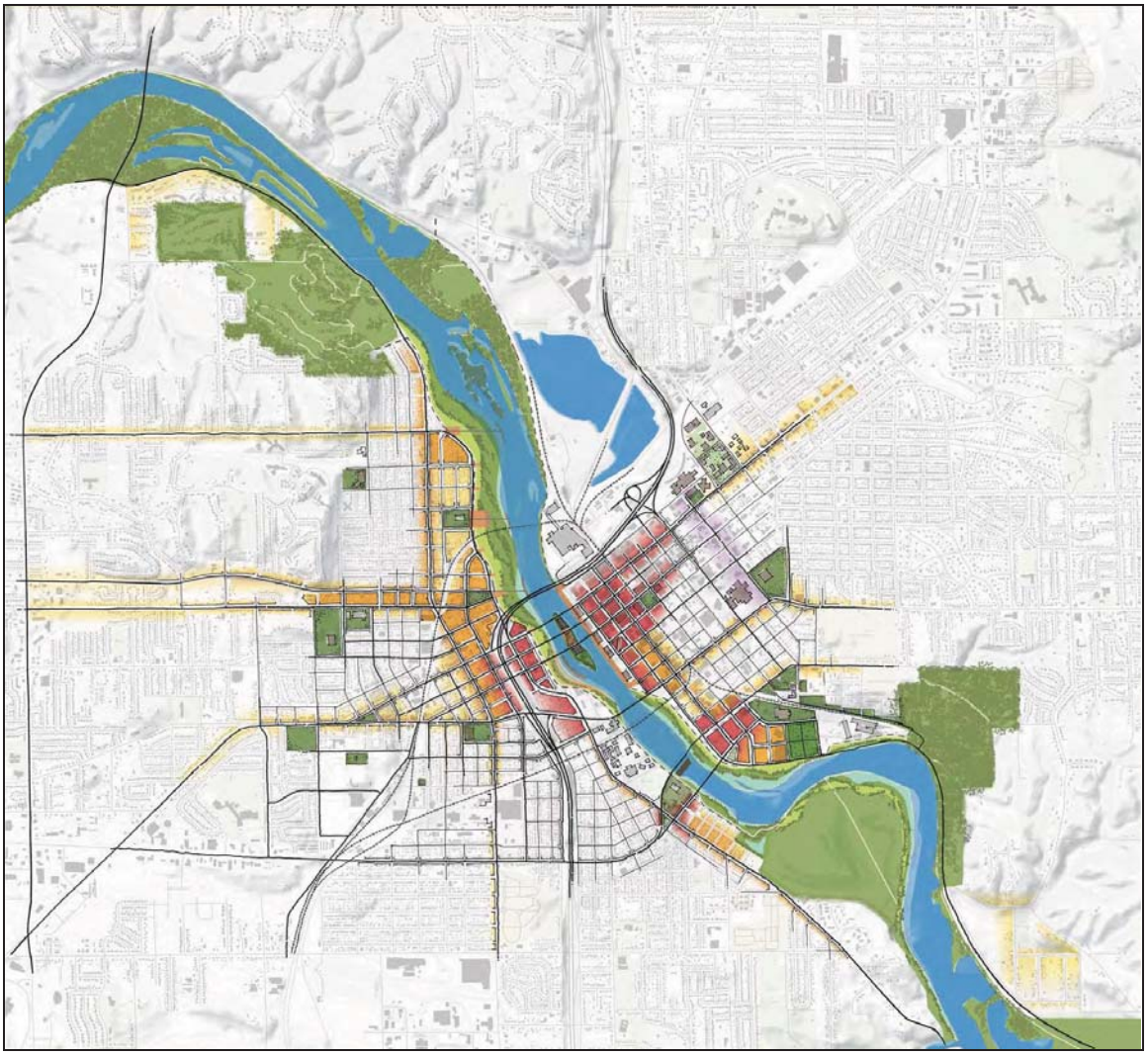
Embracing the River: Smart Growth Strategies for Assisting in Cedar Rapids' Recovery



with

U.S. Environmental Protection Agency
Federal Emergency Management Agency
City of Cedar Rapids, Iowa
Rebuild Iowa Office
Iowa Department of Economic Development

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For more information about smart growth technical assistance in Iowa, please see: http://www.epa.gov/smartgrowth/iowa_techasst.htm

Source of image on cover: City of Cedar Rapids

1 Introduction and Summary of Options

Background

In January 2009, the Federal Emergency Management Agency (FEMA) and the U.S. Environmental Protection Agency (EPA) entered into an Interagency Agreement to supplement FEMA's Long-Term Community Recovery (LTCR) activities in Iowa and provide technical assistance to help communities recover from the June 2008 floods and tornadoes. Between March 2009 and May 2010, six communities in Iowa—New Hartford, Iowa City, Cedar Rapids, Cedar Falls, Coralville, and Waverly—received assistance through this interagency agreement. Outcomes from this partnership include strategies tailored to the specific recovery efforts in each of the six communities, a model for collaborative work between EPA and FEMA, and the transfer of technical expertise on smart growth approaches and long-term recovery across the two agencies. This report describes the technical assistance with the city of Cedar Rapids.

Staff from EPA headquarters, FEMA, Rebuild Iowa Office (RIO), the Iowa Department of Economic Development, and EPA Region 7 convened local leaders to explore options for stabilizing neighborhoods affected by the flooding and to address barriers to creating neighborhoods that support compact development patterns with a mix of land uses. The city sought to address how existing land development patterns contributed to the occurrence of flooding in certain areas of the city.

During the summer of 2009, staff from EPA and FEMA met with the local and state partners to learn about the city's concerns and needs. These stakeholders decided to focus on addressing barriers to infill development following the flooding. In September 2009, the team met for a two-day workshop to analyze city policies and procedures that affect development patterns and the management of stormwater. Focusing on these issues was consistent with the city council's desire for staff to incorporate sustainable redevelopment strategies into its policy development and guidance.

Figure 1: *One of the hundreds of homes damaged by the flooding in 2008. (Source: EPA)*

Project Purpose and Goals

Cedar Rapids suffers from disinvestment in its downtown and adjacent neighborhoods. Over the past 30 years, new development and investment have gone to the fringe, where land is cheaper and growth is actively planned. Recognizing this challenge, city leaders have created a land use vision to encourage development in the city core and have taken steps to achieve this vision. While devastating, the 2008 floods provided an impetus to change development policies that encouraged development of the outer fringe. Rebuilding from the floods has created an opportunity to investigate policies that have led to fringe development and created barriers to compact development in existing, established mixed-use neighborhoods.

Since the city was pursuing and expanding some smart growth initiatives before the flood, another purpose of this assistance is to help the city integrate post-disaster rebuilding goals into those initiatives. This project provides options for incentives and policies to support infill development in the core neighborhoods. Specific changes discussed in this report could make it easier for developers to build projects that meet the city's goals for sustainability, while making new construction and redevelopment more resilient. This report provides guidance that could help the city make policy changes to achieve the benefits of improving walkability, encouraging mixed-use development, and better managing stormwater runoff.

More directly, the EPA-FEMA technical assistance project aims to review and assess Cedar Rapids' major land use policies to determine how they could be changed to create incentives for infill development and sustainability.

Project Products

The site visit in September 2009 focused on viewing sites impacted by the flooding and reviewing land development policies with the project partners at the local, state, and national levels. EPA's team included two national experts on codes and planning that facilitated conversations with the local team about reviewing existing conditions, development trends, opportunities to amend development regulations. Staff from Cedar Rapids asked for a policy analysis of the four key development elements: existing codes, smart growth strategies, infill strategies, and green infrastructure practices. After understanding the issues and analyzing the key development elements, the expert team offered options for the local community to consider.

The project produced four products to help the city assess its policies and explore possible changes, which are described in this report:

1. Finding from an audit of existing codes;
2. A review of the city's Smart Growth Scorecard;
3. A review of the city's infill strategies; and
4. A review of proposed green infrastructure practices.

These products make up sections 2-5 of this report in full detail. A brief summary of the expert team analysis include:

Codes Audit

The Cedar Rapids comprehensive plan is now ten years old and has several policies and objectives that are key components of mixed-use, compact neighborhoods that are walkable and provide housing and transportation choices for its residents. This policy document could be updated to emphasize, prioritize, and reinforce these objectives. Also the city might consider:

- Review its land use map to identify areas that could be redeveloped with higher densities and identify low density areas that should not continue to be developed at existing densities;
- Prioritize development in specific areas, including downtown, inner residential neighborhoods, and older commercial corridors, to provide efficient utilities and to develop in a more compact and well-designed manner;
- Include street connectivity regulations in its subdivision regulations;
- Write subdivision and roadway design standards; and
- Amend the zoning code to remove aspects that hinder compact, mixed-use development.

Review of Smart Growth Scorecard

The city of Cedar Rapids developed a scorecard to evaluate development projects. For this project, the expert team reviewed the components of the scorecard to determine how effectively it conveyed ideas like connectivity, mix of land uses, adequate infrastructure and other elements to ensure that compact, walkable neighborhoods were planned and developed. Beyond evaluating what the scorecard contained, the team also reviewed the use of the tool, that is, whether or not the scorecard was successfully used to achieve expected goals. The expert team concluded that the scorecard includes clear principles and measures, and it appears easy to undertake in project reviews. With some minor adjustments to the weighting of individual measures—and a requirement that its score is tied to project decisions—the scorecard could become a more effective tool.

Figure 2: *An intact intersection in Cedar Rapids that could catalyze further infill development. (Source: EPA)*

Review of Infill Strategies

The city of Cedar Rapids would benefit to focus its attention and policies on actions that direct growth and development into existing areas that can support additional residences and businesses. There are plenty of neighborhoods and locations that can support infill development. Some specific options discussed in the infill memo include:

- Focus infill development in targeted commercial and retail corridors;
- Catalogue and map potential housing sites;
- Create strategies for community input for infill development;
- Modify the zoning regulations to promote appropriate infill development prototypes;
- Create an infill housing prototypes booklet to illustrate the types of development the city prefers;
- Provide incentives to projects in the priority infill areas through pre-development assistance such as grants or loans, infrastructure assistance through direct financial support, or providing related public improvements; and
- Refine the Smart Growth Scorecard to align with infill development strategies.

Review of Green Infrastructure Practices

The city of Cedar Rapids asked the expert team to evaluate key development documents, including the *Comprehensive Plan* and *Best Management Practices for Maintenance of Private Storm Water Facilities* as well as consulted with the EPA's *Water Quality Scorecard* to determine how well the city and its Stormwater Committee addressed green infrastructure in its policies. After the review options for Cedar Rapids include:

- Include stormwater management and water quality considerations throughout the comprehensive plan, neighborhood plans, and reviews of development projects;
- Work with neighboring jurisdictions to maintain a compact development footprint;
- Work with regional partners to explore incorporating green infrastructure, low-impact development, when updating the Metro Area Design Standards;
- Educate residents and the development community about stormwater quality and management issues;
- Work with state agencies to provide funding and incentives to accelerate acceptance of green infrastructure and low-impact development; and
- Consider stormwater system hook-up fees that can create incentives to pursue green infrastructure strategies.

Figure 3: *Sykora Bakery anchors the main street of Czech Village. This neighborhood was damaged by the floods, but the city is investing in its recovery. (Source: EPA)*

Next Steps

The first step for the city is to review the options in this report and determine which, if any, to implement. This effort will require continued discussions with appropriate staff throughout the city, especially senior staff not intimately involved in the week-to-week process. Assessing, reviewing, and selecting the options that best address the city's needs and that have a good chance for success will be critical. Next, staff should discuss with elected officials how the proposed strategies meet city council directives to achieve sustainability in planning and development. This process may include getting on the agenda at city council meetings, presenting findings, and following up with the city council as the selected options are implemented.

To help ensure support, staff can educate the development community and the public about the process of selecting options to pursue, the benefits of implementing these options, and other related topics. Public hearings on the options may be appropriate. Staff could meet with developers to discuss how the scorecard could be used to determine the viability of a proposal. When the city makes significant changes in how it uses a tool such as the scorecard, it makes sense to develop those changes with the businesses and people who will be affected. The general public may also need outreach and education to ensure that they understand how and why changes are being made.

Another step is to regularly share information among local, state (RIO and Iowa Department of Economic Development), and federal (FEMA and EPA) staff. Information sharing will help the city staff to compare their policies with other national models and will help the state and federal staff to learn from Cedar Rapids about what strategies may help other cities. Other benefits of these exchanges could include learning about resources, training, and education.

Finally, if the city institutionalizes the selected policies, these strategies will continue and expand through existing and new programs. Options for making the strategies part of city work include regular discussions at staff meetings, staff briefings, and tools such as checklists to ensure that policies are written and/or updated to produce the results sought. These steps may create more work in the short term, but in the long term they can help the city build a more stable and sustainable community.

2 Codes Audit Findings

This chapter describes the findings of a smart growth policy and code audit, which included a review of the comprehensive plan[1], the city's zoning code[2], and the design standards[3]. The evaluation is based on the Smart Growth Leadership Institute's Smart Growth Code and Zoning Audit[4] and the Smart Growth Implementation Tool Kit[5], as well as EPA's *Essential Smart Growth Fixes for Urban and Suburban Zoning Codes*[6].

The codes audit is organized around the smart growth principles that the Smart Growth Network developed based on the experiences of communities around the country. The smart growth principles are:

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

The Smart Growth Code and Zoning Audit is organized to get users to think about how to implement the smart growth principles through a series of exercises that evaluate the elements of codes and regulations. This organization is built around the elements of how communities regulate land development. The outline of the Audit is as follows:

A. Connectivity and Circulation
   1. Street Network and Plan
   2. Streetscape Features
   3. Parking
   4. Walking, Biking, and Multi-Use Trail Facilities
   5. Transportation and Transit Zones

B. Land Subdivision, Zoning, and Services
   6. Land Subdivision and Lot Size
   7. Use (Zoning) Districts
   8. Services

C. Special Use District (evaluates each special district separately)

[1] City of Cedar Rapids, Cedar Rapids Comprehensive Plan, 1999.
[2] City of Cedar Rapids, Zoning Code Update, January 2009.
[3] City of Cedar Rapids, Metropolitan Area Design Standards, 2007.
[4] Smart Growth Leadership Institute, *Smart Growth Code and Zoning Audit*, 2007. (in Appendix C)
[5] Smart Growth Leadership Institute, *Smart Growth Implementation Toolkit*, 2007. www.sgli.org
[6] US EPA, *Essential Smart Growth Fixes for Urban and Suburban Zoning Codes*. November 2009.

A. Connectivity and Circulation

1. Street Network and Plan

Cedar Rapids has many older neighborhoods, including downtown, that have the traditional neighborhood pattern of a tight, connected grid of streets. However, post-World War II development has not continued this street pattern, and the grid has been lost in all but the core areas of the city. Development in the last 60 years follows US Department of Transportation Federal Highways' Functional Road Classifications Plan.[7] The road network in these neighborhoods is focused on moving vehicles on collector and arterial streets; however, it does not address connectivity through a network of streets that enable short trips for vehicles, bicycles and pedestrians. The road classification system is a relatively standard and suburban-oriented method of organizing streets. This type of classification system generally develops a pattern that minimizes connectivity, rather than creating a network of local connected streets, and leads to excessive widening of the main roads, which generally still remain congested which is not preferred for walkable, compact communities.

The lack of connectivity and block-size regulations limit the potential for a network of local streets like those in the older neighborhoods where short blocks and a number intersections enable citizens to have multiple options for getting around the neighborhood via the street network. In traditional neighborhoods, the street network provides for various route options to minimize vehicle miles traveled, while in developments with long blocks and minimal intersection, a citizen will have to travel a longer distances to reach its planned destination. Cedar Rapids has not yet developed a policy or standards to achieve connectivity.

To create better-connected streets, the city would need to have more options of roadway classifications and include a neighborhood-connector level of streets on a roughly 1/8th-mile grid. A connectivity regulation and maximum block dimensions, along with block perimeter dimension, would help engineers or planners understand what level of connectivity the city wants.

In the current road pattern, local traffic is forced to travel on the arterials, leading to increased congestion. A well-connected grid of local streets would create new route options for neighborhood residents, workers, and customers to access local services, shops, and employment. Through traffic would stay on the main roads. Residents are often concerned that a grid will encourage drivers to cut through their neighborhoods, creating congestion on their quiet streets and potentially endangering pedestrians and bicyclists. To discourage this cut-through traffic, street design standards could include traffic-calming features (discussed under "Streetscape Features" below).

Block lengths are typically between 400 and 600 feet, allowing a great deal of flexibility in a street network. When regulating block perimeter size, for example, a maximum of 1600 feet would create a block of 300 feet by 500 feet, or 200 feet by 600 feet. The most walkable downtown districts in older cities can even have blocks as small as 200 feet by 200 feet or 300

[7] US DOT Federal Highways Administration, http://wwwcf.fhwa.dot.gov/planning/fcsec3_4.htm. Accessed September 2, 2010.

feet by 300 feet, which could be permitted in a well-designed "town center" portion of a new neighborhood.

The current road classifications also contain relatively high design speeds (aka speed limits) for each street type, which is typical when vehicular movement is emphasized over pedestrians and bikes. Designing for higher speeds also requires that intersections are not focused on the needs of pedestrians, as their use is not encouraged. The required street widths are wider than the street widths in existing downtown and core neighborhoods. Intersections are also relatively wide, with a radius of 30 feet, far greater than the older inner neighborhoods, which have intersections with 10- to 20-foot radii. Wider intersections are more difficult for pedestrians to cross because the wider radius takes longer to walk across and encourages drivers to maintain fast speeds through a residential neighborhood, especially while making turns.

Narrower streets and intersections are safer for pedestrians and bicyclists, send visual cues to drivers to slow down, and still keep traffic circulating. The narrower streets in Cedar Rapids' downtown and core neighborhoods accommodate the needs of vehicles, bicyclists and pedestrians. More traditional, narrower intersection radii tend to be better for traffic flow, especially at stop signs or traffic signals since the pedestrian crossing distance is shorter.

On-street parking for residential streets is inconsistent at best. On some streets it is required, in others, it is not existent. This is a result of various polices to determine the best way to get people around town. Parking has been removed on many streets to support greater traffic flow; however, this also leads to faster traffic and puts pedestrians at risk. Providing parking on at least one side of residential streets, with parking on both sides encouraged, would protect pedestrians by providing a buffer between the sidewalk and street. Street trees would strengthen the buffering effect for pedestrians, while also adding shade, capturing rainfall, and enhancing the look and feel of the street. Under the city's current regulations, on-street parking does not count toward zoning-required parking minimums. However, reductions to required off-street parking could be balanced by adding on-street parking (parking requirements are discussed further in the "Parking" section below).

Alleys are used in the older portions of town; however, they are not encouraged in the *Metropolitan Design Standards Manual.* This document is based on the statewide streets standards, but modified to address issue relevant to the greater Cedar Rapids community. Alleys are an important access type in a road network that has residences facing arterial or collector/connector streets. The alleys allow access to parking behind homes, which is better for both pedestrian and vehicular travel than having multiple driveways along the arterial. City code encourages, but does not outright require, alleys in commercial districts to provide access for rear parking, delivery entrances, and refuse removal and to maintain a street front that looks appealing and is safer for pedestrians. Alleys in neighborhoods help to create uninterrupted streetscapes, allowing continuous lawns with tree-lined streets. This pattern can be found throughout the Midwest and can be encouraged as part of the character, design aesthetics and livability of Cedar Rapids.

2. Streetscape Features

The city does not require specific streetscape elements within developments. The code does not define streetscape design elements for each area type. Key streetscape elements that would be useful to consider include pedestrian-scaled lighting, street trees in adequately sized planting strips, and shelters for bus stops. Street trees provide many attributes to the streetscape including providing a shade canopy. Shaded sidewalks encourage walking and can help minimize the heat island effect[8]. Neighborhood gateway signs can help to define a neighborhood or district. Other streetscape features such as seating, trash receptacles, and other accessories are used mostly in the downtown areas. These could be included along bike paths, at neighborhood "mini-parks," and at occasional seating areas.

