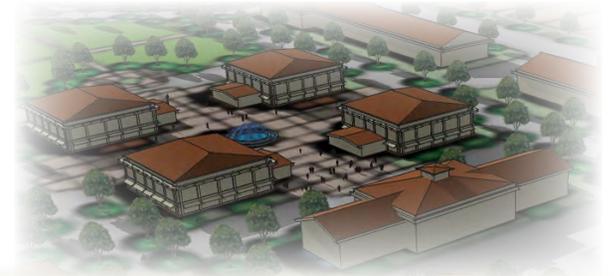




# Town Center & Transit-Oriented Development Plan

Village of Prairie Grove, Illinois

June 15, 2010



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*The Regional Transportation Authority (RTA) provided funding and technical assistance for the preparation of this plan through its Community Planning Program.*

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*This document was prepared by the Consultant Team of:*

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*Teska Associates, Inc. :: Metro Transportation Group, Inc. :: LandUse|USA, LLC :: Bondy Studio*





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A special thank you to the following individuals and groups who participated in the planning process and provided invaluable feedback that helped mold the plan. Without your support, expertise, and input, this plan would not have been possible.

## Village Board

Stanley Duda, Village President  
W. Randal Baudin II, Trustee  
Todd Greenwald, Trustee  
Lisa Behm, Trustee  
David Handera, Trustee  
Keith McConnell, Trustee  
David Robak, Trustee

## Village Staff

Jeannine Smith, Village Administrator  
Kim Minor, Village Clerk  
Phil Knudsen, Building Inspector  
Tim Carone, Public Works  
Ron Lyons, Director of Public Safety

All citizens of Prairie Grove who participated in the community workshops and provided input on the project website.

## Steering Committee

David Handera, Chair, Village Trustee  
Pam Cumpata, McHenry County EDC  
Mary Donner, McHenry County & Pace  
Bob Gray, Village Planning & Zoning Commission Chair  
Jim Hicks, Resident  
John Kremer, McHenry County Conservation District  
Tom Mattingly, McHenry County Soil & Water  
Keith McConnell, Village Trustee & Village EDC Chair  
Maryanne Wanaski, McHenry County  
Barb Wheeler, McHenry County Board

## Transit Agencies

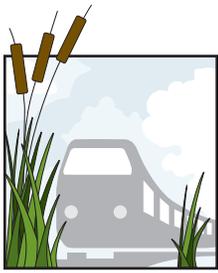
RTA, Metra, and Pace

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# Executive Summary

Courtesy: Bondy Studio.



A birdseye perspective view of the Prairie Grove Town Center, looking west from the site entry from IL Route 31 via Gracy Road.

**I** imagine it is early morning. Your first destination of the day: the **Metra station**. With a backpack filled with your work files and laptop, you **hop on your bike** and peddle towards the station **along the bike trail**. Looking to your left, you see a row of townhouses overlooking a **wetland strewn with cattails and native prairie plantings**. To your right is the **community garden** (mental note: check on tomatoes after work to see if they are ripe enough for picking). The **Pace bus** buzzes by. Up ahead you see a bridge crossing over a **stream flowing with fresh rainwater** from last night's storm. As the Metra station gets into view, you see a steady cascade of **parents walking their children to the neighborhood elementary school**. Many of the **children are on their bikes**, just like you. Almost there. Oh, there's the **bioswale you and your neighbors adopted to maintain**. Arrival. You made it to the Metra station. You lock your bike on the rack, which is almost filled with bikes from other **"bike-and-ride" commuters**. Looking down the tracks, the train is approaching from the distance. **"Just in time,"** you think, as you get out a book to read on **the commute to work**.

**Where are you?**

Possibly the **Village of Prairie Grove**.

Courtesy: Teska Associates, Inc.



*Applying their creativity and collective vision for Prairie Grove, community members took part in an interactive community visioning exercise using building blocks at the Public Design Charrette on October 28, 2009. Exercise results provided the basis for the conceptual Framework Plan.*

### **Envisioning the Prairie Grove Town Center**

With the planning phase completed, the Village looks ahead to maintain the momentum from the planning efforts to implement the core strategies outlined in Figure ES-2 and defined in greater detail in Section 16. Successfully accomplishing these strategies will help the Village realize the concepts of this Town Center & Transit-Oriented Development (TOD) Plan, bringing to life the imaginative scene foretold at the beginning of this Executive Summary.

With funding and technical assistance from the Regional Transportation Authority's (RTA) Community Planning Program, the Village and Prairie Grove community – led by the consultant team of Teska Associates, Inc. (Teska), Metro Transportation Group, Inc. (Metro), and LandUse|USA, LLC – completed a nine-month process to plan and design a mixed-use Town Center and TOD around the future Metra station on the Village's far northwest side. With a Steering Committee to help guide the collaborative planning process, alternative framework plan concepts were developed, outlining the general land use, design, infrastructure, and transportation principles for the proposed Town Center and TOD.

These concepts were based on an existing conditions assessment, feedback from the public, and multiple discussions with Village staff, the Steering Committee, and transit agen-

Courtesy: Teska Associates, Inc.



*Community members were able to review preliminary concept plans and provide feedback at the Public Open House on February 24, 2010. The open house format allowed the community to get a close look at concepts and interact with Village staff and the consultant team.*

cies. The public were provided with different opportunities to view interim plan documents and supply feedback to help shape the concepts. In addition to a comment blog on the project website, the public were able to participate in an interactive Public Design Charrette on October 28, 2009, and a Public Open House on February 24, 2010. In all cases, public comments were considered as the concept plans and designs were continually refined to truly reflect the vision and desires of the Prairie Grove community.

Based on public comments and discussions with Village staff, the Steering Committee, and transit agencies, a preferred alternative for the conceptual Framework Plan was selected, providing the basis for more detailed design and development plans and guidelines for the Town Center & TOD Plan. In addition to general site design and development principles, sustainability principles were also carefully considered to be a core facet of the Prairie Grove Town Center, providing the potential for the project to attain LEED-ND certification.

Perhaps in time, residents, visitors, and employees of the future Prairie Grove Town Center will have a similar experience as the one imagined above, where sustainability features are distinctively woven into the site design to create a memorable place – one that is reflective of Prairie Grove's distinct character – in which to live, work, play, and visit.



*In addition to offering an alternate mode of transportation, the potential to provide Metra commuter rail service to Prairie Grove creates the opportunity to plan, design, and build a Town Center on the far west side of the community, with the commuter rail station serving as a focal point.*

### **Plan Overview**

With the potential to extend commuter rail service along the Metra Union Pacific / Northwest Line (UP-NW) to Prairie Grove, the Village has taken a proactive approach to planning for potential transit facilities and transit-oriented development as part of a potential Town Center. Public participation was a major component of the Village’s planning approach to ensure the Plan had oversight and input from the community. This Town Center & TOD Plan focuses on these transit and TOD opportunities to design a unique, sustainable development for the Prairie Grove community.

### **Introduction**

Beginning with Section 1, the Plan starts with an overview of the planning process and a discussion of the need for transit in Prairie Grove. The opportunity for TOD is also discussed. Section 2 describes the relationship between this Plan and the Prairie Grove Comprehensive Plan (2006), particularly the visioning and policy elements that help frame the Village’s potential for transit, a Town Center, and general development. Other related planning documents and efforts are also summarized, including the preliminary Metra station exhibits, the Wildflowers of Prairie Grove Annexation and Development Agreement (2007), and residential and commercial design and development design guidelines.



*The Prairie Path is the only existing dedicated multi-use trail serving the Study Area. As depicted in this image (looking northward), the Prairie Path traverses along the east side of the railroad tracks before crossing over to the west side at the Edgewood Road intersection.*

### **Existing Conditions Assessment**

The Existing Conditions Assessment, covered in Sections 3 through 6, provides a comprehensive analysis of a variety of elements, including: land use, zoning, environment, water and sewer service, sustainability, urban design, transportation, and market conditions. This assessment provided insight into community character, physical conditions, and market information that informed the preparation of concept plans for transit and TOD opportunities. Although some site characteristics posed challenges to planning for the Town Center, these challenges inspired creativity to adequately address site issues and develop plans that optimized opportunities for creating transit facilities and transit oriented development.

Overall, many characteristics, including a mix of Town Center uses, transportation accessibility, and potential to phase development over time, place Prairie Grove in a favorable position to capitalize on transit and development opportunities.

### **Concept Plans**

Building upon the findings from the Existing Conditions Assessment and ongoing community input, the Concept Plans, covered in Sections 7 through 15, define the concept designs, market strategy, and design and development guidelines for the potential transit facilities and mixed use Town Center.

In particular, the concepts focus on land use development, transportation factors, sustainability, architecture, streetscape, and other urban design elements. The Framework Plan in Section 8 provides the primary basis for the Conceptual Land Use Development Plan in Section 9 and the Circulation & Access Plan in Section 11. A snapshot of the Conceptual Land Use Development Plan is illustrated in Figure ES-1. The Market Strategy in Section 10 also defines the residential and commercial opportunities presented by the proposed Town Center and TOD, particularly outlining specific unit counts and floor areas.

While the proposed transit facilities and mixed use Town Center are the primary focus of this planning effort, the Plan also places a strong emphasis on integrating sustainability principles into the project's ultimate design, including the potential to seek LEED-ND certification. Section 12 includes a Sustainability Analysis, which summarizes how the Town Center & TOD Plan compares to LEED-ND prerequisite and credit requirements. While these sustainability principles will help promote environmental stewardship and produce a sustainable development, they will also help the Village of Prairie Grove build itself as a regional leader in sustainability within McHenry County and the region.

The architectural and streetscape design guidelines, which are outlined in Sections 13 and 14, are intended to form the character of the Town Center as well as enhance living, shopping, working, and overall experience and quality-of-life in the Town Center.

To verify the economic viability of the proposed development plan relative to the Village's finances, a Fiscal Impact Analysis is provided in Section 15.

#### **Implementation Plan**

Section 16 outlines steps the Village can take towards implementing this Plan. In particular, the Implementation Plan does the following: encourages that this Plan aligns with the Village's regulatory plans and policies; describes site preparation needs; outlines sustainability recommendations based

FIGURE ES-1

#### **Quick Snapshot of Conceptual Land Use Development Plan**

A more detailed version of the Conceptual Land Use Development Plan is provided in Figure 9-2 in Section 9.



on the Sustainability Analysis in Section 12; defines the seven core implementation strategies; and identifies funding sources and support resources. The primary element of this section is the core implementation strategies, which are configured in a matrix that outlines implementation objectives, specific tasks, potential partnerships, and phasing. The strategies are intended to guide the Village as it carries out the recommendations outlined in this Plan.

## Core Strategies

As defined in Section 16, the Implementation Plan is anchored by a series of core implementation strategies that are designed to ensure the concepts and recommendations detailed in this Plan are achieved to capitalize on the Village's opportunities for building the capacity for transit and creating a new Town Center in Prairie Grove.

The seven core strategies are listed in Figure ES-2.

FIGURE ES-2

### **Core Implementation Strategies**

- 1:** Build awareness of the development opportunities offered by the Town Center.
- 2:** Utilize the RFQ/RFP process to attract developer interest.
- 3:** Construct a park-and-ride facility and promote usage as an initial step towards encouraging transit and ultimately constructing a complete commuter rail station.
- 4:** Secure the resources needed to construct a commuter rail station with adequate parking facilities.
- 5:** Create a strong character and sense of place in the Town Center by creating a brand identity and designing an urban design program for streetscape, signage, and gateways.
- 6:** Maintain open communication with the property owners of adjacent unincorporated parcels to preserve the potential for further build-out of the Town Center.
- 7:** Commit to dedicated adherence to the sustainability recommendations outlined in this Plan to facilitate the potential for the Town Center to achieve LEED-ND certification.

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## SECTION 1

# Introduction

Since the last U.S. Census in 2000, the Village of Prairie Grove has grown by about 107% from 960 residents in 2000 to 1,995 residents today<sup>1</sup> and anticipated by regional agencies to grow to about 12,000 residents by 2030<sup>2</sup>. Although Prairie Grove has generally been able to maintain its small town character through its population growth, it is the substantial population growth and development of adjacent communities like McHenry, Bull Valley, and Crystal Lake that have had a major impact on Prairie Grove in recent years.

As Prairie Grove and the adjacent area continues to experience population growth and plans for additional development opportunities, the local and regional road networks that serve the Village will be impacted, creating problems with mounting road congestion and potential hindrances to safe and efficient access and circulation. To address growth pressures over the next 20 years, McHenry County's draft 2030



Courtesy: Tiska Associates, Inc.

*The Town Center and TOD district would provide diverse transportation options, including: a commuter train line; multi-use trails for cyclists, pedestrians, and roller bladers; and roads for automobiles, buses, and paratransit vans.*

plan promotes the development of "...balanced communities that provide desirable places to live and work, while making efficient use of the County's limited land resources and infrastructure, and preserving the County's natural, water, and agricultural resources." To implement this vision the County is promoting several initiatives, including as first on its list "Encouraging transit-oriented development and traditional neighborhood development.

Transit-oriented Development (TOD) encourages the creation of alternative transportation systems that will help ease burdens on the road network and provide alternate travel options that reduce dependence on the automobile. The goal is to create a more sustainable community that minimizes impact on natural resources, conserves energy, and results in a healthier environment.

As an alternative to the automobile, providing transit alternatives such as commuter train and bus service will expand the travel options for residents, visitors and employees. The potential for transit service in Prairie Grove requires a phasing of transit facilities, beginning with a new transit facility site that could initially serve as a Park-and-Ride commuter lot with bus service to Metra Stations in Crystal Lake and McHenry and other stations along the Metra Union Pacific / Northwest Line (UP-NW) Line. The success of a Park-and-Ride facility

<sup>1</sup> 2008 population estimate provided by the U.S. Census Bureau.

<sup>2</sup> 2030 population projection provided by the Chicago Agency for Planning (CMAP) 2030 Forecasts of Population, Households and Employment by County and Municipality.



could provide the justification for the future potential Prairie Grove transit facility upon the potential extension of commuter rail service to Prairie Grove and Johnsbury.

This Town Center & Transit-Oriented Development (TOD) Plan focuses on the opportunity to create a transit hub that would provide Prairie Grove with local access to commuter rail and Pace bus service. This hub will also provide significant opportunities to reduce dependence on the automobile while creating a vibrant, high quality mixed use development in and around a potential Town Center for Prairie Grove.

### ***Study Area***

The Study Area is located in the northwest section of the Village of Prairie Grove. As shown in the Study Area Map in Figure 1-1, the proposed commuter rail station location serves as a centerpoint of the ½-mile radius that serves as the primary Study Area. A larger 2-mile radius illustrates the immediate area of influence in which the TOD area is located.

The potential commuter rail station would be established along the Union Pacific Railroad, which generally bisects both the ½-mile and 2-mile radii. Prominent existing features within the Study Area are also shown on the map.

### ***Planning Process***

Throughout the duration of the planning process, a Steering Committee, comprised of Village staff, public officials, County agency officials, local residents, representatives from the Regional Transportation Authority (RTA), Metra, Pace, and Illinois Department of Transportation (IDOT), and others provided guidance and feedback during each phase of work. These phases include: (1) Existing Conditions Assessment; (2) Conceptual Land Use Development Plan; (3) Circulation & Access Plan; (4) Design Guidelines; and (5) Implementation Strategies

To ensure that the final plan has a broad level of support and understanding, the planning process includes an extensive public participation component designed to involve community stakeholders and residents in crafting a plan that repre-



Courtesy: Tiska Associates, Inc.

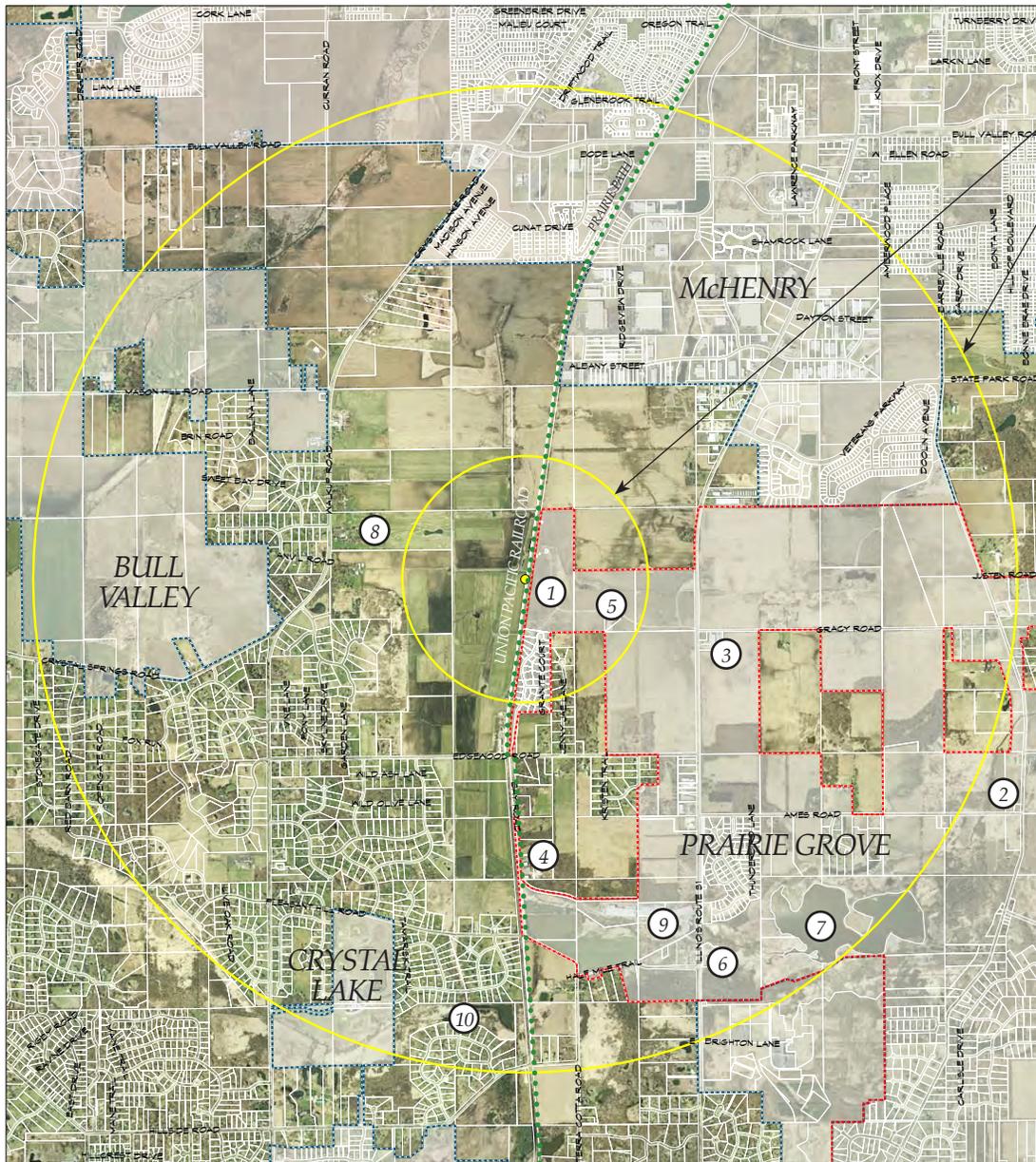
The project website ([www.PrairieGroveTOD.org](http://www.PrairieGroveTOD.org)) provides an online forum for visitors to learn more about the project, access project files, keep updated on upcoming meetings, and provide comments.

sents a vision for the Study Area that is responsive to the goals and aspirations of Prairie Grove residents and businesses. The public participation process includes:

- » ***Key stakeholder interviews*** provided select community members with the opportunity to share insights and ideas relating to the Study Area and visions for how they would like the area to be designed.
- » A ***Public Design Charrette*** will provide community members with a dynamic workshop designed to obtain community input into the planning process via a series of interactive activities, including a “Build-the-Vision” mapping exercise and image preference survey.
- » ***Public Open Houses*** will provide an informal public review process for community members to review the Conceptual Land Use Development Plan and share their preferences relating to the alternatives presented.
- » A ***project website*** will provide an online resource and forum to keep the public informed and engaged in the planning process.

Website: [www.PrairieGroveTOD.org](http://www.PrairieGroveTOD.org)

FIGURE 1-1  
Study Area Map



Primary Study Area: 1/2-mile radius

Area of Influence: 2-mile radius

Prominent Existing Features

- ① Proposed Commuter Rail Station
- ② Village Hall
- ③ Public Works Building
- ④ Nunda Township Offices
- ⑤ Illinois American Water Tower
- ⑥ Water Treatment Facility
- ⑦ Thunderbird Lake
- ⑧ Old Top Farm Golf Course
- ⑨ Terra Cotta Industries
- ⑩ Prairie Ridge Conservation Area

Source: GIS mapping data provided by McHenry County; map prepared by Teska Associates, Inc.

### Need for Transit in Prairie Grove

As Prairie Grove and McHenry County continue to prepare for the prospects of growth and development, local and regional road networks will also continue to bear the burden of increased auto traffic. Road congestion negatively affects two of our most valued resources, our time and our money. The extra five, ten, or thirty minutes that we spend in traffic is time that we most certainly would prefer to spend elsewhere. Even when gasoline prices were much lower than current rates, idling in traffic was a costly and inefficient use of our time and our money.

Congestion, coupled with unstable gasoline prices, has increased the strain on not only our wallets and quality of life, but also the environment. As a result, alternative means of transportation have become more desirable and transportation issues have increasingly become major concerns for communities. With the Village's population growing from 960 residents in 2000 to approximately 1,995 residents in 2008<sup>3</sup>, and projected to grow to 12,076 residents by 2030<sup>4</sup>, the neces-

<sup>3</sup> 2008 population estimate provided by the U.S. Census Bureau.

<sup>4</sup> 2030 population projection provided by the Chicago Agency for Planning (CMAP) 2030 Forecasts of Population, Households and Employment by County and Municipality.

FIGURE 1-2  
**Distance to Nearest Metra Stations**

Miles*	Metra Station (UP-NW Line)
3.8 miles	McHenry
4.8 miles	Pingree Road / Crystal Lake
5.0 miles	Crystal Lake

\* Mileage approximate, as measured from the intersection of Illinois Route 31 and Gracy Road.

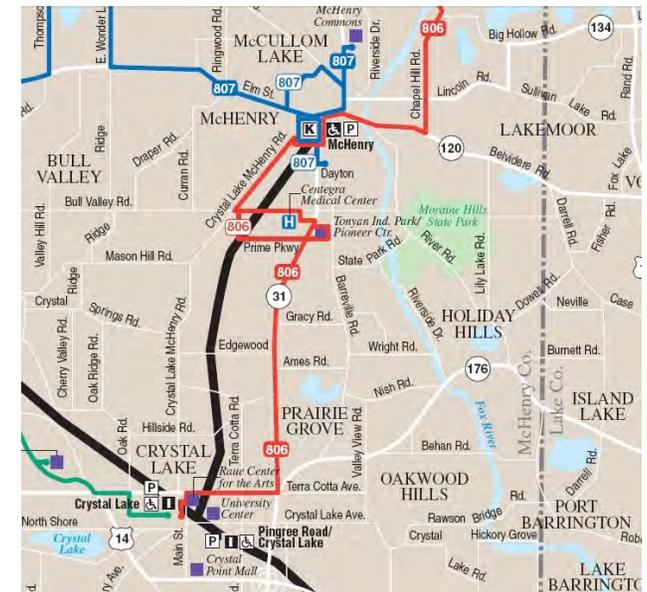
Source: MapQuest.

sity to provide public transportation options in Prairie Grove is becoming increasingly apparent. This planning effort aims to take steps to reduce this congestion and create a healthier community by providing opportunities for public transportation and associated supportive development that allow people to more resourcefully utilize their time and money as they traverse to, from and within Prairie Grove.

Presently, Prairie Grove has very limited public transportation options available. Relative to the Study Area, the only transit option is Pace Bus Route 806, which runs along Route 31, with service to Metra stations in McHenry to the north and Crystal Lake to the south. The table in Figure 1-2 lists approximate mileage to the nearest Metra stations in McHenry and Crystal Lake.

The map in Figure 1-3 shows all Metra commuter rail lines and Pace bus routes in the greater region around Prairie

FIGURE 1-3  
**RTA System Map for Prairie Grove Area**



Source: Regional Transportation Authority.

Grove. The McHenry branch of the Metra UP-NW Line runs west of Prairie Grove from Crystal Lake to McHenry, with the only station located in McHenry to the north. The various colored lines that symbolize an integrated network of bus routes and train lines are noticeably sparse in the Prairie Grove area, signifying a limited public transit system. The potential Prairie Grove commuter rail station would be located along the McHenry branch of the Metra UP-NW Line.

A new Metra Station at Prairie Grove would be built as part of a system of improvements along the Metra UP-NW Line. The proposed UP-NW Upgrade Project includes extension of the McHenry Branch to Johnsburg, new yards at Woodstock and Johnsburg, track and signal upgrades along the entire line, and improvements to station and parking facilities at various stations. In addition to the Prairie Grove Station, new stations would also be built at Ridgefield and Johnsburg. Metra is currently applying for funding for the UP-NW improvements under the federal New Starts program. Metra

completed Alternatives Analysis, the first step of the competitive application process, in 2007 and is currently waiting for approval to enter the next phase, Preliminary Engineering. Metra is also currently undertaking an Environmental Assessment for the project. Metra will look to developers and the Village of Prairie Grove to secure funding for the new station and parking facilities.

In addition to regular bus service, Pace offers public transportation options in McHenry County for seniors and individuals with disabilities via its ADA Paratransit Service and Dial-a-Ride program. The ADA Paratransit Service for the Prairie Grove area provides service within 3/4 of a mile of the fixed route taken by Pace Bus Route 806. Nunda Township offers senior paratransit service for township residents and the disabled. Senior Services Associates, Inc., located in McHenry and Crystal Lake, and other local health care facilities also offer paratransit services for senior residents in McHenry County.

With limited public transportation options available in Prairie Grove, it is little surprise that only 2% of all workers (age 16 years and over) use public transportation as a means of transportation to work (Figure 1-4).

Even for those residents that commute via public transportation, it is likely that many still require some commuting via private automobile to gain access to a Metra train or Park-and-Ride facility. Building a station in Prairie Grove will shorten the distance residents must travel to reach the nearest Metra station and make walking or biking more viable modes of access for those living near the new station. Increased public transportation options within the Prairie Grove area are needed to accommodate not only commutes to work but also the general travel needs of residents of and visitors to Prairie Grove. By providing viable public transportation options, commute times improve and roads become less congested; in turn, these improvements help enhance the quality of life in Prairie Grove, allowing residents to use their time for more important matters and improving the environment with less automobile-induced impacts.

FIGURE 1-4  
**Means of Transportation to Work**

Mean	1990		2000	
	Workers* #	%	Workers* #	%
Car, Truck or Van	331	89.5%	521	94.7%
- Drove Alone	285	77.0%	476	86.5%
- Carpooled	46	12.4%	45	8.2%
Public Transportation	4	1.1%	11	2.0%
Walked	0	-	0	-
Other Means	3	0.8%	0	-
Worked at Home	32	8.7%	18	3.3%
<b>TOTAL</b>	<b>370</b>	<b>100.0%</b>	<b>550</b>	<b>100.0%</b>

\* Workers age 16 years and over; Village of Prairie Grove.

Source: U.S. Census, 1990 and 2000.

### *Opportunity for Transit-Oriented Development*

Transit-Oriented Development (TOD) is a prevalent planning concept that holds great potential to shape communities, or at least a portion of them, in a way that merges the best land use and transportation planning principles. With the need to enhance public transit options, availability of undeveloped land parcels, and the Metra UP-NW Line running through the Study Area, Prairie Grove holds strong potential to establish a commuter rail station as well as develop the Study Area as a vibrant mixed-use Town Center and TOD.

One of the better definitions of TOD and key associated planning principles are found in the City of Austin's (TX) Transit Oriented Development Guidebook, which was published by the City's Neighborhood Planning and Zoning Department in 2006. The highlights of this guidebook are summarized in Figure 1-5 and are appropriate to considering TOD in Prairie Grove.



*Examples: Transit-oriented development*

*Courtesy: Telsa Associates, Inc.*

FIGURE 1-5  
**TOD Definition & Principles**

*Definition*

*Transit oriented development (TOD) is the functional integration of land use and transit via the creation of compact, walkable, mixed-use communities within walking distance of a transit stop or station. A TOD brings together people, jobs, and services and is designed in a way that makes it efficient, safe, and convenient to travel on foot or by bicycle, public transit, or car.*

*Principles*

*The following principles serve as a guide and provide an understanding of the essential elements and characteristics of a TOD. They will serve as the foundation for the station area planning.*

- » *Create a compact development within an easy walk (typically ½ mile) of public transit and with sufficient density to support ridership.*
- » *Make the pedestrian the focus of the development strategy without excluding the auto.*
- » *Create active places and livable communities that service daily needs & where people feel a sense of belonging & ownership.*
- » *Include engaging, high quality civic spaces (e.g. small parks or plazas) as organizing features and gathering places for the neighborhood.*
- » *Encourage a variety of housing types near transit facilities available to a wide range of ages and incomes.*
- » *Incorporate retail into the development if it is a viable use at the location without the transit component, ideally drawing customers both from the TOD and a major street.*
- » *Ensure compatibility and connectivity with surrounding neighborhoods.*
- » *Introduce creative parking strategies that integrate, rather than divide the site and reduce the sense of auto domination.*
- » *Create TOD plans that are flexible so they can respond to changing conditions.*
- » *Strive to make TODs realistic, yet economically viable and valuable from a diversity of perspectives (Village, transit agencies, developer, resident, employer).*
- » *Recognize that all TODs are not the same; each development is located within its own unique context and serves a specific purpose in the larger context.*



Source: City of Austin, TX, Transit Oriented Development Guidebook, 2006.

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SECTION 2

# Relationship to the Prairie Grove Comprehensive Plan

As a major planning effort that will have a significant impact on the growth and development of the Village of Prairie Grove, it is important to consider how the Town Center and TOD Plan aligns with the vision, goals, objectives, and guidelines established in the Prairie Grove Comprehensive Plan, which was adopted in March 2006. In fact, the Town Center, Metra station, and TOD area are collectively part of one of the two “Key Target Areas” identified in the Prairie Grove Comprehensive Plan. Other planning documents and efforts were also reviewed, as they guide the Village on matters relating to the design and development of the Town Center, Metra station, and TOD.

### Vision Statement

The Vision Statement defined in the Prairie Grove Comprehensive Plan is highly supportive of the creation of a Town Center and development of a Metra station in a TOD environment. In particular, key phrases from the Vision Statement are highlighted in Figure 2-1. As described in the Vision Statement, the Town Center, which would include the new Metra station, will become the “civic core” of Prairie Grove and serve as “a model Transit-Oriented Development in the region.”

### Goals & Objectives

In addition to the Vision Statement, the goals and objectives outlined in the Comprehensive Plan emphasize the Village’s intentions to create a Town Center, build a Metra station, and establish a mixed use, pedestrian-oriented TOD. Collectively, the goals and objectives support “mixed use planned developments near the Town Center” with a Metra station offering

*The Town Center, which would include the new Metra station, will become the “civic core” of Prairie Grove and serve as “a model Transit-Oriented Development in the region.”*

a public transportation option that “reinforces surrounding land development patterns, and compliments the rural character of the Village.” Furthermore, the goals and objectives cover a range of topics, from growth management and transportation to the natural environment and Village identity, all which have bearing on this Plan.

The goals and objectives will also provide guidance to the planning and design process for the Town Center and TOD, particularly relating to other characteristics such as residential areas, commercial development, pedestrian access, the natural environment, parks and open space, and Village identity.

### Community Wide Plans & Policies

The second section of the Prairie Grove Comprehensive Plan outlines the Community Wide Plans and Policies, mainly consisting of the following components: land use, residential, commercial areas, transportation, and community facilities. The manner in which the Town Center, Metra station, and TOD correlate to each plan component is described below.

- » **Land Use Plan.** The potential Metra station and its associated commuter parking are identified as Public/Semi-



Courtesy: Teska Associates, Inc.

Elements such as rustic farm structures, rolling hills, and native prairie vegetation help define Prairie Grove’s rural character.



FIGURE 2-1  
Key Elements from the Vision Statement  
(Prairie Grove Comprehensive Plan)

“ ... the Village Hall was relocated to the new Town Center, Metra trains stop in the Village ... ”

“ ... the development of a new Town Center ... ”

“ ... the ‘Town Center’ located north of the Gracy Road extension is home to the new Village Hall, the next Post Office, and the new Metra station. Although the Town Center has become the community’s ‘civic core’, it has also become a vibrant pedestrian-oriented shopping district ... ”

“ ... much of the commercial development has incorporated existing on-site natural resources into their design ... ”

“ ... mix of housing sizes and options has created a diversified housing market ... ”

“ ... the large natural areas that distinguish Prairie Grove from nearby communities have been preserved and protected ... ”

“ ... the rural and wooded character of the community has been maintained along the Village’s roads ... ”

“ ... quality development and the utilization of attractive architecture and landscaping ... ”

“ ... consisting of civic, commercial and residential uses, Prairie Grove Town Center is a model Transit-Oriented Development in the region, and a destination for the community ... ”

“ ... a trail system connecting to other trail systems throughout the Village ... ”

**Vision Statement**  
Since Prairie Grove's Comprehensive Plan was completed 10 years ago, considerable change has occurred. The Village Board and Terra Cotta reconciled their differences and a development plan was approved, a trail system has been established, the Village Hall was relocated to the new Town Center, Metra trains stop in the Village, construction of the Riverwalk on Route 31 and Route 176 has started, and commercial growth on Route 31 and Route 176 has helped the Village's economic health, created employment opportunities, and provided residents with a local place to shop and dine.

Despite the growth that has occurred, the small town and rural character of Prairie Grove has been maintained and the community's natural resources have been protected and enhanced. These assets have served to distinguish Prairie Grove from nearby communities and add greatly to the desirability of the community. The tenets of the Comprehensive Plan, adopted in 2005, provided sound decisions made by elected officials and community leaders, are largely responsible for maintaining and enhancing the Village's rural character, while also accommodating sound growth and development.

**In the year 2015 ...**  
The Village and Terra Cotta resolved their differences shortly before the adoption of the Comprehensive Plan, and much of Terra Cotta's property has been developed in accordance with a land plan approved by the Village in 2005. Terra Cotta withdrew their suit to disconnect property from the Village and the land was developed according to a plan approved by the Village. Although the approval plan was similar to an earlier proposal, the new development proposal was able to strike agreement with the Village with regard to overall residential density, location and intensity of commercial uses, and the development of a new Town Center.

The settlement of the Terra Cotta issue has allowed the community and its elected officials to focus on a more regional view of community issues, and has fostered an improved political climate in the community. Improved relationships between the Village and other public organizations has allowed the community to plan for its ultimate growth and address residents' concerns. **Bound-**

ary agreements with Bull Valley, McHenry, Crystal Lake, Oakwood Hills and Holiday Hills, have allowed Prairie Groves elected officials to accurately plan and effectively manage the growth and development within its planning jurisdiction.

The much anticipated 'town center' project has been realized, thanks largely to the developers of the Terra Cotta property. Not long ago, the Station on Barreville Road, the partnership of Public Works was rented to Nunda Township, Prairie Grove residents had a Crystal Lake mailing address, and residents had to travel to McHenry or Crystal Lake to ride Metra. Today, the 'Town Center' located north of the Gracy Road extension is home to the new Village Hall, the new Post Office, and the new Metra station. Although the Town Center has become the community's 'civic core', it has also become a vibrant pedestrian-oriented shopping district. Consisting of civic, commercial and residential uses, Prairie Grove Town Center is a model Transit-Oriented Development in the region, and a destination for the community.

Attractive and appropriate commercial development has occurred along Route 31 and Route 176. The new commercial development has significantly reduced the tax burden on residences, and diversified the Village's tax base, but not at the cost of the Village's rural character. Much of the commercial development has incorporated existing on-site natural resources into their design, and the natural resources have been preserved and protected.

Although some condominiums have been built near the town center, and some townhomes have been used to buffer incompatible uses, most of the residential development that has occurred has been single-family housing on one-acre lots or larger. This has created a mix of housing sizes and options that has protected the natural resources of the community. The impact on the community has been minimized by the fact that the Village has provided affordable housing opportunities for first-time homebuyers and seniors, as well as high-end homes for move-up buyers.

Despite the growth that has occurred, the large natural areas that distinguish Prairie Grove from nearby communities have been preserved and protected. The Conservation District's acquisition and development policies and practices, together with the Village's park dedication regulations and sound subdivision practices, are largely responsible for the numerous park sites, preservation areas, and greenways network that connects residential areas with park sites and regional trails. Thunderbird Lake, a recreational area, has been improved with a trail system connecting to other trails systems throughout the Village. Thunderbird Lake, enjoyed by boaters, fishermen, anglers, and hikers. Clusters of housing, in areas where the natural resources would have otherwise been lost or located on private property, instead homes have been grouped together, thus keeping the natural resources protected as public open space.

Plans for the new Riverwalk on the west bank of the Fox River have recently been approved, and the last remaining parcels and easements are to be acquired by the Village. The Riverwalk will open to the public and provide scenic overlooks, boat launches, picnic areas, and benches and plazas. The 1/2-mile Riverwalk will begin at Route 176 and extend north to the new park site located south of Riverside Drive. The Riverwalk will also extend to the area just south of Route 176, revitalizing the small commercial area on the west bank.

The community has invested heavily in its infrastructure and community facilities. A new fire station has been built by Nunda Township Fire Protection District on the north side of the Village, and both stations are staffed by full-time firefighters. Other Village departments, including public works and police, have also expanded to keep pace with growth. The Police Department is now the sole tenant of the old Village Hall on Barreville Road and the Public Works Department has built their own facility as well. With the increasing population of Prairie Grove, school facilities are one of the community's greatest assets. Necessary school construction and programming costs have been financed by a strong local-cash donation ordinance, which impacts created by their development.

The rural and wooded character of the community has been maintained along the Village's roads. The 1/2-mile Riverwalk will begin at Route 176 and extend north to the new park site located south of Riverside Drive. The Riverwalk will also extend to the area just south of Route 176, revitalizing the small commercial area on the west bank.

Each direction and a center turn-lane to accommodate better access to adjacent sites and overall improved safety. The overall appearance and character of the Village has been improved through the utilization of attractive architecture and landscaping. Ames Road has been realigned to the north to intersect with Edgewood Road. The realignment improvements, which include a traffic signal at Route 31 were funded through private development. Traffic signals have also been installed at Gracy Road and Route 31, Barreville Road and Route 176, and Nash Road and Route 176.

Source: Prairie Grove Comprehensive Plan, 2006.



Public uses in the far northwest section of the Village. The area designated for the Town Center is comprised of a mix of land use types, including Public/Semi-Public (e.g. civic facilities such as a municipal center, post office, library, etc), Town Center Commercial, different Residential uses, and Parks, Open Space, Recreation. In particular, the Town Center Commercial land use is defined as providing “a unique pedestrian oriented shopping/mixed use area within the community” that is “intended to accommodate multi-family residential units on the upper floors of mixed-use buildings.” An excerpt from the Land Use Plan is shown in Figure 2-2.

It is important to note that the land use composition for the potential Town Center and TOD area are fairly consistent with the Preliminary Plan of Subdivision for the Wildflowers of Prairie Grove development (see Figure 2-3).

» **Residential Plan.** The Residential Plan outlines a range of housing types – including Estate Residential, Single-Family Detached, Single-Family Attached, Multi-Family, and Neo-Traditional – that all have the potential to be integrated into the Town Center and TOD Plan. The residential type that will most likely be part of the Plan is the multi-family residential component of the mixed-use

development in the Town Center, providing units “close to shopping, dining, civic uses, and the Metra, making it an attractive and convenient living destination.”

» **Commercial Area Plan.** The Town Center is specifically identified as one of the key commercial areas to be developed in Prairie Grove. With the potential commuter rail station as a focal point, the Town Center Commercial would offer destination retail, dining, and entertainment opportunities in a dense, clustered pedestrian-oriented environment “developed as a ‘walkable’ area, much like traditional downtowns.” There would be possibilities for professional offices and residential units above ground floor retail, as well as the integration of civic uses, outdoor plazas, and cultural amenities.

*With the potential commuter rail station as a focal point, the Town Center would offer destination retail, dining, and entertainment opportunities in a dense, clustered pedestrian-oriented environment “developed as a ‘walkable’ area, much like traditional downtowns.”*



FIGURE 2-2  
*Excerpt from the Prairie Grove Land Use Plan*

Source: Prairie Grove Comprehensive Plan, 2006.

» **Transportation Plan.** The Transportation Plan indicates the limited availability of public transportation options in Prairie Grove, indicating Pace Bus Route 806 as the only option currently within the Village. The nearest Metra stations are located in Crystal Lake and McHenry, with Pace Bus Route 806 traveling between the Crystal Lake Metra Station to the south and the Fox Lake Metra Station to the north. The potential Metra station for Prairie Grove would be situated on a 20-acre parcel in the proposed Town Center area along the Union Pacific Railroad. The Transportation Plan also outlines the possibility to create a short-term Park-and-Ride facility, with Pace bus service to the Crystal Lake Metra Station, on the 20-acre parcel, provided that building Prairie Grove's own Metra station would fit a more long-term timeline.

In addition to transit and the general road network, the Prairie Path is a 26-mile multi-use trail that currently runs along the west side of the Union Pacific Railroad before switching to the east side after crossing Edgewood Road to head southbound along Bay Road. The Prairie Path is maintained by the McHenry County Conservation District.

» **Community Facilities Plan.** Other than the potential new site for civic facilities, other community facilities to be established in the Town Center and TOD area will likely include parks and open space, with potential for trail connections throughout the Village. It is important to note that Nunda Township proposes that the portion of the study area located immediately west of the Union Pacific Railroad be designated as open space.

Public utilities are also a key component of the Village's community facilities. Currently, the majority of parcels within the Village's municipal limits are served by septic fields for wastewater storage and treatment and individual wells for water. Also, Prairie Grove is not served by underground stormwater sewers; however, there is a system of drainage ditches and man-made detention ponds to help manage stormwater.



Courtesy: Tiska Associates, Inc.

*The Town Center and TOD district would provide diverse transportation options, including: a commuter train line; multi-use trails for cyclists, pedestrians, and roller bladers; and roads for automobiles, buses, and paratransit vans.*

### ***Other Planning Documents & Efforts***

In addition to the Comprehensive Plan, the Village of Prairie Grove is guided by other planning documents and efforts that provide relevant recommendations and direction relative to the Town Center and TOD Plan. They include the following:

- » Preliminary Prairie Grove Station Exhibits
- » Wildflowers of Prairie Grove Preliminary Plan of Subdivision
- » Wildflowers of Prairie Grove Annexation & Development Agreement
- » Residential Design & Development Guidelines
- » Commercial Design & Development Guidelines
- » Nunda Township Open Space Plan

All documents will be taken into consideration to properly plan and design for the Town Center and TOD Plan.

### ***Preliminary Metra Station Exhibits***

The Village currently has two preliminary exhibits for the 20-acre Metra station site, which is located at the northwest section of the Village along the Union Pacific Railroad. One exhibit illustrates a conceptual site plan, particularly showing potential placement of the Metra station building, commuter parking, a well and pump house, and stormwater detention.

The other exhibit illustrates environmental features relative to the Metra station site, which the exhibit refers to as "Prairie Grove Station". Environmental features include the 100-year floodplain, delineated wetlands, and wetlands identified by the National Wetlands Inventory (NWI).

**Wildflowers of Prairie Grove  
Preliminary Plan of Subdivision**

Formerly known as the Terra Cotta property, the Wildflowers of Prairie Grove is a prominent mixed use development proposed at the northwest section of the Village. The current version of the plan, now known as Wildflowers of Prairie Grove, has a mixed-use quality, with a combination of residential uses of varying densities, commercial and civic uses, parks and open space, a Town Center, and a Metra station parcel. The Plan of Subdivision is also accompanied by an Amended Annexation and Development Agreement dated April 17,

2007. This agreement outlines development matters, fiscal issues, and other site characteristics related to the proposed Wildflowers development. The Wildflowers of Prairie Grove plan is shown in Figure 2-3.

**Wildflowers of Prairie Grove  
Annexation & Development Agreement**

The Wildflowers of Prairie Grove Annexation & Development Agreement, is the current guide to development of the property, superseding the Prairie Grove Comprehensive Plan of 2006. The agreement was entered into by the Village of Prairie Grove and Prairie Grove 1078 SPE, LLC (Wildflowers) on April 17, 2007.

The agreement generally defines parameters for various property issues, including zoning, development matters, costs and fees, and other legal issues. The objectives, stan-

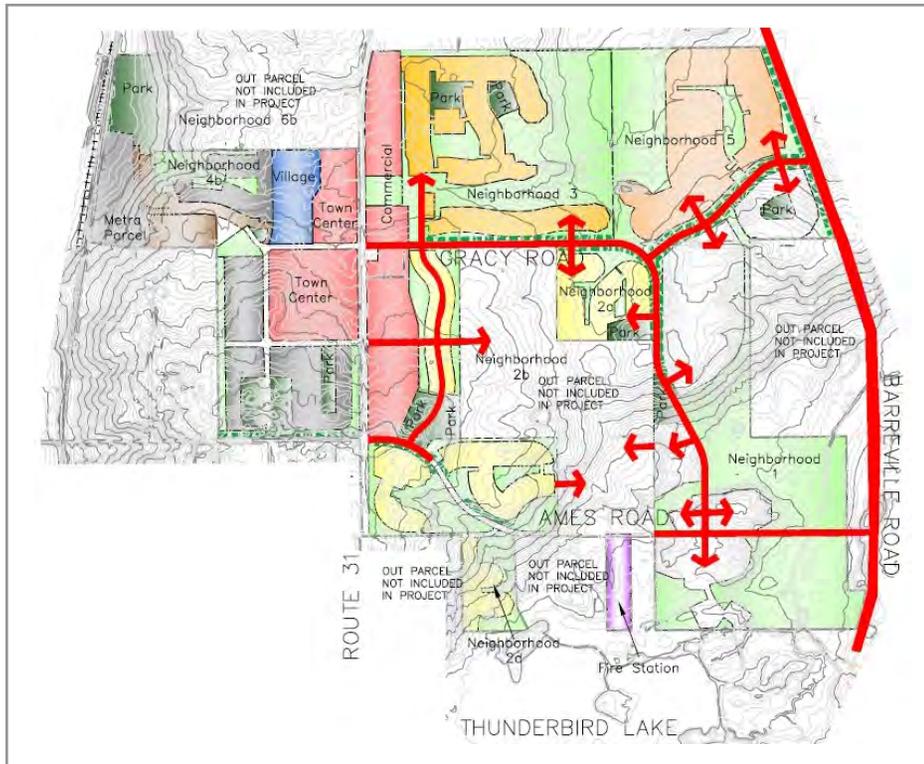


FIGURE 2-3  
*Wildflowers of Prairie Grove  
Preliminary Plan of Subdivision*

Source: Prairie Grove 1078 SPE, LLC (Wildflowers); Greengard, Inc.

dards, and conditions of development must be considered as they relate to the proposed Town Center and TOD Plan. As stated in the agreement, “implementation of this [agreement] and development of the Property pursuant hereto will further the orderly growth, planning and development of the Village, increase the tax base of the Village and create housing, job and economic growth within the Village while preserving environmental values.” The Town Center and TOD Plan essentially takes this agreement a step further into the planning and design stages, balancing the objectives, standards, and conditions of the Wildflowers plan with the Village of Prairie Grove’s vision and goals for the community.

Rather than summarize these objectives, standards, and conditions in this part of the report, they are discussed in the appropriate subsections to which they relate (for example, zoning conditions are discussed in the “Zoning” subsection).

#### **Residential Design & Development Guidelines**

The Residential Design & Development Guidelines outline a variety of recommendations for the design and development of residential uses in Prairie Grove. Recommendations relate to a range of issues, including: architectural style and monotony; building materials and color; environmental, open space and stormwater; garages and driveways; home size, height and bulk; lighting; placement and orientation; roofs and rooflines; transportation; and windows, doors and entrances. While these residential guidelines apply to the entire



*Existing structures in and around Prairie Grove can provide design cues for residential and commercial developments. In addition to modern structures (left), structures that are more rustic or agricultural in nature (right) also offer design ideas that characterize Prairie Grove’s rural heritage.*

Village, they will be appropriately referenced and integrated into the transit-supportive district design guidelines for this Plan, intended to foster a welcoming, attractive, and vibrant multi-modal Town Center and TOD for Prairie Grove.

#### **Commercial Design & Development Guidelines**

The Commercial Design & Development Guidelines delineates recommendations for the design and development of new commercial uses, as well as improvement of existing commercial uses, in Prairie Grove. The guidelines apply to different commercial areas around the Village, including: the Route 31 and Route 176 corridors; potential mixed use and pedestrian-oriented Town Center; and public rights-of-way and properties. Recommendations for the Town Center relate to a range of issues, including: architecture; building dimensions, placement and orientation; lighting; signage; parking; landscaping; residential components; and potential Metra station. Similar to the residential guidelines, the commercial guidelines will be appropriately referenced and integrated into the transit-supportive district design guidelines for this Plan.

#### **Nunda Township Open Space Plan**

The general recommendations outlined in the Nunda Township Open Space Plan are integrated into the Prairie Grove Comprehensive Plan. Of the 25 open space areas/properties identified in the Nunda Township Open Space Plan that had potential for acquisition, four of them are located in Prairie Grove or its planning jurisdiction. These four open spaces are indicated on the Community Facilities & Open Space Plan within the Comprehensive Plan. Of those four open spaces, three are within close proximity to the Study Area, with one being the sod farms and open spaces immediately to the west of the Union Pacific Railroad.



SECTION 3

# Planning & Urban Design Assessment

This section provides an overview of planning principles and urban design elements that both influence and guide the Town Center & TOD Plan, including existing land use, zoning, environmental characteristics, and urban design.

### Existing Land Use

The primary Study Area within the 1/2-mile boundary is generally comprised of “greenfield” sites, which are land parcels that are presently farmed vacant or undeveloped. The greenfields present a tremendous opportunity for Prairie Grove to plan and develop its own unique Town Center, anchored by a commuter rail station and mixed-use transit-oriented development. However, natural impediments – including environmentally sensitive features such as floodplain, wetlands, and topography, as well as man-made barriers such as the railroad and major roads – can limit the extent to which a greenfield can be developed (environmental characteristics are described further below).

*A significant portion of the Study Area is comprised of “greenfield” sites, which are land parcels that are currently vacant or undeveloped, presenting opportunities for development.*

The only portion of the 1/2-mile boundary area that is developed is the residential enclave at the northeast corner of Edgewood Road and the Union Pacific Railroad. This residential enclave includes the Cobblestone Woods townhome development, which is annexed into Prairie Grove, and the cluster of single family homes along Jenny Jae Lane, which is unincorporated. The Illinois American water tower is also located within the Study Area. This water tower is owned and maintained by Illinois American Water. The land located west of the railroad tracks are environmentally sensitive, un-



Courtesy: Teksa Associates, Inc.

While a significant portion of the Study Area is comprised of “greenfield” sites representing opportunities for development, existing land uses within the 1/2-mile boundary) and 2-mile boundary include (from left to right): residential homes; agricultural and equine uses; commercial businesses; and open spaces.

Courtesy: Tesla Associates, Inc.



The properties located west of the Union Pacific Railroad are primarily vacant, consisting of agricultural land, sod farms, and natural open space. Although this area will largely remain undeveloped, recreational uses may be feasible in limited instances.

developed land, including sod farms. Per the Prairie Grove Comprehensive Plan, this land is identified as Nunda Township Proposed Open Space, indicating that it will likely be preserved and not be subject to development.

Immediately outside the primary Study Area, much of the land is vacant, particularly the area bounded by Illinois Route 31 on the east, Edgewood Road on the south, Walkup Road on the west, and Mason Hill Road on the north.

Moving further out to the larger 2-mile boundary, there is still vacant land; however, land becomes increasingly more developed with residential and commercial uses, including those within Prairie Grove as well as uses in adjacent municipalities like McHenry to the north, Bull Valley to the northwest, and Crystal Lake to the south. There are also a handful of existing (and planned) residential developments located within the unincorporated area between Bull Valley and Crystal Lake.

*As designated by Nunda Township, much of the land located west of the railroad will likely be preserved due to environmental conditions.*

Courtesy: Tesla Associates, Inc.



The Prairie Path traverses parallel to the Union Pacific Railroad, providing a recreational path that spans the entire length of McHenry County. With its location along the railroad, the Prairie Path provides the opportunity to create an interconnected trail system for the Town Center.

Despite some existing residential and commercial uses, much of the land within the 2-mile boundary that is annexed by the Village of Prairie Grove is vacant, creating the potential for development that could complement the potential Town Center and TOD.

Other notable land uses within the 2-mile boundary include:

- » Prairie Grove Public Works Facility
- » Nunda Township offices
- » Terra Cotta Industries
- » Illinois American Water Treatment Plant
- » Prairie Ridge High School (within Crystal Lake)
- » Prairie Ridge Conservation Area
- » Thunderbird Lake
- » Old Top Farm Golf Course

The Prairie Path bike trail also runs along the Union Pacific Railroad.

## Zoning

Within the primary Study Area (½-mile boundary), less than half of the land parcels are annexed by the Village of Prairie Grove. These annexed parcels are designated as the one of the following zoning districts:

- » **IT (Industrial/Transitional):** Cobblestone Woods
- » **I (Industrial):** Illinois American water tower
- » **T (Transitional):** Vacant/undeveloped land

The majority of land located in the primary Study Area is presently within McHenry County jurisdiction.

Within the larger 2-mile boundary, land is further split among various jurisdictions, including Prairie Grove, McHenry County, and the adjacent communities of McHenry, Bull Val-

ley, and Crystal Lake. The Zoning Map illustrated in Figure 3-1 shows the zoning classifications for the land within both the ½-mile and 2-mile boundaries, including:

- » **T (Transitional):** A large percentage of the land within the 2-mile boundary and incorporated within Prairie Grove is designated as the T (Transitional) zoning district, which creates the opportunity to provide multi-family residential uses, building the residential density needed to support a transit oriented development and housing diversity to sustain a unique Town Center for Prairie Grove.
- » **B (Business):** The B (Business) District also supports the concept of a potential Town Center and TOD, providing an assortment of retail, service, office, and other business uses to serve the community and enhance the viability of the collective developments.

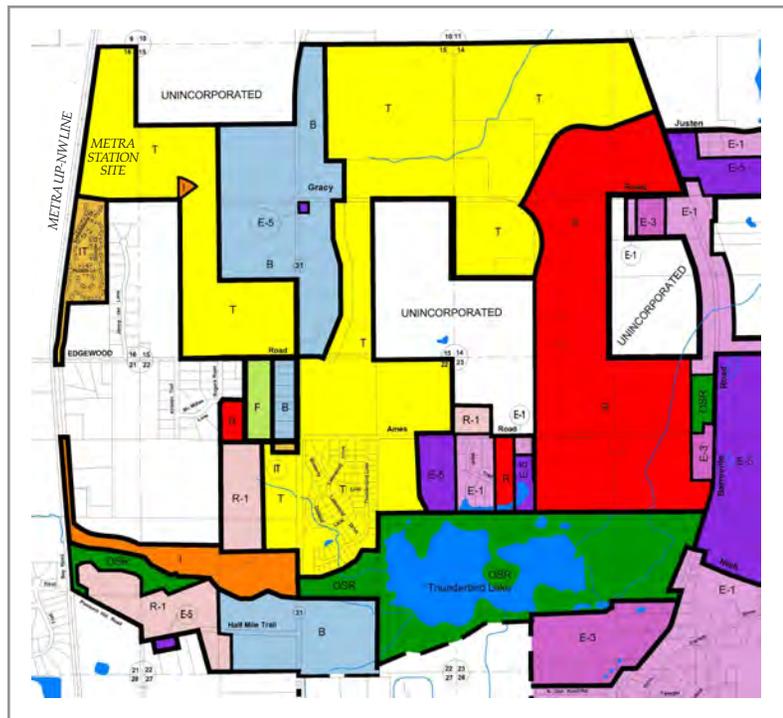


FIGURE 3-1  
Excerpt from the Zoning Map

### VILLAGE ZONING DISTRICTS

- E-5 ESTATE (5 ACRE)
- E-3 ESTATE (3 ACRE)
- E-1 ESTATE (1 ACRE)
- R-1 RESIDENTIAL (2 DU/A)
- R RESIDENTIAL (1 DU/A)
- T TRANSITIONAL
- IT INDUSTRIAL/ TRANSITIONAL
- I INDUSTRIAL
- B BUSINESS
- F FARMING DISTRICT
- OSR OPEN SPACE RECREATIONAL

Source: Prairie Grove Zoning Map, 2009.

Since a portion of the parcels around the proposed site for the Town Center and TOD are situated within unincorporated McHenry County, the Village will need to annex any parcels that it anticipates will be served by municipal services and contribute to the municipal tax base. In particular, the Wildflowers annexation agreement states that “the Property [is to] be zoned and developed within the corporate limits of the Village.” In addition, the Wildflowers property is to be permitted as a special use for planned development approval, which strongly supports the intent of this Plan to create a Town Center and support TOD in Prairie Grove.

Given the proximity of certain unincorporated parcels to the adjacent communities of McHenry, Bull Valley, and Crystal Lake, the Village of Prairie Grove may also need to consult its boundary agreements and coordinate with these communities to determine the appropriate course of action for any annexations. The OSR (Open Space Recreation) District, which is designed to protect open space and areas with unique natural resources, may be particularly important to preserve the environmentally sensitive land located west of the Union Pacific Railroad.

To properly accommodate any desired development, certain parcels may need to be rezoned, designated as a special use, or designated as a Planned Development. Designation as a

*The topographic profile of the Study Area will play a crucial role in developing site design concepts that are properly integrated into the natural environment.*

Planned Development is generally appropriate for TOD's, which typically have unique elements and character and require assembly of multiple parcels.

### ***Environmental Characteristics***

Although greenfields represent a significant portion of the Study Area, the environmental characteristics of the area will play a critical role in determining the extent to which certain land parcels are developed. The most prominent environmental features characterizing the Study Area include the following:

- » **Topography.** The topography of the Study Area varies greatly, creating scenic vistas along road corridors, atop high points, and within sloping valleys. This is particularly the case looking westward from the railroad tracks and the proposed commuter rail station site. The vary-

Courtesy: Tesla Associates, Inc.



*The rolling topography of Prairie Grove is apparent by the images shown above, including: the varying grade levels between the railroad and Prairie Path (left); the steep sloping topography along Illinois Route 31 (center); and the integration of retaining walls in site designs (right).*

ing topography is also apparent along certain segments of the railroad tracks, creating a prominent grade separation between the tracks and Prairie Path.

In many cases, the rolling topography of Prairie Grove is also integrated into the site design of developed properties, creating the need to utilize retaining walls and build structures into hillsides. There are certainly areas of significantly steep slopes, which will, if feasible, create opportunities to draft imaginative design concepts for creative and safe development sites.

The topographic profile of the Study Area will play a crucial role in developing site design concepts that are properly integrated into the environment, maintaining the pastoral character that distinguishes the identity of Prairie Grove.

» **Water elements.** While located at the edge of the 2-mile boundary, the most prominent water element is Thunderbird Lake. Owned by Terra Cotta Realty, Thunderbird Lake currently has limited access; however, the potential to link the Town Center and TOD to the lake via recreational trails could open the possibility to increase public access. In addition to the lake, a few streams traverse through the Study Area, creating the potential to integrate well-designed water-related elements such as bridges and culverts.

» **Wetlands.** Several high quality wetlands, classified by the Environmental Protection Agency (EPA) as Advanced Identification (ADID) wetlands, are present within the Study Area. ADID wetlands are generally considered unsuitable for disposal of dredged or fill material based upon the functional value they provide to maintain natural characteristics such as habitats, stormwater storage, and water quality. The largest wetlands are located in prominent environmental areas, including stream corridors, the area around Thunderbird Lake, and the area west of the railroad tracks designated by Nunda Township as open space. Smaller wetlands are interspersed throughout both the ½-mile and 2-mile boundaries. Whether large or small, wetlands provide vital benefits to both the natural and built environments, reinforcing the need to carefully consider how they will be integrated into the design and function of the proposed Town Center and TOD.

*Wetlands provide vital benefits to both the natural and built environments, reinforcing the need to carefully consider how they will be integrated into the design and function of the proposed Town Center and TOD.*

» **Floodplain.** Floodplains in the Study Area are fairly limited. In the immediate ½-mile boundary, the only floodplain runs west of the railroad tracks. Since this area is designated for open space by Nunda Township, consideration of this particular floodplain for potential recreational purposes should be explored, as development will be highly constrained in areas designated for open space. Other floodplains within the larger 2-mile boundary will have very little impact on the Town Center and TOD Plan, as these floodplains are located in areas that will unlikely be considered for development as part of this plan. The floodplains that may have an impact

Courtesy: Tesla Associates, Inc.



