



# DUBUQUE SDAT

Masterpiece on  
the Mississippi

A Sustainable Design  
Assessment Team Report

**Dubuque, Iowa**  
**October 22–24, 2007**

The American Institute of Architects  
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## EXECUTIVE SUMMARY

The city of Dubuque, Iowa, identified three overall goals and five major planning issues for the SDAT to focus on. Each goal is stated below with a summary of the SDAT's recommendations to foster a more sustainable Dubuque.

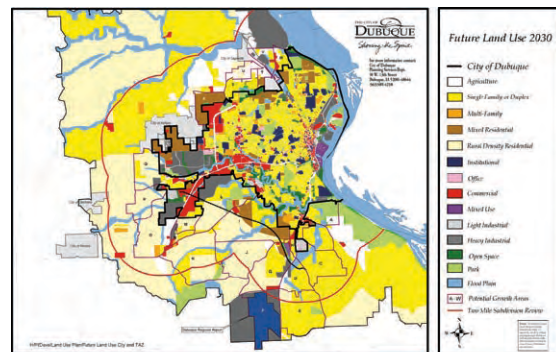
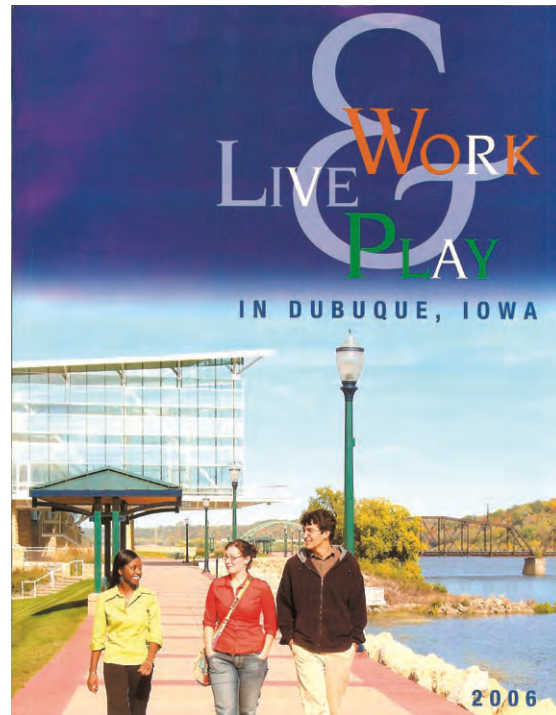
**Think outside of Dubuque.** The SDAT focused on the city of Dubuque but also considered the long-term sustainability of the entire region. The city should avoid a return to the 1980s, when influences outside of the city were significant factors.

**Enhance the city-county relationship.** To become a greener community, it is critical for the city to enhance its relationship with surrounding Dubuque County and other adjacent areas. The city must address the reality of city-county interdependence to achieve long-term sustainability.

**Formalize sustainability planning.** Planning and development initiatives are already underway—most notably regarding use of the Unified Development Code, which can catalyze green development by rewarding sustainable development practices and restricting unsustainable ones. Formally incorporating sustainability into such initiatives can make it a proactive focus.

### Specific Recommendations

The SDAT developed the recommendations below for each of the five major planning areas that the team and community addressed during the October 2007 SDAT charrette.



## 1. Urban Sprawl vs. Planned and Managed Growth

- **Conduct a full inventory of vacant and underused sites**, including both land and buildings, as an information planning tool—also accounting for estimated build-out of development plans
- **Further develop the concept of neighborhood centers** as a managed-growth strategy, i.e., concentrations of pedestrian-friendly, mixed-use development and housing opportunities
- **Provide housing choices** through a citywide mix of market-rate and affordable housing
- **Implement a regional planning process**, involving at least the city and county, to foster cooperative planning efforts
- **Integrate transportation with land-use planning** at a variety of levels, ideally through a plan that combines the two fields and includes the specific recommendations in this report
- **Implement a system of progress indicators** to ensure implementation of the city's strong vision and comprehensive plan

## 2. Stormwater Runoff vs. Stormwater Management

- **Use a Low-Impact Development (LID) stormwater toolkit approach** that mimics natural water infiltration and hydrology, all closer to the point of stormwater origins. Sustainable stormwater management will require techniques specific to a variety of conditions, hence the toolkit approach.





- **Use green roadway medians** that enhance stormwater infiltration
- **Use vegetative buffers** made of local, natural vegetation and local limestone to create natural terraced areas that promote water infiltration
- **Develop a coordinated management and educational outreach program** to monitor and enforce the use of the LID stormwater tools. Success will depend on corresponding promotional and educational programs for developers, property owners, city agencies, and so on.

### 3. Traditional Development vs. Sustainable Design

- **Incorporate green building guidelines** into the Unified Development Code
- **Promote sustainability** through partnerships
- **Decrease waste** and make it an energy source
- **Create incentives** for green building construction and use of alternative fuels, fuel-efficient vehicles, and mass transit
- **Preserve the landscape** instead of reshaping it for development
- **Increase awareness** of impact on the river
- **Create a community energy profile**

### 4. Neighborhood Disinvestment vs. Neighborhood Revitalization

- **Focus on infill** (small, discrete buildings), not demolition and redevelopment
- **Create zoning** for integrated, multiple occupancies within buildings
- **Establish vital daily businesses** to encourage walking within districts
- **Provide consistent public improvements** that encourage safe walking, biking, and social interaction
- **Encourage teaching centers** that are open to the entire city but focused on the needs and issues specific to the city's historic neighborhoods
- **Provide incentives for owner occupancy** throughout the city's historic districts
- **Implement preservation guidelines** that promote understanding and encourage incorporation of traditional building systems



- **Encourage communal energy generation and distribution systems**
- **Encourage communal water collection systems**
- **Negotiate with multinational retailers** to adapt universal designs to historic districts, especially the warehouse district
- **Designate “destination zones”** within established districts and neighborhoods
- **Initiate a city-funded carbon credit** for retailers locating in the central downtown districts
- **Strengthen and expand “conservation districts”**
- **Build upon existing Community Development Block Grant (CDBG) programs**

## 5. Bluff Development vs. Bluff Preservation

- **Master plan.** Thoroughly map and analyze the blufflands to develop a master plan that prioritizes areas for sustainable growth and preservation, including opportunities to establish greenways along the blufflands
- **Viewsheds.** Work with the county, state, region, and local community to preserve the viewsheds, both from within the bluffs and up to and across the bluffs
- **Character.** Recognize the two types of character relative to the blufflands
- **Architectural character.** Consider the existing scale and architectural character of the blufflands in future planning and zoning regulations
- **Landscape character.** Identify areas where landscape features and elements should be protected
- **Recreation and leisure.** Identify and promote opportunities for ecotourism, heritage tourism, and recreational pursuits
- **Education.** Engage Dubuque citizens in the process of guiding and implementing the sustainability of the blufflands
- **Maintenance:** Establish a program to maintain the integrity of the blufflands
- **Economic value:** Plan economic development carefully to preserve character

The balance of this Dubuque SDAT report fully discusses the background, analysis, and details of the above recommendations.

# INTRODUCTION

In January 2006, Dubuque, Iowa, submitted a proposal to the American Institute of Architects (AIA) for a Sustainable Design Assessment Team (SDAT) to help the city and its citizens to address key issues facing the community. The issues were categorized into three areas:

## 1. Achieve U.S. EPA “Green Communities” designation

- Promote innovative tools that encourage successful community-based environmental protection and sustainable community development in both the public and private sector
- Establish partnerships with other organizations and agencies to help build community capacity and knowledge to create a more livable community

## 2. Address five major critical land-use and urban-design issues

- Urban sprawl vs. planned and managed growth
- Bluff development vs. preservation
- Stormwater runoff vs. stormwater management
- Traditional design vs. sustainable design
- Neighborhood disinvestment vs. neighborhood revitalization



## 3. Work toward the City of Dubuque’s five-year goals

- Improved connectivity: transportation and communications
- Diverse, strong economy
- Planned and managed growth
- Partnering for a better Dubuque
- Riverfront development



The AIA accepted the proposal and, after a preliminary visit by a small group in August, the SDAT members arrived in Dubuque on October 22, 2007. For three days, the team members, working closely with local officials, community leaders, technical experts,



and citizens, studied the community and its concerns. The team came to understand the issues and used their expertise to frame a wide range of recommendations, which were presented to the community in a public meeting on October 24, 2007. This report is a more detailed version of the findings and recommendations of that presentation.

### **Dubuque SDAT Focus**



A review of the three stated goals revealed that the best use of the SDAT team would be to focus on Goal No. 2 and the five related issues. The U.S. Environmental Protection Agency no longer has an active Green Communities designation program, although the process and intent of that program were consistent with the SDAT process and program. Hence, following the recommendations of this SDAT report will help the

City of Dubuque to become a green city.

Similarly, following the sustainability recommendations from this report related to the five topical areas of Goal No. 2 will feed into the existing Dubuque five-year goals being pursued as part of Goal No. 3. The difference will be a focus on achieving these goals in a genuinely sustainable manner.

Therefore, after a brief overview of the SDAT program and process, and a short discussion of Dubuque and the issues it is facing, the Dubuque SDAT and this report cover

1. Urban sprawl vs. planned and managed growth
2. Stormwater runoff vs. stormwater management
3. Traditional development vs. sustainable design
4. Neighborhood disinvestment vs. neighborhood revitalization
5. Bluff development vs. bluff preservation

A closing section offers some thoughts on how the community can best move forward to address the range of issues and recommendations covered in the report.

### **What Is the SDAT Program?**

The SDAT program is an interdisciplinary community assistance program that focuses on principles of sustainability. Launched in 2005, the program represents an exciting new chapter in the Institute's history of supporting communities with volunteer design expertise.

The SDAT program is modeled on the AIA R/UDAT (Regional and Urban Design Assistance Team) program. While the R/UDAT program provides communities with specific design solutions, the SDAT program provides broad assessments to help frame future policies or design solutions in the context of sustainability and helps communities plan the first steps of implementation. The SDAT program is based on an understanding of design as a process that

- Is integrative, holistic, and visual
- Is central to achieving a sustainable relationship between humans, natural environment, and place
- Gives three-dimensional form to a culture and a place
- Achieves balance between culture, environment, and economic systems

The SDAT program is grounded in the AIA design assistance team values, which call for a multidisciplinary approach, objectivity of the participating team members, and broad public participation.

### **Why Is the SDAT Program Valuable?**

Many communities are immobilized by conflicting agendas, politics, personalities, or even overabundant opportunity. Many communities have not yet taken stock of their practices and policies within a sustainability framework, while others have identified issues of concern but want help in developing an action plan. The SDAT process ensures that alternative solutions receive a fair hearing. The SDAT process

- Informs the community of opportunities and encourages it to protect local and regional resources
- Helps the community understand the structure of the place at various scales and contexts—from regional resources to the neighborhood scale
- Explores and articulates the larger contexts and interactions of ecological, sociological, economic, and physical systems
- Visualizes potential futures
- Recognizes and describes the qualities of a place by preserving the best elements of the past, addressing the needs of the present, and planning for the needs of future generations
- Identifies and describes choices and consequences

- Connects plans and actions
- Advances the principles of quality sustainable communities
- Helps the community define the roles of various stakeholders
- Develops a roadmap for the implementation of more sustainable policies and practices

The key to SDAT success is diversity and participation, involving multiple disciplines and stakeholders. The SDAT process includes not only the expert team but also government agencies and officials, private businesses, schools and students, community members, and other parties as appropriate.