With a connected street network, residents are often concerned about speeding and cut-through traffic. Studies[9]have found that closely spaced, small (ideally 3 lanes or less of travel lanes) intersections can calm traffic, as drivers take greater care where cross traffic is present. In connected street networks, neighborhood streets typically have lower design speeds (planned speed limits) and speed limits of 15 to 25 mph. The design speed should match the speed limit; most streets have design speeds that are 10 mph higher than the posted speed limit. Features such as roundabouts, curb extensions, median crosswalks, mini-circles, and chicanes (winding streets such as Main Street in Cedar Falls) are good traffic-calming measures. These features are particularly important in places with wide intersections that lengthen crossing distances. The team noticed in its site visit that few intersections in Cedar Rapids have marked crosswalks and suggested that the city could better mark crosswalks. Adding other traffic-calming tools at key crossings and at regular intervals would also help to keep pedestrians safe and encourage more walking and biking. Any of these traffic-calming elements individually may not be critical; however, tighter intersections and narrower streets are essential and fundamental elements to creating a more appealing and safer walking and biking environment in Cedar Rapids.

Safe and inviting pedestrian environments are particularly important around schools. Across the country, many communities are encouraging children to walk to school to help them get daily physical activity, reduce traffic congestion due to school drop-offs and pick-ups, and reduce costs for buses. The city uses Safe Routes to School funding for some streetscape, trails, and bike lanes. This program has helped communities realize the potential for safe travel to school and encouraging neighborhood residents to think about streets, sidewalks and barriers to safe travel to school. The city might consider a complete and continuous sidewalk network, with marked crossings within approximately a mile of any school. Ideally, sidewalks would be on each side of the streets with the city's minimum standard of 4 feet widened to at least 5 or 6 feet minimum within school zones, as well as near parks and other neighborhood amenities. Per the subdivision ordinance this can be requested.

The state's and city's design standards might incorporate these connectivity and other traffic-calming criteria and pedestrian enhancement standards. A Complete Streets[10] program incorporating bike lanes could also be considered to augment the bike and trail system

[8] US EPA. Heat Islands, http://www.epa.gov/heatisland/index.html. Accessed August 20, 2010.
[9] Traffic calming studies compiled by the Victoria Transport Policy
[10] Complete Streets Coalition, http://www.completestreets.org/. Accessed September 2, 2010.

throughout the city. The city could incorporate a "green streets"[11] program similar to the one in Portland, Oregon into its streetscape and *Metropolitan Design Standards Manual*. The *Iowa Green Streets Manual*[12] is a good starting place for drawing from successful ideas and best practices that can be incorporated into local policies.

3. Parking

Cedar Rapids' zoning code currently requires minimum parking standards for each specific use by type or amount of developed area. There is no maximum parking limit. These requirements have been modified when the city has created a parking district, such as within the downtown. Parking standards are not lower for transit corridors or transit areas, even though these areas require less parking because of the transit options. Bike parking is not included in vehicle parking requirements.

On-street parking is particularly appropriate where small commercial establishments are located near residential neighborhoods or in smaller "Main Street" districts like Czech Village. On-street parking has less impact on community appearance than a parking lot does and, as discussed under "Street Network and Plan" above, buffers pedestrians from traffic.

Creative solutions can help reduce the amount of space devoted to off-street parking, which saves developers money because they do not have to build parking spaces that will sit empty, and they can use more of the land for buildings. When adjacent properties can share parking because they need the parking at different times of the day, their combined parking requirement can be reduced. For example, in Czech Village, the access from the commercial street to adjacent shared rear parking lots also serves as an inviting, user-friendly mid-block mini-park. Rather than being an exception, shared parking could be included in the code, along with provisions for reduced parking requirements for retail stores in highly walkable neighborhoods.

The design and site location of parking are also important considerations. A continuous row of parking lots along an arterial boulevard in front of stores or a large parking lot surrounding an apartment building are two examples of how poor site planning and parking locations can destroy a pedestrian environment because pedestrians do not feel comfortable walking along large expanses of asphalt without a screen or buffer. By contrast, parking located behind buildings lining the street allows continuous sidewalks, which encourages people to walk or bike and reduces the chances that a vehicle pulling into or out of a driveway will hit either a pedestrian or another vehicle. Putting parking lot access behind buildings instead of in front allows more room for on-street parking, which in addition to its other benefits described previously adds convenience parking in front of each shop. Where the scale of uses requires a larger parking lot, the lot can be surrounded by shops, with the design minimizing the parking lot's street frontage. It can be well landscaped, with low screening walls and large shade trees throughout the parking lot, and incorporate stormwater management through green streets

[11] City of Portland, Oregon, Portland Bureau of Environmental Services. http://www.portlandonline.com/BES/index.cfm?c=44407. Accessed August 16, 2010.

[12] Iowa Department of Economic Development, http://www.iowalifechanging.com/community/downloads/green-criteria08.pdf. Accessed August 21, 2010.

techniques. For more information about green street resources see the EPA Office of Water website on managing stormwater with green infrastructure.[13]

The cost of parking to a municipality is better managed at a neighborhood or district level because parking ultimately is governed by its localized or consistent daily users in aggregate. Creating parking districts minimizes the need for addressing parking parcel by parcel, allowing more development opportunities for small businesses and expansion of existing smaller parcels in commercial districts since more space on the parcel can be used as developed land versus needed for parking. Addressing a community's needs for parking demand, parking meters work well for short-term convenience parking, with parking lots and structures for daily use and longer term parking. The use of parking districts, shared parking, and on-street parking can be maximized with the development of a single integrative parking management plan. This plan lays the foundation for how parking strategies can more efficiently use land and protect natural resources.

4. Walking, Biking, and Multi-Use Trail Facilities

The city's policy is to establish a continuous network of safe and convenient pedestrian paths, bike trails, and bike lanes throughout the city. The city has a substantial trail map; however, very little of the trail network has actually been built. The comprehensive plan calls for incorporation of trails into the various subdivisions and for the community to work on other funding sources for trail development. The integration of trails and bikeways for developments is at the discretion of the city engineer during the subdivision approval process. It would be preferable to city staff to require developments to incorporate and develop their section of any designated trails. This issue will need to be addressed directly with developers and a clear policy could be created.

5. Transportation and Transit Zones

Other than downtown and around the community college, there is little focus on transit and transit-supportive development. The city has not taken advantage of opportunities to maximize and improve transit service. The current bus system provides a basic level of service for its users, however, opportunities exist to increase focus on this topic. For instance, the comprehensive plan and supporting documents does directly address transportation nor its relationship how access and circulation can better the quality of life for residents. Thus, the city could establish a comprehensive strategy for addressing transportation policy. To assist in this effort, city staff might explore the benefits of transit-oriented development (TOD), a general concept related to encouraging development at and around transit stops. Bus stations can and do have significant developments such as residential and commercial land uses that help support and provide ridership. Staff can refer to resources compiled by the Center for Transit-Oriented Development, to learn about how TOD strategies and policies can be put into place in Cedar Rapids.

B. Land Subdivision, Zoning, and Services

[13] US EPA. Managing Wet Weather with Green Infrastructure. http://cfpub.epa.gov/npdes/greeninfrastructure/munichandbook.cfm. Accessed August 22. 2010.

The zoning regulations and subdivision ordinances are the city's controls over land development. While the comprehensive plan looks to the future, the zoning and subdivision ordinances are today's rules. These regulations are modified over time to implement the comprehensive plan's policies. As in most cities, these documents lag behind Cedar Rapids' policy directives which are timelier and are typically born out of city council discussion or staff-led discussions. Although more current than the comprehensive plan, some of the city's zoning and subdivision regulations do not provide the implementation tools to achieve the vision described in the comprehensive plan. These regulations are discussed below.

Over 60 percent of the land currently in the city is designated low-density residential (LDR), and over 75 percent of land designated on the future land use map in the city will be LDR and suburban residential (SR). All of the future LDR and SR land will be between 1 and 3.99 dwelling units per acre. In other words, a significant amount of the land in the city will be developed at a density for which it is difficult to provide cost-effective services, maintain a pedestrian environment, or provide travel options. As the road system becomes stressed through increasing traffic from outlying development, the costs to first build and then maintain this road system become unsustainable. At these low densities, each new development will be serviced by a road network of collector streets and arterials, instead of short block on a grid pattern. The collector and arterial streets system makes connectivity more difficult and perpetuates the pattern of minimal roads with minimal development densities.

Residents see the day-to-day impact of this development pattern. They must drive their children everywhere, as the distances between friends' homes, shops, and schools are too far or unsafe to walk or bike. More land is needed to get the required number of residents to support retail centers, which creates greater distances between residents and the services they need. The prevailing land use mix requires continued expansion of the city, which is contrary to the city's desire to provide efficient and cost-effective services, a vibrant downtown, alternative modes of travel, and attractive neighborhoods that encourage walking and bicycling. More residential acreage at the periphery needs to be annexed to maintain this growth pattern, which once developed is very difficult to change. Most of the land slated for annexation is privately owned; and these property owners pay for a low level of municipal service instead of higher rates and service provision in more established and denser neighborhoods. Many residents moved to these areas for a rural setting, and as it builds out, they are unhappy with the suburban nature of the community. .

6. Land Subdivision and Lot Size

The lot sizes within each low-density and medium-density zoning designation are very specific. There is a minimum frontage, which is large enough that developers will generally provide most homes on the same or similar lot size to meet the allowed density. The frontage width controls the density, size, and general massing or appearance of the homes. Only with duplexes does the city allow for smaller parcels. Smaller parcels would create more affordable housing options; however, the team saw few duplexes as part of any recent development.

The comprehensive plan has a goal of a variety of housing types in a neighborhood, without inserting apartments into single-family areas. Creating a wider variety of lot sizes and frontage widths within a development could be achieved by implementing an average lot size requirement

and allowing some percentage of larger lots in exchange for a percentage of smaller lots. In most conventional developments, everyone has the same lot and home size, a similar mortgage cost, and similar income minimum, thereby economically segregating residents into mortgage/income enclaves. One sustainable option is to have a greater variety of housing types and ages so that they mature at different rates, allowing people with different incomes and at different stages of life to live in the same neighborhood. Varied lot and home sizes would also help with absorption rate for home sales, as a wider sales price bracket increases the number of potential buyers.

7. Use (Zoning) Districts

The Cedar Rapids zoning regulations are strictly based on land use. They do not generally consider building type, except for some instances in the downtown core, where they anticipate a vertical mix of uses and address number of stories and other elements. There is no purely mixed-use zoning designation that requires a mix of uses, although commercial with ground-floor retail is implied, but not required, in the downtown core area through the language of zoning code. Other zones are single-use zones with some ability to mix uses, but a mix of uses is not required.

In some instances, such as in the Commercial-Mixed Use (C-MU) zone, the code allows residential development over a first floor with commercial/retail to a maximum density of 5 to 7 dwelling units per acre, up to 5 stories. This provision is a logical step in creating a sustainable community – one that addresses the need for preserving land by encouraging higher densities. To strengthen the commercial-mixed use zone, the density limits could be removed or greatly increased (for example, to 20 to 45 units per acre or more). If density limits are removed from downtown zoning, the building height and amount or required parking will probably determine the overall development intensity.

The C-1 Mixed Neighborhood Convenience Zone allows residential uses for up to 80 percent of the development. This is a fairly high proportion of residential to commercial uses and is appropriate for mixed-use developments. The development community requires education from staff or trade associations on this zoning. More retail than residential developers consider using this zone, making it a "hidden" opportunity rather than a clear and distinct mixed-use designation. Converting this designation to a clear mixed-use zone with significant residential density would encourage more residential developers to build in these zones.

The downtown area currently encourages mixed-use and residential development. The downtown allows residential floor area not to count towards the allowable commercial Floor Area Ratio (FAR) as a way to encourage more residential development. Mixing retail, office, and residential uses in a downtown building is very complex. To provide an incentive to residential developers in downtown and other commercial areas, the city could revise its zoning code to change allowable commercial FAR into increased residential density and allow a predominantly residential building with ground-floor retail and minimal office space.

The city has no flex zoning or live-work zones designated, although these conditions have been met through conditional use permits. Residential and "live-work" lofts have been developed, and commercial buildings have been changed to residential uses in the downtown, but these developments may have been done through special zoning exceptions or permits. These

approaches might be clearly permitted in downtown and core neighborhood zoning and encouraged in other city policies.

Planned Unit Developments (PUDs) are often used for large areas being master planned together by one or multiple property owners/developers. PUDs allow greater flexibility in layout, design, and land use than the subdivision regulations. However, PUDs are agreed to provisions that are not necessarily tied to the city's comprehensive plan objectives. Recent PUDs have been used to modify some subdivision regulations or to create a more dispersed development pattern with separated land uses linked by an arterial street under the guise of "mixed use". If the city chooses to allow PUDs, the city (or a developer working with the neighborhood) might be wise to include guidelines that achieve more walkable neighborhoods, a vibrant mix of uses and enhanced stormwater management as part of the specifications on larger PUDs. Guidelines could include:

- Well-connected streets;
- Variety in lot sizes and home sizes;
- A well-integrated mix of uses, whether horizontal or vertical mixed use;
- Protection of sensitive habitat and cultural resources; and
- Shared parking and allowing on-street parking to reduce the overall parking requirements within a area designated by the city.

PUD is a powerful tool that has been used to create much of the dispersed development across the United States. It has also been used to create some of the most progressive mixed-use, traditionally designed communities in the country. If the city wants to use this tool to create walkable, mixed-use neighborhoods, it might determine a set of criteria that reflect the values of the guidelines listed above. Examples of how to organize these criteria can be found in *Essential Smart Growth Fixes for Urban and Suburban Zoning Codes*.

The city has no zoning districts that could be considered traditional neighborhood development (TNDs), although a PUD with clear, specific design guidelines could be used to create such a neighborhood. TND's refers to the development of a complete neighborhood or town using traditional town planning principles. TND may occur in infill settings and involve adaptive reuse of existing buildings, but often involves all-new construction on previously undeveloped land. To qualify as a TND, a project should include a range of housing types, a network of well-connected streets and blocks, ample public spaces, and have amenities such as stores, schools, and places of worship within walking distance of residences. Typically used more for new development, this type of PUD could include TND criteria with design guidelines covering site planning and general building form.[14]

The zoning code has no historic preservation districts, although there are historic areas in the city. A new section of the zoning ordinance is the R-TN (Traditional Neighborhood Residential Zone District), which allows setback modifications (or "build-to" lines) for those older neighborhoods so that they better meet the existing conditions of their neighbors, matching the historic development pattern. The city might be able to build upon the R-TN district to make a TND zone or part of a PUD Regulation for TND districts. This can be done to create more

[14] City of Westminster, Colorado. Design Guidelines for Traditional Mixed Use Neighborhood Developments http://www.ci.westminster.co.us/files/tmund.pdf. Accessed September 2, 2010.

complete communities with that provide options for residents to conduct their daily activities with minimal environmental impact.

The code currently has no transit-oriented zones or requirements to being along a transit corridor or potential future transit corridor with the purpose increasing opportunities for transit-oriented development. Transit-oriented zones could be implemented gradually, as Cedar Rapids Transit bus routes are enhanced and extended, through site planning requirements, modifications to mixed use development, density and FAR requirements, and parking regulations. This strategy could be studied and encouraged in trial corridors where redevelopment is desired and significant residential density already exists.

The city might consider including some connectivity requirements to the zoning code. These requirements provide for how the street network and trail system works to benefit pedestrians as well as motorized vehicles. Using a connectivity index (the number of street links (street sections between intersections including cul-de-sacs) divided by street nodes, that is, intersections and ends. Street connectivity standards are used primarily in new developments and can also be applied to retrofit older suburban neighborhoods, where it is feasible. General language relating to street connectivity can be put into the Comprehensive Plan to provide the basis for future regulations. Zoning provisions can be incorporated into a city or community zoning code to require improved street connectivity.

C. Special Use District

Special use districts were not evaluated as part of the project.

Summary of Options

The comprehensive plan is now ten years old and has several policies and objectives that are key components of a smart growth strategy. This policy document could be updated to emphasize, prioritize, and reinforce these objectives.

- The city could review its land use map and attempt to remove some of the low-density (Suburban Residential) areas from immediate development, or raise densities in these areas into a more focused nodal pattern.

- The city could consider prioritizing development in certain areas, including downtown, inner residential neighborhoods, and older commercial corridors, to provide utilities efficiently and to develop in a denser and well-designed manner.

Within the subdivision and streetscape standards, the city might include:

- Street connectivity regulations, which could also include block size regulations within new development areas.

- Subdivision and roadway design standards with:

    - Revisions to the road classification system to be less hierarchical and better connected;
    - Allow narrower streets and tighter radii to reduce design speeds;
    - Reduced street width standards for most local and connector streets;
    - New intersection designs with reduced corner radii and emphasis on pedestrian crossings;
    - Pedestrian-oriented street lights;
    - Inclusion of street trees in wide tree lawns to create a continuous shade canopy;
    - Green streets stormwater management features incorporated into fundamental street standards; and
    - Special standards emphasizing pedestrian and bike circulation near schools.

- The existing zoning has several regulations that are counterproductive to creating vibrant, walkable, attractive neighborhoods and is lacking other regulations that could make it easier to build these neighborhoods. Modifications that the city could consider include:

    - Create mixed-use districts;
    - Change residential zones to allow a variety of housing sizes in a zoning district;
    - Create parking districts with shared lots and structures, shared parking for off-peak uses, and reduced parking within pedestrian areas;
    - Create pedestrian and transit zones to emphasize connectivity between land uses;
    - Use design guidelines or form-based codes (a code that describes the form of the development instead of the required uses)[15] to provide design direction to the development community, which is especially important with site planning; and
    - Include design parameters in PUDs to help create pedestrian and mixed-use districts.

- To ensure that these regulatory changes will create the type of community envisioned in the comprehensive plan, the city should considering educating the development community, residents, and policy makers about these issues, particularly the need for connectivity and the potential of mixed-use developments.

[15] For information about Form Based Codes, visit http://www.formbasedcodes.org/resource.html.

3 Review of Smart Growth Scorecard

The expert team evaluated Cedar Rapids' Smart Growth Scorecard to see how effective it is and to determine how the scorecard could realize its full potential. It is an excellent tool, with clear principles and measures. It appears to be easy to apply in project review and has appropriate weighting. However, due to the fact that the tool is somewhat new and still being tested, it is not yet universally being used to score and approve all projects in development reviews or funding decisions. With some minor adjustments to the weighting of individual measures—and a requirement that it be used to screen projects, with the scores affecting project decisions—the scorecard could become a very effective tool. For reference purposes, the Cedar Rapids Smart Growth Scorecard can be found in Appendix B.

This analysis is based on the materials the team received (three examples of how the scorecard was used to review specific projects), plus discussions with staff and the planning commission during the site visit. The team did not receive any instructions on how to use the scorecard or assumptions used in rating projects; these instructions and assumptions could be developed to clarify how applicants and reviewers use the scorecard. For instance, does the first measure—"project requires upgrade or construction of public roads"—refer only to extension or upgrade of existing, publicly funded roads, or does it also apply to new developer-built roads in the neighborhood that will be dedicated to the city (and require future public maintenance)? The scorecard could also be a valuable tool for planning, siting, and designing public facilities to make sure that they use energy efficiently, preserve resources, are in accessible locations, and enhance the neighborhood. It could also be used to evaluate applications for city funding for affordable housing, parks, and similar investments to make sure they are in line with city priorities.

A. Evaluation of the Smart Growth Scorecard

The Smart Growth Scorecard is well-designed, based on established smart growth principles, and measures things that matter to the city's future. The six organizing principles plus a provision for bonus points cover issues relevant to Cedar Rapids, with specific measures under each issue that fit with development types used or likely to be used in the region. The principles are:

1. Infrastructure/service proximity
2. Protection of land
3. Housing options
4. Mix of uses
5. Transportation options
6. Character and design
7. Bonus criteria

The points and weighting systems are balanced to address issues related to scorecard purpose but would need minor adjustments to help deliver a development pattern that is sustainable over the long term, with an appropriate mix of housing, shops, and services in locations that preserve valued resources while increasing transportation choices. For instance, in the current scorecard, only larger developments would contain enough different housing types and mix of uses to score

well in the housing options and mix of uses sections. The kinds of projects that the city wants to encourage—smaller infill on individual lots or portions of blocks in existing downtown and core neighborhoods—would not score well on these measures. This disincentive could easily be fixed by changing the scorecard to measure the existing housing options, uses, or proximity to parks/trails within a two- to three-block radius, rather than only looking at the amenities available on site or directly adjacent to the project.

