



Smart Growth America
Making Neighborhoods Great Together

East Central Florida Regional Planning Council: Cool Planning Report and Suggested Next Steps

Building Blocks for Sustainable Communities Program

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Workshop introduction

As a result of the East Central Florida Regional Planning Council (ECFRPC) being awarded a Smart Growth America (SGA) technical assistance grant, a representative of SGA and their consultant, Otak, Inc., conducted a day-long workshop and held an evening public presentation on September 10, 2014 in the Altamonte Springs, Florida area. The workshop was facilitated by Otak, Inc. principal Mandi Roberts, with support from Roger Millar of SGA.

Pursuant to the technical assistance award provided to ECFRPC from Smart Growth America, this memorandum constitutes the final report summarizing the “Cool Planning” workshop and suggesting possible next steps ECFRPC could take.

Workshop focus

The workshop focused on the following key topics, using the Cool Planning Handbook as a technical resource, as well as other background research and information:

- Overview of the Smart Growth America technical assistance program
- Cool Planning Handbook best practices and strategies
- Interactive discussion on regional challenges and opportunities
- Recycling land and buildings/suburban infill and retrofit examples
- Integrating green building practices
- Land use patterns, travel habits and trip generation
- Benefits of trees in urban and suburban areas
- Integrating ideas from the workshop and developing an action plan/next steps

The interactive workshop focused on specific smart growth strategies and tools for implementation in the East Central Florida from the *Cool Planning Handbook*, developed by Otak, Inc., a planning and design firm based in the Pacific Northwest.

Smart growth overview

Smart growth encompasses planning principles directed at developing sustainable communities that are great places to live, to do business, to work and to raise families.

Ten top principles that guide smart growth include:

1. Create distinctive and desirable communities.
2. Mix land uses so that people can live, work, shop, go to the park or school, get services, run errands and do other activities within walking distance.
3. Focus on compact urban form around vibrant urban centers.
4. Provide a range of housing opportunities.
5. Make neighborhoods walkable.
6. Preserve open space and critical resource areas.
7. Develop within existing communities to centralize resources and infrastructure.
8. Provide transportation choices.
9. Encourage "smart" development decisions that are predictable, fair and cost effective.
10. Encourage community collaboration through participatory planning and design and engagement in development decisions.

Handbook overview

“Cool Planning” is planning and growing smartly while integrating key strategies that address climate change as part of policy-making and community design. The *Cool Planning Handbook* is a guide developed to help cities, towns, and communities identify tools and strategies for mitigating and slowing climate change at the local level. While the handbook was developed for the Oregon State Transportation and Growth Management Program, its guidance can be applied nationally and internationally. In 2012, the handbook was awarded a national American Planning Association award for excellence in best practices.

Cool planning is smart growth through the lens of climate change and with a focus on integrating land use and transportation and maximizing travel choices. Transportation and the amount of miles people choose to travel by motor vehicle generate a large portion of carbon dioxide and greenhouse gas emissions. With the understanding that local growth and development decisions affect how we get around and that how we get around affects our climate, the handbook provides a variety of recommendations for how to reduce the need to drive for every trip and reduce vehicle miles traveled overall in communities, and as such, reduce greenhouse gas emissions and carbon footprints. Statistics related to travel, trip-making, carbon use and emissions generated in the United States (US) are provided in the Appendix.

The handbook contains specific guidance related to the following topics, with strategies and tools that can help make a difference at the local level when implemented:

- Grow More Compact
- Get Centered (create vibrant, attractive activity centers)
- Mix Up Your Land Uses
- Recycle Urban Land and Buildings*
- Make Streets Complete
- Make Way for Pedestrians
- Make Your City Bicycle Friendly
- Get Well Connected
- Put Parking In Its Place
- Change Travel Habits*
- Find Better Models for Big Trip Generators*

- Green Your Buildings*
- Plant Trees in Your Town*
- Guidance for Climate Action Planning*

*Topics presented and discussed at the East Central Florida Cool Planning Workshop.

The handbook presents a variety of smart growth best practices and strategies that improve public health, quality of life and economic prosperity, along with reducing environmental impacts and mitigating climate change at the local level. The handbook recognizes that reduction of carbon emissions and sustainable planning and design will happen through smart decisions about land use planning, transportation, and local redevelopment and investment, as well as adoption of policies and guidelines to better shape the future of the community and region.

Cool planning supports creation of places and communities that are sustainable, livable and resilient. Smart growth and “cool planning” are basically just other names for creating great communities—great places that are healthy, attractive, and desirable places where people want to be—live, work, play and learn. Great communities are communities that are family-friendly and healthy, as well as economically strong and environmentally sound. As part of creating great communities, the handbook emphasizes the importance of investing in downtowns and activity centers and avoiding strip development. Within these centers providing a combination of land uses and services within a compact area results in key benefits, such as:

- An improved tax base and avoidance of diluted economic development potential
- Healthier life styles and improved quality of life
- Reduced need to drive and less reliance on fossil fuels
- More transportation and housing choices
- Decreased infrastructure costs
- More vibrant streets and communities

The handbook can be downloaded at:

http://www.oregon.gov/energy/gblwrm/docs/cool_planning_handbook.pdf

Applying the handbook tools in the East Central Florida region

This memorandum summarizes the workshop results and discussions related to each topic presented and provides recommendations for next steps for the East Central Florida Regional Planning Council.

Regional challenges and opportunities

After introductory presentations on smart growth and cool planning best practices, workshop participants brainstormed on a variety of challenges and opportunities in land use and transportation, aided by a slide show of photographs showing existing conditions throughout the region. The following is a summary of key observations and discussions related to regional challenges and opportunities:

- While there are several strong community centers that have developed over time or recently emerged, the region also has sprawling strip commercial corridors that tend to pull energy away from centers.
- Building vacancies and underutilized properties exist throughout the East Central Florida region along these corridors. As businesses have moved to other locations, buildings and lands have been left to find new uses and tenants.
- There is a need for more complete streets, with better walking, bicycling and transit facilities and connections throughout the region.
- There is a need for better access to transit with connecting sidewalks, paths and bikeways, and local transit connecting to regional transit.
- The region has a great network of shared use paths that help connect communities and provide alternatives to driving for every trip.





Time stuck in traffic—a consequence of sprawl.

- Big trip generators, such as schools and larger commercial/big box retail areas, are often not well connected to communities or located within walking distance of housing. More students are bussed to school than are able to walk and parents often do not let their children walk to school due to concerns about safety (including traffic speeds) and security.
- Because of the regional land use patterns, most people have to rely on driving to and from daily destinations.
- More shade trees are needed throughout the region. Development projects often tend to use palms, which use a high amount of water and provide less shade.
- There are some great examples of urban and suburban infill and retrofit happening in the region, with more occurring as time progresses and the economy tends to strengthen after the recession.