*Water elements, such as the two streams shown above, can be integrated into site designs for the Town Center and TOD. For example, streams can create a natural barrier between adjacent uses. Well-designed bridges and culverts can also enhance the built environment while protecting natural elements.*

on the Town Center and TOD Plan are designated by FEMA as an “A” zone, which is defined as a “high risk area” where there is “a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage.”<sup>5</sup>

As specified in the Wildflowers annexation agreement, the property owner “acknowledges that base flood elevation engineering studies of the Property (‘BFE Studies’) have not been completed and certain areas are subject to flood risk (‘BFE Areas’).” The annexation agreement

<sup>5</sup> Definitions of FEMA Flood Zone Designations (<http://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%20Flood%20Zone%20Designations>)

FIGURE 3-2  
*Nunda Township Proposed Open Space*



Source: *Prairie Grove Comprehensive Plan (excerpt from the Community Facilities & Open Space Plan)*, 2006.

specifies recommendations for mitigating the three BFE Areas.

As a result, floodplains and flood areas will need to be carefully considered when drafting development plans for the Town Center and TOD.

In addition to topography and water-based environmental elements, the Study Area also has a few areas with notable tree masses, which should be carefully integrated into the design of the Town Center and TOD.

As identified on the Community Facilities & Open Space Plan in the Prairie Grove Comprehensive Plan, significant amounts of land are designated as “Nunda Township Proposed Open Space”, which reflects the recommendations from the Nunda Township Proposed Open Space Plan to acquire 25 open space areas/properties for environmental protection. Four of these 25 open space areas/properties are within the Village of Prairie Grove and its planning jurisdiction, including the area west of the railroad tracks and a few others within the 2-mile boundary. While development concepts for the Town Center and TOD will consider Nunda Township’s recommendations to preserve these areas as open spaces, the potential to create recreational opportunities to complement the offerings in the Town Center will be explored. The open space areas are illustrated on the map in Figure 3-2, which is an excerpt from the Community Facilities & Open Space Plan in the Comprehensive Plan.

While many of the parcels within the Study Area are considered greenfields, some parcels have existing uses on them,

*While development concepts for the Town Center and TOD will comply with Nunda Township’s open space recommendations, the potential to create recreational opportunities will be explored, where feasible.*



Located west of the intersection of IL Route 31 and Gracy Road, the Illinois American water tower is part of an existing water and sewer system that will provide utility service to the proposed Town Center and TOD.

some of which may have created hazardous or environmentally harmful conditions to the site (either on the ground or subsurface). As a result, any parcel considered for development may require environmental assessment and remediation to ensure feasibility for development and suitability for certain types of desired uses. Limitations to develop certain parcels will vary depending on the extent of environmental impact and remediation, if any exist.

### Water & Sewer Service

While a majority of the Prairie Grove community obtains water and sewer utilities via private wells and septic systems, such water and sewer provisions are prohibited by the Wildflowers annexation agreement. Rather, the Study Area “shall be developed with sanitary sewer and water utilities operated by private companies serving members of the public.” In addition to connection to water and sewer service, the Wildflowers annexation agreement states that a lift station shall be provided to provide water service to different parts of the development.

With the existing Illinois American water tower and water and sewer lines already in place with sufficient capacity, the Town Center and TOD will adequately be served with water and sewer service.

### Sustainability

Village officials and Steering Committee members envision the Town Center and TOD Plan becoming an archetypal example of a sustainable development for other communities throughout McHenry County. With a rich array of environmental elements that uniquely characterize McHenry County, taking a pioneering role in developing a planning and design approach for the Town Center and TOD that focuses on sustainability and environmental stewardship will help the Village of Prairie Grove build itself as a regional leader within the County and beyond. Methods such as LEED-ND and Conservation Development can help Prairie Grove become a sustainability pioneer.

### Leader in Energy & Environmental Design Neighborhood Development (LEED-ND)

One potential method to help foster a prominent sustainability focus for the Town Center and TOD Plan is for the Village to participate in the U.S. Green Building Council’s **LEED-Neighborhood (LEED-ND) program**<sup>6</sup>. The LEED-ND program is based on a rating system that integrates various principles of “green,” mixed use, transit oriented development. It is important to note that seeking LEED-ND status is not the driving force of the Plan; rather, the goals and concepts supporting the Plan will lend themselves to the Village seeking certification under LEED-ND. Figure 3-3 provides an overview of LEED-ND.

<sup>6</sup> LEED-ND is an acronym for Leader in Energy and Environmental Design –Neighborhood Development.



Encouraging healthy living by creating pedestrian- and bike-friendly communities is one of the key benefits of the LEED-ND program.

Currently under a national pilot program, LEED-ND emphasizes the creation of compact, walkable, vibrant, mixed use neighborhoods with connections to nearby communities and encourages compact development patterns and the selection of sites that are within or adjacent to existing development in order to minimize habitat fragmentation and preserve areas for recreation. The benefits of LEED-ND include:

- » Reduction of urban sprawl and encroachment on agricultural lands
- » Support for compact development and healthy living

FIGURE 3-3  
**Overview of LEED-ND**

“The LEED for Neighborhood Development (LEED-ND) Rating System integrates the principles of smart growth, urbanism and green building into the first national system for neighborhood design. LEED certification provides independent, third-party verification that a development’s location and design meet accepted high levels of environmentally responsible, sustainable development. LEED for Neighborhood Development is a collaboration among USGBC, the Congress for the New Urbanism and the Natural Resources Defense Council.”



- Official description from the U.S. Green Building Council website

The LEED-ND Rating System evaluates a project using the following criteria:

- Smart location and linkage
- Neighborhood pattern and design
- Green construction and technology
- Innovation and design process

Source: U.S. Green Building Council.

- » Protection of natural resources and environments
- » Increase in transportation options and decrease in automobile dependency
- » Reinforcement of municipal policies to encourage strong community development and environmental stewardship

LEED-ND moves beyond the individual building envelope to the neighborhood scale by focusing on smaller location and neighborhood design. In addition, LEED-ND encourages convenient and efficient transportation options such as trains, buses, car pools, bicycle lanes, and sidewalks.

In order to obtain LEED-ND certification, a neighborhood must accrue a number of points based upon a rating system, in which points are awarded based on the four categories listed in Figure 3-3.

FIGURE 3-4  
**Components of Sustainable Development**

- Environmental integrity** involves protection and improvement of the natural environment by enhancing it and increasing biodiversity through sound decisions in land use, development, and stewardship practices.
- Economic prosperity** is enhanced by supporting cost effective conservation development, improving stormwater management, and maintaining water quality, which will enhance community well being and development prospects.
- Community livability** ensures mobility and access to employment, recreational, education, and shopping opportunities, particularly when conservation development strikes a balance between the natural and built environments.

Source: “Conservation Development in Practice”, The Nature Conservancy & Chicago Wilderness.

FIGURE 3-5

**Principles of Sustainable Development**

- 1: Promote infill development and redevelopment where transportation facilities and utilities already exist to minimize impact on open and natural areas.
- 2: Locate and plan new development that protect natural resources and provide buffers between sensitive natural areas and intensive use areas.
- 3: Use the development process to enhance and restore streams, wetlands, and other water features to enhance their potential as recreational, natural, and aesthetic amenities.
- 4: Preserve permanent open space as an integral part of new development to protect natural areas and provide opportunities for recreation and environmental education.
- 5: Protect the value of water as a resource by promoting sound stormwater management practices, preserving groundwater resources, and maintaining natural hydrology.
- 6: Preserve the natural ecosystem and state of the environment by minimizing alterations to natural topography, soils, and vegetation.
- 7: Establish procedures that support the ongoing management of natural areas within developments as part of an overall strategy for achieving sustainability.
- 8: Design developments that support the sustainability of human and natural communities, including the social and economic dimensions.

*Adopted by Chicago Wilderness*

Source: "Conservation Development in Practice", *The Nature Conservancy & Chicago Wilderness*.

**Conservation Development / Sustainable Development**

**Conservation Development** is another potential method to encourage sustainability for the Town Center and TOD. Encouraging conservation of the natural environment and environmentally-friendly design, Conservation Development also employs best management practices for stormwater management to protect natural hydrology, prevent flooding, guard natural habitats, and manage water quality.

Although Conservation Development primarily focuses on the protection of the natural environment, it should advocate for all three components of the **Sustainable Development** concept, including environmental integrity, economic prosperity, and community livability, which are defined in Figure 3-4. In addition, Figure 3-5 summarizes the principles of sustainability, which were drafted through a collaboration of local government officials, developers, engineers, planners, site designers, and conservationists in 2004; the principles were adopted by Chicago Wilderness, which is "an alliance of that champions biodiversity and its contribution to the quality of life in the urban, suburban, and rural areas of the Chicago Metropolitan region."<sup>7</sup> Conservation Development (and the overarching concept of Sustainable Development) is applicable to all types of land uses, ranging from residential to commercial and industrial to office.

7 Mission for the Chicago Wilderness Alliance (<http://www.chicagowilderness.org/mission.php>).

Courtesy: Teska Associates, Inc.



This example of Conservation Development illustrates the careful integration of residential home sites with natural features, such as trees, ponds, streams, and open space, to create an environmentally sensitive site design. In addition, the open spaces and bike paths allow for active recreation, while the ponds offer stormwater management uses.

Courtesy: Tesla Associates, Inc.



Despite the growth and development occurring in adjacent communities, Prairie Grove has been able to maintain its rural heritage, ranging from old farm structures (left) to the visibility and usage of farm equipment (right). Agricultural elements can play a symbolic role in the design of the Town Center and TOD.

No matter which method is utilized and regardless of the attainment of LEED-ND certification, planning and designing the Town Center and TOD in a manner that strongly advocates for sustainability and environmental stewardship will provide many benefits to the Village and surrounding area. These benefits include protecting the environment, supporting sustainable stormwater management practices, encouraging healthy and active living, reducing sprawl and energy consumption, increasing transportation options, and reducing automobile dependence.

### **Community Character**

Just as important as creating physical buildings and spaces, incorporating community character into the design of these buildings and spaces ensures the Town Center and TOD will not only exemplify the characteristics that make Prairie Grove unique but also enhance the Village's identity within McHenry County and the Chicago metropolitan area. Recognizing the local elements that shape Prairie Grove's community character will be beneficial to the planning and design of development concepts for public spaces, gateways, streetscape, signage, architecture, and other urban design elements.

Prominent community characteristics include:

» **Rolling topography.** The varying topography creates scenic vistas and unique site design of properties through-

Courtesy: Tesla Associates, Inc.



Equine elements, such as horse stables (left) and even horse road crossings (right), are prevalent in and around Prairie Grove. While the horse can be viewed as a uniquely alternative form of transportation, equine elements can be integrated into urban design elements like gateways, signs, and trails.

out Prairie Grove. While the views of vast open spaces create attractive natural backdrops, the proper integration of built structures atop high points, into hillsides, and within valleys can have just as spectacular effects. As stated earlier, the topographic profile of the Study Area will influence site design concepts by properly integrating developments into the topography, maintaining Prairie Grove's pastoral character. It is important to note that the Wildflowers annexation agreement specifies mass grading parameters for certain parts of the Wildflowers property.

» **Agricultural and equine elements.** As one of the smaller communities within McHenry County, Prairie Grove has been able to maintain a rural feel, even as adjacent communities like McHenry and Crystal Lake continue to urbanize. Agricultural elements such as old barns, accessory structures, farmsteads, and agricultural tools and equipment (big and small) are fairly prominent in Prairie Grove and the immediate surrounding area. In addition, equine elements like horse stables, equestrian training grounds, and even horse road crossings are also noteworthy. These agricultural and equine elements can be incorporated into the design of structures as well as urban design features like gateways, signage, and streetscape elements.



From retail and agricultural businesses to parks and residential neighborhoods, the signage in Prairie Grove has a distinct rural character. The rustic quality of the materials (e.g. wood, stone, etc) and simple designs (e.g. font types, placement, etc) could be replicated in the Town Center and TOD.

- » **Rural-style signs.** Although some developments like Cobblestone Woods have large signs, many signs around Prairie Grove and the less urbanized adjacent areas have a rustic feel that is more fitting for a rural or less urbanized setting. Many of these rural-style signs are constructed of rudimentary materials such as wood, stone, and limited metal for brackets and bracings. The design of rural-style signs, including font types, layout, and placement (e.g. hanging down or protruding to the side), also indicate a rustic quality that could be replicated for the Town Center and TOD to maintain ties to Prairie Grove’s rural heritage, even in a dense and more urban development.
- » **Native prairie plantings.** A walk or drive through Prairie Grove clearly illustrates the growth and conservation of native prairie plantings throughout the Village and its surroundings. Whether they are preserved in their natural habitats or are planted as landscape features to accentuate the built environment, native prairie plantings should be maintained to sustain the natural quality of Prairie Grove’s community character.
- » **Terra cotta materials.** With its historic ties to the Village, Terra Cotta Industries is located south of the Study Area along Illinois Route 31. The potential use of terra cotta building materials in the Town Center and TOD could pay homage to the influential company and its storied link to Prairie Grove.



The natural quality of Prairie Grove’s character is accentuated by the prominent display of wildflowers and other prairie plantings, both within natural areas and as part of a manicured landscaping treatment for a home or business. For this project, prairie plantings will continue to define the community’s character.

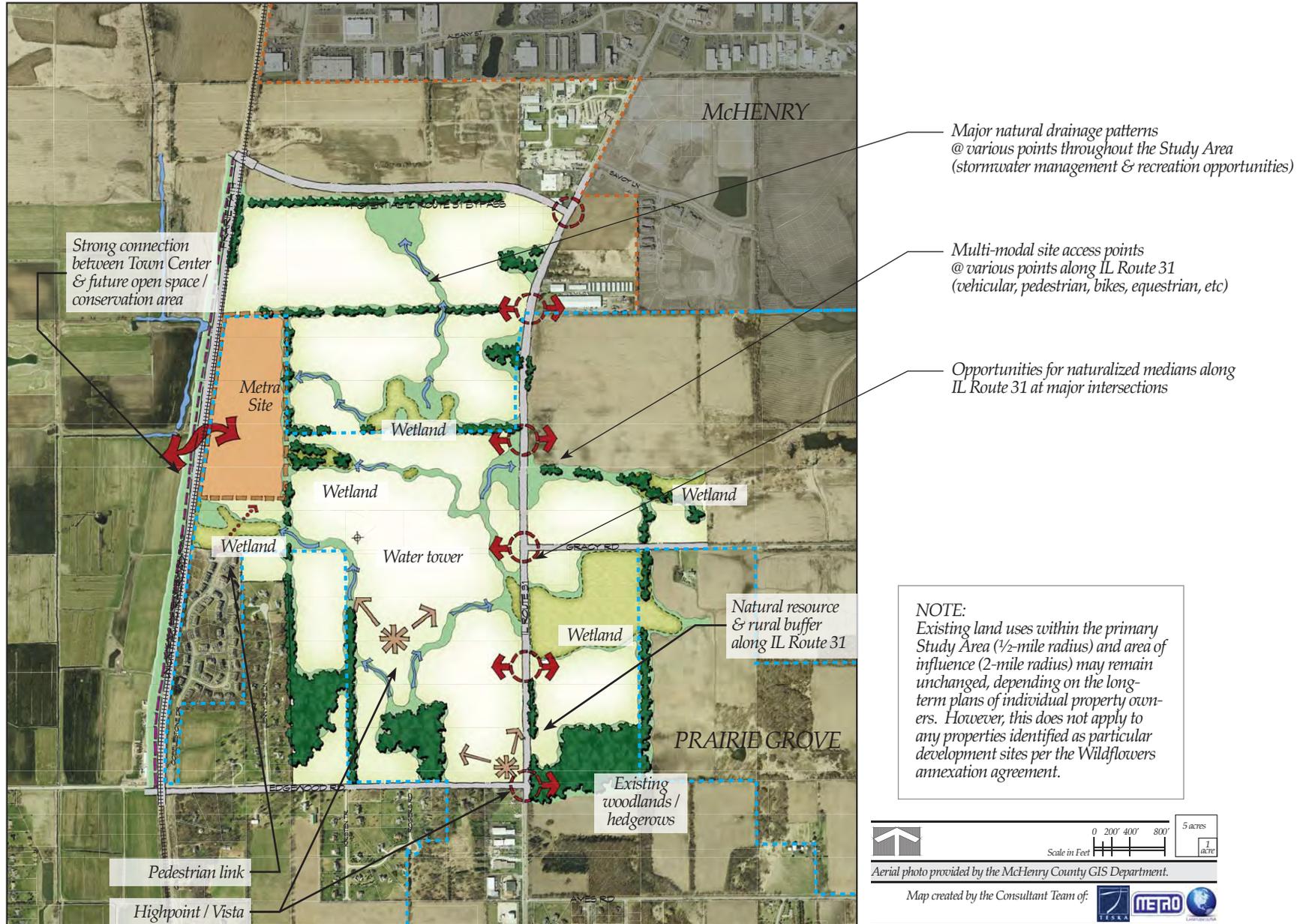
### Issues & Opportunities Map

The Issues & Opportunities Map (Primary View) in Figure 3-6 illustrates key planning issues that will have an impact on the planning and design of the Town Center and TOD. Key planning issues relate to environmental, transportation, and other design elements. Transportation issues are described in greater detail in the Transportation Assessment in Section IV. In addition, the Transportation Overview Map on page 4-8 illustrates additional transportation elements that are not depicted on the Issues & Opportunities Map. The intent of this map is to illustrate the present conditions of the site and the opportunities it may offer, which will inform planning, design, transportation, and market recommendations in the later phases of this project.

To consider the larger area of influence (2-mile radius), a regional view of issues and opportunities is shown in Figure 3-7, extending east to Barreville Road and west to Walkup Road / Crystal Lake Road.

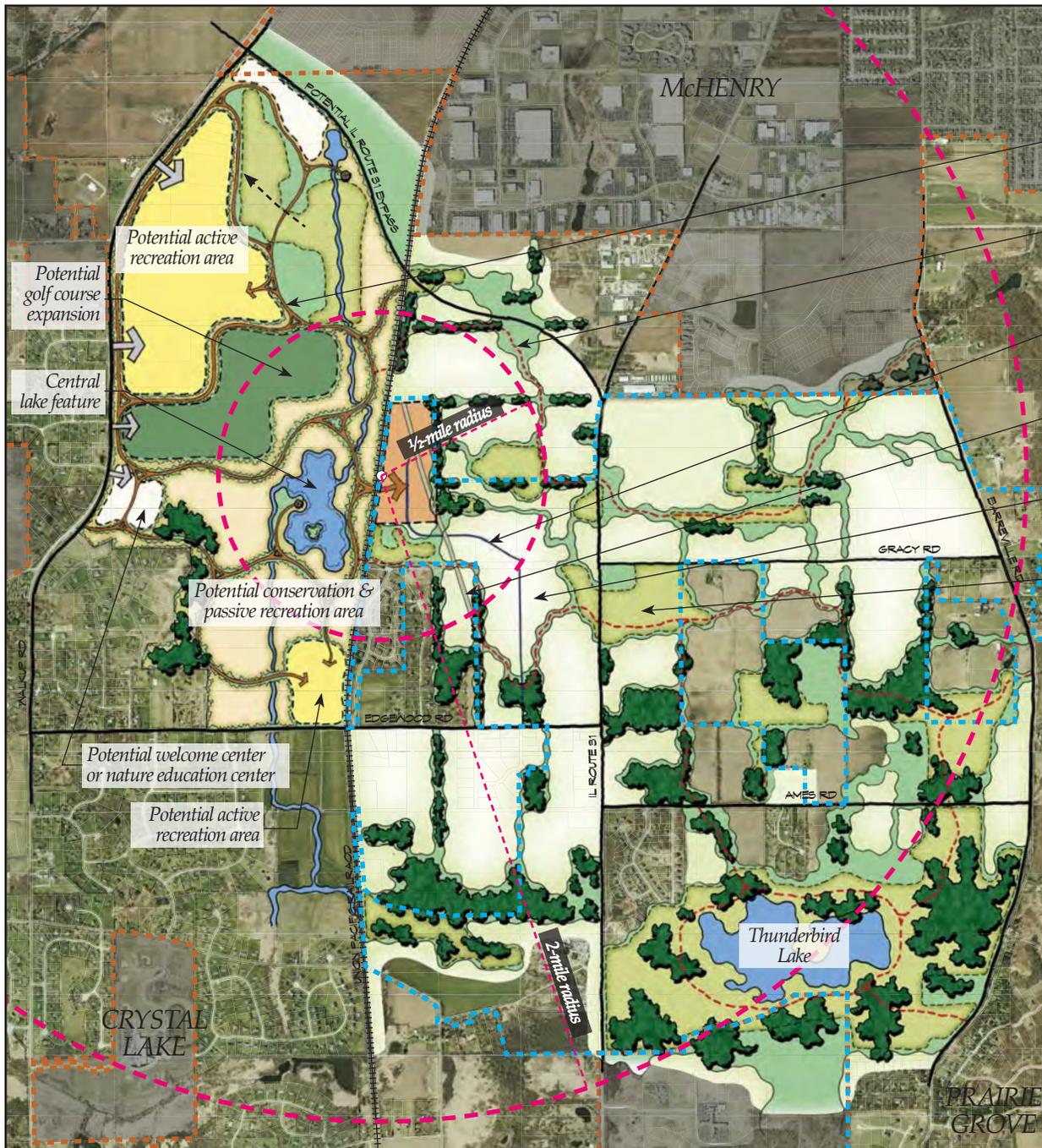
For reference, a Topography Map for the primary Study Area is provided in Figure A-6 in the Appendix.

FIGURE 3-6  
**Issues & Opportunities Map - Primary View**



Source: GIS mapping data provided by McHenry County; map prepared by Teska Associates, Inc.

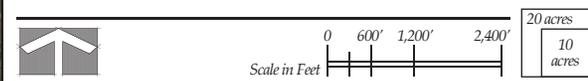
FIGURE 3-7  
Issues & Opportunities Map - Regional View



- Multi-modal trail network (pedestrian, bikes, equestrian, etc)
- Potential multi-modal trailway connections (pedestrian, bikes, equestrian, etc)
- Water easement (existing)
- Pipeline easement (existing)
- Potential development sites @ various points throughout the Study Area
- Potential conservation/open space areas @ various points throughout the Study Area

**NOTE:**  
Existing land uses within the primary Study Area (1/2-mile radius) and area of influence (2-mile radius) may remain unchanged, depending on the long-term plans of individual property owners. However, this does not apply to any properties identified as particular development sites per the Wildflowers annexation agreement.

Source: GIS mapping data provided by McHenry County; map prepared by Teska Associates, Inc.



Aerial photo provided by the McHenry County GIS Department.

Map created by the Consultant Team of:   

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## SECTION 4

# Transportation Assessment

The following presents a summary of the existing transportation systems and characteristics within the Study Area. Information is provided regarding existing traffic volumes, existing capacity analyses, public transportation characteristics, and key transportation issues and opportunities associated with the study area. The Transportation Overview Map (Figure 4-7) on page 4-9 illustrates an overview of transportation characteristics within the Study Area.

### ***Existing Traffic Conditions***

In order to gain an understanding of the traffic patterns in the area, manual traffic counts were conducted on a weekday morning (6:00 to 9:00 AM) and a weekday evening (4:00 to 7:00 PM) in September 2009, at the following intersections:

- » IL Route 31 / Gracy Road
- » IL Route 31 / Edgewood Road
- » IL Route 31 / Ames Road
- » Edgewood Road / Bay Road - Cobblestone Drive



*IL Route 31, which is the only regional arterial road serving the Study Area, carries approximately 25,150 vehicles per day.*

These time periods were chosen since they coincide with the anticipated peak periods of the surrounding roadway system, commuter rail stations, and many potential land uses that may be considered in the Town Center and TOD Plan. The traffic count data indicates that the weekday morning peak hour occurs from 6:30 to 7:30 AM and the weekday evening peak hour occurs from 4:15 to 5:15 PM.

In addition, 24-hour mechanical traffic counts were also conducted in September 2009 on IL Route 31, just north of Edgewood Road, and on Edgewood Road, just west of IL Route 31. The 24-hour counts indicate that the average daily traffic (ADT) on IL Route 31 is approximately 25,150 vehicles and the ADT on Edgewood Road is approximately 2,950 vehicles.

In general planning-level terms, two lane roadways can handle daily traffic volumes approaching approximately 15,000 vehicles. At that time, widening is typically needed to provide additional capacity with separate left-turn lanes at intersections and access locations. Once daily traffic volumes reach over 20,000 to 22,000 vehicles, additional travel lanes are needed in each direction. Clearly, IL Route 31 experiences daily traffic volumes that typically require additional travel lanes along with separate turn lanes.

The existing traffic counts are illustrated on the Existing Traffic Counts Map (Figure 4-6) on page 4-8.

Courtesy: McHenry County Blog



The Pingree Road station is one of the five Metra stations most commonly utilized by Prairie Grove residents.

### ***Commuter/Public Transportation Characteristics (Metra & Pace)***

Two public transportation services currently operate near the study area, but neither currently maintains a station or stop within Prairie Grove. The Union Pacific Railroad operates Metra service on the UP-NW Line from Ogilvie Transportation Center in Chicago to Harvard on the main line, and from Crystal Lake to McHenry on the branch line. The Metra UP-NW Line currently services a total of twenty-three stations.

The second form of public transportation, Pace suburban bus, provides local service through the Study Area between the

*Of the 44 Prairie Grove residents boarding a Metra commuter train along the UP-NW Line in 2006, 77% accessed the station via a single occupancy vehicle. None took a bus.*

Metra stations in downtown Crystal Lake, McHenry, and Fox Lake.

Further operational characteristics for each current transit service are outlined below.

#### **Metra**

As part of the proposed UP-NW Upgrade Project, a new station is proposed in Prairie Grove on the east side of the existing railroad, approximately due west of Gracy Road.

Data provided by Metra indicates that Prairie Grove residents currently utilize the existing Metra stations in Cary, Pingree Road, Crystal Lake, and McHenry. The greatest number of Prairie Grove commuters riding Metra use the Pingree Road Station and downtown station in Crystal Lake. Several riders travel to Cary to ride the train, while McHenry only experiences a few riders.

FIGURE 4-1  
***Mode of Access for Prairie Grove Residents - 2006***

Station	Total Boardings	Mode of Access					
		Drive Alone	Kiss-n-Ride	Carpool	Bus	Bicycle	Walk
Cary	11	100%	0%	0%	0%	0%	0%
Crystal Lake	15	57%	14%	29%	0%	0%	0%
Pingree Road	17	88%	0%	0%	0%	13%	0%
McHenry	1	0%	0%	100%	0%	0%	0%
Total	44	77%	5%	13%	0%	5%	0%

Source: Metra 2006 Origin-Destination Survey.

FIGURE 4-2  
**Metra Existing Weekday Boardings: Union Pacific / Northwest Line**

Station	Year										
	1983	1985	1987	1989	1991	1993	1995	1997	1999	2002	2006
Cary	457	478	516	615	732	853	973	899	951	1,035	988
Crystal Lake	907	954	1,084	1,105	1,248	1,316	1,463	1,495	1,501	1,579	1,370
Pingree Road	-	-	-	-	-	-	-	-	-	-	581
McHenry	101	74	199	115	131	179	162	154	159	140	101

Source: Metra Boarding and Alighting Counts.

In 2006, Metra conducted an origin-destination survey to determine the modal breakdown of how Metra riders arrive to the stations along the UP-NW Line. Based on the data, the highest percentage (77 percent) of Prairie Grove resident riders drive to one of the region's Metra stations in a single occupancy vehicle. Approximately 13 percent arrive by carpool and five percent of riders are dropped off (kiss-n-ride) at the station. The remaining riders from the Metra survey arrived by bicycle.

The mode-of-access data for the UP-NW Line stations utilized by Prairie Grove residents is summarized in Figure 4-1.

Figure 4-2 presents boarding count data collected by Metra between 1983 and 2006. As shown in Figure 4-2, the Cary and Crystal Lake Metra stations experienced relatively consistent growth in daily ridership from 1985 to 2002, while the McHenry Metra station experienced periods of both ridership growth and contraction.

In 2006, Metra collected boarding/alighting data and organized the information by time-of-day and inbound versus outbound direction. The data, consistent with most suburban commuter stations, indicates that most riders commute inbound from the Northwest suburbs towards Chicago in the

FIGURE 4-3  
**Year 2006 Station Boardings / Alightings By Time-Of-Day & Direction**

Station	AM Peak				Midday				PM Peak				Evening			
	Inbound		Outbound		Inbound		Outbound		Inbound		Outbound		Inbound		Outbound	
	On	Off	On	Off												
Cary	778	7	6	25	124	6	1	92	47	8	9	724	20	1	3	77
Crystal Lake	988	22	0	86	237	10	4	184	77	3	28	939	35	4	1	151
Pingree Road	448	2	4	25	73	8	0	45	36	0	2	439	16	1	2	81
McHenry	101	-	-	1	-	-	-	-	-	-	-	93	-	-	-	-

Source: Metra Boarding and Alighting Counts.

FIGURE 4-4  
**Historical Daily Ridership Data - Pace Bus Route 806**

Pace Route	Average Daily Ridership					
	1998	1999	2000	2001	2002	2003
Route 806	58	57	59	44	48	60

Source: RTAMS.

morning and vice versa in the evening. Figure 4-3 presents the year 2006 boarding/alighting data. It should be noted here that the Metra UP-NW Line provides inbound and out-bound service to the McHenry Metra station only three times daily: three inbound trains in the AM peak time period and three outbound trains, one in the AM peak and two in the PM peak.

#### **Pace Bus**

One Pace Bus route currently operates within the Study Area. Route 806 operates regular service primarily along IL Route 31 through the Study Area. Route 806 operates rush hour service between the Crystal Lake and McHenry Metra stations, with eventual connection to the Fox Lake Metra station along the Milwaukee District North Line. The route was designated a paratransit route as of April 2004 and ridership data has not been made available since then. The historical ridership data available for Route 806 is presented in Figure 4-4.

As summarized in Figure 4-4, daily Pace Route 806 along IL Route 31 has maintained a generally stable ridership through 2003.

#### **Existing Roadway Characteristics**

The roadways in the site vicinity include IL Route 31, Gracy Road, Ames Road, Edgewood Road, and Bay Road (Cobblestone Drive), and the Prairie Path bikeway. These roadways are described below in more detail.

**IL Route 31** is a north/south, two-lane (rural cross-section) arterial roadway with a posted speed limit of 45 miles per



The current gravel roadway leading to the proposed commuter rail parcel is slightly offset from the intersection of Gracy Road and IL Route 31.

hour (MPH). Currently, IL Route 31 provides one lane in each direction throughout the Study Area and currently does not provide auxiliary turn lanes at Gracy Road, Edgewood Road, or Ames Road. A paved shoulder is currently used to bypass left turns on the northbound approach on IL Route 31 at Edgewood Road.

It should be noted that the Illinois Department of Transportation (IDOT) has designated IL Route 31 as a Strategic Regional Arterial (SRA). The SRA system was developed to establish long-term corridor plans, address regional mobility and intercity travel along arterial roadways, and deal with urban congestion due to rapid Chicagoland growth in developing areas. Stricter access controls, minimum spacing between traffic signals (¼-mile), and identification/preservation of long-term right-of-way needs along designated SRA routes are some of the strategies used to accomplish these goals.

**Gracy Road** and **Ames Road** are both east/west, two-lane collector roadways under the jurisdiction of the Village of Prairie Grove. At both westbound approaches to their unsignalized T-intersections with IL Route 31, Gracy Road and Ames Road each provide a single lane under stop sign control. The posted speed limit on both roadways is 35 MPH.

**Edgewood Road** is an east/west, two-lane collector roadway extending west from IL Route 31. At its eastbound approach to IL Route 31, Edgewood Road provides one shared left/right



The *Prairie Path* runs parallel along the west side of the Union Pacific Railroad, then switches to the east side of the tracks south of Edgewood Road, running in between the railroad and Bay Road.

lane and is under stop control. At its unsignalized, two-way stop-controlled intersection with Bay Road (Cobblestone Drive), Edgewood Road provides one lane with shared turning movements in both directions. Edgewood Road is under the jurisdiction of the Village of Prairie Grove and maintains a posted speed limit of 45 MPH.

**Bay Road - Cobblestone Drive** is a north/south, two lane roadway along the east side of the Union Pacific Railroad. South of Edgewood Road, Bay Road serves as a collector roadway. North of Edgewood Road, Cobblestone Drive is a local street serving the Cobblestone Woods townhome residential development. At its unsignalized intersection with Edgewood Road, the north leg (Cobblestone Drive) and the south leg (Bay Road) each provide a single lane with shared turning movements operating under stop sign control. The speed limit on Bay Road is 35 MPH while the speed limit on Cobblestone Drive is 25 MPH.

The ***Prairie Path*** is a paved north/south multi-use trail for bicycles and pedestrians that runs parallel to the Union Pacific Railroad. Within the Study Area, the path runs along the west side of the rail tracks north of Edgewood Road and along the east side of the tracks south of Edgewood Road. Posted signs direct bicyclists to walk their bikes while crossing the at-grade



While the Union Pacific Railroad primarily runs parallel to Bay Road, a spur branches off in a southeasterly direction, crossing the road towards the Terra Cotta Industries site.

crossing on Edgewood Road. The *Prairie Path* is maintained by the McHenry County Conservation District.

As part of the larger 475-mile Grand-Illinois Trail, the *Prairie Path* links the Mississippi River and the Quad Cities, Rockford, Chicago, Lake Michigan, and numerous attractions along the way.

### **Existing Capacity Analysis**

Capacity analyses were conducted to evaluate the overall traffic operations of key intersections for existing conditions. The analyses were conducted for the weekday morning and evening peak hours.

The effectiveness of how well an intersection operates is measured in terms of Levels of Service (LOS). Levels of Service range from LOS "A" (best) to LOS "F" (worst). The minimum intersection LOS that is generally accepted by reviewing jurisdictions is LOS "D". Figure 4-5 summarizes the capacity analyses for existing conditions.

As shown in Figure 4-5, the critical movements at intersections along IL Route 31 operate at acceptable levels of service in both peak hours. However, as can be observed along the

corridor during both peak hours, the minor street approaches of Gracy Road, Edgewood Road, and Ames Road at IL Route 31 all experience delay with less than desirable levels of service. This is common for minor street approaches, particularly left-turn movements, accessing arterials from a stop sign. The

FIGURE 4-5  
**Year 2009 Existing Intersection Level of Service (LOS)**

Intersection	Existing Conditions	
	AM Peak	PM Peak
IL Route 31 / Gracy Rd	SB Left: A WB App: D	SB Left: A WB App: F
IL Route 31 / Edgewood Rd	NB Left: B EB App: F	NB Left: B EB App: E
IL Route 31 / Ames Rd	SB Left: A WB App: E	SB Left: B WB App: F
Edgewood Rd / Bay Rd - Cobblestone Dr	NB App: B SB App: B EB Left: A WB Left: A	NB App: B SB App: B EB Left: A WB Left: A
<b>Roadway Segments</b>		
IL Route 31 (Edgewood Rd - Gracy Rd)	E	E
IL Route 31 (Ames Rd - Edgewood Rd)	E	E
Edgewood Rd (Bay Rd - IL Route 31)	B	B

KEY: NB - Northbound    EB - Eastbound  
SB - Southbound        WB - Westbound  
App - Approach

Source: Metro Transportation Group.

relatively high traffic volumes on IL Route 31 further impact the issue with only a single lane in each direction.

Consistent with experiences driving along IL Route 31, the analysis of roadway segment capacity indicates LOS E along IL Route 31 through the Study Area. This confirms previous discussion regarding the traffic volumes counted along IL Route 31 (over 25,000 vehicles per day) and the typical volumes that can be accommodated by a two-lane road.

### **Planned Roadway Improvements**

The following summarizes various transportation planning/design studies and planned improvement project as they relate to the Study Area.

### **IDOT FY 2010-2015 Highway Improvement Program**

According IDOT representatives, there are a few engineering studies and minor intersection improvements included in IDOT's FY 2010-2015 Highway Improvement Program that would ultimately lead to a positive effect on traffic operations in the Study Area. Although construction funding has not yet been secured and a project timeline is not established, preliminary engineering studies have been approved related



As seen from this southward aerial view, cars making left-turn movements from a minor street (such as Edgewood Rd) onto a major arterial (such as IL Route 31) often experience delays, which is attributed to different aspects such as a non-signalized intersection, single lane traffic in each direction, and general traffic volumes on a major arterial road.

to constructing additional lanes along IL Route 31 between IL Route 176 and Bull Valley Road. Additionally, funding has been secured to improve the intersections on IL Route 31 at Ames Road and at Edgewood Road. The intersection improvements are considered minor as they primarily include channelization for right-turning movements to/from IL Route 31; thus, allowing some vehicles to avoid waiting behind left-turning vehicles from Ames Road or Edgewood Road to IL Route 31.

#### **IL Route 31 McHenry County Bypass Feasibility Study**

In April 2004, a study prepared for the McHenry County Highway Department and the IDOT evaluated the feasibility of various alternative alignments for a bypass to ease traffic congestion on IL Route 31 and IL Route 120 through downtown McHenry. The southern terminus of the studied bypass corridor is located on IL Route 31 just north of Gracy Road.

As it pertains to the Study Area for the Prairie Grove Town Center and TOD Plan, the general key findings of the study include an interchange with IL Route 31 at its southern end (approximately 1/2-mile north of Gracy Road) and overpasses spanning the Union Pacific Railroad and the Prairie Path.

Further engineering design and a detailed environmental impact assessment are necessary. At this time, timelines and

funding towards additional engineering design and implementation of such a bypass are not secured.

#### **Strategic Regional Arterial - IL Route 31**

As previously noted, IL Route 31 is designated as a Strategic Regional Arterial (SRA) by IDOT. The following is a general summary of the corridor plan segment between IL Route 176 and Bull Valley Road:

- » IL Route 176 to Gracy Road: Two through lanes in each direction with a 30-foot wide median within a 120-foot wide desirable ultimate right-of-way.
- » Gracy Road to Bull Valley Road: Two through lanes in each direction with a 46-foot wide median within a 170-foot wide desirable ultimate right-of-way in the West McHenry Bypass Corridor.
- » Interconnected signal systems from IL Route 176 to mid-mile collector and from Edgewood Road to Gracy Road.
- » Realignment of Ames Road to intersect IL Route 31 opposite Edgewood Road.

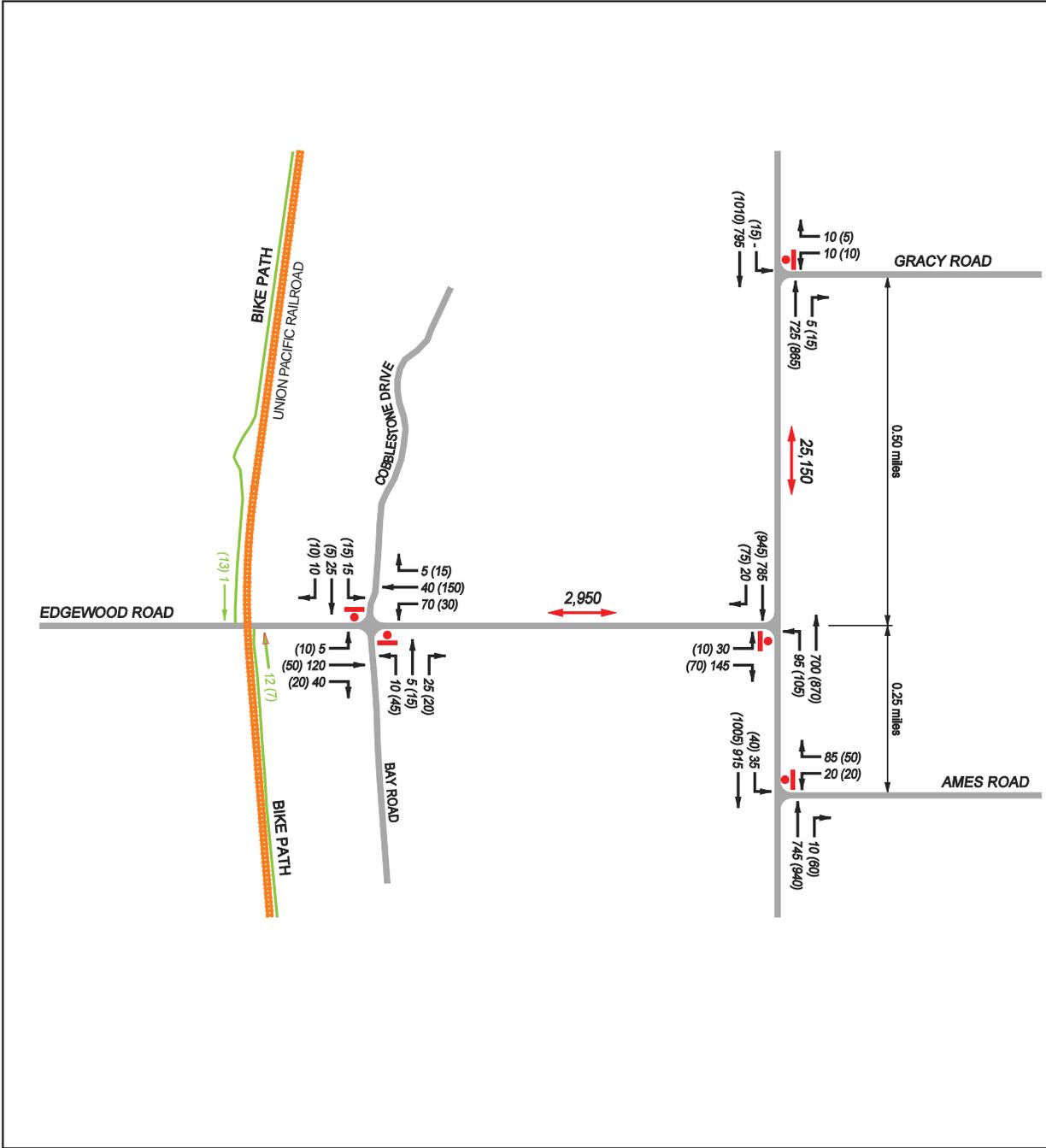


FIGURE 4-6  
Existing Traffic Counts Map

- XX AM Peak Hour (6:30 - 7:30 AM)
- (XX) PM Peak Hour (4:15 - 5:15 PM)
- ⊥ Stop Sign
- XX,XXX Daily Traffic Volume

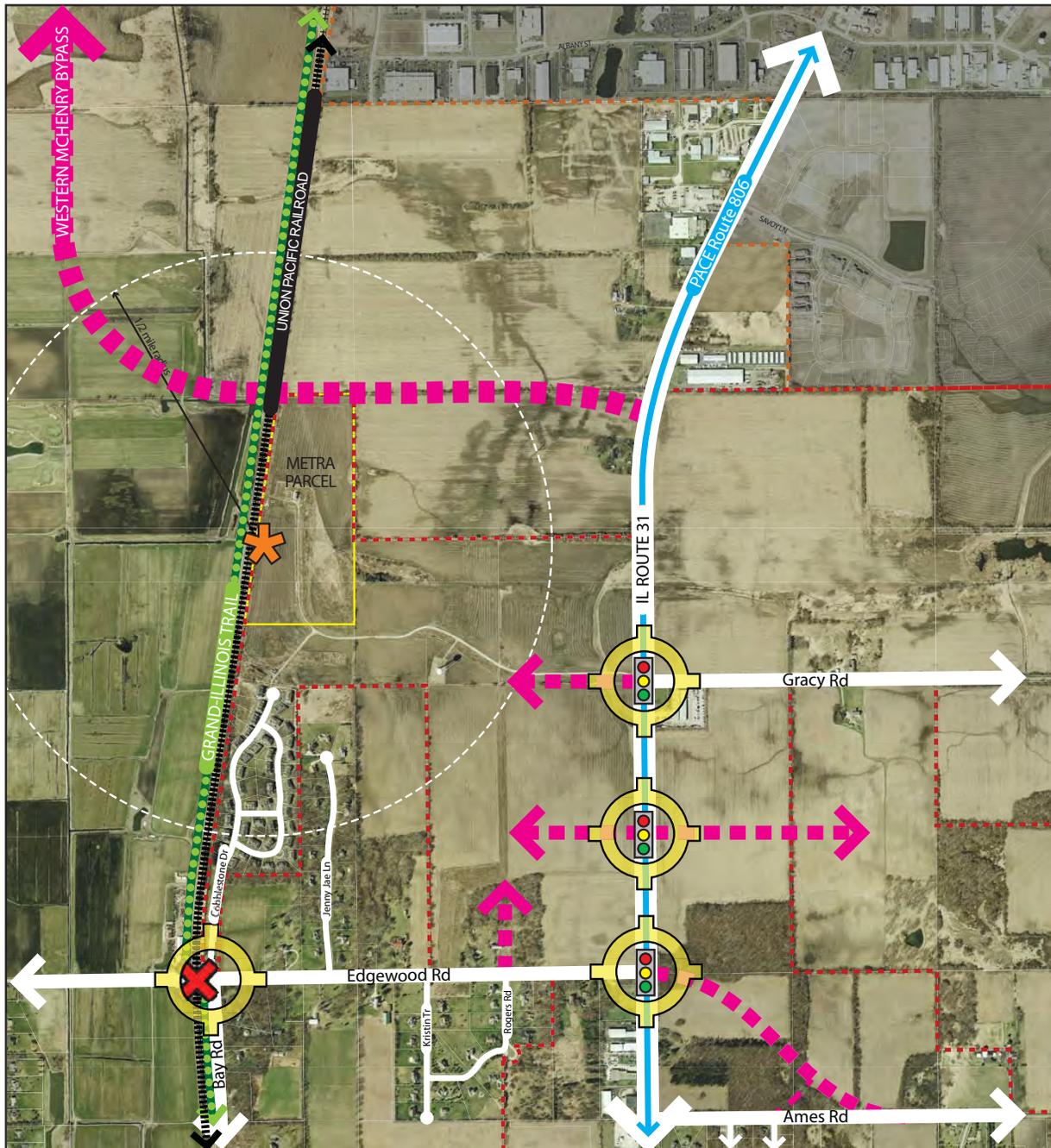
Scale in Feet: 0 200' 400' 800'

5 acres  
1 acre

Aerial photo provided by the McHenry County GIS Department.

Map created by the Consultant Team of:

FIGURE 4-7  
 Transportation Overview Map



- Arterial Roadway
- Collector Roadway
- Local Street
- Planned / Potential Roadway
- Railroad
- Bus Route
- Bike Trail
- Proposed Metra Station
- At-Grade Railroad Crossing
- Key Intersection
- Potential Traffic Signal

Scale in Feet: 0 200' 400' 800' 5 acres / 1 acre

Aerial photo provided by the McHenry County GIS Department.

Map created by the Consultant Team of:

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SECTION 5

# Market Assessment

This section of the report addresses a broad range of topics that have a direct bearing on the economic feasibility of a TOD in the Village of Prairie Grove. This is a preliminary report that summarizes our initial findings as part of the assessment of existing conditions for the study area. More detailed recommendations regarding specific market opportunities and project strategies will be developed with concept plans in subsequent phases of work.

We have focused on data that specifically addresses the feasibility of potential retail stores, businesses, services, conveniences, and residential units. Depending on the availability of data, we have studied various levels of geography including the Upper Midwest Region; Chicagoland; Cook, Lake, McHenry and Walworth Counties; and 1-mile, 2-mile and 3-mile rings around Metra stations along nearby lines.

We have also delineated Primary and Effective Trade Areas for the TOD project, representing the geographic area from

which 50% (primary) and 70% (effective) of new patrons will be derived. These patrons include:

- » Potential shoppers at retail destinations in the project;
- » Visitors to entertainment venues;
- » Transit riders of the proposed Metra station;
- » Potential buyers of new residential units; and
- » Employees at new businesses.

The data results are provided in three subsections, as follows:

- » Subsection 1.0 Demographic Profiles (Retail Demand)
- » Subsection 2.0 Retail Data and Nearby Metra Stations (Retail Supply)
- » Subsection 3.0 Residential Data (Supply and Demand)

Finally, we also reviewed transit data from other markets to gain a better understanding of behavior patterns among “typical” transit riders, and to demonstrate trends in ridership volumes. A narrative and relevant data will be added in the next draft of our report.

### *Subsection 1.0 Demographic Profiles (Retail Demand)*

This subsection of our report focuses on a few key variables that retailers use to measure market demand and opportunity, specifically:

- a) Employment trends;
- b) Population and growth; and
- c) Per capita income and growth.

Courtesy: Tesla Associates, Inc.



As a community still rooted in its rural heritage, some of the recreation/entertainment opportunities offered by Prairie Grove focus on horses.



These three variables are good measures of consumer confidence and capacity to spend on retail goods.

Retail shoppers are comprised of individuals, so we always study population rather than households, and per capita income rather than household income when testing a market for retail potential. In comparison, home buyers are comprised of households, so they become the focus of our study when testing for potential residential units.

**Recovering Unemployment**

Although unemployment rates had been spiking through July 2009, they have fallen slightly in August 2009. We are optimistic that unemployment will begin significant recoveries through 2010, even if we continue to see high numbers through the winter of 2009. Meanwhile, unemployment rates in McHenry County are currently keeping pace with both Cook and Lake County, and with averages for the State of Illinois. McHenry County has a history of having a lower un-

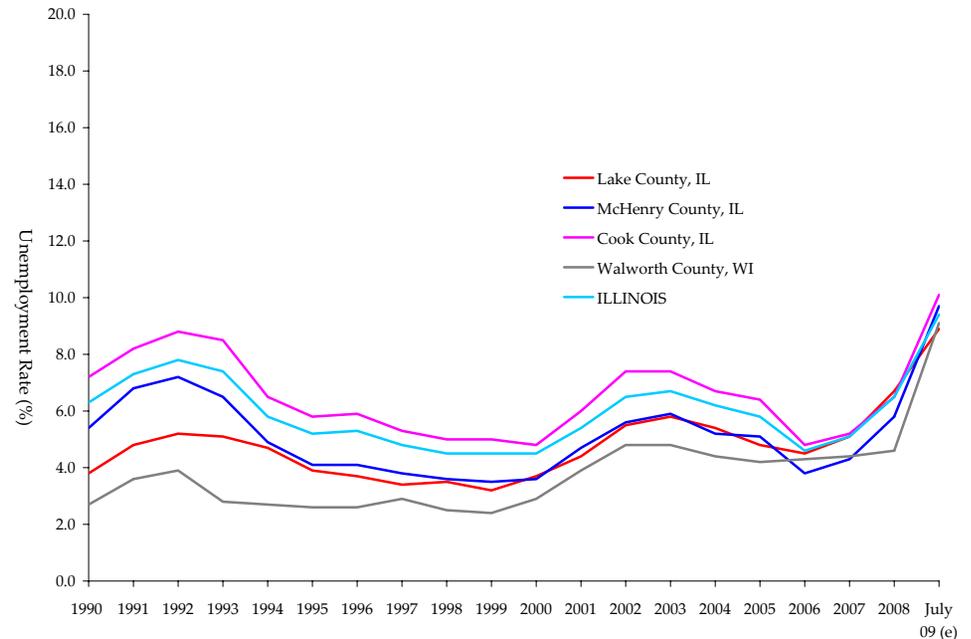
employment rate than Cook County, but that gap has closed since 2006. Unemployment rate trends for selected Chicagoland counties are shown in Figure 5-1 (below) and Figure A-1 (in the Appendix).

**Population v. McHenry & Crystal Lake**

Population and growth are critical variables in testing a market's near- and long-term capacity for retail. It is also helpful to provide "analogs" for a subject market for perspective. By comparing Prairie Grove with neighboring McHenry and Crystal Lake, we are striving to identify differences and similarities that could point to opportunities.

As illustrated in Figure 5-2, the existing population within a 1-mile ring of the proposed Prairie Grove Metra station is currently very small, and pales in comparison to McHenry and Crystal Lake. However, the population within 2 miles of Prairie Grove is similar to the population within 1 mile of Crystal Lake, and the population within 3 miles of Prairie

FIGURE 5-1  
**Selected Chicagoland Counties**  
**Annual Unemployment Rates, 1990 - June 2009 <sup>(e)</sup>**



<sup>(e)</sup> The June 2009 figures are seasonally adjusted, preliminary estimates. All figures are percents of the total Labor Force, Ages 16+.

Source: Bureau of Labor Statistics - July 2009; Analysis by LandUse\USA in collaboration with Teska Associates, Inc.



Grove is similar to the population within 2 miles of Crystal Lake. In general, the data suggests that if the planned TOD project is to include any meaningful amount of retail and/or services, then the market also needs to achieve population growth throughout the 3-mile area, and not just within 1 mile of the new station. The issue of balancing land conservation with population growth will be addressed again in upcoming public meetings, workshops and charrettes.

**Population v. Other Metra Stations**

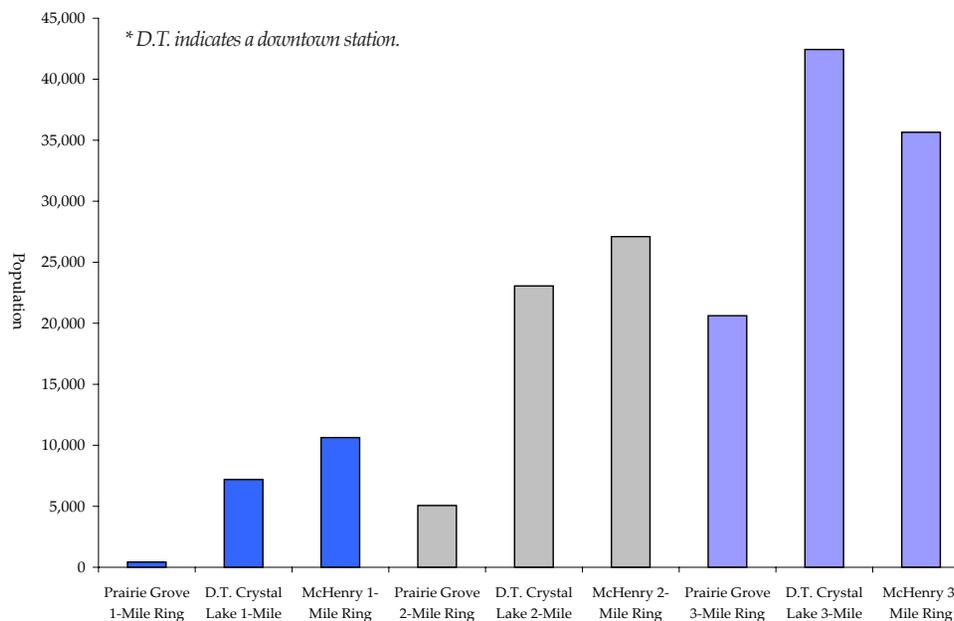
We decided to test the data a little further and determine just how much Prairie Grove needs to “catch up” in terms of population size to support a meaningful amount of retail in the TOD. As indicated in the charts in Figure 5-3, a comparison with other existing Metra stations along nearby lines reveals that Prairie Grove is in fact the smallest market, regardless of whether we test for the population within 1, 2 or 3 miles. However, the gap shrinks as we move farther away from the Metra Stations.

In fact, the gap between Prairie Grove and Fox Lake / Gray-slake / Ingleside within 1 mile is about 4,000 people. The gap between Prairie Grove and these same markets within 2 miles is nearly the same, or 4,000 to 5,000 people. Finally, the gap between these same nearby Metra Stations and within 3 miles also is about 5,000 people.

To close the gap, we recommend that Prairie Grove strive for population growth (and new residential units) within the 3 miles of the new Metra station, with the vast majority of new residential units being developed within 1 mile. This approach supports smart planning principles and is most likely to result in a compact design that enables continued land conservation in other parts of the Village.

However, these recommendations in no way imply the 5,000 new residents living within one mile of the Metra station are sufficient to support new retailers and businesses in the project. Regardless of where the growth occurs (i.e., within

**FIGURE 5-2**  
**1, 2 and 3-Mile Ring Population - 2009**  
**Prairie Grove, McHenry & Crystal Lake**  
**Metra Stations**



Source: Claritas, Inc.; Analysis by LandUse|USA in collaboration with Teska Associates; September 2009.



1 v. 3 miles), new retailers will depend on shoppers from throughout the entire trade area to achieve sustainable sales and profit.

**Per Capita Income**

The second important variable in measuring retail opportunity is Per Capita Income. As indicated in the top chart in Figure 5-4, a comparison of Prairie Grove’s 3-mile area with existing Metra stations along the North and Northwest lines shows that the market is attractive, and does not fall short on income. Additional data in Subsection 3.0 will demonstrate a market need for better-priced multi-family units, which could help

in attracting even more affluent households, which in turn could translate to even higher per capita income levels – and higher expenditure potential.

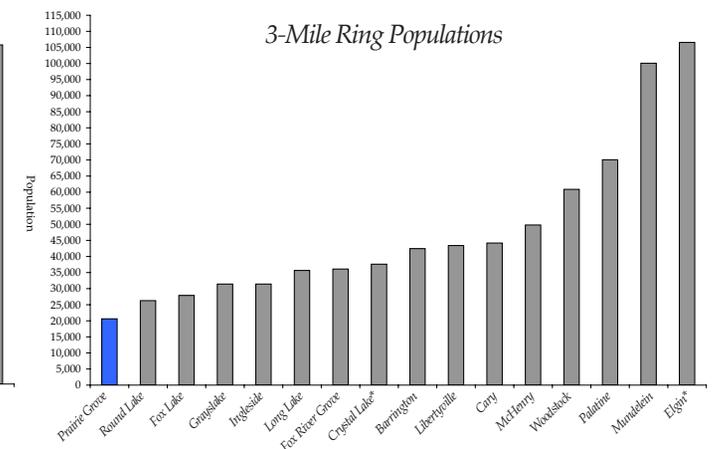
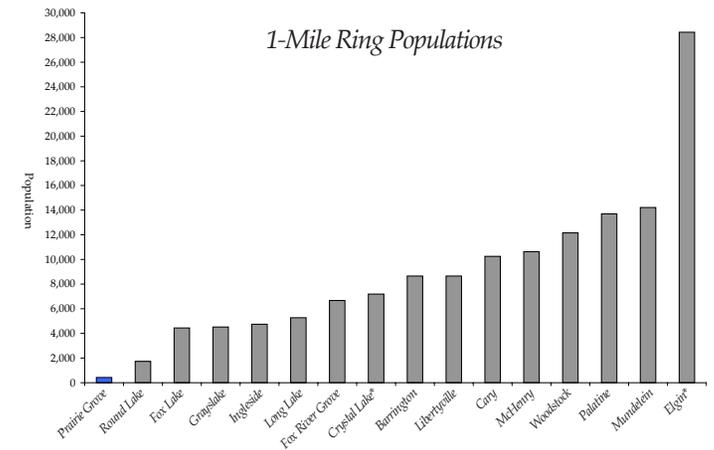
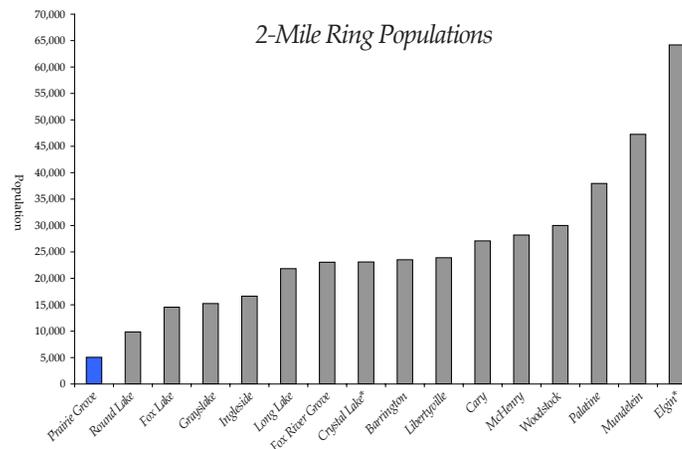
**Total Personal Income**

Population and Per Capita Income together comprise Total Personal Income, which is directly used to measure expenditure potential within a given market. For Prairie Grove, the small population within 3 miles of the proposed Metra station is barely compensated for by the market’s favorable income levels. This is shown in the bottom chart in Figure 5-4.

**FIGURE 5-3  
1-, 2-, and 3-Mile Ring Populations - 2009  
Selected Nearby Metra Stations**

Source: Claritas, Inc.; Analysis by LandUse|USA in collaboration with Teska Associates; September 2009.

\* Asterisk indicates a downtown station.



With the addition of at least 5,000 new residents (about 2,500 new residential units) throughout the 3-mile area, plus a good boost in per capita income (generated by attractive new housing choices in a well-designed TOD,) the market will be barely on par with Round Lake, Grayslake, Ingleside and Long Lake. These are the most conservative standards that Prairie Grove could strive for, whereas Crystal Lake represents a longer-term, more aggressive standard needed to support a truly meaningful amount of retail.

