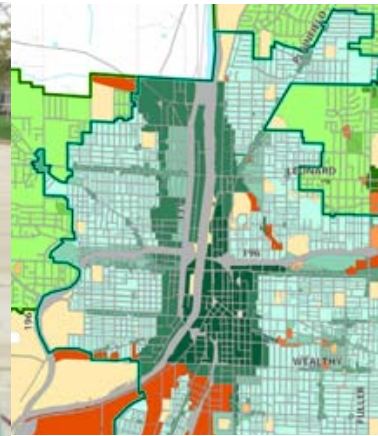


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# GREEN GRAND RAPIDS

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CITY OF  
GRAND  
RAPIDS  
March 2012



## Planning Commission - Resolution of Adoption

RESOLUTION  
CITY OF GRAND RAPIDS PLANNING COMMISSION  
GREEN GRAND RAPIDS MASTER PLAN AMENDMENT, 2011

WHEREAS a Steering Committee was appointed to oversee the preparation of an update to the 2002 Master Plan and Future Land Use Map for the City of Grand Rapids, called Green Grand Rapids;

WHEREAS the City of Grand Rapids partnered with the Frey Foundation, Dyer-Ives Foundation, Wege Foundation, Downtown Development Authority, Grand Rapids Community Foundation, neighborhood and business associations, and other various organizations, agencies and individuals;

WHEREAS citizen input was solicited throughout the planning process at numerous public involvement and information gathering meetings to engage the community in the development, review and revision of the Plan;

WHEREAS this Green Grand Rapids update replaces three themes of the 2002 Master Plan pertaining to *Balanced Transportation*, *A City in Balance with Nature*, and *A City that Enriches our Lives*;

WHEREAS the Planning Commission held a Public Hearing on October 13, 2011 to seek public comments regarding the Master Plan amendment;

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission does hereby adopt Green Grand Rapids as an amendment to the 2002 Master Plan declares that said Master Plan including the text, figures and maps shall be a basic policy guide for the future development of the City of Grand Rapids.

BE IT FURTHER RESOLVED that the Planning Commission recommends that Green Grand Rapids be forwarded to the City Commission for their acceptance.

YEAS: 9  
NAYS: 0

Date



Mary Angelo, Secretary

## City Commission - Resolution of Acceptance

80918 Com. Gutowski, supported by Com. Bliss, moved to adopt the following resolution:

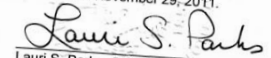
WHEREAS, the Planning Commission adopted the October 2011 Green Grand Rapids Plan as an amendment to the 2002 City of Grand Rapids Master Plan after a public hearing held on October 13, 2011; and

WHEREAS, the City Commission held a public hearing on November 29, 2011 to consider the October 2011 Green Grand Rapids Plan,

BE IT THEREFORE RESOLVED that the Green Grand Rapids Plan dated October 2011, is hereby approved by the City Commission as an amendment to the 2002 City of Grand Rapids Master Plan.

Adopted: Yeas: -7 Nays: -0

I hereby certify that the foregoing is a true transcript of the action of the City Commission of the City of Grand Rapids, Michigan, in public session held November 29, 2011.

  
Lauri S. Parks, City Clerk



## Funding



Grand Rapids  
Community Foundation

Wege Foundation



Frey Foundation

Dyer-Ives  
Foundation



Grand Rapids  
Downtown  
Development  
Authority



City of Grand Rapids

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Creative

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Jocelyn Dettloff, Disability Advocates of Kent  
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Mike DeVries, DeVries Properties

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Mike Guswiler, West Michigan Sports Commission

Paul Haan, Healthy Homes Coalition

Christine Helms Maletic, Midtown Neighborhood  
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Jack Hoffman, Kuiper Orlebeke, PC - Committee  
Chairperson

Rachel Hood, West Michigan Environmental Action  
Council

James Jendrasiak, former City Commissioner

Patrick Miles, Planning Commissioner

Michael Mraz, Jade Pig Ventures

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Nate Phelps, Western Michigan Mountain Bike  
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## Community Champions



West Michigan  
Environmental  
Action Council

Friends of  
Grand Rapids Parks



Grand Rapids  
Whitewater

Western Michigan  
Mountain Bike  
Association



and

- Mayor's Urban Forestry Committee
- Fulton Street Farmers' Market
- Greater Grand Rapids Bicycle Coalition
- Grand Action

---

## Consultant Team



Connie Dimond, JJR Project Manager

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# 1.0 - Introduction

Green Grand Rapids updates the citywide 2002 Master Plan with a focus on the importance of green infrastructure, sustainability and quality of life in maintaining the city's livability and competitive edge in attracting and retaining residents and businesses. Grand Rapids is thinking green - from planting trees, to encouraging walking and cycling, protecting water quality and improving both close-to-home and river-related recreation opportunities.



## What is Green Infrastructure?

Green infrastructure is the network of open spaces, parks and other natural areas that supports native species, maintains ecological processes to sustain clean air and water and contributes to health and quality of life. Grand Rapids' green infrastructure includes environmental assets, green spaces and the links between them, for example:

### Environmental assets

- Waterways
- Wetlands
- Wooded areas
- Wildlife habitat

### Green spaces

- Parks
- Community gardens
- Streetscapes

### Links/connectors

- Greenways
- Trails
- Bikeways
- Sidewalks

# 1.1 - Planning Context

A master plan establishes objectives and policies to manage change and guide decisions about future land use and development within a community. It also provides the foundation for setting capital improvement priorities, revising zoning regulations and developing other implementation tools.

## 1.1.1 - Master Plan Update

### Issues

In 2008, the City of Grand Rapids initiated an update to its 2002 Master Plan. While the Master Plan is still considered a sound policy foundation for guiding land use and development, a number of new issues had emerged that called for community discussion including:

- shrinking municipal revenues and heightened pressure on public bodies to sell property assets to meet current budget shortfalls;
- significant cuts in funding to support park facilities and programming;
- the consolidation of public schools and the disposal of park-school sites, resulting in reductions in the overall park inventory;
- a decreasing amount of vacant and undeveloped land within the city;
- infestation of the Emerald Ash Borer, the anticipated loss of thousands of trees and a growing awareness of the value of the urban forest canopy;
- a continuing emphasis on improving water quality and increasing awareness of the benefits of low impact development (LID) stormwater management solutions;

- rising fuel prices and an increasing demand for investments that encourage biking, walking and transit as alternatives to travel by car;
- an interest in expanding recreational use of the Grand River;
- a growing interest in food security and the expanded availability of fresh, local food.

All of these issues share a common thread - the importance of Grand Rapids' "green infrastructure" and the environmental, economic and social benefits it provides to the city and its people. As a result, the Green Grand Rapids Master Plan update focuses on recommendations for protecting, improving and linking environmental assets and green spaces in a connected system that improves sustainability, health and quality of life.

Strengthening the city's green infrastructure is inextricably tied to Grand Rapids' continuing competitiveness as a place to live and work. It is especially important in retaining and attracting the "creative class" residents who provide the knowledge, creativity and entrepreneurship to drive "new economy" business diversification and growth.

### Topics

Six topics were established to organize the Master Plan update process, recognizing that there are important inter-relationships among the topics. These are Natural Systems, Greening, Connections, the Grand River, Parks & Recreation and Local Food. Each topic's focus and an overview of primary Green Grand Rapids products are described below.

- **Natural Systems** focuses on the protection of environmental resources, including the urban forest canopy and water quality, with an emphasis on larger-scale stormwater management strategies. Green Grand Rapids provides an Ecological Framework for prioritizing efforts to protect

valued natural resource areas and proposes guidelines for restoring river banks and riparian corridors. An urban tree canopy analysis is provided (to support the concurrent work of the City-appointed Urban Forest Committee) and priorities for ordinance and policy re-evaluation are suggested to help guide tree planting and protection efforts.

- **Greening** focuses on improving the visual appeal of city streets and better managing stormwater on streets, in parks and on private development parcels. Green Grand Rapids identifies priorities for greening the street network, illustrates alternatives for adding permeable, landscaped areas along street rights-of-way and suggests other “green streets” strategies. The use of LID strategies in all public and private development is also explored. A series of four park concept plans illustrate a range of greening strategies - from native landscapes to underground stormwater detention tanks that settle out pollutants before release to the storm sewer.
- **Connections** focuses on on-street pedestrian and bicycle improvements, off-street trails and transit. Green Grand Rapids explores how alternatives to travel by car can be improved by adopting a “Complete Streets” approach that re-balances the use of street rights-of-way to provide sidewalks, on-street bicycle facilities and expanded areas for street trees and landscaping. Off-street trails, especially those along the Grand River (linking to the regional trail system), are also addressed. A special study provides preliminary engineering recommendations and costs for the extension of the existing riverwalk from Fulton Street to the Wealthy Street Bridge.
- **The Grand River** focuses on riverfront mixed-use and open space development, the expansion



Natural Systems



Greening



Connections

## “New Economy” and the “Creative Class”

In contrast to the “old,” labor-based economy, the “new economy” is driven by businesses based on knowledge and human capital (talented people) that create products, services and technology to generate new wealth and jobs.

The “creative class” includes the well-educated, professionals and entrepreneurs that drive the creation and growth of new economy businesses. These individuals are looking for the following characteristics in places they choose to live and work:<sup>1</sup>

- vibrant and attractive urban environments with a rich mix of retail, entertainment and cultural offerings;
- access to every day needs by walking, cycling or using transit;
- readily available outdoor activities that support an active lifestyle;
- parks, cafes and bookstores that serve as social environments (in addition to home and work).

In combination with the 2002 Master Plan’s recommendations for compact, mixed-use, transit-oriented and walkable development, a focus on green infrastructure can strengthen Grand Rapids creative class appeal.



*The Grand River*



*Parks and Recreation*



*Local Food*

of river-related recreation opportunities and improving the ecological health of the river system (see also Natural Systems - Page 2 and Greening - Page 3). Green Grand Rapids provides a concept study evaluating the future mixed-use redevelopment of the City-owned 201 Market Street riverfront site, including recommendations for key public access and open space links. Preliminary guidelines for the improvement and extension of the riverwalk are suggested, including riverbank restoration (see also Natural Systems - Page 2 and Connections - Page 3). A framework for recreational use zones along the Grand River is suggested and options and costs for the creation of a whitewater course on the river's Downtown reach are explored.

- **Parks and Recreation**<sup>2</sup> focuses on the protection and improvement of existing parks, meeting park acreage deficits and sustainable funding strategies. Green Grand Rapids builds on the work of the Mayor's Blue Ribbon Commission on Parks and Recreation (2007) to recommend funding and partnership strategies. In addition, a series of park concept plans (for Joe Taylor Park, Pleasant Park, Ball-Perkins Park and park development at the City-owned Butterworth Landfill superfund site) move the City a major step closer to submitting grant applications for park improvements. Green Grand Rapids also provides an analysis of park accessibility as a planning tool in determining which areas of the city have insufficient park land and where acquisition of park-school sites (which may be declared surplus by the Grand Rapids Public School District) or other parcels can help accomplish the more equitable distribution of park land.
- **Local Food** focuses on community gardens and farmers' markets as sources of fresh, locally grown

food and as urban green spaces and community focal points. Green Grand Rapids offers suggestions on ordinance and policy changes that can encourage the further expansion of community gardening, as well as continuing City support for the Fulton Street Market and a potential four-season market at a Downtown location.

## 1.1.2 - Relationship to Master Plan Themes

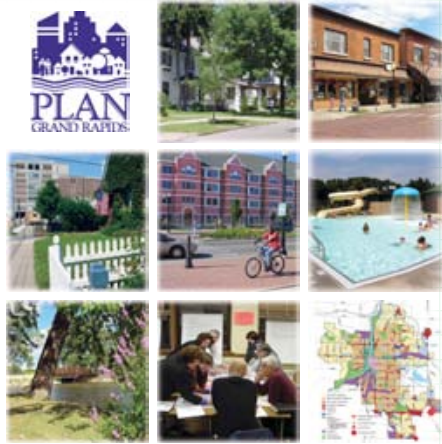
Recommendations on the six Green Grand Rapids topics have been used to update and augment three of the 2002 Master Plan theme chapters: Balanced Transportation, A City that Enriches Our Lives and A City in Balance with Nature. Nevertheless, Green Grand Rapids recommendations support all of the Master Plan themes (see *Figure 1.a - 2002 Master Plan Themes and Green Grand Rapids Topics*). Just as the objectives and policies for each theme in the 2002 Master Plan reinforced recommendations for other themes, so do the Green Grand Rapids topic recommendations inter-relate and reinforce one another.

## 1.1.3 - 2002 Master Plan

Figure 1.a - 2002 Master Plan Themes and Green Grand Rapids Topics

2002 Master Plan Themes	Green Grand Rapids Topics					
	Connections	Greening	Natural Systems	Parks & Recreation	Grand River	Local Food
Great Neighborhoods	●	●	●	●	●	●
Vital Business Districts	●	●	●	●	●	●
A Strong Economy	●	●	●	●	●	●
Balanced Transportation	●	●	●	●	●	●
A City that Enriches Our Lives	●	●	●	●	●	●
A City in Balance with Nature	●	●	●	●	●	●
Partnerships	●	●	●	●	●	●

● indicates a primary relationship; ● indicates a secondary relationship.



2002 Master Plan

### Principles of Smart Growth

- Strengthen, and direct development towards, existing communities.
- Mix land uses.
- Encourage compact development patterns.
- Create walkable, accessible neighborhoods.
- Create a range of housing choices.
- Provide alternatives to travel by car.
- Foster distinctive, attractive development with a strong sense of place.
- Preserve farmland, open space, natural beauty and critical environmental areas.
- Encourage stakeholder and community collaboration.
- Make development decisions predictable, fair and cost effective.

*\*Adapted from The Smart Growth Network*

### 2002 Master Plan Overview

Grand Rapids' 2002 Master Plan was the first comprehensive, citywide plan prepared since 1963. It builds on previous planning for the future of the Downtown area<sup>3</sup> and focuses attention on the balance of the community. Begun in 2000, the Plan Grand Rapids process drew extensive community participation to gain consensus on a new vision for the community. The Master Plan went beyond broad citywide policies for land use and transportation to make the quality and character of development an important planning consideration.

Based on the principles of Smart Growth, the Master Plan's recommendations are organized into seven theme chapters.

- **Great Neighborhoods** - Great neighborhoods are the foundation of a great city; they are the physical and social expressions of community. Grand Rapids will capitalize on its urban amenities to ensure that it is a competitive housing location within the region. By protecting the development character of existing neighborhoods, by strengthening neighborhoods experiencing disinvestment and by encouraging higher density housing in the development of mixed-use, transit-oriented centers and districts, the city will offer a broad range of high quality housing choices.
- **Vital Business Districts** - Vital business districts are critical in providing livable neighborhoods and maintaining a strong economy. Grand Rapids will continue to reinforce Downtown as a regional mixed-use destination and encourage reinvestment in traditional business area corridors to create compact, walkable mixed-use retail cores linked by residential mixed-use connectors. The City will also promote the development of mixed-use, transit-oriented centers at the sub-regional,

village and neighborhood scale.

- **A Strong Economy** - A strong economy will help to ensure that Grand Rapids residents prosper and that revenues needed to support important urban services and amenities are available. Grand Rapids will capitalize on the economic and quality of life value of the Grand River by encouraging a change in riverfront land use from industry to open space and mixed use. Industry will be located along rail lines where easy access to highways can be provided without routing trucks through neighborhoods. Major institutions will be encouraged to remain and grow in Downtown, on its edges and in proposed mixed-use, transit-oriented village and sub-regional centers. Economic growth will be balanced with priorities for neighborhoods, the environment and the quality of development.
- **Balanced Transportation** - Grand Rapids supports the coordination of transportation and land use decisions to reduce dependence on the automobile and to support transit. The City will balance needs for vehicle access with objectives for making streets more bike- and pedestrian-friendly and for ensuring that they present a pleasing image. Grand Rapids will work to reduce the extent to which highways create barriers to movement and reduce the impact of parking on the city's appearance and walkability.
- **A City that Enriches Our Lives** - Quality of life helps to determine whether people will choose to live, shop, work and spend leisure time in Grand Rapids. While many factors influence quality of life, the City will concentrate its efforts on making the Grand River a recreational, aesthetic and historic focus and creating a system of on- and off-street walking and biking connections that link all city neighborhoods to the river, major destinations and the regional

trail system. Strategies and priorities for funding the acquisition, development and maintenance of parks and open spaces will also be explored. Protecting the city's historic and architectural heritage, urban design quality in new development and support for the arts will also be given priority.

- **A City in Balance with Nature** - People in Grand Rapids support planning and development approaches that protect natural resources, capitalize on existing infrastructure and honor the principles of Smart Growth. Grand Rapids will help to reduce sprawl by working to remain the urban focal point of West Michigan and by encouraging infill development. Sensitive environmental resources and valued natural areas will be identified and protected. Stormwater runoff will be reduced and water quality improved by increasing natural infiltration.
- **Partnerships** - Grand Rapids will continue to be a regional partner in supporting Smart Growth approaches to land use, transportation and environmental planning. The City will also collaborate with neighborhood and business organizations, and promote coordination with state agencies and among City departments, to achieve the community's vision for the future.

### 1.1.4 - Zoning Ordinance

Figure 1.b - 2002 Future Land Use Plan

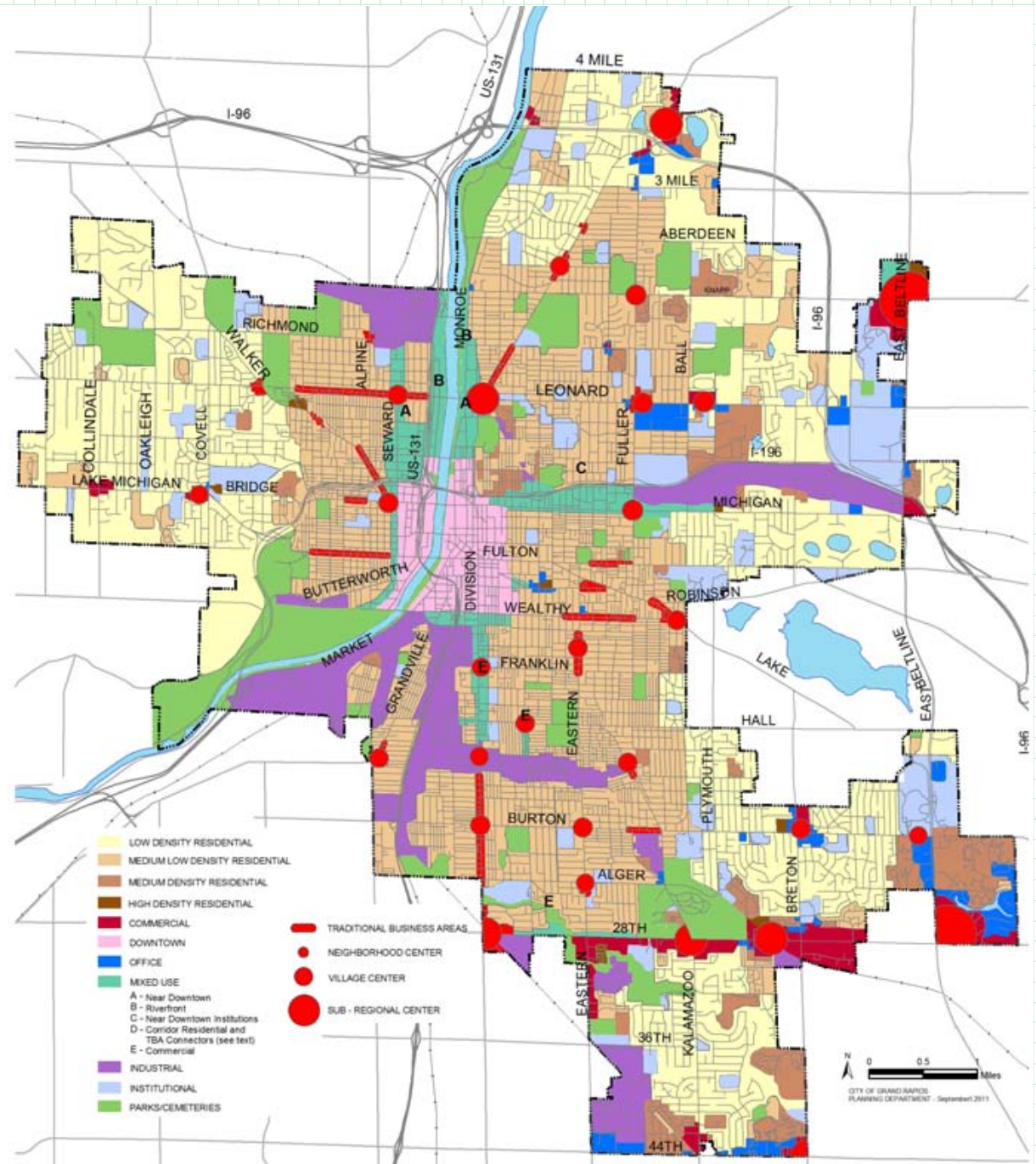
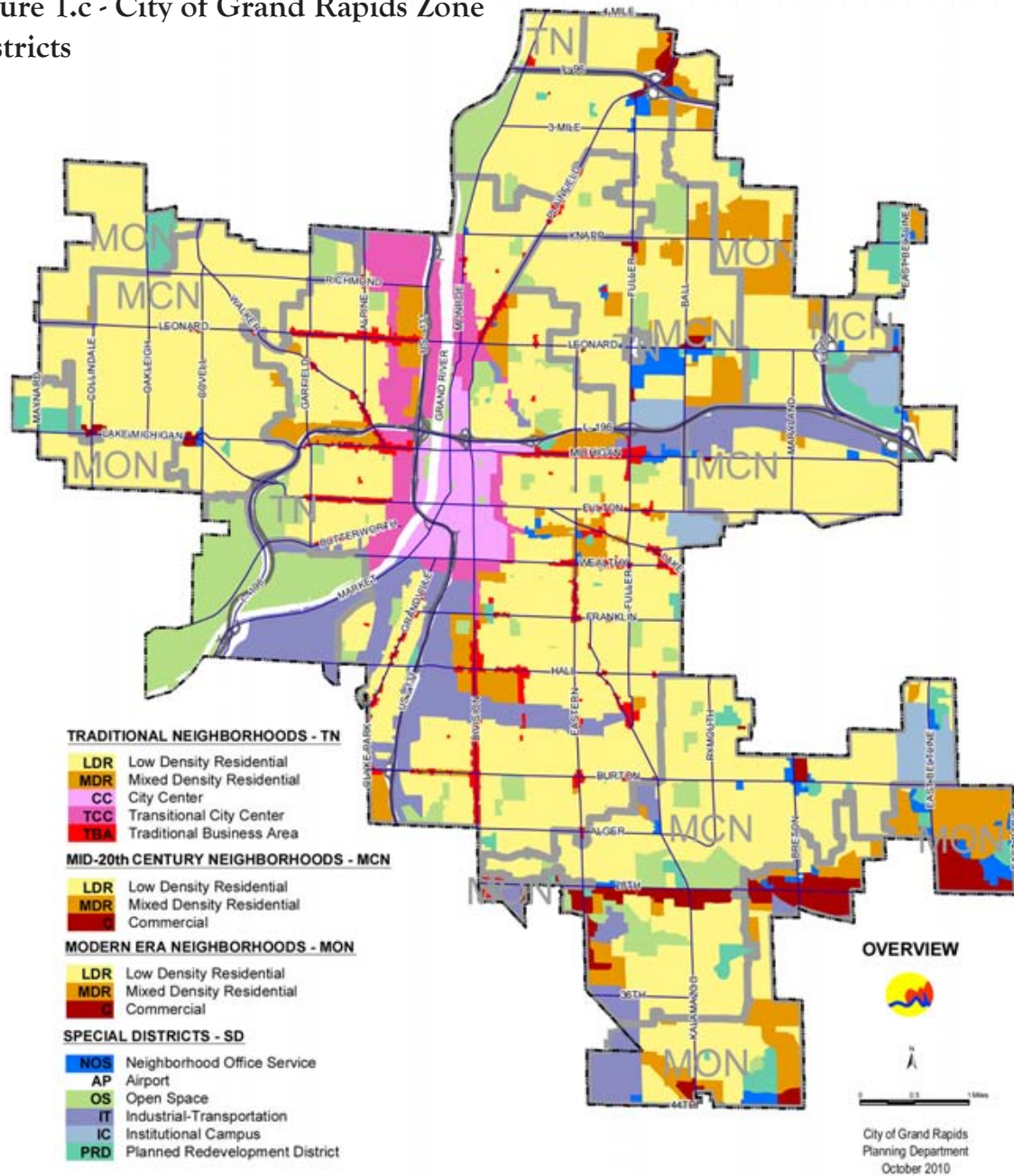


Figure 1.c - City of Grand Rapids Zone Districts



## Revision

The 2002 Master Plan presented a preliminary evaluation of the characteristics that distinguish different Grand Rapids neighborhoods and sample development guidelines for mixed-use and higher density residential development. These became the starting point for updating the City's Zoning Ordinance (one of the most important tools available for implementing a master plan) to achieve the principles of Smart Growth and to include more urban design (or form-based) content on how buildings and activities should be located and designed to create appealing, comfortable and meaningful places for people.

One of the 2002 Master Plan's goals is to ensure that the valued characteristics of each neighborhood's existing development context are preserved as new development, infill and retrofitting are undertaken. To achieve this the new zoning ordinance (adopted 2007; amended 2008) was built around three different neighborhood types - Traditional, Mid-20th Century and Modern Era. Requirements for build-to lines, parking, green space, building orientation, façade variation, entrances, façade transparency and building materials were established for each district. Incentives were provided for ground floor retail, residential use, mixed-income housing, urban open space and transit stations.

In addition to creating a transit-oriented development district, the ordinance includes other "green" provisions including parking maximums and waivers to reduce impervious surface, a minimum greenspace percentage, requirements for sidewalks and bicycle parking, standards for wind and solar power, and updated regulations for community gardens and farmers' markets.



# 1.2 - Green Grand Rapids Process and Participants

The 2002 Master Plan process was structured to encourage extensive community participation and its content was built around the community input received. As a result, the Master Plan is broadly understood and actions to implement its recommendations are widely supported. This commitment to involve the community, and the clear demonstration that their ideas and priorities are reflected in both the Master Plan and its implementation, created a new sense of partnership between citizens and City government. In 2004, the City began the process of updating Grand Rapids' zoning code, one of the most important tools for master plan implementation. This 3-year process again demonstrated the City's commitment to involving and listening to the community. As a result, Green Grand Rapids benefited from a history of collaboration with the community and a citizenry confident in its ability to shape planning outcomes.

## 1.2.1 - Community Participation Process

Green Grand Rapids' community participation process began with a new strategy for inspiring interest and engaging citizens in the Master Plan update - a game called Green Pursuits. Green Pursuits provided a structured format for gathering community ideas about "green" initiatives without conducting more resource-intensive workshops. Groups were organized by volunteer citizen planners to play the game which included a series of question cards and a corresponding answer booklet to record

participants' input. A game board (in the form of a city map) was also used to record where efforts should be focused in greening streets, improving non-motorized connections, adding parks and improving recreational opportunities on the Grand River. Green Pursuits was played in board rooms, living rooms and school rooms across the city, involving hundreds of citizens in a fun activity that produced meaningful results.

Stakeholder interviews and meetings were also held at key points during the planning process to gather information and confirm directions. In addition, design charettes were conducted in developing concept plans for four parks and four special studies along the Grand River (a future riverwalk extension, a whitewater "rapids" course on the Downtown reach of the river, river corridor guidelines for the preservation and restoration of riparian buffers and the redevelopment of the City-owned 201 Market Street riverfront parcel).

At key milestones in the planning process community forums, called Green Gatherings, were held to encourage people from different parts of the city to share their perspectives and to solicit feedback on how accurately citizen input was being synthesized and interpreted. These included:

### Green Gathering #1 - Ideas

Brainstorm and prioritize "action ideas" for one of the six topics; provide input on the results of Green Pursuits (June 2008)

### Green Gathering #2 - Choices

Provide input on draft objectives and policies and identify top priority policies for one of six topics (October 2008)



The Green Grand Rapids Master Plan update was structured in three major phases:

#### Phase 1 - Ideas

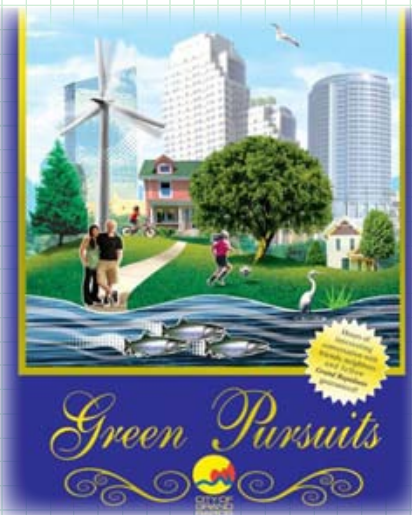
- Green Pursuits game
- Stakeholder interviews
- Inventory map atlas
- Best practices research

#### Phase 2 - Choices

- Analytical tools
- Plan concepts
- Draft objectives, policies and actions

#### Phase 3 - Actions

- Stakeholder meetings
- Park concept plans and charettes
- Grand River concept plans, charettes and guidelines
- Existing ordinance and policy review (community gardens; urban forest)



### Green Gathering #3 - Actions

Meet “green champions;” review and comment on concept plans for three parks and three Grand River projects; prioritize policies across all six topics (May 2009)

### Green Gathering #4 - Call to Action

“Green champions” introduce ongoing and new initiatives to encourage coordination and invite citizens to get involved (October 2009)

## 1.2.2 - Champions

The Green Grand Rapids process generated a level of community enthusiasm for translating ideas into action that outpaced the completion of the Master Plan update. A number of existing organizations - including the West Michigan Environmental Action Council (WMEAC) and the Mayor’s Urban Forestry Committee - already have plans and programs in place to move portions of the Green Grand Rapids agenda forward. Friends of Grand Rapids Parks (FGRP), is building its projects and programs around the Master Plan update. Other existing organizations, including the Downtown Development Authority, Fulton Street Farmers’ Market and Grand Action, are actively exploring how their priorities match those the community has identified during the Green Grand Rapids process. New organizations have also been formed to advance the momentum of the Master Plan, including Grand Rapids Whitewater and the Greater Grand Rapids Bicycle Coalition. The commitment and creativity of “green champions” like these, and the active support of individual citizens, will be essential in “greening” Grand Rapids.

## 1.2.3 - Participants

Community involvement has been a cornerstone of the planning process and many people have played an important role in the preparation of the Green Grand Rapids update to the 2002 Master Plan.

### Citizens

Residents, business people, employers, property owners, developers and representatives of area institutions and non-profit organizations participated in workshops, charettes and interviews. Over 1,800 people gave their time, energy and insight in shaping of content of this Master Plan.

### Steering Committee

Mayor George Heartwell appointed a steering committee to guide the Green Grand Rapids Master Plan update. Members of the Green Grand Rapids Steering Committee, chaired by Jack Hoffman and co-chaired by Chris Reader, provided many hours of volunteer time over the 17 months during which the study process was conducted and draft materials were prepared, reviewed and revised. Their expertise and varying perspectives provided valuable guidance throughout the planning process.

### City Staff

The directors of the Planning Department, Parks and Recreation Department and Downtown Development Authority worked with the Steering Committee and the consultant team throughout the Green Grand Rapids process.

### Consultants

The consultant team, including O’Boyle, Cowell & Blalock Associates (OCBA), Fishbeck Thompson Carr & Huber (FTCH), and ClareWade Communications of Grand Rapids, was led by JJR of Ann Arbor, MI.

## Funders

The Green Grand Rapids Master Plan update was funded by the Frey Foundation, Wege Foundation, Grand Rapids Community Foundation, Dyer-Ives Foundation, the Downtown Development Authority and the City of Grand Rapids.

## 1.2.4 - Guiding Principals

The Committee began its work by reviewing and augmenting the guiding principles established in the 2002 Master Plan (additions are shown in italic type). These principles influenced both the planning process and the content of the Master Plan update.

### Partnership

We make decisions and accomplish our plans in an open, inclusive and collaborative manner. We empower people to contribute their ideas, work toward consensus and take responsibility for achieving a shared vision of the future. We work in partnership - neighborhoods, businesses, private sector investors, non-profits, institutions, schools, City government and surrounding jurisdictions - to capitalize on the synergy of pooled resources and expertise.

### Leadership

We count on our community leaders and decision-makers to contribute to our vision and work creatively and aggressively to make it a reality. Our leaders encourage the early involvement of affected parties in developing appropriate planning strategies. They help us focus on shared goals to manage change.

*Our planning process is designed to increase neighborhood-based involvement, leadership, advocacy and support. Our goal is to inspire community participation in preserving, maintaining and improving our city's parks and public spaces by fostering an increased sense of community ownership.*

## Choice

We honor the diversity of our community by providing choices in housing and neighborhood types, transportation modes, shopping and job opportunities and recreational and cultural offerings.

## Economic Health

We understand that our city's ability to attract and retain business, jobs and households is the economic engine that drives investment in new development and the improvement and reuse of older areas of the city. Our city's economic health also determines our fiscal capacity to provide public investments and quality public services. We recognize the importance of broadening access to economic opportunity for all our citizens.

*We believe our city's competitiveness and long-term economic health in the New Economy will depend on the quality of life investments that we make in its "green infrastructure" including parks, public spaces, environmental assets and the network of streetscapes, trails and greenways that connect them.*

## Balance

We recognize the importance of maintaining a balance between economic (and job) growth, neighborhood preservation and environmental stewardship. We are committed to protecting and improving the valued characteristics of our central city while encouraging change that will make the best use of vacant and under-used land and buildings. We support a balanced transportation system that offers attractive alternatives to automobile use.

*We recognize the value of natural systems in their own right and the need to educate the community on proper land management techniques.*

## Quality

We believe that quality in the design and maintenance of private development and the public realm makes a difference to the quality of our lives. We support design approaches that honor context, compatibility, authenticity and the human scale. We support maintenance strategies that keep our city clean, green and safe.

*The quality of our green infrastructure will determine the health of our citizens, the economic vitality of our community and the biodiversity of our natural systems.*

## Access

We are committed to creating a pedestrian-friendly city that also provides convenient connections over longer distances. We support transit, but we also need a quality roadway system that minimizes negative traffic impacts. We manage parking so that its impact on the pedestrian scale and visual quality of our city is minimized.

*Our goal is to provide the best possible access to our "green" assets (parks, the river, recreational opportunities) for people of all ages, incomes and physical abilities. We seek to create new opportunities for connectivity, green space and locally grown food that will improve community well being.*

## Sustainability

We care about the environment, the availability of resources for future generations and the integrity of natural systems. We aspire to the Hannover Principles. The choices we make will protect natural resources, capitalize on existing infrastructure and honor the principles of Smart Growth. We support actions that conserve the cultural and physical heritage of our community.

*We will use our natural assets, work to conserve and restore natural systems and protect and enhance green space to contribute to the health of our community and its people.*

# 1.3 - Overview of Green Grand Rapids Products

In addition to updating citywide Master Plan policy recommendations, Green Grand Rapids focused resources on the preparation of materials that provide both tools for future decision-making and the foundation for implementing projects.

Tools for decision-making include:

- **201 Market Street** - A concept plan for the City-owned 201 Market Street site located on the riverfront immediately south of the Downtown core. The plan recommends physical parameters for the possible future private redevelopment of this site, including future open space and public access requirements, vehicular circulation and parking, the configuration of development parcels, maximum building heights and urban design. See *Chapter 3 - A City that Enriches Our Lives*.<sup>4</sup>



201 Market Street Concept Plan

- **River Corridor Guidelines** - Principles and tools for the preservation and restoration of riparian buffers, including the banks of the Grand River, to protect water quality, enhance habitat, reduce flooding and improve visual quality and recreational use. These guidelines can serve as the basis for reviewing development proposals in riparian zones and in updating development regulations. Guidelines for improving the design and functional continuity of the riverwalk are also included. See *Chapter 3 - A City that Enriches Our Lives* and *Chapter 4 - A City in Balance with Nature*.<sup>5</sup>
- **Park Accessibility Analysis** - This map links information on walking distance (1/4 mile) and access barriers (major traffic streets; industrial and commercial areas) to accessible park acres and population density for each city block. See *Chapter 3 - A City that Enriches Our Lives, Figure 3.j - Page 50*. This analysis tool can be used to help set priorities for acquiring surplus park-school (and other potential park) sites and forming partnerships with institutional land owners to help address deficits in accessible park acreage.
- **Ecological Framework** - A composite map of important natural features that identifies core areas to preserve, areas to buffer and connect and opportunities for restoration/enhancement. See *Chapter 4 - A City in Balance with Nature, Figure 4.b - Page 69*. The Ecological Framework provides a starting point in establishing priorities for land and/or easement acquisition, updating ordinances to better protect natural features and developing incentives for conservation and restoration.
- **Urban Forest Analyses** - An analysis of Grand Rapids' tree cover and its economic value and maps documenting the percentage tree cover by zoning classification and by major arterial street.

See *Chapter 4 - A City in Balance with Nature, Figures 4.d - Tree Canopy by Neighborhood Type and Special District - Page 73 and Figure 4.e - Percentage Tree Canopy Along Street Rights-of-way - Page 74*. These analyses can be used as the basis for determining where more detailed inventories of existing trees are most needed and assessing alternative approaches for incorporating tree canopy requirements into each zoning classification.

- **Urban Trees Ordinance and Policy Analysis** - A review of existing City ordinances and policies pertaining to urban trees with recommendations for possible modifications. See *Chapter 4 - A City in Balance with Nature*.
- **Community Gardens Ordinance and Policy Analysis** - A review of City ordinances and policies related to community gardens with recommendations for modifications and additions. See *Chapter 3 - A City that Enriches Our Lives*.

Studies, prepared with stakeholder participation, that provide concept plans and estimates of probable costs to establish a foundation for pursuing funding support and implementing future projects include (see also *Chapter 3 - A City that Enriches Our Lives*):

- **Joe Taylor Park** - A plan that increases existing park acreage and incorporates a range of green strategies including rain gardens to infiltrate runoff from paved surfaces, an underground stormwater detention basin designed to settle out pollutants from a 40-acre sub-watershed before water is released to the Grand River, use of native plant materials and an increase in the tree canopy. The concept plan also expands recreational facilities (spray park; picnic shelter).
- **Pleasant Park** - A plan for transforming a vacant lot and surface parking area into a 2.3-acre neighborhood park in a severely underserved area

of the city (including the Heritage Hill and South Hill neighborhoods). The concept plan includes a formal sitting garden, a lawn area for informal play and neighborhood gatherings and a barrier-free playground. Native tree plantings, no/low mow grass, naturalized perimeter landscaping and a rain garden are also included.

- **Ball-Perkins Park** - A plan that preserves a high value natural resource area (woods, wetlands and steep slopes), restores prairie plantings and provides environmental education/interpretation. A new trail system improves internal access and connections to surrounding neighborhoods. Relocation and improvement of

the existing community garden, and the addition of a picnic area, are also proposed.

- **Butterworth Landfill/Park** - A plan to reclaim undeveloped City-owned land on the riverfront to create a new park, while maintaining the “cap” on this super fund site. A range of active and passive recreational opportunities are included. The plan provides a naturalized river edge treatment and other stormwater management strategies to protect water quality, as well as an interpretive trail, wetlands and prairie restoration areas. The site is an important link in the regional riverfront trail system; improved connections are recommended. A dog park, cycling “pump” track,



Pleasant Street Park Concept Plan

skateboard park, fields for archery and soccer, boat launch, kayak/canoe livery, community gardens, poly-vinyl greenhouses and a potential farmers' market are also proposed.