One of the most important outcomes of the workshop was building awareness of focusing key messages related to smart planning and best practices in community development around their potential to increase economic resiliency and improve community health and quality of life. Another focus of workshop discussions was the importance of continuing to strengthen the town centers and activity centers of the region, drawing energy and investment to centers as a focus for infill and redevelopment activity, rather than along highway corridors.

“Getting centered”— an important baseline strategy

One of the most important ways for a community to grow smart is to create places that bring a mix of land uses and transportation facilities closer together, with more focus in the city center, as well as neighborhood and district activity centers and hubs. Increasing density in these centers, within community service areas, coupled with introducing more mixed land uses, brings more people closer and reduces travel distances between home and work, school, community services, shopping, recreation and other activities. Communities can also realize economic benefits as a result of lower costs for infrastructure, utilities, and public services.

Many people are willing to pay premium prices to live in well-planned, well-designed higher density communities. For these people, the benefits from the convenience and accessibility exceed the costs. The value of such convenience is sometimes called the “density dividend.” Also, these walkable, attractive areas become *THE* places to be, where there is higher demand for property and a correlating increased value for land and buildings.

Staying centered means focusing on and investing in your city center and community activity centers to keep them economically vibrant, attractive, and sources of pride within the community. These are the places that provide a rich combination of commercial, residential, and public uses that serve the community. Strong centers reduce the amount of driving people have to do because people can walk, bike, or take transit to conduct their business and run their errands. To maintain and enhance downtowns and other centers, a commitment to redevelopment and preservation is important, along with avoiding sprawl and commercial strip development.

Some cities are planning toward a model that creates “20-minute neighborhoods,” including Portland, Oregon and Eugene, Oregon. Within these 20-minute areas (10-minute/half-mile walking radius creating a 20-minute/one mile circle), residents are able to access the goods and services they need, run errands, and complete most of their daily trips. For more information about this approach and the benefits realized, refer to the Appendix.

Key strategies for getting and staying centered:

- Provide a combination of land uses and services that are readily accessible by transit, walking and bicycling:
 - Focus on the main streets and activity centers.
 - Avoid strip commercial.
 - Avoid spreading economic viability too thinly.
- Create a more walkable city/community, particularly by strengthening walkability and connectivity (walking/biking/transit) to, from and within downtowns, campuses and other activity areas.
- Housing trends are shifting to more compact development and a variety of housing types to fit diverse income levels. Recent studies show that the next generation of homebuyers is seeking to live in neighborhoods where residents can walk and where their commute time can be greatly reduced. This means that communities need to provide a variety of housing choices to fit the different needs of the community (remember no “one size fits all”) and increase walkability to be competitive.
- Shift to more compact, higher densities of housing in downtown and activity center areas, especially those served by transit.
- Provide a full mix of land uses (schools, post offices, grocery stores, hardware stores, beauty salons, restaurants, cafes, bakeries, coffee shops, theaters, libraries, cultural events, various retail shops, etc.) within walking distance to serve the neighborhood.
- Concentrate density and development cost-effectively and in areas of sufficient infrastructure. This is the “density dividend.”
 - Lower density = more traffic and higher density = less traffic.
 - More compact = better access to services, amenities, schools = less traffic.
 - There is a growing demand for well-designed, compact places.
 - The more compact built environments are, the less distance needed for providing infrastructure, utilities and services = operational cost efficiencies and smarter public investment.

Recycling land and buildings and green building

Land and building can be reused and used more intensively in three ways: infill, redevelopment and historic preservation. Infill is the process of developing vacant or

underused sites that are sitting empty or unproductive. Infill often involves construction of new buildings. Redevelopment of land and buildings typically calls for a more intense use of vacant, blighted or underused areas as well as rehabilitation and retrofit of older structures into new productive uses. Redevelopment also may involve removal of derelict buildings and replacement with new structures. Historic preservation is the act of maintaining and protecting significant historic structures that otherwise might fall into decay and disuse, extending the life of these buildings.

Recycling land and buildings in areas that are already urbanized with existing infrastructure, particularly in activity centers, provides the benefit of not needing to extend roads and utilities for development. Infill and redevelopment can be effective strategies and hold the potential to reduce site-specific vehicle miles traveled by 15 to 50 percent according to the Center for Clean Air Policy.

Although developers often prefer “greenfield” sites—undeveloped properties in less central areas, where land may be cheaper, taxes lower, and construction easier—it is important to recognize the public costs associated with uncontrolled growth and sprawl extending out further from our centers. Affects on public health for example, have been documented through alarmingly increasing levels of adult and child obesity and diabetes in the US over the past several decades. People are less active, walking less, driving more—and research is confirming there is a direct correlation between the way communities are designed and public health.

Examples of successful urban infill, redevelopment and building retrofit/rehabilitation can be found throughout the East Central Florida region. As an outcome of the workshops, it is recommended that these examples be collected into a portfolio and shared throughout the region as best practices to be continued and promoted. The Full Sail University complex, which has expanded from the original campus into nearby business park and commercial buildings retrofitted for University classroom and uses, is a great example of urban infill and reuse of existing buildings. The campus has been designed to be very walkable and provides bicycle parking and shared use paths for students, faculty, and employees at the University. However, despite the success of the University in retrofitting land uses, SR 436 is designed as a high volume, high speed

corridor, and thus creates a barrier between Full Sail and some of the multi-family housing in the area where students live.



Full Sail University, Winter Park, Florida.

Key strategies for recycling land and buildings:

- Prioritize infill and redevelopment over new development.
- Incentivize by eliminating burdens and providing bonus opportunities to developers.
- Promote and market key opportunity sites.
- Assign staff to guide projects.
- Consider scenario planning for high priority areas—identify key districts, subareas and corridors that merit design-based planning.
- Provide illustrative design standards and guidelines that clearly convey the desired urban form and character for the community. Consider integrating form based codes.

- Lead by example: Implement high quality public projects as a model to others.
- Partner with the private sector.
- Work with transportation organizations to improve the roadway corridor design of these areas to support the walkability, connections, and safety aspects needed to support these new projects.

Innovative green building practices:

- Require, encourage and guide compliance with green building standards (such as Leadership in Energy & Environmental Design/LEED certification).
- Require, encourage and guide low impact development techniques with site design and construction.
- Promote the benefits of and offer incentives for energy conservation, as well as projects that generate energy and/or are part of energy districts.
- Consider the potential for eco-district and eco-village development in urban districts, downtowns, campuses and other areas of compact urban form.



