

2011 Assessment of Smart Growth in Austin, Texas

by

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Abstract

Smart Growth refers to a variety of goals focused on curbing urban sprawl throughout the world. Though it has the potential to resolve many of the current problems faced by American cities, Smart Growth has yet to be formalized into a coherent policy. In the United States, some cities have tried and succeeded but others have failed in developing sustainable Smart Growth practices.

In Austin, Texas, Smart Growth became a goal for future planning and was implemented in 1999 to create a “smarter,” more sustainable city. This research paper gauged the current implementation of Smart Growth practices with an emphasis on Partnerships, Development Models and Transportation. City planning and transportation documents were reviewed to measure Smart Growth goals against practical ideal types discussed in the existing scholarly research. The methodology used to assess Smart Growth practices in Austin was document analysis, direct observations, field research.

The research revealed that the City of Austin has met and exceeded expectations in the sub-categories of Non-Profit Advocacy Groups, Intergovernmental Agreements, Business Entitlement Programs, Traditional Neighborhood Design, Transit-Oriented Development and Value-Added Services. The only sub-category failing to meet expectations of Smart Growth practices in this research was Transit Reorientation.

Recommendations made to improve all sub-categories to exceed expectations would be to empower citizens by providing an advisory chair on final decisions, providing a mass transit liaison at major transit centers to improve customer satisfaction and creating more amenities to improve rider experience on public transportation.

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Chapter I: Introduction

Smart Growth is a term used to describe a large set of new theories on how development should move forward in the 21st century. The concept emerged in response to the trend of outward development – also known as urban sprawl-- in cities throughout the United States. Many cities in the United States have transformed from centralized communities with city centers that provided everything a citizen might need to fragmented or sprawling developments where a person would need some form of motorized transportation to get the essentials for everyday living (Canby 2003, 26). Sprawling development allowed middle class families to experience the luxury of living away from the fast-paced life of the inner city (Robinson, Newell, and Marzluff 2005, 51).

After years of urban sprawl, cities throughout the United States (US) have started to realize the effect this type of development has on its urban areas and infrastructure. Despite efforts to curb sprawl, Americans have not contributed to the solution, because families are still “wanting the ‘American dream’, namely a single-family detached home” (Peiser 2001, 280).

One major problem with sprawl is a practice developers use known as “leapfrog,” or scattered development. This type of development causes the production of inefficient infrastructures and costs cities more taxpayer money “because utilities and roads must extend across greater distances” (Peiser 2001, 280). In many regions throughout the US, localities compete for expansion property in order to create a larger tax base to produce larger revenue streams for the local government (Daniels 2001, 273). This competition exacerbates urban sprawl because the majority of the expansion is created in the outer boundaries of the city.

Sprawl has also contributed to adverse effects in cities, such as the abandonment of impoverished families in city centers, the creation of low performing inner-city schools due to

decreases in the tax base and traffic congestion, which creates “environmental degradation and the loss of open space” (Katz 2000, 68).

Smart Growth is a set of strategies that aim to reverse the negative effects of urban sprawl. Smart Growth goals include: “better coordinated planning with input from the public, providing multiple transportation and housing choices, providing green space to make communities more attractive and using mixed use development and infill strategies” (Miller and Hoel 2002, 5). These goals are very broad but leave cities with enough flexibility to fit their specific needs.

A coordinated plan should include community planning with direct input from citizens to help decision makers better understand the needs of the effected community. It could also include an advisory task force with community members who are more informed about development practices in their community, such as neighborhood association members, community leaders and citizens who may have a background in neighborhood planning. Soliciting public input and community cooperation is essential to generating a favorable response to Smart Growth development within a neighborhood community, and can ensure sustainability in the plans set forth by the city government (Jennings 2004, 31).

Multiple transportation methods are also essential for Smart Growth development. One of the key elements of Smart Growth is reducing the need for single occupancy automobile transportation and creating a friendly atmosphere for alternative methods of transportation, such as mass transit, bicycling and walking. Moving toward the goal of a more pedestrian-friendly environment with different types of alternative transportation can help move a city closer to becoming Smart Growth oriented. This would also encourage city planners to create designs for more compact use and help revitalize decaying urban areas through new infill strategies.

Creating a better environment with more green space, better mixed-use development and infill strategies can move a city toward creating a more compact environment. The outward growth of US cities has caused many areas in urban centers to go unused, and Smart Growth encourages the revitalization of downtown areas that have been deserted. These infill strategies which include brownfields are areas of “land and structures that are known to be contaminated or perceived to be contaminated that are underutilized or not used” (Greenberg et al 2001, 130). Concerns about contamination have driven people away from redeveloping these areas because of the financial liability a company may incur in order to make these areas environmentally safe for redevelopment. The key solution is to have city officials encourage this redevelopment by providing assistance. As described by Greenberg, “Decontaminating brownfields reduces community health risk and creates opportunities for redevelopment activities that will bring jobs, ratables, housing and open space opportunities to communities that badly need them” (Greenberg et al. 2001, 130). Redeveloping run-down areas, creating green space, and creating mixed-use facilities for easy and convenient access to city living could create incentives that draw families from the suburbs back to live in the revitalized Smart Growth city.

Although Smart Growth is an appealing alternative to sprawl, there are some criticisms. Smart Growth plans must survive political change and challenges to be a sustained alternative, and as such, the development and implementation of Smart Growth goals can be haphazard or incomplete.

Also, entrenched policies promoting more development and more roads may also hinder the progress Smart Growth may make in many cities throughout the US. Over the past fifty years, transportation policies and outward growth have been main focal points of US cities, and this has allowed more room for businesses and increased tax bases for municipalities (Pollard 2001, 12). Resistance toward changing policies to allow for Smart Growth planning is also

apparent among transportation and developer interest groups. The current regulations encourage sprawl, which encourages more growth and more highways. This form of city growth is very profitable for the business sector, and trying to alter current policies to reduce this outward development could prove difficult for any politician seeking election (Pollard 2000, 12).

Another concern is a shift in political priorities could completely thwart any progress that may have been made. In addition, smart growth practices can lose credibility when sprawling development continues even after compact development plans have been made (Ben-Zadok 2009, 382).

Furthermore, Smart Growth can create a barrier within city government because it often requires the implementation of mandatory measures, and this causes division among the different interests in the community (Miller and Hoel 2002, 8). These interests can include citizens, businesses and even the local government, who may all have different ideas about what is best for the city. All may have legitimate reasons for suggesting a certain type of Smart Growth, but everyone also will have criticisms of the other interested parties.

Another unintended but potentially adverse consequence of Smart Growth is gentrification, as inner city housing becomes more valuable and affordable housing for low income families more scarce (Miller and Hoel 2002, 11). Gentrification is defined as “the process of renewal and rebuilding accompanying the influx of middle-class or affluent people into deteriorating areas that often displaces poorer residents” (Webster’s). Smart Growth focuses on urban cores and these “rediscovered and revitalized neighborhoods are priced well beyond the economic reach of longtime residents” (Bullard 2007, 3).

These unintended consequences of Smart Growth have affected cities across the country and have created a larger division between community leaders, environmental activists and neighborhood associations who support Smart Growth policy changes and the developers and

businesses who encourage outward growth for the sake of profitability. Concerns about rapid growth and congestion problems are prevalent in many Sun-Belt cities in the United States, including Austin, Texas. The population has continued to shift to the southern half of the US and some cities like Austin have worked to decrease urban sprawl by implementing Smart Growth practices.

The Case of Austin, Texas

In Austin, Smart Growth planning was initiated by Mayor Kirk Watson in 1998. Mayor Watson advocated Smart Growth planning to make Austin a more environmentally conscious city, along the lines of cities like Portland, Oregon and San Francisco, California.

Application of Smart Growth to a Texas city proved to be a challenge for the local government. Given the amount of open land in Texas, it is difficult to convince developers that their best options for development are in the inner-city, where the tax rates are higher and planning can be complicated by the need to remove current infrastructure. Mayor Watson advocated incentives for inner city development by suggesting tax incentives and expedited building approval for Smart Growth development in the central business district (Adams). In 1998, the City of Austin Smart Growth Initiative was adopted by the Austin City Council based largely on recommendations made by a citizens planning committee that was formed three years prior to address planning policy changes in Austin (Adams).

In order for a Smart Growth planning process to be effective and sustainable, it must include Partnerships, Smart Growth Development Models and Transportation methods that directly relate to the objectives of Smart Growth strategies. These Partnerships must include Non-Profit Advocacy Groups, Intergovernmental Agreements and Business Entitlement Programs. The Development Models needed are Traditional Neighborhood Design and Transit-Oriented Development. The Transportation methods needed are Transit Reorientation and

Value-Added Services. With these three main categories in place, Smart Growth can be a viable alternative to past growth patterns and can help Austin provide the framework for other cities throughout the US to follow.

Research Purpose

This paper presents a practical ideal type for the elements of Smart Growth. A practical ideal type provides “benchmarks and/or best practices that enable the manager/researcher to understand (and improve) reality” (Shields and Tajalli 2005, 28). The conceptual framework is the map that navigates the research through experience and within reality (Shields and Tajalli 2005, 7). This paper consists of three major sections. First, I reviewed the literature on Smart Growth planning in order to develop an ideal model for Smart Growth policies. Secondly, I gauged Austin’s recent practices against the practical ideal model. Third, I used this research to recommend improvements for current and future Smart Growth policy implementation. The purpose of this project was to gauge Smart Growth in Austin using the practical ideal type categories of Partnerships, Development Models and Transportation.

The Partnerships section explains the effects that Non-Profit Advocacy Groups, Intergovernmental Agreements, and Business Entitlement Programs have on Smart Growth development. Second, I explain some of the major Development Models being used in Smart Growth development, including Traditional Neighborhood Design and Transit Oriented Development. Third, the Transportation section explains methods used to improve transit in a Smart Growth setting, including Transit Reorientation and Value-Added Services in Smart Growth development.

Chapter Summaries

Chapter II reviews the scholarly literature on Smart Growth and develops a practical ideal type model to gauge the research purpose. Chapter III addresses the research methodology of this project and details the criteria used to gauge Smart Growth practices in Austin. Chapter IV explains the results of this research. Chapter V summarizes the findings and offer suggestions for future Smart Growth policies for the City of Austin.

Chapter II: Literature Review

The purpose of this chapter is to review the literature associated with Smart Growth planning practices and identify the practical ideal type elements. This chapter begins by defining the practical ideal type elements needed for effective Smart Growth planning and providing the supporting literature used to develop the conceptual framework for this research.

This research is necessary for the City of Austin because of the constant sprawling development that takes place in every city in Texas. Austin, Texas has attempted to revert to a traditional, centrally-focused city, and the existing literature on the subject offers a helpful framework for gauging Smart Growth in Austin.

Partnerships

Smart Growth Partnerships need to include groups that create a sense of regional cooperation, such as Non-Profit Advocacy Groups such as homeowners associations who advocate for social justice and preserving open space, the Capitol Area Metropolitan Planning Organization (CAMPO)—which promotes Smart Growth transportation development in the Austin metro area, and business organizations that are willing to accept government incentives to develop smarter growth for the good of the community (Downs 2003, 5). Incentives can include tax incentives, fee waivers and expedited reviews.

Non-Profit Advocacy Groups

Non-Profit Advocacy Groups can be local—such as a homeowners association or a community task force or more expansive with a larger member base, such as Smart Growth America or Envision Central Texas. Lenahan O’Connell, (as cited in Clark and Goetz 1994), found that anti-growth and Smart Growth groups were created in 26% of the cities studied (O’Connell 2009, 282). The make-up of Smart Growth supporters was as follows: 57% were

local politicians, 53% were environmental groups, 45% were Smart Growth groups and 44% were neighborhood associations (O'Connell 2009, 285). These statistics show that support for Smart Growth progress starts with local involvement and persists through community involvement. Smart Growth groups focus on improving their community by preserving the natural environment and encouraging smarter development (Vogel and Swanson 1989, 73). Cities influenced by Smart Growth groups include: Santa Barbara, California, Gainesville, Florida, Boulder, Colorado, and San Francisco, California (Burbank, Heying, and Andranovich 2000, 337).

Groups on the national level also focus on informing the public but possess a little more political clout because they have a larger member base and a broader understanding of the different methods of Smart Growth development. An example of a national Non-Profit Advocacy Group is Smart Growth America (SGA). SGA is a coalition of local and regional organizations with the main goals of creating livable neighborhoods, maintaining open space, and improving shared benefits in order to eliminate racial and economic divides that plague urban centers today (Ye, Mandpe and Meyer 2005, 305). SGA consists of nearly 100 Smart Growth organizations that communicate Smart Growth strategies to its member organizations for the sake of maintaining consistent goals. SGA focuses on the importance of local involvement in moving forward with a Smart Growth agenda in each member city. These groups form in order to give citizens concerned about development a unified voice, demonstrating to local government that these citizens are organized and ready to be a part of the process. The practical ideal type category of Non-Profit Advocacy Group partnerships focuses on the level of involvement that the city of Austin has from citizens and advocacy groups, particularly the type of involvement that the city of Austin requires to move forward with Smart Growth plans.

Given the large number of non-profit advocacy groups promoting Smart Growth throughout the US, the focus on Smart Growth shifts to regional governments and the partnerships they have developed to answer the citizens' call for smarter growth.¹

Intergovernmental Agreements

Intergovernmental Agreements are essential for creating an appropriate plan that will benefit the greater good. These agreements are set by state and regional agencies coming together to manage future development without straining current infrastructures.

While most land management policies throughout the U.S. are formulated by local governments, regional and state level agreements are actually the most important factor in producing a legitimate Smart Growth plan (Downs 2005, 369). Downs states, "separate [growth] limits adopted by individual localities will just spread sprawl farther" (Downs 2001, 21). "Regional agencies have been created to manage growth and protect open space on a larger scale and coordinate the fragmented efforts of individual municipalities and counties" (Bengston, Fletcher and Nelson 2004, 272).