- **Riverwalk Extension, Blue Bridge to Wealthy Street** - Concepts for closing a critical gap in the riverwalk system between Downtown and the Wealthy Street bridge to create a connection to proposed trails at Butterworth Landfill and existing links to Millennium Park, farther south. Short- and long-term riverwalk alignments and design criteria (including riverwalk alignment, width, materials, bank restoration, landscaping and lighting) are recommended.
- **Grand River Whitewater Course** - A preliminary preferred concept and order-of-magnitude costs for two phases in constructing a rapids run for kayaks and canoes on the river's Downtown reach. The first phase proposes reconfiguring the five "beautification" dams to create a series of whitewater features; includes a portage route around the 4th Street dam and expands the number of sites available for put-in and take-out. The second phase adds a more dramatic whitewater element on the downstream side of the 4th Street dam by creating a stair-step rapids that keeps the dam intact.

Green Grand Rapids also researched potential sources of grant funding for project implementation. This information focused on grant programs offered by federal and state governments and national foundations and is organized by the six Green Grand Rapids topics. Grant program descriptions, funding levels and contact information are provided.

## 1.4 - Plan Review and Adoption

In January 2011, the Green Grand Rapids draft Master Plan update was released for public review and comment. On October 13, 2011, the Grand Rapids Planning Commission held a public hearing on the draft document. The revised Master Plan update was presented to the Planning Commission and, as authorized by Public Act 285 of 1931 and Chapter 62 of the City code, adopted by the Grand Rapids Planning Commission on October 25, 2011 as an amendment to the 2002 Master Plan for the City of Grand Rapids. The Plan amendment was then officially adopted by the City Commission on **November 29, 2011**.

## Chapter 1 Notes

1. Encouraging the Revitalization of Downtown Detroit: Attracting the Millennial Knowledge Worker, 2008 Multidisciplinary Project, Michigan Future, Inc. and the University of Michigan Ross School of Business. Based on the work of Richard Florida, *The Rise of the Creative Class*.
2. The Green Grand Rapids work on this topic became the foundation for the City's *2010 Parks and Recreation Master Plan*.
3. *Voices & Visions*, adopted in 1993, is the Downtown area plan. The recent *Downtown Framework Plan* was adopted by the DDA in January 2011.
4. An overview of the full content and recommendations of the 201 Market Street study is available as a separate document from the Planning Department.
5. The *River Corridor Guidelines* are available as a separate document from the Planning Department.





# 2.0 - Balanced Transportation

Primary travel modes change over time. They shape, and are shaped by, land use patterns. Grand Rapids' citizens support the coordination of transportation and land use decisions to reduce dependence on the automobile and provide choice in travel modes by balancing needs for vehicle access with objectives for making streets "complete" for all users including bicyclists, transit riders and pedestrians of all ages and abilities.





Road Diet on Division Avenue

## Why are connections that provide alternates to travel by car important?

### Environmental Benefits

- Reduce the use of non-renewable energy resources
- Reduce air pollution
- Reduce green house gas emissions; carbon footprint

### Economic Benefits

- Improve accessibility and property values
- Attract and retain businesses and residents, particularly “creative class” workers
- Increase tourism
- Decrease traffic congestion and increase work productivity
- Reduce household costs for car ownership

### Quality of Life Benefits

- Provide transportation options for non-drivers
- Increase physical activity to improve health (and reduce health care costs)
- Expand recreation options and accessibility

## 2.1 - 2002 Vision and Green Priorities

One of the first steps of the 2002 Master Plan process was to ask the citizens of Grand Rapids what they would like to see the city look like 20 years from now. The following vision emerged:

*“We will plan land use and transportation in our city and the region to make transit convenient and affordable. All residents will be able to get to work, school, recreation opportunities or shopping without relying on a car. Because our state-of-the-art transit system will be such a success, parking demand will be significantly reduced and we will be able to devote less land to storing parked cars. In most neighborhoods, residents will have convenient access to daily shopping and services within walking distance of home. Our streets will create a connected network and will be designed to encourage walking and cycling; information on walk/bike routes will be easily available. Attractively landscaped, safe, clean, well maintained streets will be an important part of our city’s positive image and quality of life. We will emphasize the importance of tree-lined, people-friendly streets in our neighborhoods. Traffic calming will contribute to safer streets for drivers and more livable neighborhoods for all residents – especially our children. Most important, our overall transportation system will offer a balance between cars, transit, cyclists and pedestrians.”*

Connections, one of six Green Grand Rapids topics, takes a closer look at how alternatives to automobile travel can be improved by taking a Complete Streets approach to re-balancing the use of street rights-of-way to provide a connected system of sidewalks, on-street bicycle facilities and improved transit stops.

Green Grand Rapids re-emphasizes the importance of completing the off-street trail system along the Grand River and Plaster Creek to connect the city to the regional trail network. The Master Plan update reinforces the community’s commitment to enhanced transit and provides a progress update on transit planning.

## What has Grand Rapids already done to improve connections?

- Adopted a master plan (2002) and zoning ordinance (2007) that encourage compact, mixed-use development including a transit oriented development (TOD) zoning classification
- Added requirements for sidewalks and bicycle parking to the zoning ordinance
- Built trails along 5.5 miles (46%) of the Grand River (riverwalk)
- Published a Bike Grand Rapids map of bike-friendly streets
- Implemented 16 miles of shared street improvements to improve cycling opportunities
- Held a Bike Summit (April 2009) to mobilize cycling advocates
- Created a carpool/vanpool rider match program
- Received a federal New Starts grant for a north-south bus rapid transit route on Division Avenue into Downtown Grand Rapids
- Studied the feasibility of a Downtown streetcar route on Monroe and Market Streets (Newberry Street to Bartlett Street)
- Adopted a 2030 *Transit Master Plan*

## 2.2 - Plan Recommendations

Green Grand Rapids recommends coordinated transportation and land use decisions and a Complete Streets approach that will:

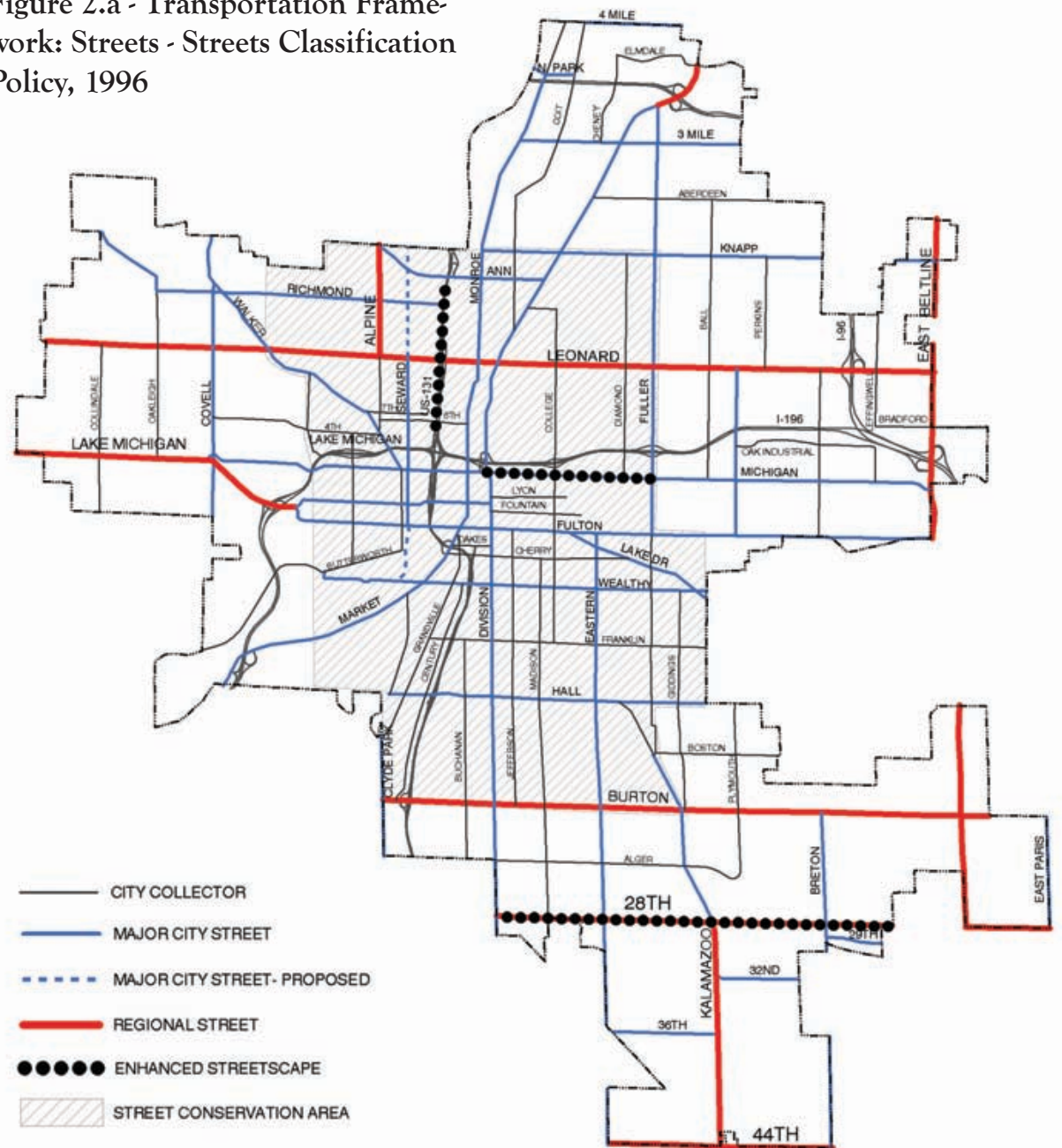
- balance the use of street rights-of-way to accommodate pedestrian and bicycle needs, as well as transit, trucks and personal vehicles;
- design streets to enhance safety, improve walkability and create “green” image corridors;
- provide off-street walking and cycling trails;
- support transit through land use, site planning and street design decisions;
- reduce the extent to which highways create barriers to movement;
- manage parking supply and demand and improve parking lot location and design.

### 2.2.1 - Complete Streets

Complete Streets are designed, maintained and operated to enable safe access for pedestrians, bicyclists, and transit riders of all ages and abilities, as well as motorists. While streets must be designed to allow cars, trucks and emergency vehicles access throughout the city, people in Grand Rapids want streets that are attractive and safe for all users.

One half of all the trips made in America are within a 20-minute bike ride (3 miles or less); one quarter of all trips are within a 20-minute walk (1 mile or less).<sup>1</sup> Nevertheless, the majority of these trips are now made by automobile. By encouraging more compact, mixed-use patterns of development, more destinations (homes, shopping, schools and work) will be located within walking and cycling distance

Figure 2.a - Transportation Framework: Streets - Streets Classification Policy, 1996





Roundabouts



Road Diet - Before



Landscape Medians



Road Diet - After

of one another. If safe and convenient opportunities are provided, more people will choose bicycling and walking for these short trips. Investments in bicycle and pedestrian improvements in other cities (Portland, Oregon; Minneapolis, Minnesota) demonstrate that “if you build it, they will come.”

Improving alternatives to automobile travel in Grand Rapids will require re-thinking the use of limited space within existing rights-of-way to provide for pedestrians, cyclists, transit stops, trees and other

“green” strategies (see also *Chapter 4 - A City in Balance with Nature - Page 71*). In many instances this can best be accomplished by reducing the number of travel lanes on 4-lane streets (also known as a road “diet”).

Along with the City’s parks and open spaces, streets are major determinants of the quality of the public realm. When they create a positive image, and provide a pleasant environment for people on foot and on bicycles, they can attract economic investment, increase property values and enhance retail sales.

To achieve this, decisions on street design, traffic management, parking, land use and development character must be coordinated.

## Street Design

In 1996, the City established guidelines to better balance the use of space within public rights-of-way in the *Street Classification Policy*. Street functional classifications (regional, major, and city collector as shown in *Figure 2.a - Transportation Framework: Streets Map - Page 19*) were coordinated with land use categories and design guidelines. These guidelines balance the need to move vehicles with the creation of a street environment that accommodates on-street parking, transit stops, pedestrians and cyclists. A Street Conservation Area was also defined, encompassing the majority of the city’s oldest neighborhoods where streets are narrower than modern standards. Within this area, street re-construction and widening projects require Planning Commission approval to ensure that streetscape and pedestrian amenities are not sacrificed.

Green Grand Rapids recommends that the *Street Classification Policy* be updated by adopting a Complete Streets policy and design guidelines for implementing improvements as street re-paving and reconstruction projects are undertaken. City staff have already started work on this effort.

**Safe Streets** - Research shows that slower travel speeds mean safer streets with fewer accidents and injuries. Like many cities, Grand Rapids has undertaken traffic calming projects that slow traffic by effectively narrowing street width using curb bump-outs, medians and roundabouts at intersections. Road diets that re-stripe 4-lane streets to provide two travel lanes and a center turn lane have also been implemented. Green Grand Rapids endorses the 2002 Master Plan recommendation for continued staff and funding support for traffic calming and

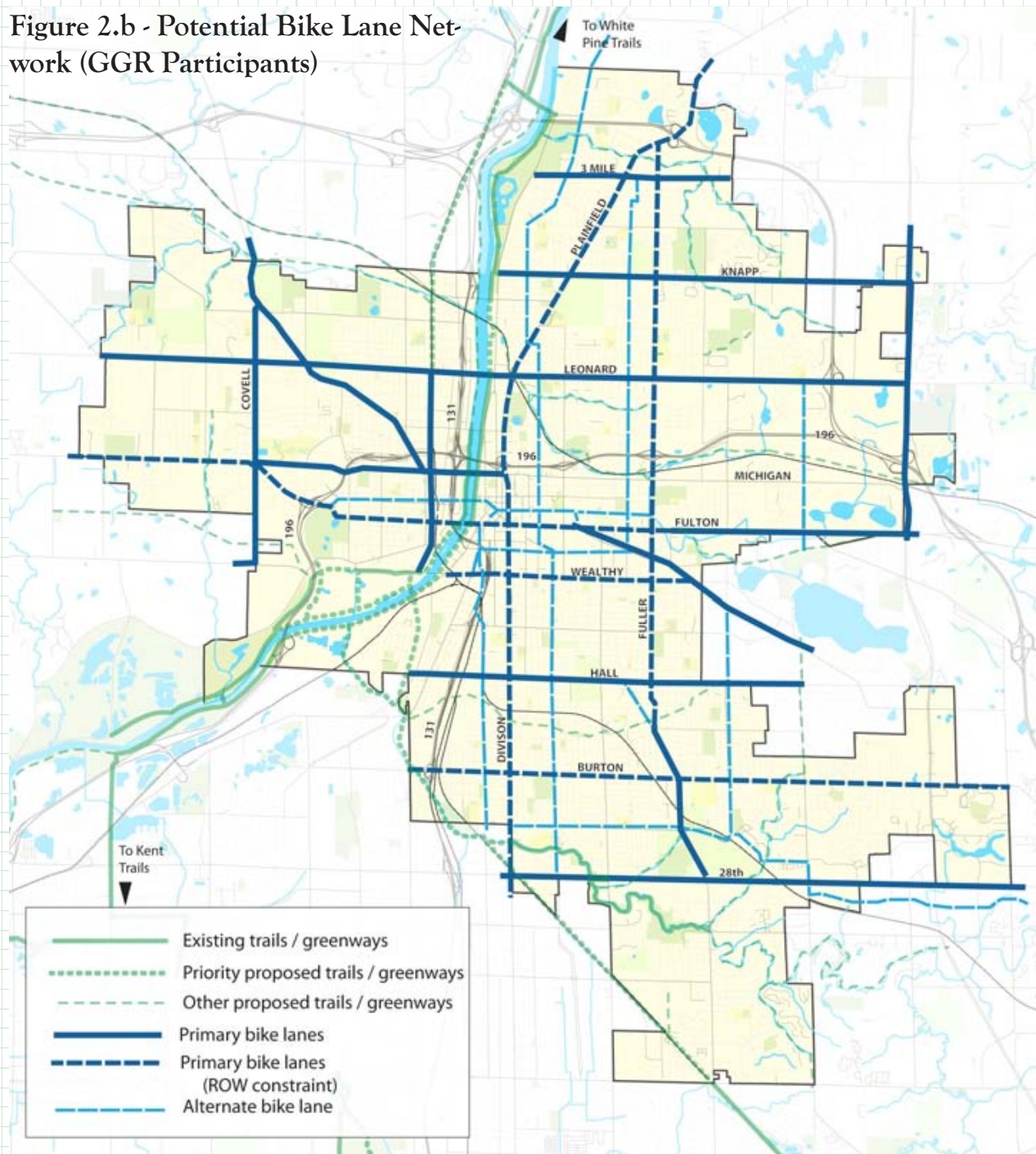
safe streets initiatives (on both residential and major traffic streets). A coordinated approach is needed to ensure that faster moving traffic is not simply displaced from one street to another or pushed into neighborhoods. In addition, for new development projects, standards that allow narrower street widths should be considered.

**Bicycle-friendly Streets** - Until 2010, when a bike lane was created on Lake Drive, Grand Rapids had no marked bike lanes or routes. Nevertheless, a 16-mile network of mapped “bike-friendly streets” has been re-paved and re-striped to provide improved cycling conditions. The majority of these improvements (approximately 13 miles) include road diets that provide a wider curb lane and painted edge line to accommodate cyclists.

These improvements are consistent with the recommendations of a committee formed in 2003 to work with the Planning Department in drafting a *Bicycle and Pedestrian Facilities Plan*. The draft document (not adopted) recommended the use of wide curb lanes, where possible, to accommodate cyclists in combination with the education of motorists and cyclists on “sharing the road.” This approach was based on the conclusion that striped bike lanes meeting national dimensional guidelines would require street widening and, as a result, were not a practical or feasible option.<sup>2</sup>

In contrast, Green Grand Rapids participants have consistently identified the introduction of bike lanes on high-traffic-volume “major” streets as a top priority, complemented by the addition of signed bike routes (with no designated bike lane) on lower-traffic-volume residential streets. Major streets are a priority because they provide the most direct routes to work, shopping, schools, transit hubs and other destinations.

**Figure 2.b - Potential Bike Lane Network (GGR Participants)**



Many of the streets identified as priority locations for bike lanes by Green Grand Rapids participants during Green Pursuits (see *Figure 2.b - Potential Bike Lane Network - Page 21*) have limited 66-foot rights-of-way with four vehicle travel lanes. This dimension is inadequate (by 8-feet) to accommodate the City's minimum standard dimensions for travel lanes, bike lanes, parkways and sidewalks (see *Figure 2.c - Roadway Dimensions - Page 22*).

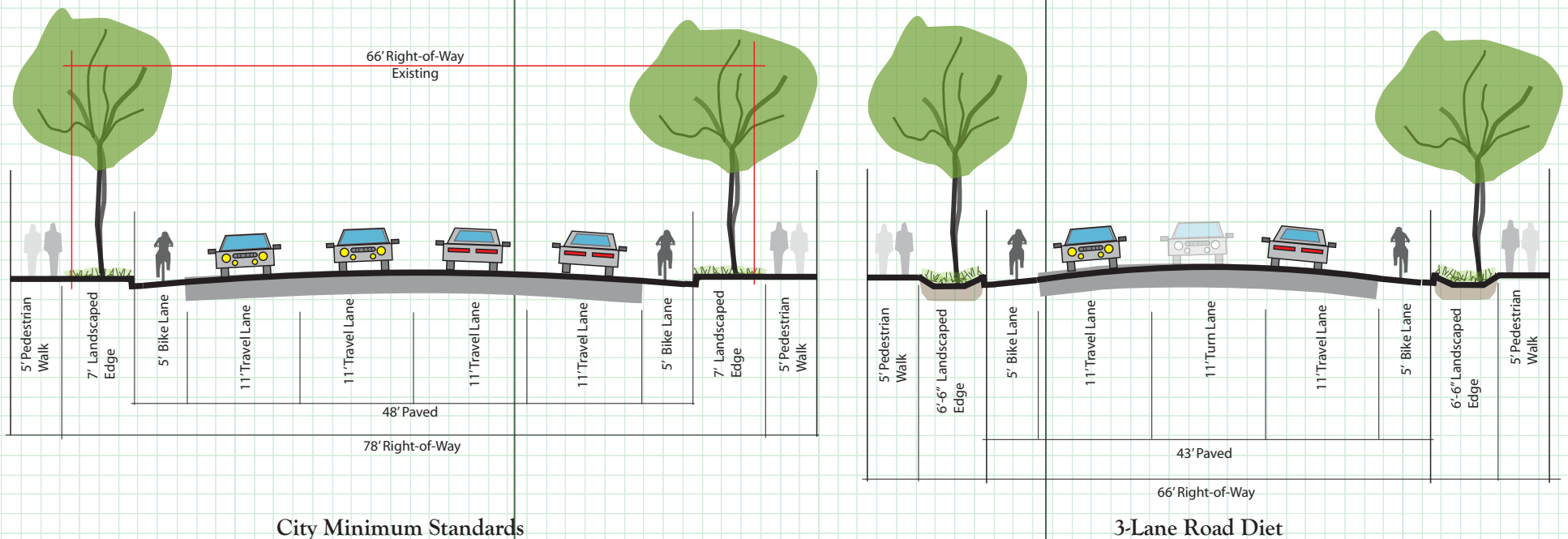
A number of alternatives for re-allocating space within these narrower rights-of-way were evaluated to identify a preferred Complete Streets approach. Road diets (the re-striping of 4-lane roadways to provide for two travel lanes, a center turn lane and two 5-foot bike lanes) was the clear first choice among Green Grand Rapids participants.<sup>3</sup>

In general, road diets can be implemented easily on streets carrying traffic volumes of 18,000 vehicles per day (vpd) or less. Although road diets have been implemented successfully on streets carrying up to 24,000 vpd,<sup>4</sup> the potential for operational changes (including, for example, a reduction in Level of Service which might result in the displacement of traffic to parallel corridors) increases with higher traffic volumes. Clearly, each road diet candidate must be evaluated individually. Green Grand Rapids recommends that feasibility analyses be undertaken, recognizing that road diets may not be possible on all "candidate" streets shown in *Figure 2.b - Potential Bike Lane Network - Page 21*. In these instances, it will be important to identify a parallel corridor (or corridors) that can serve as part of a continuous, connected on-street bike network (see Alternate Bike Lanes in *Figure*

*2.b - Potential Bike Lane Network - Page 21* for possible locations). In choosing these parallel routes, priority should be given to streets with traffic controls that facilitate efficient bicycle movement, rather than streets with frequent stop signs that slow cyclists.

"Sharrow" pavement markings are another option for improving cycling conditions on streets where bike lanes and wide curb lanes (meeting American Association of State and Highway Transportation Officials (AASHTO) standards) cannot be accommodated. These pavement markings are placed within the travel lane to alert motorists to the need to share the lane with bicycles and to guide the positioning of cyclists in the roadway. Sharrows are already in use in many cities and are included in the

**Figure 2.c - Roadway Dimensions**



Federal Highway Administration's latest edition of the *Manual of Uniform Traffic Control Devices* (2009) which establishes federal standards and will be adopted in the State of Michigan by 2012.

No matter which specific techniques are used for improving cycling conditions on particular Grand Rapids streets, the adoption of an official plan that addresses bicycle infrastructure and updated street design guidelines are critical steps in preparing for coordinated implementation.

Other important strategies for making Grand Rapids more bike-friendly include:

- driver and cyclist education on rights and responsibilities;
- working with the Police Department on the enforcement of regulations that protect cyclists;
- continuing implementation of the City Manager's mandate to the Design Team<sup>5</sup> to facilitate efforts to improve cycling opportunities through project design and review.

In addition, steps to encourage cycling by building skills and confidence are recommended. These might include, for example, closing selected street loops temporarily to provide opportunities for on-street bike riding in a low-stress environment. This strategy (e.g., Portland, Oregon's "Sunday Parkways") has been used with great success in other cities.



*Sharrow Pavement Markings*

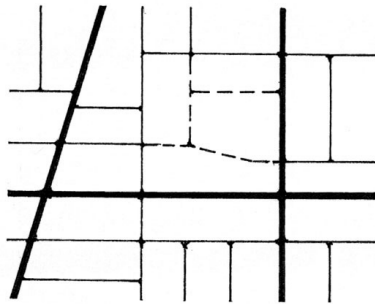
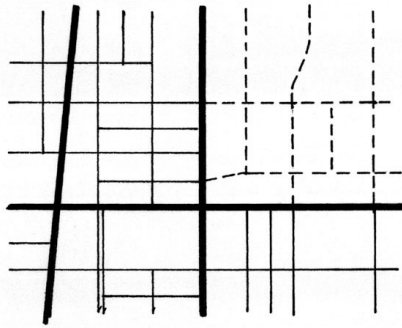


*Division Avenue Bike Lane*

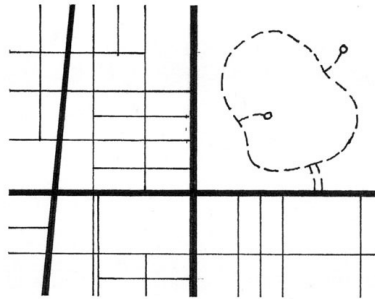
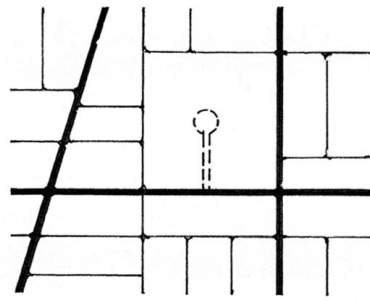
## **Bike Summit/Bicycle-friendly Community**

In April 2009, Grand Rapids bicycling advocates organized the area's first Bike Summit to raise awareness about and foster participation in making Grand Rapids a bicycle-friendly community. The Summit drew 200 participants who heard from speakers on the process for being recognized as bicycle-friendly community, how to design bike facilities and encourage cycling and what the State and City are doing to support these efforts. Summit attendees also participated in breakout discussions of issues and opportunities concerning: on-road facilities; off-road facilities; policy, law and enforcement; and advocacy and education.

Led by a new organization, the Greater Grand Rapids Bicycle Coalition, bicycling advocates worked through the summer to prepare an application for bicycle-friendly community recognition from the American League of Cyclists. In October 2009, the Grand Rapids area was designated a bronze-level bicycle-friendly community. Grand Rapids is the third bicycle-friendly community in Michigan, joining Ann Arbor (silver) and Traverse City (bronze). A second bike summit was held on May 6, 2011. This summit was heavily focused on the implementation of on-street facilities and included announcements on the advancement of bicycle infrastructure in Grand Rapids.



*Good Examples of Street Design*



*Bad Examples of Street Design*

**Walkable Streets** - Even streets that carry high volumes of traffic can act as seams, rather than barriers if they are designed to:

- provide sidewalks that allow continuous access and streetscapes that create a comfortable, human-scale environment;
- include on-street parking and/or planting zones to protect pedestrians from travel lanes;
- use traffic calming techniques to slow vehicles;
- provide well-defined crossing points (including curb ramps with tactile warnings, audible crossing signals and, where appropriate, pedestrian refuge islands).

As recommended in the 2002 Master Plan, land use patterns that encourage a mix of uses within a compact area are also important, as they ensure that pedestrian origins and destinations (homes, shopping, jobs) are located within easy walking distance of one another.

Green Grand Rapids participants identified “major” traffic streets (for example, 28th Street, Division and Plainfield Avenues) as the highest priorities for sidewalk and streetscape improvements needed to close gaps in the pedestrian network and improve walkability.

The location and treatment of off-street parking, and the number and design of driveways (especially those serving non-residential uses) also influence walkability. Parking lots located adjacent to the

sidewalk, especially if they occupy significant street frontage and/or are not softened and screened by landscaping, create an environment that is not hospitable to people on foot. In contrast, buildings located close to the sidewalk, with entries, windows and/or storefronts oriented to the street, create a sense of human scale and add activity and visual interest. This model can be applied to residential, commercial, institutional and industrial development, and is essential in Downtown, the city’s traditional business areas and proposed neighborhood, village and regional mixed-use centers. To ensure that these important urban design objectives are achieved, the City’s zoning ordinance has been updated to include site layout and building placement requirements, as well as building element<sup>6</sup> requirements that enhance walkability.

In addition to the design of the street environment, the configuration of the larger street network has an impact on walkability (and the convenience of cycling). Streets that create connections within and between neighborhoods, and to shopping, jobs, parks and schools, are needed. Small blocks and variations on a grid of streets multiply connections; large blocks and cul-de-sacs limit connections.

**Image Streets** - Certain high-traffic-volume streets that serve as gateways to Grand Rapids, especially those on which the addition of higher density residential development will be encouraged, deserve special treatment to create a positive image for the city overall and to enhance their appeal as investment locations. Boulevard treatments or other streetscape improvements - for example, street tree plantings, improved sidewalk paving, street signs and street lights - would dramatically improved their appearance. The 2002 Master Plan identifies 28th Street, Division Avenue and Michigan Street west of Fuller Avenue as important image streets. Other gateway streets recommended for consideration as image streets



include North Monroe Avenue, Fulton Street, Leonard Street, Plainfield Avenue, Lake Michigan Drive, Market Street and Grandville Avenue.

Green Grand Rapids participants confirmed these priorities and identified US-131 and I-196, Hall Street and Burton Street as additional candidates for improved landscaping and/or street tree planting. As noted above (see Bike-friendly Streets - Page 21), many of the priority image streets have limited right-of-way dimensions and now accommodate four travel lanes. The feasibility of providing wider planting zones (and bike lanes) by implementing road diets to re-allocate space will require investigation.

**Green Streets** - The design approach to all city streets should include improved stormwater management, wherever possible. These “green street” strategies manage stormwater at its source and include, for example, reducing paved area (by decreasing lane widths where possible) and using permeable pavement in alleys, parking lanes and sidewalks. Landscape areas parallel to the curb, in curb bump-outs, traffic islands or medians can also be expanded and designed to capture and infiltrate runoff from streets and sidewalks; additional street tree plantings will clean and absorb rainfall (see *Chapter 4 - A City in Balance with Nature*). Such a streetscape approach has been proposed along Michigan Avenue in the densely developed “Michigan Hill” area.

**Figure 2.d - Greening Priority Streets (GGR Participants)**

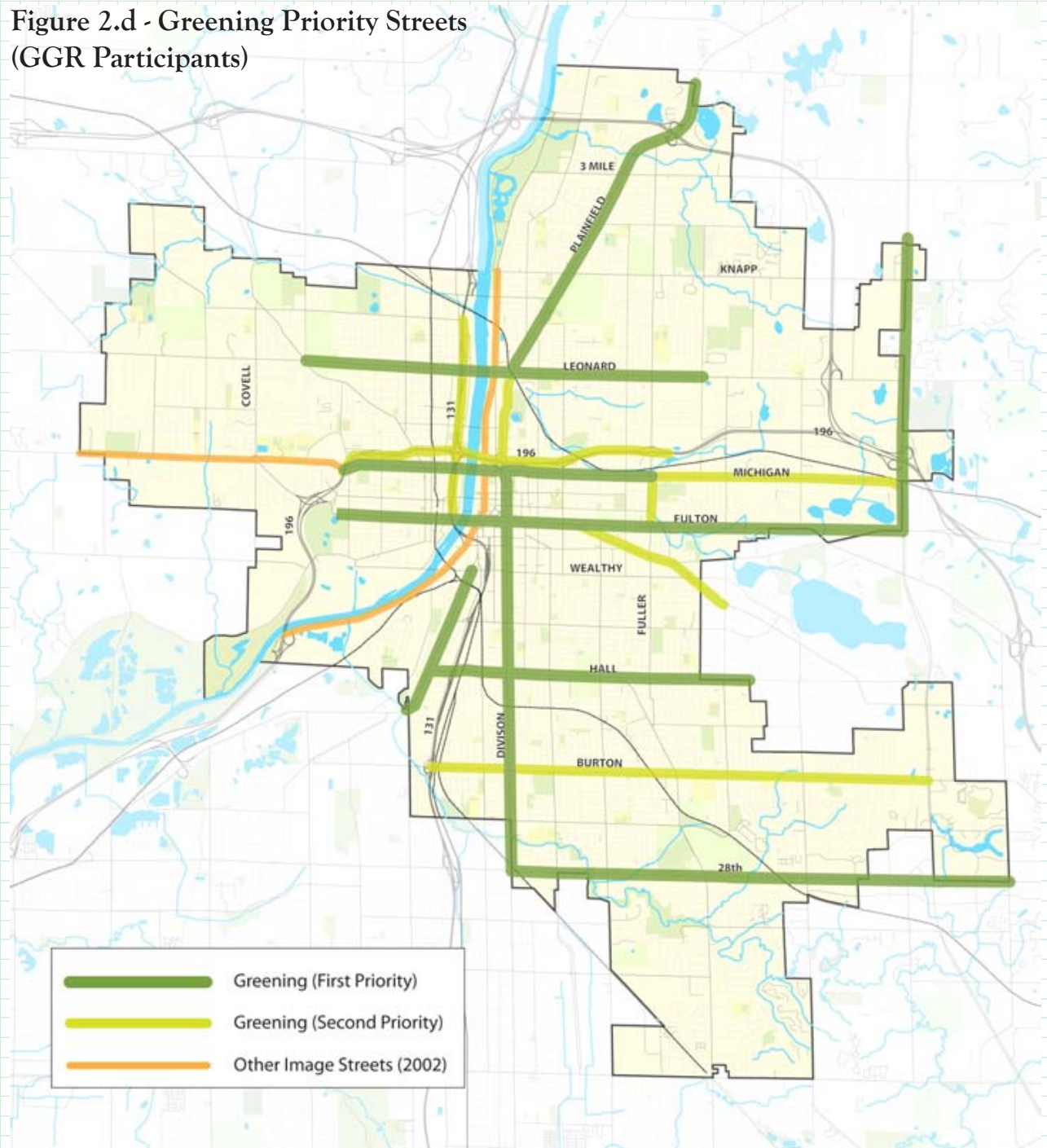
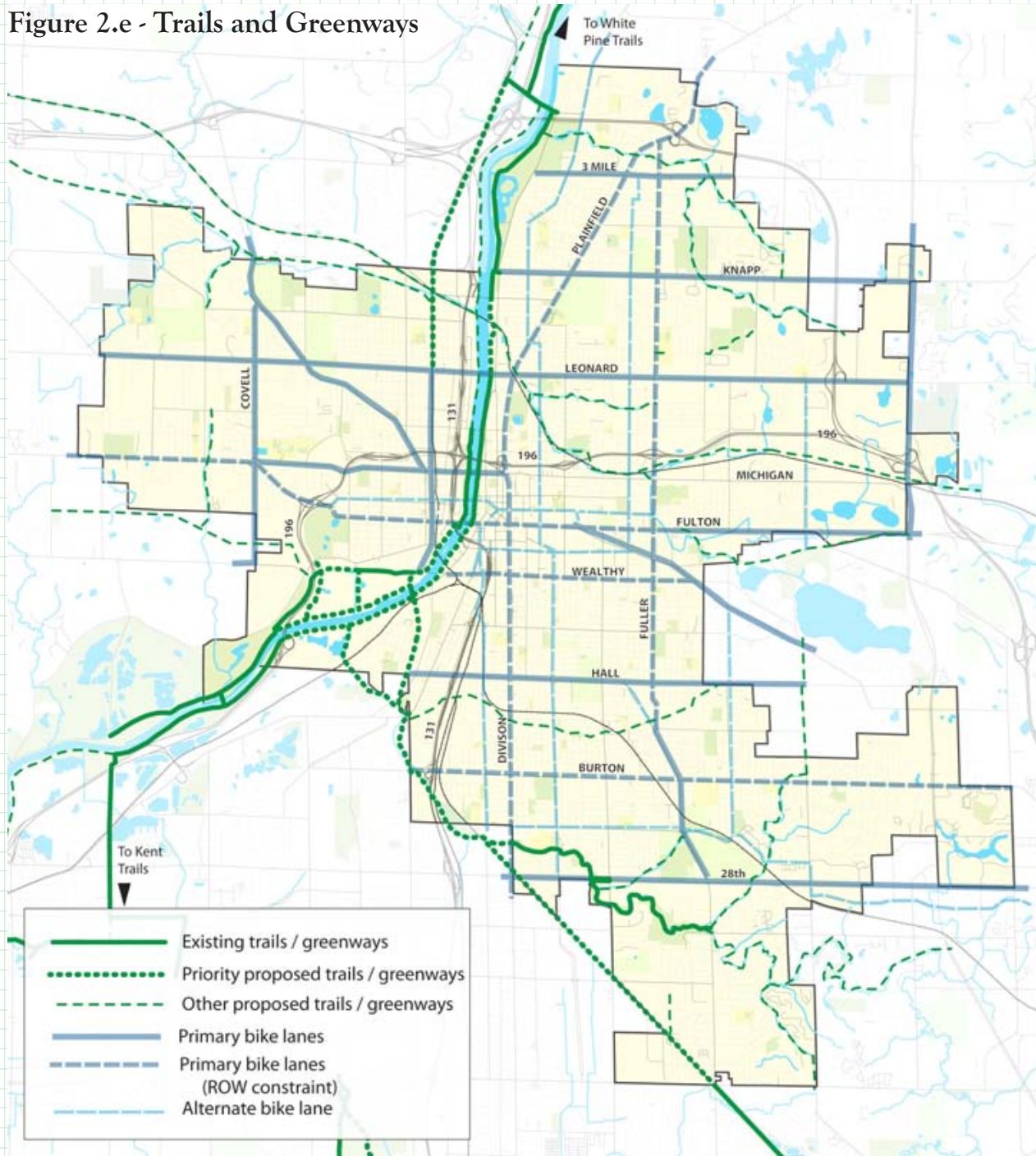


Figure 2.e - Trails and Greenways



## 2.2.2 - Off-street Bicycle and Pedestrian Trails

The existing Kent Trails (to the south) and White Pine Trail (north to Cadillac) connect Grand Rapids to regional and state-wide trail networks. Additional regional links are proposed to the Muscatawa Trail (west to Muskegon) and the Paul Henry/Thornapple Trail (to the southeast). Over time, the City has developed trail segments along the Grand River (riverwalk) and Plaster Creek that will ultimately link Grand Rapids to this larger system. These local trails will also connect community recreational resources and offer a bicycle commuting alternative to Downtown.