Tempe Transportation Center, a public/private partnership project with LEED Platinum green building certification in Tempe, Arizona.

Making streets more complete

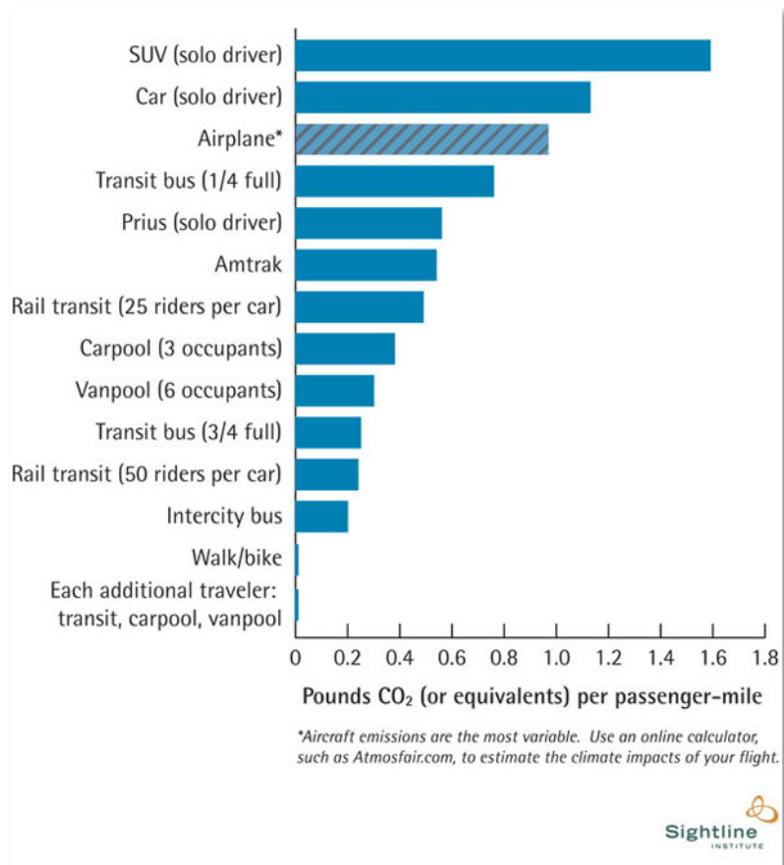
Although not a specific topic of focus in the workshop, the need for more complete streets persists throughout the region. One of the most important methods for reducing greenhouse gas emissions at the local and regional level is to change the way people travel. Overall in the United States, according to the Environmental Protection

Agency, transportation related activities account for 28 percent of our greenhouse gas emissions. The chart at right depicts estimated average emission rates by type of vehicle per mile in the U.S.

Continuing to create complete streets and make existing streets more complete by providing facilities that support all modes of travel and encouraging travel behavior that reduces the level of vehicle miles traveled (particularly by single occupant vehicles) are important actions the region can take.

Public street and road rights-of-way serve a critical role in livable communities, making up approximately 30 to 40 percent of the public realm in our communities. This is critical public space that serves a multitude of purposes. Streets should be viewed as corridors for moving people, not for moving cars. People should have the opportunity to move by walking, bicycling, using transit or driving. All streets should provide a basic level of service for all modes. Workshop participants discussed the need for more complete streets throughout the region and continuing to adopt policies and design guidance to encourage streets that are designed for all modes—walking, bicycling, transit use and motor vehicles.

In the discussion of green building principles at the workshop, participants recognized that streets also function as places for green investment—not only trees and landscaping, but green infrastructure solutions such as stormwater management and flood control. Workshop participants also were interested in opportunities to think of streets as “places.”



Key concepts discussed included looking at opportunities to create more shared street blocks for festivals, market and other events was of interest and transforming urban arterials and thoroughfares that have traditionally served a more single-purpose of moving cars, into multi-functional corridors that move people in a variety of ways to create more livable, desirable and attractive communities.

Key strategies for making streets more complete:

- Maximize the number of people and functions that streets serve.
- Avoid creating new single-function thoroughfares that predominantly serve motor vehicle traffic.
- Provide wider sidewalks, curb extensions, crossing improvements and other pedestrian treatments to create and enhance walkable districts.
- Provide streetscaping, trees, street furniture, pedestrian-scale lighting and other features to create an attractive environment for walking, bicycling and transit use.
- Provide a basic level of service on all streets for all modes, while further analyzing the network for opportunities to create transit-friendly, bike-friendly and pedestrian-friendly corridors that may emphasize these modal uses.

Changing travel habits and finding better models for big trip generators

Shaping, encouraging and directing ways in which people travel and use transportation systems can have a dramatic effect on reducing vehicle miles traveled. Transportation demand management (TDM) includes a full range of policies and practices from providing pedestrian, bicycle and transit facilities; to better managing parking; to sponsoring commute trip reduction programs; and a variety of other actions.

The chart on the following page provides a comprehensive list of TDM strategies from the Online TDM Encyclopedia of Victoria Transport Policy Institute. As policymakers continue to realize that they cannot build their way out of congestion management problems, the list of TDM measures continues to grow. Carpooling and smart travel programs are increasing in many metropolitan areas. “Drive alone less” is a common message being conveyed to commuters and travelers, along with providing other transportation choices in communities (transit, rail, bicycling walking).

Some land uses generate so many trips that they warrant special attention. For example, school-related trips can increase morning rush hour traffic by as much as 30 percent in some communities, while big box stores can generate as many as 10,000 car trips a day. So many motor vehicle trips mean big carbon footprints.

Transportation Demand Management (TDM) Strategies

Improves Transport Options	Incentives	Land Use Management	Policies and Programs
Transit improvements	Road pricing	Smart growth	TDM Programs
Nonmotorized improvements	Distance-based fees	New urbanism	Commute trip reduction
Rideshare programs	Commuter financial incentives	Location-efficient development	Campus transport management
Flextime	Parking pricing	Parking management	Freight transport management
Car sharing	Pay-as-you-drive vehicle insurance	Transit oriented development	Tourist transport management
Telework	Fuel tax increases	Car free planning	TDM marketing
Taxi improvements	Nonmotorized encouragement	Traffic calming	Least-Cost planning
Bike/transit integration			Market reforms
Guaranteed ride home			
HOV Priority			

Working with school districts to better plan locations of new schools and to increase walking and bicycling connectivity to existing schools is important. Exploring more urban models for schools that use less property can help as well. School sites have gotten increasingly larger in the last few decades, often as large as 13 to 60 acres, which is roughly equivalent to 14 to 65 city blocks. Parcels this large can be hard to find at affordable prices in already developed areas, so school districts often purchase sites on the outskirts. While putting new schools on large sites at the edge of a city may reduce up-front capital costs, it is likely to increase other costs, including those

related to transportation. At the same time, there has been a general decline in walking to school across the US, as well as a concurrent increase in childhood obesity and diabetes levels. The increase in school sites can influence walking because distance has been documented as the number one barrier to walking and biking to school. The larger the school site, the longer distance students have to walk to get there. Schools often provide parking lots that exceed the daily demand or need, as well as large lawn areas around the buildings. Smarter site planning should be encouraged.