Cooperation between municipalities and counties can produce ideal Smart Growth policies such as urban growth boundaries and regional mass transit systems. Portland, Oregon is a prime example of regional cooperation with its existing Urban Growth Boundary (UGB) and mass transit agency that covers a three-county region. Martha Bianco states, "Regional agencies served as the formulators and implementers of rational, progressive policy" (Bianco 2001, 109). As of 2002, Portland had the nation's only regional governing system, known as Portland Metro, and it has been demonstrably effective in implementing Smart Growth policies for the entire region (Gibson and Abbott 2002, 430). Portland Metro may have been effective in creating an

¹ For more information on community involvement in the planning process in Austin, Texas see the following citation in bibliography: Johnson (2008)

Urban Growth Boundary around a three-county region because it has the authority to require the municipalities in their region to mesh their land use plans with the region (Gibson and Abbott 2002, 430).

Some states have reduced regulations and increased incentives for local governments to participate in Smart Growth plans. Financial incentives are given to reduce enforcement while fostering cooperation and coordination among the local and state governments. States that have incorporated incentive provisions to encourage Smart Growth activity are: Hawaii, Vermont, Maine, Rhode Island, Georgia, Maryland and Tennessee (Zovanyi 2007, 383). Coordination among regional governments has the power to control sprawl through the adoption of regional transportation plans, but these regional plans must be more than just a recommendation. The practical ideal type assessed is the collaboration and implementation of a regional plan within the central Texas area.

Business Entitlement Programs

Businesses and developers play an essential part in Smart Growth planning. Problems arise with the cost of building in central locations, the cost of renting space, and the taxes that are paid while working in a central area of a city. In order to offset costs, cities such as Austin, Texas have implemented incentives to entice private developers and businesses to work within their Smart Growth initiative (Adams and Gerard 2000, 31). Some of the incentives included expedited reviews, development fee waivers and tax incentives (Adams and Gerard 2000, 31).

Expedited reviews create a “fast track” method for developers who are willing to provide development that focuses on Smart Growth principles. If developers can show they are following Smart Growth principles, then the City of Austin will make sure that the development is moved right along to the proper departments to allow for faster approval and quicker development of these facilities (Adams and Gerard 2000, 31).

There are two types of incentives that are available to Traditional Neighborhood Design (TND) and Transit-Oriented Development (TOD) projects located in the Desired Development Zone (DDZ) in Austin. One incentive that can be given is a development fee waiver². The fee waivers will offset the initial cost for development and provide the developers with a reason to build in the DDZ. The second incentive that can be given is a tax incentive. This incentive could be negotiated into a development project contract and would state that after the facilities have been built, the developer would get some percentage of local sales tax back in rebates (Adams and Gerard 2000, 31). These incentives are examples of Business Entitlement Programs that entice developers back to the DDZ.

Lorentz and Shaw (2000) state that if developers are willing to be screened and meet the requirements of Smart Growth plans, then the developers should receive incentives like development fee waivers (Lorentz and Shaw 2000, 7). Many other authors have also concluded that building and tax incentives³ are excellent tools for encouraging the private sector to share the goals of Smart Growth initiatives (Dowling 2000, 881; Zovanyi 2007, 379; Krueger and Gibbs 2008, 1271).

Large business organizations agree that development should be more compact and focus on the revitalization of urban centers. One major development organization, The National Association of Home Builders (NAHB) believes in the reforms that are taking shape throughout the US. Outlined in their “Smarter Growth Policy,” NAHB believes in improvements to current developments and the creation of more mixed-use and compact neighborhoods in order to combat the negative effects of sprawl (National 2009). In addition, NAHB is focused on increasing energy efficiency and environmentally safe development using recycled resources for

² For more information on incentives for S.M.A.R.T. Housing in Austin, Texas see the following citation in bibliography Lewis (2007).

³ For information on the benefits and consequences that tax and development incentives have on city budgets see the following citation in bibliography De La Cerda (2010).

construction in the US. However, the organization does not want to accomplish these at the expense of creating congestion in current neighborhoods (National 2009).

The practical ideal type for Business Entitlement Programs focuses on expedited reviews, fee waivers and tax incentives for businesses that contribute to the Smart Growth developments of Traditional Neighborhood Design and Transit-Oriented Development in Austin.

All three partnerships of Non-Profit Advocacy Groups, Intergovernmental Agreements, and Business Entitlement Programs are important to the actual implementation and development of a Smart Growth plan. The Non-Profit Advocacy Groups begin the discussion on creating a Smart Growth plan. Then Intergovernmental Agreement participating parties assess growth in regions and create proper transportation and development plans to influence Smart Growth. Then the business sector helps construct the infrastructure needed in desired areas of the city through Business Entitlements provided by the city. These developers are responsible for making sure that these developments fall under categories such as Traditional Neighborhood Design or Transit-Oriented Development.

Development Models

There are many different ways to develop a city, but only certain styles can properly promote a Smart Growth initiative. Current zoning regulations in the US are focused on separating areas into commercial, residential and industrial uses. The Smart Growth trend is to create mixed-use neighborhoods in order to promote self-sufficiency and reduce traffic congestion. Ninety-two percent of US cities use zoning to create single use land development (Hirt 2007, 439). This type of plan has led to the current trend of sprawl, excess automobile pollution, and in some instances has had a negative impact on the aesthetics of a city. These zoning codes have regulations that may prohibit some of the more memorable and recognizable sights in cities, such as balconies, front porches and sidewalk dining (Busha 2010, 2). Zoning

boards grew concerned with mixed-use land development because of the possibility of developing industrial facilities near residential neighborhoods. This type of mixed-use development could be hazardous to the health of local residents, but the regulations were written in a way that would also eliminate some more memorable sights as discussed by Busha.

This section discusses two Development Models that have been used in Smart Growth plans: Traditional Neighborhood Design and Transit-Oriented Development. These models have similar goals for developing mixed use properties, promoting livable communities, and creating multi-modal transportation options. Each has distinct features, distinguishing their designs from the others to suit the city's geography, needs, and challenges. Some cities may be surrounded by open space, bordering a body of water, or completely landlocked. This section discusses two major Development Models and the impact they have had on communities similar to Austin.

Traditional Neighborhood Design

Traditional Neighborhood Design is a planning process that involves re-creating cities to mimic the small towns of New England that once provided all the essentials for a community (Plaut and Boarnet 2003, 255). Creating self-sufficient neighborhoods within a city is the key factor of Traditional Neighborhood Design. Traditional Neighborhood Design, also known as, "Urban Core" (Song and Quercia 2008, 4) or "Diverse" (Wheeler 2003, 328) development is concerned with revitalizing areas in city centers and fostering a mixed-use of land without the typical suburban, monotonous design throughout. In Smart Growth, one of the main objectives is to create "good urban form," which means developing neighborhoods that are "compact, diverse and walkable" (Talen 2005, 207).

Traditional Neighborhood Design is developed in a new or existing area by preserving open space and creating a more densely-populated neighborhood. Traffic calmed streets and

‘urban oases’ are features that may appeal to residents in this type of urban design community (Alexander and Tomalty 2002, 404). According to Pollard, “traditional neighborhood patterns would preserve more than eight times as much open space than would a conventional suburban pattern, while providing the same number of residential units and the same amount of commercial and industrial space” (Pollard 2001, 12).

Cities are starting to reshape their zoning ordinances to reduce or eliminate current urban expansion trends. Novi, Michigan has started to focus its attention on Traditional Neighborhood Design. The fastest growing city in Michigan, Novi is developing planning strategies to combat sprawl and create a self-sufficient city where residential, commercial, and entertainment districts can prosper in the same densely-populated space. Novi is also focused on trying to eliminate vehicular-oriented commercial land use by discouraging development of car washes, gas stations and other vehicle necessary businesses that may impede on pedestrian-oriented design (Wolshon and Wahl 1999, 5).

Another positive effect of Traditional Neighborhood Design is the availability of open space. By preserving open space for the community through compact development, a community prevents neighboring development and provides a scenic view for the individuals who live in the community (Irwin and Bockstael 2004, 721). These initiatives are preparing cities to meet the goals of Traditional Neighborhood Design.

The practical ideal type integrates mixed-used components of residential, retail, commercial and open space in the city of Austin.

Transit Oriented Development

Transit-Oriented Development (TOD) is the term given to development focusing on multi-modal transportation. This planning style can either focus on bus systems or rail lines. This literature review includes both types of TODs and discusses bicycle and pedestrian access within these TOD areas.

Rail TOD is a “high density, mixed-use development around a [rail] transit station” (Luscher 1995, 57). TOD is more effective when the transit stop is no more than one-half mile away from the rider’s place of business or residence (Luscher 1995, 58). Also, Rail TOD should focus on residential units within a 2,000 foot radius and should devote 35% of the area to residential dwelling units (Luscher 1995, 58). If transit stops and residences are any further apart, individuals would be discouraged from riding public transit (Lund, Willson and Cervero 2006, 251). This type of development also needs to provide easy journey continuation, such as accessible bike lanes and/or easy connections to bus lines.

Work trips by public transportation, bicycling, or walking declined by 13.4% from 1990 to 2000, while single-occupant vehicles accounted for 76% of work trips in 2000 (Canby 2003, 26). TOD should have higher density mixed-use buildings that are closer to transit stops and lower density buildings further from the transit centers. The TOD system in the San Francisco Bay Area consists of 40 transit agencies, 9 county governments, and 100 municipal governments. With a fleet of 668 trains and 104 miles of track, the BART system provided an estimated 60 million vehicle miles in 2003 alone (Renne 2009, 3). Other examples of Rail TOD cities are San Diego, California, Dallas, Texas, and Portland, Oregon (Shelton and Lo 2003, 46).

Bus systems are equally important in a successful TOD. Bus TODs have the same recommendations as Rail TODs but with a focus on creating park-and-ride facilities in residential areas. Seattle has developed two bus transit centers, The Overlake Transit Center and

the Renton Transit Center. Both transit villages converted old park-and-ride facilities into affordable multi-family housing and mixed-use buildings with parking garages, services, shopping and employment (Shelton and Lo 2003, 47-48). These facilities help transition large open spaces used primarily for park-and-ride centers into functional multi-purpose facilities.

A survey conducted by Hollie Lund of residents in San Diego, the San Francisco Bay Area, and Los Angeles (2006) discovered that the three most important factors drawing people to TOD were quality of housing, cost of housing, and the quality of the neighborhood (Lund 2006, 360). The Bay Area also ranked proximity to transit as an important factor.

Bicycle and pedestrian access are other forms of non-motorized transportation used in Smart Growth planning to increase community interaction, decrease crime and promote healthier lifestyles. They are also essential for reducing vehicular transportation, traffic congestion and pollution.

Bicycle access is important in Smart Growth plans aiming to reduce vehicular transportation, but some cities don't require bicycle or pedestrian access in zoning ordinances (Canby 2003, 27). There are many communities that try to create perceived bicycle access, but in actuality, many factors have discouraged residents from using bicycles as a form of transportation. Akar and Clifton (2009) state: "some of the most important aspects deterring individuals from riding bikes would be the level of automobile traffic, discontinuities of on-street bicycle lanes, and parking after the discontinuities"(Akar and Clifton 2009, 166). Even with some discomfort, many still take to the road and use bicycles as their primary mode of transportation. Some accommodations that could promote cycling are: advanced green lights allowing riders to start ahead of automobile traffic, bicycle lane continuation to urban centers,

cyclist priority streets, and off-road bicycle trails that lead to main arterials of the city (Akar and Clifton 2009, 165)⁴.

US cities can learn about effective bicycle facilities and infrastructure by studying cities in Canada. “Canadian cities average almost three times as many kilometers of bike paths and lanes per capita as American cities sampled (45.7 vs. 17.4 km)” (Pucher and Buehler 2006, 272). Toronto is an excellent example of a bike-friendly city. Toronto has over 15,000 bicycle parking spaces throughout the city and is adding 1,000 new bike racks each year (Pucher and Buehler 2006). Chicago is the only city in the US that has made efforts to accommodate cycling as a mode of transportation, installing 9,200 bike racks on sidewalks throughout the city (Pucher and Buehler 2006).

A walkable community is another example of non-motorized transportation. When a community is walkable and has necessary commercial, retail and urban space, residents are more likely to avoid vehicle use. This also creates more interaction among community residents (Lund 2003, 414). Neighborhoods in city areas that are densely-populated are more likely to be accessed by walking rather than using a vehicle. Leslie et al. (2007) assume that safe, attractive, closely-located and clearly-defined walking areas will motivate individuals to use walking as a form of transportation in communities (Leslie et al. 2007, 119).

Walking can also promote a healthy lifestyle among community residents. According to Cutts et al. (2009), youth populations that have lower access to parks and walkable areas are more likely to be obese and have increased health risks (Cutts et al. 2009, 1320). Such issues have become an increasing concern, and walkable areas with open space can create an active community.

⁴ For more information on bicycle issues in Austin, Texas see the following citation in bibliography Marlin (2008).

Another reason to have fully developed pedestrian access areas is that it seems to positively affect crime prevention. More interaction between residents and increases in pedestrian activity will likely deter illegal activity in a neighborhood (Haughey 2005, 21). Examples of cities that have noticed a significant decrease in crime after making park space more pedestrian friendly are: San Antonio, Texas and Atlanta, Georgia (Harnik and Welle 2008, 26).

If properly developed, TOD can play a major role in Smart Growth initiatives by promoting a reduction in traffic congestion and emphasizing the importance and convenience of using alternative forms of transportation. While other factors are included in the development of TODs, this research specifically gauges the use of multi-modal transportation methods within the City of Austin.

The practical ideal type assessed recognizes properties throughout Austin labeled Transit Oriented Developments and to see if each TOD includes rail, bus, bicycle and pedestrian access in close proximity to the residential property designated as the TOD center.

Transportation

Governments constantly try to find ways to improve transportation, and the focus tends to be on improving roadways. “The continued assumption that simply building more highway capacity with marginal attention to transit and non-motorized options will fix the problem is not likely to be a formula for success” (Canby 2003, 27). Reducing vehicle-miles-traveled is an important part of Smart Growth development. Examples of vehicle-miles-traveled reduction plans are improving transit service, providing well-connected streets, and promoting bicycling and walking (Voigt and McCombs 2010, 40). In order to promote reduced vehicle-miles-traveled in Smart Growth transportation plans, planners and government officials must look at two areas: Transit Reorientation, and Value-Added Services for riders.

Transit Reorientation

Transit Reorientation is described as, “emphasizing intermodalism and nonmotorized forms of transportation. Intermodalism advocates creating connections between and among different transportation modes to enhance overall mobility options” (Zovanyi 2007, 378). Since automobile use is the main form of transportation used by most individuals in the US, it is safe to assume that a growing number of US citizens have a decreased knowledge of public transportation. In order to create new ridership on mass transit, city and regional governments must find ways to reach out to the communities and show that mass transit can actually be cost-effective.