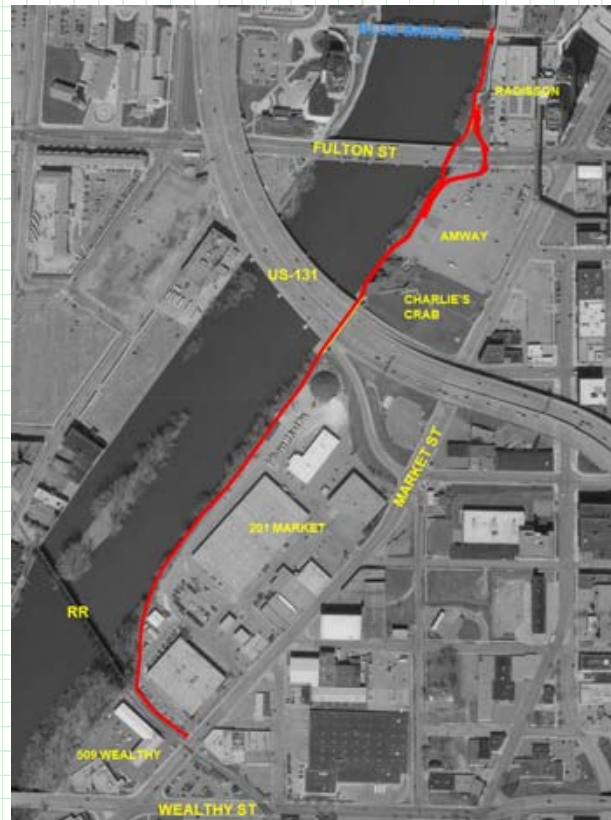
Completing these major trails is an important priority established in the 2002 Master Plan and reiterated in the Green Grand Rapids process. To illustrate how one critical gap in the riverwalk could be closed, Green Grand Rapids included a pre-engineering study for a riverwalk extension from the Blue Bridge (just north of Fulton Street) to the Wealthy Street Bridge on the east side of the river. This study can serve as the basis for negotiating riverwalk agreements with private property owners and for establishing guidelines for the possible future redevelopment of the City-owned 201 Market Street site. This proposed riverwalk segment, in combination with the trails proposed as part of the Green Grand Rapids concept plan for park development on Butterworth Landfill, will connect Downtown to the south to Millennium Park and Kent Trails (see *Chapter 3 - A City That Enriches Our Lives - Page 52*). In addition, in July 2011, the Michigan Department of Natural Resources (MDNR), Michigan Department of Transportation (MDOT) and Monroe North TIF purchased the Central Michigan Rail right-of-way on the east side of the river to allow a riverwalk extension to be completed from Canal Street Park

to Riverside Park and the White Pine Trail. On the river's west side, a connection from Kent Trails to Downtown and the White Pine Trail can be created by providing on-street bike facilities as part of the extension of Seward Avenue south to Wealthy Street and shared use paths in the publicly owned corridor extending north to Ann or North Park Streets. In addition, Grand Valley State University (GVSU) is evaluating strategies for extending the existing west bank riverwalk south from Fulton Street as they plan for new campus development.

The 2002 Master Plan also recommended the creation of greenways with bicycle and pedestrian trails along the Grand River's tributary streams to link neighborhoods to the river, its recreational amenities, the riverwalk and the regional trail system. For the most part, the creation of trail connections along these tributary streams will require the acquisition of public access easements from private property owners. Because this is likely to be a long-term effort, priority should be given to creating on-street bicycle and pedestrian connections along selected streets linking neighborhoods to the river trail. For example, the Seward corridor from Ann to Wealthy Streets would provide a direct connection on the west side. Opportunities may also exist to create trail connections along active rail lines and utility corridors.

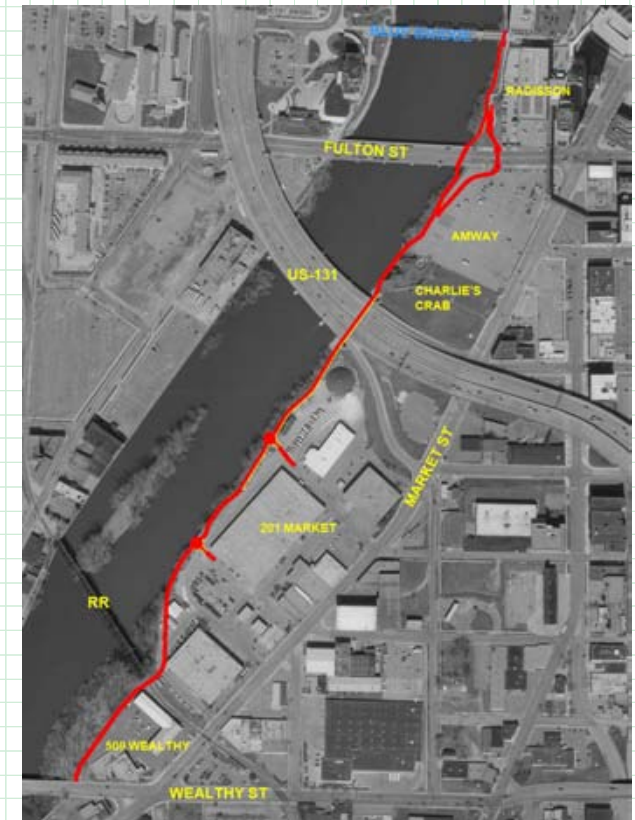
Even though the feasibility of creating pedestrian and bicycle trails along tributary streams may be limited, Green Grand Rapids recommends the protection and restoration of riparian buffers<sup>7</sup> along these corridors, and the river itself, to improve stormwater management in order to protect water quality, reduce flood risk and provide habitat corridors (see *Chapter 4 - A City in Balance with Nature*).

**Figure 2.f - Interim Riverwalk Extension: Blue Bridge to Wealthy Street**



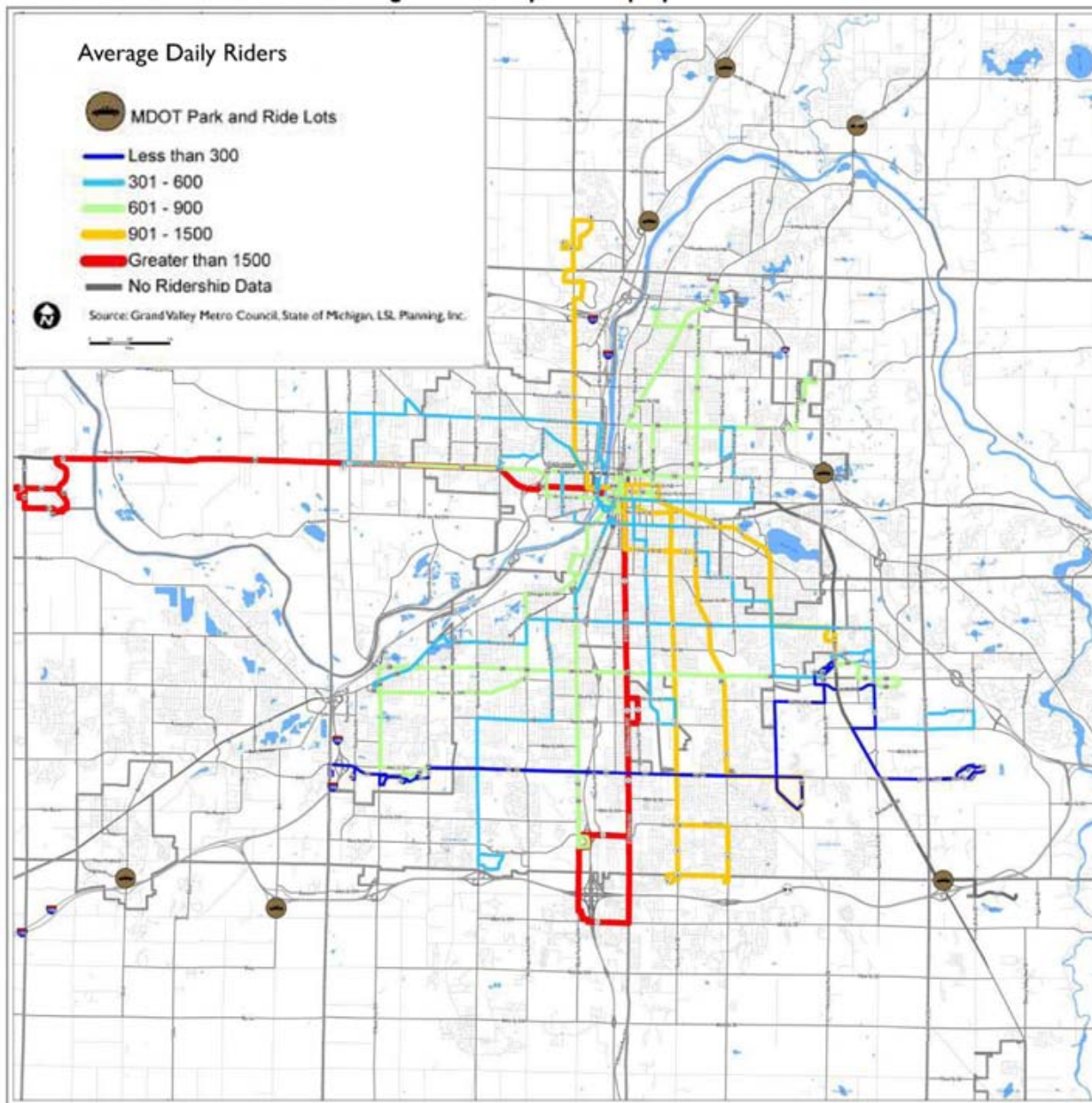
- Temporary walkways on or adjacent to sites of potential redevelopment
  - 201 Market Site
  - Amway Site
- Permanent walkways on or adjacent to sites already developed
  - Radisson Site
  - 509 Wealthy Site
  - Charlie's Crab
- Optional crossing under Fulton or at grade
- Permanent crossing under US-131
- Temporary connection to Wealthy Street via Market Street at RR

**Figure 2.g - Permanent Riverwalk Extension: Blue Bridge to Wealthy Street**



- Permanent walkways on or adjacent to sites of potential redevelopment
  - 201 Market Site
  - Amway Site
- Permanent walkways on or adjacent to sites already developed
  - Radisson Site
  - Charlie's Crab
  - 509 Wealthy Site
- Permanent crossing under Fulton + US-131
- Permanent connection to Wealthy Street across 509 wealthy site.

Figure 2.h - 2030 Transit Master Plan - Ridership Map



Credit: 2030 Transit Master Plan

## 2.2.3 - Transit

### Planning Background

In 1998, The Rapid, the transit agency serving Grand Rapids and portions of Kent and Ottawa counties, developed a strategic public transportation plan in coordination with the Grand Valley Metropolitan Council (GVMC) and a citizen taskforce, Mobile Metro 2020. Key goals included:

- providing a surface transportation center in Downtown Grand Rapids;
- establishing community transit hubs at major centers within, and at the edges of, The Rapids' service area (at locations where park-and-ride capacity is available);
- serving high-volume, high-capacity corridors by providing express service and by adding routes;
- providing 15-minute service on high traffic corridors;
- planning and seeking funding for bus rapid transit (BRT) service on a high ridership route (Division Avenue);
- improving employment transportation services (car and vanpooling).



Proposed BRT Stop Design

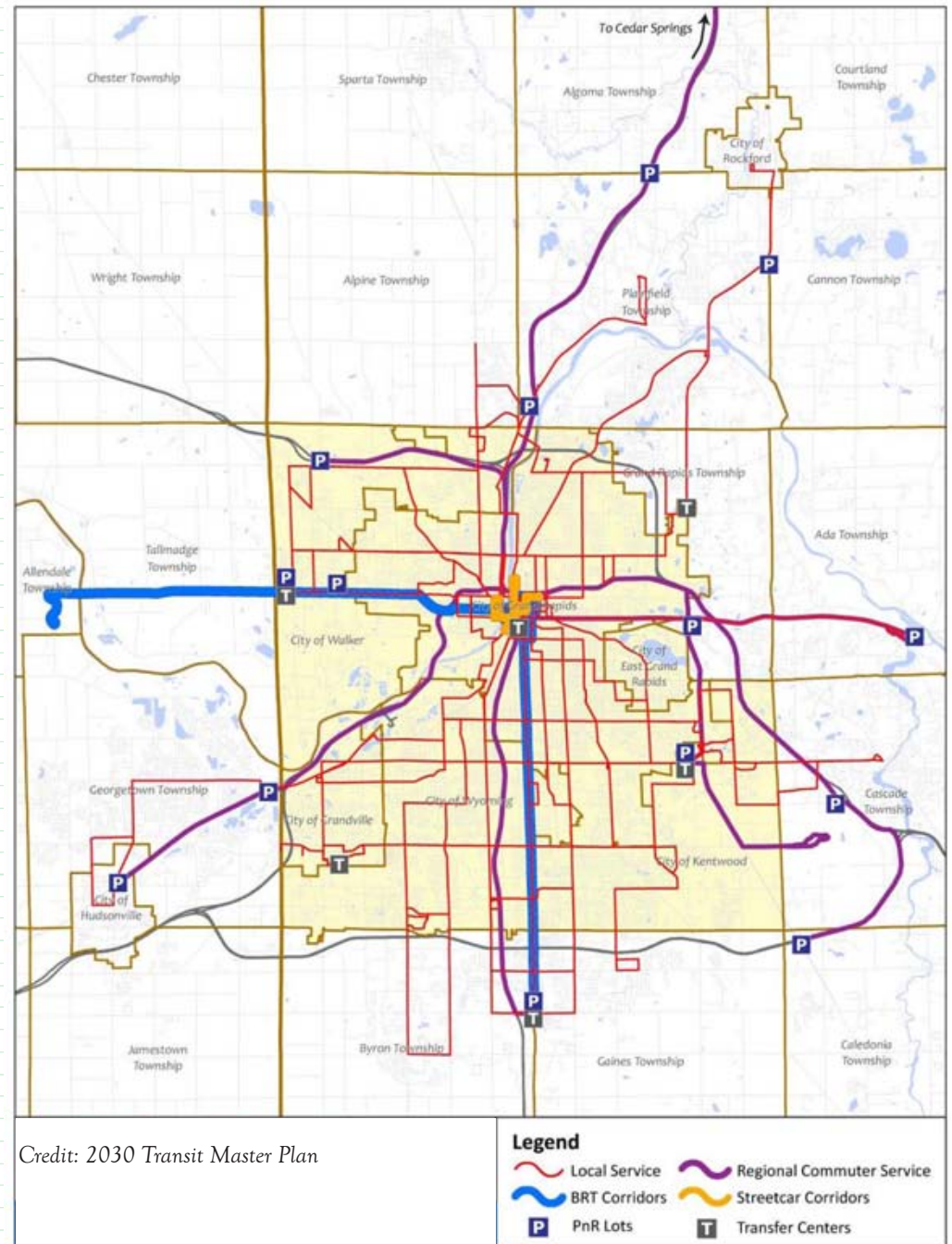
Since then, many of these strategic plan goals have been achieved,<sup>8</sup> resulting in double digit ridership increases over the past four years (to over 9 million riders in 2008). In addition, a Downtown streetcar feasibility study<sup>9</sup> has been completed.

In October 2009, The Rapid initiated the preparation of a new transit master plan with the Mobile Metro 2030 citizen taskforce. A 20-year preferred scenario was adopted by The Rapid Board in June 2010 that includes the following elements:

- extension of service hours - from 5 am to 12 am on weekdays and Saturdays, and 7am to 9 pm on Sundays and holidays;
- improved service frequencies - with 15-minute peak and off-peak service frequencies on six routes with higher than average ridership rates and 15-minute peak and 30-minute night and weekend service frequencies on most routes;
- BRT - on the Rapids' two highest ridership routes (the Silver Line on Division Avenue and the Laker Line on Lake Michigan Drive);
- express bus service - six to seven new regional commuter routes into the Medical Mile and Downtown;
- modern streetcar - a north/south route linking The Rapid's Central Station to North Monroe Avenue and an east-west route from the GVSU Pew campus to the Medical Mile via Downtown;
- new crosstown service - on Leonard Avenue and 3 Mile Road.

In addition, funding has been secured to relocate the Amtrak Station from Wealthy and Market Streets to the east in close proximity to The Rapid's Grand Central Station and Greyhound services. Station design is anticipated to begin in 2011.

Figure 2.i - 2030 Preferred Transit Scenario



Credit: 2030 Transit Master Plan

## Future Land Use

Land use decisions must be coordinated with efforts to improve and expand transit service, and to create a balanced transportation system that reduces dependence on the automobile. More compact development patterns and higher development densities in some areas of the city will concentrate travel origins and destinations to support more efficient transit operation. The 2002 Master Plan includes a number of land use recommendations that reinforce efforts to make transit a viable transportation choice, including:

- directing higher housing densities to locations on, or within walking distance, of major transit routes;
- encouraging the creation of compact, walkable mixed-use centers located on existing high ridership bus routes and proposed bus rapid transit routes;
- encouraging the location of major job centers on transit routes and the provision of incentives for employees to choose the bus over commuting by car.



Coit Bridge Reconstruction

## Site Planning and Street Design

The way that buildings and parking are arranged on a site has a significant impact on the ease with which transit users can move between transit stops and the front doors of buildings. Large parking lots located adjacent to the street establish a barrier to pedestrian movement between transit stops and buildings. Existing development can be retrofitted to reduce the extent to which parking lots discourage pedestrian connections. The most efficient pattern for bus operation and transit riders is to locate buildings on or near the front property line, with parking located to rear. This is especially important at major job centers and in neighborhood, village and sub-regional mixed-use centers.

Similarly, the planning and design of street improvements should take transit vehicles and riders into consideration, for example by providing sidewalks, bike parking, bus shelters and benches. At major transit connection points, a configuration that accommodates more than one bus at a time, and that is located off the major through-traffic street, is preferred. By negotiating park-and-ride agreements, these hubs can often be located at major shopping centers or big box retail sites where ample parking and room for bus shelters/waiting areas can be provided.

### 2.2.4 - Highways

Limited access highways within a city often create significant barriers by limiting or eliminating street connections and/or ignoring pedestrian and bicycle needs in the design of underpasses and bridges. In Grand Rapids, the design of US-131 – especially on the west bank of the Grand River to the north of Downtown – is an extreme example of this phenomenon. The 2002 Master Plan recommends that strategies for minimizing this barrier be explored to reconnect Near West Side neighborhoods to the

river. In the longer term, when major reconstruction of this segment of US-131 is being planned, east-west streets should be extended to the riverfront, wherever possible. Interim steps to reduce the barrier created by the US-131 embankment include improving the existing pedestrian tunnel at 10th Street and creating new street extensions and underpasses at 7th and/or 8th Streets where there is adequate vertical clearance. The US-131 corridor also limits east-west access in the southeast and southwest portions of Grand Rapids. South of Cherry Street, only five freeway overpasses (located at Wealthy, Franklin, Hall, Burton and 28th Streets) allow for connections between neighborhoods and shopping areas.

As highway improvements are planned, designed and implemented on both US-131 and I-196, opportunities for improving street connectivity and enhancing pedestrian and bicycle access (by widening sidewalks and adding bike lanes) should be given serious consideration. This will require coordination among City departments and neighborhood and business organizations, as well as the Michigan Department of Transportation (MDOT). MDOT's "Fix on I-196"<sup>10</sup> provides an excellent template for the future. In this project, bridges over the freeway were re-designed to improve accommodations for pedestrians to better connect neighborhoods on either side of the freeway. The best example is the Coit Avenue Bridge where nearly as much space was allocated to pedestrians as to cars.

### 2.2.5 - Parking

Parking is a complex and controversial planning issue. Nevertheless, a balanced transportation system must include a balanced approach to parking management. Critical parking management variables include:

- the amount of off-street parking required for different land uses and types of development;

- the way in which off-street parking is located and designed;
- the availability of on-street parking;
- how the costs for both on- and off-street parking are assigned and who bears those costs.

Decisions on how parking is managed can have a tremendous influence on neighborhood livability, business district vitality, the cost and financial feasibility of new development and the price of housing and other real estate for sale or rent. Parking management can also affect the following:

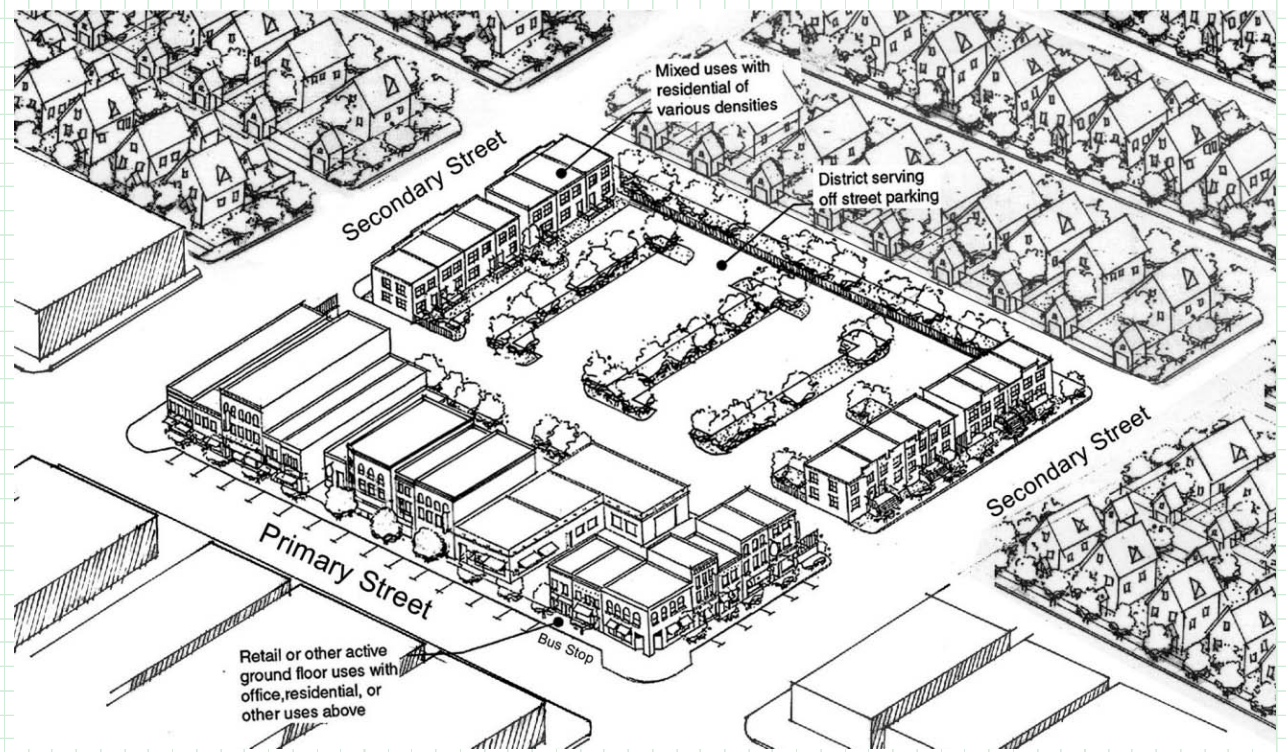
- individual decisions on whether to take the bus, cycle or walk - rather than finding, and possibly paying for, a place to park a private automobile;
- the amount of traffic on city streets (and the air quality impacts of tail pipe emissions);
- the amount of impermeable, paved land area and the volume (and pollutant loading) of surface runoff;
- the extent to which compact, walkable development patterns can be achieved.

## Supply

Prior to the zoning code update (2007; amended 2008), Grand Rapids specified a minimum number of off-street parking spaces for different types of land uses. These minimum parking requirements were based on national standards geared to suburban, rather than urban, development patterns. With the exception of the Downtown area, the same standards applied no matter where in the city a particular use was located. This approach failed to reflect differences in actual parking demand patterns or to take advantage of the potential to use variations in parking requirements as an incentive in implementing both transportation and development objectives.

Today, the zoning code includes off-street parking requirements that are better tailored to an urban environment and allows for some variations in the number of required parking spaces based on the district (e.g., Traditional Neighborhood vs. Modern Era Neighborhood) in which a use is located. Parking maximums have also been established (20% above the required number of spaces) and may not be exceeded without approval. Some flexibility has also been provided in allowing for reductions in the number of required spaces, for example, if a development is located within 100 feet of a bus stop. Parking reductions are also allowed in mixed-use developments with shared parking agreements. This provides a financial incentive for encouraging mixed-use development, the restructuring of traditional

business areas and the creation of neighborhood, village and sub-regional centers. In many instances, shared parking lots (and decks) that serve the needs of a district are a more land efficient and cost effective parking strategy than requiring each property owner to provide his/her own off-street parking. This shared parking approach is especially helpful in maintaining a more compact development pattern and a continuous block face. In areas where incentives for reinvestment are needed, the City may play a more active role in planning and developing shared district parking lots or ramps. Similarly, available on-street parking can now be counted in meeting total parking requirements to reduce the area that must be devoted to surface parking lots.



*Traditional Business Area Shared Parking*

Initiatives for managing the supply of parking, especially in the older parts of the city, require coordinated efforts to avoid the potential negative effects of parking spillover onto neighborhood streets. Many communities use resident permit parking programs to control these impacts.

## Demand

New approaches for managing the supply of parking must be coordinated with strategies for managing parking demand. One of the most effective strategies for managing demand is to ask drivers to pay for the parking they use. This would make some of the true costs of parking more visible and distribute them more equitably. Another, less politically challenging, approach is the use of Transportation Demand Management (TDM) programs. These programs require large employers to provide incentives for employees to use transit, car- or van-pools, or walk or cycle to work. While they effectively encourage reductions in vehicle miles traveled (VMT), these strategies also offer substantial benefits to employers, especially those located in densely developed areas in and near Downtown, by reducing their costs to build and maintain parking decks. Major employers can also be encouraged to develop financial incentive programs that allow and encourage employees to purchase homes within walking distance of work. These employer-assisted housing programs can take many forms, but often include low-interest loans and/or assistance with closing costs.

## Design

Parking should be located and designed to minimize its impact on the visual quality and pedestrian orientation of the street environment. Wherever possible, this means that parking should be located to the rear of buildings, rather than between buildings and the street. In addition, all development - even on

auto-oriented strip commercial corridors - should be required to provide landscape screening on parking lot edges adjacent to the street, as well as those adjacent to residential uses. Landscaping should be required within parking lots to provide visual relief, shade and a more human sense of scale. These requirements have now been included in the City's updated zoning code. Wherever possible, these landscaped zones should also serve as stormwater runoff infiltration areas designed to improve water quality.





## 2.3 - Objectives and Policies

The following objectives and policies summarize what needs to be done to achieve the plan recommendations presented on the preceding pages so that Grand Rapids can effectively balance transportation modes.

### Objective BT 1

**Design, maintain and operate streets to enable safe access for all users including pedestrians, bicyclists, motorists and transit riders of all ages and abilities (Complete Streets).**

- a. Appoint a Complete Streets planning committee to draft policies and plans.
  - Assign the City's Design Team to act as champions.
  - Propose a resolution to include Complete Streets improvements in all street construction and reconstruction projects.
  - Consider a resolution dedicating a percentage of funds received under PA 51, Michigan Transportation Fund, toward completing a system on non-motorized routes.
  - Update *Street Classification Policy* guidelines to create clear street design standards and processes for exceptions, recognizing the need for flexibility.
  - Plan community education and involvement strategies.
  - Recommend revisions to current agency procedures.
  - Select priority projects for implementation.
  - Define actions, responsibilities, time lines and funding sources.
  - Monitor and report on progress.

### Objective BT 2

**Coordinate land use and transportation planning to provide safe and appropriate vehicular access to all areas of the city.**

- a. Locate industrial and commercial land uses, and manage truck traffic, to avoid the use of residential streets.
- b. Balance through-traffic and commuter needs with the need for pedestrian quality in neighborhoods, neighborhood business districts and Downtown.
- c. Encourage the development of a connected street network that disperses traffic and facilitates walking and cycling.
- d. Target roadway and streetscape improvements to assist in the revitalization of neighborhoods and business districts and encourage mixed-use development.

### Objective BT 3

**Make Grand Rapids a bicycle-friendly city.**

- a. Prepare an on-street bike route plan.
  - Review and revise the draft 2004 *Bicycle Pedestrian Facilities Plan* to map improvements needed to create a connected and convenient bike system; adopt the amended plan.
  - Balance cycling and other priorities.
  - Provide design guidelines for bicycle improvements, including parking.
  - Provide education and enforcement.
- b. Implement improvements incrementally.
  - Give priority to bike lane feasibility studies on major traffic streets or parallel corridors.<sup>11</sup>
  - Identify road diet candidates (reduced number of travel lanes).

- Coordinate with street re-construction and repaving projects.
  - Capitalize on "easy wins" (stripe and sign streets where cycling can be accommodated now).
- c. Prepare an application for designation as a "silver" bicycle-friendly community.
  - d. Design bikeways to meet national standards.
  - e. Encourage bike/transit linkages (e.g., bus bike racks; bike storage facilities at major transit stops and destinations).

### Objective BT 4

**Make Grand Rapids a walkable city.**

- a. Continue to encourage compact development patterns, a mix of uses, connected streets and transit-supportive development.
- b. Design all streets to be safe and walkable and to present a pleasing image of the city.
  - Give priority to sidewalk improvements on high-traffic-volume streets (e.g., 28th Street).<sup>12</sup>
  - Promote the placement of buildings close to the sidewalk with entries, windows and storefronts oriented to the street.
  - Continue traffic calming efforts.
  - Evaluate road diet candidates.
  - Plant street trees.
  - Provide crossing improvements (cross walks, refuge islands, audible signals, tactile warnings on curb ramps).
- c. Require sidewalks in all development/re-development projects.
  - Require sidewalks on both sides of high-traffic-volume streets.
  - Require sidewalks on at least one side of residential streets.

- Consider retrofit of built areas.
  - Consider establishing a new sidewalk funding source (other than special assessment).
- d. Provide streetscape improvements on city gateway corridors and image streets (greening priority streets).
- Priority streets include: Plainfield Avenue, Division Avenue, Grandville Avenue, Market Avenue, North Monroe Avenue, Leonard Street, Lake Michigan Drive, Michigan Street/Bridge, Fulton Street, Hall Street, Burton Street and 28th Street.
  - Work with MDOT to encourage landscape improvements along US-131 and I-196.
  - Plant street trees and include stormwater infiltration/bio-infiltration and porous sidewalk and parking lane pavement wherever possible.
  - Coordinate with street re-construction and repaving projects (including Combined Sewer Overflow projects).
  - Give priority to areas where neighborhood and business organizations will take responsibility for maintenance.
- e. Recognize the importance of alleys in traditional neighborhoods and promote alley improvements projects.

## Objective BT 5

**Promote the development of a system of bicycle and pedestrian trails (greenways) along the Grand River and tributary streams, rail rights-of-way and utility corridors to link all city neighborhoods to the river and regional trail systems.**

- a. Provide continuous public access and trail connections along the Grand River from Riverside

Park to Millennium Park and from Ann Street to Wealthy Street via Seward Street with connections to the White Pine Trail, Kent Trails and the proposed Muscatawa Trail.

- Accommodate both walkers and cyclists.
  - Develop a short-term plan, including on-street segments where necessary.
  - Provide pavement markings and/or signs, as appropriate, to identify the route.
  - Develop mid- and long-term action plans, including requirements/incentives for a wider private development setback from the river and public access easements.
  - Develop design guidelines to achieve a higher level of quality and consistency in the incremental development of the riverwalk.
- b. Complete the Plaster Creek Trail from Division Avenue to the Grand River.
- Coordinate with the City of Wyoming.
  - Seek funding for establishing the link from Wyoming to/across the Grand River.
  - Collaborate in developing a connection to the Thornapple Trail.
- c. Evaluate the feasibility of obtaining public access easements and creating trail connections along other tributary creeks.
- Assess ownership patterns.
  - Seek easement agreements.
- d. Explore off-street trail opportunities along rail rights-of-way and utility corridors.
- e. Design trails to protect natural features, provide habitat corridors and improve stormwater management (riparian buffers).

## Objective BT 6

### **Increase the use and effectiveness of transit.**

- a. Coordinate land use, site design and transportation planning to make transit convenient, efficient and affordable.
- Locate mixed-use centers on transit routes and higher density housing within walking distance.
  - Encourage transit-supportive development densities in proposed neighborhood, village and sub-regional centers.
  - Ensure that major employment centers are well served by transit.
  - Coordinate parking, Transportation Demand Management (TDM) and transit strategies to reduce peak hour congestion and on-site parking needs.
  - Encourage building placement and parking design that facilitates access to transit stops.
  - Include transit-related improvements (bus stations and shelters, benches, sidewalks) in roadway re-construction and streetscape improvement projects.
  - Ensure that transit is accessible to persons with disabilities.
- b. Support The Rapid's efforts to implement the 2030 *Transit Master Plan*, including the proposed BRT and Downtown streetcar routes.

## Objective BT 7

**Reduce the extent to which highways create barriers to movement between neighborhoods, business areas and the Grand River.**

- a. Encourage MDOT to evaluate the feasibility of redesigning US-131 (from the S-curve to Franklin Street) to allow at-grade local street connections when major reconstruction is planned.
- b. Reduce the barrier created by the US-131

embankment between West Side neighborhoods and the river's edge by improving the existing pedestrian tunnel and creating underpasses to extend 7th and/or 8th Streets.

- c. Seek other opportunities for improving street connectivity and pedestrian/bicycle access as highway improvements are planned on both US-131 and I-196.

## **Objective BT 8**

**Encourage the more efficient provision of parking and reduce its impact on the city's appearance and walkability.**

- a. Coordinate transit and parking strategies.
- b. Encourage shared parking; manage parking in neighborhood business areas on a shared, district-wide basis.
- c. Encourage the development of TDM programs by major employers and at major employment and activity centers to reduce peak hour congestion and on-site parking needs.
- d. Adopt policies to avoid potential spillover parking on neighborhood streets (for example, resident parking permit programs).
- e. Establish regulations and incentives to locate and screen parking to minimize its impact on the view from the street.
- f. Develop policies to discourage demolition of buildings exclusively for surface parking use.
- g. Consider the feasibility of providing structured parking in densely developed business districts where extensive surface parking would negatively impact pedestrian character.

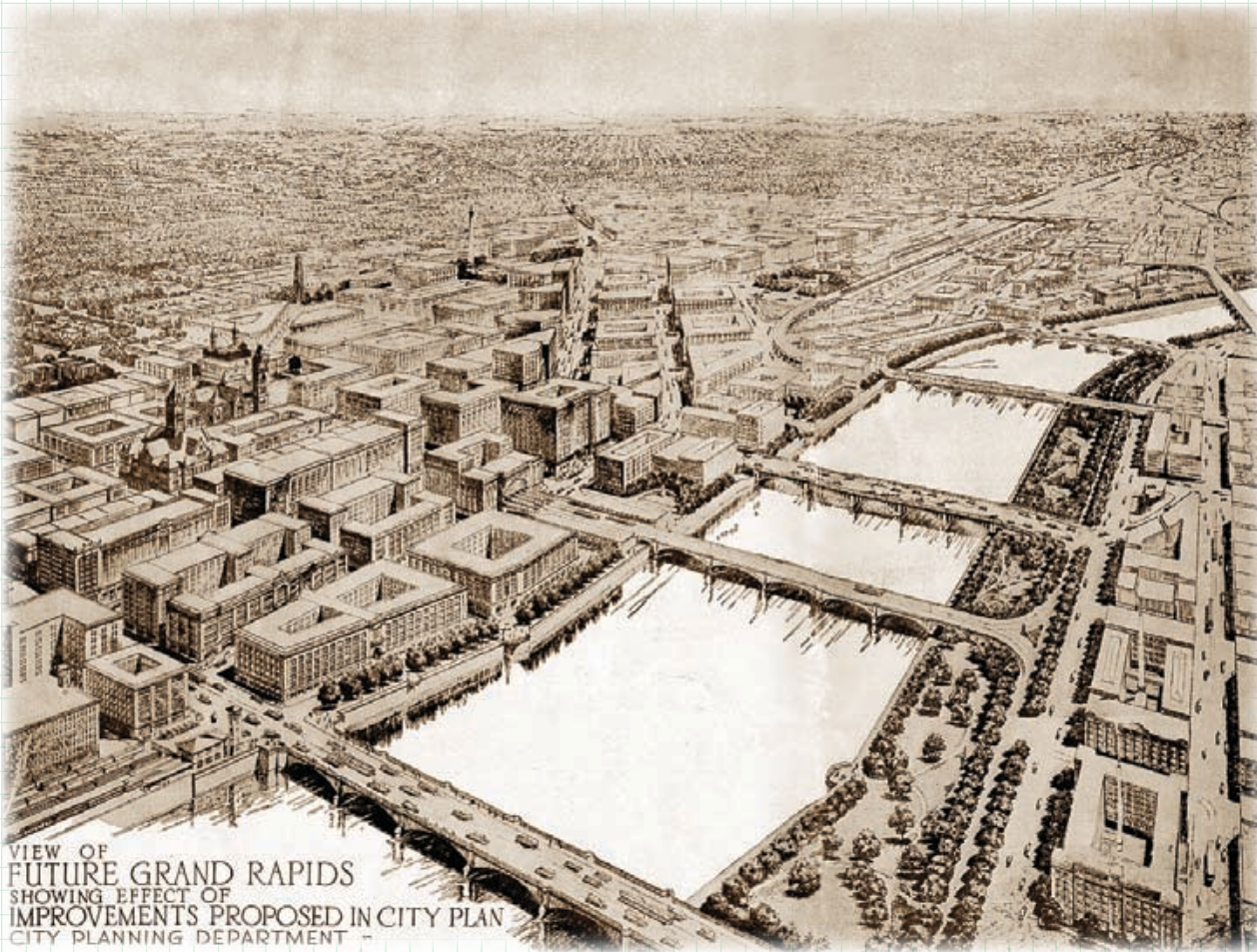
## Chapter 2 Notes

1. *Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking*, Rails-to-Trails Conservancy, 2008.
2. The American Association of State and Highway Transportation Officials (AASHTO) publishes these guidelines. Recommended dimensions for striped bike lanes (designating the area for cyclists) are 6-feet adjacent to on-street parking (typically a 11-foot wide zone from face of curb) or 6 feet from the face of curb where no on-street parking is provided. (Note: 5-feet is considered a satisfactory dimension, but 6 feet is preferred.) Recommended dimensions for a shared roadway (wide curb lane) are 14 feet (travel lane plus bikeway, not including curb and gutter) and 12-feet with on-street parking.
3. The relocation of existing curbs would be required in some instances to provide the ideal post-road diet cross section illustrated in *Figure 2.c - Roadway Dimensions - Page 22*. Unless major roadway re-construction is planned, it is unlikely that the cost of relocating curbs will be considered feasible.
4. *Four-lane to Three-lane Conversions: An Update and Case Study*, Keith Knapp and Jennifer Rosales, 3rd Urban Street Symposium, June 2007.
5. The Design Team includes representatives of all City departments involved with the review of private development projects and the planning and design of public improvements. The Design Team meets bi-monthly.
6. Building element requirements establish standards for building height, materials, façade articulation, building orientation, entrances and façade transparency.
7. River Corridor Guidelines, available from the Planning Department, were prepared as part of Green Grand Rapids to describe the principles and tools for protecting and restoring riparian buffers.
8. Federal and state funding support for the proposed BRT line has been committed and a millage request to provide local funding was narrowly approved in May 2011.
9. It is anticipated that the proposed streetcar route would be privately funded.
10. The “Fix on I-196” included the widening of I-196 between US-131 and Fuller Avenue including the replacement of bridges over I-196 at Coit, Diamond and Eastern Avenues. Work began in April 2010 and was scheduled for completion in late summer 2011.
11. North-south priorities include: Covell Avenue, Walker-Stocking Avenue, Seward Avenue (Fulton Street to Leonard Avenue), Plainfield Avenue, Division Avenue, Fuller Avenue/Kalamazoo Avenue. East-west priorities include: 3 Mile Road, Knapp Street, Leonard Street, Bridge/Lake Michigan Drive, Fulton Street, Wealthy Street, Hall Street, Burton Street and 28th Street.
12. Top priority streets include: Plainfield Avenue, Division Avenue, Fuller Avenue/Kalamazoo Avenue (south of Fulton Street) and 28th Street.

# 3.0 - A City That Enriches Our Lives

The quality of life in Grand Rapids plays an important role in determining whether people will choose to live, shop, work and spend leisure time in the city. Maintaining Grand Rapids' competitiveness in attracting people and investment is essential to the city's economic sustainability. While many factors influence quality of life, the Master Plan focuses on environmental quality, open space and recreation, walkability and transportation and good urban design. These characteristics have broad appeal, but are especially important to highly educated "creative class" workers, who can help to provide the innovation and entrepreneurship needed to support and attract 21st century "knowledge-based" businesses.





1923 Master Plan Illustration

## 3.1 - 2002 Vision and Green Priorities

One of the first steps of the 2002 Master Plan process was to ask the citizens of Grand Rapids what they would like to see the city look like 20 years from now. The following visions emerged.