Students walking to school

Considering smaller site models for schools and locating schools closer to urban areas and higher density housing can increase the level of walking to and from school, which in turn can improve the health of children.

More urban models for big box and large commercial stores are also being implemented around the U.S. These models consider buildings with multiple levels, as well as parking that is sized correctly to demand and/or shared with other nearby uses. Target, for example, has built downtown stores in Seattle, Washington; Minneapolis, Minnesota; Pasadena, California; and other cities.

Local governments can help by providing design guidelines for large retail stores that emphasize easy pedestrian, bicycle, and transit access. Local governments also can promote vacant buildings and sites suitable for redevelopment and retrofit that are accessible to transit and encourage retail stores to meet shopping needs within walking distance of their customers.

Wrapping big box stores with liner buildings that have smaller shops increases the opportunities for shared parking and less trip-making. Counting on-street parking as part of the parking capacity for shopping areas also is important.



Bel-Mar Mixed Use District in Lakewood, Colorado.

Encouraging urban shopping development in walkable blocks and gridded streets with on-street parking can transform the look and character of the area. Many older 1960s-1990s shopping malls are reinventing themselves into more walkable “park once and walk” urban forms.

The Bel-Mar mixed use area in Lakewood, Colorado, a new vibrant urban neighborhood that was the result of a redeveloped a 1960s era suburban shopping mall is one example. Other examples include Keirland Commons in Scottsdale, Arizona and University Village in Seattle, Washington.

Key strategies for improving land use patterns and related travel habits and reducing trip generation:

- Maximize travel choices and options and promote smart travel through education and outreach.
- Make funding for transit, access to transit and transit-oriented development high priorities.
- Encourage urban forms of transit-oriented development that are connected to fast and reliable transit systems.
- Consider how 20-minute neighborhoods might work as an overlay with community/town centers in the region.
- Implement all forms of travel demand management.
- Promote better models for big trip generators:

- Redevelop of shopping centers into more walkable urban block and grid forms.
- Locate shopping areas in proximity to transit and within walking and bicycling distance from housing/neighborhoods.
- Better connect large trip generators such as shopping centers, big box retail, campuses, schools, etc. with walking and bicycling facilities, as well as transit
- Improve connections between campus housing and nearby shopping and dining areas.
- Promote more urban school development models.
- Invest in school walking routes.
- Continue to invest in creating stronger town and neighborhood centers and main streets with opportunity to park once and walk between uses and errand destinations.

Benefits of trees in urban and suburban areas

Planting trees enhances community character, softens the impact of parking lots and makes walking more pleasant and comfortable. Trees also provide shade and reduce the effect of urban heat islands that occur in highly developed areas. Trees help to moderate temperatures, reducing the need for cooling and related energy use and costs (and reduced energy consumption also decreases greenhouse gas emissions).

The benefits of trees go further, including:

- Absorption of stormwater runoff, which helps in flood control
- Air quality improvement: leaves collect and absorb particles of airborne pollutants such as sulfur dioxide, and they absorb carbon dioxide in the air and generate oxygen (clean air)
- Reduction and buffering of wind speeds
- Water quality improvement by decreasing soil erosion
- Increased property values—a



Trees shade an Altamonte Springs, Florida parking area.

study by the National Association of Home Builders showed that 43% of home buyers would pay up to \$3,000 more for wooded lots and 30% would pay \$5,000 more, and mature trees can add an average of a 10 percent increase in property value

- People are attracted to areas with tree-lined streets—A National Arbor Day Foundation report showed that people are more likely to linger and shop in areas with street trees
- Research also has concluded that crime levels are reduced in areas with extensive street tree systems and well-landscaped parks, which also correlates to a higher level of community pride and investment
- Traffic calming—tree-lined streets help to slow traffic in urban areas by creating a visual narrowing of the roadway
- Increased wildlife habitat

Asphalt and concrete streets and parking lots increase urban temperatures by 3 to 10 degrees Fahrenheit typically. Trees can reduce temperatures in these areas significantly. Because trees absorb carbon dioxide, a major culprit among greenhouse gas emissions, trees are often thought of as “carbon sinks” that capture and sequester carbon dioxide that otherwise would remain in the atmosphere.

Considering the amount of water trees use is important as well, particularly in areas that rely on aquifer recharge for water. Palm species tend to use significantly more irrigation water than deciduous street tree species. Deciduous trees also tend to provide more shade and absorb more carbon dioxide. Research the tree boxes, etc. for use of more shade providing trees in urban areas.

Big ideas for East Central Florida

In brainstorming potential action items for the region, the following “big ideas” were offered by the workshop participants.

Recycling urban land and buildings and green building practices

- Assemble a portfolio of local successes/best practices and examples from communities of the region to share with others (mixed use, commercial retrofit, etc.). Identify and promote successful examples in the region (Full Sail University mall/business park retrofit, other mall rehabs, hotel, Mercado style, etc.).
- Find opportunities to enter into development agreements that incentivize best practices with developers. Make agreements for affordable housing, green building, infrastructure improvements, etc. by allowing bonus height, density, less parking or other incentives.
- Encourage development is predictable, fair and cost effective.
- Refer to the Scottsdale, Arizona example, where there are pre-approved infill development plans for quick turn-around approvals.
- Make it easier for developers to do the right things, and make it harder to build outside of centers. Encourage form-based codes.
- Scenario-based planning and visualizations can help communities/cities understand what the built results will look like.
- Consider market demand metrics related to building types and constructibility (4-5/2 buildings -or- greater than 12 stories can meet financial goals/metrics) building with heights in the middle, not economical.
- Even if vertical mixed use is not possible, horizontal mixed use can bring benefits with commercial located behind/on the same site as residential. This type of development may fit some development preforms better. Look into mixed uses/mixed operations with single retrofitted buildings.
- If you cannot put parking below buildings, at least arrange sites for parking to go behind urban form (buildings) along streets. Be sure to put windows, doors, and access ways on the street sides of buildings. In some cases, buildings may need multiple faces.

