Projection Methodology

New Residential and Mixed-Use Development Projections

As shown on the Future Land Use map, areas for future residential and mixed-use growth have been identified. To determine potential future housing units in these areas, each parcel acreage was multiplied by the density of the assigned typology as shown in Figure A.1. Environmental constraints were taken into consideration as they can affect areas of development. Environmental corridors including wetlands with a 75' buffer, streams with a 75' buffer, and steep slopes greater than 12% were removed from development sites prior to calculation. If large areas were planned as Future Neighborhood, they were broken down into pieces and varying typologies were assigned meant to estimate the likely overall density and balance of housing types in such neighborhoods. These calculations resulted in anticipated housing units.

Example: 20 acres planned for small lot single-family (Typology C, 4 dwelling units per acre) with no environmental constraints is projected to result in 80 new residential housing units.

Figure A.1.: Land Use Typologies

Typology	Residential Type	Typical Building	Typical Achieved Density
A	Planned Projects	Varies	Used Planned Total Units
Suburban Residential - Only Typologies			
B	Medium Lot S.F.	Single-Family	3 du/ac
C	Small Lot S.F.	Single-Family	4 du/ac
D	Duplex	Duplex (2 Units)	6 du/ac
E	Two-Flat	2 Flat (2 Units)	8 du/ac
F	3-4 Unit M.F.	4 Unit	8 du/ac
G	5-8 Unit M.F.	8 Unit/Townhouse	12 du/ac
H	9-16 Unit M.F.	12 Unit/16 Unit	16 du/ac
I	Large 3-Story M.F.	3 Story (Underground Parking)	20 du/ac
J	Large 4-Story M.F.	4 Story (Underground Parking)	30 du/ac
K	Large 5-8 Story M.F.	5+ Story (Underground Parking)	50 du/ac
Mixed Use Typologies (typically residential over commercial and/or office)			
W	Neighborhood M.U.	2-3 floors Res. above Comm.*	25 du/ac
X	Urban M.U.	4-5 floors Res. above Comm.*	40 du/ac

**All mixed-use redevelopment sites were identified using a parcel-by-parcel review and analysis conducted by V&A and City Staff.*

For each land use typology (Figure A.1.), an estimated persons per housing units was projected. As shown in Figure A.2. This provides the ability to calculate the number of new residents projected per housing unit for each area identified on the Future Land Use Map.

Example: 20 acres planned for small lot single-family (Typology C, 4 dwelling units per acre) with no environmental constraints is projected to result in 80 new residential housing units. At 3 projected persons per dwelling unit, that results in 240 new residents.

Figure A.2.: Estimated Persons Per Housing Unit

Typology	Estimated Persons per Housing Unit
A	Varies
B	3.25
C	3
D	2.75
E	2.75
F	2.5
G	2.25
H	2
I	1.75
J	1.7
K	1.5
W	1.6
X	1.5

Together, these projections were used to calculate the total number of potential new residential dwelling units in residential and mixed-use areas as identified on the Future Land Use Map for 2020-2030 and 2030-2040. See Map X: Housing & Population Projections.

Infill Residential Development Projections in Existing Single-Family Neighborhoods

In identified existing single-family residential neighborhoods on the Existing and Future Land Use maps, future projected infill development was calculated. Instead of site-specific projection calculations, a broader approach was taken in which a generalized percentage grow figures were used to calculate the projected infill development that could occur within these areas of the City (Existing Neighborhood parcels within Map 9b: Future Lane Use City View)

The projections were determined using the following methodology:

3% growth in the total number of total dwelling units over the next 10 years in existing single-family neighborhoods*

A. 1% growth in the total number of dwelling units over the next 10 years from the construction of new accessory dwelling units and in-family suites on existing single-family lots
B. 1% growth in the total number of dwelling units over the next 10 years from new conversions of existing single-family homes to new two-unit structures
C. 1% growth in the total number of dwelling units over the next 10 years from redevelopment of existing single-family homes to small-scale multi-family structures (3-4 dwelling units)
    - Redevelopment of single-family homes to small-scale multi-family would only occur in strategic locations and would require a Zoning Map Amendment, Conditional Use Permit, and Certified Survey Map. This type of redevelopment would also require combining multiple existing single-family parcels, meaning that the density is projected to be similar to A. and B. above.

4,964 parcels exist within the Existing Neighborhood land use category on Map 9b: Future Land Use City View). Of these parcels, 4,537 are recorded as a primary address, 227 parcels are listed as non-primary

address (usually a two-flat or upstairs units), and 200 parcels have no primary address record (outlots and newly platted lots). The primary addressed parcels (4,537) would yield 135 potential additional dwelling units within the Existing Neighborhood areas over the next 10 years.

*Over the next 10 years, it is anticipated that the City will undertake a full rewrite of the Zoning Ordinance and Zoning Map. This will impact the projections calculated within this Plan based on policy decisions made during that process. Additionally, the Plan Commission and City Council will ultimately have the ability to determine the level to which these changes occur in the form of Zoning Ordinance and Zoning Map Amendments, Conditional Use Permits, and Comprehensive Plan Amendments.

Employment Projections

The Future Land Use map designates areas for future retail, commercial and industrial growth. To determine future job projections, both known vacant parcels and parcels with redevelopment potential are highlighted on the Employment Projections map.

Potential building square footage for each parcel on the Employment Projections map was determined by multiplying the site square footage by a Floor Area Ratio (FAR) of 0.3. This number was chosen to maximize site development with surface parking. Zoning code parking requirements typically require structured parking to achieve an FAR of about 0.35 and above.

Once the building square footage was calculated, the number was multiplied by the Projected Jobs Per Building Square Foot associated the land in Figure A.3. Office, retail, and industrial job densities were derived from a combination of national averages and Madison-area averages. Future Land Use Business Park was calculated as office. All mixed-use sites located along the Beltline Highway were classified as office as these mixed-use districts are anticipated to mostly be employment with limited support retail. These sites are indicated with an "O" on Map X: Employment Projections. The remaining mixed-use areas are located within the downtown, Greenway Center and along University Avenue. These future commercial spaces are anticipated to contain a mix of retail, office, and service. For these areas 75% were assumed as retail and 25% were assumed as office. There were no industrial redevelopment sites identified.

Figure A.3.: Projected Jobs Per Square Foot by Future Land Use Type

Future Land Use	Projected Jobs Per Building Square Foot
Industrial/Warehousing	0.001 Jobs/Square Foot
Office	0.004 Jobs/Square Foot
Retail	0.002 Jobs/Square Foot

Source: U.S. Energy Information and Administration (EIA), The Fiscal Impact Handbook (Robert Burchell), and V&A evaluation of the greater Madison area.

Together, these projections were used to calculate the total number of potential new jobs in commercial and industrial areas as identified on the Future Land Use Map for 2020-2050. See Map X: Employment Projections.

Land Use	FLU Category	Projected Building SF	Projected Jobs Per Building Square	Projected Jobs
Office	Business Park	1,647,506	0.004	6,590
Office	Mixed Use*	227,254	0.004	909
Retail	Mixed Use*	681,763	0.002	1,364
Total		2,556,523		8,863

*Includes Neighborhood, Avenue & Downtown Mixed Use categories on the Future Land Use Map

City of Middleton
Residential Forecast

Phase	Projected Total Housing Units Added	Projected Detached Units Added
2020 to 2035	4,293	542
2035 to 2050	2,020	853

Phase	Projected Total Housing Units Added **within** City	Projected Detached Units Added **within** City
2020 to 2035	3,286	151
2035 to 2050	1,222	261

Phase	Projected Total Housing Units Added **beyond** City	Projected Detached Units Added **beyond** City
2020 to 2035	1,007	391
2035 to 2050	797	592

Note-These projections do not account for potential infill of existing residential land uses

Projected Attached Units Added
3,751
1,166

Projected Attached Units Added **within** City
3,135
961

Projected Attached Units Added **beyond** City
616
205

THE NCS™

The National Community Survey™

Middleton, WI

Community Livability Report

2020

NRC

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NRC is a charter member of the AAPOR Transparency Initiative, providing clear disclosure of our sound and ethical survey research practices.

About The NCS™

The National Community Survey™ (The NCS™) report is about the "livability" of Middleton. The phrase "livable community" is used here to evoke a place that is not simply habitable, but that is desirable. It is not only where people do live, but where they want to live.

Great communities are partnerships of the government, private sector, community-based organizations and residents, all geographically connected. The NCS captures residents' opinions considering ten central facets of a community:

- Economy
- Mobility
- Community Design
- Utilities
- Safety
- Natural Environment
- Parks and Recreation
- Health and Wellness
- Education, Arts and Culture
- Inclusivity and Engagement



The Community Livability Report provides the opinions of a representative sample of 664 residents of the City of Middleton. The margin of error around any reported percentage is 4% for all respondents and the response rate for the 2020 survey was 26%. The full description of methods used to garner these opinions can be found in the *Technical Appendices* provided under separate cover.

Overview of Results

Quality of life ratings in Middleton are exceptional.

Almost all residents gave excellent or good ratings to Middleton as a place to live (97%) and the overall quality of life in Middleton (95%), and 9 in 10 gave positive scores to the overall image or reputation of the City, their neighborhood as a place to live, and the city's overall appearance. These ratings were all higher than the national benchmarks. Almost all respondents would recommend living in Middleton to someone who asked and more than 8 in 10 planned to remain in the city for the next five years.

Residents are pleased with City government performance.

About 9 in 10 residents positively rated the overall quality of services provided by the City of Middleton and the customer service provided by the City, and at least 7 in 10 residents gave favorable marks to being honest, government generally acting in the best interest of the community, the value of services for the taxes paid to Middleton, the overall direction that Middleton is taking, and overall confidence in Middleton government. These ratings were all higher than national averages. Further, about two-thirds of residents or more were pleased with the job Middleton government does at welcoming resident involvement, treating residents with respect, treating all residents fairly, informing residents about issues facing the community, and being open and transparent to the public; these scores were similar to those given in other communities across the country.

A strong economy is a feature of Middleton.

Middleton residents also gave high praise for aspects of the city's economy: about 9 in 10 respondents positively rated the overall economic health of Middleton, the overall quality of business and service establishments in the City, and Middleton as a place to work. About three-quarters gave favorable marks to the vibrancy of the downtown/commercial area and economic development, and 6 in 10 rated employment opportunities as excellent or good. All of these ratings were higher than the national benchmark comparisons. Additionally, about three-quarters of survey participants were pleased with Middleton as a place to visit and with the variety of business and service establishments in the City. Of note, however, was that only 13% of residents thought that the economy would have a positive impact on their income in the next six months, which was lower than average.

Mobility is also a highlight of the community.

Many of Middleton's Mobility-related items received ratings higher than the national averages: these included the ease of travel by car in Middleton (92% excellent or good), ease of walking (87%), street cleaning (87%), traffic flow on major streets (83%), snow removal (82%), sidewalk maintenance (79%), street lighting (78%) ease of travel by bicycle (78%) and ease of public parking (73%). Middleton residents were also more likely than those who lived elsewhere to have walked or biked instead of driving.

Residents value and prioritize the Natural Environment.

When asked to rate the quality and importance of various facets of community livability in Middleton, residents indicated that Natural Environment was higher in both quality and importance than national averages. Ratings for individual aspects of Natural Environment were also strong: about 9 in 10 respondents gave excellent or good ratings to the overall quality of natural environment in Middleton, air quality, cleanliness of the city and preservation of natural areas, while about 8 in 10 favorably rated Middleton open space and water resources. These ratings were all higher than national averages. Further, other measures related to the quality of the outdoor environment in Middleton (City parks, availability of paths and walking trails, and overall quality of parks and recreation opportunities) were rated positively by at least 9 in 10 respondents and were also higher than scores seen elsewhere.

Resident concern over COVID-19 remains high in Middleton.

While residents gave glowing ratings to many aspects of Middleton, COVID-19 is still an important challenge for the community. When asked about reopening the economy, slightly more than half of residents reported that the City of Middleton and Dane County were proceeding at a speed that was about right. Other respondents disagreed as to whether the speed was too fast or too slow. Residents were less pleased with the pace of the State of Wisconsin. About one-third of residents felt the State speed of reopening was moving about right, with more respondents (about 40%) rating the speed of reopening was too fast. Common concerns about community reopening related to other residents not wearing masks in public or proper social distancing. Residents also expressed significant concern for the health of vulnerable populations and household exposure to the virus.

When asked how the City of Middleton should balance the shortfall in revenue due to the pandemic, two-thirds of residents supported fee increases (although 50% of those somewhat supported the measure). A property tax increase was supported by nearly half of residents, although only 12% strongly supported a tax increase. Cutting or decreasing services was the option least preferred with only 36% of residents (5% strongly support) supporting this budget management strategy. Support for increased property taxes and fees may be tempered by the fact that only 13% of residents felt that the economy was going to have a positive impact on their household in the upcoming 6 months.

Facets of Livability

Ratings of importance were compared to ratings of quality to help guide City staff and officials with decisions on future resource allocation and strategic planning areas. When competition for limited resources demands that efficiencies or cutbacks be instituted, it is wise not only to know what facets are deemed most important to residents' quality of life, but which among the most important are perceived to be of relatively lower quality in your community. It is these facets of community livability – more important facets perceived as being of lower quality – to which attention needs to be paid first.

IMPORTANCE	QUALITY: *LOWER*	QUALITY: *SIMILAR*	QUALITY: *HIGHER*
HIGHER			• Natural Environment
SIMILAR		• Mobility • Safety • Education, Arts and Culture • Inclusivity and Engagement	• Economy • Community Design • Utilities • Natural Environment • Parks and Recreation • Health and Wellness
LOWER			

FIGURE 1: QUALITY OF FACETS OF LIVABILITY- SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Overall economic health of Middleton	↑	88%
Overall quality of the transportation system in Middleton	↔	72%
Overall design or layout of Middleton's residential and commercial areas	↑	79%
Overall quality of the utility infrastructure in Middleton	↑	86%
Overall feeling of safety in Middleton	↔	88%
Overall quality of natural environment in Middleton	↑	94%
Overall quality of parks and recreation opportunities	↑	94%
Overall health and wellness opportunities in Middleton	↑	87%
Overall opportunities for education, culture, and the arts	↔	70%
Residents' connection and engagement with their community	↔	66%

FIGURE 2: IMPORTANCE OF FACETS OF LIVABILITY- SUMMARY

Percent essential or very important	Comparison to benchmark	2020 rating
Overall economic health of Middleton	↔	88%
Overall quality of the transportation system in Middleton	↔	79%
Overall design or layout of Middleton's residential and commercial areas	↔	74%
Overall quality of the utility infrastructure in Middleton	↔	88%
Overall feeling of safety in Middleton	↔	91%
Overall quality of natural environment in Middleton	↑	90%
Overall quality of parks and recreation opportunities	↔	84%
Overall health and wellness opportunities in Middleton	↔	74%
Overall opportunities for education, culture, and the arts	↔	76%
Residents' connection and engagement with their community	↔	75%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Quality of Life

Measuring community livability starts with assessing the quality of life of those who live there, and ensuring that the community is attractive, accessible, and welcoming to all.

OVERALL QUALITY OF LIFE IN MIDDLETON

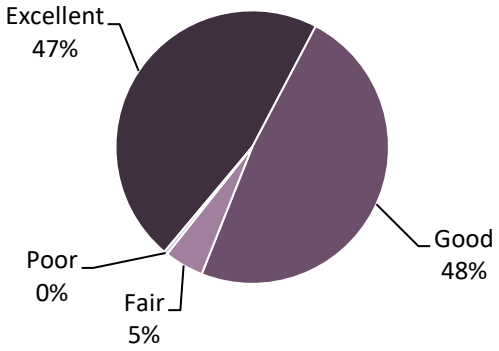


FIGURE 3: QUALITY OF LIFE IN MIDDLETON

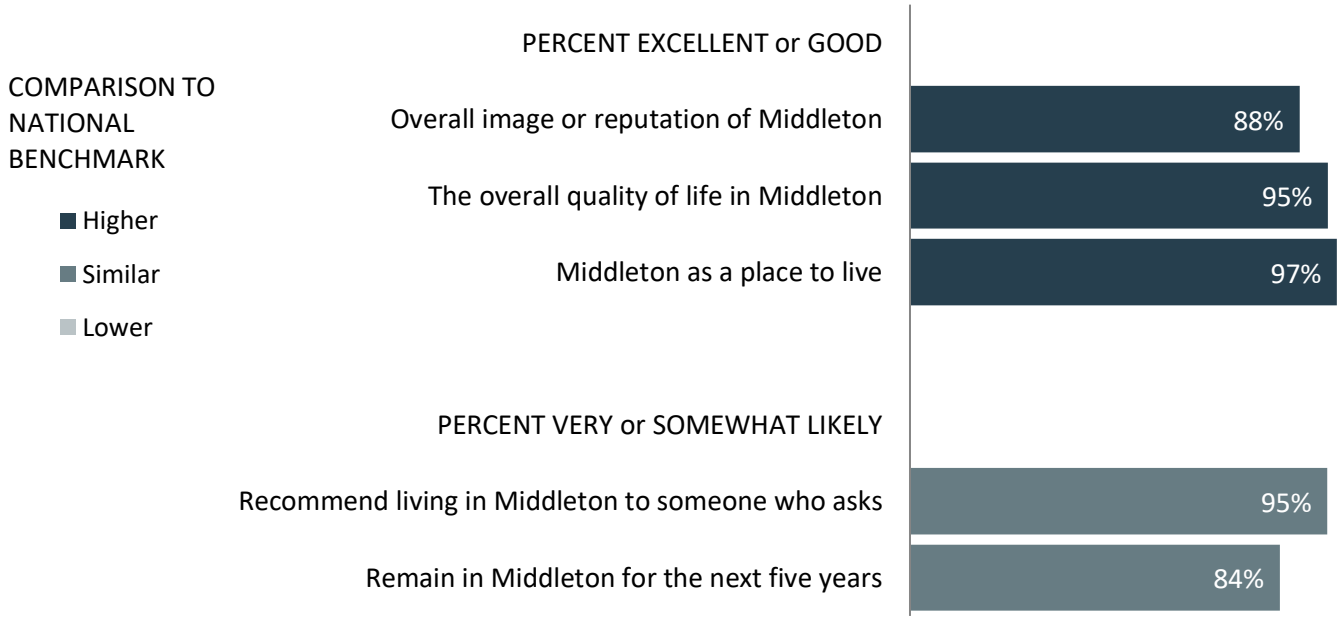


FIGURE 4: QUALITY OF LIFE IN MIDDLETON - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Overall image or reputation of Middleton	↑	88%
The overall quality of life in Middleton	↑	95%
Middleton as a place to live	↑	97%

FIGURE 5: RECOMMEND MIDDLETON - SUMMARY

Percent very or somewhat likely	Comparison to benchmark	2020 rating
Recommend living in Middleton to someone who asks	↔	95%
Remain in Middleton for the next five years	↔	84%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Governance

Strong local governments produce results that meet the needs of residents while making the best use of available resources, and are responsive to the present and future needs of the community as a whole.

OVERALL CONFIDENCE IN MIDDLETON GOVERNMENT

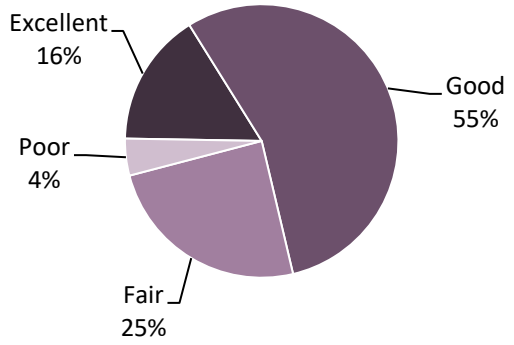


FIGURE 6: GOVERNMENT PERFORMANCE AND SERVICES

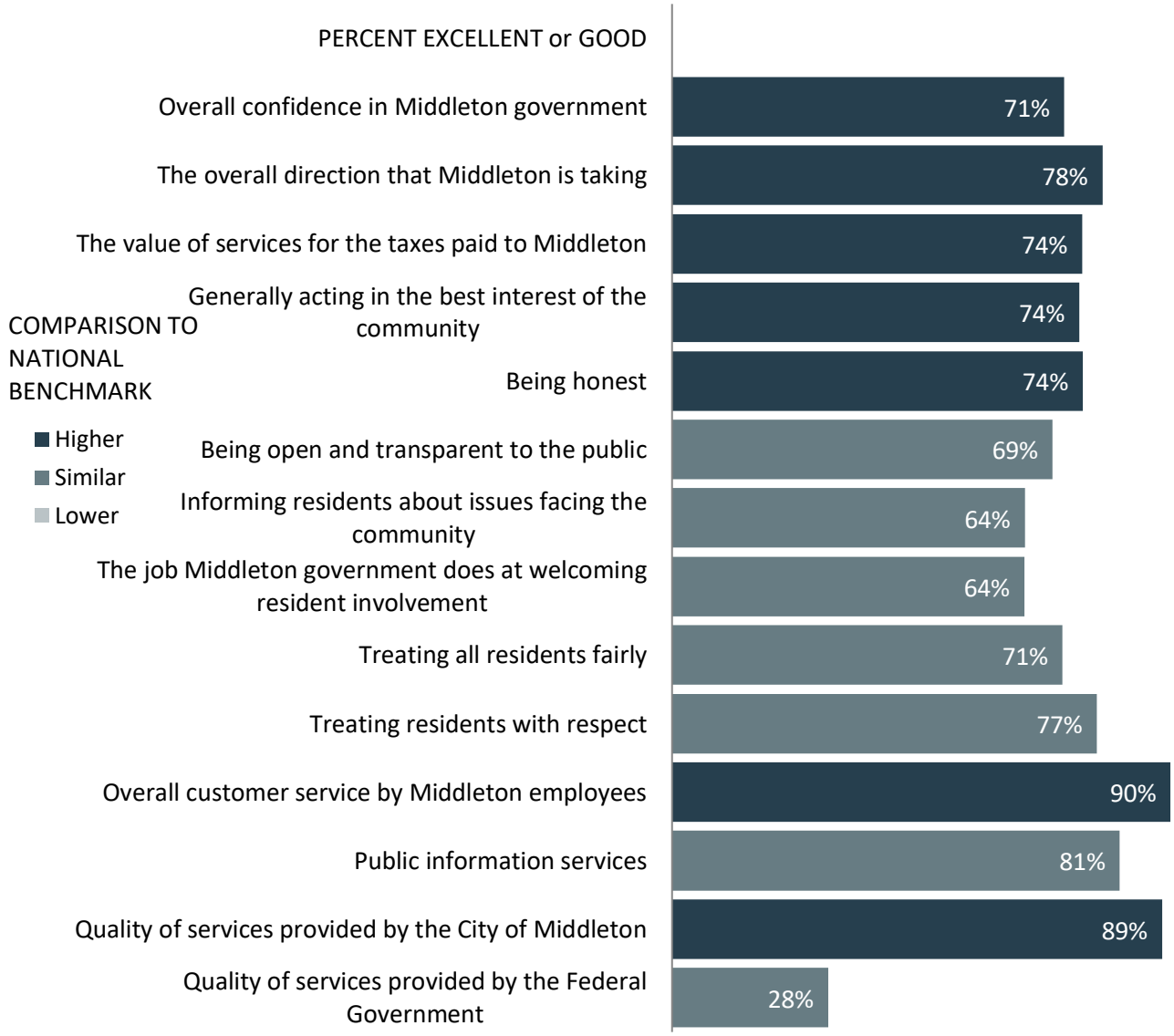


FIGURE 7: GOVERNMENT PERFORMANCE AND SERVICES - SUMMARY

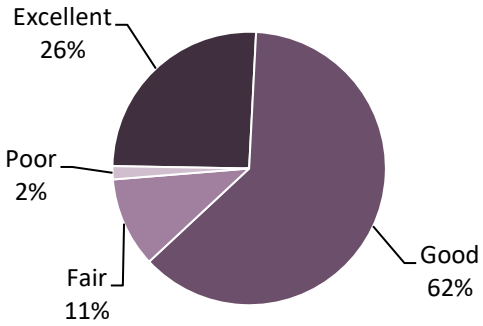
Percent excellent or good	Comparison to benchmark	2020 rating
Overall confidence in Middleton government	↑	71%
The overall direction that Middleton is taking	↑	78%
The value of services for the taxes paid to Middleton	↑	74%
Generally acting in the best interest of the community	↑	74%
Being honest	↑	74%
Being open and transparent to the public	↔	69%
Informing residents about issues facing the community	↔	64%
The job Middleton government does at welcoming resident involvement	↔	64%
Treating all residents fairly	↔	71%
Treating residents with respect	↔	77%
Overall customer service by Middleton employees	↑	90%
Public information services	↔	81%
Quality of services provided by the City of Middleton	↑	89%
Quality of services provided by the Federal Government	↔	28%

Legend
↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Economy

Local governments work together with private and nonprofit businesses, and with the community at large, to foster sustainable growth, create jobs, and promote a thriving local economy.

OVERALL ECONOMIC HEALTH OF MIDDLETON



What impact, if any, do you think the economy will have on your family income in the next 6 months?

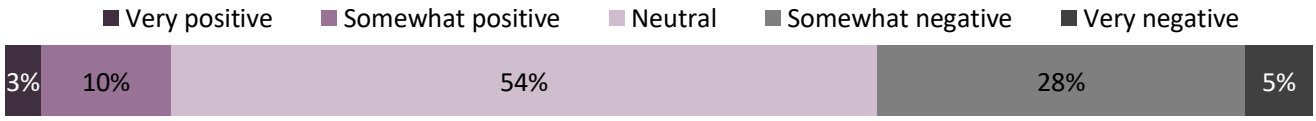


FIGURE 8: ECONOMIC HEALTH

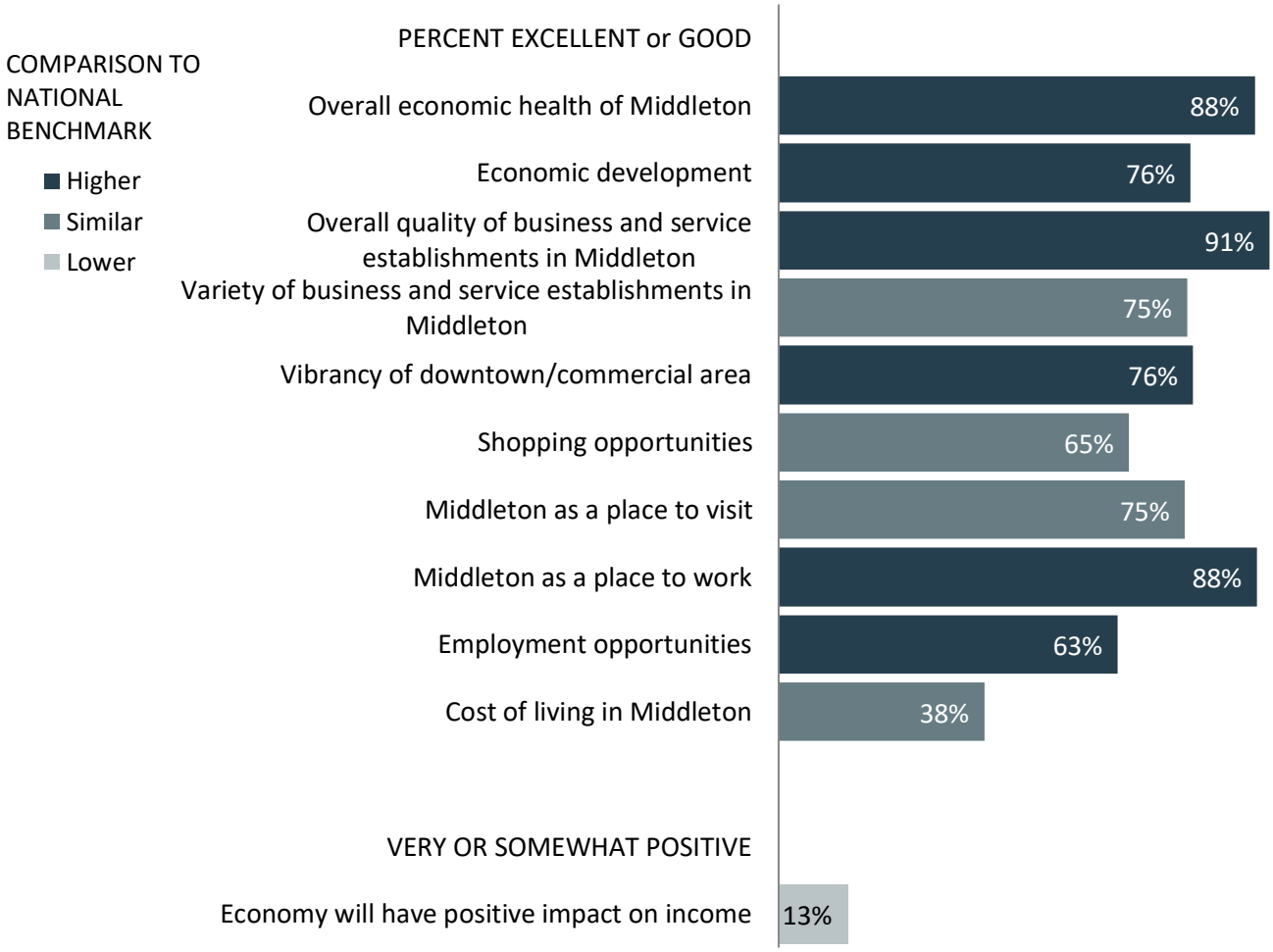


FIGURE 9: ECONOMIC HEALTH - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Overall economic health of Middleton	↑	88%
Economic development	↑	76%
Overall quality of business and service establishments in Middleton	↑	91%
Variety of business and service establishments in Middleton	↔	75%
Vibrancy of downtown/commercial area	↑	76%
Shopping opportunities	↔	65%
Middleton as a place to visit	↔	75%
Middleton as a place to work	↑	88%
Employment opportunities	↑	63%
Cost of living in Middleton	↔	38%

FIGURE 10: ECONOMIC IMPACT - SUMMARY

Percent very or somewhat positive	Comparison to benchmark	2020 rating
Economy will have positive impact on income	↓	13%

FIGURE 11: HOUSING COST - SUMMARY

Percent for whom housing costs are NOT 30% or more of household income	Comparison to benchmark	2020 rating
NOT experiencing housing costs stress	↔	64%

Legend
↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Mobility

The ease with which residents can move about their communities, whether for commuting, leisure, or recreation, plays a major role in the quality of life for all who live, work and play in the community.

OVERALL QUALITY OF THE TRANSPORTATION SYSTEM IN MIDDLETON

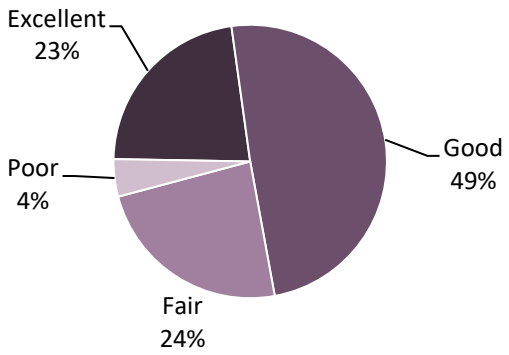


FIGURE 12: MOBILITY IN MIDDLETON

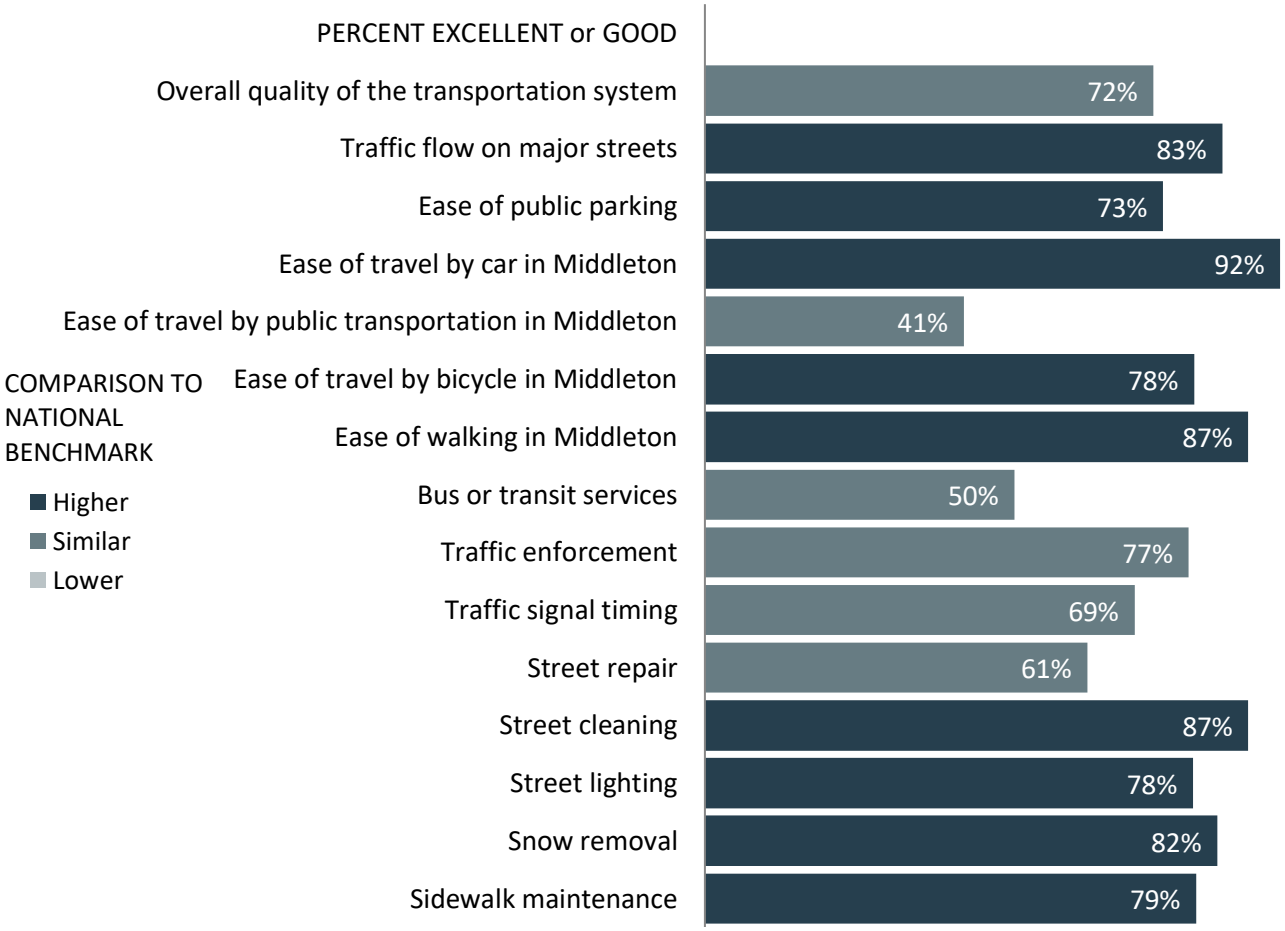


FIGURE 13: USE OF ALTERNATIVE TRANSPORTATION MODES

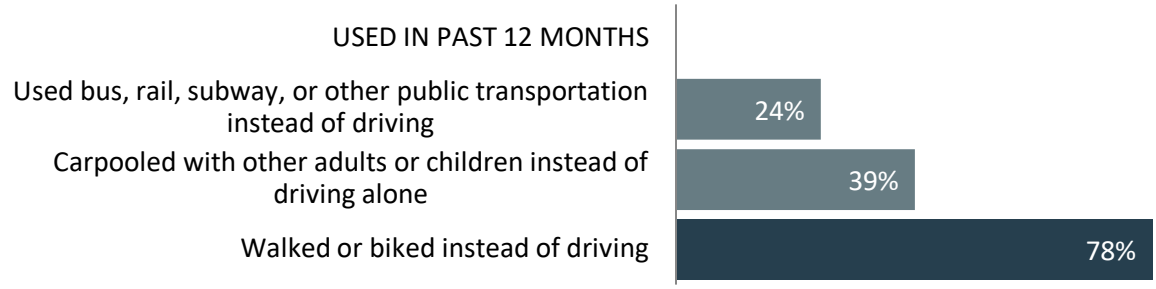


FIGURE 14: MOBILITY IN MIDDLETON - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Overall quality of the transportation system in Middleton	↔	72%
Traffic flow on major streets	↑↑	83%
Ease of travel by car in Middleton	↑	92%
Ease of travel by public transportation in Middleton	↔	41%
Ease of travel by bicycle in Middleton	↑	78%
Ease of walking in Middleton	↑	87%
Ease of public parking	↑	73%
Bus or transit services	↔	50%
Traffic enforcement	↔	77%
Traffic signal timing	↔	69%
Street repair	↔	61%
Street cleaning	↑	87%
Street lighting	↑	78%
Snow removal	↑	82%
Sidewalk maintenance	↑	79%

FIGURE 15: USE OF ALTERNATIVE TRANSPORTATION MODES - SUMMARY

Percent who did this in past 12 months	Comparison to benchmark	2020 rating
Used bus, rail, subway, or other public transportation instead of driving	↔	24%
Carpooled with other adults or children instead of driving alone	↔	39%
Walked or biked instead of driving	↑↑	78%

Legend
↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Community Design

A well-designed community enhances the quality of life for its residents by encouraging smart land use and zoning, ensuring that affordable housing is accessible to all, and providing access to parks and other green spaces.

OVERALL DESIGN OR LAYOUT OF MIDDLETON'S RESIDENTIAL AND COMMERCIAL AREAS

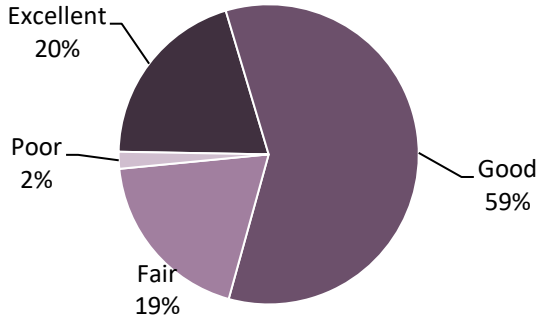


FIGURE 16: COMMUNITY DESIGN

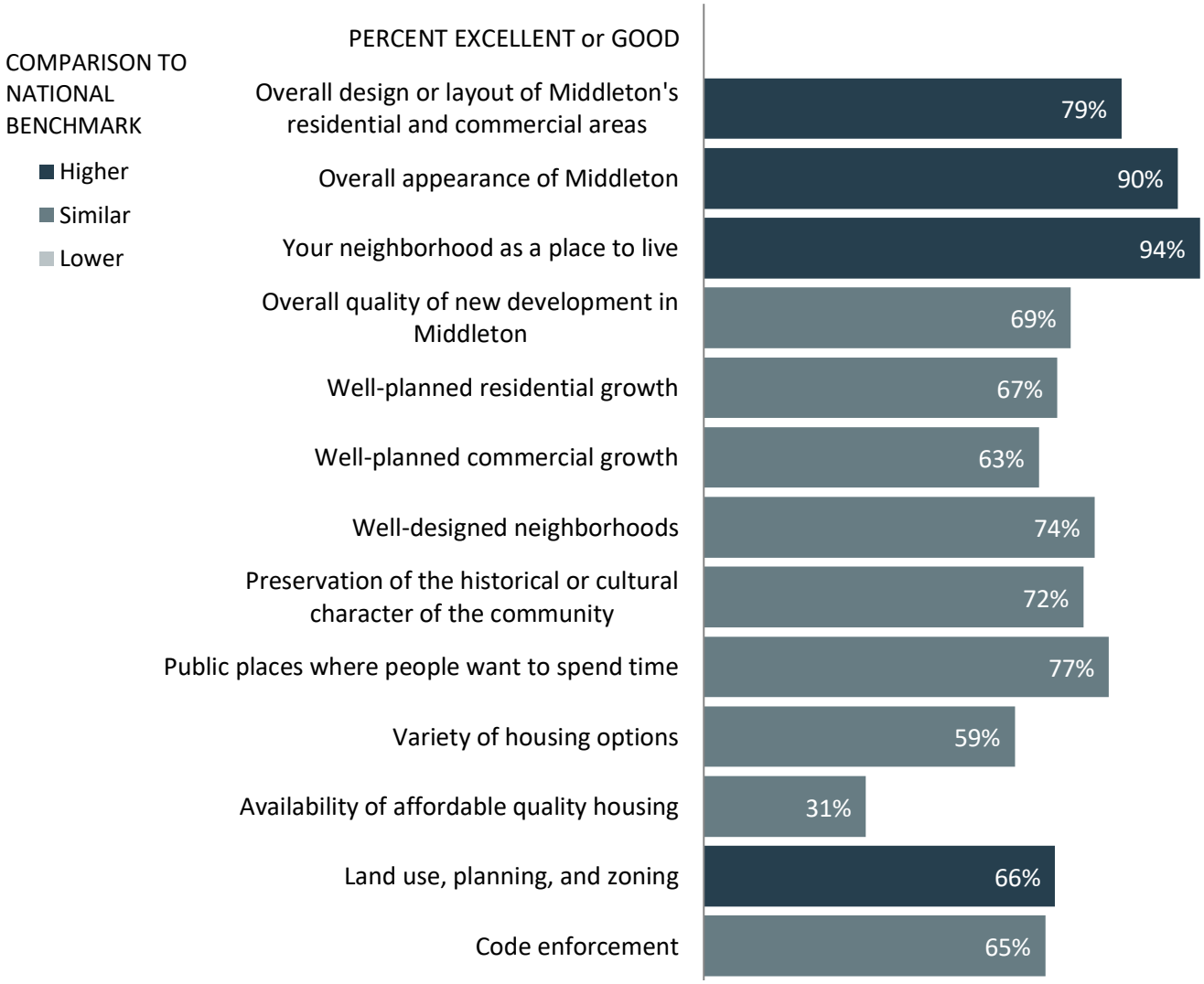


FIGURE 17: COMMUNITY DESIGN - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Overall design or layout of Middleton's residential and commercial areas	↑	79%
Overall appearance of Middleton	↑	90%
Your neighborhood as a place to live	↑	94%
Overall quality of new development in Middleton	↔	69%
Well-planned residential growth	↔	67%
Well-planned commercial growth	↔	63%
Well-designed neighborhoods	↔	74%
Preservation of the historical or cultural character of the community	↔	72%
Public places where people want to spend time	↔	77%
Variety of housing options	↔	59%
Availability of affordable quality housing	↔	31%
Land use, planning, and zoning	↑	66%
Code enforcement	↔	65%

Legend
↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Utilities

Services such as water, gas, electricity, and internet access play a vital role in ensuring the physical and economic health and well-being of the communities they serve.

OVERALL QUALITY OF THE UTILITY INFRASTRUCTURE IN MIDDLETON

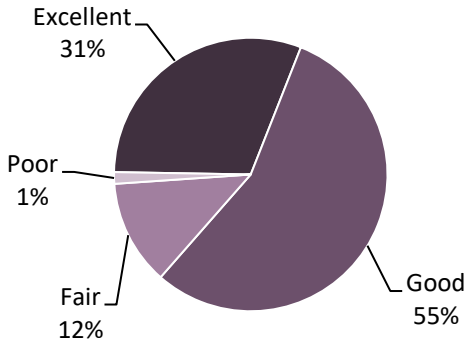


FIGURE 18: UTILITES

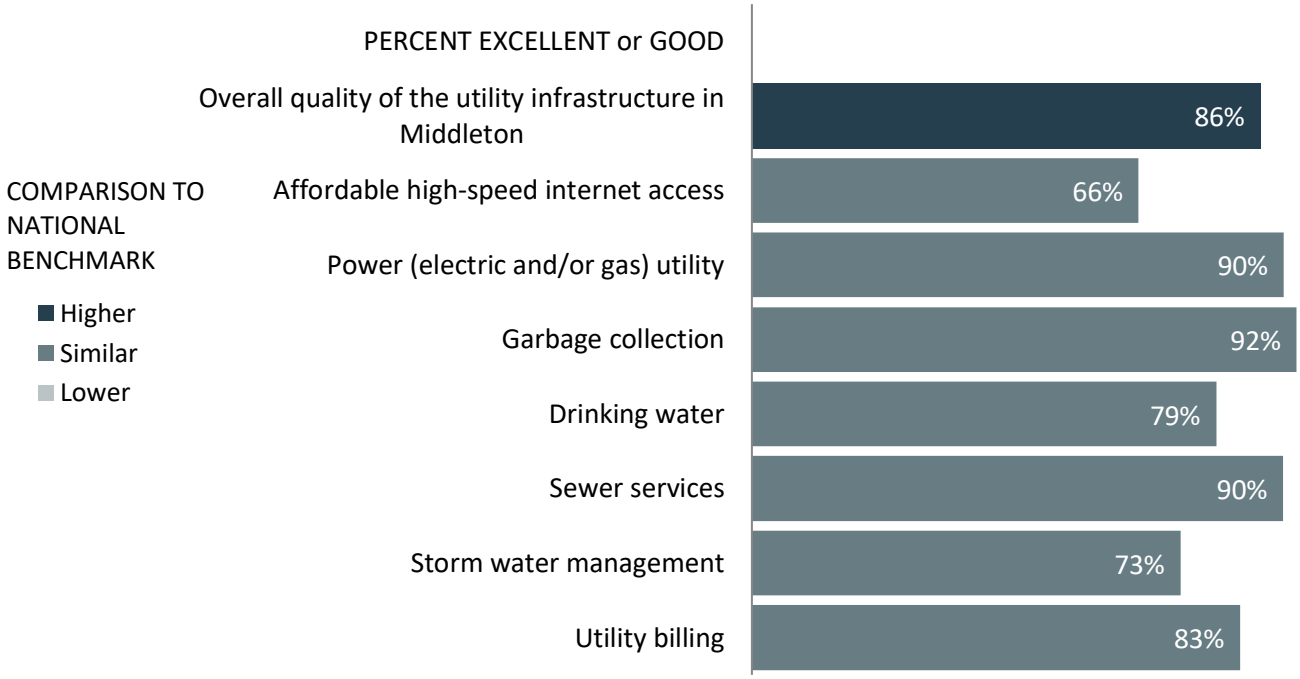


FIGURE 19: UTILITES - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Overall quality of the utility infrastructure in Middleton	↑	86%
Affordable high-speed internet access	↔	66%
Power (electric and/or gas) utility	↔	90%
Garbage collection	↔	92%
Drinking water	↔	79%
Sewer services	↔	90%
Storm water management	↔	73%
Utility billing	↔	83%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Safety

Public safety is often the most important task facing local governments. All residents should feel safe and secure in their neighborhoods and in the greater community, and providing robust Safety-related services is essential to residents' quality of life.

OVERALL FEELING OF SAFETY IN MIDDLETON

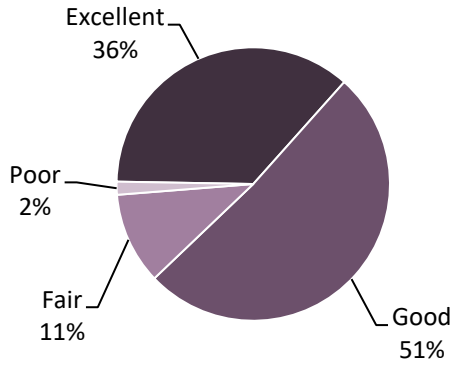


FIGURE 20: SAFETY IN MIDDLETON

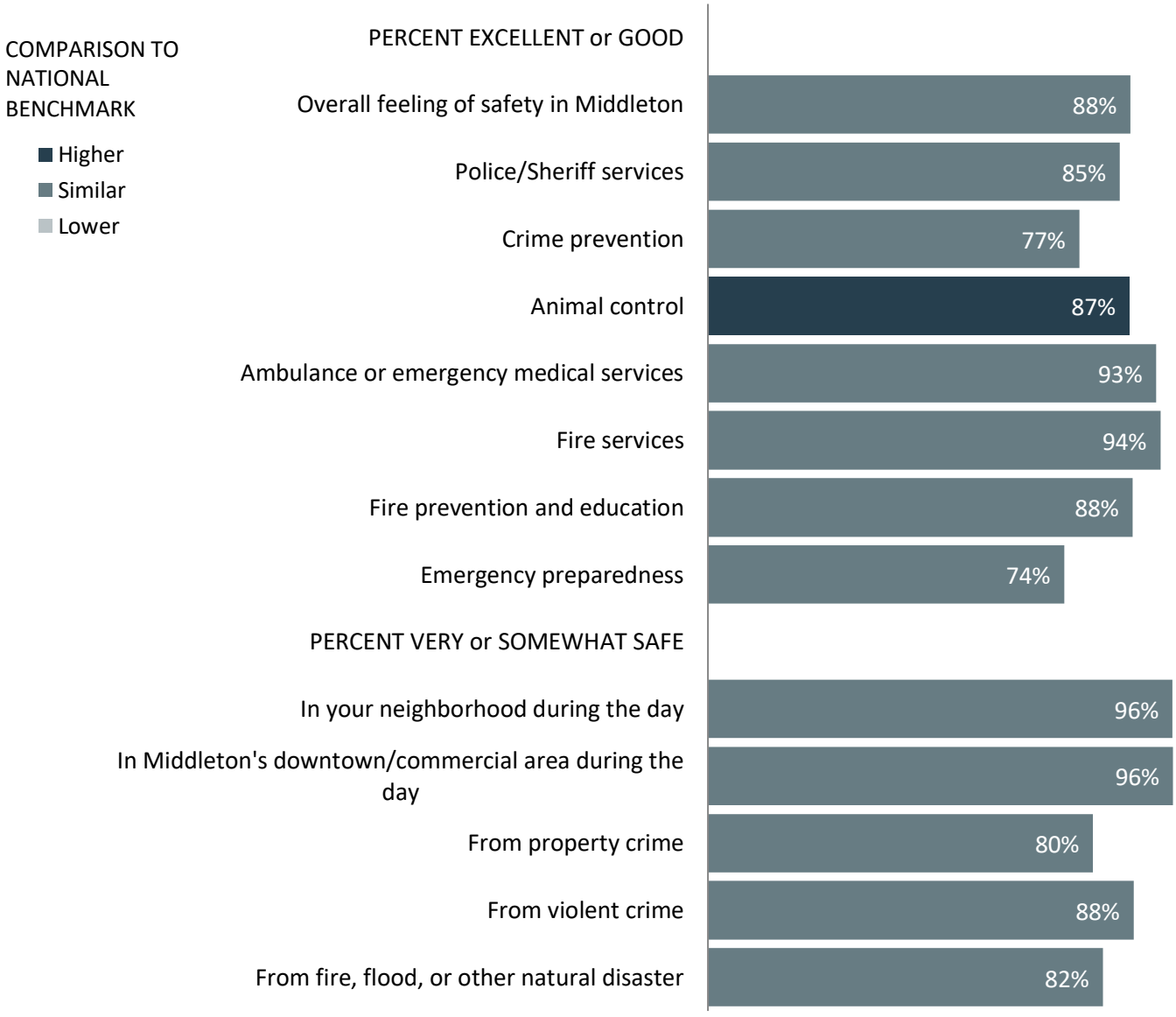


FIGURE 21: SAFETY-RELATED SERVICES - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Overall feeling of safety in Middleton	↔	88%
Police/Sheriff services	↔	85%
Crime prevention	↔	77%
Animal control	↑	87%
Ambulance or emergency medical services	↔	93%
Fire services	↔	94%
Fire prevention and education	↔	88%
Emergency preparedness	↔	74%

FIGURE 22: FEELINGS OF SAFETY- SUMMARY

Percent who feel very or somewhat safe	Comparison to benchmark	2020 rating
In your neighborhood during the day	↔	96%
In Middleton's downtown/commercial area during the day	↔	96%
From property crime	↔	80%
From violent crime	↔	88%
From fire, flood, or other natural disaster	↔	82%

Legend
↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Natural Environment

The natural environment plays a vital role in the health and well-being of residents. The natural spaces in which residents live and experience their communities has a direct and profound effect on quality of life.