### **Who Are the Key Participants in the SDAT Process?**

SDATs bring a team of respected professionals—selected on the basis of their experience with the specific issues facing the community—who volunteer their time to help community decision makers develop a vision and framework for a sustainable future. To ensure their objectivity, they agree to refrain from taking paid work for three years from the date of SDAT project completion. The AIA assembles a distinct team for each project based on the project’s unique features. The team consists of a leader, five to seven members, and a staff person from AIA Communities by Design.

The professional stature of the SDAT members, their independence, and the pro bono nature of their work generate community respect and enthusiasm for the SDAT process, which, in turn, encourages the participation of community stakeholders. The passion and creativity unleashed by a top-notch multidisciplinary team of professionals working collaboratively can produce extraordinary results.

#### *Local Steering Committee*

The steering committee is the SDAT project’s key organizing group. It is responsible for assembling local and regional information, organizing the preliminary meeting and SDAT visit, and generating local media coverage during the project. After the SDAT visits, the steering committee typically evolves into a group dedicated to implementing the SDAT recommendations.

### *Local Technical Committee*

The local technical committee is the SDAT project's technical support group, including local design professionals, environmental professionals, economists, and others whose skills and experience parallel those of the SDAT members and who have detailed knowledge of local conditions, issues, and information resources. Their presence magnifies the team's effectiveness.



### *Citizens*

In the end, community citizens are the critical players, both for their insights and observations during the team visit and for their support for the new directions emerging from the SDAT process.

On behalf of the Dubuque SDAT and the AIA, we hope this report will be a useful guide to the Dubuque community as it charts its future for the coming years and for coming generations.



# DUBUQUE: AN OVERVIEW

## Background of a River City

Founded as a small community in 1788 by French fur trader Julien Dubuque, the city became incorporated in 1833 and is the oldest city in the state of Iowa. Situated along flatlands and limestone bluffs that rise above the Mississippi River, Dubuque is distinctive because of the steep hills created by these bluffs—geographic features that many people don’t expect to find in Iowa.

Its location—in northeastern Iowa, adjacent to both Illinois and Wisconsin across the river—has served it well historically, contributing to its reputation as a source for lead mining, fur trading, button making, boat building, logging, millwork, and related activities. The city and surrounding area prospered well into the 20th century as “a strategic industrial, wholesale, and retail center dominating a vast tri-state marketland” (in the words of a local publication in 1965). With its combination of historical strengths and geographic location, the population grew steadily to about 50,000 people in 1950 and to more than 62,000 in 1970. The lowest percentage of unemployment ever recorded was 1.5 percent in July 1965.



## A Reversal of Fortune—and Population

Reflecting changes in the local and state economies, industrial and retail losses contributed to a virtual halt in population growth between the 1970s and 1980s, to the point where Dubuque became a city experiencing difficult times.

Between 1980 and 1990, the city lost 7.8 percent of its population, dropping to 57,500 in 1990. As double-digit unemployment persisted, many residents left both city and state,

leaving many downtown businesses struggling. Accordingly, property tax rates increased while the average home value fell by 9 percent. In January 1982, Dubuque's unemployment hit a record high of 23 percent while a billboard proclaimed: "Would the last person to leave Dubuque, please turn off the lights?"

As the trend continued, neighborhoods were left disconnected. Most of all, citizens had little hope that anything would change. A 1983 Chamber of Commerce publication described the situation as "desperate," pointing out that Dubuque "has for the past three years had the highest unemployment rate of Iowa's largest cities.... Recent estimates show 10 percent of the housing stock vacant or available for sale."

### **Turning Dubuque Around**

More dramatic than the downturn, is a truly remarkable turnaround in recent years. Community leaders from the private and public sectors came together in four grassroots visioning efforts over the past 20 years that helped change Dubuque. As Mayor Roy Buol stated upon his 2005 election, "The next five years will define the next 50 for Dubuque."

Those visioning sessions and local leaders have prompted a number of actions that have yielded real results in stabilizing the local economy and population and laid a strong foundation for a truly sustainable city.

#### *Infrastructure Investments*

Efforts to promote planned and managed growth included infrastructure improvements, highway connections, airport improvements, annexation, creation of business parks, and stormwater management—with the following results:

- 6,709 acres prepared for development
- Tens of millions of dollars in highway and airport improvements, netting double-digit increases in airline traffic
- More than 4,200 acres annexed since 1995
- Nonresidential construction of 8 million square feet
- Residential construction of 5 million square feet over eight years
- Five consecutive years of record real estate sales in Dubuque by 2006



- Public-park renovation (22 parks, 713 acres), creation (19 new parks, 138 acres), and planning (3 planned parks, 5.75 acres), representing \$9.75 million investment since 1994
- A \$38.7 million drainage-basin plan under development to save more than 1,150 homes from flooding

#### *Riverfront Revitalization*

A decision to use the riverfront as a focal point for the community resulted in a 90-acre revitalization effort, with \$188 million in investment in the first phase of development. The “Port of Dubuque—America’s River” now boasts

- The new National Mississippi River Museum and Aquarium (600,000 visitors in the first year)
- A city-owned, 174,000-square-foot conference and event center
- Renovation of several historic structures
- A \$30 million resort hotel with an indoor water park
- A network of outdoor spaces including the Mississippi River walk, an outdoor amphitheater, and biking/walking trails

This development has earned Dubuque numerous awards and set the next phase in motion, including more museum and recreation space, a River Research Center, a River Max Theater, and new commercial development.

#### *Economic Expansion*

A plan to promote economic expansion and increase job opportunities enabled Dubuque to create 17.8 percent of the net new jobs in the entire state of Iowa (3,200 of Iowa’s statewide total of 17,900 from February 2006 through February 2007) even though Dubuque represents only 3 percent of Iowa’s statewide population. Further, the average wage in Dubuque County increased faster than the annual inflation rate from 2000 to 2005, to an average of \$31,616 in 2005.

A significant part of the success can be attributed to the creation of the public-private enterprise known as the Greater Dubuque Development Corporation, which has created more than \$540 million in new construction and 5,300 new jobs a full year ahead of scheduled goals. Much of this growth has been through the creation of new “shovel-ready” industrial and technology parks, which gave Dubuque more developable land within the otherwise development-starved city.

#### *Downtown and Neighborhood Revitalization*

A downtown revitalization plan attracted hundreds of millions of dollars of improvements between 1985 and 2006 (most of which has been spent since 2000), including façade renovations, building rehabilitation, new construction, and public improvements. Real estate sales in this time period are approaching \$100 million, with 2,000 new jobs created.

Innovative neighborhood improvements and development have included the creation of new neighborhood organizations, partnerships with local high schools for housing renovations, creation of a community health center, a coordinated street improvement program, and programs to promote home ownership over rental options.

A focus on technology allowed improvements in both public schools (K–12) and the seven local colleges and universities. Accordingly, the Milken Institute ranked the Greater Dubuque area first in high-tech output growth 1998–2003.

Of particular note is the fact that Dubuque accomplished all of the above while maintaining strong fiscal indicators and a net increase in bond rating. Certainly the presence of an income stream from casino operations on city-owned land and the riverfront helped the fiscal strength of the city and tourism. Nonetheless, casino-related income has been only one part of a dramatic and impressive turnaround that has included numerous awards and accolades—the most recent being the National Civic League’s designation of Dubuque as an “All-America City” in 2007.

The next distinction the City of Dubuque seeks is recognition as a sustainable, green community. Hence, the SDAT program is both timely and appropriate. While the community takes great pride in the slogan, “Masterpiece on the Mississippi,” the people appear to take equal pride in the quest to show true leadership among sustainable U.S. cities.

# URBAN SPRAWL VS. PLANNED AND MANAGED GROWTH

## Background

Smart growth provides for housing and jobs while also using existing and new infrastructure efficiently and protecting significant natural and agricultural resources. Sprawl signifies an inefficient use of limited resources, in which public spending for more miles of roads, sewer, and water pipes serves fewer people while consuming more land.

Dubuque has exemplified smart growth in the revitalization of Main Street and other neighborhoods in and around downtown. The city and various community stakeholders are continuing these efforts. However, as Dubuque rebounded from the early 1980s, it also sprawled, exhibiting the low-density subdivisions and strip malls typical of many other parts of the country. This type of development has increased dependence on the automobile. Between 1990 and 2000, the proportion of Dubuque residents commuting to work by driving alone increased from 76.8 percent to 83.9 percent. Almost every other mode of transportation—public transit, taxi, bicycle, or walking—declined in their share according to the Dubuque Metropolitan Area Transportation Study (DMAT). (DMATS, p. 28).

In preparing this section of the report, the SDAT reviewed relevant planning documents, including the 2031 Long-Range Transportation Plan, the Annexation Study, the city's Comprehensive Plan, the county's Comprehensive Land-Use Development Plan, the Downtown Master Plan, the Port of Dubuque Plan, and both city and county zoning ordinances.



## **SWOT Analysis**

### *Strengths*

Dubuque has rebounded in economic and population growth, with significant revitalization of downtown and other older neighborhoods. The city has an array of strengths to build upon, including the high level of community involvement and the area's high quality of life. These strengths are reflected in the provision of parks and other public spaces and the overall balance of development and preservation in tune with major natural features such as the bluffs and the Mississippi River.

### *Weaknesses*

While many parts of Dubuque have been revitalized, they still lack amenities, services, and, in some cases, parking to attract residents. Stakeholders also noted the need for the vision and comprehensive plan to be better backed by development policies and regulations. The city's relationship to the county and other municipalities has also been a source of difficulty, especially with regard to annexation and land-use decisions in the fringe areas. Due to these and other factors, developers still find it much easier to work on greenfield land instead of investing in infill or redevelopment projects.

### *Opportunities*

The city and other stakeholders have initiatives in place or in the works through which they can implement the recommendations of this report. Planning documents reflect the people's vision for less sprawl, more interesting built environments, and proximity to employment and services. Existing neighborhoods have significant capacity to support new investment. In the Warehouse District alone, one stakeholder estimated 1 million square feet of available space. The Unified Development Code represents a key opportunity to implement the vision and comprehensive plan.

### *Threats*

The proposal for a Southwest Arterial can represent an opportunity with good land-use planning along the highway. However, if the Northwest Arterial is a harbinger, the extension may serve as further impetus for annexation issues, sprawl, and the outward flow of infrastructure investment. With regard to growth management tools, including land-use and zoning controls, workshop participants noted potential issues with property owner equity. This concern is especially reflected in the county's development regulations.

## **Recommendations**

### *Information Tools*

Stakeholders called for a full inventory of vacant and underused sites, including both land and buildings. This inventory should also account for estimated buildout of development plans. Various stakeholders already have data that could be part of a larger inventory, including the Main Street program's detailed vacancy data for a 90-block area, and the city's land inventory, mainly consisting of larger vacant sites in the outer parts of the city. This inventory should include data such as location, block/lot, square footage or acreage, ownership, condition/status, and access to infrastructure and services. The inventory can inform city decision makers to better align land supply with anticipated growth, possibly holding reserves to prioritize development or redevelopment of particular areas.