- Consider the need to build residential population/units first to drive the demand for retail/commercial in mixed use developments. If retail does not pencil out, encourage other active ground floor uses beneath residential.
- Look at sustainable re-use opportunities using schools, community health centers, foot markets (East End Market), etc.

Travel patterns/big trip generators/land use and community design

- Handle parking at a district level. Treat it like a “utility” and look for creative solutions (e.g., Arlington Whole Foods has valet parking).
- Engage school districts and work with school planning officials/consultants to encourage best practices in placement and design of schools. Identify features that encourage walking to school; look at urban form, infill, and shared-use models. Consider long term versus short-term costs (related to capital improvements, maintenance and operations).
- With the aging population of America, considering how to allow for aging in place will be critical.
- Build key smart growth planning messages around health and resiliency.
- Encourage adoption of Complete Streets policy at the local and regional level. Broaden awareness of the importance of complete streets through outreach/technical assistance.
- Educate about costs of transportation in household budgets—transportation choices affect household income, and they can be a burden on household income and economy (less driving = more expendable income for other things).
- Work with health department to look at the design of subdivisions. What can be done to promote physical activity and healthy, active lifestyles in these areas?
- Examine tourism trips/travel behaviors. What is the regional economic reliance on rental cars, etc.? (Transition reliance on tax revenues from rental cars to other sources over time.) Consider ways to educate and encourage travelers/visitors to use other transportation means or drive less while here (even if renting a car). Encourage visitors to walk and use transit once they have arrived at their tourism destination.
- Consider market demand. Unique places create a demand to be there, which helps give cities/communities leverage over development options (stronger

regulations to preserve the sense of place and uniqueness that people are demanding).

Trees

- Provide broad education about the benefits of trees in urban and suburban areas.
- Start education in schools to broaden awareness of the importance of trees and to bring the idea of needing more trees in urban and suburban areas to homes and families in the region.
- Work with developers to ensure they are considering the importance of trees in site design and development. Provide resources about preferred trees and plants (planting guide for the region). Encourage adoption of criteria to preserve a percentage of trees for each property.
- Tree spacing is important (avoiding tree overcrowding). Encourage best practices that consider long-term growth and that provide guidance on the right understory trees for the region.
- Promote the use of trees as a cost-effective energy conservation measure (explore the potential for rebates from utility companies, work with utility companies to encourage best practices, etc.).
- Encourage region-wide best practices including with Home Owners Associations' right-of-way maintenance.
- Consider street tree give-away. Refer to the Orlando Livability Action Plan and the Orlando tree/forestry expert.
- Encourage diversity of tree types and bio-diversity; avoid monocultures. Refer to the Vancouver example, where they plant only 5 percent of a certain tree species (challenges of this include different life spans, disease, pest, and climate susceptibility).
- Involve IFAS and UCF in a regional discussion and approach.

Other ideas

- Consider how cool planning ties into themes of health access and healthy foods. Explore creative ways to bring healthy food into areas with no grocery stores (example: East End Market, Winter Garden-hydroponic Tilapia farm). Consider

opportunities for edible streets and landscapes, such as city halls, community centers and other public resources at locations to grow food.

- Set budgets for ongoing collaboration with area agencies and jurisdictions and to support ongoing outreach efforts.
- Engage elected leaders and garner support for smart planning practices. Hold workshop for elected leaders, private sector, utility representatives, etc. to have discussions and get buy-in.
- Explore partnership opportunities to encourage best practices.

Recommendations and next steps for East Central Florida

The following recommendations can help guide the next steps for cities, towns, and communities in the East Central Florida Region.

Action planning

As jurisdictions move forward with comprehensive and subarea plans, integrate policy-making and action items related to community health, economic resiliency and mitigating climate change at the local level. As part of action plan development, the following steps are recommended:

1. Inventory existing conditions and collect data – this includes health statistics, greenhouse gas emissions, energy use and other characteristics. This will form a baseline to compare the results of planning to in the future.
2. Set goals and measurable objectives (or performance measures) that can be tools for monitoring progress and effectiveness of the plan.
3. Provide education and outreach as part of the planning process and fully engage communities, the public and key stakeholders in plan development.
4. Analyze alternative growth and development scenarios using effective tools (such as scenarios modeling, GIS-based built form sketch up models and others) that allow the ability to efficiently measure the effectiveness of each alternative related to improving community health, reducing energy use and greenhouse gas emissions and increasing economic vitality.
5. “Clean house” by revisiting your adopted regional and municipal polices, codes and plans. Audit codes to confirm that they support the desired forms of development and redevelopment. Integrate new policies and provisions where

needed. Create consistency across the region, forming a frontline of defense against development that does not further smart growth principles.

6. Monitor progress comparing implemented results annually with baseline results established as part of Step 1. Fine-tune and adjust implementation strategies and actions as needed to improve effectiveness in results.
7. Provide leadership—strong leaders both in elected roles at the state, regional, and local levels, as well as within county and city government and staffing are critical for successful implementation.
8. Learn from others—often people are resistant to change and fall back on statements such as, “Oh, that will never work here!” or “We can’t change the way people travel in this region.” Study what other regions and communities have been able to do over time. Even some of the most auto-centric places in the world, such as the Los Angeles and Phoenix metropolitan areas, have made significant progress in the last ten years in better integrating land use and transportation and offering more choices in travel and housing options to citizens.



Cottage housing (smaller lots and homes with common space) that meets transit-oriented development density standards for local bus lines in the Seattle, Washington metropolitan area.

As part of Step 5, cleaning house, it is important to address the following key questions:

- Do existing codes encourage higher density development and compact urban form focused around transit and a variety of transportation choices?
- Do codes encourage the provision of a variety of housing choices to serve different household sizes and income levels?
- Do codes permit and encourage mixed use, particularly in downtowns, activity centers, and neighborhood centers?
- Are infill and redevelopment treated as priorities over conventional development?
- Is there are framework for encouraging walkable and vibrant neighborhood centers (20-minute neighborhoods)?
- Are travel demand management measures being implemented at regional and local levels?
- Do existing parking policies and requirements harm or help? Is more parking required than needed? Are on-street parking, shared parking and day-time/night-time use patterns considered in required parking quantities? Is parking well managed in town centers? (Read *The High Cost of Free Parking*.)
- Are building setback requirements excessive?
- Are best practices in site development an urban form encouraged (for example, with buildings along street frontages and parking behind or under buildings)?
- Is pedestrian-friendly development encouraged everywhere and guided by design guidelines?
- Is affordable/work force housing encouraged near job centers and transit?
- Is transit supported by efficient and effective pedestrian and bicycle access and by transit-oriented development? Are buildings and businesses oriented for efficient access to transit? Are connections between transit systems seamless and efficient?
- How much is green building encouraged or required?
- Are shade trees required? Are guidelines available for selecting the preferred species of trees for urban areas?

