, the American way of life would be turned upside down, but the long-held practice has helped build the Interstate Highway System and currently sustains the feasibility of fueling the motor vehicles that travel on them.

While the implementation of highways and gasoline subsidies have promoted the development of suburban residential communities, commercial suburban development has also increased via government policy. Just as it was cheaper for people to buy tracts of open land and build a larger home in outlying, undeveloped areas in the mid-twentieth century, businesses found it cheaper to build on previously undeveloped land in the suburbs as well. Otherwise, if businesses were to purchase a plot of land in an urban area that had been utilized previously by industry, it would be obligated by Federal law to finance its cleanup. Thus, the dynamic remains apparent today with many businesses located in the surroundings of large green spaces outside

cities known as “business parks.” It is simply due to the fact that land has been cheaper to purchase and maintain on the “urban fringe,” than it is in the urban center as a result of government land use policy.

Some scholars, however, such as Robert Bruegmann argue the following: “notions that sprawl was caused by the widespread use of the automobile, or by American tax policies, or by anti-urban attitudes...are inadequate” (Bruegmann 2005, 10). It is difficult to argue that government initiatives such as the Interstate highway system have not contributed to the development of sprawl. Additionally, in defending his argument that government policies such as the highway system are not tied to sprawl, Bruegmann asserted that urban sprawl is a trend that “...predates the automobile...” (Bruegmann 2005, 10). Certainly, there had been evidence of sprawl throughout the landscape before the introduction of the automobile, but the invention of the automobile fundamentally changed the scale upon which sprawl developed.

Despite Bruegmann’s qualms about sprawl, it is a phenomenon that must be mitigated by evaluating the influence of government policies in addition to the desires of the American people. Undoubtedly, it appears that the people received the freedom that they wanted from the development of automobiles and the highways. Quality of life had significantly decreased in urban areas throughout the country and people wanted to “...distance their residence from locally unwanted land uses including environmentally contaminated former industrial lands, from transportation and transmission corridors, and from rundown neighborhoods” (Paehlke 2010, 253). Through the years, urban areas have lost their reputation as a safe place to live and raise a family. As Paehlke explained, “...urban streets were feared, and many people

moved to protected buildings, other neighborhoods, or gated suburban communities” (Paehlke 2010, 253). Ultimately, people began to feel trapped inside of cities and were looking for a means to escape. Once widely affordable automobiles were introduced, it did not take much convincing for people to vacate American urban areas. Cities were no longer livable communities in the eyes of the American people!

Nonetheless, as much as the American public influenced the decisions that have caused sprawl, it would not have proliferated to the extent it has without consistent government support through policies that were created nearly a century ago. While in recent decades, people have begun to move back into cities throughout the country, suburban development, which is unsustainable, remains a major problem in metropolitan areas. This is a particular issue in the Albany-Schenectady-Troy metropolitan statistical area or as it is otherwise known; the Capital Region of New York State. The region consists of Albany, Schenectady, Rensselaer, and Saratoga Counties, which collectively hold a population of 837,967 people according to the 2010 U.S. Census Bureau (United States Census Bureau 2010).

Prior to the 2010 U.S. Census, each county in the Capital Region had seen the populations of its respective urban centers decrease. The only exception had been Saratoga County and while the 2010 Census noted modest population increases in Albany, Schenectady, and Rensselaer Counties, Saratoga County continued to experience more rapid growth, with a population increase of 9.46% over the past ten years. Saratoga County epitomizes the suburban problem within the Capital Region with widespread low-density development. Whereas there exist well-established suburbs such as Delmar, Niskayuna, Colonie, Green Island, Watervliet, and Cohoes

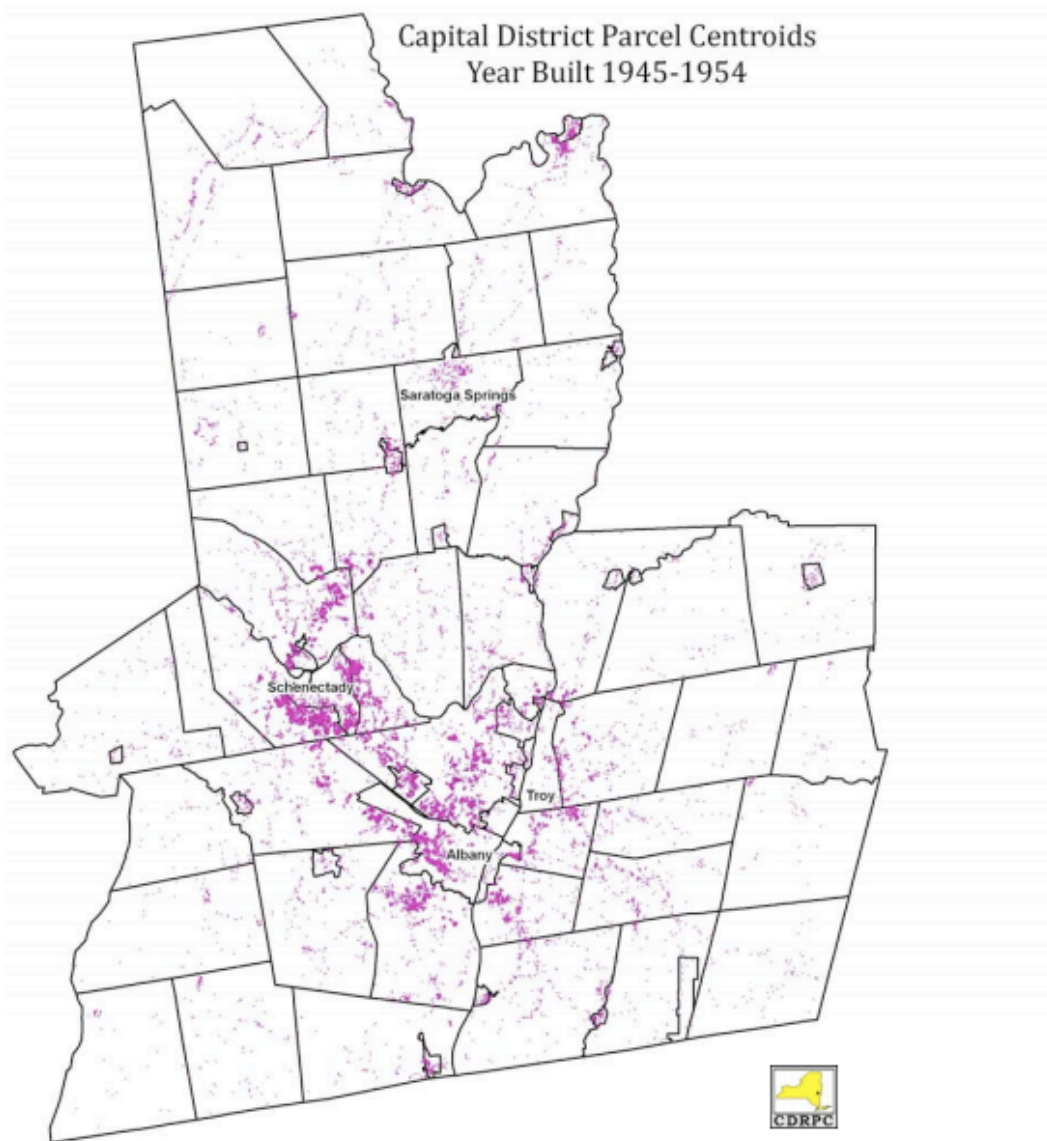
among others in Albany, Rensselaer and Schenectady Counties, the communities within Saratoga County continue to expand. Saratoga County ultimately marks the northernmost terminus of the Capital Region and its continued development extends the boundaries of the region. In fact, Jayme Lahut, the Executive Director of the Schenectady Metroplex Authority, noted that Saratoga County is the second fastest growing county in New York State (Jayme Lahut, interview by author, February, 10, 2012). Such a statistic should alarm planning experts and elected officials within the region for it exhibits unsustainable development practices that have long-term consequences.

The proliferation of suburbs within the Capital Region has been substantially impacted by many of the aforementioned policies, notably transportation policy that has established the automobile as the principal mode of transportation. Interstates 88, 90, 787, and 890 form an extensive highway network to carry traffic between the urban centers and the suburbs in the Capital Region. James Howard Kunstler, a native of Saratoga Springs summarized the impact of the automobile stating, “In the era before automobiles came on the scene, you took a train to Saratoga Springs. The train ran on tracks up a narrow right-of-way, through farms and forest, and stopped at the Saratoga depot, a block from Broadway” (Kunstler 1993, 135).

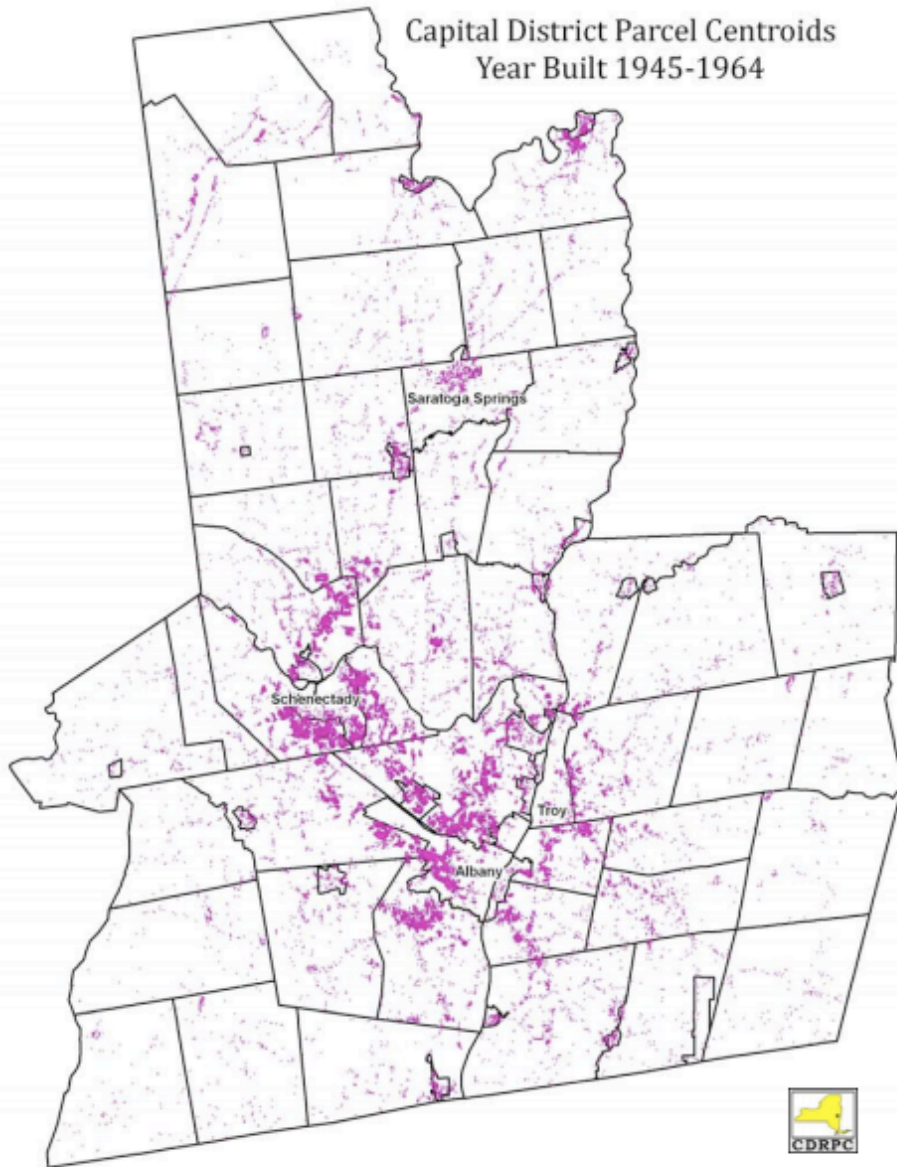
That has obviously not been the case for some time, as the successive maps (labeled 1-6) below exemplify, and thus the regional pattern of development within the Capital District must be reevaluated. While Saratoga County is the preeminent symbol of the problem to date, each county must work to sustainably reintegrate its suburban and urban areas. As an ever-expanding regional area, the Capital Region is

well suited to study for the implementation of a regional sustainable development policy set.