### Trade Areas

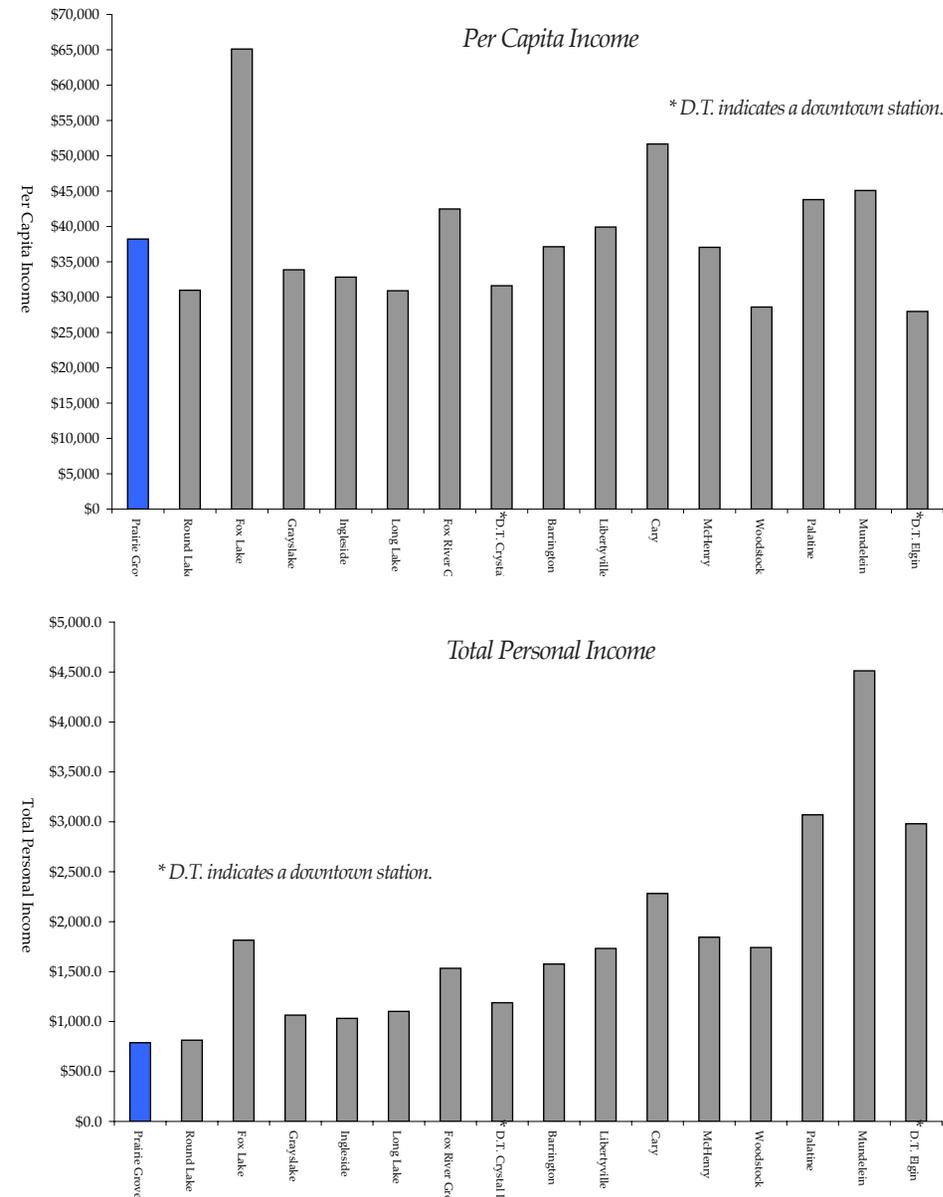
Ring data is useful for comparing population and income between markets, and in this case between the planned Prairie Grove Metra station and existing stations along the North and Northwest lines. However, we ultimately need to delineate a Primary Trade Area and Effective Trade Area to more accurately measure expenditure potential and opportunity for new retail in the market.

Trade areas are delineated to reflect a number of variables that are ignored by simple ring data. For example, trade areas are delineated to reflect transportation linkages and drive times; intercepting destinations; distribution of population density, income and growth; and locations of employment centers. They are also delineated to reflect just 50% (primary) and 70% (effective) of retail sales and/or new home purchases, with the balance representing import from beyond that geography.

As drawn in the two maps in Figure 5-5, we have delineated conservative trade areas for the planned Prairie Grove TOD project, and have carefully considered road linkages; locations of competing destination; the distribution of income; and the propensity for residents in McHenry to travel south through Prairie Grove, which outweighs the propensity of residents in Crystal Lake to travel north. We have also considered natural barriers like the Fox River and proposed transportation improvements throughout the area.

The 70% effective trade area for Prairie Grove is geographically larger than its 3-mile ring area, and roughly equal to the 3-mile ring area for the Crystal Lake Metra station. However,

FIGURE 5-4  
3-Mile Ring Populations; Per Capita Income & Total Personal Income - 2009  
Selected Nearby Metra Stations



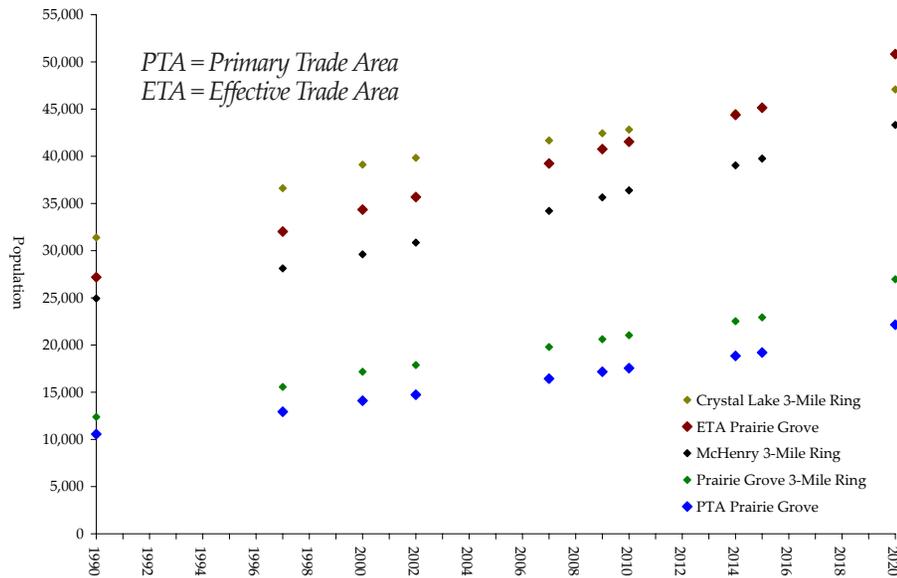
Source: Claritas, Inc.; Analysis by LandUse | USA in collaboration with Teska Associates; September 2009.

Crystal Lake also has a much larger trade area supporting a critical mass of retail destinations that have strategically located a) where the population is most concentrated; and b) at the crossroads of important highway connectors. These are two important locational attributes missing in the Prairie Grove TOD, but the generalized comparisons suggest at least some support for a small amount of retail in planned TOD. These population growth trends are shown in Figure 5-6.

*Subsection 2.0  
Retail Data & Nearby Metra Stations  
(Retail Supply)*

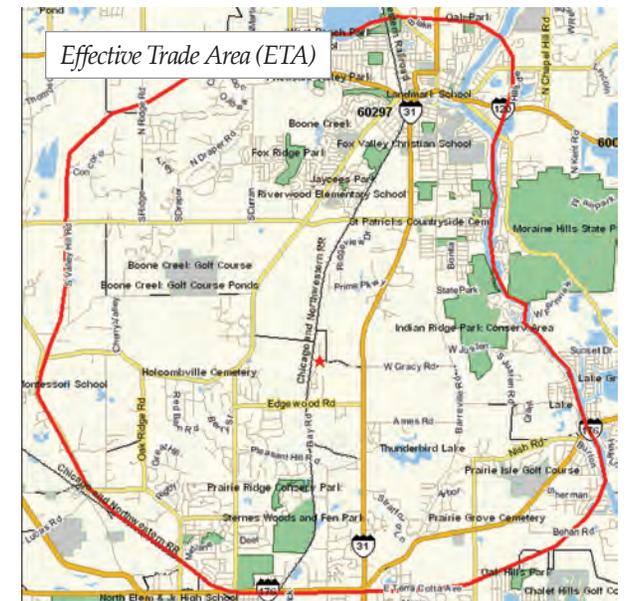
This subsection of our report takes a closer look at the retail potential for the proposed Prairie Grove TOD. It begins with a study of transacted retail sales in McHenry, Lake, Cook and Walworth Counties, and then compares the clustering

**FIGURE 5-6  
Population Growth Trends  
Prairie Grove PTA and ETA v. 3-Mile Rings**



Source: Claritas, Inc. through 2014; Forecasts and Analysis by LandUse|USA in collaboration with Teska Associates; Sept. 2009.

**FIGURE 5-5  
Maps of the Primary Trade Area (PTA)  
& Effective Trade Area (ETA)**



Source: Claritas, Inc.

of retail around selected Metra stations along the North and Northwest stations. So, it includes both a regional or macro-market approach, and a local or micro-market approach to testing for retail opportunities.

### **Retail Gap & Opportunity**

Our first top-line test of market opportunity involves a comparison between McHenry County with Cook, Lake and Walworth Counties, and specifically for market share or capture rates among established retailers. The results of the import-export analysis are summarized in Figure 5-7. Based on the most recent 2002 economic census of retail trade (the 2007 results will be available in late 2009,) McHenry County had 827 retail establishments that collectively achieved sales of \$2.6 billion. This represents an average of \$3,200,000 per establishment.

Dividing the total transacted sales figure of \$2.6 billion by the total population in McHenry County implies that the average person spent \$9,454 on retail expenditures. This also represents an average of 27.1 percent of their income. However, these measures do not account for sales export, or leakage of expenditure potential to surrounding counties.

resents an average of 27.1 percent of their income. However, these measures do not account for sales export, or leakage of expenditure potential to surrounding counties.

To identify a good standard for McHenry County we also studied the State of Illinois, which generally represents a blended average of all counties with import and export washing out between them. The approach is not perfect, because it does not consider import from Wisconsin or export to Minnesota (Mall of America, etc.), but it is close enough for this initial test.

Assuming that Illinois represents a reasonable standard for the other counties, the data suggests that Lake County is importing sales from its neighbors, whereas Cook, McHenry and Walworth Counties are all exporting sales. It is nearly impossible for a county to completely intercept all sales (exporting or exported), but at least some of it could be diverted to local retailers. In the case of McHenry, a modest upward adjustment in market share from 27.1 percent to 29.1 percent

**FIGURE 5-7**  
**Import-Export Analysis Results - 2002**  
**McHenry County, Illinois with Comparative Geographies**

Geography	No. of Estab.	Sales (\$000)	\$/Estab. (\$Mil.)	Implied Sales per Capita	Implied Market Share	Index to State	Net Sales Flow	Upside Potential Sales	Upside Potential Estab.
State of Illinois	43,022	\$131,469,518	\$3.1	\$10,412	33.2%	1.00	--	--	--
State of Wisconsin	21,360	\$59,978,700	\$2.8	\$10,978	37.1%	1.00	--	--	--
<b>Illinois Counties</b>									
Lake Co.	2,459	\$13,098,140	\$5.3	\$19,447	41.5%	1.20	Import	--	--
Cook Co.	16,494	\$50,441,449	\$3.1	\$9,285	29.1%	0.90	Export	--	--
McHenry Co.	827	\$2,637,228	\$3.2	\$9,454	27.1%	0.83	Export	\$194,600,000	63
<b>Wisconsin Counties</b>									
Walworth Co.	369	\$815,244	\$2.2	\$8,315	28.6%	0.73	Export	\$14,200,000	5

Source: Underlying retail expenditures from the US Economic Census of Retail Trade for 2002. 2007 Economic Census results will be available in late 2009. Underlying population and per capita income data from the US Census and Claritas, Inc., 2009. Interpolations, computations, extrapolations and analysis by LandUse\USA in collaboration with Teska Associates.

(i.e., more similar to Cook County but not as high as the state average), implies an opportunity for \$194.6 million in unrealized sales potential. In reality, only half of this volume could realistically be intercepted by even the best of retail strategies. Established shopping patterns, loyalties and store preferences can be difficult to change, and existing retail destinations in competing markets will keep their “first in” advantage for years to come.

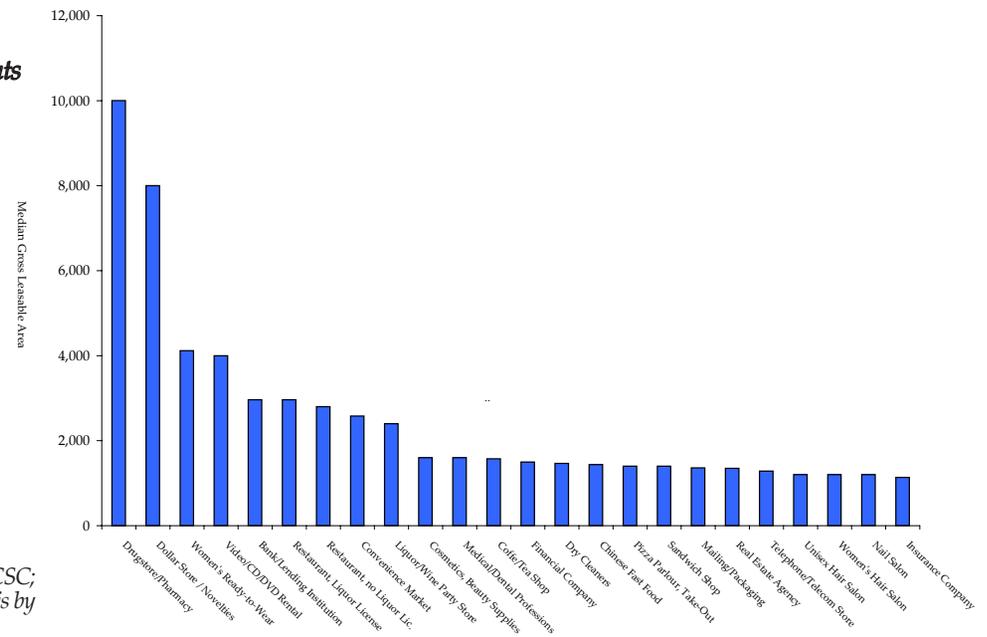
Aggressively assuming that the entire “gap” of \$194.5 million of unrealized sales potential could be intercepted, this is roughly equivalent to 63 stores, of which only a small portion could be reasonably allocated to the Prairie Grove TOD. Many new businesses interested in locating along the Highway 31 corridor could easily target competing destinations, particularly where complementary retailers have already achieved critical mass (i.e., in central Crystal Lake and north McHenry).

**Median Store Size**

In developing a store program for the Village of Prairie Grove’s TOD, it is helpful to understand typical store sizes and prototypes. Figure 5-8 illustrates median gross leasable areas for typical store types. This data is commonly used by developers in preparing preliminary site plans and identifying anchor stores needed to help generate traffic.

For perspective, regional shopping centers usually have at least one anchor with 100,000 square feet, and a traditional enclosed mall could easily have several department stores of 150,000 to 250,000 square feet. Similarly, discount department stores are usually 120,000 square feet or larger, whereas national chain stores like Best Buy and Barnes N Noble and Linens N Things might be closer to 30,000 square feet. Grocery stores tend to have a wide range in sizes, with some as small as 15,000 square feet, and others as large as 75,000 square feet.

**FIGURE 5-8**  
**Median Gross Leasable Area (Square Feet)**  
**Neighborhood & Convenience Shopping Center Tenants**  
**Midwest Region - 2006**



Source: Underlying data from the Urban Land Institute and ICSC; Dollars & Cents of Shopping Centers; The Score 2006; Analysis by LandUse\USA in collaboration with Teska Associates.

In comparison, neighborhood and convenience shopping centers typically include one or two anchor stores that are 10,000 square feet or smaller. Anchors usually include a small grocery store and/or pharmacy, plus at least one larger women's apparel shop and/or variety store. However, hardware stores can also be powerful anchors and help meet a local need for household basics with convenience.

After the anchors, other tenant sizes quickly fall, with the majority occupying spaces with 2,000 square feet or less. Subdividing leasable space is easiest in increments of 2,000 or 3,000 square feet, building up to larger tenants of 4,000, 6,000 or 8,000 square feet.

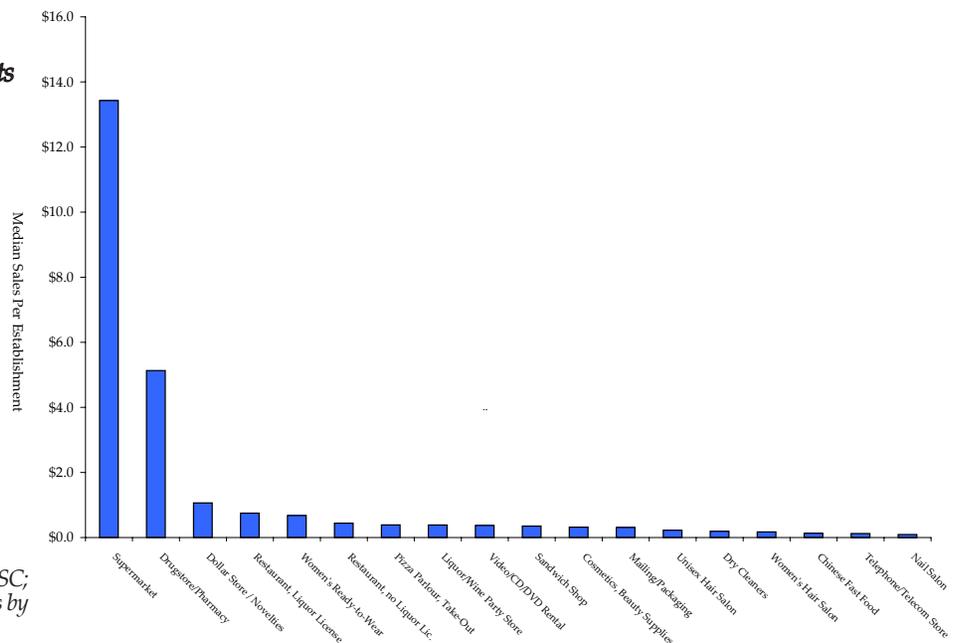
**Sales Per Establishment**

Earlier data revealed that establishments throughout McHenry County achieved average sales of \$3.2 million in 2002. However, this can vary considerably between store types and

largely depending on the merchandise mix and price points, as illustrated in Figure 5-9. For example, grocery stores and supermarkets throughout the Upper Midwest achieved average sales of nearly \$14 million in 2006. However, they are selling a large volume of small-ticket merchandise, and profit margins can be thin. In comparison, the vast majority of small tenants will achieve annual sales of less than \$1.0 million, and many will achieve sales of \$500,000 or less.

Some retail categories do a better job of attracting shoppers from a farther away and help expand a market's trade area. These typically include big-ticket hardline categories that would not be described as "conveniences." Examples include automotive dealerships, furniture stores, appliances, electronics and home improvement (flooring, kitchen cabinets). However, these stores are also more selective in choosing locations that enable them to achieve a regional draw.

FIGURE 5-9  
**Median Sales Per Establishment**  
*Neighborhood & Convenience Shopping Center Tenants*  
*Midwest Region - 2006*



Source: Underlying data from the Urban Land Institute and ICSC; Dollars & Cents of Shopping Centers; The Score 2006; Analysis by LandUse\USA in collaboration with Teska Associates.



**Sales Per Square Foot**

In neighborhood and convenience shopping centers throughout the Upper Midwest, the average small tenant achieves sales of \$200 to \$250 per square foot. In comparison, small tenant productivity in regional shopping centers tends to reach closer to \$300 per square foot. Some categories will perform better than others, and big-ticket hardline categories tend to lead the pack. In comparison, businesses with low merchandise densities or that rely heavily on services tend to have lower productivity levels.

Across the board and for all retail establishments, productivity levels have not changed much in the past decade. Including neighborhood and regional shopping centers as well as free-standing stores, productivities has hovered between \$250 and \$350 per square, depending on the retail category. However, the costs of running a business have certainly increased with inflation, and retailers today are still struggling to achieve the

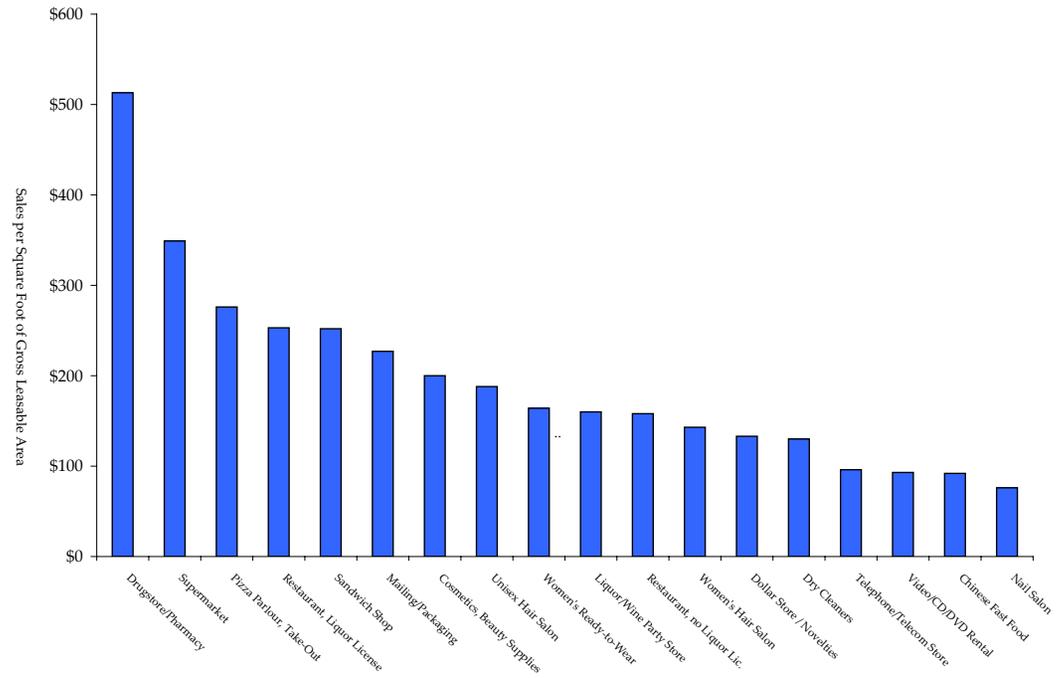
same profit margins that they had realized in prior years. Figures 5-10 and 5-11 summarize sales per square foot data.

**Metra Stations - Aggregate Results**

Our analysis of nearby Metra Stations for Prairie Grove's TOD includes a close study of retail establishments clustered within a reasonable walking distance of selected Metra Stations along the Northwest line. To be included in our inventory, the business also had to feel "connected" to the retail core with pedestrian access, signage and line-of-sight. We followed these criteria in collecting data for five stations, including Crystal Lake, Cary, Fox River Grove, Barrington and Palatine.

Among all five stations collectively, there were more personal care establishments than any other retail category, followed by restaurants and financial services (excluding banks). In comparison, there were few stores offering more traditional categories like photography, shoe repair, pets, bakeries and flo-

FIGURE 5-10  
**Median Sales Per Square Foot  
 (Gross Leasable Area)  
 Neighborhood & Convenience  
 Shopping Center Tenants  
 Midwest Region - 2006**



Source: Underlying data from the Urban Land Institute and ICSC; Dollars & Cents of Shopping Centers; The Score 2006; Analysis by LandUseUSA in collaboration with Teska Associates.



rist shops, although these are usually targeted by downtown districts to convey an enjoyable shopping environment.

The graphs in Figure A-2 in the Appendix indicate the aggregate inventory of various retail establishment types clustered around select Metra stations along the Northwest Line.

**Metra Stations - Station Results**

In our survey of retailers and businesses clustered around selected Metra stations, we were impressed by the number and diversity of gift stores in some locations. Other locations are clearly being targeted by automotive repair shops, benefiting from proximity to the transit line that offer alternative transportation to work while vehicles are in the shop.

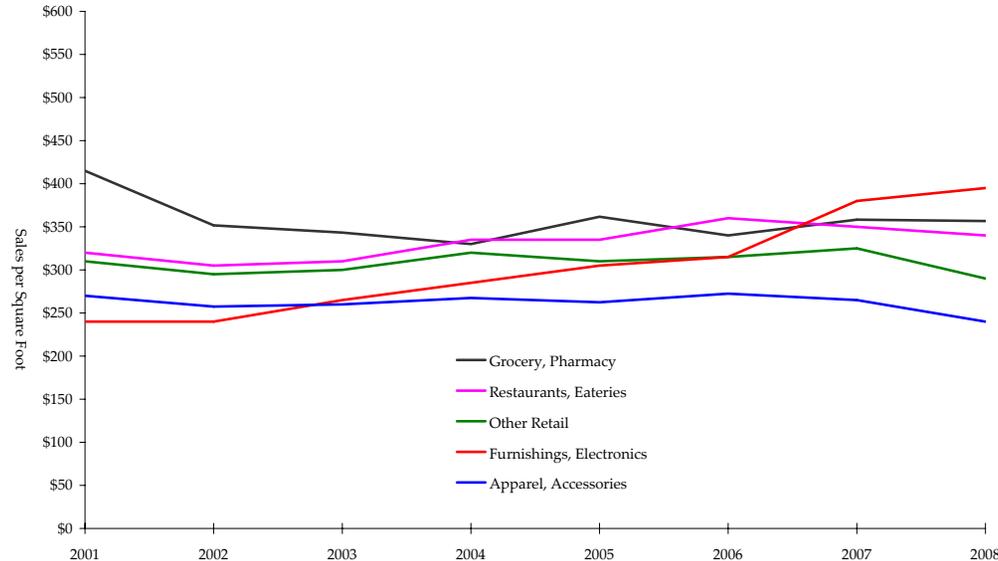
Crystal Lake’s traditional downtown shopping district has the largest number of stores, but heavily weighted by personal care establishments, restaurants, financial services (excluding

banks), and attorneys. However, Crystal Lake has also been successful in attracting a number of quality women’s boutique shops and gift stores.

Businesses near the Cary station are focused primarily on services, and Fox River Grove is heavily influenced by automotive repair shops and a few home improvement shops. Barrington has a good offering of eating and drinking establishments as well as clothing shops and used merchandise stores (thrift, consignment, charity, etc.), plus home furnishings. Restaurants take the largest share of the pie in Palatine, followed by personal care.

The graphs in Figure A-3 in the Appendix indicate the individual inventory of various retail establishment types clustered around each of the following Metra stations: Crystal Lake, Cary, Fox River Grove, Barrington, and Palatine.

**FIGURE 5-11**  
**Sales Per Square Foot by General Retail Category**  
**Upper Midwest States - 2001-2008**



Source: LandUse\USA in collaboration with Teska Associates - July 2009; based on regional data provided by the ICSC and ULI, with local estimates based on per capita income ratios.



**National & Local Brands**

In our inventory of retailers clustered around the five nearby Metra stations (Figure 5-12), we also noted any national and/or local brands that appeared at least once among the markets. We noted three Harris Banks among the five markets, and three Starbucks Coffee shops. Other brands had two locations among the five markets, including Subway and Kaleidoscoops Ice Cream. Brands like Einstein Bagels had only one store, but their presence is important in identifying potential brands for Prairie Grove’s planned TOD.

**Office Space**

Office space will warrant a closer study in subsequent stages of our work. We will be conducting a study of regional trends among non-retail commercial and office space, and will test market a) rents per square foot for sublease space; b) vacancy rates among Class A and Class B space; and c) price per acre for undeveloped commercial real estate property. We will

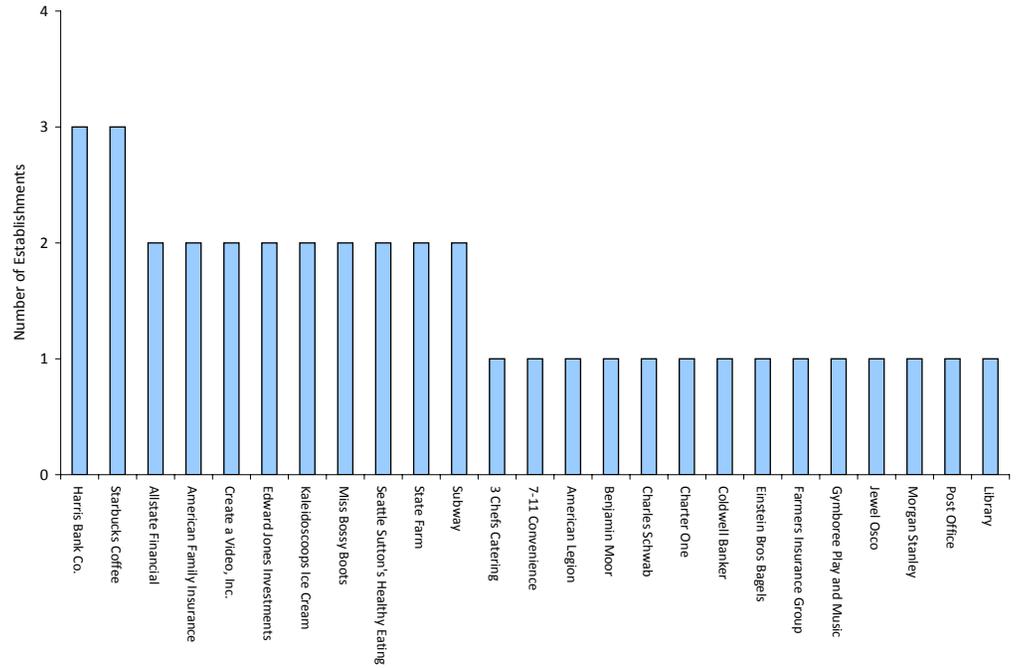
then formulate recommendations regarding the amount of office space that should be planned within the Prairie Grove TOD project.

Based on our preliminary assessment of market conditions and regional setting of the TOD, we are reasonably confident that the TOD project will be attractive to a) potential investors and developers seeking to build speculative office space; and b) businesses interested in build-to-suit facilities for regional headquarters. The total amount of office space will depend on building height and density restrictions; local stakeholder preferences that will be identified during public charrettes; and the site plan’s ability to accommodate a variety of building footprints.

**Daytime Population**

So far, our forecasts for retail space in the proposed Prairie Grove TOD have been conservative at best, and we are con-

FIGURE 5-12  
**Inventory of National & Local Chain Stores  
 The Chicago Metra - Stations along the North-  
 west Line (Crystal Lake, Cary, Fox River Grove,  
 Barrington and Palatine) - September 2009**



Source: Field Analysis, Inventory and Analysis by LandUse\USA, LLC; Includes only those businesses that are within a reasonable walking distance of the Metra Station and that also feel “connected” to the retail core.

cerned that the size of the resident population within the trade area will be too small to support more than a few conveniences.

However, the resident population could get a moderate boost from a daytime population of employees working in offices in the TOD and along the Highway 31 corridor. The same issues associated with resident population also apply to the daytime office worker population. If all development is confined within the boundaries of the TOD project, then this will again limit the expenditure potential and support for additional conveniences like restaurants, grocery stores and pharmacies.

### *Subsection 3.0*

### ***Residential Data (Supply & Demand)***

This subsection of our report focuses on some key demographic variables used to help us identify the best price points among future housing units for the Village of Prairie Grove. Again, our recommendations for new housing units apply to the entire effective trade area and 3-mile ring around the new Metra station, and not just to the immediate area within 1 mile of the station.

### **Chicagoland - Household Income v. Home Values**

Our analysis begins with a closer look at Chicagoland to help establish a standard and develop perspective. Two specific variables are intended to be compared side-by-side, including: 1) the distribution of households by income bracket; and 2) the distribution of housing units by value bracket. Household income and home value data for Chicagoland are shown in Figures A-4 and A-5, respectively, in the Appendix.

Both variables are presented with a total of 10 brackets each, although they do not necessarily align with one another. In other words, it should not be concluded that the highest income brackets always buy the most expensive houses, or that the lowest income brackets buy the lowest value homes. The brackets are held constant between markets, but home buying behavior changes between markets and depending on lifestyle preferences and supply.

Chicagoland is intended to represent a comparison for the Village of Prairie Grove in explaining how various income brackets tend to buy among housing unit value brackets. For Chicagoland, the income bracket of \$50,000 to \$74,999 has largest share of households, and the value bracket of \$200,000 to \$299,999 has the largest share of housing units. However, a number of households in the \$100,000 to \$149,999 income bracket could be occupying homes valued in the \$200,000 to \$299,999 range, rather than in the \$400,000 to \$499,999 range. The reasons could include a lack of supply or a preference for living relatively conservatively, which in turn drives construction activity.

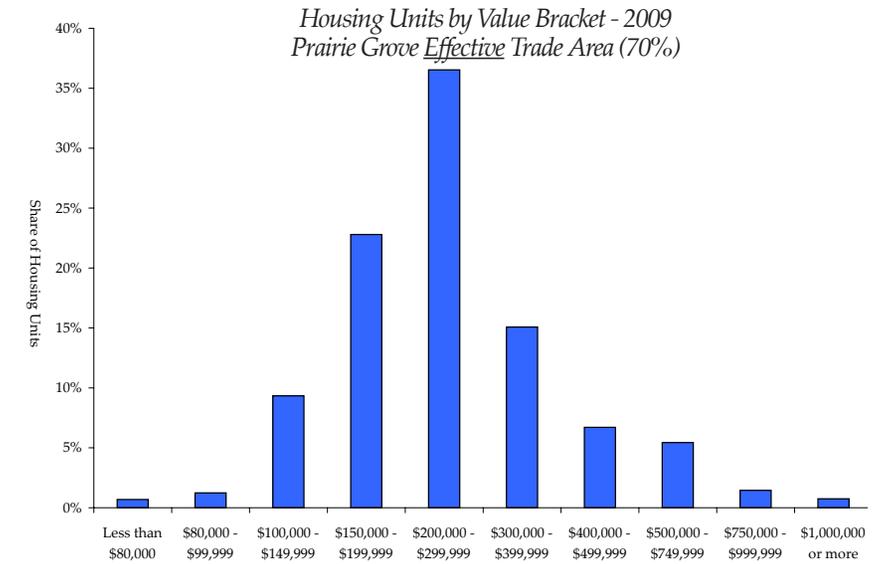
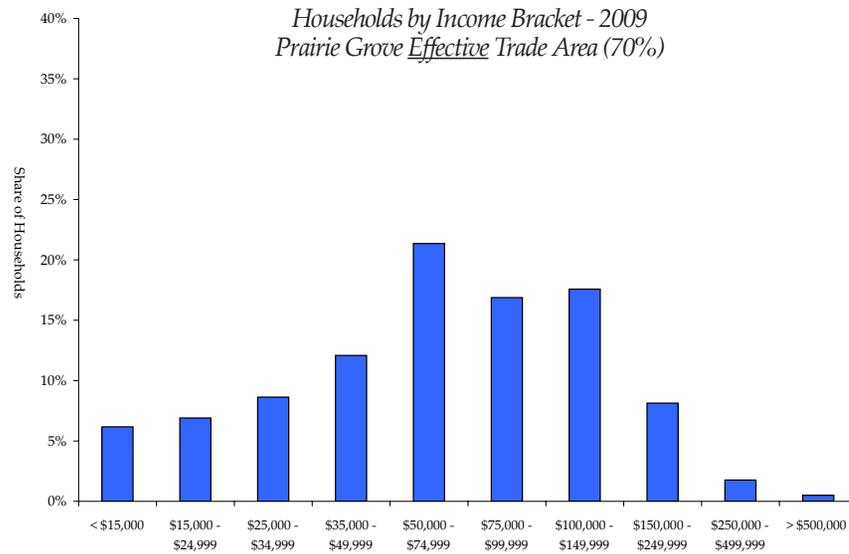
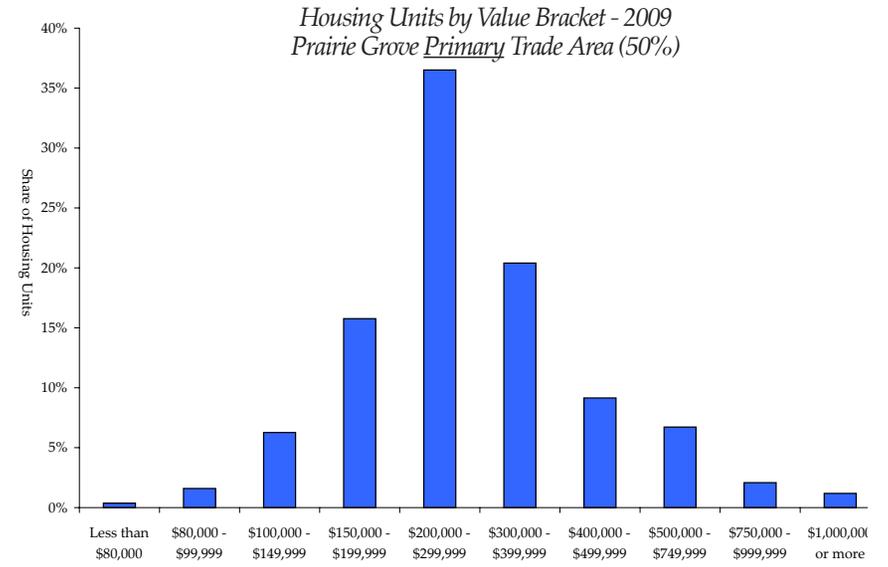
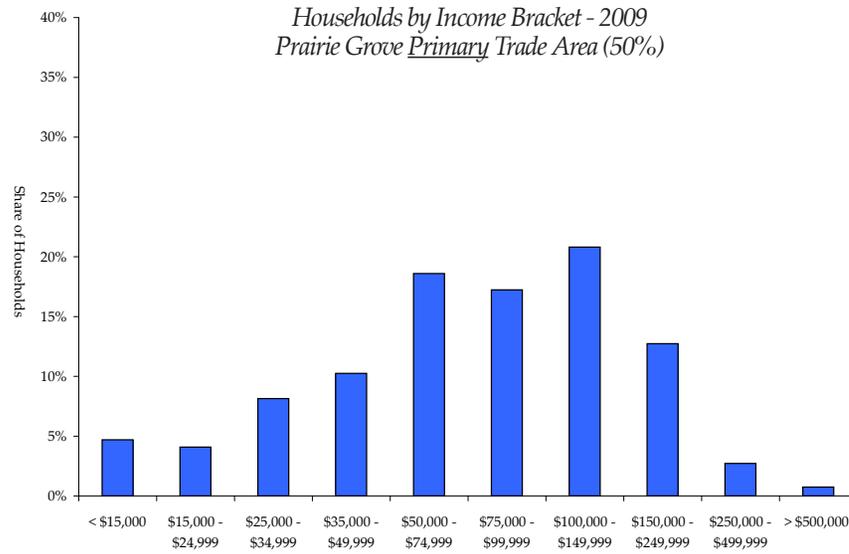
There is very little product on the market among units values below \$100,000, but it is nearly impossible for modern day developers to build units in this bracket and still make a profit unless they are funded by state and local agencies supporting affordable housing. The data also does not take into consideration renter occupancies, which would include a good share of households earning \$34,999 or less.

### **Prairie Grove - Household Income v. Home Values**

Households in the Prairie Grove primary trade area are clearly more affluent than averages for Chicagoland. This affluence translates across to higher home values, but not to the degree that we expected. Chicagoland has about 30 percent of its owner-occupied housing stock in the \$200,000 to \$299,999 value bracket, and in Prairie Grove this figures jumps to over 35 percent rather than shifting into the higher value brackets. We expected to see a larger share of housing units in Prairie Grove in the \$400,000 and higher value brackets.

The potential gap seems less pronounced within the effective trade area, but income levels in the effective trade area are also relatively more moderate when compared to the primary trade area. Regardless, the potential market gap will be tested further in subsequent stages of our work. The household income and home value data for Prairie Grove's trade areas are shown in Figure 5-13.

**FIGURE 5-13**  
**Households by Income Bracket & Housing Units by Value Bracket - 2009**  
**Prairie Grove Primary Trade Area (50%) & Prairie Grove Effective Trade Area (70%)**



Source: Claritas, Inc.; Analysis by LandUse\ USA in collaboration with Teska Associates; September 2009.



**For-Sale Prices - Multi-Family Units**

Our last test at this stage of our work involves a study of for-sale multi-family housing units in Prairie Grove, McHenry and Crystal Lake. We have reviewed the data in two ways, first with a simple comparison of the a) number of units by price, and the b) range in prices among those units; and second by comparing the price per square foot versus the unit size. Listed for-sale price for multi-family units data are illustrated in the top chart in Figure 5-14.

The first test shows that Crystal Lake and McHenry have a large number of multi-family owner-occupied housing units available on the market, and that the vast majority range in price between \$100,000 and \$249,999. There are fewer units available in the \$300,000 to \$399,999 price bracket, but there are some choices nevertheless.

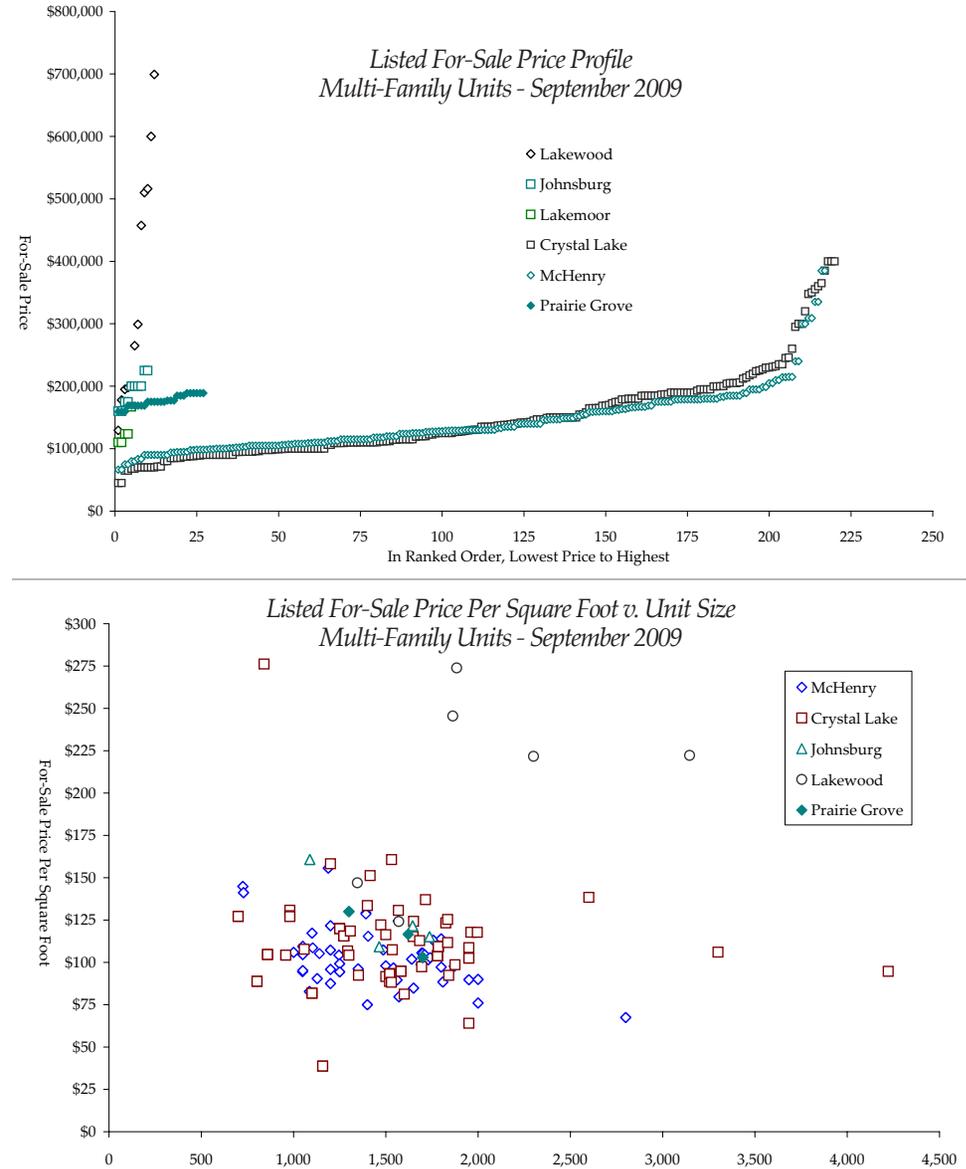
The Lakewood community west of Crystal Lake has very few units available for sale, but the price ranges vary considerably and reach all the way to up to \$700,000. Clearly this is an affluent and desirable market with very little choice available to new home buyers, which in turn is driving up the prices.

In comparison, the Village of Prairie Grove also has relatively few multi-family units available for sale, and the prices start above \$150,000 and stop at \$200,000. Even though there are units available in higher price brackets in both Crystal Lake and McHenry, developers have yet to introduce comparable products in Prairie Grove. Assuming that we can demonstrate sufficient demand in the local market, then this suggests an



Multi-family housing units, such as those in Cobblestone Woods, comprise a small percentage of Prairie Grove's existing housing stock.

FIGURE 5-14  
**Listed For-Sale Price Profile & Price Per Square Foot v. Unit Size  
Multi-Family Units - September 2009**



Source: [www.Realtor.com](http://www.Realtor.com); Analysis by LandUse\USA in collaboration with Teska Associates; September 2009. Multi-Family Units includes condominiums, townhouses, rowhomes, cooperatives and multi-family homes.

opportunity for the planned TOD project. We will also test the market for single-family owner-occupied housing units, which would be appropriate for other locations within the effective trade area and 3-mile ring.

#### **Price Per Square Foot v. Unit Size**

The bottom chart in Figure 5-14 displays the relationship between price per square foot among for-sale multi-family units, and the individual unit size. In general, we would expect to see an inverse, logarithmic relationship in the data, where the larger units demand a lower price per square foot than the smaller units. However, this is difficult to demonstrate in markets where product is tightly clustered in certain price or size brackets.

For the Village of Prairie Grove, we were able to find only three for-sale units where the sizes were disclosed. However, the prices are on-par with the surrounding areas and particularly Crystal Lake, and higher than the trend in McHenry.

In all of the markets tested, there is very little product available for home buyers to choose from if they are seeking more than

2,000 square feet or less than 1,000 square feet. There may be some potential for small lofts or flats above street front retail with about 950 square feet, and there may also be some potential for luxury condominiums, townhomes or row houses with 2,200 square feet, and we will consider both formats in our subsequent work.

#### **Market Assessment Conclusion**

In testing these gaps through additional analysis, we will be assuming that Village's long-term objectives include development of a TOD with a mix of uses that includes economically sustainable retailers and businesses. To support this, the market must also support population and income growth, on the order of at least 5,000 units within 3 miles of the TOD.

To balance population and income gains with the Village's goals for land conservation and smart growth, we will be developing TOD concept plans for a walkable community with a compact design that is integrated with the planned Metra station. Related strategy recommendations will be focused on the 2 mile study area around the TOD, generally representing the Wildflowers Annexation area.



SECTION 6

# Issues, Challenges & Opportunities

Below is a summary of issues, challenges, and opportunities as they relate to the potential Town Center and TOD.

## Current Issues & Challenges

- » The need to balance the critical mass of residential units to support TOD with well-designed development.
- » Forming appropriate connections between the Town Center and TOD area on the west to the Village's existing core to the east.
- » Congestion, vehicle speeds, and current lack of turn lanes along IL Route 31 contribute to safety issues and driver frustration.
- » Traffic volumes, speeds, and likely design parameters act as barriers, real or perceived, for non-auto transportation between the east and west sides of IL Route 31.
- » Adjacent to the Metra site and Town Center & TOD area, the Prairie Path is located on the west side of the railroad, and the eastside of the tracks from Edgewood Road to the north is occupied by development.
- » Sod farms and environmentally sensitive land located west of the Union Pacific Railroad limits development potential.

- » Uncertainty of funding for the UP-NW New Starts projects, which includes the proposed Metra station at Prairie Grove.

## Potential Opportunities

- » "Blank slate" created by the greenfield properties allow for integration of transit, pedestrian, and bicycle amenities within newly designed sites offering a mix of land uses with limited need for infill development.
- » Prominence of environmental features such as topography, wetlands, streams, and wooded areas encourage the potential for sustainable development techniques, including LEED and conservation development.
- » Edgewood Road and Gracy Road maintain ½-mile spacing, allowing for a potential traffic signal on IL Route 31 at their midpoint to further provide access to the adjacent properties.
- » Parking at nearby Metra stations in Crystal Lake is very limited. An interim park-and-ride lot may be feasible until a Metra service begins in Prairie Grove.
- » Large parking requirement for Metra commuters (approximately 1,250 spaces) may be shared with potential adjacent uses with complimentary peak parking demands (i.e.,

evenings, weekends) to reduce need for additional surface parking.

- » Local bicycle path connections from Prairie Path to Town Center attractions.
- » Village's desire to relocate the Village Hall to the Town Center to serve as an anchor and allow for expanded facilities.
- » Study Area is ready for water and sewer service.

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SECTION 7

# Concept Plan Overview

This Final Concept Plan Summary Report ties together the previous concept designs and market strategies aimed at creating a Town Center and a mixed use transit-oriented development (TOD) district in Prairie Grove. Concept designs focus on land use development, transportation factors, and urban design elements such as architecture, streetscape, and signage.

Figure 7-1 outlines the components of this report. Each component is described below.

» **Framework Plan.** As the initial visionary element of the Town Center & TOD Plan, the Framework Plan provides the basis for the concept designs, outlining general development and design elements for land use, density, site access and circulation, open space preservation, and key transit features, including the proposed Metra station and commuter parking areas. During the previous interim stage of planning, three alternative concepts were pre-

sented to show a diverse range of design ideas based on discussion with community members, Village officials, and transit agency representatives. The community also had the opportunity to provide input via an interactive community mapping exercise conducted at the Public Design Charrette, which was held on October 28, 2009.

The three alternatives were continually discussed with the Steering Committee, Village staff and officials, and community members, including a presentation at a Public Open House on February 24, 2010. A preferred alternative for the Framework Plan was selected soon after and is presented in Section 8. The other two alternatives are provided in the Appendix.

» **Conceptual Land Use Development Plan.** The Conceptual Land Use Development Plan is a conceptual site plan for the Study Area, providing further detail based input from Village officials, citizens, and the Steering Committee. This plan will illustrate elements such as land use types, lot and road configurations, building forms and placement, parking, public and open spaces, streetscape elements, and other urban design features.

» **Market Strategy.** The Market Strategy identifies specific land use types, potential market themes, and residential and commercial development potential that best suit current and anticipated market conditions. Describing elements such as the significance of anchor tenants and the potential for market-driven retail, the Market Strategy details specific land uses to target (e.g. retail businesses,



Source: Tiska Associates, Inc.

*The Public Design Charrette, which was held in late October, provided the opportunity for Prairie Grove community members to participate in an interactive mapping exercise, which was designed to gather public input on development and design ideas for the Town Center and TOD.*

FIGURE 7-1

### Concept Plan Elements

- Framework Plan
- Conceptual Land Use Development Plan
- Market Strategy
- Circulation & Access Plan
- Sustainability Analysis
- Design Guidelines
- Fiscal Impact Analysis

office industries, and housing types) and phasing potential for development over time.

- » **Circulation & Access Plan.** Building off of the Framework Plan and Conceptual Land Use Development Plan, a Circulation & Access Plan is provided that identifies multimodal circulation patterns and access points for buses, trains, automobiles, bicycles, and pedestrians. Transit facilities, parking, traffic operations control, street cross section designs, and connectivity between adjacent areas are also considered.
- » **Sustainability Analysis.** The Sustainability Analysis describes how the Town Center can become a “green” community based on sustainability principles. In particular, the LEED-ND Rating System is increasingly being utilized as a method to measure sustainability. While the goal of the rating system is to achieve LEED-ND certification, it can also be used as a general guide for measuring the sustainable aspects of a project. The Sustainability Analysis evaluates the integration of sustainable features into the concept plans for the Prairie Grove Town Center and TOD. Certain sustainable features are interwoven in the Conceptual Land Use Development Plan, Circulation & Access Plan, and Design Guidelines, which illustrates the interconnected nature of sustainability.
- » **Design Guidelines.** The Design Guidelines define how the urban design elements for the Town Center and TOD can reflect Prairie Grove’s community character, particularly as outlined in Section 3 of the Existing Conditions Assessment Report. Design standards are divided into two sections: architectural guidelines (Section 13) and streetscape guidelines (Section 14). Sustainable design techniques, particularly those relating to LEED-ND certification, are also considered to help develop the Prairie Grove Town Center and TOD with a strong focus on environmental conservation and sustainability. Design strongly rooted in conservation and sustainability will potentially enable Prairie Grove to position itself as a pioneer in McHenry County and beyond, transforming the



Source: Tesla Associates, Inc.

*The Public Open House, which was held in late February, provided the opportunity for Prairie Grove community members to participate in a presentation of preliminary concept plans for the Town Center and TOD. Public interaction with Village staff and the consultant team enabled community members to ask questions and provide direct feedback on plan elements.*

Town Center & TOD Plan into an exemplar model that other communities may follow.

- » **Fiscal Impact Analysis.** A major development such as the proposed Town Center and TOD will have significant impacts on not only the physical composition and population of Prairie Grove, but also the financial budgets of the Village and other governing bodies serving the community. By calculating the revenues and expenditures generated by the proposed Town Center and TOD, the Fiscal Impact Analysis determines the net fiscal impact of the development on the Village’s budget.

Altogether, these elements provide a conceptual perspective for how the Town Center and TOD should be designed, with careful regard to market realities and the community’s vision for the area.

The concepts and strategies were formed by the various planning elements produced throughout the planning process, including the Existing Conditions Assessment and multiple discussions with local stakeholders, Village staff, transit agencies, and the project’s Steering Committee. Public participation has been a very important piece to the development of concepts and strategies, with public input being sought during the Public Design Charrette and Public Open House.



SECTION 8

# Framework Plan

The Framework Plan describes the general land use, design, infrastructure and transportation principles that form the basic organizational structure to guide more detailed conceptual plans to be developed in the next phase. The Framework Plan recommendations will help to establish the type, amount and character of the future development potential within the Study Area.

### *Basis for the Framework Plan*

Based on findings from the Existing Conditions Assessment and outcomes from the Public Design Charrette, which was held October 28, 2009, three alternative concepts for the Framework Plan were initially developed to serve as the fundamental visionary element for the Town Center & TOD Plan.

In particular, the Issues & Opportunities Maps from the Existing Conditions Assessment outlined the existing transportation issues, environmental factors, physical constraints, and development and transit opportunities for the Study Area.

Also, results from the “Build-the-Vision” mapping exercises from the Public Design Charrette provided public insight into the preferred types of uses and land use patterns, creating the principles for the development of the Town Center and mixed use TOD for Prairie Grove. Multiple discussions with local stakeholders, Village staff, transit agencies, and the project’s Steering Committee also helped mold the three alternative concepts for the Framework Plan.

At the Public Design Charrette, community members divided into four small groups to participate in the “Build-the-Vision” mapping exercise. Using a base map of the Study Area, each group was able to arrange three-dimensional blocks representing potential development types (e.g. townhouses, retail/residential mixed use, restaurants, office buildings, civic buildings, etc) to produce their vision for the Town Center and TOD. Sample mapping exercise results are shown in Figure 8-1 (additional pictures of the mapping exercise results are provided on pages A-2 through A-5 in the Appendix).



FIGURE 8-1  
**Sample Results from the “Build-the-Vision” Mapping Exercise**

*The community members present at the Public Design Charrette in October broke out into four small groups. Each group produced a three-dimensional vision for the Town Center and TOD. Sample results are shown to the right.*

Source: Teska Associates, Inc.

While each group had its own set of unique ideas and vision for the Town Center and TOD, common themes emerged from the four groups, providing specific development and design characteristics that all groups identified as important considerations for the Town Center and TOD. These common themes are outlined in Figure 8-2.

Based on these common themes and the findings from the Existing Conditions Assessment, three alternative concepts for the Framework Plan were prepared. The preferred conceptual Framework Plan map is provided in Figure 8-4, with a narrative summary provided on the following pages. Summaries and maps for the other two alternatives are provided in the Appendix from pages A-6 through A-12.

### ***Rationale for Selecting the Preferred Alternative***

Based on multiple discussions with local stakeholders, Village staff, transit agencies, and the Steering Committee, the third of the three Framework Plan alternatives was selected as the preferred option. When selecting the preferred alternative, the following issues were taken into consideration:

- » Influence of the unincorporated Koerber property
- » Orientation of the Town Center relative to the Metra site
- » Commuter parking lot configuration
- » Pace access to the Metra station
- » Transitions between uses
- » Retail access and visibility
- » Potential for phasing
- » Preservation of open space
- » Provision of civic uses

Although the other two alternatives were not selected, they remain part of this document in the Appendix, as they may still be of benefit as new information comes to light, such as the potential to annex the Koerber property. The other two alternatives also illustrate the iterative thought process that was undertaken to ultimately develop the preferred alternative.

FIGURE 8-2

### ***Common Themes identified from the "Build-the-Vision" Mapping Exercise***

- 1:** Transition to existing residential areas via open spaces, recreational uses, or low intensity uses.
- 2:** Creation of a primary focal point, such as a town square or community green.
- 3:** Concentration of mixed uses and density around the primary focal point.
- 4:** Preservation of the large central wetland on the north side of the site. Also possible integration of the wetland into site design for a town square or residential use.
- 5:** Primary Town Center access from IL Route 31 at or north of Gracy Road.
- 6:** Secondary Town Center access from Edge-wood Road.
- 7:** Clustering of higher density residential uses and higher building heights near the Metra site or potential town square.
- 8:** General location of single family residential uses at southern part of Town Center.
- 9:** Civic uses must be an essential part of the Town Center, clustered near potential town square.
- 10:** Recreational opportunities are an essential part of the Town Center.
- 11:** Provision of some retail along IL Route 31.
- 12:** Free-standing offices provide employment opportunities for local residents and reverse commuters, as well as provide services (e.g. doctor, dentist, finance, etc) to meet the daily needs of local residents/employees.

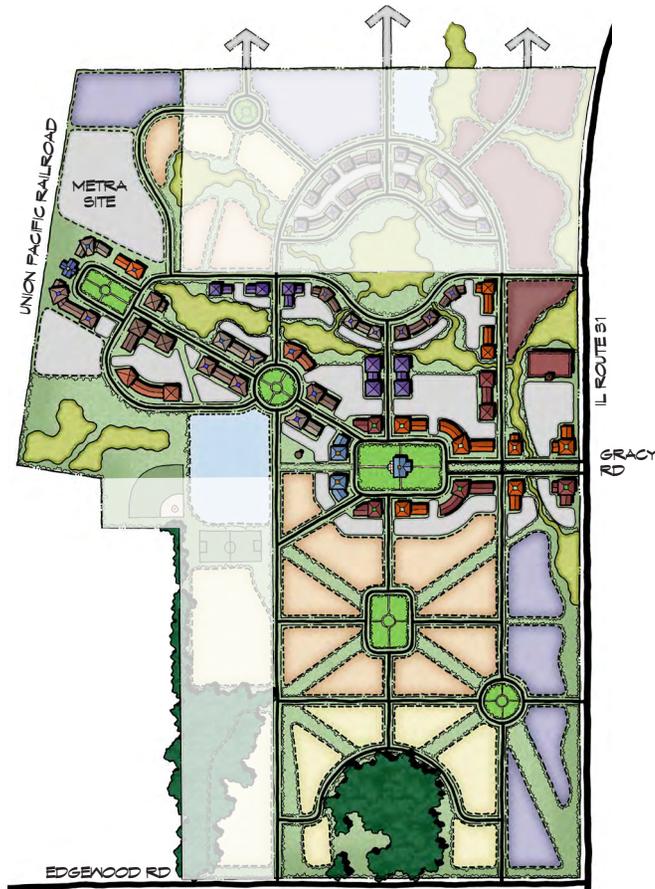
## Preferred Alternative - Summary

The preferred alternative of the Framework Plan locates the Town Center along the existing access road that aligns with Gracy Road, which is a general compromise between the positioning of the Town Center in the other two alternatives. The Town Center concept for the preferred alternative does not depend upon the annexation of the Koerber property on the north side of the Study Area. A quick snapshot of the preferred alternative is shown in Figure 8-3.

FIGURE 8-3

### Quick Snapshot of Framework Plan - Preferred Alternative

A more detailed version of the preferred alternative is provided in Figure 8-4 at the end of this section.



## Overall Strategy

Situated closer to the center of the Study Area, the Town Center is located along the existing access road aligning with Gracy Road, maintaining close access to the proposed Metra station and integrating it as a central component of the Town Center design. The radial axis shown in the first alternative is maintained, with the intent to take advantage of the views of major highpoints and vistas formed by the natural topography of the Study Area. In addition to the proposed Metra station, a village green and civic campus form additional focal points for the Town Center, making it into a multi-destination center. The balance of land uses throughout the rest of the Study Area takes advantage of access and visibility along IL Route 31 and properly integrates new residential uses to existing neighborhoods. Also, wetlands and substantial tree masses are preserved as much as possible, with compensatory stormwater storage to be provided as needed to replace any displaced wetlands.

### Metra Site & Pace Bus Service

The proposed Metra station is provided in the southern half of the prescribed Metra site, with commuter parking located north and south of the station and platform. While a bulk of the parking is provided to the north, the furthest walking distance from the northern most point of the Metra site to the station and platform is approximately  $\frac{1}{4}$  mile. The Metra site also exceeds the minimum requirement of 12.5 acres for commuter parking. Pace bus service would access the proposed Metra station from IL Route 31 via the access road located a  $\frac{1}{4}$

*The overall strategy for the preferred alternative focuses the Town Center along the existing access road aligning with Gracy Road. This strategy closely integrates the proposed Metra station as a central component of the Town Center design, but eliminates the dependence of annexing the Koerber property.*

mile north of Gracy Road or the access road that aligns with Gracy Road (i.e. the main entrance into the Town Center). Having a Pace bus travel through the Town Center would help promote public transit connectivity between the retail center and the proposed Metra station.