One way to reorient the community to mass transit is to produce a form of transportation that can potentially be preferable to automobile travel. For example, light or urban rail can provide faster service to central business districts. The Bay Area Rapid Transit (BART) system is a good example of the effectiveness of mass transit on a region. In order for people to become open to reorientation, some key factors must be acknowledged: the rail system must connect to urban centers, local transit must be available at every transit stop, and the transit must be frequent, comfortable and faster than vehicular travel (Barnett 2007, 27).

Light rail systems can provide faster travel times, but their connectivity and frequency are major constraints in increasing ridership. “BART’s superior level of regional connectivity, more extensive mid-day operations, and greater station amenities,” have proven to increase ridership versus a similar light rail system with less frequency of travel (Cervero 2006 291-292). In order to increase ridership, the transit system must be favorable to the general population.

Another component to proper Transit Reorientation is providing an efficient bus system that reaches most areas of the city. Buses may not be able to go down every street, but access to stops and stations must be convenient for riders, and routes have to be frequent and efficient

(Bochner et al. 2003, 30). Efficient mass transit can guarantee that riders will arrive on time or early at their designated stops.

If efficient stops are provided, people may be more willing to become reoriented to their local transit system. Mass transit systems are often a method of travel for long journeys and commutes between suburban and outlying urban areas to the major areas of the city. The practical ideal type assessed focuses on the efficiency and the overall satisfaction of current ridership with the bus and rail system in the City of Austin.

Value-Added Services

Value-Added Services are the tangible features provided to the mass transit commuter. These services are used as incentives for single-occupancy vehicle users to change their mode of transportation to a more eco-friendly alternative. Mass transit can sometimes be seen as a hassle, but Value-Added Services are implemented to alleviate the anxiety some people have about riding public transportation. As described in the Transit-Oriented Development section of this paper, proximity to a service station is essential to increasing ridership, but convenient locations and safe stops and transit areas are also important factors (Murray and Wu 2003, 95).

Park-and-ride services are described as “free, paved parking lots where commuters leave their cars and change modes to some form of mass transit” (Horner and Grubestic 2001, 58). Park-and-ride services should be considered a community asset because they reduce traffic congestion, decrease pollution, and offer convenience to individuals.

Individuals considering mass transit may also value amenities that make their commute more comfortable. Moreover, increasing the accessibility of information about schedules and fares is a critical service to help current riders and welcome new riders to mass transit (Pucher and Buehler 2006, 273). Other incentives that may entice new riders are covered waiting areas, off street loading and unloading, passenger information, lighting, real-time next bus arrival

information, bus pre-board ticket vending machines, vending machines (non-ticket), concession sales space similar to a convenience store, park-and-ride centers, video information explaining rules and procedures for bus rides, ticket sales office, next bus arrival information indicating the next bus to enter the transit center, restrooms and temperature-controlled enclosed waiting areas (Volinski and Page 2004, 81). These amenities were observed in a study of transit centers throughout the US by the Florida Department of Transportation. The study was done to provide examples of amenities that have enhanced the commute for riders of mass transit in their respective cities.

Transit centers with park-and-ride services and amenities are just a few Value-Added Services that are suggested in the readings. From the numerous sources cited throughout this paper, it seems that there are many more services that could enhance the mass transit rider experience. The more cities are willing to implement mass transit Value-Added Services, the greater the possibility of ridership in future years.

The practical ideal type assessed focuses on the amenities the city provides at transit centers. The amenities observed were covered waiting areas, off street loading and unloading, passenger information, lighting, real-time next bus arrival, ticket vending machines, vending machines (non-ticket), concession sales space, park-and-rides, video information, ticket sales office, next bus arrival information, restrooms and temperature-controlled enclosed waiting areas⁵.

Conclusion

Urban sprawl has had multiple negative effects on the environment, on cities, and on the people in those cities due to lack of proper planning methods. As advocacy groups, local

⁵ For more information on gauging Value-Added Services in Mass Transit see the following citation in bibliography Schacherl (2008)

governments, and developers have begun to realize the strain sprawling developments have caused, partnerships have formed to try and reverse the trend of unsustainable growth. Planners have created development and design methods that have proven effective in creating Smart Growth communities, and the focus for development is now shifting to providing self-sufficient communities in the form of Traditional Neighborhood Design and Transit-Oriented Development in order to reduce dependence on the automobile.

Smart Growth also incorporates the use of mass transit through new, efficient, and frequent transit systems. Communities have been shown to respond positively to efficient transit systems such as light rail, but people also need to become reoriented to multi-modal transportation methods. Value-Added Services that provide simple, safe and convenient amenities at transit stops can help make residents in a community more open to mass transit.

Conceptual Framework

The existing literature on Smart Growth strategies identifies these focus areas, which informed the development of my practical ideal type and helped gauge how these elements are being used in the Austin area.

Table 2.1 Conceptual Framework for Key Smart Growth Elements shows the categories gathered from Smart Growth research and justifies those categories through supporting literature.

Table 2.1 Conceptual Framework of Key Smart Growth Elements

Practical Ideal Type Components	Sources
Partnerships	
<ul style="list-style-type: none"> • Non-Profit Advocacy Groups 	Burbank, Heying and Andranovich 2000; O’Connell 2009; Ye, Mandpe and Meyer 2005; Vogel and Swanson 1989
<ul style="list-style-type: none"> • Intergovernmental Agreements 	Bengston, Fletcher and Nelson 2004; Bianco 2001; Downs 2001; Downs 2005; Gibson and Abbott 2002; Zovanyi 2007

<ul style="list-style-type: none"> • Business Entitlement Programs 	Adams and Gerard 2000; Dowling 2000; Krueger and Gibbs 2008; Lorentz and Shaw 2000; National 2009; Zovanyi 2007
Development Models	
<ul style="list-style-type: none"> • Traditional Neighborhood Design 	Alexander and Tomalty 2002; Irwin and Bockstael 2004; Plaut and Boarnet 2003; Pollard 2001; Song and Quercia 2008; Talen 2005; Wheeler 2003; Wolshon and Wahl 1999
<ul style="list-style-type: none"> • Transit-Oriented Development 	Akar and Clifton 2009; Canby 2003; Cutts et al. 2009; Harnik and Welle 2008; Haughey 2005; Leslie et al. 2007; Lund 2003; Lund 2006; Lund, Willson and Cervero 2006; Luscher 1995; Pucher and Buehler 2006; Renne 2009; Shelton and Lo 2003
Transportation	
<ul style="list-style-type: none"> • Transit Reorientation 	Barnett 2007; Bochner et al. 2000; Cervero 2006; Zovanyi 2007
<ul style="list-style-type: none"> • Value-Added Services 	Horner and Grubestic 2001; Murray and Wu 2003; Pucher and Buehler 2006; Volinski and Page 2004

Chapter III: Methodology

The purpose of this research project was to gauge Smart Growth in Austin using the conceptual framework and the practical ideal type categories outlined in Chapters Two and Three. The three categories to be gauged included Partnerships, Development Models and Transportation methods. Partnerships for successful Smart Growth planning must include Non-Profit Advocacy Groups and Intergovernmental Agreements. Furthermore, planning must include incentives for the Business sector, known as Business Entitlement Programs. Next, Smart Growth Development Models such as Traditional Neighborhood Design and Transit-Oriented Development must be included to create a more compact and transit-oriented city. Lastly, Transportation methods focusing on increasing mass transit ridership and including alternative methods of transportation need to be included in order to implement successful Smart Growth planning. These Transportation methods are known as Transit Reorientation and Value-Added Services. The three categories of the practical ideal model were used to collect and sort information from publicly available documents in order to gauge Smart Growth progress in the City of Austin.

Table 3.1 on page 38 operationalizes each sub-category in the conceptual framework. This table indicates the research method, evidence and sources used for every sub-category for this project.

Table 3.2 on page 45 shows the three assessment criteria that will be used to gauge Smart Growth in Austin: “Fails to Meet Expectations,” “Meets Expectations” and “Exceeds Expectations.” The “Fails to Meet Expectations” criterion was given to the sub-categories that have not been successful in reaching the standards for Smart Growth. The “Meets Expectations” criterion was given to the sub-categories that have been successful in reaching the standards for Smart Growth. The “Exceeds Expectations” criterion was given to the sub-categories that have

exceeded the standards for Smart Growth. In order to gauge the sub-categories in the conceptual framework, three methods were used to gather research, document analysis, and direct observation and field research.

Document Analysis

The practical ideal type categories were gauged using document analysis and other archival data from the City of Austin and other regional organizations involved in Smart Growth planning in Austin. Document analysis is an important research tool since the use of documents can “corroborate and augment evidence from other sources” (Yin 2003, 86).

The list of documents that were used for analysis included “Imagine Austin Comprehensive Plan: About the Comprehensive Plan,” “Imagine Austin Comprehensive Plan: Advisory Task Force Meeting Minutes,” “Capital Area Metropolitan Planning Organization (CAMPO) 2035 Plan,” “S.M.A.R.T. Housing Policy Resource Guide,” “The Domain Performance-Based Incentive Agreement: Compliance Review and Status,” “Capital Metro FY 2011 Budget,” and The Capital Metro “President’s Monthly Performance Reports” for the months of September 2010 through January 2011.

The “Imagine Austin Comprehensive Plan: About the Comprehensive Plan” was analyzed to determine the amount of participation the City of Austin has requested from the community in the creation of the 3-phase Comprehensive Plan. The information gathered from the document discussed the type of participation that is required from the community and explained who have final approval of decisions made by the community.

The “Imagine Austin Comprehensive Plan: Advisory Task Force Meeting Minutes” was analyzed to determine the level of participation citizens have had so far in the development process in the City of Austin. Each document names the Advisory Task Force members, which consist of representatives from local businesses and neighborhoods throughout Austin. This

document verified that the meetings have been held and that the concerns of the public are being heard in the development of the Comprehensive Plan.

The “CAMPO 2035 Plan” was analyzed to discover the level of participation that is required by the metropolitan planning organization. This document also helped determine the impact this plan has had in regional transportation planning.

The S.M.A.R.T. (Safe, Mixed-income, Accessible, Reasonably-priced, Transit-oriented) Housing policy initiative was implemented by the City of Austin to provide fee waivers to developers who produce affordable housing in close proximity to transit nodes. Document analysis included a review of the City of Austin “S.M.A.R.T. Housing Policy Resource Guide.” This document described the type of fee waivers that are provided, and allowed this researcher to determine the Smart Growth properties that have been granted S.M.A.R.T. Housing fee waivers.

The “The Domain Performance-Based Incentive Agreement: Compliance Review and Status” focuses on the City of Austin incentive agreement with the Domain Austin development. The document states the goals of the project and the incentives that have been granted because those goals were met. This document was used to explain the type of incentives that have been granted to the Domain Austin other than the fee waivers that are being granted because of the S.M.A.R.T. Housing policy initiative.

The Capital Metro “President’s Monthly Performance Reports” from September 2010 through January 2011 was used to gauge the on-time performance of the CapMetro fleet. On-time performance was measured by the direct observations of CapMetro auditors. The data was then collected and measured against actual scheduled stop times to get the percentage of on-time performance. This data is displayed in Table 4.4 on page 59. The goal for CapMetro is 90% on-time performance by all three contractors. The “Performance Reports” document also assisted this researcher in providing customer satisfaction information on CapMetro ridership. This

information is gathered through customer complaints on a monthly basis. The goal for CapMetro is 41 customer complaints or less per month for all three contractors. This data is displayed in Table 4.5 on page 60.

The “Capital Metro FY 2011 Budget” provided the locations for transit centers that were observed to determine the amenities that are provided by the city to entice ridership.

These documents were reviewed for empirical evidence that Austin’s Smart Growth either does or does not conform to the practical ideal type categories. Document Analysis is economically effective with regard to both time and money. It helped identify the key Smart Growth elements within the Austin Metro area. If there is researcher error and the research can be an easy process to repeat. Also, the documents used are readily available to all citizens since these documents are public records. Finally, document analysis is more reliable than other research methods and techniques for the purpose of this research (Babbie 2007, 330).

Document Analysis does have some weaknesses including retrieveability, author bias and selectivity bias. The documents reviewed were produced by the City of Austin, the Capital Metro Planning Organization, and the Capitol Metropolitan Transit Authority. The authors of the documents included in the document analysis may skew the reader’s perception of the results. However, these documents were vital to gather information on the properties where this researcher’s observations took place. The researcher used only facts provided in publicly-scrutinized documents to minimize the bias that may have been presented by the aforementioned organizations.

Direct Observation

In addition to document review, this study included direct observations around the City of Austin. According to Babbie (123) direct observables are “those things we can observe rather simply and directly” (Babbie 2007, 123). In other words, these were not indirect inferences that

were being gathered but physical items that could be viewed and documented. The weaknesses of direct observation include time constraints, since the observations were conducted by one researcher, and cost of travelling to sites for data collection. The researcher allotted enough time for data collection and travel times between research sites was not a factor for this research. The researcher used direct observation of Smart Growth locations to determine whether or not the facilities were developed according to the practical ideal type categories. Areas that were observed for this project are stated in Table 3.1 on page 39. The sub-categories of Traditional Neighborhood Design (Table 4.2 p. 56), Transit-Oriented Development (Table 4.3 p. 58), Transit Reorientation (Tables 4.4 p.59 and 4.5 p.60) and Value-Added Services (Table 4.6 p. 63) were directly observed since document analysis only convey the proposals for development.

It is best to measure some research through direct observation in order to capture the development in operation within the community. A drawback with direct observation is that it can be time consuming and costly. In this research one person conducted the direct observations, so it was essential to provide an all-encompassing observation within the time constraints for this project.

Field Research

The field research for this project included interviews. Persons interviewed included Teri McManus, Transportation Planner for the City of Austin and George Adams, Assistant Director of the Planning and Development Review Department of the City of Austin. The Teri McManus interview focused on Intergovernmental Agreements, specifically CAMPO, and the influence the organization has over regional planning in Central Texas. The interview focused on the Business Entitlement Programs in the City of Austin. Mr. Adams played an integral role in developing the plan for Smart Growth in Austin. His knowledge of tax incentives, fee waivers and expedited

reviews for developers helped in gathering information to properly assess the Business Entitlement Programs in Austin.