OVERALL QUALITY OF NATURAL ENVIRONMENT IN MIDDLETON

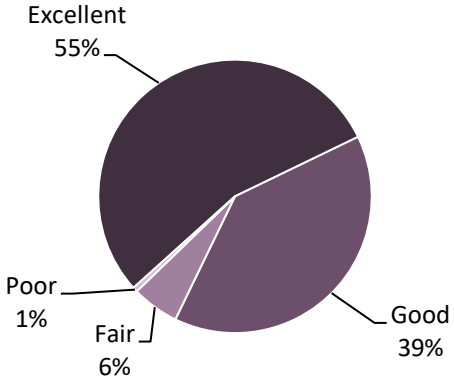


FIGURE 23: NATURAL ENVIRONMENT

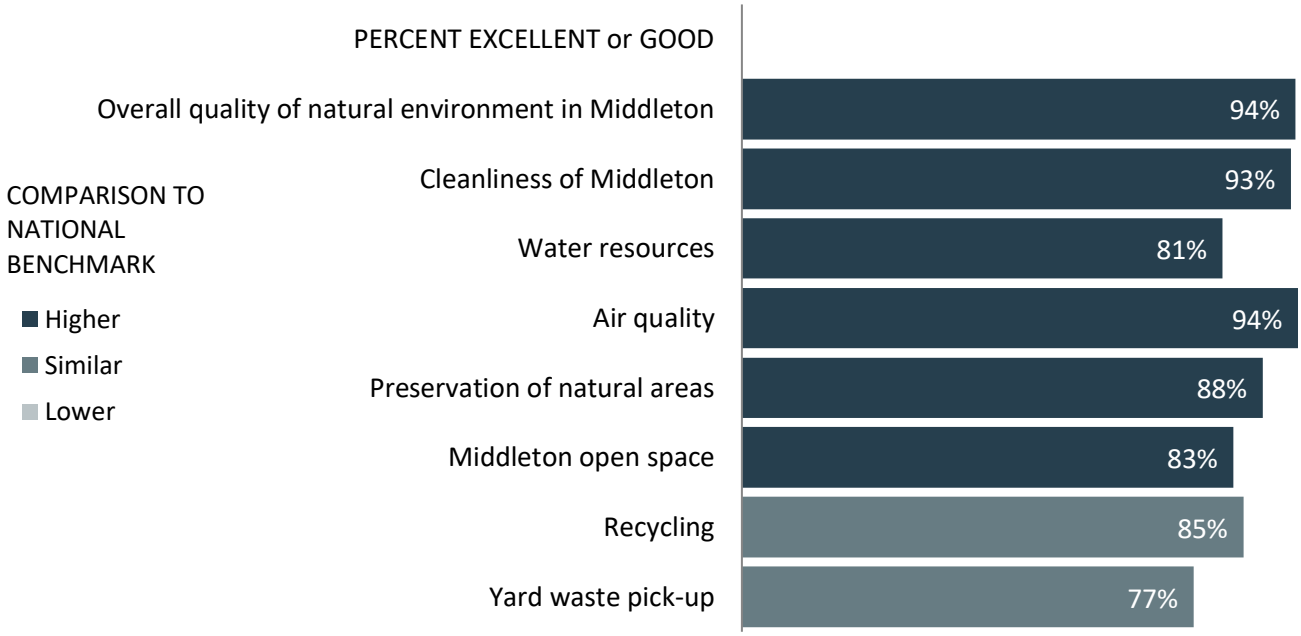


FIGURE 24: NATURAL ENVIRONMENT - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Overall quality of natural environment in Middleton	↑	94%
Cleanliness of Middleton	↑	93%
Water resources	↑	81%
Air quality	↑	94%
Preservation of natural areas	↑↑	88%
Middleton open space	↑	83%
Recycling	↔	85%
Yard waste pick-up	↔	77%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Parks and Recreation

"There are no communities that pride themselves on their quality of life, promote themselves as a desirable location for businesses to relocate, or maintain that they are environmental stewards of their natural resources, without such communities having a robust, active system of parks and recreation programs for public use and enjoyment."
- National Recreation and Park Association

OVERALL QUALITY OF PARKS AND RECREATION OPPORTUNITIES IN MIDDLETON

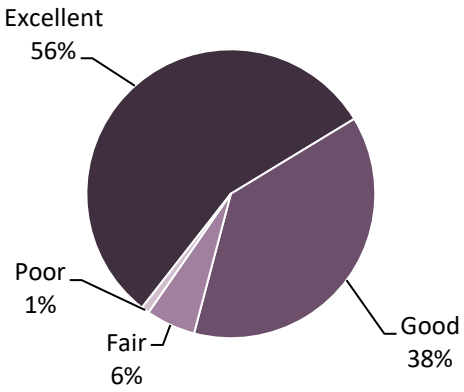


FIGURE 25: PARKS AND RECREATION



FIGURE 26: PARKS AND RECREATION - SUMMARY

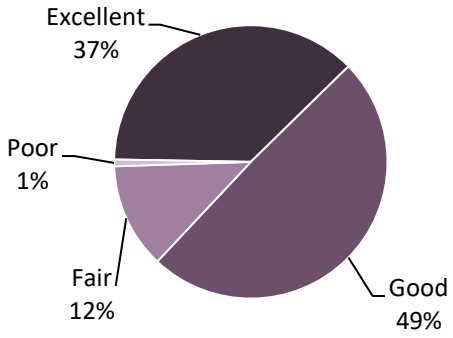
Percent excellent or good	Comparison to benchmark	2020 rating
Overall quality of parks and recreation opportunities	↑	94%
Availability of paths and walking trails	↑↑	94%
City parks	↑	95%
Recreational opportunities	↑	84%
Recreation programs or classes	↔	80%
Recreation centers or facilities	↔	78%
Fitness opportunities	↑	88%

Legend
↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Health and Wellness

The characteristics of and amenities available in the communities in which people live has a direct impact on the health and wellness of residents, and thus, on their quality of life overall.

HEALTH AND WELLNESS OPPORTUNITIES IN MIDDLETON



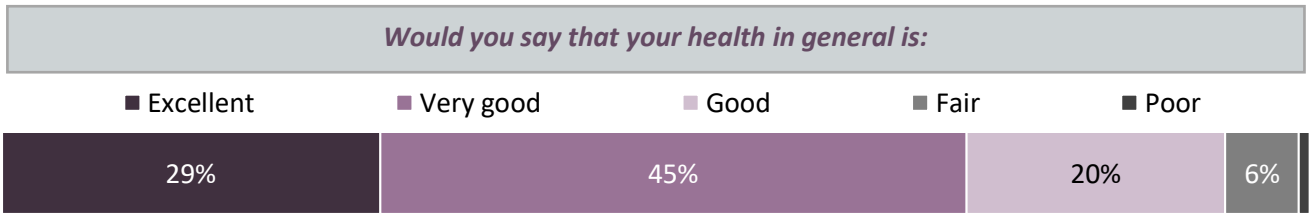


FIGURE 27: HEALTH AND WELLNESS

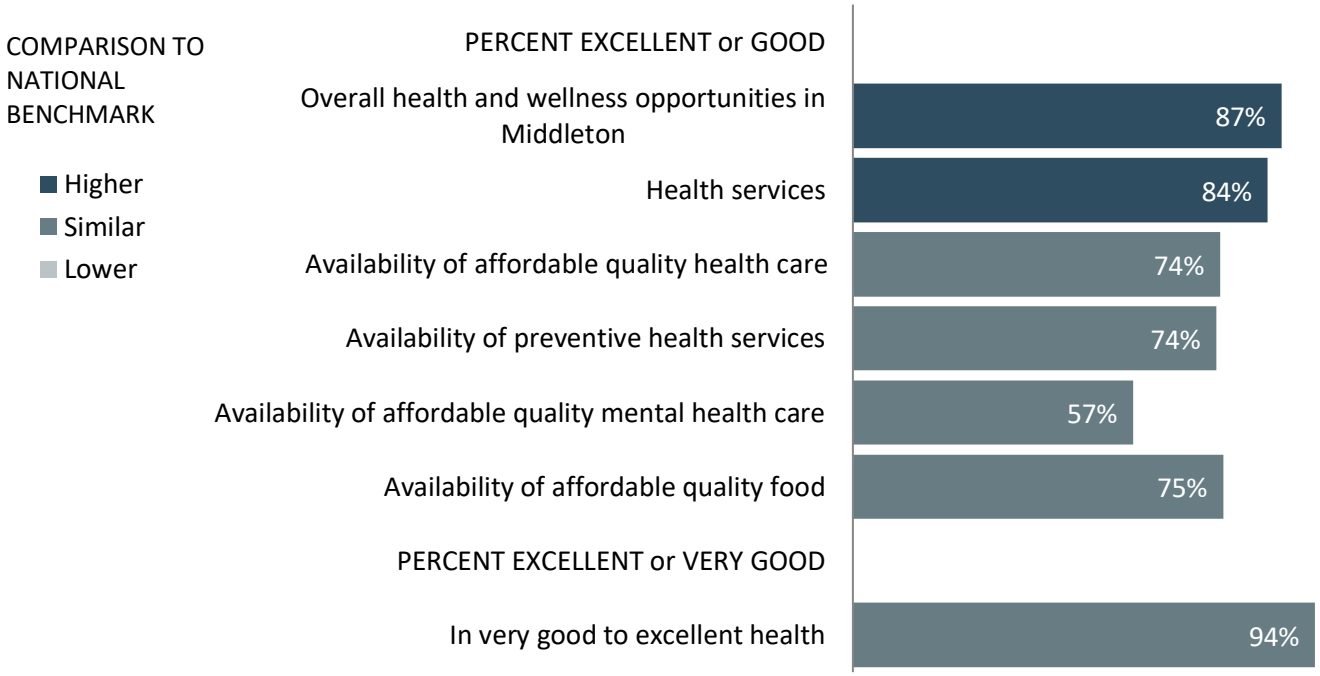


FIGURE 28: HEALTH AND WELLNESS - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Overall health and wellness opportunities in Middleton	↑	87%
Health services	↑	84%
Availability of affordable quality health care	↔	74%
Availability of preventive health services	↔	74%
Availability of affordable quality mental health care	↔	57%
Availability of affordable quality food	↔	75%

FIGURE 29: PERSONAL HEALTH - SUMMARY

	Comparison to benchmark	2020 rating
In very good to excellent health	↔	94%

Legend
↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Education, Arts, and Culture

Participation in the arts, in educational opportunities, and in cultural activities is linked to increased civic engagement, greater social tolerance, and enhanced enjoyment of the local community.

OVERALL OPPORTUNITIES FOR EDUCATION, CULTURE, AND THE ARTS IN MIDDLETON

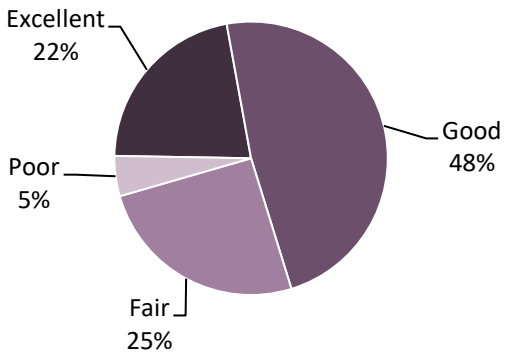


FIGURE 30: EDUCATION, ARTS AND CULTURE

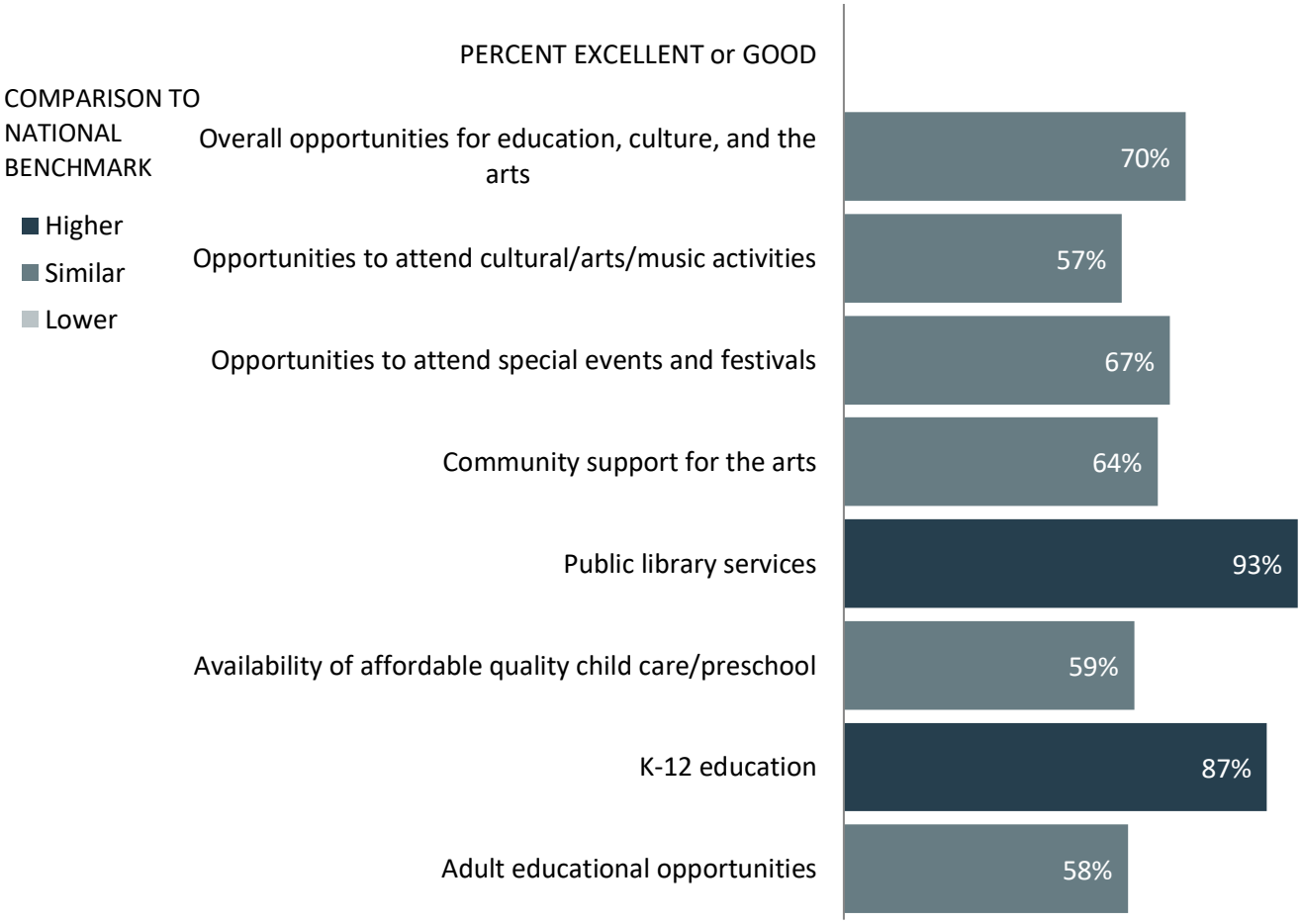


FIGURE 31: EDUCATION, ARTS AND CULTURE - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Overall opportunities for education, culture, and the arts	↔	70%
Opportunities to attend cultural/arts/music activities	↔	57%
Opportunities to attend special events and festivals	↔	67%
Community support for the arts	↔	64%
Public library services	↑	93%
Availability of affordable quality child care/preschool	↔	59%
K-12 education	↑	87%
Adult educational opportunities	↔	58%

Legend
↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Inclusivity and Engagement

Inclusivity refers to a cultural and environmental feeling of belonging; residents who feel invited to participate within their communities feel more included, involved, and engaged than those who do not.

RESIDENTS' CONNECTION AND ENGAGEMENT WITH THEIR COMMUNITY

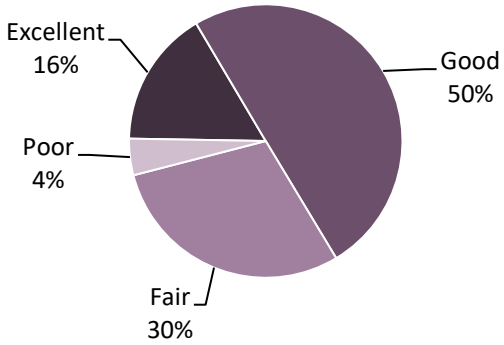


FIGURE 32: INCLUSIVITY AND ENGAGEMENT

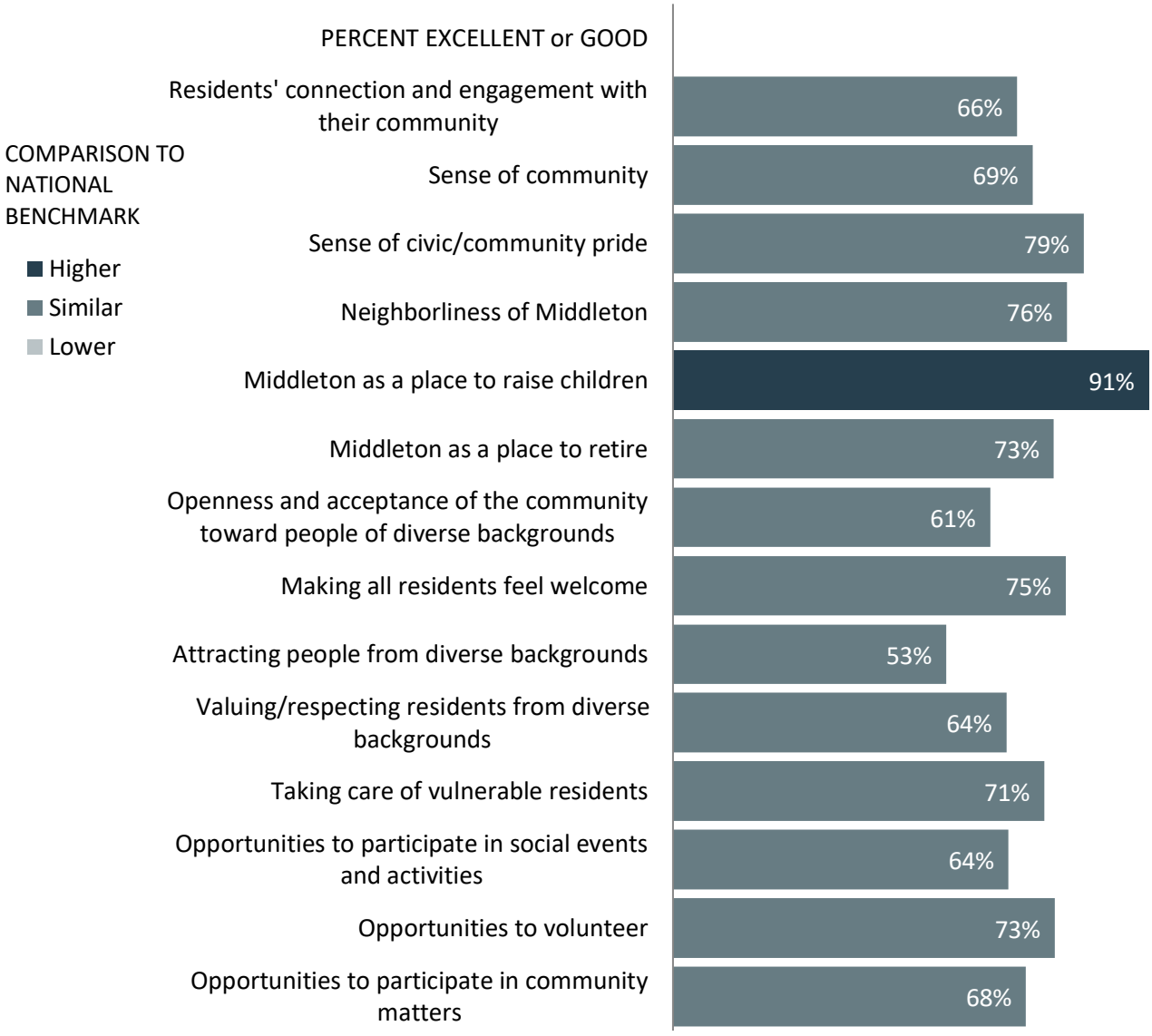


FIGURE 33: INCLUSIVITY AND ENGAGEMENT - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Residents' connection and engagement with their community	↔	66%
Sense of community	↔	69%
Sense of civic/community pride	↔	79%
Neighborliness of Middleton	↔	76%
Middleton as a place to raise children	↑	91%
Middleton as a place to retire	↔	73%
Openness and acceptance of the community toward people of diverse backgrounds	↔	61%
Making all residents feel welcome	↔	75%
Attracting people from diverse backgrounds	↔	53%
Valuing/respecting residents from diverse backgrounds	↔	64%
Taking care of vulnerable residents	↔	71%
Opportunities to participate in social events and activities	↔	64%
Opportunities to volunteer	↔	73%
Opportunities to participate in community matters	↔	68%

Legend
↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

FIGURE 34: RESIDENTS' PARTICIPATION LEVELS

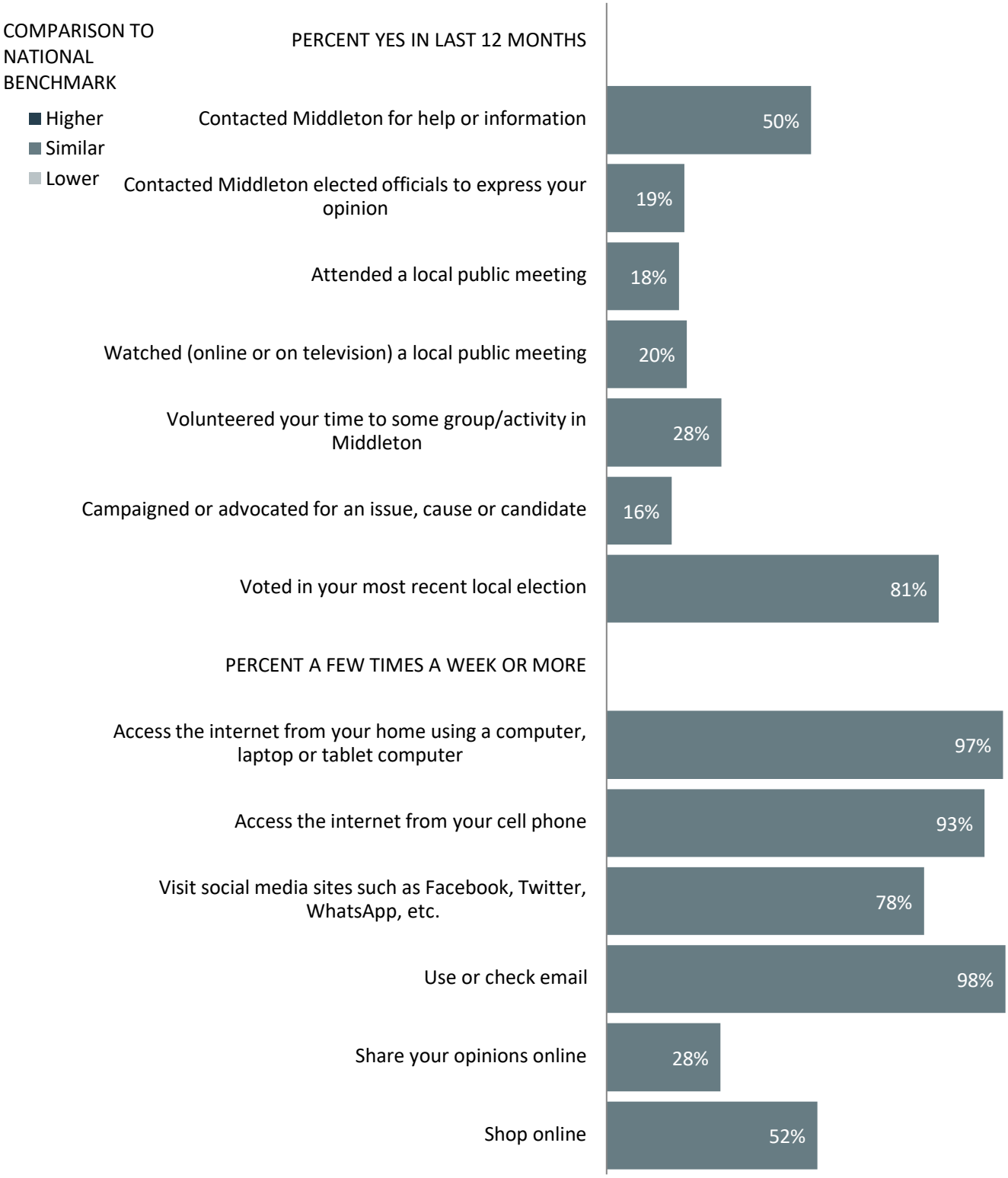


FIGURE 35: RESIDENTS' PARTICIPATION IN LAST 12 MONTHS- SUMMARY

Percent who had done each in last 12 months	Comparison to benchmark	2020 rating
Contacted Middleton for help or information	↔	50%
Contacted Middleton elected officials to express your opinion	↔	19%
Attended a local public meeting	↔	18%
Watched (online or on television) a local public meeting	↔	20%
Volunteered your time to some group/activity in Middleton	↔	28%
Campaigned or advocated for an issue, cause or candidate	↔	16%
Voted in your most recent local election	↔	81%

FIGURE 36: RESIDENTS' GENERAL USE OF TECHNOLOGY- SUMMARY

Percent who report doing each at least a few times a week	Comparison to benchmark	2020 rating
Access the internet from your home using a computer, laptop or tablet computer	↔	97%
Access the internet from your cell phone	↔	93%
Visit social media sites such as Facebook, Twitter, WhatsApp, etc.	↔	78%
Use or check email	↔	98%
Share your opinions online	↔	28%
Shop online	↔	52%

Legend
↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Special Topics: COVID-19

The Coronavirus Aid, Relief, and Economic Security (CARES) Act was passed by Congress to protect the American people from the public health and economic impacts of COVID-19. Through the CARES Act, State, Local, and Tribal governments receive financial assistance to help navigate the impact of the COVID-19 outbreak.

While the standard questions from The NCS provide significant information to evaluate COVID-19 impacts on Middleton, additional questions were included in the survey to dig deeper into resident opinions on community reopening and their preferences for managing the local government revenue loss caused by the pandemic.

FIGURE 37: GOVERNMENT PLANS FOR LIFTING COVID-19 RESTRICTIONS

Thinking about government plans to lift restrictions on businesses and community gathering areas or venues related to COVID-19, how would you rate the reopening at each of the following levels of government?

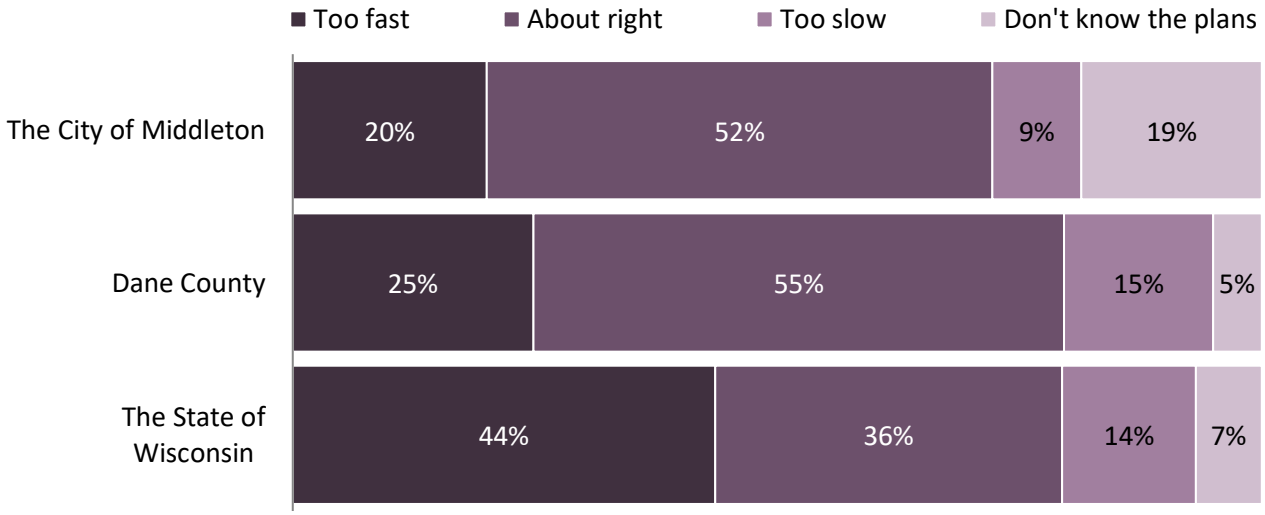


FIGURE 38: LEVEL OF CONCERN WHILE RESUMING NORMAL ACTIVITIES

As your local community takes steps to resume normal activities, how concerned are you about the following:

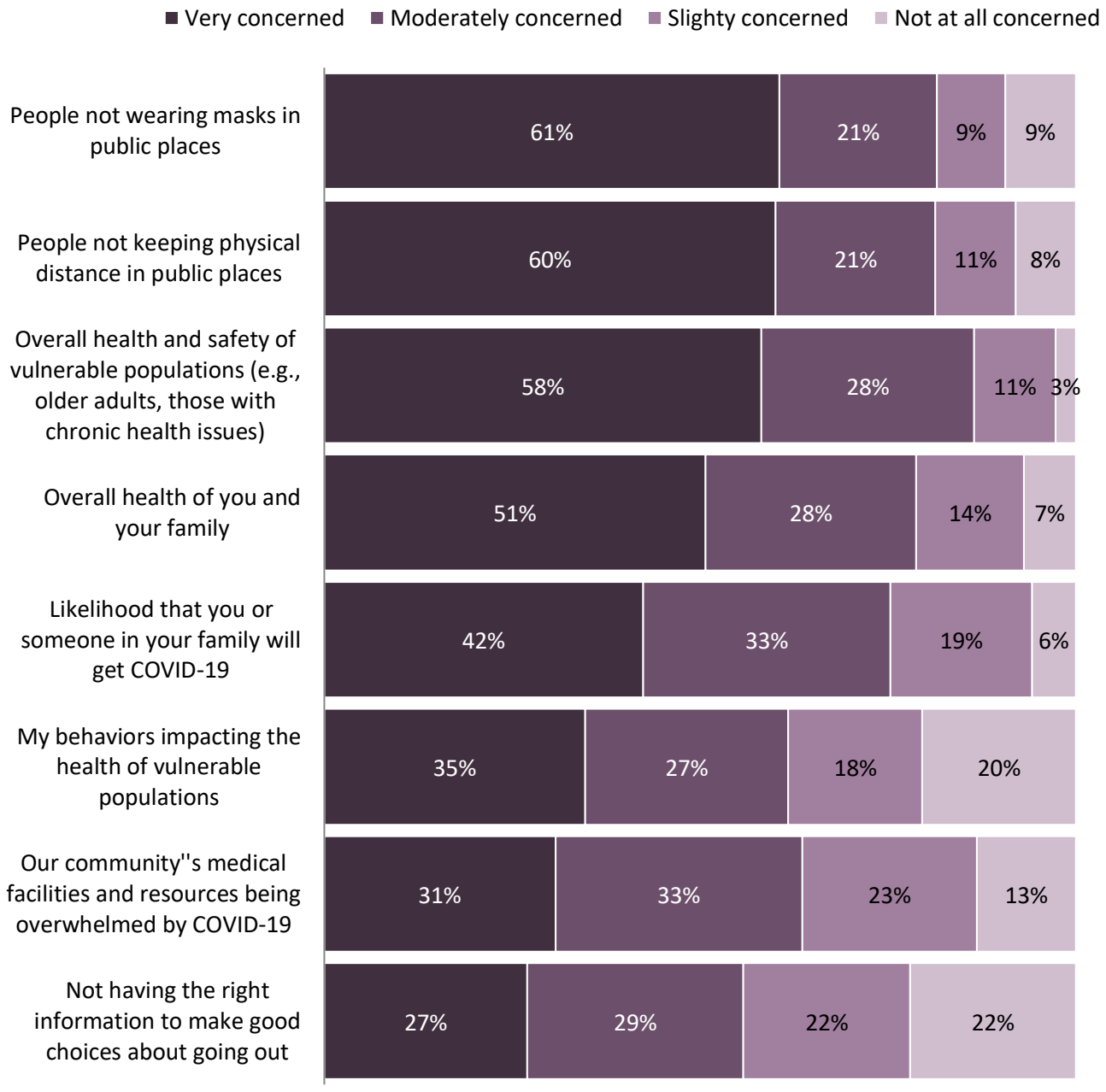
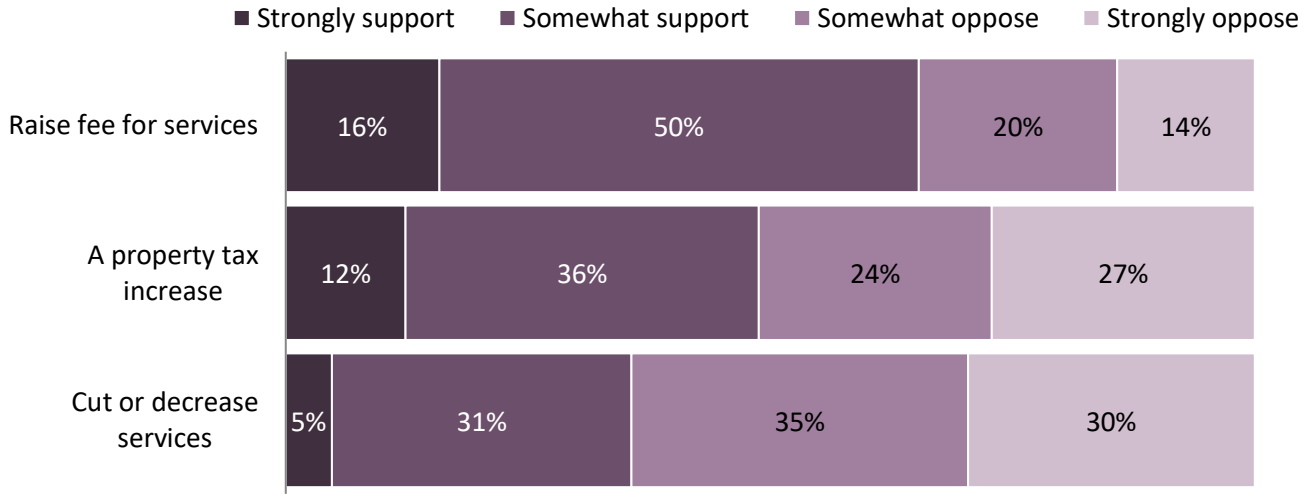


FIGURE 39: SUPPORT FOR FUNDING CHANGES

We know the COVID-19 pandemic has caused significant economic impacts on our business community and our residents. Our local government also will be significantly affected by the pandemic due to decreased tax revenues and unanticipated expenses related to management of COVID-19. If the gap between costs and revenues widens, how much would you support or oppose your local government taking each of the following actions?



THE NCS™

The National Community Survey™

Middleton, WI

Technical Appendices

2020

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Appendix A: Complete Survey Responses

The following pages contain a complete set of responses to each question on the survey. For questions that included a "don't know" response option, two tables for that question are provided: the first that excludes the "don't know" responses, and the second that includes those responses. The percent of respondents giving a particular response is shown followed by the number of respondents (denoted with "N=").

Table 1: Question 1 without "don't know" responses

Please rate each of the following aspects of quality of life in Middleton.	Excellent		Good		Fair		Poor		Total	
Middleton as a place to live	55%	N=367	41%	N=274	3%	N=20	0%	N=0	100%	N=661
Your neighborhood as a place to live	59%	N=387	35%	N=233	5%	N=36	1%	N=4	100%	N=661
Middleton as a place to raise children	56%	N=288	35%	N=180	7%	N=37	1%	N=7	100%	N=512
Middleton as a place to work	44%	N=190	44%	N=189	10%	N=43	2%	N=8	100%	N=431
Middleton as a place to visit	27%	N=171	48%	N=303	23%	N=145	2%	N=14	100%	N=632
Middleton as a place to retire	37%	N=181	36%	N=179	21%	N=105	6%	N=27	100%	N=492
The overall quality of life in Middleton	47%	N=307	48%	N=318	5%	N=31	0%	N=3	100%	N=659
Sense of community	25%	N=155	44%	N=279	27%	N=169	4%	N=25	100%	N=628

Table 2: Question 1 with "don't know" responses

Please rate each of the following aspects of quality of life in Middleton.	Excellent		Good		Fair		Poor		Don't know		Total	
Middleton as a place to live	55%	N=367	41%	N=274	3%	N=20	0%	N=0	0%	N=0	100%	N=661
Your neighborhood as a place to live	59%	N=387	35%	N=233	5%	N=36	1%	N=4	0%	N=1	100%	N=662
Middleton as a place to raise children	43%	N=288	27%	N=180	6%	N=37	1%	N=7	23%	N=151	100%	N=662
Middleton as a place to work	29%	N=190	29%	N=189	7%	N=43	1%	N=8	35%	N=231	100%	N=662
Middleton as a place to visit	26%	N=171	46%	N=303	22%	N=145	2%	N=14	5%	N=30	100%	N=662
Middleton as a place to retire	27%	N=181	27%	N=179	16%	N=105	4%	N=27	26%	N=170	100%	N=661
The overall quality of life in Middleton	46%	N=307	48%	N=318	5%	N=31	0%	N=3	1%	N=3	100%	N=662
Sense of community	23%	N=155	42%	N=279	25%	N=169	4%	N=25	5%	N=33	100%	N=662

Table 3: Question 2 without "don't know" responses

Please rate each of the following characteristics as they relate to Middleton as a whole.	Excellent		Good		Fair		Poor		Total	
Overall economic health of Middleton	26%	N=147	62%	N=358	11%	N=61	2%	N=9	100%	N=575
Overall quality of the transportation system (auto, bicycle, foot, bus) in Middleton	23%	N=144	49%	N=316	24%	N=152	4%	N=28	100%	N=640
Overall design or layout of Middleton's residential and commercial areas (e.g., homes, buildings, streets, parks, etc.)	20%	N=132	59%	N=386	19%	N=126	2%	N=12	100%	N=656
Overall quality of the utility infrastructure in Middleton (water, sewer, storm water, electric/gas)	31%	N=190	55%	N=343	12%	N=77	1%	N=8	100%	N=618
Overall feeling of safety in Middleton	36%	N=240	51%	N=338	11%	N=72	2%	N=10	100%	N=660
Overall quality of natural environment in Middleton	55%	N=359	39%	N=259	6%	N=37	1%	N=4	100%	N=658
Overall quality of parks and recreation opportunities	56%	N=363	38%	N=246	6%	N=36	1%	N=6	100%	N=650
Overall health and wellness opportunities in Middleton	37%	N=224	49%	N=295	12%	N=75	1%	N=5	100%	N=598
Overall opportunities for education, culture, and the arts	22%	N=129	48%	N=284	25%	N=150	5%	N=28	100%	N=591
Residents'' connection and engagement with their community	16%	N=93	50%	N=287	30%	N=170	4%	N=25	100%	N=575

Table 4: Question 2 with "don't know" responses

Please rate each of the following characteristics as they relate to Middleton as a whole.	Excellent		Good		Fair		Poor		Don't know		Total	
Overall economic health of Middleton	22%	N=147	54%	N=358	9%	N=61	1%	N=9	13%	N=85	100%	N=660
Overall quality of the transportation system (auto, bicycle, foot, bus) in Middleton	22%	N=144	48%	N=316	23%	N=152	4%	N=28	3%	N=20	100%	N=660
Overall design or layout of Middleton's residential and commercial areas (e.g., homes, buildings, streets, parks, etc.)	20%	N=132	58%	N=386	19%	N=126	2%	N=12	1%	N=7	100%	N=662
Overall quality of the utility infrastructure in Middleton (water, sewer, storm water, electric/gas)	29%	N=190	52%	N=343	12%	N=77	1%	N=8	6%	N=43	100%	N=661
Overall feeling of safety in Middleton	36%	N=240	51%	N=338	11%	N=72	2%	N=10	0%	N=0	100%	N=660
Overall quality of natural environment in Middleton	54%	N=359	39%	N=259	6%	N=37	1%	N=4	0%	N=3	100%	N=661
Overall quality of parks and recreation opportunities	55%	N=363	37%	N=246	5%	N=36	1%	N=6	2%	N=12	100%	N=662
Overall health and wellness opportunities in Middleton	34%	N=224	45%	N=295	11%	N=75	1%	N=5	9%	N=62	100%	N=661

Please rate each of the following characteristics as they relate to Middleton as a whole.	Excellent		Good		Fair		Poor		Don't know		Total	
Overall opportunities for education, culture, and the arts	20%	N=129	43%	N=284	23%	N=150	4%	N=28	11%	N=70	100%	N=662
Residents' connection and engagement with their community	14%	N=93	43%	N=287	26%	N=170	4%	N=25	13%	N=86	100%	N=662

Table 5: Question 3 without "don't know" responses

Please indicate how likely or unlikely you are to do each of the following.	Very likely		Somewhat likely		Somewhat unlikely		Very unlikely		Total	
Recommend living in Middleton to someone who asks	63%	N=415	31%	N=206	4%	N=24	2%	N=11	100%	N=655
Remain in Middleton for the next five years	55%	N=346	29%	N=180	7%	N=45	9%	N=56	100%	N=626

Table 6: Question 3 with "don't know" responses

Please indicate how likely or unlikely you are to do each of the following.	Very likely		Somewhat likely		Somewhat unlikely		Very unlikely		Don't know		Total	
Recommend living in Middleton to someone who asks	63%	N=415	31%	N=206	4%	N=24	2%	N=11	1%	N=6	100%	N=661
Remain in Middleton for the next five years	52%	N=346	27%	N=180	7%	N=45	9%	N=56	5%	N=34	100%	N=660

Table 7: Question 4 without "don't know" responses

Please rate how safe or unsafe you feel:	Very safe		Somewhat safe		Neither safe nor unsafe		Somewhat unsafe		Very unsafe		Total	
In your neighborhood during the day	83%	N=546	14%	N=91	1%	N=9	2%	N=14	0%	N=2	100%	N=662
In Middleton's downtown/commercial area during the day	81%	N=519	16%	N=101	2%	N=10	1%	N=9	1%	N=4	100%	N=643
From property crime	37%	N=242	43%	N=280	10%	N=68	9%	N=57	1%	N=7	100%	N=655
From violent crime	57%	N=375	31%	N=207	5%	N=33	6%	N=39	1%	N=5	100%	N=659
From fire, flood, or other natural disaster	42%	N=275	40%	N=258	14%	N=91	4%	N=24	1%	N=3	100%	N=651

Table 8: Question 4 with "don't know" responses

Please rate how safe or unsafe you feel:	Very safe		Somewhat safe		Neither safe nor unsafe		Somewhat unsafe		Very unsafe		Don't know		Total	
In your neighborhood during the day	82%	N=546	14%	N=91	1%	N=9	2%	N=14	0%	N=2	0%	N=1	100%	N=663
In Middleton's downtown/commercial area during the day	78%	N=519	15%	N=101	2%	N=10	1%	N=9	1%	N=4	3%	N=20	100%	N=663
From property crime	37%	N=242	42%	N=280	10%	N=68	9%	N=57	1%	N=7	1%	N=7	100%	N=662
From violent crime	57%	N=375	31%	N=207	5%	N=33	6%	N=39	1%	N=5	1%	N=4	100%	N=663
From fire, flood, or other natural disaster	42%	N=275	39%	N=258	14%	N=91	4%	N=24	1%	N=3	2%	N=12	100%	N=663

Table 9: Question 5 without "don't know" responses

Please rate the job you feel the Middleton community does at each of the following.	Excellent		Good		Fair		Poor		Total	
Making all residents feel welcome	26%	N=155	49%	N=286	20%	N=117	5%	N=27	100%	N=585
Attracting people from diverse backgrounds	16%	N=92	36%	N=203	28%	N=159	19%	N=107	100%	N=561
Valuing/respecting residents from diverse backgrounds	22%	N=122	42%	N=234	26%	N=144	10%	N=55	100%	N=554
Taking care of vulnerable residents (elderly, disabled, homeless, etc.)	24%	N=103	47%	N=203	24%	N=104	4%	N=19	100%	N=429

Table 10: Question 5 with "don't know" responses

Please rate the job you feel the Middleton community does at each of the following.	Excellent		Good		Fair		Poor		Don't know		Total	
Making all residents feel welcome	23%	N=155	43%	N=286	18%	N=117	4%	N=27	12%	N=77	100%	N=662
Attracting people from diverse backgrounds	14%	N=92	31%	N=203	24%	N=159	16%	N=107	15%	N=100	100%	N=662
Valuing/respecting residents from diverse backgrounds	18%	N=122	35%	N=234	22%	N=144	8%	N=55	16%	N=107	100%	N=662
Taking care of vulnerable residents (elderly, disabled, homeless, etc.)	16%	N=103	31%	N=203	16%	N=104	3%	N=19	35%	N=232	100%	N=661

Table 11: Question 6 without "don't know" responses

Please rate each of the following characteristics as they relate to Middleton as a whole.	Excellent		Good		Fair		Poor		Total	
Overall quality of business and service establishments in Middleton	34%	N=222	56%	N=365	9%	N=58	1%	N=3	100%	N=649
Variety of business and service establishments in Middleton	24%	N=155	51%	N=329	22%	N=143	2%	N=15	100%	N=642
Vibrancy of downtown/commercial area	26%	N=164	51%	N=322	22%	N=140	2%	N=10	100%	N=636
Employment opportunities	17%	N=64	46%	N=179	31%	N=119	7%	N=27	100%	N=389
Shopping opportunities	19%	N=124	46%	N=297	30%	N=196	5%	N=35	100%	N=652
Cost of living in Middleton	6%	N=40	32%	N=210	44%	N=287	18%	N=121	100%	N=657
Overall image or reputation of Middleton	37%	N=239	52%	N=338	11%	N=72	1%	N=4	100%	N=653

Table 12: Question 6 with "don't know" responses

Please rate each of the following characteristics as they relate to Middleton as a whole.	Excellent		Good		Fair		Poor		Don't know		Total	
Overall quality of business and service establishments in Middleton	34%	N=222	55%	N=365	9%	N=58	1%	N=3	2%	N=12	100%	N=661
Variety of business and service establishments in Middleton	24%	N=155	50%	N=329	22%	N=143	2%	N=15	3%	N=17	100%	N=659
Vibrancy of downtown/commercial area	25%	N=164	49%	N=322	21%	N=140	2%	N=10	4%	N=24	100%	N=660
Employment opportunities	10%	N=64	27%	N=179	18%	N=119	4%	N=27	41%	N=271	100%	N=660
Shopping opportunities	19%	N=124	45%	N=297	30%	N=196	5%	N=35	1%	N=9	100%	N=661
Cost of living in Middleton	6%	N=40	32%	N=210	43%	N=287	18%	N=121	1%	N=5	100%	N=661
Overall image or reputation of Middleton	36%	N=239	51%	N=338	11%	N=72	1%	N=4	1%	N=8	100%	N=661

Table 13: Question 7 without "don't know" responses

Please rate each of the following characteristics as they relate to Middleton as a whole.	Excellent		Good		Fair		Poor		Total	
Traffic flow on major streets	22%	N=146	61%	N=398	13%	N=88	4%	N=25	100%	N=656
Ease of public parking	25%	N=158	49%	N=312	23%	N=146	4%	N=25	100%	N=640
Ease of travel by car in Middleton	41%	N=269	51%	N=332	7%	N=48	1%	N=3	100%	N=653
Ease of travel by public transportation in Middleton	12%	N=48	30%	N=120	38%	N=155	20%	N=83	100%	N=406

Please rate each of the following characteristics as they relate to Middleton as a whole.	Excellent		Good		Fair		Poor		Total	
Ease of travel by bicycle in Middleton	30%	N=161	49%	N=263	18%	N=100	3%	N=17	100%	N=541
Ease of walking in Middleton	45%	N=290	42%	N=276	12%	N=77	1%	N=8	100%	N=651
Well-planned residential growth	15%	N=70	52%	N=239	27%	N=123	7%	N=30	100%	N=462
Well-planned commercial growth	16%	N=72	47%	N=215	31%	N=140	6%	N=26	100%	N=453
Well-designed neighborhoods	20%	N=119	54%	N=319	23%	N=138	3%	N=16	100%	N=592
Preservation of the historical or cultural character of the community	18%	N=96	54%	N=282	25%	N=134	3%	N=15	100%	N=526
Public places where people want to spend time	25%	N=159	52%	N=329	21%	N=135	2%	N=14	100%	N=637
Variety of housing options	16%	N=94	43%	N=257	32%	N=189	9%	N=57	100%	N=596
Availability of affordable quality housing	7%	N=36	24%	N=127	37%	N=194	33%	N=173	100%	N=530
Overall quality of new development in Middleton	15%	N=79	55%	N=295	23%	N=126	7%	N=39	100%	N=539
Overall appearance of Middleton	34%	N=225	56%	N=367	10%	N=65	1%	N=3	100%	N=659
Cleanliness of Middleton	45%	N=297	48%	N=317	6%	N=43	1%	N=3	100%	N=659
Water resources (beaches, lakes, ponds, riverways, etc.)	33%	N=208	49%	N=314	17%	N=108	2%	N=11	100%	N=641
Air quality	44%	N=284	50%	N=328	5%	N=35	0%	N=3	100%	N=650
Availability of paths and walking trails	61%	N=394	34%	N=221	5%	N=32	1%	N=4	100%	N=650
Fitness opportunities (including exercise classes and paths or trails, etc.)	43%	N=271	45%	N=280	11%	N=67	1%	N=8	100%	N=626
Recreational opportunities	37%	N=225	47%	N=287	15%	N=89	2%	N=11	100%	N=612
Availability of affordable quality food	28%	N=183	47%	N=302	21%	N=138	4%	N=24	100%	N=647
Availability of affordable quality health care	28%	N=144	46%	N=240	18%	N=95	7%	N=37	100%	N=516
Availability of preventive health services	27%	N=123	47%	N=213	21%	N=97	5%	N=24	100%	N=457
Availability of affordable quality mental health care	16%	N=49	41%	N=128	26%	N=82	17%	N=53	100%	N=312
Opportunities to attend cultural/arts/music activities	13%	N=72	44%	N=249	31%	N=177	12%	N=66	100%	N=565
Community support for the arts	16%	N=77	48%	N=229	27%	N=127	9%	N=44	100%	N=477
Availability of affordable quality childcare/preschool	20%	N=50	40%	N=101	33%	N=84	8%	N=19	100%	N=255
K-12 education	48%	N=214	38%	N=169	11%	N=48	3%	N=11	100%	N=442

Please rate each of the following characteristics as they relate to Middleton as a whole.	Excellent		Good		Fair		Poor		Total	
Adult educational opportunities	16%	N=60	42%	N=160	29%	N=109	13%	N=49	100%	N=377
Sense of civic/community pride	25%	N=150	54%	N=321	18%	N=107	3%	N=18	100%	N=597
Neighborliness of residents in Middleton	28%	N=179	47%	N=298	20%	N=128	4%	N=25	100%	N=631
Opportunities to participate in social events and activities	17%	N=97	47%	N=268	28%	N=158	8%	N=44	100%	N=566
Opportunities to attend special events and festivals	19%	N=111	47%	N=273	26%	N=147	8%	N=45	100%	N=576
Opportunities to volunteer	25%	N=116	49%	N=229	23%	N=106	4%	N=19	100%	N=470
Opportunities to participate in community matters	22%	N=106	46%	N=228	25%	N=122	7%	N=36	100%	N=491
Openness and acceptance of the community toward people of diverse backgrounds	17%	N=87	44%	N=230	28%	N=146	11%	N=57	100%	N=521

Table 14: Question 7 with "don't know" responses

Please rate each of the following characteristics as they relate to Middleton as a whole.	Excellent		Good		Fair		Poor		Don't know		Total	
Traffic flow on major streets	22%	N=146	60%	N=398	13%	N=88	4%	N=25	1%	N=3	100%	N=659
Ease of public parking	24%	N=158	47%	N=312	22%	N=146	4%	N=25	3%	N=18	100%	N=659
Ease of travel by car in Middleton	41%	N=269	50%	N=332	7%	N=48	1%	N=3	1%	N=8	100%	N=661
Ease of travel by public transportation in Middleton	7%	N=48	18%	N=120	23%	N=155	13%	N=83	39%	N=254	100%	N=660
Ease of travel by bicycle in Middleton	24%	N=161	40%	N=263	15%	N=100	3%	N=17	18%	N=118	100%	N=659
Ease of walking in Middleton	44%	N=290	42%	N=276	12%	N=77	1%	N=8	2%	N=10	100%	N=661
Well-planned residential growth	11%	N=70	36%	N=239	19%	N=123	5%	N=30	30%	N=198	100%	N=661
Well-planned commercial growth	11%	N=72	33%	N=215	21%	N=140	4%	N=26	31%	N=207	100%	N=660
Well-designed neighborhoods	18%	N=119	48%	N=319	21%	N=138	2%	N=16	10%	N=68	100%	N=661
Preservation of the historical or cultural character of the community	15%	N=96	43%	N=282	20%	N=134	2%	N=15	20%	N=132	100%	N=658
Public places where people want to spend time	24%	N=159	50%	N=329	20%	N=135	2%	N=14	3%	N=22	100%	N=659
Variety of housing options	14%	N=94	39%	N=257	29%	N=189	9%	N=57	10%	N=63	100%	N=659
Availability of affordable quality housing	5%	N=36	19%	N=127	30%	N=194	26%	N=173	19%	N=128	100%	N=658

Please rate each of the following characteristics as they relate to Middleton as a whole.	Excellent		Good		Fair		Poor		Don't know		Total	
Overall quality of new development in Middleton	12%	N=79	45%	N=295	19%	N=126	6%	N=39	18%	N=119	100%	N=658
Overall appearance of Middleton	34%	N=225	56%	N=367	10%	N=65	1%	N=3	0%	N=1	100%	N=660
Cleanliness of Middleton	45%	N=297	48%	N=317	6%	N=43	1%	N=3	0%	N=0	100%	N=659
Water resources (beaches, lakes, ponds, riverways, etc.)	32%	N=208	47%	N=314	16%	N=108	2%	N=11	3%	N=20	100%	N=661
Air quality	43%	N=284	50%	N=328	5%	N=35	0%	N=3	2%	N=10	100%	N=660
Availability of paths and walking trails	60%	N=394	33%	N=221	5%	N=32	1%	N=4	1%	N=9	100%	N=659
Fitness opportunities (including exercise classes and paths or trails, etc.)	41%	N=271	42%	N=280	10%	N=67	1%	N=8	5%	N=34	100%	N=660
Recreational opportunities	34%	N=225	44%	N=287	14%	N=89	2%	N=11	7%	N=46	100%	N=658
Availability of affordable quality food	28%	N=183	46%	N=302	21%	N=138	4%	N=24	2%	N=12	100%	N=659
Availability of affordable quality health care	22%	N=144	36%	N=240	14%	N=95	6%	N=37	22%	N=143	100%	N=659
Availability of preventive health services	19%	N=123	32%	N=213	15%	N=97	4%	N=24	31%	N=201	100%	N=658
Availability of affordable quality mental health care	7%	N=49	19%	N=128	12%	N=82	8%	N=53	53%	N=347	100%	N=659
Opportunities to attend cultural/arts/music activities	11%	N=72	38%	N=249	27%	N=177	10%	N=66	14%	N=95	100%	N=660
Community support for the arts	12%	N=77	35%	N=229	19%	N=127	7%	N=44	28%	N=182	100%	N=659
Availability of affordable quality childcare/preschool	8%	N=50	15%	N=101	13%	N=84	3%	N=19	61%	N=403	100%	N=658
K-12 education	33%	N=214	26%	N=169	7%	N=48	2%	N=11	33%	N=215	100%	N=657
Adult educational opportunities	9%	N=60	24%	N=160	17%	N=109	7%	N=49	43%	N=282	100%	N=659
Sense of civic/community pride	23%	N=150	49%	N=321	16%	N=107	3%	N=18	9%	N=59	100%	N=656
Neighborliness of residents in Middleton	27%	N=179	45%	N=298	20%	N=128	4%	N=25	4%	N=25	100%	N=657
Opportunities to participate in social events and activities	15%	N=97	41%	N=268	24%	N=158	7%	N=44	14%	N=91	100%	N=657
Opportunities to attend special events and festivals	17%	N=111	42%	N=273	22%	N=147	7%	N=45	12%	N=80	100%	N=656
Opportunities to volunteer	18%	N=116	35%	N=229	16%	N=106	3%	N=19	28%	N=185	100%	N=655
Opportunities to participate in community matters	16%	N=106	35%	N=228	19%	N=122	5%	N=36	25%	N=164	100%	N=655
Openness and acceptance of the community toward people of diverse backgrounds	13%	N=87	35%	N=230	23%	N=146	9%	N=57	20%	N=128	100%	N=649