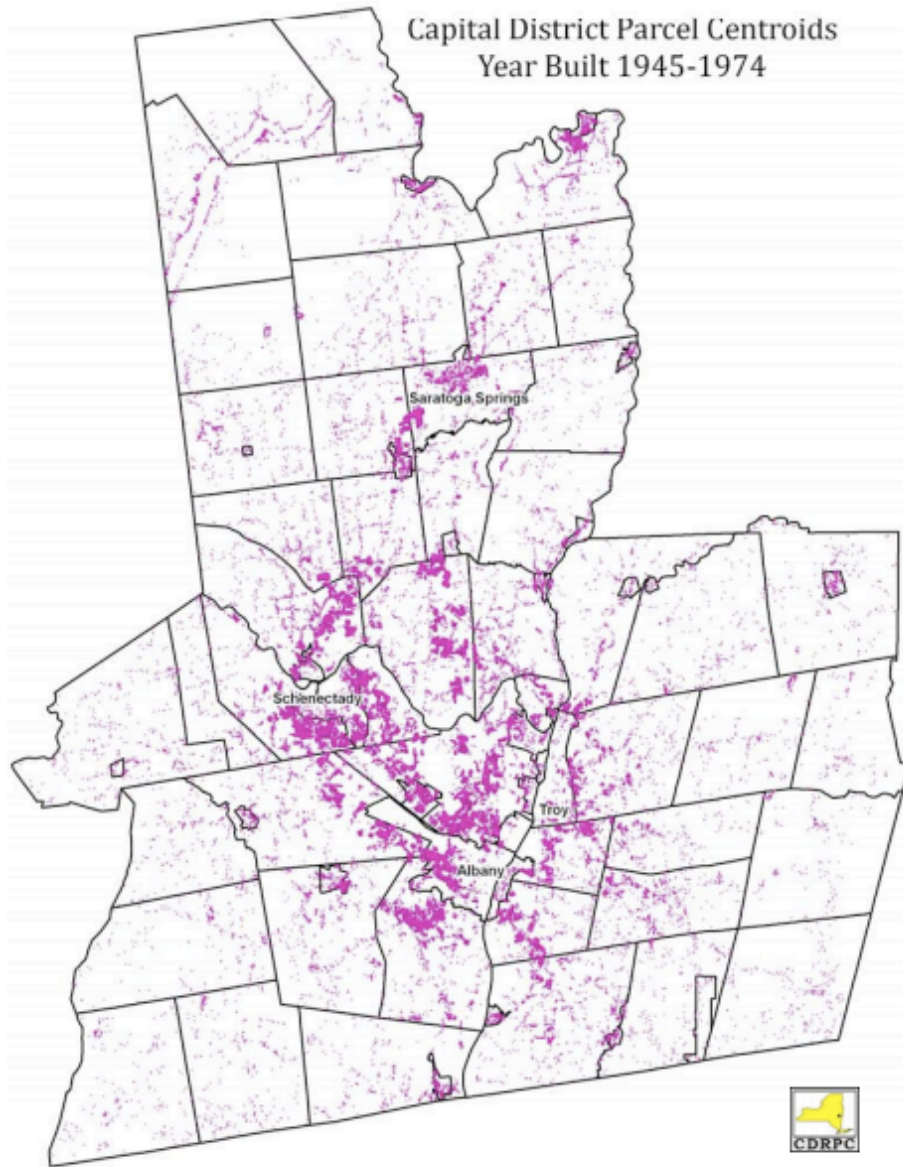
Maps 1-6: All Courtesy of the Capital District Regional Planning Commission. Map 1: Capital District Land Use in 1954 since 1945.



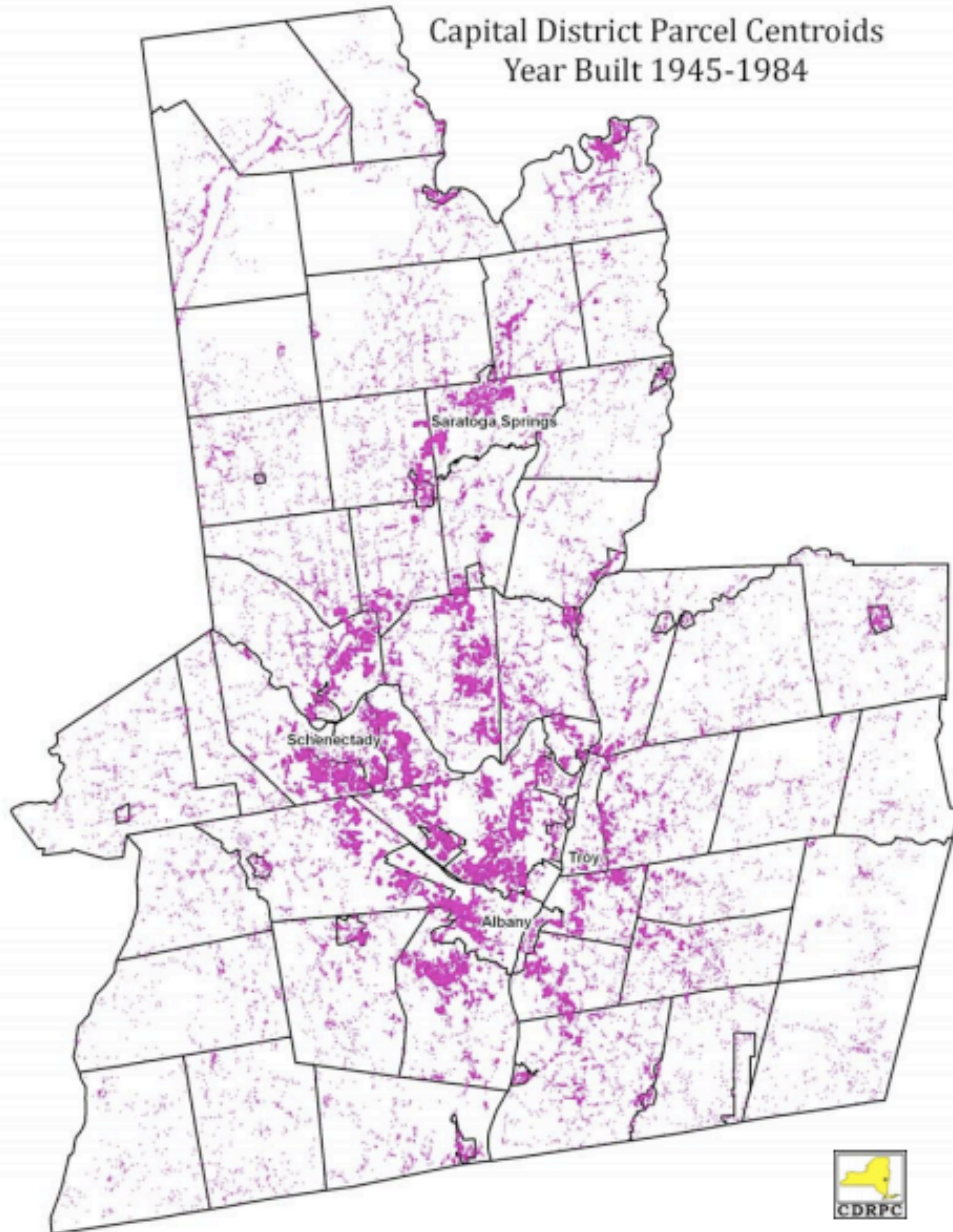
Map 2: Diagram of Capital District Land Use in 1964.



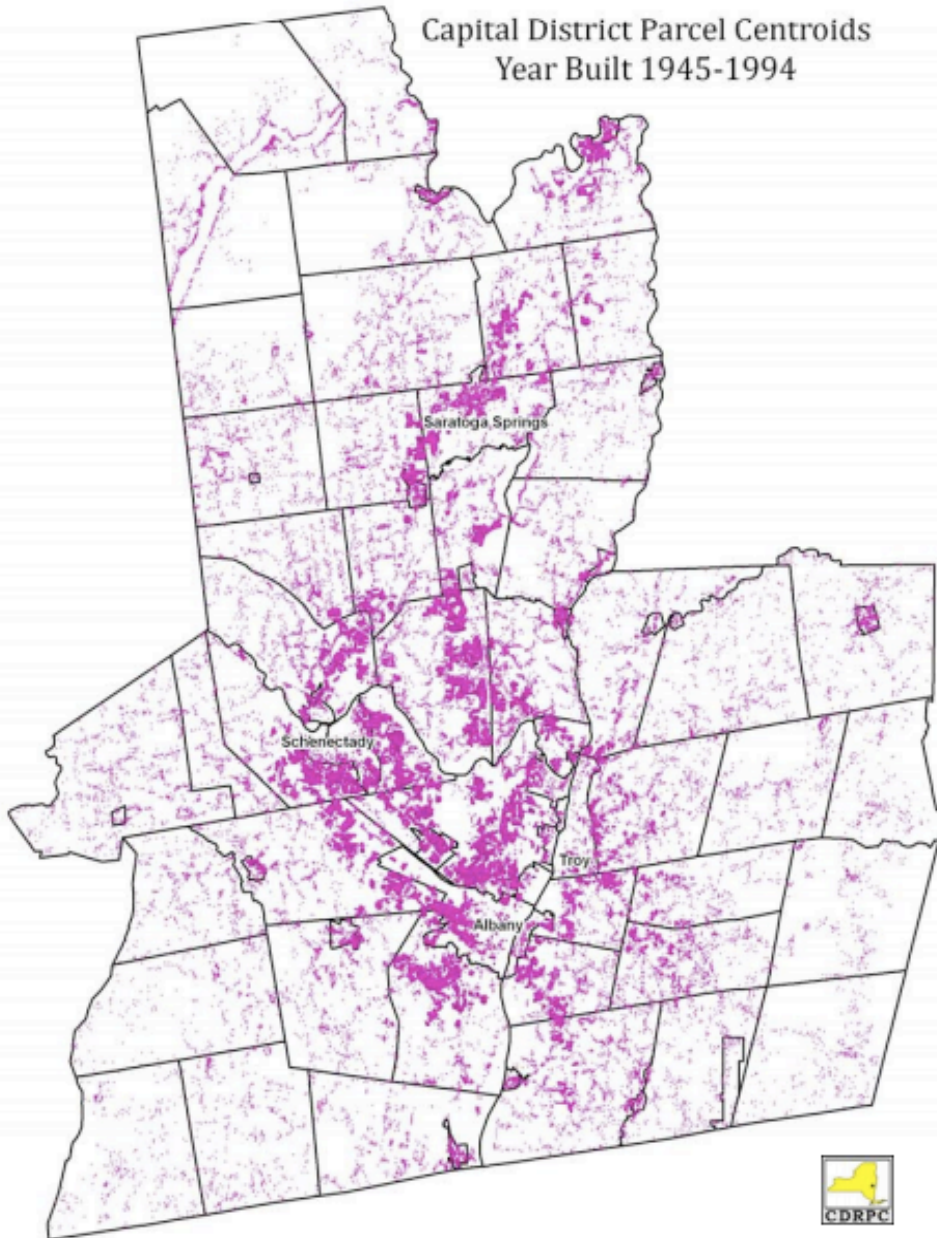
Map 3: Capital District Land Use in 1974.



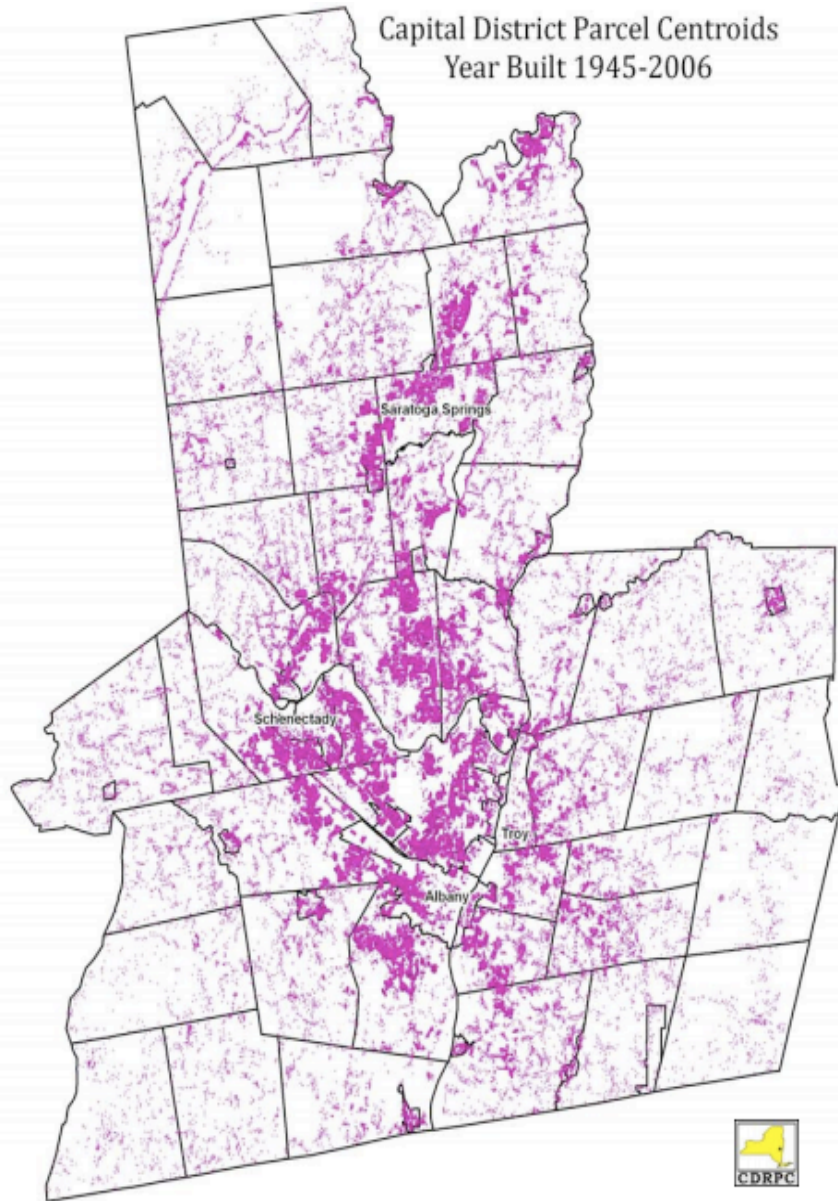
Map 4: Capital District Land Use in 1984.