Interviews can be as strong or as weak as the interviewer. Since questioning is guided by the interviewer, an interview could provide substantial information on the research topic or provide little information if the interviewer treats the encounter like a normal conversation (Babbie 2007, 307). This researcher focused on specific questions but altered questioning according to information that was provided. This allowed the interviewee to realize that the researcher was engaged in the conversation, but was also trying to gather information to complete the research.

Operationalization of Conceptual Framework

The operationalization section detailed the ideal type categories, the research methods, the evidence, and the sources that were used. Each row in Table 3.1 provides the reader a guide to each sub-category of this research for greater comprehension of the Smart Growth principles researched in this project.

Partnerships

Non-Profit Advocacy Groups

An assessment of the Non-Profit Advocacy Group sub-category focused on document analysis, since direct observations of community involvement would be very difficult for one researcher to gather within the time constraints. The sources used included the “Imagine Austin Comprehensive Plan: Advisory Task Force Minutes” and “Imagine Austin Comprehensive Plan: About the Comprehensive Plan.” These documents helped quantify past and present community involvement and also showed the level of involvement that is required to proceed with development in the City of Austin.

Intergovernmental Agreements

An assessment of the Intergovernmental Agreements sub-category focused on document analysis and field research, which measured whether or not these agreements are mere suggestions or are actively influencing growth management in the Austin Metro area. The sources used included the “CAMPO 2035 Plan” and an interview with Teri McManus, Transportation Planner for the City of Austin.

Business Entitlement Programs

An assessment of the Business Entitlement Programs sub-category included document analysis of the City of Austin “S.M.A.R.T. Housing Policy Resource Guide,” “The Domain Performance-Based Incentive Agreement: Compliance Review and Status,” and an interview with George Adams, Assistant Director of the Planning and Development Review Department for the City of Austin. The document analysis and interview focused on whether or not the City of Austin has provided incentives to any TNDs and/or TODs in the City of Austin. The results table displaying which properties received a fee waiver, expedited review and/or tax incentive can be found in Table 4.1.

Development Models

Traditional Neighborhood Design

An assessment of the sub-category of Traditional Neighborhood Design (TND) involved direct observation of three communities distinguished as TNDs: Mueller Austin, located at 4550 Mueller Boulevard, Austin, Texas 78723; The Triangle, located at 4600 West Guadalupe Street, Austin, Texas 78751; and the Domain Austin, located at 11410 Century Oaks Terrace, Austin, Texas 78758. The researcher determined whether or not the developments include some or all of the elements of a mixed-use facility, such as residential, commercial/office, retail and green/open space. Direct observation also allowed the researcher to provide images of the

different developments labeled TNDs in Austin. The results of these observations can be found in Table 4.2.

Transit-Oriented Development

An assessment of the Transit-Oriented Development sub-category focused on direct observation of the four communities distinguished as TODs to see if they incorporate multi-modal transportations methods. City of Austin and CapMetro documents were used to determine the four locations of TODs in Austin: the Convention Center TOD, located at 500 East 4th Street, Austin, Texas 78701; the Plaza Saltillo TOD, located at 408 Comal Street, Austin, Texas 78702; the Martin Luther King, Jr. Blvd. TOD, located at 207 Chalmers Avenue, Austin, Texas 78702; and the Lamar Blvd./St. Johns Ave TOD, located at 810 W. St. Johns Avenue, Austin, Texas 78752. The results of these observations can be found in Table 4.3.

Transportation

Transit Reorientation

An assessment of the Transit Reorientation sub-category focused on the on-time performance and customer satisfaction measures of the Capitol Metro Bus and Rail Systems. This category was analyzed through document analysis and focused on averaging the last six months of the CapMetro “President’s Monthly Performance Reports” from September 2010 through February 2011. The results for the on-time performance can be found in Table 4.4. The results for customer satisfaction can be found in Table 4.5.

Value-Added Services

The sub-category of Value-Added Services focused on the inclusion of the following amenities: covered waiting areas, off street loading and unloading, passenger information, lighting, real-time next bus arrival, ticket vending machines, vending machines (non-ticket), concession sales space, park-and-rides, video information, ticket sales office, next bus arrival

information, restrooms and temperature-controlled enclosed waiting areas. This sub-category was measured through direct observation, using a checklist to determine the level of amenities that are provided to mass transit riders. The nine park-and-ride locations included are: Great Hills Baptist Church, located at 10500 Jollyville Rd., Austin, Texas 78759; the Pavilion, located at 12400 North US Highway 183, Austin, Texas 78759; Tech Ridge, located at 900 Center Ridge Dr., Austin, Texas 78753; North Lamar Transit Center, located at 8001 US Highway 183, Austin, Texas 78757; Lakeline Mall, located at 1300 Lyndhurst, Austin, Texas 78613; Oak Hill, located at 6501 W. Highway 290, Austin, Texas 78753; The Triangle, located at 4800 Guadalupe St., Austin, Texas 78751; the South Congress Transit Center, located at 301 W. Ben White Blvd, Austin, Texas 78704; and the Howard Station, located at 3710 Howard Ln., Austin, Texas 78728. The results for the Value-Added Services checklist can be found in Table 4.6.

Table 3.1 Operationalization of Conceptual Framework

Ideal Type Categories	Research Method	Evidence	Sources
Partnerships needed for Effective Smart Growth Plans			
Non-Profit Advocacy Groups	-Document Analysis	Advocacy Group and Community involvement in decision process for new smart growth development and determination of the level of participation Austin requires for new development according to city plan.	<p>“Imagine Austin Comprehensive Plan: About the Comprehensive Plan”</p> <p>“Imagine Austin Comprehensive Plan: Advisory Task Force Meeting Minutes”</p>

Intergovernmental Agreements	-Document Analysis -Field Research	Centralized development in and around Austin and the influence development plans for the region have on the city of Austin plans.	“CAMPO 2035 Plan” Interview with Teri McManus, City of Austin Transportation Planner
Business Entitlement Programs	-Document Analysis -Field Research	Fee waivers, Expedited Reviews, Tax incentives for Smart Growth Development.	“S.M.A.R.T. Housing Policy Resource Guide” “The Domain Performance-Based Incentive Agreement: Compliance Review and Status” Interview with George Adams, City of Austin Assistant Director Planning and Development Review Department

Effective Development & Design Models used in Smart Growth Communities

Traditional Neighborhood Design	-Direct Observation	Observation of current developments labeled TND by the City of Austin for the key elements of Retail, Residential, Office/Commercial and Green/Open Space	Mueller Austin 4550 Mueller Blvd. Austin, Texas 78723 The Domain Austin 11410 Century Oaks Terrace Austin, Texas 78758 The Triangle 4600 West Guadalupe Austin, Texas 78751
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Transit Oriented Development	-Direct Observation	Determining whether the sites labeled TODs by the City of Austin include multi-modal transportation. The forms of transportation include Bus lines, Rail lines, Bicycle access and Pedestrian access	<p>Convention Center TOD 500 East 4th Street Austin, Texas 78701</p> <p>Plaza Saltillo TOD 408 Comal Street Austin, Texas 78702</p> <p>MLK, Jr. Blvd TOD 207 Chalmers Ave Austin, Texas 78702</p> <p>Lamar Blvd/ St. Johns TOD 810 West St. Johns Avenue Austin, Texas 78752</p>
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Transportation Plans needed to create an efficient Smart Growth Community

Transit Reorientation	-Document Analysis	Reviewing CapMetro Monthly reports to gauge effectiveness and efficiency of mass transit in Austin.	CapMetro President's Monthly Performance Report from September 2010 through January 2011 (months measured in these reports July-December 2010)
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<p>Value-Added Services</p>	<p>-Document Analysis</p> <p>-Direct Observation</p>	<p>Visiting park-and-ride facilities to determine the number of the following amenities available at each facility: covered waiting areas, off street loading and unloading, passenger information, lighting, real-time next bus arrival, ticket vending machines, vending machines (non-ticket), concession sales space, park-and-rides, video information, ticket sales office, next bus arrival information, restrooms and temperature-controlled enclosed waiting areas</p>	<p>“Capital Metro FY 2011 Budget”</p> <p>Great Hills Baptist Church 10500 Jollyville Rd. 78759</p> <p>Pavilion (U.S. 183 & Oak Knoll) 12400 U.S. Hwy 183 78759</p> <p>Tech Ridge 900 Center Ridge Dr 78753</p> <p>North Lamar Transit Center (183 and Lamar Bl) 8001 U.S. Hwy 183 78757</p> <p>Lakeline Mall 1300 Lyndhurst 78613</p> <p>Oak Hill 6501 W. Hwy 290 78753</p> <p>The Triangle 4800 Guadalupe St. 78751</p> <p>S. Congress Transit Center 301 W. Ben White Blvd 78704</p> <p>Howard Station 3710 Howard Lane 78728</p>
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Assessment Criteria

Table 3.2: Assessment Criteria breaks down each sub-category from the Conceptual Framework Table. Each sub-category was measured by a “Fails to Meet Expectations,” “Meets Expectations” or “Exceeds Expectations” ordinal scale.

Partnerships

Non-Profit Advocacy Groups

The Non-Profit Advocacy Group sub-category was operationalized through the three categories as described above. In the “Fails to Meet Expectations” criterion, the City of Austin does not require any type of community participation in the planning process. This means the city does not provide any town hall meetings that discuss new developments or an advisory task force to vote on measures that should be presented to the planning department. In the “Meets Expectations” criterion, the City of Austin requires community participation such as town hall meetings and advisory task forces and allows for input to be presented for final discussion and approval by the Planning Commission. This criterion provides community participation, but does not provide institutionalization of the community activists nor participation in the final decision process within the Planning Commission. In the “Exceeds Expectations” criterion the City of Austin allows for community participation in the decision planning process of new development, provides institutionalization for a community member at the Planning Commission and gives the community member voting power on final approval of the development plan.

Intergovernmental Agreements

The Intergovernmental Agreements sub-category was operationalized using the three categories mentioned above. In the “Fails to Meet Expectations” criterion, Intergovernmental Agreements are non-existent. In the “Meets Expectations” criterion, regional governments

collaborate to form a working document stating the goals of growth in the region and provide recommendations to city and county governments to stay within the document framework. In this scenario, the Intergovernmental Agreement is working toward a goal of smarter growth practices but these types of documents are based on recommendations and usually do not carry much weight when it comes to regional planning. In the “Exceeds Expectations” criterion, regional governments would have a planning board to discuss growth and would enforce the working document in each of its city and county planning departments in order to stay on the track with the goals set forth through the regional plan.

Business Entitlement Programs

The Business Entitlement Programs sub-category was operationalized using the three categories mentioned above. In the “Fails to Meet Expectations” criterion, 0 to 3 of the 7 developments categorized as TNDs or TODs received any of the following: tax incentives, fee waivers, or expedited reviews. That is, there would be an incentive to develop in a higher tax area but only 0 to 3 developments considered Smart Growth Development Models received an entitlement. In the “Meets Expectations” criterion, 4 to 5 of the 7 developments categorized as TNDs or TODs received any of the following: tax incentives, fee waiver, or expedited reviews. In this case, developers would be enticed to the DDZ to create buildings that fit the mold of a Smart Growth city, and the developments considered Smart Growth Development Models were provided these entitlements. In the “Exceeds Expectations” criterion 6 to 7 of the 7 developments categorized as TNDs or TODs received any of the following: tax incentives, fee waivers, or expedited reviews. This criterion will be fulfilled if some form of incentive was provided to the majority of the TND and TOD developments.

Development Models

Traditional Neighborhood Design

The Traditional Neighborhood Design sub-category was operationalized in three criteria mentioned above. In the “Fails to Meet Expectation” criterion, 0 to 1 of the three neighborhoods would fulfill the requirements of a mixed-use neighborhood, which would mean that residential, commercial/office, retail and green/open space are not intertwined. In the “Meets Expectations” criterion, 2 out of the 3 neighborhoods designated as TNDs create a mixed-use community that has all four categories of residential, commercial/office, retail and green/open space. In the “Exceeds Expectations” criterion, 3 out of 3 neighborhoods have all four categories in order to provide an alternative community center for the neighborhood and therefore minimize automobile transportation for everyday activities.

Transit-Oriented Development

The Transit-Oriented Development sub-category was operationalized using the three criteria mentioned above. In the “Fails to Meet Expectations” criterion, 0 to 1 out of the 4 neighborhoods designated TODs has access to all four methods of alternative transportation. This would mean that your typical neighborhood with a bus line and bicycle lane and sidewalk would not meet the expectations of a TOD. In the “Meets Expectations” criterion, 2 to 3 out of the 4 neighborhoods designated TODs have access to all four methods of alternative transportation. In order for a neighborhood to meet expectations, it would have to include all of the following: rail system, bus system, bicycle access, and a pedestrian walking trail. In the “Exceeds Expectations” criterion, 4 out of 4 neighborhoods designated TODs have access to all four methods of alternative transportation. This would mean that the City of Austin has properly developed all neighborhoods designated as TODs in their master plan.

Transportation

Transit Reorientation

The Transit Reorientation sub-category was operationalized using the three criteria mentioned above. In the “Fails to Meet Expectations” criterion, the transit system would be either an inefficient form of transportation with an on-time performance six month average of less than 85% or be considered unsatisfactory according to rider experience in the form of customer complaints, totaling 42 or above per month from July to December 2010. These goals are measured according to the standards set forth by Capitol Metro. In the “Meets Expectations” criterion, the transit system would be an efficient form of transportation with an on-time performance six month average of 86% to 90% and considered satisfactory according to rider experience in the form of customer complaints, totaling 33-41 per month averaged over a six-month period. In the “Exceeds Expectations” criterion, the transit system would exceed efficiency goals with an on-time performance six month average of 91% or above and exceptional rider experience in the form of customer complaints totaling 32 or less per month averaged over a six-month period.

Value-Added Services

The Value Added Services was operationalized using the three criteria listed above. In the “Fails to Meet Expectations” criterion, the transit centers would average 4 or fewer of the 14 amenities listed: covered waiting areas, off street loading and unloading, passenger information, lighting, real-time next bus arrival, ticket vending machines, vending machines (non-ticket), concession sales space, park-and-rides, video information, ticket sales office, next bus arrival information, restrooms and temperature-controlled enclosed waiting areas. In the “Meets Expectations” criterion, the park-and-ride and transit centers would average 5 to 9 of the 14

amenities. In the “Exceeds Expectations” criterion the park-and-ride and transit centers would average 10 to 14 of the 14 amenities.