Table 15: Question 8

Please indicate whether or not you have done each of the following in the last 12 months.	No		Yes		Total	
Contacted the City of Middleton (in-person, phone, email or web) for help or information	50%	N=327	50%	N=329	100%	N=656
Contacted Middleton elected officials (in-person, phone, email or web) to express your opinion	81%	N=530	19%	N=125	100%	N=655
Attended a local public meeting (of local elected officials like City Council or County Commissioners, advisory boards, town halls, HOA, neighborhood watch, etc.)	82%	N=539	18%	N=116	100%	N=655
Watched (online or on television) a local public meeting	80%	N=525	20%	N=129	100%	N=654
Volunteered your time to some group/activity in Middleton	72%	N=470	28%	N=184	100%	N=655
Campaigned or advocated for a local issue, cause or candidate	84%	N=551	16%	N=104	100%	N=655
Voted in your most recent local election	19%	N=121	81%	N=532	100%	N=653
Used bus, rail, subway, or other public transportation instead of driving	76%	N=499	24%	N=155	100%	N=654
Carpooled with other adults or children instead of driving alone	61%	N=400	39%	N=256	100%	N=655
Walked or biked instead of driving	22%	N=146	78%	N=511	100%	N=656

Table 16: Question 9 without "don't know" responses

Please rate the quality of each of the following services in Middleton.	Excellent		Good		Fair		Poor		Total	
Public information services	20%	N=104	61%	N=310	17%	N=85	2%	N=12	100%	N=511
Economic development	18%	N=78	58%	N=256	21%	N=91	3%	N=15	100%	N=440
Traffic enforcement	19%	N=103	58%	N=310	18%	N=96	5%	N=24	100%	N=533
Traffic signal timing	15%	N=92	54%	N=339	21%	N=131	10%	N=65	100%	N=626
Street repair	13%	N=81	49%	N=312	27%	N=172	12%	N=77	100%	N=643
Street cleaning	29%	N=189	58%	N=370	11%	N=73	2%	N=10	100%	N=643
Street lighting	20%	N=131	58%	N=370	19%	N=123	3%	N=17	100%	N=642
Snow removal	25%	N=152	57%	N=352	14%	N=89	4%	N=22	100%	N=615
Sidewalk maintenance	22%	N=138	57%	N=356	18%	N=112	3%	N=22	100%	N=628
Bus or transit services	14%	N=54	35%	N=135	35%	N=134	15%	N=57	100%	N=380
Land use, planning, and zoning	13%	N=51	54%	N=217	26%	N=105	8%	N=31	100%	N=403
Code enforcement (weeds, abandoned buildings, etc.)	14%	N=55	50%	N=193	24%	N=93	11%	N=43	100%	N=383

Please rate the quality of each of the following services in Middleton.	Excellent		Good		Fair		Poor		Total	
Affordable high-speed internet access	21%	N=121	45%	N=264	23%	N=135	11%	N=67	100%	N=587
Garbage collection	43%	N=264	49%	N=301	7%	N=43	1%	N=4	100%	N=612
Drinking water	34%	N=218	45%	N=284	16%	N=101	5%	N=35	100%	N=638
Sewer services	37%	N=215	53%	N=313	9%	N=54	1%	N=5	100%	N=587
Storm water management (storm drainage, dams, levees, etc.)	27%	N=153	45%	N=256	23%	N=130	4%	N=24	100%	N=563
Power (electric and/or gas) utility	37%	N=236	53%	N=339	9%	N=59	1%	N=4	100%	N=637
Utility billing	31%	N=189	52%	N=314	16%	N=95	2%	N=10	100%	N=609
Police/Sheriff services	42%	N=218	44%	N=231	12%	N=62	3%	N=15	100%	N=526
Crime prevention	25%	N=128	52%	N=268	18%	N=94	5%	N=24	100%	N=514
Animal control	28%	N=98	60%	N=212	11%	N=38	2%	N=7	100%	N=356
Ambulance or emergency medical services	44%	N=180	49%	N=197	7%	N=28	0%	N=1	100%	N=406
Fire services	48%	N=203	46%	N=197	5%	N=23	1%	N=4	100%	N=426
Fire prevention and education	36%	N=126	52%	N=183	9%	N=32	3%	N=10	100%	N=351
Emergency preparedness (services that prepare the community for natural disasters or other emergency situations)	26%	N=93	48%	N=175	21%	N=76	5%	N=19	100%	N=363
Preservation of natural areas (open space, farmlands, and greenbelts)	43%	N=259	45%	N=272	11%	N=64	1%	N=7	100%	N=601
Middleton open space	34%	N=205	49%	N=296	14%	N=83	3%	N=18	100%	N=601
Recycling	37%	N=223	48%	N=293	12%	N=70	3%	N=21	100%	N=607
Yard waste pick-up	27%	N=129	49%	N=233	18%	N=85	6%	N=26	100%	N=474
City parks	47%	N=296	48%	N=300	4%	N=26	1%	N=5	100%	N=626
Recreation programs or classes	26%	N=102	54%	N=217	15%	N=61	5%	N=20	100%	N=399
Recreation centers or facilities	24%	N=103	54%	N=232	17%	N=75	5%	N=21	100%	N=432
Health services	29%	N=114	55%	N=213	11%	N=45	5%	N=18	100%	N=389
Public library services	57%	N=338	36%	N=210	6%	N=38	1%	N=4	100%	N=590
Overall customer service by Middleton employees (police, receptionists, planners, etc.)	40%	N=220	50%	N=275	8%	N=42	2%	N=11	100%	N=548

Table 17: Question 9 with "don't know" responses

Please rate the quality of each of the following services in Middleton.	Excellent		Good		Fair		Poor		Don't know		Total	
Public information services	16%	N=104	48%	N=310	13%	N=85	2%	N=12	22%	N=140	100%	N=651
Economic development	12%	N=78	39%	N=256	14%	N=91	2%	N=15	32%	N=211	100%	N=650
Traffic enforcement	16%	N=103	47%	N=310	15%	N=96	4%	N=24	18%	N=120	100%	N=653
Traffic signal timing	14%	N=92	52%	N=339	20%	N=131	10%	N=65	4%	N=27	100%	N=653
Street repair	12%	N=81	48%	N=312	26%	N=172	12%	N=77	2%	N=11	100%	N=654
Street cleaning	29%	N=189	57%	N=370	11%	N=73	2%	N=10	2%	N=11	100%	N=654
Street lighting	20%	N=131	57%	N=370	19%	N=123	3%	N=17	2%	N=12	100%	N=654
Snow removal	23%	N=152	54%	N=352	14%	N=89	3%	N=22	6%	N=40	100%	N=655
Sidewalk maintenance	21%	N=138	54%	N=356	17%	N=112	3%	N=22	4%	N=25	100%	N=653
Bus or transit services	8%	N=54	21%	N=135	21%	N=134	9%	N=57	42%	N=275	100%	N=655
Land use, planning, and zoning	8%	N=51	33%	N=217	16%	N=105	5%	N=31	38%	N=250	100%	N=654
Code enforcement (weeds, abandoned buildings, etc.)	8%	N=55	29%	N=193	14%	N=93	7%	N=43	42%	N=272	100%	N=654
Affordable high-speed internet access	19%	N=121	40%	N=264	21%	N=135	10%	N=67	10%	N=67	100%	N=654
Garbage collection	40%	N=264	46%	N=301	7%	N=43	1%	N=4	7%	N=43	100%	N=655
Drinking water	33%	N=218	43%	N=284	15%	N=101	5%	N=35	3%	N=17	100%	N=656
Sewer services	33%	N=215	48%	N=313	8%	N=54	1%	N=5	10%	N=69	100%	N=656
Storm water management (storm drainage, dams, levees, etc.)	23%	N=153	39%	N=256	20%	N=130	4%	N=24	14%	N=93	100%	N=656
Power (electric and/or gas) utility	36%	N=236	52%	N=339	9%	N=59	1%	N=4	3%	N=18	100%	N=655
Utility billing	29%	N=189	48%	N=314	15%	N=95	1%	N=10	7%	N=44	100%	N=653
Police/Sheriff services	33%	N=218	35%	N=231	9%	N=62	2%	N=15	20%	N=130	100%	N=656
Crime prevention	20%	N=128	41%	N=268	14%	N=94	4%	N=24	22%	N=141	100%	N=656
Animal control	15%	N=98	33%	N=212	6%	N=38	1%	N=7	45%	N=297	100%	N=652
Ambulance or emergency medical services	28%	N=180	30%	N=197	4%	N=28	0%	N=1	38%	N=249	100%	N=655
Fire services	31%	N=203	30%	N=197	3%	N=23	1%	N=4	35%	N=227	100%	N=652
Fire prevention and education	19%	N=126	28%	N=183	5%	N=32	1%	N=10	46%	N=303	100%	N=654

Please rate the quality of each of the following services in Middleton.	Excellent		Good		Fair		Poor		Don't know		Total	
Emergency preparedness (services that prepare the community for natural disasters or other emergency situations)	14%	N=93	27%	N=175	12%	N=76	3%	N=19	45%	N=292	100%	N=655
Preservation of natural areas (open space, farmlands, and greenbelts)	40%	N=259	42%	N=272	10%	N=64	1%	N=7	8%	N=52	100%	N=654
Middleton open space	31%	N=205	45%	N=296	13%	N=83	3%	N=18	8%	N=53	100%	N=654
Recycling	34%	N=223	45%	N=293	11%	N=70	3%	N=21	7%	N=46	100%	N=652
Yard waste pick-up	20%	N=129	36%	N=233	13%	N=85	4%	N=26	27%	N=178	100%	N=652
City parks	45%	N=296	46%	N=300	4%	N=26	1%	N=5	4%	N=25	100%	N=651
Recreation programs or classes	16%	N=102	33%	N=217	9%	N=61	3%	N=20	39%	N=254	100%	N=653
Recreation centers or facilities	16%	N=103	35%	N=232	12%	N=75	3%	N=21	34%	N=221	100%	N=653
Health services	18%	N=114	33%	N=213	7%	N=45	3%	N=18	40%	N=260	100%	N=649
Public library services	52%	N=338	32%	N=210	6%	N=38	1%	N=4	10%	N=63	100%	N=653
Overall customer service by Middleton employees (police, receptionists, planners, etc.)	34%	N=220	42%	N=275	6%	N=42	2%	N=11	16%	N=104	100%	N=652

Table 18: Question 10 without "don't know" responses

Please rate the following categories of Middleton government performance.	Excellent		Good		Fair		Poor		Total	
The value of services for the taxes paid to Middleton	18%	N=101	56%	N=311	22%	N=120	4%	N=23	100%	N=555
The overall direction that Middleton is taking	19%	N=102	59%	N=322	17%	N=91	5%	N=29	100%	N=544
The job Middleton government does at welcoming resident involvement	17%	N=76	47%	N=210	25%	N=113	11%	N=49	100%	N=448
Overall confidence in Middleton government	16%	N=91	55%	N=316	25%	N=141	4%	N=25	100%	N=572
Generally acting in the best interest of the community	19%	N=106	55%	N=313	19%	N=109	7%	N=40	100%	N=568
Being honest	21%	N=100	53%	N=252	21%	N=101	4%	N=20	100%	N=473
Being open and transparent to the public	21%	N=99	48%	N=225	24%	N=111	8%	N=35	100%	N=470
Informing residents about issues facing the community	18%	N=92	46%	N=241	24%	N=124	12%	N=64	100%	N=521
Treating all residents fairly	20%	N=88	51%	N=227	19%	N=86	10%	N=44	100%	N=445
Treating residents with respect	26%	N=126	51%	N=255	18%	N=89	5%	N=25	100%	N=495

Table 19: Question 10 with "don't know" responses

Please rate the following categories of Middleton government performance.	Excellent		Good		Fair		Poor		Don't know		Total	
The value of services for the taxes paid to Middleton	16%	N=101	48%	N=311	19%	N=120	3%	N=23	14%	N=94	100%	N=649
The overall direction that Middleton is taking	16%	N=102	50%	N=322	14%	N=91	4%	N=29	16%	N=101	100%	N=645
The job Middleton government does at welcoming resident involvement	12%	N=76	32%	N=210	18%	N=113	8%	N=49	31%	N=200	100%	N=647
Overall confidence in Middleton government	14%	N=91	49%	N=316	22%	N=141	4%	N=25	12%	N=76	100%	N=648
Generally acting in the best interest of the community	16%	N=106	48%	N=313	17%	N=109	6%	N=40	12%	N=81	100%	N=649
Being honest	15%	N=100	39%	N=252	16%	N=101	3%	N=20	27%	N=177	100%	N=650
Being open and transparent to the public	15%	N=99	35%	N=225	17%	N=111	5%	N=35	28%	N=179	100%	N=648
Informing residents about issues facing the community	14%	N=92	37%	N=241	19%	N=124	10%	N=64	20%	N=128	100%	N=649
Treating all residents fairly	13%	N=88	35%	N=227	13%	N=86	7%	N=44	32%	N=205	100%	N=651
Treating residents with respect	19%	N=126	39%	N=255	14%	N=89	4%	N=25	24%	N=157	100%	N=651

Table 20: Question 11 without "don't know" responses

Overall, how would you rate the quality of the services provided by each of the following?	Excellent		Good		Fair		Poor		Total	
The City of Middleton	30%	N=183	59%	N=363	11%	N=65	1%	N=4	100%	N=615
The Federal Government	5%	N=31	23%	N=138	39%	N=231	33%	N=196	100%	N=596

Table 21: Question 11 with "don't know" responses

Overall, how would you rate the quality of the services provided by each of the following?	Excellent		Good		Fair		Poor		Don't know		Total	
The City of Middleton	28%	N=183	56%	N=363	10%	N=65	1%	N=4	6%	N=36	100%	N=652
The Federal Government	5%	N=31	21%	N=138	35%	N=231	30%	N=196	9%	N=56	100%	N=652

Table 22: Question 12

Please rate how important, if at all, you think it is for the Middleton community to focus on each of the following in the coming two years.	Essential		Very important		Somewhat important		Not at all important		Total	
Overall economic health of Middleton	36%	N=234	52%	N=340	11%	N=70	1%	N=6	100%	N=650
Overall quality of the transportation system (auto, bicycle, foot, bus) in Middleton	35%	N=230	43%	N=281	19%	N=123	2%	N=15	100%	N=649
Overall design or layout of Middleton's residential and commercial areas (e.g., homes, buildings, streets, parks, etc.)	28%	N=179	46%	N=299	26%	N=169	0%	N=3	100%	N=650
Overall quality of the utility infrastructure in Middleton (water, sewer, storm water, electric/gas)	46%	N=300	41%	N=269	11%	N=74	1%	N=6	100%	N=650
Overall feeling of safety in Middleton	58%	N=375	33%	N=215	9%	N=55	1%	N=5	100%	N=650
Overall quality of natural environment in Middleton	47%	N=306	43%	N=283	9%	N=61	0%	N=1	100%	N=651
Overall quality of parks and recreation opportunities	37%	N=243	47%	N=305	16%	N=102	0%	N=1	100%	N=650
Overall health and wellness opportunities in Middleton	27%	N=178	47%	N=303	24%	N=159	2%	N=10	100%	N=650
Overall opportunities for education, culture and the arts	31%	N=204	44%	N=288	24%	N=154	1%	N=3	100%	N=649
Residents'' connection and engagement with their community	24%	N=158	50%	N=328	24%	N=154	2%	N=11	100%	N=651

Table 23: Question 13 without "N/A" responses

Thinking about government plans to lift restrictions on businesses and community gathering areas or venues related to COVID-19, how would you rate the reopening at each of the following levels of government?	Too fast		About right		Too slow		Don't know the plans		Total	
The City of Middleton	20%	N=130	52%	N=339	9%	N=60	19%	N=121	100%	N=649
Dane County	25%	N=162	55%	N=357	15%	N=100	5%	N=33	100%	N=651
The State of Wisconsin	44%	N=284	36%	N=233	14%	N=90	7%	N=44	100%	N=651

Table 24: Question 13 with "N/A" responses

Thinking about government plans to lift restrictions on businesses and community gathering areas or venues related to COVID-19, how would you rate the reopening at each of the following levels of government?	Too fast		About right		Too slow		Don't know the plans		N/A		Total	
The City of Middleton	20%	N=130	52%	N=339	9%	N=60	18%	N=121	1%	N=6	100%	N=655
Dane County	25%	N=162	55%	N=357	15%	N=100	5%	N=33	0%	N=3	100%	N=654
The State of Wisconsin	43%	N=284	36%	N=233	14%	N=90	7%	N=44	1%	N=4	100%	N=655

Table 25: Question 14 without "don't know" responses

As your local community takes steps to resume normal activities, how concerned are you about the following:	Very concerned		Moderately concerned		Slightly concerned		Not at all concerned		Total	
Overall health of you and your family	51%	N=332	28%	N=183	14%	N=94	7%	N=45	100%	N=654
Likelihood that you or someone in your family will get COVID-19	42%	N=277	33%	N=215	19%	N=123	6%	N=38	100%	N=652
Our community's medical facilities and resources being overwhelmed by COVID-19	31%	N=196	33%	N=210	23%	N=148	13%	N=84	100%	N=638
Overall health and safety of vulnerable populations (e.g., older adults, those with chronic health issues)	58%	N=373	28%	N=181	11%	N=69	3%	N=17	100%	N=640
Not having the right information to make good choices about going out	27%	N=173	29%	N=185	22%	N=143	22%	N=141	100%	N=642
My behaviors impacting the health of vulnerable populations	35%	N=225	27%	N=175	18%	N=116	20%	N=132	100%	N=649
People not wearing masks in public places	61%	N=395	21%	N=137	9%	N=59	9%	N=61	100%	N=652
People not keeping physical distance in public places	60%	N=393	21%	N=139	11%	N=70	8%	N=52	100%	N=653

Table 26: Question 14 with "don't know" responses

As your local community takes steps to resume normal activities, how concerned are you about the following:	Very concerned		Moderately concerned		Slightly concerned		Not at all concerned		Don't know		Total	
Overall health of you and your family	51%	N=332	28%	N=183	14%	N=94	7%	N=45	0%	N=0	100%	N=654
Likelihood that you or someone in your family will get COVID-19	42%	N=277	33%	N=215	19%	N=123	6%	N=38	0%	N=2	100%	N=654
Our community's medical facilities and resources being overwhelmed by COVID-19	30%	N=196	32%	N=210	23%	N=148	13%	N=84	2%	N=16	100%	N=654
Overall health and safety of vulnerable populations (e.g., older adults, those with chronic health issues)	57%	N=373	28%	N=181	11%	N=69	3%	N=17	2%	N=15	100%	N=655
Not having the right information to make good choices about going out	27%	N=173	28%	N=185	22%	N=143	22%	N=141	2%	N=12	100%	N=654
My behaviors impacting the health of vulnerable populations	35%	N=225	27%	N=175	18%	N=116	20%	N=132	1%	N=4	100%	N=653
People not wearing masks in public places	60%	N=395	21%	N=137	9%	N=59	9%	N=61	0%	N=3	100%	N=655
People not keeping physical distance in public places	60%	N=393	21%	N=139	11%	N=70	8%	N=52	0%	N=2	100%	N=655

Table 27: Question 15

We know the COVID-19 pandemic has caused significant economic impacts on our business community and our residents. Our local government also will be significantly affected by the pandemic due to decreased tax revenues and unanticipated expenses related to management of COVID-19. If the gap between costs and revenues widens, how much would you support or oppose your local government taking each of the following actions?	Strongly support		Somewhat support		Somewhat oppose		Strongly oppose		Total	
A property tax increase	12%	N=81	36%	N=238	24%	N=157	27%	N=177	100%	N=652
Raise fee for services	16%	N=103	50%	N=323	20%	N=134	14%	N=93	100%	N=652
Cut or decrease services	5%	N=31	31%	N=202	35%	N=226	30%	N=193	100%	N=652

Table 28: Question 16

How many adult members of your household currently work for pay?	Percent	Number
0	21%	N=137
1	41%	N=269
2	34%	N=224
3 or more	3%	N=20
Total	100%	N=650

Table 29: Question D1 without "don't know" responses

Thinking about a typical week, how many times do you:	Several times a day		Once a day		A few times a week		Every few weeks		Less often or never		Total	
Access the internet from your home using a computer, laptop or tablet computer	92%	N=601	4%	N=23	2%	N=11	1%	N=4	2%	N=13	100%	N=653
Access the internet from your cell phone	87%	N=564	3%	N=20	3%	N=19	0%	N=3	7%	N=44	100%	N=651
Visit social media sites such as Facebook, Twitter, WhatsApp, etc.	51%	N=335	16%	N=103	11%	N=69	3%	N=21	19%	N=123	100%	N=651
Use or check email	87%	N=566	9%	N=59	2%	N=14	0%	N=3	2%	N=12	100%	N=653
Share your opinions online	9%	N=61	4%	N=27	14%	N=92	19%	N=122	53%	N=343	100%	N=645
Shop online	7%	N=48	7%	N=44	38%	N=244	38%	N=244	11%	N=70	100%	N=650

Table 30: Question D1 with "don't know" responses

Thinking about a typical week, how many times do you:	Several times a day		Once a day		A few times a week		Every few weeks		Less often or never		Don't know		Total	
Access the internet from your home using a computer, laptop or tablet computer	92%	N=601	4%	N=23	2%	N=11	1%	N=4	2%	N=13	0%	N=1	100%	N=654
Access the internet from your cell phone	86%	N=564	3%	N=20	3%	N=19	0%	N=3	7%	N=44	0%	N=2	100%	N=653
Visit social media sites such as Facebook, Twitter, WhatsApp, etc.	51%	N=335	16%	N=103	11%	N=69	3%	N=21	19%	N=123	0%	N=2	100%	N=654
Use or check email	87%	N=566	9%	N=59	2%	N=14	0%	N=3	2%	N=12	0%	N=0	100%	N=653
Share your opinions online	9%	N=61	4%	N=27	14%	N=92	19%	N=122	53%	N=343	1%	N=7	100%	N=652
Shop online	7%	N=48	7%	N=44	37%	N=244	37%	N=244	11%	N=70	0%	N=2	100%	N=651

Table 31: Question D2

Would you say that in general your health is:	Percent	Number
Excellent	29%	N=189
Very good	45%	N=294
Good	20%	N=130
Fair	6%	N=37
Poor	1%	N=5
Total	100%	N=655

Table 32: Question D3

What impact, if any, do you think the economy will have on your family income in the next 6 months? Do you think the impact will be:	Percent	Number
Very positive	3%	N=18
Somewhat positive	10%	N=65
Neutral	54%	N=353
Somewhat negative	28%	N=184
Very negative	5%	N=34
Total	100%	N=653

Table 33: Question D4

How many years have you lived in Middleton?	Percent	Number
Less than 2 years	23%	N=152
2 to 5 years	25%	N=166
6 to 10 years	15%	N=100
11 to 20 years	14%	N=94
More than 20 years	22%	N=141
Total	100%	N=654

Table 34: Question D5

Which best describes the building you live in?	Percent	Number
One family house detached from any other houses	42%	N=278
Building with two or more homes (duplex, townhome, apartment or condominium)	57%	N=375
Mobile home	0%	N=0
Other	1%	N=8
Total	100%	N=661

Table 35: Question D6

Do you rent or own your home?	Percent	Number
Rent	45%	N=299
Own	55%	N=359
Total	100%	N=658

Table 36: Question D7

About how much is your monthly housing cost for the place you live (including rent, mortgage payment, property tax, property insurance and homeowners' association (HOA) fees)?	Percent	Number
Less than $500 per month	3%	N=22
$500 to $999 per month	19%	N=124
$1,000 to $1,499 per month	33%	N=212
$1,500 to $1,999 per month	20%	N=126
$2,000 to $2,499 per month	10%	N=67
$2,500 to $2,999 per month	6%	N=37
$3,000 to $3,499 per month	4%	N=27
$3,500 or more per month	4%	N=25
Total	100%	N=641

Table 37: Question D8

Do any children 17 or under live in your household?	Percent	Number
No	75%	N=488
Yes	25%	N=164
Total	100%	N=653

Table 38: Question D9

Are you or any other members of your household aged 65 or older?	Percent	Number
No	72%	N=467
Yes	28%	N=186
Total	100%	N=653

Table 39: Question D10

How much do you anticipate your household's total income before taxes will be for the current year? (Please include in your total income money from all sources for all persons living in your household.)	Percent	Number
Less than $25,000	7%	N=43
$25,000 to $49,999	19%	N=120
$50,000 to $74,999	18%	N=115
$75,000 to $99,999	17%	N=109
$100,000 to $149,999	19%	N=120
$150,000 or more	19%	N=123
Total	100%	N=631

Table 40: Question D11

Are you Spanish, Hispanic or Latino?	Percent	Number
No, not Spanish, Hispanic or Latino	95%	N=613
Yes, I consider myself to be Spanish, Hispanic or Latino	5%	N=36
Total	100%	N=649

Table 41: Question D12

What is your race? (Mark one or more races to indicate what race(s) you consider yourself to be.)	Percent	Number
American Indian or Alaskan Native	1%	N=7
Asian, Asian Indian or Pacific Islander	7%	N=47
Black or African American	2%	N=11
White	88%	N=575
Other	5%	N=32

Total may exceed 100% as respondents could select more than one option.

Table 42: Question D13

In which category is your age?	Percent	Number
18 to 24 years	6%	N=40
25 to 34 years	24%	N=159
35 to 44 years	15%	N=96
45 to 54 years	18%	N=119
55 to 64 years	12%	N=80
65 to 74 years	16%	N=108
75 years or older	9%	N=57
Total	100%	N=659

Table 43: Question D14

What is your gender?	Percent	Number
Female	53%	N=348
Male	46%	N=307
Identify in another way	1%	N=6
Total	100%	N=661

Appendix B: Benchmark Comparisons

Comparison Data

NRC's database of comparative resident opinion is comprised of resident perspectives gathered in surveys from over 600 communities whose residents evaluated the same kinds of topics on The National Community Survey. The comparison evaluations are from the most recent survey completed in each community; most communities conduct surveys every year or in alternating years. NRC adds the latest results quickly upon survey completion, keeping the benchmark data fresh and relevant. The communities in the database represent a wide geographic and population range. The County of Middleton chose to have comparisons made to the entire database.

Interpreting the Results

Ratings are compared when there are at least five communities in which a similar question was asked. Where comparisons are available, four columns are provided in the table. The first column is Middleton's "percent positive." The percent positive is the combination of the top two most positive response options (i.e., "excellent" and "good," "very safe" and "somewhat safe," etc.), or, in the case of resident behaviors/participation, the percent positive represents the proportion of respondents indicating "yes" or participating in an activity at least once a month. The second column is the rank assigned to Middleton's rating among communities where a similar question was asked. The third column is the number of communities that asked a similar question. The final column shows the comparison of Middleton's rating to the benchmark.

Benchmark Database Characteristics	
Region	Percent
New England	3%
Middle Atlantic	5%
East North Central	15%
West North Central	13%
South Atlantic	22%
East South Central	3%
West South Central	7%
Mountain	16%
Pacific	16%
Population	Percent
Less than 10,000	10%
10,000 to 24,999	22%
25,000 to 49,999	23%
50,000 to 99,999	22%
100,000 or more	23%

In that final column, Middleton's results are noted as being "higher" than the benchmark, "lower" than the benchmark or "similar" to the benchmark, meaning that the average rating given by Middleton residents is statistically similar to or different (greater or lesser) than the benchmark. Being rated as "higher" or "lower" than the benchmark means that Middleton's average rating for a particular item was more than 10 points different than the benchmark. If a rating was "much higher" or "much lower," then Middleton's average rating was more than 20 points different when compared to the benchmark.

National Benchmark Comparisons

Table 44: Quality of Life

Quality of Life Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Overall image or reputation of Middleton	88%	60	344	Higher
The overall quality of life in Middleton	95%	42	431	Higher
Middleton as a place to live	97%	52	373	Higher
Recommend living in Middleton to someone who asks	95%	42	289	Similar
Remain in Middleton for the next five years	84%	153	282	Similar

Table 45: Governance

Governance Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Overall confidence in Middleton government	71%	23	277	Higher
The overall direction that Middleton is taking	78%	28	318	Higher
The value of services for the taxes paid to Middleton	74%	16	380	Higher
Generally acting in the best interest of the community	74%	33	278	Higher
Being honest	74%	28	270	Higher
Being open and transparent to the public	69%	9	27	Similar
Informing residents about issues facing the community	64%	15	27	Similar
The job Middleton government does at welcoming resident involvement	64%	69	318	Similar
Treating all residents fairly	71%	58	275	Similar
Treating residents with respect	77%	12	27	Similar
Overall customer service by Middleton employees	90%	24	372	Higher
Public information services	81%	59	285	Similar
Quality of services provided by the City of Middleton	89%	50	393	Higher
Quality of services provided by the Federal Government	28%	251	259	Similar

Table 46: Economy

Economy Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Overall economic health of Middleton	88%	49	275	Higher
Economic development	76%	30	284	Higher
Overall quality of business and service establishments in Middleton	91%	7	278	Higher
Variety of business and service establishments in Middleton	75%	5	26	Similar
Vibrancy of downtown/commercial area	76%	36	253	Higher
Shopping opportunities	65%	102	295	Similar
Middleton as a place to visit	75%	88	292	Similar
Middleton as a place to work	88%	9	354	Higher
Employment opportunities	63%	38	310	Higher
Cost of living in Middleton	38%	170	273	Similar
Economy will have positive impact on income	13%	263	264	Lower
NOT experiencing housing costs stress	64%	185	264	Similar

Table 47: Mobility

Mobility Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Overall quality of the transportation system in Middleton	72%	150	280	Similar
Traffic flow on major streets	83%	5	332	Much higher
Ease of travel by car in Middleton	92%	4	308	Higher
Ease of travel by public transportation in Middleton	41%	83	243	Similar
Ease of travel by bicycle in Middleton	78%	21	307	Higher
Ease of walking in Middleton	87%	20	308	Higher
Ease of public parking	73%	28	238	Higher
Bus or transit services	50%	116	238	Similar
Traffic enforcement	77%	68	354	Similar
Traffic signal timing	69%	33	268	Similar
Street repair	61%	88	352	Similar
Street cleaning	87%	10	308	Higher
Street lighting	78%	35	327	Higher
Snow removal	82%	50	269	Higher
Sidewalk maintenance	79%	14	304	Higher
Used bus, rail, subway, or other public transportation instead of driving	24%	89	225	Similar

Mobility Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Carpooled with other adults or children instead of driving alone	39%	170	257	Similar
Walked or biked instead of driving	78%	29	265	Much higher

Table 48: Community Design

Community Design Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Overall design or layout of Middleton's residential and commercial areas	79%	37	270	Higher
Overall appearance of Middleton	90%	63	341	Higher
Your neighborhood as a place to live	94%	24	310	Higher
Overall quality of new development in Middleton	69%	57	294	Similar
Well-planned residential growth	67%	9	30	Similar
Well-planned commercial growth	63%	4	30	Similar
Well-designed neighborhoods	74%	8	31	Similar
Preservation of the historical or cultural character of the community	72%	6	25	Similar
Public places where people want to spend time	77%	70	264	Similar
Variety of housing options	59%	100	283	Similar
Availability of affordable quality housing	31%	207	307	Similar
Land use, planning, and zoning	66%	32	299	Higher
Code enforcement	65%	74	363	Similar

Table 49: Utilities

Utilities Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Overall quality of the utility infrastructure in Middleton	86%	7	27	Higher
Affordable high-speed internet access	66%	4	24	Similar
Power (electric and/or gas) utility	90%	11	192	Similar
Garbage collection	92%	44	334	Similar
Drinking water	79%	88	302	Similar
Sewer services	90%	22	302	Similar
Storm water management	73%	63	328	Similar
Utility billing	83%	14	238	Similar

Table 50: Safety

Safety Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Overall feeling of safety in Middleton	88%	144	353	Similar
Police/Sheriff services	85%	131	420	Similar
Crime prevention	77%	132	350	Similar
Animal control	87%	8	318	Higher
Ambulance or emergency medical services	93%	137	320	Similar
Fire services	94%	163	360	Similar
Fire prevention and education	88%	68	284	Similar
Emergency preparedness	74%	59	281	Similar
In your neighborhood during the day	96%	86	346	Similar
In Middleton's downtown/commercial area during the day	96%	45	320	Similar
From property crime	80%	16	40	Similar
From violent crime	88%	19	40	Similar
From fire, flood, or other natural disaster	82%	19	27	Similar

Table 51: Natural Environment

Natural Environment Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Overall quality of natural environment in Middleton	94%	20	281	Higher
Cleanliness of Middleton	93%	35	300	Higher
Water resources	81%	6	23	Higher
Air quality	94%	25	254	Higher
Preservation of natural areas	88%	3	259	Much higher
Middleton open space	83%	16	249	Higher
Recycling	85%	83	342	Similar
Yard waste pick-up	77%	142	269	Similar

Table 52: Parks and Recreation

Parks and Recreation Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Overall quality of parks and recreation opportunities	94%	3	27	Higher
Availability of paths and walking trails	94%	6	306	Much higher
City parks	95%	30	310	Higher
Recreational opportunities	84%	42	295	Higher
Recreation programs or classes	80%	97	314	Similar
Recreation centers or facilities	78%	96	282	Similar
Fitness opportunities	88%	16	261	Higher

Table 53: Health and Wellness

Health and Wellness Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Overall health and wellness opportunities in Middleton	87%	29	273	Higher
Health services	84%	35	231	Higher
Availability of affordable quality health care	74%	62	267	Similar
Availability of preventive health services	74%	65	249	Similar
Availability of affordable quality mental health care	57%	72	243	Similar
Availability of affordable quality food	75%	51	253	Similar
In very good to excellent health	94%	41	259	Similar

Table 54: Education, Arts, and Culture

Education, Arts, and Culture Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Overall opportunities for education, culture, and the arts	70%	131	272	Similar
Opportunities to attend cultural/arts/music activities	57%	167	294	Similar
Opportunities to attend special events and festivals	67%	155	288	Similar
Community support for the arts	64%	13	27	Similar
Public library services	93%	26	319	Higher
Availability of affordable quality child care/preschool	59%	63	265	Similar
K-12 education	87%	47	269	Higher
Adult educational opportunities	58%	132	252	Similar

Table 55: Inclusivity and Engagement

Inclusivity and Engagement Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Residents' connection and engagement with their community	66%	12	27	Similar
Sense of community	69%	86	305	Similar
Sense of civic/community pride	79%	8	27	Similar
Neighborliness of Middleton	76%	19	265	Similar
Middleton as a place to raise children	91%	66	370	Higher
Middleton as a place to retire	73%	74	356	Similar
Openness and acceptance of the community toward people of diverse backgrounds	61%	155	299	Similar

Inclusivity and Engagement Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Making all residents feel welcome	75%	12	27	Similar
Attracting people from diverse backgrounds	53%	24	27	Similar
Valuing/respecting residents from diverse backgrounds	64%	17	27	Similar
Taking care of vulnerable residents	71%	6	27	Similar
Opportunities to participate in social events and activities	64%	120	270	Similar
Opportunities to volunteer	73%	102	273	Similar
Opportunities to participate in community matters	68%	107	279	Similar

Table 56: Participation

Participation Items	Percent positive	Rank	Number of communities in comparison	Comparison to benchmark
Contacted Middleton for help or information	50%	86	329	Similar
Contacted Middleton elected officials to express your opinion	19%	90	264	Similar
Attended a local public meeting	18%	182	270	Similar
Watched (online or on television) a local public meeting	20%	149	241	Similar
Volunteered your time to some group/activity in Middleton	28%	214	272	Similar
Campaigned or advocated for an issue, cause or candidate	16%	203	251	Similar
Voted in your most recent local election	81%	3	27	Similar
Access the internet from your home using a computer, laptop or tablet computer	97%	4	27	Similar
Access the internet from your cell phone	93%	11	27	Similar
Visit social media sites such as Facebook, Twitter, WhatsApp, etc.	78%	19	27	Similar
Use or check email	98%	7	27	Similar
Share your opinions online	28%	22	27	Similar
Shop online	52%	12	27	Similar

Table 57: Focus Areas

Importance Items	Percent essential or very important	Rank	Number of communities in comparison	Comparison to benchmark
Overall economic health of Middleton	88%	222	252	Similar
Overall quality of the transportation system in Middleton	79%	115	252	Similar
Overall design or layout of Middleton's residential and commercial areas	74%	171	252	Similar
Overall quality of the utility infrastructure in Middleton	88%	13	27	Similar
Overall feeling of safety in Middleton	91%	111	252	Similar
Overall quality of natural environment in Middleton	90%	22	252	Higher
Overall quality of parks and recreation opportunities	84%	3	27	Similar
Overall health and wellness opportunities in Middleton	74%	143	251	Similar
Overall opportunities for education, culture, and the arts	76%	162	252	Similar
Residents' connection and engagement with their community	75%	204	252	Similar

Communities included in national comparisons

The communities included in Middleton's comparisons are listed on the following pages along with their population according to the American Community Survey (ACS) 2017 5-year estimates.

Adams County, CO....487,850
Airway Heights city, WA....8,017
Albemarle County, VA....105,105
Albert Lea city, MN....17,716
Alexandria city, VA....154,710
Allegan County, MI....114,145
American Canyon city, CA....20,341
Ankeny city, IA....56,237
Ann Arbor city, MI....119,303
Apache Junction city, AZ....38,452
Arapahoe County, CO....626,612
Arlington city, TX....388,225
Arvada city, CO....115,320
Asheville city, NC....89,318
Ashland city, OR....20,733
Ashland town, MA....17,478
Ashland town, VA....7,554
Aspen city, CO....7,097
Athens-Clarke County, GA....122,292
Auburn city, AL....61,462
Aurora city, CO....357,323
Austin city, TX....916,906
Avon town, CO....6,503
Avon town, IN....16,479
Avondale city, AZ....81,590
Azusa city, CA....49,029
Bainbridge Island city, WA....23,689
Baltimore city, MD....619,796
Baltimore County, MD....828,637
Batavia city, IL....26,499
Battle Creek city, MI....51,505
Bay Village city, OH....15,426
Baytown city, TX....76,205
Beaumont city, CA....43,641
Bellingham city, WA....85,388
Bend city, OR....87,167
Bethlehem township, PA....23,800
Bettendorf city, IA....35,293
Billings city, MT....109,082
Bloomington city, IN....83,636
Bloomington city, MN....85,417
Boise City city, ID....220,859
Bonner Springs city, KS....7,644
Boulder city, CO....106,271
Bowling Green city, KY....64,302
Bozeman city, MT....43,132
Brookline CDP, MA....59,246
Brooklyn Center city, MN....30,885
Brooklyn city, OH....10,891
Broomfield city, CO....64,283
Brownsburg town, IN....24,625
Buffalo Grove village, IL....41,551
Burlingame city, CA....30,401
Cabarrus County, NC....196,716

Cambridge city, MA 110,893
Canandaigua city, NY 10,402
Cannon Beach city, OR 1,517
Cañon City city, CO 16,298
Cape Coral city, FL 173,679
Carlsbad city, CA 113,147
Cartersville city, GA 20,235
Cary town, NC 159,715
Castle Rock town, CO 57,274
Cedar Hill city, TX 48,149
Cedar Park city, TX 70,010
Cedar Rapids city, IA 130,330
Celina city, TX 7,910
Centennial city, CO 108,448
Chandler city, TX 2,896
Chanhassen city, MN 25,108
Chapel Hill town, NC 59,234
Chardon city, OH 5,166
Charles County, MD 156,021
Charlotte County, FL 173,236
Charlottesville city, VA 46,487
Chattanooga city, TN 176,291
Chautauqua town, NY 4,362
Chesterfield County, VA 335,594
Clayton city, MO 16,214
Clearwater city, FL 112,794
Clinton city, SC 8,538
Clive city, IA 17,134
Clovis city, CA 104,411
College Park city, MD 32,186
College Station city, TX 107,445
Colleyville city, TX 25,557
Collinsville city, IL 24,767
Columbia city, MO 118,620
Commerce City city, CO 52,905
Conshohocken borough, PA 7,985
Coolidge city, AZ 12,221
Coon Rapids city, MN 62,342
Coral Springs city, FL 130,110
Coronado city, CA 24,053
Corvallis city, OR 56,224
Cottonwood Heights city, UT 34,214
Coventry Lake CDP, CT 2,932
Coventry town, CT 12,458
Cupertino city, CA 60,687
Dacono city, CO 4,929
Dakota County, MN 414,655
Dallas city, OR 15,413
Dallas city, TX 1,300,122
Danvers town, MA 27,527
Danville city, KY 16,657
Darien city, IL 22,206
Davidson town, NC 12,325
Dayton city, OH 140,939
Dayton town, WY 815
Dearborn city, MI 95,295
Decatur city, GA 22,022
DeLand city, FL 30,315
Delaware city, OH 38,193
Denison city, TX 23,342
Denton city, TX 131,097
Denver city, CO 678,467
Des Moines city, IA 214,778
Des Peres city, MO 8,536
Destin city, FL 13,421
Dothan city, AL 67,784
Dover city, NH 30,901
Dublin city, CA 57,022
Dublin city, OH 44,442
Duluth city, MN 86,066
Durham city, NC 257,232
Durham County, NC 300,865
Dyer town, IN 16,077
Eagan city, MN 66,102
Eagle Mountain city, UT 27,773
Eau Claire city, WI 67,945
Eden Prairie city, MN 63,660
Eden town, VT 1,254
Edgewater city, CO 5,299
Edina city, MN 50,603
Edmond city, OK 89,769
Edmonds city, WA 41,309
El Cerrito city, CA 24,982
El Paso de Robles (Paso Robles) city, CA 31,409
Elgin city, IL 112,628
Elk Grove city, CA 166,228
Elmhurst city, IL 46,139
Englewood city, CO 33,155
Erie town, CO 22,019
Escambia County, FL 309,924
Estes Park town, CO 6,248
Euclid city, OH 47,698
Farmers Branch city, TX 33,808
Farmersville city, TX 3,440
Farmington Hills city, MI 81,235
Fate city, TX 10,339
Fayetteville city, GA 17,069
Fayetteville city, NC 210,324
Ferguson township, PA 18,837
Fernandina Beach city, FL 11,957
Flower Mound town, TX 71,575
Forest Grove city, OR 23,554
Fort Collins city, CO 159,150
Franklin city, TN 72,990
Frederick town, CO 11,397
Fremont city, CA 230,964
Frisco town, CO 2,977
Fruita city, CO 13,039
Gahanna city, OH 34,691
Gaithersburg city, MD 67,417
Galveston city, TX 49,706
Gardner city, KS 21,059
Germantown city, TN 39,230
Gilbert town, AZ 232,176
Gillette city, WY 31,783
Glen Ellyn village, IL 27,983
Glendora city, CA 51,891
Glenview village, IL 47,066
Golden city, CO 20,365
Golden Valley city, MN 21,208
Goodyear city, AZ 74,953
Grafton village, WI 11,576
Grand Rapids city, MI 195,355
Grand Traverse County, MI 91,222
Greeley city, CO 100,760
Greenville city, NC 90,347
Greer city, SC 28,587
Gunnison County, CO 16,215
Haltom City city, TX 44,059
Hamilton city, OH 62,216
Hamilton town, MA 7,991
Hampton city, VA 136,255

Hanover County, VA	103,218
Harrisburg city, SD	5,429
Hastings city, MN	22,620
Henderson city, NV	284,817
High Point city, NC	109,849
Highland Park city, IL	29,796
Highlands Ranch CDP, CO	105,264
Homer Glen village, IL	24,403
Honolulu County, HI	990,060
Hopkinton town, MA	16,720
Hoquiam city, WA	8,416
Horry County, SC	310,186
Hudson town, CO	1,709
Huntley village, IL	26,265
Huntsville city, TX	40,727
Hutchinson city, MN	13,836
Hutto city, TX	22,644
Hyattsville city, MD	18,225
Independence city, MO	117,369
Indio city, CA	86,867
Iowa City city, IA	73,415
Issaquah city, WA	35,629
Jackson city, MO	14,690
Jackson County, MI	158,989
Jefferson Parish, LA	437,038
Jerome city, ID	11,306
Johnson City city, TN	65,598
Johnston city, IA	20,172
Jupiter town, FL	62,373
Kalamazoo city, MI	75,833
Kansas City city, KS	151,042
Kansas City city, MO	476,974
Kent city, WA	126,561
Kerrville city, TX	22,931
Key West city, FL	25,316
King City city, CA	13,721
Kingman city, AZ	28,855
Kirkland city, WA	86,772
Kirkwood city, MO	27,659
La Mesa city, CA	59,479
La Plata town, MD	9,160
La Vista city, NE	17,062
Lake Forest city, IL	18,931
Lake in the Hills village, IL	28,908
Lake Zurich village, IL	19,983
Lakeville city, MN	61,056
Lakewood city, CO	151,411
Lakewood city, WA	59,102
Lancaster County, SC	86,544
Laramie city, WY	32,104
Larimer County, CO	330,976
Las Cruces city, NM	101,014
Las Vegas city, NM	13,445
Lawrence city, KS	93,954
Lawrenceville city, GA	29,287
Lehi city, UT	58,351
Lenexa city, KS	52,030
Lewisville city, TX	103,638
Libertyville village, IL	20,504
Lincolnwood village, IL	12,637
Lindsborg city, KS	3,313
Little Chute village, WI	11,006
Littleton city, CO	45,848
Livermore city, CA	88,232
Lombard village, IL	43,776
Lone Tree city, CO	13,430
Long Grove village, IL	7,980
Longmont city, CO	91,730
Lonsdale city, MN	3,850
Los Alamos County, NM	18,031
Los Altos Hills town, CA	8,490
Loudoun County, VA	374,558
Louisville city, CO	20,319
Lower Merion township, PA	58,500
Lynchburg city, VA	79,237
Lynnwood city, WA	37,242
Manassas city, VA	41,379
Manhattan Beach city, CA	35,698
Manhattan city, KS	55,427
Mankato city, MN	41,241
Maple Grove city, MN	68,362
Maplewood city, MN	40,127
Maricopa County, AZ	4,155,501
Marin County, CA	260,814
Marion city, IA	38,014
Mariposa County, CA	17,658
Marshfield city, WI	18,326
Martinez city, CA	37,902
Marysville city, WA	66,178
Maui County, HI	164,094
McKinney city, TX	164,760
McMinnville city, OR	33,211
Mecklenburg County, NC	1,034,290
Menlo Park city, CA	33,661
Menomonee Falls village, WI	36,411
Mercer Island city, WA	24,768
Meridian charter township, MI	41,903
Merriam city, KS	11,259
Mesa city, AZ	479,317
Mesquite city, TX	144,118
Miami city, FL	443,007
Middleton city, WI	18,951
Middletown town, RI	16,100
Milford city, DE	10,645
Milton city, GA	37,556
Minneapolis city, MN	411,452
Minnetrista city, MN	7,187
Missoula County, MT	114,231
Missouri City city, TX	72,688
Moline city, IL	42,644
Monroe city, MI	20,128
Montgomery city, MN	2,921
Montgomery County, MD	1,039,198
Monticello city, UT	2,599
Montrose city, CO	18,918
Moraga town, CA	17,231
Morristown city, TN	29,446
Morrisville town, NC	23,873
Morro Bay city, CA	10,568
Moscow city, ID	24,833
Mountlake Terrace city, WA	20,922
Murphy city, TX	20,361
Naperville city, IL	146,431
Napoleon city, OH	8,646
Needham CDP, MA	30,429
Nevada City city, CA	3,112
Nevada County, CA	98,838
New Braunfels city, TX	70,317
New Brighton city, MN	22,440
New Concord village, OH	2,561
New Hope city, MN	20,909
Newport city, RI	24,745

Newport News city, VA 180,775
Newton city, IA 15,085
Niles village, IL 29,823
Noblesville city, IN 59,807
Norcross city, GA 16,474
Norfolk city, NE 24,352
North Mankato city, MN 13,583
North Port city, FL 62,542
North Yarmouth town, ME 3,714
Northglenn city, CO 38,473
Novato city, CA 55,378
Novi city, MI 58,835
O'Fallon city, IL 29,095
Oak Park village, IL 52,229
Oakdale city, MN 27,972
Oklahoma City city, OK 629,191
Olmsted County, MN 151,685
Orland Park village, IL 59,161
Orleans Parish, LA 388,182
Oshkosh city, WI 66,649
Oswego village, IL 33,759
Overland Park city, KS 186,147
Paducah city, KY 24,879
Palm Beach Gardens city, FL 53,119
Palm Coast city, FL 82,356
Palo Alto city, CA 67,082
Palos Verdes Estates city, CA 13,591
Panama City Beach city, FL 12,461
Papillion city, NE 19,478
Paradise Valley town, AZ 13,961
Park City city, UT 8,167
Parker town, CO 51,125
Pasco city, WA 70,607
Pasco County, FL 498,136
Payette city, ID 7,366
Pearland city, TX 113,693
Peoria city, IL 115,424
Pflugerville city, TX 58,013
Philadelphia city, PA 1,569,657
Pinehurst village, NC 15,580
Piqua city, OH 20,793
Pitkin County, CO 17,747
Plano city, TX 281,566
Platte City city, MO 4,867
Pleasant Hill city, IA 9,608
Pleasanton city, CA 79,341
Plymouth city, MN 76,258
Port Orange city, FL 60,315
Port St. Lucie city, FL 178,778
Portland city, OR 630,331
Powell city, OH 12,658
Powhatan County, VA 28,364
Prairie Village city, KS 21,932
Pueblo city, CO 109,122
Purcellville town, VA 9,217
Queen Creek town, AZ 33,298
Raleigh city, NC 449,477
Ramsey city, MN 25,853
Raymore city, MO 20,358
Redmond city, OR 28,492
Redmond city, WA 60,712
Redwood City city, CA 84,368
Reno city, NV 239,732
Richfield city, MN 35,993
Richland city, WA 53,991
Richmond city, CA 108,853
Richmond Heights city, MO 8,466
Rio Rancho city, NM 93,317
River Falls city, WI 15,256
Riverside city, CA 321,570
Roanoke city, VA 99,572
Roanoke County, VA 93,419
Rochester city, NY 209,463
Rock Hill city, SC 70,764
Rockville city, MD 66,420
Roeland Park city, KS 6,810
Rohnert Park city, CA 42,305
Rolla city, MO 20,013
Rosemount city, MN 23,474
Rosenberg city, TX 35,867
Roseville city, MN 35,624
Round Rock city, TX 116,369
Royal Palm Beach village, FL 37,665
Sacramento city, CA 489,650
Sahuarita town, AZ 28,257
Sammamish city, WA 62,877
San Carlos city, CA 29,954
San Diego city, CA 1,390,966
San Francisco city, CA 864,263
San Jose city, CA 1,023,031
San Marcos city, TX 59,935
Sangamon County, IL 198,134
Santa Fe city, NM 82,980
Santa Fe County, NM 147,514
Savage city, MN 30,011
Schaumburg village, IL 74,427
Schertz city, TX 38,199
Scott County, MN 141,463
Scottsdale city, AZ 239,283
Sedona city, AZ 10,246
Sevierville city, TN 16,387
Shakopee city, MN 40,024
Shawnee city, KS 64,840
Shawnee city, OK 30,974
Shoreline city, WA 55,431
Shoreview city, MN 26,432
Shorewood village, IL 16,809
Sierra Vista city, AZ 43,585
Silverton city, OR 9,757
Sioux Falls city, SD 170,401
Skokie village, IL 64,773
Snoqualmie city, WA 12,944
Snowmass Village town, CO 2,827
Somerset town, MA 18,257
South Jordan city, UT 65,523
Southlake city, TX 30,090
Spearfish city, SD 11,300
Springville city, UT 32,319
St. Augustine city, FL 13,952
St. Charles city, IL 32,730
St. Cloud city, MN 67,093
St. Joseph city, MO 76,819
St. Louis County, MN 200,294
St. Lucie County, FL 298,763
State College borough, PA 42,224
Steamboat Springs city, CO 12,520
Sugar Land city, TX 86,886
Suisun City city, CA 29,280
Summit County, UT 39,731
Sunnyvale city, CA 151,565
Surprise city, AZ 129,534
Suwanee city, GA 18,655

Tacoma city, WA 207,280
Takoma Park city, MD 17,643
Tempe city, AZ 178,339
Temple city, TX 71,795
Texarkana city, TX 37,222
The Woodlands CDP, TX 109,608
Thousand Oaks city, CA 128,909
Tigard city, OR 51,355
Tinley Park village, IL 57,107
Tracy city, CA 87,613
Trinidad CCD, CO 10,819
Tualatin city, OR 27,135
Tulsa city, OK 401,352
Tustin city, CA 80,007
Twin Falls city, ID 47,340
Unalaska city, AK 4,809
University Heights city, OH 13,201
University Park city, TX 24,692
Urbandale city, IA 42,222
Vail town, CO 5,425
Vernon Hills village, IL 26,084
Victoria city, MN 8,679
Vienna town, VA 16,474
Virginia Beach city, VA 450,057
Walnut Creek city, CA 68,516
Warrensburg city, MO 19,890
Washington County, MN 250,979
Washoe County, NV 445,551
Waunakee village, WI 13,284
Wauwatosa city, WI 47,687
Wentzville city, MO 35,768
West Carrollton city, OH 12,963
West Chester township, OH 62,804
West Des Moines city, IA 62,999
Western Springs village, IL 13,187
Westerville city, OH 38,604
Westlake town, TX 1,006
Westminster city, CO 111,895
Westminster city, MD 18,557
Wheat Ridge city, CO 31,162
White House city, TN 11,107
Wichita city, KS 389,054
Williamsburg city, VA 14,817
Willowbrook village, IL 8,598
Wilmington city, NC 115,261
Wilsonville city, OR 22,789
Windsor town, CO 23,386
Windsor town, CT 29,037
Winter Garden city, FL 40,799
Woodbury city, MN 67,648
Woodinville city, WA 11,675
Wyandotte County, KS 163,227
Wyoming city, MI 75,124
Yakima city, WA 93,182
York County, VA 67,196
Yorktown town, IN 11,200
Yorkville city, IL 18,691
Yountville city, CA 2,978

Appendix C: Detailed Survey Methods

The National Community Survey™ (The NCS™), conducted by National Research Center, Inc., was developed to provide communities an accurate, affordable and easy way to assess and interpret resident opinion about important local topics. Standardization of common questions and survey methods provide the rigor to assure valid results, and each community has enough flexibility to construct a customized version of The NCS.

Results offer insight into residents' perspectives about the community as a whole, including local amenities, services, public trust, resident participation and other aspects of the community in order to support budgeting, land use and strategic planning and communication with residents. Resident demographic characteristics permit comparison to the Census as well as comparison of results for different subgroups of residents. The City of Middleton funded this research. Please contact Middleton City Administrator Mike Davis at mdavis@ci.middleton.wi.us if you have any questions about the survey.