*“Grand Rapids will be a city where green spaces are valued, protected and preserved to enhance neighborhoods, provide community gathering places and sustain the invaluable treasure of wildlife and nature. We will succeed in making our most important natural feature – the Grand River – increasingly visible and usable by converting older riverfront industrial sites to parks and new development that welcome people to the river’s edge. We will recreate the rapids in the river as a reminder of our heritage.”*

*“Grand Rapids will have safe parks and community centers with lots of supervised activities for children of all ages – from sports to the arts. Our success in engaging youth and families in our diverse recreational programs will strengthen our community and provide opportunities for young people to chart a constructive life course. We will also make great progress in developing a system of greenway corridors that link neighborhoods to parks, to one another and to regional and state trail systems.”*

Green Grand Rapids extensively expanded and evaluated various topics related to quality of life. This deeper dive provided greater clarity to community issues and priorities around three central topics: the Grand River, Parks and Recreation and Local Food.

The Grand River topic explores riverfront mixed-use and open space development and takes a closer look at opportunities to expand river-related recreation. The Parks and Recreation topic evaluates deficits in park accessibility to help set priorities for maintaining and expanding the park inventory. It also re-emphasizes the importance of community partnerships in addressing maintenance priorities in for existing parks. The Local Food topic looks at strategies for supporting community gardens and farmers’ markets to improve access to fresh, local food, provide neighborhood focal points and offer entrepreneurial opportunities.

## 3.2 - Plan Recommendations

Plan recommendations focus on:

- the Grand River as one of the city's greatest quality of life assets;
- the equitable distribution of parks, and strategies for maintaining them;
- local food;
- quality urban design.

### 3.2.1 - The Grand River

As Grand Rapids' most significant natural asset, the Grand River can and should play an increasingly important role in enhancing the city's quality of life. This can be achieved by continuing to expand the visibility of the river, improving access to and along its edges and encouraging active uses on and adjacent to the water. Historically, industrial development and highways have limited the extent to which people can see, access and enjoy the riverfront. The 2002 Master Plan recommends a new land use pattern that calls for open space and mixed-use development to encourage riverfront reinvestment that creates a variety of people-oriented destinations. It also recommends extending the existing riverwalk along the entire length of the Grand River with connections to the regional trail network and to neighborhoods across the city (see also *Chapter 2 -Balanced Transportation*).

These ideas are not new; they build on the City's 1923 Master Plan and the *Grand River Edges Plan* and *Central Area River Land Policy* recommendations formulated in the 1980's. The 2002 Master Plan expands on these ideas to reflect a broader vision for making the Grand River the focus of a larger open space system. Green Grand Rapids emphasizes

two particular priorities for the Grand River. The first is to capitalize on its underused recreational potential by adding new activities on and along the river. The second is to improve the health of the river ecosystem, a critical component of the regional green infrastructure network, by preserving and restoring riverbanks and riparian buffers (see also *Chapter 4 -A City in Balance with Nature*).

#### Mixed-Use Development

As shown in the Future Land Use Plan (*Figure 1.b - 2002 Future Land Use Plan - Page 7*), the 2002 Master Plan recommends that a change in land use be encouraged along the riverfront north of Wealthy Street from industry to open space and mixed-use. In the area north of I-196, east of US-131 (on the west side) and west of Monroe or Market Avenues (on the east side) the mix of uses should give priority to:

- the addition of open space available to area residents, employees and the public;
- continuous public access along the river edge;
- medium- and high-density residential development on the riverfront.

New job-generating uses along the riverfront could include offices, educational or cultural institutions and hotels. Retail, restaurant and/or entertainment can also be encouraged as accessory uses located in the same building as a primary residential, office, institutional or hotel use. A mix of uses within a single building or development parcel should be encouraged. Develop densities that capitalize on the value of a riverfront location, and careful control of surface parking, are recommended.

Encouraging a new mix of uses on the riverfront (and near Downtown) is an important strategy in creating a human-scale, walkable and transit-supportive city. To be successful, these mixed-use areas must be carefully planned and designed to provide incremental

#### Why is the Grand River Important?

##### Environmental Benefits

- Grand Rapids' most important natural asset
- A healthy river has greater visual appeal and recreation value
- A habitat corridor (aquatic and terrestrial)
- A primary link in the regional "green infrastructure" network

##### Economic Benefits

- A magnet for reinvestment/economic development. The water has universal appeal for people
- Higher property values (and tax revenues)
- Potential tourism destination (spin-off expenditures)

##### Quality of Life Benefits

- A visual, historic, cultural and recreational amenity
- A focus of community activity and pride
- A linear recreation corridor (walking, cycling, boating)

#### What has Grand Rapids already done to improve the Grand River?

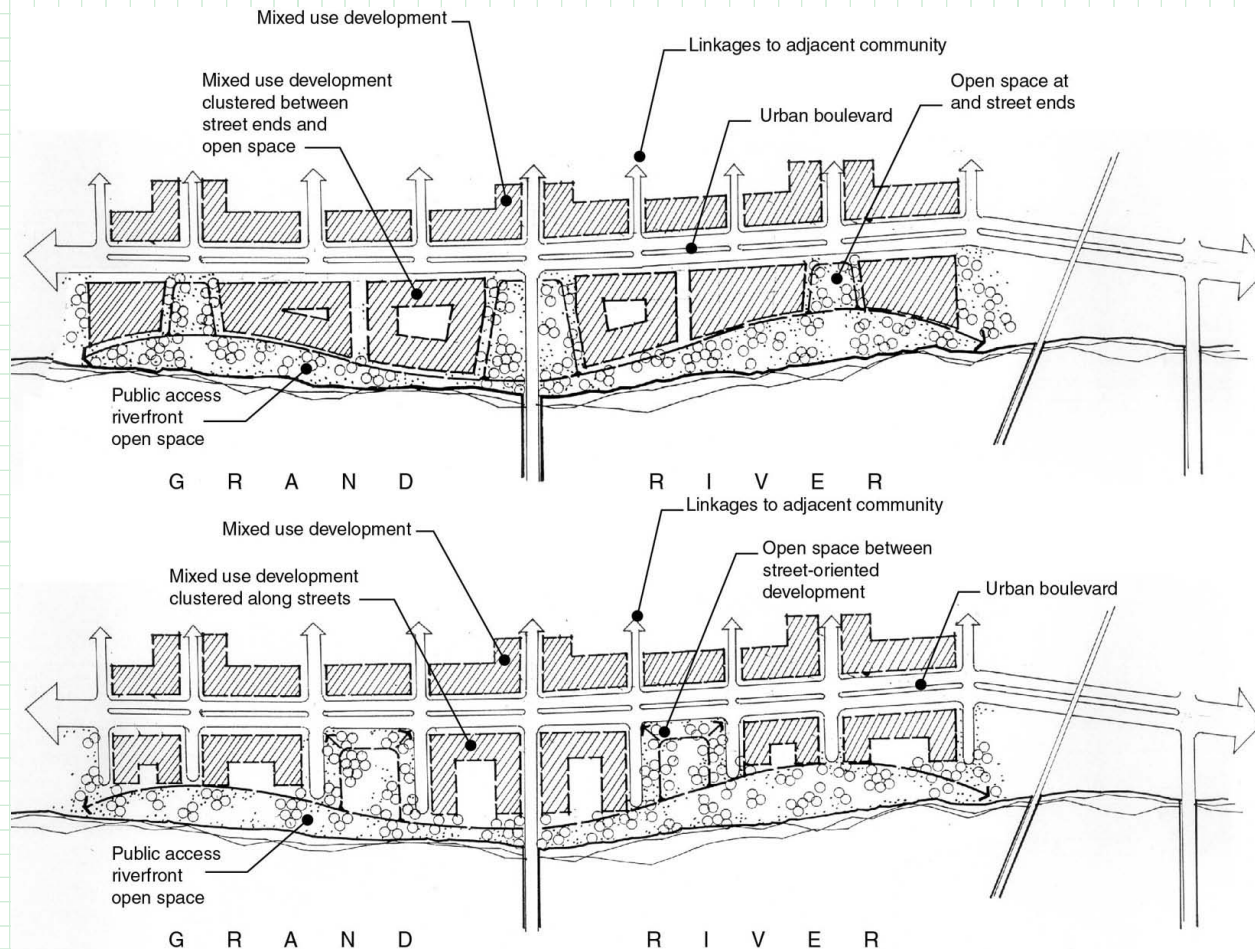
- Implemented water quality improvements (CSO) to reduced pollutants by 99% since the 1960s. Non-chemical waste water disinfection. Stormwater management.
- Adopted riverfront land use policies encouraging a transition from industry to open space and mixed-use
- Created new riverfront parks and riverwalk extensions (Canal Street; 6th Street)
- Re-zoned riverfront parcels from industrial to mixed-use

transitions in use intensity and building scale, coherence in architectural design and a pedestrian-friendly public realm.<sup>1</sup> Performance standards may also be needed to control impacts (for example, noise and truck traffic) that can reduce quality of life. In this riverfront zone, additional standards that protect the river's water quality, habitat value and flood control functions are also appropriate (see also Health of the River Ecosystem, Page 44).

**Updated Zoning Ordinance** - The city's updated zoning ordinance (2007; amended 2008) represents a major step in implementing these recommendations concerning riverfront land use and development character. New industrial uses are either not permitted or permitted only as special land uses requiring Planning Commission review. Urban design requirements have been established for build-to lines, green space, building materials, façade variation, building orientation, entrances and façade transparency. Building height bonuses are

also offered (for those portions of Downtown where heights permitted as-of-right are limited to 85 feet) for urban open space, ground floor retail and residential use (see also Urban Design, Page 57). The new Riverfront Overlay District establishes additional requirements for development on the river's edge. These include a minimum 25-foot setback from the riverwalk, floodwall, shore or dockline; application of "building element" requirements<sup>2</sup> to the river side, as well as the street side, of buildings and an increased green space requirement. An additional building height bonus is also offered for providing public access along the river's edge.

**Figure 3.a - Examples of Riverfront Mixed-Use and Green Space Design**



**201 Market Street** - A concept plan for the future redevelopment of the riverfront 201 Market Street site, prepared as part of Green Grand Rapids, illustrates the Master Plan's riverfront mixed-use and open space development objectives. It also explores the development capacity of this City-owned 18-acre site, now the home of the Parks and Recreation Department and storage for Streets and Sanitation. The concept plan, supported by Green Grand Rapids participants,<sup>3</sup> illustrates public access and open space, vehicular circulation and parking, the configuration of development parcels and building heights and massing.

To capitalize on the potential value of this parcel (located less than a 1/2-mile walk from the heart of Downtown), the concept plan recommends a mix of uses with building heights (with bonuses) of up to 28 stories at the northern end of the site (closest to US-131) with heights stepping down to the south and public open space along the river's edge. The plan also recommends upper story setbacks on taller buildings and the preservation of view corridors between tower elements. To allow for this development capacity (approximately 2.8 million gross square feet), it will be necessary to re-evaluate and revise the existing height limitations and bonus provisions of the Downtown



Height and Riverfront Overlay districts. The concept plan suggests several other modifications to existing zoning for consideration:

- establishing a minimum 50-foot development setback from the river's edge (consistent with existing riparian buffer requirements) for the riverwalk and bank improvements/restoration;
- stronger incentives/requirements for providing public access through development parcels from the street to the riverfront.

### River Recreation Opportunities

Green Grand Rapids addresses a number of inter-related initiatives for expanding recreation opportunities along the Grand River. These include:

- extending the riverwalk;
- riverwalk design guidelines;
- strategies for improving water quality and the overall health of the river ecosystem;
- the addition of parks and the expansion river-related activities and events;
- the creation of a rapids/whitewater course

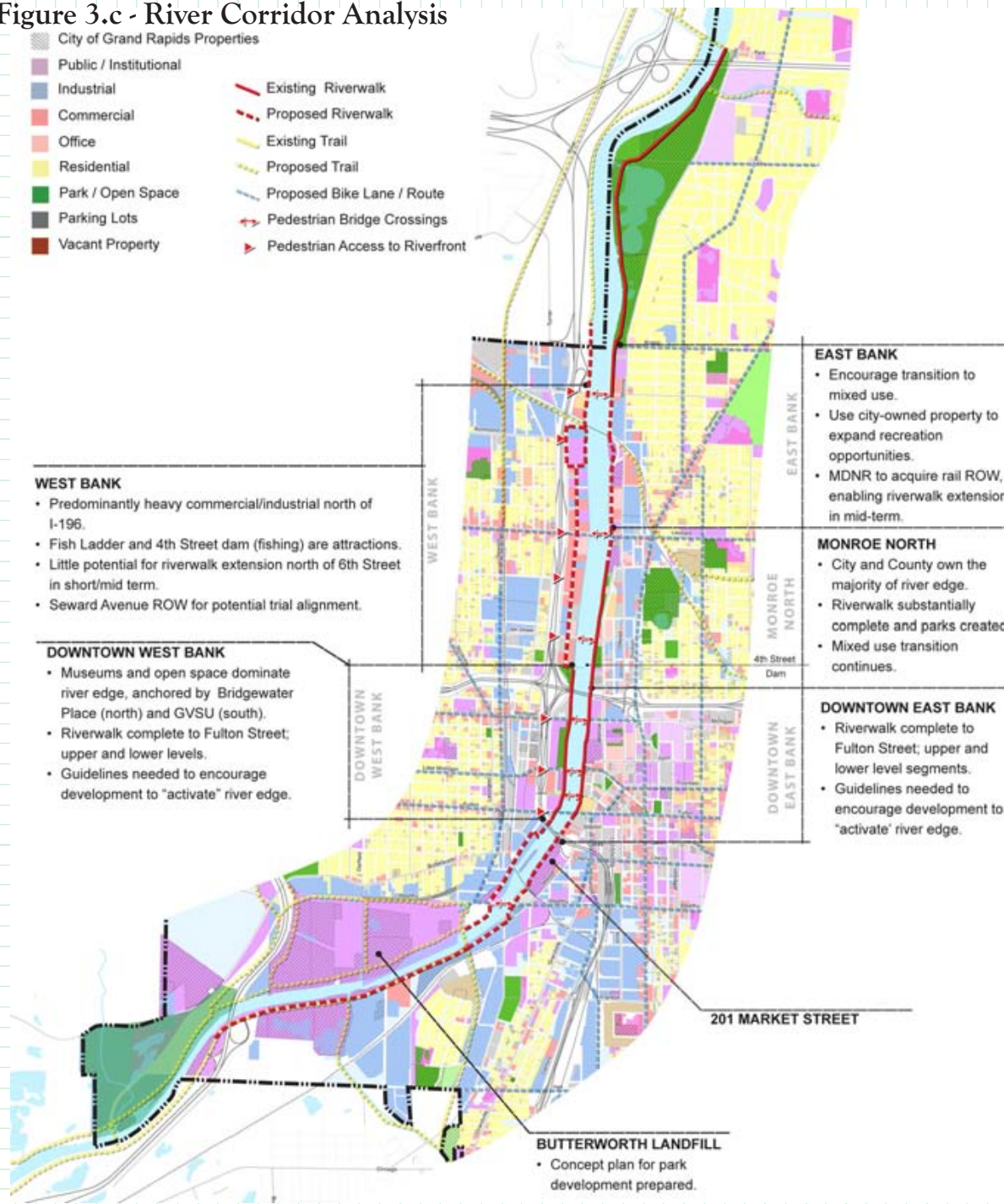
**Riverwalk Extensions** - The 2002 Master Plan endorses the recommendation originally proposed in the *Grand River Edges* (1981) plan that continuous riverfront “walk/bike ways” be created on both sides of the Grand River to connect Millennium Park (and Kent Trails on the south) to Riverside Park (and the White Pine Trail on the north), linking the riverfront parks in between. This system of riverfront parks and connecting “green” corridors will serve as a citywide recreational amenity, a non-motorized transportation link and the spine of Grand Rapids green infrastructure network.

**Figure 3.b - 201 Market Street: Preferred Concept Plan and Building Height Comparison**



Bridgewater & Riverhouse ~ 35 stories (405')	Plaza Towers ~ 32 stories (345')	JW Marriott ~ 24 stories (256')	— 201 Market Street Preferred Concept —
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**Figure 3.c - River Corridor Analysis**



Today, 5.5 miles of riverwalk connections have been completed representing approximately 46% of the combined length of the east and west banks of the Grand River. These riverwalk segments are concentrated in the Downtown area and at Riverside Park, leaving critical gaps north of the Sixth Street Bridge and south of Fulton Street. Opportunities to close these gaps are being pursued. In 2011, the Michigan Department of Natural Resources (MDNR) purchased (and will lease to the City) the rail right-of-way on the east bank of the river to make the riverwalk connection from Canal Street Park north to Riverside Park possible. In addition, Green Grand Rapids proposes both interim and permanent riverwalk connections on the east bank from Fulton to Wealthy Street (including public open space easements on the City-owned 201 Market Street site) and as part of a concept plan for future park development on the City-owned Butterworth Landfill on the west bank. GVSU is also exploring potentials for extending the existing riverwalk on the west bank south from Fulton Street as part of campus development that could connect to the Seward Avenue bikeway. Completing these riverwalk links connecting Riverside and Millennium Parks is one of the top priorities established through the Green Grand Rapids process (see also *Figure 3.c - River Corridor Analysis* for other potential river trail components).

**Riverwalk Design** - Existing riverwalk segments have been completed over time by different entities. As a result, the character and quality of the riverwalk varies. Different paving widths and materials, wall and railing treatments, landscaping and site furnishings create a fragmented experience. In many cases, the width of existing riverwalk segments does not meet current standards for accommodating both bicyclists and pedestrians.<sup>4</sup>

The location of the riverwalk also varies, particularly in the Downtown area where steep earth embankments, floodwalls and multiple east-west bridge crossings exist. These conditions make it necessary to decide whether the primary riverwalk alignment should be located:

- at the top of the floodwall or bank adjacent to buildings which could create an “active” urban edge, with street crossings at grade, or
- closer to the water’s edge, passing under bridges, but visually separated from adjacent development and subject to periodic flooding and closure.<sup>5</sup>

A combination of path alignments currently exists, requiring ramps and steps to connect upper and lower riverwalk segments. These variations in vertical alignment isolate some portions of the riverwalk from Downtown activity and make them difficult for cyclists and the mobility limited to use.

A preliminary engineering plan was prepared as part of Green Grand Rapids<sup>6</sup> to explore issues related to the riverwalk and to recommend an alignment for its extension along the east bank from the Blue Bridge and Fulton Street south to Wealthy Street (and, ultimately Butterworth Landfill and Millennium Park). The study area includes the City-owned 201 Market Street site, as well as the privately owned undeveloped parcel to the north. Prepared with the input of a group of Downtown stakeholders and endorsed by community participants, this riverwalk extension concept recommends:

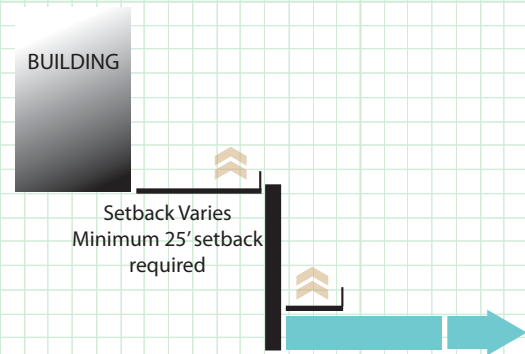
- including both upper and lower level riverwalk alignments, giving priority to the development of a continuous upper level walkway wherever possible;<sup>7</sup>
- establishing a minimum elevation for lower level riverwalk segments that will minimize seasonal flooding and riverwalk closures;<sup>8</sup>

**Figure 3.d - Existing Riverwalk Conditions: Floodwall and Earth Embankment**

**EXISTING EDGE CONDITIONS:**

**FLOODWALL**

The riverwalk is sometimes located at the upper level close to buildings and sometimes at the lower level close to the water.



Walk at lower level



Walk at upper level

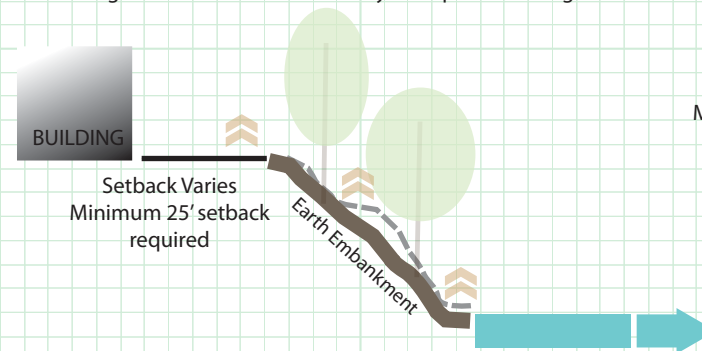


Ramps to lower level

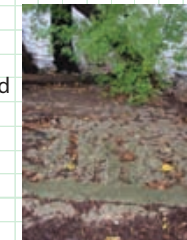
**EXISTING EDGE CONDITIONS:**

**EARTH EMBANKMENT**

- The riverwalk location varies between the top, middle, or bottom of the embankment.
- The embankment may include: (1) earth / assorted fill (2) rip-rap, rock, and debris (3) concrete “cap” and (4) landscaping.
- Growing conditions often are usually not optimal for vegetation.



Walk at mid-bank

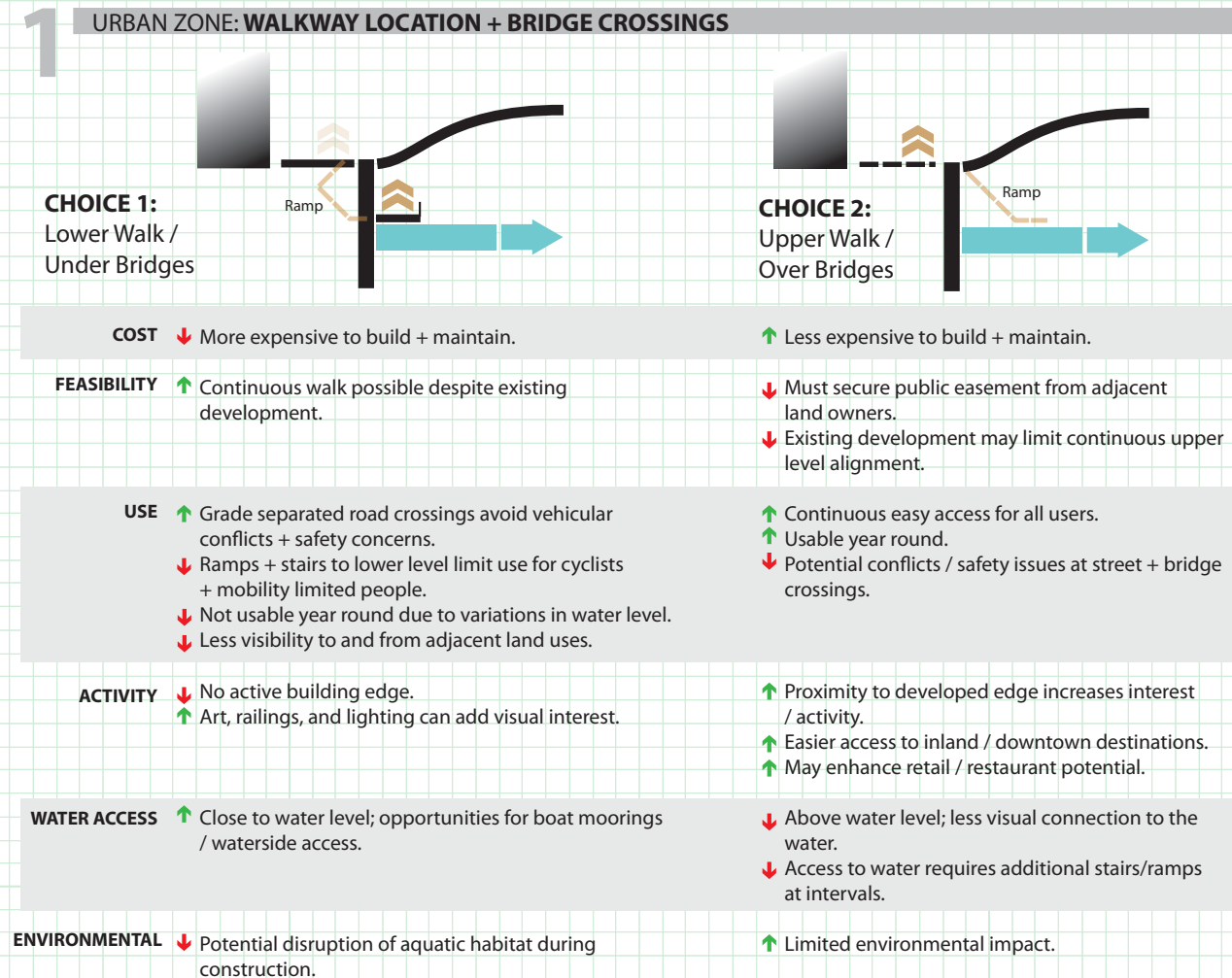


Mid-bank + Concrete Cap



Walk close to water

Figure 3.e - Alternative Riverwalk Locations



- providing connections between upper and lower riverwalk segments that make it easy for users to navigate changes in grade and are compliant with Americans for Disabilities Act (ADA) standards;
- establishing a consistent minimum pathway width (12-feet) to accommodate both cyclists and pedestrians;
- providing a durable pathway surface (concrete) that will minimize maintenance requirements;
- establishing attractive gateways to the riverwalk, for example at street ends and bridge crossings;
- providing stabilized access to the water's edge (for boaters and fishermen) at appropriate locations;
- restoring and naturalizing the riverbank wherever possible to filter and remove pollutants from urban runoff and improve habitat conditions (aquatic and terrestrial), while maintaining flood protection.

**Health of the River Ecosystem** - These design principles, and more detailed guidelines for improving the continuity and quality of the riverwalk, are included in the River Corridor Guidelines, also prepared as part of Green Grand Rapids. Using riverfront parks, the riverwalk and greenways<sup>9</sup> along tributary streams to improve water quality, and the overall health of the river ecosystem, is one of Green Grand Rapids top priorities - not only because it will protect the environment, but also because it will enhance the river's recreational potential and its value as an economic development asset. As a result, the River Corridor Guidelines emphasize principles and tools for protecting water quality, enhancing habitat, reducing flooding and improving the visual quality of river and stream corridors by protecting and restoring riparian buffers, improving natural riverbanks and restoring constructed earth embankments and floodwalls (see *Chapter 4 - A City in Balance with Nature*).

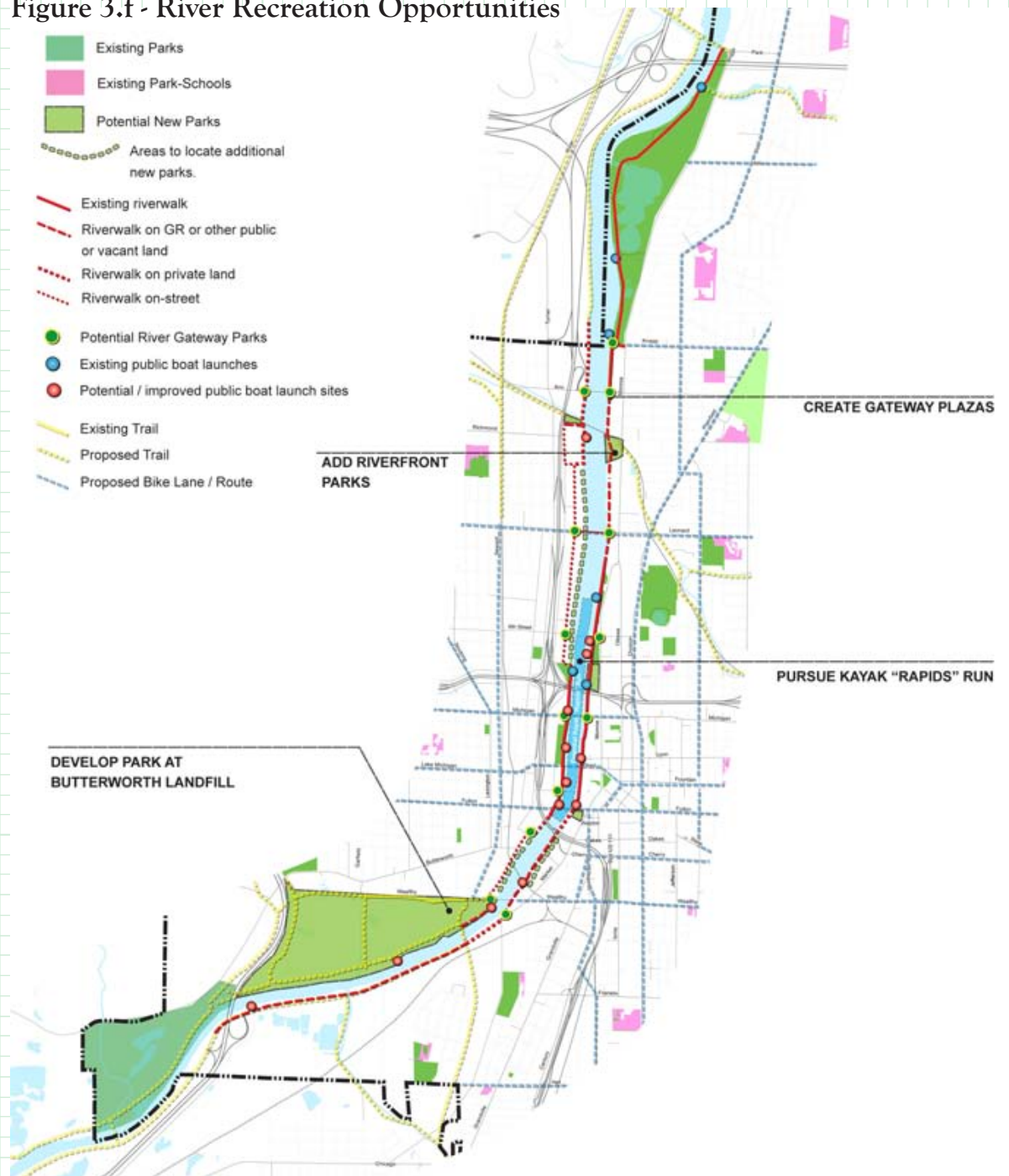
**Other River Recreation Opportunities** - A continuous riverwalk is a critical part of the strategy for enhancing the recreational value of the Grand River, but Green Grand Rapids also recommends the creation of a broader range of river-related recreation opportunities, especially along the more urbanized reach of the river between Wealthy and Leonard Streets. Opportunities to add riverfront parks and open space include gateways to the riverwalk at east-west street ends and bridge crossings; underused industrial sites and surface parking areas, particularly on the west bank of the river; and, City-owned sites at 201 Market Street, Butterworth Landfill, the Wealthy Street pump station and in the Monroe North area (see *Figure 3.f - River Recreation Opportunities - Page 45*).

Green Grand Rapids recommends that a number of steps be taken to capitalize on these potentials for adding park space on the river:

- work with riverfront property owners to acquire land or public access easements needed to develop riverwalk gateways;
- strengthen Riverfront Overlay District incentives and requirements for river edge setbacks, public access and open space;
- establish public access and open space requirements for City-owned riverfront sites in advance of public or private development;<sup>10</sup>
- capitalize on the momentum created by developing a park concept plan for Butterworth Landfill by continuing to work with the Butterworth Site Group (BSG) and the U.S. Environmental Protection Agency to gain approval for park development on this Super Fund site and seek grants and sponsorships for park development.

On the Downtown riverfront, private development can play an important role in creating destinations that “activate” the riverwalk by providing shops and

**Figure 3.f - River Recreation Opportunities**



restaurants, landscaped areas and plazas that face the river. The City also has an important role to play in expanding the number of boating and fishing access sites, providing outdoor performance and special event venues and working with sponsors to schedule an expanded calendar of activities to draw city residents and out-of-town visitors. In addition,

the City could encourage seasonal concessions in riverfront parks (including food carts, boat liveries and bike rentals) by establishing the necessary policy framework and actively seeking vendors. The riverfront's recreational appeal could also be enhanced by public art and interpretive displays that describe the historic, cultural and environmental

importance of the river in the life of the city, as well as wayfinding signs that identify the location of, and distance to, attractions along the river, in Downtown and nearby neighborhood business areas.

**A Rapids/Whitewater Course** - The concept of returning the rapids to the Grand River has been discussed for a number of years. Green Grand Rapids combined this idea with the desire for improving boating access and expanding boating activity to explore opportunities for creating a whitewater "rapids" course that takes advantage of the 4th Street dam and five downstream beautification dams. The potential benefits of such a project include:

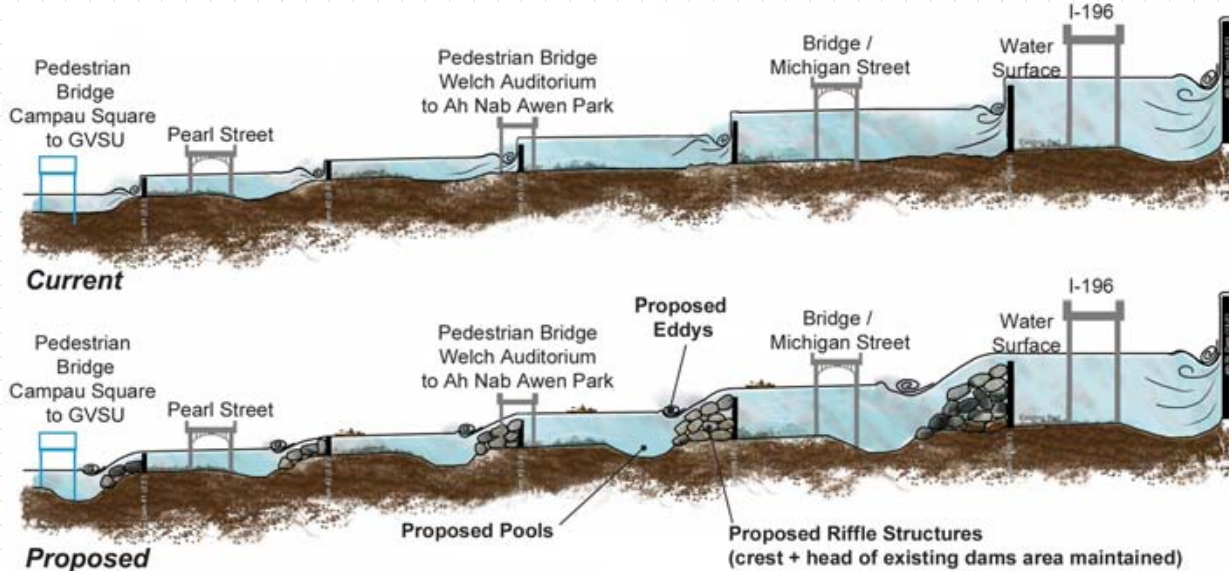
- creating a Downtown recreational amenity that would attract both users and spectators;
- serving as a catalyst for Downtown economic development;
- improving safety and accessibility for fishermen and other river users by adding stabilized water access points;
- enhancing in-stream fish habitat and naturalizing river edges.

The major challenges include:

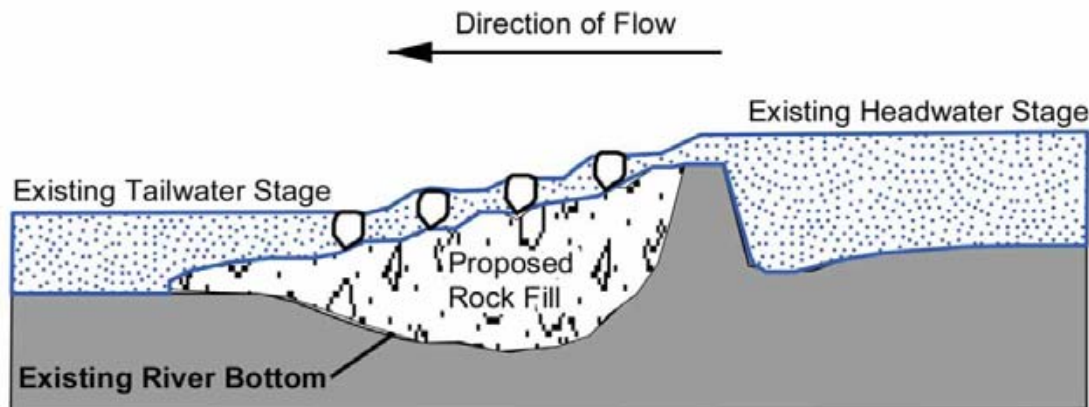
- costs of construction, operations and maintenance;
- estimating the potential return on investment;
- balancing different user interests, especially in the area of the 4th Street dam;
- ensuring that the design of the whitewater course does not increase flood levels.

A number of alternative approaches<sup>11</sup> were evaluated in a well attended planning workshop that demonstrated both the high level of interest in the concept and the importance of balancing the needs and preferences of fishermen and kayakers. Based on workshop input, a preferred alternative was developed

**Figure 3.g - Phase 1: Beautification Dam Modifications + Habitat Improvements**



**Figure 3.h - Proposed 4th Street Dam Modifications: Stair-step Rapids**



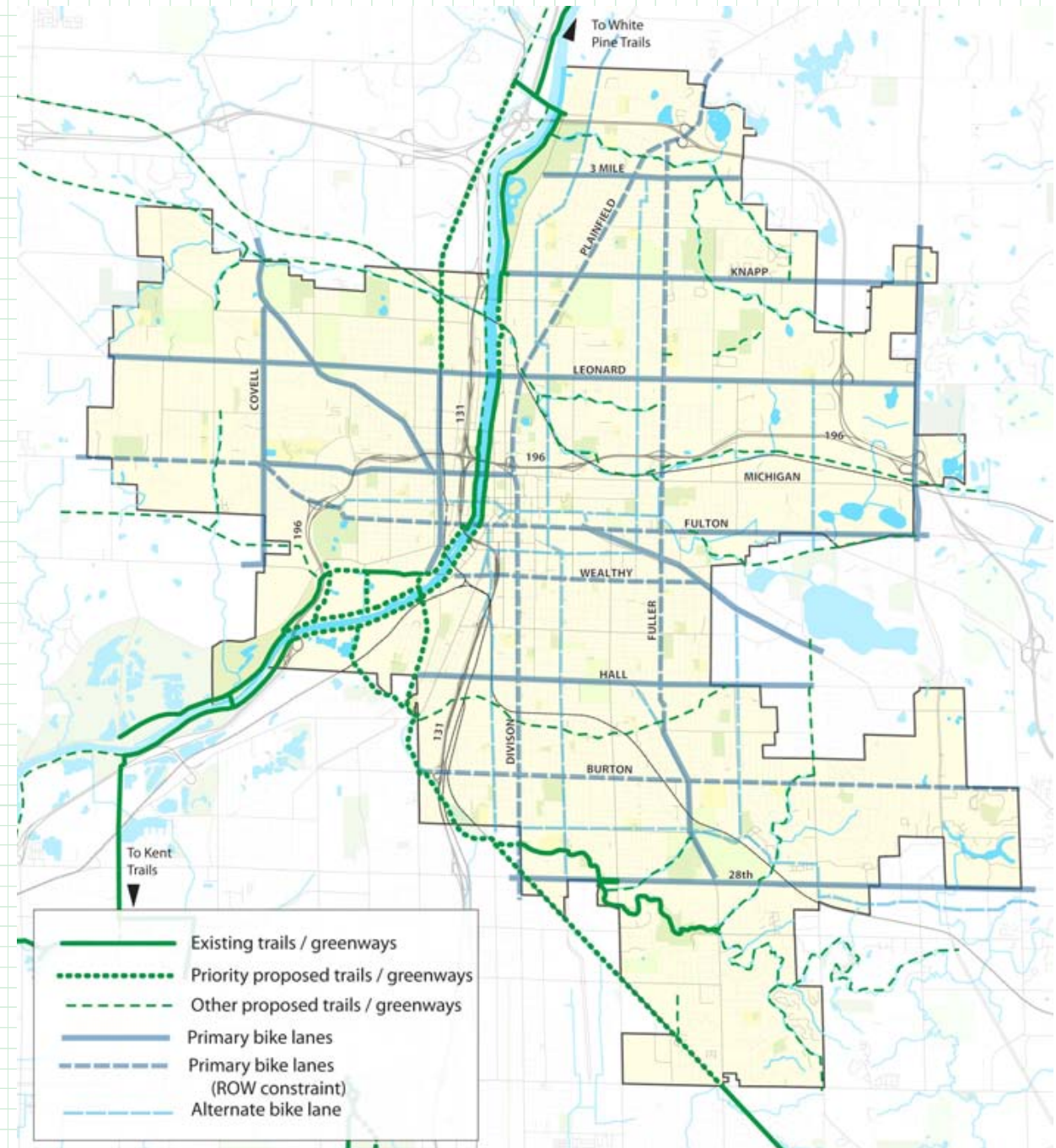
and presented for community review and comment. The preferred alternative developed at the workshop kept the 4th Street dam intact to reduce costs, avoid possible environmental hazards associated with the release of contaminants from behind the dam and maintain upstream water levels as they are today. As an initial phase, re-configuration of the five downstream beautification dams is proposed to create a series of whitewater features; a portage route around the 4th Street dam is also recommended, as well as access sites for canoe/kayak put-in and take-out at a number of new locations. In the second phase, an additional whitewater element is proposed by creating a step-like rapids on the downstream side of the 4th Street dam, while keeping the dam itself intact. It is anticipated that this expansion of the whitewater course would attract paddlers from beyond the immediate region, as well as providing opportunities for competitions and training courses.