The inventory can also be a marketing tool to attract developers and investors. A comprehensive resource toolkit should also be part of the package, outlining the variety of city and other resources available to encourage revitalization. The toolkit should include information about funding type (grant, loan, tax incentive, tax credit), funding cycles or deadlines, eligibility criteria, project examples, Web site, and contact information. This toolkit will help investors cobble together a range of resources to make projects feasible.

### *Growth Management Strategies*

Participants from the city expressed interest in revisiting and further developing the concept of Neighborhood Centers—concentrations of pedestrian-friendly development with a mix of uses and housing opportunities. These centers would promote the revitalization of older areas and better design of new projects. In light of the New Urbanism trend, Dubuque already has a heritage of Real Urbanism. Infill and redevelopment should rely on preservation and context-sensitive design. Local tools such as TIF and tax abatements are already in place and can be prioritized to better support revitalization. The State of Iowa's Department of Economic Development is developing programs to channel federal CDBG and other funds toward this end. Future successes for this state initiative in Dubuque and other Iowa cities may spur further state policy alignment with smart growth.

For new Neighborhood Centers, Dubuque's Real Urbanism can form the basis for a design vocabulary through form-based codes, pattern books, and/or design guidelines. Neighborhood Centers will also help preserve open space—providing an additional amenity for

residents and serving environmental goals such as water quality. As is feasible per the state enabling legislation, the city should use zoning tools such as PUD, clustered development, and incentivized overlay zones to encourage better design, center-based development, and provision of amenities.

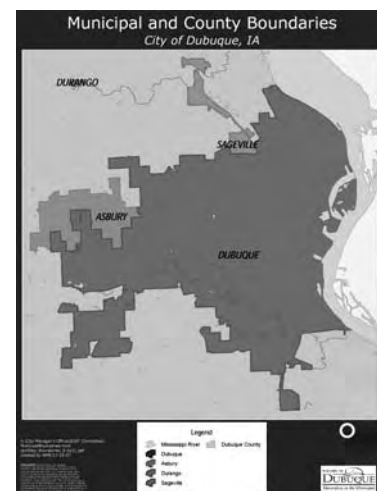
### *Housing Choice*

A mix of market-rate and affordable housing should be provided throughout the city. Downtown and other neighborhoods can allow for a more urban format for young professionals, college students, and empty nesters. New developments should contain a village core with a mix of uses and housing types, surrounded by residential neighborhoods that, while single-use, are accessible to the core by walking. For wealthier areas such as the West End, the inclusion of affordable housing and amenities should be a key point in negotiations for approval. Policies and programs should also factor in the cost of transportation and utilities for households as part of the overall cost of affordable housing. This would promote a more sustainable land use pattern and green building.

### *Regional Planning Framework*

There is a clear need for improvement in relations between the city and the county and other municipalities. The city and county should revisit discussions of a Joint Fringe Area Development Agreement. Currently, it appears that annexation is a line of defense for the city to prevent certain county development decisions. An agreement could allow for sounder land-use planning, where annexation does not mean sprawl but a balance of development and preservation.

Even though this process may take some time, a clear short-term benefit is the establishment of informal relationships that can provide the foundation for a more cooperative planning framework. Furthermore, the fringe area agreement should not be viewed as the end goal but one of several steps toward achieving a broader regional planning policy. In the long term, this policy should focus on growth management, particularly through alternatives to down-zoning such as farmland assessments, conservation easements, and transfer of development rights. If state legislative action is required, the city and county should work together to advocate for change.





## Integrated Land Use and Transportation

Transportation and land-use planning must be integrated at a variety of levels, ideally through a plan that combines the two fields and including the recommendations noted below.

### *Highways*

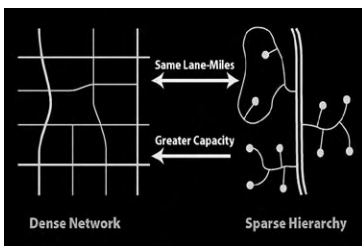


Highways can be a corridor for movement, development, or—when planned correctly—both. The Northwest Arterial was originally intended to serve a movement function. However, following a cost-based decision to use at-grade rather than grade-separated intersections, development along the length of the road followed. Too many points of access from those uses have yielded negative impacts for traffic congestion and safety.

Whether or not the Southwest Arterial is to be a limited-access divided highway, the county and/or the city should maintain the road’s mobility by concentrating development and access at particular nodes. Development should rely on internal road networks or cross-access that use lane miles more efficiently rather than have drivers spill out onto the new highway for every trip. The city should apply this philosophy to other existing or new arterials for the retrofitting or new construction of developments.

### *Local Streets*

Local streets should be designed with more than the automobile in mind. Sidewalks, bicycle paths, and bus shelters should emphasize alternative transportation modes. Standard engineering allows for road widths greater than necessary, with the design speed often exceeding the intended (posted) speed limit. “Skinny streets” should be



encouraged in areas where walking is an important transportation mode. Streetscaping, sidewalk design (bumpouts, chokers), differentiated crosswalks (pavers), bicycle paths, and street parking (parallel, diagonal) can all help narrow the street. Building design—especially appropriate height, massing, and limited setbacks—can also help frame the street.

### *Transit*

Major obstacles to transit include more than the quality or frequency of service. Sprawling development means that too many areas cannot be effectively served by transit. The destinations themselves may not lend themselves to walking—a problem

for someone arriving by transit. Transit routes should be aligned with a network of transit-oriented Neighborhood Centers and travel demand generators such as the airport and industrial parks. The routes should also target the needs of citizens including students, the elderly, the disabled, and economically disadvantaged households that lack cars.

### *Parking*

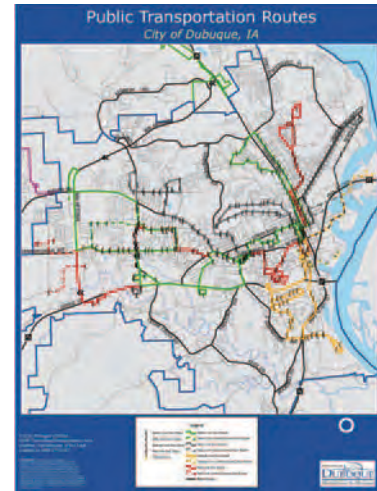
The city has a downtown parking system study that, as of this writing, was soon to be underway. This study will explore a wide range of parking-related topics, including supply and demand, rates, and links to transit. The study should also consider circulation and signage to direct visitors to parking. As with other forms of infrastructure, the city should strive to maximize parking supply by encouraging shared parking. Private owners may be attracted to this concept through mechanisms such as a parking management district where they can share in the parking revenues. Gains from such efficiencies in the downtown and other neighborhoods can allow for lower parking requirements, thereby reducing a cost factor in development.

A revision of parking requirements should also be considered in more suburban development, considering how parking lots for big-box and chain stores are hardly ever filled near capacity. In addition to revised parking minimums, the city could consider parking maximums to ensure more efficient use of land.

### *Unified Development Code*

The Unified Development Code (UDC) should promote sustainable design, perhaps at first providing incentives for (rather than requiring) private developments to incorporate green building principles. Sustainable design criteria should apply across the board, covering building and site as well as both greenfield and infill projects. Over time, as green building becomes the norm in the development industry, the city can require these design features for more project types.

Education and outreach regarding the benefits of green design—financial, social, and environmental—will help the city to apply incentives and move toward requirements. On the public-sector side, the city itself should “LEED by example,” applying Leadership in Energy and Environmental Design (LEED) standards for renovation and new construction of municipal buildings. The city should “ring-fence” its own savings from



green design to reinvest in future sustainability efforts. The city should work with the school district, colleges, and other major institutions to go green.

From a planning perspective, the criteria should place additional value on the preservation and greening of existing buildings over the construction of new ones. They should consider the location and context of a green building. If a green building is located in a sprawling, auto-dependent area, is the development truly sustainable? The UDC should also serve as an alternative to typical zoning policy by focusing more on design. A form-based code or similar approach can directly relate to the vision and planning goals, recognizing that where various land uses are compatible, the way people experience a place is based more on its physical character.

*Monitoring Progress*

Stakeholders called for accountability to ensure that the city’s strong vision and comprehensive plan are implemented. For the implementation mechanisms discussed above, the city should establish a set of indicators, determining current baseline figures and short-term (3 to 5 years) and long-term (10 to 20 years) targets.

INDICATOR	BASELINE	TARGET	ACTIONS (TO ACHIEVE TARGET)	WHO MEASURES?

Targets or indicators can include the following:

- Reduce vehicle miles traveled per capita
- Reduce share of work commutes by driving alone
- Reduce expenditure per capita for new infrastructure
- Increase citywide population density
- Increase downtown residential base to X
- Increase warehousing district residential base to X
- Number of new and renovated buildings incorporating green design
- Number of affordable housing units built (break down by area, e.g., West End)
- Increase home ownership rates in XYZ neighborhoods

#### *Connected Issue Areas*

Smart-growth considerations cut across the four other issue groups significantly.

**Neighborhood reinvestment.** By reducing sprawl, the city can channel development toward revitalizing neighborhoods, taking advantage of existing buildings and infrastructure (both social and physical).

**Sustainable design.** This initiative should extend beyond the level of an individual building or site—also linking that building or site to the context of location and proximity to existing services and infrastructure.

**Stormwater management.** More compact development and preservation of open space, especially around key features of the watershed, will help manage stormwater and maintain water quality.

**Bluff development and preservation.** Appropriate development along the bluffs will help relieve development pressures farther out from the city and beyond.

Themes such as transportation, implementation tools such as the UDC, and the need to measure progress all cut across the four other topics.

# STORMWATER RUNOFF VS. STORMWATER MANAGEMENT

## A Historic Perspective

Sustainable stormwater management is a relatively new term in the engineering and planning professions, but many of its design principles have been in practice for decades. In fact, one could argue that Fredrick Law Olmstead's design of New York's Central Park or Boston's Back Bay Fens in the 1800s exhibited many sustainable practices.

The ecology movement of the 1960s also gave sustainable design principles a foothold from which to build. Ian L. McHarg's classic book, *Design With Nature* (1969), advocated that land development be based on a region's natural features including geology, soils, drainage, hydrology, vegetation, and habitats, to name a few.

In the last decade, "sustainable design," "green building," and related terms have become commonplace even in popular culture, and politicians (notably Al Gore and Chicago mayor Richard Daley) have become strong advocates for sustainability. In addition, nonprofit and trade organizations including the AIA, the U.S. Green Building Council, the American Society of Landscape Architects, and the American Society of Civil Engineers have conducted conferences, published books, and provided consulting services (i.e., the SDAT program) to advance sustainability issues.

With this background in mind, the AIA SDAT began to look at Dubuque's stormwater challenges with the goal of developing a sustainable management system that is functional, attractive, and cost-effective.

## The Dubuque Story

Dubuque, the first permanent European settlement in what would become the state of Iowa, has an interesting history tied to fur trading, lead mining, lumbering, and transportation due to its position on the Mississippi River. The city's riverfront location also led to a series of disastrous floods over the years that eventually resulted in the construction of a floodwall in the late 1960s. More recently, the riverfront has been the site of redevelopment projects including the riverwalk, the National Mississippi River Museum and Aquarium, and several private developments. Given a history so tied to its riverfront location and flooding, a discussion of sustainable stormwater management techniques seems appropriate.