Map 5: Capital District Land Use in 1994.



Map 6: Capital District Land Use in 2006.



CHAPTER TWO: Sustainable Policies Instituted in Other American Metropolitan Areas

While it is clear that the decline of American cities in the twentieth century can be attributed to a number of factors, American cities fell victim largely to disinvestment as people moved en masse to suburbs. People no longer viewed cities as being a livable area, as industry and income inequality reared its negative impacts. Industry released an unregulated amount of pollutants into the air and water, while income inequality spread rampantly, degrading once desirable neighborhoods. Suburbia, however, is an ideal of the past, as the low-density development that it features is an unsustainable form land development. Humans must engage in rebuilding where society originated and developed new ideas: the cities themselves. For many years, cities had become an afterthought as a place to reside, for they had been effectively abandoned in the rise and fall of industry.

That pattern of vacating cities, however, has reversed as people are once again settling back into cities. Robert D. Yaro and David M. Kooris acknowledge as much stating, “Today, 80 percent of Americans live in metropolitan regions, a pattern that will continue in the future” (Birch and Wachter 2008, 29). Such a pattern of repopulation has helped catalyze city governments to begin reinvestment and institute revitalization plans that promote sustainable urban practices that will help cities become both environmentally sound and livable. Sustainable cities have been identified by names such as “green” or “eco-city,” nonetheless; each city utilizes less energy, conserves nature, increases the efficiency of its infrastructure, and meshes commercial and residential areas together. Some cities, however, still promote sprawl, particularly “newer, rapidly growing, spread cities...” that “...have little parkland,

rely heavily on automobiles, and accommodate their growth through Greenfield conversion under zoning ordinances legislating low-density, large-lot sites and single uses” (Birch and Wachter 2008, 3). Therefore, it is imperative that the efforts and initiatives that many American cities have undertaken to become sustainable are analyzed for their success and replicated in other cities.

Notably, a common foundation amongst sustainable cities across the world is an effective mass transit network. Mass transit has been viewed as the universal symbol of urban sustainability. While Europe has been noted for its mass transit networks, particularly the widespread development of rail, the United States has been known for its massive, government-backed, Interstate Highway System which is utilized by cars and trucks. Instead of studying the extensive rail infrastructure of Europe, transportation policymakers in the United States found themselves enamored with Germany’s famous highway, the Autobahn. While the highway system certainly was certainly one of the major accomplishments in twentieth century America, it was a project undertaken with little foresight for the environment, predominantly for the long-term vitality of cities.

By the time the late 1960s came around, the American people began to voice their displeasure with the highways. In the words of Federal Highway Administrator Frank Turner, “public opposition to urban interstates was so out of hand in so many places that in 1971, he was moved to write a memo to John Volpe, asking that the transportation secretary keep his ‘confidence in us’...” (Swift 2011, 301). Although Turner was not opposed to incorporating mass transit into America’s transportation network, he believed that “...no one mode of transportation could answer all of a

city's needs" (Swift 2011, 301). Nonetheless, a fundamental rift existed between a growing number of the American public and Turner, who vehemently argued in favor of transportation based upon automobiles. It seemed, however, that Turner was on the losing end of the argument as a great amount of momentum existed for the development of rail and subway based mass transit. The ultimate rebuttal of Turner came after he resigned his post, when,

...the Federal-Aid Highway Act of 1973 permitted the states and local governments to request permission to junk plans for as-yet-unbuilt urban interstates, and if they got the nod, to devote the unspent money to transit systems (Swift 2011, 307).

It is apparent that the American people have been yearning to have the federal government pivot its transportation policy towards investments in mass transit, which is a pillar of sustainable infrastructure in urban areas.

The Interstate Highway System accomplished one thing for certain; it made nearly each settlement along its routes feel indistinguishable from another. Earl Swift summed up his own experience traveling the highway stating, "with rare exception, a sense of place, of uniqueness, is undetectable from the off ramp" (Swift 2011, 315). Each exit features the same restaurants, hotels, and overall commercialized setting. While progress has been piecemeal in developing a functioning mass transit infrastructure throughout U.S. urban areas, since the beginning of the twenty-first century, American cities have exemplified a renewed commitment towards achieving the highest levels of sustainability once and for all. Americans have long been searching for a sense of place and cities offer the most potential for being sustainable, livable communities in the twenty-first century and beyond.

While investment in mass transit is a near universal policy tool in the blueprint for urban sustainability, obviously each urban area is different and suited for a custom set of policies, which complement mass transit in promoting sustainability. Geography, climate, topography, existing infrastructure, and population size are only some of the variables that must be taken into account by policymakers. The ultimate goal of this project is to produce a regional urban sustainability outline for the Capital District in New York State. In examining the sustainability policies of other U.S. urban areas, some policies may be applicable to the Capital Region and others may have no value. Careful evaluation of already implemented policies, however, is essential in constructing a complete and effective set of sustainable urban solutions for the future of the Capital Region.

Urban sustainability initiatives within the United States achieved a significant boost when the United States Conference of Mayors signed the Climate Protection Agreement in 2005. In an effort led by former Seattle Mayor Greg Nickels, over 600 U.S. mayors signed the agreement, which pledged to reduce carbon dioxide emissions in each signing mayor's respective city. The agreement targeted overhauling four areas of urban policy: transportation, land use, building codes, and municipal energy consumption. Of the many cities that signed the agreement, a few stand out in their efforts to reduce sprawl, which plagues nearly every American city, and subsequently as models of urban sustainability.

A. Seattle and Portland, Oregon Revisited

Two of the major icons of urban sustainability in the United States are two cities located in the Pacific Northwest: Seattle, Washington and Portland, Oregon. It is no coincidence that two of the leaders in American urban sustainability are located within the same geographic region. Both Portland and Seattle have seen their respective sustainability efforts activate via citizen involvement. Public participation in Portland's sustainability plan has been well documented, as environmental publications have lauded the city for its "...high levels of civic participation in sustainability planning" (Karlenzig 2008, 355). In Seattle, initiatives were first developed through citizens who started a non-profit organization called Sustainable Seattle Incorporated, which helped build awareness of the environmental problems within the city to foster further citizen participation. Additionally, Seattle has had a major role in promoting urban sustainability throughout the nation as its former mayor initiated a nationwide initiative for sustainable cities.

Otherwise, the cities are quite different. Helen Jarvis noted that while, "...each municipal authority [of Seattle and Portland] separately promotes urban living as the best way to reconcile economic development and environmental protection," the physical layout of each city is fundamentally different. Jarvis elaborated, "Portland is the compact core to a polycentric metropolitan region..." whereas "Seattle is...much larger and more dispersed, forming part of an uninterrupted region of predominately low-density development..." (Jarvis 2001, 244). Therefore, the scale upon which sprawl has occurred in Seattle is greater than in Portland. With differing intensities of the problem, each city has prescribed different policies in attempt to mitigate sprawl.

Seattle, despite its imprint of sprawl, has taken major steps forward in its quest for sustainability. Seattle city government became involved in Sustainable Seattle, its original citizen initiative, and helped to devise its comprehensive plan in 1994 that became known as *Towards a Sustainable Seattle*. The plan is quite complex with a large list of policy elements to address in order to build sustainably, including: urban village, land use, transportation, housing, neighborhood planning, and environmental emphases amongst others. To date, the plan has accomplished numerous goals, though it remains a work in progress as it is currently undergoing a periodic review and amendments have been added. The review is done to ensure that *Towards a Sustainable Seattle* follows Washington State law and is “...consistent with the regional growth management strategy (Vision 2040)...” which had been recently updated (City of Seattle Department of Planning and Development 2009). Coordinating planning between local, regional, state, and federal planning and development agencies is critical to successful sustainable growth management projects.

For example, the Seattle Department of Planning and Development works in concert with another city agency, the Office of Sustainability and the Environment. In addition to aiding the implementation of the *Towards a Sustainable Seattle*, the Office of Sustainability and the Environment spearheads Seattle’s efforts to combat environmental problems. Robert Paehlke noted that the agency oversees a wide variety of initiatives such as, “...tree planting and urban reforestation, enhanced bicycling opportunities, green roofs on city buildings, improved walkability, technical assistance to builders...” and “...zoning changes downtown that discourage sprawl at

the city's edges..." (Paehlke 2010, 255). Many of these initiatives have been carried out as a part of the *Towards a Sustainable Seattle* comprehensive plan, notably the zoning changes that mitigate Seattle's problem of sprawl.

Thus, the policies implemented within the *Towards a Sustainable Seattle* must be analyzed, particularly those that have shown to be effective at promoting sustainable development and that discourage sprawl. Seattle is a major proponent of investing in building "urban villages," a development pattern that promotes "...compact, mixed-use neighborhoods in order to support walking and transit use, and to provide services and employment close to residences" (City of Seattle Department of Planning and Development 2009). Mixed-use developed neighborhoods present a range of housing types alongside commercial and industrial spaces to inclusively accommodate people. Urban village developments can attract residents and businesses to centrally locate in downtown Seattle, where the commercial and residential area is immersed into one.

All of the daily resources that people need would be in a centralized area. It would not be a necessity to use an automobile, as supermarkets, doctor's offices, and jobs would be located within a short distance accessible via walking, bicycle or mass transit. In theory, people would be able to work, shop, and enjoy leisure and recreation within close proximity to their residences. Seattle has also set forth an urban village policy that would establish mass transit hubs in areas where there were "...densities sufficient to take advantage of [the] significant investment in public transportation infrastructure" (City of Seattle Department of Planning and Development 2009). Additionally, urban villages include plentiful open, public space

where people can interact with one another, which is central for a feeling of a community similarly found in suburban neighborhoods. Ultimately, the environmental quality of a neighborhood in Seattle would be enhanced through urban village style development, while residents would also gain by saving on transportation costs and increased public health.

Seattle's urban village policy also displays great foresight as it takes into account surrounding neighborhoods and their respective densities. It is important not to promote one type of development in an urban area, as it would be extremely inefficient to do so. If urban villages spread throughout the majority of the Seattle downtown area, there would be excess in supermarkets and services to handle the extremely dense population. The essential problem within most urban areas today such as Seattle is the fact that their development has been one-dimensional. Neighborhoods with single-family homes and less dense development enable a more efficient flow of people to and from the supermarkets and mass transit hubs within the urban villages. The people living within the single-family neighborhoods near downtown Seattle most likely were already utilizing downtown supermarkets and mass transit. Finally, the city of Seattle has a policy in place to utilize 20-year urban growth targets for urban villages that will help plan ahead to handle the growth that may occur in the villages.

In addition to its policies promoting the development of urban villages, Seattle has crafted land use policies intended to handle existing buildings and lands. The city has also created a map that envisions the future types of development planned to occur, which helps direct the proper implementation of zoning rules. For example, in

order to coincide with the development of urban villages, Seattle has implemented policy that "...limits higher intensity zoning designations to urban centers..." (City of Seattle Department of Planning and Development 2009). Although multiple high-density centers are not always inefficient as will be exemplified later, within Seattle, the critical mission is to keep high-density development compact within Seattle's core urban center. Therefore, another land use policy that Seattle has proposed will "prioritize the preservation, improvement and expansion of existing commercial areas over the creation of new business districts" (City of Seattle Department of Planning and Development 2009). Perhaps even more ambitious is the policy that calls for the preferred development of compact, concentrated commercial areas known as "nodes." Under this initiative more businesses would be accessible by walking instead of the common development along busy roadways where businesses can only be reached via automobile.

Finally, the City of Seattle has instituted a transportation strategy that is focused around the urban village style of development taking place in the city. In order to support the growth and ultimate success of the urban villages, Seattle has designed infrastructure to support compact land use and pedestrian accessibility. As had been discussed earlier, Seattle has long valued citizen involvement and subsequently, the city has sought public input in the design and planning of the transportation network. It is important to involve citizens in the planning of any project that involves improving critical public services, such as mass transit. In particular, Seattle has also had to manage its transportation system with limited street space juggling automobiles, buses, pedestrians, and bicycles. Once configured,

Seattle has set forth numerous policies to promote the mass transit alternatives to automobile travel. The city has achieved this through increased "...public awareness of the impact travel choices have on household finances, personal quality of life, society, and the environment, and increase awareness of the range of travel choices available" (City of Seattle Department of Planning and Development 2009).