Green Grand Rapids recommends further exploration of Phase 1 of this preferred whitewater concept by undertaking a feasibility/preliminary design study. This work is already underway. Implementation of this initial phase would make it possible to test the level of use and economic development benefit at a relatively low cost before a decision is made as to whether or not to pursue the second phase of whitewater course development.<sup>12</sup>

### River Connections

To increase the value of the Grand River to all city neighborhoods, the 2002 Master Plan recommends that connections between inland neighborhoods and the riverfront be improved (see also *Chapter 2 - Balanced Transportation*). West Side neighborhoods could be reconnected to the river by improving existing pedestrian tunnels and/or creating new underpasses to allow streets to be extended to the riverfront. Equally important changes are

**Figure 3.i - Trails and Greenways**





Riverside Park



Kaboom Volunteers by West Michigan Conference of The United Methodist Church



Rosa Parks Circle

recommended on other portions of the riverfront to improve its accessibility from inland neighborhoods. These include the creation of additional public open spaces at the riverfront termini of selected east-west streets and at bridge crossings, as well as improved sidewalks, street tree plantings and bike lanes on selected streets leading to the river. A Legacy Trail is proposed along Fulton Street, Lake Drive and Wealthy Street to connect across the river from John Ball Park to Reeds Lake/John Collins Park in East Grand Rapids. This Legacy Trail, which follows a former streetcar line, could be developed in a variety of ways (for example, streetscape improvements, historic interpretive displays, public art, antique trolley) to highlight the city's history.

In addition to an on-street system of designated bicycle and pedestrian connections, the 2002 Master Plan recommends the creation of off-street greenways that follow (and in some instances, suggest daylighting) the river's tributary streams. These greenways will protect and restore riparian buffers to create habitat corridors and detain and/or filter stormwater runoff to improve water quality and reduce flood risk. Wherever public access can be provided, the greenway corridors should include improved walk/bike connections and recreational opportunities. The Plaster Creek Trail provides an example; other stream corridor trails have already been proposed along Indian Mill Creek and portions of Coldbrook and Carrier Creek Drains. Green Grand Rapids also suggests a greenway along a "daylighted" Silver Creek Drain.

### 3.2.2 - Parks and Recreation

People in Grand Rapids want to capitalize on the potential of parks and open spaces to improve neighborhood quality of life, bring residents together and build organizational capacity and pride. Volunteer efforts to create a new playground, develop a community garden or help make a park a beautifully landscaped and maintained focal point can provide opportunities for residents to cooperate in creating tangible improvements in the quality of life on their street or in their neighborhood.

Parks that provide close-to-home recreation expand opportunities for exercise to improve health, reduce obesity and control health care costs. New and improved open spaces that create an attractive residential environment (for example, on the riverfront or in a challenged neighborhood), or that are designed and programmed to draw people and activity (for example, in a mixed use center core), also improve property values and enhance an area's appeal for private investors.

In addition, permeable surfaces, trees and native landscaping in parks and open spaces provide important ecological "services" (see *Chapter 4 - A City in Balance with Nature*) and can enhance urban residents' understanding of, and appreciation for, natural systems and environmental stewardship.

Despite the importance of parks, declining General Operating Fund support for the Parks and Recreation Department has created tough challenges in maintaining recreation programs, facilities and park lands. Park-school sites (owned by the Grand Rapids Public Schools, but included in the City's inventory of park acreage) are at risk of being lost over time as schools have been closed and properties sold to "right size" school operations and budgets. This has raised difficult questions on how to use limited resources to protect the inventory of park sites (by exercising



the City's right-of-first refusal on park-school sales) and, at the same time, provide appropriate facilities, maintenance and programming at remaining City-owned parks. Grand Rapids has considered the option of selling park land to help meet budget shortfalls, but residents have strongly opposed such an approach.

New tools are needed to aid decision-makers in determining which areas of the city have insufficient park land, and where park-school sites are critical to its equitable distribution. Strategies for funding park acquisitions and improvements - especially in providing the local matching funds required by many grant programs - are also required. In addition, new partnership and funding strategies are needed for park maintenance. Recognizing these important issues, Green Grand Rapids participants have identified the need to address deficits in accessible park acreage and the maintenance of existing parks as top priorities.<sup>13</sup>

## Why are parks and recreation important?

### Environmental Benefits

- Protect valued natural resource areas
- Demonstrate/foster environmental stewardship
- Provide pervious areas that filter and absorb urban runoff
- Provide trees to reduce air pollution, sequester carbon and provide shade

### Economic Benefits

- Increase nearby property values (and tax revenues)
- Attract and retain residents and businesses
- Catalyze neighborhood revitalization
- Increase tourism

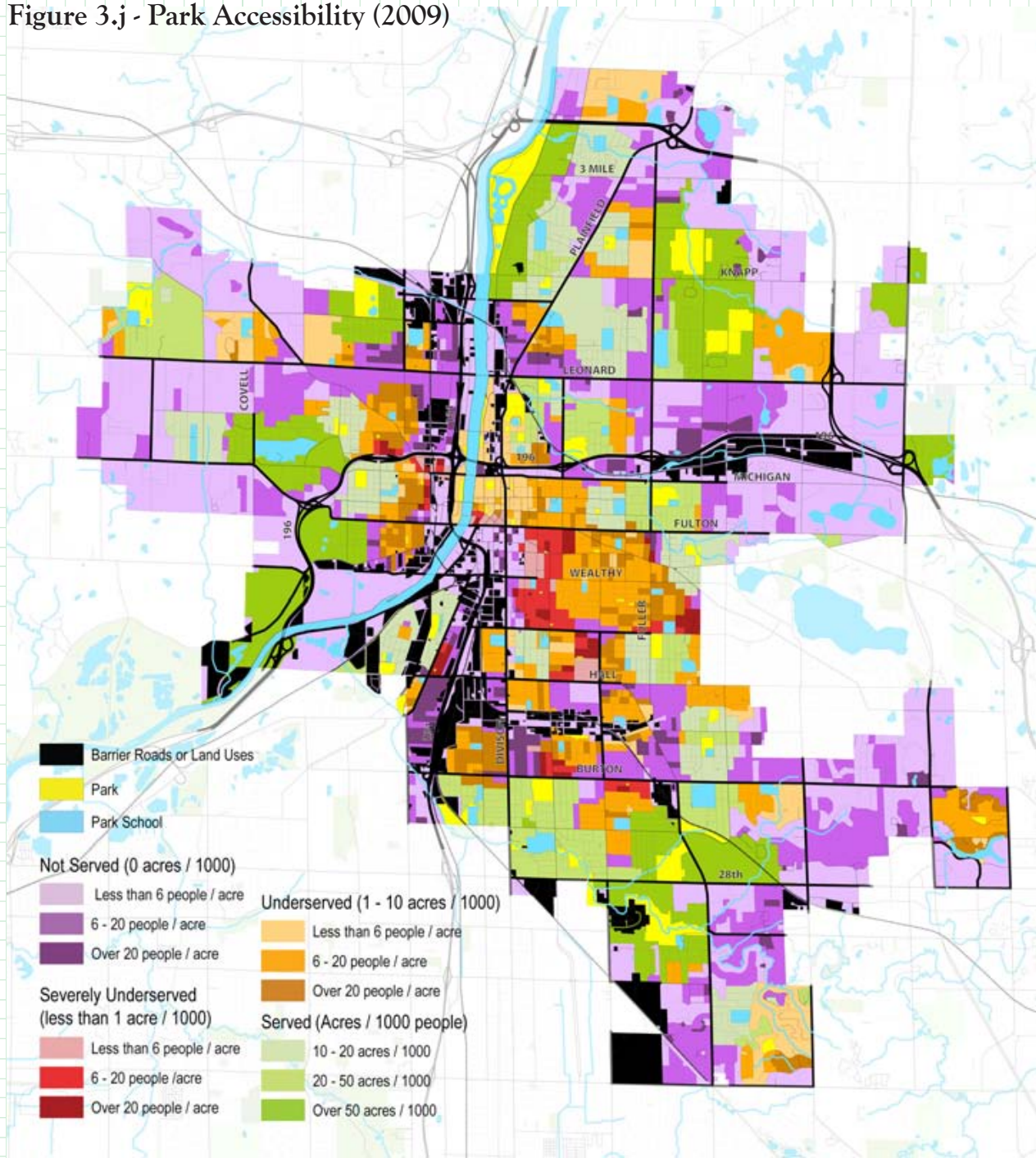
### Quality of Life Benefits

- Encourage social interaction and build community
- Increase exercise opportunities (physical activity makes people healthier and reduces health care costs)
- Improve psychological health through contact with nature
- Provide important play opportunities (for kids, play is learning)
- Provide programming opportunities to develop life skills and reduce juvenile crime

## What has Grand Rapids already done to improve parks and park access?

- Developed recommendations to foster financial sustainability for the Parks and Recreation Department (Mayor's Blue Ribbon Commission, 2007)
- Friends of Grand Rapids Parks established, a non-profit, to assist with funding for park acquisition; advocacy and volunteer support programs
- Acquired 2 acres of parkland at former Iroquois Middle School
- Expanded Joe Taylor Park from 1 to 2 acres
- Provided after school and summer playground programs for 6,000 young people annually
- Provided athletic and instructional programs for 3,000 kids annually
- Updated the *Parks and Recreation Master Plan* in 2010
- Acquired a 2.3 acre parking lot at the SE corner of Madison and Pleasant from Kent County for a new park.

Figure 3.j - Park Accessibility (2009)



## Accessible Park Acreage

Overall, Grand Rapids has adequate park acreage per 1,000 population based on national standards when GRPS properties are included. That park acreage is not evenly distributed across the city, however, resulting in varying “levels of service” in different neighborhoods and on different blocks. While there are a variety of methodologies for evaluating park acreage distribution (or level of service), Green Grand Rapids participants recommend adopting a standard that is simple to understand, but challenging to achieve: Provide an accessible park within ¼ mile of every city resident. This standard is based on the idea that the quality of life value of a park is greatest when it is within walking distance of home. To be truly accessible - especially for younger children, seniors and the disabled - walking to a park should not require crossing a major traffic street or traversing an area that is predominantly industrial or commercial in land use. Another factor in measuring level of service is population density - in other words, how many people an accessible park must serve.

To provide a visual representation of park accessibility today, and an analytical tool for future decision-making, Green Grand Rapids developed a map that links information on walking distance and park accessibility barriers to the number of accessible park acres and population for each city block. *Figure 3.j - Accessible Park Acreage - Page 50* illustrates this level of service measure for four major categories:

- unserved areas (purple; no accessible<sup>14</sup> park acres/1,000 people)
- severely underserved areas (red; less than 1 accessible park acre/1,000 people)
- underserved areas (orange; 1-10 park acres/1,000 people)
- served areas (green; 10 or more accessible park acres/1,000 people)

The population density of each block is also indicated (less than 6 people/acre; 6-20 people/acre; over 20 people/acre) to provide an additional measure of the impact of each level of service category.

Lower income households have less money to allocate for meeting their recreation needs in the private sector, and their mobility is more likely to be limited by lower rates of car ownership. As a result, Green Grand Rapids participants endorsed the addition of a measure of need based on income and

recommended that priority in park land acquisition be given to unserved and severely underserved areas with high population density and low household income. In outlying areas of the city identified as “not served” it should be noted that the typical development pattern consists of homes on larger lots with ample private greenspace. Closer to the core of the city, development densities are higher and residential lots are smaller. As a result, it is recommended that priority be given to opportunities for adding park acreage in the city’s “traditional”

(pre-WWII) neighborhoods. Land assembly and park development in these neighborhoods will be challenging.

Green Grand Rapids recommends seeking potential partnerships with institutions who have land and facilities that can reduce accessible park acreage deficits (for example, churches, colleges, private schools and other recreation providers). Expanding this partnership approach beyond the City’s existing relationship with the public schools offers a cost-effective strategy for improving level of service.

**Figure 3.k - Joe Taylor Park Concept Plan**

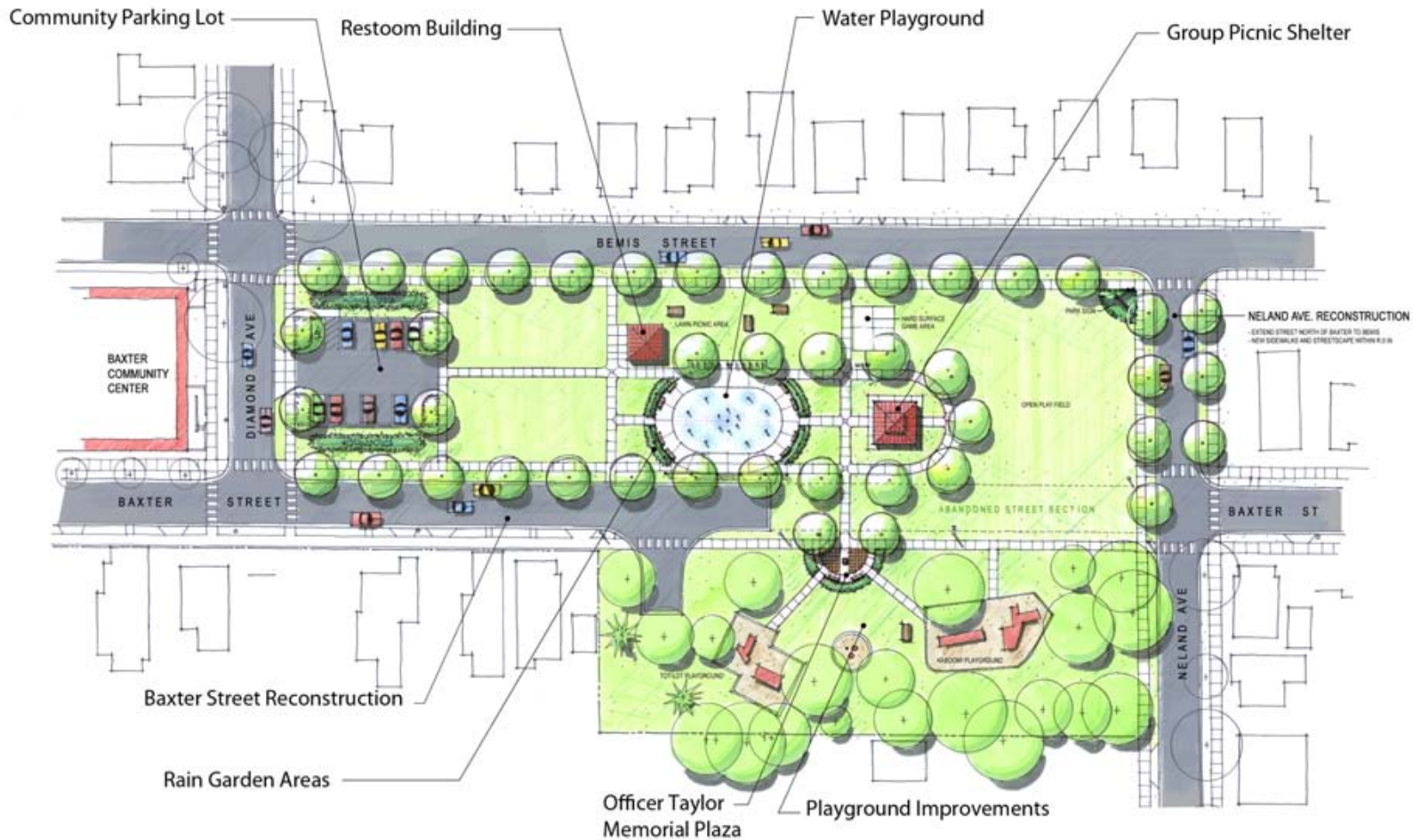


Figure 3.1 - Butterworth Landfill Concept Plan



Opportunities may also exist for rethinking development regulations to shift some of the responsibility for providing, developing and maintaining open space improvements to the private sector. For example, additional requirements for usable, accessible public spaces could be included in zoning regulations. An option allowing payments in lieu of providing those open spaces might also be included.

### Park Maintenance

Strategies for acquiring additional park land to meet accessibility deficits will not have a meaningful impact on level of service if new and existing parks cannot be maintained appropriately. Indeed, a park that is unattractive and attracts few users can become a nuisance rather than a neighborhood asset. In contrast to funding for park acquisition and improvement, state and federal funding assistance for park maintenance is not available. This means that a sustainable source of local support for maintenance

(and programming) must be created if existing parks are to continue to serve as neighborhood assets and new parks are to be added.

Green Grand Rapids recommends establishing partnerships with residents, neighborhood and business organizations, potential institutional partners and other sponsors to encourage more active community participation in identifying, prioritizing and addressing park maintenance needs.<sup>15</sup> Work is needed on several levels to inspire, structure and maintain these partnerships, for example:

- educating the community to the economic, environmental and social benefits of parks;<sup>16</sup>
- fostering greater community awareness and use of parks by providing more easily available information and offering more special events to attract park patrons;
- involving resident groups in identifying park maintenance priorities, program/facility needs and in monitoring levels of use;
- giving more emphasis to recruiting adopt-a-park partners and sponsors and streamlining partnership agreements;
- establishing a maintenance endowment for new parks.

A new non-profit, Friends of Grand Rapids Parks (FGRP), has been established by the community to assist in advocating for parks, organizing volunteer efforts and raising funds to preserve and expand the park inventory. Designed to help implement the Green Grand Rapids agenda, FGRP is expected to offer increasing support for Grand Rapids' parks as the organization and its resources grow over time. In addition, the Parks and Recreation Department will continue to take steps to reduce maintenance costs without sacrificing park quality. Nevertheless, the maintenance of a park system that continues to contribute to the city's quality of life and competitiveness in attracting new residents and investment may require a new dedicated source of funding. It will be up to the community to determine whether, and to what extent, they are willing to support such an initiative to help implement objectives and strategies not only for parks, but also for other Green Grand Rapids topics.

**Figure 3.m - Ball-Perkins Park Concept Plan**



### **Parks as Models of Sustainable Design**

Four park concept plans have been prepared to build community consensus on park improvements, demonstrate how parks can serve as models of sustainable design and provide the plan and cost information that serves as the basis for grant applications. These park concept plans include:

- Joe Taylor Park, a neighborhood park to be expanded and improved adjacent to the Baxter Community Center;
- Pleasant Park, a new neighborhood park serving the Heritage Hill and South Hill areas, created from a 2-acre parking lot;
- Ball-Perkins Park, a high value natural resource area where environmental interpretation, trails

Figure 3.n - Pleasant Park Concept Plan



Rain Gardens

Native Trees

Natural Landscape Perimeter

- and improved community garden are the focus;
- Butterworth Landfill, a City-owned super fund site located on the Grand River, which can provide a range of recreational and environmental education opportunities, as well as critical riverwalk connections to Millennium Park.

As open green spaces, parks already contribute to stormwater management by providing large permeable surface areas that can infiltrate rainfall, as well as plants and tree cover that filter and absorb runoff. But additional steps can be taken to maximize the potential for parks and trail corridors (greenways) to minimize runoff volumes and improve water quality by incorporating Low Impact Development (LID)<sup>17</sup> strategies into their design. Parks can also be planned in coordination with larger scale stormwater management facilities to provide surface or below-ground detention areas. For example, despite its small size, the concept plan prepared for the expansion and improvement of Joe Taylor Park includes an underground stormwater detention area designed to collect 270,000 gallons of runoff from the surrounding area (40 acres) and to filter out pollutants before release to storm sewers and, ultimately, the Grand River.

Parks can also be planned and retro-fitted to become models of sustainable design in other ways, for example:

- including high value natural areas (identified in the Ecological Framework in *Chapter 4 - A City in Balance with Nature*) as a consideration in acquisition decisions;
- expanding native landscaping to reduce the area requiring irrigation and/or regular mowing and to improve habitat;
- ensuring that riparian buffers in parks and trails along the Grand River and tributary streams are protected and restored;

- protecting existing and planting additional trees to maintain and expand the urban forest canopy;
- providing educational programs and interpretive signs to explain “green” practices.

### 3.2.3 - Local Food

Because of a growing interest in community gardens and farmers’ markets in Grand Rapids, local food was identified as one of the six topics that serve as the focus of the Green Grand Rapids Master Plan update. The 2002 Master Plan included community gardens as a recommended use for City-owned vacant land and in parks, but the broader value of local food production was not fully recognized. Farmers’ markets and community gardens have the potential to yield significant environmental, economic and quality of life benefits - from reducing vehicle miles traveled to distribute and access food, to providing income to urban farmers and capturing food expenditures in the local economy, to promoting healthy eating and providing opportunities for exercise and recreation. As a result, Green Grand Rapids explores potentials for promoting local food in several ways that go beyond general policy recommendations. These include incorporating community gardens in three of the park concept plans that have been prepared, with a potential farmer’s market in the Butterworth Landfill concept plan, and providing suggestions for changes to existing City ordinances and policies that would remove barriers to, and facilitate the expansion of, community gardening.

#### Community Gardens

Grand Rapids has a number of ordinances and policies that address, or have implications for, community gardening. These include, for example:

- the updated zoning code, which permits community gardens (by right) in the great majority of zoning classifications;

#### What has Grand Rapids already done to improve farmers’ markets and community gardens?

- Provided City support for the Fulton Street Market; prepared improvement/expansion feasibility study
- Provided City/DDA support in evaluating a Downtown 4-season market
- Developed 19 community gardens
- Provided urban gardening programs at Blandford Center
- Amended the zoning ordinance to permit farmers’ markets in residential areas and community gardens “by right”

- Chapter 45 of Title III, Parks and Public Grounds, which establishes policies for “allotment gardens” on City-owned land;
- an Adopt-a-Park, Partnership and Sponsorship policy which establishes a framework for allowing community gardens in city parks;
- the Property Maintenance Nuisances code, which can be interpreted to limit community garden activities;
- a number of policies concerning the disposal of City-owned properties, and the acquisition and transfer of tax foreclosed property, which could be modified to make community gardens a priority for re-use.

Green Grand Rapids recommends that these and other relevant ordinances and policies be reviewed and updated to reduce or remove barriers to community gardening. As there are many questions to be answered on how best to amend these policies, it

#### Why are farmers’ markets and community gardens important?

##### Environmental Benefits

- Slow the loss of farmland; maintain green space
- Encourage environmental stewardship by educating the community on the ecosystems that support food production
- Reduce carbon footprint by reducing vehicle miles traveled to distribute and access food
- Maintain permeable surface area to better manage stormwater
- Encourage composting

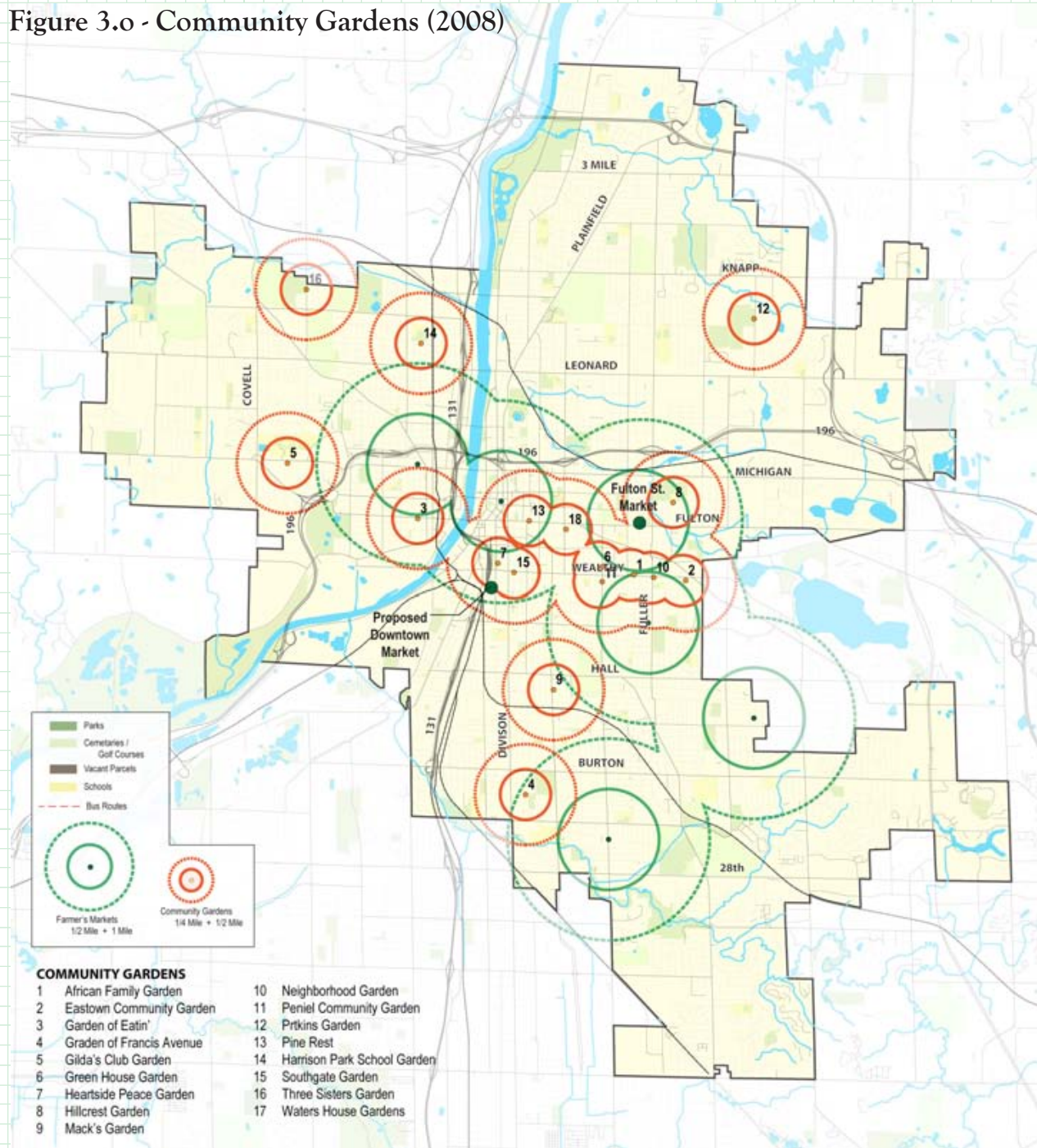
##### Economic Benefits

- Increase local food security
- Capture food expenditures in the local economy
- Provide lower cost fresh foods to urban residents
- Provide income to gardeners/urban farmers
- Convert unused property to productive use
- Increase green space and neighborhood appeal
- Encourage neighborhood reinvestment; increase nearby property values

##### Quality of Life Benefits

- Bring nature into the city
- Strengthen neighborhoods: social cohesiveness and pride
- Provide education on nutrition, ecology and environmental stewardship
- Expand options for exercise and recreation
- Cultivate individual empowerment/entrepreneurship
- Provide opportunities for youth involvement to build job skills and provide possible employment

Figure 3.o - Community Gardens (2008)



would be appropriate to appoint an Urban Agriculture Committee, including knowledgeable gardeners and City staff, to prepare recommendations for City Commission review and approval. In addition, the preparation of an inventory<sup>18</sup> of existing and potential City-owned community garden sites will be needed. Finally, the City could provide web-based information on available community garden sites and existing garden groups to help publicize local food activities and support knowledge-sharing.

Other public agencies with significant land holdings, for example Grand Rapids Public Schools and Grand Rapids Housing Commission, can be encouraged to make land available, and provide “how to” support, for community gardens. In addition, community development programs<sup>19</sup> in lower income neighborhoods can focus staff and funding resources on community gardening. Making community gardens available in these settings would provide opportunities for recreation, education, and youth employment, as well as fresh healthy food for children and families.

Even after the City has created the policy framework to facilitate community gardening, and helped to make land available, other frequently encountered barriers to establishing community gardens will still need to be overcome. These include, for example:

- the cost of garden preparation (clearing, tilling, water lines, fencing);
- the cost of water service;
- the cost of liability insurance;
- the cost of tools, equipment and other materials;
- education/training for gardeners and garden organizers.

Rather than expecting each individual garden group to find ways to overcome these barriers, it would be



more effective to have a community-wide (or regional) non-profit with the organizational capacity, resources and experience to raise funds (through grants, donations and sponsors) and provide programs to help address these issues. A number of organizations exist in Grand Rapids today (including the Greater Grand Rapids Food Systems Council, the Blandford Center and Michigan State University Extension) which may become this “umbrella” organization. Ultimately, progress in creating such a non-profit, and expanding the number of gardens and garden groups, will depend largely on the interest and commitment of citizens who are willing to invest their own time, talent and resources in expanding the production of local, fresh food.

### Farmers’ Markets

For those who may not have the interest or ability to garden themselves, farmers’ markets offer an important alternative for expanding access to local, fresh food. They also encourage gardening (and farming on a larger scale) by providing a venue for the sale of produce. This, in turn, helps to protect open space/farmland and to create economic development opportunities at a range of scales.

The City-owned Fulton Street Farmers’ Market, in operation for over 80 years, is Grand Rapids only permanent seasonal farmers’ market.<sup>20</sup> Through the Midtown Neighborhood Association, which operates the market, planning for improvements is underway<sup>21</sup> and could include the construction of a market “headhouse” (a building providing offices, public meeting space and some year-round food sales), expansion of the plaza in front of the market on Fulton Street, building a permanent shed structure and improving circulation and parking.

Several additional farmers’ markets<sup>22</sup> exist within the city that operate one to two days a week during the growing season. There may be opportunities to pilot

additional “temporary” farmers’ market in other locations through the city. Potential locations will need parking areas for vendor set-up and customer parking and could be provided at public schools on weekends or churches on weekdays. Ideally these market sites should also be located on transit lines.

Interest in creating a year-round Downtown farmers’ market has also been expressed by Green Grand Rapids participants and others. Grand Action, a non-profit Downtown development group established by area business leaders, is currently exploring the feasibility of such a facility which could include the sale of local produce, meat, seafood, baked goods and other items. This possible new market is envisioned as a complement to the existing Fulton Street Farmers’ Market and would be located south of Wealthy Street on Ionia Avenue.

### 3.2.4 - Urban Design

In Grand Rapids, people want buildings, streets, parks and open spaces to be located, designed and managed to create appealing, interesting, comfortable and meaningful places for people. Creating a sense of place, and reinforcing the distinct character of Grand Rapids’ neighborhoods and business districts is a community priority. The quality of these placemaking elements and the way they relate to one another are important because they determine whether a community’s physical environment is a place where people want to live, work, visit and invest. As a result, urban design that protects and creates a sense of place is a critical part of an effective long-term economic development strategy.

### Guidelines

Sample development guidelines were prepared as part of the 2002 Master Plan<sup>23</sup> to illustrate how the community can be more proactive in describing the urban design objectives it wants to achieve and the factors that will be considered in reviewing and approving projects. These guidelines addressed the following topics:

- **Mixed Use** - how to maximize the compatibility between different uses, densities and building types, especially in the city’s older neighborhoods.
- **Strip Commercial** - how to improve the visual quality and walkability of auto-oriented strip commercial development.
- **Higher Quality, Higher Density Residential Development** - how to encourage medium- and high-density residential development that is located and designed to complement existing neighborhood patterns.
- **Green Space in the Central City** - how to provide more green space in densely developed areas.



Fulton Street Farmers’ Market

The ultimate goal of these guidelines is to shape change in order to create a strong sense of place and community identity. As a result, they are used by the City's Design Team (including representatives of the Planning, Traffic Safety, Engineering, Street Lighting, Stormwater, Water, Sewer and Fire departments, as well as the Downtown Development Authority and The Rapid) in bi-monthly meetings as they review new development projects, design public infrastructure and establish policies that will enhance physical development in Grand Rapids. This site design review process is the City's "front line" opportunity for promoting urban design quality and for encouraging redevelopment, preserving historic resources, ensuring land use compatibility and creating a diverse transportation system.

### **Form-based Zoning**

The 2002 Master Plan also presented a preliminary evaluation of the characteristics that distinguish different Grand Rapids neighborhoods as the starting point for developing additional guidelines to ensure that valued characteristics of the each neighborhood's existing development context are preserved as new development, infill and rehabilitation are undertaken. These guidelines were created in a *Neighborhood Pattern Workbook* (2005) that served as a precursor to the City's new form-based zoning ordinance (adopted 2007; amended 2008). The zoning ordinance ultimately included three different neighborhood types: Traditional, Mid-20th Century and Modern Era. Zoning requirements for build-to lines, green space, building materials, façade variation, building orientation, entrances and façade transparency have been defined for residential and mixed-use commercial districts in each neighborhood type to reinforce its unique urban design characteristics.

### **Public Art**

Public art can help to create a sense of place that celebrates a community's unique history, interprets the natural environment, engages and inspires the public and adds beauty to be enjoyed for generations to come. Grand Rapids' heritage as a center for the arts should continue to be reinforced and arts events, such as ArtPrize, encouraged because they play a significant role in creating a vibrant, diverse community. Consideration should also be given to encouraging public art in both public and private development projects.

# 3.3 - Objectives and Policies

The following objectives and policies summarize what needs to be done to achieve the plan recommendations presented on the preceding pages.

## Grand River

### Objective EOL 1

**Capitalize on the Grand River as an asset for economic development and quality of life by encouraging a change in land use along the riverfront from industry to open space and mixed-use.**

- a. North of Wealthy Street, encourage mixed-use development that adds open space, provides public access and gives priority to medium- and high-density residential along the river's edge. Encourage development that takes advantage of valuable riverfront land by discouraging one-story buildings and controlling surface parking.
- b. North of Wealthy Street, encourage new development/re-development that provides lively public spaces with shops and restaurants to contribute to the river's vibrancy as a focus of activity.
  - Consider stronger incentives for public open space and active ground floor uses in the Grand River Overlay District.
  - Consider a more pro-active City role in encouraging mixed-use redevelopment on the river's west bank (I-196 to Ann Street).
- c. Evaluate all vacant and underutilized riverfront properties to determine how they can best contribute to the riverfront experience.

- Plan for the eventual re-development of publicly-owned sites; identify required park space, riverwalk alignment and public access connections.
- Investigate plans for privately owned underused parcels.

### Objective EOL 2

**Continue to improve the visual character of the river.**

- a. Identify conditions that impair the visual character of the river/riverfront; develop and prioritize improvement strategies.
  - Encourage tree planting and improved landscaping in industrial and commercial areas.
  - Encourage improvements in the appearance of floodwalls, bridge piers and abutments and blank building walls; replace floodwalls with restored/landscaped riverbanks where possible.
  - Make bridges a visual asset.
  - Explore opportunities for re-designing (or re-locating) utility infrastructure on the riverfront (e.g., electric substations, pump stations, storm outfalls).
  - Expand river clean up days to involve more volunteers.
- b. Provide open spaces and gateways to the riverwalk at the riverfront termini of selected east-west streets and bridge crossings; coordinate with pedestrian and bike improvements on these streets linking to neighborhoods.
  - Identify/confirm priority east-east linkage streets.
  - Define the ownership of riverfront street termini.
  - Use Riverfront Overlay District zoning to encourage the provision of open space and public access at street ends.

### Objective EOL 3

**Increase recreational opportunities along the river.**

- a. Investigate opportunities for adding riverfront parks, giving special attention to vacant and under-used City and County properties.
  - Continue to assess the need for improvements in existing riverfront parks.
  - Pursue park planning and development on the Butterworth Landfill site.
  - Assess recreation potential at the former Wealthy Street pump station site.
  - Assess (County- and) City-owned property .
  - Evaluate other under-used riverfront properties as potential park sites.
  - Consider strengthening ordinance requirements/ incentives for publicly accessible green space in private riverfront developments.
  - Give priority to Downtown.
- b. Evaluate the feasibility of creating a kayak "rapids" experience on the river.
  - Further evaluate and implement a two-phase project that creates a whitewater kayak course by (1) modifying the beautification dams (between I-196 and Pearl Street) and providing a portage around the 4th Street dam and (2) creating a "stair step" rapids with numerous short drops from the top of the 4th Street dam downstream.
  - Explore other design alternatives for the kayak course that improve the experience along the riverbanks and do not impair the river ecology.
  - Evaluate the potential economic development impact that a course could create.

- c. Expand other recreation activities on and adjacent to the river.
  - Add boat launch sites/liveries.
  - Support continued rowing activity north of the 4th Street dam.
  - Consider allowing concessions (boat and bike liveries; cafes; marinas/docks; water taxis) in riverfront parks.
  - Identify a site for an improved outdoor performance venue on the Downtown riverfront (Ah-Nab-Awen).
  - Program more special events on the river.
  - Add public art/interpretive displays (ecology; history).
  - Provide riverwalk wayfinding signs.
  - Improve and expand fishing access.
- d. Provide continuous public access and trail/riverwalk connections (walking and cycling) from Riverside Park to Millennium Park with connections to Kent Trails and White Pine Trail.
  - Accommodate both walkers and cyclists.
  - Identify and implement maintenance and retrofit priorities on existing riverwalk segments.
  - Develop and implement a short-term plan for trail extensions, including on-street segments where necessary.
  - Provide pavement markings and/or signs, as appropriate, to identify the route.
  - Develop mid- and long-term action plans, including requirements/incentives for a wider private development setback from the river and public access easements.
  - Develop design guidelines to achieve a higher level of quality and consistency in the incremental development of a continuous riverwalk.

## Objective EOL 4

**Promote the development of a system of greenways along tributary streams to the Grand River, as well as on-street pedestrian and bicycle corridors, to link all city neighborhoods to the river, major destinations and the regional trail system.**

- a. Complete the Plaster Creek Trail.
  - Coordinate with the City of Wyoming on planned trail extension.
  - Seek funding for establishing the link from Wyoming to/through the Grand River.
  - Collaborate in developing a connection to the Thornapple Trail.
- b. Investigate the feasibility of obtaining public access easements and creating trail connections on other tributary creeks, as well as inactive rail rights-of-way and utility corridors.
  - Coordinate with the Kent County Road Commission on the planned Muscatawa Trail extension, which would connect Seward Street and the west bank of the river.
  - Assess ownership patterns.
  - Seek easement agreements.
  - Pursue regional collaboration through the Grand Valley Metro Council.
- c. Provide streetscape, pedestrian and bicycle improvements on streets that link neighborhoods to the river.
- d. Improve connections between Near West Side neighborhoods and the river by enhancing pedestrian, bike and vehicular access under the US-131 embankment.