Table 3.2 Assessment Criteria

Ideal Type Sub-Category	Fails to Meet Expectations	Meets Expectations	Exceeds Expectations
Non-Profit Advocacy Groups	Not involved in discussions for growth and development	City incorporates community input in revising final draft of development plan but final approval is with Planning Commission or City Council	City incorporates input from focus groups and provides advisory chair for NPAG member on final approval board.
Intergovernmental Agreements	No cooperation between regional governments	Regional Plan used as recommendation for city development plans	Regional Plan with regional board providing enforcement and implementation of development plan
Business Entitlement Programs	Tax incentive, fee waiver and/or an expedited review provided to 0 to 3 of the 7 TND/TOD sites	Tax incentive, fee waiver and/or an expedited review provided to 4 to 5 of the 7 TND/TOD sites	Tax incentive, fee waiver and/or an expedited review provided to 6 to 7 of the 7 TND/TOD sites
Traditional Neighborhood Design	0-1 out of 3 neighborhoods designated TNDs meets the criteria of mixed use (residential, office/commercial, retail, green/open space)	2 out of 3 neighborhoods designated TNDs meets the criteria of mixed use (residential, office/commercial, retail, green/open space)	3 out of 3 neighborhoods designated TNDs meets the criteria of mixed use (residential, office/commercial, retail, green/open space)
Transit Oriented Development	0-1 out of 4 neighborhoods designated TODs meets multi-modal focus (Rail, Bus, Bicycle, Pedestrian)	2-3 out of 4 neighborhoods designated TODs meets multi-modal focus (Rail, Bus, Bicycle, Pedestrian)	4 out of 4 neighborhoods designated TODs meets multi-modal focus (Rail, Bus, Bicycle, Pedestrian)

Transit Reorientation	Inefficient or ineffective mass transit. Below 85% on time performance per 6 month average 42 or above complaints per month averaged over 6 months	Efficient and effective mass transit. 86 to 90% on time performance per 6 month average 33-41 complaints per month averaged over 6 months	Efficient and Effective mass transit. 91% or above on time performance per 6 month average 32 or below complaints per month averaged over 6 months
Value-Added Services	Austin park-and-rides average 4 or fewer of 14 amenities detailed	Austin park-and-rides average 5 to 9 of 14 amenities detailed	Austin park-and-rides average 10 to 14 of 14 amenities detailed

Human Subjects Protection

This document analysis, direct observation and field research are exempt categories of research under 45 CFR, Part 46, Section 101(b)(4). This research involved document analysis of public records, direct observation of development in the city of Austin and two field research interviews pertaining to Transportation and Business Entitlements. The Texas State Institutional Review Board approval request number is EXP2011M7954.

Chapter IV: Results

The purpose of this chapter is to discuss the document analysis, direct observations and field research collected for this research project. The data collected is explained for each sub-category as outlined in the conceptual framework. The findings are used to assess Smart Growth in Austin using the practical ideal categories described earlier.

Partnerships

Non-Profit Advocacy Groups

In the category of Non-Profit Advocacy Groups, the City of Austin “Meets Expectations” since the Imagine Austin Comprehensive Plan outlines community participation as a key element in the three phases of development. In Phase I of the Comprehensive Plan, the City of Austin addressed the Participation Plan. The Plan “addresses the roles and responsibilities and venues for public outreach and involvement” (Comprehensive). Phase I also provided for the formation of the Citizens Advisory Task Force. These task forces are divided into four categories: the Steering Committee, the Analysis Committee, the Communications Committee, and the Engagement Committee. The Steering Committee was formed to provide community support for the Comprehensive Plan and to form subcommittees when necessary (Comprehensive). The Analysis Committee was formed to provide data detailing community participation and concerns and also to find common ground amongst the community participants and make recommendations to the planning commission (Comprehensive). The Communications Committee was formed to make sure that community members were informed about the progress of the Comprehensive Plan. The Engagement Committee was formed to plan events and provide information regarding the Comprehensive Plan (Comprehensive). Task Force meeting minutes

can be viewed online, and the contact information for all members is provided to verify community involvement.

Phase II of the Imagine Austin Comprehensive Plan consisted of six forum-setting meetings used to inform the community about the progress of the Comprehensive Plan and to receive input from the community. In these forums, the community was provided with another opportunity to manipulate the plans developed in Phase I. The Comprehensive Plan website provides information regarding these forum meetings and the outcomes and changes that had been discussed at these meetings.

Phase III has begun as of March 2011 and also requires community input on the final draft of the Comprehensive Plan, which will be presented to the Planning Commission and the Austin City Council for final approval and adoption. Phase III indicates that the City of Austin does not provide voting rights to a community liaison representing the advisory task forces or participants in the forum series on the adoption of the Comprehensive Plan (Comprehensive). This exclusion does not allow for a Smart Growth Partnership within the NPAG sub-category to “Exceed Expectations.”

Intergovernmental Agreements

In the category of Intergovernmental Agreements, the City of Austin would “Exceed Expectations” since the Central Texas region is mandated by the federal government to create a Metropolitan Planning Organization (MPO) and the participation of the city and county is required for the allocation of federal funds. In the Central Texas region, the MPO that the City of Austin participates in is the Capital Area Metropolitan Planning Organization (CAMPO), and this partnership includes five counties, which are Travis, Caldwell, Bastrop, Williamson and Hays (CAMPO 2010, 1). The original focus of CAMPO was to prepare a working document for the region in order to have a collaborative goal for transportation planning.

In an interview, Teri McManus, Transportation Planner for the City of Austin, explained that CAMPO's focus has shifted towards compact growth within the five-county region. McManus stated, "Currently central Texas has 16% of its population living in Activity Centers (AC). These ACs are the centers of cities and towns throughout the region but do not have a concentrated amount of the population living in these urban areas" (McManus). In the CAMPO 2035 Plan, the goal is to move 31% of the population within these 24 ACs by 2035 (CAMPO 2010, 28).

The focus has shifted to compact growth because the CAMPO region is expected to grow by 2 ½ times the existing population by 2035. Eighty percent of the money needed to fund these new projects to accomplish the new compact growth transportation plan will come from federal grants distributed through CAMPO (McManus). The other 20% needed to complete projects will come from city and county funds.

The CAMPO organization has proved to be important to Smart Growth progress. The City of Austin, along with other cities and counties within the region, has adopted the CAMPO 2035 Plan because federal funds are allocated to participants of regional MPOs. The Intergovernmental Agreement sub-category "Exceeds Expectations" because there is a regional plan created by an intergovernmental policy board that enforces the implementation of the regional plan in order for its members to qualify for federal funding.

Business Entitlement Programs

Results in the Business Entitlement Programs (BEP) sub-category were provided by document analysis and an interview with George Adams, Assistant Director of the Planning and Development Review Department for the City of Austin. Adams was instrumental to the creation of the Smart Growth Matrix and has also played a role in the TNDs and TODs that are discussed later in this paper. In discussing the three different incentives for these developments,

Adams explained that Expedited Review is something of a misnomer. Adams described the Expedited Review as “an incentive that is hard to quantify since there is no measure to indicate the difference between an expedited and a normal review” (Adams). He stated that no Expedited Reviews were given to the seven developments mentioned in this research. It is stated that expedited review is an incentive that can be offered in the “S.M.A.R.T. Housing Policy Resource Guide,” but it also states, “City staff will work with applicants to move projects through review and inspection as quickly and efficiently as possible. However, the speed of the review also depends on the applicant’s performance” (S.M.A.R.T.). This phrase in the resource guide verifies Mr. Adams’ assessment that the idea of Expedited Review sounds like a good idea but cannot be guaranteed in any form to Smart Growth developments.

Adams discussed Fee Waivers and stated that he had no knowledge of any Fee Waivers granted to the seven developments outside of the S.M.A.R.T. Housing policy initiative Fee Waivers, which he expected to be given to the MLK Jr. Blvd TOD. Adams stated that he was not sure about the other 6 developments. Document analysis shows that Fee Waivers were granted to four of the Smart Growth developments through the S.M.A.R.T. Housing policy initiative. Those four developments were Mueller Austin, The Domain Austin, Midtown Commons in the N. Lamar Blvd./Justin Lane TOD and the Villas on Sixth in the Plaza Saltillo TOD (S.M.A.R.T.). Each development allocates at least 25% of their units or homes for affordable housing, which is verified through the Austin Housing Finance Corporation. Below is the scale that the City of Austin follows when deciding the percentage of fees that will be waived.

A builder provides

10% Reasonably priced Housing Units
20% Reasonably priced Housing Units
30% Reasonably priced Housing Units
40% Reasonably priced Housing Units

City of Austin provides

25% Fee Waivers
50% Fee Waivers
75% Fee Waivers
100% Fee Waivers

Source: S.M.A.R.T Housing Policy Resource Guide

Some Smart Growth developments were given different forms of Tax Incentives, such as sales tax rebates and the purchasing of green space to decrease property tax. Commercial and retail establishments at The Domain Austin were granted an 80% sales tax rebate for the first 5 years and a 50% sales tax rebate for the next 15 years for a total of 20 years of sales tax rebates (The Domain). The sales tax rebate was a point of contention with the citizens of Austin and was ultimately brought up for a referendum vote. The repeal of the sales tax rebate was defeated with 52% against repeal.

Another Tax Incentive presented to developers of the Triangle complex was the purchasing of green space. Adams stated, “the city purchased a tract of land from the Triangle development to provide a green space that the Triangle developers were to work into their master plan for park space” (Adams). He explained that this would decrease the property tax for the Triangle developers while guaranteeing that green space would be included in the final development plan. Currently, the park is used for concerts and farmers’ markets throughout the year.

Table 4.1 shows the type of incentive, if any, that was given to the 7 TNDs and TODs.

Table 4.1 Business Entitlements Checklist

Location	Fee Waiver	Expedited Review	Tax Incentive
Traditional Neighborhood Design			
The Domain 11410 Century Oaks Terrace Austin, Texas 78758	Yes (S.M.A.R.T. fee waiver)	No	Yes (Sales Tax Rebate)
Mueller Austin 4550 Mueller Blvd Austin, Texas 78723	Yes (S.M.A.R.T. fee waiver)	No	No
The Triangle 4600 West Guadalupe Austin, Texas 78751	No	No	Yes (city purchased green space)

Transit-Oriented Development			
Convention Center TOD 500 East 4 th Street Austin, Texas 78701	No	No	No
Plaza Saltillo TOD 408 Comal Street Austin, Texas 78702	Yes (S.M.A.R.T. fee waiver)	No	No
Lamar Blvd/St. Johns TOD 810 West St. Johns Avenue Austin, Texas 78752	Yes (S.M.A.R.T. fee waiver)	No	No
MLK Jr. Blvd TOD 207 Chalmers Avenue Austin, Texas 78702	Yes (Expected) (S.M.A.R.T. fee waiver)	No	No
Total Properties with at least one BEP			
6 -The Domain, Mueller Austin, The Triangle, Plaza Saltillo TOD,MLK, Jr. TOD, and Lamar Blvd/St. Johns Ave TOD			

As indicated in the table, four S.M.A.R.T. Housing policy initiative incentives have been granted to Mueller Austin, The Domain Austin, N. Lamar Blvd. /Justin Ln. TOD, the Plaza Saltillo TOD. A fifth location, the Martin Luther King, Jr. Blvd TOD, is also expected to provide 25% reasonably priced units, which also include it in the S.M.A.R.T. Housing Fee waiver category. No Expedited Reviews for any Smart Growth development could be verified. The Domain Austin was also granted a Tax Incentive, and the Triangle was given a tax break on a tract of land purchased by the City of Austin to lower the developer’s property tax and to provide green space to the community. In the sub-category of Business Entitlement Programs, the City of Austin “Exceeds Expectations” since 6 out of the 7 developments were granted an entitlement. The Convention Center TOD is located in downtown Austin and no new developments were created to qualify for a business entitlement.

Development Models

Traditional Neighborhood Design

To assess the sub-category of Traditional Neighborhood Design, this researcher visited three properties described as TNDs by the City of Austin. The three properties visited were the Domain Austin, Mueller Austin and the Triangle. During the observation of these three TND developments, this researcher was looking for four types of space to be available: Retail, Office/Commercial, Residential and Green/Open Space.

The Domain Austin TND is a property located at 11410 Century Oaks Terrace in Austin, Texas. The Domain currently provides 390 apartment homes for leasing with efficiencies, 1, 2 and 3 bedroom apartments available. It also provides over 40 retailers, 9 restaurants and 75,000 square feet of office space available in the complex (Simon). The Domain also provides many grab and go eateries and food specialty shops. Based on observations of the complex, the Domain provides its community with an adequate amount of Residential space, a large amount of Retail space and an adequate amount of Office/Commercial space. The Domain also provides open space in the center of the complex with benches, and this “town center” is accentuated with large trees and a fire place. The property is currently still developing the complex, but as of now no park space can viewed or is mentioned on the Domain website where it describes its many amenities for guests and residents.

Mueller Austin, the next neighborhood observed, is located at 4550 Mueller Blvd. in Austin, Texas 78723. The Mueller development provides 8 eateries and over 10 large Retail shops (i.e. Old Navy, Home Depot, Best Buy). There is a significant amount of Office/Commercial space with the main focus being the Dell Children’s Hospital. Mueller Austin also provides significant Green/Open space with two main parks and a hike and bike green belt in and around the residential area of the development. Mueller Austin also has a

significant amount of Residential space with a mixed-use home buyer neighborhood throughout. They have townhomes, garden homes, row houses, condos, and large high-end homes in the neighborhood. There are also rental units provided in the Mosaic Austin apartment complex. Mueller Austin provides more than adequate Residential, Office/Commercial, Retail and Green/Open Space to meet requirements of a TND community.