Additionally, to further strengthen its mass transit system, Seattle has developed transportation demand management strategies alongside regional partners to build a more cohesive, efficient system. Ultimately, it is apparent that Seattle, a city once plagued by sprawl, has a broad initiative, supported by an array of policy options to achieve urban sustainability.

Portland's quest for urban sustainability, meanwhile, occurred more swiftly. Whereas "...growth management systems were not established for the Puget Sound (Seattle) area until 1989" (Jarvis 2001, 244), Portland gained notoriety for sustainable urban development with its implementation of an urban growth boundary in 1973. Seattle had developed its policies to manage uncontrolled urban growth late relative to Portland and as such Seattle was left "...with a visible legacy of sprawl" (Jarvis 2001, 244). Portland's boundary attempted to limit the spread of low-density growth around the city's border and consolidate Portland into an area of high-density development. The American Planning Association has supported the implementation of such urban growth boundaries "to promote compact and contiguous development patterns that can be effectively served by public services and to preserve or protect open space, agricultural land, and environmentally sensitive areas" (Jun 2003, 1333).

Visitors to Portland commonly find it difficult to uncover many problems with the layout of the city and its mass transit options. Authors, such as James Howard Kunstler have praised Portland for its ability to “...defy the forces that elsewhere drag American urban life into squalor and chaos...” that has been accomplished “...with a lot of conscious, intelligent planning...” (Kunstler 1993, 200). Kunstler further asserted the success of Portland’s bold policies, as he noted how the downtown area featured compact development, with city blocks laid out in a grid. Kunstler stated that “city planners were very specific about the desired scale...” and “...that they wanted population density, but not colossal dehumanizing towers that would overload the infrastructure.” Ultimately, Kunstler acknowledged that planners in Portland had done what planners “...have been unable to do elsewhere in America; they showed respect for limits” (Kunstler 1993, 202).

Additionally, Portland has utilized light rail as the centerpiece of its mass transit options. Light rail was implemented to discourage automobile usage within the compact urban area that had developed in Portland. Since its inception, the light rail network has been expanded. Automobile usage was also discouraged with a policy that placed a “ ‘parking lid’ on the total number of parking spaces downtown” (Kunstler 1993, 203). To ease the demand on the light rail system, Portland also has developed an extensive bus service to serve the downtown area.

Although Portland boasts its credentials as the urban sustainability capital of the U.S., the Urban Growth Boundary policy it enforces is a lightning rod of debate amongst citizens and planning professionals alike. Most visitors to Portland that marvel at the efficient transit system and overall quality of the environment in an

urban setting. Certainly, James Howard Kunstler who has studied Portland's public policies extensively is a proponent of the Urban Growth Boundary and its outcomes. He described the Urban Growth Boundary as the centerpiece of "...a revolution in land-use policy" that stated, "beyond this line you cannot develop commercial projects, housing, retail or otherwise" (Kunstler 1993, 204). Portland further exemplified its policy-making acumen by establishing an agency that would enforce the Urban Growth Boundary, the Metropolitan Service District or "Metro." Kunstler noted that while the measure was marketed to the public as a means to protect farms nearby to Portland, people realized that in reality, it was intended to mitigate the issue of sprawl. Although the UGB angered those within the construction industry and real estate who thrived on sprawl inducing development, the UGB was nonetheless established. Subsequently, Metro has enforced a strict land-use policy on Portland and its suburbs. Kunstler suggested that the rest of the U.S. should follow Portland's lead as "...Oregonians are acting intelligently and setting an example in regional land-use policy that the rest of nation would do well to heed" (Kunstler 1993, 206).

While the implementation of the Urban Growth Boundary has resulted in some adverse environmental impacts as raised principally by Myung Jin-Jun, they should not completely devalue the UGB as an effective policy tool for encouraging regional sustainability. Jun asserted that the UGB increased automobile usage as well as new growth on land outside of the UGB. Additionally, Jun critiqued prior studies done on the Urban Growth Boundary in Portland that supported the policy due to limitations in each study's research. The limitations that Jun cited were the timeframe of certain studies that examined data only over a five-year span. He stated that,

“...urban land uses change over a relatively long period of time...” and a study lasting just five years would not offer a complete, reliable assessment that in fact the UGB was beneficial (Jun 2004, 1336). Ultimately, time will tell who is on the right side of the debate over the effectiveness of the UGB, but Portland and its surrounding communities have certainly been aggressive in pursuing sustainability.

B. Minneapolis-Saint Paul, Minnesota

Contrary to the belief of many, sustainable community initiatives do not only prominently exist in the Pacific Northwest of the U.S. in the Seattle and Portland metropolitan areas. In the Midwestern U.S., the “twin cities” of Minneapolis and Saint Paul, Minnesota have implemented many sustainability policies. According to the *2010 Sustainable Saint Paul Final Report*, “Mayor Chris Coleman and the Saint Paul City Council and City Council are committed to making Saint Paul ‘The Most Livable City in America’ and a leader in sustainable urban living” (City of Saint Paul 2010). In fact this was not Minneapolis-St. Paul’s first effort towards sustainability, as similar to other American cities such as Los Angeles, Minneapolis-St. Paul’s original progress was halted when the extensive mass transit network it maintained using streetcars was eliminated with the rise of the Interstate Highway System in the 1950s.

Even before St. Paul Mayor Coleman’s proclamation, significant movement towards sustainability had begun in the Twin Cities. Six years earlier in 2004, rail made a comeback in the region with the “Hiawatha Line,” a light rail network that connected downtown Minneapolis to suburban Bloomington, the area’s third largest

municipality and home to the Mall of America. The Hiawatha Line has served as a supplement to the bus service run by Minneapolis-St. Paul's regional transit agency, Metro Transit. Currently, as the *Sustainable Saint Paul Final Report* cited its achievements in the advancement of a light rail network, Metro Transit is in the process of completing an additional "Central Corridor" line, which will connect downtown Minneapolis and downtown St. Paul. Ridership on the line will be further promoted by extending connecting bus routes to areas outside of the corridor.

The *Star Tribune* of Minneapolis wrote a recent editorial that supported the region's investments in mass transit. It stressed the importance of mass transit by acknowledging that it eased the impacts of "...rising population, traffic congestion, and higher gas prices..." Additionally, the editorial noted that "rail transit isn't the only investment..." and that "2012 will see the beginning of the Cedar Avenue bus rapid transit line as well as Rapid Bus, which is a faster version of traditional bus service" (*Star Tribune* (Minneapolis, MN) 2012). It appears that the Minneapolis-St. Paul area is on target to achieve its sustainability objectives, particularly in regards to increasing mass transit ridership. The developments in mass transit will also help St. Paul with its principal land use goal to "target growth and higher density in Downtown, Central Corridor, mixed-use corridors, neighborhood centers and employment districts" (City of Saint Paul 2010).

Minneapolis and St. Paul provide a unique example of sustainability, as though they exist as two different municipalities, the two cities have come together with separate, but similar policy plans to develop a form of regional sustainability. Minneapolis has laid out development plans that are built around the incorporation of

transportation access, particularly by bicycles and pedestrians. Similar to many other areas, Minneapolis is a proponent of mixed-use development within the city that will help support high-density development near transit centers. Other notable policy plans that have been outlined by the City of Minneapolis seek to ensure that mass transit is more attractive option than automobile travel, accessibility to open space and parks is increased, and that the desirability of the city's urban neighborhood residential areas is strengthened. Overall, *The Minneapolis Plan for Sustainable Growth* summarized that its goal is to “support urban design standards that emphasize traditional urban form with pedestrian scale features at the street level in mixed-use and transit-oriented development” (City of Minneapolis 2008).

C. New York City and New Rochelle, New York

New York City is a prime example of the nationwide progression towards urban sustainability initiatives. For many years, New York City symbolized the downfall of urban America. Mayor Michael Bloomberg released the sustainability initiative, called PlaNYC, in 2007, and it acknowledged the City of New York's shortcomings related to sustainability as it stated,

For much of the second half of the 20th century, New York did not take care of what it had inherited. The city was widely believed to be in decline and the City failed to adequately invest in new infrastructure or maintain the existing assets we depend on (City of New York 2011).

While the City had long been viewed as an undesirable place to live, today it is a popular destination for people to work, live and visit. The implementation of PlaNYC shows how New York City is committed to remaining a desirable, livable community far into the future. The plan states that it intends to “...prepare the city for one million

more residents, strengthen our economy, combat climate change, and enhance the quality of life for all New Yorkers” (City of New York 2011).

Although PlaNYC is only four years old, the majority of the 127 initiatives that it proposed have been launched. Overall, there are 18 categories of focus, such as “Housing and Neighborhoods,” “Parks and Public Space” and “Transportation.” Great progress has occurred, which is tracked through a set of 29 sustainability indicators. For example, the initiative that calls for all New York City residents to live within a 10-minute walk of a park is monitored by annually calculating the percentage of New Yorkers that live within a ¼ mile of a park. Per the PlaNYC Update from 2011, “...over 250,000 more New Yorkers live within a 10 minute walk of a park” (City of New York 2011). Additionally, as part of the plan’s focus on “Housing and Neighborhoods” and “Transportation,” the City has “...completed over 20 transit-oriented rezonings so that more than 87% of new development is transit-accessible” (City of New York 2011). It is essential to promote high-density, mixed-use development in New York City since so many people have decided to live and work there. The plan called for an increased focus on neighborhood sustainability as it noted that,

The percentage of New Yorkers living within a half-mile of transit decreased, as many of our neighborhoods with the best subway access either lost population or experienced only modest growth. Development accelerated in parts of the city that depend more heavily on cars” (City of New York 2011).

Implementing regulations on zoning allow the City to govern the density of development within the city. The regulations must work to increase the “...allowable densities at appropriate locations in areas of the city near transit and decreasing them

in more auto-dependent areas...” so that New York City can “...direct growth to more transit oriented parts of the city” (City of New York 2011).

Since the plan intends for growth to increase near transit centers, the city has had to further improve and expand sustainable transportation options, with policies particularly focused on the core modes of mass-transit, its subway and bus systems. Under the plan, the first bus rapid transit (BRT) route was started and it will expand its routes in the coming years. Such policies seek to promote increased transit ridership and mitigate congestion through the reduction of traffic volume in the City. Figure 1 exhibits how transit ridership has increased in relation to traffic volume since 1993. While Figure 1 shows a decrease in transit ridership between 2008 and 2009, the plan cites that “...87% of new housing starts since 2007 have been within a half-mile of transit” so transit ridership should increase once again beyond 2009 (City of New York 2011).

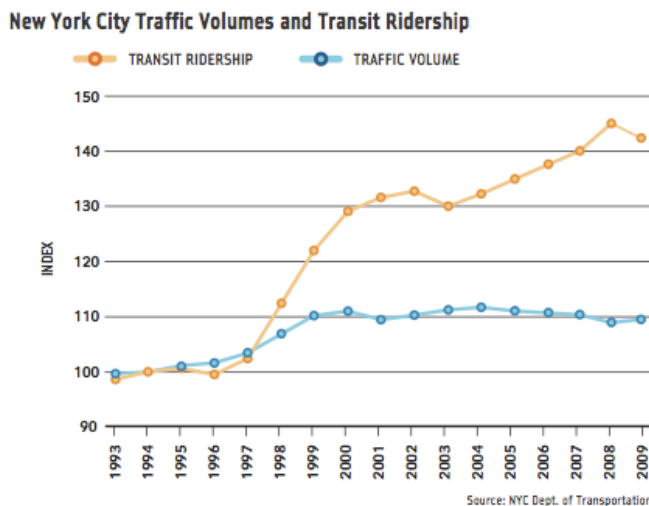


Figure 1: Traffic Volumes and Mass Transit Ridership in New York City 1993-2009.

New York City has invested heavily in its mass transit for good reason, as it collectively moves more people than any other system in the country. Nonetheless, traffic congestion has remained a problem in the city so numerous policies have been conceived to reduce congestion. This has been done through initiatives such as bus network improvements via bus rapid transit, expansion of subway and commuter rail, promoting car sharing, and increasing the bike friendliness of the city. Four years ago, however, some of these initiatives suffered a setback in their implementation as,

... We proposed a plan to reduce traffic congestion and provide critical funding for transit to improve bus and subway service. Like the first gasoline tax proposal to pay for roads decades ago, the plan to charge drivers in the Manhattan Central Business District and devote the proceeds to improving transportation was controversial (City of New York 2011).

Although the ambitious initiative would have improved the traffic conditions as well as the transit service, it was never passed. Nonetheless, New York City has made great progress in its mission to become more sustainable. Overall, its mass transit network of subway, bus, and regional rail carries 8.5 million people per day and that will only be improved through the full-life of the PlaNYC initiative.