### **Site Access & Circulation**

The primary site access point to the Town Center is provided along IL Route 31 at Gracy Road. A potential bicycle bridge is located north of Gracy Road, providing safe and convenient cross access for bicyclists and pedestrians between the east and west sides of IL Route 31. Another key access point along IL Route 31 is located a ¼ mile north of Gracy Road. With additional site access points from Edgewood Road, all points of access link to an interconnected system of internal roads within the Study Area, providing efficient access to various areas, including the proposed Metra station.

Wherever possible, sidewalks and bike paths are provided along these internal roads to provide multi-modal access and circulation throughout the Study Area. Pedestrian connectivity is particularly important to adjacent neighborhoods.

### **Land Use**

Land use composition is as follows:

- » Residential density is highest in the vicinity of the proposed Metra station, creating the walk-in density for the commuter train service. Multi-family residential uses, including condominiums or apartments, are primarily located near the proposed Metra station, but also provided near the core retail area of the Town Center. Multi-family residential may be provided either as stand-alone structures or as part of a mixed use building with retail at ground level.
- » Lower density residential uses, including townhouses and detached single family houses, are generally located at different sections of the Study Area, providing diverse housing options and a suitable buffer between existing residential uses and new higher intensity development.

- » Each residential area is located within walking distance to a green space or natural open space areas to provide a balance between the built and natural environment.
- » A civic campus is planned around a village green space located along the main internal road leading from IL Route 31 to the proposed Metra station.
- » Commercial office and retail uses are primarily located along IL Route 31 to take advantage of access and visibility. A key retail area is located at the IL Route 31/Gracy Road intersection. Retail uses may be provided either as stand-alone structures or as part of a mixed use building with retail at ground level and residential or office uses on upper floors.
- » Offices in a campus setting are located along IL Route 31 and the Study Area's north end to encourage employment of Town Center residents. The offices are situated in close proximity to the proposed Metra station to encourage reverse commuting. Office campuses at the IL Route 31 / Edgewood Road intersection would properly integrate the radial axis into its site design to maintain scenic views of the topography.
- » Another civic site is located in the central west section of the Study Area, providing potential for civic, recreation, or school uses with convenient access to new and existing residential neighborhoods and the core retail area
- » Recreational playing fields are provided. These fields are adjacent to the municipal site and core retail area to encourage shared use.
- » A landscaped open space setback along IL Route 31 provides the opportunity to maintain a natural prairie feel along the road and provide natural stormwater benefits.
- » Maximum building height is 5 stories.

FIGURE 8-4  
**Conceptual Framework Plan - Preferred Alternative**

Single-family residential

Metra station & platform

Civic campus w/ Village green

Recreational playing fields

Open space

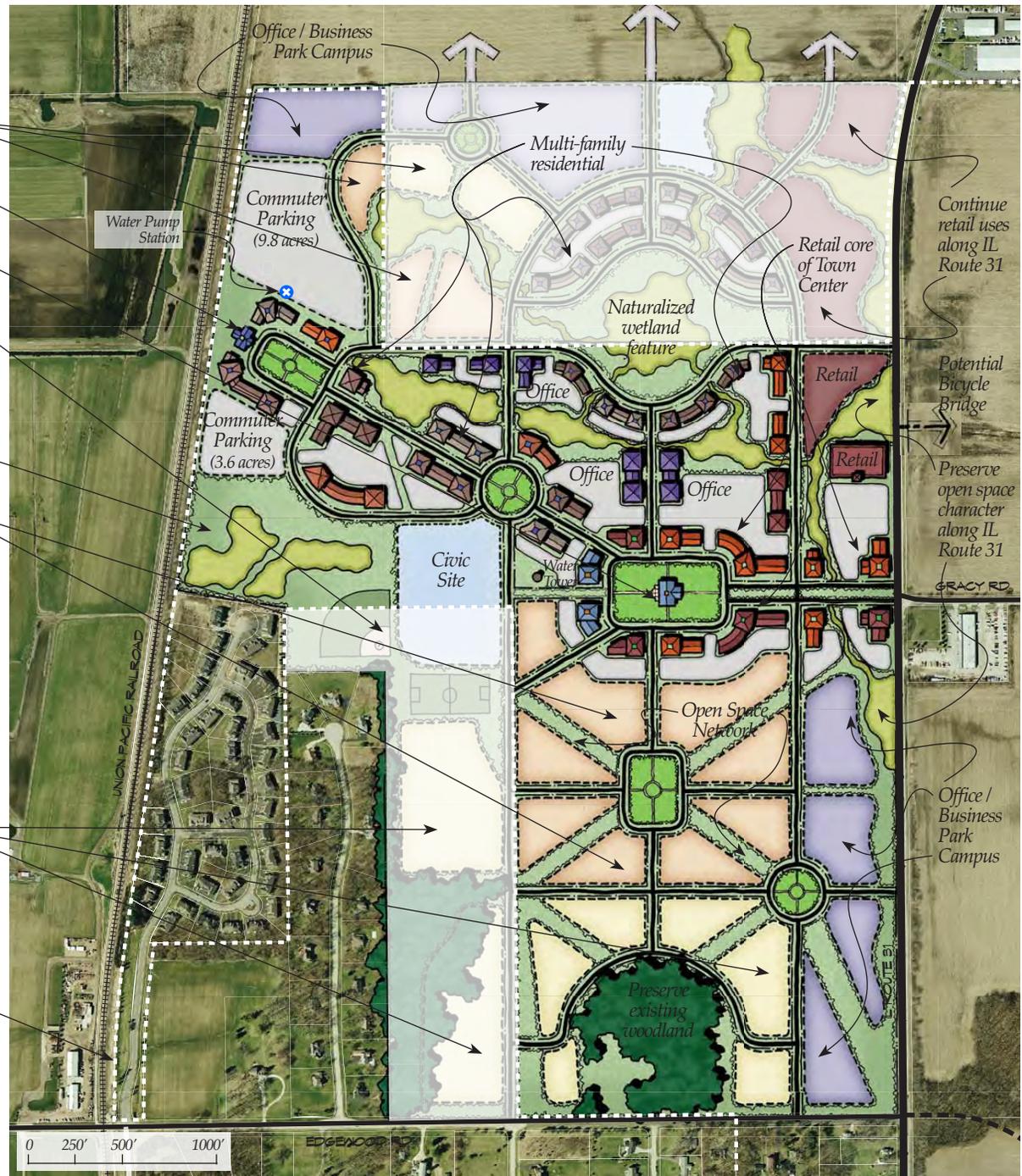
Single-family residential  
 (moderate density)

**NOTES:**  
 The preferred alternative can be built with or without the unincorporated Koerber property on the north side of the site. If the property is included, site design will integrate appropriately with the rest of the site.

See the table in Figure 8-5 for approximate land use areas and unit counts.

Single-family residential  
 (low density)

Village boundary



Continue retail uses along IL Route 31

Potential Bicycle Bridge

Preserve open space character along IL Route 31

GRACY RD

Office / Business Park Campus

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SECTION 9

# Conceptual Land Use Development Plan

As a conceptual site plan for the proposed Prairie Grove Town Center and TOD, the Conceptual Land Use Development Plan illustrates key elements such as land use types, lot and road configurations, building forms and placement, parking, public spaces, open spaces, streetscape elements, and other urban design features. The preferred alternative of the Framework Plan provides the basis for the Conceptual Land Use Development Plan.

## Key Plan Elements

As illustrated in Figures 9-1 and 9-3, the key elements of the Conceptual Land Use Development Plan include:

- » **Metra Station.** A new Metra commuter rail station is proposed on the east side of the Metra UP-NW Line. The station will be served by a single platform on the east side of the tracks, which would permit boardings and alightings on the same platform. Pace would access the Metra station via a new northern collector road extending west from IL Route 31 along the north side of the Study Area.
- » **Commuter Parking.** Approximately 12.5 acres (1,250 commuter parking spaces) would be needed at full build-out. Commuter parking lots are located to the north and south of the Metra station. If additional parking is needed, Metra may utilize adjacent space to the north, which is presently designated for business park use.
- » **Core Town Center Business District.** The core Town Center business district includes a central commons with green space surrounded by ground floor retail, which

FIGURE 9-1

### Quick Snapshot of Conceptual Land Use Development Plan

A more detailed version of the Conceptual Land Use Development Plan is provided in Figure 9-3 at the end of this section.



is essential to activate the commons and generate the customers to support the businesses and services. The central commons will be the focal point from the Town Center's primary entrance from IL Route 31 via Gracy Road. In addition to ground floor retail, two- and three-story mixed use buildings will include office and residential uses. The core Town Center business district also includes potential locations for civic buildings to serve as an anchor within the Town Center, accommodating uses such as a post office, library, and municipal buildings. The conceptual Town Center central commons and mixed use area are illustrated in Figure 9-4.

- » **Retail Node at Gracy Road.** Retail uses are provided at the Town Center's primary entrance from IL Route 31 via Gracy Road. Opportunities to locate an anchor retail tenant and create a gateway feature at this primary entrance will help attract visitors into the Town Center. The potential for a gateway feature would also help define the character of the Town Center.
- » **Office / Business Park Campus.** An office / business park campus is located at the southeast end of the Study Area, with strong visibility along IL Route 31. To help maintain the natural landscape of the area, the site designs for office uses are encouraged to create a campus environment that respects the natural surroundings while also meeting the needs of the end users. There is also potential for ad-

Source: Project for Public Spaces.



*Businesses located at the ground floor help activate a central commons, providing places to set up outdoor displays, hold events, or just sit and people-watch.*

Source: Seattle-DJC.



*An anchor retail tenant such as a grocery store could serve as a major draw and focal point at the Town Center's gateway entry at Gracy Road.*

ditional office space close to the proposed Metra station, which would provide office employees with close train access as well as create a symbiotic relationship between the office employees and nearby businesses.

- » **Multi-Family Residential Neighborhoods.** To generate the critical mass of population to help make Metra commuter rail service and the core Town Center business district viable, multi-family residential neighborhoods are located closest to the Metra station and the core Town Center retail area. These neighborhoods would include a variety of housing types, including condominiums, apartments, townhouses, urban rowhouses, flats and lofts. Furthermore, the condos and apartments are part

Source: Teska Associates, Inc.



*Providing garages at the rear clears the streetscape of visual clutter created by driveways and garage doors, making the streetscape more pedestrian-scale.*



*Residential lofts can be integrated in a mixed use building with commercial space at ground level and living spaces above.*

of either retail mixed use buildings or stand-alone residential structures. Larger structures, such as condos and apartments, would be served by a mix of surface and underground parking, with additional guest parking available on the street. Smaller structures, such as townhouses and urban rowhouses, would be served by rear-loaded garages accessed by alleys, which would help curtail the clutter of front-loaded garages and driveways along the streetscape. Instead, homes would look upon the streetscape with front yards and porches to maintain a pedestrian-friendly environment.

» **Single-Family Residential Neighborhoods.** The southern portion of the Study Area is occupied by single-family res-



*A central commons can provide a place for residents, employees, and visitors to congregate, either for programmed activities or just to be outdoors.*

idential neighborhoods, which would include detached homes of varying sizes and styles. The single-family residential neighborhoods would also be most compatible with the existing neighborhoods to the east and south. Similar to the townhouses and urban rowhouses, most single-family residential lots would be served by rear-loaded garages accessed by alleys.

» **Central Commons.** In addition to the central commons in the core Town Center area, two other central commons areas are provided. The second central commons is located in the single-family residential neighborhood, providing a green expanse in the center of the neighborhood. Recreational trails will feed into this green space. The third central commons is located adjacent to the Metra station, providing a green focal point for this section of the Town Center. Each central commons may include programmed activities, passive green space, or a mixture of both. Also, each central commons will have its own distinct character defined by its size, amenities, and proximity to certain uses.

» **Additional Civic Space.** Additional civic space is provided in the area including the existing water tower and northeast of the Jenny Jae Lane residences. This space could accommodate a school, recreational uses, or additional municipal facilities.



*Civic space in the Town Center could accommodate a range of uses, including a school, ball fields, municipal facilities, or an outdoor nature center (above).*

» **Environmental Conservation Areas.** With sustainability and environmental protection being of paramount importance to the community, the Town Center and TOD carefully integrates existing environmental features into the design of the site. For example, the existing woodlands along the north side of Edgewood Road will be preserved, creating an extensive undeveloped natural area along this road corridor. In addition, the existing wetlands on the site are protected and incorporated into the site design wherever possible.

» **IL Route 31 Open Space Corridor.** In addition to the environmental conservation areas, a substantial portion of the parkway along the west side of IL Route 31 would be maintained as an open space corridor, including the integration of bioswales, landscaped berms, and other elements to maintain the natural character and rural feel of the IL Route 31 corridor as best as possible. The open space corridor would ensure that the commercial buildings and their associated parking areas are set back from IL Route 31 to further enhance the natural character of the road corridor.

» **Pedestrian/Bicycle Bridge.** There are two potential locations for pedestrian/bicycle bridges to provide safe connections for bicyclists and pedestrians: (1) over IL Route 31, and (2) over the railroad tracks. The bridges would be ADA compliant to allow for equitable access. The

Source: Lake County, IL.



*A bioswale along a major roadway corridor can create a natural buffer between the road right-of-way and land uses, such as an office or business park.*

Source: USGS via Bing Maps.



*Preservation of the existing woodlands along the north side of Edgewood Road will create a prominent natural area at the Town Center's south end.*

bridges could also incorporate elements such as signage, unique architecture, or other ornamentation to create a community identity marker for Prairie Grove.

» **Unincorporated Properties.** While a majority of the site is presently annexed into Prairie Grove, certain portions are still unincorporated. The Conceptual Land Use Development Plan illustrates conceptual ideas for the future development of these unincorporated parcels if and when these properties decide to annex into the Village. For the purpose of this Plan, specific site plans were not developed in these holding areas; rather, conceptual land

Source: USGS via Bing Maps.



*A bridge spanning across a major arterial road, such as the Eola Road bridge in Aurora, Illinois (above), provides safe passage for pedestrians and bicyclists.*

use zones are identified to specify the types of uses that would generally be appropriate in these locations if these properties became available to be incorporated into the Town Center.

### ***Land Use Map***

The Land Use Map in Figure 9-5 illustrates the general configuration of land uses proposed for the Town Center and TOD area.

### ***Comparison to Wildflowers Plan***

The table in Figure 9-6 lists approximate land use areas and unit counts as represented on the Conceptual Land Use Development Plan. These areas and unit counts are compared to those represented on the Wildflowers of Prairie Grove preliminary plat of subdivision, which is shown for reference in Figure 9-6. In terms of land use areas and unit counts, the table indicates that the Conceptual Land Use Development Plan is comparable to the Wildflowers plan.

### ***3D Perspective Concepts***

Figure 9-7 shows a series of three-dimensional (3D) perspective concepts of the Prairie Grove Town Center, providing different view of various sections of the are from different vantage points. Since these 3D perspective concepts are intended to only illustrate general ideas like building massing

and site configuration, the amount of architectural and landscaping details are limited. However, the design guidelines in Sections 13 and 14 define the type of character that the Village anticipates for the Town Center. In particular, detailed street cross sections – including right-of-way dimensions, landscaping elements, and multi-modal access for cars, buses, pedestrians, and bicycles – are shown in Figures 14-3 through 14-8 in Section 14.

Source: Tesla Associates, Inc.



*The three-dimensional (3D) perspective concepts illustrate varying views of the proposed Town Center from different vantage points (see Figure 9-7).*

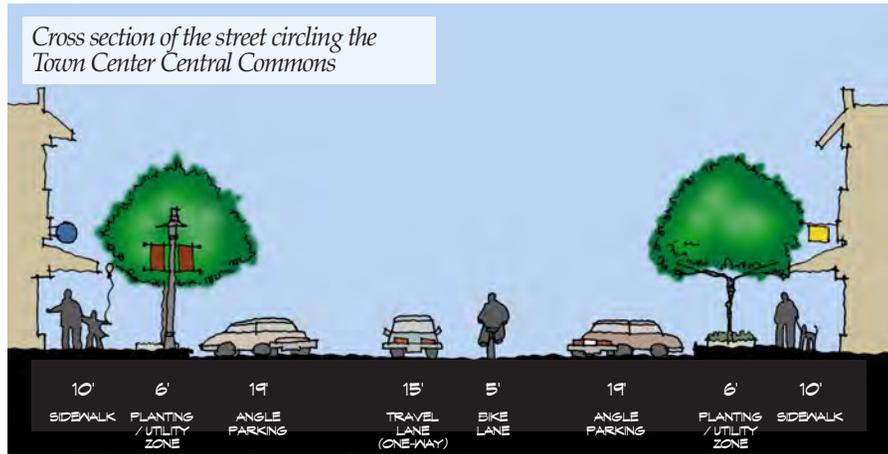
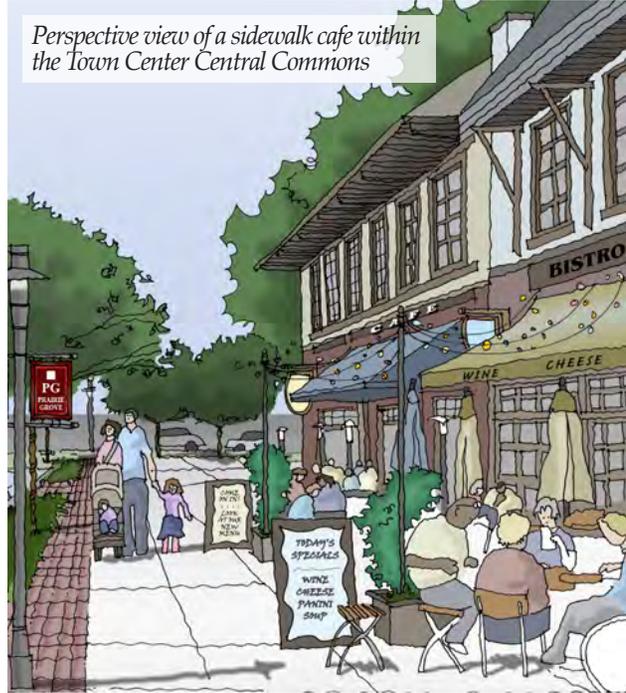
FIGURE 9-3  
**Conceptual Land Use Development Plan**

-  Single Family Residential (7,500 - 9,000 sf)
-  Single Family Residential (10,000 - 12,000 sf)
-  3-5 Story Multi-Family Residential
-  Townhouse / Rowhouse
-  Hotel
-  1 Story Retail
-  2-3 Story Mixed Use
-  3-4 Story Mixed Use
-  1-3 Story Office
-  Civic
-  Metra Commuter Rail Station
-  Commuter Parking
-  Business Park

Source: GIS mapping data provided by McHenry County; concept plan prepared by Teska Associates, Inc., Metro Transportation Group & LandUse\ USA.



FIGURE 9-4  
**Conceptual Town Center Central Commons Plan**



Renderings created by Teska Associates, Inc.

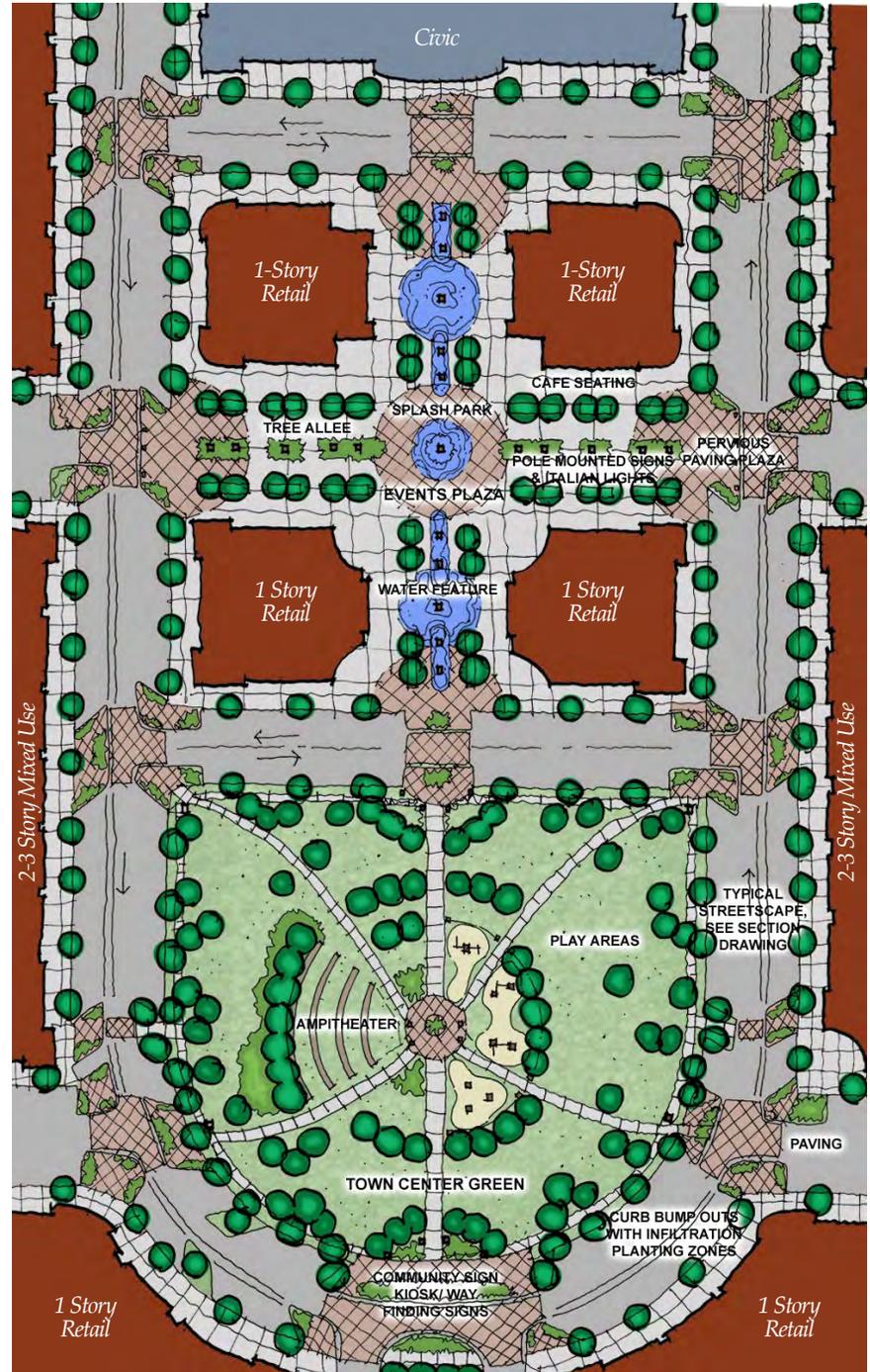
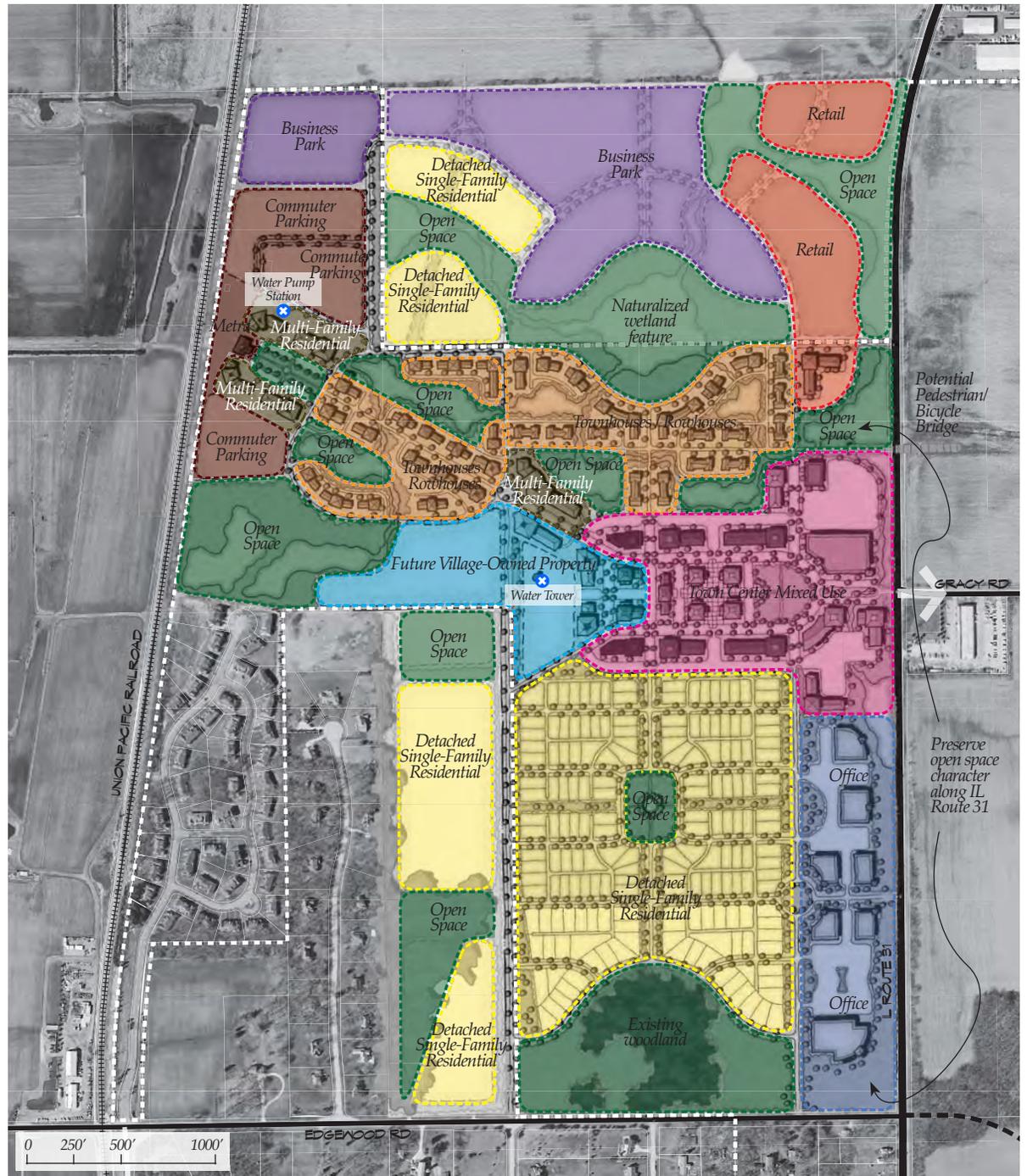


FIGURE 9-5  
**Land Use Map**

The Land Use Map illustrates the general configuration of land uses proposed for the Town Center and TOD area. While large open spaces are depicted, smaller green areas such as landscaped parkways, bioswales, and other landscaped or natural areas are also not identified as separate open spaces. Parking areas are also not identified as separate land uses. These particular areas are better depicted in the Conceptual Land Use Development Plan in Figure 9-3.



Source: GIS mapping data provided by McHenry County; land use map prepared by Teska Associates, Inc.

FIGURE 9-6

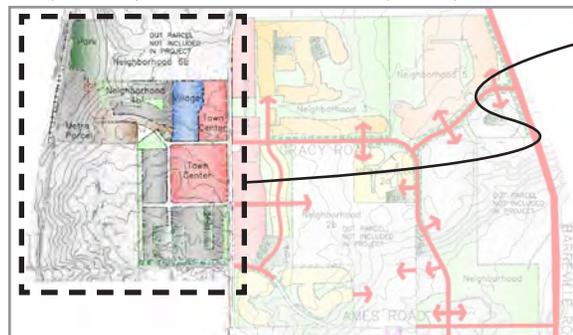
**Approximate Land Use Areas / Unit Counts**

Comparing the Conceptual Land Use Development Plan to the Wildflowers Plan

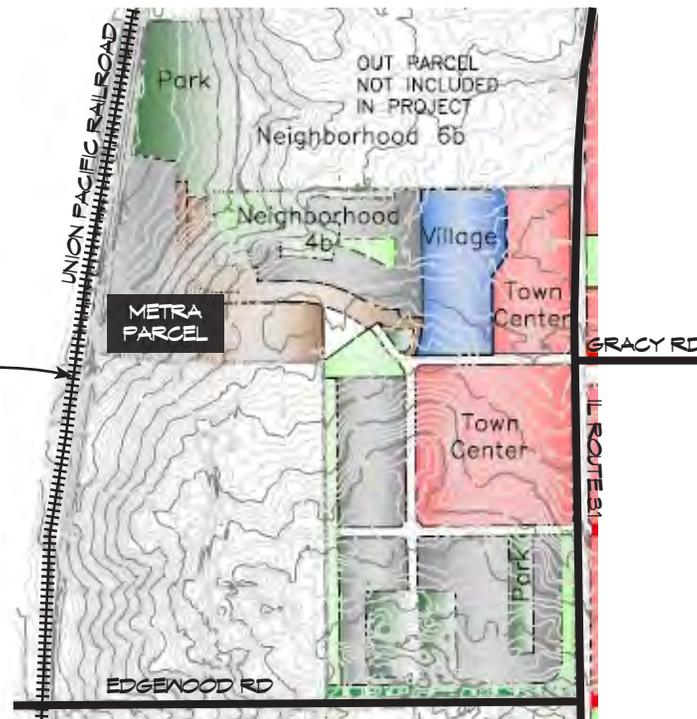
Land Use	Wildflowers Plan (See Below)	Conceptual Land Use Development Plan (See Figure 9-3)		
	Area Located West of IL Route 31	Incorporated Area Only <sup>1</sup>	Unincorporated Area <sup>2</sup>	Entire Study Area <sup>3</sup>
<b>Residential</b>	442 units (excludes multi-family)	697 units	117 units	814 units
- Single-Family Detached	209 units	179 units	117 units	296 units
- Rowhouses / Townhouses	233 units	196 units	-	196 units
- Multi-Family <sup>4</sup>	Not specified	322 units	-	322 units
<b>Commercial</b>	472,000 sq ft @ 0.25 FAR <sup>5</sup>	516,000 sq ft	322,000 sq ft	838,000 sq ft
- Retail	Not specified	290,000 sq ft	112,000 sq ft	402,000 sq ft
- Office	Not specified	226,000 sq ft	210,000 sq ft	436,000 sq ft
<b>Municipal<sup>6</sup></b>	18 acres	18 acres	3 acres	21 acres
<b>Parks &amp; Open Space</b>	67 acres	82 acres	33 acres	115 acres
<b>Metra<sup>7</sup></b>	20 acres	13 acres	-	13 acres

- <sup>1</sup> Includes incorporated areas within current Prairie Grove municipal boundary only.
- <sup>2</sup> Includes unincorporated areas outside of municipal boundary but within Study Area.
- <sup>3</sup> Includes areas both within and outside of municipal boundary but within Study Area.
- <sup>4</sup> Includes condominiums, flats, lofts, and apartments, either in a residential-only building or as part of a mixed use building.
- <sup>5</sup> Approximately 51 acres for commercial uses in Wildflowers Plan.
- <sup>6</sup> Property to be owned by the Village; development not limited to municipal uses, but may include civic, recreational, or mixed use.
- <sup>7</sup> Metra minimum requirement of 12.5 acres; additional space is available for potential expansion at the far northwest pod currently proposed for a business park.

**Wildflowers of Prairie Grove Preliminary Plat of Subdivision**



Note: Only the portion of the Wildflowers Plan located west of IL Route 31 is comparable to the Study Area of this Town Center & TOD Plan.



Source: Prairie Grove 1078 SPE, LLC (Wildflowers); Greengard, Inc.

FIGURE 9-7  
*Three-Dimensional Perspective Concepts of the Prairie Grove Town Center*



Rendering created by Teska Associates, Inc.

**Southward view:** The Town Center Central Commons is in the background, with a cluster of mixed use buildings and townhouses in the foreground. The curvilinear street in the foreground serves as the primary access road for commuters and Pace buses to access the Metra station from IL Route 31 (see Figure 11-2 for details on this access road).

*Three-Dimensional Perspective Concepts of the Prairie Grove Town Center*



**Westward view:** This view depicts the extensive open space and wetland conservation areas that help define the Town Center's identity. While some areas are more substantial in size than others, residents and visitors will have green space in close proximity, no matter where they are in the Town Center.

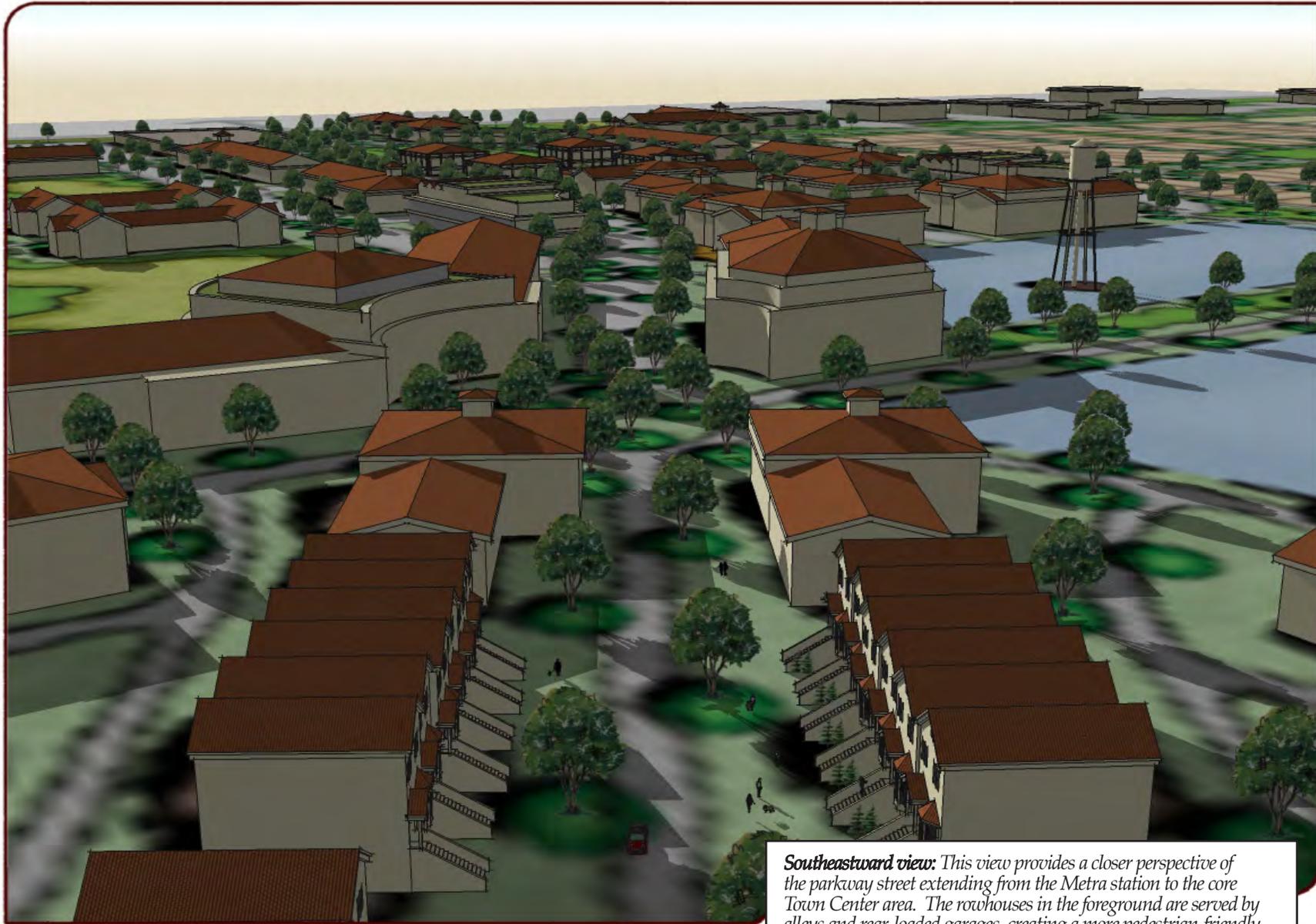
Rendering created by Teska Associates, Inc.

FIGURE 9-7 (continued)  
*Three-Dimensional Perspective Concepts of the Prairie Grove Town Center*



Rendering created by Teska Associates, Inc.

**Southeastward view:** The proposed Metra station and UP-NW Line tracks are in the foreground. This view provides a perspective of the parkway street extending from the Metra station to the core Town Center area.



Rendering created by Teska Associates, Inc.

**Southeastward view:** This view provides a closer perspective of the parkway street extending from the Metra station to the core Town Center area. The rowhouses in the foreground are served by alleys and rear-loaded garages, creating a more pedestrian-friendly streetscape (see Figure 11-9 for details on the street cross section).

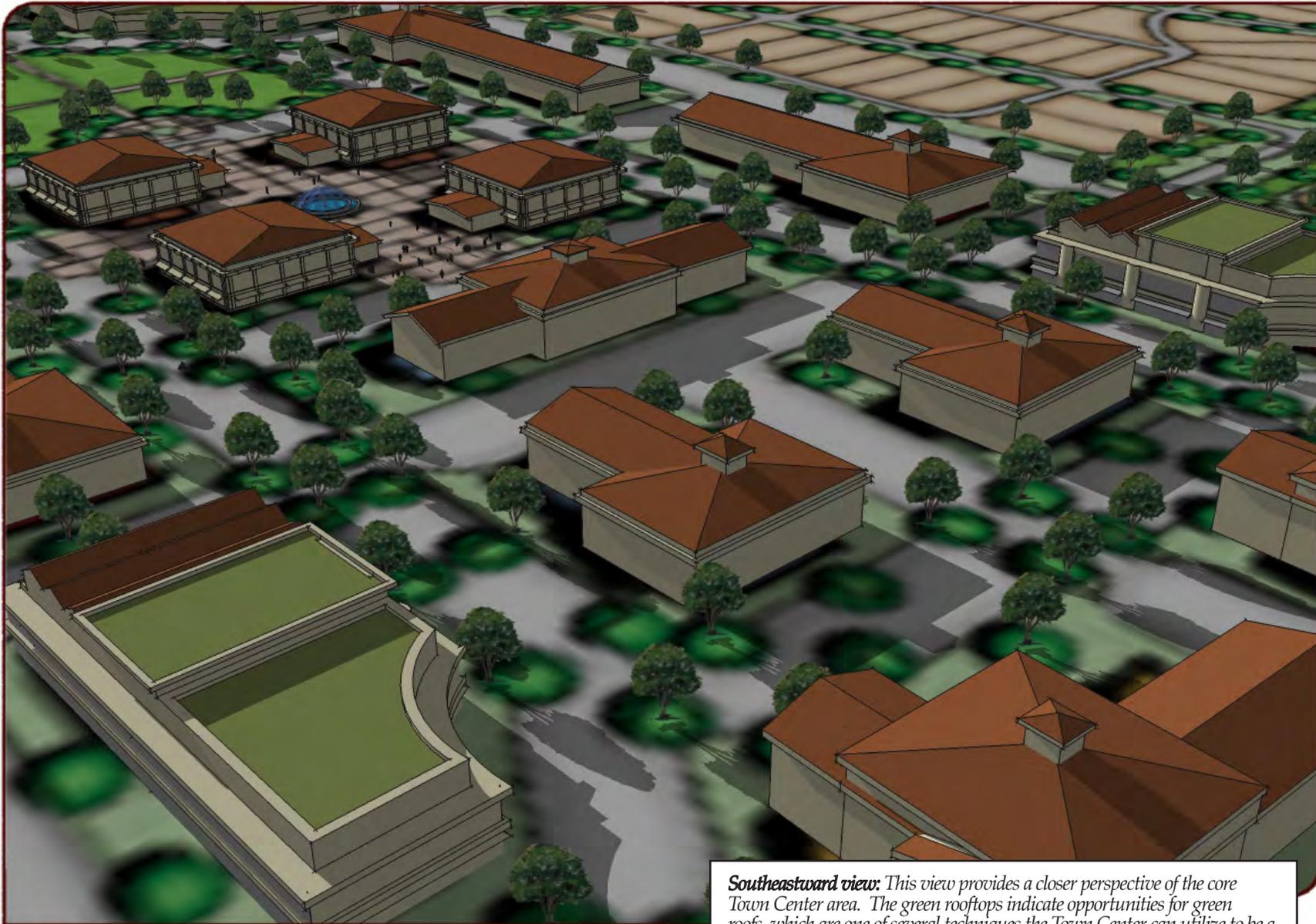
FIGURE 9-7 (continued)

*Three-Dimensional Perspective Concepts of the Prairie Grove Town Center*



Rendering created by Teska Associates, Inc.

**Westward view:** The core Town Center area includes a central commons, ground floor retail, upper floor offices and residences, and direct access from IL Route 31 (background). The central commons could integrate elements such as a central green, splash park, amphitheater, play areas, and plazas (see Figure 9-3 for details).



Rendering created by Teska Associates, Inc.

**Southeastward view:** This view provides a closer perspective of the core Town Center area. The green rooftops indicate opportunities for green roofs, which are one of several techniques the Town Center can utilize to be a sustainable development (see Section 14 for other green opportunities).

FIGURE 9-7 (continued)  
*Three-Dimensional Perspective Concepts of the Prairie Grove Town Center*



Rendering created by Teska Associates, Inc.

**Southwestward view:** This streetscape view illustrates the relationship between buildings and the street. With rear-loaded garages served by alleys, these rowhouses create a more pedestrian-friendly streetscape with ample front yard space, parkway, and sidewalks. In this particular section of the Town Center, cars are limited to two lanes (see Figure 11-9 for details on the street cross section).

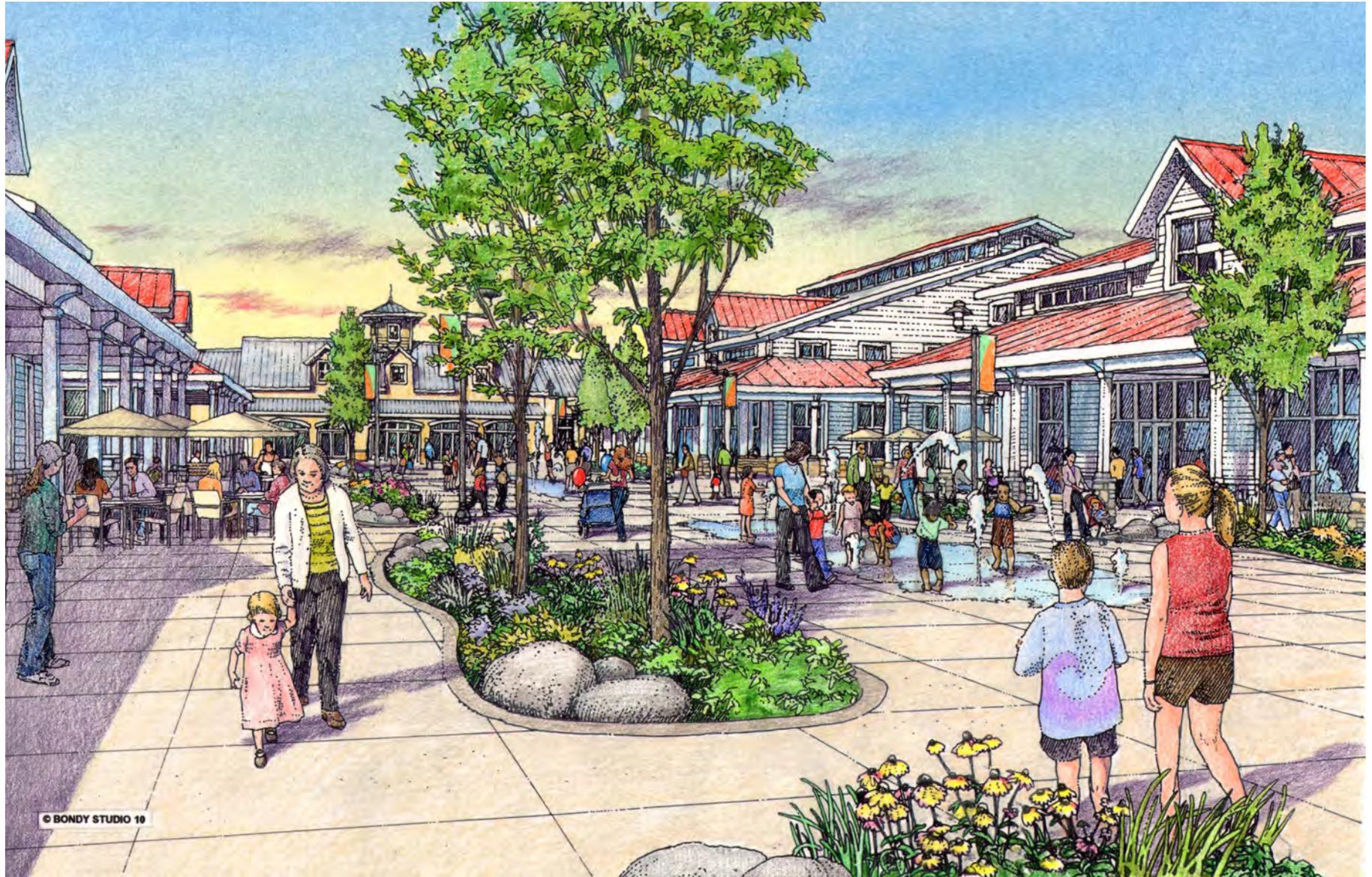
*Three-Dimensional Perspective Concepts of the Prairie Grove Town Center*



Rendering created by Bondy Studio

**Westward view:** This view provides a birdseye view perspective of the the northern portion of the Town Center. IL Route 31 and the core retail area are shown in the foreground. The proposed Metra station are railroad tracks are shown in the far back-ground. The integration of open spaces, green roofs, central common areas, and a mix of uses are illustrated in this view.

FIGURE 9-7 (continued)  
*Three-Dimensional Perspective Concepts of the Prairie Grove Town Center*



Rendering created by Bondy Studio

**Westward view:** This view provides a pedestrian-view perspective of the core Town Center area, including an open-air plaza complete with outdoor cafes, interactive water features, and landscaped walkways flanked by retail businesses and services.



Rendering created by Bondy Studio

**Westward view:** This view provides a pedestrian-view perspective of the core Town Center area, including a central commons with a large open green space that provides for different recreational opportunities, such as an amphitheater, play areas, walkways, and general open space for social interaction and activity. The core retail area and plaza are shown in the background to illustrate the close proximity between the central commons and Town Center retail opportunities.

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## SECTION 10

# Market Strategy

The Prairie Grove Town Center and TOD Plan reflects market realities and is supported by the results of quantitative supply-demand and gap analyses. The market analysis began with a study of economic conditions in McHenry County and the Village of Prairie Grove, with results that have already been documented in the Existing Conditions Assessment Report dated November 30, 2009.

The economic analysis studied various levels of geography including the Upper Midwest Region; Chicagoland; Cook, Lake, McHenry and Walworth Counties; and 1-mile, 2-mile and 3-mile rings around Metra stations along the MD-N, NCS, UP-NW, and MD-W lines. However, in formulating a strategy for the Prairie Grove TOD, we focused more on the market's trade area, and considered the following groups:

- » Existing and future residents living in Prairie Grove, McHenry and Crystal Lake;
- » Potential shoppers at retail destinations in the project;
- » Visitors to entertainment venues in the project;
- » Employees working at new businesses in the project;
- » Transit riders of the proposed Metra station; and
- » Potential buyers of new residential units.

The following sections of the plan focus on describing the optimal strategy for the Village TOD, with an emphasis on distilling the analytic results into meaningful recommendations. The recommendations reflect the results of the supply-demand analysis and are qualified to reflect Prairie Grove's unique character, attributes and geographic setting within the region. A more complete explanation of the methodol-

*The future Prairie Grove TOD should reach for project elements that clearly convey the Village's truly unique character and identity.*

ogy used for the retail, business and service categories can be found on page A-6 in the Appendix, and the methodology for testing residential units is described on page A-8 in the Appendix.

### Qualifying the Results

In envisioning the future Prairie Grove TOD, it is important to see beyond conventional perceptions of Town Centers and instead reach for project elements that clearly convey the Village's truly unique character and identity. Although the trade area currently has a small population, it will eventually grow with the addition of new households throughout the region. The market is relatively affluent and its geographic

Source: LandUse! USA.



*This market strategy describes recommendations for residential and commercial uses for the Prairie Grove Town Center and TOD.*



setting between the Cities of McHenry and Crystal Lake can be leveraged to boost the project's customer base, but only if the project is truly unique and compelling enough to draw patrons from throughout the region.

To achieve these goals, we have identified three themes that are already apparent in the local market and that can be integrated into the Town Center to convey a truly unique project, thereby helping it attract anchors that can reach well beyond that of a convenience destination for local residents. The three themes include:

1. European Heritage
2. Equestrian Lifestyle
3. Leisure and Healthy Lifestyle

Figure 10-1 provides three separate lists citing examples of how these themes can be conveyed in the mix of retail, services and entertainment venues.

The three themes are designed to be bold and imaginative, but collectively the project size is still recommended to be realistic and at a pedestrian scale. Among the three themes, the concept of a Town Center that emphasizes Leisure and Healthy Lifestyles is perhaps the easiest to implement by leveraging the positive influences of the Centegra and Sherman health care systems, complemented by wide range of independent practitioners (see Figure A-5 in the Appendix for a partial inventory.)

**FIGURE 10-1**  
**Example Thematic Retail, Service & Entertainment Venues**



***Leisure and Healthy Lifestyle***  
*(Low Level of Difficulty)*

- » Executive-style Golf Course
- » Travel and Reservation Services
- » Extended Stay Hotel
- » Full-Service Health Club
- » Handball, Racquetball, Tennis Courts
- » Multi-purpose Practice Fields
- » Playhouse, Ballroom, Chapel
- » Comedy Club, Dueling Pianos, Mystery Theater
- » Sculpture and Rose Garden
- » Physicians Offices; Sports Medicine
- » Home Nursing Services
- » Tuxedo Rental Shop
- » Wedding Consulting, Bakery
- » Event Catering Services
- » Seafood Restaurant



***European Heritage***  
*(Moderate Level of Difficulty)*

- » European Market, Green Grocer
- » Sausage Shop, Butcher, Baker
- » European Cuisine Restaurant
- » Euro-Style Day Spa
- » Full-Service Wellness Center; Resort
- » Boutique Hotel
- » Bed & Breakfast
- » Wine and Cheese Shop
- » Microbrewery
- » Men's Full-Service Tailor



***Equestrian Lifestyle***  
*(Highest Level of Difficulty)*

- » Tack and Boot Shop, Livery
- » Equestrian Stables, Clubhouse
- » Veterinarian Services
- » Art Gallery, Equine Photography
- » Equine Appraisal, Insurance, Law Services
- » Therapeutic Riding Services
- » University of Illinois Institute of Equine Research
- » Equestrian Riding Academy
- » Mounted Police of Prairie Grove (station)
- » Ranch-style Houses with Stable or Prairie Views



European-style businesses like delis, butchers, bakeries, and food co-ops (left) hark to the European heritage that is traditional to Chicagoland. A boutique hotel (right) is also representative to European heritage, and could also be combined with an Equestrian Lifestyle use, such as an equine clubhouse.

The European Heritage concept recognizes the importance of European nationalities in Chicagoland's history, and the positive influences that they can have for conveying leisure, healthy lifestyles and cultural diversity. A wellness center, boutique hotel and meeting space could all echo European influences, and the theme could be broadcast by a few selected merchants like European-style deli's, butchers, bakeries, day spas, and tailor. Wayfinding and signage with European influences could knit it together.

The Equestrian Lifestyle theme is perhaps the most difficult because equine venues typically rely on a large regional trade area. However, the concept could be knit together with the leisure and healthy lifestyle while staying at a scale appropriate for the trade area size and inboard location relative to major highways. An equine arena or coliseum would not be supported, but a small riding academy, stables, clubhouse and complementary retail would certainly celebrate the importance of the equine industry while supporting parallel objectives for land and prairie conservation. Not of least importance, the theme would help convey a Town Center project that is truly unique from its more urban relatives.



The prominence of an equine character in Prairie Grove could be carried over into the Town Center, with potential uses or activities such as hosting an equine expo (left) or creating a mounted police squad to patrol the Town Center and surrounding area via officers on horseback (right).

The themes have considerable overlap and can be used together in the project, complementing each other across a broad spectrum of land use categories. They should also bridge various demographic groups, serving executives with leisure categories, and moderate households with conveniences in groceries, eating establishments and entertainment venues. The challenge for independent merchants will be keeping services and venues attainable to the general public, and avoiding price points that are exclusive and undermine revenue goals.

The recommended mix of uses must also work collectively and in a synergistic fashion, striving for critical mass within any given theme or category. For example, an art gallery and photography studio focusing on the equine industry is more likely to thrive if the entire project clearly celebrates equine lifestyles. Similarly, handball and racquetball courts are more likely to be utilized if the project also includes a wellness center and athletic club; and a wine and cheese shop can benefit from traffic generated by a European-style green grocer. However, pursuing an art gallery and cheese shop without these other elements in place would be a fruitless endeavor.

### Retail Opportunity

The retail results of the supply-demand analysis and gap model for the Village of Prairie Grove are detailed in Figure 10-2, and demonstrate a measureable but conservative and realistic opportunity for 160,000 square feet of traditional merchant space. This includes a number of important anchors in the project, and specifically a hardware store, supermarket, pharmacy and critical mass among full-service restaurants.

Assuming that valued anchors are included in the project then there are also opportunities for a diverse mix of retail shops, but with a limited amount of space allocated to each. Some categories like apparel and restaurants achieve success through critical mass within their categories, whereas a single establishment might struggle alone. Other categories like sporting goods, office supply stores and book stores benefit by clustering together, but with limited direct competition within their own category.

The 160,000 square feet of retail assumes that the TOD will be developed in advance of any other retail along IL Route 31 in Prairie Grove. Regardless of whether other retail is determined to be “complementary” or “competing”, every 10,000 square feet of space that is developed outside of the TOD means that much less opportunity for this Plan. In other words, all retail development in the market must share the pie, at least until housing and population growth generates sufficient demand to support additional space.

Source: Williamsburg Chamber of Commerce.



Source: Pyral Hardware.

The Town Center and TOD provides an opportunity for about 160,000 square feet of traditional commercial retail space, including a pharmacy (left) and a hardware store (right).

FIGURE 10-2  
Retail Gap & Opportunity for  
the Prairie Grove Town Center & TOD

NAICS	Category Description	Village of Prairie Grove TOD		
		No. of Potential Estab.	Average Size (GLA)	Gross Leasable Area
44413	Hardware stores	1	10,000	10,000
44511	Supermarkets, Grocery	1	65,000	65,000
44512	Convenience stores	1	2,000	2,000
4452	Specialty food stores	1	2,000	2,000
4453	Beer, wine, & liquor stores	1	3,000	3,000
44611	Pharmacies & drug stores	1	14,000	14,000
448	Clothing, Accessories, Jewelry	4	2,000	8,000
44612	Cosmetics, beauty supplies	1	2,000	2,000
45111	Sporting goods stores	1	2,000	2,000
45112	Hobby, toy, game stores	1	2,000	2,000
4512	Book stores	1	2,000	2,000
4529	Variety stores	1	2,000	2,000
4531	Florists	1	2,000	2,000
453210	Office supplies & stationery stores	1	2,000	2,000
453220	Gift, novelty, & souvenir stores	1	2,000	2,000
45392	Art dealers	2	2,000	4,000
5111	News, periodical, book publishing	1	2,000	2,000
5112	Software publishers	1	2,000	2,000
51213	Motion picture & video exhibition	1	2,000	2,000
7221	Full-service restaurants	4	4,000	16,000
7222	Limited-service eating places	3	2,000	6,000
7223	Special food services	2	2,000	4,000
7224	Drinking Establishments	2	2,000	4,000
	Subtotal Retail (excl. Accommodation)	34		160,000
721	Accommodations, Hotels, Motels	2	60,000	120,000
	Total Retail and Accommodations	36		280,000
	Additional Market-Driven Categories	7		14,000
	Total Opportunity	43		294,000

Sources: Underlying data utilized from the 2002 Economic Census, 1990 and 2000 Population Census, and Claritas, with interpolations, calculations and analysis by LandUse USA, LLC. The 2007 Economic Census data will be available in December 2009, and the model can be updated at that time.



Chain businesses like Barnes & Noble, Bravo! Cucina Italiana, and World Market adhere to build-to lines established by municipal codes and supported by specific design guidelines for the district in which they are located.

Meanwhile, the Village is prudent in planning for additional commercial uses along IL Route 31, and should utilize Master Plan and Zoning Ordinance tools to ensure that modern design guidelines are firmly in place. If a bypass is ever constructed around the west side of the City of McHenry with an intersection through Prairie Grove, it is likely to attract big-box retailers and national chain stores. Rather than accepting these uses in conventional strip center layouts, the Village should establish smart design guidelines for mixed-use projects that complement the TOD and continue to support compact design through a combination of density and land conservation. The design guidelines that will be part of this Plan will provide some guidance in this regard, providing design cues and development standards upon which to base guidelines for peripheral areas around the TOD.

### **Market-Driven Retail**

In testing the market for opportunities, there are a number of categories with very little or no gap based on the model, but that are likely to locate within the TOD project anyway. They tend to be convenience-based businesses and tend to appear in nearly every successful retail project. Examples include personal care salons, dentists, real estate agents, tax preparation services, attorney offices, and drycleaners.

For the Prairie Grove TOD, we have also identified a number of retail categories that could complement the targeted retail mix in the project, and that could be operated by independent entrepreneurs occupying secondary tenant spaces with



Convenience-based businesses, such as a drycleaners (left) and real estate agent (right) may locate within the Prairie Grove Town Center and TOD based on market needs.

relatively moderate rent rates. These include a camera and photography store; piece goods store (embroidery and silk screening), musical instruments supplier, and/or pet and pet supply store.

Given the risks, all uses listed in Figure A-C in the Appendix should all be “market-driven” through their own initiative rather than secured through an aggressive tenant recruitment strategy. Collectively, they would total about 14,000 square feet, or less than 10 percent of all retail space in the project.

### **Exclusions**

It is also important to be explicit about the categories of retail that are not recommended for the Prairie Grove project, mainly to help to ensure that tenant recruitment efforts are

FIGURE 10-3

#### ***Retail Categories Not Recommended for the Prairie Grove Town Center & TOD***

- Traditional and discount department stores
- Automotive dealerships, parts and repair
- Furniture, home furnishings and electronics
- Home, lawn and garden supplies
- Home and business services
- Spectator sports arenas
- Hotels with casinos, water parks

focused on the clear opportunities. Specific categories are not recommended for a number of potential reasons, in some cases because they are inappropriate land uses for a Town Center concept, but mainly because they rely on a larger market than the Prairie Grove TOD will achieve near-term.

Figure A-D in the Appendix provides a detailed list of categories not recommended for the Prairie Grove TOD, and they include the general retail categories listed in Figure 10-3.

### Anchors

Anchors in the project are considered essential to its success, and are critical for generating shopper traffic needed to support smaller tenants. Anchors are so important to the project's success that without them, we would not recommend any small tenant space. In fact, we do not recommend that a single retail structure, building or footprint be constructed anywhere in the project without an anchor. This means that every row of small tenants must have an anchor, without exception.

Anchors can be more than traditional retail stores in the hardware, grocery and pharmacy categories, and can also include unique destinations that help expand the project's regional draw. For the Prairie Grove TOD, these could include a playhouse; convention facility; full-service wellness center / health club; boutique hotel; library or even a meaningful cluster of three or more themed restaurants.

However, to ensure that the project is a success, the definition of an anchor should not be compromised to include national chain stores that desire corner tenant space – particularly if they are not even unique to the market. Establishments like Panera Bread, Starbucks or Buffalo Wild Wings should not be accepted under the genre of anchors for the Prairie Grove TOD; and services like banks, post offices, club houses, and outpatient medical facilities also do not qualify.

For perspective on stores sizes, an anchor store in the Prairie Grove TOD should be at least 6,000 square feet in size, and ideally 8,000 to 14,000 square feet. For additional perspective, shops like Lane Bryant, Coldwater Creek, Eddie Bauer and

*Anchor stores can be more than traditional retail stores in the hardware, grocery and pharmacy categories, and can also include unique destinations that help expand the regional draw of the Town Center and TOD.*

White House | Black Market often have 6,000 square feet, and Pier 1 typically begins at 8,000 square feet. Chain pharmacy stores like Walgreens and CVS are usually 12,000 to 14,000 square feet.