This analysis primarily refers to the Residential and Commercial Development Scorecard, since it covers the most topics. The Scorecard for Preliminary Plats rates fewer items because typically less is known about project design and housing mix at that early stage. However, since encouraging projects in the right locations could be a primary goal of using the scorecard, the city could consider whether more elements could be rated in the preliminary plat review. The comments below could also apply to those elements rated on the Industrial Scorecard.

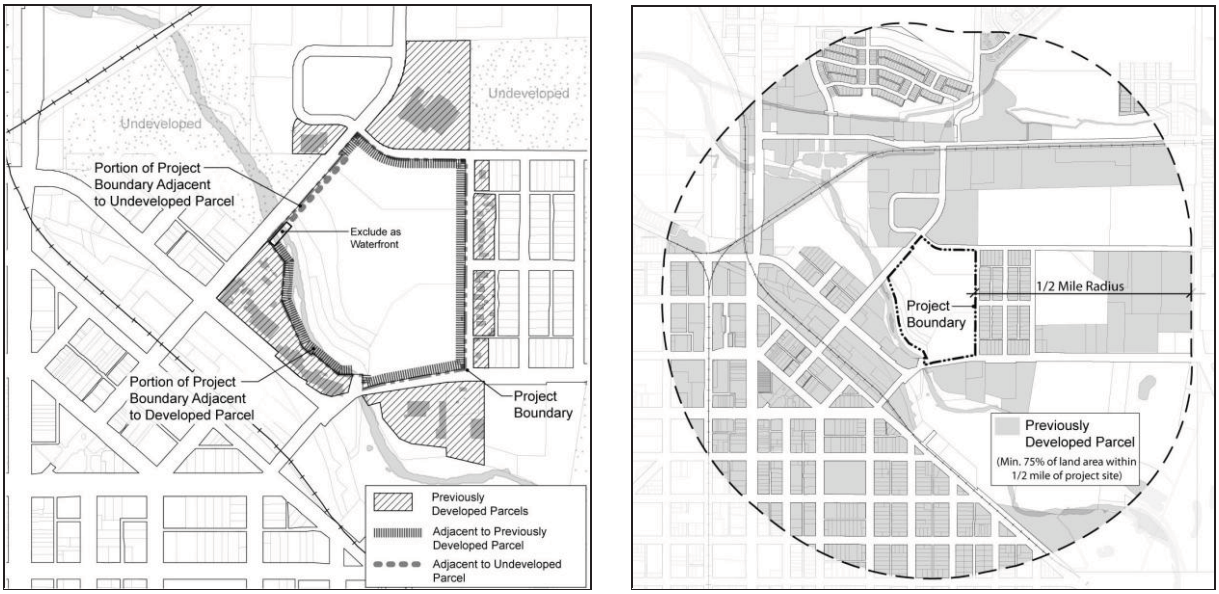
1. Infrastructure/service proximity. The infrastructure criteria appear to measure the right systems and give a strong location/siting foundation to developmental approval decisions. While there are some additional points in the other sections for proximity to existing development (for example, development on brownfields or sidewalk connections to adjacent neighborhoods), the points in this section are the most significant siting criteria. Cedar Rapids might focus on infill development to create incentives for more compact development closer to core neighborhoods and downtown. As currently defined and weighted, these points could be slightly adjusted to favor development patterns that are closer to downtown, the surrounding traditional neighborhoods, and/or redeveloping commercial corridors. In addition, the combination of points for not needing to upgrade or extend water and sewer service is double that for not needing to upgrade or extend roadways[16]. Instead, the scorecard could calculate average road, water, and sewer costs in reviewing the point allocation. Without knowing exact Iowa infrastructure costs, the team thinks that water and sewer combined are probably not double road costs and may even be less, and these water and sewer points could be combined. Some sections of Cedar Rapids have water but not sewer (requiring either sewer extensions or septic system installation), so the layered system maps could be reviewed carefully in deciding this issue.

If water and sewer are combined, the remaining points (maximum 12) could be reallocated to a measure that favors development in or adjacent to existing neighborhoods or along commercial corridors. For example, the LEED for Neighborhood Development (LEED-ND)[17] criteria require a range of precise yet flexible measures (such as development that is adjacent to existing neighborhoods on three out of four sides, shown in Figure 4, or the amount of land already developed within a half-mile of the project, shown in Figure 5) to receive full location credits. This approach could be adjusted to Cedar Rapids' needs. When the team toured projects with city staff, one project proposal in review was described as "infill" because it was in the city and on city services (across from the golf course near Edgewood Park). It appears that, due to a critical need for replacement housing, it had received funding from the city to support affordable or replacement housing. From the team's perspective, however, it seemed more like a greenfield site, with an iconic rural house, barn, and wooded valley. Based on the limited site tour the team had, while this project may be an appropriate place for housing, it seemed inappropriate to

[16] See Appendix B for point breakdown and combination/allocation of the Cedar Rapids Smart Growth Scorecard.
[17] For information about LEED-ND, see http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148.

receive a development subsidy, and the affordable housing would be better located in walkable distance to services and transit. Appropriately adjusted measures and points on the scorecard would give staff and the planning commission a basis to make siting and funding decisions that favor locations near downtown, core neighborhoods, and redeveloping corridors—especially when city funds are being used.

LEED-ND Location Criteria: Proximity to existing development



Figures 4 and 5*: The images above show two approaches to measuring a proposed project's relationship to previously developed areas: 1) development adjacent to three out of four sides, on left (Figure 4), or 2) amount of land already developed within a half-mile of the project, on right (Figure 5) (Source: LEED-ND Reference Guide, USGBC[18]).*

2. Protection of land. These criteria and measures seem appropriate and well tuned to Cedar Rapids' issues. One adjustment to consider would be adding points to the last measure about green infrastructure or green streets installation, if the city wants to encourage developers to experiment with these practices. The extra-point incentives could be included either here or in the bonus criteria. The item "exceeding storm water management requirements" could not include credit merely for use of detention basins as a method for exceeding requirements. This measure might be rewritten to encourage experimentation with rain gardens, pervious pavement, bio-swales, linked tree planting trenches, and other green infrastructure techniques.

3. Housing options. These measures are good, especially the graduated weighting toward downtown, core neighborhoods, and existing neighborhoods. The points and weighting on these measures could be carefully reviewed against the infrastructure measures to see if they are aligned with the city's priorities for infill and affordable housing. For instance, locating housing in downtown receives 9 points, while locating it on any existing road with water and sewer anywhere in the city receives 36 points. To be fair, the downtown development would also receive the same 36 points (+9), and points could probably be adjusted to give a stronger priority

[18] US Green Building Council, *LEED-ND Reference Guide,* Washington, DC 2009.

to projects in or adjacent to existing neighborhoods or that are within walking distance of redeveloping transit corridors. If the city wants to increase affordable housing, it could consider increasing the points and weighting for including 15 percent affordable units (currently a maximum of 2 points), with increased points for a higher percentage (either here or in bonus criteria).

4. Mix of uses. Only larger developments will score well in the housing options and mix of uses sections, since the houses and uses considered are assumed to be within the proposed development. To encourage smaller infill on individual lots or portions of blocks in existing downtown and core neighborhoods, the city could consider allowing smaller projects to measure the existing housing options and mix of uses that are within a radius of two to three blocks or up to half a mile, rather than just those to be built on the site or that exist directly adjacent to the site (this approach is also used in LEED-ND, using diagrams similar to those in Figure 5). This would allow smaller projects in existing neighborhoods to score well, such as a senior housing project that is located within a few blocks of a library, shopping, churches, transit, affordable housing for health facility workers, and a park. The same is true for a small infill housing project the team saw in the Jackson neighborhood that had a row of houses with rear alleys and appeared to be within walking distance of neighborhood stores, churches, and other amenities. This section is otherwise good, with just a slight cautionary note about the points for "development new to the community."

5. Transportation options. This section measures all travel modes, but most measures could need clarification and adjusted points. For transit access, the range of points is good, but the transit frequency criterion needs definition. Most similar criteria in other rating systems require either a specified minimum number of trips per day (e.g., 40 to 60) or a peak hour frequency of service (e.g., every 15 minutes). Transit access could also get more points than trail access (currently, each criterion is worth 12 points). The trail measure could be adjusted to include points for access to a downtown or neighborhood park. Since an interconnected grid of complete streets and sidewalks is critical to walkability and transportation choice, not to mention energy conservation and reducing household costs, the "sidewalks connected to adjacent neighborhoods" and "interconnected road system" measures might be combined to create a new criterion like "project has an interconnected grid of complete streets and sidewalks, connected to adjacent neighborhoods." The points could also be increased, since even combined the road and sidewalk system would get just 8 points versus 12 for trail connections. Similarly, there could also be more points for projects that actually construct a segment of a regionally significant trail, as opposed to just locating near a planned trail or providing right-of-way (since there are many planned trails that are not being implemented). For projects in existing downtown neighborhoods, the trail points could be available either for improving walking and biking connections to an existing trail or, if a good sidewalk or bike lane connection exists, for making a financial contribution for improving or extending existing urban trails.

6. Character and design. These are good measures, but the point values could be adjusted to help produce more pedestrian-oriented and appealing designs that add value to the community. For instance, "building design includes elements to make building mass appear in scale with the established context, including proportion of open space and first floor pedestrian orientation" may be mis-worded—a typical building at the "build-to" line on an urban block may not require

open space on site to fit into context, and all urban buildings should have pedestrian orientation. This measure could probably receive more points as well. For the parking measure, an ugly, non-pedestrian-oriented parking structure at the street front could receive 6 points, where a well-designed building under might receive 2 points. This could be adjusted to award points for structured parking only with liner buildings that have active, street-front retail, offices, or live/work units on the ground floor or comprehensive landscaping, such as a setback with a double row of trees and seating. The measure on public plazas, squares, and parks could get more points, since this is a critical need. For smaller developments or individual buildings, proportional payment into a parks fund (for maintenance or upgrades of nearby parks or establishment of new ones) could also receive points.

7. Bonus Criteria. The bonus criteria are good, with potential consideration noted above in section 2: protection of land, about added points for green infrastructure installation and more than 15 percent affordable housing. The city could also consider giving bonus points for project design that enhances neighborhood character, provides an excellent pedestrian environment, or provides a transit stop and shelter. If the city wants to see significant progress on redevelopment of brownfields, greyfields, and transit-focused corridor projects, it could double the bonus points as an incentive to pursue these strategies. LEED and LEED-ND projects could also be considered for bonus points, since they have to pass rigorous hurdles and additional documentation costs.

B. Applying the Scorecard in Project Review and Funding Decisions

During the site visit, both staff and planning commissioners acknowledged that the scorecard is not being used to its complete potential. It has primarily been in a testing period, with a few developments scored and the results presented to the commission, but the results are not really being used for project evaluation. The scorecard could be fine-tuned as noted above and tested against a few existing developments to work out any kinks. The city could then enact an ordinance to require its use for:

1) Review and approval of development proposals;
2) Review of applications for funding under a variety of city programs (similar to the Iowa Green Streets Manual)[19]; and
3) Review of potential siting options for city and county facilities like city hall or fire stations.

Using the scorecard to evaluate siting options for public facilities may be a higher priority (due to rebuilding planning), so the city could use the scorecard as it currently stands if a proposed facility is coming up for review in the next few months. Feedback from that scoring could be used in any changes the city makes in the scorecard. This approach might help in discussions with developers, if the city is willing to show its commitment by first reviewing its own actions.

To fully integrate the scorecard into the city's project approval process, project approval would require a certain minimum score. When the criteria are clear, understandable, and achievable,

[19] The Iowa Green Streets Criteria promote public health, energy efficiency, water conservation, smart locations, operational savings and sustainable building practices. Iowa Department of Economic Development. http://www.iowalifechanging.com/community/downloads/green-criteria08.pdf. Accessed August 12, 2010.

developers tend to strive for a higher rating if it leads to more public support and the ability to market the project as greener than the competition. A fully implemented, strong, and enforced scorecard would likely raise the bar for projects throughout the city.

This program could be expedited with training for both staff and the planning commission, working through scoring a few projects together. These sessions could also be used to brainstorm bonus criteria and adjustment of points and weighting based on common values critical to Cedar Rapids' vision. Once the new criteria are finalized, additional training sessions could be scheduled for the development community. For larger projects, scoring could be done or at least discussed by an interdepartmental working group.

In addition to its potential use in reviewing applications for city funding (including flexible funding for which the city sets local criteria, like US Housing and Urban Development's Community Development Block Grants), the scorecard may be useful in demonstrating alignment with other state and national funding criteria for programs to save energy, lower greenhouse gas emissions, and provide transportation choices. Although Cedar Rapids is not required to comply with the Iowa Green Streets criteria (since it receives most of the applicable funds directly rather than through competitive grant programs), it may be worth working with state and regional partners to ensure that the scorecard is closely aligned with these criteria and other relevant documents (like the Metropolitan Area Design Standards). If revised as described here and fully implemented, the scorecard has the potential to be significantly stronger than the Green Streets criteria, since it will be more specific about critical transportation network and facility design. This discussion with state and regional partners could include the potential for testing the revised scorecard for use throughout the region and incorporating some of the elements into the Metropolitan Area Design Standards.

4 Review of Infill Strategies

Cedar Rapids municipal agencies, the planning commission, and the city council are promoting infill development as a sustainable communities strategy. There is a great need for replacement affordable or workforce housing as a result of the loss of housing stock in flood-damaged areas. Prior to the floods, the city created an Infill Task Force to focus on infill development, which presented recommendations to the city on types and benefits of infill development, along with identifying barriers to be overcome.

The Infill Task Force's recommendations included:

- Integrative planning processes to include small neighborhood plans focusing on infill.
- Code flexibility to allow more infill.
- Quality of life components to make infill housing more desirable and help to overcome perceived market preferences to expand at the periphery.
- Community input and education to help neighborhoods overcome increasing resistance to infill housing within their neighborhoods.
- Clear standards and approval processes to provide more certainty for developers and to reduce their fears of uncertain outcomes in the development process.
- Incentives to help individual infill projects to bridge the financial gap typical in developing infill projects, or to meet other affordability goals.

The task force's suggestions form a good framework for auditing processes, regulations, standards, and incentives programs.

During its Cedar Rapids tour, the EPA team visited several areas the city had identified as likely candidates for infill development. The team visited potential or proposed development sites, each of which had particular problems that needed to be overcome to achieve the project's goals. The team also spoke with Infill Task Force members, the planning commission, community stakeholders, and the development community to discuss the task force's report and other issues that arise repeatedly on infill development proposals and project review.

Definition of Infill

The city and the infill task force current definition of infill development is "any site that is within the city jurisdiction and will be served by city sewer and water services." There does not seem to be any prioritization with regard to site type, location, or characteristics. Thus, an undeveloped greenfield site on the edge of the city adjacent to services is as much an "infill" site as a downtown site. This is a critical shortcoming of current infill development policies, which could be easily remedied by specifying preferred locations, site types, and characteristics—for project approvals as well as for public investment and support.

Types of Infill

The task force evaluated the types of infill development sites and categorized them as vacant lots, brownfield sites, greyfield[20] sites, vacant buildings (which could also be brownfield or greyfield sites), and greenfield sites (which have not been developed previously). The following sections integrate location considerations with the task force's infill development categories. These locations can affect the ease and speed of project development, and some may provide access to special funding that can make a project more feasible.

Location of Infill Development

In reviewing how these infill types relate to smart growth, and how the city might prioritize its use of zoning tools or incentives for a particular development, the location of the infill development may be more critical than whether it is a vacant, brownfield, or greenfield site. The city may find that specifying location criteria works in conjunction with the types of infill sites described by the task force.

In Cedar Rapids, the team found four primary location types that provide opportunities for infill development:

1) Downtown and its adjacent commercial areas;
2) Traditional residential neighborhoods surrounding downtown, which may include smaller commercial districts or civic facilities;
3) Commercial corridors, which have many commercial buildings and aging sites that are underused or underperforming as retail or commercial businesses; and
4) Peripheral residential sites, which are outside the city core and traditional residential neighborhoods.

These location types are based on the fundamental principles of smart growth and sustainable development patterns. The city could focus on downtown, key corridors, and inner neighborhoods as priority areas for compact, infill development. This definition of "infill" could also be used when the city evaluates whether to provide zoning modifications or alternative subdivision or streetscape standards. It could also be critical in evaluating where to spend the city's limited resources on incentives, whether through funding of infrastructure improvements, purchase or provision of vacant land, or financing to developers to spur mixed-income affordable housing products. These priority locations also fit well with the city's existing revitalization plans and target areas for the flood-damaged areas of the city.

The city may also find that infill development is somewhat less contentious in the city core and along commercial corridors, as residents of these areas anticipate change and are used to a variety of uses in their neighborhoods. On the periphery, however, a greenfield site is sometimes perceived as "open space" by residents who moved to that location for its rural character. The city may use less energy and political capital in reviewing and approving well-thought-out and well-designed infill developments in appropriate locations.

[20] Generally meaning aging or functionally obsolete strip malls and shopping centers.

Downtown and Adjacent Commercial Areas

The downtown commercial area had extensive flood damage but is slowly coming back. Many of the businesses and offices are returning, but there is still extensive damage and many vacant properties. While it is important to have businesses and expansion capacity, the downtown and the surrounding commercial areas could accommodate a substantial amount of housing in new construction and renovated historic buildings. Several properties in the downtown appear to be underused or vacant, which could be the makings of a small residential district. However, the city would have to evaluate the market and ensure that there will be enough commercial and office space to meet future demand.

Many cities are using residential development as an anchor for downtown revitalization, especially when the desired services and amenities exist downtown. For civic pride and proof of the resiliency of downtown, the city hall and civic services, auditoriums, movie houses, and theaters need to remain, along with everyday services such as a grocery and drug store. Downtown can provide a type of housing not widely available in the Cedar Rapids marketplace, particularly for young adults and seniors, who desire more access to urban amenities, activities, and, for seniors, nearby medical centers.

Downtown and the surrounding commercial district have a variety of sites that can provide development opportunities. There are existing commercial buildings that could be attractive residential buildings, with ground-floor retail or offices. Others are light-industrial or warehouse-style buildings, which could also be distinctive housing or live/work lofts. A financial feasibility analysis identifying the appropriate translation to residential density would help the development community to understand the opportunities.

There are also one or two large industrial parcels that could be transformed into residential or mixed-use communities to help anchor the New Bohemia neighborhood. These would probably best be done as a planned unit development or through a specific master plan process. A hands-on planning charrette session with city departments, the planning commission, the general public and the city council to identify major priorities and design concepts for these larger projects could begin to set the stage for development. The city might also assist with infrastructure funding or accessing cleanup or housing subsidy funds for brownfield or greyfield developments. Several other vacant sites could be developed quickly. City staff could put together a quick, informal list of potential downtown housing sites for development consideration. These catalogues of potential sites are often included in the housing element of a community's comprehensive plan.

Traditional Residential Neighborhoods Surrounding Downtown

Many of the residential neighborhoods surrounding downtown were extensively damaged by the floods. Some owners are rehabilitating homes while others are awaiting flood protection decisions before they invest more of their money. These neighborhoods have lost a great deal of older housing stock, both rental and ownership, which were affordable due to their owners' long tenure and the efficient size of the buildings. These areas should eventually be able to realize a substantial amount of infill development. Aggregating parcels, even in smaller sections of a block, can make development more cost effective. This approach was used in a newly developed,

attractive row of houses in the Jackson neighborhood, and it appeared to have stimulated other nearby development.

Developing small area plans and design guidelines, with neighborhood participation, can help protect the character of these mostly single-family neighborhoods, while town homes, apartments, and other larger buildings could be encouraged to develop on appropriate sites, typically along primary corridors or near commercial, parks, schools, and other focal points. Regulatory modifications could assist in promoting infill developments that both fit into the neighborhood and achieve environmental benefits like reduced emissions and improved water quality. These downtown neighborhoods already have great examples of small apartment buildings along the primary streets, secondary units behind homes on deep lots, and vacant sites that could be developed. To promote infill development, the city of Portland, Oregon, rezoned targeted areas to allow slightly greater densities and modified zoning standards. The city also published a handbook with examples of the kinds of infill housing it encouraged to educate the neighborhood, smaller builders, and the development community.