Survey Validity

The question of survey validity has two parts: 1) how can a community be confident that the results from those who completed the questionnaire are representative of the results that would have been obtained had the survey been administered to the entire population? and 2) how closely do the perspectives recorded on the survey reflect what residents really believe or do?

To answer the first question, the best survey research practices were used for the resources spent to ensure that the results from the survey respondents reflect the opinions of residents in the entire community. These practices include:

- Using a mail-out/mail-back methodology, which typically gets a higher response rate than phone for the same dollars spent. A higher response rate lessens the worry that those who did not respond are different than those who did respond.
- Selecting households at random within the community to receive the survey to ensure that the households selected to receive the survey are representative of the larger community.
- Over-sampling multi-family housing units to improve response from hard-to-reach, lower income or younger apartment dwellers.
- Selecting the respondent within the household using an unbiased sampling procedure; in this case, the "birthday method." The cover letter included an instruction requesting that the respondent in the household be the adult (18 years old or older) who most recently had a birthday, irrespective of year of birth.
- Contacting potential respondents three times to encourage response from people who may have different opinions or habits than those who would respond with only a single prompt.
- Inviting response in a compelling manner (using appropriate letterhead/logos and a signature of a visible leader) to appeal to recipients' sense of civic responsibility.
- Providing a pre-addressed, postage-paid return envelope.
- Offering the survey in Spanish or other language when requested by a given community.
- Weighting the results to reflect the demographics of the population.

The answer to the second question about how closely the perspectives recorded on the survey reflect what residents really believe or do is more complex. Resident responses to surveys are influenced by a variety of factors. For questions about service quality, residents' expectations for service quality play a role as well as the "objective" quality of the service provided, the way the resident perceives the entire community (that is, the context in which the service is provided), the scale on which the resident is asked to record his or her opinion and, of course, the opinion, itself, that a resident holds about the service. Similarly a resident's report of certain behaviors is colored by what he or she believes is the socially desirable response (e.g., reporting tolerant behaviors toward "oppressed groups," likelihood of voting for a tax increase for services to poor people, use of alternative modes of travel to work besides the single occupancy vehicle), his or her memory of the actual behavior (if it is not a question speculating about future actions, like a vote), his or her confidence that he or she can be honest without suffering any negative consequences (thus the need for anonymity) as well as the actual behavior itself.

How closely survey results come to recording the way a person really feels or behaves often is measured by the coincidence of reported behavior with observed current behavior (e.g., driving habits), reported intentions to behave with observed future behavior (e.g., voting choices) or reported opinions about current community quality with objective characteristics of the community (e.g., feelings of safety correlated with rates of crime). There is a body of scientific literature that has investigated the relationship between reported behaviors and actual behaviors. Well-conducted surveys, by and large, do capture true respondent behaviors or intentions to act with great accuracy. Predictions of voting outcomes tend to be quite accurate using survey research, as do reported behaviors that are not about highly sensitive issues (e.g., family abuse or other illegal or morally sanctioned activities). For self-reports about highly sensitive issues, statistical adjustments can be made to correct for the respondents' tendency to report what they think the "correct" response should be.

Research on the correlation of resident opinion about service quality and "objective" ratings of service quality vary, with some showing stronger relationships than others. NRC's own research has demonstrated that residents who report the lowest ratings of street repair live in communities with objectively worse street conditions than those who report high ratings of street repair (based on road quality, delay in street repair, number of road repair employees). Similarly, the lowest rated fire services appear to be "objectively" worse than the highest rated fire services (expenditures per capita, response time, "professional" status of firefighters, breadth of services and training provided). Resident opinion commonly reflects objective performance data but is an important measure on its own. NRC principals have written, "If you collect trash three times a day but residents think that your trash haul is lousy, you still have a problem."

Selecting Survey Recipients

"Sampling" refers to the method by which households were chosen to receive the survey. All households within the City of Middleton were eligible to participate in the survey. A list of all households within the zip codes serving Middleton was purchased from Go-Dog Direct based on updated listings from the United States Postal Service. Since some of the zip codes that serve the City of Middleton households may also serve addresses that lie outside of the community, the exact geographic location of each housing unit was compared to community boundaries using the most current municipal boundary file (updated on a quarterly basis) and addresses located outside of Middleton boundaries were removed from consideration. Each address identified as

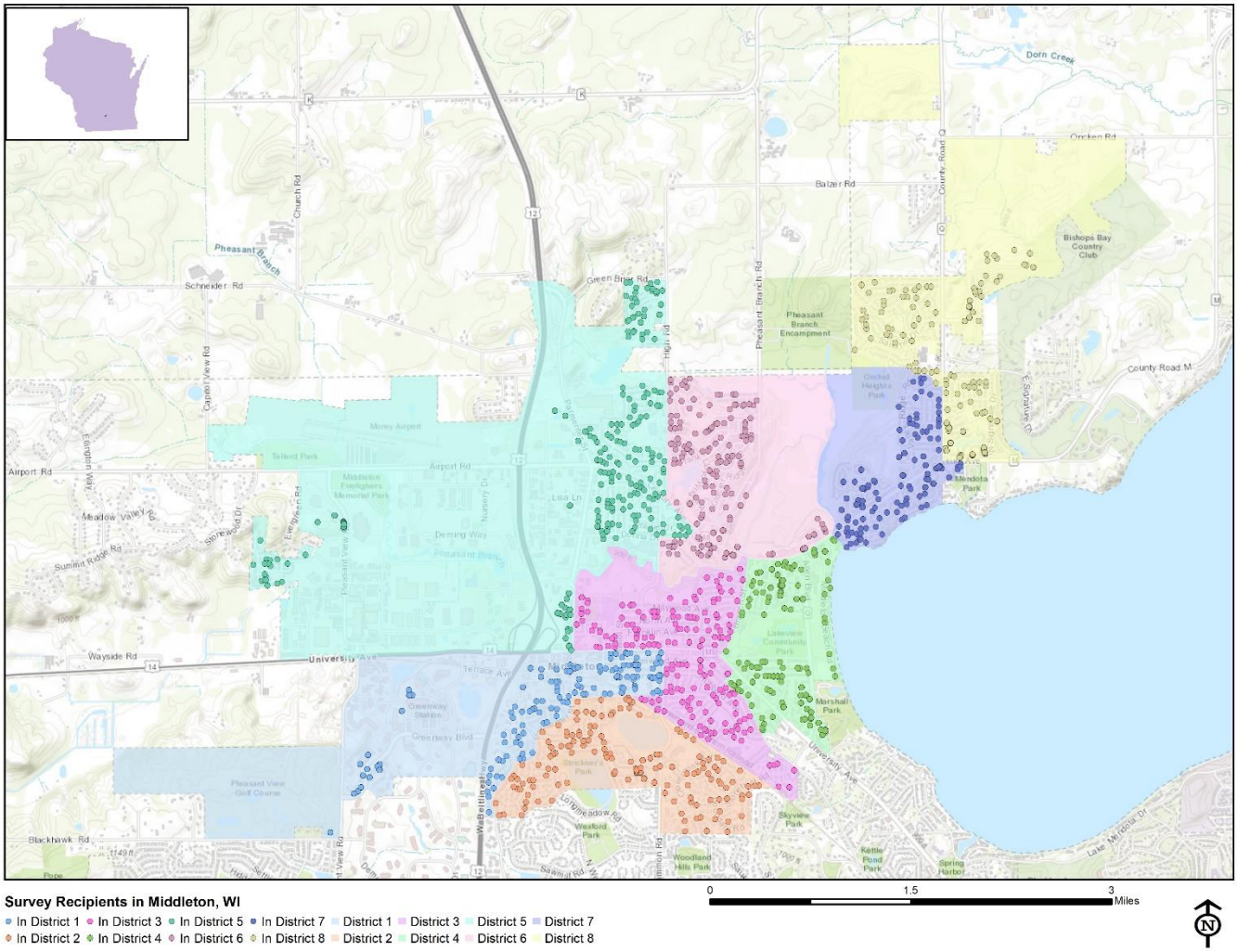
being within City boundaries was further identified as being within one of the eight Alder Districts.

To choose the 2,700 survey recipients, a systematic sampling method was applied to the list of households previously screened for geographic location. Systematic sampling is a procedure whereby a complete list of all possible households is culled, selecting every *Nth* one, giving each eligible household a known probability of selection, until the appropriate number of households is selected. Multi-family housing units were selected at a higher rate as residents of this type of housing typically respond at lower rates to surveys than do those in single-family housing units. Figure 1 displays a map of the households selected to receive the survey. In general, because of the random sampling techniques used, the displayed sampling density will closely mirror the overall housing unit density (which may be different from the population density). While the theory of probability assumes no bias in selection, there may be some minor variations in practice (meaning, an area with only 15% of the housing units might be selected at an actual rate that is slightly above or below that).

An individual within each household was selected using the birthday method. The birthday method selects a person within the household by asking the "person whose birthday has most recently passed" to complete the questionnaire. The underlying assumption in this method is that day of birth has no relationship to the way people respond to surveys. This instruction was contained in the cover letter accompanying the questionnaire.

In addition to the scientific, random selection of households, a link to an online "opt-in" survey was publicized and posted to the City of Middleton website. This opt-in survey was identical to the scientific survey and open to all City residents. (The data presented in this report exclude the opt-in survey data. These data can be found in the *Supplemental Online Survey Results* provided under separate cover.)

Figure 1: Location of Survey Recipients



Survey Administration and Response

Selected households received mailings beginning on September 3. For 1,200 households, the first mailing was a postcard announcing the upcoming survey with a link to complete the survey online. The next mailing contained a letter from the City Administrator inviting the household to participate, a questionnaire, and a postage-paid return envelope. The final mailing contained a reminder letter, another survey, and a postage-paid return envelope. The second cover letter asked those who had not completed the survey to do so and those who had already done so to refrain from turning in another survey. For 1,500 households, the first mailing was a postcard with a link to complete the survey online, followed one week later by a reminder postcard with a link to the survey. The second postcard also asked respondents not to complete the survey a second time.

The survey was available in English. All mailings included a URL through which the residents could choose to respond online. The City of Middleton's reporting included demographic and geographic subgroup comparisons. Completed surveys were collected over seven weeks. The online "opt-in" survey became available to all residents on October 8 and remained open for four weeks.

About 6% of the 2,700 surveys mailed were returned because the housing unit was vacant or the postal service was unable to deliver the survey as addressed. Of the remaining 2,534 households that received the survey, 664 completed the survey, providing an overall response rate of 26%. Of the 664 completed surveys, 502 were completed online. Additionally, responses were tracked by Alder District; response rates by District ranged from 17% to 38%. The response rates were calculated using AAPOR's response rate #2[1] for mailed surveys of unnamed persons. Additionally, 164 residents completed the online opt-in survey.

Table 58: Survey Response Rates by Alder District

	District 1	District 2	District 3	District 4	District 5	District 6	District 7	District 8	Overall
Total sample used	511	220	219	383	454	283	289	341	2,700
I=Complete Interviews	126	66	75	61	96	102	71	64	661
P=Partial Interviews	0	1	0	1	1	0	0	0	3
R=Refusal and break off	0	0	0	0	0	0	0	0	0
NC=Non Contact	0	0	0	0	0	0	0	0	0
O=Other	0	0	0	0	0	0	0	0	0
UH=Unknown household	0	0	0	0	0	0	0	0	0
UO=Unknown other	340	140	134	296	336	169	200	255	1,870
NE=Not eligible	45	13	10	25	21	12	18	22	166
Response rate: (I+P)/(I+P) + (R+NC+O) + (UH+UO)	27%	32%	36%	17%	22%	38%	26%	20%	26%

Confidence Intervals

It is customary to describe the precision of estimates made from surveys by a "level of confidence" and accompanying "confidence interval" (or margin of error). A traditional level of confidence, and the one used here, is 95%. The 95% confidence interval can be any size and quantifies the sampling error or imprecision of the survey results because some residents' opinions are relied on to estimate all residents' opinions.[2]

1 See AAPOR's Standard Definitions for more information:
http://www.aapor.org/Standards-Ethics/Standard-Definitions-(1).aspx

2 A 95% confidence interval indicates that for every 100 random samples of this many residents, 95 of the confidence intervals created will include the "true" population response. This theory is applied in practice to mean that the "true" perspective of the target population lies within the confidence interval created for a single survey. For example, if 75% of residents rate a service as "excellent" or "good," then the 4% margin of error (for the 95% confidence interval) indicates that the range of likely responses for the entire community is between 71% and 79%. This source of uncertainty is called sampling error. In addition to sampling error, other sources of error may affect any survey, including the non-response of residents with opinions different from survey responders. Though standardized on The NCS, on other surveys, differences in question wording, order, translation and data entry, as examples, can lead to somewhat varying results.

The margin of error for the City of Middleton survey is no greater than plus or minus four percentage points around any given percent reported for all respondents (664 completed surveys).

For subgroups of responses, the margin of error increases because the number of respondents for the subgroup is smaller.

Survey Processing (Data Entry)

Upon receipt, completed surveys were assigned a unique identification number. Additionally, each survey was reviewed and "cleaned" as necessary. For example, a question may have asked a respondent to pick two items out of a list of five, but the respondent checked three; in this case, NRC would use protocols to randomly choose two of the three selected items for inclusion in the dataset.

All surveys then were entered twice into an electronic dataset; any discrepancies were resolved in comparison to the original survey form. Range checks as well as other forms of quality control were also performed.

NRC uses Polco, an online public engagement tool designed primarily for local governments, to collect online survey data. The Polco platform includes many features of online survey tools, but also includes elements tailored to the civic environment. For example, like NRC's mailed surveys, surveys on Polco are presented with the City name, logo (or other image) and a description, so residents understand who is asking for input and why. Optionally, Polco can also verify respondents with local public data to ensure respondents are residents or voters. More generally, an advantage of online programming and data gathering is that it allows for more rigid control of the data format, making extensive data cleaning unnecessary.

Survey Data Weighting

Upon completion of data collection for both the scientific (probability) and nonscientific open participation online opt-in (non-probability) surveys, the demographics of each dataset were separately compared to those found in the 2010 Census and 2017 American Community Survey estimates for adults in the City of Middleton. The primary objective of weighting survey data is to make the survey respondents reflective of the larger population of the community. Both survey datasets were weighted independently to best match the Census. The characteristics used for weighting were sex, age, race/ethnicity, housing unit type (attached or detached) and housing tenure (rent or own). No adjustments were made for design effects. Results for the opt-in survey have been provided under separate cover.

The results of the weighting scheme are presented in the following table.

Table 59: Middleton, WI 2020 Weighting Table

Characteristic	Population Norm	Unweighted Data	Weighted Data
Housing			
Rent home	45%	34%	45%
Own home	55%	66%	55%
Detached unit*	43%	50%	42%
Attached unit*	57%	50%	58%
Race and Ethnicity			
White	90%	92%	86%
Not white	10%	8%	14%
Not Hispanic	95%	97%	95%
Hispanic	5%	3%	5%
Sex and Age			
Female	53%	57%	53%
Male	47%	43%	47%
18-34 years of age	29%	14%	30%
35-54 years of age	37%	29%	33%
55+ years of age	34%	57%	37%
Females 18-34	15%	8%	15%
Females 35-54	19%	16%	17%
Females 55+	19%	33%	21%
Males 18-34	15%	6%	15%
Males 35-54	18%	13%	15%
Males 55+	15%	25%	17%
Alder District			
District 1	17%	19%	23%
District 2	10%	10%	8%
District 3	10%	11%	11%
District 4	13%	9%	11%
District 5	17%	15%	16%
District 6	11%	15%	13%
District 7	11%	11%	10%
District 8	13%	10%	9%

* U.S. Census Bureau ACS 2017 5-year estimates

Survey Data Analysis and Reporting

The survey dataset was analyzed using the Statistical Package for the Social Sciences (SPSS). For the most part, the percentages presented in the reports represent the "percent positive." The percent positive is the combination of the top two most positive response options (i.e., "excellent" and "good," "very safe" and "somewhat safe," "essential" and "very important," etc.), or, in the case of resident behaviors/participation, the percent positive represents the proportion of respondents indicating "yes" or participating in an activity at least once a month.

On many of the questions in the survey respondents may answer "don't know." The proportion of respondents giving this reply is shown in the full set of responses included in Appendix A. However, these responses have been removed from the analyses presented in the reports. In other words, the tables and graphs display the responses from respondents who had an opinion about a specific item. When a table for a question that only permitted a single response does not total to exactly 100%, it is due to the common practice of percentages being rounded to the nearest whole number.

Appendix D: Survey Materials

Dear Middleton Resident,

It won't take much of your time to make a big difference! With the COVID-19 pandemic weighing heavily in our lives, it is important for City leaders to continue to understand the broader needs of our community so we can keep resident opinions front and center as we move forward together.

Your household has been randomly selected to participate in a survey about our community. You can go online and complete the survey at:

Please do not share your survey link. This survey is for randomly selected households only. The City will conduct a separate survey that is open to all residents just a few weeks from now.

You can also wait a few days for the survey to arrive in the mail.

Thank you for helping create a better City!

Sincerely,



Mike Davis, City Administrator

Dear Middleton Resident,

It won't take much of your time to make a big difference! With the COVID-19 pandemic weighing heavily in our lives, it is important for City leaders to continue to understand the broader needs of our community so we can keep resident opinions front and center as we move forward together.

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Mike Davis, City Administrator



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7426 HUBBARD AVENUE
MIDDLETON, WI 53562-3118
PH 608.821-8358
E-MAIL: mdavis@ci.middleton.wi.us
WEB: www.CityofMiddleton.us

September 2020

Dear City of Middleton Resident:

Please help us shape the future of Middleton! You have been selected at random to participate in the 2020 Middleton Community Survey.

With the COVID-19 pandemic weighing heavily in our lives, it can be hard to focus on anything else. It is important for City leaders to continue to understand the broader needs of our community. By conducting this survey, we can gather important feedback which is essential in uncertain times such as these, so we can keep resident opinions front and center as we move forward together. The survey also allows us to hear from you even when in-person meetings are canceled.

Please take a few minutes to fill out the enclosed survey. Your participation is very important – especially since your household is one of only a small number being surveyed. Your feedback will help Middleton make decisions that affect our City.

A few things to remember:

- **Your responses are completely anonymous.**
- In order to hear from a diverse group of residents, the adult 18 years or older in your household who most recently had a birthday should complete this survey.
- **You may return the survey by mail in the enclosed postage-paid envelope, or you can complete the survey online at:**

Please do not share your survey link. This survey is for randomly selected households only. The City will conduct a separate survey that is open to all residents just a few weeks from now.

If you have any questions about the survey please call 608-821-8358.

Thank you for your time and participation!

Sincerely,

Mike Davis
City Administrator

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PH 608.821-8358
E-MAIL: mdavis@ci.middleton.wi.us
WEB: www.CityofMiddleton.us

September 2020

Dear City of Middleton Resident:

Here's a second chance if you haven't already responded to the 2020 Middleton Community Survey! **(If you completed it and sent it back, we thank you for your time and ask you to recycle this survey. Please do not respond twice.)**

Please help us shape the future of Middleton! You have been selected at random to participate in the 2020 Middleton County Community Survey.

With the COVID-19 pandemic weighing heavily in our lives, it can be hard to focus on anything else. It is important for City leaders to continue to understand the broader needs of our community. By conducting this survey, we can gather important feedback which is essential in uncertain times such as these, so we can keep resident opinions front and center as we move forward together. The survey also allows us to hear from you even when in-person meetings are canceled.

Please take a few minutes to fill out the enclosed survey. Your participation is very important – especially since your household is one of only a small number being surveyed. Your feedback will help Middleton make decisions that affect our community.

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If you have any questions about the survey please call 608-821-8358.

Thank you for your time and participation!

Sincerely,

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Your household has been randomly selected to participate in a survey about your community.

Please complete the survey online at:

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Thank you for helping create a better City!

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Dear Middleton Resident,

Just a reminder—if you have not yet completed Middleton's 2020 Community Survey, please do so. If you have completed it, thank you. Please do not respond twice.

It is important for City leaders to continue to understand the broader needs of our community during the COVID-19 pandemic so we can keep resident opinions front and center as we move forward together.

Your participation in this survey is very important—your answers will help Middleton make decisions that affect your community.

Please complete the survey online at:

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Thank you very much!

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The City of Middleton 2020 Community Survey

Please complete this survey if you are the adult (age 18 or older) in the household who most recently had a birthday (the year of birth does not matter). Your responses are anonymous and will be reported in group form only.

1. Please rate each of the following aspects of quality of life in Middleton.

	Excellent	Good	Fair	Poor	Don't know
Middleton as a place to live	1	2	3	4	5
Your neighborhood as a place to live	1	2	3	4	5
Middleton as a place to raise children	1	2	3	4	5
Middleton as a place to work	1	2	3	4	5
Middleton as a place to visit	1	2	3	4	5
Middleton as a place to retire	1	2	3	4	5
The overall quality of life in Middleton	1	2	3	4	5
Sense of community	1	2	3	4	5

2. Please rate each of the following characteristics as they relate to Middleton as a whole.

	Excellent	Good	Fair	Poor	Don't know
Overall economic health of Middleton	1	2	3	4	5
Overall quality of the transportation system (auto, bicycle, foot, bus) in Middleton	1	2	3	4	5
Overall design or layout of Middleton's residential and commercial areas (e.g., homes, buildings, streets, parks, etc.)	1	2	3	4	5
Overall quality of the utility infrastructure in Middleton (water, sewer, storm water, electric/gas)	1	2	3	4	5
Overall feeling of safety in Middleton	1	2	3	4	5
Overall quality of natural environment in Middleton	1	2	3	4	5
Overall quality of parks and recreation opportunities	1	2	3	4	5
Overall health and wellness opportunities in Middleton	1	2	3	4	5
Overall opportunities for education, culture and the arts	1	2	3	4	5
Residents' connection and engagement with their community	1	2	3	4	5

3. Please indicate how likely or unlikely you are to do each of the following.

	Very likely	Somewhat likely	Somewhat unlikely	Very unlikely	Don't know
Recommend living in Middleton to someone who asks	1	2	3	4	5
Remain in Middleton for the next five years	1	2	3	4	5

4. Please rate how safe or unsafe you feel:

	Very safe	Somewhat safe	Neither safe nor unsafe	Somewhat unsafe	Very unsafe	Don't know
In your neighborhood during the day	1	2	3	4	5	6
In Middleton's downtown/commercial area during the day	1	2	3	4	5	6
From property crime	1	2	3	4	5	6
From violent crime	1	2	3	4	5	6
From fire, flood or other natural disaster	1	2	3	4	5	6

5. Please rate the job you feel the Middleton community does at each of the following.

	Excellent	Good	Fair	Poor	Don't know
Making all residents feel welcome	1	2	3	4	5
Attracting people from diverse backgrounds	1	2	3	4	5
Valuing/respecting residents from diverse backgrounds	1	2	3	4	5
Taking care of vulnerable residents (elderly, disabled, homeless, etc.)	1	2	3	4	5

6. Please rate each of the following characteristics as they relate to Middleton as a whole.

	Excellent	Good	Fair	Poor	Don't know
Overall quality of business and service establishments in Middleton	1	2	3	4	5
Variety of business and service establishments in Middleton	1	2	3	4	5
Vibrancy of downtown/commercial area	1	2	3	4	5
Employment opportunities	1	2	3	4	5
Shopping opportunities	1	2	3	4	5
Cost of living in Middleton	1	2	3	4	5
Overall image or reputation of Middleton	1	2	3	4	5

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7. Please rate each of the following characteristics as they relate to Middleton as a whole.

	Excellent	Good	Fair	Poor	Don't know
Traffic flow on major streets	1	2	3	4	5
Ease of public parking	1	2	3	4	5
Ease of travel by car in Middleton	1	2	3	4	5
Ease of travel by public transportation in Middleton	1	2	3	4	5
Ease of travel by bicycle in Middleton	1	2	3	4	5
Ease of walking in Middleton	1	2	3	4	5
Well-planned residential growth	1	2	3	4	5
Well-planned commercial growth	1	2	3	4	5
Well-designed neighborhoods	1	2	3	4	5
Preservation of the historical or cultural character of the community	1	2	3	4	5
Public places where people want to spend time	1	2	3	4	5
Variety of housing options	1	2	3	4	5
Availability of affordable quality housing	1	2	3	4	5
Overall quality of new development in Middleton	1	2	3	4	5
Overall appearance of Middleton	1	2	3	4	5
Cleanliness of Middleton	1	2	3	4	5
Water resources (beaches, lakes, ponds, riverways, etc.)	1	2	3	4	5
Air quality	1	2	3	4	5
Availability of paths and walking trails	1	2	3	4	5
Fitness opportunities (including exercise classes and paths or trails, etc.)	1	2	3	4	5
Recreational opportunities	1	2	3	4	5
Availability of affordable quality food	1	2	3	4	5
Availability of affordable quality health care	1	2	3	4	5
Availability of preventive health services	1	2	3	4	5
Availability of affordable quality mental health care	1	2	3	4	5
Opportunities to attend cultural/arts/music activities	1	2	3	4	5
Community support for the arts	1	2	3	4	5
Availability of affordable quality childcare/preschool	1	2	3	4	5
K-12 education	1	2	3	4	5
Adult educational opportunities	1	2	3	4	5
Sense of civic/community pride	1	2	3	4	5
Neighborliness of residents in Middleton	1	2	3	4	5
Opportunities to participate in social events and activities	1	2	3	4	5
Opportunities to attend special events and festivals	1	2	3	4	5
Opportunities to volunteer	1	2	3	4	5
Opportunities to participate in community matters	1	2	3	4	5
Openness and acceptance of the community toward people of diverse backgrounds	1	2	3	4	5

8. Please indicate whether or not you have done each of the following in the last 12 months.

	No	Yes
Contacted the City of Middleton (in-person, phone, email or web) for help or information	1	2
Contacted Middleton elected officials (in-person, phone, email or web) to express your opinion	1	2
Attended a local public meeting (of local elected officials like City Council or County Commissioners, advisory boards, town halls, HOA, neighborhood watch, etc.)	1	2
Watched (online or on television) a local public meeting	1	2
Volunteered your time to some group/activity in Middleton	1	2
Campaigned or advocated for a local issue, cause or candidate	1	2
Voted in your most recent local election	1	2
Used bus, rail, subway or other public transportation instead of driving	1	2
Carpooled with other adults or children instead of driving alone	1	2
Walked or biked instead of driving	1	2

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9. Please rate the quality of each of the following services in Middleton.

	Excellent	Good	Fair	Poor	Don't know
Public information services	1	2	3	4	5
Economic development	1	2	3	4	5
Traffic enforcement	1	2	3	4	5
Traffic signal timing	1	2	3	4	5
Street repair	1	2	3	4	5
Street cleaning	1	2	3	4	5
Street lighting	1	2	3	4	5
Snow removal	1	2	3	4	5
Sidewalk maintenance	1	2	3	4	5
Bus or transit services	1	2	3	4	5
Land use, planning, and zoning	1	2	3	4	5
Code enforcement (weeds, abandoned buildings, etc.)	1	2	3	4	5
Affordable high-speed internet access	1	2	3	4	5
Garbage collection	1	2	3	4	5
Drinking water	1	2	3	4	5
Sewer services	1	2	3	4	5
Storm water management (storm drainage, dams, levees, etc.)	1	2	3	4	5
Power (electric and/or gas) utility	1	2	3	4	5
Utility billing	1	2	3	4	5
Police/Sheriff services	1	2	3	4	5
Crime prevention	1	2	3	4	5
Animal control	1	2	3	4	5
Ambulance or emergency medical services	1	2	3	4	5
Fire services	1	2	3	4	5
Fire prevention and education	1	2	3	4	5
Emergency preparedness (services that prepare the community for natural disasters or other emergency situations)	1	2	3	4	5
Preservation of natural areas (open space, farmlands and greenbelts)	1	2	3	4	5
Middleton open space	1	2	3	4	5
Recycling	1	2	3	4	5
Yard waste pick-up	1	2	3	4	5
City parks	1	2	3	4	5
Recreation programs or classes	1	2	3	4	5
Recreation centers or facilities	1	2	3	4	5
Health services	1	2	3	4	5
Public library services	1	2	3	4	5
Overall customer service by Middleton employees (police, receptionists, planners, etc.)	1	2	3	4	5

10. Please rate the following categories of Middleton government performance.

	Excellent	Good	Fair	Poor	Don't know
The value of services for the taxes paid to Middleton	1	2	3	4	5
The overall direction that Middleton is taking	1	2	3	4	5
The job Middleton government does at welcoming resident involvement	1	2	3	4	5
Overall confidence in Middleton government	1	2	3	4	5
Generally acting in the best interest of the community	1	2	3	4	5
Being honest	1	2	3	4	5
Being open and transparent to the public	1	2	3	4	5
Informing residents about issues facing the community	1	2	3	4	5
Treating all residents fairly	1	2	3	4	5
Treating residents with respect	1	2	3	4	5

11. Overall, how would you rate the quality of the services provided by each of the following?

	Excellent	Good	Fair	Poor	Don't know
The City of Middleton	1	2	3	4	5
The Federal Government	1	2	3	4	5

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12. Please rate how important, if at all, you think it is for the Middleton community to focus on each of the following in the coming two years.

	Essential	Very important	Somewhat important	Not at all important
Overall economic health of Middleton	1	2	3	4
Overall quality of the transportation system (auto, bicycle, foot, bus) in Middleton	1	2	3	4
Overall design or layout of Middleton's residential and commercial areas (e.g., homes, buildings, streets, parks, etc.)	1	2	3	4
Overall quality of the utility infrastructure in Middleton (water, sewer, storm water, electric/gas)	1	2	3	4
Overall feeling of safety in Middleton	1	2	3	4
Overall quality of natural environment in Middleton	1	2	3	4
Overall quality of parks and recreation opportunities	1	2	3	4
Overall health and wellness opportunities in Middleton	1	2	3	4
Overall opportunities for education, culture and the arts	1	2	3	4
Residents' connection and engagement with their community	1	2	3	4

13. Thinking about government plans to lift restrictions on businesses and community gathering areas or venues related to COVID-19, how would you rate the reopening at each of the following levels of government?

	Too fast	About right	Too slow	Don't know the plans	N/A
The City of Middleton	1	2	3	4	5
Dane County	1	2	3	4	5
The State of Wisconsin	1	2	3	4	5

14. As your local community takes steps to resume normal activities, how concerned are you about the following:

	Very concerned	Moderately concerned	Slightly concerned	Not at all concerned	Don't know
Overall health of you and your family	1	2	3	4	5
Likelihood that you or someone in your family will get COVID-19	1	2	3	4	5
Our community's medical facilities and resources being overwhelmed by COVID-19	1	2	3	4	5
Overall health and safety of vulnerable populations (e.g., older adults, those with chronic health issues)	1	2	3	4	5
Not having the right information to make good choices about going out	1	2	3	4	5
My behaviors impacting the health of vulnerable populations	1	2	3	4	5
People not wearing masks in public places	1	2	3	4	5
People not keeping physical distance in public places	1	2	3	4	5

15. We know the COVID-19 pandemic has caused significant economic impacts on our business community and our residents. Our local government also will be significantly affected by the pandemic due to decreased tax revenues and unanticipated expenses related to management of COVID-19. If the gap between costs and revenues widens, how much would you support or oppose your local government taking each of the following actions?

	Strongly support	Somewhat support	Somewhat oppose	Strongly oppose
A property tax increase	1	2	3	4
Raise fee for services	1	2	3	4
Cut or decrease services	1	2	3	4

16. How many adult members of your household currently work for pay?

❍ 0 ❍ 1 ❍ 2 ❍ 3 or more

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The City of Middleton 2020 Community Survey

Our last questions are about you and your household.
Again, all of your responses to this survey are completely anonymous and will be reported in group form only.

D1. In general, how many times do you:

	Several times a day	Once a day	A few times a week	Every few weeks	Less often or never	Don't know
Access the internet from your home using a computer, laptop or tablet computer	1	2	3	4	5	6
Access the internet from your cell phone	1	2	3	4	5	6
Visit social media sites such as Facebook, Twitter, WhatsApp, etc.	1	2	3	4	5	6
Use or check email	1	2	3	4	5	6
Share your opinions online	1	2	3	4	5	6
Shop online	1	2	3	4	5	6

D2. Would you say that in general your health is:

❍ Excellent ❍ Very good ❍ Good ❍ Fair ❍ Poor

D3. What impact, if any, do you think the economy will have on your family income in the next 6 months? Do you think the impact will be:

❍ Very positive ❍ Somewhat positive ❍ Neutral ❍ Somewhat negative ❍ Very negative

D4. How many years have you lived in Middleton?

❍ Less than 2 years
❍ 2-5 years
❍ 6-10 years
❍ 11-20 years
❍ More than 20 years

D5. Which best describes the building you live in?

❍ One family house detached from any other houses
❍ Building with two or more homes (duplex, townhome, apartment or condominium)
❍ Mobile home
❍ Other

D6. Do you rent or own your home?

❍ Rent
❍ Own

D7. About how much is your monthly housing cost for the place you live (including rent, mortgage payment, property tax, property insurance and homeowners' association (HOA) fees)?

❍ Less than $500
❍ $500 to $999
❍ $1,000 to $1,499
❍ $1,500 to $1,999
❍ $2,000 to $2,499
❍ $2,500 to $2,999
❍ $3,000 to $3,499
❍ $3,500 or more

D8. Do any children 17 or under live in your household?

❍ No ❍ Yes

D9. Are you or any other members of your household aged 65 or older?

❍ No ❍ Yes

D10. How much do you anticipate your household's total income before taxes will be for the current year? (Please include in your total income money from all sources for all persons living in your household.)

❍ Less than $25,000
❍ $25,000 to $49,999
❍ $50,000 to $74,999
❍ $75,000 to $99,999
❍ $100,000 to $149,999
❍ $150,000 or more

D11. Are you Spanish, Hispanic or Latino?

❍ No, not Spanish, Hispanic or Latino
❍ Yes, I consider myself to be Spanish, Hispanic or Latino

D12. What is your race? (Mark one or more races to indicate what race you consider yourself to be.)

❑ American Indian or Alaskan Native
❑ Asian, Asian Indian or Pacific Islander
❑ Black or African American
❑ White
❑ Other

D13. In which category is your age?

❍ 18-24 years
❍ 25-34 years
❍ 35-44 years
❍ 45-54 years
❍ 55-64 years
❍ 65-74 years
❍ 75 years or older

D14. What is your gender?

❍ Female
❍ Male
❍ Identify in another way

Thank you! Please return the completed survey in the postage-paid envelope to:
National Research Center, Inc., PO Box 549, Belle Mead, NJ 08502

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THE NBS™

The National Business Survey™

Middleton, WI

Business Climate Report

2020

NRC

POWERED BY POLCO

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AAPOR Transparency Initiative
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NRC is a charter member of the AAPOR Transparency Initiative, providing clear disclosure of our sound and ethical survey research practices.

About The NBS™

The National Business Survey™ (The NBS) gives local businesses and employers the opportunity to provide feedback about the community characteristics and local government services that help support the local economy. It was developed by the experts at Polco's National Research Center.

Great communities are partnerships of the government, businesses in the private sector, community-based organizations, and residents, all geographically connected. With the Business Climate Report, the City of Middleton gains an important perspective from its businesses and employers across six core indicators of the business climate in the community:

- Community amenities
- Business climate
- Employment opportunities and workforce supports
- Workforce readiness
- Business growth
- Governance



The Business Climate Report provides the opinions of 108 business owners and managers of the City of Middleton. Because the survey was intended to be taken by all businesses in the community, no traditional margin of error was calculated. However, because not all businesses responded, Polco recommends using plus or minus 10 percentage points as the "range of uncertainty" around any given percent reported for the city as a whole. The full description of methods used to garner these opinions can be found in the Technical Appendices provided under separate cover.

Overview of Results

Middleton business owners and managers give high marks to the business climate in the city.

Ninety percent of businesses said they were very or somewhat likely to recommend operating a business in Middleton (higher than the nation) and to keep their business in Middleton for the next five years (on par with the nation).

Additionally, about 9 in 10 business owners and managers felt that Middleton was an excellent or good place to do business and a similar proportion gave the same evaluations to the overall economic health of Middleton, ratings that were higher than the national benchmark. Middleton businesses also gave assessments that exceeded the national average for the City welcoming business involvement, retaining existing businesses, attracting new businesses, and supporting or creating new jobs. Between 59% and 70% of respondents said each of these government supports was excellent or good.

Businesses appreciate the community amenities provided in Middleton.

The city as a place to visit, overall image or reputation, cleanliness, and overall appearance in Middleton were rated as excellent or good by at least 92% of respondents; each of these were rated higher than the national benchmark. About 8 in 10 businesses said that the vibrancy of the downtown or commercial area and the overall quality of commercial development were excellent or good.

The vast majority of business owners and managers also gave high marks to hotel and lodging options in the city as well as the quality of restaurants and places to eat. About three-quarters of respondents gave favorable reviews to the quality of shopping opportunities, a rating that was lower than the national average.

Business owners and managers note improvements could be made to community supports for the workforce.

Overall, a majority of business owners and managers gave positive reviews to Middleton as a place to work and employment opportunities. These community aspects were rated higher than the nation. However, respondents tended to give lower evaluations to community supports for Middleton employees. About two-thirds of business owners said that the availability of jobs that pay a livable wage was excellent or good. The cost of living in Middleton was rated positively by about 4 in 10 respondents. About half of respondents said that the variety of housing options and transportation options for people who work in Middleton were excellent or good. The affordability of housing for people who work in Middleton as well as affordable childcare received positive assessments from only one-third of business owners.

COVID-19 has and will continue to impact Middleton's workforce.

About half of the businesses surveyed experienced and anticipated no changes in staffing due to COVID-19. However, about 40% reported a decrease in current or future staffing levels. About 6% reported an increased need for staffing.

Middleton businesses have relied on a variety of strategies to mitigate the revenue losses of the pandemic. About 4 in 10 reported cutting back the hours of staff and 10% more were currently considering similar cutbacks. Approximately one-fourth of the survey respondents were currently implementing or considering staff layoffs or suspension of bonuses. Reduction in wages and furloughs also have been used or considered by a smaller number of companies to help manage pandemic shortfalls.

Many businesses expect growth in the next five years.

Although a sizable number of Middleton businesses reported negative impacts on their staffing levels from COVID-19, about three-quarters of businesses expected a large or small increase in the amount of growth in their company in the next five years. This was similar to the proportions experiencing increased growth over the last five years. Likely due to the impacts of COVID-19, only 23% of business owners and managers felt that the economy would have a positive impact on their revenues in the next 6 months, which was a rating that was lower than the national average. However, close to 6 in 10 respondents may consider hiring in the next 6 to 12 months, with the largest proportion of business owners planning to hire skilled jobs (45%) followed by semi-skilled jobs (38%).

Quality of Life

Measuring community livability starts with assessing the quality of life of those who live and work there, and ensuring that the community is attractive, accessible, and welcoming to all.

OVERALL QUALITY OF LIFE IN MIDDLETON

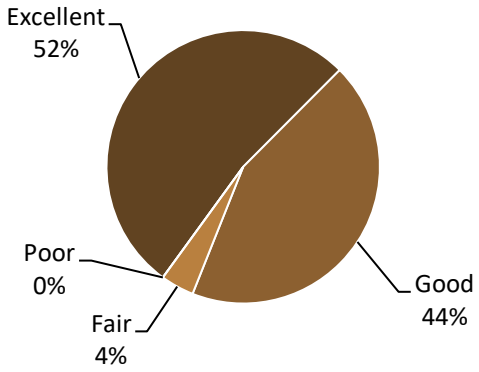


FIGURE 1: QUALITY OF LIFE IN MIDDLETON

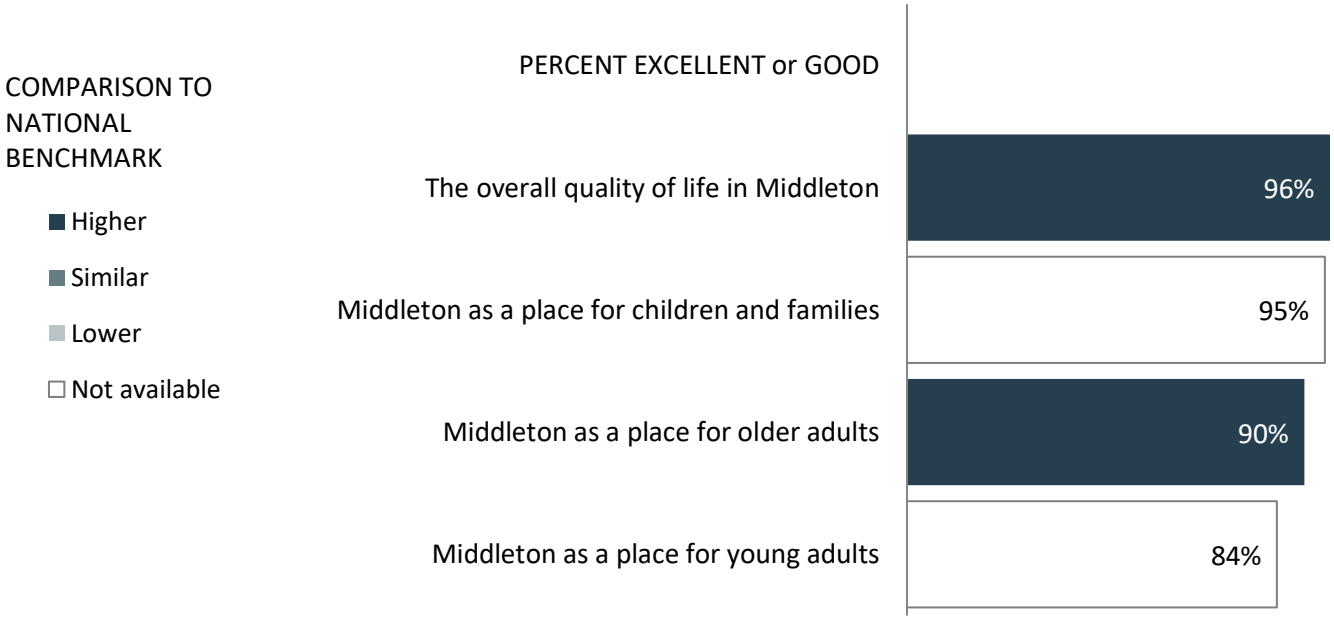


FIGURE 2: QUALITY OF LIFE IN MIDDLETON - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
The overall quality of life in Middleton	↑	96%
Middleton as a place for children and families	*	95%
Middleton as a place for older adults	↑	90%
Middleton as a place for young adults	*	84%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Facets of Community Livability

Characteristics such as natural amenities, safety, and design ensure a community is attractive to businesses, their employees, and the residents they serve. Communities that invest in their natural, social, and built environment foster strong economies where people want to live, visit, and spend time.



FIGURE 3: COMMUNITY FACETS OF MIDDLETON

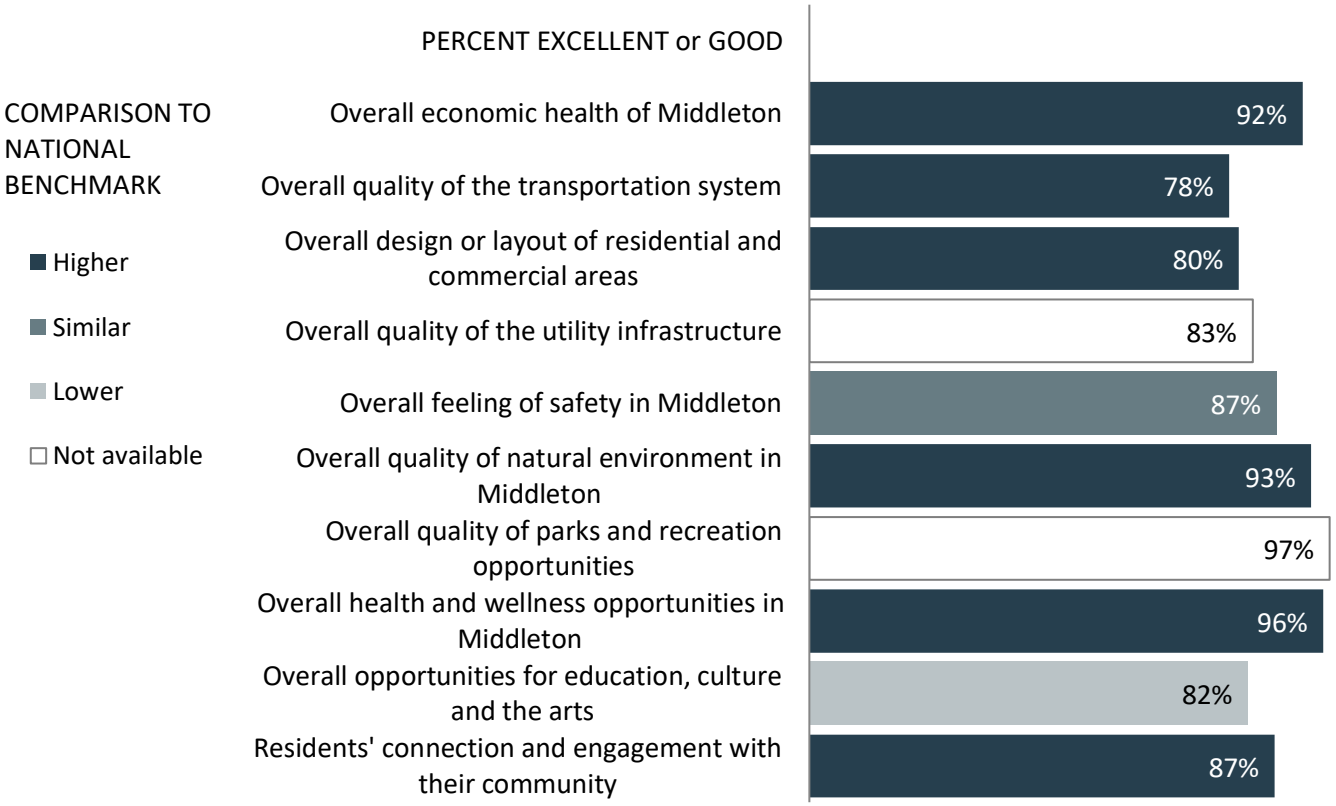


FIGURE 4: SAFETY IN COMMERCIAL AREAS

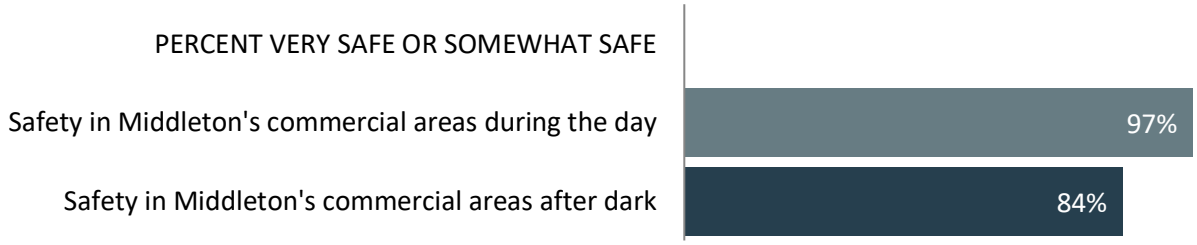


FIGURE 5: QUALITY OF FACETS OF LIVABILITY- SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Overall economic health of Middleton	↑	92%
Overall quality of the transportation system	↑	78%
Overall design or layout of residential and commercial areas	↑	80%
Overall quality of the utility infrastructure	*	83%
Overall feeling of safety in Middleton	↔	87%
Overall quality of natural environment in Middleton	↑	93%
Overall quality of parks and recreation opportunities	*	97%
Overall health and wellness opportunities in Middleton	↑	96%
Overall opportunities for education, culture and the arts	↓	82%
Residents' connection and engagement with their community	↑	87%

FIGURE 6: SAFETY IN COMMERCIAL AREAS - SUMMARY

Percent very or somewhat safe	Comparison to benchmark	2020 rating
Safety in Middleton's commercial areas during the day	↔	97%
Safety in Middleton's commercial areas after dark	↑	84%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Community Amenities

When businesses choose where to locate and think about the potential for growth, they are highly influenced by community infrastructure, local markets, and the quality of amenities that may help attract and retain employees.

FIGURE 7: COMMUNITY AMENITIES IN MIDDLETON

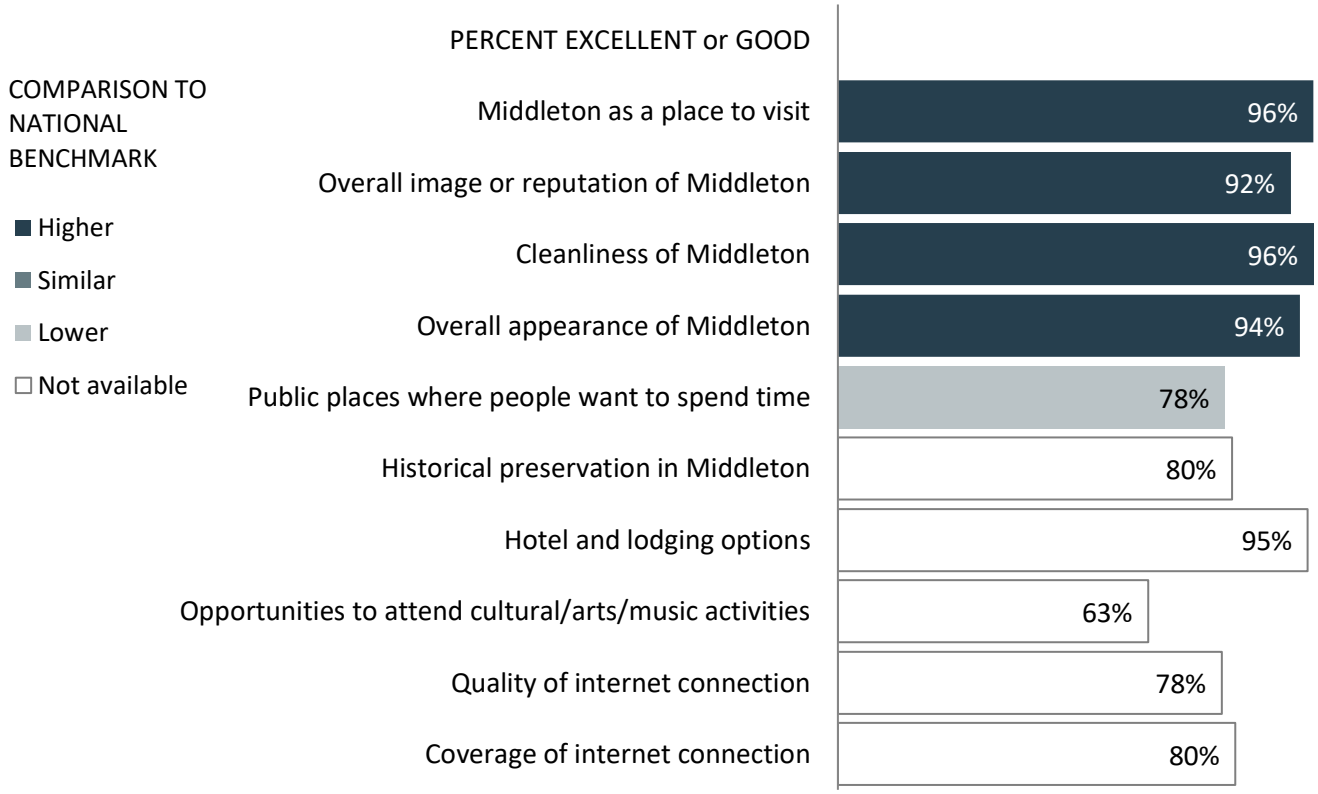


FIGURE 8: COMMUNITY AMENITIES IN MIDDLETON - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Middleton as a place to visit	↑	96%
Overall image or reputation of Middleton	↑	92%
Cleanliness of Middleton	↑	96%
Overall appearance of Middleton	↑	94%
Public places where people want to spend time	↓	78%
Historical preservation in Middleton	*	80%
Hotel and lodging options	*	95%
Opportunities to attend cultural/arts/music activities	*	63%
Quality of internet connection	*	78%
Coverage of internet connection	*	80%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

FIGURE 9: BUSINESS AND SERVICE AMENITIES IN MIDDLETON

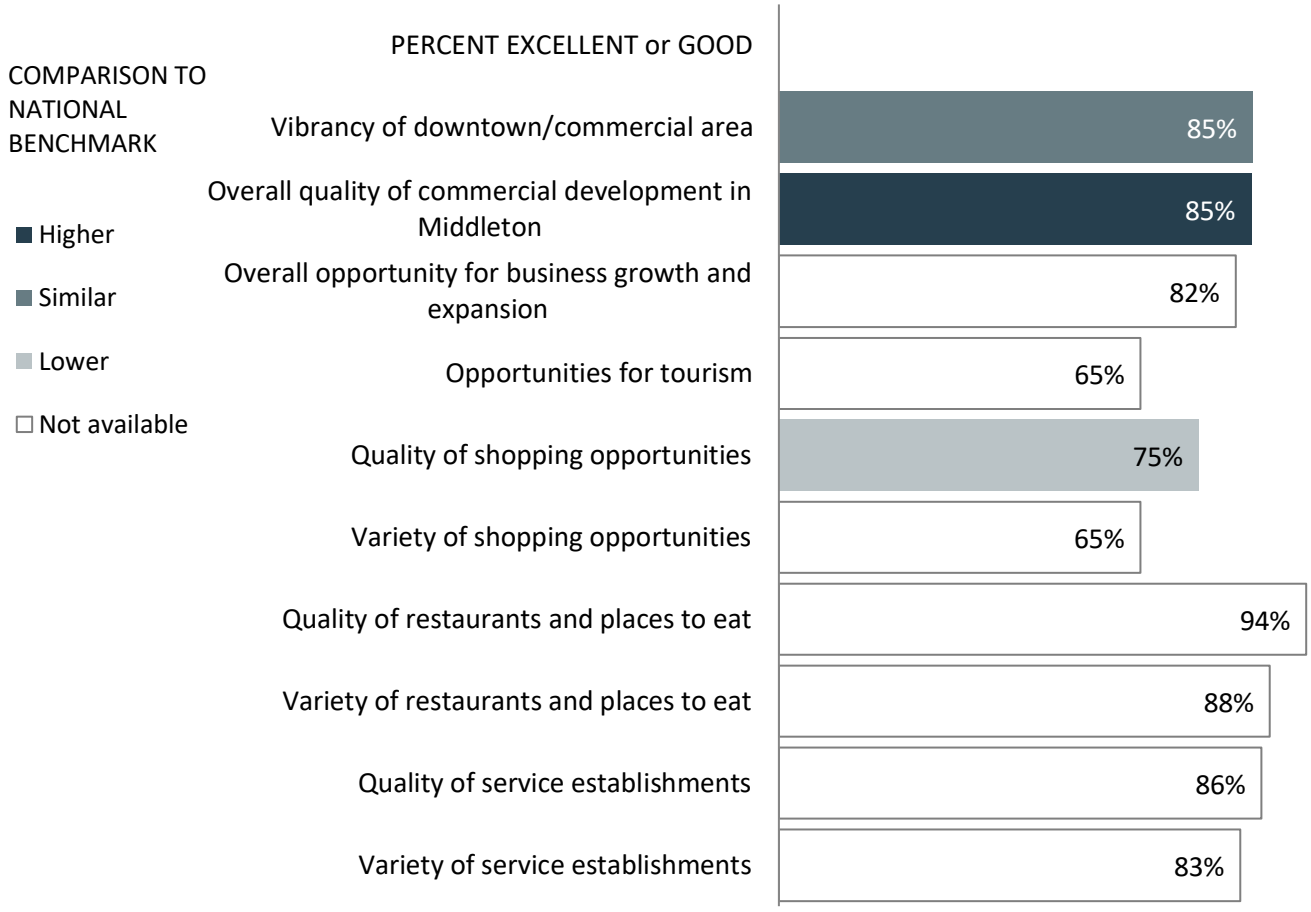


FIGURE 10: BUSINESS AND SERVICE AMENITIES IN MIDDLETON - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Vibrancy of downtown/commercial area	↔	85%
Overall quality of commercial development in Middleton	↑	85%
Overall opportunity for business growth and expansion	*	82%
Opportunities for tourism	*	65%
Quality of shopping opportunities	↓	75%
Variety of shopping opportunities	*	65%
Quality of restaurants and places to eat	*	94%
Variety of restaurants and places to eat	*	88%
Quality of service establishments	*	86%
Variety of service establishments	*	83%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

FIGURE 11: DISRUPTIVE, NUISANCE, ILLEGAL BEHAVIORS

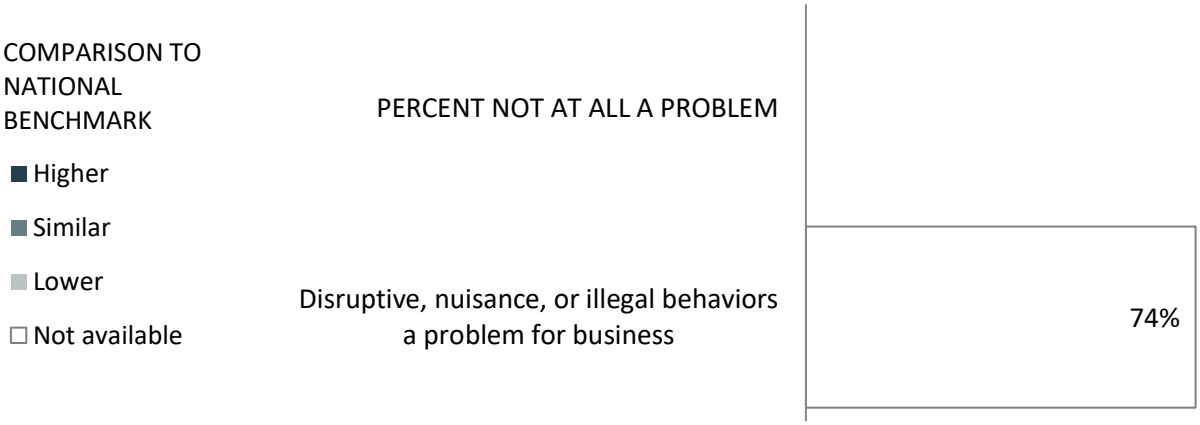


FIGURE 12: DISRUPTIVE, NUISANCE, AND ILLEGAL BEHAVIORS - SUMMARY

Percent not at all a problem	Comparison to benchmark	2020 rating
Disruptive, nuisance, or illegal behaviors a problem for business	*	74%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Business Climate

A strong business climate can improve the local economy, increase employment, and wages, and provide additional tax revenues to support community livability.