The recently completed Drainage Basin Master Plan (2001) outlined deficiencies in the existing system: “Problem areas are associated with limited hydraulic capacity of existing detention cells, natural channels, and culverts.” The Bee Branch Creek Restoration Alignment Study (2004) recommended ways to protect more than 1,100 homes and businesses from flood damage during a 100-year rain event. This study includes options for open-channel and enclosed-pipe conveyance systems. Both of these studies appear to focus on downstream improvements using traditional stormwater systems to minimize flooding.

### **The Sustainable Stormwater Toolkit**

Unlike traditional stormwater management that rapidly conveys stormwater through a system of drainage structures, pipes, and sterile detention basins, a sustainable system focuses on using natural features to improve infiltration, treat stormwater, remove suspended solids and phosphorus, and create green amenities that improve property values while lowering costs. (Staten Island’s Bluebelt system, for example, which has been in place for over 20 years, has cost about one-half the cost of a traditional system, resulting in savings of \$80 million.)

#### *Toolkit Benefits*

A sustainable stormwater system is often referred to as a low-impact development (LID) approach, which attempts to mimic the natural infiltration and groundwater-driven hydrology of historic landscapes. LID, which disperses flows and manages runoff closer to its point of origin, has the following advantages over a traditional stormwater system:

- Protects sensitive areas
- Increases wildlife habitat
- Protects water quality by reducing sediment and nutrient loads
- Minimizes erosion by reducing surges of storm sewer flows
- Reduces high and low stream flows by restoring groundwater discharges to streams
- Reduces flooding
- Improves community character and quality of life
- Creates pedestrian-friendly open space



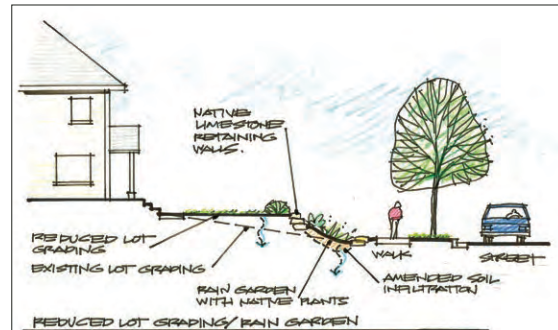
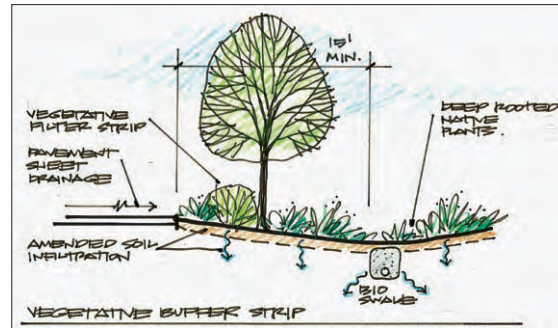
- Reduces land development and infrastructure costs
- Balances growth needs with environmental quality
- Reduces infrastructure and utility maintenance costs
- Improves property values

#### *Low-Impact Development Tools*

The preferred method to achieve these goals is to manage stormwater in small amounts beginning at the highest elevation of the watershed to reduce volumes (i.e., flooding) at the lowest elevations. This strategy divides a site into micro-watersheds where stormwater is slowed, treated, and allowed to infiltrate. The tools used in this process include the following:

- **Green roofs:** Vegetated roofs that reduce run-off, improve energy efficiency, and create a green amenity
- **Microbasins:** Small depressions to create longer flow paths or localized depressions to encourage longer standing-water periods and infiltration
- **French drains and soak-away pits:** Rock-filled trenches that promote rapid infiltration
- **Swales:** Serpentine, vegetated swales that convey water slowly and improve infiltration
- **Bioswales:** Vegetated swales with amended soil backfill and underdrains to improve infiltration
- **Street tree filters:** Systems that divert a portion of street stormwater from gutters into tree planters, where water infiltrates amended soils and surrounds plant roots (e.g., the Green Street project in Portland, Ore., and the SEA [Street Edge Alternative] project in Seattle)
- **Rain gardens:** Landscape depressions filled with amended, permeable soil and native, deep-rooted, moisture-tolerant plants to promote infiltration
- **Native plantings:** Use of native plants to reduce the need for irrigation and reduce runoff. Native plants also slow runoff and improve infiltration with their deep, fibrous root systems.

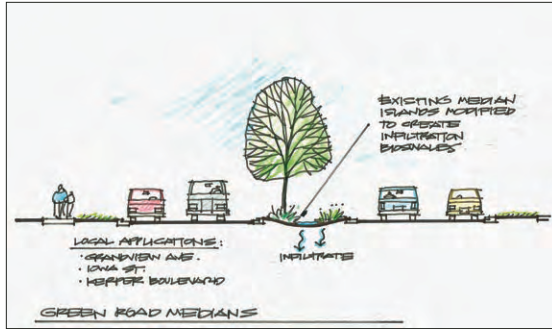
- **Permeable pavements:** Open-graded, permeable asphalt pavement; open-cell unit pavers; and porous concrete—typically used in parking lots and low-traffic areas—to provide storage space and another infiltration route for stormwater
- **Street trees and other plantings:** Landscaping to intercept rainfall, reduce erosion, improve infiltration, slow runoff, and reduce peak flows
- **Vegetative buffers:** Bands of native plantings that intercept runoff from developed areas before it reaches detention basins or natural water courses (another pretreatment tool)
- **Sidewalks and drives sloped toward open space:** A tool to provide water for site vegetation, which slows surface water flow, improving infiltration. This technique eliminates the need for curbs, gutters, and catch basins, and the open space slows the transport of untreated water and associated pollutants while reducing construction costs.
- **Reduced lot grading:** Ground-slope reduction outside the immediate perimeter of a building (where foundation drainage is not a concern) to promote stormwater infiltration
- **Rainwater harvesting systems:** Cisterns and rain barrels that harvest water from roof drains and downspouts for landscape watering and nonpotable uses
- **Check dams:** Where narrow areas and/or excessive grades force the construction of less than ideal steep swales, rock check dams can be added to slow flows, minimize erosion, and improve infiltration.
- **Open water features:** To reduce runoff through evapotranspiration, improve habitats, and create attractive community amenities



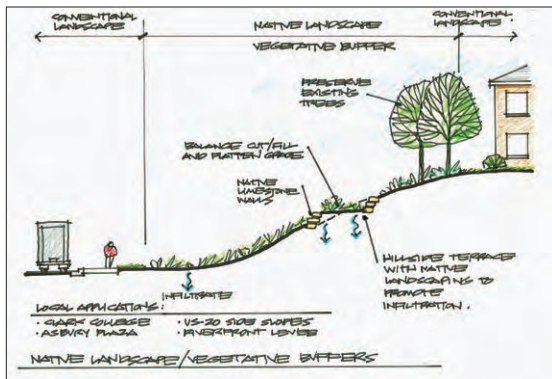
The tools outlined above provide a framework for sustainable stormwater treatment. Successfully applied, they reduce construction and maintenance costs, improve water quality, reduce flooding, stabilize groundwater levels, reduce heat-island effects, beautify neighborhoods and development sites, calm traffic, and improve property values. In a LID landscape, stormwater is treated as a resource, not a waste product.

## Applying the LID Toolkit to Dubuque

In Dubuque, these tools can be applied to new development sites or retrofitted to existing properties. From our brief tour of Dubuque and subsequent meetings with community members and city staff, some applications of these tools to the city seem obvious.



**Green street medians.** The city could build stormwater-infiltrating green medians on many streets, including Grandview Avenue, Iowa Street, and Kerper Boulevard. These would be an attractive amenity that reduces the potential for downstream flooding.



**Vegetative buffers.** Vegetative buffers that slow and filter runoff before infiltrating could be built along the front-yard setbacks of many public streets, including Clark College, Asbury Plaza, and US-20 side slopes. These buffers could also replace some of the expansive lawn areas in city parks and business parks, further improving water quality and reducing flood hazards.

**Porous pavements.** City staff felt that porous pavements could be successfully used to reconstruct much of the 26 miles of public alleys that are in poor condition.

Many visitors felt that these and other strategies should be applied to the Bee Basin Watershed to reduce the size and cost of proposed stormwater improvement while reducing the impact on the adjoining neighborhood.

In addition, the local SDAT stormwater stakeholder group discussed many management tools and outreach efforts that are underway as well as new programs that should be further developed and coordinated into a comprehensive plan of action:

- **Stormwater stenciling programming:** Continue existing educational program
- **New subdivision ordinances:** Military Road Subdivision Model Ordinance developed; Dubuque County Soil and Water Conservation District (SWCD) developed.
- **Catfish Creek Homeowners Covenant:** Ordinance or policy model developed (SWCD)
- **City's Green Subdivision Task Force:** Draft proposal developed for review
- **Water quality monitoring:** Develop guidance for phasing and maintenance decisions

- **Stream restoration:** Restore stream bank in bike-trail areas (Middlefork) of Catfish Creek
- **River museum partnership:** Develop federal partnership with proposed museum research center (McKnight Foundation) to expand education and monitoring efforts
- **Urban watershed program:** Tap into Iowa Department of Agriculture's new urban conservation program to hire staff to develop water quality initiatives
- **Youth programs:** Develop outreach programs in partnership with schools to educate and involve youth in stormwater projects
- **City Soil Erosion and Sediment Control Ordinance:** Enforce city ordinance, identifying tools, performance measures, enforcement actions, and staffing
- **Educational workshops:** Develop workshops to educate developers and contractors about erosion control ordinance and proper application of LID tools
- **Recognition programs:** Expand programs and awards to recognize noteworthy projects (i.e., rain garden award, parade of green homes)
- **Green alleys:** Build pervious pavements and infiltration tools in alleys (Chicago model program)
- **Pilot projects:** Demonstrate and test effectiveness of tools and maintenance practices (especially in Bee Branch Basin Area)
- **Cash incentives:** Develop cost-sharing program to subsidize LID tool development on private property (e.g., Rock Island, Ill., rain garden program)
- **Social equity:** Develop standards to test effects of proposed programs on social equity (e.g., Bee Branch home purchases)
- **LID education:** Events, tours, and expos to educate public about rain gardens, rain harvesting, green roofs, and other tools in collaboration with school system and river museum
- **Agricultural tools:** Improve stormwater management tools for farmlands, cattle yards, and other sites in out-lying areas



- **Educational links:** Promote best management practices with inviting educational tools and link to the city Web site, cable-TV station, city newsletter, and other media
- **Interjurisdictional regulations:** Develop regulations in cooperation with the county, Ashbury, and Sageville
- **LID stormwater tools:** Develop coordinated program to implement LID tools in the city

### **Sustainable Stormwater Management: A Win-Win-Win Situation**

Sustainable stormwater management is one component of a sustainable community, which should incorporate environmental integrity, economic prosperity, and livability. While some believe these components are mutually exclusive, the opposite has proven true when they are appropriately applied in an urban environment (for example, many developers sell homes and office sites that adjoin open space at a premium).

**Environmental integrity** involves more than simply protecting a natural environment; it also enhances the environment and thus increases biodiversity. Sustainable stormwater techniques enhance natural features.

**Economic prosperity** is enhanced by sustainable stormwater management, which has proven less costly than traditional methods while reducing flood hazards and improving water quality. In addition, increased property values associated with these techniques improve the local tax base.