The Triangle is the third designated TND visited. The Triangle is located at 4600 West Guadalupe Street in Austin, Texas. There are 10 eateries within the complex, which is located in the heart of Hyde Park. The complex is located less than a tenth of a mile from state office buildings. It also provides 8 Retail store fronts and 12 Office/Commercial spaces. The Triangle also provides a Green/Open space in the center of the complex with a bocce court, covered pavilion and a weekly farmers' market for the surrounding community. The complex has many Residential units with apartment homes and condos available. The Triangle provides adequate Residential, Office/Commercial, Retail and Green/Open Space to meet the requirements of a TND community.

In the sub-category of TND, the City of Austin "Exceeds Expectations" since all three locations designated as TNDs meet the requirements of a Smart Growth TND community that minimizes automobile use by providing Retail, Office/Commercial, Residential and Green/Open Space.

Table 4.2 shows the results of the three designated TND communities.

4.2 Traditional Neighborhood Design Location Checklist

Traditional Neighborhood Design Location	Retail Space	Office/ Commercial Space	Residential Space	Green/Open Space
Mueller Austin 4550 Mueller Blvd. Austin, Texas 78723	✓	✓	✓	✓
The Triangle 4600 West Guadalupe Austin, Texas 78751	✓	✓	✓	✓
The Domain Austin 11410 Century Oaks Terrace Austin, Texas 78758	✓	✓	✓	✓
Totals	3	3	3	3

Transit-Oriented Development

To assess the sub-category of Transit-Oriented Development, this researcher visited four locations designated by the City of Austin as TODs. This research was specifically focused on the number of alternative forms of transportation in these locations: Rail, Bus, Bicycle and Pedestrian access.

The first property visited was the Convention Center TOD, located at 500 East 4th Street in Austin, Texas. This TOD is located in the heart of downtown Austin and is conveniently situated next to the Austin Convention Center and the city's historic Sixth Street. Across the street from the rail station are numerous bus stops that connect to different parts of the city. Also, this TOD has a designated bicycle lane next to the rail station for easy entry and exit from the rail. This TOD also provides plenty of pedestrian-friendly sidewalks for easy off-street access.

The Convention Center TOD provides all four alternative transportation methods with Rail and Bus line stops and Bicycle and Pedestrian access in the vicinity of the TOD.

The second property visited was the Plaza Saltillo TOD, located at 408 Comal Street in Austin, Texas. This location is close to downtown and has access to the East Austin. In this TOD, there are many affordable housing properties and a nearby open park space. The rail station exits to a park with access to businesses, residential areas and the street. Also, located in this TOD is a bus stop right next to Plaza Saltillo. Bicycle access is available with designated bike lanes in the vicinity of the TOD, and there are adequate sidewalks all around the neighborhood. The Plaza Saltillo TOD provides all four alternative transportation methods with Rail, Bus stops, Bicycle and Pedestrian access in and around the TOD.

The third property visited was the Martin Luther King, Jr. Boulevard TOD, located at 207 Chalmers Avenue in Austin, Texas. This TOD is also located in East Austin just north of the Plaza Saltillo TOD. Affordable housing is also available with homes next to the rail station and apartment complexes in the process of construction. The rail station is located off the main street of MLK, Jr. Blvd. with easy access to the train station. There are several bus lines that connect with the rail line in this TOD. Bicycle access is also available in the complex and throughout the neighborhood by the designated TOD. There is easy pedestrian access all around the TOD with sidewalks being constructed outside of the rail station to make the TOD more walkable for the community it is looking to serve. The MLK, Jr. Blvd. TOD provides all four alternative transportation methods with Rail and Bus stops and Bicycle and Pedestrian access in and around the TOD.

The last property visited was the Lamar Boulevard/St. Johns Avenue TOD, located at 810 West St. Johns Avenue in Austin, Texas. This TOD is located in North Central Austin with close access to Highland Mall. The TOD is located in the Midtown Commons apartment complex and

in close proximity to the Crestview Neighborhood. In this designated TOD, there are two bus lines for easy transfers and a CapMetro transit center with bicycle access about one mile north of the rail station. There is designated bicycle access on the newly-built sidewalks in this neighborhood to allow cyclists to avoid having to use street access to ride. These sidewalks were built with adequate space to also allow for pedestrian access throughout the apartment complex and the Crestview Neighborhood. The Lamar Blvd/St. Johns Ave TOD provides all four alternative transportation methods with Rail and Bus stops and Bicycle and Pedestrian access in and around the TOD.

In the sub-category of Transit-Oriented Development, the City of Austin “Exceeds Expectations” because all four properties designated as TODs by the City of Austin do provide access to the four methods of alternative transportation.

Table 4.3 provides the research results for the four TOD locations observed for this project.

Table 4.3 TOD Multi-Modal Checklist

Transit-Oriented Development Location	Bus	Rail	Pedestrian Access	Bicycle Access
Convention Center TOD 500 East 4 th Street Austin, Texas 78701	✓	✓	✓	✓
Plaza Saltillo TOD 408 Comal Street Austin, Texas 78702	✓	✓	✓	✓
Lamar Blvd/ St. Johns TOD 810 West St. Johns Avenue Austin, Texas 78752	✓	✓	✓	✓
MLK, Jr. Blvd TOD 207 Chalmers Avenue Austin, Texas 78702	✓	✓	✓	✓
Totals	4	4	4	4

Transportation

Transit Reorientation

In order to assess the quality of mass transit in Austin, this researcher reviewed and analyzed the “Capital Metropolitan Transportation Authority Monthly Performance Report” from September 2010 through January 2011. These reports compiled data from two months prior, so the actual dates are July 2010-December 2010.

Each section of each report is divided into sections devoted to each of the three CapMetro contractors: Star Tran, Veolia and First Transit. On-time performances for each contractor were averaged for the six-month period. The on-time performance goal for CapMetro is 90%.

These reports also contain information about customer satisfaction. CapMetro mandates that the six-month average for customer complaints should not exceed 41 total complaints for all three contractors.

Table 4.4 CapMetro On-Time Performance Data Average

Month	StarTran	Veolia	First Transit	Monthly Average
July 2010	90.4%	89.7%	97.3%	92.46%
Aug. 2010	88.5%	89.5%	96.74%	91.58%
Sept. 2010	84.3%	84.3%	95.02%	87.87%
Oct. 2010	85.4%	86.7%	94.5%	88.86%
Nov. 2010	86.5%	85.5%	96.9%	89.63%
Dec. 2010	89%	90.2%	95.6%	91.6%
Total Average				90.33%

Source: CapMetro “President’s Monthly Performance Report” Sept. 2010 through Jan. 2011

CapMetro’s three contractors average a 90.33% on-time performance for the whole bus fleet from the months of July 2010 through December 2010. This would mean that CapMetro provides efficient bus service. The-on time performance data can be found in Table 4.4 above.

CapMetro’s average number of customer complaints is 45.80. This exceeds the limit CapMetro has set for customer complaints per month. The data and results can be found in Table 4.5 below.

Table 4.5 CapMetro Customer Satisfaction Data Average

Month	StarTran	Veolia	First Transit	Monthly Total
July 2010	12.53	13.02	1.69	27.24
Aug. 2010	13.5	16.02	3.24	32.67
Sep.2010	12.73	35.1	7.5	55.33
Oct. 2010	14.6	33.37	5.16	53.13
Nov. 2010	13.39	31.83	5.91	51.13
Dec. 2010	13.11	31.46	10.74	55.31
Total Average				45.80

Source: CapMetro “President’s Monthly Performance Report” Sept. 2010 through Jan. 2011

In the sub-category of Transit Reorientation, the City of Austin via the CapMetro services “Fails to Meet Expectations” because the average number of CapMetro customer complaints exceeds the goals set by the organization. The transit system is efficient given their on-time performance average of 90.33%. It would be close to exceeding expectations if this criterion was being measured alone. However, since the sub-category is focused on efficiency and effectiveness to encourage Transit Reorientation, this sub-category falls under the “Fails to Meet Expectations” category.

Value-Added Service

In order to assess the sub-category of Value-Added Services, this researcher observed sites mentioned in the Fiscal Year 2011 Capital Metropolitan Transportation Authority Budget in the facilities section under park-and-rides. The nine locations that were visited were Great Hills Baptist Church; the Pavilion; Tech Ridge; North Lamar Transit Center; Lakeline Mall; Oak Hill; The Triangle; South Congress Transit Center and Howard Station.

In observing these locations, the researcher was trying to identify 14 amenities that have been described as Value-Added Services that could entice more ridership by making the journey more convenient. These 14 amenities include covered waiting areas, off street loading and unloading, passenger information, lighting, real-time next bus arrival, ticket vending machines, vending machines (non-ticket), concession sales space, park-and-rides, video information, ticket sales office, next bus arrival information, restrooms and temperature-controlled enclosed waiting areas.

These facilities were properly located to accommodate commuters into the central business district. All nine locations provided covered waiting areas with benches, off-street passenger loading and unloading, proper lighting for early morning and evening riders, and park-and-ride space. Eight out of the nine locations provided bus line information with detailed maps, stop times and take away pamphlets for further information on connection lines.

The only facility that did not provide passenger information for the bus line was the Howard Station. This station provides significant information for the rail station but does not provide the basic passenger information for the bus riders. Typically, CapMetro provides stop times and a detailed map of the bus routes on bus stop posts. Neither was provided at this location and no pamphlets were available.

The next most available amenity at bus facilities was vending machines. Five out of the 9 facilities visited provided drink and food vending machines. The facilities that did not provide vending machines were the Great Hills Baptist Church, Oak Hill, Triangle and Howard Station locations. The Great Hills, Oak Hill and Triangle locations were all within walking distance of convenience stores but did not provide vending machines on site. The Howard Station was the only facility that did not have any type of store within the vicinity of the facility.

In the category of real-time information, only the South Congress Transit Center and the Northwest Lakeline Transit Center provided a customer service agent at the facility with updated information on bus arrivals. The other seven facilities only provided the schedules and maps described above.

Only the metro rail allows for ticket vending. Passengers cannot purchase tickets from a ticket vending machine if their journey only consists of bus travel. None of the facilities provide a ticket vending machine for all methods of transportation.

Only the Triangle provides sales space since the bus facility is incorporated into a TND location. This facility provides coffee shops and eateries in the vicinity of the bus stops. No other facilities visited provided sales space for the mass transit rider.

In the category of restroom facilities, only the Triangle facility provides public restrooms, which are available in the leasing office of the Triangle complex. As stated above, the Triangle complex was built as a TND location and incorporated the mass transit facility into their master plan.

The four remaining Value-Added Services were not available at any of the nine mass transit locations visited. The four amenities that were not provided by any facility were video passenger information, ticket sales offices, next bus arrival information boards and temperature controlled enclosed waiting areas.

Table 4.6 provides the results of the amenities found at each park-and-ride facility.

Table 4.6 Amenities Checklist

Park & Ride Location	Covered Waiting	Off Street	Passenger Information	Lighting	Real-Time	Ticket Vending	Vending Machine	Sale space	Park and ride	Video Information	Ticket Sales Office	Next Bus Arrival Information	Restrooms	Enclosed
Great Hills Baptist Church 10500 Jollyville Rd. Austin, TX 78759	✓	✓	✓	✓					✓					
Pavilion (U.S. 183 & Oak Knoll) 12400 U.S. 183 Austin, TX 78759	✓	✓	✓	✓			✓		✓					
Tech Ridge 900 Center Ridge Dr Austin, TX 78753	✓	✓	✓	✓			✓		✓					
North Lamar Transit Center 8001 U.S. 183 Austin, TX 78757	✓	✓	✓	✓			✓		✓					
Northwest Lakeline 1300 Lyndhurst Austin, TX 78613	✓	✓	✓	✓	✓		✓		✓					
Oak Hill 6501 W. Hwy 290 Austin, TX 78753	✓	✓	✓	✓					✓					

Table 4.6 Amenities Checklist

Park & Ride Location	Covered Waiting	Off Street	Passenger Information	Lighting	Real-Time	Ticket Vending	Vending Machine	Sale space	Park and ride	Video Information	Ticket Sales Office	Next Bus Arrival Information	Restrooms	Enclosed
The Triangle 4800 Guadalupe St. Austin, TX 78751	✓	✓	✓	✓				✓	✓				✓	
South Congress Transit Center 301 W. Ben White Blvd. Austin, TX 78704	✓	✓	✓	✓	✓		✓		✓					
Howard Station 3710 Howard Ln Austin, TX 78728	✓	✓		✓					✓					
Totals	9	9	8	9	2	0	5	1	9	0	0	0	1	0

In Table 4.6, totals are given for all 14 amenities present at the nine park-and-ride facilities visited.

The total per amenity is as follows: 9 facilities with covered waiting areas, 9 facilities with off street passenger loading and unloading, 8 facilities that provide passenger information, 9 facilities that provide adequate lighting for morning and evening riders, 2 facilities that provide real time information, 0 facilities with ticket vending machines, 5 facilities that offer drink and food vending machines, 1 facility that provides sales space, 9 facilities providing park-and-ride space, 0 facilities with passenger video information, 0 facilities that provide a ticket sales office, 0 facilities with next bus arrival information boards, 1 facility providing restrooms and 0

facilities with a temperature controlled enclosed waiting area. Fifty-three amenities were observed at the 9 park-and-ride facilities. The average number of amenities at each facility was 5.89.

In the sub-category of Value-Added Services, the City of Austin “Meets Expectations” of Smart Growth transportation planning. The 5.89 average amenities provide riders with essential information and Value-Added Services to keep current commuters content with the mass transit in the city.

Conclusion

This chapter provided all the information and data that was collected for the 7 sub-categories researched in the paper. Four of the sub-categories “Exceed Expectations” for Smart Growth planning: Intergovernmental Agreements, Business Entitlement Programs, Traditional Neighborhood Design and Transit-Oriented Development. The two sub-categories of Non-Profit Advocacy Groups and Value-Added Services “Meet Expectations” for Smart Growth Planning.

Only one sub-category “Fails to Meet Expectations.” This category was Transit Reorientation. The Transit Reorientation sub-category was measured on two fronts, efficiency and effectiveness. In the on-time performance measure CapMetro averaged 90.33% on schedule. The aspect that hurt this sub-category was customer satisfaction. CapMetro averaged 45.80 complaints per month over the analyzed six-month period. CapMetro has set their goal at 41 customer complaints or less per month.

With four sub-categories Exceeding Expectations and two sub-categories Meeting Expectations, the city is moving in the right direction toward developing a complete Smart Growth city.