MIDDLETON AS A PLACE TO DO BUSINESS

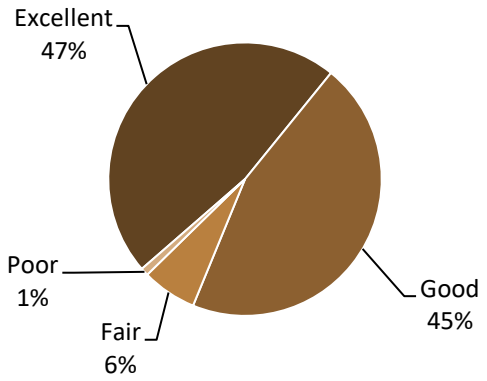


FIGURE 13: GOVERNMENT SUPPORT FOR THE BUSINESS COMMUNITY



FIGURE 14: GOVERNMENT SUPPORT FOR THE BUSINESS COMMUNITY - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Middleton as a place to do business	↑	93%
Informing businesses of community issues and values	↔	66%
Communicating during City construction	*	64%
Welcoming business involvement	↑	70%
Retaining existing businesses	↑	72%
Attracting new businesses	↑	70%
Supporting or creating new jobs	↑	59%
Middleton as a place to do business	↑	93%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

FIGURE 15: RECOMMEND AND INTENTION TO STAY

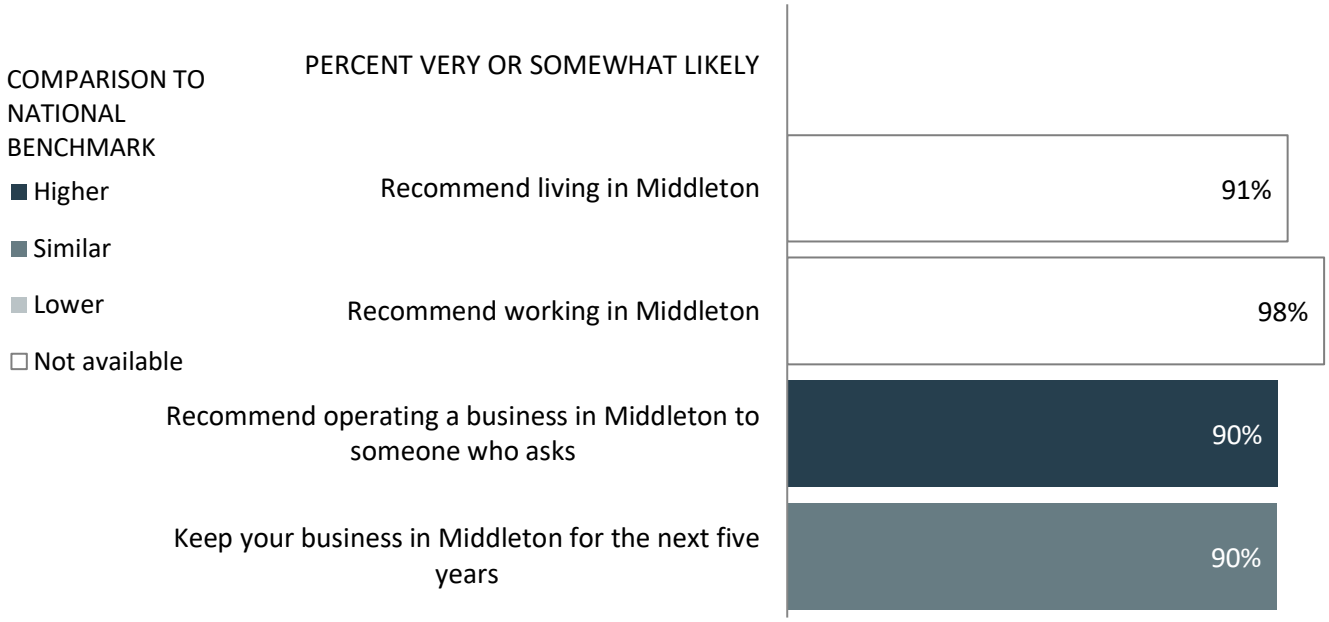


FIGURE 16: RECOMMEND AND INTENTION TO STAY - SUMMARY

Percent very or somewhat likely	Comparison to benchmark	2020 rating
Recommend living in Middleton	*	91%
Recommend working in Middleton	*	98%
Recommend operating a business in Middleton to someone who asks	↑	90%
Keep your business in Middleton for the next five years	↔	90%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Employment Opportunities and Workforce Supports

Offering quality employment opportunities and the supports needed for residents to successfully access that work are critical for a healthy and resilient local economy.

MIDDLETON AS A PLACE TO WORK

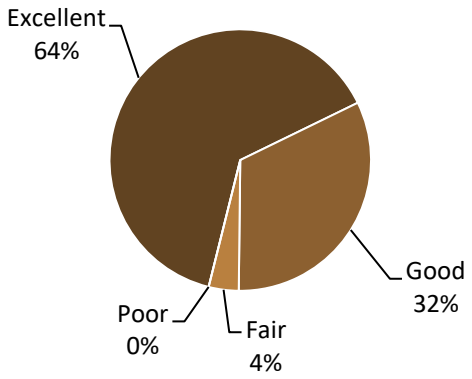


FIGURE 17: EMPLOYMENT IN MIDDLETON



FIGURE 18: EMPLOYMENT IN MIDDLETON - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Middleton as a place to work	↑	96%
Quality of employment opportunities	↑	79%
Variety of employment opportunities	*	72%
Availability of jobs that pay a livable wage	*	64%

Legend
↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

FIGURE 19: WORKFORCE SUPPORTS IN MIDDLETON

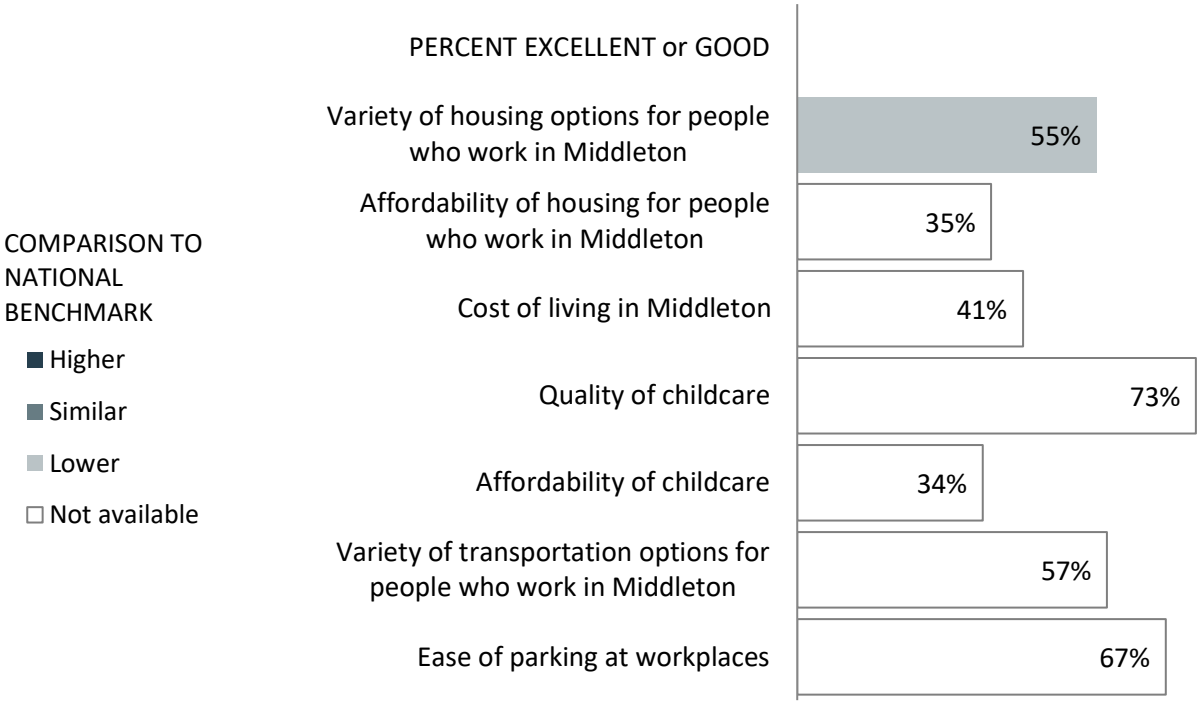


FIGURE 20: WORKFORCE SUPPORTS IN MIDDLETON - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Variety of housing options for people who work in Middleton	↓	55%
Affordability of housing for people who work in Middleton	*	35%
Cost of living in Middleton	*	41%
Quality of childcare	*	73%
Affordability of childcare	*	34%
Variety of transportation options for people who work in Middleton	*	57%
Ease of parking at workplaces	*	67%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

FIGURE 21: WORKFORCE EDUCATION AND SKILL SUPPORTS IN MIDDLETON

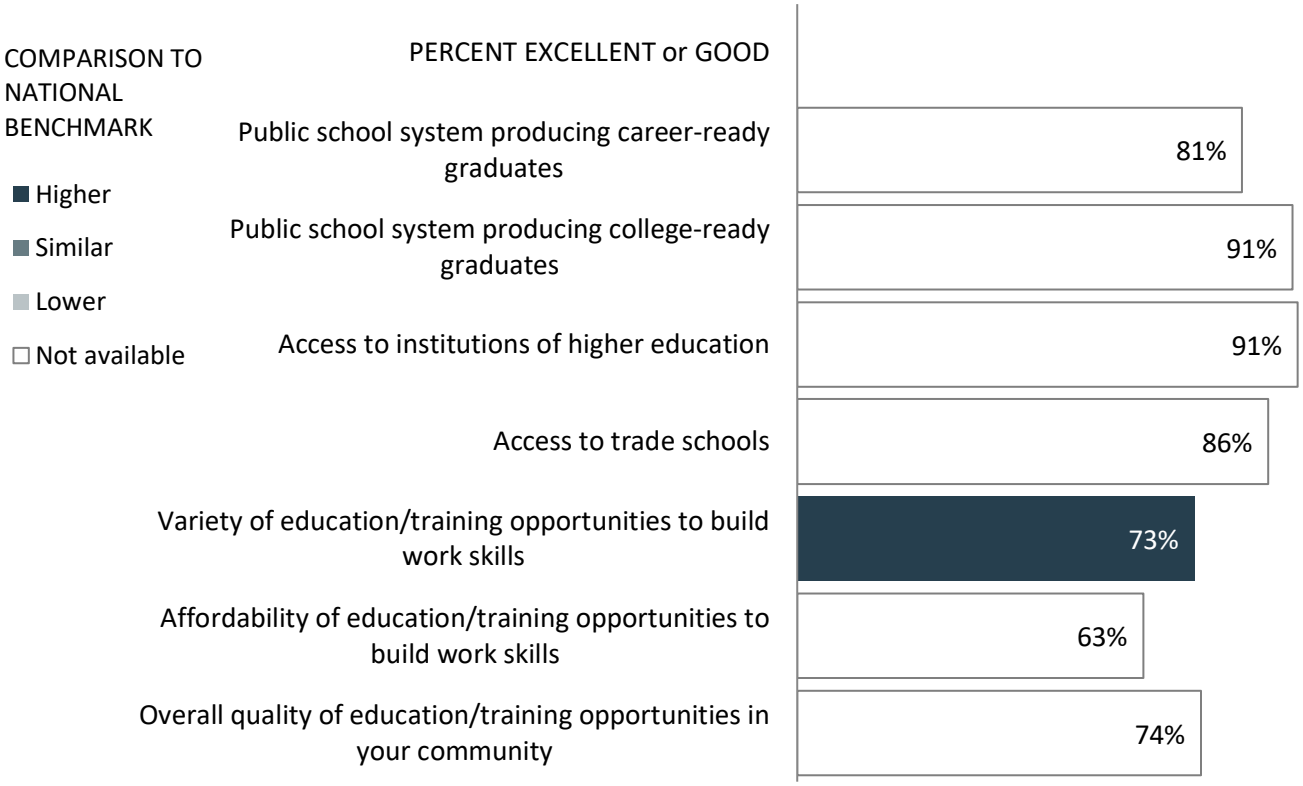


FIGURE 22: WORKFORCE EDUCATION AND SKILL SUPPORTS IN MIDDLETON - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Public school system producing career-ready graduates	*	81%
Public school system producing college-ready graduates	*	91%
Access to institutions of higher education	*	91%
Access to trade schools	*	86%
Variety of education/training opportunities to build work skills	↑	73%
Affordability of education/training opportunities to build work skills	*	63%
Overall quality of education/training opportunities in your community	*	74%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Workforce Readiness

Workforce readiness is the measure of how well a community's employees' education and skill levels align with current and future labor market needs. Growing the economy, jobs, and wages often requires an investment in training programs as well as community partnerships to help support residents as they seek to meet new employment opportunities.

FIGURE 23: WORKFORCE READINESS IN MIDDLETON

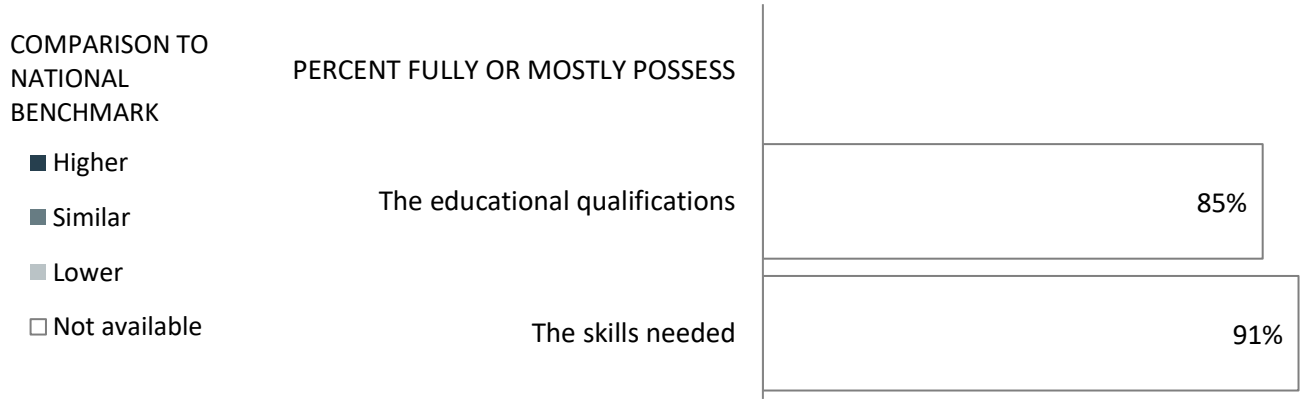


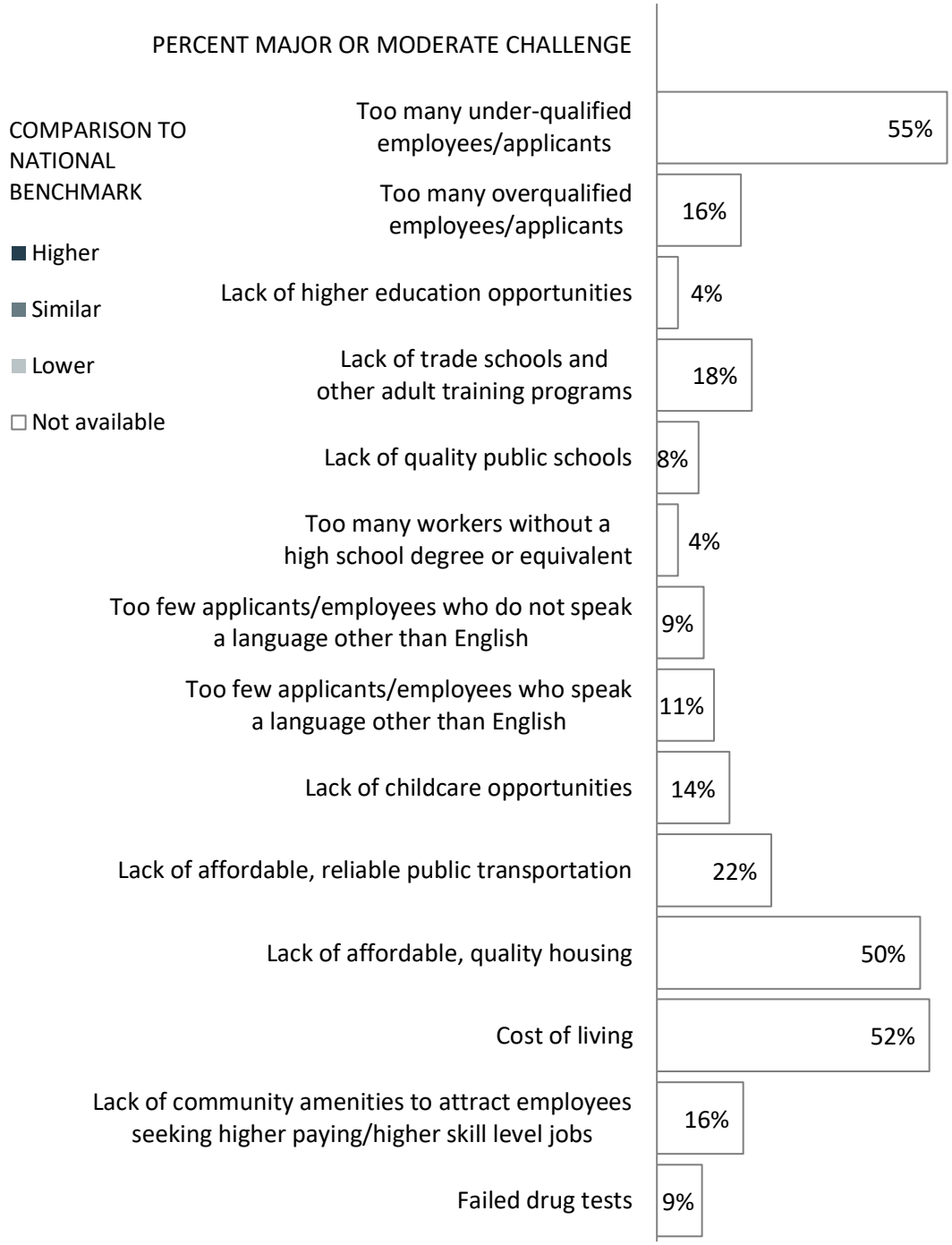
FIGURE 24: WORKFORCE READINESS IN MIDDLETON - SUMMARY

Percent fully or mostly possess	Comparison to benchmark	2020 rating
The educational qualifications	*	85%
The skills needed	*	91%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

FIGURE 25: WORKFORCE CHALLENGES IN MIDDLETON



Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

FIGURE 26: WORKFORCE CHALLENGES IN MIDDLETON - SUMMARY

Percent major or moderate challenge	Comparison to benchmark	2020 rating
Too many under-qualified employees/applicants	*	55%
Too many overqualified employees/applicants	*	16%
Lack of higher education opportunities	*	4%
Lack of trade schools and other adult training programs	*	18%
Lack of quality public schools	*	8%
Too many workers without a high school degree or equivalent	*	4%
Too few applicants/employees who do not speak a language other than English	*	9%
Too few applicants/employees who speak a language other than English	*	11%
Lack of childcare opportunities	*	14%
Lack of affordable, reliable public transportation	*	22%
Lack of affordable, quality housing	*	50%
Cost of living	*	52%
Lack of community amenities to attract employees seeking higher paying/higher skill level jobs	*	16%
Failed drug tests	*	9%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Business Growth

Growth is a key indicator of both company and community level economic health.

FIGURE 27: EXPECTED BUSINESS GROWTH

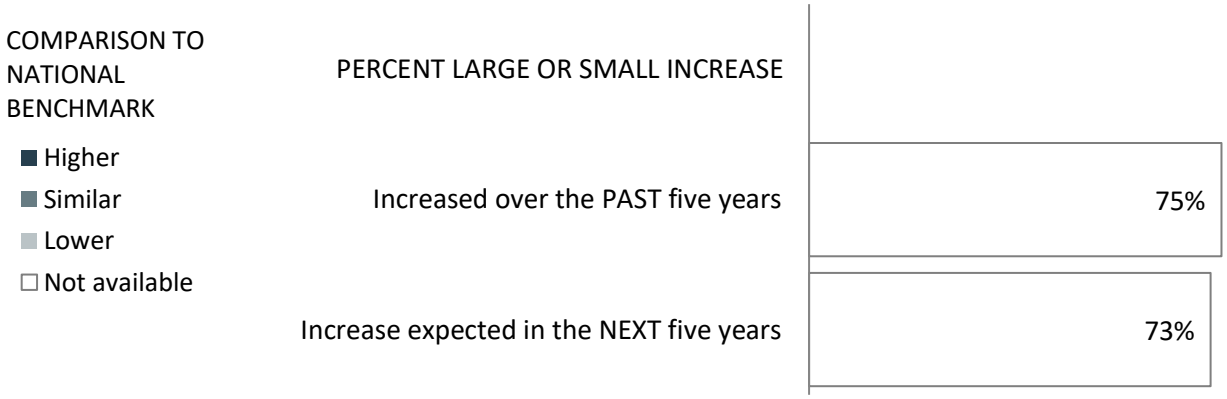


FIGURE 28: EXPECTED BUSINESS GROWTH - SUMMARY

Percent large or small increase	Comparison to benchmark	2020 rating
Increased over the PAST five years	*	75%
Increase expected in the NEXT five years	*	73%

FIGURE 29: IMPACT OF ECONOMY ON BUSINESS REVENUE IN NEXT 6 MONTHS

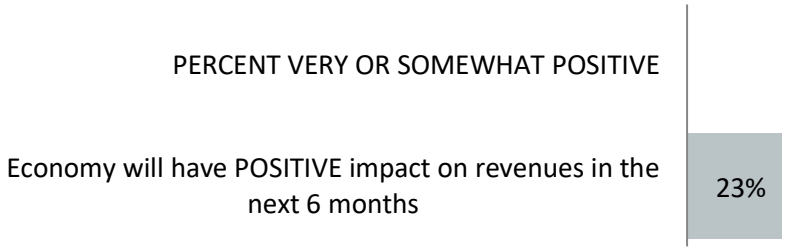


FIGURE 30: IMPACT OF ECONOMY ON BUSINESS REVENUE IN NEXT 6 MONTHS - SUMMARY

Percent very or somewhat positive	Comparison to benchmark	2020 rating
Economy will have POSITIVE impact on revenues in the next 6 months	↓	23%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

FIGURE 31: BUSINESS PLANS TO HIRE IN NEXT 6-12 MONTHS

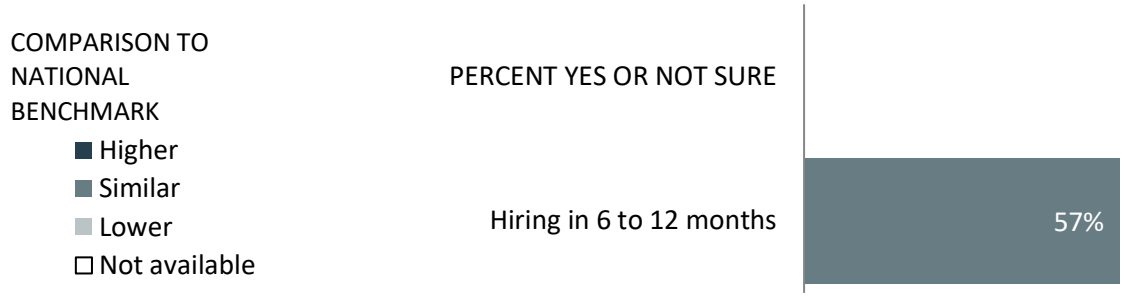


FIGURE 32: BUSINESS PLANS TO HIRE IN NEXT 6-12 MONTHS - SUMMARY

Percent yes or not sure	Comparison to benchmark	2020 rating
Hiring in 6 to 12 months	↔	57%

FIGURE 33: TYPES OF JOBS BUSINESSES PLAN TO ADD

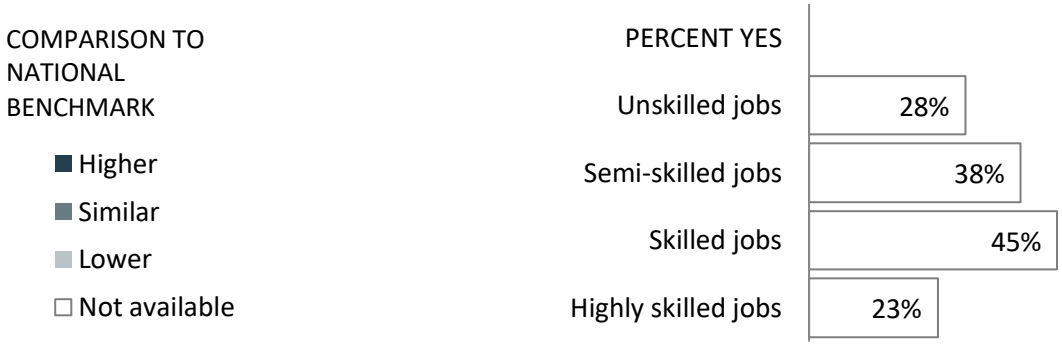


FIGURE 34: TYPES OF JOBS BUSINESSES PLAN TO ADD - SUMMARY

Percent yes	Comparison to benchmark	2020 rating
Unskilled jobs	*	28%
Semi-skilled jobs	*	38%
Skilled jobs	*	45%
Highly skilled jobs	*	23%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Governance

The overall quality of the services provided by the local government, as well as the manner in which these services are delivered, form the backbone for the community in which local economies prosper.

OVERALL QUALITY OF SERVICES PROVIDED BY THE CITY OF MIDDLETON

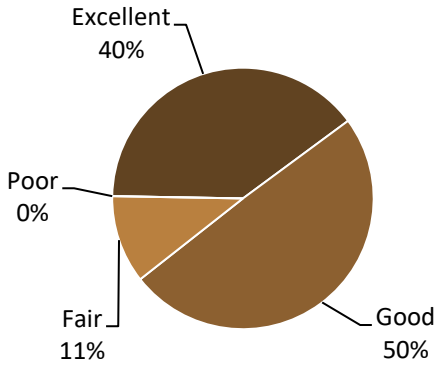


FIGURE 35: GOVERNMENT PERFORMANCE

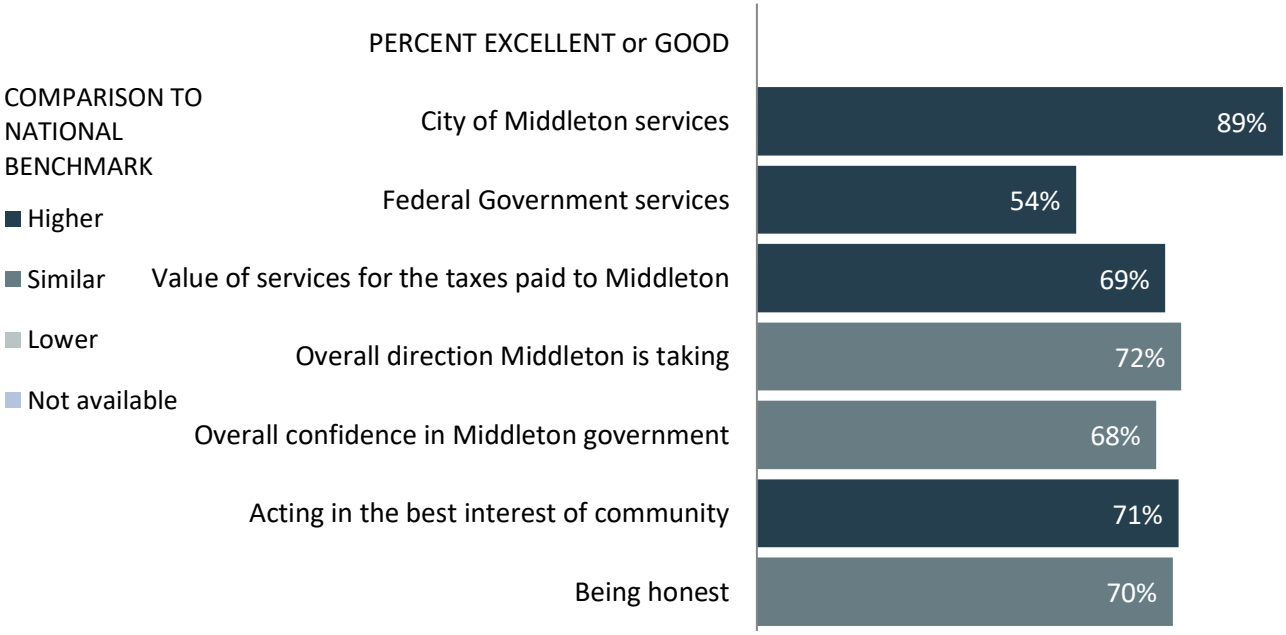


FIGURE 36: GOVERNMENT PERFORMANCE - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
City of Middleton	↑	89%
Federal Government	↑	54%
Value of services for the taxes paid to Middleton	↑	69%
Overall direction Middleton is taking	↔	72%
Overall confidence in Middleton government	↔	68%
Acting in the best interest of community	↑	71%
Being honest	↔	70%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

FIGURE 37: QUALITY OF GOVERNMENT SERVICES

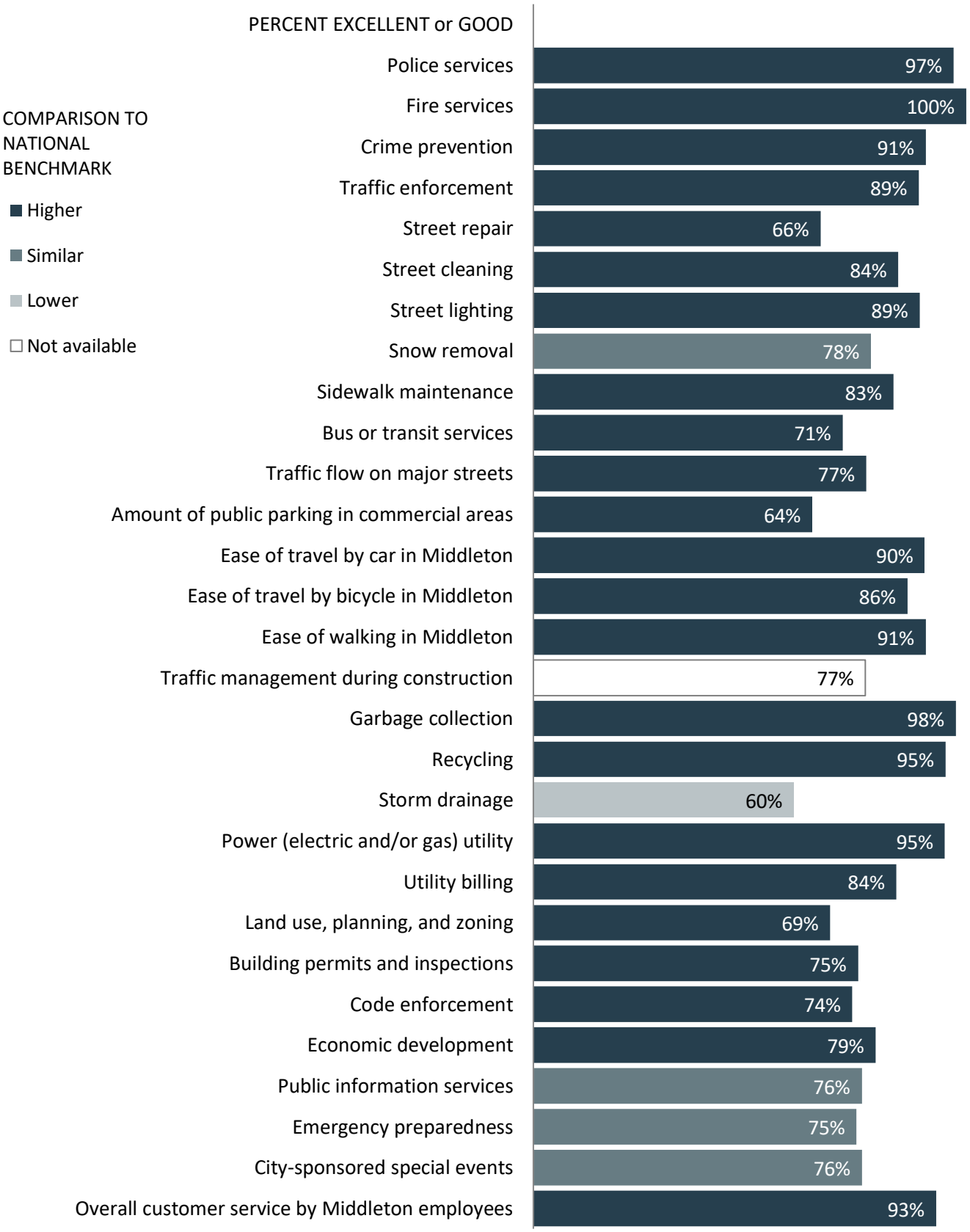


FIGURE 38: QUALITY OF GOVERNMENT SERVICES - SUMMARY

Percent excellent or good	Comparison to benchmark	2020 rating
Police services	↑	97%
Fire services	↑	100%
Crime prevention	↑	91%
Traffic enforcement	↑	89%
Street repair	↑	66%
Street cleaning	↑	84%
Street lighting	↑	89%
Snow removal	↔	78%
Sidewalk maintenance	↑	83%
Bus or transit services	↑	71%
Traffic flow on major streets	↑	77%
Amount of public parking in commercial areas	↑	64%
Ease of travel by car in Middleton	↑	90%
Ease of travel by bicycle in Middleton	↑	86%
Ease of walking in Middleton	↑	91%
Traffic management during construction	*	77%
Garbage collection	↑	98%
Recycling	↑	95%
Storm drainage	↓	60%
Power (electric and/or gas) utility	↑	95%
Utility billing	↑	84%
Land use, planning, and zoning	↑	69%
Building permits and inspections	↑	75%
Code enforcement	↑	74%
Economic development	↑	79%
Public information services	↔	76%
Emergency preparedness	↔	75%
City-sponsored special events	↔	76%
Overall customer service by Middleton employees	↑	93%

Legend

↑↑ Much higher ↑ Higher ↔ Similar ↓ Lower ↓↓ Much lower * Not available

Special Topics – COVID-19

In order to better understand the impacts of the COVID-19 pandemic on local businesses, the City of Middleton included several questions on this topic on The NBS.

FIGURE 39: RATE OF REOPENING BUSINESSES DUE TO COVID-19

Thinking about government plans to lift restrictions related to COVID-19 on businesses and community gathering areas or venues, how is the rate of reopening at each of the following levels of government?

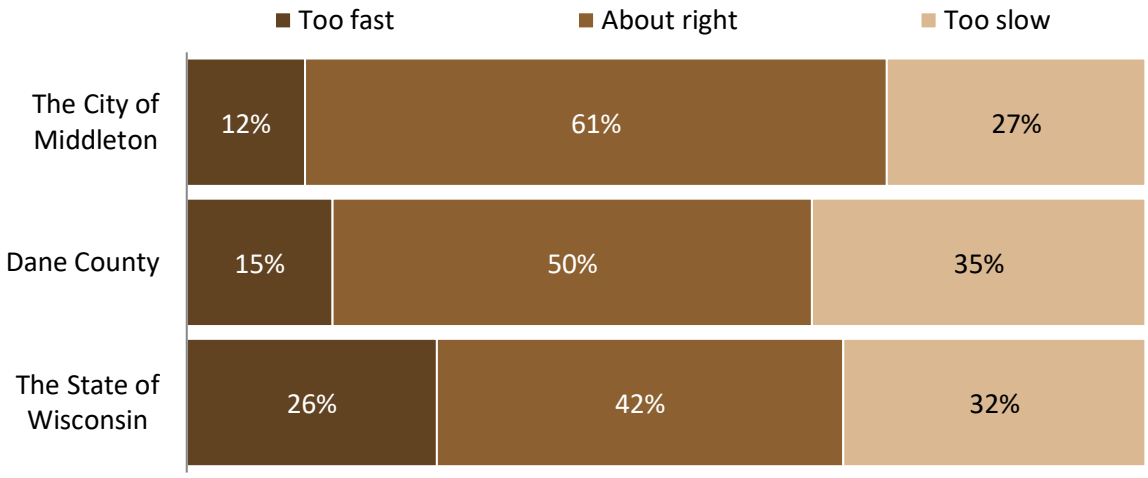


FIGURE 40: BUSINESS PROBLEMS DUE TO COVID-19

How much of a problem, if at all, are the following issues for your business as a result of the COVID-19 pandemic?

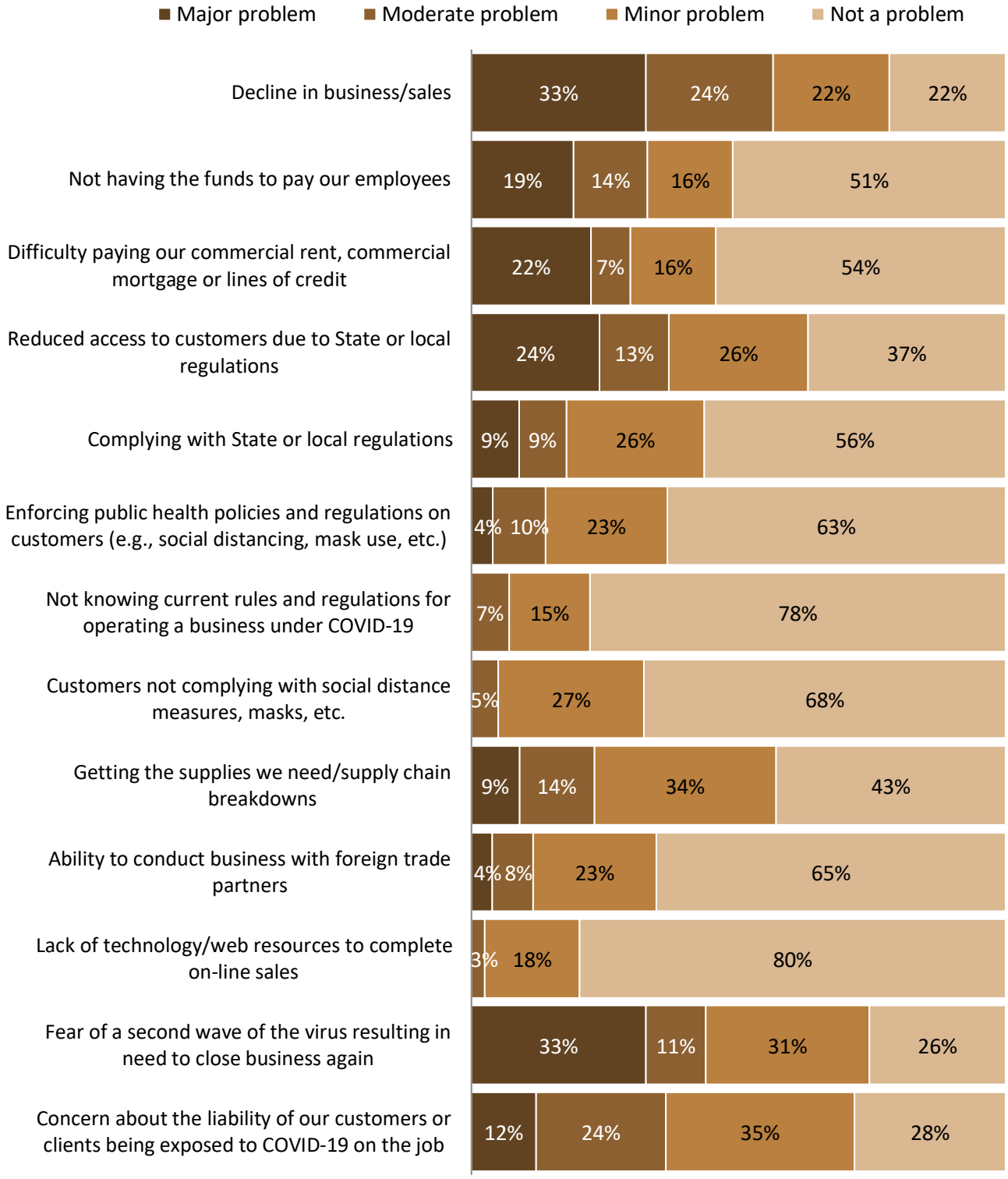


FIGURE 41: IMPACT OF COVID-19 ON STAFFING LEVELS

How has, or how do you anticipate, COVID-19 will impact your current or future staffing levels?

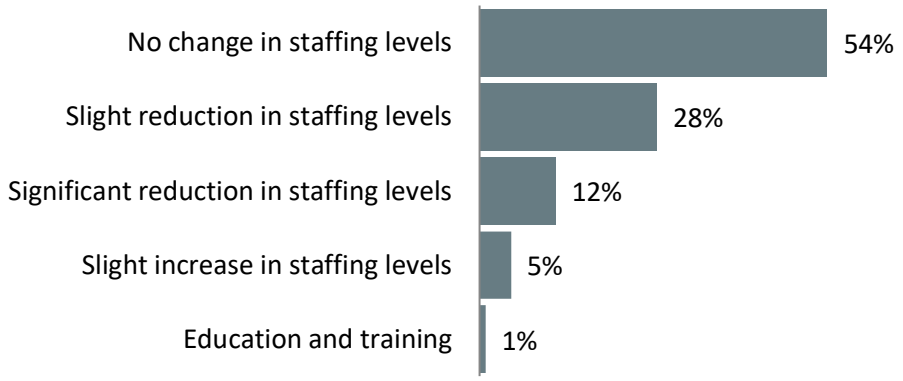
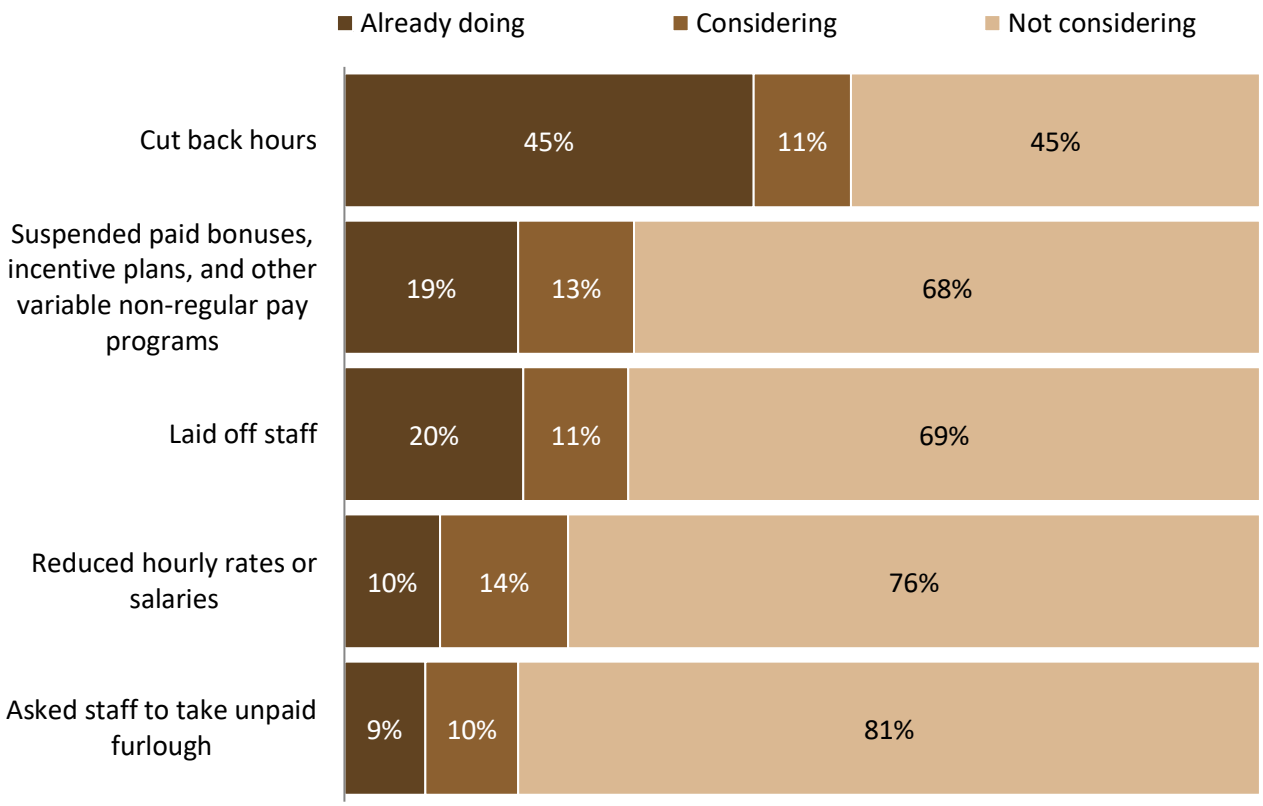


FIGURE 42: STRATEGIES TO MINIMIZE COVID-19 IMPACT

Which of the following strategies, if any, are you using or have you used to minimize the impact of COVID-19 on your business?



THE NBS™

The National Business Survey™

Middleton, WI

Technical Appendices

2020

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Appendix A: Complete Survey Responses

The following pages contain a complete set of responses to each question on the survey. For questions that included a "don't know" response option, two tables for that question are provided: the first that excludes the "don't know" responses, and the second that includes those responses. The percent of respondents giving a particular response is shown followed by the number of respondents (denoted with "N=").