**Community livability** is improved when sustainable stormwater management increases access to open space, trails, and other recreation amenities. The open space network often serves as an organizing tool linking homes with schools, businesses, and parks.

These tools can help a community on every scale: the individual lot, the neighborhood, the city, and the watershed. The end result is the same: improved environmental quality, infrastructure and maintenance cost savings, and enhanced quality of life—a win-win-win situation.

# TRADITIONAL DEVELOPMENT VS. SUSTAINABLE DESIGN

## Background Assessment

Dubuque is already on a path toward becoming a sustainable community. It has a history of collaboration with partners such as the neighborhood associations to develop the livable neighborhood concept. This collaboration evolved from simply focusing on the livable neighborhood concept to developing a broader sustainable community vision. The city government created a draft sustainable vision statement and identified some goals.

To meet the challenge of putting the community on a sustainable path, the city is (a) updating the comprehensive plan, (b) prioritizing goals, and (c) preparing and implementing an action plan. City entities that can take steps to fulfill the plan include the following:

- **Advisory commissions:** environmental, housing, historic preservation, long-range planning (to update the comprehensive plan), and zoning
- **Neighborhood development specialist**
- **Sustainability Working Group**
- **Downtown Master Plan Task Force**
- **County Solid Waste Authority** (recycling, composting, education/outreach, and so on)
- **A green inventory map**
- **“Keep Iowa Beautiful” partnership**
- **America’s River Corporation partnership**

More partnership opportunities are ongoing with neighborhood associations, colleges (specifically, environmental classes), community schools, and many others.

In addition, the city government has publicly pledged (through Council action) to make the city a “green community,” and the mayor signed a climate-change protection pledge (a project of the U.S. Conference of Mayors currently involving 691 mayors). There is also a tri-state trail vision, opportunity to expand the existing farmers market, and a WiFi initiative. The city has an opportunity to promote sustainability education through partnerships with organizations that put on local festivals. Community events afford opportunities to encourage use of public transportation. There is an opportunity



to expand the city's initial effort in using alternative fuels within the government fleet to other fleet owners and overall communitywide. Health providers are an opportunity for a partnership in terms of sustainability and the health advantages.

### **Defining Sustainability**

The Traditional Development vs. Sustainable Design Subcommittee began by discussing the components of “sustainable development”:

- Building sustainable buildings (materials)
- Making waste a resources (e.g., methane captured and used as a fuel)
- Incorporating energy-efficiency measures and/or renewable-energy technologies in all construction and in adaptive reuse of existing housing stock
- Building design that results in health benefits
- Incorporating passive and active open space in residential and commercial development (ensuring that open space has a purpose)
- Recapturing wastewater as a resource and responsibly managing all water sources
- Promoting an interconnected and efficient multimodal transportation system
- Neighborhoods with incorporated systems (easy access to goods and services)
- Building with the landscape instead of reshaping it
- Public education and partnerships related to sustainable design and practices
- Access to green spaces without a car (in residential areas and connectivity)
- Cluster development—smaller lots with larger public green space
- Gray water—looking at water other than stormwater as a resource, not waste

### **Focus on Building, Transportation, and Land-Use Sectors**

The subcommittee also looked at the two community sectors that are critical to a sustainable path, primarily due to their energy use: buildings and transportation.

A specific building-related issue was the need to recognize the difference between developers and builders. Second, because downtown has been developed as an office park instead of a business district, the city needs to focus on mixed development with the loss of neighborhood stores and movement toward more of the chain stores.

Transportation-related issues included the following:

- Overall transit system—movement of both vehicles and services, both individual and commercial use
- “We have a community that doesn’t use public transportation because public transportation doesn’t go to enough places and doesn’t come often enough.”
- Parking
- Traffic management, e.g., interconnection of traffic lights to control of traffic movement
- Routing truck traffic from the north end to the south end of Dubuque without forcing trucks to go downtown and through neighborhoods

Next, the subcommittee addressed the strengths, weaknesses, and opportunities for sustainable activity in the building and transportation sectors. Last, the subcommittee looked briefly at land use and water (which other subcommittees addressed in greater detail).

### *Buildings and Codes*

#### **Strengths**

- Dubuque has a city building services department—best for adaptive reuse but weak in one area and strong in another area.
- Dubuque has a historic building code.
- City is developing a UDC and connecting zoning regulations with building codes.
- Current incentives for added extra parking in a building complex
- Zoning regulations
- Green inventory of the city buildings
- Deconstruction waste recycling

#### **Weaknesses**

- Dubuque lacks a city/county energy code and currently uses only state building/energy codes.
- Local builders lack education in green construction principles.
- Lack of utility-company participation means more incentives needed to support affordability of new technologies and energy-efficient upgrades such as efficient

HVAC systems and appliances for homeowners and builders as well as similar incentives for the business/commercial sector.

- Home builders and contractors lack education about sustainable practices.
- Diminishing Main Street competes with rampant “big box” developments.
- City has only one “green design” firm, but others are working toward becoming green firms.
- Recycling is not required but those who do recycle receive incentives.
- State resources provide important opportunities but are not being tapped effectively.

### **Opportunities**

- Consider a different sort of rating and classification—and link codes and buildings to green standards
- Bring city utilities back into stronger partnership with city government
- Educate home builders
- Train students to rehabilitate buildings (e.g., Central Alternative students get involved in home building while learning at the same time), producing model energy-efficient homes with renewable-energy applications (e.g., solar hot-water systems)
- Promote health benefits of green buildings and development
- Use UDC language to encourage or even require green building design and construction that produce showcase projects
- Use existing commercial buildings that have renewable-energy sources and energy-efficiency measures as demonstration projects
- Educate city staff and possibly hire an expert in green buildings
- Designate a place and process for recycling building waste during both construction and deconstruction
- Require recycling of deconstruction and construction materials through city ordinances
- Provide incentives for clean energy companies to locate in Dubuque for manufacturing and assembly plants, also resulting in more local jobs
- Link codes and buildings to green “standards” such as building layout and design

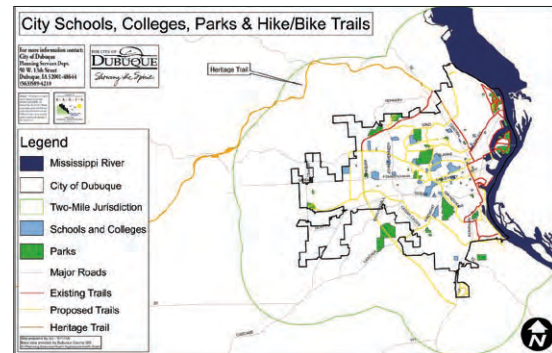
## Transportation

### Strengths

- Existing bike path system and a small number of walking paths
- Existing sidewalks downtown and in most older neighborhoods
- Mid-town schools within walking distance for students
- Free school bus rides for community children
- Pedestrian-friendly downtown
- Existing bus and trolley service

### Weaknesses

- Paths are primarily recreational.
- Bike Trails
- Limited bus service is taxpayer-subsidized, and routing is inefficient.
- Lack of public education about available alternative transportation methods
- Excessive traffic poses problems for children walking to school.
- Trolley service, limited to between Memorial Day and Labor Day, seems intended as a visitor-based transportation system (running between port and 10th Street, then through bluff, then through downtown and back to port)
- Limited number of bus and trolley stops
- Limited availability of resources explaining the route system and schedule, which are difficult to understand.



### Opportunities

- Require sidewalks in new developments
- Educate downtown businesses on the availability of the trolley service and the city staff on ways to increase ridership on the buses and trolleys
- Federal Safe Route to School Initiative

- Partnerships with businesses such as the casinos
- Citizen health education to promote walking and use of bike paths as daily exercise
- Partnerships with colleges and K–12 schools to increase mass-transit ridership while teaching students about alternative energy and fuel-efficient school transportation
- Work with businesses, employers, churches, and civic organizations to expand the knowledge about alternative fuels and transportation
- Partnerships with service stations and suppliers to offer alternative fuels at the pump

### *Land Use and Water*

#### **Strengths**

City-owned land is available, which offers an opportunity to use it sustainably.

#### **Weaknesses**

No existing water quality requirements

#### **Opportunities**

- Amend the south port development plan to use it sustainably
- Require sustainable design and building in the Dubuque Industrial Park West and Dubuque Technology Park
- Incorporate green guidelines in the annexation plan

#### **Vision and Goals**

The subcommittee also recommended additions to the city’s vision and goals.

#### *Vision*

- A progressive, sustainable city for future generations
- A strong, balanced economy
- Preserved or recaptured natural assets and historic architecture
- Quality, livable neighborhoods with character (existing and new)
- A community well-educated about sustainability

## *Goals*

1. Improve connectivity (transportation, telecommunication, community)
2. Plan and manage growth and reinvestment
3. Partner with businesses, organizations, and schools
4. Develop the riverfront sustainably
5. Engage and inform tri-state area citizens
6. Use renewable energy and energy-efficient resources
7. Improve public health
8. Build sustainable buildings
9. Address parking availability

## **Success Indicators**

How can Dubuque measure whether it is on a sustainable path? The subcommittee developed an Indicator Framework. Given the focus on goals, we used goal-based indicators as an example. The criteria for the indicators were that they are (a) relevant, (b) easy to understand, (c) reliable information, and (d) accessible data that can be used for evaluation in a short-term timeframe.

### *Goal 1: Improve Connectivity (Telecommunications)*

- **Indicator:** WiFi coverage areas
  - o **Purpose:** Meets community need (new demographics), development incentives, access for all residents and businesses, remains competitive
    - **Linkage:** Balanced economy, planned and managed growth, livable neighborhood
- **Indicator:** Installation of underground fiber-optics system
  - o **Purpose:** Linking city facilities, traffic lights, safety, congestion management, and reduced maintenance costs and response times
    - **Linkage:** Transportation management, public health, quality neighborhoods

*Goal 1: Improve Connectivity (Transportation)*

- **Indicator:** Increased ridership on public transportation
  - o **Purpose:** Reduced congestion, improved public health, supporting tax dollars, energy efficiency, improved land use/parking, increased service, reduced emissions
    - **Linkage:** Public health, livable neighborhood, business and community benefits
- **Indicator:** Increased number and use of bike racks and paths/lanes
  - o **Purpose:** Reduced congestion, improved public health, supporting tax dollars, energy efficiency, improved land use-parking, increased service, reduced emissions, increased use of renewable energy (e.g., lighting)
    - **Linkage:** Public health, quality neighborhood, business community, consumer choices
- **Indicator:** Progress on SW arterial (reduction of truck traffic downtown)
  - o **Purpose:** Reduced heavy traffic in neighborhoods, improved road maintenance, neighborhood and pedestrian safety, economic growth (existing and future industry)
    - **Linkage:** Managed growth, riverfront development, balanced economy, livable neighborhood
- **Indicator:** Increased use of alternative-fuel vehicles
  - o **Purpose:** Use waste gas and other alternative energy sources to reduce fossil-fuel consumption and conduct an impact study on alternative-fuel production
    - **Linkage:** Public health, climate change, energy security
- **Indicator:** Increased use of other mass-transit options (rail, air, boats, 4th Street elevator)
  - o **Purpose:** Reduce cars on street, improve access (economic development, strengthen local economy)
    - **Linkage:** Public health, economy, riverfront development, planned and managed growth