- e. Explore the potential for creating a Legacy Trail on Fulton Street/Lake Drive/Wealthy Street, connecting John Ball Park to John Collins Park.

## Objective EOL 5

**Preserve and restore natural areas to improve the health of the river ecosystem, Grand Rapids' primary link to the regional green infrastructure network.**

- a. Continue to implement the *Lower Grand River Watershed Management Plan*.
- b. Use riverfront parks, the riverwalk and the greenway system as part of a comprehensive strategy for protecting and restoring open space buffers to reduce the water quality impacts of stormwater runoff and provide habitat.
  - Emphasize natural habitat, native landscapes, stormwater management and environmental education in all riverfront parks and especially at Riverside and Butterworth Landfill Parks.
  - Restore river and stream banks to create more naturalized treatments (earth banks and vegetation as an alternative to flood walls) wherever possible.
  - Implement guidelines for riparian buffers.
- c. Especially on the riverfront, promote LID approaches in all private development projects.
  - Review the Grand River Overlay District to ensure that LID standards are emphasized.
  - Encourage more natural landscaping and tree planting in urbanized areas.

# Parks and Recreation

## Objective EOL 6

**Protect existing parks and open spaces, and support the acquisition and development of new parks, giving special consideration to areas in the city with acreage distribution deficits.**

- a. Adopt a policy requiring deed restrictions guaranteeing the preservation of important open spaces and/or trail connections in considering the sale/transfer of any existing park land or other City-owned property.
- b. Provide an “accessible” park with a playground within walking distance (1/4 mile) of all residents of every neighborhood.
  - Map accessibility barriers.
  - Identify/prioritize areas with deficits.
  - With neighborhood involvement, identify opportunities for adding park space where needed, including partnerships/joint use, as the basis for seeking funding assistance.
  - Acquire properties in under-served areas where opportunities are presented; give priority to higher density, lower income areas.
- c. Continue to cooperate with the public schools to provide joint park-school facilities.
  - Update the park-school agreement.
  - Identify/monitor proposed school closures/property sales.
  - Seek funding and/or partnerships for acquisitions where needed to maintain “accessible” acreage.

- d. Coordinate park acquisitions with the Ecological Framework plan’s identification of high value natural resource areas to protect, buffer and connect. See *Chapter 4 - A City in Balance with Nature*.

## Objective EOL 7

**Maintain existing parks and managed open spaces in safe, clean and attractive condition.**

- a. Establish maintenance priorities that balance cost effectiveness and quality.
  - Work with neighborhood/business organizations to inventory/prioritize maintenance needs.
  - Seek funding and partnerships to supplement existing budgets.
  - Establish maintenance endowments for new parks.
  - Use more native landscaping to reduce maintenance.
  - Identify priority locations for restrooms and drinking fountains, and strategies for maintenance.
  - Consider transfer of Aman Park to Ottawa County.
- b. Maintain publicly owned vacant lots in park like condition or make them available as community gardens.
  - Re-evaluate City policies to allow the sale or lease of City-owned and tax foreclosed properties for use as community gardens.

## Objective EOL 8

**Foster awareness, use and stewardship of public parks and open spaces.**

- a. Better market and advertise the park system.

- Provide maps, brochures and other information.
  - Make the community more aware of the economic value of parks and open spaces.
- b. Hold more special events to attract park users and build support for the parks.
  - c. Seek involvement of community groups/organizations in helping to maintain parks and open spaces.
    - Assist the Friends of Grand Rapids Parks (FGRP) in coordinating volunteer efforts.

## Objective EOL 9

**Develop parks, trails<sup>24</sup> and managed open space to become models of sustainable design.**

- a. Use sustainable design principles in developing/redeveloping all park sites.
  - Protect valuable natural resources.
  - Expand native landscapes.
  - Protect/expand the tree canopy.
  - Minimize impervious area.
  - Use LID stormwater management practices.
  - Use locally sourced and/or recycled content materials.
- b. Use parks as demonstration and education sites for green practices to promote environmental stewardship.
- c. Identify opportunities for joint park-stormwater management projects.

## Objective EOL 10

### Design parks and provide recreation programming in response to community/neighborhood needs and preferences.

- a. Seek grant funding to implement the concept plans (prepared with community input) for Joe Taylor, Pleasant, Ball-Perkins and Butterworth Landfill Parks.
- b. Give priority to funding multi-purpose parks (as opposed to specialized parks) that provide a diversity of user activities.
- c. Support expanded recreational programming for residents of all ages.
  - Focus on health and fitness for children, youth and seniors.
  - Meet the growing demand for walking and cycling trails.
  - Encourage multiple uses of public buildings for recreational programming.

## Objective EOL 11

### Identify a range of “one-time” and sustainable strategies for funding the acquisition, development and maintenance of parks and open spaces.

- a. Continue to investigate opportunities for partnerships for the provision of recreation facilities and programs.
  - Work with FGRP.
  - Work with churches, schools, sports teams and other recreation providers.
  - Seek corporate sponsorships.
  - Pursue adopt-a-park agreements.

- Consider tax credit for park contributions.
  - Investigate youth participation in park maintenance.
  - Investigate pros/cons of using parks for fundraising events.
- b. Evaluate the feasibility of establishing dedicated revenue sources to support parks and recreation (for example user fees or a parks - or broader green initiatives - millage).
  - c. Consider the cost reduction and revenue generating benefits of the sale, lease or transfer of City-owned park and cemetery property.
    - Establish conditions and criteria.
    - Consider transfer of Aman Park to Ottawa County.
  - d. Re-evaluate existing requirements/incentives for private sector provision of useable, public open space.
    - Focus on Downtown and the riverfront.
  - e. Aggressively pursue state and federal funding.

## Local Food

### Objective EOL 12

#### Help to preserve productive farmland within the region (and reduce sprawl) by making Grand Rapids a livable community that attracts and retains residents and businesses.

### Objective EOL 13

#### Support community gardening to promote the availability of lower cost fresh local food, good nutrition and community cohesion and pride.

- a. Propose policy changes and ordinance revisions that support community gardens.

- Re-evaluate the priority given to community gardens in City policies for the disposal/transfer of City-owned and tax-foreclosed property.
  - Consider subsidizing water connections and use fees.
  - Consider waiving market stall fees for lower income community gardening groups.
  - Modify property maintenance nuisance ordinances (plant height, composting, rain barrels) to remove barriers.
  - Allow for roof top gardening.
  - Allow for small appropriately scaled greenhouses to extend the growing season.
  - Identify and work to overcome other barriers to community gardening.
- b. Encourage partnerships among organizations working on local food issues.
  - c. Support the adoption of community gardens (and backyard gardening) as a primary initiative of a local non-profit (to assist in community garden coordination and/or matching grants for garden development/improvement).
  - d. Encourage schools and other institutions to provide additional community gardens.

### Objective EOL 14

#### Support farmers’ markets to promote the availability of lower cost fresh food and good nutrition.

- a. Continue to support the City-owned Fulton Street Farmers’ Market.
  - Assist the Midtown Neighborhood Association in implementing the recommendations of their feasibility study on market expansion and improvement.

- b. Collaborate in investigating the feasibility of a 4-season farmers' market on Ionia Avenue, south of Wealthy Street.
- c. Facilitate the "piloting" of smaller, temporary farmers' markets throughout the city.
  - Refine policies for approving temporary/seasonal outdoor sales locations.
  - Consider locating where ample parking is already available.
  - Consider giving priority locations where fresh local produce is not readily available.
  - Work with market sponsors/organizers to coordinate schedules and provide promotion.

## Urban Design

### Objective EOL 15

**Encourage quality urban design to support placemaking, encourage social interaction and maintain Grand Rapids' appeal as a place to live, work, visit and invest.**

- a. Protect and capitalize on important scenic views, landmarks and entrances to the city.
- b. Encourage the protection and restoration of important natural features.
- c. Encourage enhancements to the public realm and the creation of spaces for informal social interaction in association with new private development.
- d. Reinforce the valued urban design characteristics of each neighborhood and business district.

### Objective EOL 16

**Make urban design decisions that promote non-automobile transportation.**

- a. Encourage compact mixed-use development that promotes walking and cycling for daily activities and short trips.
- b. Promote streetscape design that is comfortable, safe and interesting to pedestrians and effectively accommodates cyclists and transit users.
- c. Promote building placement and building and site design that facilitates access for pedestrians (including transit users) and cyclists.

### Objective EOL 17

**Promote high quality urban design through the project review process. Use public sector projects to lead by example.**

### Objective EOL 18

**Build on our past.**

**Make city history and historic preservation important values in land use and development decisions.**

- d. Encourage the identification of districts with historic and architectural value and work with area property owners to assist in their designation to capture the benefit of historic tax credits.
- e. Encourage the preservation and adaptive reuse of historic and architecturally valuable structures.

### Objective EOL 19

**Recognize the arts as an essential resource to be nurtured and supported.**

## Chapter 3 Notes

1. Recommended *Development Objectives for All Mixed-Use Areas* are presented in the 2002 Master Plan, *Figure 2.g - Permanent Riverwalk Extension: Blue Bridge to Wealthy Street - Page 27*. Descriptions of the *Purpose, Recommended Uses and Special Considerations for Mixed-Use Areas* are presented in the 2002 Master Plan, *Figure 3.b - Page 41 (see Mixed-Use Area Type B)*.
2. Building element requirements establish standards for building height, materials, façade articulation, building orientation, entrances and facade transparency.
3. The 201 Market Street concept plan was developed with the participation of area stakeholders in a series of workshops and reviewed by community participants in May 2009 at Green Gathering #3: Actions. An overview of the full 201 Market Street study and its recommendations is available from the Planning Department.
4. Guidelines published by the American Association of State Highway Transportation Officials (AASHTO) recommend a minimum clear width of 10 feet for a path shared by cyclists and pedestrians (shared use path).
5. Flood stages along the Downtown portion of the Grand River can increase water levels by as much as 12 to 15 feet.
6. The Riverwalk Extension Special Study, which also includes cost estimates, is available as a separate document from the Planning Department. Additional riverwalk design principles and guidelines are presented in the River Corridor Guidelines, also prepared as part of the Green Grand Rapids Master Plan update and available from the Planning Department.
7. In some locations lower level walkways may be the only feasible option (for example, adjacent to the Charlie's Crab site and passing under the US-131 bridge).
8. A minimum elevation of 600 feet is recommended.
9. Wherever possible, greenways along tributary streams should include public access easements and walk/bike trails. Riparian buffers should be protected or restored whether or not public access can be provided.
10. The 201 Market Street site concept plan provides an example.
11. These alternatives included: modifying the beautification dams only to create a whitewater course; creating a new whitewater course parallel and connected to the river; modifying the 4th Street dam or removing the dam to create a "rapids" run.
12. The *Grand River Whitewater Park Preferred Alternative* report is available from the Planning Department.
13. Extending the riverwalk from Millennium Park to Riverside Park and expanded recreational programming for residents of all ages were also among the top priorities in the Green Grand Rapids Parks and Recreation topic.
14. Accessible park acres are located within 1/4 walking distance of a block with no intervening barriers (major traffic street; large area of industrial or commercial land use).
15. These ideas build on the work done by the Mayor's Blue Ribbon Commission on Parks and Recreation and their March 2007 report.
16. The Trust for Public Land provides an excellent example of how these benefits can be quantified in their report for the Philadelphia Park Alliance, *How Much Value Does the City of Philadelphia Receive from its Park and Recreation System*, June 2008.
17. LID manages rainfall using techniques that infiltrate, filter, store, re-use and/or evaporate runoff close to its source. See *Chapter 4 - A City in Balance with Nature*.
18. This inventory should ideally include an assessment of each site's suitability for community gardening; such an assessment could be prepared with volunteer assistance from experienced gardeners.
19. For example, Community Development Block Grant (CDBG) programs.
20. The Fulton Street Farmers' Market is open four days a week from 8:00 a.m. - 4:00 p.m. from May through late December.
21. *Expanding the Fulton Street Farmers' Market: A Feasibility Study and Strategic Business Plan*, Project for Public Spaces, October 2008.
22. These include the Southeast Area and Westside markets.
23. See the 2002 Master Plan, *Chapter 10 - Development Character*.
24. Natural or paved surface.



# 4.0 - A City in Balance with Nature

People in the City of Grand Rapids support planning approaches that protect natural resources, capitalize on existing infrastructure and honor the principles of Smart Growth. This chapter highlights Plan recommendations that promote sustainable development patterns, protect and restore natural systems, better manage stormwater and protect and expand the urban forest canopy. By undertaking measures that address natural systems in a comprehensive way, Grand Rapids can realize significant benefits for the entire community and the region.



## Why are greening/natural systems important?

### Environmental Benefits

- Protect water quality by absorbing and filtering pollutants from runoff
- Reduce the quantity of stormwater entering sewers, streams and rivers
- Improve air quality by filtering pollutants and reducing carbon dioxide
- Provide shade to reduce the urban heat island effect (and energy use for cooling)
- Protect and improve urban habitat and biodiversity

### Economic Benefits

- Reduce pollution mitigation and health care costs (by improving air and water quality)
- Reduce infrastructure costs by reducing stormwater volumes
- Reduce flood risks and insurance costs
- Attract and retain businesses and residents by providing/protecting natural amenities
- Increase property values and property tax revenues

### Quality of Life Benefits

- Improve health by reducing air pollution and the number of high heat days
- Expand river recreation opportunities by improving water quality
- Enhance community character and sense of place
- Improve psychological health and productivity by increasing access to nature
- Maintain heritage and connection to the land

## What has Grand Rapids already done to improve greening/natural systems?

- Implemented Combined Sewer Overflow (CSO) projects to separate sanitary and storm sewers and improve water quality
- Participated in *Lower Grand River Watershed Management Plan* and prepared related *Stormwater Pollution Prevention Initiative*
- Provided city tree planting and Ash tree replacement programs
- Established “Save Your Ash” educational outreach program
- Established an Urban Forestry Committee to develop a plan for protecting and increasing tree cover
- Updated zoning requirements for green space and landscaping
- Participated in West Michigan Strategic Alliance Green Infrastructure Vision

## 4.1 - Visions

One of the first steps of the 2002 Master Plan process was to ask the citizens of Grand Rapids what they would like to see the city look like 20 years from now. The following visions emerged:

*“Grand Rapids and the metropolitan region will be national leaders in controlling urban sprawl. As a result, we will succeed in revitalizing the city’s central core, strengthening long-established neighborhoods and protecting treasured green spaces. The quality of our neighborhood-based businesses, workplaces and schools will play an important role in maintaining our city’s appeal to families, employers and investors.”*

*“We will be a sustainable city because of our balanced approach to transportation, our support for waste reduction, our reinvestment in developed areas and the diversity of our economy. Our transportation policies will pay dividends in improving air quality and our state-of-the-art stormwater management practices will reduce runoff volumes and improve water quality. We will also foster a culture that educates the community to the benefits of waste reduction and recycling and support the programs needed to move towards the goal of producing no waste. Grand Rapids will be nationally known as an environmental leader. We will be proud of our progress in promoting harmony between humanity and the built and natural environments.”*

Green Grand Rapids’ Greening and Natural Systems topics provide an Ecological Framework for prioritizing efforts to protect and restore valued natural resources areas, take a closer look at Low Impact Development (LID) stormwater management strategies and provide an urban forest canopy analysis to help guide tree planting and protection efforts.

## 4.2 - Plan Recommendations

Plan recommendations focus on sustainable development patterns, a natural systems Ecological Framework, LID stormwater management strategies and the urban forest canopy.

### 4.2.1 - Sustainable Development Patterns

The 2002 Master Plan presents recommendations, objectives and policies that can make Grand Rapids a more competitive alternative to greenfield development for many households and businesses in the metropolitan region by supporting great neighborhoods, creating vital business districts and establishing a strong economy.<sup>1</sup> The Green Grand Rapids Master Plan update augments recommendations for enhancing alternatives to travel by car (see *Chapter 2 - Balanced Transportation*) and improving community quality of life (see *Chapter 3 - A City that Enriches Our Lives*) as essential parts of a successful strategy for making Grand Rapids a competitive location for “creative class” workers who can provide the knowledge, creativity and entrepreneurship needed to support economic growth and sustainability.<sup>2</sup>

By encouraging reinvestment in already developed areas within the city’s boundaries, compact, mixed-use development and a range of housing choices, Grand Rapids can lead the way to a more sustainable regional growth pattern. Nevertheless, significant cooperation among all units of government within the region, and with the private sector, will be required to reduce development pressures on farmland, critical natural areas and open space. Grand Valley Metropolitan Council’s 1994 *Blueprint*

*Report* provides an agenda for modifying current (business as usual) development patterns to manage growth in a more sustainable way. The 2002 Master Plan supports and implements that agenda.

Providing transportation choices to reduce auto dependence and encourage transit use, walking and cycling will also contribute directly to sustainable development, help to improve environmental quality and encourage healthy lifestyles. For example, a shift from single-occupancy vehicle commuting to other modes of transportation will reduce consumption of nonrenewable resources and improve air quality by reducing tail pipe emissions. Reduced auto dependence will reduce the need for, and cost of providing, parking at multiple destinations; less paved area for parking will result in less stormwater runoff carrying pollutants to rivers and streams. A choice of travel modes that encourages people to walk and cycle for short trips will burn calories, instead of carbon and increase physical activity to improve health.

### 4.2.2 - Natural Systems

For the first time, Green Grand Rapids has developed a detailed inventory map of the city’s natural systems including watersheds; river and stream corridors; wetlands and floodplains; steep slopes; wooded areas and high bio-diversity areas (see *Figure 4.a - Natural Features Inventory Composite - Page 68*). This inventory allows Grand Rapids’ citizens and decision-makers to understand in some detail how the city’s natural systems fit into the region’s larger “green infrastructure” vision, defined by a task force created in 2003 by the West Michigan Strategic Alliance.

Green infrastructure is the network of connected open space, woodlands, wildlife habitat, parks and other natural areas that supports native species, maintains natural ecological processes to sustain clean air and water and contributes to the health and quality of life for communities and people.<sup>3</sup> At the

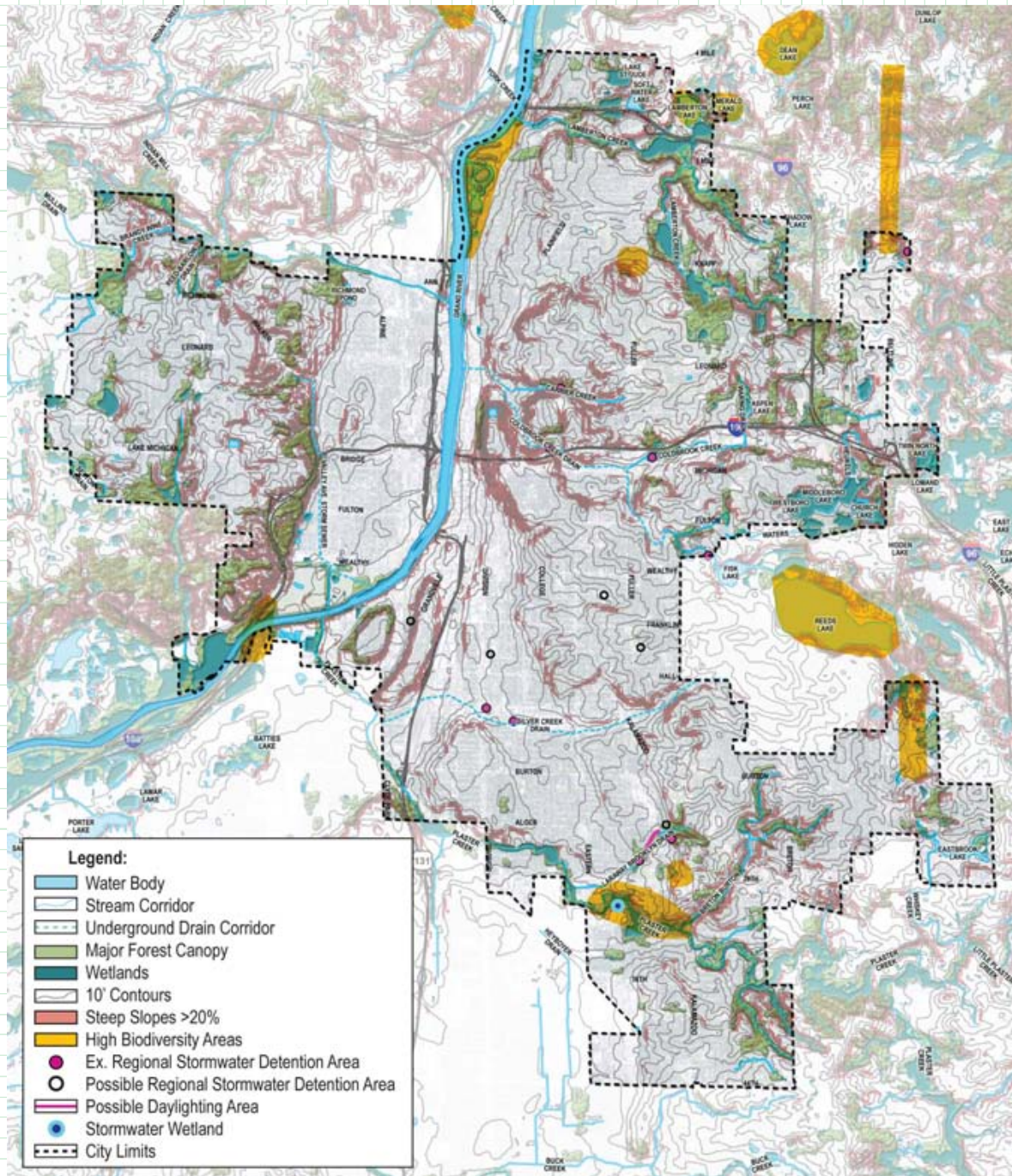
heart of the green infrastructure philosophy are the ideas that:

- the green space network, including publicly and privately owned lands, provides valuable economic benefits in the form of ecological “services” (including flood control and stormwater management) that can decrease the cost of “grey” (roadway or utility) infrastructure investment, while providing amenities that increase private property values (and property tax revenues);



Overlook along the Riverwalk

Figure 4.a - Natural Features Inventory Composite



- the protection and restoration of natural systems should be viewed as a primary public investment, like a community’s “grey” infrastructure;
- this connected system should shape land use and development patterns, rather than being viewed as “left over” space.

Grand Rapids’ regional-scale green infrastructure components are the Grand River, Plaster Creek and adjacent committed green spaces, including Riverside, Millennium and Ken-O-Sha Parks. At a city scale, additional high value resource areas that make up the green infrastructure network include other tributary streams, wetlands, water bodies and wooded areas that can be connected to each other and the Grand River.

Green Grand Rapids participants have consistently identified two top natural systems priorities: the restoration of riparian corridors along the Grand River and its tributary streams to protect water quality, and the protection and enhancement of the city’s urban forest canopy. Building on these priorities, an Ecological Framework map was developed as part of Green Grand Rapids to identify opportunities for natural systems protection, enhancement and restoration.

### Ecological Framework

The Ecological Framework (see *Figure 4.b - Ecological Framework - Page 69*) maps riparian corridors and buffers, hydric soils (floodplain and wetlands), high biodiversity areas, upland and lowland habitat areas, steep slopes and related buffer zones to illustrate Grand Rapids’ green infrastructure network. The map also classifies areas/corridors into three priority categories: core habitat areas to preserve; buffer and connection areas to conserve; and, opportunity areas for restoration/enhancement. Existing parks are outlined to illustrate the extent to which they protect

critical open spaces. Existing and proposed off-street trails are also indicated to identify greenway corridors that can help to protect and connect key resource areas. Finally, natural resource planning areas are suggested to provide a structure for more detailed inventory and planning activities.

The Ecological Framework provides a starting point for discussion in setting priorities for land and/or easement acquisition, updating ordinances to better protect natural features and/or developing incentives for conservation and restoration. Green Grand Rapids participants have identified several priority areas and initiatives for consideration.

Priority areas include:

- the Grand River;
- Plaster Creek;
- the Silver Creek Drain.

Priority initiatives include:

- increasing the width of riparian buffers (particularly along the Grand River; Lamberton Creek and Indian Mill Creek);
- exploring the potential to “daylight” tributary streams that are now underground in pipes (Coldbrook Creek; Silver Creek Drain);
- continuing the development of greenways (with a bicycle/pedestrian trail) along the Grand River and Plaster Creek;
- exploring the potential to create greenways along the Silver Creek Drain and through the Valley Avenue area (to connect John Ball Park to Indian Mill Creek).

Figure 4.b - Ecological Framework

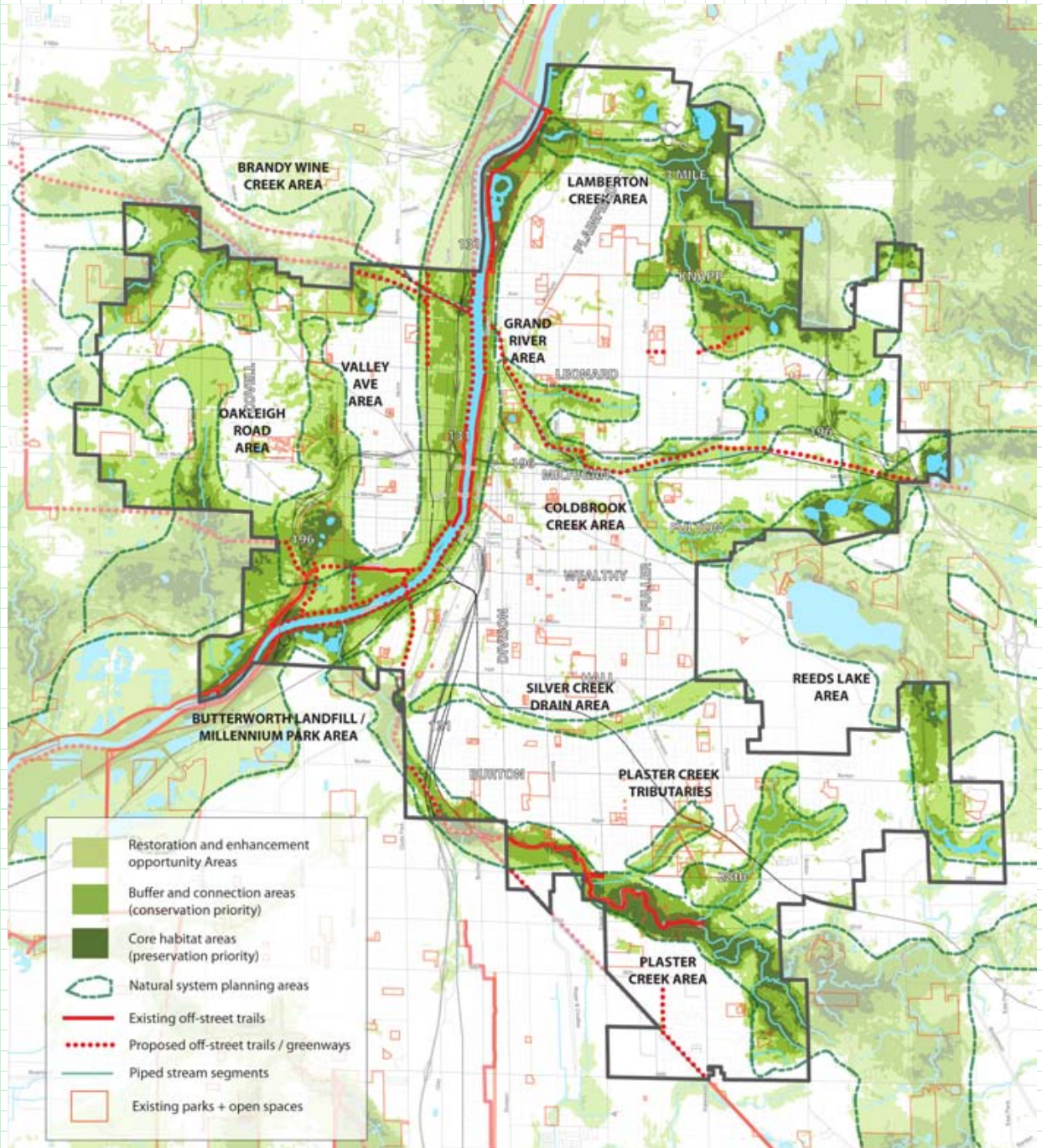
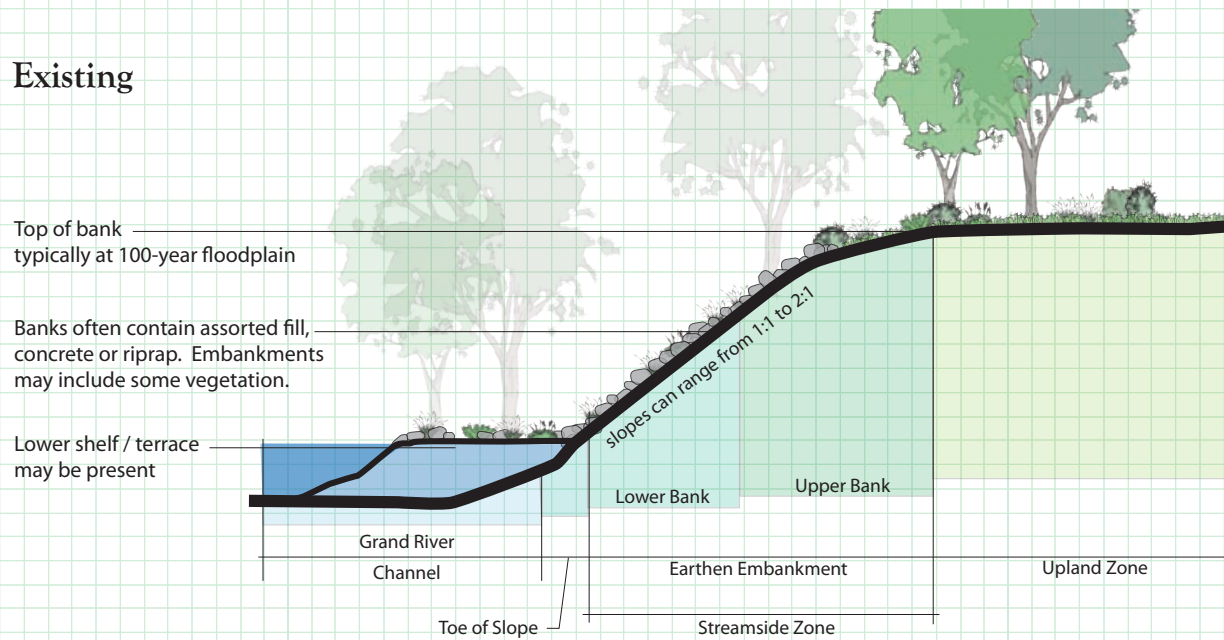
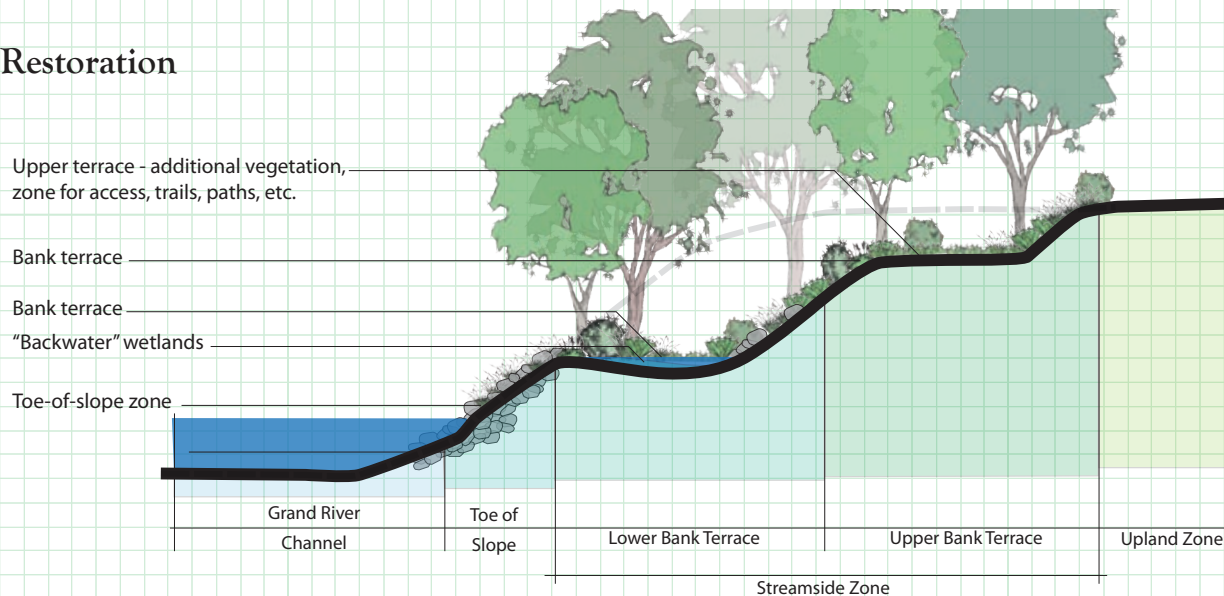


Figure 4.c - Existing Bank Condition (top) and Restoration Option (bottom)

### Existing



### Restoration



### River Corridor Guidelines

To help achieve these priorities, River Corridor Guidelines<sup>4</sup> were developed as part of Green Grand Rapids to address the preservation and improvement of riparian buffers and the restoration of river and stream banks. The guidelines provide principles and tools for protecting water quality, enhancing habitat, reducing flooding and improving the visual quality and recreational use of Grand Rapids' river and tributary stream corridors. In addition, they serve as a stepping off point in determining how existing development requirements and incentives that apply to these riparian sites can be strengthened.

### 4.2.3 - Stormwater Management

Stormwater management, and its impact on water quality and flood risk, has been a significant issue in Grand Rapids. Substantial investments have been made (and more are anticipated) in separating combined sewers, providing stormwater storage capacity and developing standards for minimizing and managing stormwater on individual development sites.

Grand Rapids adopted a revised stormwater management ordinance in 2007 that emphasizes the use of LID Best Management Practices (BMP) to reduce the quantity, and improve the quality, of runoff on a site-by-site basis. Low impact development manages rain water where it falls by reducing impervious surface area to allow infiltration and by taking advantage of natural processes to store and treat stormwater to reduce flows and improve water quality before stormwater is released to sewers and, ultimately, the Grand River.

Requirements for pervious surface area (green space requirements) have been included in the

City's updated zoning code (2007; amended 2008). Additional steps have been taken to educate developers, engineers and public officials about LID techniques through workshops and a map and driving tour (2006-07). The Grand Rapids-based West Michigan Environmental Action Council (WMEAC) has also been conducting a community stormwater education project since 2002.

## Low Impact Development (LID)

Green Grand Rapids recommends a continued focus on LID strategies in reviewing and updating existing City policies and ordinances, in educating the community on actions individuals can take, and in the design of public and private development projects. The LID approach manages rainfall using techniques that infiltrate, filter, store, re-use and/or evaporate runoff close to its source. The approach is based on the understanding that stormwater is a resource, not a waste product to be transported and disposed of as quickly as possible.

Instead of using large structural, and often costly, end-of-pipe facilities at the bottom of drainage areas, LID emphasizes smaller, more cost effective landscape approaches at the site level. As a result, rain water is "managed" where it falls by reducing impervious surface area to allow infiltration and by taking advantage of natural processes to store and treat stormwater to reduce flows into public sewers and, ultimately, the Grand River. A wide variety of BMPs have been implemented and documented, and many technical resources providing a comprehensive "toolbox" of LID stormwater management strategies are available.<sup>5</sup>

## Green Streets

The city's streets contribute a substantial volume of runoff and, especially in the first hour of storm events (first flush), contain a high percentage of stormwater

pollutants. Most of this runoff is collected in underground pipes that flow to the Grand River.

Over time, as streets are re-designed and re-constructed, LID strategies can be incorporated to reduce impervious surface area, increase infiltration and reduce pollutant loads. For example:

- the potential to reduce paved area, widen parkway zones (the area between the curb and the sidewalk) and add landscaped curb bump outs or median islands can be explored to increase pervious surface within the right-of-way;
- compacted soil in the parkway zone can be replaced with structural soils to increase infiltration capacity;
- street trees can be planted to help clean and absorb rainfall;
- the parkway can be re-designed as a bioretention area, or rain garden, to capture and infiltrate runoff, remove pollutants and beautify the urban environment;
- existing infrastructure can be retrofitted with catch basin inserts and water quality inlets to remove suspended solids, hydrocarbons and other pollutants;
- the use of porous pavement in parking lanes and/or sidewalks can be explored.

Regular sweeping of streets can also significantly reduce the amounts sediments, nutrients, oil and trash that drain into storm sewers, rivers and streams.

Making space available within the right-of-way to provide room for "greening" (as well as pedestrian and bike facilities) can be a problem, especially along major traffic streets (with 4 traffic lanes) that have limited right-of-way dimensions (often 66-feet). Nevertheless, these are the streets that Green Grand Rapids participants have consistently identified as the priorities for greening and Complete Streets

## Low Impact Development Stormwater Techniques

**Re-use of Rainwater** - Capturing roof runoff in tanks and cisterns allows it to be used for lawn and garden irrigation, reduces peak flows during storms and provides for infiltration into the soil in dry weather.

**Green Roofs** - A modern variant on sod roofs, green roofs capture a percentage of rainwater and replace some of the functions of the vegetation buildings displace.

**Disconnection of Roof Drains** - Disconnecting downspouts from sewers and directing their discharge to rain gardens, dry wells or vegetated swales reconnects rainwater with native soil (for infiltration) and vegetation (for absorption).

**Surface Drainage** - Pitching the drainage of driveways, sidewalks and parking lots onto adjacent vegetated soil (and not into storm sewers) also increases infiltration and absorption.

**Infiltration Basins** - Carefully engineered depressions in the landscape (for example, rain gardens, dry wells and subsurface recharge beds) collect runoff from roofs and pavement and allow it to percolate into the soil.

**Tree Plantings** - Tree branches and foliage intercept a portion of rainwater; tree roots absorb rainwater.

**Reduction in Impervious Surfaces** - Reconfiguring driveways, parking lots and streets to reduce unnecessary pavement allows more vegetated soil and more rainwater infiltration.

**Porous Pavement** - Special types of asphalt, concrete, masonry and other materials have open pores that detain runoff, filter pollutants and allow water to infiltrate the underlying soil.

**Vegetated Swales** - Landscaped drainage channels (as an alternative to pipes) slow runoff, remove pollutants and infiltrate water.

**Daylighting** - Restoring historic streams by creating naturalized open channels slows runoff and brings it into contact with soil, vegetation and air to allow natural ecosystem processes to treat and infiltrate stormwater.

Adapted from *Stormwater magazine*, July/August 2001.



Green Street in Portland, OR

improvements (see *Figure 2.d - Greening Priority Streets - Page 25*). As a result, Green Grand Rapids recommends that these streets be evaluated as candidates for road diets (re-striping to create two travel lanes and a center turn lane) as re-construction and/or re-paving is planned to allow more space to be dedicated to non-motorized users, stormwater improvements and tree planting.