Table 1: Question 1 without "don't know" responses

Please rate each of the following aspects of quality of life in Middleton:	Excellent		Good		Fair		Poor		Total	
Middleton as a place to work	64%	N=69	32%	N=35	4%	N=4	0%	N=0	100%	N=108
Middleton as a place to visit	44%	N=47	52%	N=56	4%	N=4	0%	N=0	100%	N=107
Middleton as a place to do business	47%	N=51	45%	N=49	6%	N=7	1%	N=1	100%	N=108
The overall quality of life in Middleton	52%	N=53	44%	N=44	4%	N=4	0%	N=0	100%	N=101
Middleton as a place for children and families	58%	N=56	37%	N=36	5%	N=5	0%	N=0	100%	N=97
Middleton as a place for older adults	43%	N=40	47%	N=43	9%	N=8	1%	N=1	100%	N=92
Middleton as a place for young adults	31%	N=29	53%	N=50	15%	N=14	1%	N=1	100%	N=94
Overall image or reputation of Middleton	49%	N=53	43%	N=46	8%	N=9	0%	N=0	100%	N=108

Table 2: Question 1 with "don't know" responses

Please rate each of the following aspects of quality of life in Middleton:	Excellent		Good		Fair		Poor		Don't know		Total	
Middleton as a place to work	64%	N=69	32%	N=35	4%	N=4	0%	N=0	0%	N=0	100%	N=108
Middleton as a place to visit	44%	N=47	52%	N=56	4%	N=4	0%	N=0	1%	N=1	100%	N=108
Middleton as a place to do business	47%	N=51	45%	N=49	6%	N=7	1%	N=1	0%	N=0	100%	N=108
The overall quality of life in Middleton	49%	N=53	41%	N=44	4%	N=4	0%	N=0	6%	N=7	100%	N=108
Middleton as a place for children and families	52%	N=56	33%	N=36	5%	N=5	0%	N=0	10%	N=11	100%	N=108
Middleton as a place for older adults	37%	N=40	40%	N=43	7%	N=8	1%	N=1	15%	N=16	100%	N=108
Middleton as a place for young adults	27%	N=29	46%	N=50	13%	N=14	1%	N=1	13%	N=14	100%	N=108
Overall image or reputation of Middleton	49%	N=53	43%	N=46	8%	N=9	0%	N=0	0%	N=0	100%	N=108

Table 3: Question 2 without "don't know" responses

Please rate each of the following characteristics as they relate to Middleton as a whole:	Excellent		Good		Fair		Poor		Total	
Overall economic health of Middleton	33%	N=32	59%	N=58	7%	N=7	1%	N=1	100%	N=98
Overall quality of the transportation system (auto, bicycle, foot, bus) in Middleton	36%	N=36	43%	N=43	21%	N=21	1%	N=1	100%	N=101
Overall design or layout of Middleton's residential and commercial areas (e.g., homes, buildings, streets, parks, etc.)	26%	N=27	54%	N=57	16%	N=17	4%	N=4	100%	N=105
Overall quality of the utility infrastructure in Middleton (water, sewer, storm water, electric/gas)	32%	N=33	50%	N=52	16%	N=16	2%	N=2	100%	N=103
Overall feeling of safety in Middleton	35%	N=38	52%	N=56	11%	N=12	2%	N=2	100%	N=108
Overall quality of natural environment in Middleton	52%	N=56	41%	N=44	7%	N=7	0%	N=0	100%	N=107
Overall quality of parks and recreation opportunities	56%	N=54	41%	N=40	3%	N=3	0%	N=0	100%	N=97
Overall health and wellness opportunities in Middleton	41%	N=38	55%	N=51	4%	N=4	0%	N=0	100%	N=93
Overall opportunities for education, culture and the arts	27%	N=25	55%	N=51	16%	N=15	2%	N=2	100%	N=93
Residents' connection and engagement with their community	36%	N=32	51%	N=46	12%	N=11	1%	N=1	100%	N=90

Table 4: Question 2 with "don't know" responses

Please rate each of the following characteristics as they relate to Middleton as a whole:	Excellent		Good		Fair		Poor		Don't know		Total	
Overall economic health of Middleton	30%	N=32	54%	N=58	6%	N=7	1%	N=1	9%	N=10	100%	N=108
Overall quality of the transportation system (auto, bicycle, foot, bus) in Middleton	33%	N=36	40%	N=43	19%	N=21	1%	N=1	6%	N=7	100%	N=108
Overall design or layout of Middleton's residential and commercial areas (e.g., homes, buildings, streets, parks, etc.)	25%	N=27	53%	N=57	16%	N=17	4%	N=4	3%	N=3	100%	N=108
Overall quality of the utility infrastructure in Middleton (water, sewer, storm water, electric/gas)	31%	N=33	48%	N=52	15%	N=16	2%	N=2	5%	N=5	100%	N=108
Overall feeling of safety in Middleton	35%	N=38	52%	N=56	11%	N=12	2%	N=2	0%	N=0	100%	N=108
Overall quality of natural environment in Middleton	52%	N=56	41%	N=44	6%	N=7	0%	N=0	1%	N=1	100%	N=108
Overall quality of parks and recreation opportunities	50%	N=54	37%	N=40	3%	N=3	0%	N=0	9%	N=10	100%	N=107
Overall health and wellness opportunities in Middleton	35%	N=38	47%	N=51	4%	N=4	0%	N=0	14%	N=15	100%	N=108
Overall opportunities for education, culture and the arts	23%	N=25	47%	N=51	14%	N=15	2%	N=2	14%	N=15	100%	N=108
Residents' connection and engagement with their community	30%	N=32	43%	N=46	10%	N=11	1%	N=1	17%	N=18	100%	N=108

Table 5: Question 3 without "don't know" responses

Please indicate how likely or unlikely you are to do each of the following:	Very likely		Somewhat likely		Somewhat unlikely		Very unlikely		Total	
Recommend living in Middleton to someone who asks	51%	N=54	40%	N=42	9%	N=9	0%	N=0	100%	N=105
Recommend working in Middleton to someone who asks	73%	N=77	25%	N=26	2%	N=2	0%	N=0	100%	N=105
Recommend operating a business in Middleton to someone who asks	54%	N=58	36%	N=38	9%	N=10	1%	N=1	100%	N=107
Keep your business in Middleton for the next five years	72%	N=76	17%	N=18	3%	N=3	8%	N=8	100%	N=105

Table 6: Question 3 with "don't know" responses

Please indicate how likely or unlikely you are to do each of the following:	Very likely		Somewhat likely		Somewhat unlikely		Very unlikely		Don't know		Total	
Recommend living in Middleton to someone who asks	50%	N=54	39%	N=42	8%	N=9	0%	N=0	3%	N=3	100%	N=108
Recommend working in Middleton to someone who asks	71%	N=77	24%	N=26	2%	N=2	0%	N=0	3%	N=3	100%	N=108
Recommend operating a business in Middleton to someone who asks	54%	N=58	35%	N=38	9%	N=10	1%	N=1	1%	N=1	100%	N=108
Keep your business in Middleton for the next five years	70%	N=76	17%	N=18	3%	N=3	7%	N=8	3%	N=3	100%	N=108

Table 7: Question 4 without "don't know" responses

Please rate how safe or unsafe you feel:	Very safe		Somewhat safe		Neither safe nor unsafe		Somewhat unsafe		Very unsafe		Total	
In Middleton's commercial areas during the day	86%	N=93	11%	N=12	2%	N=2	1%	N=1	0%	N=0	100%	N=108
In Middleton's commercial areas after dark	45%	N=47	39%	N=41	13%	N=14	3%	N=3	0%	N=0	100%	N=105

Table 8: Question 4 with "don't know" responses

Please rate how safe or unsafe you feel:	Very safe		Somewhat safe		Neither safe nor unsafe		Somewhat unsafe		Very unsafe		Don't know		Total	
In Middleton's commercial areas during the day	86%	N=93	11%	N=12	2%	N=2	1%	N=1	0%	N=0	0%	N=0	100%	N=108
In Middleton's commercial areas after dark	44%	N=47	38%	N=41	13%	N=14	3%	N=3	0%	N=0	3%	N=3	100%	N=108

Table 9: Question 5 without "don't know" responses

Please rate each of the following characteristics as they relate to Middleton as a whole:	Excellent		Good		Fair		Poor		Total	
Cleanliness of Middleton	64%	N=69	32%	N=35	4%	N=4	0%	N=0	100%	N=108
Overall appearance of Middleton	55%	N=59	39%	N=42	6%	N=6	1%	N=1	100%	N=108
Vibrancy of downtown/commercial area	30%	N=32	55%	N=58	14%	N=15	1%	N=1	100%	N=106
Overall quality of commercial development in Middleton	25%	N=26	60%	N=62	13%	N=13	3%	N=3	100%	N=104
Overall opportunity for business growth and expansion	30%	N=30	52%	N=51	15%	N=15	3%	N=3	100%	N=99
Opportunities for tourism	18%	N=16	47%	N=41	31%	N=27	5%	N=4	100%	N=88
Public places where people want to spend time	31%	N=30	47%	N=46	21%	N=20	1%	N=1	100%	N=97
Historical preservation in Middleton	26%	N=22	54%	N=45	19%	N=16	1%	N=1	100%	N=84
Hotel and lodging options	39%	N=40	56%	N=57	4%	N=4	1%	N=1	100%	N=102
Opportunities to attend cultural/arts/music activities	17%	N=16	46%	N=43	33%	N=31	4%	N=4	100%	N=94
Quality of internet connection	29%	N=30	49%	N=50	18%	N=19	4%	N=4	100%	N=103
Coverage of internet connection	29%	N=28	52%	N=50	15%	N=15	4%	N=4	100%	N=97
Quality of shopping opportunities	27%	N=28	49%	N=51	23%	N=24	2%	N=2	100%	N=105
Variety of shopping opportunities	21%	N=22	44%	N=46	33%	N=35	2%	N=2	100%	N=105
Quality of restaurants and places to eat	38%	N=41	56%	N=61	6%	N=6	0%	N=0	100%	N=108
Variety of restaurants and places to eat	30%	N=32	58%	N=63	11%	N=12	1%	N=1	100%	N=108
Quality of service establishments (e.g., salons, dry cleaners, etc.)	33%	N=32	53%	N=51	14%	N=13	0%	N=0	100%	N=96
Variety of service establishments (e.g., salons, dry cleaners, etc.)	29%	N=28	54%	N=53	17%	N=17	0%	N=0	100%	N=98
Quality of employment opportunities	30%	N=27	49%	N=44	20%	N=18	1%	N=1	100%	N=90
Variety of employment opportunities	30%	N=27	42%	N=37	27%	N=24	1%	N=1	100%	N=89
Availability of jobs that pay a livable wage	21%	N=18	43%	N=36	30%	N=25	6%	N=5	100%	N=84

Table 10: Question 5 with "don't know" responses

Please rate each of the following characteristics as they relate to Middleton as a whole:	Excellent		Good		Fair		Poor		Don't know		Total	
Cleanliness of Middleton	64%	N=69	32%	N=35	4%	N=4	0%	N=0	0%	N=0	100%	N=108
Overall appearance of Middleton	55%	N=59	39%	N=42	6%	N=6	1%	N=1	0%	N=0	100%	N=108
Vibrancy of downtown/commercial area	30%	N=32	54%	N=58	14%	N=15	1%	N=1	2%	N=2	100%	N=108
Overall quality of commercial development in Middleton	24%	N=26	57%	N=62	12%	N=13	3%	N=3	4%	N=4	100%	N=108
Overall opportunity for business growth and expansion	28%	N=30	47%	N=51	14%	N=15	3%	N=3	8%	N=9	100%	N=108
Opportunities for tourism	15%	N=16	38%	N=41	25%	N=27	4%	N=4	19%	N=20	100%	N=108
Public places where people want to spend time	28%	N=30	43%	N=46	19%	N=20	1%	N=1	10%	N=11	100%	N=108
Historical preservation in Middleton	20%	N=22	42%	N=45	15%	N=16	1%	N=1	22%	N=24	100%	N=108
Hotel and lodging options	37%	N=40	53%	N=57	4%	N=4	1%	N=1	6%	N=6	100%	N=108
Opportunities to attend cultural/arts/music activities	15%	N=16	40%	N=43	29%	N=31	4%	N=4	12%	N=13	100%	N=107
Quality of internet connection	28%	N=30	47%	N=50	18%	N=19	4%	N=4	4%	N=4	100%	N=107
Coverage of internet connection	26%	N=28	46%	N=50	14%	N=15	4%	N=4	10%	N=11	100%	N=108
Quality of shopping opportunities	26%	N=28	47%	N=51	22%	N=24	2%	N=2	3%	N=3	100%	N=108
Variety of shopping opportunities	20%	N=22	43%	N=46	32%	N=35	2%	N=2	3%	N=3	100%	N=108
Quality of restaurants and places to eat	38%	N=41	56%	N=61	6%	N=6	0%	N=0	0%	N=0	100%	N=108
Variety of restaurants and places to eat	30%	N=32	58%	N=63	11%	N=12	1%	N=1	0%	N=0	100%	N=108
Quality of service establishments (e.g., salons, dry cleaners, etc.)	30%	N=32	47%	N=51	12%	N=13	0%	N=0	11%	N=12	100%	N=108
Variety of service establishments (e.g., salons, dry cleaners, etc.)	26%	N=28	49%	N=53	16%	N=17	0%	N=0	9%	N=10	100%	N=108
Quality of employment opportunities	25%	N=27	41%	N=44	17%	N=18	1%	N=1	17%	N=18	100%	N=108
Variety of employment opportunities	25%	N=27	35%	N=37	22%	N=24	1%	N=1	17%	N=18	100%	N=107
Availability of jobs that pay a livable wage	17%	N=18	34%	N=36	23%	N=25	5%	N=5	21%	N=23	100%	N=107

Table 11: Question 6

How much of a problem, if at all, are disruptive, nuisance, or illegal behaviors (e.g., loitering, vulgar language, panhandling, etc.) for your business?	Percent	Number
Major problem	2%	N=2
Moderate problem	6%	N=7
Minor problem	18%	N=19
Not at all a problem	74%	N=80
Total	100%	N=108

Table 12: Question 7 without "don't know" responses

Thinking about Middleton's workforce, please rate each of the following characteristics as they relate to Middleton:	Excellent		Good		Fair		Poor		Total	
Variety of housing options for people who work in Middleton	13%	N=12	42%	N=40	38%	N=36	7%	N=7	100%	N=95
Affordability of housing for people who work in Middleton	9%	N=8	27%	N=25	42%	N=39	23%	N=21	100%	N=93
Cost of living in Middleton	8%	N=8	33%	N=32	43%	N=42	15%	N=15	100%	N=97
Quality of childcare	34%	N=20	39%	N=23	20%	N=12	7%	N=4	100%	N=59
Affordability of childcare	9%	N=5	25%	N=13	43%	N=23	23%	N=12	100%	N=53
Variety of transportation options for people who work in Middleton	13%	N=11	43%	N=36	34%	N=28	10%	N=8	100%	N=83
Ease of parking at workplaces	31%	N=31	37%	N=37	25%	N=25	8%	N=8	100%	N=101

Table 13: Question 7 with "don't know" responses

Thinking about Middleton's workforce, please rate each of the following characteristics as they relate to Middleton:	Excellent		Good		Fair		Poor		Don't know		Total	
Variety of housing options for people who work in Middleton	11%	N=12	37%	N=40	34%	N=36	7%	N=7	11%	N=12	100%	N=107
Affordability of housing for people who work in Middleton	7%	N=8	23%	N=25	36%	N=39	20%	N=21	13%	N=14	100%	N=107
Cost of living in Middleton	8%	N=8	30%	N=32	40%	N=42	14%	N=15	8%	N=9	100%	N=106
Quality of childcare	19%	N=20	21%	N=23	11%	N=12	4%	N=4	45%	N=48	100%	N=107
Affordability of childcare	5%	N=5	12%	N=13	22%	N=23	11%	N=12	50%	N=52	100%	N=105
Variety of transportation options for people who work in Middleton	10%	N=11	34%	N=36	26%	N=28	7%	N=8	22%	N=24	100%	N=107
Ease of parking at workplaces	29%	N=31	35%	N=37	23%	N=25	7%	N=8	6%	N=6	100%	N=107

Table 14: Question 8 without "don't know" responses

Please rate each of the following characteristics as they relate to Middleton as a place to develop job and workforce skills:	Excellent		Good		Fair		Poor		Total	
The quality of the public school system at producing graduates who are career-ready	33%	N=25	48%	N=36	13%	N=10	5%	N=4	100%	N=75
The quality of the public school system at producing graduates who are college-ready	49%	N=36	42%	N=31	4%	N=3	5%	N=4	100%	N=74
Access to institutions of higher education (colleges, universities)	50%	N=47	41%	N=39	7%	N=7	1%	N=1	100%	N=94
Access to trade schools	35%	N=28	51%	N=40	11%	N=9	3%	N=2	100%	N=79
Variety of education/training opportunities to build work skills	32%	N=23	41%	N=30	27%	N=20	0%	N=0	100%	N=73
Affordability of education/training opportunities to build work skills	19%	N=13	44%	N=30	29%	N=20	7%	N=5	100%	N=68
Overall quality of education/training opportunities in your community	30%	N=24	44%	N=35	24%	N=19	3%	N=2	100%	N=80

Table 15: Question 8 with "don't know" responses

Please rate each of the following characteristics as they relate to Middleton as a place to develop job and workforce skills:	Excellent		Good		Fair		Poor		Don't know		Total	
The quality of the public school system at producing graduates who are career-ready	24%	N=25	34%	N=36	9%	N=10	4%	N=4	29%	N=31	100%	N=106
The quality of the public school system at producing graduates who are college-ready	34%	N=36	30%	N=31	3%	N=3	4%	N=4	30%	N=31	100%	N=105
Access to institutions of higher education (colleges, universities)	44%	N=47	37%	N=39	7%	N=7	1%	N=1	11%	N=12	100%	N=106
Access to trade schools	26%	N=28	38%	N=40	8%	N=9	2%	N=2	25%	N=27	100%	N=106
Variety of education/training opportunities to build work skills	22%	N=23	28%	N=30	19%	N=20	0%	N=0	31%	N=33	100%	N=106
Affordability of education/training opportunities to build work skills	12%	N=13	28%	N=30	19%	N=20	5%	N=5	36%	N=38	100%	N=106
Overall quality of education/training opportunities in your community	23%	N=24	33%	N=35	18%	N=19	2%	N=2	25%	N=26	100%	N=106

Table 16: Question 9 without "don't know" responses

Please rate the quality of each of the following services provided by the City of Middleton.	Excellent		Good		Fair		Poor		Total	
Police services	67%	N=68	30%	N=31	2%	N=2	1%	N=1	100%	N=102
Fire services	67%	N=68	33%	N=33	0%	N=0	0%	N=0	100%	N=101
Crime prevention	44%	N=42	47%	N=45	6%	N=6	3%	N=3	100%	N=96
Traffic enforcement	30%	N=30	59%	N=59	9%	N=9	2%	N=2	100%	N=100
Street repair	21%	N=22	45%	N=47	21%	N=22	13%	N=13	100%	N=104
Street cleaning	39%	N=40	45%	N=46	15%	N=15	1%	N=1	100%	N=102
Street lighting	35%	N=36	54%	N=55	9%	N=9	2%	N=2	100%	N=102
Snow removal	32%	N=32	46%	N=46	19%	N=19	3%	N=3	100%	N=100
Sidewalk maintenance	28%	N=28	55%	N=56	16%	N=16	1%	N=1	100%	N=101
Bus or transit services	21%	N=16	51%	N=39	21%	N=16	8%	N=6	100%	N=77
Traffic flow on major streets	21%	N=22	56%	N=58	20%	N=21	3%	N=3	100%	N=104
Amount of public parking in commercial areas	17%	N=18	47%	N=49	24%	N=25	12%	N=12	100%	N=104
Ease of travel by car in Middleton	40%	N=42	50%	N=52	8%	N=8	2%	N=2	100%	N=104
Ease of travel by bicycle in Middleton	38%	N=31	48%	N=39	14%	N=11	0%	N=0	100%	N=81
Ease of walking in Middleton (path/sidewalk connectivity, etc.)	43%	N=41	48%	N=46	9%	N=9	0%	N=0	100%	N=96
Traffic management during construction	18%	N=19	58%	N=60	20%	N=21	3%	N=3	100%	N=103
Garbage collection	46%	N=38	51%	N=42	2%	N=2	0%	N=0	100%	N=82
Recycling	43%	N=36	52%	N=43	5%	N=4	0%	N=0	100%	N=83
Storm drainage	17%	N=17	43%	N=42	29%	N=28	11%	N=11	100%	N=98
Power (electric and/or gas) utility	36%	N=36	59%	N=60	4%	N=4	1%	N=1	100%	N=101
Utility billing	27%	N=27	57%	N=56	12%	N=12	4%	N=4	100%	N=99
Land use, planning, and zoning	17%	N=15	52%	N=46	24%	N=21	8%	N=7	100%	N=89
Building permits and inspections	25%	N=17	50%	N=34	25%	N=17	0%	N=0	100%	N=68
Code enforcement (weeds, signs, etc.)	18%	N=14	55%	N=42	18%	N=14	8%	N=6	100%	N=76
Economic development	31%	N=27	48%	N=41	16%	N=14	5%	N=4	100%	N=86

Please rate the quality of each of the following services provided by the City of Middleton.	Excellent		Good		Fair		Poor		Total	
Public information services	26%	N=23	49%	N=43	22%	N=19	2%	N=2	100%	N=87
Emergency preparedness (services that prepare the community for natural disasters or other emergency situations)	23%	N=16	52%	N=37	23%	N=16	3%	N=2	100%	N=71
City-sponsored special events	25%	N=21	51%	N=42	20%	N=17	4%	N=3	100%	N=83
Overall customer service by Middleton employees (police, receptionists, planners, etc.)	45%	N=45	48%	N=48	7%	N=7	0%	N=0	100%	N=100

Table 17: Question 9 with "don't know" responses

Please rate the quality of each of the following services provided by the City of Middleton.	Excellent		Good		Fair		Poor		Don't know		Total	
Police services	65%	N=68	30%	N=31	2%	N=2	1%	N=1	3%	N=3	100%	N=105
Fire services	65%	N=68	31%	N=33	0%	N=0	0%	N=0	4%	N=4	100%	N=105
Crime prevention	40%	N=42	43%	N=45	6%	N=6	3%	N=3	9%	N=9	100%	N=105
Traffic enforcement	29%	N=30	56%	N=59	9%	N=9	2%	N=2	5%	N=5	100%	N=105
Street repair	21%	N=22	45%	N=47	21%	N=22	12%	N=13	1%	N=1	100%	N=105
Street cleaning	38%	N=40	44%	N=46	14%	N=15	1%	N=1	3%	N=3	100%	N=105
Street lighting	34%	N=36	52%	N=55	9%	N=9	2%	N=2	3%	N=3	100%	N=105
Snow removal	30%	N=32	44%	N=46	18%	N=19	3%	N=3	5%	N=5	100%	N=105
Sidewalk maintenance	27%	N=28	53%	N=56	15%	N=16	1%	N=1	4%	N=4	100%	N=105
Bus or transit services	15%	N=16	37%	N=39	15%	N=16	6%	N=6	27%	N=28	100%	N=105
Traffic flow on major streets	21%	N=22	55%	N=58	20%	N=21	3%	N=3	1%	N=1	100%	N=105
Amount of public parking in commercial areas	17%	N=18	47%	N=49	24%	N=25	11%	N=12	1%	N=1	100%	N=105
Ease of travel by car in Middleton	40%	N=42	50%	N=52	8%	N=8	2%	N=2	1%	N=1	100%	N=105
Ease of travel by bicycle in Middleton	30%	N=31	37%	N=39	10%	N=11	0%	N=0	23%	N=24	100%	N=105
Ease of walking in Middleton (path/sidewalk connectivity, etc.)	39%	N=41	44%	N=46	9%	N=9	0%	N=0	9%	N=9	100%	N=105
Traffic management during construction	18%	N=19	57%	N=60	20%	N=21	3%	N=3	2%	N=2	100%	N=105
Garbage collection	36%	N=38	40%	N=42	2%	N=2	0%	N=0	22%	N=23	100%	N=105

Please rate the quality of each of the following services provided by the City of Middleton.	Excellent		Good		Fair		Poor		Don't know		Total	
Recycling	34%	N=36	41%	N=43	4%	N=4	0%	N=0	21%	N=22	100%	N=105
Storm drainage	16%	N=17	40%	N=42	27%	N=28	10%	N=11	7%	N=7	100%	N=105
Power (electric and/or gas) utility	35%	N=36	58%	N=60	4%	N=4	1%	N=1	2%	N=2	100%	N=103
Utility billing	26%	N=27	53%	N=56	11%	N=12	4%	N=4	6%	N=6	100%	N=105
Land use, planning, and zoning	14%	N=15	44%	N=46	20%	N=21	7%	N=7	15%	N=16	100%	N=105
Building permits and inspections	16%	N=17	32%	N=34	16%	N=17	0%	N=0	35%	N=37	100%	N=105
Code enforcement (weeds, signs, etc.)	13%	N=14	40%	N=42	13%	N=14	6%	N=6	28%	N=29	100%	N=105
Economic development	26%	N=27	39%	N=41	13%	N=14	4%	N=4	18%	N=19	100%	N=105
Public information services	22%	N=23	41%	N=43	18%	N=19	2%	N=2	17%	N=18	100%	N=105
Emergency preparedness (services that prepare the community for natural disasters or other emergency situations)	15%	N=16	35%	N=37	15%	N=16	2%	N=2	32%	N=34	100%	N=105
City-sponsored special events	20%	N=21	40%	N=42	16%	N=17	3%	N=3	20%	N=21	100%	N=104
Overall customer service by Middleton employees (police, receptionists, planners, etc.)	43%	N=45	46%	N=48	7%	N=7	0%	N=0	5%	N=5	100%	N=105

Table 18: Question 10 without "don't know" responses

Overall, how would you rate the quality of the services provided by each of the following?	Excellent		Good		Fair		Poor		Total	
The City of Middleton	40%	N=40	50%	N=50	11%	N=11	0%	N=0	100%	N=101
The Federal Government	13%	N=13	41%	N=40	36%	N=35	10%	N=10	100%	N=98

Table 19: Question 10 with "don't know" responses

Overall, how would you rate the quality of the services provided by each of the following?	Excellent		Good		Fair		Poor		Don't know		Total	
The City of Middleton	39%	N=40	49%	N=50	11%	N=11	0%	N=0	2%	N=2	100%	N=103
The Federal Government	13%	N=13	39%	N=40	34%	N=35	10%	N=10	5%	N=5	100%	N=103

Table 20: Question 11 without "don't know" responses

Please rate the following categories of Middleton government performance:	Excellent		Good		Fair		Poor		Total	
The value of services for the taxes paid to Middleton	19%	N=17	51%	N=46	23%	N=21	8%	N=7	100%	N=91
The overall direction that Middleton is taking	19%	N=18	53%	N=51	23%	N=22	5%	N=5	100%	N=96
Overall confidence in Middleton government	15%	N=14	53%	N=51	25%	N=24	7%	N=7	100%	N=96
Generally acting in the best interest of the community	19%	N=19	52%	N=51	21%	N=21	7%	N=7	100%	N=98
Being honest	24%	N=21	47%	N=41	24%	N=21	6%	N=5	100%	N=88

Table 21: Question 11 with "don't know" responses

Please rate the following categories of Middleton government performance:	Excellent		Good		Fair		Poor		Don't know		Total	
The value of services for the taxes paid to Middleton	16%	N=17	44%	N=46	20%	N=21	7%	N=7	13%	N=13	100%	N=104
The overall direction that Middleton is taking	17%	N=18	49%	N=51	21%	N=22	5%	N=5	8%	N=8	100%	N=104
Overall confidence in Middleton government	13%	N=14	49%	N=51	23%	N=24	7%	N=7	8%	N=8	100%	N=104
Generally acting in the best interest of the community	18%	N=19	49%	N=51	20%	N=21	7%	N=7	6%	N=6	100%	N=104
Being honest	20%	N=21	39%	N=41	20%	N=21	5%	N=5	15%	N=16	100%	N=104

Table 22: Question 12 without "don't know" responses

Please rate the job the Middleton government does:	Excellent		Good		Fair		Poor		Total	
Informing businesses of community issues and values	20%	N=19	46%	N=45	25%	N=24	9%	N=9	100%	N=97
Communicating during City construction (e.g., streets, utilities, etc.)	18%	N=17	46%	N=45	29%	N=28	7%	N=7	100%	N=97
Welcoming business involvement	22%	N=19	48%	N=42	23%	N=20	7%	N=6	100%	N=87
Retaining existing businesses	18%	N=16	54%	N=49	20%	N=18	8%	N=7	100%	N=90
Attracting new businesses	20%	N=17	50%	N=42	25%	N=21	5%	N=4	100%	N=84
Supporting or creating new jobs	14%	N=11	45%	N=35	31%	N=24	10%	N=8	100%	N=78

Table 23: Question 12 with "don't know" responses

Please rate the job the Middleton government does:	Excellent		Good		Fair		Poor		Don't know		Total	
Informing businesses of community issues and values	18%	N=19	43%	N=45	23%	N=24	9%	N=9	7%	N=7	100%	N=104
Communicating during City construction (e.g., streets, utilities, etc.)	16%	N=17	43%	N=45	27%	N=28	7%	N=7	7%	N=7	100%	N=104
Welcoming business involvement	18%	N=19	40%	N=42	19%	N=20	6%	N=6	16%	N=17	100%	N=104
Retaining existing businesses	15%	N=16	47%	N=49	17%	N=18	7%	N=7	13%	N=14	100%	N=104
Attracting new businesses	16%	N=17	40%	N=42	20%	N=21	4%	N=4	19%	N=20	100%	N=104
Supporting or creating new jobs	11%	N=11	34%	N=35	23%	N=24	8%	N=8	25%	N=26	100%	N=104

Table 24: Question 13 without "don't know" responses

Please rate the amount of growth in your company:	Large increase		Small increase		No change		Small decrease		Large decrease		Total	
Over the PAST five years	17%	N=17	58%	N=60	16%	N=16	7%	N=7	3%	N=3	100%	N=103
Expected in the NEXT five years	14%	N=13	59%	N=54	16%	N=15	5%	N=5	5%	N=5	100%	N=92

Table 25: Question 13 with "don't know" responses

Please rate the amount of growth in your company:	Large increase		Small increase		No change		Small decrease		Large decrease		Don't know		Total	
Over the PAST five years	16%	N=17	58%	N=60	15%	N=16	7%	N=7	3%	N=3	1%	N=1	100%	N=104
Expected in the NEXT five years	13%	N=13	52%	N=54	15%	N=15	5%	N=5	5%	N=5	11%	N=11	100%	N=103

Table 26: Question 14

What impact, if any, do you think the economy will have on your business revenues in the next 6 months? Do you think the impact will be:	Percent	Number
Very positive	4%	N=4
Somewhat positive	19%	N=20
Neutral	30%	N=31
Somewhat negative	30%	N=31
Very negative	17%	N=17
Total	100%	N=103

Table 27: Question 15

Is your business planning to hire in the next 6 to 12 months?	Percent	Number
No	43%	N=44
Yes	36%	N=37
Not sure	21%	N=22
Total	100%	N=103

Table 28: Question 16

If you said “yes” or “not sure” to question 15 above, what types of jobs might you be adding? (Please select all that apply.)	Percent	Number
Unskilled jobs: these jobs do not require workers to have special training or skills (e.g., cashiers, farm laborers, grocery clerks, hotel workers)	28%	N=17
Semi-skilled jobs: these jobs require some skill but do not require highly specialized skills (e.g., truck drivers, typists)	38%	N=23
Skilled jobs: these jobs require a comprehensive knowledge of the trade, craft or industry (e.g., electricians, plumbers, law enforcement officers, administrative assistants)	45%	N=27
Highly skilled jobs: these jobs require an advanced education or training (e.g., doctors, lawyers, architects, financial consultants)	23%	N=14

Total may exceed 100% as respondents could select more than one option.

Table 29: Question 17 without "don't know" responses

Thinking about your current employees and current employment options at your business, please rate to what extent they possess the following:	Fully		Mostly		Somewhat		Slightly		Not at all		Total	
The educational qualifications	41%	N=40	44%	N=43	15%	N=15	0%	N=0	0%	N=0	100%	N=98
The skills needed	39%	N=38	52%	N=51	8%	N=8	0%	N=0	1%	N=1	100%	N=98

Table 30: Question 17 with "don't know" responses

Thinking about your current employees and current employment options at your business, please rate to what extent they possess the following:	Fully		Mostly		Somewhat		Slightly		Not at all		Don't know		Total	
The educational qualifications	40%	N=40	43%	N=43	15%	N=15	0%	N=0	0%	N=0	1%	N=1	100%	N=99
The skills needed	38%	N=38	52%	N=51	8%	N=8	0%	N=0	1%	N=1	1%	N=1	100%	N=99

Table 31: Question 18 without "don't know" responses

Thinking about your current employees and current employment options at your business, please rate to what extent they possess the following:	Major challenge		Moderate challenge		Minor challenge		Not at all a challenge		5		Total	
Too many under-qualified employees/applicants	24%	N=19	31%	N=24	26%	N=20	19%	N=15	0%	N=0	100%	N=78
Too many overqualified employees/applicants	4%	N=3	12%	N=9	28%	N=21	56%	N=42	0%	N=0	100%	N=75
Lack of higher education opportunities (e.g., universities, colleges)	0%	N=0	4%	N=4	18%	N=18	52%	N=53	26%	N=26	100%	N=101
Lack of trade schools and other adult training programs	6%	N=6	12%	N=12	13%	N=13	44%	N=44	25%	N=25	100%	N=100
Lack of quality public schools	2%	N=2	6%	N=6	9%	N=9	57%	N=58	26%	N=26	100%	N=101
Too many workers without a high school degree or equivalent	2%	N=2	2%	N=2	16%	N=16	56%	N=57	24%	N=24	100%	N=101
Too few applicants/employees who do not speak a language other than English (e.g., cannot speak Spanish)	2%	N=2	7%	N=7	11%	N=11	51%	N=52	29%	N=29	100%	N=101
Too few applicants/employees who speak a language other than English (e.g., cannot speak English)	1%	N=1	10%	N=10	12%	N=12	49%	N=49	29%	N=29	100%	N=101
Lack of childcare opportunities	4%	N=4	10%	N=10	17%	N=17	30%	N=30	40%	N=40	100%	N=101
Lack of affordable, reliable public transportation	6%	N=6	16%	N=16	22%	N=22	29%	N=29	28%	N=28	100%	N=101
Lack of affordable, quality housing	15%	N=11	35%	N=26	20%	N=15	30%	N=22	0%	N=0	100%	N=74
Cost of living	17%	N=14	35%	N=29	27%	N=22	22%	N=18	0%	N=0	100%	N=83
Lack of community amenities to attract employees seeking higher paying/higher skill level jobs	3%	N=2	14%	N=10	25%	N=18	59%	N=43	0%	N=0	100%	N=73
Failed drug tests	1%	N=1	7%	N=5	16%	N=11	76%	N=53	0%	N=0	100%	N=70

Table 32: Question 18 with "don't know" responses

Thinking about your current employees and current employment options at your business, please rate to what extent they possess the following:	Major challenge		Moderate challenge		Minor challenge		Not at all a challenge		Don't know		Total	
Too many under-qualified employees/applicants	19%	N=19	24%	N=24	20%	N=20	15%	N=15	23%	N=23	100%	N=101
Too many overqualified employees/applicants	3%	N=3	9%	N=9	21%	N=21	42%	N=42	26%	N=26	100%	N=101
Lack of higher education opportunities (e.g., universities, colleges)	0%	N=0	4%	N=4	18%	N=18	52%	N=53	26%	N=26	100%	N=101
Lack of trade schools and other adult training programs	6%	N=6	12%	N=12	13%	N=13	44%	N=44	25%	N=25	100%	N=100
Lack of quality public schools	2%	N=2	6%	N=6	9%	N=9	57%	N=58	26%	N=26	100%	N=101
Too many workers without a high school degree or equivalent	2%	N=2	2%	N=2	16%	N=16	56%	N=57	24%	N=24	100%	N=101
Too few applicants/employees who do not speak a language other than English (e.g., cannot speak Spanish)	2%	N=2	7%	N=7	11%	N=11	51%	N=52	29%	N=29	100%	N=101
Too few applicants/employees who speak a language other than English (e.g., cannot speak English)	1%	N=1	10%	N=10	12%	N=12	49%	N=49	29%	N=29	100%	N=101
Lack of childcare opportunities	4%	N=4	10%	N=10	17%	N=17	30%	N=30	40%	N=40	100%	N=101
Lack of affordable, reliable public transportation	6%	N=6	16%	N=16	22%	N=22	29%	N=29	28%	N=28	100%	N=101
Lack of affordable, quality housing	11%	N=11	26%	N=26	15%	N=15	22%	N=22	27%	N=27	100%	N=101
Cost of living	14%	N=14	29%	N=29	22%	N=22	18%	N=18	18%	N=18	100%	N=101
Lack of community amenities to attract employees seeking higher paying/higher skill level jobs	2%	N=2	10%	N=10	18%	N=18	43%	N=43	28%	N=28	100%	N=101
Failed drug tests	1%	N=1	5%	N=5	11%	N=11	52%	N=53	31%	N=31	100%	N=101

Table 33: Question 19 without "don't know" and "N/A" responses

Thinking about government plans to lift restrictions related to COVID-19 on businesses and community gathering areas or venues, how is the rate of reopening at each of the following levels of government?	Too fast		About right		Too slow		Total	
The City of Middleton	12%	N=11	61%	N=54	27%	N=24	100%	N=89
Dane County	15%	N=14	50%	N=46	35%	N=32	100%	N=92
The State of Wisconsin	26%	N=24	42%	N=39	32%	N=29	100%	N=92

Table 34: Question 19 with "don't know" and "N/A" responses

Thinking about government plans to lift restrictions related to COVID-19 on businesses and community gathering areas or venues, how is the rate of reopening at each of the following levels of government?	Too fast		About right		Too slow		Don't know		N/A		Total	
The City of Middleton	11%	N=11	53%	N=54	24%	N=24	8%	N=8	5%	N=5	100%	N=102
Dane County	14%	N=14	45%	N=46	31%	N=32	6%	N=6	4%	N=4	100%	N=102
The State of Wisconsin	24%	N=24	38%	N=39	28%	N=29	6%	N=6	4%	N=4	100%	N=102

Table 35: Question 20 without "don't know" responses

How much of a problem, if at all, are the following issues for your business as a result of the COVID-19 pandemic?	Major problem		Moderate problem		Minor problem		Not a problem		Total	
Decline in business/sales	33%	N=33	24%	N=24	22%	N=22	22%	N=22	100%	N=101
Not having the funds to pay our employees	19%	N=18	14%	N=13	16%	N=15	51%	N=48	100%	N=94
Difficulty paying our commercial rent, commercial mortgage or lines of credit	22%	N=21	7%	N=7	16%	N=15	54%	N=51	100%	N=94
Reduced access to customers due to State or local regulations	24%	N=24	13%	N=13	26%	N=26	37%	N=37	100%	N=100
Complying with State or local regulations	9%	N=9	9%	N=9	26%	N=26	56%	N=57	100%	N=101
Enforcing public health policies and regulations on customers (e.g., social distancing, mask use, etc.)	4%	N=4	10%	N=10	23%	N=23	63%	N=64	100%	N=101
Not knowing current rules and regulations for operating a business under COVID-19	0%	N=0	7%	N=7	15%	N=15	78%	N=77	100%	N=99
Customers not complying with social distance measures, masks, etc.	0%	N=0	5%	N=5	27%	N=27	68%	N=67	100%	N=99
Getting the supplies we need/supply chain breakdowns	9%	N=9	14%	N=14	34%	N=34	43%	N=43	100%	N=100
Ability to conduct business with foreign trade partners	4%	N=2	8%	N=4	23%	N=12	65%	N=34	100%	N=52
Lack of technology/web resources to complete on-line sales	0%	N=0	3%	N=2	18%	N=14	80%	N=63	100%	N=79
Fear of a second wave of the virus resulting in need to close business again	33%	N=32	11%	N=11	31%	N=30	26%	N=25	100%	N=98
Concern about the liability of our customers or clients being exposed to COVID-19 on the job	12%	N=12	24%	N=24	35%	N=35	28%	N=28	100%	N=99

Table 36: Question 20 with "don't know" responses

How much of a problem, if at all, are the following issues for your business as a result of the COVID-19 pandemic?	Major problem		Moderate problem		Minor problem		Not a problem		Not applicable		Total	
Decline in business/sales	31%	N=33	23%	N=24	21%	N=22	21%	N=22	4%	N=4	100%	N=105
Not having the funds to pay our employees	17%	N=18	13%	N=13	14%	N=15	46%	N=48	10%	N=10	100%	N=104
Difficulty paying our commercial rent, commercial mortgage or lines of credit	20%	N=21	7%	N=7	14%	N=15	49%	N=51	10%	N=10	100%	N=104
Reduced access to customers due to State or local regulations	23%	N=24	13%	N=13	25%	N=26	36%	N=37	4%	N=4	100%	N=104
Complying with State or local regulations	9%	N=9	9%	N=9	25%	N=26	55%	N=57	3%	N=3	100%	N=104
Enforcing public health policies and regulations on customers (e.g., social distancing, mask use, etc.)	4%	N=4	10%	N=10	22%	N=23	62%	N=64	3%	N=3	100%	N=104
Not knowing current rules and regulations for operating a business under COVID-19	0%	N=0	7%	N=7	14%	N=15	74%	N=77	5%	N=5	100%	N=104
Customers not complying with social distance measures, masks, etc.	0%	N=0	5%	N=5	26%	N=27	64%	N=67	5%	N=5	100%	N=104
Getting the supplies we need/supply chain breakdowns	9%	N=9	13%	N=14	33%	N=34	41%	N=43	4%	N=4	100%	N=104
Ability to conduct business with foreign trade partners	2%	N=2	4%	N=4	12%	N=12	33%	N=34	50%	N=52	100%	N=104
Lack of technology/web resources to complete on-line sales	0%	N=0	2%	N=2	13%	N=14	61%	N=63	24%	N=25	100%	N=104
Fear of a second wave of the virus resulting in need to close business again	30%	N=32	10%	N=11	29%	N=30	24%	N=25	7%	N=7	100%	N=105
Concern about the liability of our customers or clients being exposed to COVID-19 on the job	11%	N=12	23%	N=24	33%	N=35	27%	N=28	6%	N=6	100%	N=105

Table 37: Question 21 without "don't know" responses

How has, or how do you anticipate, COVID-19 will impact your current or future staffing levels?	Percent	Number
Significant reduction in staffing levels	12%	N=12
Slight reduction in staffing levels	28%	N=28
No change in staffing levels	54%	N=55
Slight increase in staffing levels	5%	N=5
Education and training	1%	N=1
Total	100%	N=101

Table 38: Question 21 without "don't know" responses

How has, or how do you anticipate, COVID-19 will impact your current or future staffing levels?	Percent	Number
Significant reduction in staffing levels	12%	N=12
Slight reduction in staffing levels	28%	N=28
No change in staffing levels	54%	N=55
Slight increase in staffing levels	5%	N=5
Education and training	1%	N=1
Total	100%	N=101

Table 39: Question 21 with "don't know" responses

How has, or how do you anticipate, COVID-19 will impact your current or future staffing levels?	Percent	Number
Significant reduction in staffing levels	12%	N=12
Slight reduction in staffing levels	27%	N=28
No change in staffing levels	53%	N=55
Slight increase in staffing levels	5%	N=5
Education and training	1%	N=1
Don't know	3%	N=3
Total	100%	N=104

Table 40: Question 22 without "don't know" responses

Which of the following strategies, if any, are you using or have you used to minimize the impact of COVID-19 on your business?	Already doing		Considering		Not considering		Total	
Laid off staff	20%	N=17	11%	N=10	69%	N=60	100%	N=87
Cut back hours	45%	N=42	11%	N=10	45%	N=42	100%	N=94
Reduced hourly rates or salaries	10%	N=9	14%	N=12	76%	N=65	100%	N=86
Suspended paid bonuses, incentive plans, and other variable non-regular pay programs	19%	N=15	13%	N=10	68%	N=54	100%	N=79
Asked staff to take unpaid furlough	9%	N=7	10%	N=8	81%	N=64	100%	N=79

Table 41: Question 22 with "don't know" responses

Which of the following strategies, if any, are you using or have you used to minimize the impact of COVID-19 on your business?	Already doing		Considering		Not considering		N/A		Total	
Laid off staff	16%	N=17	10%	N=10	58%	N=60	16%	N=17	100%	N=104
Cut back hours	40%	N=42	10%	N=10	40%	N=42	10%	N=10	100%	N=104
Reduced hourly rates or salaries	9%	N=9	12%	N=12	63%	N=65	17%	N=18	100%	N=104
Suspended paid bonuses, incentive plans, and other variable non-regular pay programs	14%	N=15	10%	N=10	52%	N=54	24%	N=25	100%	N=104
Asked staff to take unpaid furlough	7%	N=7	8%	N=8	62%	N=64	24%	N=25	100%	N=104

Table 42: Question D1

Which one of the following industries best describes the nature of your business?	Percent	Number
Agriculture or farming	1%	N=1
Arts, audio, video technology and communications	1%	N=1
Banking/financial services/credit unions	6%	N=6
Business, industry, and trade associations	0%	N=0
Construction	6%	N=6
Education and training	5%	N=5
Financial activities	1%	N=1
Health care and health services	6%	N=6
Information/media	1%	N=1
Legal	3%	N=3
Leisure and hospitality (travel, lodging, restaurants, bars, entertainment)	10%	N=11
Manufacturing	8%	N=9
Marketing, sales and services	5%	N=5
Non-profit charitable organization	3%	N=3
Other services (cleaning, dog walking, beauty, etc.)	3%	N=3
Professional and business services/consulting	9%	N=10
Public service and government	4%	N=4

Which one of the following industries best describes the nature of your business?	Percent	Number
Shopping and retail	8%	N=8
Technology and computers	2%	N=2
Transportation and automotive services	4%	N=4
Utilities (gas, electric, water, internet, cable)	1%	N=1
Wholesale trade/sales	7%	N=7
Other	8%	N=9
Total	100%	N=106

Table 43: Question D2

What is your position in this organization?	Percent	Number
Owner	63%	N=67
Administrative Assistant	29%	N=31
Manager or Administrator	2%	N=2
Other	6%	N=6
Total	100%	N=106

Table 44: Question D3

How many years has your business been located in Middleton?	Percent	Number
Less than 1 year	1%	N=1
1-5 years	15%	N=16
6-10 years	9%	N=10
More than 10 years	75%	N=79
Total	100%	N=106

Table 45: Question D4

What was the approximate annual gross revenue (for the most recent accounting year) generated by all of your Middleton sites?	Percent	Number
Pre-revenue	2%	N=2
Less than $100,000	8%	N=8
$100,000 to $499,999	36%	N=35
$500,000 to $999,999	14%	N=14
$1,000,000 to $4,999,999	35%	N=34
$5,000,000 or more	5%	N=5
Total	100%	N=98

Table 46: Question D5

Which, if any, of the following most closely reflect your business? Select "Yes" or "No" for each item.	Yes		No		Total	
Home-based	15%	N=16	85%	N=90	100%	N=106
A small business (1-49 employees)	82%	N=87	18%	N=19	100%	N=106
Mid-sized business (50-499 employees)	12%	N=13	88%	N=93	100%	N=106
Large business (500+ employees)	8%	N=8	92%	N=98	100%	N=106
Minority-owned business enterprise (MBE, 51% owned, operated, and controlled by a US citizen(s) who is a racial or ethnic minority)	4%	N=4	96%	N=102	100%	N=106
Woman-owned business enterprise (WBE)	31%	N=33	69%	N=73	100%	N=106

Table 47: Question D6

Approximately what percent of your workforce at this location do you think lives in Middleton?	Percent	Number
Less than 10%	38%	N=40
10-24%	20%	N=21
25-49%	12%	N=13
50-74%	11%	N=12
75% or more	17%	N=18
Don't know	2%	N=2
Total	100%	N=106

Appendix B: Benchmark Comparisons

Comparison Data

NRC's database of comparative business opinion is comprised of business perspectives gathered in surveys from communities whose business owners and/or managers evaluated the same kinds of topics on The National Business Survey™. NRC adds the latest results quickly upon survey completion, keeping the benchmark data fresh and relevant. Comparisons are made to the entire database.

Interpreting the Results

Ratings are compared when there are at least five communities in which a similar question was asked. Where comparisons are available, four columns are provided in the table. The first column is Middleton's "percent positive." The percent positive is the combination of the top two most positive response options (i.e., "excellent" and "good," "very safe" and "somewhat safe," "essential" and "very important," etc.). The second column is the rank assigned to Middleton's rating among communities where a similar question was asked. The third column is the number of communities that asked a similar question. The final column shows the comparison of Middleton's rating to the benchmark.

In that final column, Middleton's results are noted as being "higher" than the benchmark, "lower" than the benchmark or "similar" to the benchmark, meaning that the average rating given by Middleton business owners or managers is statistically similar to or different (greater or lesser) than the benchmark.

National Benchmark Comparisons

Table 48: QUALITY OF LIFE

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Middleton as a place for young adults	84%	NA	NA	NA
Middleton as a place for older adults	90%	1	10	Higher
Middleton as a place for children and families	95%	NA	NA	NA
The overall quality of life in Middleton	96%	2	13	Higher

Table 49: QUALITY OF FACETS OF LIVABILITY

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Residents' connection and engagement with their community	87%	1	6	Higher
Overall opportunities for education, culture and the arts	82%	7	8	Lower
Overall health and wellness opportunities in Middleton	96%	1	6	Higher
Overall quality of parks and recreation opportunities	97%	NA	NA	NA
Overall quality of natural environment in Middleton	93%	2	8	Higher
Overall feeling of safety in Middleton	87%	6	6	Similar
Overall quality of the utility infrastructure	83%	NA	NA	NA
Overall design or layout of residential and commercial areas	80%	2	6	Higher
Overall quality of the transportation system	78%	4	6	Higher
Overall economic health of Middleton	92%	2	13	Higher

Table 50: SAFETY IN COMMERCIAL AREAS

Percent very or somewhat safe	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Safety in Middleton's commercial areas after dark	84%	3	9	Higher
Safety in Middleton's commercial areas during the day	97%	2	9	Similar

Table 51: COMMUNITY AMENITIES IN MIDDLETON

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Coverage of internet connection	80%	NA	NA	NA
Quality of internet connection	78%	NA	NA	NA
Opportunities to attend cultural/arts/music activities	63%	NA	NA	NA
Hotel and lodging options	95%	NA	NA	NA
Historical preservation in Middleton	80%	NA	NA	NA
Public places where people want to spend time	78%	4	6	Lower
Overall appearance of Middleton	94%	3	12	Higher
Cleanliness of Middleton	96%	3	11	Higher
Overall image or reputation of Middleton	92%	2	11	Higher
Middleton as a place to visit	96%	1	6	Higher

Table 52: BUSINESS AND SERVICE AMENITIES IN MIDDLETON

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Variety of service establishments	83%	NA	NA	NA
Quality of service establishments	86%	NA	NA	NA
Variety of restaurants and places to eat	88%	NA	NA	NA
Quality of restaurants and places to eat	94%	NA	NA	NA
Variety of shopping opportunities	65%	NA	NA	NA
Quality of shopping opportunities	75%	7	11	Lower
Opportunities for tourism	65%	NA	NA	NA
Overall opportunity for business growth and expansion	82%	NA	NA	NA
Overall quality of commercial development in Middleton	85%	3	12	Higher
Vibrancy of downtown/commercial area	85%	2	6	Similar

Table 53: DISRUPTIVE, NUISANCE, AND ILLEGAL BEHAVIORS

Percent not at all a problem	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Disruptive, nuisance, or illegal behaviors a problem for business	74%	NA	NA	NA

Table 54: GOVERNMENT SUPPORT FOR THE BUSINESS COMMUNITY

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Supporting or creating new jobs	59%	3	7	Higher
Attracting new businesses	70%	2	8	Higher
Retaining existing businesses	72%	1	6	Higher
Welcoming business involvement	70%	2	10	Higher
Communicating during City construction	64%	NA	NA	NA
Informing businesses of community issues and values	66%	5	10	Similar
Middleton as a place to do business	93%	1	13	Higher

Table 55: RECOMMEND AND INTENTION TO STAY

Percent very or somewhat likely	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Keep your business in Middleton for the next five years	90%	8	13	Similar
Recommend operating a business in Middleton to someone who asks	90%	3	9	Higher
Recommend working in Middleton	98%	NA	NA	NA
Recommend living in Middleton	91%	NA	NA	NA

Table 56: EMPLOYMENT IN MIDDLETON

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Availability of jobs that pay a livable wage	64%	NA	NA	NA
Variety of employment opportunities	72%	NA	NA	NA
Quality of employment opportunities	79%	4	11	Higher
Middleton as a place to work	96%	3	12	Higher

Table 57: WORKFORCE SUPPORTS IN MIDDLETON

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Ease of parking at workplaces	67%	NA	NA	NA
Variety of transportation options for people who work in Middleton	57%	NA	NA	NA
Affordability of childcare	34%	NA	NA	NA
Quality of childcare	73%	NA	NA	NA
Cost of living in Middleton	41%	NA	NA	NA
Affordability of housing for people who work in Middleton	35%	NA	NA	NA

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Variety of housing options for people who work in Middleton	55%	10	11	Lower

Table 58: WORKFORCE EDUCATION AND SKILL SUPPORTS IN MIDDLETON

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Overall quality of education/training opportunities in your community	74%	NA	NA	NA
Affordability of education/training opportunities to build work skills	63%	NA	NA	NA
Variety of education/training opportunities to build work skills	73%	3	7	Higher
Access to trade schools	86%	NA	NA	NA
Access to institutions of higher education	91%	NA	NA	NA
Public school system producing college-ready graduates	91%	NA	NA	NA
Public school system producing career-ready graduates	81%	NA	NA	NA

Table 59: WORKFORCE READINESS IN MIDDLETON

Percent fully or mostly possess	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
The skills needed	91%	NA	NA	NA
The educational qualifications	85%	NA	NA	NA

Table 60: WORKFORCE CHALLENGES IN MIDDLETON

Percent major or moderate challenge	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Failed drug tests	9%	NA	NA	NA
Lack of community amenities to attract employees seeking higher paying/higher skill level jobs	16%	NA	NA	NA
Cost of living	52%	NA	NA	NA
Lack of affordable, quality housing	50%	NA	NA	NA
Lack of affordable, reliable public transportation	22%	NA	NA	NA
Lack of childcare opportunities	14%	NA	NA	NA
Too few applicants/employees who speak a language other than English	11%	NA	NA	NA
Too few applicants/employees who do not speak a language other than English	9%	NA	NA	NA
Too many workers without a high school degree or equivalent	4%	NA	NA	NA

Percent major or moderate challenge	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Lack of quality public schools	8%	NA	NA	NA
Lack of trade schools and other adult training programs	18%	NA	NA	NA
Lack of higher education opportunities	4%	NA	NA	NA
Too many overqualified employees/applicants	16%	NA	NA	NA
Too many under-qualified employees/applicants	55%	NA	NA	NA

Table 61: EXPECTED BUSINESS GROWTH

Percent large or small increase	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Increase expected in the NEXT five years	73%	NA	NA	NA
Increased over the PAST five years	75%	NA	NA	NA

Table 62: IMPACT OF ECONOMY ON BUSINESS REVENUE IN NEXT 6 MONTHS

Percent very or somewhat positive	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Economy will have POSITIVE impact on revenues in the next 6 months	23%	7	7	Lower

Table 63: BUSINESS PLANS TO HIRE IN NEXT 6-12 MONTHS

Percent yes or not sure	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Hiring in 6 to 12 months	57%	6	8	Similar

Table 64: TYPES OF JOBS BUSINESSES PLAN TO ADD

Percent yes	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Highly skilled jobs	23%	NA	NA	NA
Skilled jobs	45%	NA	NA	NA
Semi-skilled jobs	38%	NA	NA	NA
Unskilled jobs	28%	NA	NA	NA

Table 65: GOVERNMENT PERFORMANCE

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Being honest	70%	2	6	Similar
Acting in the best interest of community	71%	3	7	Higher
Overall confidence in Middleton government	68%	4	6	Similar

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Overall direction Middleton is taking	72%	4	12	Similar
Value of services for the taxes paid to Middleton	69%	2	10	Higher
Federal Government	54%	2	8	Higher
City of Middleton	89%	3	12	Higher

Table 66: QUALITY OF GOVERNMENT SERVICES

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Overall customer service by Middleton employees	93%	1	12	Higher
City-sponsored special events	76%	6	7	Similar
Emergency preparedness	75%	5	7	Similar
Public information services	76%	6	10	Similar
Economic development	79%	4	11	Higher
Code enforcement	74%	3	12	Higher
Building permits and inspections	75%	3	13	Higher
Land use, planning, and zoning	69%	6	11	Higher
Utility billing	84%	3	8	Higher
Power (electric and/or gas) utility	95%	1	6	Higher
Storm drainage	60%	9	10	Lower
Recycling	95%	1	8	Higher
Garbage collection	98%	1	7	Higher
Traffic management during construction	77%	NA	NA	NA
Ease of walking in Middleton	91%	1	12	Higher
Ease of travel by bicycle in Middleton	86%	1	11	Higher
Ease of travel by car in Middleton	90%	2	12	Higher
Amount of public parking in commercial areas	64%	6	12	Higher
Traffic flow on major streets	77%	3	11	Higher
Bus or transit services	71%	2	7	Higher
Sidewalk maintenance	83%	3	10	Higher
Snow removal	78%	8	11	Similar
Street lighting	89%	1	10	Higher
Street cleaning	84%	3	11	Higher
Street repair	66%	4	11	Higher
Traffic enforcement	89%	3	12	Higher

Percent excellent or good	Percent positive	Rank	Number of jurisdictions for comparison	Comparison to benchmark
Crime prevention	91%	2	10	Higher
Fire services	100%	2	11	Higher
Police services	97%	1	11	Higher

Communities included in national comparisons

The communities included in Middleton's comparisons are listed on the following pages along with their population according to the American Community Survey (ACS) 2017 5-year estimates.

Bloomington, MN 82,893
Cape Girardeau, MO 37,941
Denton, TX..... 113,383
Eagan, MN 64,206
Fort Collins, CO..... 167,830
Littleton, CO 46,333
Lone Tree, CO 10,218
Mankato, MN..... 39,309
Medina, MN..... 4,892
Middleton, WI..... 20,034
Novi, MI 55,224
Oakland Park, FL..... 41,363
Orland Park, IL 56,767

Appendix C: Detailed Survey Methods

The National Business Survey (The NBS™), conducted by National Research Center, Inc., was developed to provide communities an accurate, affordable and easy way to assess and local business owners' and managers' perspectives about the economic environment of a community or district. Standardization of common questions and survey methods provide the rigor to assure valid results, and each community has enough flexibility to construct a customized version of The NBS.

Results offer insight business owners' and managers' perspectives about the community as a whole, including the economic environment, local services, public trust, and other aspects of the community in order to support budgeting, land use and strategic planning and communication with local businesses. The City of Middleton funded this research. Please contact Middleton City Administrator Mike Davis at mdavis@ci.middleton.wi.us if you have any questions about the survey.