Throughout New York State, many municipalities and the subsequent regions in which they reside are pursuing sustainability initiatives, many of which promote the concept of “smart growth.” The City of New Rochelle for instance, located just outside of New York City, has developed its own action plan for smart growth called the GreeNR Sustainability Plan. GreeNR states within its framework to “employ smart growth principles that strategically encourage density and diverse housing opportunities in areas with ready access to local goods, services, infrastructure and mass transit...” (City of New Rochelle 2010). Like the PlaNYC set of initiatives in

New York City, the GreeNR plan calls for a strategy to promote the development of commercial and residential areas within close proximity to the New Rochelle Transit Center, limiting the growth of outlying, low-density areas. Since New Rochelle is situated in a major commuting area, a part of the GreeNR plan seeks to create financial incentives to discourage the use of single occupancy vehicles in commuting to work. Instead, the plan plans to create “efficient and attractive multi-modal access to New Rochelle’s downtown through improve of major transit corridors...” (City of New Rochelle 2010). Although the GreeNR plan remains in its elementary stages of implementation, it will help to cement sustainability through smart growth on a regional scale, supplementing efforts not only in New York City, but throughout the state as well.

When the Smart Growth Infrastructure Policy Act was passed by the state legislature in 2010, it marked a small achievement for proponents of sustainable and smart growth development. Todd Fabozzi, the Program Manager for the Capital District Regional Planning Commission described the bill’s passage as “a step in the right direction, but it contains many loopholes” (Todd Fabozzi, interview by author, February 22, 2012). While the bill states that every New York State funding agency meet ten Smart Growth goals, Fabozzi elaborated that the most “egregious, disconnected developments do not have to deal with it” (Todd Fabozzi, interview by author, February 22, 2012). Overall, the bill, Fabozzi believes that the bill needs to be strengthened to address the key problems, such as the structure of local roads that foster congestion. Among the more promising aspects of the bill, however, are its ten policy goals that seek “to foster mixed land uses and compact development,”

“provide for mobility through a variety of transportation choices,” and “coordinate between state and local governments” (Gidaly 2010, 1). Despite the bill’s shortcomings, it should please many progressive thinking planners and at least serve as a building block for future legislation that promotes sustainable development initiatives.

Ultimately, it is evident that many urban municipalities and regions in the U.S. have pursued policies that promote sustainability. Although not unlimited, there exists a myriad of initiatives that promote sustainability concepts such as smart growth. Thus, they must be critically examined and selected for each area that they are to be implemented in. Policies that have worked in Portland, Oregon and Minneapolis-Saint Paul may not be applicable to New York City. The Capital District, a region which includes three smaller cities; Albany, Schenectady, and Troy could benefit from regional planning policies that take into account the interconnectivity of the area and offer the most potential for widespread sustainability or “smart growth” from the region’s urban centers to its plethora of suburbs.

CHAPTER THREE: The Promise of Regionally Focused Policies

Many people argue that the abundant sprawl across metropolitan areas in the United States, such as the Capital Region is principally a market driven phenomenon. But in fact, the development of sprawl has also been due to numerous government policies and regulation, as outlined in the first chapter, which have adversely impacted land use in the area. Thus, it is imperative to establish measures, including innovative government policy that will catalyze urban sustainability within the Capital Region. While people, professional urban planners included, have different visions of smart growth, regional focused policies offer the greatest potential for urban sustainability. James Howard Kunstler, after all, had asserted that such efforts, notably in Portland, "...was Lewis Mumford's dream come true: authentic regional planning" (Kunstler 1993, 205).

The Capital Region may even be better suited for regional urban sustainability policies than Portland, Oregon and its surrounding communities have been. Between 1960 and 2000, there existed a broad trend of people leaving the area's cities for its suburbs (Fabozzi 2012). Suburbs continually grew, with a particular surge northward into Saratoga County communities such as Clifton Park, when Interstate 87 or "the Northway" was opened in 1960. The principal cities within the region; Albany, Schenectady, and Troy became degraded, impoverished areas overrun by vacant houses like the majority of urban areas in America had during the impending decades. Fabozzi noted the magnitude of the population loss within the Capital Region's three main cities, as 94,000 people had left between 1960 and 2000. That number equates across the three cities to the loss of the entire City of Albany.

While Albany, Schenectady, and Troy declined, their respective suburbs thrived and created disconnection between the two areas. It was easy to travel between the cities and their suburbs on the extensive highway system in the region, however, once the suburbs were reached, connectivity was non-existent. Although this was perhaps what the market had dictated as people strived to achieve success and raise their families in idyllic suburban settings in order to attain the “American Dream,” it was unsustainable. In the Capital Region, Todd Fabozzi noted that there was a trend that showed a “large jump” in the number of single-family homes built in the suburbs between 1945 and 2007 (Fabozzi 2012). People wanted safety, backyards, and open space for recreation. American society believed and to an extent still believes that those desires can only be satisfied in a suburban setting.

Of course the suburbs remain prevalent today and are not going anywhere. Delmar, Colonie, and Guilderland surround Albany; Niskayuna and Rotterdam surround Schenectady; Green Island and Watervliet surround Troy, while Saratoga County boasts numerous suburbs that continue to grow. Notable among the continually growing areas in Saratoga County are Clifton Park, Saratoga Springs, and Malta. All of the suburbs in the Capital Region have to an extent developed into what Fabozzi described as “disconnected pods,” which further reinforce the use of the automobile to travel from place to place locally. The roadways serving these suburban developments also create the problem of traffic congestion as the side roads eventually filter the traffic into one area. These congested areas are otherwise known as the “Interstates,” the main arterial routes from the suburbs to the city centers. Ultimately, the Capital Region has suffered from shortsighted land use and transit

development, which has led to a current layout that does not take into account the concept of interconnectivity. Instead there exist the separate, low-density suburbs that bare no distinction from one another except for their names.

Fabozzi is the Program Manager for the Capital District Regional Planning Commission (CDRPC), an organization that has worked extensively to promote the development of regional planning initiatives in the area. Aside from its professional staff, the Board of the CDRPC includes five members from each of the four counties who are appointed by their respective County Legislative Bodies. The CDRPC Board serves as the policymaking body, thus over half of the Board is required to be an elected or appointed government official. Overall, the mission of the Capital District Regional Planning Commission is to serve the best interests of the public and private sectors by promoting intergovernmental cooperation in order to build regional initiatives. Such a structure allows for efficient information sharing and extensive dialogue on the creation of solutions to regional problems, particularly suburban sprawl and its adverse impact on the area's cities.

It appears, however, that the cities within the Capital Region are on the rebound, as people have been repopulating the cities, a trend that is applicable across most of the U.S. Fabozzi reported that it was good news to find that the cities within the region had gained population and had reversed a 60-year trend of population loss. While sprawl has not stopped, the reversal of the population trend is a sign that can be used to encourage investment in urban areas once again. Already there have been signs throughout the region with the redevelopment of old buildings, particularly the redevelopment of State Street in downtown Schenectady, which was facilitated in part

through the efforts of the Schenectady Metroplex Authority. Nonetheless, there is much work that remains in fostering sustainable development throughout the Capital Region and the CDRPC has attempted to catalyze such efforts.

One major initiative that the CDRPC has attempted to implement is *The Capital District Sustainable Communities Regional Plan*. Though the plan is led by the CDRPC, it is a Consortium of 42 government, non-profit organizations and members of the private sector. Among the members of the Consortium are the Capital District Transportation Committee, Albany, Schenectady, Rensselaer, and Saratoga Counties, the Cities of Albany, Troy, Schenectady, Saratoga Springs, and Watervliet. Also included is the University at Albany and Behan Planning and Design. Each of the stakeholders attached to the plan have either experienced the adverse impacts of unsustainable development or are adept at mitigating the problem.

The plan, therefore addresses the major roots of unsustainable development in the Capital Region. One of the primary problems that the plan cited is “urban flight and suburban sprawl.” This problem is highlighted by the fact that until recently, “the region’s central cities have each lost one-third of their respective populations while the population outside the central cities more than doubled” (Capital District Regional Planning Commission 2011). An analysis completed by the CDRPC found that region gained nearly 15,000 acres of new development between 1986 and 1997. This accounted for a 15.8 percent increase in developed land during a timeframe when the Capital Region only experienced a 3.4 percent increase in population. This analysis confirmed the overwhelming rate of land consumed that occurred while the rate of

population growth remained much lower. This primarily exemplifies the scale to which low-density suburban development has dominated the region.

Low-density development forms in the pattern of “disconnected pods” that Fabozzi and other planners seek to stop. Therefore another problem that the plan seeks to address in the Capital Region is “scattered development and transportation inefficiencies” (Capital District Regional Planning Commission 2011). The two problems are directly related to one another as the significant distances between where one lives, shops, and works in the Capital Region places a major strain on the transportation infrastructure currently in place. While there are many state and federal highways in the region, they symbolize the transportation inefficiencies that the plan seeks to address. The roadways are heavily trafficked and congested during peak transportation hours; the morning and evening commute to and from the suburbs. Roadways are quite simply the only viable means of large-scale transportation in the region, and the system is ineffective at best. *The Capital District Sustainable Communities Regional Plan* elaborated that solutions to the problem are complicated by the fact that “the density of most of these areas is too low to be conducive to mass transit service” (Capital District Regional Planning Commission 2011). The plan further highlighted the problem of scattered development and need for regional policy solutions as it stated, “The lack of regional coordination on land use patterns and economic development and infrastructure investments has also intensified the land consuming impacts on prime farmland and natural systems” (Capital District Regional Planning Commission 2011).

Three additional factors that the *Capital District Sustainable Communities*

Regional Plan addressed were the impacts of concentrated poverty, jurisdictional fragmentation, and fiscal cost burdens in the region's urban areas. Since the common trend across America had been until recently to move from the cities to the suburbs, the social makeup of each became polarized. While the poor remained in the cities, the more well off moved and continually expanded the reach of the suburbs onto new land. The suburban areas blossomed and urban areas in the Capital Region regressed. In particular, the plan cited how there has been "...a reduced supply and quality of affordable housing within urban areas..." which only reawakens social stigmas that have existed in the past towards residential life in cities.

Eradicating poverty and increasing the availability of affordable housing is a very difficult task and in many cases, gentrification projects have been counterproductive. Although, the urban area that had been plagued by poverty had been improved, its residents have just been dispatched elsewhere. In the Capital Region it has been extremely difficult to increase opportunity for the poor due to the area's automobile centered transit infrastructure. The plan acknowledged as much stating that the Albany-Schenectady-Troy Metropolitan Statistical Area "...ranks 17th out of the 100 largest metro areas in the nation for percentage of households without a vehicle, leaving many residents disenfranchised from the job market..." that has shifted more towards office parks in outlying suburban areas (Capital District Regional Planning Commission 2011).

Further complicating efforts to improve the Capital Region's urban areas and overall regional sustainability is the issue of "jurisdictional fragmentation." It is a problem that Union College Economics Professor Bradley Lewis has asserted is

impeding upon any progress for building regional policy solutions in New York State.

The Capital District Sustainable Communities Regional Plan takes into account the challenge posed in the coordination and implementation of policies between different agencies and many political jurisdictions. After all,

The four-county Capital District is governed by 79 minor civil subdivisions, 43 school districts, and nine public housing authorities, and there are also 18 different geographically constrained industrial development authorities/agencies, 10 local development corporations, and six area wide economic development institutions (Capital District Regional Planning Commission 2011).

Additionally, the plan observed that "...in New York State, home rule authority vests land use authority with local municipal governments, which has led to fragmented land use patterns and unproductive intra-regional competition for development" (Capital District Regional Planning Commission 2011). Todd Fabozzi asserted that one of the greatest myths in New York State is the meaning of home rule. Many believe that local government bodies hold the power control their own density and "that growth will provide tax revenues" (Todd Fabozzi, interview by author, February 22, 2012). Fabozzi warned, however, that local communities forget that with growth comes a demand for new services as well. Thus, the increased tax revenue coming in is undermined by even greater expenditures for services that the local areas end up paying. Fabozzi concluded such has become a notorious pattern in Saratoga County where the costs for its growth have been covered largely by its local municipalities and not the state government.

Regional planning would obviously be much easier to implement without a complicated network of agencies and municipal governments where disagreements will inevitably occur over certain policies. Fabozzi, who has extensive experience in

regional planning, elaborated upon the numerous disagreements that have occurred between municipalities within New York State, as he stated that “communities compete against themselves and regional infighting is seen all of the time” (Todd Fabozzi, interview by author February 22, 2012). Nonetheless, Fabozzi also cautioned that incorporating numerous municipalities into one area, as has been done in areas of Texas, has drawbacks to achieving sustainability. While such a process could help expedite the implementation of regional sustainability outlines, it also contains the risk of giving increased power to county officials and those in the development lobby. Essentially, the number of stakeholders is decreased and with a more centralized power structure, it becomes more easily to manipulate its leaders to continue status-quo trends in development. Regional sustainability holds great promise, but it also requires patience and compromise amongst various stakeholders, particularly in New York State to begin implementation. Otherwise, the incorporation of large areas, such as the Houston Metropolitan Area ultimately results in less oversight and sprawl due to near non-existent land-use policy.