The development community will probably not make major commitments to flood-damaged areas until the flood control master plan and schedule are clearly defined and insurance and other risks are resolved. The city can be proactive in these neighborhoods, first by mapping potential development parcels and then by assisting with aggregating development parcels. To make infill in these neighborhoods more attractive to developers, the city could evaluate whether to modify the zoning on potential infill parcels designated by the city's plan. This could be coordinated in conjunction with the neighborhood-focused plans and overall revitalization master plan that was created as part of the flood recovery efforts. The city could provide infill prototypes (e.g., drawings, pictures, and concept plans of typical buildings) as part of the planning effort to illustrate potential changes and demonstrate the potential for proposed infill development.

These close-in residential neighborhoods areas are probably not the ones with the most immediate development potential, since flood control issues will continue to dominate some of these areas for some time. However, areas outside of the flood-affected zones could be good targets for immediate infill development, as they would provide replacement housing closest to the affected areas. Older residential neighborhoods typically have small commercial areas with local services such as a small grocery store. Adding new residential development will provide more customers for these stores and improve the overall retail environment. These neighborhoods often become desirable areas for young families and adults who work downtown. Residents frequently walk or bike to nearby destinations, which reduce the need for parking.

Commercial Corridors[21]

Many of the commercial corridor areas are not in the flood-damaged areas of the city. However, those areas that the team saw appeared to be suffering from the nationwide trend of aging and deterioration as well as competition from newer outlying retail centers. This situation was exacerbated by the flooding, which reduced the number of available residential units and refocused the retail and business priorities of the community. These aging corridors have

[21] For more information and ideas, see *Restructuring the Commercial Strip*, US EPA http://www.epa.gov/smartgrowth/pdf/2010_0318_wa_328_corridor_manual2.pdf.

greyfields and possible brownfield properties, often at key intersections and within walking distance of surrounding residential neighborhoods.

These factors and trends create an opportunity to reduce the amount of "under-leased" properties in areas that are "over-retailed" and convert them to provide more conveniently located housing sites, near services and transit routes, in areas outside of the flood zones. This strategy could provide some immediate opportunities for development or revitalization with mixed-use and higher-density residential development. The current or future transit service typically available along these corridors, coupled with nearby walkable destinations, could provide transportation choice and lower costs for residents. Communities across the country are investing in major streetscape projects, focused area planning, and rezoning to encourage and stimulate infill development along their commercial corridors. Many of these corridors are state highways, and city may be able to use state DOT funding sources to enhance the streetscape.

Infill developments along the commercial corridors could be a win-win opportunity for the city. The city could inventory, map, and review the redevelopment potential of underused sites along the major retail corridors. Reusing these retail sites has several advantages:

1. They are often large enough to be viable residential developments;
2. Existing retail zoning allows for residential development and mixed-use development;
3. Often new homes will be more compatible with adjacent neighborhoods than existing commercial uses, helping build neighborhood support for redevelopment; and
4. Most older shopping centers were built at major intersections, putting redevelopment in good locations to be "transit targets" for enhanced, extended transit service

Corridor plans, like the neighborhood plans, could be developed quickly, or a charrette with the city departments and policy-makers could expedite the process by providing some general direction to potential developers. These plans could be used as guidance within a Planned District process or as policy design guidelines for a mixed-use project under the current retail zoning incorporating residential uses. The infill prototypes discussed in the previous section could also be used along the commercial corridors to illustrate the types of development desired. The city could assist in these projects by expediting design and review processes and by providing infrastructure financing for streetscape and utility upgrades.

Peripheral Residential Sites

This type of development exemplifies inefficient development patterns, where land uses are not connected to neighborhood assets and resources. They are also not usually served by transit; have little or no nearby retail, schools, or other services and amenities; and cannot be accessed without driving. Rezonings are usually at densities that are not consistent with the surrounding area. While there is a critical need for affordable replacement housing, these locations are considered low priority by the city, providing less effort and incentives to see these projects realized.

Summary of Options to Promote Infill Development

Cedar Rapids can use its policies and energy to direct development to locations in which it wants to see infill, revitalization and economic development. By targeting specific areas, the city and

partners can use the tools articulated in this section and supported by the Infill Task Force to support redevelopment policies. Beyond individual planning, regulation, infrastructure, funding, and incentives efforts, the city could consider a concerted policy and budget initiative to reinvest in the downtown with new housing and businesses, as well as by returning the city hall offices to downtown.

The city could encourage development in the surrounding commercial area by providing incentives for businesses and housing to locate there, by reinvesting in the surrounding urban neighborhoods and business nodes, and by looking at its commercial corridors as opportunity areas. It could consider focusing infrastructure improvements, CDBG funds, housing funds, and political energy to influence investment and access additional state and federal funding in these designated areas. The Iowa Green Streets Criteria include an emphasis on infill and using existing infrastructure, in addition to other sustainable development practices. The city of Cedar Rapids currently uses these criteria for some redevelopment and economic development projects, including in disaster-affected areas, and the state is applying the criteria to more funding programs relevant to Cedar Rapids. The Cedar Rapids Smart Growth Scorecard (Appendix C is reasonably well aligned with these criteria and could be strengthened and used to evaluate and support these infill priorities.

Key steps the city could consider to encourage infill development and affordable housing include:

1. Focus infill development efforts in a small group of target areas, including retail/commercial corridors, traditional residential neighborhoods close to downtown, and downtown and surrounding commercial districts.
2. Catalogue and map the potential housing sites in these areas as recommended by the Infill Task Force. By limiting the scope to specific districts (as opposed to the entire city), the city should be able to accomplish the process quickly.
3. Make modifications to the zoning regulations to promote appropriate infill development prototypes identified in the focused planning efforts. This could be done via a series of zoning overlay districts.
4. Create an infill housing prototypes booklet to illustrate the types of development the city would like to see as part of the infill program. Test a variety of these prototypes on typical catalogued sites (to see if they fit and work) and evaluate for development feasibility.
5. Provide incentives to projects in the priority infill areas in the form of pre-development assistance such as grants or loans, infrastructure assistance through direct financial support, or by providing related public improvements.
6. Refine the Smart Growth Scorecard (as discussed in Section 3), and phase it in as a required tool to evaluate, compare, and approve infill development proposals. Working with the development community on this activity will help ensure that developers understand and support this tool.

5 Review of Green Infrastructure Practices

This chapter summarizes the findings of the team's review of Cedar Rapids' green infrastructure practices, policies, and regulations. The team looked at the *Cedar Rapids Comprehensive Plan* (1999); *Iowa Statewide Urban Design Standards Manual*; Chapter 2: Storm Water Management of the *Metropolitan Design Standards Manual* (2006); and *Best Management Practice for Maintenance of Private Storm Water Facilities* (2008), which describes how to comply with state stormwater permit requirements. The team also reviewed the Cedar Rapids Smart Growth Scorecard as discussed in Chapter 3 of this report, conducted site inspections and discussions with staff and the Storm Water Commission, and reviewed EPA's *Water Quality Scorecard: Incorporating Green Infrastructure Practices at the Municipal, Neighborhood, and Site Scales.*

Background

The city of Cedar Rapids derives all of its drinking water from alluvial wells located along the Cedar River. Most of the recharge of the city's wells is from the river, making the river's water quality very important to public health in the city. Nearly 90 percent of the river's watershed is agricultural, so agricultural practices have a significant impact on the quality of the city's drinking water. Although there is concern that continued development will require the city to install costly systems to remove contaminants, the agricultural practices outside of the city's jurisdiction are of much greater concern than local urban runoff. The team thought that the city must first take care of urban and development runoff if it is going to have greater leverage in discussions with agriculture and other industries affecting the city's water quality. The city works with the United States Geological Survey (USGS) and the Army Corp of Engineers to better manage the Cedar River watershed. Cedar Rapids relies on these and other governmental agencies and private stakeholders to implement best management practices (BMPs) to improve water quality.

The Cedar River flood of 2008 resulted not from local stormwater management practices, but from watershed inundation. As with water quality, the city's flood protection program is also heavily influenced by the greater Cedar River watershed. Stormwater management also must deal with localized flooding, which occurs in smaller, more frequent storm events. The city's regulations focus on these regular events, with the goal of minimizing the storms' impact on property and the storm drainage system. These stormwater management practices as characterized through green infrastructure should help retain water in frequent, smaller events and minimize runoff from private properties during peak flows. Integrating green infrastructure best management practices into both public infrastructure and private development can filter, slow, and reduce stormwater runoff, which protects water quality and helps prevent flooding and erosion. In addition, attractively designed green infrastructure can provide shade that makes walking and biking more comfortable and appealing, enhances streetscapes, and reinforces community character.

Site Visit and Working Sessions

The team discussed development issues, including stormwater management strategies, with city staff, including the engineering and planning departments, and with the Storm Water Commission, the planning commission, the city council, the Infill Task Force, developers, private engineers and architects, and property owners. During the two days of stakeholder meetings and site review, the team visited residential neighborhoods, commercial districts, and representative infill development sites that were targeted for development or had been recently developed. The team discussed the city's development review process and Smart Growth Scorecard, as well as the overall regulatory framework to assess current planning and implementation processes.

The Storm Water Commission is involved in both stormwater management and protection of sensitive habitat and natural areas. Although these areas are not separate, discussing both topics together does sometimes confuse regulatory priorities. Low-impact development[22] strategies and BMPs are often related to natural habitat preservation, but in many urban areas, habitat preservation is a secondary purpose. Generally speaking, it is more important to discuss these topics in tandem for developments along the urban fringe or transitions between land uses.

Prior to the September 2009 workshop, the Storm Water Commission suggested several strategies that it felt would improve stormwater management and quality. These included:

- Measure impervious surface of developments, and establish a limit on the percentage of impervious surface allowed within a development.
- Provide economic incentives in the form of lower fees for projects that incorporate swales and other low-impact development (LID) designs.
- Incorporate LID features and stormwater quality controls into the city's Metro Design Standards.
- Link builders' requirements for obtaining a certificate of occupancy to including stormwater management features like pervious soil material and rain gardens.
- Provide educational materials and programs for both residents, to help them include elements like rain gardens in their yards, and developers, to encourage them to include green infrastructure elements more extensively in developments.

Development Scorecards and Evaluating Cedar Rapids

The Cedar Rapids Smart Growth Scorecard is intended to evaluate the quality and appropriateness of a development's location, program, and design. It has so far been used informally, although the team proposed that its use could be required and ratings used in development decisions. The scorecard addresses stormwater management and water quality under the heading "Protection of Land – benefits the general public, as it spares environmentally sensitive areas, watersheds, and agricultural land needed for a viable quality of life." The scorecard currently awards one point for a project that exceeds stormwater management requirements and another for projects that incorporate water quality protection methods other than detention, such as infiltration techniques, filter strips, drywells, and rain gardens.

[22] Low impact development land planning and engineering design approach to managing stormwater runoff. LID emphasizes conservation and use of on-site natural features to protect water quality.

Stormwater management is an important issue that could be a separate category in the scorecard or have additional scorecard points assigned to it. The scorecard could include additional points for green streets designs, treatment of parking areas, stormwater collection and reuse for irrigation, grey-water reuse, and reducing runoff to levels lower than that required by code or city ordinance. As an example, LEED considers exceeding stormwater management requirements as mandatory rather than optional. The scorecard could also be revised to incorporate some of the Storm Water Commission's suggestions, such as requiring all construction sites to add 12 inches of high-quality soils for infiltration purposes.

Another tool the city could explore is EPA's *Water Quality Scorecard*, a more comprehensive and complex evaluation tool that evaluates a wide variety of planning, regulatory, engineering, and development practices to better understand how these practices affect stormwater management and water quality. It is organized into five sections:

- Section 1: Protect Natural Resources (Including Trees) and Open Space
- Section 2: Promote Efficient, Compact Development Patterns and Infill
- Section 3: Design Complete, Smart Streets That Reduce Overall Imperviousness
- Section 4: Encourage Efficient Parking
- Section 5: Adopt Green Infrastructure Stormwater Management Provisions

The team used these sections to evaluate Cedar Rapids' stormwater management and water quality issues.

Section 1: Protect Natural Resources and Open Space

The protection of natural resources and open space is a current implementation objective in the comprehensive plan; however, the team feels it has yet to be dealt with effectively. On the site visit, the team saw several development sites where creeks were not protected by a buffer zone, which could create erosion as well as severely diminish the land's ability to retain stormwater. The Storm Water Committee suggested specific setback requirements from creeks and drainage ways, ranging from 25 feet to 100 feet depending on the sensitivity of the waterway and the site's location within the drainage basin. Setbacks such as these are key requirements in many localities and could be considered in Cedar Rapids.

The comprehensive plan does contain detailed information on floodplains, woodlands, wetlands, and prairies. The preservation of these resources is done through designated open space. Another strategy is that the comprehensive plan's implementation/administration section stresses the creation of incentives, through more streamlined clustering provisions, for the protection of wetlands, floodplains, woodlands, and steep slopes. This approach emphasizes working with property owners individually, rather than setting a comprehensive, citywide policy.

The comprehensive plan also includes an implementation policy of coordinating with Linn County, the state Department of Natural Resources, and the state Department of Wildlife to:

1) Evaluate and study habitat and wildlife areas in the metro area;
2) Set priorities for preservation of valuable areas; and
3) Designate corridors for preservation.

These elements are critical to infrastructure that addresses regional issues and needs. The city does not appear to integrate regionally focused infrastructure with its parks and open space planning. A regional green infrastructure plan that integrates the regional resources network with the city's open space system would help protect the regional watershed. Once the "highest value" resources and corridors have been identified and mapped, all development proposals, roadway, and public facilities improvements could be reviewed against the green infrastructure plan to help preserve critical, connected resources. As there is no regional planning agency, the plans would have to be developed and implemented through consensus among multiple jurisdictions.

Figure 6 (left) and Figure 7 (right): *Even small streams can benefit from a protective buffer area, which can be allowed to flood during storms (left). Larger streams should be protected by wider buffers, preferably forested areas (right). (Sources, both figures: ICF)*

The preservation of trees through an urban forestry program, on private property as well as in street tree programs, is a critical component of a stormwater management strategy. Trees retain a substantial amount of water, reduce and disperse rain flows, and prevent damaging erosion. Adding trees along public streets would provide more tree canopy, help reduce the urban heat island effect, make walking and biking safer and more appealing, and enhance the character and appearance of the city's streets. The Metro Design Standards and state Iowa Statewide Urban Design Standards Manual (SUDAS) streetscape standards allow, but do not require, street trees. Many outdated street standards require a "clear zone," which reduces the ability to place street trees along the public right of way. A clear zone is a highway standard that is inappropriate for lower-speed roads. The city, through revised Metro Design Standards, could refine the regulations to require street trees to form a continuous canopy. Modifications to the SUDAS and Metro Design Standards requiring street trees at a regular spacing would enhance the streetscape and pedestrian realm and help the city better manage stormwater. Other states have various interpretations as to considerations about street trees. For example, the state of California's stormwater management regulations recently began to allow a community to consider tree canopies as part of the stormwater management permit program. In particular, street trees can be planted in continuous rain gardens along residential streets. On busier commercial streets, trees

can be planted in individual tree wells that are dug as a continuous, connected trench, with pavers forming a more permeable surface between tree wells.[23]

Figures 8 (left) and 9 (right): *Green infrastructure techniques can be adapted to a variety of places and contexts to absorb and filter rainfall and to make streets more attractive. (Sources: SVR Design Company (Figure 8) and Nevue Ngan Associates (Figure 9))*

Section 2: Promote Compact Development

To meet its goal of more walkable development with a mix of uses, the city can consider maintaining an efficient, compact development footprint or city form, while promoting infill development in downtown and nearby neighborhoods and along key transportation corridors. The compact development footprint helps achieve stormwater management goals as well. By directing development to specific locations, the city can protect sensitive areas, remove development from floodplains or watersheds, and efficiently use existing infrastructure. By promoting infill development that is more compact and has a mix of uses, the city can more efficiently use land and infrastructure, with proportionally less impervious surface per resident, reducing the overall impact on the stormwater system.

The city grapples with this conversation, as the general public seems to perceive few barriers to expanding development at the periphery and little consequence of further expansion, environmentally or to quality of life. The Infill Task Force was set up by the city council to

[23] For more information about green infrastructure practices and stormwater management techniques, see EPA's technical assistance reports from Sussex County, Delaware, Protecting Water Quality With Smart Growth Strategies and Natural Stormwater Management in Sussex County, Delaware: *Protecting Water Quality With Smart Growth Strategies and Natural Stormwater Management in Sussex County, Delaware* and Sanitation District No. 1, Northern Kentucky: *Stormwater Management Handbook: Implementing Green Infrastructure in Northern Kentucky Communities*. Both documents are available at www.epa.gov/smartgrowth/ sgia_communities.htm.

promote infill development, take comment on the issues, and help educate the public and development community on the benefits of infill for Cedar Rapids. Chapter 4 of this report analyzed the infill policies the city is currently using and offered options for changes that would better meet the city's needs and desires. Directing new development to designated infill districts will help maintain natural areas at the community's periphery, reducing stormwater impacts by not developing sites with natural stormwater retention. When compact development is directed to the right locations, it reduces development pressures on open space and sensitive habitat, making these places easier to preserve.

Section 3: Design Complete Streets that Reduce Overall Imperviousness

The Cedar Rapids Metro Design Standards incorporate the SUDAS street design standards.. The street design standards have few requirements for stormwater management design features outside of traditional engineering practice, such as green infrastructure, LID, or green streets designs. They also do not address complete streets design, which ensures that streets are safe and accommodating for pedestrians, bicyclists, transit users, and drivers. Many communities have found that their streets were built overly wide and can be narrowed without increasing traffic congestion. The excess road width can be used to create a bike lane, a sidewalk, a planting strip for street trees, or a vehicle turning lane. In addition, narrower streets reduce the overall amount of impervious surface, even if sidewalks are added. The city could consult experts in complete streets or context-sensitive design to determine how to incorporate appropriate designs for new streets into the Metro Design Standards, along with "road diet" standards for existing overly wide streets. Many resources existing that address street design and complete streets.[24] If green street elements are added into the street standards, streets would become a valuable part of a stormwater management strategy. Green and complete streets typically calm traffic, which keeps drivers, pedestrians, and bicyclists safer, while making neighborhoods more attractive. Strategies include using rain gardens in bulb outs and tree lawns, connected street tree canopies, pervious pavement or pavers, and mini-parks that are depressed to flood and recharge during storms.

Section 4: Encourage Efficient Parking

Parking, particularly surface parking areas, creates a major impact on stormwater runoff and water quality. In many conventional developments, including shopping centers, apartment buildings, or office complexes, 50 percent or more of the site development can be impervious parking lots.

[24] For more information, see American Planning Association Planning Advisory Service. *Complete Streets: Best Policy and Implementation Best Practices*, 2010.