Other recommendations and next steps

- Continue to coordinate across jurisdictions regionally for consistency in policy-making and development provisions. For example, the East Central Florida Regional Planning Council can serve in a supportive role for City of Orlando Green Works Community Action Planning and help to support and implement these planning principles in other communities regionally.
- Build a portfolio of best practices and examples from the region and elsewhere to promote smart growth principles.
- Encourage tree planting and develop and provide guidance for preferred species and tree care/maintenance in urban areas.
- Provide education and outreach to key stakeholders, elected officials, school district representatives, development firms, utility agencies and others.
- Build key outreach messages around improving community health and economic resiliency in the region.
- Develop materials for a sustainable development code workshop that can be provided on an ongoing basis regionally.
- Focus on infill redevelopment and continuing to strengthen centers (town centers, neighborhood centers, community centers and activity centers) rather than commercial strip development.
- Promote and support complete streets policy-making and implementation.
- Continue to invest in regional transit systems, as well as local connecting systems.
- Continue to support the development of shared use path systems as connecting corridors between communities.
- Design and build for pedestrians, at pedestrian scale and with features that create an attractive walking environment. Update street design guidelines to include building face and adjacent development requirements.
- Consider scenario planning for key districts, subareas and corridors. Scenarios could explore and evaluate (through quantifiable measures) various options for growth and change. A “scenario planning” approach could look at how areas might change in certain time increments (10 years, 20 years, etc.). Scenarios evaluated can also look at different land use mixes, densities, etc. Some of the key considerations to evaluate in these areas as part of special studies include:

- Walkability and connectivity—what is needed to create a more walkable, well-connected district or neighborhood where people can make most of their trips in a 20-minute zone?
- Land use mix supported by transit, pedestrian, and bicycle facilities—are there or will there be a mix of land uses so that people can work, learn, run errands, shop and play within a short distance from where they live? And are there transit, pedestrian and bicycle facilities (or will there be) so that people do not always have to drive between activities?
- Housing choices—can a range of housing options be provided to fit varying needs (those of different age groups for example) and affordability levels?
- What parking policies are in place in these areas, or how should parking be better managed to achieve regional community health and placemaking goals?
- Are there special development incentives and regulations that should be adopted in these areas to encourage low impact development, green building and amenities that will attract a diversity of residents?
- Can the area function as a mini-activity center or neighborhood center, with a mix of retail, civic services, parks and recreation to support surrounding residents and employees? What land use provisions need to be adopted to support mixed use and creating a jobs-to-housing balance in these areas and city-wide?

APPENDIX

Additional information is provided in the appendix that may be useful to the East Central Florida Regional Planning Council as it moves forward with integrating the workshop ideas into ongoing planning efforts. The following information and reports are included:

- Information About the Benefits of Trees in Urban and Suburban Areas
- 20-Minute Neighborhood Planning Information, Portland, Oregon
- Examples of Performance Measures and Metrics
- Additional Resources (for reference as part of ongoing planning and implementation efforts)

Appendix

THE BENEFITS OF TREES IN URBAN AND SUBURBAN AREAS

As discussed previously, trees bring a full range of benefits to urban and suburban areas when integrated into the fabric of our communities. Some resources that can help East Central Florida jurisdictions in continuing to plan for and select the right trees in community planning design are provided below.

Central Florida Community Tree Guide:

https://www.itreetools.org/streets/resources/Streets_CTG/PSW_GTR230_Central_Florida_CTG.pdf

22 Benefits of Urban Trees by Dan Burden:

http://www.michigan.gov/documents/dnr/22_benefits_208084_7.pdf

Other resources:

<http://urbanful.org/2014/08/19/trees-may-be-the-urban-healthcare-of-the-future/>

<http://www.theatlantic.com/health/archive/2014/07/trees-good/375129/>

<http://www.fs.fed.us/pnw/sciencef/scifi158.pdf>

<http://www.treesarecool.com/trees4florida.php>

http://hillsborough.ifas.ufl.edu/urbanforestry/tree_benefits.shtml

<http://www.naturewithin.info/UF/TreeBenefitsUK.pdf>

<http://www.louisianaurbanforestry.org/userfiles/files/UrbanTreeFacts.pdf>

20-MINUTE NEIGHBORHOODS

Some cities across the United States (US) are creating frameworks of 20-minute neighborhoods, designed to provide residents easy, convenient access to many of the places and services they use daily including grocery stores and local markets, restaurants, schools, and parks, without relying heavily on a car. 20-minute neighborhoods are characterized by a vibrant mix of commercial and residential uses all within an easy walk. They have higher concentrations of people with streets that are complete with the sidewalks, bike lanes and bus routes that support a variety of transportation options. Most people should be able to carry out their daily activities and errands within a 20-minute walk distance (one mile) from their homes. And even

if they do have to drive within that one-mile distance, they will be driving less than outside of the 20-minute neighborhood framework.

20-minute neighborhoods provide a variety of commercial and residential establishments within a one-mile walking distance similar to traditional, walkable downtowns, but can be created outside of “Main Street” as is the case with suburban neighborhoods being retrofitted with more active centers as part of the planning approach. In the early 1900s, city and town planners in the US promoted the social advantages of physically defined neighborhoods with parks, shops and housing concentrated around community centers/town centers. Initially, this design placed housing no farther than a half-mile (10-minute) walk from the community center to promote social interaction among neighborhood residents. As suburban areas started to develop across the US in the mid-1900s, this approach began to change, and neighborhoods became less defined with spread out land uses (housing, schools, parks, shopping) that increased the need for driving to complete daily errands. With concerns about community health, greenhouse gas emissions, and environmental impacts, more communities are returning to creation of compact walkable neighborhoods focused around community/town centers.

20-minute neighborhoods are an important strategy for reducing reliance on the automobile, lowering household transportation costs and help residents save money. Walkable neighborhoods improve public health and improve access to daily needs. Living in a walkable 20-minute neighborhood also reduces reliance on fossil fuels, conserves energy, and decreases greenhouse gas emissions generated within a community. Cities such as Portland and Eugene, Oregon are now planning for 20-Minute Neighborhoods as a vital part of their community’s growth strategy with the added benefit of improving livability and reducing the need for expansion of infrastructure. The benefits of 20-minute neighborhoods are summarized below.

Health—The average resident of a walkable neighborhood has a healthier body weight than someone who lives in a less walkable neighborhood. Our local air quality can be improved by reducing reliance on automobiles, a primary source of air pollutants.