Similarly, national chains like Borders, Bed Bath & Beyond and Best Buy could easily be 25,000 to 30,000 square feet, and department stores like Kohl's and J.C. Penney start at about 90,000 square feet. Big-box stores like Wal-Mart, Target and Home Depot could easily be 120,000 square feet, and supercenters and membership warehouse clubs start at 160,000 square feet and might easily exceed 200,000 square feet. Note:



*Anchor tenants for the Prairie Grove Town Center and TOD may include uses such as a playhouse (top left), library (top right), grocery store (bottom right), and a full-service wellness center / health club (bottom left).*

FIGURE 10-4

**Revenue Gap & Opportunity (2002) for the Prairie Grove Town Center & TOD**

		Village of Prairie Grove TOD		
NAICS	Category Description	No. of Potential Estab.	Average Size (GLA)	Gross Leasable Area
5416	Mngmt., scientific, technical	2	25,000	50,000
5418	Advertising & related services	1	25,000	25,000
5613	Employment services	1	25,000	25,000
5614	Business support services	1	25,000	25,000
5415	Computer systems design, related	1	25,000	25,000
	Subtotal Build-to-Suit Anchor Firms	6		150,000
6211	Offices of physicians	5	2,000	10,000
6214	Outpatient care centers	1	12,000	12,000
6216	Home health care services	2	2,000	4,000
623	Nursing & residential care	2	2,000	4,000
	Medical Services Building; Sublet Spa	10		30,000
53111	Lessors of residential units	1	1,000	1,000
53112	Lessors of office, commercial space	1	1,000	1,000
53132	Real estate appraisers	1	1,000	1,000
54119	Licensed professionals	4	1,000	4,000
54131	Architectural services	2	1,000	2,000
54137	Surveying, mapping services	2	1,000	2,000
54194	Veterinary services	1	2,000	2,000
5611	Office admin., human resources	2	3,000	6,000
5615	Travel & reservation services	1	1,000	1,000
	Non-Medical Professional; Above Str	16		20,000
	Subtotal Non-Retail Office Space	32		200,000
	Additional Niche Categories	11		26,000
	Total Non-Retail Office Space	43		226,000

Sources: Underlying data utilized from the 2002 Economic Census, 1990 and 2000 Population Census, and Claritas, with interpolations, calculations and analysis by LandUse USA, LLC. The 2007 Economic Census data will be available in December 2009, and the model can be updated at that time.

All of these brands are presented because they are usually easy to recognize in most markets, and are not necessarily recommended for Prairie Grove.

**Placement of Land Uses**

It is recommended that retail, services, amenities and venues described in the prior section of this plan be knit together to convey a unique Town Center that celebrates the character and identity of Prairie Grove with leisure, healthy lifestyles, European-style amenities, and Equine elements. These should also be positioned at the “gateway” entrance into the Town Center, and will set the tone and feel for the quality of life and working environment that are located within the project and with relatively less visibility to traffic along Highway 31.

In addition, the project should include a number of build-to-suit development pads for office buildings, where the tenant is either a) the owner or b) the developer under a lease-back agreement. These buildings should generally flank the retail core of the Town Center, and most anchor tenants will desire visibility to traffic along Highway 31 (even if they are set-back from the corridor and buffered by greenways.) Anchor office tenants will want their company logo emblazoned on the side of an office building to achieve advertising “exposures,” and these exposures can be as important as newspaper ads in competing for customers, suppliers, partners and employees. The opportunity for office tenants is addressed in the following section of this plan.

**Office Opportunity**

Figure 10-4 details the opportunity for non-retail professional space in the Prairie Grove TOD, based partly on the results of the supply-demand model, and qualified based on market observations of existing supply and industry clusters.

Today, Prairie Grove already has good representation among businesses specializing in publishing, packaging, record storage, operations support, marketing, management consulting and other business services (see Figure A-1 in the Appendix.) There is also a heavy influence among the plastics fabrication industry (Figure A-2, Appendix), and medical profession-



Source: LandUseUSA.



To maintain an appropriate scale for the Town Center, large-scale office buildings may take on alternative formats, including landscaped campuses.

als (Figure A-5, Appendix.) Plastics fabrication appears to be supporting the medical and business services industries through manufacturing of medical supplies, protective medical gear, waxes and cleaning agents.

These existing industries should be leveraged to attract complementary businesses that can share resources, talent, skilled labor, services and suppliers. Aligning existing clusters with results from the gap model indicates potential for the industry sectors listed in Figure 10-5.

In general, each tenant business should plan on occupying at least one level of an office building with a 25,000 square footprint or more. Additional levels could be used to expand the business and/or generate revenues from sublease space. Businesses subletting space could be a mix of professionals in

FIGURE 10-5

**Industry Sectors with Attraction Potential to the Prairie Grove Town Center & TOD**

- Management, Scientific Technical
- Advertising, Marketing, Related Services
- Employment Services
- Non-Marketing Business Support Services
- Computer Systems Design, Web Support

Source: Triax Development.



To avoid an over-building of sublease office space, build-to-suit office buildings should include subleasing plans with their permit applications.

a variety of industries, mainly medical, real estate, appraisal, architecture, construction, building, surveying, human resources, and business consulting.

In the current economic climate and market conditions, there is a serious risk of over-building among speculative and sublet office space in the Village of Prairie Grove. However, we also are confident that the Town Center plan will be attractive and compelling to potential build-to-suit tenants. The challenge is in developing office space for new anchor tenants without over-building the amount of sublease space. This challenge is compounded by the concept of a Town Center, which almost by definition calls for some small professional suites and flex-space above street front retail in the project's core.

To align these goals, we recommend that build-to-suit tenants include a detailed subleasing plan with their permit applications, including letters of intent from interested subletting companies. An anchor tenant planning to occupy 25,000 square feet of a 75,000 square foot building is not recommended unless the proposal includes commitments from subletting tenants. Otherwise, the building format should be scaled down to meet only the needs of the anchor tenant.

To accommodate the inevitable interest by regional head-quarter types of anchor tenants, it will be prudent to set some land aside in the Plan that allows for the development of build-to-suit facilities in a market-driven (or tenant-driven)



*Speculative professional office suites should only be allowed in flex-space stacked above street-front retail, and only in moderate amounts. All equine-related businesses should be located in the retail core of the Town Center.*

manner, rather than under developer-driven agendas. “Land banking” attractive office parcels for future build-to-suit tenants can help achieve long-term goals for a diversity of land uses, critical mass of development, and enhanced daytime population.

In addition to anchor types of tenants occupying build-to-suit space, there is an opportunity for about 50,000 square feet of professional office space in sublet suites – the majority of which should be planned above street-front retail in the TOD core. Exceptions will apply for outpatient care centers combined with physician offices (other than physical therapy, optometrists and dentist) and nursing/residential care services.

Veterinary services and travel/reservation services are also supportable, but are more likely to demand street-front retail space beside traditional retail categories. These aside, Figure 10-6 lists office categories that should be targeted above the street-front retail.

### ***Residential Market Strategy***

Among the various categories of land uses tested for the Village of Prairie Grove TOD, residential units are addressed last only because they are easier to substantiate economically and are supportable even without the retail component. In fact, housing for working families is needed to support the proposed Metra station, making residential an integral piece to our underlying assumptions.

FIGURE 10-6

### ***Potential Office Categories to Target Above Street-Front Retail***

- Lessors of Real Estate Space
- Real Estate Appraisers
- Title and Mortgage Companies
- Licensed Professionals (other than Physicians)
- Architectural Services, Planning and Design
- Surveying, Mapping Services
- Office Administration Services
- Human Resource Services

The Village’s vision calls for build-out of 442 units in the project, which is less than 1,000 new residents. As potential shoppers and patrons, these new 1,000 residents will not make or break the project’s viability of the retail.

The success of retail, services and entertainment venues will depend far more on population growth that is forecast throughout the entire trade area. Expenditures by residents living in the TOD will enhance sales for its businesses, but the vast majority (60 to 70 percent) of all sales will depend on the 50,000 residents living throughout the trade area, and 30 to 40 percent will depend on visitors and patrons through import.

The main concern with the residential market strategy is ensuring that developers can achieve target absorption rates and minimize the time that each unit sits on the market before it is absorbed. This is particularly challenging in a soft housing market and during economic recessions, but we are confident in the long-term opportunity for housing units in the TOD, and throughout the Village of Prairie Grove.

Absorption rates are a difficult variable to measure and can range from 1 unit per month to 10 units per month, depending on a large number of variables. Obviously, the most successful project manages to sell 10 units per month. However, the averages even during robust economic times tend to hover around 4 units per month. During a recession, developers generally consider themselves lucky if they are selling 2 units per month. With this perspective, Figure 10-7 provides a summary of the factors that tend to affect absorption rates the most, with the most important listed first.

To be clear, a small project with all units in the upper price brackets is guaranteed to have a slower absorption rate than a larger project that offers more units to choose from among

Source: LandUse | USA.



The Town Center and TOD should provide a diverse housing stock, including single-family (e.g. detached houses and townhouses) and multi-family (e.g. condominiums, flats, lofts, etc) residential options.

FIGURE 10-7

**Primary Factors Driving Higher Absorption Rates  
& Secondary Factors that can Boost Absorption Rates**

**Most Important Factors Driving Higher Absorption Rates**

- » *Market Demand v. Supply*  
(market-wide availability of choices)
- » *Price Points*  
(attainable by a larger group of potential buyers)
- » *Overall Project Newness*  
(excitement and Wow-factor)
- » *Overall Project Size*  
(larger varieties of units to choose from)
- » *Tenure Options*  
(attainable by a larger group of potential tenants)

**Secondary Factors that can help Boost Absorption Rates**

- » *Uniqueness* (first-in townhomes, neo-traditional houses)
- » *Community Amenities* (club houses, stables, etc.)
- » *Unit Amenities*  
(vaulted ceilings, appliances, utility room, etc.)
- » *Quality Exteriors*  
(brick v. vinyl; sculpted patios v. treated lumber)
- » *Number of Bedrooms*  
(for offices, recreation rooms, nurseries, etc.)
- » *One Bathroom for Every Bedroom*  
(enables roommates to share costs)
- » *Attached Garages* (v. detached or no garage)
- » *Walkable Environment*  
(sidewalks, benches, pet areas, bike racks)
- » *Sense of Place*  
(established single-family houses, wayfinding, boulevards)
- » *Safe Play Areas* (play grounds, curbs, public green space)
- » *Vista Views*  
(water features, downtown scenes, golf courses, creeks, stables)
- » *Mixed Uses*  
(convenience to retail, services, public transportation)

FIGURE 10-8

**Residential Opportunity by Size & Price Bracket**

Residential Type	# of Units			Low Sq Ft	High Sq Ft	Owner Occupied Prices		
	2015	2020	2025			Low	Median	High
Single-Family Detached Houses	28	100	142	1,800	3,500	\$200,000	\$350,000	\$700,000
Single-Family Attached Townhouses	24	48	100	1,200	2,400	\$250,000	\$350,000	\$550,000
Multi-Family Condominiums	24	48	100	1,000	2,200	\$180,000	\$300,000	\$450,000
Multi-Family Flats, Lofts	24	48	100	1,000	2,000	\$160,000	\$250,000	\$400,000
<b>TOTAL Residential</b>	<b>100</b>	<b>244</b>	<b>442</b>					

a wider range of prices. For the TOD, we recommend that new residential units develop or are developed under a very conservative phasing plan, with about 100 units near-term and about 244 units through the year 2020. Assuming that the first units are available in 2012, this would be roughly 30 units per year, with a targeted absorption rate of 2.5 to 3 units per month.

This moderate absorption rate reflects the relatively high price points recommended for the product mix. Our analysis of supply and demand in the market indicates that the best opportunities for new developers are in the better price brackets, although not necessarily the upper tier. As noted in Figure 10-8, a range of price brackets should be targeted, beginning as low as \$200,000 for some smaller detached houses, but as high as \$700,000 for a few of the “best” sites. The medi-

an price among houses, townhomes and row houses should be about \$350,000. In comparison, condos should be priced a little lower, and urban flats and lofts should be priced yet another notch down.

The first housing products developed in the project should include a combination of a) single-family detached houses; and b) multi-family flats and lofts above street-front retail. Both formats are designed to set the tone of the community with a Town Center core and family-oriented neighborhoods nearby. Multi-family condos, townhomes and/or row houses should be developed only after a meaningful neighborhood of single-family houses is established and absorption rates seem favorable, ideally approaching 4 units per month.

Renter-occupied units should be able to command contract rents in the range of \$700 to \$1,100 per month, with an average of about \$900. To clarify, contract rents generally exclude extras like pet fees, utilities, garage or storage rental, and memberships to clubhouses and services. To make these high rental prices attainable, renter-occupied units should be designed where every bedroom has its own bathroom, which makes it more practical for roommates to share a unit.

Ideally, each multi-family building will have no more than 6 private entrances along any given face, although units could be developed back-to-back with 12 units for each footprint. A multi-family building with three levels should include a two-

Source: LmndLse | USA.



Senior living facilities, such as the local example shown above, could be integrated into the Town Center, though not as an anchor location.

Source: LandUse/USA, Tesla Associates, Inc.



*Building height should be appropriately scaled within the Prairie Grove Town Center and TOD, with a maximum height of five stories.*

level condominium topped by a one-level garden studio, for a total of 24 units. A multi-family building with two levels could include 6 row houses, townhomes or condominiums.

Conceptually, a larger-scale multi-family building with five levels could be designed for three stacked flats (or “lofts”) topped by a two-level executive condominium, but is more likely to be five stacked flats and might approach the appearance to conventional “apartments.” The units would probably share an entrance to a lobby and elevator; and the footprint of the building (and number of units per floor) could be increased proportionate to the building height. There may be some areas proximate to the Metra station where this format is appropriate, but they should not dominate the landscape.

Regardless of the scale, all multi-family buildings should be designed for a mix of tenant, with owner-occupied units usually at both ends of the building and with the best vista views. “Vista views” may include clear views of main street activity within the TOD retail core, nearby golf courses, riding stables, town squares, prairie ranges, small ponds and/or creeks. Units sharing walls on both sides should carry options for renter or rent-to-own households, particularly if the views are interrupted by parking fields, driveways and/or garages.

### ***Long-Term Opportunity for Housing***

The recommendations detailed above assume that the Plan needs to coincide with the Village’s earlier vision for no more than 442 residential units in the TOD. If this is the case, then the project will probably approach build-out among those

Source: LandUse/USA, Tesla Associates, Inc.



*The visual appearance of residential properties can be enhanced by using Village-approved building materials and providing landscaping.*

units around 2025. However, if the Village is willing to consider a longer-range plan that accommodates more housing over a longer time span, then the market demand will eventually develop to support those additional units.

Overall, project goals for mixed-use and compact design (i.e., density combined with land conservation) in a transit-oriented environment indicate that 442 units is too few, and that some land should be banked for longer-term development of significantly more housing. This topic will be discussed further and addressed again in the final Plan.

### ***Conclusion***

Overall, the emphasis should be on variety and diversity among price points, unit sizes, formats and tenancy. This strategy is designed to a) achieve the best absorption rates; b) provide choices that make the community attainable to some working families; c) celebrate diversity; and d) support the concept of a Town Center.

This strategy is designed to create and convey a clear “sense of place” that is welcoming to shoppers, visitors and patrons across all income brackets, which in turn will help generate sales needed to support retailers and services. The goal is to encourage resident shoppers from throughout the trade area to visit the TOD frequently, bring friends and family along for the outing, stay longer, cross-shop among various retailers and venues, and ultimately spend more. Alternatively, if the project is designed in a manner that is clearly “exclusive,” then potential visitors will take the hint and go elsewhere.



SECTION 11

# Circulation & Access Plan

A multimodal circulation and access plan illustrating the auto, transit, pedestrian, and bicycle routes through the study area, commuter and business parking locations, transit facilities, and key pedestrian/bicycle paths serving the proposed Town Center and TOD are presented on the following pages.

## Transportation Review of Preferred Plan

The transportation components of the proposed Town Center and TOD integrate a multimodal approach to provide safe and efficient access, circulation, and mobility for all modes of transportation. The plan accommodates the needs for rail and bus transit riders, motorists, pedestrians, and bicyclists representing a wide-range of user types, including residents, Metra and Pace commuters, employees, shoppers, and visitors.

A multimodal approach fosters sustainable transportation that will effectively serve the Town Center and the surrounding residential, commercial, and civic uses. Consistent with “complete street” design objectives, the plan incorporates a roadway network designed to safely accommodate pedestrians, bicyclists, motorists, and various public transportation options for all users, ages, and abilities.

*A multimodal approach fosters sustainable transportation that will effectively serve the Town Center and the surrounding residential, commercial, and civic uses.*

The following section identifies and highlights the key transportation components of the preferred plan, including transit facilities, commuter and business parking, Pace bus routes and connections, roadway network characteristics, traffic controls, and pedestrian/bicycle facilities.

## Metra Station Location

The location of the future Metra station and associated parking is fixed in the northwest portion of the Study Area on the east side of the Metra UP-NW Line. The proposed Metra station will be adjacent to an existing cluster of residential condominium/apartment buildings and is easily walkable (within 1/2-mile) from the proposed Town Center, which will include numerous townhomes, condominiums, apartments, retail, and entertainment opportunities.

The Metra UP-NW Line currently includes, and will continue to maintain, a single track in the vicinity of the planned station. As such, the station will provide a single platform on the east side of the tracks; thus, all passenger boardings and alightings will occur on the same platform.

## Station Parking

No ridership or parking demand projections have been developed for the future Metra station in Prairie Grove at this time. However, planning guidelines for new Metra stations in a location such as this recommend 1,250 parking spaces. Depending on the levels of growth in population, employment, and ridership in conjunction with limited parking availability at nearby Metra stations in Crystal Lake (Downtown and Pingree Road) and McHenry, the need for 1,250 commuter



Source: TrainWeb

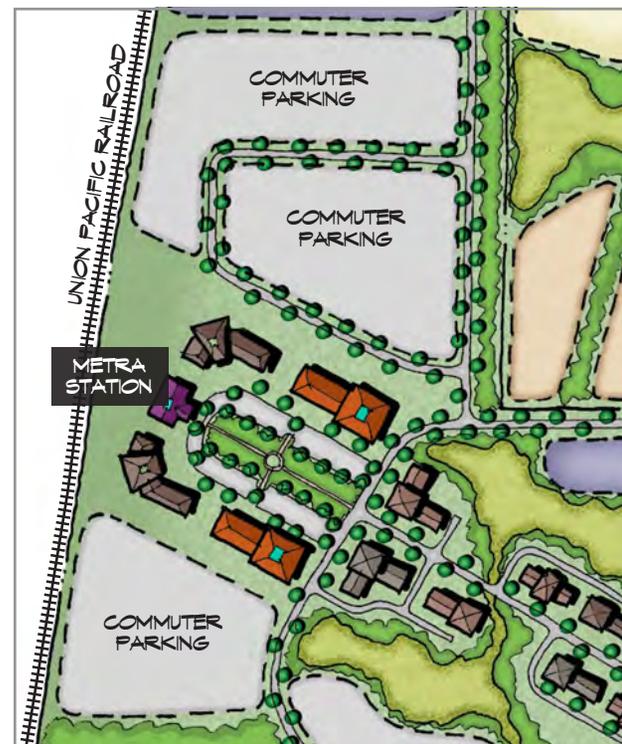
*The proposed Metra station for Prairie Grove will provide a single platform for boardings and alightings. There are several examples of single platforms within the Metra system; the Elburn Station (above) along the UP-W line is one such example.*

parking spaces may or may not materialize. Therefore, the plan reserves ample land to ultimately provide up to 1,250 commuter parking spaces, but actual provision of parking will likely occur in phases as parking demand increases.

As illustrated in Figure 11-1, the commuter parking facilities in the plan are configured as two separate lots; one to the north of the station and one to the south of the station. Splitting the parking into two separate lots, versus providing one larger lot, provides more parking spaces proximate

**FIGURE 11-1**  
**Commuter Parking Facilities**

*As depicted on the Conceptual Land Use Development Plan, the proposed Metra station will be served by commuter parking lots to the north and south, creating a more equitable distribution of parking spaces proximate to the station.*



to the station, helps reduce the walking distance between the station and furthest parking spaces, better allocates parking to take advantage of potential shared parking opportunities with nearby businesses and park facilities, and reduces the concentration of vehicle ingress/egress coinciding with train arrivals/departures.

Parking lot access is provided via new local streets that are integrated into the planned traditional grid roadway network, but are ultimately accessible via both IL Route 31 to the east and Edgewood Road to the south. While commuter traffic may certainly drive through the Town Center along Gracy Road to access the lots, the primary access serving the commuter parking lots will likely be via a new northern collector roadway extending west from IL Route 31 across the northern boundary of the Study Area. This particular route is depicted in Figure 11-2.

In addition to their use as commuter parking lots, these facilities may also be utilized to accommodate public parking on evenings and weekends when commuter parking demand is low. This complimentary parking demand may be generated by nearby restaurants, retail shops, businesses, recreational uses, and special events.

### **Pace Bus Access & Pick-Up/Drop-Off Area**

The Study Area is currently served by Pace Bus Route 806, which operates rush hour service along IL Route 31 between the Crystal Lake and McHenry Metra stations. Once the future Prairie Grove Metra station is constructed and operational, Pace will adjust Route 806 to provide a stop at the station. In order to balance route efficiency, potential ridership, and impacts on travel times, the plan provides a direct route between IL Route 31 and the station using a new northern collector roadway extending west from IL Route 31, which is depicted in Figure 11-2. As illustrated in the Circulation & Access Plan map in Figure 11-18, Pace buses will access the northern commuter lot and utilize a passenger loading area along the south curb of the lot. Ample loading is available to accommodate two Pace buses at a time as well as space for a vanpool or paratransit vehicle.

FIGURE 11-2

### Primary Access to Commuter Station & Parking Lots

As depicted on the Conceptual Land Use Development Plan, primary access to the proposed Metra station and its parking lots will likely emanate from a new northern collector road extending west from IL Route 31 along the north side of the Study Area (yellow dotted line). Commuters may also access the station via other access points, including through the Town Center via Gracy Road. A proposed kiss-and-ride area is also shown.



Source: Teska Associates, Inc.

The planned passenger loading area for Pace buses is very conveniently located to the station and platform (approximately 200 feet) to encourage and facilitate intermodal connections. The loading and bus staging area included in the plan is completely separated from the commuter parking portions of the lot. Buses will enter the parking lot's internal roadway while mixing with commuter traffic; however, once buses reach the west end of the lot, they will utilize a designated bus-only lane to access the passenger loading and bus staging area and a bus-only exit lane. This planned circulation route through the parking lot balances the objective of separating bus traffic from auto traffic while providing an efficient use of paved areas within the parking park. Once buses exit the passenger loading area, they will utilize the same direct route exiting to IL Route 31 as they used to enter.

### Kiss-and-Ride Area

Providing an area for commuters to get dropped off or picked up by a spouse or friend (otherwise known as kiss-and-ride) is critical in maintaining efficient traffic flow in the station area. For the preferred plan, kiss-and-ride activities are designated within on-street parking spaces around the central green located directly in front of the station (see Figure 11-2). During the morning rush period, commuters are likely to be dropped off along the curb in front of the station. However, since most people arriving in the evening to pick up a com-

muter tend to arrive in advance of the train, the designated short-term angle parking spaces around the central green allows waiting vehicles to park without negatively impacting traffic flow and clogging up the curbside space in front of the station. These spaces would be available during non-peak hours for other uses.

### Multimodal Station Access

The future Metra station must serve as an intermodal connection point to accommodate the transfer between multiple modes of transportation for all users; not just commuters driving to the station. It is important that Pace bus service

Source: Bay Area Bikes.



The proposed Metra station will attract commuters arriving via various transportation modes, including cars, buses, pedestrians, and bikes (above).

Source: Tesla Associates, Inc.



*Covered bicycle racks in a clear, accessible location will encourage commuters to ride their bike to the Metra station if they are able.*

provide a convenient option for riders to access the station and surrounding area. The plan does satisfy this objective. Plentiful bicycle parking, with appropriate amenities such as covered and secure bike storage, should be provided at the station in conjunction with the planned network of paths and bike lanes to encourage bike use.

Although the station will have just one platform on the east side of the tracks and Metra commuters will not need to cross to the west side, the Prairie Path along the west of the railroad tracks and potential open space/recreational uses to the west does present the need for a railroad crossing for pedestrians and bicyclists. Generally, railroads currently prohibit establishing a new at-grade railroad crossing to maximize safety and avoid any potential conflict points. One or more existing crossings need to be closed in exchange for a new crossing. Any new railroad crossing near the station must be grade-separated either over or under the railroad tracks. Due to several factors including soil conditions, drainage issues, and real or perceived security concerns associated with constructing an underpass, the preferred option in this case is to construct a pedestrian/bicycle bridge spanning the tracks.

Due to the need to provide adequate clearance for trains, the bridge will need to rise approximately 23'-6" above the tracks. The ramp system leading to and from the bridge span must adhere to ADA requirements associated with acceptable ramp slopes, among other design variables. Although ADA

requirements allow ramp slopes up to 8 percent, the ramps are recommended to maintain a 5 percent slope to ease their use by people of all ages and abilities. This bridge will provide a direct and convenient link to/from the Metra station and the planned network of sidewalks, paths, and bike lanes serving the Town Center. There is also potential for another pedestrian/bicycle bridge over IL Route 31, providing a safe, ADA-compliant east-west connection for pedestrians and bicyclists to cross the busy arterial road.

### **Roadway Network & Access Locations**

The following summarizes key characteristics of the planned street system and access configurations serving the Town Center and TOD area.

#### **Roadway Network**

The planned roadway system generally follows a traditional grid network to maximize connectivity through the area for autos, pedestrians, and bicyclists. While most of the streets are typically straight without any cul-de-sacs or winding roadways, there are some street alignments that provide some horizontal curvature to minimize impact on adjacent forested areas or wetland features.

With a small exception, each street within the Study Area is planned to provide two-way traffic flow. However, based on

Source: Historic Bridges of the U.S.

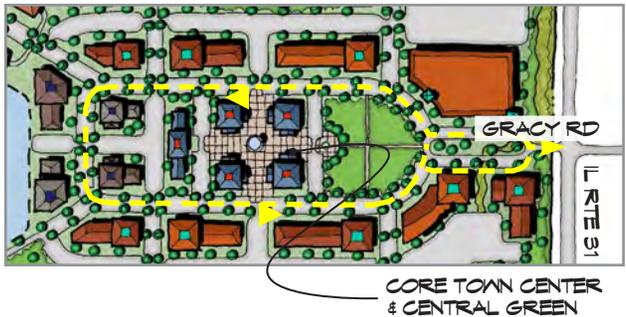


*A potential pedestrian/bicycle bridge over the railroad tracks would provide a safe connection from the existing Prairie Path to the proposed Metra station and Town Center. The image above depicts a historic truss bridge that provides pedestrian/bicycle access over the Canadian National Railroad in Chicago.*

FIGURE 11-3

### Proposed Traffic Flow around Core Town Center Area

One-way directional traffic flow is recommended around the core Town Center area and central green (yellow dotted line). Factors such as block width, mid-block connections, and minimization of roadway width make the one-way flow the most optimal option.



the block width, availability of mid-block connections, and a general desire to minimize roadway width, the portion of Gracy Road circulating around the Town Center and central green is recommended as one-way directional traffic flow (see Figure 11-3).

Another key component of the planned roadway system is the “complete street” design approach. A complete street refers to the design considerations and integration of features to safely accommodate all users. All roadway users include various modes of transportation (i.e., auto, bus, pedestrians, bicyclists) as well as types of people (i.e., children, seniors, handicap). These user types represent residents, employees, commuters, shoppers and business patrons, recreators, students, and others. The planned street system safely incorporates multiple modes of transportation, facilitates access to



The National Complete Streets Coalition provides policy guidance and resources to help communities design and build safe, accessible streets for all users.

commuter rail and bus service, fosters walking and biking to, from, and within the community, and provides opportunities to efficiently access and navigate the Town Center.

### Access Locations

As illustrated on the Circulation & Access Plan map in Figure 11-18, auto access to the area is planned via several locations along both IL Route 31 and Edgewood Road.

Along IL Route 31, three intersections are planned to provide full access to and from the north-south arterial roadway. Each intersection is spaced approximately ¼-mile from another. This ¼-mile spacing is generally a minimum intersection-spacing guideline for signalized intersections in order to efficiently establish a coordinated traffic signal corridor. Thus, if future traffic volumes satisfy applicable signal warrants, each of these intersections along IL Route 31 are properly spaced in such a way that they may accommodate installation of a traffic signal.

The first intersection along IL Route 31 is located approximately ¼-mile north of Edgewood Road (and the planned northern realignment of Ames Road). Any roadway or access driveway serving future development east of IL Route 31 should align with this intersection. The access location on IL Route 31 is a western extension of Gracy Road, located approximately ½-mile north of Edgewood Road. The third intersection, located approximately ¼-mile north of Gracy



The Prairie Grove Town Center and TOD will integrate “complete streets” concepts, including safe accommodations for handicapped citizens.

Road, is planned to serve a new northern collector roadway extending west of IL Route 31 and leading directly to the Metra station and adjacent parking.

Access to the Town Center and TOD area via Edgewood Road is planned at two intersections. The first intersection is planned approximately 500 feet west of IL Route 31 to serve one of two north-south collector roadways planned through the area. The second intersection is planned to align opposite Kristen Trail, approximately 2,000 feet west of IL Route 31. This intersection, as part of the interconnected grid street network serving the Town Center and Metra station, provides good access via Edgewood Road, limits the additional traffic and reliance on IL Route 31, and helps to properly distribute traffic across the study area.

However, some resident concern has been expressed regarding the provision of this collector roadway, its intersection with Edgewood Road across Kristen Trail, and the impact that traffic accessing the Town Center and Metra station to/

from the west may have on the McMillan Meadows subdivision to the south.

As a formal development proposal is presented to the Village, the lane configuration, traffic control, levels of service, and other design characteristics at the intersection should be further evaluated prior to Village approval.

### **Intersections & Traffic Control**

The intersections providing access to the Town Center and TOD area via IL Route 31 and Edgewood Road will be controlled by either traffic signals or stop signs (on the minor street only). For instance, the primary access intersection at IL Route 31 and Gracy Road will require a traffic signal to best facilitate vehicles turning to and from IL Route 31. However, given the lower traffic volumes along Edgewood Road and the anticipated traffic entering and existing at those locations, traffic signals are not anticipated and the streets approaching Edgewood Road from the north and south will be controlled by stop signs.

FIGURE 11-4  
*Maneuvering through a Modern Roundabout*



*While facilitating auto traffic flow, a modern roundabout can integrate elements such as bicycle lanes, paved crosswalks, pedestrian-scale lighting and planters, medians, and landscaping.*

### **Traffic Control at a Roundabout**

Vehicles approach a roundabout and yield to circulating vehicles that have the right-of-way. All turns to either enter or exit a roundabout are right-turns, thus eliminating left-turns that can cause delay at a conventional intersection as well as create a conflict point with oncoming traffic. In particular, the elimination of left-turns is a major safety benefit of roundabouts, as the possibility of a dangerous broadside collision cannot occur and the total number of potential conflict points is much lower than a typical intersection. Another safety benefit is the low speed (typically 18-22 mph) at which vehicles can pass through a roundabout, as vehicle paths are physically deflected upon entry and through the roundabout. Thus, collision angles are reduced, and combined with low speeds, the frequency and severity of auto accidents at roundabouts are considerably less than those at conventional intersections.

Within the Town Center and TOD area itself, the intersections will consist of crossing local and collector roadways. The anticipated traffic volumes will not likely reach levels that require traffic signals. These internal intersections will be easily controlled by stop signs on either two or all approaches, depending on the roadway types, the intersection location, traffic volumes, and vehicle/pedestrian right-of-way needs.

However, as illustrated in the site plan, modern roundabouts are an alternative intersection type planned at two locations and, if desired, they could be constructed at additional intersections. While modern roundabouts are relatively new to this region, they provide considerable safety and operational benefits and advantages over more conventional intersection designs. In the context of their locations, along collector roadways, the planned roundabouts will include a single lane and be approximately 125 feet in diameter. Figure 11-4 provides a general description of traffic control at a roundabout.

Prior to the installation of a modern roundabout, it is important to prepare and implement a focused effort to educate and inform the public on how to maneuver through a roundabout by auto, on foot, or with a bicycle.

### **Functional Roadway Classification**

There are several types of roadways, each with different purposes or functions, which comprise the roadway network. The following discussion outlines the functional roadway classifications included in the Town Center & TOD Plan.

#### **Arterial Roadway**

Arterial roadways are generally moderate- to high-capacity and high-speed roadways whose primary function is to carry large traffic volumes longer distances between population and employment centers. Arterials commonly favor mobility over accessibility to adjacent properties. Access locations are typically limited and controlled by minimum spacing to ensure optimal traffic flow. The only arterial in the Study Area is IL Route 31. In order to accommodate future traffic volumes, and consistent with long-term IDOT plans, IL Route 31 will include the characteristics outlined in Figure 11-5.

#### **Collector Roadway**

Collector roadways are generally walkable, low to moderate-capacity roadways that distribute traffic between arterials and local streets. Collectors provide a balance of mobility and accessibility through an area such as the Town Center & TOD area. Within this plan, there are generally two collector types as outlined in Figures 11-6 and 11-7.

#### **Local Roadway**

Local roadways are walkable, low-speed and low-volume roadways, providing access to residential driveways and neighborhood business districts. Within this plan, there are three local street types as outlined in Figures 11-8 through 11-10: (1) neighborhood, (2) parkway, and (3) Town Center.

#### **On-Street Parking**

Provision of on-street parking satisfies a key component in the overall parking plan for the Town Center and TOD area. On-street parking provides convenient short-term parking for shoppers, restaurant patrons, and other visitors to the business, residential, and civic uses. These spaces also can serve the needs of curbside loading and delivery needs.

The Town Center & TOD Plan include three types of on-street parking as outlined below and illustrated in Figure 11-11.

#### **Parallel Parking**

A familiar configuration for most people, parallel parking requires less roadway width than angle parking, but does not

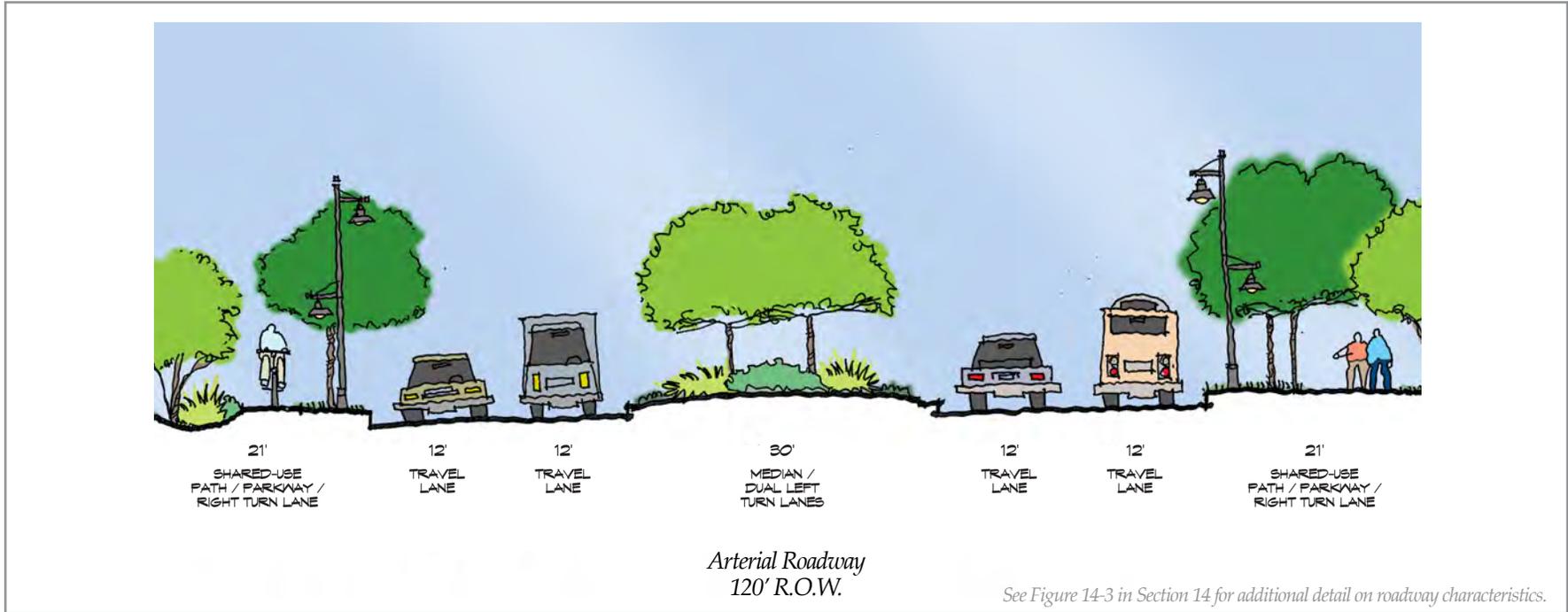


Source: Metro Transportation Group, Inc.

*Parallel parking requires less roadway width than angled configurations but yields less spaces per length of curb.*

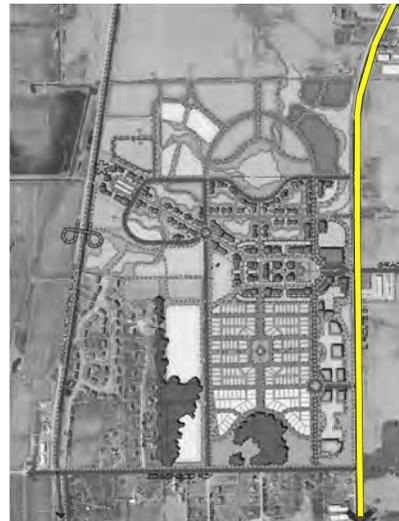
FIGURE 11-5  
**Arterial Roadway Characteristics & Cross-Section**

Source: Metro Transportation Group, Inc. & Teska Associates, Inc.



See Figure 14-3 in Section 14 for additional detail on roadway characteristics.

<b>Right-of-way</b>	120 ft
<b>Travel lanes</b>	2 in each direction
<b>Turn lanes</b>	30-ft median for potential dual left-turn lanes at intersections Right-turn lanes at intersections
<b>Shoulder</b>	12 ft on both sides or curb/gutter
<b>Parkway</b>	Varies
<b>Bike facilities</b>	Shared-use path along west side
<b>Parking</b>	Not allowed



These roadway characteristics and cross section apply to the following arterial roadways:

» IL Route 31

It is important to note that IL Route 31 is presently a two-lane road (one lane in each direction). This cross section illustrates potential expansion.

These arterial roadways are indicated by the yellow lines on the Circulation & Access Plan Map to the left. See Figure 11-18 for a larger, detailed color exhibit of this map.

FIGURE 11-6  
**Collector Roadway Characteristics & Cross-Section (With Marked Bike Lane)**

Source: Metro Transportation Group, Inc. & Teska Associates, Inc.



*Collector Roadway with Marked Bike Lanes*  
 80' R.O.W.

See Figure 14-4 in Section 14 for additional detail on roadway characteristics.

<b>Right-of-way</b>	80 ft
<b>Travel lanes</b>	1 in each direction
<b>Turn lanes</b>	None
<b>Shoulder</b>	None
<b>Parkway</b>	22 ft on both sides
<b>Bike facilities</b>	6-ft path on both sides of street
<b>Parking</b>	Not allowed



These roadway characteristics and cross section apply to the following arc collector roadways (with marked bike lanes):

- » North-south interior access road via Edgewood Road (eastern entry point)

These collector roadways are indicated by the yellow lines on the Circulation & Access Plan Map to the left. See Figure 11-18 for a larger, detailed color exhibit of this map.

FIGURE 11-7  
**Collector Roadway Characteristics & Cross-Section (With Shared-Use Path)**

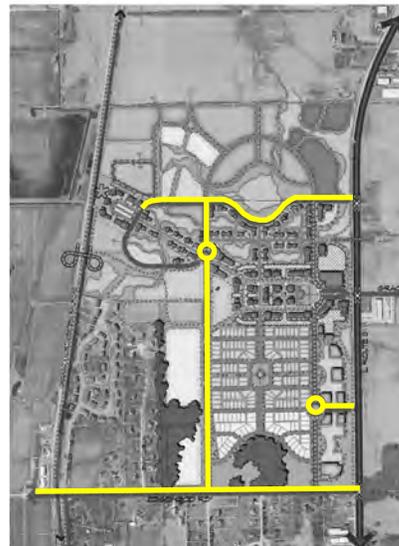
Source: Metro Transportation Group, Inc. & Teska Associates, Inc.



Collector Roadway with Shared-Use Path  
 80' R.O.W.

See Figure 14-5 in Section 14 for additional detail on roadway characteristics.

<b>Right-of-way</b>	80 ft
<b>Travel lanes</b>	1 in each direction
<b>Turn lanes</b>	None
<b>Shoulder</b>	None
<b>Parkway</b>	16 ft on both sides
<b>Bike facilities</b>	8 to 10-ft path on both sides of street
<b>Parking</b>	Not allowed



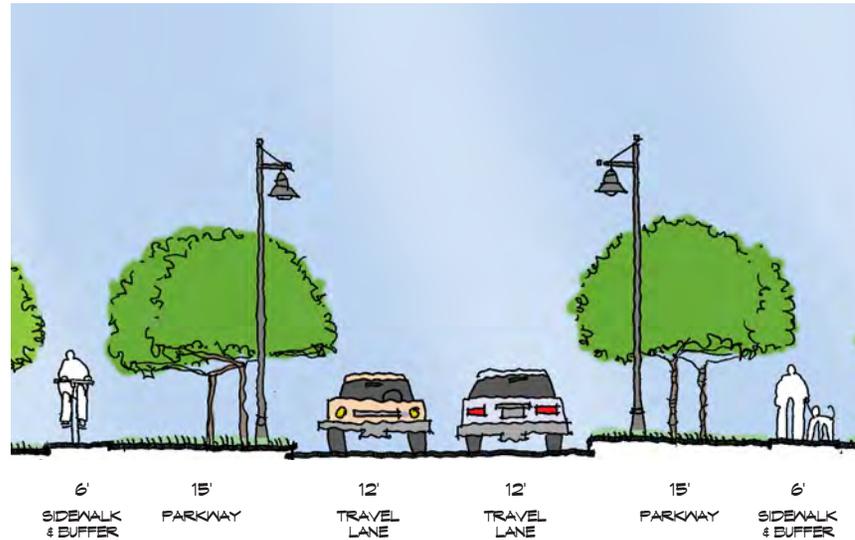
These roadway characteristics and cross section apply to the following collector roadways (with shared use path):

- » Edgewood Road
- » North-south interior access road via Edgewood Road (western entry point)
- » East-west interior access road towards Metra station (north of Gracy Road)
- » East-west interior access road towards single-family residential area (south of Gracy Road)

These collector roadways are indicated by the yellow lines on the Circulation & Access Plan Map to the left. See Figure 11-18 for a larger, detailed color exhibit of this map.

FIGURE 11-8  
**Local Roadway Characteristics & Cross-Section (Neighborhood Street)**

Source: Metro Transportation Group, Inc. & Teska Associates, Inc.



*Local Roadway (Neighborhood Street)*  
 66' R.O.W.

See Figure 14-6 in Section 14 for additional detail on roadway characteristics.

<b>Right-of-way</b>	66 ft
<b>Travel lanes</b>	1 in each direction
<b>Turn lanes</b>	None
<b>Shoulder</b>	None
<b>Parkway</b>	15 ft with 6-ft sidewalk on both sides of street
<b>Bike facilities</b>	Shared within vehicle lane
<b>Parking</b>	Parallel parking allowed



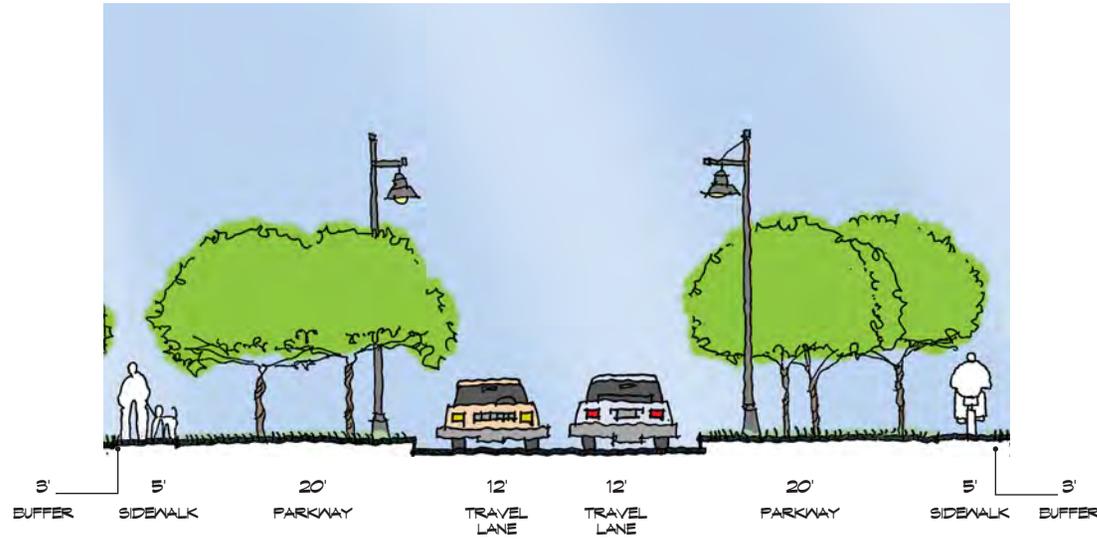
These roadway characteristics and cross section apply to the following local roadways (neighborhood street):

- » Various local roadways throughout the Town Center, particularly those within the single family residential area and the section north of the core Town Center retail area

These local roadways are indicated by the yellow lines on the Circulation & Access Plan Map to the left. See Figure 11-18 for a larger, detailed color exhibit of this map.

FIGURE 11-9  
Local Roadway Characteristics & Cross-Section (Parkway Street)

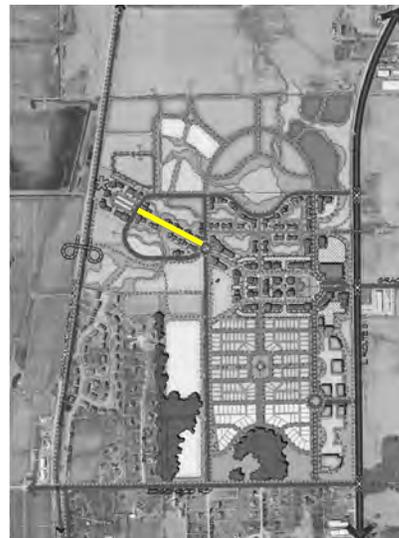
Source: Metro Transportation Group, Inc. & Teska Associates, Inc.



Local Roadway (Parkway Street)  
80' R.O.W.

See Figure 14-7 in Section 14 for additional detail on roadway characteristics.

<b>Right-of-way</b>	80 ft
<b>Travel lanes</b>	1 in each direction
<b>Turn lanes</b>	None
<b>Shoulder</b>	None
<b>Parkway</b>	20 ft with 5-ft sidewalk on both sides of street
<b>Bike facilities</b>	Shared within vehicle lane
<b>Parking</b>	Parallel parking allowed



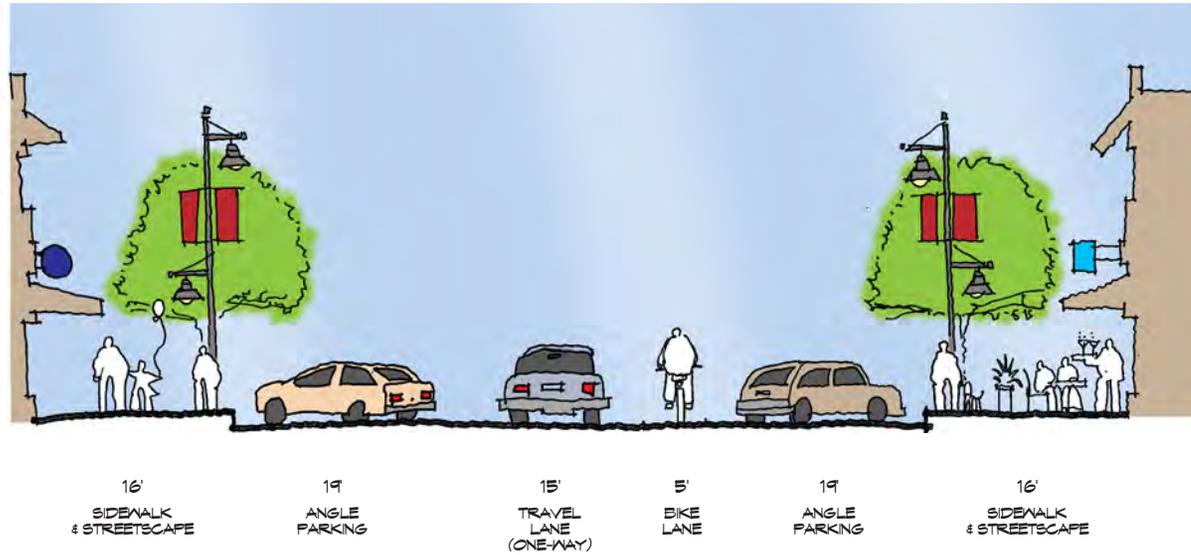
These roadway characteristics and cross section apply to the following local roadways (parkway street):

- » Local roadway extending from the core Town Center retail area towards the Metra station

These local roadways are indicated by the yellow lines on the Circulation & Access Plan Map to the left. See Figure 11-18 for a larger, detailed color exhibit of this map.

FIGURE 11-10  
**Local Roadway Characteristics & Cross-Section (Town Center Street)**

Source: Metro Transportation Group, Inc. & Teska Associates, Inc.



*Local Roadway (Town Center Street)*  
 90' R.O.W.

See Figure 14-8 in Section 14 for additional detail on roadway characteristics.

<b>Right-of-way</b>	90 ft
<b>Travel lanes</b>	1 one-way
<b>Turn lanes</b>	None
<b>Shoulder</b>	None
<b>Parkway</b>	16 ft sidewalk & streetscape on both sides of street
<b>Bike facilities</b>	5-ft lane adjacent to one-way vehicle lane
<b>Parking</b>	19-ft (horizontally), angled, head-in parking stalls on both sides of street



These roadway characteristics and cross section apply to the following local roadways (Town Center street):

- » Local roadways circulating the central commons/core Town Center retail area

These local roadways are indicated by the yellow lines on the Circulation & Access Plan Map to the left. See Figure 11-18 for a larger, detailed color exhibit of this map.

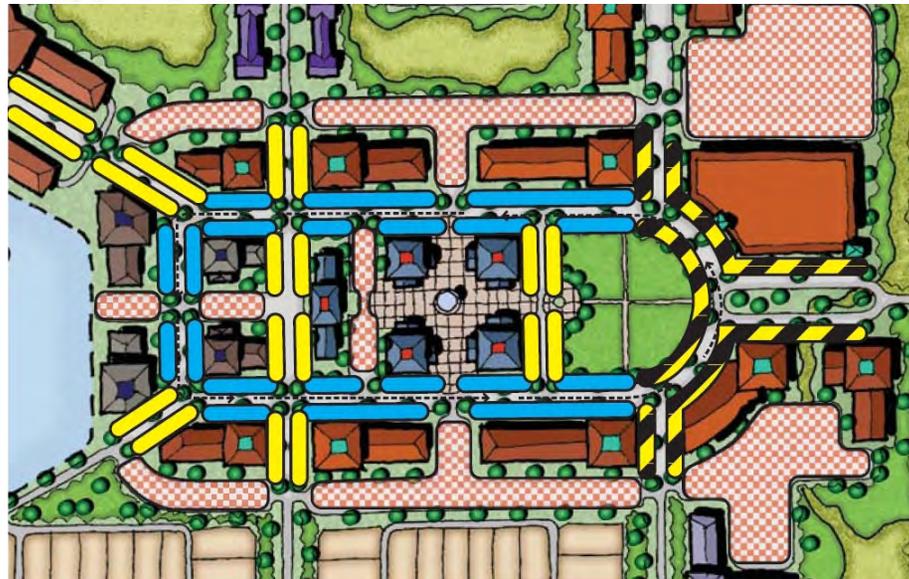
FIGURE 11-11  
**On-Street Parking Plan for the Metra Station Area  
 & Core Town Center Area**



**Metra Station Area**

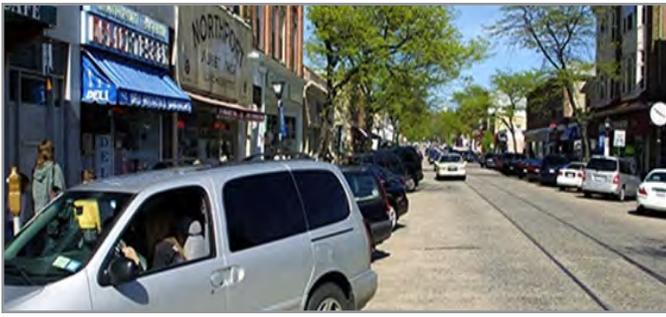
The Metra Station Area will include angle parking around the central commons to accommodate motorists utilizing the kiss-and-ride area or seeking general short-term parking.

LEGEND	
	Shared Off-Street Parking
	Angle Parking in Core Retail Area (Head-In)
	Angle Parking in Metra Station Area (Head-In)
	Parallel Parking
	No On-Street Parking



**Core Town Center Area**

The core Town Center area will include head-in angle parking generally around the perimeter of the central commons and core area. Parallel parking will also be provided along the through streets that cut through the central commons and core area, with branches to the northwest and southwest. No on-street parking shall be permitted near the primary entrance into the core Town Center area from IL Route 31 via Gracy Road.



*Angled parking allows for greater parking capacity per block than a parallel configuration; however, more pavement is needed.*

achieve as many spaces per length of curb. Marked parallel parking spaces are planned on the two-way streets within the Town Center and allowed on residential streets. Examples of parallel parking are shown in the images on page 11-7.

#### **Angle Parking (Head-In)**

While angle parking requires additional pavement width than parallel spaces, more parking capacity can be achieved per block. In order to maximize the number of convenient on-street parking spaces in the Town Center, the one-way portion of Gracy Road is planned to include head-in angle parking. An example of angle head-in parking is shown in the image above (left).

#### **Angle Parking (Reverse)**

Reverse angle parking, while unconventional, provides several characteristics that many view as benefits over head-in angle parking, including: superior visibility and sight lines when exiting a space, opened car doors to protect passengers (particularly children) from traffic and guide them to the sidewalk, and trunk access at curbside rather than facing traffic. An example of reverse angle parking is shown in the image above (right).

While the plan does not specifically indicate potential locations of reverse angle parking, a parking area designed for head-in angle spaces could easily be reconfigured to accommodate reverse angle spaces, especially since both formats have the same dimensions (only the angle of the space changes).



*Although less conventional, reverse angle parking provides visibility and safety benefits that parallel and angle head-in parking configurations do not.*

### ***Off-Street Parking***

The mix of land uses within the Town Center & TOD Plan include residential single-family homes, apartments, condominiums, and townhomes, commercial retail, office, and civic uses. In general, off-street parking requirements for TOD districts are lower than for those not conveniently located to transit and mixed-use business districts.

For multi-family residential uses included in this plan, off-street parking for apartments are recommended at a ratio of 1.5 spaces per unit. This is appropriate for apartments and condominiums in a suburban downtown and transit-oriented development area. The townhomes included in the plan are recommended to provide 2.0 spaces per unit.

With respect to commercial retail and office uses in a transit-oriented and downtown area, parking requirements are reduced from typical suburban standards, as the rail station and convenient walking distance of residential neighborhoods and other businesses can be leveraged to reduce parking needs. Thus, a parking ratio of 3.0 spaces per 1,000 square feet is recommended to serve planned retail and office uses in the Study Area. In conjunction with the on-street parking recommended in the plan, ample parking should be available overall to serve the parking demand generated by shoppers, employees, and other visitors. Parking ratios are summarized in Figure 11-12.

It should be noted that all off-street parking identified within the Town Center should be shared among all businesses in the area. This policy, along with a walkable network of sidewalks, crosswalks, plazas, and other pedestrian-friendly amenities allows patrons to park once and walk to all of their destinations without moving their car. Thus, traffic volumes through the Town Center associated with vehicles circulating between parking areas are minimized as best as possible.

In addition to the on-street and off-street parking lots serving the businesses and civic uses in the Town Center, the relatively close proximity of the commuter parking lots presents an opportunity for shared parking during complimentary peak periods. Metra commuters will utilize the parking during weekdays until the afternoon/evening, when demand starts to diminish. During weekday evenings and weekends, when commuter parking demand is low, excess parking will be available to meet peak community-parking demands for uses such as retail uses, restaurants, entertainment uses/venues, programmed sports and recreational activities, and special events.

As specific development proposals are presented, opportunities to evaluate and integrate shared parking agreements should be pursued. By applying shared parking strategies, valuable land that might otherwise be used to accommodate

FIGURE 11-12  
**Off-Street Parking Ratios**



Townhomes and single family homes can provide their parking at the rear with access via shared alleys; this removes the clutter of garage doors and driveways from the front streetscape.

peak parking demand separately for each individual property may be used more efficiently for further development, open space, or other uses. Because peak parking demand characteristics, such as magnitude of peak demand, day of week, and time of day, for a range of land uses can vary, shared parking opportunities should be evaluated on a case-by-case basis depending on the mix and interaction of uses and their respective parking characteristics.

***Pedestrian & Bicycle Facilities***

As previously stated, one primary objective of the transportation component of the Town Center & TOD Plan is to integrate multimodal transportation options throughout the Study Area. Consistent with a complete street approach to



The proposed Prairie Grove Town Center will have a pedestrian-friendly environment that encourages walking to multiple nearby destinations.

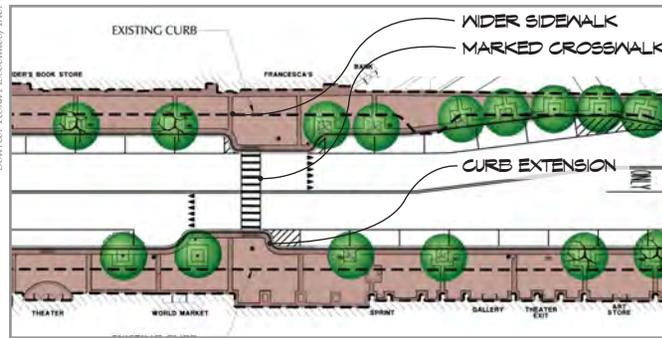


Separated from the roadway, an off-street path may be a simple concrete sidewalk or a paved shared-use path for both pedestrians and bicyclists (above).

developing the plan's transportation network, the pedestrian and bicycle facilities aim to provide options for both purpose-oriented and recreational transportation. As illustrated in the Circulation & Access Plan map, the plan includes an extensive network of shared-use paths combined with on-street bicycle lanes and sidewalks.

The off-street paths are generally planned for the busier roadways that may experience higher vehicle speeds and volumes. Paths, shared between both pedestrians and bicyclists, should be 10 to 12 feet wide with a buffer of at least 5 feet between the path and roadway.

However, paths and trails do not go everywhere people want or need to go. Therefore, the plan also includes a network of marked on-street bicycle lanes to complement the paths and



Elements such as clearly marked crosswalks, wider sidewalks, and curb extensions can help achieve a safer and more enjoyable pedestrian experience.

provide connections where establishing a separate path is not feasible or desirable. These 5-foot wide bike lanes delineate right-of-way and predictable movements using signs and pavement markings and are appropriate for collector roadways and local streets.

With regards to pedestrian circulation, sidewalks within the Town Center are planned to provide 10-foot wide sidewalks with 6-foot wide furniture/utility zone to allow two pedestrians to comfortably pass each other and also provide room for items and features such as benches, planters, retail displays, bike racks, and potentially café tables to enhance the character and feel of the pedestrian zone. Many such streetscape features can also serve as a buffer between pedestrians and auto traffic. A more comfortable, attractive, and safe pedestrian area will help to encourage walking as an alternative mode of



Rather than being separated from the roadway like off-street paths, marked bicycle lanes are delineated on the roadway with clearly painted markings and directional indicators. In the left image, the bicycle lane is located between the vehicular travel lane and shoulder. The right image is similar except the shoulder is replaced by parallel parking. In both cases, a sidewalk is provided in addition to the marked bicycle lane.

transportation and contribute to the character and feel of the neighborhood.

Crosswalks should consider differentiating pavement materials and markings to clearly delineate pedestrian crossing zones. Curb extensions should be constructed at intersection corners to increase visibility of pedestrians waiting to cross the street and reduce the actual crosswalk length.

### **Park-and-Ride**

Although the plan includes a future Metra station, there may be a point in the implementation of the development area when the station and increased commuter rail service are not yet funded, but there is a desire to introduce a transit component. One interim opportunity includes establishing a park-and-ride facility, essentially providing parking spaces for commuters who would then ride a shuttle bus to an inbound station such as Pingree Road to catch a Metra train. The lot could also be a meeting point for carpoolers.

Ideally, a park-and-ride lot could be constructed as a portion of a lot that will ultimately serve Metra commuters at the future station. An interim park-and-ride facility would introduce transit to the immediate area, alleviate capacity parking demand at adjacent Metra commuter parking lots such as Pingree Road, and increase access to Metra commuters who may not be able to find a parking space at adjacent stations.

The Village may enter into an operational agreement with Pace, and if a formal parking lot is not constructed at that

*A park-and-ride lot can be constructed as part of a lot that will ultimately be used to serve as a full Metra commuter lot once the station is in place. Another option is for the Village to enter into an operational agreement with Pace to draft a lease agreement with a property owner that may be able to utilize excess daytime parking for temporary commuter parking as a park-and-ride lot.*



Source: USGS via Bing Maps (left); Gothamist (right).

time, work out a lease agreement with a property owner that has excess daytime parking (i.e., vacant site, church, retail development, etc.) to initiate service until the planned Metra station is constructed. This initial service is very flexible and provides the opportunity to initiate and promote the transit service to the community in a more immediate future.

### **Review of Future Traffic Conditions**

This section presents information regarding anticipated traffic volumes associated with the town center and transit-oriented development plan. The goal of this review is to identify roadway improvements and recommendations that will be needed to accommodate the additional traffic within the study area associated with a future Metra station, commuter parking, and development of the surrounding area as presented in the town center and transit-oriented development plan.