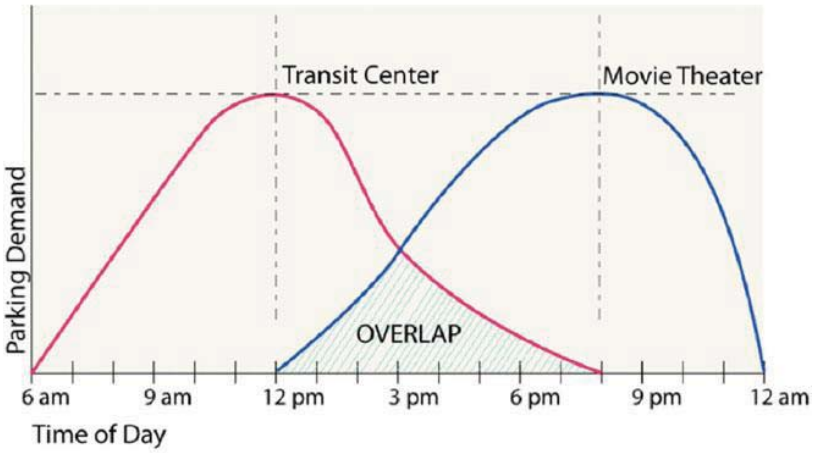


Figure 10: *An example of a parking demand diagram by hour for uses that could share parking. This diagram illustrates how to reduce the overall parking count by the "overlap" and reduce the amount of impervious surface required. (Source: Van Meter Williams Pollack)*

Many of the parking lots the team saw during the site visit had few or no green infrastructure elements or stormwater management BMPs. Runoff from parking areas typically flows directly into the storm drain system or, in newer developments, into a detention basin to reduce off-site flows. Some developments use bio-swales or other strategies to slow runoff and filter and clean the water. If the city and private developers want to reduce stormwater flows and clean the outflow as much as possible, they can consider parking-related strategies that bring other benefits. These strategies include:

- Reduce the overall amount of a site dedicated to parking, particularly surface parking. The city has relatively high parking requirements. Through reduced parking requirements, shared parking arrangements, a parking management plan for commercial districts (a "park-once" district), and the use of shared parking structures, surface parking areas could be substantially reduced. Developers save money when they do not have to build as many parking spaces. They could develop the space that would have gone to parking to create more housing, office space, or retail space, or they could use it for a park.
- Use green infrastructure stormwater management strategies to retain and treat parking lot stormwater runoff before it enters the stormwater system. Some techniques to consider include using pervious paving or pavers in the parking areas, adding bio-swales to landscaped medians, adding individual or connected tree wells, and adding parks that also retain runoff. These strategies help protect water quality by capturing and filtering runoff, as parking lots often have more oil and other contaminants than streets or single-family driveways. These approaches could be required as part of new development and encouraged as older sites redevelop. Green infrastructure elements combined with improved pedestrian walkways (for instance, to provide direct access from a roadside bus stop through a parking lot to a store) can greatly improve both the image and customer experience of existing retail or office environments.

Figure 11: *Parking lots can use low-impact drainage infrastructure to collect stormwater and protect water quality. Using native plants can make the parking area more attractive. (Source: ICF)*

Section 5: Adopt Green Infrastructure Stormwater Management Provisions

In many areas, including Cedar Rapids, streets and public right-of-ways may occupy 20 to 30 percent of the land. Thus, if the city or state develops stormwater management and green infrastructure BMPs for the public right-of-ways, they will cover a substantial amount of land. To be effective and efficient, the city could prioritize stormwater management provisions toward areas that could have the greatest impact. The city might use the Water Quality Scorecard to evaluate these sites.

The city currently uses its own Cedar Rapids Metropolitan Area Engineering Design Standards. These standards do not incorporate green infrastructure or LID principles for development or green streets features into their regulations. The city is has begun incorporating SUDAS into the Metro Design Standards. However, SUDAS does not incorporate green infrastructure design approaches for stormwater management either. The city could consider making green infrastructure approaches an option for private developments and for city-sponsored projects.

Figure 12 and 13: *Parking and streets make up a large percentage of impervious land area within a city. Incorporating green infrastructure into street and parking lot standards could improve water quality from as much as 20 - 30% of the paved surface. (Source: Nevue Ngan Associates for both figures)*

Cedar Rapids' Public Works Department has published a *Best Management Practice Manual for Maintenance of Private Storm Water Facilities*. It was developed to comply with the city's Separate Storm Sewer System (MS4) permit. It is educational material only, but it clearly shows knowledge of innovative stormwater management techniques. The city could encourage greater incorporation of these features, through regulation, negotiation, or incentives through fee reduction to encourage project implementation of these types of features.

Elements in this maintenance booklet include:

- Well-design detention basins (where appropriate and necessary) designed as an aesthetic feature;
- Rain gardens for residential and commercial sites; and
- Underground detention basins for more urban sites.

Implementation of stormwater management and water quality strategies on a regional basis is difficult, as independent jurisdictions tend to have differing priorities. While regulating at the local level is more typical, regulations that are regional or statewide can better address area-wide watershed and water quality issues and are often easier for designers and contractors to implement than individual municipalities trying to create self-regulating ordinances. This has already been demonstrated locally with the SUDAS and Metro Design Standards for streets, and the same approach could work well for regional green infrastructure/green streets standards (perhaps as a supplement or appendix to SUDAS).

Statewide Initiatives

The state of Iowa understands that it has major stormwater management and water quality issues. Several stormwater management documents and issue papers highlight requirements or regulatory goals for which there is some interest in statewide implementation.

The state-developed Iowa Green Streets Criteria[25] (include an emphasis on infill and using existing infrastructure in addition to other sustainable development practices. The city of Cedar Rapids currently uses these criteria for some redevelopment and economic development projects, including in disaster-affected areas, and the state is applying the criteria to more funding programs relevant to Cedar Rapids. The Iowa Stormwater Management Manual (ISMM) could also be implemented by local jurisdictions such as Cedar Rapids[26].

In July 2009, a subcommittee of the state's Water Resources Coordinating Council (WRCC) was asked to submit policy and funding recommendations on a variety of topics that promote watershed management, reduce the impact of flooding on communities, and improve water quality.[27] The subcommittee made recommendations that would move sustainable stormwater management to the forefront of development issues. These recommendations include:

- Implement statewide stormwater management standards consistent with the ISMM. These could be phased in.
- Require new and amended federal water quality permits to include stormwater BMPs as outlined in Iowa's stormwater management manual, de-emphasizing structural solutions.
- Require the use of the ISMM on all state projects or on those that use state funds or are on state property.
- Support or enhance stormwater project funding to public agencies and private development through current grant programs, including additional funds for projects that include BMPs.
- Allow cities and counties to include hookup fees on systems based on impervious surface installed to pay for stormwater infrastructure costs.
- Allow soil and water conservation districts to create watershed districts and taxation abilities pay for infrastructure improvements.
- Emphasize education focusing on BMPs and LID as outlined in the ISMM, including water quality and water quantity and the potential for environmental impact and damage to cities and counties. Programs should be developed to reach larger audiences and include technical assistance.

[25] For more information, see www.iowalifechanging.com/community.
[26] For more information, see www.ctre.iastate.edu/PUBS/stormwater/.
[27] For more information, see http://www.rio.iowa.gov/wrcc/assets/recommendations/exhibit_a.pdf.

Figures 14 and 15: *Demonstration projects, which can use features such as pervious pavement, can educate the community and developers, help illustrate various techniques, and show how they can improve the appearance of developments. (Sources: ICF (Figure 14) and EPA (Figure 15))*

The WRCC subcommittee's recommendations are all good and are consistent with the discussions the expert team had about local versus statewide regulations. Cedar Rapids could implement much of the ISMM and other regulations through local ordinances. However, it makes sense for these regulations to be discussed and implemented at the watershed scale or statewide, with local jurisdictional review and oversight.

Summary

The team's key findings and options for the city to consider for next steps are:

- Stormwater management and water quality are affected by a wide variety of a city's planning and development decisions. Cedar Rapids might include these considerations throughout its comprehensive plan, neighborhood plans, and review of development projects and through its Smart Growth Scorecard, which could be expanded to give further weight to this issue.
- The city could continue to work with and coordinate with surrounding jurisdictions to maintain as compact a development footprint as manageable, as well as coordinate large-scale open space plans or a regional green infrastructure plan that considers watersheds along with sensitive habitats and riparian resources.
- The city and regional partners might consider incorporating green infrastructure, and LID when updating the Metro Design Standards, the statewide SUDAS, and other regulations that address streets and development.
- Education is suggested to inform residents and the development community about stormwater management issues, goals, and policies. This could include discussion of anticipated local, state, and federal regulations and of an accelerated, phased approach to stormwater management in the near future.

- The city could work with state agencies to provide funding and incentive programs to accelerate acceptance of green infrastructure and LID features. These could be for individual residents, private developments, and public projects, with the latter accelerated to illustrate innovative strategies.
- The city might consider stormwater system hookup fees (like sewer fees) that could then be used to pay for incentives to encourage green infrastructure and LID strategies on all development projects. They can also help to pay for larger-scale infrastructure needs to meet eventual state requirements for stormwater management.

As cities take more responsibility to manage and clean the water that finds its way to the rivers, they are in a better position to engage the agricultural community in a discussion of how to do its fair share to incorporate water quality improvements and flow reduction strategies in agricultural practices and stormwater management programs.

APPENDIX A: Project Contacts

EPA Contact
Kevin Nelson
Smart Growth Program
1200 Pennsylvania Avenue, NW
(MC 1807T)
Washington, DC 20460
Tel (202) 566-2835
nelson.kevin@epa.gov

Cedar Rapids Contact
Jennifer Pratt
Development Coordinator
City of Cedar Rapids, IA
Community Development Department
3851 River Ridge Drive NE
Cedar Rapids, IA 52402
Tel (319) 286-5047
j.pratt@cedar-rapids.org

Expert Team
Rick Williams
Van Meter Williams Pollack
18 De Boom Street
San Francisco, CA 94107
Tel (415) 974-5352
rick@vmwp.com

Harrison Rue
ICF International
9300 Lee Highway
Fairfax, VA 22031
Tel (703) 934-3244
HRue@icfi.com

Additional Contacts
Tara Bradley, City of Cedar Rapids
Brad Larson, City of Cedar Rapids
Richard Luther, City of Cedar Rapids

Steve Castaner, Federal Emergency Management Administration

David Doyle, US EPA Region 7

Ann Poe, Rebuild Iowa Office

Aaron Todd, Rebuild Iowa Office

Stephanie Weisenbach, Iowa Department of Economic Development

APPENDIX B: Smart Growth Code and Zoning Audit

The city of Cedar Rapids developed this tool to evaluate proposed development projects.

Residential & Commercial Preliminary Site Development Scorecard

name of case

I. Infrastructure / service proximity - makes the most of limited public resources and builds on public investments already made.

Measure-ment	Answer	Points Available	Points Given	Weight	Score
Project requires upgrade or construction of public roads (linear miles)	None < 1/2 l.m. 1/2 to 1 l.m. > 1 l.m.	3 2 1 0	0	x 4	0
Project requires upgrade or construction of water service (linear miles)	None < 1/2 l.m. 1/2 to 1 l.m. > 1 l.m.	3 2 1 0	0	x 4	0
Project requires upgrade or construction of sewer service (linear miles)	None < 1/2 l.m. 1/2 to 1 l.m. > 1 l.m.	3 2 1 0	0	x 4	0
Distance from primary fire station	< 1/2 mile 1/2 to 1 mile 1 to 1 1/2 mile >1 1/2 mile	3 2 1 0	0	x 2	0
		Subtotal			0

II. Protection of land - benefits the general public, as it spares environmentally sensitive areas, watersheds, and agricultural land needed for a viable quality of life.

Measure-ment	Answer	Points Available	Points Given	Weight	Score
Project avoids sensitive environmental areas, such as wetlands and mature woodlands	Yes No	1 0	0	x 3	0
Project avoids impacting land physically unsuitable for development, such as slopes greater than 15%, floodplains, and streams	Yes No	1 0	0	x 3	0
Project does not intrude into land zoned for agricultural or recreational use	Yes No	1 0	0	x 4	0
Project exceeds storm water management requirements - NEEDS MORE CLARIFICATION	Yes No	1 0	0	x 4	0
Project incorporates water quality methods other than detention, such as infiltration techniques, filter strips, dry wells, and rain gardens	Yes No	1 0	0	x 4	0
		Subtotal			0

III. Housing options - offers a range of housing opportunities, including types of ownership, sizes, and prices.

Measure -ment	Answer	Points Available	Points Given	Weight	Score
Project offers a mix of housing types, such as single family, duplex, apartments, townhouses, and condos	3+ types 2 types 1 type	2 1 0	0	x 2	0
Housing unit density is greater than that of adjacent developments	Yes No	1 0	0	x 3	0
Location of housing units	Downtown District (SSMID) Core Neighborhood Existing Neighborhood Greenfield	3 2 1 0	0	x 3	0
		Subtotal			0

IV. Mix of uses -- Creates a vibrant community where places to work, shop, live and play are integrated.

Measure-ment	Answer	Points Available	Points Given	Weight	Score
Project provides a mix of uses, such as housing, office, commercial, or public	3+ uses 2 uses 1 use	2 1 0	0	x 3	0
Project provides a new type of development to an existing neighborhood, such as housing, retail, office, education, cultural, or public	Yes No	2 0	0	x 3	0
		Subtotal			0

V. Transportation options - sited near existing transit and trail service to decrease dependency on the automobile, thereby reducing traffic and encouraging walkability.

Measure-ment	Answer	Points Available	Points Given	Weight	Score
Project proximity to public transit access	< 1/8 mile 1/8 to 1/4 mile 1/4 to 1/2 mile > 1/2 mile	3 2 1 0	0	x 4	0
Project proximity to an existing or proposed access point on the City's designated trail system - NEEDS CLARIFICATION	< 1/4 mile 1/4 to 1 mile 1 to 2 miles > 2 miles	3 2 1 0	0	x 4	0
Project is connected by sidewalks to adjacent neighborhood	Yes No	1 0	0	x 4	0
Project has an interconnected road system without cul-de-sacs	Yes No	1 0	0	x 4	0
		Subtotal			0

VI. Character and design - in keeping with surrounding architecture and designed on a human scale to increase social interaction, walking, and sense of community.

Measure-ment	Answer	Points Available	Points Given	Weight	Score
Developer met with the City's Project Review Group to discuss a concept plan prior to formal submittal	Yes No	1 0	0	x 5	0
Project reuses or rehabilitates existing structures	Yes No	1 0	0	x 3	0
Building design includes elements to make building mass appear in scale with the established context, including proportion of open space and first floor pedestrian orientation	Yes No	1 0	0	x 2	0
Project parking is located where it does not visually dominate the development from the street and allows easy and safe pedestrian access to buildings	Structured parking Parking in rear Front parking/access	2 1 0	0	x 3	0
Project exceeds City's minimum landscaping requirements	Yes No	1 0	0	x 2	0
		Subtotal			0

VII. Bonus Criteria

Measure-ment	Answer	Points Available	Points Given	Weight	Score
Project provides additional sidewalk connections to community resources	Yes No	1 0	0	x 4	0
Project located on former brownfield site	Yes No	1 0	0	x 4	0
Project located on former greyfield site	Yes No	1 0	0	x 4	0
Project will be LEED certified.	Yes No	1 0	0	x 4	0
Project provides housing units, for sale or lease, with at least a 30% differential in estimated price points	Yes No	1 0	0	x 2	0
At least 15% of the project's housing units meet affordability standards for households with incomes of 80% of the area median income (AMI)	Yes No	1 0	0	x 2	0
Developer met with potentially impacted property owners and documented steps taken to alleviate identified concerns	Yes No	1 0	0	x 5	0
Project creates or enhances community spaces such as public plazas, squares, and parks	Yes No	1 0	0	x 1	0
		Subtotal			0

Smart Growth Criteria			Column 1 Total Possible	Column 2 Section Scores	Column 3 Calculation (Col 2/Col 1)
I.	Infrastructure / service proximity		48	0	0%
II.	Protection of land		18	0	0%
III.	Housing options		20	0	0%
IV.	Mix of uses		18	0	0%
V.	Transportation options		32	0	0%
VI.	Character and design		27	0	0%
VII.	Bonus		0	0	0%

TABLE I

Smart Growth Criteria	Column 1 Total Possible	Column 2 Section Scores	Column 3 Calculation (Col 2/Col 1)	Column 4 Final Score (Col 3 x 100)	Column 5 Final Grade (A-F)
I. Near existing development and infrastructure	24				
II. Range of housing options*	7				
III. Protects open space, farmland and critical environmental areas	12				
IV. Mix of uses	17				
V. Provides choices for getting around	18				
VI. Walkable, designed for personal interaction	16				
VII. Respectful of community character, design and historic features	6				
TOTAL OVER ALL CRITERIA	100				

*If there is no housing component to the project under review, deduct 7 points from Column 1, bringing the total possible to 93 points. Divide the total for column 2 by the new total possible (93 points) to find the project's overall score.

TABLE II

Final Score	Letter Grade
100 - 90	A
89 - 80	B
79 - 70	C
69 - 60	D
59 - 0	F

APPENDIX C: Smart Growth Code and Zoning Audit

The Smart Growth Code and Zoning Audit is a product of the Smart Growth Leadership Institute, funded through a cooperative agreement from the US EPA. This document was used by the EPA team to evaluate zoning codes and regulations in Cedar Rapids.

About the Code and Zoning Audit

The Smart Growth Code and Zoning Audit will help you review the land use (zoning) codes and regulations in your community to see if they help your community achieve its vision for smarter growth.

This Tool will help you identify the rules and regulations in your community that support or block smart growth. It will also show the gaps in the regulations where a lack of standards may be hindering smart growth development.

Using the Code and Zoning Audit

Depending on what your community needs, you can use the whole audit or you can use segments of the audit.

You can use this tool as a guide to understanding your community's codes and zoning regulations. It will help you appreciate which regulations are critical to achieving smart growth and how standards imposed by regulation can enable or hinder smart growth.

You can use this tool to learn more about a how each smart growth principle is expressed in regulations and to understand what kind of regulations support the principle.

You can use it to audit one specific topic (such as street connectivity) of your codes and zoning regulations.

You can conduct a full audit of all your community's codes and zoning regulations.

You can also use this tool to review proposed changes in your community's codes and zoning regulations.

Smart Growth Code and Zoning Audit

Version 1.0 | December 1, 2007

Smart Growth Implementation Toolkit

Growing Smarter

Communities across the country are facing tremendous opportunities to shape their future and provide solutions to the most pressing local, national and global challenges of our time. Community leaders, serving as stewards of the future, have the power to change previous patterns of unsustainable growth and realize the benefits of smarter growth.

A growing number of local political, civic and business leaders understand that with smarter patterns of growth and development, our towns, counties and cities can enjoy the fruits of growth without the costs of poorly planned development. They understand that smart growth strategies can help communities to generate more jobs, enjoy a more stable tax base, provide more choice in the location and cost of housing and build a healthy economy while reducing our impact on the environment, securing our energy independence and creating safe and healthy neighborhoods for our children, our seniors and our families. They understand that communities that choose to grow smarter are also improving their ability to compete in the global marketplace for investments and talent.

While the challenge of building healthier and safer communities has not changed, the opportunities to move away from previous unsustainable patterns have increased. These opportunities are driven by dramatic demographic changes and shifting lifestyle preferences in our population and by a growing understanding of our shared responsibility for the future of our planet. At the same time, the prospect of ever lengthening commutes and rising gas prices is leading growing numbers of people to seek locations where they are not completely automobile-dependent. More and more people prefer neighborhoods where they can improve their health by choosing to walk or bike to the grocery store or shrink their "carbon footprint" (reduce their greenhouse gas emissions) by taking public transit to work or to school. They want to live where they can still be active citizens as they age and where their children and grandchildren can enjoy healthy physical activity everyday.

Shortsighted planning sacrifices the long-term fiscal health of our communities — starving our established downtown businesses, overlooking existing investments in our older communities, eating up our farms and open spaces and damaging our environment. Many communities are envisioning an alternative future. They want to rebuild our existing communities and design new ones to better respond to the needs and preferences of their citizens

Getting there from where we are today can look like an overwhelming task because it asks community leaders to overhaul outdated plans. It requires rewriting laws and regulations to transform the existing development patterns.

The good news is that we can take advantage of the opportunities simply by allowing walkable, mixed-use development to happen in our communities. The tools in the Smart Growth Implementation Toolkit can help community leaders take the first step of removing the regulatory obstacles to smarter growth. The tools can help your community level the playing field to encourage development that meets your community's goals and your citizens' aspirations.

If you are new to the ideas of Smart Growth,
visit smartgrowthtoolkit.net
to find more resources available for download
as well as links to other helpful sites.

The Goals of Smart Growth

Smart growth can help communities achieve their shared vision by building on these goals:

Healthier, Safer Communities

The central goal of any smart growth plan or project is to improve the quality of the neighborhoods where we live. Our efforts should make our communities healthier, safer, more convenient, more attractive and more affordable.

Protecting the Environment

Neighborhoods designed to reduce our dependence on automobiles also reduce our impact on the environment. By creating streetscapes that encourage walking or biking, we create opportunities for individuals to reduce their carbon footprint.

Better Access, Less Traffic

Mixing land uses, clustering development, and providing multiple transportation choices helps us to encourage healthier lifestyles, manage congestion, pollute less and save energy.