Fiscal cost burdens are another problem that would be addressed under a regional sustainability plan. As suburbanization became prominent and many wealthy residents left the cities, the areas were left with “...service and infrastructure maintenance burdens that they cannot afford to address” (Capital District Regional Planning Commission 2011). The plan further described how the “...resulting spiral of disinvestments, deferred maintenance, and excessive property taxes, further undermines the attractiveness of the cities for potential new homeowners” (Capital District Sustainable Communities Regional Plan 2011). Undesirable inner-city

housing is antithetical to achieving sustainability as it further reinforces the social stigmas towards urban centers as viable residential communities.

The attractiveness of urban centers is a foundation for regional sustainability, as cities act as the centers of regions. They provide the capacity for high-density, mixed-use development and mass-transit hubs among other high-yield sustainability initiatives. Cities need to be returned to what they were before they were torn apart, which Earl Swift describes as "...settlements of closely packed neighborhoods, narrow streets, shoulder-to-shoulder industry" (Swift 2011, 227). While shoulder-to-shoulder industry does not sound conducive to sustainability, industry is no longer a significant factor in many American urban areas. Shoulder-to-shoulder commercial development within urban areas, however, does promote sustainability as when it is coupled with urban residential development, it creates what is known as "mixed-use" development. "Closely packed neighborhoods" would allow people to live and work in urban areas, which in conjunction with "narrow streets" would encourage greater pedestrian travel, bicycling, and mass-transit ridership. All in all, such development would reduce dependency on automobiles, as people's needs like supermarkets, would be within a short distance accessible either by mass transit or walking. Reestablishing cities as desirable places to live has been achieved elsewhere, but it remains a work in progress within the Capital District. If residents of the region were to move into a revitalized Albany, Schenectady or Troy to live and work from the expansive suburbs, then the notorious commuter traffic could significantly be reduced.

Todd Fabozzi pondered how the ideal, sustainable Capital District region would

have developed if its growth had been well planned and centered around the geographic center of the region, the Town of Colonie in Albany County. Fabozzi believes that it was unfortunate that it did not happen because Colonie was “the ideal place to do smart growth” (Todd Fabozzi, interview by author, February 22, 2012). If land development within the region had been done with more foresight, Colonie could have served as the urban center that was anchored with high-density development and a regional mass-transit center. Obviously, this did not occur and instead Fabozzi is left to grapple with the low-density growth that has continually expanded in the region particularly northwards in Saratoga County.

The roots for expansion of low-density, suburban development within Saratoga County are quite easy to pinpoint. The floodgates for development were first opened within Saratoga County when Interstate-87 or as it is popularly known as “the Northway” was completed in the early 1960s. Timothy Holmes the author of *Saratoga Springs: A Brief History*, wrote, “The Northway swung around Saratoga Springs close enough to allow easy commuting but far away enough to preserve the downtown core” (Holmes 2008, 95). While Saratoga’s downtown area has remained intact, the easy commuting has allowed for people to shuttle between their jobs in places such as Albany and the suburbs of Saratoga Springs, which have expanded through the years.

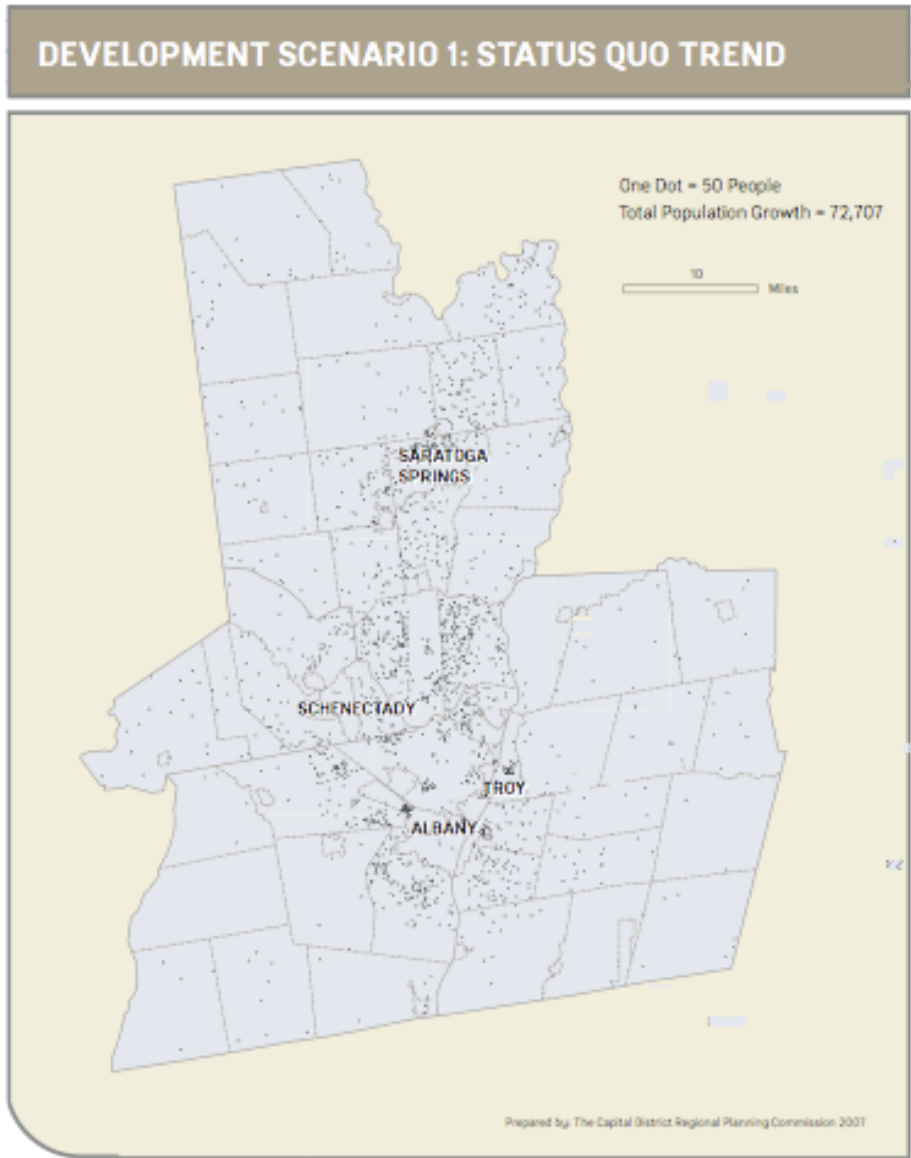
In addition to the commuting convenience provided by the Northway, the recent technology industry boom in the region has catalyzed further low-density growth. Global Foundries, a corporation that specializes in the chip manufacturing has situated a major production plant in the Saratoga County Town of Malta. It has

reached the stage where the Capital Region is now known as “Tech Valley” as high-tech businesses have inundated the area. In addition to the economic benefits that the technology sector has on the region, its impact on the region’s development must also be analyzed. Fabozzi noted the amount of controversy that the project has stirred up within the community of Malta, as though its residents wanted the economic gain, they do not desire any further residential development. That has left Fabozzi to wonder how Malta will transform alongside the development of the Global Foundries plant. He believes that the transformation Malta must undergo includes a transition from a “traditional suburb to a city” (Todd Fabozzi, interview by author, February 22, 2012). Otherwise, if Malta does not transform, suburban areas within the Capital District and Saratoga County in particular, will continue to propagate.

Thus, Saratoga County and its low-density developed suburbs have obviously complicated regional sustainability initiatives in the Capital District. Fabozzi, however, believes that success in regional sustainability can be attained by thoroughly examining suburbs such as Clifton Park and Malta in Saratoga County. He believes that part of the solution lies in the core of “urbanism,” where “development can be coordinated with different developers” to build the suburban towns better and concentrate their growth (Todd Fabozzi, interview by author, February 22, 2012). The commission upon which Fabozzi sits, the Capital District Regional Planning Commission has created numerous policies for sustainability. The CDRPC, as a regional commission within New York State does not have authority to implement policies. Fabozzi stated that their main goals are to keep people informed of the

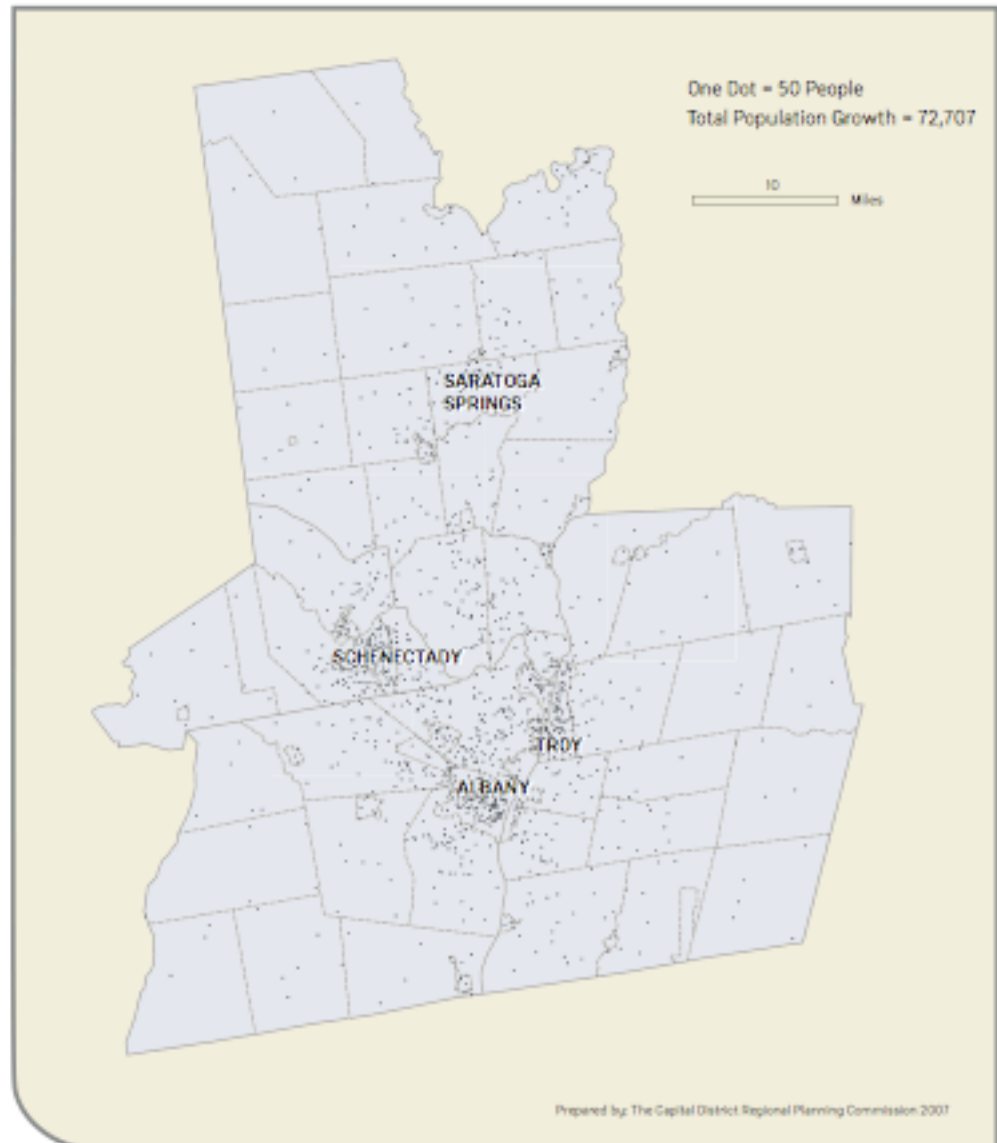
problem of sprawl in the region, publish reports and trends, as well as promote conversation on the value of initiatives such as Smart Growth.

One of the more recent reports that the CDRPC has contributed to is one led by the Capital District Transportation Committee (CDTC), the Metropolitan Planning Organization (MPO) for the region. The plan, entitled, *New Visions for a Quality Region*, or alternatively known as the *New Visions 2030 Plan*, provides what it describes as “...a practical framework for experiencing sustainable growth while maintaining a high quality of life” (Capital District Transportation Committee 2011). The plan further explains how the region is in the midst of a critical juncture with growth and development. It argues that the best way to effectively handle growth is to concentrate it, which the plan stressed is possible only through regional cooperation. Ultimately, the *New Visions* plan analyzed four possible growth scenarios in the Capital District based upon “realistic assumptions about the region” (Capital District Transportation Committee 2011). Each of the four scenarios; the status quo, concentrated growth, trend hyper-growth and concentrated hyper-growth are visualized below in Figures 1-4, all courtesy of Capital District Transportation Committee’s *New Visions* Plan.