Chapter V: Conclusion

This research paper should have informed the reader of the different key elements that are needed to create a Smart Growth city. Three main categories for assessment were chosen through the review of previous research on Smart Growth development: Partnerships, Development Models and Transportation.

This chapter summarizes the results of each research sub-category and provides recommendations to help the City of Austin improve its current plan of Smart Growth practices.

Partnerships

In the category of Partnerships, the researcher focused on three sub-categories of Non-Profit Advocacy Groups, Intergovernmental Agreements and Business Entitlement Programs. These categories discussed the importance of communication and participation from all members of the community.

Non-Profit Advocacy Groups: Summary

In the sub-category of Non-Profit Advocacy Groups, this researcher focused on the level of community and citizen involvement required and allowed by the City of Austin in the development of the new Comprehensive Plan. The Comprehensive Plan is the document that is used to project the needs of the city and its citizens by gathering input, forming task forces and holding forum meetings. These meetings are being held to allow citizens' direct influence on the development of the city's future planning and development projects. The feedback given is used to rework the Comprehensive Plan. The main goal of the task force is to discuss the plan amongst community leaders and concerned citizens. The recommendations proposed by the Advisory Task Force are presented to the Planning Commission and ultimately to the Austin City

Council for adoption. This level of involvement has allowed for the City of Austin to “Meet Expectations” with Smart Growth Non-Profit Advocacy Groups.

Non-Profit Advocacy Groups: Recommendations

The only part lacking for the City of Austin to “Exceed Expectations” is to provide an advisory chair that would empower a community member with voting privileges on final decisions for planning in the city. This advisory chair would be a rotating chair in order to provide all areas of the city with a period where direct representation is available. This would make planning decisions more transparent and could help push the city to enact more Smart Growth initiatives.

Intergovernmental Agreements: Summary

In the sub-category of Intergovernmental Agreements, this researcher focused on the level of cohesiveness in regional planning in the Central Texas area and particularly on the Capital Area Metropolitan Planning Organization (CAMPO). CAMPO is an MPO mandated by the federal government, but participation in this organization is voluntary. CAMPO’s main purpose is to develop regional plans that are to be adopted by its members to better serve the region. In recent years, the focus for CAMPO has been on creating more densely-populated centers throughout the region to minimize automobile use. Since the focus has shifted to these “Activity Centers,” CAMPO has moved in the direction of regional cooperation and has pushed for Smart Growth in the region.

Even though participation is voluntary, federal funds are only distributed to members of these MPOs. This voluntary but seemingly mandatory participation makes the Intergovernmental Agreements sub-category fall into the category of “Exceed Expectations,” but in this case the Central Texas region is doing nothing more than what is needed to be in compliance for federal funding. The organization provides a forum where city and county

leaders can discuss regional concerns and where these same leaders can partner to create a document that will help alleviate strain on current city and county infrastructure throughout the region.

Intergovernmental Agreements: Recommendations

The Intergovernmental Agreement that is currently produced by the voluntary but mandatory nature of CAMPO helps move this region in the direction of Smarter Growth. However, in order to truly create a regional plan that will push Smart Growth in the Central Texas area, the organization should start facilitating more alternative transportations methods within the cities and counties in this region. This will reduce the amount of money spent on developing new roads, which is counterproductive if the ultimate goal is to create urban centers. If the focus can shift to more compact planning within the region, then Central Texas can start a trend that would prompt the rest of Texas to move in the direction of Smart Growth.

Business Entitlement Programs: Summary

In the sub-category of Business Entitlement Programs, the research focused on three main entitlements: Fee Waivers, Expedited Reviews and Tax Incentives. Many articles discussed the importance of providing entitlements in the development of Smart Growth communities. These entitlements provide enough of an incentive for developers to produce properties in areas they may have otherwise avoided.

In Austin, developers were provided entitlements to develop in the urban core of the city. These entitlements helped produce communities in central and East Austin. It also helped produce some standard facilities available in Smart Growth cities, such as TNDs and TODs. The entitlements that were provided were S.M.A.R.T. policy initiative Fee Waivers and Tax Incentives. In an interview, George Adams discussed how Expedited Reviews cannot truly be measured and how he does not feel that this is an entitlement that can be used as a benefit. The

sub-category of Business Entitlement Programs provided at least one entitlement for every TND or TOD researched, except for the Convention Center TOD. This TOD is located in the heart of downtown and therefore new development would be hard to create in the limited amount of space available. Overall, the sub-category “Exceeds Expectations” because six developments were provided an incentive to build a mixed-use, transit-oriented, compact community.

Business Entitlement Programs: Recommendations

The entitlements that have been provided to the developers to create these mixed-use communities have enhanced some areas of the city, and the programs should continue with these entitlements to draw new developers into the “urban core” of the city. The one improvement that I think can still be made is to create a better method for these Expedited Reviews. If the Assistant Director of the Planning and Development Review Department has trouble differentiating between a Standard Review and an Expedited Review, then improvements need to be made to make the entitlement clearer. Maybe a separate department could be in charge of making sure that the developments that qualify, do in fact receive these Expedited Reviews. This could speed the process of getting affordable housing to the community and would provide the incentive that has been promised to these developers.

Development Models

In the literature review on Smart Growth developments, two development and design methods were consistently discussed: Traditional Neighborhood Design and Transit-Oriented Development. These developments focus on compactness, mixed-use, and transit focus.

Traditional Neighborhood Design: Summary

In the sub-category of Traditional Neighborhood Design (TND), the literature review revealed four types of necessary space: Residential, Retail, Office/Commercial and Green/Open space. In order for a community to be a livable community that minimizes the use of

automobiles, the area has to be self-sufficient in that a person can live, play and work within the community. This allows for neighbors to have more communication with each other, which in turn creates a friendlier environment. The inclusion of Retail and Office/Commercial space also creates pride within the community, since everything in your life is centered on the community. All three locations visited provided all four categories required of a TND community. As such, the City of Austin “Exceeds Expectations” in this sub-category. Each community that was developed to accomplish the goals of a TND has done exactly that.

Traditional Neighborhood Design: Recommendations

The main concern about TND communities in Austin is that there are not enough of them. More areas in the city should be created using the TND model to facilitate a sense of community pride. TND neighborhoods provide restaurants and retail in close proximity of residential and commercial space in order to keep people active. Park space also helps produce a more neighborly feel in any area of the city. The inclusion of more TND communities in the City of Austin future plans could reduce vehicular miles traveled and improve quality of life for all individuals included in these TNDs.

Transit-Oriented Development: Summary

In the sub-category of Transit-Oriented Development (TOD), the literature review revealed a few key elements needed to create an effective TOD. One of the key elements involves the use of multiple alternative methods of transportation. This multi-modal aspect was the focus of this research. The four types of alternative transportation which were used for the observation were Rail and Bus line access and Bicycle and Pedestrian access. The city has labeled four neighborhoods as TODs, and those four neighborhoods were visited to determine whether or not they provide these four methods of alternative transportation.

The areas designated TODs by the City of Austin met all the transportation requirements of a TOD neighborhood. They provided bus and rail line stops within close proximity to ample sidewalks as well as bicycle access and lanes. In the sub-category of TOD, the City of Austin “Exceeds Expectations.” These TODs help decrease automobile use and in turn create a Smart Growth city with a focus on alternative transportation methods.

Transit-Oriented Development: Recommendations

While all methods of transportation were available in the TODs observed, more access to bus lines and more bicycle lanes should be provided. Two rail line stops provided two or fewer bus lines. These facilities should create more bus line access to make journeys more efficient and minimize the need for multiple transfers. Also, bicycle lanes should be designed to provide easy access for cyclists. These TODs were designed in high traffic areas and could be dangerous for cyclists during peak vehicle use times. Extending bicycle lanes to main arteries of the city will improve bicycle access, ensure the safety of cyclists, and make this form of transportation a more pleasant alternative.

One other recommendation is to improve TODs at the other stops along the rail line. There are a total of 8 rail stops in the Austin city limits. Of the 8 rail stops 4 of the locations are in designated TODs. The Kramer and Highland stations are located near residential neighborhoods but more mixed-use development could be placed by these stations to create a viable TOD. Also, the Lakeline and Howard stations are in secluded areas of the city with plenty of space for development, and more should be done to produce a TOD at these locations as well.

Transportation

When discussing Smart Growth, the conversation always comes back to changing the mindset of single occupancy vehicle use. Constantly developing new roads and highways is exacerbating our pollution levels, but reversing the status quo is nearly impossible. Two

opportunities that could help move people back to mass transit are guaranteeing efficient and effective rides and providing amenities to entice riders back to public transport. The two sub categories researched in this paper were Transit Reorientation and Valued-Added Services.

Transit Reorientation: Summary

Transit Reorientation is the goal of trying to bring individuals back to mass transit. In order to do that, transit authorities need to find ways to make sure their transit systems are on time and that these rides are satisfying to the customer. The City of Austin transit system authority is the Capital Metropolitan Transportation Authority or CapMetro. Document analysis was used to research the efficiency and effectiveness of CapMetro. The monthly average from July 2010 to December 2010 was found and measured against the standards set by CapMetro. In the category of on-time performance, CapMetro had an average of 90.33% over the six-month period.

The same documents were used to gather data specifying customer satisfaction over the same six-month period of July 2010 through December 2010. With an average of 45.80 customer complaints per month, CapMetro did not meet its goal of less than 41 complaints per month. Since the requirement was for both on-time performance and customer satisfaction to be at or better than the standard, the Transit Reorientation sub-category “Fails to Meet Expectations.”

Transit Reorientation: Recommendations

In order to improve CapMetro customer satisfaction, the organization should investigate the effects of having a customer service representative at certain main facilities will have with transit riders. Many times, complaints come from lack of communication and in order to clear up miscommunications, live individuals present at transit centers could provide the clarity some

individuals expect. This liaison could effectively minimize confusion and therefore lower customer complaints to the standard set by CapMetro.

Value -Added Services: Summary

The scholarly literature showed 14 amenities that are present at transfer centers throughout the US. These 14 amenities were used as a checklist for the 9 park-and-ride facilities in Austin. In order for the city to “Meet Expectations,” the facilities observed had to average 5 to 9 amenities. After visiting the 9 locations, the facilities averaged 5.89 amenities. This average barely “Meets Expectations.” The four basic amenities of off street passenger loading and unloading, lighting, covered waiting areas and passenger information helped with the overall average. The other aspect that kept the average above 5 was the park-and-ride facilities available at these locations. Vending machines were located at the 5 of these facilities but the amenities of real-time next bus arrival, ticket vending machines, sales space, video information, ticket sales office, next bus arrival information, restrooms and temperature-controlled enclosed waiting area were either sporadically available or non-existent.

Value-Added Services: Recommendations

In order to entice new riders and improve the experience for current ridership, CapMetro and the City of Austin should consider amenities such as next bus arrival information and a ticket vending machine. The next bus arrival information could provide information for riders to know for sure if their bus is entering the facility. This would allow people to feel less stressed and reduce the anxiety of having to constantly be watching for your bus. This system could be as simple as stating which bus is entering the transit center or park-and-ride facility.

My other recommendation is to include bus tickets on the rail vending machines. These machines are already in place at the rail stations, and a ticket that allows a rider to use both forms of mass transit could improve ridership. Currently, the rail tickets can be used on connector

buses in certain locations but cannot be used on other bus lines. Improving the ticket vending to include bus lines and allowing flexibility on rail tickets could be an additional amenity for current and future riders.

Conclusion

Since 1999, the City of Austin has pursued the goal of making this city a community that uses Smart Growth principles to improve the quality of life for its citizens. The city is moving in the right direction with increasing community involvement, cooperation with regional governments and the provision of incentives to businesses and developers to work within Smart Growth plans.

Austin has also pushed to create developments that are based on Smart Growth principles, such as the Traditional Neighborhood Design and Transit-Oriented Developments. The city should continue to improve current urban infrastructure and push for more development based on TOD and TND Development Models.

The city also needs to continue focusing on improving the mass transit system. The single occupancy vehicle issue we have in Austin and in Texas will continue to be a problem if we do not start addressing the improvements needed to bring people back to mass transit. Two areas with room for improvement are improving customer satisfaction with mass transit and making the facilities more convenient for riders on their work commute. With these improvements, the City of Austin can accomplish what it set out to do in 1999: to create a livable, sustainable community using Smart Growth principles to guide us towards the future.

Bibliography

- Adams, George. Interview by Jason Summerville. Phone interview. Austin, TX., March 25, 2011.
- Adams, George, and David Gerard. 2000. Smart growth and transportation: Opportunities and challenges for Austin. *ITE Journal* 70 (11): 30-4.
<http://vnweb.hwwilsonweb.com.libproxy.txstate.edu/hww/jumpstart.jhtml?recid=0bc05f7a67b1790e872990f68905223acddce2238c40b0619f81492929c5c61498d16e50b989c47f&fmt=H>.
- Akar, Gulsah and Kelly J. Clifton. 2009. Influence of individual perceptions and bicycle infrastructure on decision to bike. *Transportation Research Record: Journal of the Transportation Research Board* 2140: 165.
- Alexander, Don, and Ray Tomalty. 2002. Smart growth and sustainable development: Challenges, solutions and policy directions. *Local Environment* 7 (4): 397-409,
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=8597134&site=ehost-live> (accessed 3/3/2010).
- Babbie, Earl. 2007. *Practice of Social Research*. 11th ed. Belmont, CA: Wadsworth.
- Barnett, Jonathan. 2007. Smart growth in a changing world. *Planning* 73 (3): 26-9,
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=24245401&site=ehost-live>.
- Ben-Zadok, Efraim. 2009. The ups and downs of Florida growth policy, 1971-2008. *Planning Practice & Research* 24 (3): 379-87,
<http://search.ebscohost.com/login.aspx?direct=true&db=syh&AN=43607412&site=ehost-live>.
- Bengston, David N., Jennifer O. Fletcher, and Kristen C. Nelson. 2004. Public policies for managing urban growth and protecting open space: Policy instruments and lessons learned in the United States. *Landscape and Urban Planning* 69 (2-3): 271-86.
- Bianco, Martha J. 2001. Robert Moses and Lewis Mumford: Competing paradigms of growth in Portland, Oregon. *Planning Perspectives* 16 (2): 95-114.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=syh&AN=5181153&site=ehost-live>.
- Bochner, Brian, Ray Burke, Steve Colman, Lisa Fontana. 2003. ITE task force report summary: A proposed recommended practice: Smart growth transportation guidelines. *ITE Journal* 73 (3): 55.
<http://vnweb.hwwilsonweb.com.libproxy.txstate.edu/hww/jumpstart.jhtml?recid=0bc05f7a67b1790e872990f68905223a1fb8012690ea4077a8e136fcb4ac46be7cf2ea4ffa9dff74&fmt=H>
- Bullard, Robert D. 2007. *Growing Smarter*. Cambridge, Massachusetts: MIT.