Thriving Cities, Suburbs And Towns

By guiding development to existing towns and cities, we maximize our investments in transportation, schools, libraries and other public services. Our public dollars can serve the communities where people live today.

Shared Benefits

Building a comprehensive transportation system and locating jobs and accessible housing within reach of each other expands opportunities for all income levels.

Lower Costs, Lower Taxes

Taking advantage of existing infrastructure keeps taxes down. Convenient transportation choices also reduce our household transportation costs, leaving our families with more money for other needs.

Keeping Open Space Open

Protecting our natural resources creates healthier air and cleaner drinking water. From forests and farms to wetlands and wildlife, let us pass on to our children the landscapes we love.

In practice, smart growth implementation is shaped by ten principles:

1. Provide a Variety of Transportation Choices
2. Mix Land Uses
3. Create a Range of Housing Opportunities and Choices
4. Create Walkable Neighborhoods
5. Encourage Community and Stakeholder Collaboration
6. Foster Distinctive, Attractive Communities with a Strong Sense of Place
7. Make Development Decisions Predictable, Fair and Cost Effective
8. Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas
9. Strengthen and Direct Development Towards Existing Communities
10. Take Advantage of Compact Building Design and Efficient Infrastructure Design

The Smart Growth Implementation Toolkit

The **Smart Growth Implementation Toolkit** is a set of practical tools to help your community grow smarter. It will help you untangle the thicket of policies and procedures that get in the way of smarter growth and sustainable development. The **Smart Growth Leadership Institute** developed the tools through a four-year technical assistance program funded by the **U.S. Environmental Protection Agency**.

The tools are designed to help communities that are committed to (or are exploring) smart growth but struggle with implementation, with building support, with identifying the most problematic policies and with other issues that typically accompany a major change in development practice.

The tools will check if your community's policies and regulations are creating safer, healthier, more livable neighborhoods. They will examine whether the policies, codes, zoning and development requirements are helping your community to protect the environment and reduce energy consumption and if they are expanding housing options, lowering household expenses and making full use of existing community investments. The tools can help the community reach its goals, its vision for the future, and help leaders discuss how to retain the great parts of the community while improving other parts.

Each tool may be used independently or in combination with others. Each user should customize the tools appropriately for local or regional use. The tools are intended to be templates. The tools include:

Quick Diagnostic

The Quick Diagnostic is a simple flowchart that will help you to understand which of the Smart Growth Implementation Tools can best help your community.

Policy Audit

The Smart Growth Policy Audit will help you assess whether existing land use and development policies align with your community's aspirations for its future.

Code and Zoning Audit

The Smart Growth Code and Zoning Audit will help you check if the zoning codes and regulations in your community implement your vision for smarter growth.

Audit Summary

The Smart Growth Audit Summary will help you summarize the findings from the Smart Growth Policy Audit and the Smart Growth Code and Zoning Audit, and help you to begin to prioritize the opportunities that are ripe for action.

Project Scorecard

The Smart Growth Project Scorecard will help you to evaluate how closely a proposed development project adheres to your community's vision for smarter growth.

Incentives Matrix

The Incentives Matrix for Smart Growth Projects will help you mobilize available incentives to encourage specific smart growth projects in your communities.

Strategy Builder

The Smart Growth Strategy Builder will help you implement smart growth in your community by identifying the most promising avenues to lasting change. It will help you map the strengths, weaknesses, opportunities and challenges facing smart growth implementation in your community.

You can download all these tools from
www.smartgrowthtoolkit.net

About the Smart Growth Code and Zoning Audit

The **Smart Growth Code and Zoning Audit** will help you review the land use (zoning) codes and regulations in your community to see if they help your community achieve its vision for smarter growth.

This Tool will help you identify the rules and regulations in your community that support or block smart growth. It will also show the gaps in the regulations where a lack of standards may be hindering smart growth development.

About its use

Depending on what your community needs, you can ***use the whole audit*** or you can ***use segments of the audit***.

- You can use this tool as a ***guide to understanding*** your community's codes and zoning regulations. It will help you appreciate which regulations are critical to achieving smart growth and how standards imposed by regulation can enable or hinder smart growth.
- You can use this tool to ***learn more about a how each smart growth principle is expressed in regulations*** and to understand what kind of regulations support the principle.
- You can use it to ***audit one specific topic*** (such as street connectivity) of your codes and zoning regulations.
- You can ***conduct a full audit of all your community's codes and zoning regulations***.
- You can also use this tool ***to review proposed changes*** in your community's codes and zoning regulations

About the documents

Your community's codes and zoning regulations are usually set out in the following types of documents:

- The Land Use Code
- The Zoning Code and Zoning Regulations
- Subdivision Regulations and Ordinances
- Overlay District Regulations
- Special Use District Regulations

They may also be in your transportation policies, street standards, parking, design guidelines, parks and open space plans, etc.

Some caveats

This Tool is not intended to "grade" your community's performance. Don't use the tool expecting to measure how well your community (and its leadership) is doing in implementing smart growth. Use it instead to identify areas for improvement.

Undertaking a complete audit is a time-consuming process. You should be prepared to spend several hours (and several sittings) if you are using the tool for this purpose.

This is an audit tool, and though it does list some suggested standards that help to implement smart growth, it does not provide an extensive list or actual code language you can adopt. You will find more materials about actual standards in publications like EPA's ***Getting to Smart Growth: 100 Policies for Implementation***, and ***Getting to Smart Growth II: 100 More Policies for Implementation***.

Visit the www.smartgrowthtoolkit.net
to find more resources and links to other helpful sites.

How to use the Smart Growth Code and Zoning Audit

Preparation

You will need copies (and we recommend paper copies) of all the code and zoning documents you are reviewing (see the list above).

If you are unfamiliar with the documents, take the time to read each one at least twice. Read it the first time to get a general understanding of the scope of the regulatory document. Read it a second time, and this time mark or highlight any section or statement that may have answers to the questions below. (Consider whether the regulations are positive –they allow for smart growth; or are negative –that they prevent smart growth.)

What does the document say...

*...about **connectivity**? Does it require an interconnected street pattern? Does it require pedestrian connectivity between zones and neighborhoods?*

*...about **circulation**? Does it prescribe street widths and streetscapes that encourage people to walk or bike? Does it protect pedestrians and require pedestrian friendly environments? Does it make sure open spaces and recreation areas are accessible to the public?*

*...about **parking**? How does it treat parking lots and parking spaces? Does it prescribe a particular relationship between parking, street and buildings? Does it vary the parking requirements so that areas that are served by transit can reduce the amount of parking they have to provide?*

*...about **land subdivision and land use**? Does it allow for a mix of land uses so people can live, work and shop within the same or nearby neighborhoods? Does it allow for areas where people can run businesses from their homes?*

*...about **housing**? Does it require a mix of lot sizes to encourage a mix of housing options? Does it allow or prevent accessory units or apartments, town homes and condominiums?*

*...about **special land use zones and special districts**? Does it provide protections for historic districts? Are there special design and architecture requirements for certain districts?*

Organization

This audit is organized into two general sections: Section A, **Connectivity and Circulation**, looks at how your community's regulations shape your community's street network and streetscapes; parking; walking, biking and multi-use trails; and, transportation and transit zones.

Section B, **Land Subdivision, Zoning and Services**, looks at the way your community regulates the subdivision of land; at how the regulations allocate land use; and, at how the community connects services to development.

There is a third section, Section C, **Special Use Districts and Zones**, that looks specifically at any special zoning districts in your community. These special zoning districts usually provide exceptions to the general rules (e.g. – *special land use districts*, or *historic overlay districts*, or *planned unit development districts*.) Use this section to review each special use district. You will need to replicate the section for each special use district in your community.

The next pages show the steps you need to take as you use this tool.

STEP 1: ANSWER THE QUESTION

The first column will ask if your community has regulations that specifically address the question. (e.g. – *Is the width of sidewalks regulated?*) Each question focuses on a particular dimension of development that supports smarter growth.

Go through each of the regulatory documents you are auditing and note the articles which actually address each question.

If there are regulations which address a question, highlight or markup the document and list the article address (e.g. – "*Zoning Code 12J.6.9.10*"). This is why having paper copies of the actual documents makes it easier to conduct the audit.

Put a mark under the Y column if your community's regulations address that question. Put a mark under the N column if the regulation actually ***prohibits*** or ***does not address*** the question.

Most of the questions are phrased so that answering "*yes*" means that the regulations are implementing smart growth principles.

STEP 2: LIST THE IMPLEMENTING CODE

Copy the text of the regulations in the next column, marked "**From Local Code and Zoning Regulations**." Be sure to identify the document address (e.g. – "*Zoning Code 12J.6.9.10*") where the regulation comes from.

Go through each document you are auditing, making sure you capture all the relevant regulations.

Mark up the document you are auditing to keep track of which regulations you have already listed.

If the documents you are auditing contain no regulations or standards that address the question, then put down "**Not Addressed**" in this column.

STEP 3: LIST POSSIBLE IMPROVEMENTS

List possible improvements to the code in the last column. You can refer to the *Suggested Standards* at the end of most sub-sections of the audit.

The *Suggested Standards* are some measures your community can take to implement smart growth. It is not an extensive list and the standards are also listed as general approaches rather than specific code language you can adopt.

WHERE TO FIND MODEL CODES

You will find more standards you can use in publications such as the U.S. Environmental Protection Agency's ***Getting to Smart Growth: 100 Policies for Implementation***, and ***Getting to Smart Growth II: 100 More Policies for Implementation***.

For examples of code language you can adopt, refer to:

- The American Planning Association's ***Model Smart Growth Codes*** (www.planning.org/smartgrowthcodes/).
- "***Smart Growth Zoning Codes: A Resource Guide***," by Steve Tracy, published by the Local Government Commission. (Available from the LGC website: www2.lgc.org/bookstore/)
- The resources section of **Envision Utah**'s website (www.envisionutah.org) provides sample ordinances for various aspects of smart growth (pdf documents).

You can also visit **www.smartgrowtoolkit.net** for updated resources on model codes and ordinances.

The next page shows an example of how you can fill out this audit tool.

Example

Here's is an example of how you might fill out this Tool:

1. EXAMPLE	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
EXAMPLES *1.1. Are standards set for curb cut frequency?*	x		*EXAMPLES* • (ZONING 12J.6.9.10) Curb cuts are not allowed on community boulevards or community avenues when access may be provided from a side or rear street located immediately adjacent to a contiguous property. • (ZONING 12J.6.9.12) Properties with more than 1 curb cut must space them a minimum of 100' apart	*EXAMPLES* • none
1.2. Is a minimum sidewalk width established?	x		• (ZONING 8Q.1.5.3) Min=5' on neighborhood streets, min=8' on collector roads; min=10' on business district boulevards; • Not addressed for arterials	• Require sidewalks on arterials.
1.3. Are crosswalks allowed		x	• Not addressed.	• Revise to allow crosswalks on long blocks, especially in business and commercial districts

The last part of the tool will allow you to quickly summarize your findings and see how those finding relate to the ten smart growth principles. You can also use it as a quick reference guide to identifying the regulations that must change to allow your community to implement smart growth.

*The **Smart Growth Code and Zoning Audit** works best when you also conduct a **Smart Growth Policy Audit**.*
*You can distill your findings from both audit tools using the **Smart Growth Audit Summary**.*
You can download all of the Smart Growth Implementation Tools from www.smartgrowtoolkit.net.

A. CONNECTIVITY AND CIRCULATION

Your community's codes and zoning regulations about connectivity and circulation determine whether your community is pedestrian friendly and whether it provides people with the option of not having to drive everywhere they need to go.

The regulations (or the absence of regulations) shape the way a district connects to the next district; how a neighborhood connects to the next neighborhood; how the whole community is interconnected; and, how people can get around the community (on foot, or by cars, bikes, or public transportation). They determine what your roads look like and what your sidewalks look like. They prescribe where cars should park and how much parking is required for each type of development. They either allow bikes and bike lanes or prevent them (making streets more dangerous for would-be bikers). They also determine whether your land uses align with your transportation policies so that your community makes the most out of its investments.

Regulations that define connectivity and circulation encourage smart growth if they follow the following principles:

Provide A Variety of Transportation Choices
(SMART GROWTH PRINCIPLE #1)

Providing a variety of transportation options – like safe and reliable public transportation, sidewalks, bike paths and walking trails –promotes and improves our health, conserves energy and safeguards the environment.

There are also many members of our communities who can't drive or don't have access to a car. Providing transportation options creates more inclusive communities, where our seniors, young people below driving age, and the disabled can all live comfortably.

Create Walkable Neighborhoods
(SMART GROWTH PRINCIPLE #4)

A compact, walkable neighborhood encourages physical activity and protects the environment while saving energy by reducing the miles we drive. Walkable neighborhoods are also safer neighborhoods for our children, allowing them to walk or bike to school or the local park and not have to dodge high-speed traffic. They are healthier environments for our seniors who can get their daily exercise by walking to their friends' homes or to a nearby restaurant.

Walkable neighborhoods also create more opportunities to get to know our neighbors when we meet them on the sidewalk.

There are six sub-sections that define your community's connectivity and circulation:

1. **Street Network and Plan**
2. **Streetscape Features**
3. **Parking**
4. **Walking, Biking and Multi-Use Trail Facilities**
5. **Transportation and Transit Zones**

CONNECTIVITY and CIRCULATION

1. Street Network and Plan	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
1.1. Is there a prescribed street hierarchy in place? (List hierarchy)	☐	☐	•	•
1.2. Do street widths vary by type of zone? (Identify each zone)	☐	☐	•	•
1.3. Are design speed standards used?	☐	☐	•	•
*1.4. Are standards set for width, intersection and corner radii for **neighborhood access** streets? (List standards)*	☐	☐	•	•
*1.5. Are standards set for width, intersection and corner radii for **neighborhood connector** streets? (List standards)*	☐	☐	•	•
*1.6. Are standards set for width, intersection, and corner radii for **regional access** streets? (List standards)*	☐	☐	•	•
1.7. Are block perimeter lengths prescribed?	☐	☐	•	•
1.8. Are block face lengths prescribed?	☐	☐	•	•

1. Street Network and Plan	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
1.9. Do prescribed block lengths differ by zone? (List block perimeter and face lengths by zone)	☐	☐	•	•
1.10. Are standards set for curb cut frequency?	☐	☐	•	•
1.11. Are cul-de-sacs discouraged?	☐	☐	•	•
1.12. Are the length and size of cul-de-sacs regulated?	☐	☐	•	•
1.13. Are there provisions to ensure both pedestrian and street connectivity between neighborhoods?	☐	☐	•	•
1.14. Are alleyways allowed?	☐	☐	•	•
1.15. Are there restrictions on their use?	☐	☐	•	•
1.16. Are there width standards for alleyways?	☐	☐	•	•
Y = Yes, **N** = No			Indicate if **Not Addressed**	Refer to **Suggested Standards**

SUGGESTED STANDARDS:

- *Divisions within categories will permit a finer grained street system (e.g. different widths in commercial and residential areas).*
- *Use design speed standards to establish pedestrian and bicycle friendly environments. Designing streets for higher speeds encourages speeding even through lower speed limits are set and often necessitates retrofitting traffic-calming features.*
- *Vary required Right of Way (R.O.W.) to reflect the nature of each district.*
    - *Major arterials - 110' with center median*
    - *Town center streets - 88' to 60' depending on whether center median, bike lanes, and/or angled parking are included in design.*
- *Consider using design speeds of 25 mph for **neighborhood access** streets.*
- *Tighten curb radii to shorten pedestrian crossings and force vehicles to make turns at lower speeds.*
- *Limit curb radii and require a 25' clear zone to accommodate the wider turning radii required by emergency vehicles.*
- *Consider using lower design speeds for **neighborhood connectors** and streets in commercial and industrial zones.*
- *Where wider streets are desired, require center medians to maintain a pedestrian-friendly environment.*
- *Excessively long blocks discourage pedestrian traffic.*
    - *Limit block perimeters (e.g. 1600 ft.).*
    - *Limit block face lengths (e.g. 500 ft.)*
- *Limit use of cul-de-sacs. When used, require pedestrian or bike connections to surrounding neighborhoods.*
- *Require mid-block pedestrian passages in commercial and mixed-use zones (e.g. at 250' intervals maximum).*

2. Streetscape Features	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
2.1. Are different streetscape features applied to different districts/zones? (List requirements by district/zone)	☐	☐	•	•
2.2. Are there provisions for traffic calming?[1]	☐	☐	•	•
2.3. Are crosswalks required? (List if conditions vary by district/zone)	☐	☐	•	•
2.4. Are crosswalks allowed? List if conditions vary by district/zone)	☐	☐	•	•
2.5. Do pedestrians have the right-of-way at crosswalks? (List if condition varies by district/zone)	☐	☐	•	•
2.6. Are provisions made to ensure pedestrian right-of-way and safety in crosswalks?	☐	☐	•	•
2.7. Are sidewalks allowed?	☐	☐	•	•
2.8. Are sidewalks required?	☐	☐	•	•
2.9. Are complete sidewalk networks required within one mile of any school?	☐	☐	•	•

[1] *Traffic calming should be a last resort and roads should be designed for speed safe for pedestrians.*

2. Streetscape Features	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
2.10. Are sidewalks required on both sides of the street?	☐	☐	•	•
2.11. Is a minimum sidewalk width established?	☐	☐	•	•
2.12. Is a maximum sidewalk width established?	☐	☐	•	•
2.13. Are sidewalks required to provide access to amenities such as parks and open space?	☐	☐	•	•
2.14. Are ADA[2] access standards strictly enforced or improved upon?	☐	☐	•	•
2.15. Are there regulations that allow street vendors in specific district? (e.g.-main street, commercial zones or the central business district)	☐	☐	•	•
2.16. Is the landscaping of medians or curbsides required?	☐	☐	•	•
2.17. Are street trees, street plantings required?	☐	☐	•	•

[2] ***ADA*** *–Americans with Disabilities Act*

2. Streetscape Features	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
2.18. Is street furniture required? (Benches, waiting sheds, etc.) Are they required to be weather protected?	☐	☐	•	•
2.19. Is pedestrian street lighting required?	☐	☐	•	•
2.20. Are provisions made for low-voltage street lighting?	☐	☐	•	•
Y = Yes, **N** = No			Indicate if **Not Addressed**	Refer to **Suggested Standards**

,

SOME SUGGESTED STANDARDS:

- *Crosswalks should not only be allowed but required on long blocks to provide access to commercial areas, schools, places of worship, transportation and recreation facilities.*
- *Crosswalk signals increase pedestrian safety and encourage walking.*
- *Landscaping softens the street environment and makes it more attractive to pedestrians.*
- *Sidewalks promote walking and contribute to pedestrian safety.*
- *Sidewalks should be required in urban and suburban areas to provide for pedestrian safety.*
- *Sidewalks should be provided on both sides of the street in commercial and industrial zones, and on at least one side of internal residential subdivision streets.*
- *Sidewalk minimums should take into account the nature of the street and the anticipated volume of pedestrian traffic.*
- *Pedestrian facilities should provide uninterrupted routes to public amenities such as parks, libraries, schools, etc.*
- *Limiting curb cuts reduces potential conflict between pedestrians and vehicles, and increases pedestrian safety.*
- *Where street design speeds encourage speeding, traffic calming features should be allowed to create conditions conducive to walking and bicycling, and to discourage the routine use of local residential streets by through traffic.*
- *Require alleys and limit number of curb cuts allowed on streets.*
- *Use should dictate width. In commercial zones, alleys can function as drive aisles for off-street parking lots and as fire lanes.*

3. Parking	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
3.1. Are minimum parking space requirements set?	☐	☐	•	•
3.2. Are maximum parking space requirements set?	☐	☐	•	•
*3.3. Is **Land Use** used as a basis to establish parking requirements??*	☐	☐	•	•
*3.4. Is **District Type** used as a basis to establish parking requirements?*	☐	☐	•	•
*3.5. Is **Building Type** used as a basis to establish parking requirements?*	☐	☐	•	•
3.6. Are there provisions that allow reductions in parking requirements along transit routes?	☐	☐	•	•
3.7. Are reductions in parking requirements allowed in exchange for bike parking?	☐	☐	•	•
3.8. Is on street parking allowed? Does it count for meeting parking requirements?	☐	☐	•	•