### Parks as Models of Sustainable Design

As open, green spaces, parks already contribute to stormwater management by providing large permeable surface areas that can infiltrate rainfall, as well as plants and tree cover that filter and absorb runoff. But additional steps can be taken to maximize the potential for parks and trail corridors (greenways) to minimize runoff volumes and improve water quality by incorporating LID strategies into their design. Parks can also be planned in coordination with larger scale stormwater management facilities to provide surface or below ground detention areas. For example, despite its small size, the concept plan prepared for the expansion and improvement of Joe Taylor Park includes an underground stormwater detention area designed to collect 270,000 gallons



Joe Taylor Park Concept Plan

of runoff from the surrounding 40 acres to filter out pollutants before release to storm sewers and, ultimately, the Grand River.

Parks can also be planned and retro-fitted to become models of sustainable design in other ways, for example:

- including high value natural areas (identified in the Ecological Framework - Page 68) as a consideration in acquisition decisions;
- expanding native landscaping to reduce the area requiring irrigation and/or regular mowing and to improve habitat;

- adding rain gardens;
- ensuring that riparian buffers in parks and trails on the Grand River and tributary streams are protected and restored and water edge access points are well stabilized;
- protecting existing and planting additional trees to maintain and expand the urban forest canopy;
- providing educational programs and interpretive signs to explain “green” practices.



## 4.2.4 - Urban Forest Canopy

Trees in the city (the urban forest canopy) provide substantial environmental, economic and quality of life benefits. For example, a tree's leaves absorb carbon, dust and soot from the air, generate oxygen and reduce noise levels. A tree's roots absorb water and hold soil in place to prevent erosion. Trees create shade to reduce summer temperatures (the urban heat island effect) and energy costs for cooling. Research has also shown that trees increase residential property values and contribute to higher retail sales in shopping areas. Trees even reduce stress and aggression and boost student concentration.

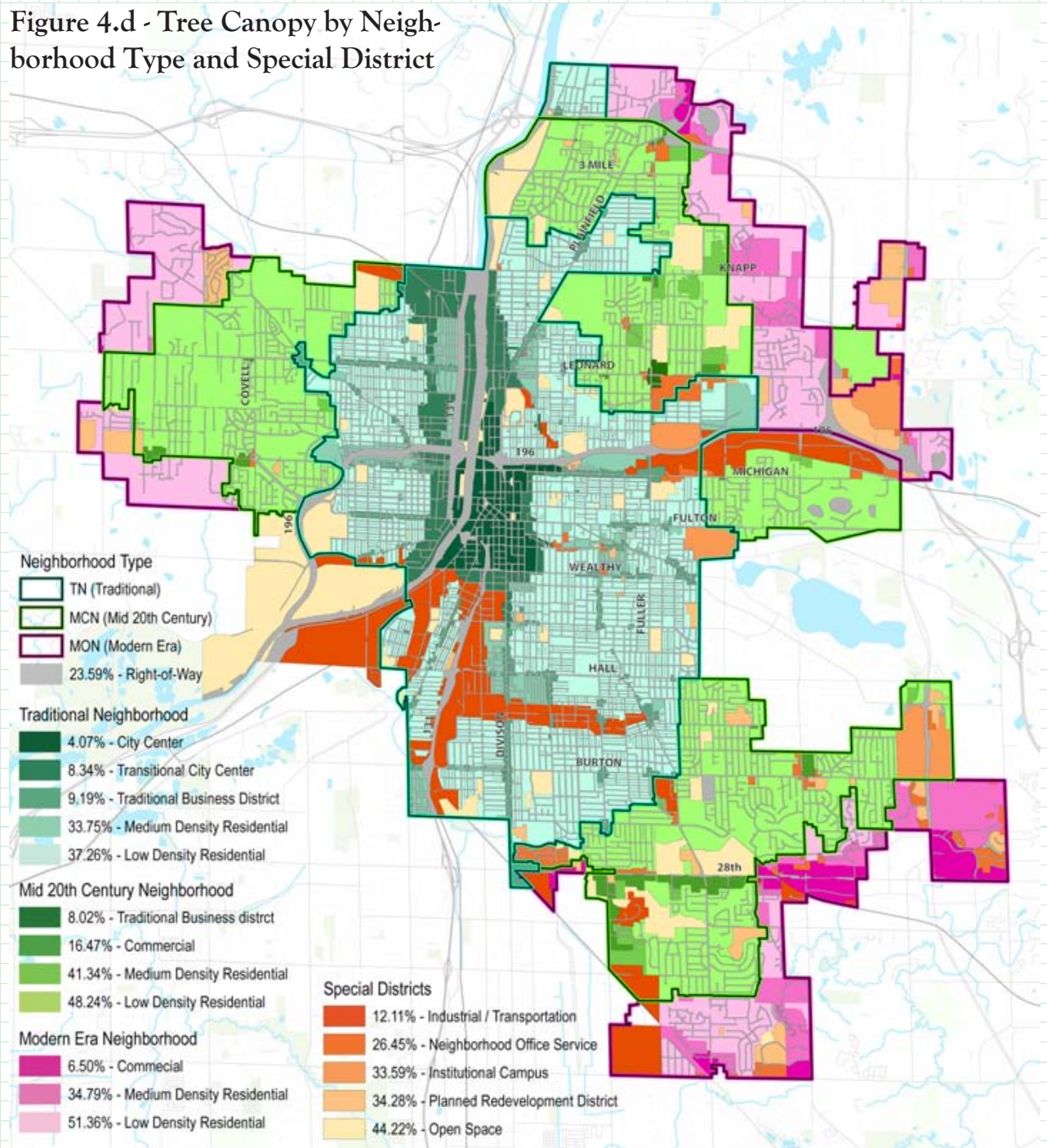
### Canopy Analysis

With the help of Grand Valley State University (GVSU) Annis Water Resources Institute, the tree canopy in Grand Rapids has been documented and the dollar value of some of these benefits has been quantified.<sup>6</sup> The first step in this analysis was to map canopy coverage using 2005 aerial photography. Overall, the canopy coverage in the city is 34.6%, which compares well to the 29.7% average for Michigan cities, but is lower than the target of 40% recommended by American Forests<sup>7</sup> as the ideal target to maximize benefits in our climate zone. This would require an additional 1,520 acres of canopy cover or approximately 185,000 new trees.<sup>8</sup>

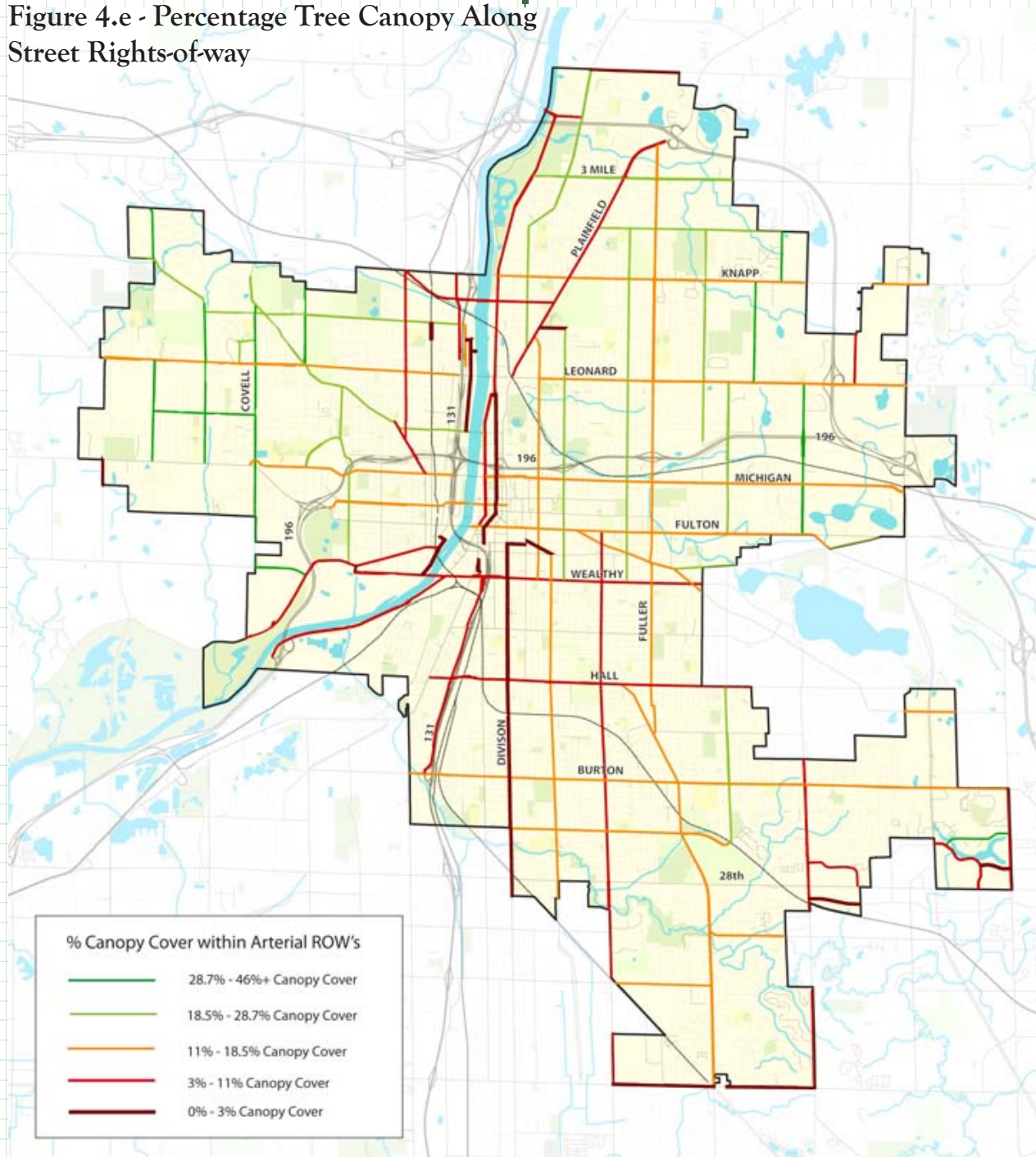
American Forests' CITYGreen model enables communities to calculate the economic value of ecological services provide by the urban forest including :

- air pollution removal - the indirect costs avoided (e.g., for health care or reduced tourism revenue);
- current value of carbon stored in tree biomass;

Figure 4.d - Tree Canopy by Neighborhood Type and Special District



**Figure 4.e - Percentage Tree Canopy Along Street Rights-of-way**



- stormwater runoff - the cost of additional stormwater management infrastructure if all existing trees were removed and replaced with impervious surface.

The economic value of Grand Rapids' existing tree canopy is:

	Annual Value	Total Current Value
Air pollution removal	\$1.7 million	-
Carbon storage	\$12,000	\$1.6 million
Stormwater mitigation	\$32 million <sup>9</sup>	\$369 million

Using the tree cover information created by GVSU, Green Grand Rapids re-mapped the data by Grand Rapids zoning classifications to illustrate the different percentages of canopy cover in different parts of the city. As this map shows (see *Figure 4.d - Tree Canopy by Neighborhood Type and Special District - Page 73*), tree coverage ranges from a high of 51% in low density residential areas in Modern Era Neighborhoods on the edge of the city to a low of 4% in the City Center. Tree canopy cover on arterial streets was also mapped (see *Figure 4.e - Percentage Tree Canopy Along Street Rights-of-way*). It is interesting to note how well the priorities for “greening” streets established by Green Grand Rapids participants (see *Figure 2.d - Greening Priority Streets - Page 25*) correspond to the low percentage cover arterial streets identified in the urban forest canopy analysis.

In 2008 the Mayor appointed an Urban Forestry Committee to develop a plan for protecting and increasing tree cover in the City of Grand Rapids. The Committee considered Green Grand Rapids' community input and analytical tools and recommended the goals and strategies as noted in *Figure 4.f - Urban Forestry Committee Plan Recommendations*.

## Green Grand Rapids Priorities

Opportunities for, and costs of, increasing tree cover in different areas of the city will vary. While it is relatively easy to plant additional trees in parks and on larger residential lots, it is more difficult and costly to plant trees on major streets where right-of-way space is limited, in Downtown and in higher density Traditional Neighborhood residential areas where lot sizes are smaller. Nevertheless, Green Grand Rapids participants suggest that priority be given to increasing the tree canopy in areas where coverage is low, including street rights-of-way, industrial areas and Downtown. Requirements and incentives for protecting existing trees and planting new ones can be strengthened by modifying zoning ordinance requirements (see Ordinance and Policy Modifications - Page 75) so that canopy coverage will be increased as new development and re-development occur.

Green Grand Rapids participants also recognize that perhaps the greatest impact in increasing the city's tree canopy can be achieved on private property where no change in development is anticipated (and zoning ordinance modifications would not come into play). As a result, participants also support educational programs that increase community awareness of the benefits of caring for existing trees, planting additional trees and the provision of incentives for doing so.



### Figure 4.f - Urban Forestry Committee Plan Recommendations

Goals	Strategies
Adopt a goal of 40% urban forest canopy	<ul style="list-style-type: none"> <li>• Incorporate 40% urban forest canopy goal in Green Grand Rapids</li> <li>• Identify canopy goals for specific land uses</li> </ul>
Develop a data base on the city's urban forest to develop prioritized planting and management plans	<ul style="list-style-type: none"> <li>• Short term: Develop a sample-based inventory profiling several areas of the city and identify maintenance and planting priorities for each</li> <li>• Long term: Develop a complete inventory of the city's public trees as the basis for citywide maintenance and planting plans</li> </ul>
Enact public policy changes to maximize tree preservation and planting incentives	<ul style="list-style-type: none"> <li>• Update the tree ordinance, planning and zoning policies and other tree-related City policies based on a review of existing ordinances and policies and promising practices from other communities</li> </ul>
Provide adequate personnel and budget resources to ensure effective, proactive functioning of the Forestry Division	<ul style="list-style-type: none"> <li>• Devote 100% of the forestry supervisor position to forestry-related duties</li> <li>• Develop an urban forest management plan</li> <li>• Provide adequate funding to implement the management plan, including resources to support outside fund development and community/volunteer involvement</li> </ul>
Increase public awareness and involvement as the foundation for developing broad public support for urban forest issues	<ul style="list-style-type: none"> <li>• Create opportunities for public education and volunteer involvement, including tree tours, workshops, planting and maintenance projects</li> <li>• Create opportunities for public and private sector financial support</li> </ul>
Explore opportunities for increasing collaboration with other jurisdictions	<ul style="list-style-type: none"> <li>• Engage in discussions with neighboring municipalities and Kent County about collaborative efforts, including cost savings through joint efforts</li> </ul>

## Ordinance and Policy Modifications

Grand Rapids should consider a number of modifications to existing ordinances and policies to strengthen tree preservation and encourage additional tree planting. For example:

- make protection of existing trees, and replacement of lost trees, a required part of every public improvement project (*Chapter 42: Trees*);
- establish stronger incentives for tree protection on development sites by requiring the replacement of trees that are removed (*Chapter 61: Zoning*);
- require street tree planting adjacent to new development/redevelopment sites, or a contribution to a street tree escrow account (*Chapter 61: Zoning*);
- include tree planting requirements in all parking lot and loading area screening requirements (*Chapter 61: Zoning*);
- consider establishing an overall percentage tree canopy requirement for each zoning classification;
- negotiate agreements with Consumers Energy on the trimming, removal and replacement of trees within public rights-of-way;
- consider giving priority to City-funded street tree planting in areas where residents and/or business organizations take responsibility for watering and monitoring during the establishment period.

## 4.3 - Objectives and Policies

The following objectives and policies summarize what needs to be done to achieve the plan recommendations on the preceding pages so that Grand Rapids can be a city in balance with nature.

### Objective N1

**Reduce sprawl and its negative environmental impacts, ensuring that Grand Rapids remains the focal point of West Michigan.**

- a. Work in collaboration with other regional and local governments to encourage Smart Growth.
- b. Maintain the city's appeal as in investment location for households, business, industry and institutions.
- c. Continue to encourage compact, clustered development patterns within the city to preserve open space and natural features, promote watershed protection and reduce development costs.
- d. Encourage infill development and brownfield clean up and reuse.
- e. Adopt comprehensive development standards for natural features protection (trees, wetlands, steep slopes, streams and rivers).

### Objective N2

**Protect and enhance natural systems in Grand Rapids and strengthen connections to regional natural systems.**

- a. Adopt an Ecological Framework to guide planning and development decisions.

- Coordinate with W. Michigan Strategic Alliance (WMSA) and Grand Valley Metro Council (GVMC) regional green infrastructure planning efforts.
  - Use rivers and riparian corridors as the basis.
  - Identify/prioritize protection of high value areas and corridors.
  - Identify/prioritize area and corridor restoration opportunities.
  - Coordinate park acquisition, design and programming with Ecological Framework priorities.
- b. Protect/expand the urban forest canopy.
- Endorse Urban Forestry Committee 40% citywide canopy goal.
  - Develop an inventory of existing trees as the basis for a detailed planting and management plan.
  - Establish sub-area canopy targets; prioritize improvements.
  - Enhance tree preservation and landscape ordinance requirements and incentives.
  - Augment Urban Forestry Department resources.
  - Encourage private revegetation efforts in already built areas through education and incentives.
  - Improve the viability of newly planted trees by increasing home owner education.

### Objective N3

**Improve the quality of water resources.**

- a. Pursue watershed based planning.
  - Continue to implement the *Lower Grand River Watershed Management Plan*; coordinate improvements across the region.
  - Integrate actions with Ecological Framework priorities.

- Establish sub-watershed runoff targets and management priorities.
- b. Reduce stormwater runoff and improve water quality by increasing natural infiltration.
- Use public buildings, facilities and infrastructure to demonstrate Low Impact Development (LID) techniques.
  - Identify/prioritize opportunities for joint stormwater management-park facilities.
  - Review/update standards for pervious area (green space) by development type.
  - Encourage parking area stormwater retention/infiltration integrated into required landscaping.
  - Encourage stormwater Best Management Practices (BMPs, e.g., rain gardens, vegetated swales, green roofs) in all private developments.
  - Minimize potable water use for irrigation by encouraging native or adapted landscapes<sup>10</sup> and encouraging rainwater collection and re-use.
  - Pursue stormwater retrofit projects in built areas.
  - Consider establishing a stormwater utility<sup>11</sup> to help fund improvements.

### Objective N4

**Promote LID strategies within the street network.**

- a. Minimize stormwater volumes and pollutants within the right-of-way (green streets).
  - Reduce impervious surface (less paving, more landscape area, porous pavers).
  - Use rain gardens for infiltration and bio-filtration.
  - Use structural Best Management Practices to reduce pollutant levels.

- b. Maximize the tree canopy on every street right-of-way.
  - Inventory street trees to identify new planting opportunities and replacement needs; give attention to greening priority streets.<sup>12</sup>
  - Develop context-based tree planting guidelines (spacing, size, diversity).
  - Protect existing mature trees.
  - Consider including developer contributions to street tree planting in zoning requirements (street tree escrow fund).
- c. Coordinate implementation with street reconstruction and Combined Sewer Overflow (CSO) projects
  - Give priority to areas where neighborhood and business organizations take responsibility for maintenance of new plantings.
- d. Design streets to reduce irrigation demand, minimize mowing and focus maintenance resources.
  - Use native or adapted landscapes to reduce irrigation needs.
  - Require structural soils to encourage infiltration and promote tree growth in challenging urban environments.
  - Focus maintenance on gateway and image corridors.
  - Use materials with recycled and locally sourced content.

### **Objective N5**

#### **Pursue river and stream restoration and daylighting projects.**

- a. Support the West Michigan Environmental Action Council's adopt-a-stream program.

- b. Consider other environmental education programs.
- c. Identify/prioritize restoration projects (Grand River, Plaster Creek, Silver Creek Drain, Indian Mill Creek, Coldbrook Creek).
- d. Increase the width of required riparian buffers where ever possible.
- e. Implement the River Corridor Guidelines and develop incentives.

### **Objective N6**

#### **Develop parks and managed open space to become models for sustainable design.**

- a. Use sustainable design principles.
  - Expand native landscapes/habitats.
  - Protect/increase tree canopy.
  - Minimize impervious surface.
  - Use LID stormwater management practices.
  - Use locally sourced and recycled materials.
- b. Use parks as demonstration and education sites for green practices.
  - Provide education programs.
  - Provide interpretive signs.
  - Engage citizens.

### **Objective N7**

#### **Reduce waste and promote the use of sustainable materials.**

- a. Expand efforts to educate the community to the benefits of waste reduction and recycling; recognize and reward waste reduction achievements.
- b. Facilitate composting.
- c. Encourage the use of locally sourced and recycled content materials

## Chapter 4 Notes

1. See 2002 Master Plan Chapters 3 - 5.
2. Michigan Future, Inc. *Young Talent in the Great Lakes: How Michigan is Faring*. July 2008.
3. Mark Benedict and Edward McMahon, *Green Infrastructure: Smart Conservation for the 21st Century*. The Conservation Fund.
4. The River Corridor Guidelines are available from the Planning Department.
5. See for example, *Low Impact Development Manual for Michigan*, Southeast Michigan Council of Governments (SEMCOG), 2008.
6. *Urban Forest Ecological Services Assessment*, Annis Water Resources Institute, Grand Valley State University, 2008.
7. American Forests is a non-profit citizens' conservation organization whose vision is to create healthy forest ecosystems for every community.
8. The GVSU tree canopy analysis accounted for trees lost to the Emerald Ash Borer up to 2005. Additional losses since that time, losses of trees other than Ashes and potential future losses are not included. As a result the estimate of 185,000 additional trees (which assumes an average tree canopy of approximately 360 square feet) should be considered a minimum goal. It has been suggested by the City's Forester that the recommended number should be 200,000 trees.
9. The annual cost of paying for additional stormwater infrastructure over 20 years at 6% interest.
10. Adapted landscapes use plants that are low maintenance, but not invasive.
11. A stormwater utility assesses user fees based on the volume of stormwater runoff a property

generates. Fees are usually based on the property's percentage of impervious area and credits can be provided for measures taken to reduce runoff volume and improve water quality. Fee revenues are used to implement stormwater management improvements. Ann Arbor, Michigan provides an example.

12. These include Plainfield, Division, Grandville, Market, North Monroe, Leonard, Lake Michigan Drive, Michigan/Bridge Street, Fulton, Hall, Burton and 28th Street.





# 5.0 - Implementation

In combination with the 2002 Master Plan, the Green Grand Rapids plan update describes the community's vision for the future and provides a framework of objectives, policies, partnership opportunities and related maps to guide development and investment decisions. The Master Plan update process also establishes clear community priorities, provides new decision-making tools and includes concept plans that position the City to move from ideas in to action. Just as importantly, local "champions" have stepped forward to help implement Grand Rapids' green infrastructure vision.



**Many people and organizations have a role to play in implementing the updated Master Plan, including:**

- the Mayor and City Commission;
- the Planning Commission;
- the staff of the Planning Department with the collaboration of staff from all City departments;
- many current and potential agency and quasi-government partners, for example, the Michigan Department of Transportation, Grand Valley Metropolitan Council, Kent County, The Rapid, The Right Place, the Grand Rapids Public School District, the Downtown Development Authority;
- the leadership and staff of adjacent jurisdictions;
- local institutions, for example, Grand Valley State University, Calvin College, Aquinas College, Spectrum Health Systems and Grand Rapids Community College;
- non-governmental organizations including, for example, the West Michigan Environmental Action Council, bicycle/pedestrian and food systems advocacy groups, the Friends of Grand Rapids Parks, Grand Rapids Whitewater, Grand Action;
- neighborhood groups and business organizations;
- property owners/developers;
- individual citizens.



Riverside Park Tree Planting

## 5.1 - The Role of the Master Plan

Like the 2002 Master Plan, the Green Grand Rapids Master Plan update process was structured to encourage community participation in building consensus on objectives and policies for future land use and development, transportation, open space and the natural environment. Because it is supported by the community, the updated Master Plan gives City staff, the Planning Commission and City Commission a clear guide for managing change and coordinating decision-making as:

- development-related policies and regulations (e.g., zoning; design guidelines) are prepared (or revised) and applied;
- improvements to the City's infrastructure are planned and designed;
- development proposals are reviewed and approved, or modifications recommended;
- resources are allocated for capital investments and programmatic initiatives.

The Green Grand Rapids planning process has been tailored to align with and reinforce other recent planning initiatives, for example, the work of the City's Urban Forestry Committee and the development of the 2010 *Parks and Recreation Master Plan*. Its recommendations will also shape the planning agenda of other local and regional agencies, for example, the Downtown Development Authority, Kent County, The Rapid and the Grand Valley Metropolitan Council. In addition, the updated Master Plan will serve as an important vehicle for communicating Grand Rapids' policies for the future to adjacent jurisdictions as the basis for coordinating land use, green infrastructure and transportation decisions.

By introducing new ideas and development models, the updated Master Plan can serve as a catalyst for change. It communicates expectations and preferences about future development to property owners, developers and business people. It can also inspire business and neighborhood organizations, non-profits, philanthropic donors and individual citizens to play a role in plan implementation. Indeed, it is important to remember that while the City can encourage and guide development, it is the private sector - from individual homeowners, to developers, major institutions and corporations - who will make new investment happen. A clear expression of what the citizens of Grand Rapids want, and the objectives and policies that will be adopted to manage development, will establish a clear guide and supportive context for that investment.

## 5.2 - Principles for Success

A number of basic principles have been shown to contribute to the success of master plan implementation.

**Communicate.** At the start of plan implementation, it is important not to underestimate the need to spread the word about major recommendations. These communication efforts need to be undertaken within City Hall, as well as externally. In addition, as plan implementation proceeds, it is important to measure and monitor progress and report back to the community at regular intervals. This helps to keep the Master Plan in the foreground and to identify any needs for plan amendment.

**Coordinate.** Plan implementation includes many moving parts and overlapping strategies that will require public-public and public-private partnerships to coordinate funding requests and timing to leverage the greatest possible impact. As several strategies move forward, groups will need to communicate, and coordinate their efforts, to ensure that the community understands how individual initiatives fit into the broader plan.

**Collaborate.** Completion and adoption of the Master Plan update is a major accomplishment, but plan implementation will be achieved over an extended time period and will require the continued cooperation and commitment of the public, private and non-profit sectors. Implementation can be accelerated by collaborating with regional agencies, local organizations, institutions, business and neighborhood groups, property owners and developers. The most successful plan implementation initiatives will be those that are at the top of multiple agency and community group agendas, are supported

by strategic alliances and joint ventures and are already attracting community and financial support.

**Be committed.** To attract the collaborative effort of others, the City must demonstrate its commitment to the objectives of the updated Master Plan. As a result, the plan needs to be used on a day-to-day basis for decision-making by the City leadership and by elected and appointed boards and commissions. In addition, the plan must serve as a foundation in developing City department budgets and work programs. This should include a re-assessment of how daily work is done, as well as identifying program initiatives and follow-up studies needed for plan implementation.

**Be a catalyst.** As noted above, the Master Plan can be a catalyst for change, but the City must take the actions needed to be “development ready.” This means having the policies and regulations in place that allow desired change to occur. These can include incentives, such as building height bonuses or reduced parking requirements, that influence the economics of development. It can also mean providing information, facilitating and coordinating the work of citizen-led action initiatives and/or undertaking the preparation of more detailed plans and guidelines that illustrate how plan recommendations can be implemented.

**Be strategic.** One aspect of being strategic is focusing the City’s capital investment resources where they can be leveraged by the action and investment of others (see Collaborate). Another important part is looking for opportunities to produce tangible success in the short- to mid-term to keep interest and momentum growing. These successes can be as large as a new Downtown 4-season farmers’ market or a whitewater “rapids” course on the Grand River, or as small as a new community garden in a park serving a lower-income neighborhood.

**Be systemic.** The City must also review how its current organizational structure is helping or hindering implementation of the Green Grand Rapids Master Plan update. Implementation will require several departments to coordinate their efforts. This may require reevaluating and restructuring the functional organization chart to maximize effectiveness.

## 5.3 - Implementation Orientation

The Green Grand Rapids Master Plan update goes beyond maps, objectives and policies to identify community-supported implementation priorities. It also provides new decision-making tools, as well as more detailed plans for specific projects, to illustrate how plan objectives can be achieved and to establish a basis for grant applications and efforts to raise local funds for implementation.

### 5.3.1 - Setting Priorities

At each step in the Master Plan update process



*Green Gathering Workshop*

**Figure 5.a - Citizen Implementation Priorities**

<b>A City in Balance with Nature</b>		<b>Balanced Transportation</b>
<b>Natural Systems Priorities</b>	<b>Greening Priorities</b>	<b>Connections Priorities</b>
<p><b>Promote sustainable growth management.</b></p> <ul style="list-style-type: none"> <li>• Foster smart growth within the region</li> <li>• Encourage compact, clustered development patterns to preserve open space and natural features</li> <li>• Adopt development standards for natural feature protection</li> </ul>	<p><b>Protect/expand the tree canopy.</b></p> <p><b>Endorse 40% citywide canopy goal.</b></p> <ul style="list-style-type: none"> <li>• Develop an inventory of existing trees</li> <li>• Establish sub-area canopy targets; prioritize improvements</li> <li>• Enhance ordinance requirements and incentives</li> <li>• Augment Forestry Department resources</li> <li>• Encourage private re-vegetation efforts</li> </ul> <p style="text-align: right;"><b>Trees</b></p>	<p><b>Appoint a Complete Streets committee to draft policies and plans.</b></p> <ul style="list-style-type: none"> <li>• Design Team as champions</li> <li>• Update design standards</li> <li>• City commission Complete Streets resolution</li> <li>• Dedicated percentage of PA 51 (MDOT) funds for non-motorized improvements</li> <li>• Select/implement priority projects</li> <li>• Monitor/report progress</li> </ul> <p style="text-align: right;"><b>Complete Streets</b></p>
<p><b>Adopt an Ecological Framework plan.</b></p> <ul style="list-style-type: none"> <li>• Coordinate with regional green infrastructure planning efforts</li> <li>• Use river and riparian corridors as the basis</li> <li>• Prioritize and protect high value areas and corridors</li> <li>• Prioritize and implement area/corridor restoration opportunities</li> <li>• Coordinate with park acquisition</li> </ul>	<p><b>Design streets to minimize irrigation and focus maintenance efforts.</b></p> <ul style="list-style-type: none"> <li>• Use native or adaptive landscapes; encourage infiltration</li> <li>• Focus maintenance on gateway and image corridors</li> <li>• Use materials with recycled and locally sourced content</li> </ul>	<p><b>Adopt and implement an on-street bike route plan.</b></p> <ul style="list-style-type: none"> <li>• Balance cycling and other priorities</li> <li>• Provide guidelines for improvements, including parking</li> <li>• Provide education</li> <li>• Implement improvements incrementally</li> <li>• Give priority to bike lane feasibility studies on major traffic streets</li> <li>• Identify road diet candidates</li> <li>• Coordinate with street reconstruction and repaving projects</li> </ul> <p style="text-align: right;"><b>Complete Streets</b></p>
<p><b>Reduce storm water runoff and improve water quality by increasing infiltration.</b></p> <ul style="list-style-type: none"> <li>• Use public projects to demonstrate LID techniques</li> <li>• Identify stormwater management opportunities in parks</li> <li>• Update standards for pervious area by development type</li> <li>• Encourage private sector use of LID</li> <li>• Consider establishing stormwater utility</li> <li>• Pursue retrofit projects in built areas</li> </ul> <p style="text-align: right;"><b>Water Quality</b></p>	<p><b>Promote the use of sustainable materials.</b></p> <ul style="list-style-type: none"> <li>• Facilitate composting and recycling</li> <li>• Encourage the use of locally sourced and recycled materials</li> </ul>	<p><b>Continue to encourage compact development, mixed-use, connected streets and transit supportive development</b></p>
<p><b>Pursue river and stream daylight and restoration projects.</b></p> <ul style="list-style-type: none"> <li>• Develop guidelines and incentives</li> <li>• Protect/restore riparian buffers</li> <li>• Identify priority projects</li> </ul> <p style="text-align: right;"><b>Water Quality</b></p>	<p><b>Use LID principles in all park development.</b></p> <ul style="list-style-type: none"> <li>• Expand native landscapes/habitats</li> <li>• Protect/increase tree canopy</li> <li>• Minimize impervious surface</li> <li>• Use LID stormwater management BMPs</li> <li>• Use locally sourced and recycled materials</li> </ul> <p style="text-align: right;"><b>Water Quality</b></p>	<p><b>Design all streets to be safe, walkable and to present a pleasing image.</b></p> <ul style="list-style-type: none"> <li>• Give priority to high traffic volume streets</li> <li>• Continue traffic calming efforts</li> <li>• Identify road diet candidates</li> <li>• Plant street trees</li> <li>• Provide crossing improvements</li> </ul> <p style="text-align: right;"><b>Complete Streets</b></p>

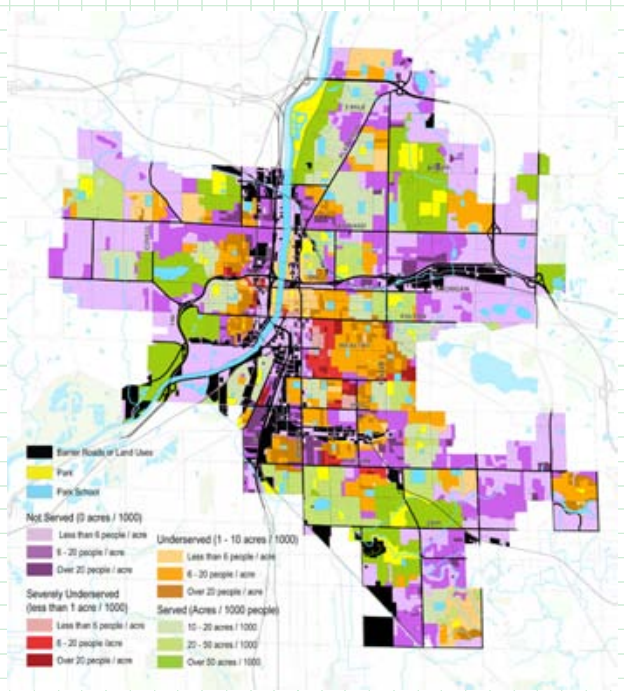
## A City that Enriches Our Lives

Parks and Rec Priorities	Grand River Priorities	Local Food Priorities
<p>Provide an accessible park within 1/4 mile of all residents.</p> <ul style="list-style-type: none"> <li>Identify/prioritize areas with deficits</li> <li>Identify and pursue opportunities for adding park space including partnerships/joint use</li> </ul> <p style="text-align: center;"><b>Parks</b></p>	<p>Expand the range of recreational opportunities on/adjacent to the river.</p> <ul style="list-style-type: none"> <li>Boat launches/liveries</li> <li>Kayak course south of 4th Street dam</li> <li>Crewing north of 4th Street dam</li> <li>Allow concessions</li> <li>Provide outdoor performance venue</li> <li>More special events</li> <li>Public art/interpretive displays</li> <li>Expanded fishing access</li> </ul> <p style="text-align: center;"><b>River Recreation</b></p>	<p>Facilitate the piloting of farmers' markets throughout the city.</p> <ul style="list-style-type: none"> <li>Refine policies for temporary/seasonal outdoor sales</li> <li>Consider locating where parking is already available</li> <li>Consider priority to locations where fresh local produce is not readily available</li> <li>Work with sponsors to coordinate schedules and provide promotions</li> </ul>
<p>Establish and implement maintenance prioritize that balance quality and cost effectiveness.</p> <ul style="list-style-type: none"> <li>Work with neighborhood and business organizations to inventory/prioritize needs</li> <li>Seek funding and partnerships to supplement existing budgets</li> <li>Use more native landscaping to reduce maintenance needs</li> <li>Identify priority locations for restroom and drinking fountains and strategies for maintenance</li> <li>Consider transfer of Aman Park to Ottawa County</li> </ul>	<p>Identify and pursue opportunities for adding riverfront parks on underused property.</p> <ul style="list-style-type: none"> <li>Butterworth Landfill</li> <li>Wealthy Street pump station site</li> <li>County- and City-owned property</li> <li>Privately owned property</li> </ul> <p style="text-align: center;"><b>River Recreation</b></p>	<p>Make policy/ordinance changes to support community gardens.</p> <ul style="list-style-type: none"> <li>Allow transfer of City-owned vacant lots to garden organizations</li> <li>Consider subsidizing water fees</li> <li>Consider waiving market stall fees for low-income gardeners</li> <li>Modify nuisance ordinance</li> <li>Allow for rooftop gardens</li> <li>Allow appropriately scaled green houses to extend the growing season.</li> </ul>
<p>Extend the riverwalk from Riverside Park to Millennium Park.</p> <ul style="list-style-type: none"> <li>Accommodate walkers and cyclists</li> <li>Develop a short-term plan including on-street segments</li> <li>Provide pavement markings, signs</li> <li>Develop mid/long-term plan including wider private development setbacks and public access easements</li> <li>Develop design guidelines for quality and consistency</li> </ul> <p style="text-align: center;"><b>River Recreation</b></p>	<p>Use riverfront parks and the riverwalk/greenways to protect the quality of stream and river corridors.</p> <ul style="list-style-type: none"> <li>Emphasize natural habitat, native landscapes, stormwater management and environmental education</li> <li>Include LID approaches</li> <li>Create more natural river edges where possible</li> <li>Develop guidelines for riverbank restoration</li> <li>Examine opportunities for flood control</li> </ul> <p style="text-align: center;"><b>Water Quality</b></p>	<p>Collaborate in investigating the feasibility of a permanent Downtown farmers' market and improvements to the Fulton Street Farmers' Market.</p>
<p>Support recreation programming for residents of all ages.</p> <ul style="list-style-type: none"> <li>Focus on health and fitness for children, youth and seniors</li> <li>Meet the growing demand for walking and cycling trails</li> <li>Encourage multiple use of public buildings for recreation programming</li> </ul>	<p>Evaluate the feasibility of returning the rapids to the river.</p> <ul style="list-style-type: none"> <li>Seek a sponsor and further evaluate a 2-phase project with (1) modification of the beautification dams and (2) a stair-step rapids on the Downtown side of 4th Street dam</li> </ul> <p style="text-align: center;"><b>River Recreation</b></p>	<p>Support adoption of community gardens as the primary initiative of a local non-profit.</p>

citizens were asked to help set priorities for action. In the first two citywide Green Gatherings (focusing on Ideas and Choices), participants identified priority strategies within each of the six Green Grand Rapids topic areas: Natural Systems; Greening; Connections; the Grand River; Parks and Recreation and Local Food. The top ranked priorities for each topic area are shown in *Figure 5.a - Citizen Implementation Priorities - Pages 84 and 85*.

In the third Green Gathering (focused on Actions), participants were asked to prioritize strategies across all six topic areas. The top ranked priorities, many of which overlap with and reinforce one another, have been grouped into five priority implementation categories.

- **Complete Streets**<sup>1</sup> - Appoint a Complete Streets committee to draft policies and plans for



Example Product - Park Accessibility Analysis Map. See Chapter 3 for a larger version of this map.

adoption and implementation with particular emphasis on an on-street bike route plan (see *Chapter 2 - Balanced Transportation - Page 17*).

- **River Recreation** - Increase recreation opportunities along and on the Grand River, including the completion of the riverwalk and the addition of parks and new recreational activities, particularly a “rapids” run for kayaks and canoes (see *Chapter 3 - A City that Enriches Our Lives - Page 59*).
- **Parks** - Address accessible park acreage deficits by providing a well-maintained park within 1/4 mile of every city resident, giving particular emphasis to underserved areas with higher population densities and lower-income residents (see *Chapter 3 - A City that Enriches Our Lives - Page 47*).
- **Water Quality** - Protect and improve water quality by using “green street” design strategies<sup>2</sup> and designing parks, the riverwalk, and greenways (riparian buffers) along tributary streams to filter runoff, increase infiltration and reduce flooding (see *Chapter 4 - A City in Balance with Nature - Page 71*).
- **Trees** - Protect and expand the city’s urban forest canopy, through both public and private efforts, to improve air and water quality, provide shade to reduce cooling costs and create a more appealing visual environment (see *Chapter 4 - A City in Balance with Nature - Page 76*).