- **Indicator:** Increased pedestrian traffic and improved walkways and trails
  - o **Purpose:** Public health, reduced congestion, energy efficiency, improved land use, increased services, reduced emissions
    - **Linkage:** Public health, planned and managed growth, consumer choices, quality neighborhoods

*Goal 1: Improve Connectivity (Community)*

- **Indicator:** Increased mixed development
  - o **Purpose:** Decrease vehicle traveling, safety, reinvestment in neighborhoods, local economic growth, convenience
    - **Linkage:** Planned and managed growth, quality neighborhoods, economy

*Goal 2: Plan and Manage Growth*

- **Indicator:** Decreased vacancies (commercial and residential) and decreased energy use
  - o **Purpose:** Use existing building stock, infill development, reuse infrastructure, decrease fossil fuel consumption, economic benefit, mixed development
    - **Linkage:** Quality neighborhoods, sustainable buildings, economic benefits, promote “live-work” concept, efficient resource use
- **Indicator:** Implementation of, and adherence to, UDC and other codes and plans
  - o **Purpose:** Encourage structured growth with green design principles, update outdated code (flexibility, interconnect zoning and building codes)
    - **Linkage:** Economy, quality neighborhoods, sustainable buildings, engaged citizens, planned and managed growth

*Goal 3: Partner with Developers, Organizations, and Public Education*

- **Indicator:** Increased use of incentives and resources
- **Indicator:** Adoption of sustainable missions and goals by development partners

- **Indicator:** Increased number of green certification programs
- **Indicator:** Increased school participation (K–College, Green Vision Education)
  - o **Purpose:** Educate targeted audiences, engaged citizens, increase partnerships, involve future generations
    - **Linkage:** Sustainable city for future generations

*Goal 4: Develop the Riverfront Sustainably*

- **Indicator:** Increased use of renewable resources and energy efficiency in buildings
  - o **Purpose:** Decrease operating costs, building comfort, health and environmental benefits
    - **Linkage:** Public health, riverfront preservation
- **Indicator:** Reduced stormwater runoff
  - o **Purpose:** Protect riverfront ecology
    - **Linkage:** Water quality
- **Indicator:** Development balanced with recreation and pedestrian uses
- **Indicator:** Reduced waste
- **Indicator:** Increased awareness of impact on river
  - o **Purpose:** Keep people connected to river, tourism

*Goal 5: Engage and Inform Citizens*

- **Indicator:** Increased number of citizens involved in programs and projects (e.g., recycling, use of energy-efficient appliances, weatherization of homes)
- **Indicator:** Increased number of businesses recycling
- **Indicator:** Increased number of available green projects and programs
- **Indicator:** Increased media coverage
- **Indicator:** Increased youth involvement
  - o **Purpose:** Educate citizens, active citizens, economies of scale-tax dollars for landfill etc., develop relationships with tri-state organizations and governments (Regionalism)
    - **Linkage:** Sustainable city and region, public education

#### *Goal 6: Use Renewable Energy and Energy-Efficient Resources*

- **Indicator:** Increased gray-water use
- **Indicator:** Increased green inventory efforts
- **Indicator:** Completed energy profile of the city
- **Indicator:** Use of new energy technologies (solar, wind, geothermal, tidal wave, biomass, waste gas) in buildings and transportation
- **Indicator:** Use of electric or alternative-fuel vehicles
  - o **Purpose:** Energy efficiency, air quality, water quality, reduced carbon footprint and emissions, model in use of renewable resources, job creation
    - **Linkage:** Public health, economic development, quality neighborhoods

#### *Goal 7: Improve Public Health*

- **Indicator:** Decreased rates of asthma, diabetes, obesity, and heart disease
- **Indicator:** Increased air and water quality
  - o **Purpose:** Increased quality of life, decreased medical and insurance costs, decreased time away from work, increased worker productivity, increased profit
    - **Linkage:** Quality neighborhoods, economy, public health

#### *Goal 8: Build Sustainable Buildings*

- **Indicator:** Increased number of green loans
- **Indicator:** Increased number of buildings with Energy Star, LEED, or other green certifications
- **Indicator:** Increased historic preservation and other building reuse
- **Indicator:** Decreased operational costs
- **Indicator:** Decreased waste to landfill
- **Indicator:** Decreased use of square footage per capita
- **Indicator:** Increased use of local, environmentally-friendly materials
- **Indicator:** Incorporation of energy codes into building codes

- **Indicator:** Green building guidelines and enforcement in UDC
  - o **Purpose:** Decreased energy profile, increased use of renewable energy sources and energy-efficiency technologies, increased preservation of structures and character, money saved, jobs created, materials reused
    - **Linkage:** Quality neighborhoods, economy, health, job growth, reduced carbon footprint, sustainable city

*Goal 9: Address Parking Availability*

- **Indicator:** Changed zoning requirements to accommodate mixed-use development (shared parking ratios)
- **Indicator:** Increased opportunities for park-and-ride facilities
- **Indicator:** Revised zoning requirements that address parking
- **Indicator:** Increased pedestrian linkages
- **Indicator:** Incentives created to balance parking needs
- **Indicator:** Increased motorcycle or alternative-transportation parking options
  - o **Purpose:** Implementation of smart-growth principles, increased public health, increased public transportation, increased energy efficiency
    - **Linkage:** Transit, economy, quality neighborhoods

## **Recommendations**

- Incorporate green building guidelines in the Unified Development Code
- Promote sustainability through partnerships with utilities, festival organizers, media, schools and colleges, civic and church groups, neighborhood associations, and other entities
- Partner with state and federal government to access resources and increase energy efficiency and use of renewable-energy technologies in the building and transportation sectors
- Make waste (e.g., landfill and other methane gas sources) an energy resource
- Develop an interconnected and fuel-efficient (including use of renewable energy) multimodal transportation system; continue to expand bike and people paths
- Only allow development that builds with the existing landscape and natural resources and does not reshape it
- Look at water as a resource, not a waste
- Create more incentives for new and major rehabilitation of buildings to achieve a “green building” status such as Energy Star and LEED
- Ensure that all motors for pumping are energy-efficient and have a renewable-energy fuel source backup

# BLUFF PRESERVATION VS. BLUFF DEVELOPMENT

## Background

The issue of bluff preservation vs. development evolved from a proposed condominium project called River Pointe, located on a key property known as Kelly's Bluff. The project's effect on the scenic views and historic character of the surrounding community produced a great deal of concern about protecting the bluff in the future.

Because the city had begun the process of creating a Unified Development Code (UDC), it decided to analyze the bluff and formulate potential protection tools as part of the code. A Citizens Advisory Committee worked with the city planning staff and its consultant on this issue. They began developing recommendations for regulations to be incorporated within the Dubuque City Code. The SDAT was asked to help the community with the "big picture"—looking at the sustainability of the bluffs in terms of preservation vs. development.

## SWOT Analysis

Asked to tell the SDAT how they see the bluffs in one or two words, the stakeholders offered the following key words and phrases:

- Unique
- Soulful
- Character
- Environmental significance
- Historic significance
- "Best-kept secret"
- Picturesque

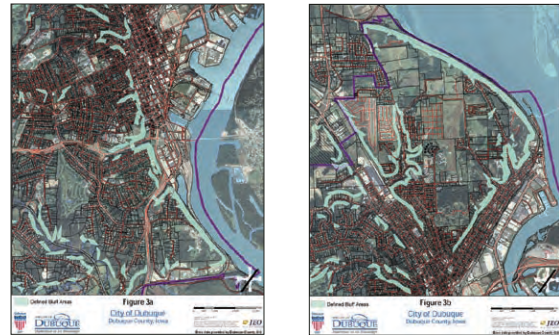
These terms became important in the discussion about sustainability as it related to development vs. preservation. The City of Dubuque has developed marketing materials that promote community sustainability by emphasizing the "Live, Work, Play" motto. However, to sustain the principles of living and working in the community, there must be commercial, office, and residential development. To promote the principles of living and playing, there must be preservation of existing communities, particularly historic ones, as well as Dubuque open spaces and resources.

The key to sustaining these principles as they relate to the bluffs is balancing the development needs with the preservation aspects. The group developed a list of issues relating to preservation and development of the bluffs and prioritized these items indicating the strengths, weaknesses, opportunities, or threats concerning each of the issues.

## Preservation Issues

### *Viewsheds (Strength and Opportunity)*

Viewsheds are a key element of preservation. Unprotected viewsheds could change the character of the blufflands both from within and outside of the bluffs. This issue provides an opportunity to help the community understand the important role that viewsheds have on quality of life.



### *Community Character (Strength and Opportunity)*

It was felt that the character of the blufflands was a tapestry that strongly defines area. There are also opportunities to build on that character in terms of the historic homes and the stone work, as they are a monument to the future.

### *Nature (Strength and Opportunity)*

The natural environment is a strength as a valuable green space as well as a geologic feature. It is also a mix of an urban and suburban environment. There is an opportunity to protect the habitat, which includes plant and animal species—in particular, endangered ones.



### *Historic and Cultural Features (Strength and Opportunity)*

This is a strength because the bluffs are an important aspect of the legacy of Dubuque. It is also an opportunity because the history and culture of the bluffs is an attraction and could be developed as part of heritage tourism.







### *Recreation (Opportunity)*

The bluffs are an opportunity to expand existing leisure opportunities—and create new ones—that are fun, healthy, and would improve quality of life.

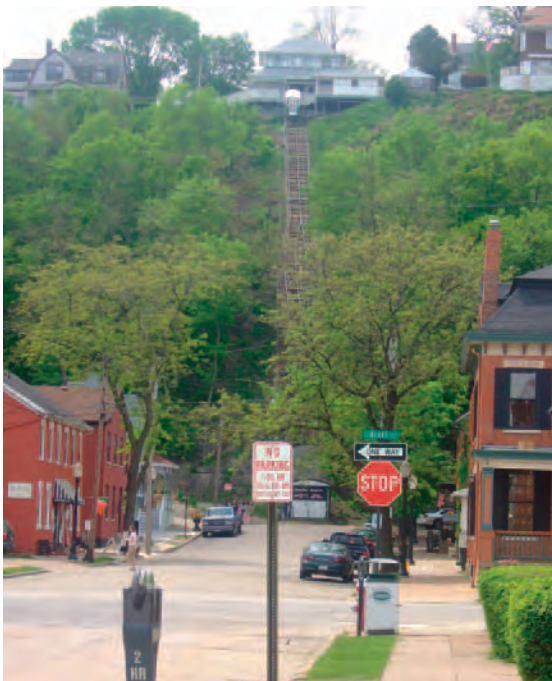
### *Stewardship (Opportunity and Weakness)*

There are numerous opportunities to educate and involve current and future generations in becoming stewards of the bluffslands. This could also be a weakness because if caretakers of the land do not step forward, the preservation effort would be difficult.



### *Tourism (Opportunity)*

Tourism is an opportunity to promote the bluffs in terms of recreational qualities, which could include both active and passive recreation such as caving, rappelling, hiking, birding, and so on. Opportunities for ecotourism and heritage tourism are also possibilities. Tourism could also provide economic opportunities, but controls over the type and amount of tourism traffic would be needed so as not to degrade the value of the bluffs.



### *Education (Opportunity)*

Numerous educational opportunities could include students from public schools and local colleges as to the importance of current and future preservation of the bluffs. Education is also an opportunity to engage people of all ages and socioeconomic backgrounds.