Economic—Homes and businesses located in walkable neighborhoods tend to retain higher property values than those that aren’t. The average annual direct price of operating a car in the US is \$8,487 and even higher for vans and trucks (covering the cost of the vehicle, fuel, insurance, and maintenance). Owning and operating a bicycle typically costs a fraction of that at around \$400. Walking also can be extremely low cost

transportation. When families save money on fuel, those dollars can continue to circulate in our community supporting jobs and stimulating more economic activity. Businesses located in 20 minute neighborhoods benefit from an increased customer base.

Strong, Healthy, and Safe Communities—Studies show that people who spend less time in daily car commutes spend more time in community activities. More walking and bicycling directly improve human health. Communities with high levels of pedestrian travel tend to be safer than those without.

Environment—Active modes of transportation such as walking and biking can significantly decrease emissions of greenhouse gases that contribute to climate change

For more information, visit:

<http://www.icic.org/connection/blog-entry/blog-the-rise-of-the-20-minute-neighborhood>

<https://www.eugene-or.gov/index.aspx?NID=506>

<http://www.theatlantic.com/special-report/the-future-of-the-city/archive/2010/05/the-people-in-your-neighborhood/56527/>

<http://www.livablecities.org/articles/distance-destinations-density>

EXAMPLES OF PERFORMANCE MEASURES AND METRICS

Reduced Greenhouse Gas Emissions through Less Vehicle Miles Traveled in the Community and Other Sustainable Transportation Measures

In setting performance measures for reduced greenhouse gas emissions as a result of less vehicle miles traveled, it is important to consider existing baseline conditions. The US Environmental Protection Agency (EPA) provides the following statistics related to typical greenhouse gas emissions from motor vehicles for the US in general.

- Average household carbon footprint in the US is estimated at 48 metric tons of CO₂/year
- Single largest source for individual households is driving
- 4.8 to 5.1 metric tons of CO₂/vehicle/year (US Average)
- Average US trip length 9.7 miles
- Average trips per household/year in US = 3,466
- Average person miles traveled/year | US = 33,004
- US carbon footprint is five times the global average
- US = 17.96 metric tons of CO₂ per capita

Source: EPA website, March 2013; numbers are subject to periodic recalculations and updates

The EPA also provides guidance for sustainable transportation performance measures (see *Guide to Sustainable Transportation Performance Measures*, August 2011). Examples of potential performance measures that the region could adapt and integrate into regional and local planning policies include:

- Measure the share of jobs and population that fall within a given threshold of transit accessibility:
 - Distance to/from transit stops (percent of daily/peak period trips starting or ending within ¼ mile of a transit stop, for example).
 - Percent of population and employment within 0.4 miles of transit
 - Households within five miles of park-and-ride lots or major transit centers.
- Measure destinations accessible to transit:
 - Share of population with good transit-job accessibility (# of jobs within # minutes travel time)
 - Number of households within a 30-minute transit ride of major employment centers
 - Percentage of work and education trips accessible in less than 30 minutes transit travel time.
 - Percentage of workforce that can reach their workplace by transit within a set time.
- Measure of transit, pedestrian, and bicycle mode shares (identify baseline, and set goals for increases in these mode shares with implementation of transportation master plan.
- Measure vehicle miles traveled (VMT) per capita and per employee.
- Measure carbon intensity:
 - Total transportation CO₂ emissions per capita
 - Passenger transportation CO₂ emissions per capita
 - Heavy-duty vehicle CO₂ emissions per capita
- Measure the community's mix of land uses—the proportion of residents living in locations with mixed land uses:
 - Ratio of jobs to housing; population/employment mix index
 - GIS analysis of activity centers and land use mixes
 - Example: as part of its Blueprint land use visioning exercise, the Sacramento Area Council of Governments (SACOG) developed a mixed use development measure based on the ratio of employees to dwelling units at the Traffic Analysis Zone (TAZ) level. An optimum mix of jobs and housing is defined as a ratio of employees to dwelling units that is greater than 0.5 and less than 2.0. Analyzing the potential to increase housing and the jobs to housing ratio in the region, setting goals for specific timeframes (five year, ten year, fifteen year, and twenty year) and establishing specific performance measures to monitor progress towards these goals is recommended.
- Measure transportation affordability; the annual cost of transportation relative to annual income, or calculated for different income groups.

- Measure benefits by income group, such as:
 - Access to other destinations such as health care, education, recreation
 - Work trip travel time and reductions
 - Non-work trip travel time and reductions
 - Other travel time measurements
 - Average distance to nearest transit stop
 - Availability of service and frequency of service
 - Availability of nighttime service
 - Number and quality of bus shelters
- Also, citizens/commuters from the region could be encouraged to measure and track their individual greenhouse gas emissions and report reductions to a website. The EPA and other entities provide individual greenhouse gas emissions calculators. (The EPA's can be accessed at www.epa.gov/climatechange/ghgemissions/individual.html)

Refer to the *Guide to Sustainable Transportation Performance Measures* by the EPA for additional examples and analytical methods and data sources.

EcoDistrict Performance Measures

The following performance measures and metrics developed for EcoDistricts in Portland, Oregon can be adapted to measure the success of planning and policies for a healthy, sustainable community. The actual metrics (percentage, rate, level, quantity, etc.) for the measures listed below can be set based on local objectives and preferences, comparing baseline conditions to desirable conditions. Measurement can occur through Geographic Information Systems (GIS) analysis, public surveys, and other methods.

Equitable Development and Access to Opportunity

- Equity ownership and profit-sharing opportunities in EcoDistrict developments (number of programs and participation rates)
- Pathway to opportunity and green economy jobs for EcoDistrict developments (number of jobs, program participation rates)
- Programs and policies are in place to prevent and mitigate displacement.
- Rate of involuntary displacement (neighborhood change indicator in Portland Plan)
- Rate of compliance with economic development incentive agreements
- Housing Diversity – mix of housing sizes and price ranges (e.g., achievement of target)
- Housing Affordability (e.g., percentage of cost burdened households, median housing price and rent/median income ratio)
- Percentage of home ownership
- Median household income
- Income disparity
- Percentage of children in poverty
- Percentage of population above self-sufficiency standard

- Percentage of residents satisfied with new development
- Number of local jobs
- Facility rental rates
- Building occupancy rates

Community Cohesion, Inclusion, and Adaptive Governance

- Percentage of residents who feel sense of community and neighborhood identity
- Percentage of residents who feel satisfied with the neighborhood
- Percentage of citizens engaged in civic life
- Social capital (measures for networks, norms, trust)
- Diversity of leadership in governance structures
- District decision-making structure fosters deliberation and consensus
- Engagement strategies encourage participation by diverse community members
- Rate of participation in EcoDistrict engagement efforts (surveys, meetings, etc.)
- Utilization of performance measures for policy, plan, and program design