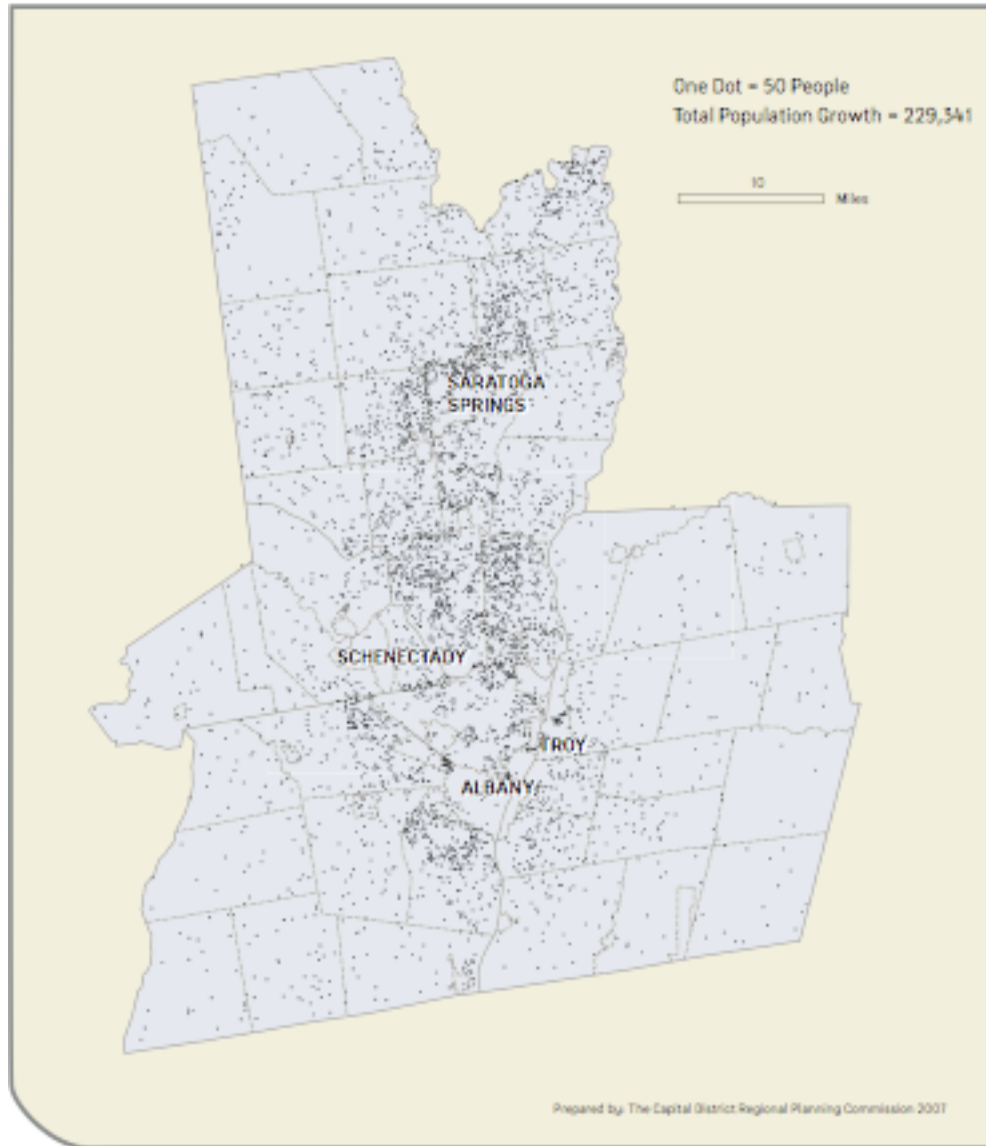
Map 7: Status Quo Growth Trend- Will occur if growth remains steady, thus enabling continuation of suburban sprawl. It is considered the most likely outcome going forward based upon past trends. (Capital District Transportation Committee 2011)

DEVELOPMENT SCENARIO 2: CONCENTRATED GROWTH



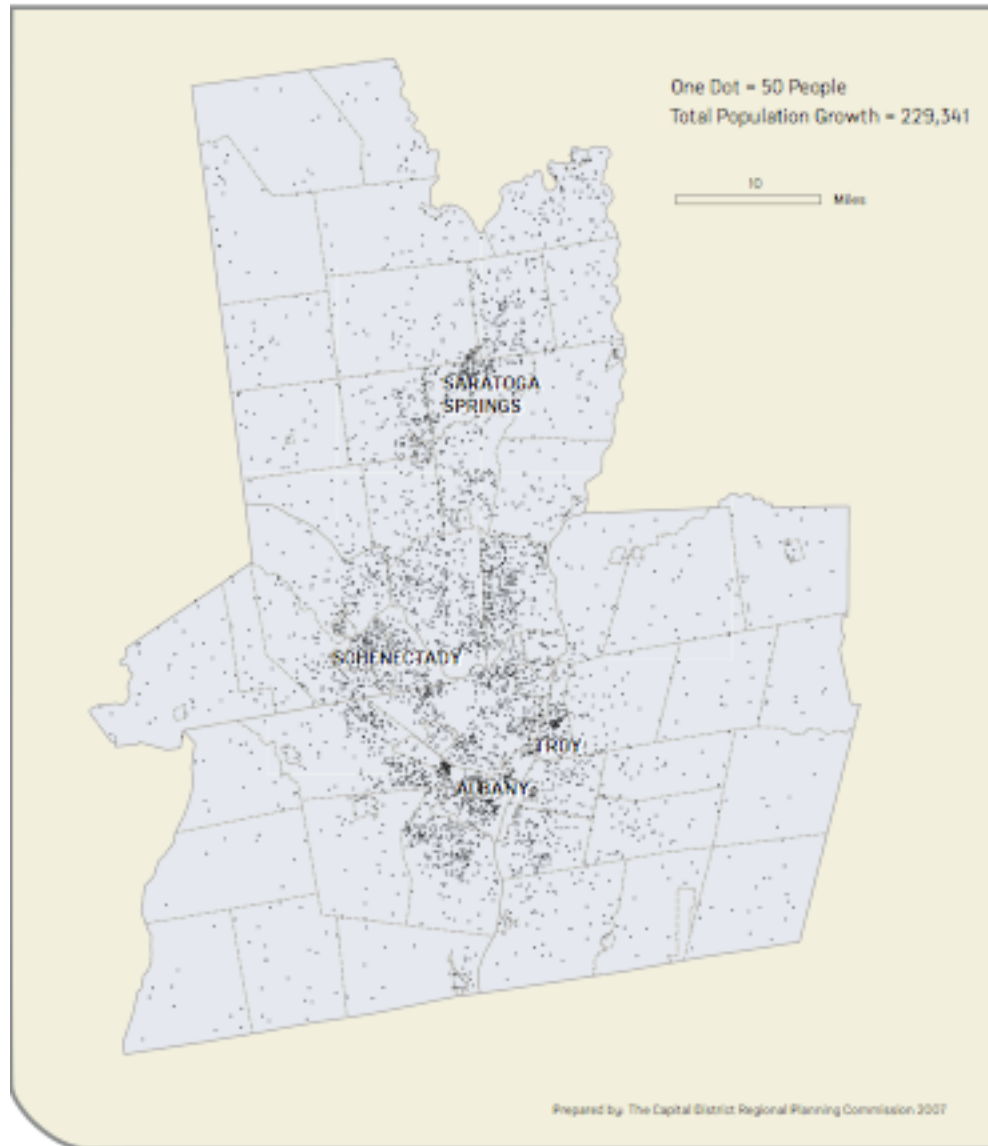
Map 8: Concentrated Growth Trend- Will occur if growth is steady and development is planned to locate people, transit and jobs close together. This exemplifies the ideal development scenario for the Capital District. (Capital District Transportation Committee 2011)

DEVELOPMENT SCENARIO 3: TREND HYPER-GROWTH



Map 9: Trend Hyper-Growth-If growth increases rapidly and sprawl into the suburban areas continues. According to Todd Fabozzi of the CDRPC, this is a more unlikely scenario (Capital District Transportation Committee 2011).

DEVELOPMENT SCENARIO 4: CONCENTRATED HYPER-GROWTH



Map 10: Concentrated Hyper-Growth- If growth increases rapidly and development is planned to locate people, transit, and jobs closer together (Capital District Transportation Committee 2011).

Thus, it is imperative for the region to avert the potentially perilous growth scenarios shown in the status quo, hyper-growth and concentrated hyper-growth models. Despite the fact that regional sustainability initiatives in the Capital District have struggled to gain much traction, there exists great potential. The time is now to bring stakeholders from throughout the region together to finally implement substantial regional policies that promote sustainability. If regional leaders continue to put such initiatives off into the future, the problems will still remain and only increase in their intensity. Certainly, effective regional policies that build sustainability in the region will require a large investment of capital, but that price will also continue to increase in the future. The Capital District Regional Planning Commission in conjunction with other regional agencies such as the CDTA and the CDTC have already crafted the policies in the *Capital District Sustainable Communities Regional Plan* and *New Visions for a Quality Region*. Todd Fabozzi declared that “people are a lot more accepting of Smart Growth” (Fabozzi 2012) and are throwing their support behind such sustainable initiatives. Once the regional leaders hear the voices of their constituents eager for regional sustainability, then all that is left is to select the policies that are best suited to achieve sustainability within the Capital District.

CHAPTER FOUR: Framework for Regional Sustainability in the Capital District

None of the forthcoming policies that will be catalogued in this section to induce regional sustainability within the Capital District are revolutionary. Such a disclaimer does not mean that the policies are ineffective, rather it serves to note that proven, practical policies already exist to tackle sprawl and await implementation in this region. A majority of the policies have already been proposed to local and state government officials, as well as distributed to community members and implemented elsewhere. Although the policies may not be revolutionary, they would be effective if implemented and thus would make a significant impact on mitigating sprawl to foster greater sustainability within the Capital District.

While authors and planning professionals such as Todd Fabozzi commonly cite Portland, Oregon as the model for regional sustainability, it does not mean that all of Portland's effective policies should be replicated in the Capital District. Put simply, policies do not translate from place to place and it is important to reiterate the unique layout of the Capital District. Unlike centralized areas such as Portland, Capital District is a polycentric area with three urban centers, each of which has scattered suburban areas sprouted around its borders. This is an important difference, particularly when discussing the implementation of land use policy. Portland, as discussed in Chapter 2, implemented an Urban Growth Boundary to control regional low-density land use. Although Robert Burchell believed that the much-debated Urban Growth Boundary was effective, he did caution that, "...these boundaries alone will not be able to direct growth" (Burchell 2005, 151). Since the Capital District is in desperate need of properly directing its growth, the implementation of

Urban Growth Boundaries, Portland's signature sustainability policy, would not be a suitable policy tool for this region. Nonetheless, alternative land use policies should be a focus for reformation to begin the implementation of sustainability policy within the Capital District.

Existing land use policy in the Capital District serves as a barrier to sustainability in the Capital District. While James Howard Kunstler, a local author and critic of development patterns in the region overeagerly asserted that "...if you want to make your communities better, begin at once by throwing out your zoning laws," his point is well taken (Kunstler 1996, 110). Kunstler adeptly concluded that, "the place that results from zoning is suburban sprawl" (Kunstler 1996, 110). Such shortsighted zoning policies for land use have supported the continuation of a region-wide low-density development pattern that spreads suburban sprawl. A more accurate name for the region might be the "Sprawl District."

In order to rectify land use in the suburbs of the region, the first step would be to implement policies that promote "suburban town center development." The policy has already been proposed in the "Big Ticket Initiatives" section of the *New Visions* plan produced by the region's planning organizations. It calls for the "implementation of town plans to create town centers," which would create "...stronger communities with a sense of place, mixed use development and walkability" (Capital District Transportation Committee 2011). Overall, the policy, which would be implemented over the course of twenty years, would add five to ten miles per year of new town center streets at an estimated final cost of around \$175 million. People would enjoy increased accessibility to shopping and perhaps even their jobs. Currently, the

suburban areas within the region are spread out in their development, where residential areas exist predominately on cul-de-sacs away from town areas where the commercial sect is located.

Policies that institute the development of town centers would revitalize towns where it is nearly impossible to identify its core area, of which there are many. The elimination of the cul-de-sac street system would further benefit the region's suburban areas, as they induce traffic congestion with their connections to arterial local, county and state roads. It is important to note that a policy that revamps the style of street systems is supplementary to the town center development policy. A grid style street system is more conducive to sustainability and the development of suburban town centers, as it promotes the concept of walkability. Street reconstruction and reconfiguration is another policy featured in the *New Visions* plan that could be implemented in either suburban or urban areas. It is a policy that works to "...reconstruct pavements, incorporate boulevard treatments, streetscaping..." in addition to sidewalks and street lighting (Capital District Transportation Committee 2011). Together, the street improvements encourage walking, bicycling and transit use. The twenty-year plan calls for improvements to occur on the scale of forty miles per year, with a total of 800 miles at a cost of \$2.4 billion.