3. Parking	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
*3.9. Are there provisions for **shared parking**?*[3]	☐	☐	•	•
*3.10. Are there provisions for **joint parking**?*[4]	☐	☐	•	•
3.11. Are there prescriptions defining the relationship between parking spaces and the street?	☐	☐	•	•
3.12. Are there prescriptions defining the relationship between parking spaces and buildings?	☐	☐	•	•
3.13. Are there prescriptions for the location of parking lots?	☐	☐	•	•
3.14. Is street parking metered?	☐	☐	•	•
3.15. Do street parking rates vary with time of day/ day of week?	☐	☐	•	•
3.16. Are there landscaping requirements for large parking lots?	☐	☐	•	•

[3] ***Shared parking*** *– a parking facility use of which is allowed to two or more users based on different peak hours (e.g. businesses with peak patronage during the day, theaters and restaurants with peak patronage at night); promotes efficient use of space.*

[4] ***Joint parking-*** *a common parking facility designed for simultaneous use by two or more uses (e.g. municipal structures or lots; privately developed structures or lots); allows for off-site provision of parking.*

3. Parking	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
3.17. Are impervious surfaces minimized?	☐	☐	•	•
Y = Yes, **N** = No			Indicate if **Not Addressed**	Refer to **Suggested Standards**

,

SOME SUGGESTED STANDARDS:

- *Among other benefits, on-street parking encourages pedestrian traffic, and can act as a buffer between pedestrians and moving vehicles.*
- *Shared parking should be encouraged.*
- *Joint parking should be considered where conditions warrant.*
- *On street parking should count towards fulfilling parking requirements*
- *Building by building parking requirements should not be used, instead encourage neighborhood parking within ¼ mile distance from the destination (using shared or joint parking)*
- *Parking fees should be demand driven.*
- *Zone and use specific parking requirements should be established and should take transit facilities into consideration.*
- *Reductions for transit availability should be allowed.*

4. Walking, Biking and Multi-Use Trail Facilities	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
4.1. Are there walkway, greenway or hiking trails?	☐	☐	•	•
4.2. Are all new developments required to connect to existing or planned walkway, greenway or hiking trails?	☐	☐	•	•
4.3. Are safe pedestrian routes to school required?	☐	☐	•	•
4.4. Are safe biking routes to schools required?	☐	☐	•	•
4.5. Is a multi-use trail provided for or planned?	☐	☐	•	•
4.6. Are there requirements for open space connectivity?	☐	☐	•	•
4.7. Are bicycle lanes required?	☐	☐	•	•
4.8. Are bicycle lanes accommodated?	☐	☐	•	•
4.9. Is bicycle parking required?	☐	☐	•	•
4.10. Are standards established for bicycle lane width?	☐	☐	•	•

4. Walking, Biking and Multi-Use Trail Facilities	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
4.11. Are standards established for bicycle lane surface?	☐	☐	•	•
4.12. Are standards established for separation of bike lanes from motorized vehicle lanes?	☐	☐	•	•
4.13. Are all new developments required to connect to existing or planned multi-use trails?	☐	☐	•	•

Y = Yes, **N** = No | Indicate if **Not Addressed** | Refer to **Suggested Standards**

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SOME SUGGESTED STANDARDS:

- *Provide for a network of bicycle routes, lanes, or shared-use trails to promote bicycle use in all zones.*
- *Retrofit bicycle lanes into roads by changing on-street parking configuration.*
- *Require bike-parking facilities in commercial and industrial projects to encourage the use of bikes as alternative transportation.*
- *Provide for both short and secured long-term parking within convenient distances of building entrances, varying standards with use type.*
- *On new roads, a minimum lane width of 6' is suggested. A minimum width of 5' is suggested for retrofits.*
- *Where a shared lane for bikes and parking is provided, a minimum total lane width of 12' (7' for parking and 5' for bikes) is suggested.*
- *Grade differences between gutter pans and street surface should be eliminated. Uniform, smooth surfaces should be specified..*

5. Transportation and Transit Zones	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
5.1. Are multi-modal transit centers identified? (e.g. – from train to bus, or water to land transport)	☐	☐	•	•
5.2. Is development encouraged around multi-modal transit centers?	☐	☐	•	•
5.3. Are transit zones specifically established?	☐	☐	•	•
5.4. Are there standards that determine the locations of transit zones?	☐	☐	•	•
5.5. Is a systems-approach used to identify transit zones? (i.e. transit corridors)?	☐	☐	•	•
5.6. Is a nodal-approach used to identify transit zones? (i.e. transit oriented development)	☐	☐	•	•
5.7. Are level-of-service (LOS) standards moderated or modified for roads in transit zones? (List modifications)	☐	☐	•	•
5.8. Are higher densities permitted in transit zones?	☐	☐	•	•
5.9. Are public transit facilities (e.g. –bus waiting stations) required?	☐	☐	•	•

5. Transportation and Transit Zones	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
5.10. Are park-and-ride facilities provided?	☐	☐	•	•
5.11. Are high-occupancy vehicle (HOV) lanes in use or planned?	☐	☐	•	•

Y = Yes, **N** = No | Indicate if **Not Addressed** | Refer to **Suggested Standards**

SOME SUGGESTED STANDARDS:

- *Plan and provide for multi-modal transit centers to make public transit more efficient and attractive as an alternative. Include bus stops and weather protected benches and waiting sheds.*
- *Encourage development around transit centers (and at higher densities) to maximize municipal investments (e.g.- bringing more potential users closer to the transit options).*
- *Transit corridors and transit oriented development tie land use to transportation investments.*
- *Modifying the level of service (LOS) around transit zones moderates traffic in the area to encourage more walking and taking public transport.*
- *HOV lanes and park-and-ride facilities encourage car pooling and more efficient road use.*

B. LAND SUBDIVISION, ZONING and SERVICES

Your community's regulations about land subdivision, zoning and services determine whether your community allows for a mix of land uses, allowing homes and businesses and stores to co-exist in the same district; and whether your community remains competitive by providing housing for all segments of the market. They determine whether the rules of development are biased against infill and redevelopment. They also encourage developers to build attractive and distinctive neighborhoods (or not) and engage all the members of the community in development decisions.

Regulations that define land subdivision, zoning and services encourage smart growth if they follow the following principles:

Mix Land Uses
(SMART GROWTH PRINCIPLE #2)

Mixing land uses, allowing stores and offices and residences to be built next to or on top of each other, where appropriate, allows people to work, shop and enjoy recreation close to where they live.

Create a Range of Housing Opportunities and Choices
(SMART GROWTH PRINCIPLE #3)

The best neighborhoods offer a range of options: single-family houses of various sizes, duplexes, garden cottages, condominiums, affordable homes for low or fixed-income families, “granny flats” for empty nesters, and accommodations for dependent elders. Not everyone has the same housing wants or needs. Some singles prefer to rent small apartments, young couples need starter homes, empty nesters look for a condominium close to town, and retirees need a caring community.

Creating options and opportunities also allow those who do important work for our community (policemen, firemen, teachers, etc.) to find homes they can afford within the community they serve. It also allows us to continue to live close to our families and friends even as our life-stages and needs (including the need to work from home) change.

Encourage Community and Stakeholder Collaboration
(SMART GROWTH PRINCIPLE #5)

By building stakeholder participation and input into the planning and development process, communities encourage and nurture the civic spirit. They allows ordinary citizens, civic and business groups, and institutions to come together to identify the shared values and common vision of what they want their communities to be.

Foster Distinctive, Attractive Communities with a Strong Sense of Place
(SMART GROWTH PRINCIPLE #6)

Our regulations create distinctive communities when they allow development to celebrate our natural settings and reflect the character and values of the citizens. The regulations also contribute to our community's unique sense of place when they intentionally provide welcoming public spaces, preserve spectacular vistas, define well-designed focal points (including civic buildings) and encourage appropriate architectural styles and scales of neighborhoods.

Make Development Decisions Predictable, Fair, and Cost Effective
(SMART GROWTH PRINCIPLE #7)

Our regulations can make it easier for developers to build the kind of neighborhoods we all desire. They can reduce the barriers to restoring historic buildings and creating infill development, making this as easy as building on green fields.

Regulations can also fast track those projects that will create the community we envision. They can provide clear design and construction standards and review and approval processes for all types of projects so we can avoid the uncertainty that so often creates misunderstanding, aggravates disagreements, and costs developers time and money.

These uncertainties serve no one in the community.

Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas
(SMART GROWTH PRINCIPLE #8)

Our regulations can encourage us to care for the environment and to invest not only in the beauty that surrounds our community, but also to preserve the very wealth and resources that will sustain our children and all future generations. Our regulations can protect the environment (keeping our air, water and soils clean, keeping the climate stable, conserving valuable farmlands, preserving critical areas) and safeguards our own health and shield us from severe weather and natural disasters.

They Strengthen and Direct Development Towards Existing Communities
(SMART GROWTH PRINCIPLE #9)

Our regulations can maximize our community's investments in public infrastructure (roads, water, sewer, etc.) and save tax money by strengthening and directing development towards our established places. They can strengthen and revitalize our neighborhoods by encouraging and facilitating infill development, the redevelopment of underutilized or derelict properties, the rehabilitation of brownfield sites, and the adaptive reuse of our older structures.

These regulations can also help us to care for our natural environment and preserve it for future generations.

Encourage Compact Building Patterns and Efficient Infrastructure Design
(SMART GROWTH PRINCIPLE #10)

Our regulations can help our communities become more energy efficient by allowing for higher densities and compact development patterns. Regulations that encourage these patterns reduce the amount of land we consume, leaving more for future generations.

They also minimize the amount of infrastructure we have to build and service to support our community. This translates to lower municipal costs, keeping our tax rates down.

There are three sub-sections that define your community's land subdivision, zoning and services:

6. **Land Subdivision and Lot Size**
7. **Use (Zoning) Districts**
8. **Services**

LAND SUBDIVISION, LAND USE and SERVICES

6. Land Subdivision and Lot Size	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
6.1. Is a wide-range of lot sizes allowed within each zone?	☐	☐	•	•
6.2. Are minimum lot sizes established?	☐	☐	•	•
6.3. Are maximum lot sizes established?	☐	☐	•	•
6.4. Are there minimum frontage requirements? Do these vary by zone/district?	☐	☐	•	•
6.5. Is a wide range of lot sizes allowed within each neighborhood or subdivision?	☐	☐	•	•
6.6. Are small single-family lots permitted (e.g. 5,000-6,000 sq. ft.)?	☐	☐	•	•
6.7. Are Rural Residential, Residential Estate, or Suburban Residential lots of an acre or more discouraged?	☐	☐	•	•
6.8. Are various parcel configurations allowed?	☐	☐	•	•

Y = Yes, **N** = No | Indicate if **Not Addressed** | Refer to **Suggested Standards**

SOME SUGGESTED STANDARDS:

- *Large minimum lot sizes discourage a mix of uses, and contribute to sprawling land use patterns.*
- *Establishing large minimum lot sizes effectively prevents a mix of housing types and affordability levels within neighborhoods.*
- *Allowing a wide range of lot sizes permits a variety of housing type and range of affordability which allows residents to remain in their neighborhoods even as their needs and circumstances change (life cycle planning).*
- *Dictating large minimum frontage requirements contributes to sprawl. Allowing various parcel configurations and clustering of structures promotes the efficient use of space and limits infrastructure requirements.*

7. Use (Zoning) Districts	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
7.1. Are zones generally based on land use (e.g. –residential, commercial, industrial, etc.)?	☐	☐	•	•
7.2. Are zones based on building type (e.g. – low rise, mid rise, high density, etc.)	☐	☐	•	•
7.3. Is the vertical stacking of land use allowed? (e.g –residential on top of commercial)	☐	☐	•	•
7.4. Are there form-based overlay districts?	☐	☐	•	•
7.5. Are there flex-zoning[5] areas?	☐	☐	•	•
7.6. Are there zones that allow for more than one land use (e.g. –residential and commercial) in the same zone? (List zones and uses allowed)	☐	☐	•	•
7.7. Is there a specific mixed-use zone designation?	☐	☐	•	•
7.8. Are there live-work zones?	☐	☐	•	•

[5] ***Flex Zoning*** *lets the developer or building owner to change the use of the building (assuming conformity to building codes for the new use) without the requiring a lengthy variance or approval process.*

7. Use (Zoning) Districts	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
7.9. Are there planned-unit development (PUD) zones?	☐	☐	•	•
7.10. Are there traditional neighborhood district (TND) zones?	☐	☐	•	•
7.11. Are there historic preservation districts/zones?	☐	☐	•	•
7.12. Are there transit oriented development (TOD) zones?	☐	☐	•	•
7.13. Are land conservation subdivisions allowed?	☐	☐	•	•
7.14. Are there other special use zones? (Identify zones and allowed uses)	☐	☐	•	•
7.15. Is vehicular and pedestrian connectivity to adjacent zones/neighborhoods required?	☐	☐	•	•
7.16. Is consideration given to each zone's relationship to adjacent zones?	☐	☐	•	•
7.17. Are there provisions for transitions between zones?	☐	☐	•	•

7. Use (Zoning) Districts	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
7.18. Are there standards that allow redevelopment of formerly single-use buildings into multi-use?	☐	☐	•	•
7.19. Are residential uses encouraged in the CBD or other business/commercial districts?	☐	☐	•	•
7.20. Is ground floor retail encouraged in business/commercial districts?	☐	☐	•	•
7.21. Are neighborhood stores/ neighborhood scale groceries allowed in residential areas?	☐	☐	•	•
7.22. Are distinctions made between infill or brownfield and greenfield development?	☐	☐	•	•
7.23. Are density standards established? (e.g. –dwelling units/acre)	☐	☐	•	•
7.24. Are there standards matching building scale to street type?	☐	☐	•	•
*7.25. Are there **minimum** density requirements? (e.g. –dwelling units/acre)*	☐	☐	•	•
7.26. Is the use of minimum residential square-footages discouraged?	☐	☐	•	•

7. Use (Zoning) Districts	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
7.27. Are minimum residential square-footages affecting the affordability of housing?	☐	☐	•	•
7.28. Are floor area ratios (FAR) severely limiting lot usage? (List how)	☐	☐	•	•
7.29. Are set back requirements severely limiting lot usage? (List how)	☐	☐	•	•
7.30. Are safety codes (primarily fire codes) restrictive? Do they effectively disallow commercial or home occupation uses?	☐	☐	•	•
7.31. Are landscaping standards affecting efficient lot usage?	☐	☐	•	•
7.32. Are provisions made for cluster development?	☐	☐	•	•
7.33. Are there provisions to encourage or expedite developments that include affordable housing units?	☐	☐	•	•
7.34. Are multi-family units[6] allowed in all zones?	☐	☐	•	•

[6] *Multi-family units include aepartments, duplexes, townhomes, condos, group housing, etc.*

7. Use (Zoning) Districts	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
7.35. Are multi-family units allowed as of right?	☐	☐	•	•
7.36. Are multi-family units allowed by use permit?	☐	☐	•	•
7.37. Are multi-family units allowed in the same zones as single family units?	☐	☐	•	•
7.38. Are accessory units allowed as of right?	☐	☐	•	•
7.39. Are accessory units allowed by use permit?	☐	☐	•	•
7.40. Is fast track permitting provided for accessory units?	☐	☐	•	•
7.41. Are manufactured homes allowed in all zones as of right?	☐	☐	•	•
7.42. Are manufactured homes allowed in all zones by use permit?	☐	☐	•	•
*7.43. Is **public** open space required?*	☐	☐	•	•
*7.44. Is **private** open space required?*	☐	☐	•	•
7.45. Are different uses permitted in open space areas as of right? What uses?	☐	☐	•	•

7. Use (Zoning) Districts	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
7.46. Are different uses permitted in open space areas by use permit? What uses?	☐	☐	•	•
7.47. Are standards set for development scale or design elements? (List standards)	☐	☐	•	•
7.48. Are building frontage standards established?	☐	☐	•	•
7.49. Are there provisions for design compatibility with adjacent structures?	☐	☐	•	•
7.50. Is development allowed in floodplains?	☐	☐	•	•
7.51. Are there conditions specifying when development can be allowed in floodplains?	☐	☐	•	•
7.52. Are view corridors and view sheds considered?	☐	☐	•	•
7.53. Are restrictions placed on signage?	☐	☐	•	•
7.54. Are there special rehab codes that encourage the re-use of historic, old or abandoned buildings?	☐	☐	•	•

7. Use (Zoning) Districts	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
7.55. Is there a public consultation/input process in place for all new developments?	☐	☐	•	•
7.56. Is there a design review board in place for any district/zone? (List districts, if any)	☐	☐	•	•
7.57. Are business improvement districts (BIDs) encouraged?	☐	☐	•	•
Y = Yes, **N** = No			Indicate if **Not Addressed**	Refer to **Suggested Standards**

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SOME SUGGESTED STANDARDS:

- *Allowing a full mix of compatible development provides for round-the-clock use of the CBD and other business and commercial districts.*
- *Infill and brownfield development should be encouraged using mechanisms such as transferable density credits, streamlined permitting, reduced development fees.*
- *School siting requirements should allow schools to be located in existing neighborhoods.*
- *Accessory units can provide affordable life-cycle housing options for extended families.*
- *Pre-fab or manufactured housing can expand affordable housing options.*
- *Minimum residential square-footage requirements may preclude building affordable housing.*

8. Services	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
8.1. Are school siting requirements and investments coordinated with the comprehensive plan?	☐	☐	•	•
8.2. Are fire, police, public transit and trash disposal coverage considered when choosing or locating school facilities?	☐	☐	•	•
8.3. Are schools siting requirements designed to allow schools to be built on infill or redevelopment areas?	☐	☐	•	•
8.4. Are schools and community services allowed to share buildings where possible?	☐	☐	•	•
*8.5. Are **school** impact fees established for new development?*	☐	☐	•	•
*8.6. Are **water service** impact fees established for new development?*	☐	☐	•	•
*8.7. Are **sewer service** impact fees established for new development?*	☐	☐	•	•
*8.8. Are **park facilities** impact fees established for new development?*	☐	☐	•	•

8. Services	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
*8.9. Are **other impact fees** established for new development? (Identify service or facility)*	☐	☐	•	•
8.10. Are differential impact fees established to encourage infill or brownfield development?	☐	☐	•	•
Y = Yes, **N** = No			Indicate if **Not Addressed**	Refer to **Suggested Standards**

SOME SUGGESTED STANDARDS:

- *School to be centrally located to reduce school transportation costs and to minimize student travel distance and traffic congestion.*
- *School sites should also be conveniently located for fire and police protection, public transit, and trash disposal.*
- *Where impact fees are allowed, they should be structured to encourage compact development.*
- *Direct new development to areas where excess infrastructure capacity exists by charging lower fees for connections to existing infrastructure.*
- *Discourage development in areas where new infrastructure must be added by charging relatively higher fees.*
- *Differential impact fees are justified by the increased cost of providing expanded capacity, concomitant service and maintenance to extensions.*
- *Infill and brownfield development should be encouraged in areas where sufficient public facility capacity exists. Fees in these areas should be lower than those imposed on greenfield developments.*

FINDINGS SUMMARY

Use this section to summarize your findings from the audit. The columns on the right show the smart growth principles addressed by the question.