### **Trip Generation**

The amount of traffic generated by a large development depends on the types and densities of the land uses being proposed. Based on the mix of land uses and densities included in the plan, trip generation estimates were generally calculated based upon information published in the Institute of Transportation Engineers (ITE) manual titled *Trip Generation*, 8th Edition. Traffic generated by commuter parking was based on the number of parking spaces and estimated percentages derived from the current portion of morning and evening Metra riders boarding and alighting during the peak hours.

In addition, mixed-use and transit-oriented development provides interaction between the multiple land uses such that visitors take advantage of multiple destinations on the same trip. These development types also promote use of public transportation and walking while creating a synergy between multiple land uses. The density and close proximity of the residential uses to the transit station attracts residents who walk to utilize Metra service. One objective of commercial businesses in the area is to capture customers from the commuters who regularly ride Metra and Pace. Thus, it is reasonable to expect some discount in the trip generation estimates, which are typically based on land uses in an auto-oriented context without influence from pedestrians, bicyclists, and transit riders.

As such, trip generation estimates were reduced to reflect the traffic characteristics of transit-oriented and mixed-use

development based on Metro’s past experience with similar developments. Figure 11-13 summarizes the estimated trip generation for the Prairie Grove Town Center and TOD.

**Directional Distribution**

The anticipated directional distribution of site traffic for the various land uses is dependent upon various factors, including the proposed land use, the adjacent roadway network, access locations and restrictions, population and employment centers, and levels of congestion. The expected directional distribution of site traffic for the planned Town Center and TOD is summarized in Figure 11-14.

**Site Traffic Assignment**

The site traffic assignment is based on the proposed development’s trip generation in conjunction with the expected directional distribution on the surrounding intersections and

FIGURE 11-13  
**Estimated Trip Generation**

Land Use	Units	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Metra Station <sup>1</sup>	1,000 spaces <sup>2</sup>	570	55	625	55	530	585
Townhomes / Rowhomes	170 units	15	65	80	65	30	95
Condo / Apartment (Metra)	120 units	15	50	65	55	30	85
Condo / Apartment (Core)	202 units	20	85	105	85	45	130
Single Family Homes	179 units	35	100	135	110	65	175
Hotel (North) <sup>3</sup>	100 rooms <sup>4</sup>	20	15	35	25	20	45
Hotel (North) <sup>3</sup>	100 rooms <sup>4</sup>	20	15	35	25	20	45
Office	226,000 sf	315	45	360	55	275	330
Retail <sup>3</sup>	196,000 sf	115	70	185	175	220	395
Civic Building	52,000 sf	100	15	115	45	105	150
<b>TOTAL</b>		<b>1,225</b>	<b>515</b>	<b>1,740</b>	<b>695</b>	<b>1,340</b>	<b>2,035</b>

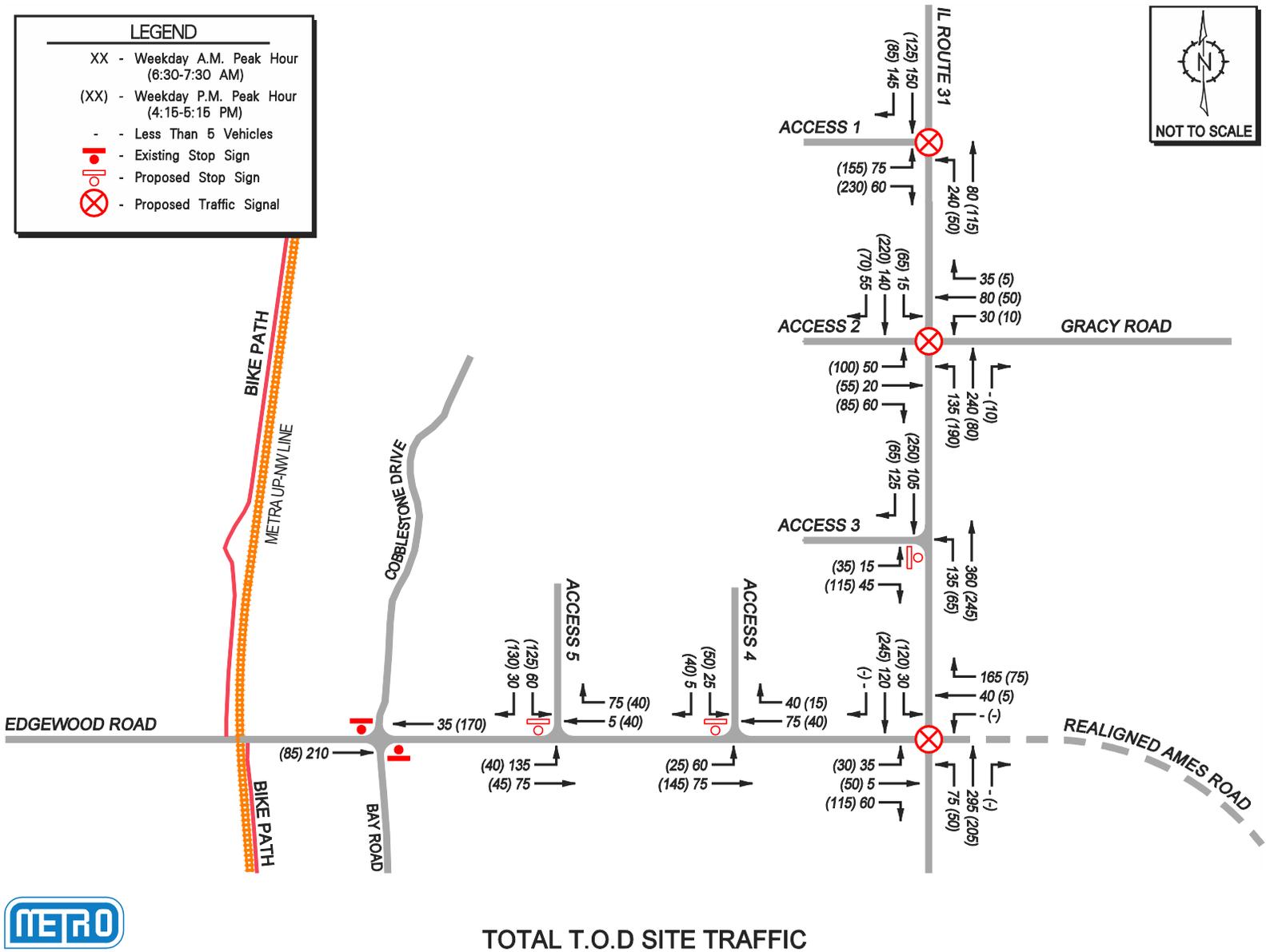
Notes

- <sup>1</sup> Assumes 57 percent (347 peak hour/613 morning boardings at McHenry and Pingree in 2006) of spaces inbound in the morning and 53 percent (308 peak hour/577 evening alightings at McHenry and Pingree in 2006) of spaces outbound in the evening with 10 percent kiss-and-ride.
- <sup>2</sup> Assume 80 percent utilization of ultimate commuter parking plan of 1,250 spaces.
- <sup>3</sup> It was assumed that approximately 20% of the traffic entering and exiting the hotels would be internal trips throughout the plan and would not impact the adjacent roadway network along IL Route 31 or Edgewood Road.
- <sup>4</sup> ITE Trip Generation Manual calculates hotel trips by room. With a projected floor plan of approximately 60,000 feet, it was estimated that each hotel would include roughly 100 rooms.

Source: Metro Transportation Group.

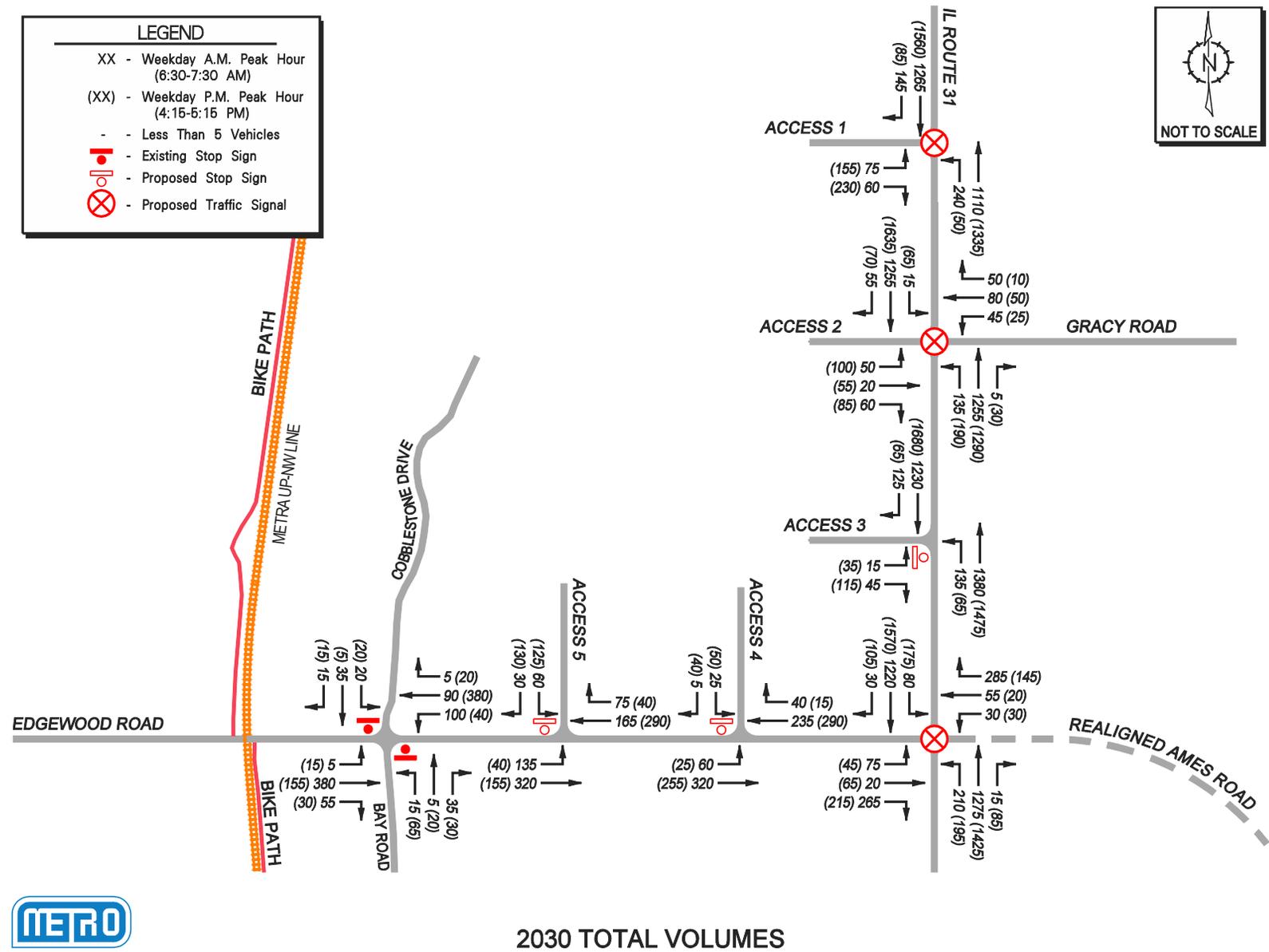


FIGURE 11-15  
Site Traffic Assignment Map



Source: Metro Transportation Group.

FIGURE 11-16  
**Total Traffic Assignment Map**



Source: Metro Transportation Group.

FIGURE 11-14  
**Directional Distribution**

To / From the . . .	Retail, Metra Station, Civic Buildings	Hotel, Residential	Office
North on IL Route 31	20%	40%	25%
South on IL Route 31	25%	45%	35%
West on Edgewood Road	20%	5%	15%
East on Gracy Road	15%	5%	10%
East on Ames Road	20%	5%	15%
TOTAL	100%	100%	100%

Source: Metro Transportation Group.

roadways. The weekday morning and evening peak hour site traffic assignments for the plan's site traffic are presented in Figure 11-15.

### **Background Traffic Growth**

To account for potential growth in non-site traffic on the adjacent roadways due to future development and population growth in the surrounding area, Metro estimated background traffic growth to an analysis year of 2030. Based on familiar projects in the surrounding area, an average two percent annual growth factor was applied to the existing peak hour traffic volumes to represent background traffic growth.

### **Total Traffic Assignment**

The total traffic assignment represents the estimated future traffic volumes on the surrounding roadways upon completion of the proposed development and was determined by combining the growth in future background traffic and the site traffic assignment. The total future traffic assignment for the weekday morning and evening peak hours is summarized in Figure 11-16.



To help prepare the local road network for the anticipated Town Center, certain roadway and intersection improvements would be needed. For example, the intersection of IL Route 31 and Gracy Road (above) would require improvements such as a new traffic signal, road widening, turn lanes, parkways with pedestrian/bicycle access, and bioswales for stormwater management.

### **Roadway & Intersection Recommendations**

The following is a discussion on the ultimate roadway improvements necessary to accommodate both the anticipated growth in background traffic as well as the expected traffic associated with development of the Town Center and TOD. The analyses conducted include discussions on future traffic signal locations along IL Route 31, as well as the anticipated lane configurations for the roadways and intersections in the Study Area.

It should be noted, however, that as development proposals for projects within the Study Area are submitted, detailed traffic impact studies should be conducted to determine transportation improvements that specifically reflect the development plans at that time.

## Capacity Analyses

The ability of an intersection to accommodate traffic flow is expressed in terms of Level of Service (LOS), which is assigned a letter from A to F based on the average total delay experienced by each vehicle passing through an intersection. LOS "A" is the highest (best traffic flow and least delay), LOS "E" represents saturated or at-capacity conditions, and LOS "F" is the lowest (oversaturated conditions). The minimum intersection LOS that is generally accepted by reviewing jurisdictions in Northeastern Illinois is LOS "D".

Capacity analyses were conducted for the Year 2030 using the subsequently stated roadway lane configurations. The capacity analysis results indicating the levels of service for each study intersection are presented in Figure 11-17.

As the values in Figure 11-17 indicate, with the recommended roadway and intersection improvements, all approaches at the study intersections along IL Route 31 and Edgewood Road are expected to operate at acceptable levels of service in both peak hours. Furthermore, all projected 95<sup>th</sup> percentile queues on approaches in the Study Area are expected to remain less than three vehicles in both peak hours and are not expected to disrupt traffic along the mainline thoroughfares.

## Signal Warrants

Strategic Regional Arterial (SRA) routes designated by the Illinois Department of Transportation (IDOT), such as IL Route 31, maintain stricter controls and requirements with regard to signal installation and access control. SRA routes must meet applicable warrants that do not apply on non-SRA routes. Given the projected land uses, anticipated distribution of traffic, and growth in background traffic, the following intersections are expected to satisfy the applicable traffic signal warrants upon development and occupancy of the Town Center and TOD, along with the assumed commuter parking demand and utilization.

- » IL Route 31 / Northern Collector Roadways
- » IL Route 31 / Gracy Road
- » IL Route 31 / Edgewood Road-Ames Road

FIGURE 11-17

### Year 2030 Future Intersection Level of Service (LOS)

Intersection	Future Conditions	
	AM Peak	PM Peak
IL Route 31 / Northern Collector <sup>1</sup>	NB App: A SB App: B EB App: C Overall: B	NB App: A SB App: C EB App: C Overall: B
IL Route 31 / Gracy Rd <sup>1</sup>	NB App: C SB App: C EB App: C WB App: C Overall: C	NB App: C SB App: C EB App: D WB App: D Overall: C
IL Route 31 / Southern Collector <sup>2</sup>	NB Left: B EB Left: C EB Right: B	NB Left: B EB Left: D EB Right: B
IL Route 31 / Edgewood Rd - Ames Rd <sup>1</sup>	NB App: C SB App: C EB App: C WB App: C Overall: C	NB App: C SB App: C EB App: C WB App: C Overall: C
Edgewood Rd / Eastern Collector <sup>2</sup>	SB App: B EB Left: A	SB App: B EB Left: A
Edgewood Rd / Western Collector <sup>2</sup>	SB App: C EB Left: A	SB App: C EB Left: A
Edgewood Rd / Bay Rd - Cobblestone Dr <sup>2</sup>	NB App: B SB App: C EB Left: A WB Left: A	NB App: C SB App: C EB Left: A WB Left: A

KEY: NB - Northbound    EB - Eastbound  
 SB - Southbound    WB - Westbound  
 App - Approach

<sup>1</sup> Signalized Intersection

<sup>2</sup> Unsignalized Intersection

Source: Metro Transportation Group.



Source: Google Maps Street View.  
 Although IL Route 31 will need major road and intersection improvements, Edgewood Road (above) will maintain its existing configuration as a two-lane road (one lane in each direction). Accommodations for a pedestrian/bicycle route will be explored, however.

Traffic volumes at the access intersections listed above, along with the other access intersections serving the area, should be monitored over time with respect to meeting signal warrant criteria. As previously stated, development proposals submitted for projects within the Study Area may ultimately differ from those included in the Town Center & TOD Plan, resulting in different levels of traffic generation. Commuter parking demand, if less than assumed in this analysis, may also impact the satisfaction of signal warrants.

### **Roadway Improvements**

Based on analysis of projected traffic volumes and review of long-term planning documents, the following summarizes improvements for the existing roadways directly serving the Study Area.

#### **IL Route 31**

IL Route 31 is designated as a Strategic Regional Arterial (SRA) under the jurisdiction of IDOT. The SRA system was developed to deal with urban congestion due to rapid Chicagoland growth and regional mobility. Stricter controls on access and signal installation on SRA routes are some means that are being used to accomplish these goals.

Currently, only one lane is provided in each direction in the site vicinity. The IL Route 31 SRA Final Report, which was prepared by IDOT, was referenced to determine the ultimate roadway geometrics for the arterial. According to the SRA Report, an ultimate right-of-way of 120 feet is recommended for IL Route 31 through the Study Area, including two through lanes in each direction with a 30-foot median to allow for potential dual left-turn lanes.

#### **Edgewood Road**

Edgewood Road is expected to maintain the existing configuration of providing one lane in each direction. This cross-section will be sufficient to continue accommodating all future traffic levels.

### **Intersection Improvements**

Given the projected cross-section of IL Route 31 and the planned access locations, an analysis was conducted to determine the recommended lane geometrics at each future intersection.

#### **IL Route 31 / Northern Collector Roadway**

- » Install traffic signal
- » Northbound: 1 left-turn lane, 2 through lanes
- » Southbound: 2 through lanes, 1 right-turn lane
- » Eastbound: 1 left-turn lane, 1 right-turn lane

#### **IL Route 31 / Gracy Road**

- » Install traffic signal
- » Northbound: 1 left-turn lane, 2 through lanes, 1 right-turn lane
- » Southbound: 1 left-turn lane, 2 through lanes, 1 right-turn lane
- » Eastbound: 1 left-turn lane, 1 through/right-turn lane
- » Westbound: 1 left-turn lane, 1 through/right-turn lane

#### **IL Route 31 / Southern Collector Roadway**

- » Northbound: 1 left-turn lane, 2 through lanes
- » Southbound: 2 through lanes, 1 right-turn lane
- » Eastbound: 1 left-turn lane, 1 right-turn lane

#### **IL Route 31 / Edgewood Road – Realigned Ames Road**

- » Install traffic signal
- » Northbound: 1 left-turn lane, 2 through lanes, 1 right-turn lane
- » Southbound: 1 left-turn lane, 2 through lanes, 1 right-turn lane
- » Eastbound: 1 left-turn lane, 1 through lane, 1 right-turn lane
- » Westbound: 1 left-turn lane, 1 through lane, 1 right-turn lane

### Edgewood Road / Eastern Collector Roadway

- » Southbound: 1 left/right-turn lane
- » Eastbound: 1 left-turn/through lane
- » Westbound: 1 through/right-turn lane

### Edgewood Road / Western Collector Roadway

- » Southbound: 1 left/right-turn lane
- » Eastbound: 1 left-turn/through lane
- » Westbound: 1 through/right-turn lane

### Edgewood Road / Bay Road – Cobblestone Drive

- » Remain as existing

## **Circulation & Access Plan Map Overview**

The Circulation & Access Plan illustrated in Figure 11-18 identifies multimodal circulation patterns and access points for buses, trains, automobiles, bicycles, and pedestrians. Key elements of the Circulation & Access Plan include:

- » **Pace Bus Route.** The circulation route of Pace Bus #806 is shown on the plan, including its existing route along IL Route 31 and its anticipated route into the Town Center to serve commuters at the proposed Metra station.
- » **Site Access.** The Town Center is accessible from both IL Route 31 and Edgewood Road. Three site access points are provided from IL Route 31, including the primary access point into the Town Center from Gracy Road. Two site access points are provided from Edgewood Road.
- » **Internal Site Circulation.** General site circulation is shown on the internal road network serving the Town Center. The internal road network includes collector roadways (2-3 lanes) and local streets (2 lanes). IL Route 31 is an arterial roadway (3-5 lanes).
- » **Parking.** Commuter and general parking areas are highlighted on the plan. As required by Metra, a minimum of 1,250 parking spaces at full build-out should be accommodated in the commuter lots depicted. (Ridership pro-

jections will determine parking needs for Phase I.) Shared parking areas in the Town Center are also shown.

- » **Traffic Signals.** Potential traffic signals are noted along IL Route 31: (1) at Gracy Road; (2) at a location 1/4-mile north of Gracy Road; and (3) at Edgewood Road.
- » **Pedestrian/Bicycle Routes.** In addition to the existing Prairie Path, pedestrian/bicycle routes are shown throughout the Town Center, ensuring multi-modal access to the proposed Metra station, core retail and office areas, and residential neighborhoods.
- » **Pedestrian/Bicycle Bridges.** One particular feature relating to pedestrian and bicycle circulation is the potential for two ADA-compliant pedestrian/bicycle bridges:

- (1) **Across the railroad tracks:** The Prairie Path, which is part of the Grand Illinois Trail network, presently runs along the east side of the tracks before it crosses to the west side as it traverses north of Edgewood Road. The potential pedestrian/bicycle bridge over the railroad provides an above-grade crossing point from the Prairie Path into a trail network serving the Town Center. The next railroad crossing point occurs at an existing at-grade crossing at Edgewood Road. One of the advantages of creating the potential pedestrian/bicycle bridge would be to directly connect the Prairie Path to the Town Center within close proximity to the Metra station.
- (2) **Across IL Route 31:** Providing a pedestrian/bicycle bridge across IL Route 31 provides a safe passage over a heavily traveled roadway for pedestrians and bicyclists. With its visibility along the roadway, this particular bridge could incorporate elements such as signage, unique architecture, or other ornamentation to create a community identity marker for Prairie Grove along IL Route 31



Source: Village of Frankfort, IL

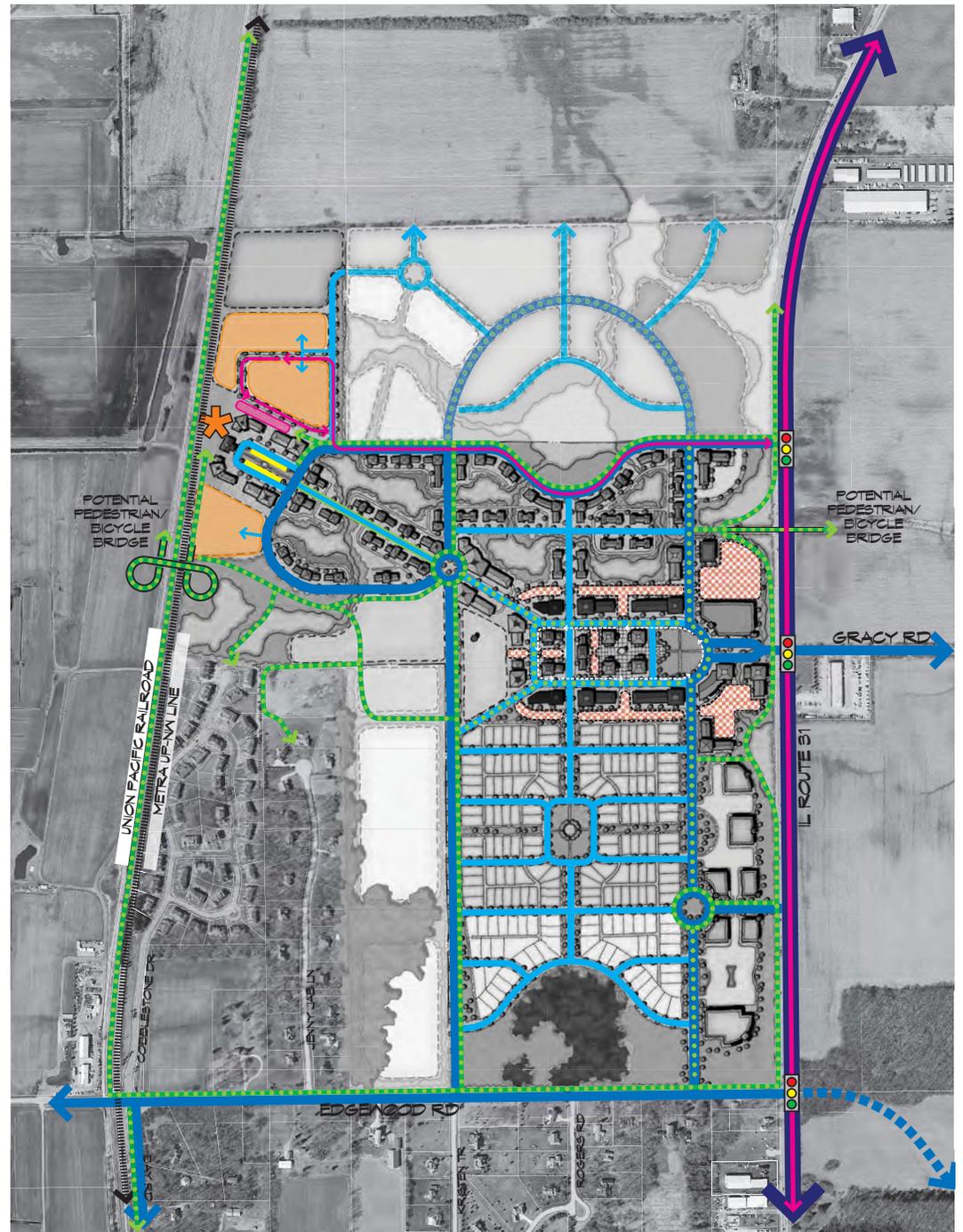
*A potential pedestrian/bicycle bridge spanning over IL Route 31 would connect the Town Center to the east side of the road. The image above depicts the Old Plank Road Trail bridge that crosses over U.S. Route 45 in Frankfort, Illinois.*

FIGURE 11-18

**Circulation & Access Plan**

Based on Conceptual Land Use Development Plan

-  Arterial Roadway
-  Collector Roadway (with Bike Lanes)
-  Collector Roadway (with Path)
-  Local Street (Town Center)
-  Local Street (Parkway)
-  Local Street (Neighborhood)
-  Pedestrian/Bicycle Route (Potential)
-  Pedestrian/Bicycle Bridge (Potential)
-  Paces Bus Route (#806)
-  Pace Bus Stop and Staging
-  Commuter Parking
-  Kiss-and-Ride Parking
-  Town Center Shared Parking
-  Metra Station
-  Potential Traffic Signal



Source: GIS mapping data provided by McHenry County; transportation map prepared by Metro Transportation Group.



SECTION 12

# Sustainability Analysis

As a community that takes pride in its rural setting and distinct natural landscape, Prairie Grove has considerable interest in ensuring any new development within the Village is respectful of the local character and environment that define the community. Big or small, a development will have some impact on the physical or environmental character of a community. Minimizing these impacts is paramount for the proposed Prairie Grove Town Center and TOD.

As illustrated in the Framework Plan, Conceptual Land Use Development Plan, and Design Guidelines, the overall Town Center and TOD Plan carefully considers how the proposed development concepts relate to the local community character, including attributes such as rolling topography, agricultural and equine elements, rural-style signs, and native prairie plantings. In addition, the development concepts are cogni-



Source: USGS via Bing Maps

Conservation of wetlands and water bodies, such as this wetland along the west side of IL Route 31 and south of Gracy Road (above), is one of the key principles of sustainability.

zant of the impact on the environment, ensuring the conservation of sensitive environmental elements, such as wetlands and significant tree masses. An interconnected network of open spaces is also provided, preserving undeveloped green spaces for flora and fauna as well as offering opportunities for recreation.

### Sustainability, Defined

Overall, the proposed development concepts are rooted in the idea of creating a sustainable Town Center and TOD in Prairie Grove. But what exactly does the term “sustainable” mean? The *Merriam-Webster Dictionary* offers a general definition for “sustainable”, defining it as:

“ ... of, relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged. ”

For a more focused definition relating to the relationship between development and environment, the term “sustainable” often embodies a spirit of stewardship and a mindful integration of the physical and natural environments. The World Commission on Environment and Development defines “sustainable development” as an action:

“ ... to meet the needs of the present without compromising the ability of future generations to meet their own needs. ”



Source: Village of Niles IL.

A rain garden is a vegetated depression that helps reduce stormwater runoff by filtrating rain back into the ground to maintain the natural cycle of water. A rain garden can be placed near buildings, in parkways, and in and around parking areas.





The LEED-ND credit for civic and public spaces is designed to ensure they are accessible and of adequate size.

*The term “sustainable” often embodies a spirit of stewardship and a mindful integration of the physical and natural environments.*

Considering the two definitions together, the primary themes are: (1) to carefully utilize resources to meet current needs, and (2) to do so without sacrificing future needs for those same resources. Without question, this is certainly the way development should be approached. The Prairie Grove Town Center and TOD is certainly no exception, and the Village understands how it can pave the way for other municipalities to achieve sustainable communities.

### ***Sustainability, Measured***

The Framework Plan (Section 8), Conceptual Land Use Development Plan (Section 9), and Design Guidelines (Sections 13 and 14) each provide a visual measure for fostering the

sustainability of the Town Center and TOD and minimizing their impacts on community character and the local environment. However, these visual depictions are fairly general and not always quantifiable, particularly to measure their effectiveness. For example, the Framework Plan depicts naturalized wetland features, generally defining the protection of existing wetlands, but not in a quantifiable manner that assesses the actual sustainability characteristics of the naturalized wetlands.

On the other hand, a program like the LEED-ND Rating System offers a more systematic measure to evaluate attributes of sustainability, including environmental impacts, walkability, compact mix of uses, and connectivity. Figure 12-1 provides a general overview of the LEED-ND Rating System, including the topical areas and certification levels.

It is important to note that seeking LEED-ND certification is not the driving force of the Town Center & TOD Plan; rather, the goals and concepts underlying the Plan have the intent

FIGURE 12-1  
**Overview of the LEED-ND Rating System**

Based on core principles of smart growth, New Urbanism, and green infrastructure and building, the LEED-ND Rating System emphasizes concepts such as site selection, site design, and construction materials in order to create a neighborhood – including both buildings and infrastructure – that relates to the surrounding landscape and the local and regional context. The five topical areas rated by the Rating System are listed below. Points are awarded to the fulfillment of prerequisites and credits based on their potential environmental impacts on and human benefits of design, construction, operation, and maintenance of the built environment. Social and public health benefits are also considered. The *LEED 2009 for Neighborhood Development Rating System Guidebook* provides greater detail on the Rating System.



The LEED-ND Rating System is comprised of prerequisites and credits that address the following five topics:

- Smart Location and Linkage (SLL)
- Neighborhood Pattern and Design (NPD)
- Green Infrastructure and Buildings (GIB)
- Innovation and Design Process (IDP)
- Regional Priority Credit (RPC)

After tabulating the points achieved by a project, LEED-ND certification is awarded based upon the following scale:

- |                                    |                     |
|------------------------------------|---------------------|
| <input type="checkbox"/> Certified | 40-49 points        |
| <input type="checkbox"/> Silver    | 50-59 points        |
| <input type="checkbox"/> Gold      | 60-79 points        |
| <input type="checkbox"/> Platinum  | 80 points and above |
| * 110 possible points              |                     |

Source: U.S. Green Building Council.

of ensuring the sustainability of the developments while also lending support to the Village if it elects to seek certification.

Prefaced with a brief overview of LEED-ND, the remainder of this section includes a LEED-ND Analysis, which is designed as an assessment of how the proposed Town Center and TOD development concepts relate to the requirements needed to attain LEED-ND certification. This analysis should generally be used as a guide as the Village considers the potential for the Town Center and TOD, or certain aspects of them, to be certified as LEED-ND.

### **Overview of LEED-ND**

LEED-ND is a national program that emphasizes the creation of compact, walkable, vibrant, mixed use neighborhoods with connections to nearby communities. It also encourages compact development patterns and the selection of sites that are within or adjacent to existing development to help minimize habitat fragmentation and preserve recreation areas.

The LEED-ND Rating System is a response to the interplay of land use and environmental factors as they relate to the development of communities and the built environment. As stated in the *LEED 2009 for Neighborhood Development Rating System Guidebook* prepared by the U.S. Green Building Council (USGBC), the Rating System emphasizes neighborhood morphology, pedestrian scale, and mix of uses, as well as underscores the importance of “the location of the neighborhood and the performance of the infrastructure and buildings within it.”

A neighborhood can achieve a higher quality-of-life with increased focus on sustainable benefits, particularly as the neighborhood provides proximity to transit, as well as allows residents, visitors, and workers to travel safely to jobs, amenities, and services. In addition, sustainable practices can help reduce energy consumption and water use, encourage best practices for stormwater management, and support environmental stewardship through green infrastructure and mindful site/landscape design.

*A neighborhood can achieve a higher quality-of-life with increased focus on sustainable benefits, particularly proximity to transit and the ability to travel safely to jobs, amenities, and services.*

### **LEED-ND Analysis**

On the following pages is a LEED-ND Analysis based on a detailed assessment of how the Town Center & TOD Plan relates to the prerequisites, credits, and requirements outlined in the *LEED 2009 for Neighborhood Development Rating System Guidebook*.

In addition to describing the point eligibility of the Town Center and TOD relative to each prerequisite/credit, mechanisms or municipal policies that can help the Town Center and TOD project attain prerequisites and credits are also outlined, which will help guide the Village as it seeks LEED-ND certification. In some cases, these mechanisms have already been integrated into the Framework Plan, Conceptual Land Use Development Plan (Site Plan), and Design Guidelines, which illustrates the ubiquitous nature of sustainability into the planning and design of a project such as the Prairie Grove Town Center and TOD. In other cases, these mechanisms or municipal policies are outlined as recommendations to be implemented by the Village and its community partnerships.

The LEED-ND Analysis is summarized in table format in Figure 12-2, which is spread over the next few pages. Wherever possible, the number of eligible points are tabulated based on available information at the time of publication of this report; otherwise, eligible points are labeled as TBD (to be determined), with the recommended mechanisms and municipal policies helping to determine the points as the Town Center and TOD transitions from plan to construction. The last three columns in the table indicate whether or not each prerequisite/credit is addressed in the Design Guidelines (DG), Site Plan (SP), and/or Implementation Plan (IP).



Source: Community involved in Sustaining Agriculture

*Proximity to a farmers' market fulfills one LEED-ND credit aimed at encouraging local food production.*

Design Guidelines (DG)  
\*See Sections 13 & 14

Site Plan (SP)  
\*See Sections 8 & 9

Implementation Plan (IP)  
\*See Section 16



FIGURE 12-2  
LEED-ND Analysis

Part 1 of 9

Design Guidelines = DG  
Site Plan = SP  
Implementation Plan = IP

Prerequisite / Credit	Name*	General Requirement(s)	Option(s)	Mechanisms / Policies to help facilitate certification	LEED-ND Points		DG	SP	IP
					Eligible	Total Possible			
Rating System Topic: Smart Location & Linkage (SLL)									
SLL Prerequisite 1	Smart Location	Fulfills general requirement to locate project on a site served by existing water and wastewater infrastructure	Fulfills Option 3 to locate project on a site with planned transit service, meeting dwelling unit and walking distance requirements	N/A (all requirements fulfilled)	Prerequisite				
SLL Prerequisite 2	Imperiled Species & Ecological Communities Conservation	Need to determine the presence of any threatened or endangered species	Need to fulfill Option 1, 2, or 3	Consult with state National Heritage Program and state fish and wildlife agencies	Prerequisite				x
SLL Prerequisite 3	Wetland & Water Body Conservation	Need to comply with all local, state, and federal regulations pertaining to wetland and water body conservation	Potential to fulfill Option 2 provided that no new development will impact preproject wetlands, water bodies, land within 50 ft of wetlands, and land within 100 ft of water bodies	Develop site design that meets all requirements to minimize development impacts and design appropriate setbacks	Prerequisite		x	x	x
SLL Prerequisite 4	Agricultural Land Conservation	Fulfills general requirement to locate project on a site not within a state or locally designated agricultural preservation district	Fulfills Option 3 to comply with SLL Prerequisite 1, Option 3	N/A (all requirements fulfilled)	Prerequisite				
SLL Prerequisite 5	Floodplain Avoidance	-	Fulfills Option 1 to located on a site without any floodplains	N/A (all requirements fulfilled)	Prerequisite				
SLL Credit 1	Preferred Locations	-	Need to fulfill combination of Options 1, 2, and/or 3	Ensure final development meets the connectivity standards and the other preferred location options	TBD	10			
SLL Credit 2	Brownfields Redevelopment	-	Does not fulfill any of the requirements established in Options 1 or 2	N/A (project site is located on a greenfield)	0	2			
SLL Credit 3	Locations with Reduced Automobile Dependence	-	Potential to fulfill Option 2 provided that the project meets the specified VMT per capita requirements	Research VMT per capita data for region	TBD	7			x
SLL Credit 4	Bicycle Network and Storage	Fulfills bicycle network requirement to locate project within 1/4-mile bicycling distance from an existing bicycle network of at least 5 continuous miles in length (Prairie Path); potential to fulfill bicycle storage requirements	-	Develop design guidelines that meet specified bicycle storage requirements	TBD	1	x	x	



Prerequisite / Credit	Name*	General Requirement(s)	Option(s)	Mechanisms / Policies to help facilitate certification	LEED-ND Points		DG	SP	IP
					Eligible	Total Possible			
SLL Credit 5	Housing and Jobs Proximity	-	Does not fulfill any of Options 1, 2, or 3, which require a 1/2-mile walking distance proximity to existing jobs from the project's geographic center	N/A (unless full-time equivalent jobs are established within the 1/2 mile walking distance proximity of the project before LEED certification)	0	3			
SLL Credit 6	Steep Slope Protection	Need to meet slope requirements in areas that may be disturbed by development	Need to fulfill Option 1 or 3 (does not qualify for Option 2)	Measure slopes in areas that may be disturbed by development	TBD	1	x	x	x
SLL Credit 7	Site Design for Habitat or Wetland and Water Body Conservation	-	Need to determine the presence of any significant habitats (Option 2); OR Need to meet setback requirements from wetlands and water bodies (Option 3)	Identify and commit to ongoing management activities so that habitats are maintained in pre-project condition or better for certain time frame (Option 2); OR Develop site development plan that meets all requirements to minimize development impacts and design appropriate setbacks (Option 3)	TBD	1	x	x	x
SLL Credit 8	Restoration of Habitat or Wetlands and Water Bodies	Need to restore predevelopment native ecological communities, water bodies, or wetlands on the project site in an area equal to greater than 10% of the development footprint	-	Ensure development of a management plan that meets the specified requirements	TBD	1	x		x
SLL Credit 9	Long-Term Conservation Management of Habitat or Wetlands and Water Bodies	Need to create and commit to implementing a long-term management plan for new or existing on-site native habitats, water bodies, and/or wetlands and buffers, including a guaranteed funding source for mgmt	-	Ensure development of a management plan that meets the specified requirements	TBD	1	x		x
Rating System Topic: Neighborhood Pattern and Design (NPD)									
NPD Prerequisite 1	Walkable Streets	Need to meet requirements for (a) building entries, (b) building height-to-street width ratio, (c) continuous sidewalks, and (d) garage/ service bay frontage	-	Develop site development plan and/or design guidelines that meets all requirements to minimize development impacts and design appropriate setbacks	Prerequisite		x	x	

FIGURE 12-2 (continued)  
**LEED-ND Analysis**

Part 3 of 9

Design Guidelines = DG  
Site Plan = SP  
Implementation Plan = IP

Prerequisite / Credit	Name*	General Requirement(s)	Option(s)	Mechanisms / Policies to help facilitate certification	LEED-ND Points		DG	SP	IP
					Eligible	Total Possible			
NPD Prerequisite 2	Compact Development	Density must be achieved within 5 years of the date that the first building of any type is occupied	Need to meet 7 du/ac density for <u>any</u> residential uses AND 0.50 FAR (or greater) for <u>any</u> non-residential uses	Ensure the final development meets the density and FAR requirements	Prerequisite			x	
NPD Prerequisite 3	Connected and Open Community	-	Need to meet minimum intersection density AND minimum connectivity at project boundary at specified intervals (Option 1)	Ensure final development meets the intersection density (per square mile) and project boundary connectivity requirements	Prerequisite			x	
NPD Credit 1	Walkable Streets	Need to meet up to 16 requirements relating to façades and entries (a-e), ground-level use and parking (f-m), design speeds for safe pedestrian and bicycle travel (n-o), and sidewalk intrusions (p)	-	Develop site development plan and/or design guidelines that meets the specified walkable street requirements	TBD	12	x	x	
NPD Credit 2	Compact Development	Need to meet possible requirements range for residential density AND non-residential FAR (density must be achieved within 5 years of the date that the first building of any type is occupied)	-	Ensure the final development meets the density and FAR requirements	TBD	6		x	
NPD Credit 3	Mixed-Use Neighborhood Centers	Need to meet dwelling unit proximity to diverse uses per Table 1 (the specified number of diverse uses must be in place by the time of occupancy according to percentages indicated in Table 1); other requirements also apply	-	Develop site development plan that provides a fair distribution of diverse uses	TBD	4		x	
NPD Credit 4	Mixed-Income Diverse Communities	-	Generates a Simpson Diversity Index of 0.74, which qualifies for 3 points and indicates a diverse housing stock; also need to assess affordable housing thresholds (Option 2); eligible for 1 extra point for meeting portion of Options 1 and 2 (per Option 3)	Develop site development plan that provides a diverse housing stock with affordable options	3 (minimum)	7		x	



FIGURE 12-2 (continued)  
LEED-ND Analysis

Part 4 of 9

Design Guidelines = DG  
Site Plan = SP  
Implementation Plan = IP

Prerequisite / Credit	Name*	General Requirement(s)	Option(s)	Mechanisms / Policies to help facilitate certification	LEED-ND Points				
					Eligible	Total Possible	DG	SP	IP
NPD Credit 5	Reduced Parking Footprint	Need to manage location and coverage of off-street parking, provision of bicycle storage, and parking spaces serving carpool and/or shared-use vehicles	-	Develop site development plan and design guidelines that foster a reduced parking footprint per the specified requirements	TBD	1	x	x	
NPD Credit 6	Street Network	Need to meet minimum connectivity at project boundary at specified intervals AND intersection density range	-	Ensure the final development creates an interconnected street network within and beyond the site	TBD	2	x	x	
NPD Credit 7	Transit Facilities	Need to identify transit stop locations with approved shelters, informational amenities, and other required improvements	-	Develop site development plan, circulation & access plan, and design guidelines that properly addresses transit station locations and design criteria	TBD	1	x	x	
NPD Credit 8	Transportation Demand Management	-	Need to fulfill at least two of Options 1-5 (1 point awarded for every two options fulfilled; maximum 2 points)	Develop a transit promotion program that includes a transportation demand management (TDM) program and other measures that encourage transit use	TBD	2			x
NPD Credit 9	Access to Civic and Public Space	Provides civic, public, and open spaces that meet specified size and proximity requirements	-	N/A (all requirements fulfilled)	1	1	x	x	
NPD Credit 10	Access to Recreation Facilities	Provides recreation facilities that meet specified size and proximity requirements	-	N/A (all requirements fulfilled)	1	1	x	x	
NPD Credit 11	Visitability and Universal Design	-	Need to provide dwelling units that adhere to universal design standards (Option 1) OR non-compliant public rights-of-way or accessible travel routes that adhere to ADA standards (Option 2)	Develop design guidelines that integrate universal design and ADA standards to meet specified requirements	TBD	1	x		

FIGURE 12-2 (continued)  
LEED-ND Analysis

Part 5 of 9

Design Guidelines = DG  
Site Plan = SP  
Implementation Plan = IP

Prerequisite / Credit	Name*	General Requirement(s)	Option(s)	Mechanisms / Policies to help facilitate certification	LEED-ND Points		DG	SP	IP
					Eligible	Total Possible			
NPD Credit 12	Community Outreach and Involvement	-	Fulfills the first 4 of 5 requirements in Option 1; need to fulfill 5th requirement to establish ongoing communication between the developer(s) and community (Option 1); extra point to obtain endorsement from an ongoing evaluation program (Option 3)	Establish recommendations in Implementation Plan to fulfill remaining community involvement requirements	TBD	2			x
NPD Credit 13	Local Food Production	Need to establish covenants, conditions, and restrictions (CC&R) or other forms of deed restrictions that do not prohibit the growing of produce in the project area	Need to fulfill at least one of the following options: (1) dedicate growing space for neighborhood farms or gardens; (2) participate in a community-supported agriculture (CSA) program; or (3) locate within proximity of a farmers' market	Establish recommendations in Implementation Plan to fulfill local food production requirements; can also integrate recommendations into design guidelines and/or site plan	TBD	1	x	x	x
NPD Credit 14	Tree-Lined and Shaded Streets	Need to retain a registered landscape architect to assess all landscaping matters related to the project	Need to fulfill landscaping requirements relating to tree-lined and shaded streets	Establish recommendations in Implementation Plan to retain a registered landscape architect to assess all landscaping matters related to the project; can also integrate landscaping requirements into design guidelines and/or site plan	TBD	2	x	x	x
NPD Credit 15	Neighborhood Schools	Need to provide conditions that support a school, including new residential units that generate students and are in close proximity to the school; recommended size of school campus is also important to consider	-	Develop site development plan that provides a new school or proximity to existing schools, ensuring appropriate campus size	TBD	1		x	
Rating System Topic: Green Infrastructure and Buildings (GIB)									
GIB Prerequisite 1	Certified Green Building	Need to meet LEED certification requirements for design and construction of <u>one whole building</u> (may also use other green building rating systems besides LEED)	-	Ensure development projects require <u>at least one building</u> within the project to adhere to LEED green building certification requirements	Prerequisite		x		



Prerequisite / Credit	Name*	General Requirement(s)	Option(s)	Mechanisms / Policies to help facilitate certification	LEED-ND Points		DG	SP	IP
					Eligible	Total Possible			
GIB Prerequisite 2	Minimum Building Energy Efficiency	Need to properly document minimum building energy efficiency using the specified guides and standards	-	Ensure development projects require all new buildings to properly document minimum building energy efficiency as specified	Prerequisite		x		
GIB Prerequisite 3	Minimum Building Water Efficiency	Need to ensure buildings comply with baseline water usage standards to maintain minimum building water efficiency	-	Establish recommendations in Implementation Plan or design guidelines that require all new buildings to comply with baseline water usage standards	Prerequisite		x		
GIB Prerequisite 4	Construction Activity Pollution Prevention	Need to minimize pollution generated from construction activity	-	Ensure development projects utilize best management practices (BMPs) to minimize pollution generated from construction activity	Prerequisite				
GIB Credit 1	Certified Green Buildings	Need to meet LEED certification requirements for design and construction of new buildings (may also use other green building rating systems besides LEED)	-	Ensure development projects integrate new buildings that adhere to LEED green building certification requirements	TBD	5	x		
GIB Credit 2	Building Energy Efficiency	Need to properly document building energy efficiency using the specified guides and standards	-	Ensure development projects require all new buildings to properly document building energy efficiency as specified	TBD	2	x		
GIB Credit 3	Building Water Efficiency	Need to ensure buildings comply with baseline water usage standards to maintain building water efficiency	-	Ensure development projects require all new buildings to comply with baseline water usage standards	TBD	1	x		
GIB Credit 4	Water-Efficient Landscaping	Need to limit or eliminate the use of potable water and other natural surface/ subsurface water for on-site landscape irrigation	-	Ensure development projects meet landscaping requirements intended to maximize the efficiency of landscape irrigation techniques	TBD	1	x		
GIB Credit 5	Existing Building Reuse	Need to reuse an existing building structure and/or envelope	-	Reuse an existing building structure and/or envelope in accordance with the greater of two benchmarks	0	1			
GIB Credit 6	Historic Resource Preservation & Adaptive Use	No historic buildings or cultural landscapes exist or are located on the project site	-	N/A (project site is void of any historic buildings or cultural landscapes)	0	1			

FIGURE 12-2 (continued)  
**LEED-ND Analysis**

Part 7 of 9

Design Guidelines = DG  
Site Plan = SP  
Implementation Plan = IP

Prerequisite / Credit	Name*	General Requirement(s)	Option(s)	Mechanisms / Policies to help facilitate certification	LEED-ND Points		DG	SP	IP
					Eligible	Total Possible			
GIB Credit 7	Minimized Site Disturbance in Design & Construction	Need to conduct a tree survey and develop a tree preservation plan that meet the specified standards	Need to (a) meet minimum "area left undisturbed" standards based on residential density and non-residential FAR; and (b) identify construction impact zones that limit disturbances to specified minimum distance requirements (Option 2)	Ensure development standards are established that identify construction impact zones; Ensure development projects outline details for tree surveying and tree preservation plans	TBD	1	x		
GIB Credit 8	Stormwater Management	Implement a comprehensive stormwater management plan that retains a specified percentage of total rainfall volume (earn higher points for greater rainfall retention)	-	Develop and implement a comprehensive stormwater management plan; stormwater management features may be specified in design guidelines and/or on the development site plan	TBD	4	x	x	x
GIB Credit 9	Heat Island Reduction	-	Meet the specified requirements for one of the following roof categories: nonroof measures (Option 1); high-reflectance and vegetated roofs (Option 2); or mixed nonroof and roof measures (Option 3)	Ensure development projects meet the roof design requirements aimed at reducing heat islands	TBD	1	x		
GIB Credit 10	Solar Orientation	-	Orient blocks (Option 1) or buildings (Option 2) that meet the specified orientation requirements	Ensure development projects meet the solar orientation requirements	TBD	1	x	x	
GIB Credit 11	On-Site Renewable Energy Sources	Incorporate on-site non-polluting renewable energy generation (e.g. solar, wind, geothermal, hydroelectric, and/or biomass) w/ minimum production capacity of 5% of the project's annual electrical and thermal energy cost	-	Utilize an accepted building energy performance simulation tool to evaluate renewable energy generation	TBD	3	x		

Prerequisite / Credit	Name*	General Requirement(s)	Option(s)	Mechanisms / Policies to help facilitate certification	LEED-ND Points			DG	SP	IP
					Eligible	Total Possible				
GIB Credit 12	District Heating and Cooling	Incorporate a district heating and/or cooling system for space conditioning and/or water heating of new buildings (minimum 2, excluding single family residential and existing buildings) such that at least 80% of the project's annual heating and/or cooling consumption is provided by the district plant; efficiency performance and energy consumption standards must also be met	-	Ensure development projects require the incorporation of a district heating and/or cooling system for space conditioning and/or water heating of new buildings	TBD	2	x			
GIB Credit 13	Infrastructure Energy Efficiency	Install all new infrastructure, including but not limited to traffic lights, street lights, and water/wastewater pumps, to achieve a 15% annual energy reduction below an estimated baseline energy use for this infrastructure	-	Ensure development projects install the required infrastructure	TBD	1	x			
GIB Credit 14	Wastewater Management	Retain on-site at least 25% of the average annual wastewater generated by the project, and reuse that wastewater to replace potable water (1 point for 25%; 2 points for 50%)	-	Ensure development projects are designed and constructed to meet the specified wastewater management requirements	TBD	2	x	x		
GIB Credit 15	Recycled Content in Infrastructure	Use materials for new infrastructure such that the sum of pre- and post-consumer recycled content and in-place reclaimed materials constitute at least 50% of the total mass of infrastructure materials	-	Ensure development projects utilize infrastructure materials that meet the specified composition of recycled and reclaimed content	TBD	1	x			

FIGURE 12-2 (continued)  
**LEED-ND Analysis**

Part 9 of 9

Design Guidelines = DG  
Site Plan = SP  
Implementation Plan = IP

Prerequisite / Credit	Name*	General Requirement(s)	Option(s)	Mechanisms / Policies to help facilitate certification	LEED-ND Points		DG	SP	IP
					Eligible	Total Possible			
GIB Credit 16	Solid Waste Management Infrastructure	Meet at least 4 of the following 5 minimum requirements: (a) one recycling or reuse station; (b) one drop-off point; (c) one compost station or location; (d) partnering recycling containers with other receptacles; and (e) 50% recycling and/or salvaging of nonhazardous construction and demolition debris	-	Ensure development projects address the specified solid waste management infrastructure requirements	TBD	1	x		
GIB Credit 17	Light Pollution Reduction	Meet lighting requirements that are aimed at: (a) reducing light levels; (b) reducing exterior lighting usage; (c) enforcing appropriate uplighting, light trespass, and roadway lighting standards; and (d) stipulating covenants, conditions, and restrictions (CC&R) or other binding documents to require continued adherence to these requirements	-	Ensure development projects address the specified light pollution reduction requirements	TBD	1	x		
<b>Rating System Topic: Innovation and Design Process (IDP)</b>									
IDP Credit 1	Innovation and Exemplary Performance	Need to identify, in writing: (1) the intent of the proposed innovation credit; (2) the proposed requirement for compliance; (3) the proposed submittals to demonstrate compliance; and (4) the design approach and strategies that might be used to encourage exemplary performance above the requirements set by LEED-ND and/or innovative performance in green building, smart growth, or new urbanist categories	-		TBD	5			x
IDP Credit 2	LEED Accredited Professional	Ensure that at least one principal member of the project team is one of the following: (a) a LEED Accredited Professional; (b) a professional who is credentialed in smart growth via the NRDC and SGA; or (c) a professional who is credentialed in new urbanism via the CNU	-		TBD	1			x
<b>Rating System Topic: Regional Priority Credit (RPC)</b>									
RPC Credit 1	Regional Priority	Comply with geographically specific environmental, social equity, and public health priorities, as identified on a database provided on the USGBC website: <a href="http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1984">www.usgbc.org/DisplayPage.aspx?CMSPageID=1984</a>	-		TBD	4			x





SECTION 13

# Architectural Design Guidelines

The following design guidelines are intended to enhance the living, shopping, working and overall quality of life that will be established in the years to come. As the Prairie Grove Town Center & TOD Plan takes root, these guidelines will aid in the creation of a mixed-use environment oriented towards the needs of commuters, employees, visitors and residents alike. These guidelines are provided to help create and maintain a sustainable, upscale transit oriented community.

The architectural guidelines are divided into five districts within the overall Study Area, as listed in Figure 13-1 and illustrated on the rendered site plan in Figure 13-2 (next page).

### Theory & Approach to the Guidelines

New development within the Town Center should reinforce building patterns, forms and materials that are uniquely reflective of Prairie Grove. Key themes include the Village's rural character, references to the prairie, and the prevalence of terra cotta materials referencing local company Terra Cotta Industries.

FIGURE 13-1

### Architectural Design Guidelines - Town Center Districts

- Town Center Retail
- Town Center Mixed Use
- Multi-Family Residential
- Business Park / Office
- Metra Station Area
- Sustainability

Described in the following pages, the architectural guidelines are intended to ensure that new development in the proposed Prairie Grove Town Center and TOD:

- » Strengthens the Village's rural character
- » Promotes a contemporary interpretation of agrarian and prairie style forms
- » Incorporates terra cotta materials as appropriate to reference the historic Terra Cotta Industries



Source: Tiska Associates, Inc.

Even the smallest elements, such as this stone shed with sloped tin roof, harken to Prairie Grove's historic agricultural past and maintain the rural character that many identify with Prairie Grove.

Source: Tiska Associates, Inc.



Despite municipal growth and development in the neighboring communities of Crystal Lake and McHenry, Prairie Grove has managed to maintain its strong ties to its agricultural heritage, with agrarian structures, expansive open spaces, and equine uses. The proposed Town Center and TOD will carefully integrate this heritage into their design.

FIGURE 13-1  
**Architectural Design Guidelines - Town Center Districts**

- Town Center Retail
- Town Center Mixed Use
- Multi-Family Residential
- Business Park / Office
- Metra Station Area



**1. Strengthen the Village's rural character**

- a. Prototypical agrarian development patterns are apparent in Prairie Grove and McHenry County
- b. Common characteristics of rural hamlets and villages include the following qualities:
  - i. Freestanding buildings oriented towards the public street with common building setbacks, presenting a unified street edge
  - ii. Variation in architectural style, including building massing, building height, and roofline
  - iii. Storefronts, signage, canopies, windows and doors present a welcoming face and human scale to pedestrians

Source: McHenry County Historic Preservation Commission.



*These images illustrate the historic agrarian development patterns of McHenry County, which influenced Prairie Grove and other communities in the county.*

## 2. Promote a contemporary interpretation of agrarian and prairie style forms

### a. Agrarian Forms

- i. Modern reinterpretations of the common barn are evident throughout the Midwest
- ii. Common characteristics of contemporary barns include the following qualities:
  1. Use of native building materials
  2. Straightforward building forms/patterns
  3. Integration of light
  4. Expression of structural elements, i.e. exposed beams, brackets, etc, as appropriate

### b. Prairie Style Forms

- i. Developed during the late 19<sup>th</sup> and early 20<sup>th</sup> century, Prairie School style architecture referenced the wide, flat, and tree-less expanses of the Midwestern United States. It gained popularity largely due its most famous advocate, Frank Lloyd Wright.
- ii. Common characteristics of Prairie School style include the following qualities:

1. Horizontal lines implied in building and roof elements
2. Broad overhanging eaves
3. Windows grouped in horizontal bands
4. Integration with topographical features of the landscape
5. Solid construction and craftsmanship
6. Restraint and order in the use of ornament

## 3. Incorporate terra cotta materials as appropriate to reference Terra Cotta Industries

- a. Historically located within Prairie Grove during the turn of the last century, Terra Cotta Industries was a significant manufacturing facility that provided the decorative terra cotta tiles and materials found along the country's prominent building facades and structural features.
- b. Terra cotta tiles were available in a variety of shapes and sizes, with a varying degree of ornamental intricacy. Where appropriate, terra cotta should be considered as ornamental embellishment to building facades and signage elements.



Source: Teska Associates, Inc.

*Terra cotta materials are encouraged to reference Prairie Grove's historic ties to Terra Cotta Industries, as well as enhance the architectural design of structures and signage.*

Source: Teska Associates, Inc.



Select examples of modern reinterpretations of common barns found throughout the Midwest.

## *Town Center Retail (R)*

### **Vision**

To promote high quality, pedestrian scaled, retail developments within the Town Center and surrounding area.

### **R-1) Building Massing**

A building's mass or shape is defined by its component parts, including the size of its footprint and number of stories. Individual characteristics of mass include building form, roof shape, and orientation.

#### **R-1A) Building Orientation & Setbacks**

- » Main pedestrian access should be oriented along the public street.
- » Parking and service areas should be oriented at the building rear and accessed from an alleyway or secondary access point.
- » Recommended front yard setback: zero setback.
- » Buildings may be set back 10'-0" to create small, semi-public plazas, patios, and gardens, provided that these setbacks do not negatively affect or significantly disrupt street wall continuity.

#### **R-1B) Intermediate Walkways**

- » Walkways between buildings are important connective elements on-site. They should promote pedestrian activity, increase the amount of potential retail frontage and reduce automobile conflicts with pedestrians.
- » Walkways between buildings should be safe and inviting, providing pedestrians with a separation from noise and car traffic. These intermediate walkways should allow pedestrians to window shop and may serve as access points to shops.



*Walkways between buildings provide retailers with increased sidewalk frontage and move pedestrians further from the street to reduce conflicts with cars.*

- » Pedestrian connectivity between off-street parking and primary retail areas should be well defined and linked via pathways and sidewalks. Walkways between buildings should be utilized to provide a more direct route between off-street parking and the primary street frontage.

#### **R-1C) Building Proportion, Size & Scale** *(1) Story*

- » Maintain ground level pedestrian scale with traditional storefront façade components and proportions.
- » Provide a consistent pattern of architectural detailing, including the use of decorative elements, changes in rooflines and fenestrations, and changes in building materials and color.
- » Façades should be subdivided with horizontal and vertical architectural elements to enhance building articulation and create an environment reminiscent of pedestrian scaled, mixed-use, shopping districts.



Retail businesses at ground level provide pedestrians with an inviting window-shopping experience or even a place to sit and relax, such as at a sidewalk cafe.

- » Vertical and horizontal design elements, including columns, pilasters, and cornices, should be defined at both the ground level and upper levels to break up the mass of buildings.
- » Match or transition building proportions and architectural elements so that they are consistent on all elevations visible from public streets and open spaces.

## R-2) Exterior Building Treatments

Exterior building treatments include everything from façade and roof materials, textures and color palette, window shapes and spacing, architectural articulation, and the overall success of how these elements relate to each other.

### R-2A) Materials & Treatments

- » Masonry materials such as limestone and brick should be used throughout the façade, and along the exterior walls of the building.
- » The back and sides of the buildings should be consistent with the front façade in terms of design style, building materials and architectural features.