Functionality, Resilience and Adaptability

- Resilient, affordable, accessible supply of sustainably produced, healthful food
- Percentage of residents with access to full-service grocery stores, farmers' markets and community gardens within 20 minutes by bike, walk, or transit
- Availability of land, rooftops, and other spaces to grow food (square footage per person, wait lists)
- Total number of fruit trees and edible landscaping (per capita)
- Availability of community kitchens
- Infrastructure for sharing (e.g., tool lending library, seed exchange, co-ops, community kitchens, web-based exchange) and participation rates
- Range/number of (public and private) facilities available to community members and organizations (participation/use rates, wait lists)
- Vibrant public spaces that are accessible and well-utilized
- Wait list for daycare facilities serving district
- Public school capacity to serve district at build-out
- Percentage of residents with access to social services within 20 minutes by walk
- Resident satisfaction with social services within 20 minutes by walk (average rating, percentage satisfied or very satisfied, etc.)
- Percentage of residents with access to retail and commercial services within 20 minutes by walk
- Resident satisfaction with retail and commercial services within 20 minutes by walk
- Percentage of residents with access to neighborhood parks and open space within 20 minutes by walk

- Resident satisfaction with access to neighborhood parks and open space within 20 minutes by walk
- Percentage of residents with access to recreation facilities within 20 minutes by walk
- Satisfaction with recreation facilities within 20 minutes by bike, walk, or transit
- Percentage of residents with access to community centers and libraries within 20 minutes by walk
- Satisfaction with community centers and libraries within 20 minutes by walk
- Percentage of residents with access to quality, affordable daycare within 20 minutes by walk
- Satisfaction with access, quality and affordability of daycare within 20 minutes by walk
- Percentage of students with access to quality, affordable afterschool and childcare programs
- Satisfaction with access, quality and affordability of after-school and childcare programs
- Distance to other vital neighborhood centers (travel time by walk)
- Percentage of properties where improved value exceeds land value
- Percentage of businesses locally owned

Health and Well-Being

- Health outcomes (possibly an index score or key metrics that relate to environmental influences of health, such as rates for obesity, diabetes, asthma, cancer, mental well-being)
- Perceived health status (including mental health)
- Percentage of residents exposed to toxins (indoor, outdoor)
- Traffic statistics/travel safety (e.g., accident rates per capita, per vehicle miles traveled (VMT) – for auto, bike, transit)
- Ambient noise
- Perception of safety (a time in your day where residents feel their safety is undermined)
- Percentage of residents satisfied with amount and type of natural features in the district
- Percentage of residents satisfied with park quality in the district
- Percentage of residents satisfied with closeness of parks or open space
- Percentage of residents who participate in neighborhood park and recreation programs
- Percentage of daycare facilities in district green certified (e.g., Eco-Healthy Child Care certification)

Sources

- *Portland Plan Handbook, City of Portland, Oregon*
- *EcoDistricts Toolkit, Portland Sustainability Institute, Portland, Oregon*

ADDITIONAL RESOURCES

Extensive publications and resources are available that can be referenced as part of ongoing planning and implementation in the region. Some suggested resources include:

- *Driving Urban Environments: Smart Growth Parking Best Practices*, Maryland Governor's Office of Smart Growth
http://www.contextsensitivesolutions.org/content/reading/parking_md/resources/parking_paper_md
- *Greenhouse Gas Emissions from a Typical Passenger Vehicle*, US Environmental Protection Agency, December 2011
- *Growing Cooler*, Reid Ewing, Keith Bartholomew, Steve Winkelman, Jerry Walters, and Don Chen, Urban Land Institute, 2008
- *Guide to Sustainable Transportation Performance Measures*, US Environmental Protection Agency, August 2011
- *The High Cost of Free Parking*, Donald Shoup, Planners Press, 2004
- *Higher-Density Development: Myth and Fact*, Urban Land Institute
- *Innovative Design and Development Codes*, a toolkit aimed at enabling smart development that can be tailored to the unique identities of different communities
http://library.oregonmetro.gov/files/design_dev_codes_toolkit.pdf
- *Parking Management Made Easy: A Guide to Taming the Downtown Parking Beast*, Oregon Transportation and Growth Management Program,
<http://www.oregon.gov/LCD/docs/publications/parkingguide.pdf>
- *Parking Spaces/Community Places: Finding the Balance through Smart Growth Solutions*
- Reconnecting America Center for Transit-Oriented Development, research and information related to transit supportive densities:
<https://www.transitorienteddevelopment.org> and
www.reconnectingamerica.org/resource-center/transit-supportive-density/#sthash.myVtTczT.dpuf
- *Re-Thinking Density to Create Stronger Healthier Communities*, a useful downloadable presentation from the American Multi-Housing Council
<http://www.nmhc.org/Content/ServeContent.cfm?ContentitemID=3423>
- *Pedestrian and Transit-Friendly Design: A Primer for Smart Growth*, Reid Ewing
http://www.epa.gov/dced/pdf/ptfd_primer.pdf

- *Playbook for Green Buildings + Neighborhoods: Strategic Local Climate Solutions*, an online resource that provides guidance and resources on ways to advance green buildings neighborhoods and infrastructure <http://www.greenplaybook.org/>
- *Public Transportation Reduces Greenhouse Gases and Conserves Energy: The Benefits of Public Transportation*, American Public Transportation Association http://apta.com/resources/reportsandpublications/Documents/greenhouse_brochure.pdf
- *Smart Growth Examples of Codes that Support Smart Growth Development*, US Environmental Protection Agency <http://www.epa.gov/dced/codeexamples.htm#trans>
- *Transit-Friendly Design Guidelines*, a useful 30-page manual published by Frederick County, Maryland <http://www.co.frederick.md.us/documents/Transit/0409TFDGFINALnoblanks.pdf>
- *Transit-oriented Development*, Portland Metropolitan Service District (Metro), 2009, a good collection of TOD examples from the Portland area, complete with photos, design specifications, and a video <http://www.oregonmetro.gov/index.cfm/go/by.web/id=140>
- Transit Oriented Design Components <http://www.reconnectingmaerica.org>
- *Towards a Climate-Friendly Built Environment*, available at: http://www.pewclimate.org/docUploads/Buildings_FINAL.pdf
- US Environmental Protection Agency website on greenhouse gas emissions: www.epa.gov/climatechange/ghgemissions
- *Visualizing Density*, Julie Campoi and Alex S. MacLean, Cambridge, Mass, Lincoln Institute of Land Policy, 2007 http://www.lincolnst.edu/pubs/1178_Visualizing-Density