## **Development Issues**

### *Harmony (Opportunity)*

This is one of the most important issues because development provides an opportunity to expand the harmonious quality and scale of the community with more stringent design standards.

### *Physical Liimits (Threat)*

The safety of the bluffs in terms of falling rock and the uncertainty of the structural stability create a physical threat both above and below the bluffs.

### *Public Rights vs. Private Rights (Opportunity and Threat)*

The threat of development is the reason this issue was brought to the forefront of the community. It is an opportunity for the community to open the discussion and to try to find a balance between private rights and the public good. This is also an opportunity to address the issue that, although the river—an important component of the bluffs—is highly regulated, the blufflands currently have no development guidelines.

### *Stormwater (Opportunity and Threat)*

Stormwater problems are a threat to the bluffs as a matter of economic justice, but they also provide an opportunity to address and correct erosion and drainage issues that affect not only those living below the bluffs but also the entire river basin.

### *Economic (Opportunity and Threat)*

Development provides an opportunity to develop the tax base as well as short-term construction jobs, but it is also a threat if property values are decreased or vacancies occur as a result of development.

## **Recommendations**

Working from the key words that the stakeholders had previously developed, the group talked about which of these they would like the residents of Dubuque to use 150 years in the future to describe the bluffslands. From this discussion, the following goal was developed: “Sustain the unique character of the bluffslands, which encompasses historic, cultural, and environmental significance. The bluffslands make Dubuque a desirable place to live, work, and play.”

Given this goal, the group developed several specific recommendations regarding the sustainability of the bluffslands. Throughout their discussion, however, they kept returning to the need for an overall vision or master plan for the bluffslands, which developed as described below.

### **Primary Recommendation**

#### *The Master Plan Vision*

Conduct a thorough mapping and analysis of the bluffslands to develop a master plan that prioritizes areas for both sustainable growth and preservation, including opportunities to establish greenways along the bluffslands.

It was suggested that the master plan visioning for the bluffslands consist of all bluffs as defined by the City Bluffland Advisory Committee in the city of Dubuque. The analysis and mapping should include the hydrology; vegetation; ownership; archaeology; mining routes; geology; zoning; topography; and other physical, cultural, and historic features of bluffs. Using the mapping and analysis of existing conditions, a plan would identify areas suitable for sustainable development as well as those needing protection. These areas would need to be prioritized and an action plan developed based on the plan outcome. It was discussed that many of the remaining recommendations be studied and analyzed within the context of the master plan vision.

### **Secondary Recommendations to Be Considered in the Master Plan Process**

#### *Viewsheds*

The city should work the county, state, region, and local community to preserve the viewsheds, both from within the bluffs and up to and across the bluffs

It was determined that the viewsheds were a key element of both preservation and development of the bluffslands. Discussion about the county bluffland overlay zone

included its impact on Dubuque's bluffs. Although there are not specific regulations, it was felt that the county should develop them as a level of protection for Dubuque and the county. These types of regulations also are applicable on a more regional level because development across the river in Wisconsin and Illinois could affect Dubuque's viewsheds. Although the UDC will provide one level of protection, other more regional regulations and controls should be evaluated. The group felt that both river viewsheds and gateway viewsheds should be evaluated within the context of the master plan.

The group of stakeholders also felt that local considerations should include evaluation of zoning in districts below the bluffs and its impact on bluff viewsheds. It also felt that education of property owners above and below the bluffs as to their property's visual impact on the city is crucial.



### *Character*

Two types of character were discussed relative to the blufflands:

- **Architectural.** Future planning and zoning regulations should consider the existing scale and architectural character of the blufflands.
- **Landscape.** Specific areas should be identified for protection of landscape features and elements.

It was felt that there were not enough adequate tools in place to help protect the "tapestry" that is the architectural fabric of the bluffs. The UDC recommendations on the blufflands are a great start, but there may need to be more stringent design standards. This would relate not only to new buildings but also to renovations.

It was felt that the master plan process should not only define but also determine how to sustain both architectural and landscape character. The master plan could include tools such as conservation easements, zoning regulations, design standards, and public-private partnerships.



### *Recreation and Leisure*

The group discussed the numerous opportunities for recreation, ecotourism, heritage tourism, and other leisure activities relating to the bluffs. There was considerable concern that these opportunities focus not only on visitors but primarily on the citizens of Dubuque. The activities that should be evaluated as part of the plan include site-specific activities such as rappelling, caving, bird watching, and hiking as well as other active and passive recreational pursuits. With the extent of recreation surrounding the blufflands such as Eagle Point Park and the Mines of Spain, potential connections should be evaluated as part of the visioning process. The recommended activities must be sensitive to the historic and environmental assets of the bluffs.

### *Education*

The master plan provides a great opportunity to engage the citizens of Dubuque in the visioning process, wherein they can help to guide the future—and implement the sustainability—of the blufflands. This engagement is a great educational tool because the more the community is involved, the more understanding and ownership of the plan is fostered. It also can become an educational tool that can lead to more stewardship and long-term support for the blufflands vision. It was recommended that citizens of all ages and socioeconomic backgrounds be included in this educational process. That includes reaching out to schools, colleges, property owners, volunteer organizations, youth groups, young professionals, retired citizens, elected officials, and others.

### *Economic Value*

The city should plan economic development carefully to preserve character. It was felt that the bluffs had an economic value, and there had to be a balance between the development value vs. the preservation value for sustainability of the bluffs. Many tools should be explored as part of the master plan process, including tax incentives, green initiatives (conservation easements, for example) design initiatives, grant opportunities, preservation incentives, and so on. Economic development incentives should be carefully planned with consideration of public and private interests.

## *Maintenance*

The master plan process should include analysis of long-term maintenance of the recommended architectural features, vegetation, and stability of the bluffs. The Fourth Street Elevator and bluff stairways need long-term maintenance for user safety. Other issues include maintaining the bluff stability so that rocks do not fall onto private property and maintaining the vegetation, including recommendations for dealing with invasive species, legacy trees, and so on. Part of the sustainability issue relates to private property owners' ability to maintain developed lands as well as city agencies' ability to maintain public lands. This will be especially critical in areas with conservation easements and public-private partnerships.

By developing a master plan for the blufflands, Dubuque could become a leader in sustainability for this important asset of the Mississippi corridor. The blufflands vision could become a model for the adjacent counties and states up and down the Mississippi.

## **Connections to Other Issue Areas**

Several issues overlapped with other groups and topics in this process, including the following:

- Determining how to achieve sustainable growth in the blufflands to reduce sprawl
- Identifying and addressing stormwater issues and their impact on the structure of the bluffs as well as properties below the blufflands
- Creating connectivity with pedestrian links between the blufflands as well as with the surrounding environs
- Including all age groups and populations in sustainability-related issues
- Increasing coordination between stakeholders, the city, and other interested parties



# NEIGHBORHOOD DISINVESTMENT VS. NEIGHBORHOOD REVITALIZATION

## **Overview: Preservation *Is* an Act of Sustainability**

Sustainability comprises three essential and overlapping components: environment, economy, and equity (social-cultural)—the “Three E’s.” It is under this lens that we evaluated neighborhoods and the choices they present for the future. This approach proved beneficial in gaining an initial appreciation for the interlocking and symbiotic relationship of Dubuque’s varied districts.

## **Assessment: Strengths, Weaknesses, Opportunities, Threats**

This component of our Sustainable Design Assessment focused on several neighborhoods defined officially and unofficially by the City of Dubuque and the city’s neighborhood associations. The neighborhoods vary widely in their composition and geographical location, although most are contiguous. The prevalent observation was that each neighborhood served a variety of cultural, social, and economic needs and that they are interdependent to a degree. As we will discuss in recommendations below, there is a clear desire for the community to strengthen and build upon these interdependencies while allowing each neighborhood to retain its distinct character.

A review of the perceived strengths, weaknesses, opportunities, and threats (SWOT) revealed—not surprisingly—found that several districts had issues in common, even when those districts did not appear on the surface to be similar. It should be noted that, anecdotally, defined “strengths” and “opportunities” far outweighed “weaknesses” and “threats,” which speaks well for the optimism and love that Dubuque citizens feel for their city and its potential. We summarize each category below.

### *Strengths*

- Diversity (economic, cultural, social, geographic)
- Some of the oldest buildings in Iowa
- Several varied historic districts
- Flexibility within building types and multiuse capabilities
- Buildings reflective of local traditions, using local materials (primarily Dubuque limestone)



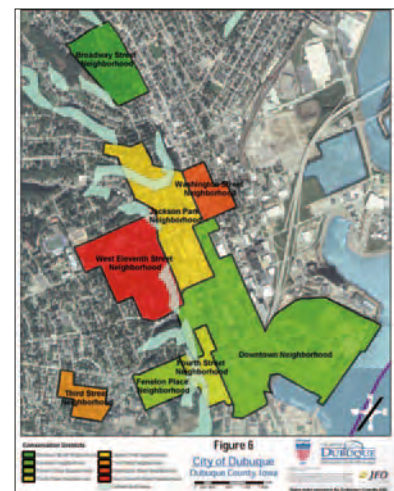
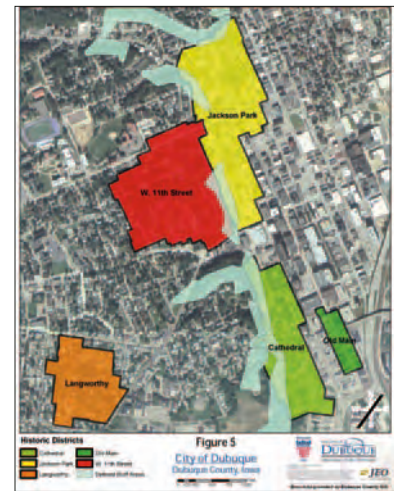
- Historic buildings' influence on design of new “future landmarks”
- Local economic incentives, including loan pools
- Linkage between historic preservation and economic opportunity
- Center for cultural activities and resulting opportunities for tourism
- Provisions for quality of life—activities for friends and families

### *Weaknesses*

- Lack of enthusiasm, among many people, for living “down-town” (Note: This comment was coupled with those who felt that living downtown at this time was exciting and provided the feeling of “homesteading.”)
- Lack of mass transit, limitations for parking personal vehicles

### *Opportunities*

- Multidimensional neighborhoods, with many aspects of daily life—personal, professional, educational, entertaining, relaxing—packaged together
- Projects that use—and build upon—existing infrastructure, especially those incorporating alternative energy systems
- Projects that use—and build upon—embodied energy
- Neighborhoods already outfitted with essential services: fire departments, police, hospitals, churches, parks, schools
- Arts Anchor School (Prescott K–5) in warehouse district
- Diversity of population
- Diversity in job creation (blue-, “green-,” and white-collar)
- Multiple opportunities for funding: federal, state, local, and special source



### *Threats*

- Demolition! (resoundingly)
- Demolition by neglect (escaping the intent of the conservation district)

- Overdone restoration, making it seem too “Disney-like” or expensive
- Population loss from failure to respond to community needs quickly enough
- Potentially limited economic opportunities for young professionals
- Lack of corporate diversity

In the aggregate, one or more of the above, under each heading, was applicable to each of the most significant districts identified by the participants of our breakout sessions, including



- Washington neighborhood
- Warehouse district
- Downtown and the cultural corridor
- Cable Car Square
- North End/The Point
- 11th Street neighborhood
- Riverfront and Port of Dubuque
- The Flats



### **Vision: The Greenest Building Is the One Already Built**

The overriding goal for redevelopment of these core districts is the reuse and continued appreciation of the original historic building stock. The diversity in population and building fabric, streetscape, and geography are important candidates for preservation, allowing for layered uses, conveniences, and experiences.