Masonry construction adds durability to a structure while also enhancing the visual appearance of the building facade and foundation.

- » A variety of complimentary materials, colors and textures should be integrated on all sides of buildings to add visual interest. Such should be consistent with surrounding buildings.
- » Building materials should be comprised of neutral colors that are versatile and mix well with other colors and the surrounding building color palette. However, brighter colors may be used for accent bands or special building features.



The limited use of bright colors, such as the bright red used for the awning and front store entrance (above), can act as an accent to the rest of the building.

Source: Village of Prairie Grove.



A building entrance can compliment the overall character of a site. For example, the bright colored door, transparent door windows, and pitched roof-covered porch create an inviting entry and add character to the structure.

Source: OKW Architects.



Retail building entrances should have an inviting quality to them by utilizing elements such as large windows, attractive materials, and ambient light.

### R-2B) Entrances

- » Building entrances should be oriented towards the public street, public open spaces or plazas when available.
- » All storefronts must comply with the Americans with Disabilities Act; guidelines are provided on ADA's website at: [www.ada.gov](http://www.ada.gov)
- » Secondary entrances, for buildings that front on multiple streets, should relate to the primary entrance and the building design as a whole.
- » Primary building entrances should not be oriented towards rear or side parking lots.
- » Building entrances should be prominent and accessible, including such elements as large entry doors, specialty paving, and architectural treatments that are complimentary to the site's overall character; i.e. the application of different materials at the entrance, such as brick, glass or stone.

### R-2C) Corner Treatments

- » Corner treatments for buildings must comply with vision triangles; where appropriate, consider inte-

Source: Tesla Associates, Inc.



Corner buildings can open their entrances onto a public plaza, which can be utilized for outdoor seating, enhanced landscaping, and retail displays.

grating small, public corner plazas to enhance these sightlines.

- » Corner buildings should have their primary entrance at an angle, to face the intersection, or should be oriented to face the street of greater importance.
- » Corner buildings may be recessed from the front and side property lines on a diagonal; the recessed corner can be just the ground level or upper levels as well.
- » Buildings located at corners should integrate the following:
  - Distinctive massing and roof form;
  - Prominent entrance accessible from the corner;
  - Architectural features like canopies, large display windows, tower features, and landmark art.

### R-2D) Façade Transparency

- » Ground floors planned for retail or restaurant use should be comprised primarily of large display windows that are clear glass, unless a specific alternative design is otherwise approved.
- » Tinted and reflective glass is discouraged at the ground level so as not to interfere with the visual



*A landscaping trellis can help screen a blank wall and add greenery to enhance the physical appearance of a building facade or overall streetscape.*

connection between the indoor-outdoor environments.

### **R-2E) Backsides of Buildings**

- » Storage, loading and service areas should be located to the rear of buildings and on the interior of blocks where they are less visible from public view.
- » Storage, loading and service areas should be screened from public view via landscaping and/or fencing. These elements should be consistent with the overall design of the associated building and surrounding site.
- » Buildings should be consistent with the front façade in terms of design style, building materials and architectural features.

### **R-2F) Blank Walls / Screening**

- » Solid blank walls should be avoided. Façade modulation, canopies, lighting, artwork, and/or landscaping trellises can all be employed to avoid blank walls.
- » Screening of electrical and mechanical equipment should be consistent with the overall building design style, building materials and architectural features.



*Façade enhancements can include elements such as awnings, wall-mounted lighting, varying building materials, and other architectural accents.*

- » Electrical and mechanical equipment, when placed on the rooftop, shall be obscured from view (i.e. by parapet).
- » Electrical and mechanical equipment, when placed along walls, should be located on the least visible side(s) of the building, to reduce visibility.

### **R-2G) Façade Features**

- » Awning and canopies are encouraged along the public walkway. Awning and canopy materials should be of a consistent color and design and composed of compatible materials.
- » Windows should have a repetitive rhythm which relates to the overall exterior of buildings on site. Where appropriate, windows should be grouped in horizontal bands.
- » Windows should incorporate multiple divisions in the glass, such as mullions.
- » Buildings should provide a consistent pattern of architectural detailing, including the use of decorative elements, changes in rooflines and fenestrations, vertical and horizontal articulation, and changes in building materials and color.

Source: Tesla Associates, Inc.



*Large bay windows on a retail building can enhance the character of the storefront, particularly if they are designed consistently with the rest of the building.*

- » Building cornices, friezes, lintels, sills, surrounds and ornament should be clearly expressed with limestone, precast concrete, terra cotta or metal materials.
- » Bay windows are encouraged; they should maintain the same details as principal façades: sills, lintels, cornices and expression lines.

#### **R-2H) Roofing Treatments & Materials**

- » Parapet or gable end roofs should comprise the majority of the building roof system. Gable ends should be oriented toward the public street.
- » Varied rooflines and roof heights are encouraged but should remain consistent and complimentary with surrounding structures; consider including parapets, gables, dormers, and overhangs. Where appropriate, broad overhanging eaves and exposed bracketing are encouraged.
- » Long, straight rooflines should be avoided.
- » Upper story cornices, friezes and gable ends should be clearly expressed with limestone, metal, or synthetic materials.

Source: Tesla Associates, Inc.



*Varied rooflines and roof heights add depth and diversity to the dimensions of a building, enhancing its visual appearance along the streetscape.*

- » When located on the roof of buildings, mechanical units should be concealed within parapet walls.

### **Town Center Mixed Use (MU)**

#### **Vision**

To promote high quality, pedestrian scaled, mixed use developments within the Mixed Use Core and surrounding area.

#### **MU-1) Building Massing**

A building's mass, or shape, is defined by its component parts, including the size of its footprint and number of stories. Individual characteristics of mass include building form, roof shape, and orientation.

#### **MU-1A) Building Orientation & Setbacks**

- » Main pedestrian access should be oriented along the public street.
- » Parking and service areas should be oriented at the building rear and accessed from an alleyway or secondary access point.
- » Recommended front yard setback: zero setback



Intermediate walkways allow pedestrians to access various parts of a site, such as walking from a rear parking lot to the storefronts along the main street.

- » Where appropriate, buildings may be set back 10'-0" to create small, semi-public plazas, patios, and gardens provided these setbacks do not negatively affect or significantly disrupt street wall continuity.

#### MU-1B) Intermediate Walkways

- » Walkways between buildings are important connective elements on-site. They should promote pedestrian activity, increase the amount of potential retail frontage and reduce automobile conflicts with pedestrians.
- » Walkways between buildings should be safe and inviting, providing pedestrians with a separation from noise and car traffic. These intermediate walkways should allow pedestrians to window shop and may serve as access points to shops.
- » Pedestrian connectivity between off-street parking and primary retail areas should be well defined and linked via pathways and sidewalks. Walkways between buildings should be utilized to provide a more direct route between off-street parking and the primary street frontage.



Variances in building materials, colors, and facade fenestration can add diversity to the built mixed use landscape.

#### MU-1C) Building Proportion, Size & Scale

(2-3) Stories; with the exception of buildings that are completely retail, which can be (1) story

- » Maintain ground level pedestrian scale with traditional storefront façade components and proportions.
- » Provide a consistent pattern of architectural detailing, including the use of decorative elements, changes in rooflines and fenestrations, and changes in building materials and color.
- » Façades should be subdivided with horizontal and vertical architectural elements to enhance building articulation and create an environment reminiscent of pedestrian scaled, mixed-use, shopping districts.
- » Vertical and horizontal design elements, including columns, pilasters, and cornices, should be defined at both the ground level and upper levels to break up the mass of buildings.
- » Match or transition building proportions and architectural elements so they are consistent on all elevations visible from public streets and open spaces.



Mixed-use buildings with 2 or 3 upper stories can utilize elements like recessed balconies and exterior walkways to help maintain an open air atmosphere for businesses and uses above ground level.

Source: Tesla Associates, Inc.



*The use of masonry as a primary building material, particularly when used on all four sides of a structure, can create a strong character for a building.*

### **MU-2) Exterior Building Treatments**

Exterior building treatments include everything from façade and roof materials, textures and color palette, window shapes and spacing, architectural articulation and most importantly the overall success of how these elements relate to each other.

#### **MU-2A) Materials & Treatments**

- » Masonry materials such as limestone and brick should be used throughout the façade, and along the exterior walls of the building.
- » The back and sides of the buildings should be consistent with the front façade in terms of design style, building materials and architectural features.
- » A variety of complimentary materials, colors and textures should be integrated on all sides of buildings to add visual interest. Such should be consistent with surrounding buildings.
- » Building materials should be comprised of neutral colors that are versatile and mix well with other colors and the surrounding building color palette. However, brighter colors may be used for accent bands or special building features.

Source: Tesla Associates, Inc.



*Commercial building entrances that open towards a public plaza or green space provides customers with a place to relax and sit outside.*

#### **MU-2B) Entrances**

- » Building entrances should be oriented towards the public street, public open spaces or plazas when available.
- » All storefronts must comply with the Americans with Disabilities Act; guidelines are provided on ADA's website at: [www.ada.gov](http://www.ada.gov)
- » Secondary entrances, for buildings that front on multiple streets, should relate to the primary entrance and the building design as a whole.
- » Primary building entrances should not be oriented towards rear or side parking lots.
- » Building entrances should be prominent and accessible, including such elements as large entry doors, specialty paving, and architectural treatments that are complimentary to the site's overall character; i.e. the application of different materials at the entrance, such as brick, glass or stone.



A corner building at the end of a mixed use cluster can integrate elements such as a tower feature to enhance the character of its unique corner location.

### MU-2C) Corner Treatments

- » Corner treatments for buildings must comply with vision triangles; consider integrating small, public corner plazas to enhance these sightlines.
- » Corner buildings should have their primary entrance at an angle, to face the intersection, or should be oriented to face the street of greater importance.
- » Corner buildings may be recessed from the front and side property lines on a diagonal; the recessed corner can be just the ground level or upper levels as well.
- » Buildings located at corners should integrate the following:
  - Distinctive massing and roof form;
  - Prominent entrance accessible from the corner;
  - Architectural features like canopies, large display windows, tower features, and landmark art.

### MU-2D) Façade Transparency

- » Ground floors planned for retail or restaurant use should be comprised primarily of large display windows that are clear glass, unless a specific alternative design is otherwise approved.



Large display windows with clear glass for a ground floor restaurant or cafe can help attract customers with displays, visible seating, and ambient lighting.

- » Tinted and reflective glass is discouraged at the ground level so as not to interfere with the visual connection between the indoor-outdoor environments.

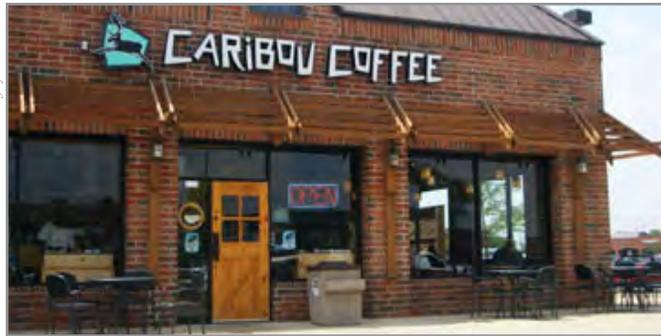
### MU-2E) Backsides of Buildings

- » Storage, loading and service areas should be located to the rear of buildings and on the interior of blocks where they are less visible from public view.
- » Storage, loading and service areas should be screened from public view via landscaping and/or fencing. These elements should be consistent with the overall design of the associated building and surrounding site.
- » Back and sides of buildings should be consistent with the front façade in terms of design style, building materials and architectural features.

### MU-2F) Blank Walls/Screening

- » Solid blank walls should be avoided. Façade modulation, canopies, lighting, artwork, and/or landscaping trellises can all be employed to avoid blank walls.

Source: City of Wheaton, IL.



*Awnings and canopies – which can be constructed of materials like metal, fabric, or wood (above) – provide shade relief and enhance a building's facade.*

- » Screening of electrical and mechanical equipment should be consistent with the overall building design style, building materials and architectural features.
- » Electrical and mechanical equipment, when placed on the rooftop, shall be obscured from view (i.e. by parapet).
- » Electrical and mechanical equipment, when placed along walls, should be located on the least visible side(s) of the building, to reduce visibility.

#### **MU-2G) Façade Features**

- » Awning and canopies are encouraged along the public walkway. Awning and canopy materials should be of a consistent color and design and composed of compatible materials.
- » Upper story balconies are encouraged; they should be recessed into the building rather than hung off the wall of exterior walls.
- » Upper story window proportions should be smaller than the proportions of the ground floor and recessed into the exterior wall.

Source: Danny Plater-Zyberk &amp; Company.



*Mullions can help form multiple divisions of a single window, which breaks up the expanse of the glass while adding an architectural accent to the storefront.*

- » Windows should have a repetitive rhythm which relates to the overall exterior of buildings on site. Where appropriate, windows should be grouped in horizontal bands.
- » Windows should incorporate multiple divisions in the glass, such as mullions.
- » Buildings should provide a consistent pattern of architectural detailing, including the use of decorative elements, changes in rooflines and fenestrations, vertical and horizontal articulation, and changes in building materials and color.
- » Building cornices, friezes, lintels, sills, surrounds and ornament should be clearly expressed with limestone, precast concrete, terra cotta or metal materials.
- » Bay windows are encouraged; they should maintain the same details as principal façades: sills, lintels, cornices and expression lines.



*Varied rooflines and architectural variances like dormers, gables, and overhangs can help enhance the articulation of the building facades and roof treatments.*

## MU-2H) Roofing Treatments & Materials

- » Parapet or gable end roofs should comprise the majority of the building roof system. Gable ends should be oriented toward the public street.
- » Varied rooflines and roof heights are encouraged but should remain consistent and complimentary with surrounding structures; consider including parapets, gables, dormers, and overhangs. Where appropriate, broad overhanging eaves and exposed bracketing is encouraged.
- » Long, straight rooflines should be avoided.
- » Upper story cornices, friezes and gable ends should be clearly expressed with limestone, metal, or synthetic materials.
- » When located on the roof of buildings, mechanical units should be concealed within parapet walls.



*Whether they are condominiums, apartments, or rowhouses (above), primary pedestrian access should be oriented towards the public street.*

## Multi-Family Residential (MF)

### Vision

To promote high quality multi-family residential buildings with the Town Center, particularly near the Metra station.

### MF-1) Building Massing

A building's mass, or shape, is defined by its component parts, including the size of its footprint and number of stories. Individual characteristics of mass include building form, roof shape, and orientation.

#### MF-1A) Building Orientation & Setbacks

- » Main pedestrian access should be oriented along the public street.
  - » Parking and service areas should be oriented at the building rear and accessed from an alleyway or secondary access point.
- Minimum front yard setback is 10'-0";

Source: Tesla Associates, Inc.



*Intermediate walkways can connect separate individual buildings within a certain cluster, which then can feed into the main public sidewalk.*

» Setbacks for Adjacent Buildings:

- Side to Rear Setback: Minimum of 30'-0";
- Side to Side Setback: Minimum 7'-0";

» Parking Setbacks:

- Off-street parking areas must be setback a minimum of 15'-0" from the rear of the building.

- » Promote pedestrian-oriented access via interconnected sidewalks and walkways to transit facilities, including Metra trains and bus stops.

**MF-1B) Intermediate Walkways**

- » Walkways between buildings are important connective elements on-site. They should promote pedestrian activity and reduce automobile conflicts.
- » Walkways between buildings should be safe and inviting, providing pedestrians with a separation from noise and car traffic. These intermediate walkways may serve as secondary access points to buildings.
- » Pedestrian connectivity between off-street parking and building entry points should be well defined

Source: Tesla Associates, Inc.



*Although this loft building has the height of a four-story building, the top floor is set back to create the visualization of a shorter building from street level.*

and linked via pathways and sidewalks. Walkways between buildings should be utilized to provide a more direct route between off-street parking and the primary street frontage.

**MF-1C) Building Proportion, Size & Scale**  
(5) Stories maximum height.

- » Recommendation that the 4<sup>th</sup> and 5<sup>th</sup> floors are set back above the 3<sup>rd</sup> floor. Minimum recommended setback dimension 10'-0".
- » Provide a consistent pattern of architectural detailing, including the use of decorative elements, changes in rooflines and fenestrations, and changes in building materials and color.
- » Façades should be subdivided with horizontal and vertical architectural elements to enhance building articulation, creating an upscale aesthetic.
- » Vertical and horizontal design elements, including columns, pilasters, and cornices, should be defined at both the ground level and upper levels to break up the mass of buildings.



The use of masonry for condos and apartments creates an architectural palette consistent with commercial and mixed use structures in the Town Center.

- » Match or transition building proportions and architectural elements such that they are consistent on all elevations visible from public streets and open spaces.

#### **MF-2) Exterior Building Treatments**

Exterior building treatments include everything from façade and roof materials, textures and color palette, window shapes and spacing, architectural articulation.

##### **MF-2A) Materials & Treatments**

- » Masonry materials such as limestone and brick should be used throughout the façade, and along the exterior walls of the building.
- » The back and sides of the buildings should be consistent with the front façade in terms of design style, building materials and architectural features.
- » A variety of complimentary materials, colors and textures should be integrated on all sides of buildings to add visual interest. Such should be consistent with surrounding buildings.
- » Building materials should be comprised of neutral colors that are versatile and mix well with each other and the surrounding building color palette.



Elements such as covered porches, short staircases, and recessed doorways can enhance the presence of residential unit entrances along the streetscape.

#### **MF-2B) Entrances**

- » Building entrances should be oriented towards the public street, public open spaces or plazas when available.
- » Secondary entryways should be oriented towards the side and rear of the buildings, providing more direct access to/from off-street parking areas.
- » Buildings must comply with the Americans with Disabilities Act (see ADA Guidelines).
- » The design of secondary entrances should relate to the primary entrance and the building design as a whole.
- » Primary building entrances should not be oriented towards rear or side parking lots.
- » Building entrances should be prominent and accessible, including such elements as large entry doors, specialty paving, and architectural treatments that are complimentary to the site's overall character; i.e. the application of different materials at the entrance, such as brick, glass or stone.



*Distinctive features such as recessed balconies, trellises, and varied building materials can enhance the presence of corner units on a residential structure.*



*By removing the visual clutter on the building facade, recessed balconies provide an outdoor space for residents with greater privacy than overhang balconies.*

#### **MF-2C) Corner Treatments**

- » Corner treatments for buildings must comply with vision triangles.
- » Corner buildings may be recessed from the front and side property lines on a diagonal; the recessed corner can be just the ground level or upper levels as well.
- » Buildings located at corners should integrate the following:
  - Distinctive massing and roof form;
  - Prominent entrance accessible from the corner;
  - Architectural features like canopies, large display windows, tower features, and landmark art.

#### **MF-2D) Screening**

- » Electrical and mechanical equipment, when placed on the rooftop, shall be obscured from view (i.e. by parapet).
- » Electrical and mechanical equipment, when placed along walls, should be located on the least visible side(s) of the building and screened with landscaping or a fence.



*The windows in this cluster of townhouses have a repetitive rhythm along the face of the cluster, creating a sense of consistency in architectural form.*

#### **MF-2E) Façade Features**

- » Upper story balconies are encouraged.
- » Windows should have a repetitive rhythm which relates to the overall exterior of buildings on site. Where appropriate, windows should be grouped in horizontal bands.
- » Windows should incorporate multiple divisions in the glass, such as mullions.
- » Buildings should provide a consistent pattern of architectural detailing, including the use of decorative elements, changes in rooflines and fenestrations, vertical and horizontal articulation, and changes in building materials and color.
- » Building cornices, friezes, lintels, sills, surrounds and ornament should be clearly expressed with limestone, precast concrete, terra cotta or metal materials.
- » Bay windows are encouraged; they should maintain the same details as principal façades: sills, lintels, cornices and expression lines.



*Varied rooflines and elements like dormers, overhangs, and other accents can add diversity to the architectural character of residential structures.*

### **MF-2F) Roofing Treatments & Materials**

- » Parapet or gable end roofs should comprise the majority of the building roof system. Gable ends should be oriented toward the public street.
- » Varied rooflines and roof heights are encouraged but should remain consistent and complimentary with surrounding structures; consider including parapets, gables, dormers, and overhangs. Where appropriate, broad overhanging eaves and exposed bracketing are encouraged.
- » Upper story cornices, friezes and gable ends should be clearly expressed with limestone, metal, or synthetic materials.
- » When located on the roof of buildings, mechanical units should be concealed within parapet walls.



*An office building can be integrated into the existing landscape and further enhanced with additional landscaping to create an attractive natural setting.*

### **Business Park / Office (B)**

#### **Vision**

To maintain and strengthen business park and office building architecture so that it balances users need with the character of the surrounding mixed-use environment.

#### **B-1) Site Design**

- » Business park and office buildings should be designed in a manner that fits in with the surrounding development pattern and context. Including:
  - The spatial relationship between structures and public right-of-way;
  - Circulation patterns;
  - Existing vegetation and topography;
  - Architectural elements in surrounding developments.

Source: Tesla Associates, Inc.



*A pedestrian plaza located at the front entrance of an office building separates the building from parking areas and provides an outdoor space for employees.*

- » The size and form of new structures in relationship to surrounding developments. The design should reflect similar setbacks, building heights and form, scale and mass, materials, compatible colors and landscape treatments. The intent is not uniformity, but compatibility.
- » Site features such as parking areas and driveways, secondary structures and outdoor functions should be arranged and located to draw attention to the aesthetics of successful components on site; for example, natural elements, open space features, existing trees and ponds, and nearby architectural features.
- » Building entrances should be prominent and accessible, including such elements as entry doors, specialty paving, and architectural treatments that are complimentary to the site's overall character.

*A potential office building at the northwest corner of Edgewood Road and IL Route 31 should be designed as a focal point for the corner, particularly utilizing a signature building that is integrated into the natural landscape. An excellent example is the Serta headquarters building in Hoffman Estates, IL.*



Source: Hill Mechanical Group.

Source: Corbett Cibinel Architects.



*The entrance for an office building should be prominent; for example, the use of large glass windows creates a welcoming space with ambient light.*

**B-2) Backsides of Buildings**

- » Storage, loading and service areas should be located to the rear of buildings and on the interior of blocks where they are less visible from public view.
- » Storage, loading and service areas should be screened from public view via landscaping, grading and/or fencing. These elements should be consistent with the overall design of the associated building and surrounding site.



*Low-level planters can provide commuters with seating areas as they wait for a train at the Metra station.*

- » Back and sides of buildings should be consistent with the front façade in terms of design style, building materials and architectural features.

### **B-3) Blank Walls/Screening**

- » Solid blank walls should be avoided. If necessary, blank walls should be treated with façade modulation and/or landscaping trellises.
- » Screening of electrical and mechanical equipment should be consistent with the overall building design style, building materials and architectural features.
- » Electrical and mechanical equipment when placed on the rooftop shall be obscured from view (i.e. by parapet).
- » Electrical and mechanical equipment when placed on walls should be located on the least visible side(s) of the building, to reduce visibility.
- » Buildings facing the public right-of-way should integrate enhanced facade features to add interest and reduce building mass. Such elements may include awnings, a variety of colors, materials, and textures, defined entries, and upper story windows.

*Note: Single story buildings can still give the illusion of having a second story with windows and awnings.*



*By utilizing attractive building materials, a Metra station building can act as a focal point for a central commons and within the overall Town Center.*

## **Metra Station Area (S)**

### **Vision**

To present a high quality transit center environment that is welcoming to residents, merchants and visitors.

### **S-1) Prairie Grove Metra Station**

The proposed Metra station for Prairie Grove will serve as a focal feature for the Town Center area and should therefore be reflective of vernacular building patterns, materials and forms.

### **S-2) Hosting Stations**

Metra currently has three sizes for basic stations, based on projected levels of ridership. Metra's basic station and parking design guidelines are documented in Metra's Station Manual and Metra's Parking Manual. These documents contain the minimum guidelines that each municipality must follow regarding station and parking design elements.

*Note: Any proposed station design and related improvements will be subject to review and approval by Metra and will need to comply with their established guidelines in Metra's Station Manual and Parking Manual, which can be downloaded online here:*

[www.metrarr.com/techservices/guidelines.html](http://www.metrarr.com/techservices/guidelines.html)

## Sustainability (SU)

The following architectural guidelines related to sustainability are based on requirements that need to be fulfilled in order for the Town Center and TOD project to qualify for LEED-ND certification, as outlined in Section 12. Even if LEED-ND certification is not sought, the following architectural guidelines maintain the same intent to promote a more sustainable Town Center and TOD development.

### **Vision**

To promote sustainable design techniques to ensure the Town Center and TOD are part of a sustainable development that has the potential to seek LEED-ND certification.

### **SU-1) Transit Facilities**

Transit opportunities are a major factor in facilitating the sustainability of a development project. While it is generally the vehicles (i.e. trains and buses) that provide the sustainability element to a project, the transit facilities and amenities also play a role to make waiting for the trains and buses an attractive transportation option. In addition to the specific architectural guidelines for the proposed Metra station (see previous page), the following transit facilities and amenities should be provided within the Town Center:

- » Shelters (train and bus)
  - » Bicycle racks/storage
  - » Kiosks, bulletin boards, and or signs that display transit schedules and route information
- » *For more information: See NPD Credit 7 (Transit Facilities) in the LEED-ND Analysis matrix in Figure 12-2; the LEED-ND Rating System Manual lists specific requirements for the transit facilities and amenities listed above.*

### **SU-2) Visitability & Universal Design**

In order to make the Town Center and TOD project accessible to all users, regardless of age or ability, it must adhere to

certain visitability and universal design standards that apply to the design of living spaces and work areas.

- » *For more information: See NPD Credit 11 (Visitability and Universal Design) in the LEED-ND Analysis matrix in Figure 12-2; the LEED-ND Rating System Manual lists specific visitability and universal design standards.*

### **SU-3) Neighborhood Schools**

Civic space is proposed in the area including the existing water tower and northeast of the Jenny Jae Lane residences. While civic uses could include municipal facilities or recreational spaces, a school could also be accommodated in this area. Integrating a school into the neighborhood and ensuring walkability can help foster a sustainable community.

- » *For more information: See NPD Credit 15 (Neighborhood Schools) in the LEED-ND Analysis matrix in Figure 12-2; the LEED-ND Rating System Manual lists specific requirements for walking distances, pedestrian/bicycle accessibility, and campus sizes of different school types.*



*Universal design can be integrated into both public and private spaces. For example, the image above depicts Kids Together Playground, which is a universally designed family recreation facility in Cary, North Carolina.*



Although still a hard surface, pervious concrete allows water to flow through the material more freely, meeting EPA stormwater management standards.

#### SU-4) Green Infrastructure & Buildings

As a greenfield development, the Village will have the opportunity to design and build completely new infrastructure and buildings within the Prairie Grove Town Center and TOD that meet sustainability standards. In particular, to comply with LEED-ND standards, new infrastructure and buildings will need to achieve the following attributes as defined by the 4 prerequisites and 17 credits under the Green Infrastructure and Buildings (GIB) LEED category:

- » At least one LEED-certified green building
- » Energy efficient buildings that reduce air, water, and land pollution
- » Minimized impacts on natural water resources
- » Reduced pollution from construction activity
- » Limited usage of potable water and other natural surface or subsurface water resources on project sites for landscape irrigation
- » Reuse of an existing building structure and/or envelope
- » Preservation of existing non-invasive trees, native plants, and pervious surfaces



In addition to keeping the sidewalk and public spaces clean, accessible receptacles for recycling and litter can also liven up the streetscape.

- » Comprehensive stormwater management plan
  - » Reduction of heat islands
  - » Optimal solar orientation of buildings
  - » On-site renewable energy production sources
  - » Incorporation of district heating and/or cooling systems
  - » Installation of energy efficient infrastructure
  - » Optimal reuse of water and reduction of pollution generated by wastewater
  - » Use of recycled and reclaimed materials for new infrastructure
  - » Provisions of proper receptacles for solid waste and recyclable materials
  - » Reduction of light pollution
- » *For more information: See GIB Prerequisites 1 through 4 and Credits 1 through 17 in the LEED-ND Analysis matrix in Figure 12-2; the LEED-ND Rating System Manual lists specific requirements for each prerequisite and credit.*

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SECTION 14

# Streetscape Design Guidelines

The following guidelines are designed to enhance the living, shopping, working and overall quality of life that will be established in the years to come. As the Prairie Grove Town Center & TOD Plan takes root, these guidelines will aid in the creation of a mixed-use environment oriented towards the needs of commuters, employees, residents and visitors alike. These guidelines are provided to help create and maintain a sustainable, upscale transit oriented community.

The streetscape guidelines are organized into eight categories, as listed in Figure 14-1.

## Pedestrian Connectivity (PC)

The intent is to encourage strong pedestrian connections throughout the development, including sidewalks and trailways. These pedestrian connections allow people to circulate throughout the entire development without the use of their cars. In addition to providing for pedestrian movement, side-

walks and trailways also offer the opportunity for outdoor plazas, overlooks and other people places which will enliven the Town Center.

### **PC-1) Mixed Use Core Guidelines**

The mixed use core of the Town Center should emphasize a pedestrian friendly environment that allows safe and easy movement in an attractive and “walkable” setting. Sidewalks should have a minimum 16’ width and include the following elements:

Source: Tesla Associates, Inc.



*This tree-lined, mixed use streetscape is defined by decorative, colored pavement and landscaped planters. Ground level retail includes ample sidewalk space for shoppers to browse and be out of the way of pedestrians.*

FIGURE 14-1  
**Streetscape Design Guidelines - Categories**

- Pedestrian Connectivity
- Street Treatments
- Parking Lots
- Urban Plazas & Open Spaces
- Lighting & Site Amenities
- Public Signage
- Landscape
- Sustainability

*Note: Alternative design concepts that do not adhere to the guidelines set forth in the following sections must be approved by the Planning and Zoning Commission.*

- » Decorative pavers and/or colored/textured concrete
- » Decorative paving treatments at all street crossings
- » Appropriately scaled pedestrian and vehicular lighting
- » Raised planters to buffer pedestrians from vehicles
- » Flexible seating areas
- » “Knuckles / bump-outs” at intersections to shorten cross-walk distances and to provide greening
- » Trees located in planters and/or tree grates
- » Unified site amenities (benches, trash receptacles, etc.)

The sidewalk areas should be organized in zones that allow for efficient pedestrian movement, and provide for landscaping opportunities. These three critical sidewalk zones are illustrated in Figure 14-2.

**PC-2) Metra Station Area**

Visual and pedestrian connections are critical to link the proposed Metra station with the mixed use core. To ensure these connections are strong, key design criteria should include the following elements:

- » A strong neighborhood parkway with tree allee (a sidewalk with trees on each side) connecting the proposed Metra station with the mixed use core
- » Enhanced pavement crosswalks



A central tree allee, which consists of a sidewalk with trees on each side, creates a natural canopy forming an enclosure over an outdoor space.

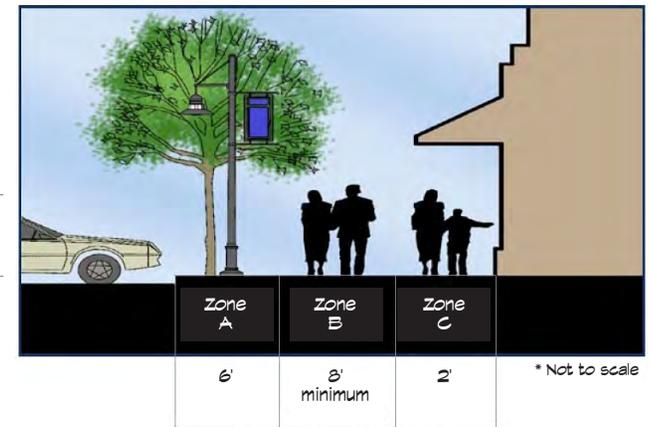
- » Public art and/or fountain features
- » Public seating areas
- » Bicycle parking
- » Handicap ramps / ADA compliant sidewalk crossings

*Note: Any proposed station design and related improvements will be subject to review and approval by Metra and will need to comply with their established guidelines in Metra’s Station Manual and Parking Manual, which can be downloaded online here:*

[www.metrarr.com/techservices/guidelines.html](http://www.metrarr.com/techservices/guidelines.html)

FIGURE 14-2  
**Sidewalk Zones**

<b>Zone A:</b> Streetscape Furnishings Zone	<ul style="list-style-type: none"> <li>» Parkway Tree Plantings</li> <li>» Decorative Lighting</li> <li>» Raised Landscape Planters</li> <li>» Site Furnishings (e.g. Benches, Trash/Recycling Receptacles, etc)</li> <li>» 6'-0" width</li> </ul>
<b>Zone B:</b> Walking Zone	<ul style="list-style-type: none"> <li>» Obstacle Free</li> <li>» 8'-0" min. width</li> </ul>
<b>Zone C:</b> Browsing Zone	<ul style="list-style-type: none"> <li>» Direct Access to Storefront Windows</li> <li>» Doorway Access to Shops / Offices</li> <li>» Business Owned and Maintained Planter Pots</li> <li>» 2'-0" width</li> </ul>





Residential walkways can include parkway trees and building foundation landscaping to help soften the hard surfaces of the street and enliven the streetscape.

### PC-3) Multi-Family Residential Areas

Multi-family residential sidewalks should be provided to connect residential areas to the mixed use core, the commuter station, and to the regional trailway. All streets within residential areas should have sidewalks on both sides of the road, and also provide the following:

- » Minimum of 5'-0" in width;
- » Parkway trees planted in the adjacent parkway at min. 35' spacing;
- » Handicap ramps / ADA compliant sidewalk crossings.

### Street Treatments (ST)

Careful attention should be given to the design of properly scaled streets and alleys. All streets shall have a pedestrian friendly scale, while still allowing for necessary vehicular movements. In addition to safe and proper street geometrics, all streets shall also have generous landscaping, lighting, sidewalks and other urban streetscape treatments.

Figures 14-3 through 14-8 illustrate typical dimensions, layouts, and streetscape treatments for the six typical street types that characterize the street network that will serve the proposed Town Center. These six figures relate directly to Figures 11-5 through 11-10 in Section 11, which provide additional detail relating to roadway characteristics.

The six typical street types include:

- » Arterial Roadway (Figure 14-3)
- » Collector Roadway with marked bike lane (Figure 14-4)
- » Collector Roadway with shared-use path (Figure 14-5)
- » Local Roadway (Neighborhood Street) (Figure 14-6)
- » Local Roadway (Parkway Street) (Figure 14-7)
- » Local Roadway (Town Center Street) (Figure 14-8)

#### ST-1) Mixed Use Core Streets

The core streets in the Town Center shall be designed to create a pedestrian friendly environment while allowing the safe and efficient movement and parking of vehicles. These core streets generally relate to the Town Center street typology illustrated in Figure 14-8.

In addition to having proper scale, all mixed use core streets should have consistent streetscape treatments, including the following:

- » Pedestrian and vehicular lighting
- » Parkway trees in tree grates and/or raised planters
- » Protective bollards to shield pedestrians from high speed traffic
- » Event banners
- » Public art opportunities
- » On-street parking

#### ST-2) Commuter Station Streets

To accommodate the traffic generated by the proposed commuter station, the streets that lead to the station and parking lots shall be designed in a way to provide efficient ingress and egress, while maintaining a scale that is compatible with the balance of the development. These commuter station streets generally relate to the collector roadway, neighborhood street, and parkway street typologies illustrated in Figures 14-5 through 14-7.

In addition to having proper scale, all commuter streets should have consistent streetscape treatments, which include the following:



While colored or brick pavers are often used to accentuate the streetprint of an intersection, the use of Duratherm paving can also be used as an alternative to create a unique character to the street. Duratherm is uniquely formulated thermoplastic material that can be inlaid into imprinted asphalt. Since it is slightly recessed below the asphalt surface, Duratherm is highly durable and resistant to wear caused by auto traffic. Different colors and patterns can be utilized in a Duratherm design.

Source: City of Vancouver BC (left);  
City of Chicago Green Alley Program (right).



To ensure residential alleys do not create a “sea of asphalt”, sustainability techniques such as the introduction of grass patches (left) and pervious pavers (left and right) can be used to help integrate more natural elements into the alleyway and provide better stormwater management for rainwater runoff.

- » Pedestrian and vehicular lighting;
- » Parkway trees along street (min. 35’ spacing);
- » Event banners;
- » Public art opportunities;
- » No on street parking

*Note that any proposed station design and related improvements will be subject to review and approval by Metra and will need to comply with their established guidelines (i.e. Metra’s Station Manual and Metra’s Parking Manual). Please refer to page 13-19 for additional information.*

### **ST-3) Residential Streets**

Properly designed streets within residential areas are vital to creating pedestrian friendly neighborhoods while still accommodating vehicular traffic. These residential streets generally relate to the neighborhood street typology illustrated in Figure 14-6.

All residential streets should also have consistent streetscape treatments that tie the residential areas to the balance of the development. Streetscape treatments should include the following:

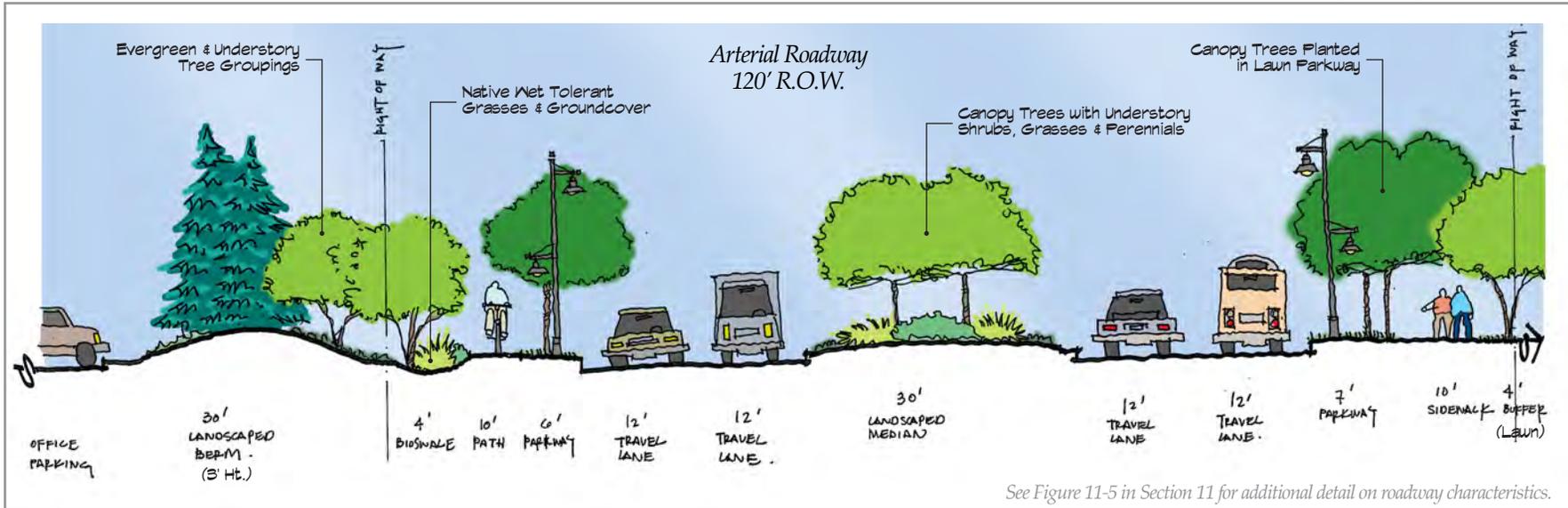
- » Pedestrian and vehicular lighting
- » Parkway trees at minimum 35’ spacing
- » Neighborhood banners on street lights
- » On-street parking

### **ST-4) Residential Alleys**

Alleys shall be designed to avoid a “sea of asphalt” behind the residential units. Where possible, green spaces shall be incorporated that allow for landscaping and/or bioswales. Vehicular lighting and visitor parking will also be required in alleys.

FIGURE 14-3  
**Arterial Roadway Street Treatments**

Source: Metro Transportation Group, Inc. & Teska Associates, Inc.



See Figure 11-5 in Section 11 for additional detail on roadway characteristics.

FIGURE 14-4  
**Collector Roadway Street Treatments (With Marked Bike Lane)**

The only arterial road serving the study area is IL Route 31, which is presently a two-lane road (one lane in each direction). This cross section illustrates potential expansion.

Source: Metro Transportation Group, Inc. & Teska Associates, Inc.



See Figure 11-6 in Section 11 for additional detail on roadway characteristics.

FIGURE 14-5  
Collector Roadway Street Treatments (With Shared-Use Path)

Source: Metro Transportation Group, Inc. & Teska Associates, Inc.

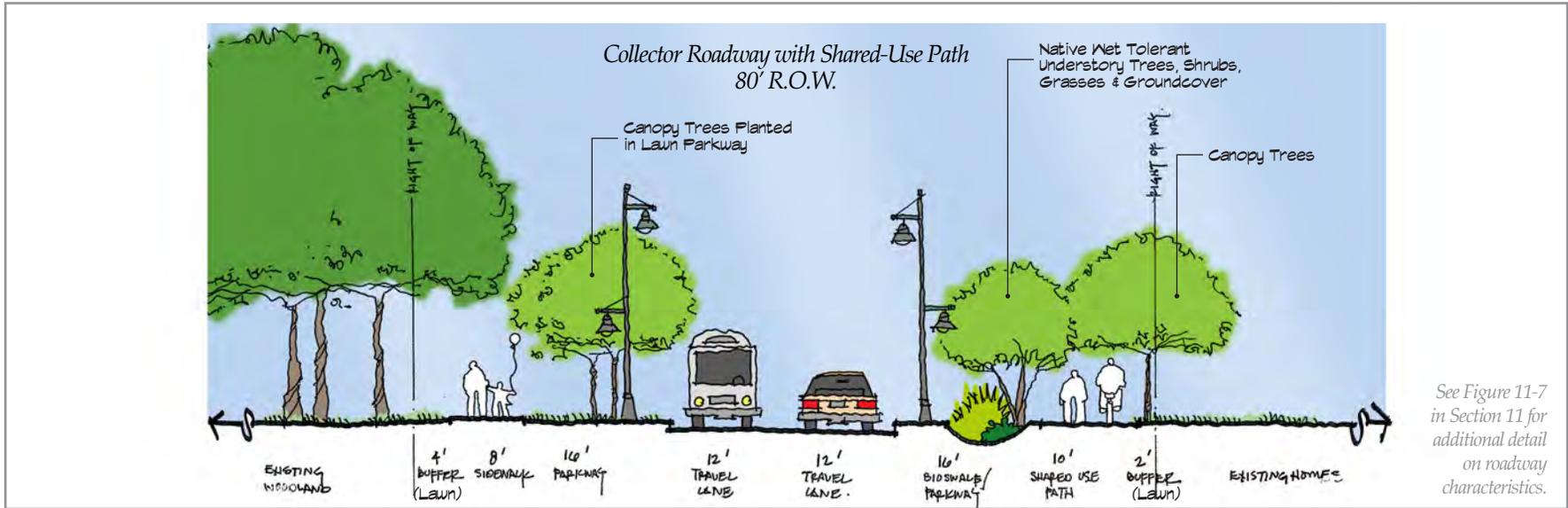


FIGURE 14-6  
Local Roadway (Neighborhood Street) Street Treatments

Source: Metro Transportation Group, Inc. & Teska Associates, Inc.

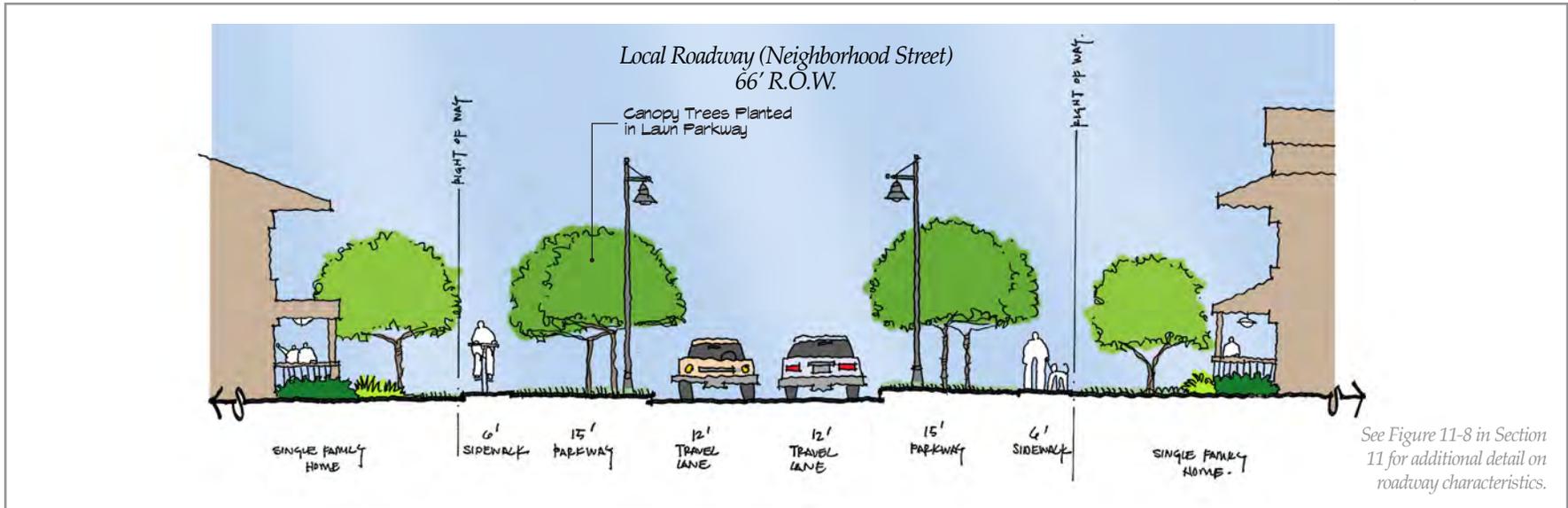


FIGURE 14-7

Local Roadway (Parkway Street) Street Treatments

Source: Metro Transportation Group, Inc. & Teska Associates, Inc.

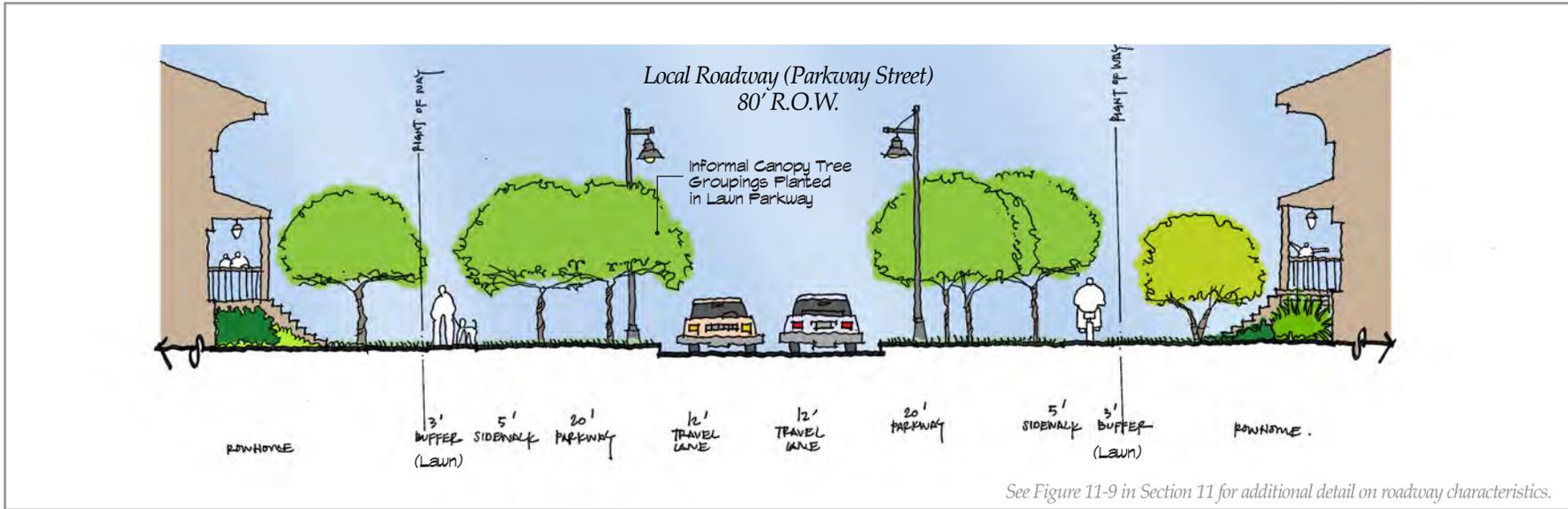
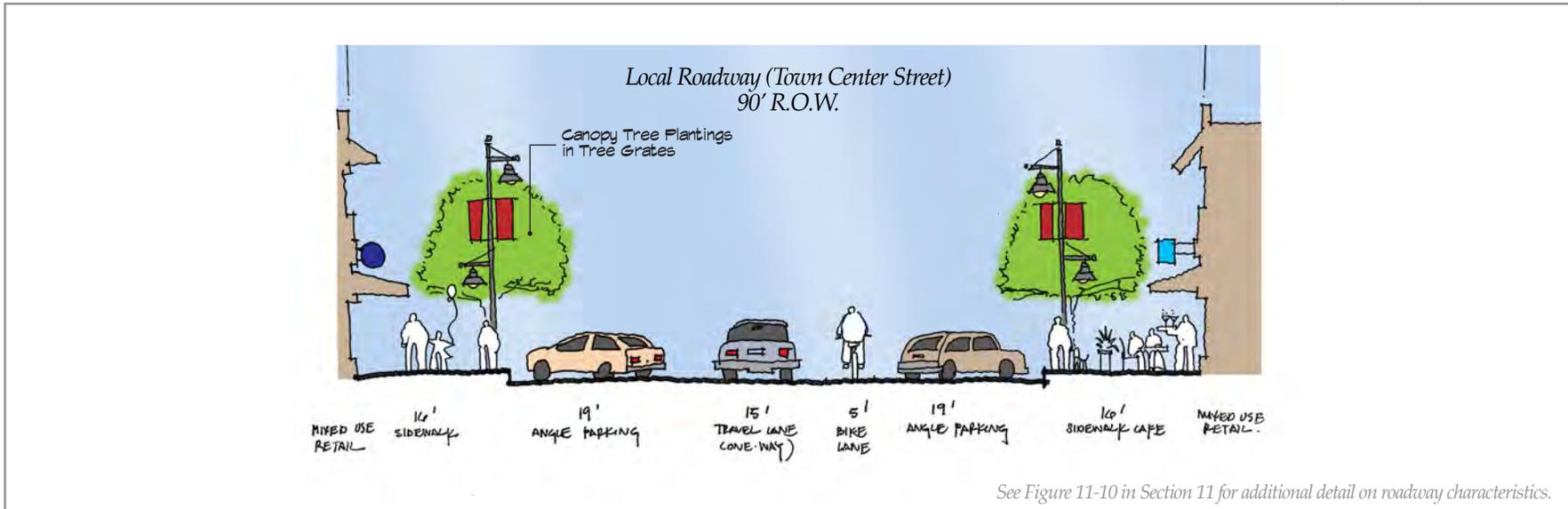


FIGURE 14-8

Local Roadway (Town Center Street) Street Treatments

Source: Metro Transportation Group, Inc. & Teska Associates, Inc.



### ***Parking Lots (PL)***

Parking lot landscaping is encouraged as it enhances the visual environment, moderates the effects of heat and wind, and minimizes the nuisances of noise and glare. In addition to providing visual interest, landscaping can control public perception of a lot by masking unattractive areas, such as mechanical units and trash enclosures, or focusing the motorist's attention to an entry or exit point.

Parking lot landscaping can also serve to slow the rate of surface runoff and minimize the amount and size of stormwater infrastructure. Porous pavements and bioswales are methods which reduce the rate of runoff on development sites.

#### **PL-1) Parking Lot Access Landscape Treatments**

- » The entrances and exits to parking lots should be landscaped to direct motorist access to and from the lot.
- » Landscape plantings should consist of a combination of canopy trees, understory shrubs, and groundcovers.
- » Plantings should be selected such that a visual clear zone is maintained between 30" and 7'-0" height as measured above grade. Metra requires that any plantings be outside the railroad right-of-way and that any plantings near the railroad right-of-way be selected such that they reach 36" height at maturity.

*Canopy trees, shade trees, and groundcover plantings can help enhance the aesthetics of a parking lot by softening the hard surfaces (left). Landscaped parking islands also increase the amount of pervious surfaces on-site, allowing for improved stormwater drainage (right). Plantings can also help screen cars and service areas.*



Source: Tesla Associates, Inc.



*Generous landscaping improves the aesthetics of parking lots and helps to reduce the "heat island" effect created by large expanses of pavement.*

- » Plantings should be selected and installed such that they form a continuous landscape grouping within the planting bed.
- » Landscape plantings should be salt and urban tolerant species.

*Note that any proposed station design and related improvements will be subject to review and approval by Metra and will need to comply with their established guidelines (i.e. Metra's Station Manual and Metra's Parking Manual). Please refer to page 13-19 for additional information.*

Source: Tesla Associates, Inc.

**PL-2) Perimeter Landscape Treatments**

Perimeter landscape plantings should consist of a combination of canopy trees, ornamental trees and understory shrubs. Where feasible, evergreen tree plantings are encouraged. All perimeter treatments (landscaping, fencing, berming, etc.) shall cover 100% of the perimeter of all parking areas.

- » Shrub plantings should be selected such that they reach 4'-0" height at maturity. Metra requires that any plantings be outside the railroad right-of-way and that any plantings near the railroad right-of-way be selected such that they reach 36" height at maturity.
- » Plantings should be selected and installed such that they form a continuous landscape grouping within the planting bed.
- » Plantings should be salt and urban tolerant species.

**PL-3) Interior Parking Lot Landscape Treatments**

- » Parking lot islands should be provided and distributed throughout the parking area. Islands should be a minimum of 9'-0" wide x 19'-0" deep.
- » Islands should consist of a combination of canopy trees and understory shrubs or groundcovers. A standard is-

land (9' x 38') shall provide 2 canopy shade trees (minimum 3" caliper).

- » Plantings should be selected such that a visual clear zone is maintained between 30" and 7'-0" height as measured above grade.
- » Plantings should be selected and installed such that they form a continuous landscape grouping within the planting bed.
- » Landscape plantings should be salt and urban tolerant species.
- » Proper irrigation and drainage is necessary for landscaped islands. Islands should have an easy method for providing irrigation or have water access within 100' of all parking lot landscaping.



Source: Tiska Associates, Inc.

*Pervious pavement in parking lot landscape treatments allows stormwater to filter through and be absorbed by the ground below.*

**Urban Plazas & Open Spaces (OS)**

Unique opportunities exist to create outdoor pedestrian oriented spaces throughout the Town Center and TOD. These spaces provide pedestrians with destinations to stroll to and spaces to congregate in. They also generally enhance the streetscape appearance. These spaces should be evenly



Source: Project for Public Spaces

*Although it has a limited use during the cold winter months, a community ice rink can be integrated into a central commons. During warm weather months, the rink can be converted to a regular plaza for various activities, such as an arts fair, farmers market, community plays, outdoor cafes, passive recreation, or other community events.*

spread throughout the development and logically located so that they are easily accessible by pedestrians.

### OS-1) Central Commons

A strong pedestrian friendly and aesthetically pleasing central commons is key in creating a strong central place for the entire development. This area is the hub that many people will see and travel through to various parts of the Town Center and TOD. To reinforce the character of a central commons, the following elements should be considered:

- » Symmetrical sidewalk layout leading to central building
- » Enhanced pavement crosswalks
- » Public art
- » Public seating areas / Outdoor café plazas
- » Infrastructure to support festivals and events, such as electrical and water service
- » Handicap ramps / ADA compliant sidewalk crossings
- » Parkway trees at minimum 30' spacing
- » Pedestrian and vehicular lighting
- » Event banners
- » Coordinated site amenities (trash receptacles, benches, etc.)
- » Open lawn areas for passive use
- » Detailed shrub / perennial plantings

Source: Tesla Associates, Inc.



Elements such as landscaping, seating areas, and a water feature can define the character of a central commons.

FIGURE 14-9

### Central Commons in the Prairie Grove Town Center & TOD

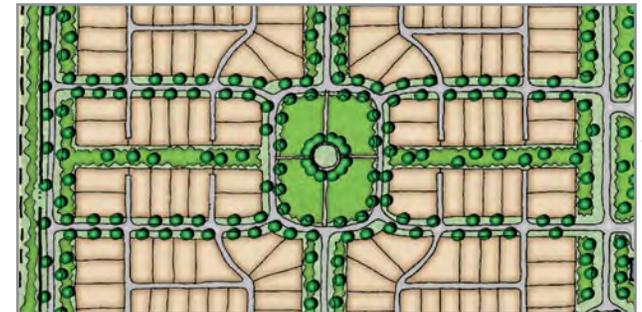
The Prairie Grove Town Center and TOD includes three central commons:

- (1) In the core area of the Town Center (top)
- (2) In the single family residential neighborhood (center)
- (3) Adjacent to the proposed Metra station (bottom)

Each will have its own distinct character due to its size, amenities, and proximity to certain uses.



Source: Tesla Associates, Inc.



Source: Tesla Associates, Inc.



Source: Tesla Associates, Inc.



Source: Village of Prairie Grove

In areas with significant topographical changes, plazas can integrate elements such as staircases to help navigate natural slopes as well as create a prominent pedestrian amenity. Plazas can also meld a variety of diverse but complementary materials, ranging from hardscapes (e.g. brick and stone pavers) to softscapes (e.g. landscaping and water features).

Central commons and plazas provide an ideal place to showcase the overall theme or character for a development such as the Prairie Grove Town Center. For example, the image below depicts an open plaza and promenade with a strong equestrian theme, which could also be explored in Prairie Grove. The image to the left depicts an open air commons flanked by retail uses that can remain active from sunrise to sundown. These spaces can be activated with pedestrian amenities such as benches, lighting, kiosks, play areas, water features, extensive landscaping, and meandering walkways.



Source: Village of Prairie Grove.



A community splash play area can be integrated into a central commons area to provide a fun recreation feature for children (and adults).



A sidewalk plaza may include elements such as an outdoor cafe to help encourage pedestrian activity in a mixed use area.

The three central commons in the proposed Town Center and TOD are shown in Figure 14-9.

**OS-2) Sidewalk Plazas**

Sidewalks along storefronts provide opportunities for enhanced landscaping and outdoor cafes / seating areas, which help emphasize pedestrian walking areas. The following elements should be considered for sidewalk plazas located in the mixed use core:

- » Enhanced pavement crosswalks
- » Public art
- » Public seating areas with benches
- » Raised planters to buffer pedestrians from vehicles

A pedestrian plaza can provide an overlook onto a detention pond or wetland (left). Pedestrian connections such as a bridge or trail can provide residents with access to natural areas (right).



- » Handicap ramps / ADA compliant sidewalk crossings
- » Parkway trees at minimum 35' spacing
- » Pedestrian and vehicular lighting
- » Event banners
- » Coordinated site amenities (trash receptacles, benches, etc.)

**OS-3) Stormwater Management, Detention Ponds & Floodplain**

The on-site stormwater management detention ponds and floodplain should be enhanced to provide unique natural amenities to the site. The following should be incorporated into the design of detention ponds and the floodplain:

- » Pedestrian connections to these natural areas
- » Pedestrian overlooks and other seating areas that overlook ponds and are immediately adjacent to trailways
- » Native landscaping that tolerates wet/dry conditions and attracts native wildlife
- » Bird houses incorporated into native plantings

**OS-4) Residential Alley Courtyards**

The “islands in the alleys” of some of the residential buildings offer open space opportunities for the residents who live in these buildings. The following elements can be incorporated into these spaces:

- » Bioswales and raingardens
- » Native plantings or more formal garden plantings

FIGURE 14-11  
**Sample Lighting & Site Amenities**



Bollard

Source: Landscape Forms (Bollard, bench, and bicycle rack).



Bench



Bicycle rack



Pedestrian scaled lighting

Source: Teska Associates, Inc.



Recycling bin

Source: Polig Products

FIGURE 14-10  
**Sample Residential Alley Location**

The excerpt below shows a sample of a residential alley location in the Conceptual Land Use Development Plan. This particular location is the set of rowhomes located between the proposed Metra station and core Town Center area.



Source: Teska Associates, Inc.

A sample of a residential alley location in the Conceptual Land Use Development Plan is shown in Figure 14-10. In this example, townhouses would be served by rear-loaded garages with alley access.

### **Lighting & Site Amenities (SA)**

Harmonious site amenities should be utilized throughout the site to help visually pull the different parts of the Town Center and TOD together. Colors and materials should be consistent throughout the site. Amenities include the following:

- » Benches
- » Trash receptacles
- » Bollards
- » Pedestrian scaled lighting
- » Vehicular scaled lighting
- » Event banners on light poles
- » Ornamental fencing

Sample lighting and site amenities to consider for the Town Center are shown in Figure 14-11.

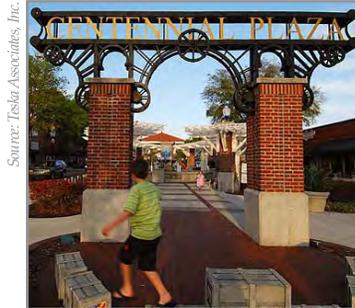


Source: Teska Associates, Inc.