- Burbank, Matthew J., Charles H. Heying, and Greg Andranovich. 2000. Antigrowth politics or piecemeal resistance?: Citizen opposition to olympic-related economic growth. *Urban Affairs Review* 35 (3): 334-57.
- Busha, Michael. 2010. Reversing the trend. [cited 04/20 2010].
<http://www.tndhomes.com/grad02.htm>
- Canby, Anne P. 2003. Creating successful communities? Making it happen! *ITE Journal* 73 (7) : 26-32.
<http://vnweb.hwwilsonweb.com.libproxy.txstate.edu/hww/jumpstart.jhtml?recid=0bc05f7a67b1790e872990f68905223a08c37d173c4e447eb9ba3173d0d67c9872b19f52c81ab530&fmt=P>.
- Capital Area Metropolitan Planning Organization. 2010. *CAMPO 2035 Regional Transportation Plan*. CAMPO Policy Board, 2010.
http://www.campotexas.org/pdfs/CAMPO_2035_Plan_Adopted_May_24,2010wMods.pdf.
- Capital Metropolitan Transportation Authority. *Approved Budget Fiscal Year 2011*. CapMetro. (March 2011).
<http://www.capmetro.org/docs/financial/CapMetro-Budget-FY2011.pdf>.
- . *President's Monthly Performance Report September 2010 through January 2011*. CapMetro. (March 2011).
<http://www.capmetro.org/docs/September%202010%20CEO%20Report.pdf>.
- Cervero, Robert. 2006. Alternative approaches to modeling the travel-demand impacts of smart growth. *Journal of the American Planning Association* 72 (3): 285-95.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=21924125&site=ehost-live>.
- City of Austin. Compliance Review Board. 2008. *The Domain Performance Based Incentive Agreement: Compliance Review and Status*. Austin, TX: City of Austin.
- . "Comprehensive Plan Advisory Task Force Meeting Minutes." City of Austin.
<http://www.imagineaustin.net/taskforce-archive.htm>. Accessed February 20, 2011.
- . "Imagine Austin Comprehensive Plan: About the Comprehensive Plan." City of Austin.
<http://www.imagineaustin.net/about.htm>. Accessed February 19, 2011.
- . 2005. Neighborhood Housing and Community Development. *S.M.A.R.T. Housing Policy Resource Guide*. Austin, TX: City of Austin.
- Cutts, Bethany B., Kate J. Darby, Christopher G. Boone, and Alexandra Brewis. 2009. City structure, obesity, and environmental justice: An integrated analysis of physical and social barriers to walkable streets and park access. *Social Science & Medicine* 69 (9): 1314-22.

- Daniels, Tom. 2001. Smart growth: A new American approach to regional planning. *Planning Practice & Research* 16 (3): 271-9.
<http://search.ebscohost.com.libproxy.txstate.edulogin.aspx?direct=true&db=syh&AN=5780769&site=ehost-live>.
- De La Cerda, Joeseeph E., "Economic Development: An Economic Impact Analysis of Tax Incentives on a Local Economy" (2010). *Applied Research Projects, Texas State University-San Marcos*. Paper 341.
<http://ecommons.txstate.edu/arp/341>
- Dowling, Timothy J. 2000. Reflections on urban sprawl, smart growth, and the fifth amendment. *University of Pennsylvania Law Review* 148 (3): 873-87.
<http://www.jstor.org.libproxy.txstate.edu/stable/3312828>
- Downs, Anthony. 2005. Smart growth. *Journal of the American Planning Association* 71 (4) : 367-80.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=18586428&site=ehost-live>.
- . 2003. Growth management, smart growth, and affordable housing
Keynote speech given at Brookings Symposium on the relationship between affordable housing and growth management.
- . 2001. What does 'smart growth' really mean? *Planning* 67 (4): 20.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=4307715&site=ehost-live>.
- Gibson, K., and C. Abbott. 2002. Portland, Oregon. *Cities* 19 (6): 425-36.
- Greenberg, Michael et al. 2001. Brownfield redevelopment as a smart growth option in the United States. *The Environmentalist* 21 (2): 129-43.
<http://www.springerlink.com.libproxy.txstate.edu/content/k321161452537tm5/fulltext.pdf>
- Harnik, Peter, and Ben Welle. 2008. Proceed without caution. *Planning* 74 (7): 24-7.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=33202210&site=ehost-live>.
- Haughey, Richard M. 2005. Higher-Density Development: Myth and Fact. Urban Land Institute. Washington, D.C.: 1-36.
- Hirt, Sonia. 2007. The devil is in the definitions. *Journal of the American Planning Association* 73 (4): 436-50.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?Direct=true&db=eih&AN=27584039&site=ehost-live>

- Horner, Mark W., and Tony H. Grubestic. 2001. A GIS-based planning approach to locating urban rail terminals. *Transportation* 28 (1): 55-77.
<http://vnweb.hwwilsonweb.com.libproxy.txstate.edu/hww/jumpstart.jhtml?recid=0bc05f7a67b1790e872990f68905223a051792fd0336f02e44633662e6ffb79182530f2a23e200d4&fmt=P>.
- Irwin, Elena G., and Nancy E. Bockstael. 2004. Land use externalities, open space preservation, and urban sprawl. *Regional Science and Urban Economics* 34. (6): 705-25.
- Jennings, James. 2004. Urban planning, community participation and the Roxbury master plan in Boston. *Annals of the American Academy of Political and Social Science* 594, (Race, Politics, and Community Development in U.S. Cities) (Jul.): 12-33,
<http://www.jstor.org.libproxy.txstate.edu/stable/4127691>.
- Johnson, Timothy Lee, "The Downtown Austin Planning Process as a Community of Inquiry: An Exploratory Study" (2008). *Applied Research Projects, Texas State University-San Marcos*. Paper 276.
<http://ecommons.txstate.edu/arp/276>
- Katz, Bruce. 2000. The federal role in curbing sprawl. *Annals of the American Academy of Political and Social Science* 572 (Presidential Campaigns: Sins of Omission) (Nov.): 66-77,
<http://www.jstor.org.libproxy.txstate.edu/stable/1048893>.
- Krueger, Rob, and David Gibbs. 2008. 'Third wave' sustainability? smart growth and regional development in the USA. *Regional Studies* 42 (9): 1263-74.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=bth&AN=34871028&site=ehost-live>.
- Leslie, Eva, Neil Coffee, Lawrence Frank, Neville Owen, Adrian Bauman, and Graeme Hugo. 2007. Walkability of local communities: Using geographic information systems to objectively assess relevant environmental attributes. *Health & Place* 13 (1): 111-22.
- Lewis, Sarah Danse, "An Assessment of Smart Growth Policies in Austin, Texas" (2007). *Applied Research Projects, Texas State University-San Marcos*. Paper 267.
<http://ecommons.txstate.edu/arp/267>
- Lorentz, Amalia, and Kirsten Shaw. 2000. Are you ready to bet on smart growth? *Planning* 66 (1): 4.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=2701360&site=ehost-live>.
- Lund, Hollie. 2006. Reasons for living in a transit-oriented development, and associated transit use. *Journal of the American Planning Association* 72 (3): 357-66.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=21924131&site=ehost-live>.

- . 2003. Testing the claims of new urbanism. *Journal of the American Planning Association* 69 (4) : 414.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=11127115&site=ehost-live>.
- Lund, Hollie, Richard W. Willson, and Robert Cervero. 2006. A re-evaluation of travel behavior in California TODs. *Journal of Architectural and Planning Research* 23. (3): 247-63.
<http://vnweb.hwwilsonweb.com.libproxy.txstate.edu/hww/jumpstart.jhtml?recid=0bc05f7a67b1790e872990f68905223a6c6d97c4080826430f93a711e83625e45475a7f8847e02e8&fmt=H>.
- Luscher, Daniel R. 1995. Transit-oriented development as a congestion-reduction strategy in the San Francisco Bay area. *Berkeley Planning Journal* 10: 55C, 56-74,
<http://vnweb.hwwilsonweb.com.libproxy.txstate.edu/hww/jumpstart.jhtml?recid=0bc05f7a67b1790e872990f68905223ae7f197f9c75302544feba5b482d7d3ea8abfbdd29bb59aeb&fmt=H>.
- McManus, Teri. Interview by Jason Summerville. Phone interview. Austin, TX, March 25, 2011.
- Marlin, Justin William, "Bicycle Transportation Issues: Describing the Attitudes and Opinions of Cyclists in Austin, Texas" (2008). *Applied Research Projects, Texas State University-San Marcos*. Paper 283.
<http://ecommons.txstate.edu/arp/283>
- Miller, John S., and Lester A. Hoel. 2002. The "smart growth" debate: Best practices for urban transportation planning. *Socio-Economic Planning Sciences* 36 (1): 1-24.
- Murray, Alan T., and Xiaolan Wu. 2003. Accessibility tradeoffs in public transit planning. *Journal of Geographical Systems* 5 (1): 93.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=9780086&site=ehost-live>.
- National Association of Home Builders Board of Directors. Smarter growth policy statement: Building better places to live, work and play. in National Association of Home Builders [database online]. Fall 2009 [cited 04/20 2010].
http://www.nahb.org/fileUpload_details.aspx?contentID=126485.
- O'Connell, Lenahan. 2009. The impact of local supporters on smart growth policy adoption. *Journal of the American Planning Association* 75 (3): 281-91.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=42746725&site=ehost-live>.
- Peiser, Richard. 2001. Decomposing urban sprawl. *The Town Planning Review* 72 (3): 275-98.
<http://www.jstor.org.libproxy.txstate.edu/stable/40112455>.

- Plaut, Pnina O., and Marlon G. Boarnet. 2003. New urbanism and the value of neighborhood design. *Journal of Architectural and Planning Research* 20 (3): 254-65.
<http://vnweb.hwwilsonweb.com.libproxy.txstate.edu/hww/jumpstart.jhtml?recid=0bc05f7a67b1790e872990f68905223a873599f44f1045ce7c43d182e9b6573e6c39efc55e6ab7eb&fmt=H>.
- Pollard, Trip. 2001. Greening the American dream? *Planning* 67 (10): 10.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=5356921&site=ehost-live>.
- Pucher, John and Ralph Buehler. 2006. Why Canadians cycle more than Americans: A comparative analysis of bicycling trends and policies. *Transport Policy* 13: 265.
- Renne, John L. 2009. From transit-adjacent to transit-oriented development. *Local Environment* 14 (1): 1-15,
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=35656343&site=ehost-live>.
- Robinson, Lin, Joshua P. Newell, and John M. Marzluff. 2005. Twenty-five years of sprawl in the Seattle region: Growth management responses and implications for conservation. *Landscape and Urban Planning* 71 (1): 51-72.
- Schacherl, Bradley A., "Assessing Smart Growth in San Antonio, Texas" (2008). *Applied Research Projects, Texas State University-San Marcos*. Paper 279.
<http://ecommons.txstate.edu/arp/279>
- Shelton, David S., and Anthony K. Lo. 2003. Transit-oriented development in the Seattle, WA, USA, area. *ITE Journal* 73 (8): 46-51.
<http://vnweb.hwwilsonweb.com.libproxy.txstate.edu/hww/jumpstart.jhtml?recid=0bc05f7a67b1790e872990f68905223a1fb8012690ea407739d2dbd801014cd8559e4a4ef442240d&fmt=P>.
- Shields, Patricia M., and Hassan Tajalli. 2005. Theory: The missing link in successful student scholarship. *Faculty Publications-Political Science* (Paper 7).
- Song, Yan, and Roberto Quercia. 2008. How are neighborhood design features valued across different neighborhood types? *Journal of Housing & the Built Environment* 23 (4): 297-316,
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=34995414&site=ehost-live>.
- Talen, Emily. 2005. Evaluating good urban form in an inner-city neighborhood: An empirical application. *Journal of Architectural and Planning Research* 22 (3): 204-28.
<http://vnweb.hwwilsonweb.com.libproxy.txstate.edu/hww/jumpstart.jhtml?recid=0bc05f7a67b1790e872990f68905223a47097347d8174b2e2bd8337f339558f74f9afe86e0a5c7f7&fmt=H>.

- Vogel, Ronald K., Swanson, Bert E. 1989. The growth machine versus the antigrowth coalition: The battle for our communities. *Urban Affairs Review* 25: 63-85.
- Voigt, Kenneth H., and Beverley McCombs. 2010. Transportation's role in sustainability. *ITE Journal* 80 (2): 40-2.
<http://vnweb.hwwilsonweb.com.libproxy.txstate.edu/hww/jumpstart.jhtml?recid=0bc05f7a67b1790e872990f68905223abee0092ccc44ac9677d5a002e2884a9132ebafb09575ff79&fmt=P>.
- Volinski, Joel and Oliver Page. 2004. Developing Bus Transfer Facilities for Maximum Transit Agency and Community Benefit. *National Center for Transit Research*. Dec. 2004: 1-92.
<http://deepblue.lib.umich.edu/bitstream/2027.42/64893/1/102506.pdf>.
- Wolshon, Brian, and James Wahl. 1999. Novi's main street: Neotraditional neighborhood planning and design. *Journal of Urban Planning & Development* 125. (1): 2.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=eih&AN=6787243&site=ehost-live>.
- Ye, Lin, Sumedha Mandpe, and Peter B. Meyer. 2005. What is "smart growth?"- really? *Journal of Planning Literature* 19 (3): 301.
- Yin, Robert K. 2003. *Case Study Research Design and Methods*. Thousand Oaks: California: SAGE publications.
- Zovanyi, Gabor. 2007. The role of initial statewide smart-growth legislation in advancing the tenets of smart growth. *Urban Lawyer* 39 (2): 371-414.
<http://search.ebscohost.com.libproxy.txstate.edu/login.aspx?direct=true&db=a9h&AN=25896683&site=ehos>.