How the Data Were Collected

All private sector-type businesses (stores and restaurants, but also professional services like accountants, lawyers, doctors, etc.) within the City of Middleton were eligible to participate in the survey. A list of all businesses within the zip codes serving Middleton was purchased based on updated listings from InfoUSA. Since some of the zip codes that serve the City of Middleton businesses may also serve business addresses that lie outside of the community, the exact geographic location of each business was compared to community boundaries using the most current municipal boundary file (updated on a quarterly basis) and business addresses located outside of the City of Middleton boundaries were removed from consideration. A total of 1,185 businesses were identified as being within the City limits of Middleton through this process.

Businesses received three mailings, one week apart, beginning on September 3, 2020. The first mailing was a prenotification postcard announcing the upcoming survey. The next mailing contained a letter from the City Administrator inviting the business owner or manager to participate. The final mailing was a reminder postcard. Each of the three mailings contained the web link to the survey. Completed surveys were collected over the following six weeks.

About 26% of the 1,185 mailed invitations were returned because the business address was vacant or the postal service was unable to deliver the survey as addressed. Of the remaining 875 businesses that received the invitations to participate, 108 completed the survey, providing an overall response rate of 12%.

Because the survey was intended to be taken by all businesses in the community and no statistical weighting was performed, no traditional margin of error was calculated. However, because not all businesses responded, NRC recommends using plus or minus five percentage points as the "range of uncertainty" around any given percent reported for the city as a whole.

Completed surveys were assigned a unique identification number at the time they were submitted online. All survey responses were captured through the online survey tool exactly as they were submitted by each survey respondent.

How the Results Are Reported

The survey dataset was analyzed using the Statistical Package for the Social Sciences (SPSS). For the most part, the percentages presented in the reports represent the "percent positive." The percent positive is the combination of the top two most positive response options (i.e., "excellent" and "good," "very safe" and "somewhat safe," "essential" and "very important," etc.). On many of the questions in the survey respondents may answer "don't know." The proportion of respondents giving this reply is shown in the full set of responses included in Appendix A. However, these responses have been removed from the analyses presented in the reports. In other words, the tables and graphs display the responses from respondents who had an opinion about a specific item.

When a table for a question that only permitted a single response does not total to exactly 100%, it is due to the customary practice of rounding percentages to the nearest whole number.

Appendix D: Survey Materials

Dear Business Owner or Manager,

It only takes a few minutes to make a big difference! With the COVID-19 pandemic weighing heavily in our lives, it is important for City leaders to continue to understand the broader needs of our business community so we can move forward together.

Your business has been selected to participate in a survey about our community.

Please complete the survey online at:

If you have any questions or need assistance with this survey, please call 608-821-8358.

Thank you for helping create a better Middleton!



Mike Davis, City Administrator

Middleton Cares About What You Think!

Dear Business Owner or Manager,

It only takes a few minutes to make a big difference! With the COVID-19 pandemic weighing heavily in our lives, it is important for City leaders to continue to understand the broader needs of our business community so we can move forward together.

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7426 HUBBARD AVENUE
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PH 608.821-8358
E-MAIL: mdavis@ci.middleton.wi.us
WEB: www.CityofMiddleton.us

The City Cares About What You Think!

September 2020

Dear Business Owner or Manager:

Please help us shape the future of Middleton! You have been selected to participate in the 2020 Middleton Business Survey. **(If you completed it online, we thank you for your time and ask you to recycle this letter. Please do not respond twice.)**

With the COVID-19 pandemic weighing heavily in our lives, it can be hard to focus on anything else. It is important for City leaders to continue to understand the broader needs of our community. By conducting this survey, we can gather important feedback which is essential in uncertain times such as these, so we can keep business opinions front and center as we move forward together. The survey also allows us to hear from you even when in-person meetings are canceled.

Please take a few minutes to complete this online survey. Your participation in this survey is very important – your feedback will help Middleton make decisions that affect our community.

A few things to remember:

- **Your responses are completely anonymous.**
- The person most knowledgeable about this business should complete this survey.
- **Please take the survey online at:**

If you have any questions or need assistance with this survey, please call 608-821-8358.

Thank you for your time and participation!

Respectfully,

Mike Davis
City Administrator

Dear Business Owner or Manager,

If you haven't already responded to the 2020 Middleton Business Survey, here's another chance! If you have completed it, thank you. Please do not respond twice.

It is important for City leaders to continue to understand the broader needs of our business community during the COVID-19 pandemic so we can keep your opinions front and center as we move forward together.

Your participation in this survey is very important – your answers will help the Middleton City Council make decisions that affect our community.

Please complete the survey online at:

If you have any questions or need assistance with this survey, please call 608-821-8358.

Thank you for helping create a better Middleton!



Mike Davis, City Administrator

Middleton Cares About What You Think!

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Mike Davis, City Administrator

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The City of Middleton 2020 Business Survey

Please complete this questionnaire if you are the person most knowledgeable about this business, typically the owner or manager. Your responses are anonymous and will be reported in group form only.

1. Please rate each of the following aspects of quality of life in Middleton.

	Excellent	Good	Fair	Poor	Don't know
Middleton as a place to work	1	2	3	4	5
Middleton as a place to visit	1	2	3	4	5
Middleton as a place to do business	1	2	3	4	5
The overall quality of life in Middleton	1	2	3	4	5
Middleton as a place for children and families	1	2	3	4	5
Middleton as a place for older adults	1	2	3	4	5
Middleton as a place for young adults	1	2	3	4	5
Overall image or reputation of Middleton	1	2	3	4	5

2. Please rate each of the following characteristics as they relate to Middleton as a whole.

	Excellent	Good	Fair	Poor	Don't know
Overall economic health of Middleton	1	2	3	4	5
Overall quality of the transportation system (auto, bicycle, foot, bus) in Middleton	1	2	3	4	5
Overall design or layout of Middleton's residential and commercial areas (e.g., homes, buildings, streets, parks, etc.)	1	2	3	4	5
Overall quality of the utility infrastructure in Middleton (water, sewer, storm water, electric/gas)	1	2	3	4	5
Overall feeling of safety in Middleton	1	2	3	4	5
Overall quality of natural environment in Middleton	1	2	3	4	5
Overall quality of parks and recreation opportunities	1	2	3	4	5
Overall health and wellness opportunities in Middleton	1	2	3	4	5
Overall opportunities for education, culture and the arts	1	2	3	4	5
Residents' connection and engagement with their community	1	2	3	4	5

3. Please indicate how likely or unlikely you are to do each of the following.

	Very likely	Somewhat likely	Somewhat unlikely	Very unlikely	Don't know
Recommend living in Middleton to someone who asks	1	2	3	4	5
Recommend working in Middleton to someone who asks	1	2	3	4	5
Recommend operating a business in Middleton to someone who asks	1	2	3	4	5
Keep your business in Middleton for the next five years	1	2	3	4	5

4. Please rate how safe or unsafe you feel:

	Very safe	Somewhat safe	Neither safe nor unsafe	Somewhat unsafe	Very unsafe	Don't know
In Middleton's commercial areas during the day	1	2	3	4	5	6
In Middleton's commercial areas after dark	1	2	3	4	5	6

5. Please rate each of the following characteristics as they relate to Middleton as a whole:

	Excellent	Good	Fair	Poor	Don't know
Cleanliness of Middleton	1	2	3	4	5
Overall appearance of Middleton	1	2	3	4	5
Vibrancy of downtown/commercial area	1	2	3	4	5
Overall quality of commercial development in Middleton	1	2	3	4	5
Overall opportunity for business growth and expansion	1	2	3	4	5
Opportunities for tourism	1	2	3	4	5
Public places where people want to spend time	1	2	3	4	5
Historical preservation in Middleton	1	2	3	4	5
Hotel and lodging options	1	2	3	4	5
Opportunities to attend cultural/arts/music activities	1	2	3	4	5
Quality of internet connection	1	2	3	4	5
Internet coverage in Middleton	1	2	3	4	5
Quality of shopping opportunities	1	2	3	4	5
Variety of shopping opportunities	1	2	3	4	5
Quality of restaurants and places to eat	1	2	3	4	5
Variety of restaurants and places to eat	1	2	3	4	5

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	Excellent	Good	Fair	Poor	Don't know
Quality of service establishments (e.g. salons, dry cleaners, etc.)	1	2	3	4	5
Variety of service establishments (e.g. salons, dry cleaners, etc.)	1	2	3	4	5
Quality of employment opportunities	1	2	3	4	5
Variety of employment opportunities	1	2	3	4	5
Availability of jobs that pay a livable wage	1	2	3	4	5

6. How much of a problem, if at all, are disruptive, nuisance, or illegal behaviors (e.g., loitering, vulgar language, panhandling, etc.) for your business?

❍ Major problem ❍ Moderate problem ❍ Minor problem ❍ Not at all a problem

7. Thinking about Middleton's workforce, please rate each of the following characteristics as they relate to Middleton:

	Excellent	Good	Fair	Poor	Don't know
Variety of housing options for people who work in Middleton	1	2	3	4	5
Affordability of housing for people who work in Middleton	1	2	3	4	5
Cost of living in Middleton	1	2	3	4	5
Quality of childcare	1	2	3	4	5
Affordability of childcare	1	2	3	4	5
Variety of transportation options for people who work in Middleton	1	2	3	4	5
Ease of parking at workplaces	1	2	3	4	5

8. Please rate each of the following characteristics as they relate to Middleton as a place to develop job and workforce skills:

	Excellent	Good	Fair	Poor	Don't know
The quality of the public school system at producing graduates who are career-ready	1	2	3	4	5
The quality of the public school system at producing graduates who are college-ready	1	2	3	4	5
Access to institutions of higher education (colleges, universities)	1	2	3	4	5
Access to trade schools	1	2	3	4	5
Variety of education/training opportunities to build work skills	1	2	3	4	5
Affordability of education/training opportunities to build work skills	1	2	3	4	5
Overall quality of education/training opportunities in your community	1	2	3	4	5

9. Please rate the quality of each of the following services in Middleton.

	Excellent	Good	Fair	Poor	Don't know
Police services	1	2	3	4	5
Fire services	1	2	3	4	5
Crime prevention	1	2	3	4	5
Traffic enforcement	1	2	3	4	5
Street repair	1	2	3	4	5
Street cleaning	1	2	3	4	5
Street lighting	1	2	3	4	5
Snow removal	1	2	3	4	5
Sidewalk maintenance	1	2	3	4	5
Bus or transit services	1	2	3	4	5
Traffic flow on major streets	1	2	3	4	5
Amount of public parking in commercial areas	1	2	3	4	5
Ease of travel by car in Middleton	1	2	3	4	5
Ease of travel by bicycle in Middleton	1	2	3	4	5
Ease of walking in Middleton (path/sidewalk connectivity, etc.)	1	2	3	4	5
Traffic management during construction	1	2	3	4	5
Garbage collection	1	2	3	4	5
Recycling	1	2	3	4	5
Storm drainage	1	2	3	4	5
Power (electric and/or gas) utility	1	2	3	4	5
Utility billing	1	2	3	4	5

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Land use, planning, and zoning	1	2	3	4	5
Building permits and inspections	1	2	3	4	5
Code enforcement (weeds, signs, etc.)	1	2	3	4	5
Economic development	1	2	3	4	5
Public information services	1	2	3	4	5
Emergency preparedness (services that prepare the community for natural disasters or other emergency situations)	1	2	3	4	5
City-sponsored special events	1	2	3	4	5
Overall customer service by employees (police, receptionists, planners, etc.)	1	2	3	4	5

10. Overall, how would you rate the quality of the services provided by each of the following?

	Excellent	Good	Fair	Poor	Don't know
The City of Middleton	1	2	3	4	5
The Federal Government	1	2	3	4	5

11. Please rate the following categories of Middleton government performance:

	Excellent	Good	Fair	Poor	Don't know
The value of services for the taxes paid to Middleton	1	2	3	4	5
The overall direction that Middleton is taking	1	2	3	4	5
Overall confidence in Middleton government	1	2	3	4	5
Generally acting in the best interest of the community	1	2	3	4	5
Being honest	1	2	3	4	5

12. Please rate the job the Middleton government does:

	Excellent	Good	Fair	Poor	Don't know
Informing businesses of community issues and values	1	2	3	4	5
Communicating during City construction (e.g., streets, utilities, etc.)	1	2	3	4	5
Welcoming business involvement	1	2	3	4	5
Retaining existing businesses	1	2	3	4	5
Attracting new businesses	1	2	3	4	5
Supporting or creating new jobs	1	2	3	4	5

13. Please rate the amount of growth in your company:

	Large increase	Small increase	No change	Small decrease	Large decrease	Don't know
Over the PAST five years	1	2	3	4	5	6
Expected in the NEXT five years	1	2	3	4	5	6

14. What impact, if any, do you think the economy will have on your business revenues in the next 6 months? Do you think the impact will be:

❍ Very positive ❍ Somewhat positive ❍ Neutral ❍ Somewhat negative ❍ Very negative

15. Is your business planning to hire in the next 6 to 12 months?

❍ No [skip to question 17] ❍ Yes ❍ Not sure

16. If you said "yes" or "not sure" to question 15 above, what types of jobs might you be adding? (Please select all that apply.)

❍ Unskilled jobs: these jobs do not require workers to have special training or skills (e.g., cashiers, farm laborers, grocery clerks, hotel workers)
❍ Semi-skilled jobs: these jobs require some skill but do not require highly specialized skills (e.g., truck drivers, typists)
❍ Skilled jobs: these jobs require a comprehensive knowledge of the trade, craft or industry (e.g., electricians, plumbers, law enforcement officers, administrative assistants)
❍ Highly skilled jobs: these jobs require an advanced education or training (e.g., doctors, lawyers, architects, financial consultants)

17. Thinking about your current employees and current employment options at your business, please rate to what extent they possess the following:

	Fully	Mostly	Somewhat	Slightly	Not at all	Don't know
The educational qualifications	1	2	3	4	5	6
The skills needed	1	2	3	4	5	6

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18. How much of a challenge, if at all, are the following to finding good employees in your community today?

	Major challenge	Moderate challenge	Minor challenge	Not a challenge	Don't know
Too many under-qualified employees/applicants	1	2	3	4	5
Too many overqualified employees/applicants	1	2	3	4	5
Lack of higher education opportunities (e.g., universities, colleges)	1	2	3	4	5
Lack of trade schools and other adult training programs	1	2	3	4	5
Lack of quality public schools	1	2	3	4	5
Too many workers without a high school degree or equivalent	1	2	3	4	5
Too few applicants/employees who are do not speak a language other than English (e.g., cannot speak Spanish)	1	2	3	4	5
Too few applicants/employees who speak a language other than English (e.g., cannot speak English)	1	2	3	4	5
Lack of childcare opportunities	1	2	3	4	5
Lack of affordable, reliable public transportation	1	2	3	4	5
Lack of affordable, quality housing	1	2	3	4	5
Cost of living	1	2	3	4	5
Lack of community amenities to attract employees seeking higher paying/higher skill level jobs	1	2	3	4	5
Failed drug tests	1	2	3	4	5

19. Thinking about government plans to lift restrictions related to COVID-19 on businesses and community gathering areas or venues, how is the rate of reopening at each of the following levels of government?

	Too fast	About right	Too slow	Don't know	N/A
The City of Middleton	1	2	3	4	5
Dane County	1	2	3	4	5
The State of Wisconsin	1	2	3	4	5

20. How much of a problem, if at all, are the following issues for your business as a result of the COVID-19 pandemic?

	Major problem	Moderate problem	Minor problem	Not a problem	Not applicable
Decline in business/sales	1	2	3	4	5
Not having the funds to pay our employees	1	2	3	4	5
Difficulty paying our commercial rent, commercial mortgage or lines of credit	1	2	3	4	5
Reduced access to customers due to State or local regulations	1	2	3	4	5
Complying with State or local regulations	1	2	3	4	5
Enforcing public health policies and regulations on customers (e.g., social distancing, mask use, etc.)	1	2	3	4	5
Not knowing current rules and regulations for operating a business under COVID-19	1	2	3	4	5
Customers not complying with social distance measures, masks, etc.	1	2	3	4	5
Getting the supplies we need/supply chain breakdowns	1	2	3	4	5
Ability to conduct business with foreign trade partners	1	2	3	4	5
Lack of technology/web resources to complete on-line sales	1	2	3	4	5
Fear of a second wave of the virus resulting in need to close business again	1	2	3	4	5
Concern about the liability of our customers or clients being exposed to COVID-19 on the job	1	2	3	4	5

21. How has, or how do you anticipate, COVID-19 will impact your current or future staffing levels?

- ❍ Significant reduction in staffing levels
- ❍ Slight reduction in staffing levels
- ❍ No change in staffing levels
- ❍ Slight increase in staffing levels
- ❍ Education and training
- ❍ Don't know

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22. Which of the following strategies, if any, are you using or have you used to minimize the impact of COVID-19 on your business?

	Already doing	Considering	Not considering	N/A
Laid off staff	1	2	3	4
Cut back hours	1	2	3	4
Reduced hourly rates or salaries	1	2	3	4
Suspended paid bonuses, incentive plans, and other variable non-regular pay programs	1	2	3	4
Asked staff to take unpaid furlough	1	2	3	4

Our last questions are about you and your business.
Again, all of your responses to this survey are completely anonymous and will be reported in group form only.

D1. Which one of the following industries best describes the nature of your business? (Please check the <u>one</u> that comes closest.)

- ❍ Agriculture or farming
- ❍ Arts, audio, video technology and communications
- ❍ Banking/financial services/credit unions
- ❍ Business, industry, and trade associations
- ❍ Construction
- ❍ Education and training
- ❍ Financial activities
- ❍ Health care and health services
- ❍ Information/media
- ❍ Legal
- ❍ Leisure and hospitality (travel, lodging, restaurants, bars, entertainment)
- ❍ Manufacturing
- ❍ Marketing, sales and services
- ❍ Non-profit charitable organization
- ❍ Other services (cleaning, dog walking, beauty, etc.)
- ❍ Professional and business services/consulting
- ❍ Public service and government
- ❍ Shopping and retail
- ❍ Technology and computers
- ❍ Transportation and automotive services
- ❍ Utilities (gas, electric, water, internet, cable)
- ❍ Wholesale trade/sales
- ❍ Other_____

D2. What is your position in this organization?

❍ Owner ❍ Manager or Administrator ❍ Administrative Assistant ❍ Other

D3. How many years has your business been located in Middleton?

❍ Less than 1 year ❍ 1-5 years ❍ 6-10 years ❍ More than 10 years

D4. What was the approximate annual gross revenue (for the most recent accounting year) generated by all of your Middleton sites?

- ❍ Pre-revenue
- ❍ Less than $100,000
- ❍ $100,000 to $499,999
- ❍ $500,000 to $999,999
- ❍ $1,000,000 to $4,999,999
- ❍ $5,000,000 or more

D5. Which, if any, of the following most closely reflect your business? Select "Yes" or "No" for each item.

	Yes	No
Home-based	1	2
A small business (1-49 employees)	1	2
Mid-sized business (50-499 employees)	1	2
Large businesses (500+ employees)	1	2
Minority-owned business enterprise (MBE, 51% owned, operated, and controlled by a US citizen(s) who is a racial or ethnic minority)	1	2
Woman-owned business enterprise (WBE)	1	2

D6. Approximately what percent of your workforce at this location do you think lives in Middleton?

❍ Less than 10% ❍ 10 – 24% ❍ 25 – 49% ❍ 50 – 74% ❍ 75% or more ❍ Don't know

Thank you for completing this survey.

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TID #3 Middleton Urban Greenway Area Study









A study of Middleton's Western Reach prepared by City Planning Staff and Vandewalle & Associates

Updated: 11.22.17

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Part I: Introduction







WHAT IS A GREENWAY?

A greenway is a linear open space. It is a continuous natural or landscaped corridor, often linking parks, natural areas, cultural features, historic sites, animal habitats, and/or water resources. An urban greenway links both natural features and urban features and provides a natural connection between destinations such as employment centers, recreational areas, housing, and retail. A greenway may follow a natural corridor such as a waterway, a manmade one such as a highway corridor, or a combination. The development of greenways reflects a marriage of ecology and design.

More than a green way to travel, a greenway is a way of living that reflects an enriched quality of life. Through continued fragmentation of the natural environment and human's disconnect with nature, the importance of greenways is increasing.

A greenway is an environmental way to define a place. This corridor should be considered a vital piece of infrastructure in every city, because greenway systems add social and economic value to all parts of the city that they touch. For this reason, investments in greenway systems are on par with investments in roadways, trails, stormwater management, and utilities.



Urban GreenWay Study

Middleton, WI

Recreation • Jobs • Education • Living

DRAFT

Dog Park
DNR
(DNR)
Dorn Creek Wildlife Area
(Dane County)
Governor Nelson State Park
Bishops Bay Golf Course
(Dane County)
Pheasant Branch Creek Conservancy
Quisling Park
Firefighters Memorial Park
Former Old Middleton Lake Park
(Dane County Land)
Lakeview Community Park
Marsha Park
Lake Mendota
Black Earth Creek Sunnyside Unit Wildlife Area
(Dane County)
To Ice Age National Scenic Trail Corridor
Pleasant View Golf Course
Blackhawk Ski Area
Pope Farm Conservancy
Pioneer Park
Owen Park
Blackhawk Country Club
12
14

Recreation or Publically Owned Land
Wetland
Environmental Corridor
Open Water

Existing Off-Street Paved Path
Existing Off-Street Unpaved Path
Planned Off-Street Paved Path
Planned Off-Street Unpaved Path

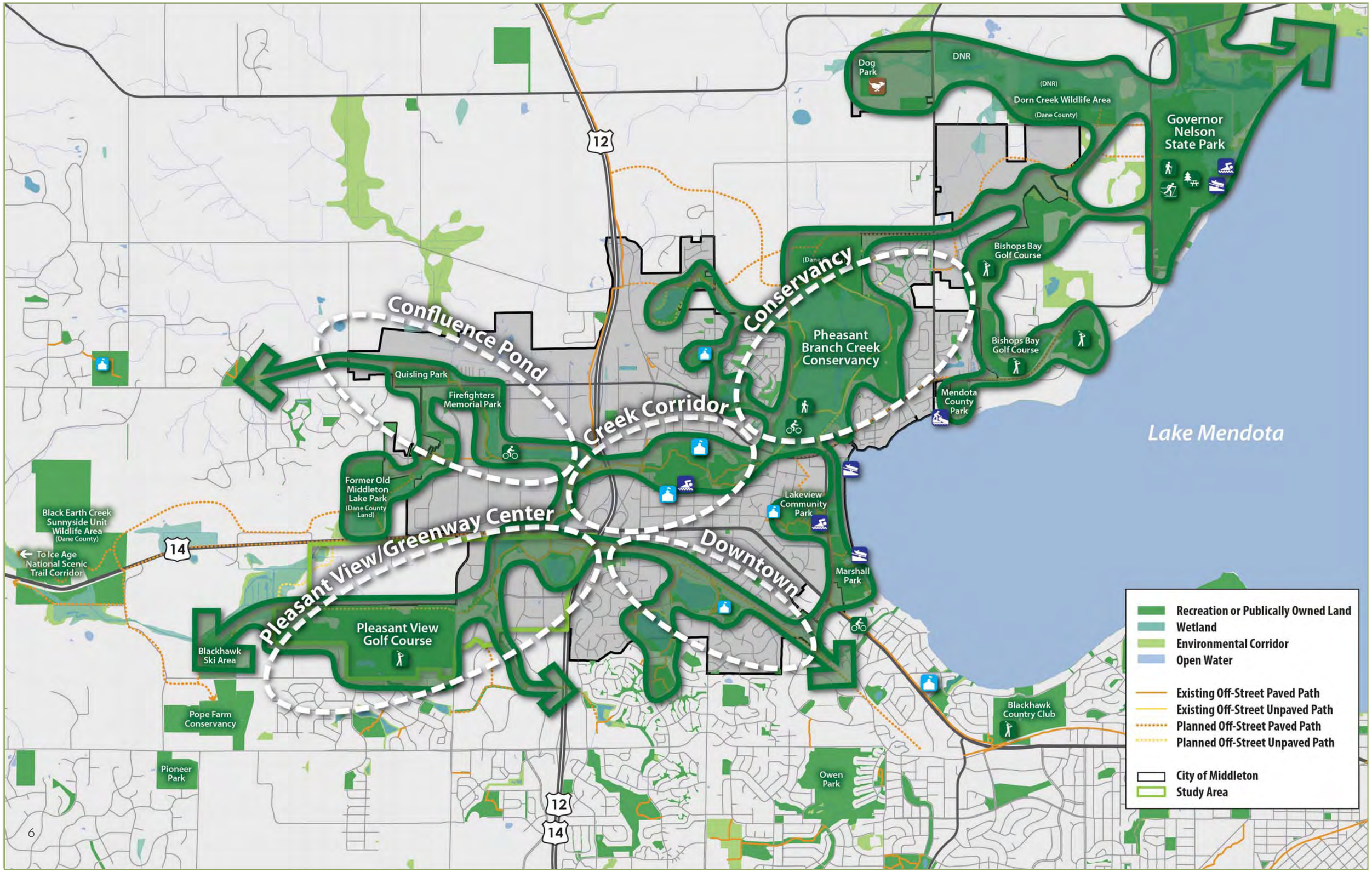
City of Middleton
Study Area

0' 1,500' 3,000' 6,000'

Revised: July 19, 2016

VANDEWALLE & ASSOCIATES INC.

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Dog Park
DNR
(DNR)
Dorn Creek Wildlife Area
(Dane County)
Governor Nelson State Park
12
Bishops Bay Golf Course
Bishops Bay Golf Course
Conservancy
Pheasant Branch Creek Conservancy
Confluence Pond
Creek Corridor
Quisling Park
Firefighters Memorial Park
Mendota County Park
Lake Mendota
Former Old Middleton Lake Park
(Dane County Land)
Lakeview Community Park
Black Earth Creek Sunnyside Unit Wildlife Area
(Dane County)
14
To Ice Age National Scenic Trail Corridor
Pleasant View/Greenway Center
Downtown
Marshall Park
Pleasant View Golf Course
Blackhawk Ski Area
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Existing Off-Street Unpaved Path
Planned Off-Street Paved Path
Planned Off-Street Unpaved Path
City of Middleton
Study Area

WHAT MAKES MIDDLETON A GREENWAY CITY?

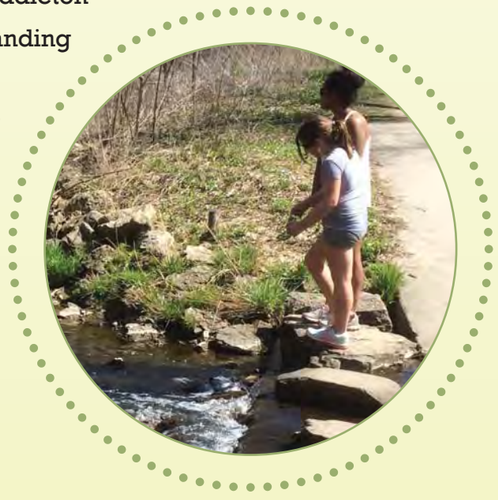
A traditional definition of a greenway is a linear open space corridor that links cultural and environmental resources; but a Greenway City is much more than that. A thoughtfully integrated greenway can play a number of social, environmental, and economic roles in the community. Its benefits are wide-ranging and can permeate the culture and livability of the whole city; the individual benefits of a greenway system offer greater combined impact than the sum of their parts. By planning and integrating greenways and their benefits throughout all areas of the city, Middleton is the very definition of a Greenway City.







Specifically, the Middleton Urban Greenway connects many of the city's and surrounding area's greatest assets, including Governor Nelson State Park, Pheasant Branch Creek Conservancy, Pleasant View Golf Course, Middleton Bike Park, Greenway Center, Greenway Station, Middleton Industrial Park, Discovery Springs, public school campuses, office and employment districts, medical and biotechnology hubs, downtown Middleton, and numerous residential neighborhoods. The Middleton Urban Greenway is a result of Middleton's longstanding practice of conserving natural landscapes, preserving permanent open space, and installing advanced stormwater management techniques and is one piece of more than 500 total acres of conservancy land in Middleton.





ROLES OF THE GREENWAY

The Middleton Greenway shapes and reflects the city's economy, community character, health and wellness, cultural values, and environmental quality. The countless functions the Greenway provides can be categorized into Economic, Environmental, and Community roles with benefits that permeate the culture and livability of the whole city.

Economic

Economic Development. Today, forward-looking companies recognize that their employees are happier, healthier, and more productive when they have opportunities to exercise at work, view nature from their offices, walk to nearby services, and immerse themselves in a natural environment as needed throughout the day. For this reason, employers are interested in locating their offices in places that provide these options, and the Greenway is a perfect fit. Several major employers in Middleton have taken advantage of a Greenway location – both as a benefit for their existing employees and as a recruitment tool for attracting the best and the brightest employees. Many Middleton businesses cited the Greenway as a reason for locating and staying in Middleton. Successful business attraction, expansion, and retention continue to support increased tax revenues and high-paying jobs in Middleton.



Because the Greenway is a magnet for companies that prioritize worker attraction and retention, it provides a related benefit of bringing very high-quality development to Middleton, which is a city priority. These companies are typically associated with well-designed buildings that capitalize on their Greenway setting. These high value properties improve and contribute to Middleton's urban fabric.

Environmental

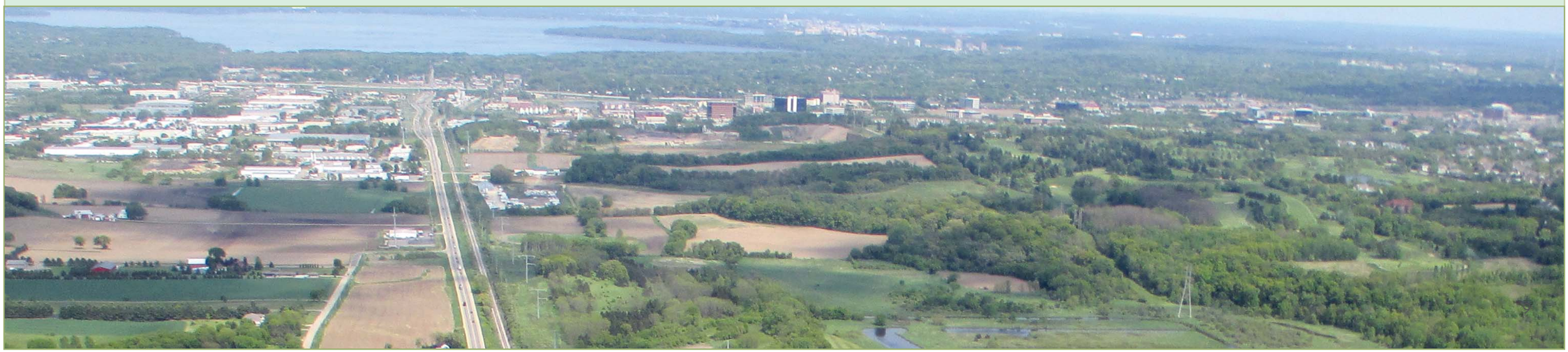


Continuous Environmental Greenway. By preserving and connecting natural areas, greenways serve multiple symbiotic environmental functions. A greenway plays a more powerful ecological role than a single conservation park or wildlife area. For example, it preserves and maintains interconnected plant and wildlife corridors, preserves larger habitat areas, and provides unique habitats required for many species' shelter needs, diet, and migration. The ability to travel greater distances within a continuous natural environment provides wildlife breeding options, supports biological diversity and species interchange, and avoids the creation of wildlife "island populations" and wildlife decline. Other critical environmental functions include water resource protection, prevention of streambank erosion and downstream sedimentation, and flood hazard mitigation.

Stormwater Management and Flood Control. The Greenway serves as a natural stormwater system that serves Middleton and the surrounding area. Rather than relying on concrete channels, storm sewers, or other built infrastructure, a large portion of the city's stormwater is funneled through the Greenway's continuous environmental corridor. This natural system helps manage floods, convey and infiltrate stormwater, and improve Pheasant Branch Creek and Lake Mendota water quality. Since the city adopted a stormwater control ordinance in 1979, more than 140 stormwater structures have been constructed. The largest piece of infrastructure is the Confluence Pond located along Deming Way, which serves a vital role in improving water quality. Since the Confluence Pond was completed in 2002, the estimated annual sediment load has been reduced by about 70 percent (over 30,000 tons total), and the estimated annual phosphorus load has been reduced by about 50 percent (over 105,000 pounds total).

This data is provided by the Middleton Water Resource Management Commission monitoring a gaging station on Pheasant Branch at Parmenter Street. Actual reductions are certainly larger, as a number of stormwater structures have been constructed downstream of the gaging station since 2002. Additional information regarding stormwater improvements can be found in a report prepared by the U.S. Department of Interior, U.S. Geological Survey, and City of Middleton entitled, "Evaluation of the Effects of City of Middleton Stormwater-Management Practices on Streamflow and Water-Quality Characteristics of Pheasant Branch, Dane County, Wisconsin, 1975–2008".

Due to the crucial stormwater management role the Greenway serves, the Greenway system should be viewed as a piece of public infrastructure, similar to the city's sewer system or road network.



Community

Recreation. The Greenway's many paths, conservancy areas, golf courses, and parks provide countless recreational opportunities for Middleton residents and visitors. The Greenway system is a great benefit for current and potential residents. Many neighborhoods are close to one or more features of the Greenway, providing residents the ability to escape to a natural environment and participate in an activity they enjoy—more or less in their backyards. This could include hiking, running, dog walking, cross country skiing, cycling, mountain biking, snowshoeing, birdwatching, golfing, canoeing, sitting, nature watching and more. Not every urban community can offer its residents such a rich variety of activities in such a well-maintained recreational system. Furthermore, spending time in natural places and greenways has been broadly demonstrated to provide cognitive and mental health benefits. The Greenway is a reason many people move to Middleton, whether they are dedicated sports enthusiasts, or they simply enjoy having views of the Greenway from their homes.

Community Building. Because the Greenway supports a multitude of uses, it can be used by a wide variety of people regardless of health, age, ability, or income. The Greenway also serves social purposes. It creates public spaces that provide opportunities for social interaction. Due to its length and extent, it connects diverse neighborhoods with one another. Neighborhoods that may be separated by barriers in the built environment can be connected through this widely accessible green network.



Safe Transportation Path. The Greenway provides Middleton residents an alternative way to travel through the city. It is a valuable option for people looking for another way to travel – whether for, health, environmental, or financial reasons. Many people are able commute to work or school via the Greenway. For others, the paths are a great option for short trips, whether for personal errands or business meetings. The Greenway's miles of trails provide a safe, car-free connection in a unique urban/natural setting. Traveling by Greenway has the added benefits of integrating exercise into daily life and improving the health of the community. It also helps reduce the number of car trips in the city, reducing public street congestion, and supplements existing pedestrian, bicycle, and vehicle facilities in the city.



Education. The Greenway is host to numerous schools and other educational facilities. Not only do schools benefit from the natural setting and proximity to nearby parks and trails, but they also have the ability to bring students into the Greenway for direct learning and incorporate the Greenway into their existing curriculum. The Greenway provides a natural environment to study plant life and wildlife, ecology, water systems, human health, and other related topics. For many Middleton-area schools, such as Middleton High School; Kromrey Middle School; Clark Street Community School; and Elm Lawn, Northside, and Sauk Trail Elementary Schools, this hands-on learning opportunity is just steps away. A recent educational greenway improvement is the Kromrey outdoor classroom.

Additionally, there are countless possibilities for environmental education within the Greenway that can serve a broad audience. The Greenway is well-suited to serve as an outdoor classroom, as it naturally accommodates informal gathering spaces. Signage in the Greenway can educate visitors on a variety of topics such as bird watching, tree identification, invasive species management, stormwater management, watershed and water quality, and Middleton's geological history and glacial legacy. Signage and other educational elements should enhance the visitor experience and complement the other activities available in the Greenway.

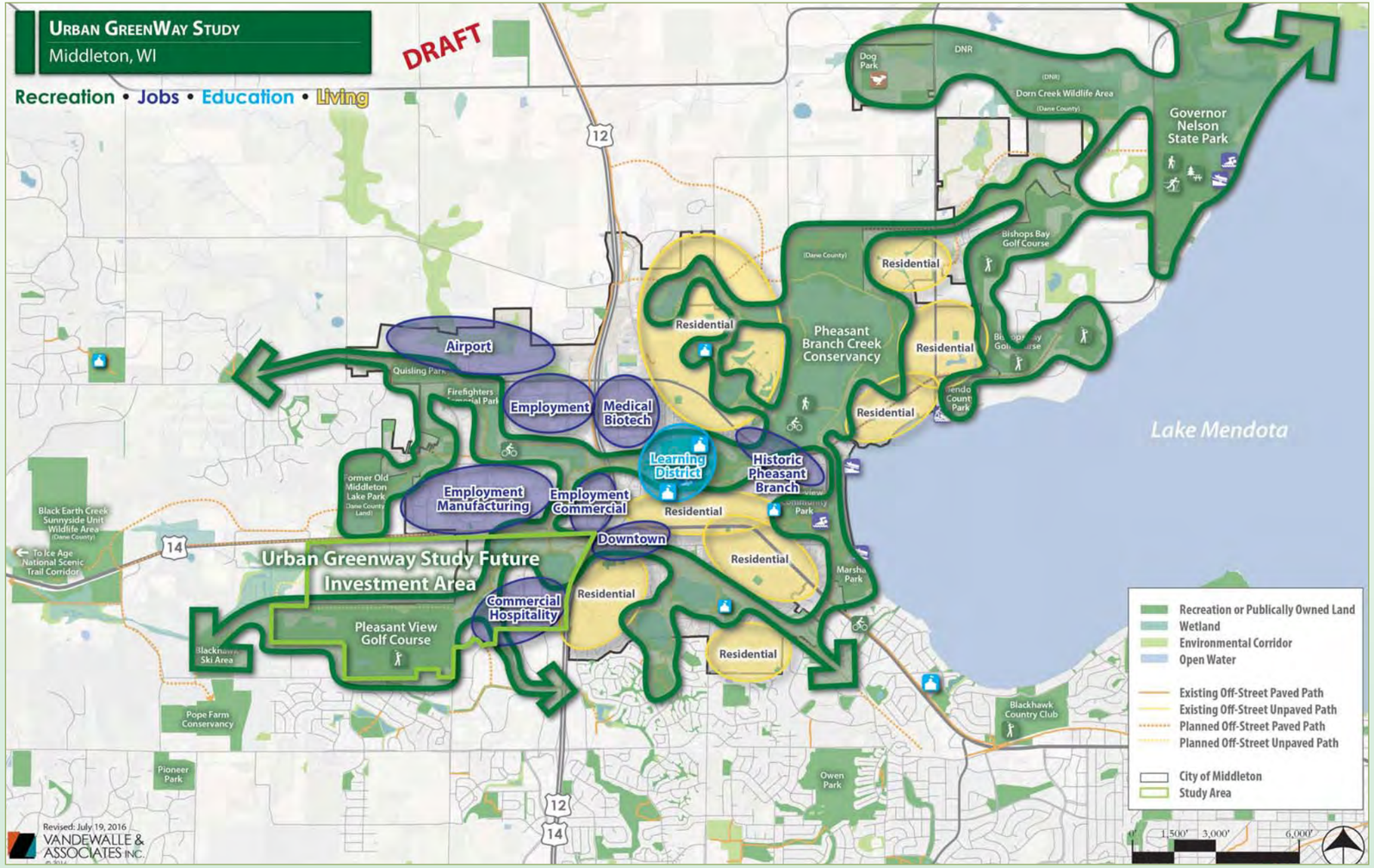


WHY FORMALIZE THE GREENWAY?

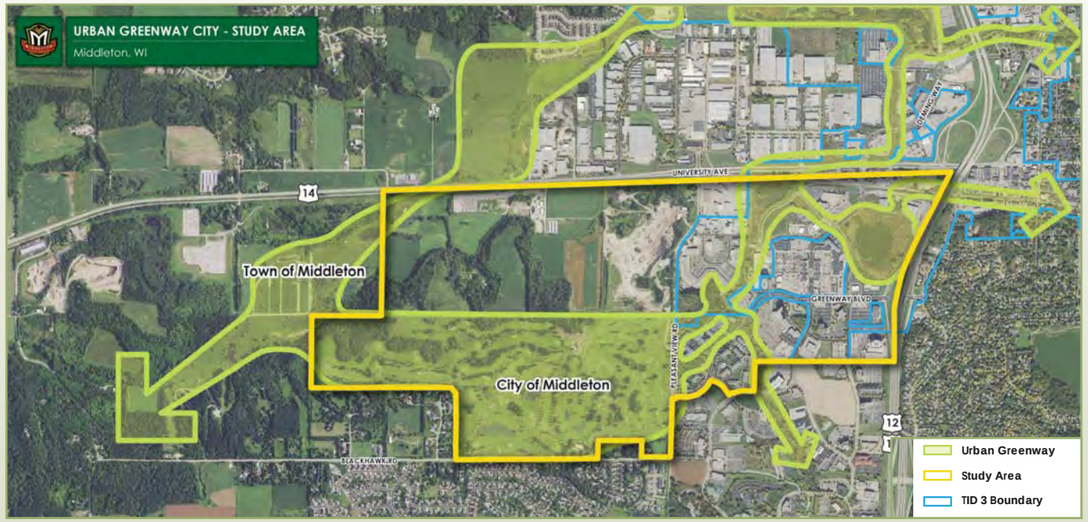
The role of the Greenway as a piece of economic, transportation, and stormwater infrastructure is well established in existing city plans and policies. The City of Middleton Comprehensive Park and Open Space Plans (2007 and 2014) recommend the "protection of sensitive environmental areas and development of a regional bicycle/pedestrian trail system linking Graber Pond to Hwy 12 Bike Path and extending easterly via the Pheasant Branch Conservancy, the new (expanded) community park and Dorn Creek to Governor Nelson State Park."

The City of Middleton Conservancy Lands Plan's goals pertaining to the Greenway are:

- **Goal 1:** Protect and restore native landscapes and designated conservancy lands to maintain or improve the natural habitat, scenic beauty, passive recreation and environmental outdoor education
- **Goal 2:** Expand partnerships for maintenance of conservancy lands and hands-on restoration and learning opportunities for the residents of Middleton
- **Goal 3:** Improve water quality within the conservancy lands properties
- **Goal 4:** Increase connections between Middleton's conservancy lands and other adjacent or regional conservation areas including corridors/linkages with other government/municipal lands of similar management



While the land, parks, and other features of the Greenway are discussed in various city plans, the city does not have a guiding document or committee that holistically plans and maintains the Greenway. The many important roles of the Greenway can most effectively be advanced by formalizing the Greenway as a single entity. This will help the Greenway best serve its many purposes and clarify the roles and responsibilities of the multiple governing bodies that relate to the Greenway and the facilities it contains.



BACKGROUND INFORMATION, PROJECT PURPOSE, AND PROCESS

The TID #3 Urban Greenway Area Study focuses on the "Pleasant View/Greenway Center" segment of the Greenway, which is located on the southwest side of the city. The study area is bounded by Pleasant View Golf Course to the west, University Avenue/Highway 14 to the north, the Beltline to the east, and Greenway Boulevard/city limits to the south. Located on the west side of Middleton, the study area is the edge of the Driftless Area, which is a land area that was not impacted by the most recent glacial period. The city has largely protected the unique landscape features, many of which are within the Greenway.

Ecological and Geological Significance

The Wisconsin Land Legacy Report issued by the Wisconsin Department of Natural Resources organizes the State of Wisconsin into distinct ecological landscapes based on soil, topography, and vegetation. In this report, the majority of the City of Middleton is located in the Southeast Glacial Plains landscape, which is characterized by some of the world's best examples of glacial landforms such as moraines, kettles, and drumlins. It also includes a large amount of wetlands and several larger lakes, including the Yahara Chain of Lakes. This type of landscape is found in the eastern part of the state and encompasses nearly 14 percent of the state's land area. The westernmost part of the city is located within the very southern tip of the Central Sand Hills landscape, which is characterized by glacial moraines, rolling topography, and sandy soils. The Central Sand Hills landscape extends north from Middleton's Pleasant View Golf Course to Portage County. Just west of the Pleasant View Golf Course, west of Middleton, two separate ecological landscapes begin: the Southwest Savanna and the Western Coulee and Ridges. These landscapes reflect the geography of the Driftless Area. The western half of the study area is Madison Metro Area's transition to the Driftless Area.



Source: Wisconsin Land Legacy Report, Wisconsin Department of Natural Resources

This unique nexus of landscapes is in part due to the fact that the geography of southern Wisconsin was shaped by the glaciers 10,000 to 25,000 years ago. During the Wisconsin Glaciation, a glacial lobe extending from north of Green Bay terminated approximately where Middleton is located today. As a result, the geography of the glaciated areas to the northeast of Middleton is vastly different from that of the unglaciated (or "Driftless") areas to the south and west. Because Middleton is situated so near to the boundary of the Driftless Area, it has a unique geology and ecology that includes many distinctive natural features such as Esser Pond (a kettle pond), dolomite limestone, and the Glacial Lake Middleton lakebed. The cross-section graphic on page 14 demonstrates how the TID #3 Urban Greenway Study Area captures these unique assets. The high point of this segment is a steep ridgetop, which is actually the bank of an ancient glacial erosion outwash, which is now the Black Earth Creek. The Pleasant View Golf Course clubhouse is located at the top of this ridgetop. Open space to the east allows for panoramic views of the city. The slope descends to the east into a creek valley leading toward South Pond. The slope and creek provide a gradual transition into Greenway Center and the surrounding commercial area, which is one of the largest employment centers in the Madison



Area. This graphic shows how the unique geology coupled with forward-thinking planning of the Greenway have created a system that provides social/recreational opportunities, supports the preservation of important environmental features, and drives economic development in the city. To help communicate the essential and multi-faceted role the Greenway plays, the city should develop a similar cross-section analysis in future studies of other segments of the Greenway.



Esser Pond and South Pond play a key role in the Greenway's stormwater infrastructure, as they trap sediment and other pollutants before the water continues downstream to Lake Mendota. According to Jim H. Zimmerman and Ken N. Kailing, ecologists who conducted an in-depth study of Esser Pond and associated wetlands, Esser Pond is integral to the Middleton's stormwater infrastructure:

> "As a functioning ecosystem, Esser Pond provides a valuable community service by retaining storm water, trapping sediments, re-cycling nutrients, slowing erosion, and, in some instances, helping to remove pollutants. It satisfies the needs of the public directly by providing scenic beauty, open space, and habitat for the game and non-game species of wildlife that people enjoy. Together, the Middleton ponds [Esser, Tiedeman, Stricker, and Graber Ponds] represent some of the only high-quality sites remaining in Dane County where deep-water marsh habitat might be restored and managed for water birds."[1]
>
> 1 Zimmerman, Jim. H and Ken N. Kailing. "Esser Pond Wetland Functional Impact Assessment, Design and Management Study for Middleton, Wisconsin." Prepared for the City of Middleton. July 1989.

Esser Pond is a natural kettle pond that was formed when the glaciers receded. South Pond, which performs similar functions as Esser Pond, is a manmade confluence pond designed to capture stormwater from adjacent development and divert sediments and pollutants from the lakes.

ECONOMIC DEVELOPOMENT

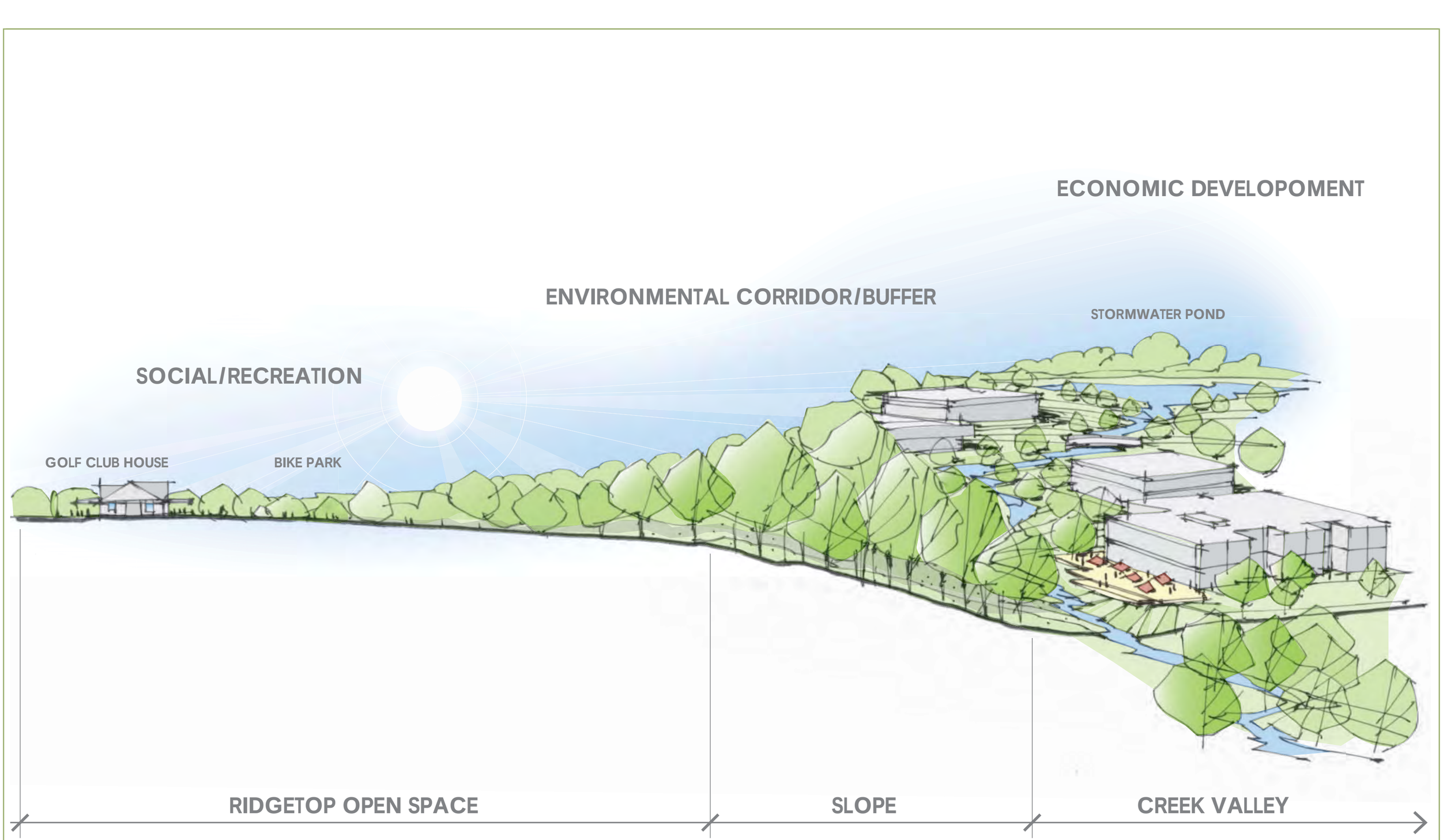
ENVIRONMENTAL CORRIDOR/BUFFER

STORMWATER POND

SOCIAL/RECREATION

GOLF CLUB HOUSE

BIKE PARK



RIDGETOP OPEN SPACE

SLOPE

CREEK VALLEY

History

The area that is now Greenway Center has long been recognized as a key office and commercial development opportunity for Middleton. The creation of Tax Incremental Finance District #3 (TID #3) helped fund the development of this commercial and employment hub. A key first step was the establishment of a stormwater improvement district that allowed the urbanizing floodplain to be developed. Other major projects completed in this district include:

- Extension of Greenway Boulevard
- CDA lease revenue bonds to build a parking garage that would support increased density in the area
- Road construction and reconstruction
- Stormwater improvements, including the development of the confluence pond
- Bike path construction

The Greenway and Pleasant View Golf Course have both played an economic development role in Middleton. These amenities spurred the development of Greenway Station, a mixed use center that includes hotels, office, retail and now residential infill development.

Today, major employers in TID #3 include:

- PPD
- Spectrum Brands
- ETC
- Fiskars
- UW Health
- Raven Software
- US Geological Survey



The Pleasant View Golf Course was once owned by Cuna Mutual Group, which had plans to develop the property into residential and golf uses. Seeing an opportunity, the City of Middleton purchased the land including the golf course and surrounding land, through Resolution No. 1994-18, issuing a bond to purchase.

1994—Before confluence pond construction



2016—Confluence pond and employment center



Planning Process

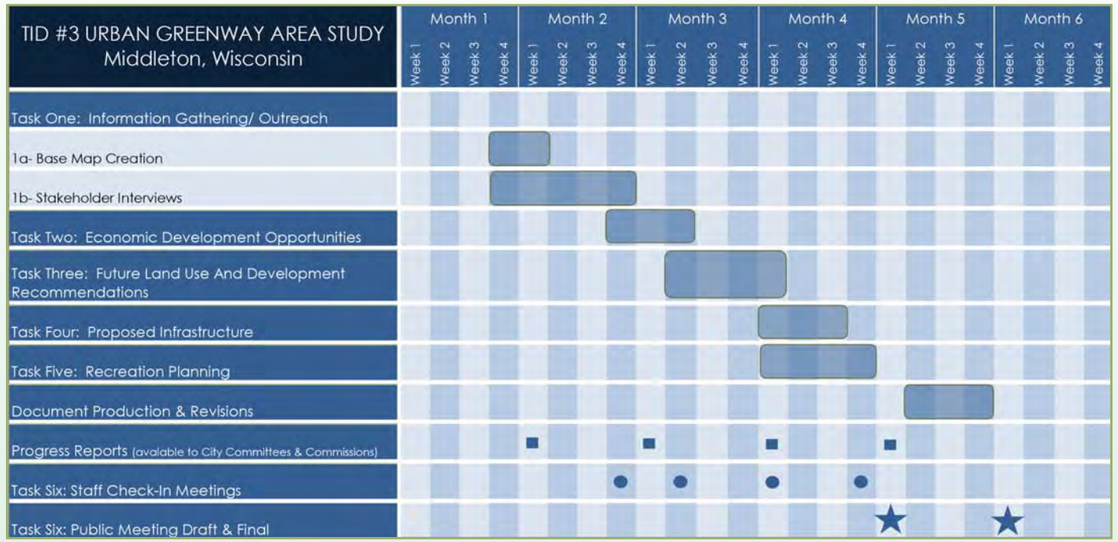
This study is the result of a joint effort of the City of Middleton Planning Department, Vandewalle & Associates (TIF planning consultant), and Strand Associates (TIF engineering consultant). The purpose of the TID #3 Urban Greenway Area Study is to further define the Greenway, identify economic development opportunities, recommend future land uses, identify preservation areas, and recommend public infrastructure improvements and recreational opportunities within the Greenway.