Although critics may question major investment in policy initiatives focused on suburban areas, the unfortunate reality exists that suburban living will not rapidly disappear from the fabric of the Capital District. Therefore, it is imperative to invest in initiatives that will increase the sustainability of the suburban areas. At the same time, it is vital to limit the further spread of new suburban development, particularly

given the alarming statistics that show Saratoga County as the second fastest growing county in New York State. For suburban communities in Saratoga County that are experiencing high rates of growth such as Malta, these towns can be built better through policies that promote concentrated growth and the development of town centers.

The fact remains, however, that of the region's many assets, the most undervalued are its urban centers of Albany, Schenectady and Troy. Land use regulations therefore are not only needed in suburban areas, but the urban centers as well. Pietro Nivola believed that for this process to begin, "Municipal governments ought to cease centralizing commercial activity in downtowns and separating business from residential districts" (Nivola 1999, 77). In other words, Nivola supports the implementation of mixed-use development. Mixed-use development is adaptable as well to the urban environs, for not only does it encourage high-density development, but it also builds appealing, livable communities, which is a crucial element if people are to consider residing in an urban area. After all, the first step in making the urban areas vibrant again is to make them an enticing place to both work and live. Vacant buildings in downtown areas can be renovated into attractive residential spaces, where jobs, shopping, entertainment and recreational opportunities are a short distance away. Such short distances between destinations promote the use of sustainable transportation methods such as walking, bicycling or mass transit.

Additionally, it is important to replicate some of the features that made suburban areas attractive in the first place to add to the allure of urban areas. Thus, urban land use policy should set aside open space for parks and other green space, for

which masses of people originally left the suburbs in search of. It is important to consider the fact that high-density development can cause people to become suffocated within their surroundings. Urban living is enhanced and made more marketable with ample park space for which people exercise and gather socially to build a sense of community within neighborhoods. In the Capital District, a regional greenway program would further enhance sustainability. Such a policy initiative has already been proposed within the *New Visions* plan, where it calls for a “system of bike-hike trails connecting parks, natural areas, neighborhoods and retail areas” (Capital District Transportation Committee 2011). If implemented, a regional greenway would make the region more interconnected, particularly between the urban areas and its suburbs.

The aforementioned land-use initiatives would be a significant step forward towards achieving sustainability in the Capital District, making its urban areas more attractive living spaces and neutralizing suburban development. Ideally, it would also encourage many people living in the suburban areas to move back to the revitalized urban centers. As I mentioned earlier, however, suburban living will ultimately remain a part of the fabric of the Capital District, thus additional policies are necessary to mitigate the adverse impacts of commuter traffic. There is no question that when it comes to transportation choices within the region, for the majority of residents, the automobile is the only choice.

Many alternative transit options however, exist and they will have to be effectively marketed by agencies such as the CDTA. Regional residents, commuters especially, will also have to adjust to and utilize such options. When I first began this

study, I envisioned that new transportation policy within the region would be based around the implementation of a light rail network. Undoubtedly, it is a publicly appealing option, but it is currently an impractical form of mass transit in the Capital District. Jayme Lahut of the Schenectady Metroplex Authority and Todd Fabozzi of the CDRPC both concluded that cost-effectiveness for light-rail in the Capital District just does not exist. Lahut cited population density as the chief issue that would undermine the success of light-rail, for ridership would not be high enough to make it successful. Fabozzi raised the question of how it would be decided where the rail lines would be run and where the ridership would come from. Ultimately, Fabozzi and his fellow planning professionals within the Capital District have decided to invest in the expansion of Bus Rapid Transit or “BRT.” As the most promising mass transit option in the region, BRT is essentially an improved version of regular bus service. Although it does not sound overly appealing its proponents, such as Fabozzi cite its numerous advantages to other regional mass transit options. Fabozzi noted that, “buses have greater flexibility than fixed rail and feature GPS technology that alter traffic signals to expedite travel times” (Todd Fabozzi, interview by author, February 22, 2012).

Implementation of Bus Rapid Transit routes within the Capital District has already begun. The first BRT line, known as BusPlus, was established between downtown Schenectady and downtown Albany on the sixteen mile Route 5 corridor in 2011. On the BusPlus route, CDTA promotes how the number of stops are reduced by 80 percent and the overall travel time between destinations is reduced, namely through priority signal technology on traffic lights. CDTA intends to further expand

its BRT service on other heavily trafficked routes in the region. Currently, there is follow-up study on implementing BRT service on the Western Avenue corridor, which would serve from the suburban town of Guilderland to downtown Albany. Todd Fabozzi also informed me that CDTA is considering BRT along Interstate-87 and the Route 9 corridor, which would service Albany, Watervliet and Cohoes.

Certainly, the CDTA should expand its investment in BRT, for it is a promising mass transit option. As the *New Visions* plan explained, BRT “provides a flexible, sustainable transportation system for the region while improving access to jobs and education for many residents” (Capital District Transportation Committee 2011). In addition to its continued investment in BRT, the CDTA should be conscious of the social stigmas that revolve around bus transit. The majority of people who own automobiles would utilize them instead of taking mass transit to shop or work, due to the belief that bus systems are unreliable and unclean. Thus, CDTA should invest in a marketing campaign that promotes the overall benefits of BRT, such as its technology-enhanced reliability and the costs that riders would save.

Obviously, as people continue to live in the suburbs, there will also be a continued stream of commuters that utilize the extensive highway network in the region. Consequently, more transportation policies will have to be implemented to reduce congestion and the overall volume of traffic utilizing the highways. Currently, there are no high-occupancy vehicle or “HOV” lanes on any of the area’s highways, which would provide a travel lane to move more people faster and incentivize car-pooling instead of congestion-inducing single-occupancy vehicle travel. If such HOV lanes were implemented upon highways such as Interstate-87 and the section of

Interstate-90 between Albany and Schenectady, they would encourage car-pooling from the suburbs. The *New Visions* plan promoted a similar traffic lane policy called the “managed lane program.” In the plan, the policy was explained as “new expressway travel lanes that have their traffic flow managed” (Capital District Transportation Committee 2011). There would be high-occupancy toll lanes (HOT) where carpools would be able to bypass congestion, whereas a single-occupant vehicle would have to pay a fee. Aside from reducing traffic congestion, if implemented, the policy would encourage mass transit usage and carpooling.

Overall, there exists a bevy of policies that discourage automobile usage and subsidize alternative transit options. A variation on the HOT lanes would be the addition of a congestion fee on tolls during peak travel hours. A reduction in downtown parking spaces concurrent with rise in pay for parking prices would be another policy that could be tested to discourage automobile commutes and increase the ridership of the BRT system. Although, some people would be willing to pay extra for the convenience of having their own car, they would incur greater costs.

The most effective policy may not even exist from the above catalogue. Increased fuel prices that currently impact the United States force people to make more reasoned transportation choices, where taking the bus to work or the store is more feasible than using their automobile. Rising fuel prices are the best tool for raising public awareness about our everyday actions and how they impact sustainability. It is quite telling that one policy that was excluded from the *New Visions* plan for the Capital District was “major highway system construction.” The plan justified the exclusion as it stated, “such a ‘build our way out’ initiative would be

inconsistent with adopted regional and state congestion management policy” (Capital District Transportation Committee 2011). It further noted that such a policy was “...not consistent with encouraging sustainable, concentrated development” (Capital District Transportation Committee 2011).

Suburban sprawl can no longer be viewed as an acceptable form of development. It is clear that a large array of policies with great potential exist to tackle the problem. But, that does not mean that planning professionals should be satisfied, they must work exceptionally hard to have the policies implemented. Planners should also receive advanced training to be made aware of development flaws that promote sprawl, so that the profession will become more adept at vetoing sprawl inducing development projects. Planning Boards at the regional level, such as the CDRPC are integral to mitigating sprawl, particularly within New York State where there exists a large number of municipalities, which lead to inconsistent planning policies. The county governments within the Capital District must also work together on these issues, including reducing the use of automobiles. The policies are there, now all of the stakeholders; citizens, business leaders, and government officials must decide whether or not they are ready commit to regional sustainability.

CHAPTER FIVE: Conclusion

It is quite clear that the Capital District has great potential. Some of that potential has been realized, as the region has ascended to become one of the leading centers for technological development in the country. Subsequently, the expansion of the technological industry has drawn more people to the area. The most expansive technological development has been carried out by GlobalFoundries in the suburban Saratoga County town of Malta. This development highlights one area where the Capital District has thus far failed to reach its potential: sustainable land use and mitigating the propagation of suburban sprawl. Planning professionals within the region, such as Todd Fabozzi have long lamented this shortcoming. Fabozzi stated, “The Capital District still has the model for sustainable development, but its elements have been undermined” (Todd Fabozzi, interview by author, February 22, 2012). While I have proposed policies that would help the Capital District attain its potential in regional sustainability, there exist numerous barriers for the implementation of such policies.

Mainly, these barriers exist in cultural and political forms that need to be addressed. Chief among the continued reinforcement of these barriers to sustainability initiatives has been the automobile. Culturally, the automobile has been glorified in America since the turn of the twentieth century. Movies, music and advertisements past and present have reinforced the idea that the ultimate symbol of freedom in America is the automobile. Today, the legacy of owning an automobile has become so pervasive, that upon their sixteenth birthday, teenagers in America do not simply wish for a car alongside their driver’s license, they *expect* to receive one. Culturally,

the importance for the ownership of an automobile has unfortunately progressed as James Howard Kunstler asserted in *Home From Nowhere*, “by the mid-twentieth century, owning a car had become a prerequisite for first-class citizenship in the United States” (Kunstler 1996, 58). The fact that such sentiment has spread to future generations, such as my own, is alarming, particularly to the long-term prognosis of sustainability initiatives in the well-documented automobile dependency of the Capital District.

It is nearly impossible to convince politicians to sign onto regional sustainability policies that charge fees and overall discourage automobile usage. From the viewpoint of the general public, such policies go beyond an attack on their freedom; they attack the modern-day symbol of American freedom. As Michael Graetz explained in *The End of Energy*, “Most Americans don’t have or don’t like mass transit; we rely instead on our nation’s highway system. We are unwilling to give up our individual privacy and flexibility to car pool” (Graetz 2011, 172). Rather than make a potentially toxic political move to break the automobile culture with ambitious sustainability policies, politicians appease the automobile culture. Thus, every effort is made to protect the automobile and its related interests, as epitomized in two relatively recent issues: President Obama’s decision to “bailout” the American automobile industry during the financial crisis of 2008-2009 and quell people’s fears over rising gas prices. Although President Obama does not have direct control over gas prices, it is politically damaging to have rising gas prices since the American people overwhelmingly depend on the automobile.

For better or worse, most politicians are looking towards the next election and must focus on keeping their constituents happy. People are not receptive to pronounced change and that is why politicians balk at the implementation of such policies proposed in this thesis. The professional staff of the Capital District Regional Planning Commission (CDRPC), such as Todd Fabozzi, is all too familiar with political inaction. Twenty board members comprise the rest of the CDRPC and each is appointed through political connections, since each county legislature of the four counties in the Capital District selects its five representatives to the commission. Despite the complications that stem from various political connections, the CDRPC has created many policies that foster regional sustainability. But it is ultimately constrained by the fact that in New York State, planning commissions have no power to implement policy.

It is easier for politicians not to act on something when they can cite that the proper funding does not exist to implement policies, which further delays progress towards regional sustainability in the Capital District. Undoubtedly, such an initiative would require substantial capital investment and subsequently depend largely upon state and federal funding. For example, a policy that encourages commute alternatives would cost an estimated \$50 million over twenty years, according to the *New Visions* plan. Additionally, some of the larger scale initiatives such as a continued expansion of the Bus Rapid Transit service would cost an initial \$200 million in capital, with \$400 million set aside for its operation over twenty years (Capital District Transportation Committee 2011). Securing such funding from The State of New York at the present time is near impossible since the state government has cut the funding

of many programs as it continues to work its way out of a deep fiscal crisis. While some funding could most likely be secured from the federal government, it would not be significant enough to cover many of the policy initiatives.

Ultimately, the barriers to implementing regional sustainability are hardly insurmountable, but great patience is required for any great progress to be achieved. Today, such investments are avoided, as both state and federal legislators will not raise taxes to fund them. The investments will have to come at some point, however, as sustainability initiatives will not become any cheaper. Price tags on infrastructure improvements that promote carpooling and mass transit systems will continue to grow. Once it becomes imperative to act, the price will be that much greater, thus the time to act on suburban sprawl and begin sustainability initiatives is now as the New Visions plan stressed in the following passage:

If growth continues unchecked, the demand on the infrastructure will continue to be dispersed throughout the region, increasing maintenance and repair costs, while adding no improvement to mobility, recreation and economic vitality. On the other hand, investment in the transportation infrastructure today will payoff over the long term by increasing transit use, encouraging economic growth in urban areas, adding to our recreation inventory and preserving open spaces (Capital District Transportation Committee 2011).

Thus, despite the pattern of development that has been instilled within the Capital District for many decades, it is salvageable and with the proper commitment of time and capital, sustainability can be attained, further unlocking the region's potential to be economically and environmentally vibrant.

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