Source: Teska Associates, Inc.

Residential alleys may include elements such as a bioswale (top) or raingarden (bottom) to enhance the character of the alley, soften hard surfaces, and provide stormwater management benefits.



A gateway signage can help direct motorists from a main road into the town center (top, example of Deer Park Town Center), as would be the case for visitors entering the Prairie Grove Town Center from IL Route 31 via Gracy Road. In addition, a secondary gateway sign may be designed at a pedestrian scale with potential placement at the entrance of a plaza or central commons (bottom).

**Public Signage (S)**

A hierarchy of signage should be utilized to help direct motorists and pedestrians to and throughout the Town Center. In addition, opportunities exist to provide informational signage for community events and other civic activities.

**S-1) Gateway Signage**

Gateway and wayfinding signage will be the first opportunity to greet visitors to the Town Center and TOD. Visitors will be attracted to the development from surrounding roadways as well as the proposed Metra station. Gateway signage is organized into two sign types:

- » Primary Gateway Signage is oriented towards motorists entering the Town Center and TOD from the main intersections at Gracy Road and IL Route 31.

- » Secondary Gateway Signage is oriented towards pedestrians and motorists entering the development from the Metra station.

Examples of gateway signage that could be considered at the entrance into the Town Center are shown in Figure 14-12.

**S-2) Directional Signage**

Directional signage integrates a potential development logo with directions to key destinations within the Town Center and TOD. Directional signage is organized into two types:

- » Community Event Sign Kiosk is oriented towards motorists and pedestrians and is therefore large in scale. The architectural style of the kiosk should mimic the vocabulary of the mixed-use / retail core architecture.

FIGURE 14-12  
**Gateway Signage**

The following gateway sign examples include a range of materials and forms appropriate to the Gracy Road gateway entry into the Prairie Grove Town Center. Masonry signage materials such as native stone outcroppings, cut drywall stones, cobbles, wood siding, wood beams and bracketing reference structures found in Prairie Grove's rural surroundings. Sign copy should be clear, legible, and attractive, incorporating a font that is appropriate to the rural theme of the Town Center. The overall size of the sign structures shall be located and designed to announce the entry to the Town Center while promoting an appropriate scale to the Town Center environment.



» Directional Signage is oriented towards motorists and pedestrians and is intended to give direction to key destinations within the development such as the Metra station, retail shops, civic uses, and recreational trails.

### Landscape (L)

Landscaping of the Town Center and TOD is critical to blend the development together, defining pedestrian and automobile areas as well as screening certain views.

#### **L-1) Parkway Trees**

Landscaping of the development is critical to blend the development together, define pedestrian / automobile areas, and screen certain views.

Parkway trees shall be planted along all roadways at a minimum spacing of 35' o.c. (maximum 40', per LEED-ND standards; see page 14-17 for additional LEED-ND standards relating to tree-lined streets). Plantings along storefronts should occur in raised planters or in tree grates. All trees should tolerate urban conditions, and no ash trees shall be used.

#### **L-2) Parking Lots**

Refer to the previous subsection "Parking Lots (PL)" on pages 14-6 through 14-8 for parking lot standards.

Source: Teska Associates, Inc.



The integration of rain gardens into a parking lot can help soften hardscapes, reduce stormwater runoff, and enhance the visual appearance of the lot.

#### **L-3) Foundation Plantings**

The mixed use / retail core buildings should provide generous foundation plantings on all sides of the building, while not impeding access to stores, sidewalk plazas, pedestrian walkways, and service areas. A mixture of deciduous and evergreen material should be used with an emphasis on native materials. Highly visible areas should also incorporate native perennials and ornamental grasses.

The residential buildings should provide generous foundation plantings on all sides of the building. Small ornamental trees, canopy trees, shrubs, and ground covers shall be used.



Source: Teska Associates, Inc.



Source: Main Street Lincoln.

Directional signage can take the form of a destinations directional sign (top) or a community event kiosk (bottom).

Source: Teska Associates, Inc.



Parkway trees can help define the character of a street and create a tree canopy over the street at full maturity (left). Trees also provide shade relief for pedestrians and cars.

Foundation plantings can enhance site design for both mixed use buildings (center) and residential structures (right).

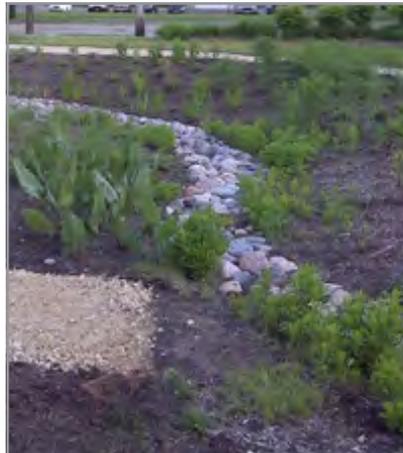
A mixture of deciduous and evergreen material should be used with an emphasis on native materials. All HVAC units shall be properly screened. Shade tree plantings shall occur in the landscape islands on the alley side of all units.

#### L-4) Green Opportunities

Opportunities exist to incorporate 'green' landscaping practices within this TOD development. The following Green opportunities may include the following within the TOD development:

- » **Bioswales:** Vegated swales that are located in parking lot islands, adjacent to parking lots, and near other large expanses of impervious surfaces. The swales are planted with native materials that slow the speed of runoff and allow water to infiltrate back into the ground instead of into storm sewers or detention ponds.
- » **Raingardens:** Similar to bioswales, raingardens are vegetated depressions that slow stormwater runoff and allow water to infiltrate back into the ground. Native materials that can tolerate wet and dry conditions are planted in the bioswales and raingardens. Raingardens can be located near buildings, in parkways, and in and around parking areas.

*Planted with native plant materials, a bioswale can help reduce stormwater runoff by filtering rain back into the ground (left). A raingarden (center) works in a very similar manner to a bioswale. Level spreaders (right) can be used in bioswales and naturalized detention ponds to help collect and evenly disperse rain water.*



Source: Village of Niles, IL (left); Taska Associates, Inc. (center & right).

- » **Naturalized Detention:** A naturalized detention area temporarily collects and stores stormwater runoff in a 'wetland' type area. It is then released at a slow and controlled rate to allow it to infiltrate into the ground. These areas are planted with native wetland plantings that can tolerate severe wet and dry conditions.
- » **Level Spreaders:** To assist with bioswales and naturalized detention, level spreaders can be utilized. Level spreaders collect and evenly disperse stormwater runoff into bioswales and other naturalized detention facilities.
- » **Native Landscaping:** The use of native grasses, forbs, shrubs, and trees should be strongly considered. Native species can withstand a wide range of temperature extremes, use less water, require less maintenance, and use less fertilizer.
- » **Efficient Irrigation:** Efforts should be undertaken to reduce the amount of irrigation that is needed onsite. Native plant materials should be planted that require little irrigation. Other ways to be efficient with irrigation is to utilize rain-triggered shut-off devices, flow reducers, head layout that only sprays in softscape spaces, and the use of drip irrigation systems.



Two examples of green opportunities to explore in the proposed Town Center: (1) Permeable pavers can help stormwater infiltrate through the pavement and into the soil below (left); and (2) A green roof can help a building reduce energy consumption, reduce the urban heat island effect, and provide a rooftop outdoor space (right).

- » **Permeable Paving:** Various paving products exist that allow stormwater to infiltrate through the pavement and infiltrate the soil below. Various options include permeable concrete, permeable precast pavers, reinforced gravel and grass paving, and permeable asphalt. The benefits of permeable paving is the reduction in on site storm sewer capacity, the recharging of underground water supplies, and the filtering out of pollutants and other debris.
- » **High Albedo Paving:** Light colored pavement can be utilized to reflect sunlight away from paved areas. This will help reduce the urban heat island effect, allows vegetation to thrive, and cuts down on the amount of irrigation required in high pavement areas.
- » **Green Roof:** Vegetated roofs can assist with reducing the energy costs of heating and cooling buildings. In addition, green roofs help to reduce urban heat islands, reduce the rate and quantity of stormwater runoff, and

provide unique and sometimes pedestrian accessible outdoor spaces. Green roofs require waterproofing, sub-roof drainage, structural soil, and native plantings.

- » **Dark Sky Lighting:** To reduce light pollution, dark sky lighting techniques should be utilized. Dark sky lighting fixtures are designed to be energy efficient, and to direct the lighting down and out, rather than up into the sky.
- » **Recycled Construction Materials:** Where possible, the use of recycled materials is strongly encouraged. Pre-consumer and post-consumer content can be incorporated into building materials, site amenities, paving, and various finishes.
- » **Alternative Energy:** Various options exist to incorporate alternative energies into the development. These include geothermal, reflective roofing, solar energy, and wind turbines.

Source: Tesla Associates, Inc.



A bicycle rack can take on a unique design, such as the one pictured above, which was formerly a wine barrel.

### ***Sustainability (SU)***

The following streetscape guidelines related to sustainability are based on requirements that need to be fulfilled in order for the Town Center and TOD project to qualify for LEED-ND certification, as outlined in Section 12. Even if LEED-ND certification is not sought, the following streetscape guidelines maintain the same intent to promote a more sustainable Town Center and TOD development.

#### **SU-1) Bicycle Storage**

Bicycle parking or storage capacity should be provided for all new buildings. Such facilities should be easy to use and located in a safe, accessible location, encouraging residents, employees, and visitors to utilize their bikes as a preferred mode of transportation within the Town Center.

- » For more information: See SLL Credit 4 (Bicycle Network and Storage) and NPD Credit 5 (Reduced Parking Footprint) in the LEED-ND Analysis matrix in Figure 12-2; the LEED-ND Rating System Manual lists specific bicycle storage allotments

Source: Arizona State University.



A tree canopy and business entrances up to the sidewalk help make the streetscape a pedestrian-friendly environment.

for different use types, including multi-unit residential, retail, and non-residential (other than retail).

#### **SU-2) Walkable Streets**

The Town Center should provide a safe, welcoming, and comfortable street environment that promotes walkability and increased pedestrian activity. The following elements help enhance the walkability of the streetscape:

- » Placement of building entries
- » Building height-to-street width ratio
- » Continuous sidewalks
- » Sidewalk intrusion
- » Garage/service bay frontage
- » Ground level use
- » Parking
- » Design speeds for safe pedestrian and bicycle travel

- » For more information: See NPD Prerequisite 1 and NPD Credit 1 (Walkable Streets) in the LEED-ND Analysis matrix in Fig-



To promote reduced automobile usage, parking lots can set aside reserved spaces for shared use vehicles, such as those offered by Zipcar.

Figure 12-2; the LEED-ND Rating System Manual lists specific streetscape dimensions and standards to help facilitate walkable streets within the Town Center.

### SU-3) Parking

While the conceptual site plan and design guidelines are designed to make the Town Center as pedestrian-friendly and multimodal as possible, visitors and commuters accessing the Metra station will still need to access the center via car. As a result, parking areas are still needed; however, certain steps can be taken to make parking more sustainable. For example, landscape treatments for parking lots are offered on pages 14-8, 14-9, and 14-15. Another option is reserving parking spaces for shared-use vehicles or carpools.

» For more information: See NPD Credit 5 (Reduced Parking Footprint) in the LEED-ND Analysis matrix in Figure 12-2; the LEED-ND Rating System Manual lists a recommended parking allocation for shared-use vehicles.



A tree-lined street can enhance the appearance of the streetscape, soften the hardscapes of roads and sidewalks, and provide shade relief for pedestrians and cars.

### SU-4) Tree-Lined & Shaded Streets

As an extension of the landscape guidelines for parkway trees on page 14-14, the following LEED-ND standards should be considered to create tree-lined and shaded streets:

- » Provide parkway trees on both sides of the street of at least 60% of new and existing streets within the project and adjacent streets
- » Provide shade over at least 40% of the length of the sidewalk on streets within or contiguous to the project
- » For more information: See NPD Credit 14 (Tree-Line and Shaded Streets) in the LEED-ND Analysis matrix in Figure 12-2; the LEED-ND Rating System Manual lists the two standards listed above.

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SECTION 15

# Fiscal Impact Analysis

Like any major development, the proposed Town Center and TOD will have significant impacts on the Village, ranging from physical development to increased population to expanded financial budgets. Whether it is the Village or other governing bodies, such as Nunda Township and the local fire and school districts, they all will be impacted by the population growth and service needs generated by the proposed Town Center and TOD.

The Fiscal Impact Analysis is based on the preferred alternative of the conceptual Framework Plan, which is illustrated on page 8-5. As listed in Figure 15-1, it is estimated that the proposed Town Center and TOD will provide 684 total dwelling units, including 472 multi-family units and 212 single-family units. In addition to residential development, Figure 15-2 indicates that the project will generate 121,250 sq ft of commercial space, including 46,875 sq ft of retail and 74,375 sq ft of office (including lodging, such as an extended stay hotel).

As specified in the Wildflowers of Prairie Grove Annexation and Development Agreement, a majority of new infrastructure and utilities created by the Town Center and TOD will be provided and maintained by the private sector. Specifically,

*Based on the conceptual Framework Plan, the proposed Town Center and TOD will generate 684 total residential units, 46,875 total retail sq ft, and 74,375 total office sq ft.*

FIGURE 15-1  
Proposed Residential Uses for the Prairie Grove Town Center & TOD\*

Residential Type	Dwelling Units per Acre	Percent of Unit Type	Number of Units	Est. Average Market Value per Unit
<b>Multi-Family Condominiums</b>				
2 bedroom	12.0	50%	118	\$250,000
3 bedroom	12.0	50%	118	\$350,000
<b>Subtotal</b>		<b>100%</b>	<b>236</b>	
<b>Multi-Family Flats, Lofts</b>				
2 bedroom	12.0	50%	118	\$200,000
3 bedroom	12.0	50%	118	\$300,000
<b>Subtotal</b>		<b>100%</b>	<b>236</b>	
<b>Single-Family Attached Townhouses</b>				
3 bedroom	6.0	45%	48	\$300,000
4 bedroom	6.0	45%	48	\$350,000
5 bedroom	6.0	10%	10	\$400,000
<b>Subtotal</b>		<b>100%</b>	<b>106</b>	
<b>Single-Family Detached Houses</b>				
3 bedroom	3.0	45%	48	\$300,000
4 bedroom	3.0	45%	48	\$350,000
5 bedroom	3.0	10%	10	\$400,000
<b>Subtotal</b>		<b>100%</b>	<b>106</b>	
<b>TOTAL Residential</b>	-	-	<b>684</b>	-

\* Based on Alternative 3 of the conceptual Framework Plan (see page 8-8 for details)

FIGURE 15-2  
**Proposed Non-Residential Uses for  
 the Prairie Grove Town Center & TOD\***

Non-Residential Type	Floor-to-Area Ratio (EAR)	Total Floor Area (sq ft)	Constr. Cost per sq ft
Commercial Retail	0.25	46,875	\$80
Commercial Office	0.35	74,375	\$100
<b>TOTAL Commercial</b>	-	121,250	-

\* Based on Alternative 2 of the conceptual Framework Plan (see page 8-8 for details)

the property owner, will design and construct/reconstruct all streets and other public improvements, including those planned for IL Route 31. Private utility companies will operate sanitary sewer and water utilities. Homeowners associations, including Neighborhood Homeowner Associations (NOA's) and a Master Owners Associations (MOA), will be responsible for covering operating expenses for stormwater management and common areas.

The Fiscal Impact Analysis calculates the net fiscal impact of the proposed Town Center and TOD on the Village of Prairie Grove and other governing bodies that will be affected by the development. All dollar figures are in current dollars with no predictions made for inflation of either revenues or expenses,

FIGURE 15-3  
**Equalized Assessed Value (EAV) Calculations for Residential Uses**

Residential Type	Expected Market Value	Assessment Level	Assessed Value (AV)	Equalization Factor	EAV per Unit	Adjusted EAV	EAV Less \$6,000 Homeowners Exemption	Number of Units	Total EAV
<b>Multi-Family Condominiums</b>									
2 bedroom	\$250,000	33.33%	\$83,325	1.00	\$83,325	\$83,190	\$77,190	118	\$9,108,437
3 bedroom	\$350,000	33.33%	\$116,655	1.00	\$116,655	\$116,520	\$110,520	118	\$13,041,377
<b>Multi-Family Flats, Lofts</b>									
2 bedroom	\$200,000	33.33%	\$66,660	1.00	\$66,660	\$66,525	\$60,525	118	\$7,141,967
3 bedroom	\$300,000	33.33%	\$99,990	1.00	\$99,990	\$99,855	\$93,855	118	\$11,074,907
<b>Single-Family Attached Townhouses</b>									
3 bedroom	\$300,000	33.33%	\$99,990	1.00	\$99,990	\$99,720	\$93,720	48	\$4,498,574
4 bedroom	\$350,000	33.33%	\$116,655	1.00	\$116,655	\$116,385	\$110,385	48	\$5,298,494
5 bedroom	\$400,000	33.33%	\$133,320	1.00	\$133,320	\$133,050	\$127,050	10	\$1,397,553
<b>Single-Family Detached Houses</b>									
3 bedroom	\$300,000	33.33%	\$99,990	1.00	\$99,990	\$99,451	\$93,451	48	\$4,485,627
4 bedroom	\$350,000	33.33%	\$116,655	1.00	\$116,655	\$116,116	\$110,116	48	\$5,285,547
5 bedroom	\$400,000	33.33%	\$133,320	1.00	\$133,320	\$132,781	\$126,781	10	\$1,394,586
<b>TOTAL Residential</b>	-	-	-	-	-	-	-	684	\$62,727,069



or potential appreciation of property values. This analysis provides a comparison of the relative revenues and expenditures that will be generated by the Town Center and TOD; therefore, adjustments relative to inflation or appreciation would be speculative and not provide any additional insight into the financial implications of this development. In addition, this analysis presents net fiscal impact at full build-out.

**Estimated Population**

Based on the proposed residential unit mix presented in Figure 10-8, the the Town Center and TOD will generate an estimated population of 1,757 new residents.

**Projected Equalized Assessed Value**

The equalized assessed value (EAV) is the basis for determining the property taxes generated by a given parcel. In McHenry County, all properties are assessed at 33% of market value. An equalization factor of 1.00 is applied to the assessed value to determine the EAV per unit.

Figure 15-3 lists the expected market values for each residential unit type, which provides the basis for calculating the EAV. Also, a homeowners exemption of \$6,000 is taken into consideration in the EAV calculations. At full build-out, the Town Center and TOD will generate a total residential EAV of \$62,727,069.

Using the same assessment level of 33% and equalization factor of 1.00, EAV's for the proposed commercial retail and of-

fice uses were also calculated on a per square foot basis. This EAV per square foot multiplier is then applied to the total retail and office square feet proposed to generate the total EAV for each use. As shown in Figure 15-4, the Town Center and TOD will generate an estimated total EAV for non-residential uses of \$3,390,117 at full build-out.

The combined residential and non-residential EAV of the proposed Town Center and TOD is estimated at \$66,117,186.

**Village Revenues**

The tables in Figure 15-5 (on page 15-5) summarize the projected revenues to the Village from various revenue sources at full build-out. Total revenue is a sum of municipal revenues collected from property tax, per capita taxes and fees, utility tax, sales tax, and a road and bridge tax levied by Nunda Township. Per capita taxes and fees include state use tax, income tax, motor fuel tax, and fines and forfeitures.

Total Village revenues generated by the development of the proposed Town Center and TOD are:

Total Village Revenues: \$695,134

Since this Fiscal Impact Analysis accounts for only full build-out and not a year-by-year analysis, one-time revenues, such as those received from construction permits, road impact fees, and municipal impact fees, were not considered.

FIGURE 15-4  
***Equalized Assessed Value (EAV) Calculations for Non-Residential (Commercial) Uses***

<i>Commercial Type</i>	<i>Construction Cost per sq ft</i>	<i>Assessment Level</i>	<i>Assessed Value (AV) per sq ft</i>	<i>Equalization Factor</i>	<i>EAV per sq ft</i>	<i>Adjusted EAV</i>	<i>Total sq ft</i>	<i>Total EAV</i>
<i>Commercial Retail</i>	\$80	33.33%	\$27	1.00	\$27	\$24	46,875	\$1,144,739
<i>Commercial Office</i>	\$100	33.33%	\$33	1.00	\$33	\$30	74,375	\$2,245,378
<b><i>TOTAL Commercial</i></b>	-	-	-	-	-	-	121,250	\$3,390,117

### Village Expenditures

The tables in Figure 15-6 (on page 15-6) summarize the projected annual expenditures that the Village will generate at full build-out of the Town Center and TOD. Total expenditures are a sum of municipal expenditures made per capita, per employee, and per mile, as well as expenditures required for police, inspections, and building and maintenance.

The majority of annual expenditures, including administration, building and zoning, and parks, can be calculated on a per capita and per employee basis because the operating costs of these services are proportionate to increased population size and employment. The per capita costs for these services are found by dividing the sum of the average 2006-2008 expenditures (\$461) by the average 2006-2008 population (1,809). The per capita costs are then multiplied by the projected population of the development to determine the total per capita expenditures attributable to full build-out of the Town Center and TOD. Per employee costs are calculated using the same approach. The sum of all per capita and per employee expenditures is \$2 Million annually.

The calculation of expenditures per mile for Public Works and highways and streets are related to miles of new roads created by the development, rather than population. The per mile cost for the Village (\$20,000) is multiplied by the total miles of new roads created by the Town Center and TOD (8.92 miles) to determine the total annual expenditures (\$178,444) for these services at full build-out.

Total Village expenditures generated by the proposed Town Center and TOD are:

Total Village Expenditures: \$310,578

Similar to revenues, one-time expenditures were not considered in this analysis, which accounts for full build-out and not a year-by-year evaluation.

### Net Fiscal Impact

As Figure 15-7 summarizes, full build-out of the proposed Town Center and TOD will provide a net positive impact of \$384,556 to the Village of Prairie Grove's tax base, helping to stabilize or even to reduce the tax burden on existing residents. Although there may be a negative impact in some years of construction, this should be more than off-set by significant positive cash flow in other years, ultimately culminating to a positive fiscal impact at full build-out.

Net Fiscal Impact to the Village: \$384,556

FIGURE 15-7  
**Net Fiscal Impact of Full Build-Out  
of the Prairie Grove Town Center & TOD**

Revenues & Expenditures	Value*
Total Annual Village Revenues	\$695,134
Total Annual Village Expenditures	\$310,578
<b>Net Fiscal Impact to the Village</b>	<b>\$384,556</b>

\* Values based on median residential unit counts and commercial areas, relative to the preferred alternative of the conceptual Framework Plan (see Section 8). Using the most conservative or generous values of unit counts and areas still yield a net positive impact, as summarized below.

	Scenario: Conservative Values	Scenario: Generous Values
Revenues	\$434,444	\$956,432
Expenditures	\$309,800	\$311,356
<b>Net Fiscal Impact</b>	<b>\$124,644</b>	<b>\$645,076</b>

FIGURE 15-5

**Revenues to the Village of Prairie Grove**

Property Tax	\$241,676
Per Capita	\$283,938
Utility Tax	\$48,780
Sales Tax	\$51,563
Road & Bridge	\$69,177

Total Revenues (Village) \$695,134

Property Tax Revenues	Type	Total Projected EAV	Rate (per \$100) of EAV to Village	Projected Annual Property Tax Revenues
	Residential	\$62,727,069	0.366	\$229,284
	Non-Residential	\$3,390,117	0.366	\$12,392
	<b>SUBTOTAL</b>	<b>\$66,117,186</b>		<b>\$241,676</b>

Per Capita Revenues	Revenue Source	Average Revenues (2006-2008)	Average Population (2006-2008)	Per Capita Revenue Multiplier	Expected Number of New Residents	Projected Annual Per Capita Revenues
	State Use Tax	\$27,454	1,809	\$15.18	1,757	\$26,665
	Income Tax	\$118,184	1,809	\$65.34	1,757	\$114,787
	Motor Fuel Tax	\$37,347	1,809	\$20.65	1,757	\$36,274
	Fines & Forfeitures	\$109,356	1,809	\$60.46	1,757	\$106,212
	<b>SUBTOTAL</b>					<b>\$283,938</b>

Utility Tax Revenues	Type	Average Revenues (2006-2008)	Average Households (2006-2008)	Per Household Revenue Multiplier	Expected Number of New Households	Projected Annual Per Household Revenues
	Residential	\$38,093	631	\$60	685	\$41,375
			Average Utility Cost per sq ft	Municipal Utility Tax Rate	Total sq ft of Non-Residential	Projected Annual Non-Res Utility Tax Revenues
	Non-Residential		\$2.04	3%	121,250	\$7,404
	<b>SUBTOTAL</b>					<b>\$48,780</b>

Sales Tax Revenues	Revenue Source	Total SF	Projected Sales per sq ft	Total Projected Sales	Sales Taxes Received by Village
	Commercial Retail	23,438	\$275	\$5,156,250	<b>\$51,563</b>

Road & Bridge Tax Revenues	Revenue Source	Total EAV	Nunda Twp Road & Bridge Tax per \$100	Total Municipal Share of Revenues
	Road & Bridge Tax	\$66,117,186	0.1046	<b>\$69,177</b>

FIGURE 15-6  
Expenditures to the Village of Prairie Grove

Per Capita	\$358
Per Employee	\$1,776
Per Mile	\$178,444
Inspection	\$100,000
Building & Maintenance	\$30,000

Total Expenditures (Village) \$310,578

**Per Capita Expenditures**

Type	Avg Village Expenditures (2006-2008)	Percent of Expenditures Related to Pop	Average Population (2006-2008)	Expenditure Per Capita Multiplier	New Population	Annual Expenditures by Village
Administration	\$400	80%	1,809	\$0.1768	1,757	\$311
Building & Zoning	\$60	80%	1,809	\$0.0268	1,757	\$47
Parks	\$0	100%	1,809	\$0	1,757	\$0
<b>SUBTOTAL</b>	<b>\$460</b>					<b>\$358</b>

**Per Employee Expenditures**

Type	Avg Village Expenditures (2006-2008)	Percent of Expenditures Relate to Emp	Total Est Employees (2006-2008)	Expenditure Per Employee Multiplier	New Employees	Annual Expenditures by Village
Administration	\$400	20%	14	\$5.5782	153	\$852
Building & Zoning	\$60	20%	2	\$6.0499	153	\$924
Parks	\$0	0%	0	\$0	153	\$0
<b>SUBTOTAL</b>	<b>\$460</b>					<b>\$1,776</b>

**Per Mile Expenditures**

Type	Per Unit Multiplier	Generated by Development	Total Expenditure
Public Works, Hwys, Streets	\$20,000	8.92	\$178,444
<b>SUBTOTAL</b>			<b>\$178,444</b>

**Inspection Expenditures**

Expenditure	Number of New Inspectors	Cost per Inspector	Total Expenditure
Additional Inspectors	2	\$50,000	<b>\$100,000</b>

**Building & Maintenance Expenditures**

Expenditure	Total Expenditure
Building & Maintenance	<b>\$30,000</b>



## SECTION 16

# Implementation Plan

The successful implementation of the plans and development policies for the Prairie Grove Town Center and TOD concepts is dependent on moving forward with various implementation actions to be undertaken by the Village, transit agencies, and other community partners. As the Village prepares itself to put this plan into action, it can take proactive steps to ensure the community is prepared to take advantage of development opportunities that fit its vision of a Metra station and Town Center for Prairie Grove. The Village does not have to wait for development, but can put in place the tools and programs in the near term that will prepare the Study Area for development, particularly as the economy rebounds and results in a more favorable environ for development.

This section identifies recommendations to modify or supplement existing municipal plans and policies to ensure the Village's regulatory tools are supportive of the Town Center and TOD concepts. Figure 16-1 outlines the different components of the Implementation Plan, which will prepare the Village as it moves from the planning stage to the implementation stage. From preparing the site for development to ensuring

FIGURE 16-1

### Components of the Implementation Plan

- Review of Village Plans & Policies
- Site Preparation
- Sustainability Recommendations
- Core Implementation Strategies
- Funding Sources & Support Resources

Source: Town of Leesburg VA.



Even before breaking ground, the Village can take certain steps, such as designing a wayfinding sign program, to prepare for the Town Center development.

the Town Center meets sustainability standards, the Implementation Plan will prepare the Village to develop the Town Center, transit facilities, and TOD components. By identifying specific core implementation strategies, this Plan outlines the specific tasks, potential partnerships, and phasing for each strategy. Funding sources and support resources are also summarized.

### Review of Village Plans & Policies

With its Comprehensive Plan, Municipal Code, Zoning Map, and Wildflowers Annexation & Development Agreement already in place, the Village of Prairie Grove has the necessary tools to regulate the development of the Town Center and TOD area. These regulating documents will ensure development meets the Village's standards and reflect the community's character and identity.

As summarized in Section 3, the Comprehensive Plan and Zoning Map are generally supportive of the Town Center



and TOD concepts. To ensure consistency between these development concepts and the Village's existing plans and regulations, it is recommended that the Village adopt this Town Center & TOD Plan by resolution of the Village Board, and consider providing appropriate references to this document within the existing Prairie Grove Comprehensive Plan. While the Town Center and TOD concepts are described in the Comprehensive Plan, these descriptions should reference the specific details of this Plan, where appropriate.

In addition, the Village is encouraged to review the zoning provisions in the Prairie Grove Municipal Code to ensure it adequately facilitates a more pedestrian-friendly, mixed use character for the Town Center.

### **Site Preparation**

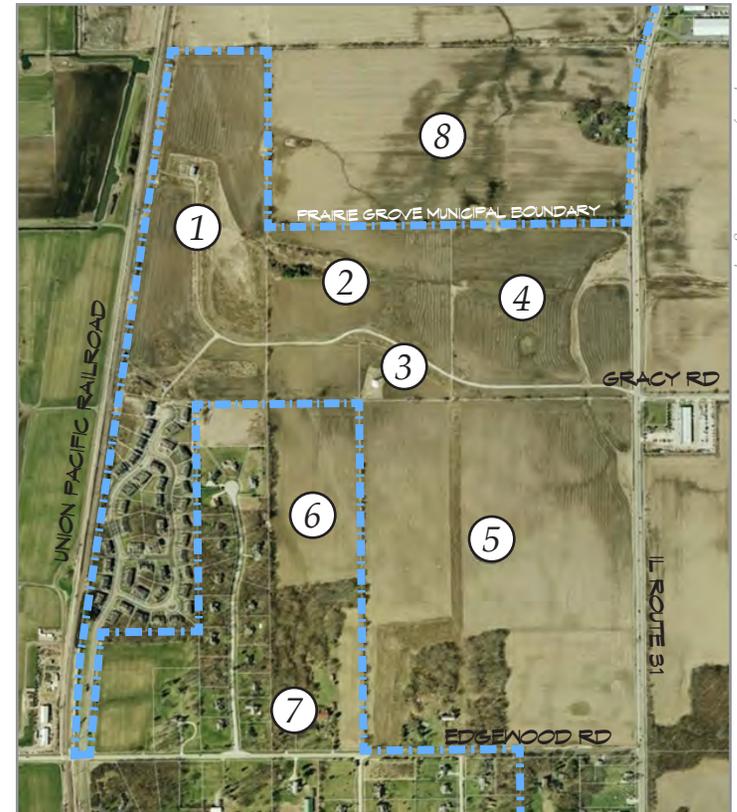
The Conceptual Land Use Development Plan illustrated in Figure 9-2 in Section 9 was designed to be completely buildable on the Boulder Capital parcel, including the Metra and Water Tower parcels, and without the need to annex or acquire any additional parcels. Further build-out of the site can be achieved by acquiring and annexing adjacent parcels to the north (Koerber property) and southwest (Home State Bank and Matheius properties).

The map in Figure 16-1 illustrates the layout of property ownership relative to the Prairie Grove municipal boundary and the overall Study Area boundary.

FIGURE 16-1  
**Property Ownership Map**

- ① Metra Parcel (58.20 acres)
- ② Northwest Boulder Capital Parcel (38.10 acres)
- ③ Water Tower Parcel (1.90 acres)
- ④ Northeast Boulder Capital Parcel (39.99 acres)
- ⑤ South Boulder Capital Parcel (120.00 acres)
- ⑥ Home State Bank Parcel (37.77 acres)\*
- ⑦ Mathesius Parcel (1.23 acres)\*
- ⑧ Koerber Parcel (80.00 acres)\*

\* unincorporated

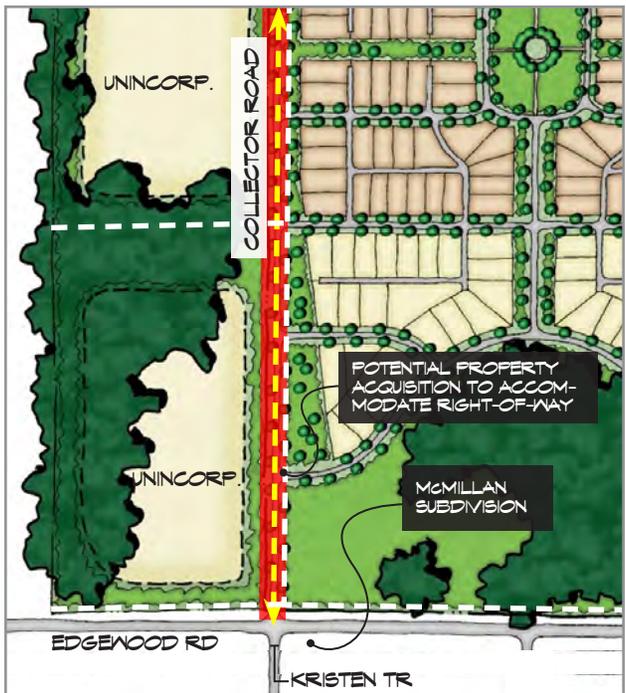


Source: Aerial photo from USGS via Bing Maps.

Even if the adjacent southwest parcels (Home State Bank and Matheius properties) are not fully acquired and annexed, a portion of these adjacent parcels would need to be acquired to accommodate the right-of-way for the proposed western collector road that leads into the Town Center via Edgewood Road. As depicted in Figure 16-2, this western collector road (yellow dotted line) would serve the single-family residential neighborhoods proposed on the southern end of the Town Center and would need to align with Kristen Trail in the McMillan subdivision to the south.

FIGURE 16-2  
**Collector Road Access via Edgewood Road**

To ensure the proposed collector road (yellow dotted line) from Edgewood Road properly aligns with Kristen Trail to the south, a portion of the adjacent unincorporated parcel to the west (conceptually shown by the red solid line) would need to be acquired to accommodate the right-of-way. Existing lot lines are depicted by the white dotted lines.



## Sustainability Recommendations

The recommendations outlined below are based on the Sustainability Analysis in Section 12. More specifically, the Village and its community partners (i.e. developers, conservation districts, transportation agencies, etc) will need to carry out these recommendations to help the Town Center and TOD project attain LEED-ND certification, provided that is the intent of the Village. The LEED-ND analysis in Figure 12-2 outlines the general requirements, eligible certification points, and recommendations for mechanisms/policies to help facilitate certification. These recommendations are extracted from Figure 12-2 and replicated in the following pages with additional detail as needed.

To more properly organize the sustainability recommendations, they are listed under one of the following categories:

1. Interagency Coordination
2. Site Design
3. Management Programs
4. Additional Sustainability Measures

Where appropriate, sustainability recommendations are also integrated into the architectural and streetscape design guidelines in Sections 13 and 14, respectively.



Reserving spaces for community gardens is one method that allows Town Center residents to make active use of green spaces in a sustainable manner.

For complete explanations of LEED-ND requirements, please consult the *LEED 2009 for Neighborhood Development Rating System Manual*, which can be viewed or downloaded here:

**For more information:**

[LEED-ND Home Page](http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148)

[www.usgbc.org/DisplayPage.aspx?CMSPageID=148](http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148)

[Zip File with PDF Document](http://www.usgbc.org/ShowFile.aspx?DocumentID=6406)

[www.usgbc.org/ShowFile.aspx?DocumentID=6406](http://www.usgbc.org/ShowFile.aspx?DocumentID=6406)

U.S. Green Building Council (USGBC)



**Interagency Coordination**

**1. Environmental Conservation:**

Consult with state National Heritage Program and state fish and wildlife agencies to determine the presence of any of the following: threatened or endangered species; imperiled/affected species or ecological communities; and significant habitats.

▷ [For more information: See SLL Prerequisite 2 (Imperiled Species & Ecological Communities Conservation) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual]

▷ [For more information: See SLL Credit 7 (Site Design for Habitat or Wetland and Water Body Conservation) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual, particularly if Option 2 is favored]

**2. Reduced Automobile Dependence:**

Research the current annual home-based vehicle miles traveled (VMT) per capita data for a predefined trans-

portation analysis zone and ensure the VMT per capita does not exceed the average for the metropolitan region; potential to consult with CMAP or MPC.

▷ [For more information: See SLL Credit 3 (Locations with Reduced Automobile Dependence) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual; in particular, consult the regional VMT per capita requirements in Option 2]

**Site Design**

**1. Wetlands & Water Bodies:**

Comply with all local, state, and federal regulations pertaining to wetland and water body conservation; also, design appropriate setbacks from all wetlands and water bodies.

▷ [For more information: See SLL Prerequisite 3 (Wetland & Water Body Conservation) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual; in particular, consult the setback requirements in Option 2]

▷ [For more information: See SLL Credit 7 (Site Design for Habitat or Wetland and Water Body Conservation) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual; in particular, consult the setback requirements in Option 3]

**2. Steep Slopes:**

Measure slopes in areas that may be impacted by development to ensure minimal disturbance of existing natural or constructed slopes.

▷ [For more information: See SLL Credit 6 (Steep Slope Protection) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual; in particular, consult the slope requirements outlined in Options 1 or 3]

## Management Programs

### 1. **Environmental Conservation:**

Establish and administer an ongoing environmental management program that does the following:

- » Monitors the condition of significant habitats (SLL Credit 7);
- » Restores predevelopment ecological communities, water bodies, or wetlands (SLL Credit 8);
- » Oversees long-term management of new or existing on-site native habitats, water bodies, and/or wetlands and buffers (SLL Credit 9).

▷ *[For more information: See SLL Credit 7 (Site Design for Habitat or Wetland and Water Body Conservation) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual, particularly if Option 2 is favored]*

▷ *[For more information: See SLL Credit 8 (Restoration of Habitat or Wetlands and Water Bodies) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual]*

▷ *[For more information: See SLL Credit 9 (Long-Term Conservation Management of Habitat or Wetlands and Water Bodies) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual]*

### 2. **Transit Promotion:**

Establish and administer a transit promotion program that includes a transportation demand management (TDM) program and other measures intended to encourage transit use. Other measures include subsidized transit passes, developer-sponsored private transit service, vehicle sharing, or unbundled parking (parking spaces

associated with a residential or commercial use but can be sold or rented separately).

▷ *[For more information: See NPD Credit 8 (Transportation Demand Management) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual]*

### 3. **Communication:**

Establish and administer an ongoing communication program between the Prairie Grove community and the selected developer(s) throughout the design and construction phases of the Town Center and TOD project. In lieu of a communication program, the Village may also “obtain an endorsement from an ongoing local or regional non-governmental program that systematically reviews and endorses smart growth development projects under a rating and/or jury system.”

▷ *[For more information: See NPD Credit 12 (Community Outreach and Involvement) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual]*

### 4. **Local Food Production:**

Establish and administer covenants, conditions, and restrictions (CC&R) or other forms of deed restrictions “that do not prohibit the growing of produce in project areas, including greenhouses, any portion of residential front, rear or side yards; or balconies, patios, or rooftops. Greenhouses but not gardens may be prohibited in front yards that face the street.”

Other steps that can be made to help support local food production include: (1) dedicating permanent, viable growing spaces and/or related facilities; (2) supporting the purchase of shares in a community-supported agri-

culture (CSA) program; and/or (3) establishing a farmers' market within a ½ mile distance from the project's geographic center.

▷ [For more information: See NPD Credit 13 (Local Food Production) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual]

5. **Registered Landscape Architect:**

Retain a registered landscape architect to obtain a professional determination that planting details are appropriate for growing healthy trees.

▷ [For more information: See NPD Credit 14 (Tree-Lined and Shaded Streets) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual]

6. **Stormwater Management:**

Establish and administer a comprehensive stormwater management plan that utilizes infiltration, evapotranspiration, and/or water reuse to retain on-site rainfall volumes as specified in GIB Credit 8. The plan must follow Best Management Practices (BMP) as defined by the Washington State Department of Ecology's Stormwater Management Manual for Western Washington, Volume V, Runoff Treatment (2005 edition).

▷ [For more information: See GIB Credit 8 (Stormwater Management) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual]

**Additional Sustainability Measures**

1. **Innovation & Design Process:**

Identify the intent of a proposed innovation credit(s) that exceed the requirements established by the LEED-ND Rating System and/or innovative performance in green

building, smart growth, or New Urbanist categories not specifically addressed by LEED-ND.

▷ [For more information: See IDP Credit 1 (Innovation and Exemplary Performance) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual]

2. **LEED Accredited Professional:**

Ensure at least one principal member of the development project team is one of the following: (a) a LEED Accredited Professional, (b) a professional credentialed in smart growth, or (c) a professional credentialed in New Urbanism.

▷ [For more information: See IDP Credit 2 (LEED Accredited Professional) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual]

3. **Regional Priority Credit:**

Consult the USGBC database to determine compliance with environmental, social equity, and public health priorities specifically identified for projects in Illinois.

▷ [For more information: See RPC Credit 1 (Regional Priority) in the LEED-ND Analysis matrix in Figure 12-2 and the LEED-ND Rating System Manual; the Regional Priority Credit database is available on the USGBC website: [www.usgbc.org/DisplayPage.aspx?CMSPageID=1984](http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1984)]

## Core Implementation Strategies

The Implementation Plan is anchored by a series of core strategies that need to be met in order to ensure the concepts and recommendations detailed in this Plan are achieved to bring the Town Center, transit, and TOD opportunities to life in Prairie Grove. The seven core implementation strategies are outlined in Figure 16-3.

As provided in Figure 16-4, the strategies are integrated into a matrix that outlines tasks for each strategy, potential partnerships, and phasing. The Village of Prairie Grove will assume primary responsibility for each task, with the potential to partner with other organizations or agencies, such as the RTA, Metra, Pace, Union Pacific Railroad, and property owners, among others. Many of the tasks can be supported by the funding sources and support resources described later in this section on pages 16-8 through 16-11.

With the Conceptual Land Use Development Plan in place, numerous activities need to be accomplished to achieve the transit and development opportunities outlined in this Plan. While the present economy suggests that development may not be immediate, there are still many steps that can be accomplished in the near-term. The phasing component of the matrix of core implementation strategies utilizes the following timeframes:

- » Short-Term Tasks (0-3 years)
- » Intermediate-Term Tasks (3-5 years)
- » Long-Term Tasks (5+ years)

FIGURE 16-3

### *Core Implementation Strategies*

- 1:** Build awareness of the development opportunities offered by the Town Center.
- 2:** Utilize the RFQ/RFP process to attract developer interest.
- 3:** Construct a park-and-ride facility and promote usage as an initial step towards encouraging transit and ultimately constructing a complete commuter rail station.
- 4:** Secure the resources needed to construct a commuter rail station with adequate parking facilities.
- 5:** Create a strong character and sense of place in the Town Center by creating a brand identity and designing an urban design program for streetscape, signage, and gateways.
- 6:** Maintain open communication with the property owners of adjacent unincorporated parcels to preserve the potential for further build-out of the Town Center.
- 7:** Commit to dedicated adherence to the sustainability recommendations outlined in this Plan to facilitate the potential for the Town Center to achieve LEED-ND certification.

FIGURE 16-4  
**Implementation Plan Matrix**

**STRATEGY 1:** Build awareness of the development opportunities offered by the Town Center.

Task	Potential Partnerships*	Phasing
1. Reach out to local newspapers and real estate trade journals to submit press releases and articles relating to the development prospects offered by the Prairie Grove Town Center.	Local newspapers; real estate trade journals	Short-Term
2. Create promotional materials, such as brochures and newsletters, to circulate around the region and among development companies and professional organizations to help attract developer and business tenant interest.	Real estate trade journals; real estate brokerages	Short-Term
3. Retain a website developer to create a professional site for the project with possible options for stakeholder blogging, posting of media releases, announcements, etc; this could be key in attracting quality developers and tenants to the Town Center.	Website developer	Short-Term
4. Promote the Town Center project at trade shows, like the International Council of Shopping Centers (ICSC).	Village	Short-Term
5. Contact the real estate representatives at anchor retail companies to provide them with marketing materials and invite them for a tour of the project site and area.	Village	Short- to Intermediate-Term

\*NOTE: The Village will be an active partner in all tasks unless specified.

**STRATEGY 2:** Utilize the RFQ/RFP process to attract developer interest.

Task	Potential Partnerships*	Phasing
1. Determine the need for any remediation or site mitigation, per the Wildflowers Annexation & Development Agreement, and ensure any such needs are referenced in the RFQ/RFP process.	Village Engineer; owner of Wildflowers site	Short- to Intermediate-Term
2. Commence with an RFQ/RFP process to accept and review development proposals, ensuring they adhere to the principles of the Framework Plan, Conceptual Land Use Development Plan, and the Design Guidelines.	Village	Short- to Intermediate-Term
3. Anticipate that anchor retailers and national developers will want to negotiate some of the plan elements and configurations; however, insist that they plan solid retail anchors and avoid speculative building in general.	Selected retailers and developer(s) for Town Center	Short- to Intermediate-Term
4. Develop the Town Center, ensuring the development components adhere to the principles of the Framework Plan, Conceptual Land Use Development Plan, and the Design Guidelines.	Selected developer(s) for Town Center	Intermediate- to Long-Term

\*NOTE: The Village will be an active partner in all tasks unless specified.



**Implementation Plan Matrix**

**STRATEGY 3:** Construct a park-and-ride facility and promote usage as an initial step towards encouraging transit and ultimately constructing a complete commuter rail station.

Task	Potential Partnerships*	Phasing
1. Continue to maintain dialogue between the Village and Pace throughout the planning, design, and construction phases of a Park-and-Ride facility.	Pace; Metra	Short-Term
2. Collaborate with Pace to explore the potential to create a temporary park-and-ride option until a complete commuter rail station is constructed.	Pace; Metra	Short-Term
3. Meet with businesses / employers located nearby to determine destination trip possibilities for a park-and-ride facility.	Local businesses / employeers	Short-Term
4. Use the Village website and other public/business polling methods to create a list of residents or employees that have interest in commuting to work via transit.	Local businesses / employeers	Short-Term
5. Monitor usage of the park-and-ride facility to gauge ridership counts to support additional transit facilities.	Pace; RTA; Metra	Intermediate-Term
6. Promote usage of an employee shuttle program to connect the park-and-ride facility (and future commuter rail station) to nearby employment centers.	Local businesses / employers; Pace; shuttle services	Intermediate-to Long-Term

\*NOTE: The Village will be an active partner in all tasks unless specified.

**STRATEGY 4:** Secure the resources needed to construct a commuter rail station with adequate parking facilities.

Task	Potential Partnerships*	Phasing
1. Continue to collaborate with RTA, Metra, and Union Pacific Railroad to evaluate the timetable for construction of the proposed commuter rail station in Prairie Grove.	RTA; Metra; Union Pacific Railroad	Short- to Intermediate-Term
2. Identify funding sources and help reserve funds to cover the Village's anticipated costs for construction of a commuter rail station and parking facilities.	RTA; Metra; Union Pacific Railroad; selected developer(s) for Town Center	Short- to Intermediate-Term
3. Continue to maintain dialogue between the Village, RTA, Metra, and Union Pacific Railroad throughout the planning, design, and construction phases of the commuter rail station and parking facilities.	RTA; Metra; Union Pacific Railroad	Intermediate-to Long-Term

\*NOTE: The Village will be an active partner in all tasks unless specified. For Task 2, Metra will assist the Village with identifying and securing funding sources, but will not actually fund property acquisition or construction costs associated with the station building or parking facilities. However, Metra will fund the cost of constructing platforms at the new station.

FIGURE 16-4 (continued)  
**Implementation Plan Matrix**

**STRATEGY 5:** Create a strong character and sense of place in the Town Center by creating a brand identity and designing an urban design program for streetscape, signage, and gateways.

Task	Potential Partnerships*	Phasing
1. Collaborate with a design and marketing firm to create a brand identity for the Town Center that is truly unique (such as equestrian, European, or leisure lifestyle living) and clearly differentiates the project from other conventional town centers.	Design and marketing firm	Short-Term
2. Design a unified wayfinding and information signage program for the Town Center based on the brand identity from Task 5-1 (per the Streetscape Design Guidelines in Section 14).	Village Engineer; IDOT; signage and design firms	Short- to Intermediate-Term
3. Integrate streetscape enhancements, signage, and gateway elements as detailed in the Streetscape Design Guidelines in Section 14.	Village Engineer; IDOT; selected developer(s) for Town Center	Intermediate-to Long-Term
4. Design and integrate a gateway sign/element to affix to the potential pedestrian/bicycle bridge that would span across IL Route 31.	Village Engineer; IDOT; signage and design firms	Intermediate-to Long-Term

\*NOTE: The Village will be an active partner in all tasks unless specified.

**STRATEGY 6:** Maintain open communication with the property owners of adjacent unincorporated parcels to preserve the potential for further build-out of the Town Center.

Task	Potential Partnerships*	Phasing
1. Maintain regular contact with individual property owners of parcels that are currently unincorporated but have potential for inclusion as additional build-out of the Town Center.	Property owners	Intermediate-to Long-Term
2. Acquire properties in cases where the property owner(s) are willing to sell and be part further build-out of the Town Center.	Property owners; selected developer(s) for Town Center	Intermediate-to Long-Term
3. Continue to develop the Town Center, ensuring the development components adhere to the principles of the Framework Plan, Conceptual Land Use Development Plan, and the Design Guidelines.	Selected developer(s) for Town Center	Intermediate-to Long-Term

\*NOTE: The Village will be an active partner in all tasks unless specified.

**Implementation Plan Matrix**

**STRATEGY 7:** Commit to dedicated adherence to the sustainability recommendations outlined in this Plan to facilitate the potential for the Town Center to achieve LEED-ND certification.

Task	Potential Partnerships*	Phasing
1. Ensure at least one member of the project development team is a LEED Accredited Professional or equivalent, as defined in IDP Credit 2 of the <i>LEED 2009 for Neighborhood Development Rating System Manual</i> .	Selected developer(s) for Town Center	Short- to Intermediate-Term
2. Consult the sustainability analysis in Section 12 and recommendations in Section 16 to ensure the development of the Town Center adheres to the LEED-ND principles and methods specific to the Prairie Grove Town Center.	Selected developer(s) for Town Center	Intermediate- to Long-Term
3. Monitor and tally the points accrued throughout the development process, per the LEED-ND Rating System.	Selected developer(s) for Town Center	Intermediate- to Long-Term
4. Submit an application for LEED-ND certification for the Prairie Grove Town Center to the USGBC, outlining the prerequisites and credits met and the total points accrued.	Selected developer(s) for Town Center	Intermediate- to Long-Term

\*NOTE: The Village will be an active partner in all tasks unless specified.

### **Funding Sources & Support Resources**

Multiple funding opportunities are available to support implementation of the transit opportunities and development concepts outlined in this Plan. Many of the funding sources noted below are administered by governmental agencies. Any program listed is subject to change or elimination.

### **Local Municipal Funding Sources & Support Resources**

Municipal funding mechanisms can supplement Prairie Grove's ability to use local revenues for potential transit and TOD opportunities. These funding mechanisms can supplement the Village's general revenues, capital improvement plans, and other revenue sources, such as motor fuel taxes, that can be partially allocated to TOD implementation over the long-term.

- » Per the Wildflowers Annexation & Development Agreement, the Village reserves the right to require the owner of the property "to construct reasonable additional, expanded or oversized municipal public improvements," including potable water and sanitary sewer systems and other improvements that are a material benefit to the property (and not primarily beneficial to adjacent properties).

Source: Flickr.



*Establishing a Business District can help generate sales tax revenue to support the Town Center project, such as right-of-way improvements to IL Route 31.*

- » Per the Wildflowers Annexation & Development Agreement, the Village may collect from the owner of the property cash donations to offset impacts on the local school, park, fire, and library districts.
- » Pursuant to Prairie Grove's home rule authority, the Wildflowers Annexation & Development Agreement indicates that the Village shall establish a Business District (BD) to generate additional sales tax revenue for certain purposes, such as the installation of permanent traffic signals, right-of-way improvements to IL Route 31, and other purposes relevant to commercial or mixed use developments.
- » Per the Wildflowers Annexation & Development Agreement, the Village may adopt two Special Service Areas (SSA), which can be used for infrastructure, maintenance, or area management purposes in a geography defined by the Village. Such revenues can support bonding or generate a revenue stream for specific projects for the defined geography. Specifically, the annexation agreement identifies the following two SSA's for the project:

- (1) An SSA to finance construction of or improvements to publicly owned structures on portions of the Town Center that will be Village-owned, and shall include all parcels that are zoned for residential use.
- (2) An SSA to provide other forms of service by the Village and shall include all parcels that are zoned for residential use.

The Village reserves the right to merge the two SSA's into a single district, as necessary.

- » Other tools, such as tax abatements that support capital projects, could also be applicable to support development and maintenance of the Town Center.

## Transportation Funding Sources

Funding for transportation related implementation work is available from federal, state, and regional sources.

- » The Illinois Transportation Enhancement Program (ITEP), administered by the Illinois Department of Transportation's (IDOT), is a reimbursement program for local governments applying for federal transportation funding. ITEP provides assistance to support local communities achieve their transportation initiatives and expand travel choices. The program also supports broader aesthetic, cultural, and environmental aspects of transportation infrastructure. ITEP is comprised of 12 categories of eligible funding, including mitigation for roadway run-off and pedestrian and bicycle facilities.

**For more information:** [www.dot.il.gov/opp/itep.html](http://www.dot.il.gov/opp/itep.html)

- » Congestion, Mitigation and Air Quality (CMAQ) Improvement funding is available via the Federal Highway Administration (FHA) and IDOT. This program is intended to reduce traffic congestion, improve air quality, improve intersections, and increase and enhance multiple travel options, such as biking and walking. These funds are available locally through the Chicago Metropolitan Agency for Planning (CMAP).

**For more information:**

[www.cmap.illinois.gov/policy/transportation.aspx?ekmense=c580fa7b\\_8\\_18\\_396\\_2](http://www.cmap.illinois.gov/policy/transportation.aspx?ekmense=c580fa7b_8_18_396_2)

- » The Regional Transportation Authority (RTA) administers the Job Access Reverse Commuter (JARC) program, a federally funded program that provides operating and capital funding for transportation services planned, designed and carried out to meet the transportation needs of eligible low-income individ-

uals and of reverse commuters regardless of income. The RTA also administers the New Freedom program, which provides operating and capital funding for new public transportation services and public transportation alternatives beyond those required by the Americans with Disabilities Act (ADA).

**For more information:** [www.rtachicago.com/jarcnf](http://www.rtachicago.com/jarcnf)

- » Through the Innovation, Coordination and Enhancement (ICE) program, the RTA provides operating and capital funding for projects that enhance the coordination and integration of public transportation and develop and implement innovations to improve the quality and delivery of public transportation.

**For more information:** [www.rtachicago.com/ice](http://www.rtachicago.com/ice)

- » The RTA website provides a variety of online resources pertaining to transit oriented development, including municipal funding opportunities.

**For more information:**

[www.rtachicago.com/community-planning/transit-oriented-development-resources.html](http://www.rtachicago.com/community-planning/transit-oriented-development-resources.html)

- » Chicago Metropolitan Agency for Planning (CMAP) provides technical assistance information for a variety of planning and transportation needs, including financial resource information related to transportation planning.

**For more information:**

[www.cmap.illinois.gov/TechAssistDirectory.aspx](http://www.cmap.illinois.gov/TechAssistDirectory.aspx)

[www.cmap.illinois.gov/TechAssistDirectory/Transportation/FinancialResourcesForTransportation-Planning.aspx](http://www.cmap.illinois.gov/TechAssistDirectory/Transportation/FinancialResourcesForTransportation-Planning.aspx)

- » Formerly the Chicagoland Bicycle Federation, the Active Transportation Alliance provides support services for local governments on bicycle and pedestrian programs and issues.

*For more information:* [www.activetrans.org](http://www.activetrans.org)

### **Community & Economic Development Support**

Illinois' Department of Commerce and Economic Opportunity (DCEO) provides multiple grants and loans to local government for economic and community development purposes. Other state agencies and authorities have certain programs that could support implementation of Prairie Grove's plan.

- » DCEO's Business Development Public Infrastructure Program provides a grant to local governments to improve infrastructure related to projects that directly create jobs. Other DCEO programs provide low interest financing for public infrastructure improvements for economic development purposes.
- » DCEO assistance in the form of participation loans is available to community and economic development corporations to serve small businesses within their defined areas.
- » As plan implementation proceeds, DCEO, through its Illinois Bureau of Tourism, provides grants to municipal and county governments and local non-profits to market local attractions to increase hotel/motel tax revenues.
- » DCEO tourism grants are also available to private sector applicants, working with local government, to attract and host events in Illinois that provide direct and indirect economic impact.

*For more information:*

[www.commerce.state.il.us/dceo/Bureaus/Business\\_Development/Grants/](http://www.commerce.state.il.us/dceo/Bureaus/Business_Development/Grants/)

- » The Illinois Finance Authority (IFA) is a self-financed, state authority with multiple programs for local governments (among other entities). IFA can assist with bond issuance, provide low cost loans, facilitate tax credits, and supply investment capital to encourage economic growth statewide.

*For more information:* [www.il-fa.com](http://www.il-fa.com)

- » The Illinois Housing Development Authority (IHDA) offers certain similarly structured programs for multi-family housing development. With different multi-family options outlined in the Conceptual Land Use Development Plan, IHDA programs could be partnered with private developers.

*For more information:* [www.ihda.org](http://www.ihda.org)

### **Specific Purpose**

Two state departments, the Illinois Department of Natural Resources (DNR) and the Illinois Environmental Protection Agency (IEPA), provide multiple programs for specific purposes to local governments.

- » IEPA provides technical assistance and funding support, depending upon the issue. IEPA has programs intended to protect watersheds and water quality near developments and roadways utilizing federal Clean Water funds. Municipal governments can also apply for revolving low interest loans for new wastewater facilities, collection systems, and sewers. Upgrades are eligible, too.
- » Just like DCEO, IEPA offers programs to improve energy efficiency.

*For more information:* [www.epa.state.il.us](http://www.epa.state.il.us)

- » DNR has two programs for bike and recreational path development or renovation.
  - The Illinois Bicycle Path Grant is a reimbursement program for multiple bike path development activities, including land acquisition, path development and renovation, and the development of support facilities for the path. This grant would be an appropriate funding source for trails along the Fox River as well as for trails leading into and through the TOD area.
  - The Recreational Trails program funds land acquisition, trail construction, and trail renovation for recreational paths/trails that can be used by multiple users.
- » DNR has additional programs dedicated to open space preservation and land/water conservation.

***For more information:***

*[www.illinois.gov/living/grants/bicyclepath.cfm](http://www.illinois.gov/living/grants/bicyclepath.cfm)*

*[www.dnr.state.il.us](http://www.dnr.state.il.us)*

### **Private & Foundation Support**

Certain regional and community foundations, private sector entities, and individuals may provide grant funding to support economic development, environmental, and land use activities or study.

- » The Grand Victoria Foundation (GVF) works with potential grantees to connect them with grant resources and partnerships aimed at producing thriving, sustainable communities.

***For more information:*** *[www.grandvictoriafdn.org](http://www.grandvictoriafdn.org)*

- » Other potential grantors may be identified through the Donors Forum of Chicago.

***For more information:*** *[www.donorsforum.org](http://www.donorsforum.org)*

- » Local citizens or businesses may also provide a donation or series of donations to fund a specific local public improvement project. These projects can include funding for subsequent studies, or physical improvements and their maintenance. These activities are usually conducted under the auspices of a local public charity and may be subject to written commitment.

### **Intergovernmental Coordination**

The complexity of coordinating multiple modes of transportation, the expense of required improvements, and the need to wisely allocate government resources all suggest the need for the Village of Prairie Grove to work closely with multiple local, regional, and state governments and agencies. This effort includes:

- » Agreements with both Pace and Metra to address provisions for station parking, area maintenance, lighting, and other issues related to operating transit service (including a potential immediate-term park-and-ride service prior to developing the complete commuter rail facility).
- » Extensive coordination and cooperation with the Union Pacific Railroad to design and implement a pedestrian/bicycle bridge over the railroad and to coordinate placement of train platforms.
- » Continued cooperation with Nunda Township and McHenry County to collaborate on park and open space projects as well as potential recreational spaces within the Town Center.

- » IDOT approvals for and review of access issues, particularly related to IL Route 31.
  - » Coordination with the Army Corps of Engineers and likely permitting for floodplain and potential wetlands issues within and near the TOD area.
  - » Coordination with local fire districts to ensure adequate fire and safety vehicle access and arrange other fire protection related elements.
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- » Coordination with Prairie Grove School District 46 and Crystal Lake Elementary School District 47 to examine the need for a new elementary school.
  - » Open lines of communications with other utilities serving the community to ensure appropriate service to new development and coordination with existing service lines.