A. CONNECTIVITY AND CIRCULATION

1. Street Network and Plan	Y	N	#1 Provide A Variety of Transportation Choices	#4 Create Walkable Neighborhoods
1.1. Is there a prescribed street hierarchy in place?			x	x
1.2. Do street widths vary by type of zone?			x	x
1.3. Are design speed standards used?			x	x
*1.4. Are standards set for width, intersection and corner radii for **neighborhood access** streets?*				x
*1.5. Are standards set for width, intersection and corner radii for **neighborhood connector** streets?*				x
*1.6. Are standards set for width, intersection, and corner radii for **regional access** streets?*				x
1.7. Are block perimeter lengths prescribed?				x
1.8. Are block face lengths prescribed?				x
1.9. Do prescribed block lengths differ by zone?				x
1.10. Are standards set for curb cut frequency?				x
1.11. Are cul-de-sacs discouraged?				x
1.12. Are the length and size of cul-de-sacs regulated?				x
1.13. Are there provisions to ensure both pedestrian and street connectivity between neighborhoods?			x	x
1.14. Are alleyways allowed?				x
1.15. Are there restrictions on their use?				x
1.16. Are there width standards for alleyways?				x

2. Streetscape Features	Y	N	#1 Provide A Variety of Transportation Choices	#4 Create Walkable Neighborhoods
2.1. Are different streetscape features applied to different districts/zones?			X	X
2.2. Are there provisions for traffic calming?			X	X
2.3. Are crosswalks required?				X
2.4. Are crosswalks allowed?				X
2.5. Do pedestrians have the right-of-way at crosswalks?				X
2.6. Are provisions made to ensure pedestrian right-of-way and safety in crosswalks?				X
2.7. Are sidewalks allowed?				X
2.8. Are sidewalks required?				X
2.9. Are complete sidewalk networks required within one mile of any school?			X	X
2.10. Are sidewalks required on both sides of the street?				X
2.11. Is a minimum sidewalk width established?				X
2.12. Is a maximum sidewalk width established?				X
2.13. Are sidewalks required to provide access to amenities such as parks and open space?				X
2.14. Are ADAaccess standards strictly enforced or improved upon?				X
2.15. Are there regulations that allow street vendors in specific districts?				X
2.16. Is the landscaping of medians or curbsides required?				X
2.17. Are street trees, street plantings required?				X
2.18. Is street furniture required? (Benches, waiting sheds, etc.) Are they required to be weather protected?				X
2.19. Is pedestrian street lighting required?				X
2.20. Are provisions made for low-voltage street lighting?				X

3. Parking	Y	N	#1 Provide A Variety of Transportation Choices	#4 Create Walkable Neighborhoods
3.1. Are minimum parking space requirements set?			x	
3.2. Are maximum parking space requirements set?			x	
*3.3. Is **Land Use** used as a basis to establish parking requirements??*			x	
*3.4. Is **District Type** used as a basis to establish parking requirements?*			x	
*3.5. Is **Building Type** used as a basis to establish parking requirements?*			x	
3.6. Are there provisions that allow reductions in parking requirements along transit routes?			x	
3.7. Are reductions in parking requirements allowed in exchange for bike parking?			x	
3.8. Is on street parking allowed? Does it count for meeting parking requirements			x	x
*3.9. Are there provisions for **shared parking**?*			x	
*3.10. Are there provisions for **joint parking**?*			x	
3.11. Are there prescriptions defining the relationship between parking spaces and the street?			x	x
3.12. Are there prescriptions defining the relationship between parking spaces and buildings?			x	x
3.13. Are there prescriptions for the location of parking lots?			x	x
3.14. Is street parking metered?			x	
3.15. Do street parking rates vary with time of day/ day of week?			x	
3.16. Are there landscaping requirements for large parking lots?				x
3.17. Are impervious surfaces minimized?				x

4. Walking, Biking and Multi-Use Trail Facilities	Y	N	#1 Provide A Variety of Transportation Choices	#4 Create Walkable Neighborhoods
4.1. Are there walkway, greenway or hiking trails?			x	x
4.2. Are all new developments required to connect to existing or planned walkway, greenway or hiking trails?			x	x
4.3. Are safe pedestrian routes to school required?			x	x
4.4. Are safe biking routes to schools required?			x	
4.5. Is a multi-use trail provided for or planned?			x	
4.6. Are there requirements for open space connectivity?			x	x
4.7. Are bicycle lanes required?			x	
4.8. Are bicycle lanes accommodated?			x	
4.9. Is bicycle parking required?			x	
4.10. Are standards established for bicycle lane width?			x	
4.11. Are standards established for bicycle lane surface?			x	
4.12. Are standards established for separation of bike lanes from motorized vehicle lanes?			x	
4.13. Are all new developments required to connect to existing or planned multi-use trails?			x	

5. Transportation and Transit Zones	Y	N	#1 Provide A Variety of Transportation Choices	#4 Create Walkable Neighborhoods
5.1. Are multi-modal transit centers identified?			x	
5.2. Is development encouraged around multi-modal transit centers?			x	
5.3. Are transit zones specifically established?			x	
5.4. Are there standards that determine the locations of transit zones?			x	
5.5. Is systems-approach used to identify transit zones?			x	
5.6. Is a nodal-approach to identify transit zones?			x	
5.7. Are level-of-service (LOS) standards moderated or modified for roads in transit zones?			x	
5.8. Are higher densities permitted in transit zones?			x	
5.9. Are public transit facilities required?			x	
5.10. Are park-and-ride facilities provided for?			x	
5.11. Are high-occupancy vehicle (HOV) lanes in use or planned?			x	

B. LAND SUBDIVISION, LAND USE and SERVICE

6. Land Subdivision and Lot Size	Y	N	#2 Mix Land Uses	#3 Create a Range of Housing Opportunities and Choices	#5 Encourage Community and Stakeholder Collaboration	#6 Foster Distinctive, Attractive Communities with a Strong Sense of Place	#7 Make Development Decisions Predictable, Fair, and Cost Effective	#8 Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas	#9 Strengthen and Direct Development Towards Existing Communities	#10 Encourage Compact Building Patterns and Efficient Infrastructure Design
6.1. Is a wide-range of lot sizes allowed within each zone?	☐	☐		x						
6.2. Are minimum lot sizes established?	☐	☐		x						x
6.3. Are maximum lot sizes established?	☐	☐		x						
6.4. Are there minimum frontage requirements?	☐	☐		x						x
6.5. Is a wide range of lot sizes allowed within each neighborhood or subdivision?	☐	☐		x						
6.6. Are small single-family lots permitted?	☐	☐		x						x
6.7. Are Rural Residential, Residential Estate, or Suburban Residential lots of an acre or more discouraged?	☐	☐		x						x
6.8. Are various parcel configurations allowed?	☐	☐		x						

7. Use (Zoning) Districts	Y	N	#2 Mix Land Uses	#3 Create a Range of Housing Opportunities and Choices	#5 Encourage Community and Stakeholder Collaboration	#6 Foster Distinctive, Attractive Communities with a Strong Sense of Place	#7 Make Development Decisions Predictable, Fair, and Cost Effective	#8 Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas	#9 Strengthen and Direct Development Towards Existing Communities	#10 Encourage Compact Building Patterns and Efficient Infrastructure Design
7.1. Are zones generally based on land use?	☐	☐	X							
7.2. Are zones based on building type	☐	☐	X							
7.3. Is the vertical stacking of land use allowed? (e.g –residential on top of commercial)	☐	☐	X							
7.4. Are there form-based overlay districts?	☐	☐	X		X					
7.5. Are there flex-zoning areas?	☐	☐	X				X			
7.6. Are there zones that allow for more than one land use (e.g. –residential and commercial) in the same zone? (List zones and uses allowed)	☐	☐	X							
7.7. Is there a specific mixed-use zone designation?	☐	☐	X							
7.8. Are there live-work zones?	☐	☐	X							
7.9. Are there planned-unit development (PUD) zones?	☐	☐	X							
7.10. Are there traditional neighborhood district (TND) zones?	☐	☐	X			X				X
7.11. Are there historic preservation districts/zones?	☐	☐				X			X	
7.12. Are there transit oriented development (TOD) zones?	☐	☐	X							X
7.13. Are land conservation subdivisions allowed?	☐	☐				X		X		
7.14. Are there other special use zones?	☐	☐	X			X				

7. Use (Zoning) Districts	Y	N	#2 Mix Land Uses	#3 Create a Range of Housing Opportunities and Choices	#5 Encourage Community and Stakeholder Collaboration	#6 Foster Distinctive, Attractive Communities with a Strong Sense of Place	#7 Make Development Decisions Predictable, Fair, and Cost Effective	#8 Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas	#9 Strengthen and Direct Development Towards Existing Communities	#10 Encourage Compact Building Patterns and Efficient Infrastructure Design
(Identify zones and allowed uses)										
7.15. Is vehicular and pedestrian connectivity to adjacent zones./neighborhoods required?	☐	☐	X							X
7.16. Is consideration given to each zone's relationship to adjacent zones?	☐	☐				X				X
7.17. Are there provisions for transitions between zones?	☐	☐				X				X
7.18. Are there standards that allow redevelopment of formerly single-use buildings into multi-use?	☐	☐	X				X		X	
7.19. Are residential uses encouraged in the CBD or other business/commercial districts?	☐	☐	X							
7.20. Is ground floor retail encouraged in business/commercial districts?	☐	☐	X							
7.21. Are neighborhood stores/ neighborhood scale groceries allowed in residential areas?	☐	☐	X							
7.22. Are distinctions made between infill or brownfield and greenfield development?	☐	☐							X	
7.23. Are density standards established? (e.g. –dwelling units/acre)	☐	☐		X						
7.24. Are there standards matching building scale to street type?	☐	☐				X				
*7.25. Are there **minimum** density requirements? (e.g. –dwelling units/acre)*	☐	☐		X						
7.26. Is the use of minimum residential square-footages discouraged?	☐	☐		X						X

7. Use (Zoning) Districts	Y	N	#2 Mix Land Uses	#3 Create a Range of Housing Opportunities and Choices	#5 Encourage Community and Stakeholder Collaboration	#6 Foster Distinctive, Attractive Communities with a Strong Sense of Place	#7 Make Development Decisions Predictable, Fair, and Cost Effective	#8 Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas	#9 Strengthen and Direct Development Towards Existing Communities	#10 Encourage Compact Building Patterns and Efficient Infrastructure Design
7.27. Are minimum residential square-footages affecting the affordability of housing?	☐	☐		X						X
7.28. Are floor area ratios (FAR) severely limiting lot usage?	☐	☐		X						X
7.29. Are set back requirements severely limiting lot usage?	☐	☐		X						X
7.30. Are safety codes (primarily fire codes) restrictive? Do they effectively disallow commercial or home occupation uses?	☐	☐	X							X
7.31. Are landscaping standards affecting efficient lot usage?	☐	☐								X
7.32. Are provisions made for cluster development?	☐	☐								X
7.33. Are there provisions to encourage or expedite developments that include affordable housing units?	☐	☐		X						
7.34. Are multi-family units allowed in all zones?	☐	☐		X						X
7.35. Are multi-family units allowed as of right?	☐	☐		X			X			X
7.36. Are multi-family units allowed by use permit?	☐	☐		X			X			X
7.37. Are multi-family units allowed in the same zones as single-family units?	☐	☐		X			X			X
7.38. Are accessory units allowed as of right?	☐	☐		X			X			X
7.39. Are accessory units allowed by use permit?	☐	☐		X			X			X

7. Use (Zoning) Districts	Y	N	#2 Mix Land Uses	#3 Create a Range of Housing Opportunities and Choices	#5 Encourage Community and Stakeholder Collaboration	#6 Foster Distinctive, Attractive Communities with a Strong Sense of Place	#7 Make Development Decisions Predictable, Fair, and Cost Effective	#8 Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas	#9 Strengthen and Direct Development Towards Existing Communities	#10 Encourage Compact Building Patterns and Efficient Infrastructure Design
7.40. Is fast track permitting provided for accessory units?	☐	☐		X			X			X
7.41. Are manufactured homes allowed in all zones as of right?	☐	☐		X			X			X
7.42. Are manufactured homes allowed in all zones by use permit?	☐	☐		X			X			X
*7.43. Is **public** open space required?*	☐	☐				X			X	
*7.44. Is **private** open space required?*	☐	☐				X			X	
7.45. Are different uses permitted in open space areas as of right? What uses?	☐	☐				X	X		X	
7.46. Are different uses permitted in open space areas by use permit? What uses?	☐	☐				X	X		X	
7.47. Are standards set for development scale or design elements? (List standards)	☐	☐				X				X
7.48. Are building frontage standards established?	☐	☐				X				
7.49. Are there provisions for design compatibility with adjacent structures?	☐	☐				X				
7.50. Is development allowed in floodplains?	☐	☐					X	X		
7.51. Are there conditions specifying when development can be allowed in floodplains?	☐	☐					X	X		
7.52. Are view corridors and view sheds considered?	☐	☐				X		X		
7.53. Are restrictions placed on signage?	☐	☐				X				

7. Use (Zoning) Districts	Y	N	#2 Mix Land Uses	#3 Create a Range of Housing Opportunities and Choices	#5 Encourage Community and Stakeholder Collaboration	#6 Foster Distinctive, Attractive Communities with a Strong Sense of Place	#7 Make Development Decisions Predictable, Fair, and Cost Effective	#8 Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas	#9 Strengthen and Direct Development Towards Existing Communities	#10 Encourage Compact Building Patterns and Efficient Infrastructure Design
7.54. Are there special rehab codes that encourage the re-use of historic, old or abandoned buildings?	☐	☐				X			X	
7.55. Is there a public consultation/input process in place for all new developments?	☐	☐			X					
7.56. Is there a design review board in place for any district/zone? (List districts, if any)	☐	☐			X					
7.57. Are business improvement districts (BIDs) encouraged?	☐	☐			X					

8. Services	Y	N	#2 Mix Land Uses	#3 Create a Range of Housing Opportunities and Choices	#5 Encourage Community and Stakeholder Collaboration	#6 Foster Distinctive, Attractive Communities with a Strong Sense of Place	#7 Make Development Decisions Predictable, Fair, and Cost Effective	#8 Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas	#9 Strengthen and Direct Development Towards Existing Communities	#10 Encourage Compact Building Patterns and Efficient Infrastructure Design
8.1. Are school siting requirements and investments coordinated with the comprehensive plan?	☐	☐					X		X	X
8.2. Are fire, police, public transit and trash disposal coverage considered when choosing or locating school facilities?	☐	☐								
8.3. Are schools siting requirements designed to allow schools to be built on infill or redevelopment areas?	☐	☐							X	X
8.4. Are schools and community services allowed to share buildings where possible?	☐	☐								X
*8.5. Are **school** impact fees established for new development?*	☐	☐					X		X	
*8.6. Are **water service** impact fees established for new development?*	☐	☐					X		X	
*8.7. Are **sewer service** impact fees established for new development?*	☐	☐					X		X	
*8.8. Are **park facilities** impact fees established for new development?*	☐	☐					X		X	
*8.9. Are **other impact fees** established for new development?*	☐	☐					X		X	
8.10. Are differential impact fees established to encourage infill or brownfield development?	☐	☐					X		X	

COMMUNITY:	
DOCUMENTS REVIEWED:	
REVIEWED BY:	
DATE:	

-end of form-

Smart Growth Code and Zoning Audit Version 1.0, 2007
by the Smart Growth Leadership Institute with key inputs from: Susan Weaver, Benjamin de la Pena, Bill Fulton, Tamar Shapiro, Harriet Tregoning, Ilana Preuss, Jessica Cogan-Millman, Deepak Bahl, Tridib Banerjee, John Bailey, Will Fleissig and Parris Glendening

SMART GROWTH
LEADERSHIP INSTITUTE

Smart Growth Code and Zoning Audit for Special Use Districts

Version 1.0 | December 1, 2007

Smart Growth Implementation Toolkit

Use this section for each special use district specified in your community's land use plan or policy documents. Replicate the audit for each identified special use district or zone. This section repeats several of the questions from the previous section but asks if they apply directly to the special district.

SPECIAL USE DISTRICTS AND ZONES | (Replicate for each identified Special Use Zone)

Special land use districts may include (but are not limited to)

Mixed Use Districts, Historic Preservation Districts, Special Overlay Districts, Town Center or Main Streets Districts, Planned Unit Developments, Transit Oriented Developments, Traditional Neighborhood Districts

Use the top column to identify the specific district you are auditing.

9. [Specify Zone or District Here]	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
9.1. Is vehicular and pedestrian connectivity to adjacent neighborhoods required?	☐	☐	•	•
9.2. Is consideration given to the zone's relationship to other zones?	☐	☐	•	•
9.3. Are there provisions for transitions between zones?	☐	☐	•	•
9.4. Are there provisions for transitioning this zone/district to adjacent suburban neighborhoods?	☐	☐	•	•
9.5. Is internal transportation and pedestrian connectivity considered?	☐	☐	•	•
9.6. Is block length regulated?	☐	☐	•	•

9. [Specify Zone or District Here]	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
9.7. Are density bonuses granted in this district/zone? (List conditions)	☐	☐	•	•
9.8. Is more than one land use allowed in this zone? (List allowed uses)	☐	☐	•	•
9.9. Is the vertical stacking of land use allowed? (e.g –residential on top of commercial)	☐	☐	•	•
9.10. Is flex zoning[7] allowed in this district/zone?	☐	☐	•	•
9.11. Are home occupations or commercial ventures allowed in this zone?	☐	☐	•	•
9.12. Are space ratios (e.g. residential square footage to work area) established?	☐	☐	•	•
9.13. Is the number of employees per square foot of workspace regulated?	☐	☐	•	•
9.14. Are compatibility standards established for commercial ventures?	☐	☐	•	•

[7] ***Flex Zoning*** *lets the developer or building owner to change the use of the building (assuming conformity to building codes for the new use) without the requiring a lengthy variance or approval process.*

9. [Specify Zone or District Here]	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
9.15. Are compatibility standards established for home occupations?	☐	☐	•	•
9.16. Are parking standards customized for the zone? How?	☐	☐	•	•
*9.17. Are there provisions for **shared parking**?*[8]	☐	☐	•	•
*9.18. Are there provisions for **joint parking**?*[9]	☐	☐	•	•
9.19. Is centralized parking allowed?	☐	☐	•	•
9.20. Do parking standards prevent home occupation use or commercial use in this zone?	☐	☐	•	•
9.21. Are density standards established?	☐	☐	•	•
9.22. Are there requirements to provide a mix of housing units affordable to all income levels within this zone?	☐	☐	•	•
9.23. Are accessory units allowed as of	☐	☐	•	•

[8] ***Shared parking*** *– a parking facility use of which is allowed to two or more users based on different peak hours (e.g. businesses with peak patronage during the day, theaters and restaurants with peak patronage at night); promotes efficient use of space.*

[9] ***Joint parking-*** *a common parking facility designed for simultaneous use by two or more uses (e.g. municipal structures or lots; privately developed structures or lots); allows for off-site provision of parking.*

9. [Specify Zone or District Here]	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
right?				
9.24. Are accessory units allowed by use permit?	☐	☐	•	•
9.25. Are manufactured homes allowed in this zone as of right?	☐	☐	•	•
9.26. Are manufactured homes allowed in this zone by use permit?	☐	☐	•	•
9.27. Are floor area ratios (FAR) severely limiting lot usage? (List how)	☐	☐	•	•
9.28. Are set back requirements severely limiting lot usage? (List how)	☐	☐	•	•
9.29. Are safety codes (primarily fire codes) restrictive? Do they effectively disallow commercial or home occupation uses?	☐	☐	•	•
9.30. Are landscaping standards affecting efficient lot usage?	☐	☐	•	•
9.31. Is public open space required?	☐	☐	•	•
9.32. Is private open space required?	☐	☐	•	•
9.33. Is consideration given to open space	☐	☐	•	•

9. [Specify Zone or District Here]	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
connectivity?				
9.34. Are different uses permitted in open space areas as of right? What uses?	☐	☐	•	•
9.35. Are different uses permitted in open space areas by use permit? What uses?	☐	☐	•	•
9.36. Are provisions made for cluster development?	☐	☐	•	•
9.37. Are standards set for development scale or design elements? (List standards)	☐	☐	•	•
9.38. Are building frontage standards established?	☐	☐	•	•
9.39. Are there provisions for design compatibility with adjacent structures?	☐	☐	•	•
9.40. Are there provisions for the preservation of historic structures?	☐	☐	•	•
9.41. Are there special rehab codes that encourage the re-use of historic, old or abandoned buildings?	☐	☐	•	•
9.42. Are restrictions placed on signage?	☐	☐	•	•
9.43. Are view corridors and view sheds	☐	☐	•	•

9. [Specify Zone or District Here]	Y	N	From Local Code and Zoning Regulations	Indicate Possible Improvements to Codes
considered?				
9.44. Are proposed developments in this zone/district subject to a special review process?	☐	☐	•	•
9.45. Does the special review process take longer than standard review process for other zones?	☐	☐	•	•
9.46. Is there opportunity for public input in the special review process?	☐	☐	•	•
Y = Yes, **N** = No			Indicate if **Not Addressed**	Refer to **Suggested Standards**

-end of form-

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