### 5.3.2 - Products

Green Grand Rapids also focused resources on the preparation of materials that move beyond policy recommendations to provide both tools for future decision-making and the foundation for implementing projects.

Tools for decision-making include:

- **201 Market Street** - A concept plan for the City-owned 201 Market Street site located on the riverfront immediately south of the Downtown core. The plan recommends physical parameters for the possible future private redevelopment of this site, including future open space and public access requirements, vehicular circulation and parking, the configuration of development parcels, maximum building heights and urban design recommendations.<sup>3</sup>
- **River Corridor Guidelines** - Principles and tools for the preservation and restoration of riparian buffers, including the banks of the Grand River, to protect water quality, enhance habitat and reduce flooding while improving visual quality and recreational use. These guidelines can serve as the basis for reviewing development proposals in riparian zones and in updating development regulations. Guidelines for improving the design and functional continuity of the riverwalk are also included.<sup>4</sup>
- **Park Accessibility Analysis** - This map links information on walking distance (1/4 mile) and access barriers (major traffic streets; industrial and commercial areas) to accessible park acres and population density for each city block (see *Chapter 3.0 - A City that Enriches Our Lives, Figure 49*). This analysis tool can be used to help set priorities for acquiring surplus park-school (and other potential park) sites and/or forming partnerships with other institutional land owners to help address deficits in accessible park acreage.
- **Ecological Framework** - A composite map of important natural features that identifies core areas to preserve, areas to buffer and connect and restoration/enhancement opportunities (see *Chapter 4.0 - A City in Balance with Nature, Figure 69*). The Ecological Framework provides a starting point in establishing priorities for

land and/or easement acquisition, updating ordinances to better protect natural features and developing incentives for conservation and restoration.

- **Urban Forest Analyses** - Maps documenting the percentage tree cover by zoning classification and by major arterial street (see *Chapter 4.0 - A City in Balance with Nature, Figure 4.d - Tree Canopy by Neighborhood Type and Special District - Page 73* and *Figure 4.e - Percentage Tree Canopy Along Street Rights-of-way - Page 74*). These analyses can be used as the basis for determining where more detailed inventories of existing trees are most needed and assessing alternative approaches for incorporating tree canopy requirements in each zoning classification.
- **Urban Trees Ordinance and Policy Analysis** - A review of existing City ordinances and policies pertaining to urban trees with recommendations for possible modifications.<sup>5</sup>
- **Community Gardens Ordinance and Policy Analysis** - A review of City ordinances and policies related to community gardens with recommendations for modifications and additions.<sup>6</sup>

Concept plans prepared with stakeholder participation to establish a foundation for pursuing grant and local resource support and for implementing future projects include:<sup>7</sup>

- **Joe Taylor Park** - A plan that increases the existing park acreage and incorporates a range of green strategies including rain gardens to infiltrate runoff from paved surfaces, an underground stormwater detention basin designed to settle out pollutants from a 40-acre sub-watershed (before water is released to the Grand River), use of native plant materials and an increase in the tree canopy. The concept plan also expands

recreational facilities (spray park; picnic shelter) and early ideas for community gardens.

- **Pleasant Park** - A plan for transforming a vacant lot and surface parking area into a 2.3-acre neighborhood park in a severely underserved area of the city (including the Heritage Hill and South Hill neighborhoods). The concept plan includes a formal sitting garden, a lawn area for informal play and neighborhood gatherings and a barrier-free playground. Sustainable design features include native tree plantings, no/low mow grass, naturalized perimeter landscaping and a rain garden.
- **Ball-Perkins Park** - A plan that preserves a high value natural resource area (woods, wetlands and steep slopes), restores prairie plantings and provides environmental education/interpretation. A new trail system improves internal access and connections to surrounding neighborhoods. Relocation and improvement of the existing community garden, and the addition of a picnic area, are also proposed.
- **Butterworth Landfill/Park** - A plan to reclaim undeveloped City-owned land on the riverfront to create a new park, while maintaining the “cap” on this super fund site. A range of active and passive recreational opportunities are included. The plan provides a naturalized river edge treatment and other stormwater management strategies to protect water quality, as well as an interpretive trail, wetlands and prairie restoration areas. The site is an important link in the regional riverfront trail system; improved connections are recommended. A dog park, cycling “pump” track, skateboard park, fields for archery and soccer, boat launch, kayak/canoe livery, community gardens, poly-vinyl greenhouses and a potential farmers’ market are also proposed.

- **Riverwalk Extension, Blue Bridge to Wealthy Street** - Concepts for closing a critical gap in the riverwalk system on the east bank between Downtown and the Wealthy Street bridge to create a connection to proposed trails at Butterworth Landfill and existing links to Millennium Park, farther south. Short- and long-term riverwalk alignments and design criteria (including riverwalk elevation, width, materials, bank restoration, landscaping and lighting) are recommended.

## Figure 5.b - Implementation: What can the community do?

Individual citizens, residential and commercial property owners, neighborhood and business organizations, advocacy groups, special interest organizations and non-profits all have a role to play. Below are some examples of what community activists have done and can do to help implement the top priority recommendations identified through the Green Grand Rapids process.

	Complete Streets	River Recreation	Parks & Recreation	Water Quality	Trees
Accomplishments	<ul style="list-style-type: none"> <li>• April 2008 and May 2011 Bike Summits</li> <li>• Greater Grand Rapids Bicycle Coalition formed; submitted Bicycle-friendly Community application</li> <li>• Bronze level Bicycle-friendly Community Award from the League of American Bicyclists in 2009</li> </ul>	<ul style="list-style-type: none"> <li>• Grand Rapids Whitewater non-profit (GRWW) formed to advocate and fundraise</li> <li>• Whitewater feasibility study underway (with Founders Brewing Company and DDA funding)</li> <li>• West Michigan Environmental Action Council (WMEAC) annual Water Festival</li> </ul>	<ul style="list-style-type: none"> <li>• Friends of Grand Rapids Parks (FGRP) non-profit formed to identify park projects, mobilize people and generate resources</li> <li>• 1,374 volunteers organize to improve 33 parks in 2010</li> <li>• Raised over \$160,000 to build Joe Taylor Park and start a maintenance endowment</li> </ul>	<ul style="list-style-type: none"> <li>• WMEAC Adopt-a-Stream and rain garden hands-on education programs</li> <li>• 950 rain barrels installed</li> <li>• 5.7 acres of rain gardens created</li> </ul>	<ul style="list-style-type: none"> <li>• WMEAC Save Your Ash program</li> <li>• East Hills Urban Forest Plan and tree inventory</li> <li>• FGRP volunteer partners plant 194 park trees in 2010</li> </ul>
Examples for the Future	<ul style="list-style-type: none"> <li>• Take novice cyclists on tours of bicycle-friendly streets</li> <li>• Participate in bicycle safety, rights and responsibilities classes</li> <li>• Participate in a Safe Routes to School planning group</li> <li>• Continue Bike Summit programming</li> </ul>	<ul style="list-style-type: none"> <li>• Participate in (and/or help sponsor) a riverfront special event</li> <li>• Join a trail advocacy group to work towards riverwalk extension</li> <li>• Help to establish a riverfront non-profit to manage improvements, maintenance and programming</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to help with park maintenance and improvement projects through an expanded Adopt-a-Park program (Parks Alive)</li> <li>• Commission a comprehensive study to ensure park system effectiveness, efficiency and quality with maintenance and design standards</li> <li>• Report park maintenance, repair and “policing” problems</li> </ul>	<ul style="list-style-type: none"> <li>• Install a rain barrel and/or plant a rain garden</li> <li>• Help to restore a riparian buffer</li> <li>• Volunteer to help maintain “green street” infiltration planters</li> <li>• Participate in the community based stormwater initiative</li> </ul>	<ul style="list-style-type: none"> <li>• Plant and/or maintain a tree</li> <li>• Volunteer to help prepare a tree inventory</li> <li>• Apply for a tree planting grant (Michigan Global ReLeaf)</li> </ul>



- **Grand River Whitewater Course** - A preferred concept and order-of-magnitude costs for two phases in constructing a rapids run for kayaks and canoes on the river's Downtown reach. The first phase proposes reconfiguring the five "beautification" dams to create a series of whitewater features, includes a portage route around the 4th Street dam and expands the number of sites available for put-in and take-out. The second phase proposes the addition of a more dramatic white water element on the downstream side of the 4th Street dam by creating a stair-step rapids that keeps the dam intact.

Green Grand Rapids also researched available sources of grant funding for project implementation. This information focused on grant programs offered by federal and state governments and national foundations and is organized by the six Green Grand Rapids topics. Grant program descriptions, funding levels and contact information are provided.<sup>8</sup>

### 5.3.3 - Inspiring Community Action

Green Grand Rapids generated a level of community enthusiasm for translating ideas into action that outpaced completion of the Master Plan update. A number of existing organizations - including the West Michigan Environmental Action Council (WMEAC) and the Urban Forestry Committee - already have plans and programs in place to move portions of the Green Grand Rapids agenda forward. Other existing organizations, including the Downtown Development Authority, Fulton Street Farmers' Market and Grand Action, are actively exploring how their priorities match those the community identified during the Green Grand Rapids process. Friends of Grand Rapids Parks is building its projects and programs around the Master

Plan update and have already been active in securing private resources to prepare a plan for Pleasant Park and to help implement the Master Plan for Joe Taylor Park. Other new organizations are being formed to keep up the momentum the plan update has created, including Grand Rapids Whitewater and the Greater Grand Rapids Bicycle Coalition.

The City faces severe fiscal limitations in providing services and making capital investments. As a result, the commitment and creativity of "champions" like these, and the active support of neighborhood and business organizations and individual citizens, will be essential in "greening" Grand Rapids. To a large degree, the interest, energy and resources that non-City champions, as partners and advocates, can bring to plan implementation will determine which recommendations are most quickly and completely achieved.



## 5.4 - City Implementation Tools

While City resources (both operating and capital funds) for implementing the Master Plan update are limited, the City does have a number of important implementation tools at its disposal. These include:

- the zoning ordinance and other development regulations and incentives;
- design guidelines used in the project review and approval process;
- area-specific plans that look, in more detail, at a specific neighborhood or district and are adopted as amendments to the Master Plan;
- the review and revision of existing policies and ordinances that may serve as barriers to implementation and the development of new policies that facilitate desired actions/outcomes;
- citywide studies that provide the information needed to improve decision making and provide the foundation for new policies and ordinances;
- the alignment of City department budgets and work plans with the Master Plan);
- Capital Improvement Program (CIP) development.

For each of these tools, the following pages describe major accomplishments in implementing the 2002 Master Plan, City initiatives that are already underway to implement Green Grand Rapids recommendations and examples of possible future City actions.

### 5.4.1 - Zoning Ordinance and Map Update

One of the key findings of the 2002 Master Plan was that residents and business owners valued the character of their neighborhoods, especially in older neighborhoods. However, the former zoning code encouraged development that did not reinforce existing patterns. A comprehensive revision was needed to establish regulations that would complement existing development character where appropriate and encourage new development models in areas where change was desired.

The 2002 Master Plan (see *Chapter 10 - Development Character*) provided a foundation for defining neighborhood types within the city as the first step in thinking about a comprehensive ordinance revision. In 2005, a much more detailed analysis of neighborhood characteristics - including street patterns, block lengths, lot widths, building setbacks and heights, parking and garage locations, building entries and window patterns - was documented in a Neighborhood Pattern Workbook. The Workbook became the basis for public review and input to provide a clearer articulation of the development classifications and metrics needed to define the “form” of different Grand Rapids neighborhoods, business districts and future mixed-use areas.

Using this information, Planning staff began the process of drafting the new zoning ordinance which combines land use-based, form-based and performance-based regulations. The public was again invited to participate in drafting and reviewing zoning language. The new ordinance was adopted in 2007 (amended 2008) and is one of the City’s most important achievements in implementing the 2002 Master Plan.

A number of provisions that reinforce Green Grand Rapids recommendations are included in the new zoning ordinance. For example, the ordinance requires bike parking and sidewalks from business front doors to and along public streets, and includes a transit-oriented development (TOD) district, to improve “connections.” Street tree plantings are required for new development. A green space provision encourages the installation of green roofs or other stormwater management techniques, and greatly reduced parking requirements reduce impervious surface area.

Green Grand Rapids recommends that additional refinements to the zoning ordinance be considered including, for example:

- requirements for tree planting/replacement and overall canopy cover;
- incentives/requirements for protecting high value natural resource areas;
- incentives for incorporating Low Impact Development (LID) stormwater management strategies in new infill development and major retrofit projects (including parking lots);
- more detailed requirements for protecting and restoring riparian buffers;
- modifications to the Downtown and Riverfront Overlay Districts’ building height and bonus options;
- modifications to the Riverfront Overlay District’s minimum river edge setback and incentives/requirements for public access, open space and activating the river edge.

## 5.4.2 - Design Guidelines

Guidelines help fill the gap between Master Plan policies and zoning requirements. Sample design guidelines provided as part of the 2002 Master Plan (see *Chapter 10 - Development Character*) have proven valuable in guiding and coordinating private investment decisions. The intent of many of the guidelines included in the 2002 Master Plan has been incorporated in the City's updated zoning ordinance as requirements or incentives.

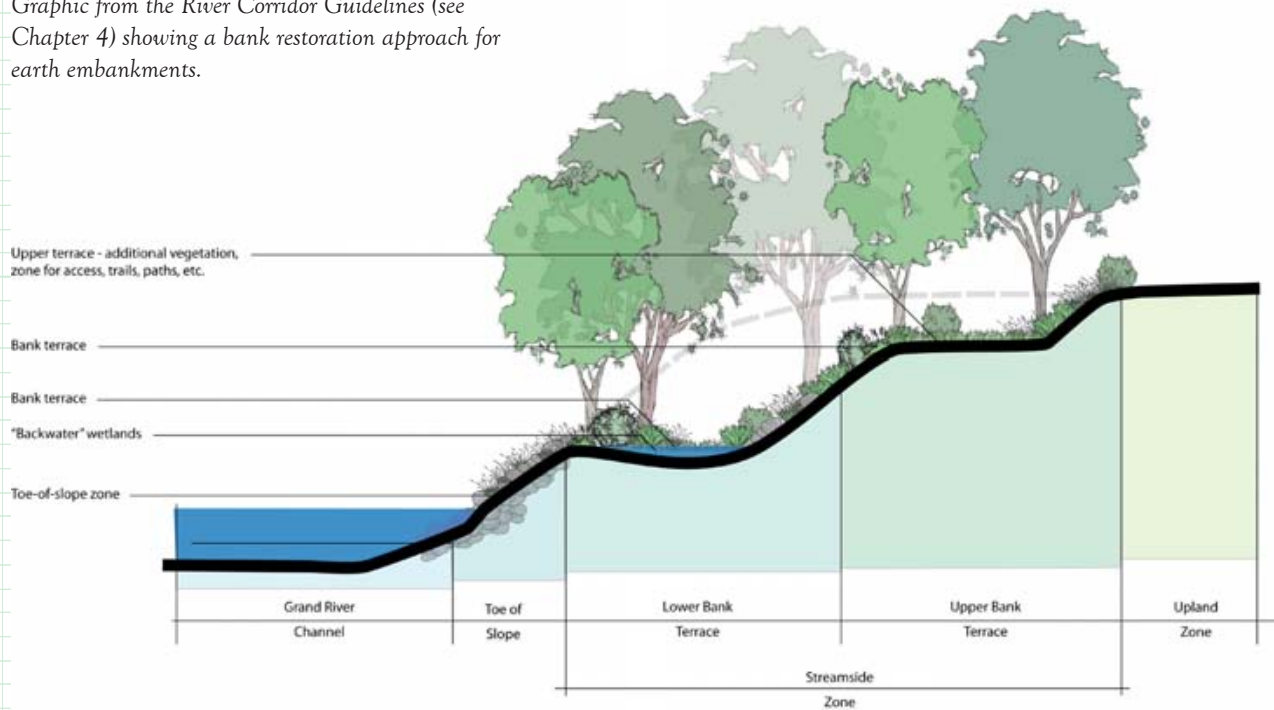
This progression from guidelines to ordinance language illustrates how effective guidelines can be as an educational tool in explaining why new regulations might be needed and how they might be expressed. Other guidelines from the 2002 Master Plan are used on a regular basis by the City's Design Team<sup>9</sup> in reviewing development proposals and designing public improvement projects; these also have a significant impact on the city's urban design quality and "green" infrastructure.

Green Grand Rapids has also produced guidelines that address:

- riparian buffers, riverbank restoration and the design of the riverwalk (River Corridor Guidelines) and
- the future private redevelopment of the 201 Market Street site.

These may also ultimately be adopted as official policies and/or incorporated into zoning updates.

Graphic from the River Corridor Guidelines (see *Chapter 4*) showing a bank restoration approach for earth embankments.



## 5.4.3 - Neighborhood and Area-Specific Plans

Neighborhood planning is authorized by the Municipal Planning Act and can provide a finer grain of analysis than is available through a citywide master plan. Area-specific plans may be prepared for a block, a neighborhood, a business district or a larger area. They may be undertaken in response to a development proposal or as a proactive planning study.

The 2002 Master Plan anticipated that area-specific plans would be particularly useful for areas transitioning to mixed-use or where significant new development was being planned. A specific work plan for preparing a neighborhood or area-specific plan is recommended (see *Chapter 11 - Area-Specific Plans*).

Since the 2002 Master Plan was completed, area-specific plans have been prepared and adopted for the Midtown, Monroe North and Belknap areas. Other planning efforts have included corridor plans for the Creston and Madison Square areas. New planning efforts for the Southwest Area Neighbors (SWAN) area, West Leonard Street and Michigan Street will begin in 2012, as well as neighborhood park planning focused on the Stocking School and Madison/Adams areas.

## 5.4.4 - City Policy and Ordinance Review

City policies and ordinances (beyond zoning) can facilitate or deter the achievement of master plan objectives. A comprehensive review for consistency with the master plan is essential as a first step in identifying needed changes and preparing and adopting amendments. In support of the 2002 Master Plan, for example, the Environmental Protection Services Department updated the City's stormwater management ordinance (2007) to emphasize the use of Low Impact Development (LID) strategies that reduce the quantity, and improve the quality, of runoff on a site-by-site basis (see *Chapter 4 - A City in Balance with Nature - Page 71*). In addition, the City's Design Team has been working to include traffic calming, bicycle infrastructure and "green street" stormwater management improvements in the design of street projects.

A preliminary review of existing ordinances and policies for two topics - community gardens (see *Chapter 3 - A City that Enriches Our Lives - Page 55*) and urban trees (see *Chapter 4 - A City in Balance with Nature - Page 74*) - was undertaken as part of the Green Grand Rapids process.<sup>10</sup>

In addition, the Planning Department staff has begun a review of policies and ordinances related to street design, maintenance and operation to determine how amendments could best facilitate the implementation of a Complete Streets approach. This new streets policy will update the current *Street Classification Policy* (1996) and bring together policies, design guidelines and recommended engineering standards for streets, sidewalks, bicycle infrastructure, parking and transit. Guidelines and standards will be coordinated with the three neighborhood types defined in the zoning ordinance

### Figure 5.c - Implementation: What can the City do?

Some examples of what the City can do to achieve the top priority recommendations identified through the Green Grand Rapids process are listed below. They include examples of what the City has already accomplished, new initiatives undertaken as a result of Green Grand Rapids and ideas for what the City can do in the future.

	Complete Streets	River Recreation
Accomplishments	<ul style="list-style-type: none"> <li>Constructed 16 miles of shared roadway bicycle improvements</li> <li>Constructed 1.38 miles of on-street bike lane, including sharrows, on Lake Drive</li> <li>Worked with MDOT to add sidewalks on 28th Street and in reconstructing the Coit Avenue Bridge</li> <li>Included bike lanes in the design of street projects for Plymouth and Hall Streets (2012 implementation)</li> </ul>	<ul style="list-style-type: none"> <li>5.5 miles of trail constructed along the Grand River (46% of total river frontage)</li> <li>Transition to riverfront mixed-use and open space through land use policies and re-zoning</li> <li>6th Street and Canal Street Parks developed</li> <li>DDA strategic planning focus on "river activation" (2010)</li> </ul>
Initiatives Underway	<ul style="list-style-type: none"> <li>Design Team working to include Complete Street improvements in all reconstruction projects</li> <li>Preparation of Complete Streets policy and design manual for adoption (including on-street bike route plan)</li> <li>Seward Avenue (west side) bike connector being planned</li> <li>Creating a bicycle and pedestrian traffic engineer position</li> </ul>	<ul style="list-style-type: none"> <li>2011 Improvements to Ah-Nab-Awen performance venue</li> <li>DDA funds committed for Lyons Square riverfront plaza improvements</li> <li>DDA funding assistance for whitewater feasibility study</li> <li>MDNR lease of east bank rail right-of-way to City for riverwalk extension to Riverside Park</li> </ul>
Examples for the Future	<ul style="list-style-type: none"> <li>Evaluate road diet candidates identified by Green Grand Rapids</li> <li>Investigate a "Sunday Parkways" program to encourage cycling</li> <li>Involve the Police Department in share-the-road education and enforcement</li> <li>Develop and adopt a comprehensive Complete Streets ordinance</li> </ul>	<ul style="list-style-type: none"> <li>Encourage redevelopment of under used riverfront parcels to provide public access, open space and riverfront activity</li> <li>Seek sponsors for additional riverfront events</li> <li>Pursue grant funding to assist in whitewater course construction</li> <li>Pursue riverwalk extensions, retrofits and maintenance and repair</li> </ul>

Figure 5.c - Implementation: What can the City do? (continued)

	Parks & Recreation	Water Quality	Trees
Accomplishments	<ul style="list-style-type: none"> <li>Expanded Joe Taylor Park from 1 to 2 acres</li> <li>Acquired 2.3-acre Pleasant Park site to address park accessibility deficit</li> <li>Prepared and adopted 2010 <i>Parks and Recreation Master Plan</i></li> <li>Provided after school and summer playground programs for 6,000 kids</li> <li>Public Services Department restructured to better align forestry, parks and streets functions</li> </ul>	<ul style="list-style-type: none"> <li>Pollutant loads to Grand River reduced by 99% since the 1960s</li> <li>Improved stormwater ordinance adopted 2007</li> <li>Permeability (green space) requirements included in revised zoning (2007; amended 2008)</li> </ul>	<ul style="list-style-type: none"> <li>1,500 trees planted in 2010 with significant volunteer help</li> <li>Formed Urban Forest Committee to prepare recommendations</li> <li>Improved tree planting requirements included in revised zoning (2007; amended 2008)</li> <li>Treated over 400 ash trees to provide 2 - 3 year Emerald Ash borer protection</li> <li>Completed a sample inventory of public street trees</li> </ul>
Initiatives Underway	<ul style="list-style-type: none"> <li>Plan prepared for Joe Taylor Park and construction completed</li> <li>Continuing investigation of opportunities to meet park accessibility deficits</li> <li>Fundraising (including grant applications) for Pleasant Park</li> <li>Collaboration with Friends of Grand Rapids Parks (FGRP) to mobilize volunteers in park maintenance and improvement</li> <li>Development of a functional organization chart and business plans for revenue generation</li> </ul>	<ul style="list-style-type: none"> <li>Working to achieve 100% compliance with all water quality permits</li> <li>Preparation of Complete Streets policy and design manual for adoption (including green street strategies)</li> <li>Creation of a business plan to identify current and future stormwater facilities needs</li> <li>Determination of level of service for stormwater facilities</li> </ul>	<ul style="list-style-type: none"> <li>Forming Task Force to evaluate park trees</li> <li>Exploring approaches for engaging volunteers in planting and preserving trees</li> <li>Emerald Ash Borer Task Force identifying 2011 park tree treatment priorities</li> <li>Developing maintenance, priority planting and species diversity plans</li> <li>Expanding street and park tree inventory</li> </ul>
Examples for the Future	<ul style="list-style-type: none"> <li>Establish maintenance endowments for new parks</li> <li>Expand the use of sustainable design principles in developing/retrofitting parks</li> <li>Prepare grant applications to implement concept plan for Butterworth Landfill Park</li> <li>Continued/expanded volunteer participation in park maintenance and improvement</li> <li>Continued community/City partnerships to streamline operations, maintenance, planning, development and acquisitions</li> </ul>	<ul style="list-style-type: none"> <li>Encourage protection/restoration of riparian buffers</li> <li>Commit to maximum use of LID practices in all City projects (e.g., green streets)</li> <li>Explore the potential for a stormwater utility to provide funds for stormwater management improvements</li> </ul>	<ul style="list-style-type: none"> <li>Add tree canopy targets to the zoning ordinance</li> <li>Update codes to improve tree preservation, protection and planting requirements</li> <li>Continue to develop a comprehensive tree inventory as the basis for a forest management plan</li> <li>Develop Citizen Forester Program and incentives for private tree planting</li> </ul>

(Traditional, Mid-20th Century and Modern Era) to ensure a positive relationship between street design and the surrounding development context. It is also anticipated that the new streets policy will provide for the preparation and adoption of area-specific streetscape plans.

The Parks and Recreation Department has also begun a comprehensive study to more fully understand the challenges of maintaining a high quality parks and recreation system with limited resources. The study will assess current conditions and maintenance backlogs, and make recommendations for additional revenue streams and best practices. The study will also benchmark Grand Rapids against other Mid-west cities. This work will lead to the establishment of new operational, maintenance, development and acquisition standards based on available resources.



Ecological Framework. See Chapter 4 for a larger version of this map.

## 5.4.5 - Citywide Studies

A number of citywide studies, identified in the 2002 Master Plan as important to successful plan implementation, have been completed. These include:

- **Historic Preservation** - *Historic Preservation Guidelines*, including maps of historic districts and landmarks (individual structures), were completed in November 2007.
- **Environmentally Sensitive Area Inventory and Plan** - Green Grand Rapids has mapped important natural systems and provided an Ecological Framework plan to guide decisions on protection and restoration of environmentally sensitive areas. Additional work will be needed to develop more detailed strategies and priorities.
- **Bikeway and Pedestrian Facilities Plan** - A draft bicycle and pedestrian plan was completed in 2004, but never adopted. Green Grand Rapids has re-emphasized the importance of bicycle and pedestrian improvements as part of a Complete Streets policy. The preparation and adoption of an on-street bike route plan is one of the highest priorities established by community input. As noted above, the City has already started work on a comprehensive streets policy that will include recommendations for streets, streetscapes, sidewalks, bicycle facilities, parking and transit.
- **Transit Plan** - In 1998, The Rapid, the transit agency serving Grand Rapids and parts of Kent and Ottawa counties, adopted a strategic plan for improving transit service including the development of a Downtown surface transportation center, establishing park-and-ride lots, improving service headways, promoting car and van pooling and planning for bus rapid transit (BRT) service on a high ridership route. Having achieved these goals, The Rapid

undertook the preparation of a new transit master plan in 2009. Adopted in June 2010, this 20-year plan complements both the 2002 Master Plan and the Green Grand Rapids Master Plan update by recommending extended service hours and improved service frequencies, new cross-town service, BRT service on Division Avenue and Lake Michigan Drive and modern streetcar service in the Downtown area (see *Chapter 2 - Balanced Transportation - Page 26*).

Green Grand Rapids provided the foundation for updating the *Parks and Recreation Master Plan* and evaluated park accessibility, and level of service, for every city block as the basis for future acquisition and partnership decisions (see *Chapter 3 - A City that Enriches Our Lives - Page 50*). A citywide evaluation of the percentage of urban forest canopy coverage<sup>11</sup> was also prepared as part of Master Plan update (see *Chapter 4 - A City in Balance with Nature - Page 74*).

Green Grand Rapids also recommends additional citywide studies to establish:

- a bike route plan (in progress as part of the new streets policy);
- trail system linkages along the Grand River to complete the riverwalk connection from Riverside Park to Millennium Park on both the east and west banks of the river corridor and the exploration of opportunities for creating trail connections along tributary creeks, rail rights-of-way and utility corridors;
- a detailed tree inventory and development of an urban forest management plan;
- potentials for sub-watershed stormwater management projects in parks and other public open spaces.

## 5.4.6 - Department Budgets/Actions

All City departments should be encouraged to identify initiatives that support Master Plan implementation, to incorporate these initiatives in annually updated work plans and budgets and to report regularly on progress/outcomes.

Several departments have already aligned their activities with the objectives and policies of the 2002 Master Plan. For example, the Community Development Department re-designed their plan for the use of Community Development Block Grant (CDBG) funds based on the Master Plan. In addition, Traffic Safety has implemented 16 miles of shared roadway improvements to better accommodate cyclists. As mentioned above, Environmental Protection Services has revised its stormwater ordinance (2007) to implement LID best practices.

In 2010, all City departments began to develop their annual work plans (known as Performance Management Plans) in alignment with the outcomes and objectives identified in the City's Sustainability Plan. Based on the "triple bottom line" goals of economic prosperity, environmental integrity and social equity, the sustainability plan establishes outcomes and targets against which departments plan their future activities, develop their budgets and measure their progress. Many of these outcomes and targets are aligned with the objectives and policies of the 2002 Master Plan; the *2011 - 2015 Sustainability Plan* has also started to incorporate Green Grand Rapids recommendations. Grand Rapids' designation as a Climate Adaptation Community in partnership with ICLEI - Local Governments for Sustainability<sup>12</sup> will also result in Green Grand Rapids' recommendations being folded into a new Climate Change Adaptation Plan.

## 5.4.7 - Capital Improvements Program

A Capital Improvements Program (CIP) is a formal mechanism for considering, prioritizing and implementing capital expenditures covering a period of six years with the first year representing the current capital budget. A CIP allows improvement proposals - for streets, utilities, parks and municipal facilities - to be tested against the community's adopted plans and policies. Examples of capital improvement projects recommended by the Green Grand Rapids Master Plan update include park and trail acquisition and development, Complete Street improvements and stormwater management projects. Currently very few municipal funds are available for capital improvements; these funds have been assigned to meet existing debt service obligations and to provide local matching funds for grants.

## 5.5 - Monitoring and Reporting

Green Grand Rapids recommends that a system for measuring and reporting progress in implementing the updated Master Plan be established. These benchmarks can guide the work of City departments as they develop their annual work programs and budgets; they can also help citizens to understand how they can make a difference in achieving important plan objectives. An annual reporting mechanism will not only encourage departmental accountability, it will also help the community to see where, and how much, progress is being made.

The City's *2011 - 2015 Sustainability Plan* includes a number of targets that serve as Green Grand Rapids' progress benchmarks. These are listed by the six Green Grand Rapids topic areas below.

Benchmarks for measuring and reporting progress in implementing the Green Grand Rapids Master Plan update are provided as "targets" in the City's *2011 - 2015 Sustainability Plan*. These targets are listed below and additional benchmarks are suggested (in italics).

### Natural Systems

- Achieve 100% compliance with water quality permits<sup>13</sup> annually
- Eliminate three of the remaining seven combined Sewer Overflow points by 2015
- Protect and restore at least three properties identified in the Ecological Framework Plan by 2015

### Greening

- Increase the number and square footage of green roofs by 2015
- Increase the percentage of city tree canopy to at least 35.7% by 2015
- Achieve 5% pervious pavement in new roads by 2015
- *Increase pervious area citywide by 2% by 2015*

### Connections

- Increase on-street bike lanes to 100 miles by 2014
- Develop 4 miles of new sidewalks by 2012
- Increase the miles of Type 1 Connector Trails to 12 miles by 2013
- Improve two city gateway corridors (accessibility, streetscape) by 2015

### Parks and Recreation

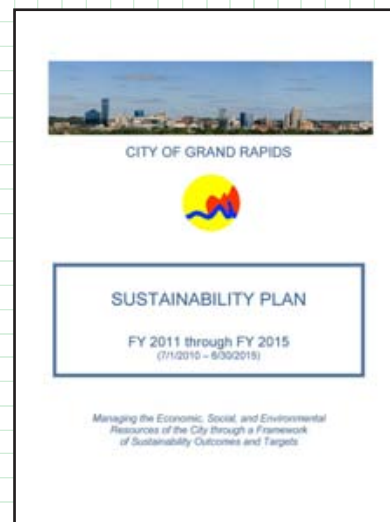
- Increase the number of people living within 1/4 mile of a park or open space by 10% by 2015

## The Hannover Principles

These guiding principles for sustainable design were developed by William McDonough for the City of Hannover, Germany as guiding principles for the 2000 World's Fair on the theme of "Humanity, Nature and Technology." Since 1992, these principles have inspired and influenced the international design community.

1. Insist on the right of humanity and nature to co-exist in a health, supportive, diverse and sustainable condition.
2. Recognize interdependence. The elements of human design interact with and depend upon the natural world, with broad and diverse implications at every scale. Expand design considerations to recognize even distant effects.
3. Respect relationships between spirit and matter. Consider all aspects of human settlement including community, dwelling, industry and trade in terms of existing and evolving connections between spiritual and material consciousness.
4. Accept responsibility for the consequences of design decision upon human well-being, the viability of natural systems and their right to co-exist.
5. Create safe objects of long-term value. Do not burden future generations with requirements for maintenance or vigilant administration of potential danger due to the careless creation of products, processes or standards.
6. Eliminate the concept of waste. Evaluate and optimize the full life cycle of products and processes to approach the state of natural systems, in which there is not waste.

7. Rely on natural energy flows. Human designs should, like the living world, derive their creative forces from perpetual solar income. Incorporate this energy efficiently and safely for responsible use.
8. Understand the limitations of design. No human creation lasts forever and design does not solve all problems. Those who create and plan should practice humility in the face of nature. Treat nature as a model and a mentor, not as an inconvenience to be evaded or controlled.
9. Seek constant improvement by the sharing of knowledge. Encourage direct and open communication between colleagues, patrons, manufacturers and users to link long-term sustainable considerations with ethical responsibility, and re-establish the integral relationship between natural processes and human activity.



- Increase participation in the Adopt-a-Park (Parks Alive) program so that each park has a minimum number of volunteer hours equal to 15% of paid staff hours by 2015
- Annually fund maintenance and repairs for each park at a level equal to 4% - 6% of its asset value
- Achieve a Customer Satisfaction rating of at least 90% for the Parks and Recreation Department by 2013

## Grand River

- Ensure 100% compliance with stream protection ordinance by 2012
- Increase riverfront property available for economic development and people-oriented activities by 2015
- Implement riverwalk wayfinding system by 2013
- Add or upgrade .25 miles of riverwalk by 2015
- Add one major event to existing calendar of riverfront events by 2015
- Develop riverfront park/riverwalk vendor program (to activate the riverfront) by 2015

## Local Food

- Increase access for development of community gardens by 2015
- Improve access and availability of farmers' markets throughout the city by 2015

The 2002 Master Plan Committee and then the Green Grand Rapids Committee agreed that aspiring to the Hannover Principles should be one of the guiding principles for planning efforts.



## Figure 5.d - Sustainability Plan Outcomes

The Performance Management Plans, developed annually by each City department, are organized around these 2011 - 2015 Sustainability Plan outcomes.

### Economic

#### Strong Economy

- Increase business investment

#### Diverse Supplier Base

- Increase supplier diversity
- Ensure fair, equal and open procurement, management and financial processes

#### Employment and Workforce Training

- Increase employment opportunities
- Increase employee skills and performance in delivering City services
- Increase career readiness of youth

#### Financial Management/Sustainability

- Improve the long-term fiscal sustainability of the City
- Optimize and maintain expenditure and operational efficiencies
- Adopt sustainable purchasing practices

#### Enhanced Customer Service

- Improve the efficiency and effectiveness of City operations
- Improve customer satisfaction with City service delivery
- Maximize the usable life and/or improve the quality of City property
- Establish and maintain regional partnerships and cooperative relationships

#### Vital Business Districts

- Ensure Downtown Grand Rapids remains a lively, diverse and healthy regional center
- Increase the vitality of neighborhood business districts
- Capitalize on the Grand River area for economic development and people-oriented activities

### Social

#### Great Neighborhoods

- Increase housing choice for all residents and decrease homelessness
- Ensure compliance with City ordinances and building, housing and nuisance codes
- Ensure diversity, inclusion and nondiscrimination

#### Strong Education, Arts and Community

- Increase educational attainment
- Increase volunteerism
- Increase access to arts and entertainment opportunities

#### Civic Engagement

- Increase access to and opportunities for civic engagement and community based leadership

#### Healthy Lifestyles and Healthy Environments

- Improve access to local food sources
- Increase and maintain human health and wellness
- Increase availability of recreational programs/facilities

#### Public Safety

- Reduce the occurrence of crime
- Reduce the loss of life and property from fire and emergency medical calls
- Ensure capacity for responding to emergencies and disasters
- Increase crime prevention, neighborhood public safety and neighborhood-based leadership and involvement

### Environmental

#### Energy and Climate Protection

- Reduce greenhouse gas emissions (carbon footprint) and impact on climate change
- Reduce energy demand and fossil fuel consumption

#### Environmental Quality and Natural Systems

- Maintain an adequate and safe water supply
- Improve the quality of the Grand River and its tributaries
- Protect and maintain healthy ecosystems and habitat
- Reuse and recycle; and reduce waste sent to landfills

#### Land Use and Development

- Ensure that sound land uses enhance the natural environment
- Ensure quality design and construction of the built environment in accordance with the City's Master Plan and Zoning Ordinance
- Ensure access to parks and open spaces for all citizens

## Chapter 5 Notes

1. Complete Streets are designed, maintained and operated to enable safe access for pedestrians, bicyclists and transit riders of all ages and abilities, as well as motorists. This includes ensuring that streets are safe, walkable and present a pleasing community image.
2. Green street design strategies manage rain water as close to where it falls as possible and include, for example, reducing paved area, using porous pavement and expanding permeable landscaped areas to provide for infiltration.
3. Some elements of the 201 Market Street special study are described in *Chapter 3.0 - A City that Enriches Our Lives*. An overview of the full content and recommendations of the 201 Market Street study is available as a separate document from the Planning Department.
4. Some elements of the guidelines are illustrated in *Chapter 3.0 - A City that Enriches Our Lives* and *Chapter 4.0 - A City in Balance with Nature*. The full guidelines are available as a separate document from the Planning Department.
5. These recommendations are summarized in *Chapter 4.0 - A City in Balance with Nature* and are available as a Technical Memo from the Planning Department.
6. The results of this review are summarized in *Chapter 3.0 - A City that Enriches Our Lives* and are available as a Technical Memo from the Planning Department.
7. The four park concept plans and opinions of probable construction cost, as well as the full reports for the Riverwalk Extension and Grand River Whitewater Course studies, are available from the Planning Department.
8. Information on sources of grant funding is available from the Planning Department.
9. The Design Team includes representatives of the Planning, Traffic Safety, Engineering, Street Lighting, Stormwater, Sewer, Water and Fire departments, as well as the Downtown Development Authority and The Rapid, and meets bi-monthly to design public infrastructure and review new development projects.
10. The full evaluations are available as Technical Memos from the Planning Department.
11. The Grand Valley State University Annis Water Resources Institute mapped Grand Rapids' tree canopy using 2005 aerial photography.
12. The International Council for Local Environmental Initiatives (ICLEI), founded in 1990, is an association of over 1,200 local government members committed to sustainable development. Now known as ICLEI Local Governments for Sustainability, the organization provides technical, consulting, training and information services to build capacity and share knowledge on sustainable development.
13. These include National Pollutant Discharge Elimination System (NPDES), Stormwater Pollution Prevention Initiative (SWIPPI), Public Education Program (PEP) and Illicit Discharge Elimination Program (DEP) permits.