The city may supplement and strengthen existing successful programs in the following ways:

- Expand the demolition moratorium for properties in the designated conservation district
- Refine the transportation network serving each district, connect them, and integrate each one into the larger city context, including newer commercial expansion to the west



The recognition that continued development is not sustainable (as national trends show) puts the preservation and maintenance of the city's long-established neighborhoods on firm ground as an appropriate and sustainable approach toward stabilization and growth. In fact, this same approach also applies to existing building stock, when within just a few years our nation's buildings will be predominantly "historic"—that is, more than 50 years old.

Building and zoning codes will reflect the value and durability of historic buildings, striving to

- Retain the maximum amount of existing materials
- Retain the maximum amount of existing structure
- Adapt the intervention of new mechanical systems to median thermal expectations, not those based on extremes of heat or cold
- Allow for multiple uses within individual buildings and individual districts—expanding the "C1" designation for "ma-and-pa" shops that has proved to be so popular and beneficial to neighborhoods, businesses, and individual buildings

Life-cycle analysis (LCA) is an important element of sustainable building practice and helps inform decisions relative to first cost; i.e., LCA can justify initial expense when its long-term benefit is defined and cost-effective. Establishing LCA as an integral part of decision making relative to the disposition (and addition) of buildings and site elements throughout neighborhoods is an effective tool toward consistent decision making.

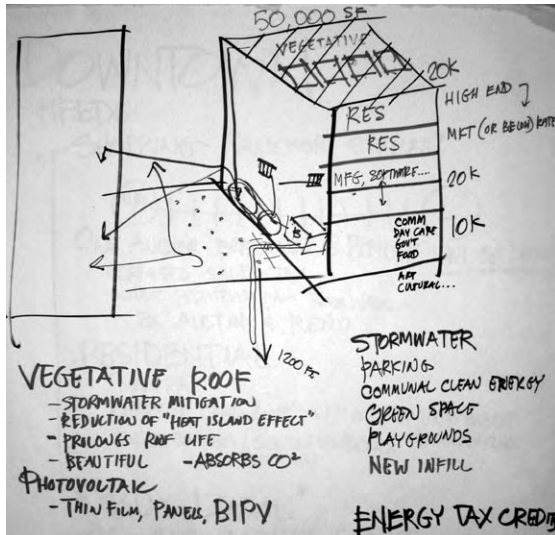
The founding of Dubuque, along the banks of the Mississippi River, has profoundly affected its identity, development, and—most recently—consideration for its redevelopment and refinement as a community. Connecting neighborhoods to one another and, ultimately, to the riverfront is an ideal that the community envisions as both strengthening its identity *from the* waterfront and being *an integral part* of it.

### **Recommendations: Toward Global, Symbiotic, and Lasting Solutions**

Most important in the consideration of how to best manage and exploit the potential that these various districts represent is their integration with one another, and that leads to the need for an integrated traffic management plan, including accommodation for inter-modal mass transit systems: bus, light rail, tram, bike, trail, sidewalk, and vehicular.

Multilayered solutions abound for each of these identified districts, offering means to satisfy several needs simultaneously, many of which overlap other immediate concerns

that the city has expressed (e.g., stormwater management). This is perhaps the most exciting aspect of this level of planning: allowing multiple needs to be addressed with symbiotic benefits. Outlined below is a hypothetical application of this approach within the warehouse district.



### Building-Specific Example

**Building size and type:** Consider a 50,000-square-foot brick masonry building in the warehouse district comprising five stories, each with a 10,000-square-foot floor plate, timber frame structure, wood floors, radiant heating, and original wooden double-hung windows. The adjacent lot is vacant.

### Ownership and use

- Fifth or upper floor (“penthouse”): Above-market-rate (upscale) residential, which partially subsidizes fourth floor
- Fourth floor: Below-market-rate residential, allowing for diversification of population (plus advantages toward funding for subsidized housing)
- Second and third floors: Light, clean manufacturing
- First or ground floor: Commercial or professional

### Ancillary sustainable program scope

- Vegetative roof not only reduces heat-island effect but also helps to reduce stormwater runoff; absorb CO<sub>2</sub>; and provide for a beautiful, more highly marketable amenity
- Roof-mounted photovoltaic sheets or panels
- Preservation of traditional sustainable building elements, including brick and stone masonry walls (thermal mass), original windows (old-growth wood, natural ventilation, increased daylighting, high-quality hardware), early lighting fixtures, original storefront
- Redevelopment with compatible new systems, including window weather-stripping systems, laminated low-e glass (*not* insulated glass units), reflective membrane roofing beneath vegetative roof, radiant heating with heat pumps for cooling

### **Communal HVAC and related benefits on adjacent lot**

- Geothermal “loop,” enabling adjacent buildings to share a source of clean, natural heating and cooling (potential benefit of reusing existing subsurface steam lines for distribution)
- Water retention system (cistern), providing for gray-water plumbing and reducing stormwater runoff
- Green space over the geothermal pump heads (beneath grade level) for recreation, playground, gardening
- New infill building

### *Universal Goals*

- Focus on infill (small, discrete buildings), not demolition and redevelopment
- Develop zoning that allows for integrated, multiple occupancies within buildings, capitalizing on the success of the city’s current C-1 zoning designation, including
  - o Healthcare facilities
  - o Day-care centers
  - o Recreation and health clubs
  - o Spas
  - o Commercial
  - o Residential (for blue-, white-, and green-collar)
  - o Light, clean manufacturing
- Establish vital daily businesses (e.g., local pharmacies, doctor’s offices, bakeries, stationery stores) with enough frequency to encourage walking within districts, especially residential districts like Washington neighborhood and the North End
- Make consistent public improvements that encourage safe walking, biking, and social interaction, such as sidewalks with increased lighting levels and enforcement of existing codes (related to pets, refuse dumping, tree pruning, signage)
- Develop natural connectivity among districts through teaching centers open to the entire city but focused on the needs and issues peculiar to the city’s historic neighborhoods:
  - o Apprenticeship training



- o Promotion of regional artisans (e.g., Amish woodworkers, graphic artists, sculptors, musicians)
  - o Instruction on indigenous planting for yards and gardens, composting, and waste management
  - o Resource center with prequalified local contractor directory
  - o Education on sustainable building technologies involving preservation, development, energy
- Provide incentives for owner-occupancy throughout the city’s historic districts, emphasizing a balance (now  $\pm 30$  percent in Washington neighborhood) with city-wide ownership rates ( $\pm 70$  percent)
- Establish preservation guidelines that promote understanding and encourage incorporation of traditional building systems (e.g., wood windows, masonry walls, timber structural systems)
- Establish infill guidelines for new buildings that discourage mimicking history (e.g., “Ye Olde New Buildings”) and encourage compatible new design that reflects its own time yet blends with the context of texture, proportion, color, massing, scale, and fenestration
- Encourage communal energy generation and distribution systems
- Encourage communal water collection systems for “grey-water” plumbing systems, irrigation, and continued reduction in stormwater runoff
- Encourage negotiations with city-determined desirable multinational retailers to adapt universal designs to the conditions in historic districts, especially the warehouse district. The proximity of so-called anchor stores to the River Walk, adjacent historic neighborhoods, and the bridges linking Dubuque with both Wisconsin and Illinois could increase sales-tax revenues.
- Designate destination zones or nodes within established districts or neighborhoods, such as the Theatre District, Restaurants On the River, or distinctive shopping avenues
- Avoid and/or discourage parking-intensive businesses while encouraging continued metered parking and shuttle services that connect neighborhoods
- Initiate a city-funded “carbon credit” for retailers in the central downtown districts, which would have a monetary value for the retailer that could be passed on to consumers in the form of reduced prices, thereby helping downtown retailers to maintain a competitive advantage over big-box stores on the periphery or within the city’s west annexes

- Strengthen and expand “conservation districts” to allow for eventual city ownership that may be transferred by lottery or auction to homesteaders (provide for appropriate “mothballing” and yard maintenance between initial contact with the owner and final disposition of the property)
- Build upon Community Development Block Grant programs (e.g., the tool-loan program in the Washington neighborhood) to give building owners ownership and management training and to identify local businesses that are a natural source of building-related materials and services (e.g., lumber, home furnishings, salvage architectural materials, legal services, architectural and engineering services, financing)
- Expand and capitalize on opportunities to fund initiatives such as preservation (e.g., Save America’s Treasures, Historic Preservation Tax Credit, TEA-21, Brownfield Redevelopment, Empowerment Zone Funds, Business Improvement District Funds, Green Building Tax Credits)
- Provide for continued arts, cultural, and social activities that combine historic neighborhoods, the River Walk, and the Port of Dubuque (e.g., culture walks, sculpture exhibitions, sports activities such as marathons or half-marathons, and sit-in “drive-ins” with classic movies displayed on sides of buildings and seating on adjacent green or vacant lots)
- Encourage tourism through local advertisements and continued regional connections but not at the expense of building a community throughout the city’s historic neighborhoods that is truly for Dubuque residents; recognize that if the city is beautiful, lively, and varied enough to satisfy its inhabitants, tourism will occur at a comfortable and manageable rate
- Turn obstacles into opportunities: Rather than encourage the divestiture of certain types of businesses—especially long-standing ones—that may now be deemed less desirable (e.g., auto salvage, auto body repair, packing houses), use these businesses as models of sustainable methods (e.g., recycling of metals, plastics, fabrics, and glass from auto salvage) and encourage outreach to local schools (K–college) and residents
- Develop objective, continuing measurement tools (i.e., metrics) that will allow the city to understand which initiatives are taking hold and working, which require refinement, and which are found to be ineffective



## MOVING FORWARD

To achieve the overall goal of becoming a truly green city, the best strategy moving forward will be for the City of Dubuque to incorporate sustainable thinking and planning into its existing initiatives and policy creation.

### **Enhanced Relationship with Dubuque County**

The SDAT study area comprises the corporate limits of the City of Dubuque and surrounding fringe area within the city's two-mile extraterritorial jurisdiction for subdivision review and approval. Under Iowa Code, the City of Dubuque has sole jurisdiction for all rezonings, planned unit developments, and subdivisions within the corporate limits as well as extraterritorial jurisdiction for subdivision review and approval within two miles of the corporate limits.

The County of Dubuque has not completely acknowledged this joint jurisdictional responsibility. The city and county are, in fact, heavily interdependent. Therefore, enhanced relations and joint planning efforts are not only recommended but also vital for the long-term sustainability of both.

### **Sustainability Planning**

The city has a number of existing and "in-process" planning documents, including a comprehensive plan, a future land use map, an annexation study, and a development policy for the two-mile fringe area. Further, there is a current effort to create a UDC that combines zoning, subdivision, historic preservation, and sign regulations.

Incorporating the philosophy, intent, and specific recommendations of this SDAT report into these various planning documents will allow for a multipronged and integrated effort to incorporate sustainable design and planning principles into the ongoing operations of the city and surrounding area.