Public input was gathered to understand future development interests and city needs within the study area. The planning team held stakeholder interviews with several property owners, City Staff, Committees, and other individuals with an interest in the study area.

Additionally, public outreach included an online recreational activities survey. The survey asked respondents to share how they used the recreational areas, suggest opportunities for improvement, identify conflicts that exist between different uses and users, and explain any environmental concerns. This survey was distributed to a wide range of Greenway user groups and stakeholders and had a high response rate, with nearly 250 responses. Generally, responses were positive about the Greenway and its offerings. The survey revealed that some respondents participate in only one activity in the Greenway, while others participate in several activities. Golf was the most commonly mentioned activity, with bicycling (mountain and road), running, cross country skiing, snowshoeing, and hiking being mentioned frequently as well.



There were many suggestions for expanding the trail network, including adding more mountain bike trails, cross country ski trails, and running/hiking trails; providing ski trails to connect Blackhawk Ski Area to Pleasant View Golf Course; and adding trail connections from the Greenway to other parts of the city. A few issues were identified as well. Pleasant View Road was generally agreed to be dangerous for bicyclists and vehicular access into Pleasant View Golf Course. Many commented on a lack of parking at the golf course during events and league nights. There were also many comments from individuals who have experienced overcrowding and conflicts in the Pleasant View Golf Course parking lot. For example, a lack of space results in bicyclists unloading their bikes in the parking lot driving lane, creating a safety hazard. There were also concerns about protecting natural environment and that development encroaching on the Greenway reduces the feeling of escape.



Part II:
Economic Development Opportunities








Key Area Economic Development Opportunities

This section identifies large economic development opportunities that are unique to the study area and which can guide future land use and infrastructure improvements to be implemented in a sustainable framework.

URBAN GREENWAY STUDY - ECONOMIC DEVELOPMENT OPPORTUNITIES

Middleton, WI

DRAFT

1 ADVANCE THE GREENWAY

- Define the Greenway
- Incorporate additional lands for recreational, educational, and environmental uses
- Develop a Parkway

2 EXCURSION TRAINS

- Day excursions to the Driftless Area (west)
- Special events at UW-Madison & Downtown (east)

3 ENERGY RELIABILITY & TECHNOLOGY DISTRICT

- Renewable energy & storage system
- Job attraction & retention

4 GOLF COURSE

- Capitalize on Lake Mendota & Capitol vistas to host new events
- Improve vehicular & pedestrian access

5 GREENWAY CENTER INFILL

- Additional Commercial
- Residential to Support Commercial & Sustain the Neighborhood

6 GREENWAY CENTER EXPANSION

- Employment
- Technology & Research
- Business Expansion

RAILROAD TRACKS

14

SOUTH POND

ESSER POND

GREENWAY CENTER

GREENWAY BLVD

TOWN OF MIDDLETON

CITY OF MIDDLETON

CLUB HOUSE

Vista

Vista

PLEASANT VIEW GOLF COURSE

CITY OF MIDDLETON

CITY OF MADISON

CITY OF MADISON

BLACKHAWK SKI CLUB

BLACKHAWK RD

N PLEASANT VIEW RD

12

14

0 1400 2800 Feet

JOINT PLAN BY:

PLANNING DEPARTMENT

Revised: 9.27.16

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ADVANCE THE GREENWAY

Growing the Greenway

The city should continue to evaluate public or private land that could potentially be added to the public Greenway system. Land additions should fill a role identified in this plan and meet the goals of the Conservancy Land Plan, particularly those goals related to protecting and restoring native landscapes, improving water quality, preserving steep slopes, increasing linkages to other conservation areas, protecting natural habitat and scenic beauty, and expanding opportunities for passive recreation and environmental outdoor education. Expansions of the Greenway should generally consist of environmentally-sensitive lands that are not planned for development or which are not otherwise developable, but may enhance development sites. Additions should be contiguous to the existing Greenway system and/or should be connected to the existing Greenway system by a bicycle/pedestrian path or linear band of open space to ensure the Greenway remains continuous. Generally, expansions to the Greenway should promote low-impact recreation (such as biking, hiking, and other silent sports) as opposed to high-intensity activities that involve noise, traffic, bright outdoor lighting, and significant energy needs.

Areas incorporated into the Greenway should expand and grow the system's natural areas, recreational areas, and education opportunities. The city's Comprehensive Park and Open Space Plan recognizes that the city will need to have additional park acreage to serve the growing community, particularly in areas north and west of the current municipal limits. Additions to the Greenway system could help meet these future parkland needs and provide additional recreation options on the north side of the city. The Comprehensive Park and Open Space Plan supports the development of a regional bicycle/pedestrian trail system linking the existing off-street bike path along Highway 12 to Graber Pond, then to the Pheasant Branch Conservancy and onward to Governor Nelson State Park. This connection would become part of the Greenway system.









Additionally, several expansion opportunities exist within the study area. Golf should be encouraged to continue to prosper within the greenway and expansion areas should be reserved adjacent to the course. The city owned and operated Middleton Bike Park could be expanded, partially relocated, or the trailhead could be relocated onto the undeveloped area to the north, freeing land for golf course expansion. This property is outside of the current municipal limits and would need to be annexed into the city in order to become part of the expanded park. The property could remain in private ownership with a public access agreement for the Bike Park or become publicly owned. Expanding the Bike Park would allow it to serve more users and offer trails for a wider variety of skill levels. The expanded park would provide the city with the opportunity to host mountain biking events and competition festivals on the Bike Park grounds. Expanding the Bike Park would also help attract mountain biking enthusiasts, and would particularly help retain and attract young professionals who work and live in Middleton.

Recreation Opportunities

A Sports Training Center is currently being planned for an area south of University Avenue and north of Pleasant View Golf Course. The Training Center would be targeted to winter sports athletes and would primarily involve a cross country skiing venue. At the time of this report the project program was in the conceptual stage and still being formalized. The new public cross country ski trails would be located on the southern half of the Training Center grounds. Potential trail routes are depicted on the map on page 38. In the warmer months, there is interest in providing sustainable agriculture uses in between and around the trails, potentially incorporating small-scale vegetable farms that would participate in local farmers markets, or similar agricultural uses. Since the land is currently farmed, this would reflect a continuation of the current land use.



The Sports Training Center or Middleton Park could incorporate an ice climbing wall as a related use. The climbing wall would be the existing quarry wall adjacent to the Golf Course, just west of Pleasant View Road. (The climbing wall is described further in Part III of this document.) The climbing wall and cross country ski trails associated with the Sports Training Center could be added to the Greenway system through a public access agreement.

To the west of the study area, Blackhawk Ski Area features a ski jump area, cross country ski trails, and mountain biking trails. This private club's activities naturally complement the Greenway concept. In the survey conducted at the beginning of this planning process, many cross country skiers suggested connecting the cross country ski trails at Blackhawk Ski Area to the trails at Pleasant View Golf Course. This represents another opportunity to advance the Greenway.



PARKWAY

Given the growing number of uses north of Pleasant View Golf Course, additional roads will be necessary to connect the many recreational opportunities. In particular, a park road is recommended to connect the Sports Training Center site to Pleasant View Golf Course to the south and the planned mixed use development to the east.









Potential Parkway Alignment

EXCURSION TRAINS

Currently excursion trains in the Middleton area are limited to the Polar Express Train Ride. This seasonal excursion leaves from the railroad spur near Deming Way. It offers a one-hour tour designed for families with young children. On this tour, guests are taken to the "north pole" and back, but guests never leave the train. It operates in November and December only.

The excursion train concept could be expanded to serve a wider audience, visit a variety of destinations, and offer trips in the warmer months or year-round. Excursion trains could be provided using the city-owned stop and rail spur. The excursion trains would serve Driftless Area destinations west of Middleton such as Cross Plains, Black Earth, Mazomanie, Spring Green, and the many natural areas along the Wisconsin River. The tours could incorporate a variety of themes, including environmental education, small town destinations, and culinary exploration. They could also appeal to all ages – from students to retirees. Schedules would be centered on weekend excursions and special events. Excursion trains could also bring visitors from the west to Middleton on UW game days or other special events on campus. From there, visitors could stop by a Middleton tavern or restaurant to watch the game, or continue their journey to Camp Randall or other downtown Madison destinations via public transportation, special shuttle, or train.



ENERGY RELIABILITY & TECHNOLOGY DISTRICT

There is a developing opportunity to establish an Energy Reliability & Technology District east of Pleasant View Road. In the District, companies could have confidence that they would not experience outages or other interruptions in their electric service. Middleton's Energy Reliability & Technology District is planned around the growth of PPD, a company that is keenly aware of the need for energy reliability. In the District, the infrastructure would be coordinated so that an outage could be isolated without disrupting service to the rest of the District. This means that an individual business would have uninterrupted power, even when existing power system grid experiences an outage. This could be achieved with battery backup storage and other technology solutions. Power for the battery backup system could be supplied by renewable energy sources, or it could be charged by the grid. The city will develop a partnership with the local utility company on implementing the concept.



This high level of reliability is critical to many biotechnology businesses that depend on control and precision in the laboratory or in complex, multi-day clinical trials. Energy reliability is a key consideration for these businesses when choosing where to locate. Providing this District would help the Greenway attract companies that depend on energy reliability. The city will work to promote the Energy Reliability & Technology District concept and encourage companies to locate in the District, as a critical mass of companies will be needed to establish this pilot project. The Energy Reliability & Technology District could ultimately lead to the development of a campus of like-minded companies with similar goals, particularly those which are concerned about their triple bottom line, their environmental footprint, and being a partner in the Greenway system.





GOLF COURSE IMPROVEMENTS

Pleasant View Golf Course is an award winning, highly successful public golf course offering 27 holes and a 9-hole par three course. Having recently won Madison Magazine's 2016 Gold Award for Best Golf Course, the course's success should continue to be a City and greenway priority. In addition to spectacular golfing, the course offers remarkable public vistas that are not found in other Middleton parks. Located at approximately 300 feet above Lake Mendota, the clubhouse and other points on the golf course provide panoramic views of Middleton and Madison, including glimpses of Lake Mendota and the Capitol. Future improvements should celebrate and preserve the public vistas. Improvements should not block or diminish the views; rather they should be designed to preserve and incorporate the views whenever possible.

In order to expand and broaden the use of Pleasant View Golf Course, the city should continue to encourage and promote after-hours activities such as music performances and public gatherings at the clubhouse and patio. The city should also encourage the development of new non-golf activities at Pleasant View Golf Course. Evening uses support expanded use of Pleasant View Golf Course that generally do not conflict with daytime golf and mountain biking uses. Maximizing the use of large parks by creating gathering spaces that offer music and/or host special events is a stated goal of the city, as described in the Comprehensive Park and Open Space Plan. Furthermore, providing additional and alternative uses of the Pleasant View Golf Course facilities will increase revenue for the course and the clubhouse restaurant. It will also bring more Middleton residents to the course and make it available to a much wider audience.

Public outreach efforts revealed a need to provide more parking at the Pleasant View Golf Course, particularly during special events and golf league nights. Additionally, more space is needed to allow for unloading of bikes from vehicles. The Middleton Bike Park is increasing in popularity, which provides alternative park uses that may particularly appeal to younger audiences and millennials, both residents of Middleton and visitors. The study recommends adding an expanded parking lot to the north of the existing parking lot and prohibiting parking along the parkway and the driveway edges. This will allow for more parking, circulation, and loading space for all Pleasant View users. There is an opportunity to introduce additional parking in the Greenway expansion area to the north, specifically along the parkway and at the Sports Training Center.

There is also a problematic bike and pedestrian conflict point at the northeast corner of the Golf Course. At this location, where the bike path crosses Pleasant View Road, visibility is poor due to the fact that Pleasant View Road is on the crest of a hill and drivers may not be expecting bicyclists to cross the road. A new entrance drive and road alignment to access the golf course from Pleasant View Road would help mitigate this issue. As improvements to Pleasant View Road are currently in the planning stages, now is the time to plan for a new access point to the golf course. Potential entrance drive options are discussed in Part IV.

GREENWAY CENTER INFILL

Encouraging mixed use infill development is a critical next step in maximizing the possibilities for Greenway Center as a retail, office, employment, and residential destination in the state. Commercial and office infill is central to continuing to grow the employment base in this part of the city. Greenway Center is already a highly-desirable location for offices and commercial uses, in part due to proximity to the Greenway and in partly to the interactions and resources that become available when locating near like-minded companies.

Residential infill in Greenway Center will enhance the customer base for the commercial and office uses, and will sustain the economic health of the neighborhood. Promoting residential infill near the Greenway will also increase the number of people living near the system and using the it on a regular basis. Increasing use of the Greenway will further support the concept of Middleton as a Greenway City, as the "green way of life" will be cemented as a central part of the city's culture and identity. The Greenway and Middleton's housing have a symbiotic relationship, as the Greenway attracts new residents to Middleton—particularly those who value access to nature and recreational opportunities. Specific residential infill locations are described in Part III.







GREENWAY CENTER EXPANSION

Expansion of Greenway Center, Middleton's major employment center, is vital for the future growth and economic health of the city. Middleton has limited corridors where Greenway Center expansion could occur, due to boundary agreements with adjacent towns. The north side of Middleton is planned primarily for residential and limited commercial uses. As a result, the southwest and southeast quadrants of University Avenue and Pleasant View Road are the only areas where Greenway Center can expand. At this critical location, land should be reserved for additional employment uses: primarily technology and research companies and corporate headquarters.

With the exception of a small area at the northwest corner of Pleasant View Road and University Avenue, the entire area needs to be added to Middleton's urban service area. Specific development opportunities are described in Part III.



Part III:
Development Opportunities







Recommended Land Uses

The map on the following page depicts recommended future land use for undeveloped, underutilized, and redevelopment sites in the study area. Development opportunities are located primarily along University Avenue, west of Pleasant View Road, and in infill locations in Greenway Center.

URBAN GREENWAY STUDY - FUTURE LAND USE OPPORTUNITIES

Middleton, WI

DRAFT

CITY OF MIDDLETON

GREENWAY EXPANSION

DEMING WAY

EXISTING QUARRY

POTENTIAL ANNEXATION & URBAN SERVICE AREA EXPANSION

SOUTH POND IMPROVEMENTS

UNIVERSITY AVE

14

REDEVELOPMENT

REDEVELOPMENT

COMM. INFILL

FUTURE COMMERCIAL REDEVELOPMENT

SCHWARTZ RD

TECHNOLOGY/OFFICE /COMMERCIAL

TECHNOLOGY/OFFICE /COMMERCIAL

TECHNOLOGY /OFFICE

TECHNOLOGY /OFFICE

POTENTIAL FUTURE CONNECTION

PLANNED NEIGHBORHOOD

POTENTIAL HOSPITALITY, COMMERCIAL & RESIDENTIAL

TECHNOLOGY / OFFICE

TECHNOLOGY / OFFICE

ESSER POND

Potential Park Road Extension

HOSPITALITY OR RESIDENTIAL RELATED TO GOLF COURSE

TECHNOLOGY / OFFICE CAMPUS EXPANSION & PARKING

LIGHT INDUSTRIAL

PPD

COMM. INFILL

RES. INFILL

GREENWAY STATION

MIXED-USE INFILL

GREENWAY EXPANSION PRIVATE PROPERTY WITH PUBLIC ACCESS AGREEMENT

POTENTIAL SPORTS TRAINING CENTER

POTENTIAL UNDERPASS

GREENWAY HOSPITALITY

GREENWAY BLVD

TOWN OF MIDDLETON

PARKWAY

QUARRY WALL PART OF GREENWAY

SOUTH FORK TRAIL

GREENWAY CENTER

MIDDLETON BIKE PARK

CLUB HOUSE

BIKE TRAILS

SEE POTENTIAL PARK ROAD ALIGNMENTS MAP FOR OTHER OPTIONS

GREENWAY

COMMERCIAL INFILL

CITY OF MIDDLETON

CITY OF MADISON

12

14

CITY OF MIDDLETON

CITY OF MADISON

PLEASANT VIEW GOLF COURSE

PUBLIC STREET IMPROVEMENTS

MULTI-FAMILY

BLACKHAWK RD

DEMING WAY

PLEASANT VIEW RD

URBAN GREENWAY

EXISTING OFF-STREET PAVED PATH

EXISTING OFF-STREET UNPAVED PATH

PLANNED OFF-STREET PAVED PATH

PLANNED OFF-STREET UNPAVED PATH

PROPOSED SPORTS CENTER TRAIL

MUNICIPAL BOUNDARY

STUDY AREA

0 800 1600 Feet

JOINT PLAN BY:

PLANNING DEPARTMENT

Revised: 9.27.16

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GREENWAY CENTER EXPANSION AREA

Greenway Center has grown to become a critical piece of the Middleton economy, being a top employment center in the region with several technology and research companies that offer high-quality jobs. Greenway Center has also become a very desirable location for companies that are seeking to attract top talent, due to its attractive Greenway location and its proximity to biosciences and biotechnology knowledge centers. Future development in the study area should build on the success of Greenway Center and continue to grow the employment base. Lands north and west of PPD and south of University Avenue have been identified as natural expansion areas for Greenway Center. Existing land uses in this area include an active quarry west of Pleasant View Road between University Avenue and Pleasant View Golf Course, and rural commercial/industrial development on the east side of Pleasant View Road, north of PPD.

Lands west of Pleasant View Road are located in the Town of Middleton and would need to be annexed into the city in order to be developed at urban intensities. Additionally, with the exception of the northeast corner of the quarry site, the majority of this area is not in the urban service area. The city will work with the Regional Plan Commission on environmental studies and other documentation required to add this land to the urban service area. New roads will be needed to serve new development and connect it to Greenway amenities. Lands outside of the city should be considered longer-term expansion areas, as compared to the Greenway Center expansion area east of Pleasant View Road.

Technology/Office Campus

The core of the Greenway Center expansion area should become a technology/office campus that takes advantage of the existing research, biotech, and information technology enterprises located in Greenway Center and north of University Avenue. The campus would be ideal for attracting new businesses that are interested in locating among other technology and research companies, seeking a natural setting and recreational options for their employees, and concerned about their environmental impact. Development of the Energy Reliability & Technology District on the east side of Pleasant View Road will also add to the appeal of Greenway Center for high tech companies that depend on energy reliability. Throughout the campus, information technology, biomedical manufacturing, biotechnology, office, and similar uses are desirable.





The technology/office campus could also be home to future expansions and relocations of existing Greenway businesses. This area is particularly suited for expansion of existing businesses in Greenway Center, along University Avenue, and in the Middleton Business Park. It would also be a natural choice for flourishing startup businesses that were developed in incubator spaces that are in need of their own professional office space.

Information technology, biomedical manufacturing, biotechnology, and office uses are recommended along the south side of University Avenue, west of Pleasant View Road. Retail or office-supporting commercial uses can also be successful here, due to the highly visible location on University Avenue. High-quality and high-value development at this key intersection will establish a strong presence at the corner of Pleasant View Drive and University Avenue and will help create a market for the quarry lands to the south.

Land further to the south could support longer-term expansion for technology/office campus and a shared parking structure to serve the multiple companies located in the campus. A parking structure would reduce the amount of surface parking and impervious surfaces in the campus and help maximize the campus land area that is available. Parking densification (i.e., structured parking) will become increasingly important as the number of jobs and businesses increase in the study area. Existing light industrial uses could be relocated within future technology/office areas further from University Avenue. Within the campus, the precise location of each use is flexible and will be ultimately determined as development is proposed.



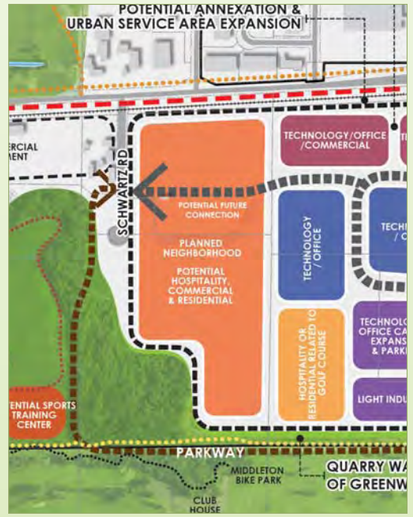
A new loop road should be constructed on the west side of Pleasant View Road using existing Pleasant View Road access points. This public street would serve the technology/office campus and connect uses to one another. In the future, this road could be extended to the west to connect the technology/office campus to the Sports Training Center and other Greenway amenities.

Hospitality/Residential

The southwest corner of the quarry site is planned for potential hospitality and residential uses. Development here could serve the potential Sports Training Center to the west and the rock climbing hub to the east and south. Climbing outfitters, housing for athletes, restaurants, taverns, or other entertainment uses that would appeal to skiers and climbers would be an especially good fit on this site. Other uses could be tailored to meet the needs of golfers, as the area is immediately adjacent to Pleasant View Golf Course and a short drive from the clubhouse. Any development in this area should not impact views from the golf course. In addition to athletes, hospitality uses could also serve visitors to other Middleton destinations, the University of Wisconsin, downtown Madison, and UW Hospital.

PLANNED NEIGHBORHOOD

The land west of the quarry site and east of Schwartz Road would be appropriate for a planned neighborhood development oriented to the nearby Greenway recreational and environmental assets and Greenway Center employment area. The planned neighborhood would incorporate a carefully-planned mix of hospitality, commercial, and residential development. The large site could be developed by a single owner or developer who could produce a master neighborhood development with a mix of complementary uses. Hospitality uses could serve outdoor recreation enthusiasts (skiers, climbers, golfers, etc.) and visitors to Middleton and Madison destinations. Due to the railroad crossing at Schwartz Road, a secondary access point will be needed in order to develop this site. This secondary access should extend from Schwartz Road, and should connect to the Technology/Office campus loop road to the east and the Sports Training Center and parkway to the west.



The Planned Neighborhood site is located in the Town of Middleton and would need to be annexed into the city and brought into the urban service area. The city would need to work with the Regional Plan Commission on the environmental studies and documentation required to accomplish this.



DOWNTOWN GATEWAY REDEVELOPMENT SITES

Redevelopment areas are identified on the south side of University Avenue. These areas are key gateway sites, as visitors arriving from University Avenue will make their first impressions of the study area here. These sites are well suited for high-density office and commercial uses. These areas could also accommodate a park and ride for commuters going from areas north and west of Middleton to downtown Middleton, downtown Madison, or the UW campus area. Individuals could reach their ultimate destination via carpool, public transit, dedicated shuttles, bicycle, or on foot. Park and rides support the goal of reducing congestion during rush hour and support alternative transportation modes.





GREENWAY HOSPITALITY INFILL SITE

An undeveloped site located south of PPD on the east side of Pleasant View Road has been identified for a hospitality use. Due to its elevation and the undeveloped Greenway lands to the east, it offers many amenities, particularly vistas of Middleton, Lake Mendota, and the Capitol. It also has direct access to Pleasant View Road and the Greenway. This very attractive site should be considered the primary hospitality destination in the study area. Uses in this location would be most successful if they relate to the Pleasant View Golf Course and other Greenway activities. For example, a boutique hotel or lodge containing roughly 80 rooms could cater to outdoor recreation enthusiasts (golfers, bicyclists, climbers, skiers, etc.) and could offer outdoor-friendly amenities or services. The inclusion of a 200-to-300-capacity gathering facility or conference center, spa, and/or retreat center paired with the stunning views could truly make this a destination in Middleton. The hotel and any other related hospitality facilities should be designed to maximize views of and access to the Greenway.





OTHER INFILL SITES

Additional infill sites are identified on the future land use graphic. The infill site at Esser Place (located on Deming Way, northwest of Esser Pond) should be an office tower that utilizes the existing parking structure in that location.

The infill site north of the Greenway Building on Aspen Commons would be best suited for commercial development, similar to that of surrounding uses. This site could host an office tower that capitalizes on the view of downtown Middleton and beyond.

The city should work with the owner of Greenway Station to provide residential or mixed use infill development within underutilized sites within Greenway Station. In particular, a site on the southeast corner of Greenway Boulevard and Deming Way is recommended for infill retail and office uses.

CITY OF MIDDLETON COMPREHENSIVE PLAN

The future land uses shown the on the map on the following page reflect the city's vision for the future of the study area. City Planning Staff recommends that the TID #3 Urban Greenway Area Study be adopted as part of the City of Middleton's Comprehensive Plan. The land use pattern shown on the city's Future Land Use Map should be consistent with the land uses described in this plan.



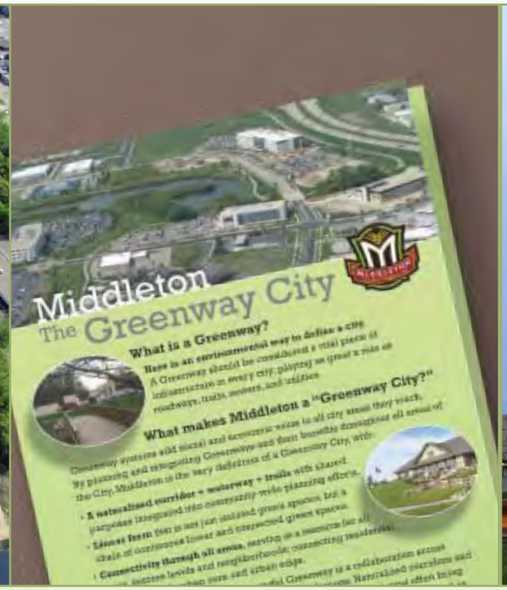
Part IV:
Public Improvement Opportunities






In order to capture the economic development opportunities and land development opportunities described in the previous sections, the city should invest in public improvements that will enhance the Greenway experience and accommodate potential growth. Specific proposed improvements relate to increasing public awareness, improving vehicular and pedestrian access to serve future development and improve access to the Pleasant View Golf Course, expanding recreational options, upgrading stormwater infrastructure, and celebrating the Greenway's environmental features.







PUBLIC AWARENESS

Although its presence is increasing, the Greenway is an unknown asset for many people outside of Middleton. The city should devote resources to marketing both the Greenway and Middleton as a Greenway City. Marketing efforts should increase public awareness and promote use of the Greenway, emphasize its importance to individual health and quality of life, and encourage preservation of the Greenway system.

These ideas can be included in the Chamber of Commerce and Tourism Commission marketing materials and also communicated by installing information signage, interactive features, or interpretive displays within the Greenway and at Greenway entrances. Signage should include a defined educational program.

Recommended topics include:

- **Stormwater management** and its relationship to clean lakes
- **Watershed education**
- **Greenway paths** and benefits of alternative transportation
- **Environmental protection,** with emphasis on ecological features and habitats such as steeps slopes, hydric soils, floodplains, wetlands, wildlife habitat, waterways, and kettle ponds
- **Geological history** and glacial legacy in Middleton
- **Native plant restoration**

Promoting Middleton as a Greenway City will help drive further economic development, job growth, and investment. It will also help grow Middleton's image as a desirable place to live, especially for those who are seeking healthy lifestyles, active recreation, and convenient access to nature.

ROAD IMPROVEMENTS

In order to accommodate increased development in the study area, improvements to Pleasant View Road are needed, particularly to address safety issues and accommodate increasing traffic. Preliminary designs include widening Pleasant View Road to two lanes in each direction. These improvements will be studied in an upcoming joint City of Middleton and City of Madison study (Contract No. 7809 for design services for Pleasant View Road). This phased project will involve reconstructing Pleasant View Road as an urban boulevard on its existing alignment. Upon completion, the reconstructed road will include four vehicle travel lanes, two bike lanes, a raised median, a sidewalk on one side, and a widened sidewalk/bike path on the other side. The Phase I road segment is between University Avenue/Highway 14 and Greenway Boulevard, and the Phase II segment is from Greenway Boulevard to Old Sauk Road.



Phase I construction is anticipated in 2021 with Phase II in 2022. Phase III, which is south of the Greenway study area, would be completed in 2023. The construction timeline could potentially be moved ahead as funding allows.

In addition, new roads will be needed to serve new development and connect to Greenway amenities. On the west side of Pleasant View Road, a new public street should be constructed to serve the technology/office campus. This loop road will utilize two existing access points on Pleasant View Road. In the future, this road should be extended west to connect across Schwartz Road to the parkway in the Greenway expansion area. This extension would connect the new development near Pleasant View Road to the Sports Training Center and would provide another option for traveling to the Pleasant View Golf Course. On the east side of Pleasant View Road, a new public street should be constructed to serve the technology/office areas south of University Avenue. This road should run east-west and then continue south to connect to the Research Way/Quarry Road intersection.



Even with the improvements to Pleasant View Road, crossing the road will likely continue to be challenging for bicyclists and pedestrians due to increased automobile traffic and a widened roadway. A bicycle and pedestrian bridge or overpass is recommended where the bike path currently crosses Pleasant View Road, at the northeast corner of the Pleasant View Golf Course. This overpass will create a safe and comfortable connection across the transportation barrier. Preliminary road designs include lowering Pleasant View Road by 10 feet or more in order to address safety and visibility concerns, which would make construction of an overpass feasible. The public overpass should serve bicycles, pedestrians, and may even serve automobiles if combined with access to the proposed Greenway hospitality site.

An opportunity also exists for an underpass of Pleasant View Road west of PPD that would create a safe connection from PPD to the proposed technology/office campus in the existing quarry west of Pleasant View Road. This underpass would likely be heavily used by Greenway Center employees and residents, as well as visitors to nearby hospitality sites and Greenway users. This underpass could be either public or private and may serve pedestrians, bicycles, or automobiles.

In addition, a new parkway should be built to link the potential Sports Training Center site to the Pleasant View Golf Course to the south and the future planned neighborhood area to the east. This parkway will increase connectivity on the west side of the study area, linking recreational opportunities. The design of this parkway is described in detail in the following section.

GOLF COURSE/BIKE PARK AREA

Numerous opportunities exist to improve parking, circulation, and recreational activities within the Pleasant View Golf Course and Middleton Bike Park area. The following recommended improvements are in response to public input. Focus groups and community survey responses indicated ongoing safety concerns and parking conflicts in the Pleasant View Golf Course parking lot, particularly during peak periods such as golf league nights. The existing lot is often times at capacity, reducing the use of this area. A primary concern was a conflict of biking, walking, driving, and unloading equipment (bike racks, bicycles, golf bags, etc.) in the parking drive aisle, where space is very limited and the drive aisle serves as the only access route to the site.



URBAN GREENWAY STUDY - GOLF COURSE/BIKE PARK AREA IMPROVEMENTS

Middleton, WI

DRAFT

14 UNIVERSITY AVENUE

SCHWARTZ RD

APPROXIMATE SPORTS TRAINING CROSS COUNTRY SKI TRACK

POTENTIAL SPORTS TRAINING CENTER

- TRAILHEAD
- CROSS PARKING OPPORTUNITY WITH BIKE PARKING & GOLF EVENTS

PROPOSED BIKE & PEDESTRIAN PATH

EXISTING BIKE PARK TRAILS

MIDDLETON BIKE PARK & NEW TRAILHEAD

POTENTIAL NEW PARK ROAD (PARKWAY)

EXISTING BIKE/PED CROSSING

QUARRY WALL
ICE CLIMBING

EXISTING PARKING

SINGLE LOOP TRAIL

BILLY GOAT PAR 3 COURSE

EXISTING VEHICLE & BIKE/ PEDESTRIAN CONFLICT POINT

WOODS COURSE

CLUBHOUSE
DRIVING RANGE

PLEASANT VIEW RD

GREENWAY BLVD

PLEASANT VIEW GOLF COURSE

MAINTAIN & ENHANCE EXISTING FACILITIES

LAKE COURSE

PRAIRIE COURSE

DEMING WAY

PLANNED MULTI-FAMILY

PLANNED TRAFFIC SIGNALS

BLACKHAWK RD

JOINT PLAN BY:

38 Revised: 9.21.16

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PLANNING DEPARTMENT

0 500 1000 Feet

Parkway

To improve site accessibility, provide additional parking options, and unify recreation areas, the study recommends constructing a parkway that connects the Pleasant View Golf Course and Middleton Bike Park to the potential Sports Training Center to the north, and continuing east to Schwartz Road. To protect the natural setting of the Greenway, a parkway should be constructed rather than a conventional urban street. The parkway consists of a curvilinear, low-impact road that provides access to recreational amenities and protected natural spaces. To reduce the impact on the Greenway, the parkway should be carefully sited in harmony with existing topography. Natural features such as mature trees and views should be identified and preserved to enhance the visitor experience. The roadway would be constructed of porous asphalt without curb or gutter. The parkway is envisioned as one automobile travel lane in each direction with intermittent parking lanes, park buildings, and adjacent multi-use trail. To discourage use as a shortcut or thoroughfare for drivers, the road would be a low speed limit public way. The parkway is envisioned as both a pleasure drive that provides visitor access into a natural space, as well as a secondary arrival route for the Pleasant View Golf Course/Middleton Bike Park area and the future Sports Training Center.



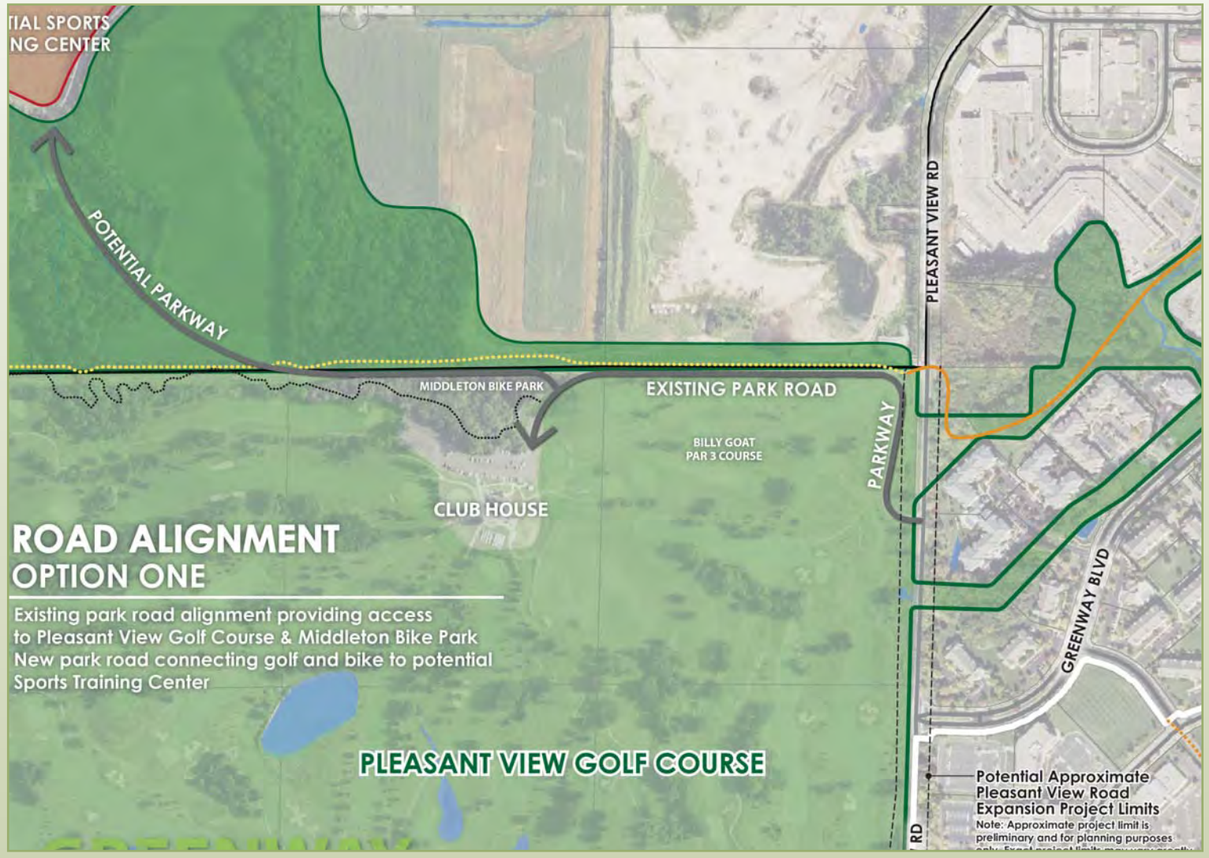
By constructing a parkway to connect the current city recreation activities at the golf course/bike park area to the potential Sports Training Center, an opportunity exists to cross-park these two facilities. Agreements should exist to allow parking between the two sites with parking location options proximate to different recreation opportunities such as golfing, biking, cross country skiing, snow shoeing, etc. Connecting the two parking areas also provides nearby space for overflow parking, making the parkway highly integral to increased programming of special events. By spreading out the many park users, these additional parking areas should alleviate the parking shortage and reduce crowding issues at the golf course parking lot.

Potential Park Road Alignments

The expansion of Pleasant View Road will be designed in the near future and may impact golf operations. Now is the time to review access options to the Pleasant View Golf Course to proactively plan for the road expansion project. If desired, this major public improvement could provide an opportunity to reconfigure the golf course entrance and arrival experience directing views toward the newly constructed club house and patio, and directing views away from the adjacent quarry and cell tower. Since the exact road expansion impact is unknown, this study provides three different options for future park road alignments to be considered during the Pleasant View Road reconstruction process. Options two and three can be found in Appendix D. The road alignment preferred by the Pleasant View Golf Course Advisory Committee is shown to the right:

- **Roadway Option One:** This option maintains the current park road alignment on the north side of the golf course. The proposed parkway would connect into the existing park road near the bike park.

Regardless of which road alignment option is constructed in the future, improvements should be made to direct visitor views toward the golf clubhouse and away from the quarry, powerlines, cell tower, and the Billy Goat Par Three Course to provide the best first impression of the course. Other improvements should also include connecting the golf course/bike park access road to the parkway and constructing a second parking lot to serve as a bike park trailhead. Additionally, a bicycle/pedestrian path is recommended along the north side of the existing park road, providing a safe space for bicyclists and pedestrians who currently use the park road. The path would run the entire length of the golf course and connect to other trails to the west of the study area. Wayfinding signage should be provided to help visitors locate the golf course, bike park, bike trails, and the parkway. Signage should also be used to help mark the trail so that users can stay on the trail, off the golf course, and avoid vehicle conflicts in the Pleasant View Golf Course parking lot. If additional activities occur in the area, the golf course may desire a fence along access roads.



This study recommends that the city hire a golf course architect to review the impact of the Pleasant View Road reconstruction on the golf course – particularly the potential impact on Hole 2 of the Lake Course – and evaluate the three park road alignment options. In particular, the golf course designer should examine the route of the new park road included in Option Three, as the road would need to circumvent the Lake Course, driving range, and Billy Goat Par 3 Course. Ultimately, the golf course designer should evaluate all three options, help identify pros and cons, bring their expertise to identify additional opportunities, and ensure that Pleasant View Golf Course continues to provide a top-quality golfing experience and maintains profitability.

Golf Course Entry Gate



Golf Course Approach 1



Golf Course Approach 2



Golf Course Approach 3



Golf Course Approach 4



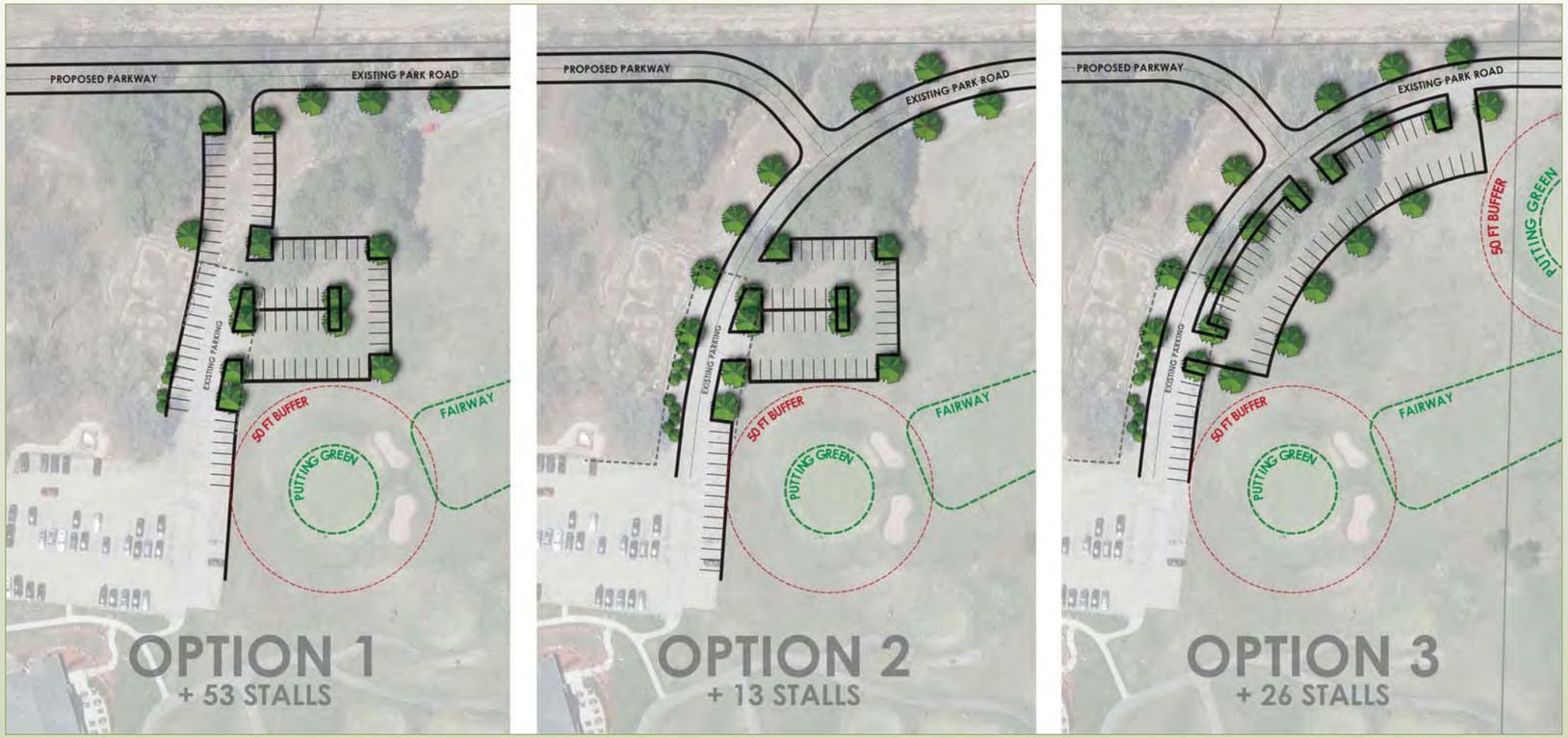
Arrival at Clubhouse



Additional Parking

In additional to parking provided within the parkway, this study recommends adding a second parking lot northeast of the existing parking lot at Pleasant View Golf Course. This provides a near-term parking solution while the parkway develops. Three potential parking lot options are provided:

- **Option One:** This parking lot design extends the existing parking lot to the north. The existing parking stalls on the east side of the primary golf course drive aisle are replaced with a parking lot. This lot would provide an ideal parking location for users that need to unload equipment, eliminating conflicts along the clubhouse access drive. This option requires a reconfiguration of the golf course park road or construction of the parkway. The parking lot provides a net of 53 parking stalls.
- **Option Two:** This parking lot design replaces parking along the golf course access drive with a parking lot located off of the park road, providing a clubhouse drive free of parking stalls, and eliminating all unloading conflicts. The parking lot provides a net of 13 parking stalls. Existing stalls on the west side of the access drive could remain to maximize parking.
- **Option Three:** Similar to Option Two, this parking lot design replaces parking along the golf course access drive with a parking lot off of the park road, but extends the parking lot along the park road. The parking lot provides a net of 26 parking stalls. Existing stalls on the west side of the access drive could remain to maximize parking.







Quarry Wall

A unique feature of the study area is the quarry wall. This 80-foot wall, a result of past quarrying activities, defines the southern boundary of the quarry site. This wall could be transformed into a four-season rock climbing wall that would complement the Greenway's recreational amenities. The wall could be used for rock climbing in the warmer months and ice climbing in the winter. As it is north-facing, it is particularly well-suited to ice climbing and could contain permanent anchor points at the top of the wall. An ice climbing wall would be a truly unique offering in the Dane County area. There are few areas in the Midwest where ice climbing is available in a natural setting such as the Greenway. The quarry wall has the potential to become a major attraction for outdoors adventurers and climbers, and it could drive recreational tourism along with the potential Sports Training Center and Greenway hospitality site. The city could find an operator for the climbing wall that could manage the climbing activities and lease the space from the city.



URBAN GREENWAY STUDY - GREENWAY IMPROVEMENTS & ACTIVITIES OPPORTUNITIES

Middleton, WI

DRAFT

14

POTENTIAL SPORTS TRAINING CENTER

MIDDLETON BIKE PARK

CROSS COUNTRY SKI TRAILS

PLEASANT VIEW GOLF COURSE

STUDY AREA

BLACKHAWK RD

BLACKHAWK RD

SOUTH FORK TRAIL

PLEASANT VIEW RD

GREENWAY BLVD

DEMING WAY

IMPROVEMENT/ACTIVITIES

- FISHING OPPORTUNITIES
- BIRD WATCHING OPPORTUNITIES
- CROSS COUNTRY SKIING
- NATIVE PLANT RESTORATION OPPORTUNITIES
- STORMWATER BMP OPPORTUNITIES
- EXISTING OFF-STREET PAVED PATH
- PLANNED OFF-STREET PAVED PATH
- PLANNED OFF-STREET UNPAVED PATH
- BIKE TRAIL
- EXISTING GROOMED CROSS COUNTRY SKI TRAILS
- POTENITAL CROSS COUNTRY SKI TRAILS
- MUNICIPAL BOUNDARY

0 800 1600 Feet

JOINT PLAN BY:

PLANNING DEPARTMENT

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Expanded Activities

This portion of the Greenway includes numerous outdoor recreation opportunities including the Pleasant View Golf Course, Middleton Bike Park, Pleasant View Golf Course Conservancy Area, and cross-country ski and snow shoe trails. All of these activities belong within a greenway and should be planned in a unified way to ensure all recreational activities continue to operate effectively, providing recreation options to a wide range of users. Understanding user needs will be important as improvements are made and special attention should be paid where uses abut. Uses should be designed to be compatible—whether that includes providing connections between uses or providing screening between incompatible facilities such as storage spaces. The new access road, parking lot, and other improvements described in this section will enhance the use of the golf course and support the course's ability to host new events and non-golf activities. As the city continues to promote after-hours activities, public gatherings, and the development of new non-golf activities at Pleasant View, the area will increasingly serve a broader audience and attract more Middleton residents to the natural space.

Additional nature and recreation activities should be encouraged throughout the Greenway within the study area. Cross country ski trails, snow shoe trails, and bike trails continue to be maintained, improved and expanded. Birdwatching, educational experiences, running, walking, and hiking should all be formalized through events and programming.





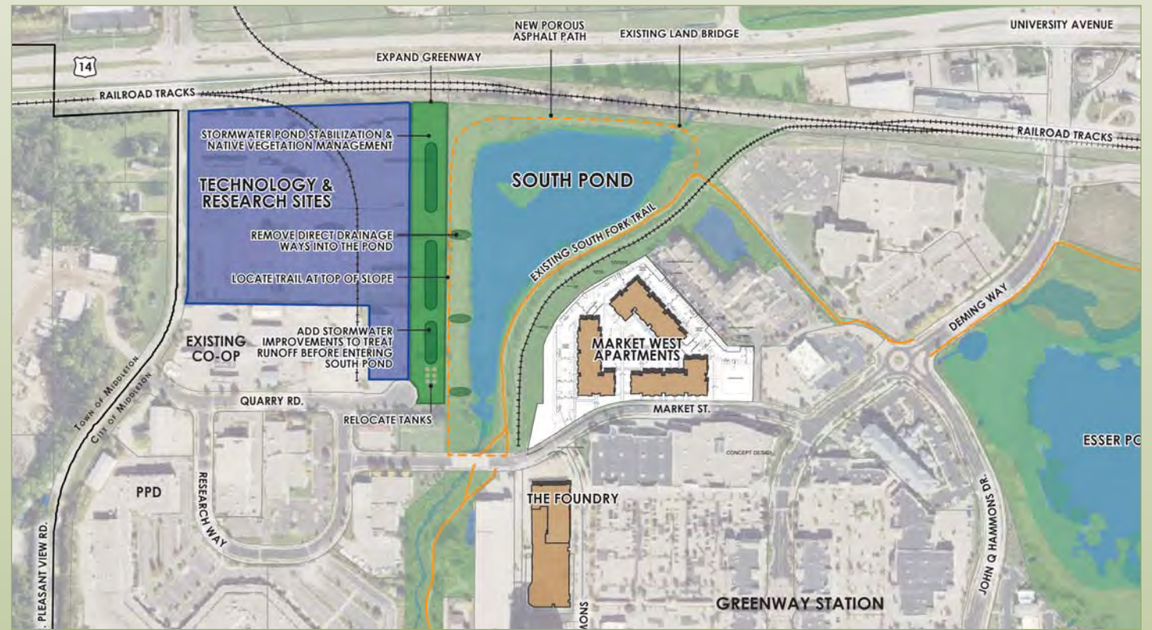


STORMWATER INFRASTRUCTURE

Recognizing the importance the Greenway plays in stormwater management, the city should continue to invest in the Greenway's stormwater infrastructure features. Improvements will involve regular maintenance including slope revegetation and stabilization, removal of invasive plant species, and removal of willow trees and phragmites along waterways. The city should incorporate new advances in stormwater best management practices (BMP's) into public drainage and conveyance corridors. Additionally, the city should require businesses to utilize stormwater BMP's and eliminate direct runoff and erosion into nearby waterways.

SOUTH POND IMPROVEMENTS

In order to continue to support the Greenway's stormwater functions and to enhance future redevelopment projects, a number of improvements to the South Pond area are recommended, generally related to pond stabilization and native vegetation management. On the west side of the pond, the study recommends removal of invasive plant species and stabilization of the pond bank. The study further recommends removing existing drainageways that drain directly into the pond and adding stormwater BMP's to treat runoff before it enters South Pond. Storage tanks currently on the co-op site immediately to the west should be relocated to reduce the risk of contamination of the pond and stormwater system. Finally, an extension of the bicycle and pedestrian trail made of porous asphalt should be added to the top of the slope along the north and west sides of the pond or as part of the future redevelopment lands to the west. Combined, these improvements will have the effect of expanding the Greenway to the west by 75 to 100 feet.



ENVIRONMENTAL IMPROVEMENTS

The Greenway's unique environmental characteristics are an inherent part of Middleton's Greenway system. The study area is located within two DNR designated watersheds. The Six Mile and Pheasant Branch Creeks watershed covers the majority of the study areas, while the Black Earth Creek watershed covers a western portion of the study area at the base of a steep ridge running northeast to southwest. Wetlands proliferate along the Pheasant Branch Creek, around South Pond and Esser Pond, and around smaller, unnamed ponds and creeks in the study area. Because the health of the natural environment within the Greenway system is essential to the Greenway's role as an economic development tool, improvements should be made that continue to protect and support the natural features of the Greenway.

The Greenway Improvements graphic recommends a number of potential environmental improvements and new low-impact recreational activities in the study area. For instance, several opportunities for native plant restoration are present along the south fork of Pleasant Branch Creek, especially in the open space east of PPD and further south in the open space between Greenway Boulevard and Deming Way. Fishing, bird watching, and native plant restoration opportunities also exist at South Pond and Esser Pond.

Another opportunity to enhance the Greenway's natural features is to create a Bird Guide for the whole Greenway system. This could include bird houses, sanctuaries, viewings of bird migrations, guided tours, and access to information about bird species and habitat. Bird watching opportunities exist at South Pond, Esser Pond, at the Pleasant View Golf Course, along the mountain biking trails, and at the future Greenway hospitality site south of PPD.

Moreover, the city should conduct an ecological study for each segment of the Greenway, as was done for Esser Pond by ecologists Zimmerman and Kailing, referenced earlier in this document. Such studies could point to additional environmental improvements and stormwater BMP's that could be prioritized in the future.

Since the Greenway provides a natural system connecting development, special attention should be paid to the interface of building and the Greenway. Parking, loading, and storage areas that face the Greenway should be screened to protect the Greenway user experience.







Part V: Implementation







The Greenway plays an important economic development role throughout the entirety of the City, beyond the Pleasant View/Greenway Center segment and study area. The TID #3 Urban Greenway Area Study could serve as a model or prototype for the other Greenway segments. The study recommends that the city conduct studies in all five segments of the Greenway. Most of the other segments may be reduced in scope with directed focus on environmental and recreational issues rather than redevelopment and future land uses.

FUNDING OF IMPROVEMENTS

Annual Budget

This plan includes recommendations for public improvements related to the Pleasant View Golf Course, public awareness, stormwater infrastructure, South Pond, transportation and connectivity, and environmental quality. In order to implement these recommendations, the city should develop an annual budget for the improvements. That budget may initially include improvements specific to this Greenway segment, and incorporate future segment improvements as planning is completed.

Additionally, the city should establish an annual budget for comprehensive monitoring, maintenance, and repair within this segment and the Greenway system as a whole. Regular monitoring of conditions should occur on an annual basis. This should include monitoring of invasive species in the waterways such as willows and phragmites, changing environmental and climate conditions, and evolving infestations such as emerald ash borer. These monitoring activities should inform maintenance and repair needs to be included in the annual Greenway budget.

TID Funding

As described earlier in this document, the Greenway plays many roles that contribute to Middleton's environmental, economic, and community health. Because the Greenway plays such a key part in ensuring that Middleton continues to be a great place to live and work, the Greenway system is an essential piece of economic development infrastructure. Consequently, the city should use TIF revenues from TID #3 and TID #5 to support the improvements recommended in this study. Tax increment was generated by the success of the commercial development in these two districts. Investing some of these revenues in the Greenway will clearly contribute to growing Middleton's economy.

Intergovernmental Agreements

The benefits of the Greenway transcend the boundaries of Middleton. Considering the Greenway system extends beyond Middleton's city limits, the city should work with the Town of Middleton and Dane County to determine roles for funding and maintenance. An intergovernmental discussion could result in a cooperative arrangement for maintaining the Greenway system and ensuring it will continue to benefit all municipalities.

Grants

The city should also track state and federal funding sources that could be appropriate for improvement projects. For example, the city could explore Knowles-Nelson Stewardship grant funding at the state level or USEPA funding at the federal level. Private foundations can also provide funding for environmental projects. Foundations with a known interest in issues related to the climate, water quality, urban environment, and habitat preservation would be the best match. In addition, the local corporate community could participate by sponsoring public art installations, interpretative signage, invasive species removal, upgrades to facilities, and other activities.

Private Organization Partners

Finally, partnering with organizations with allied goals can also help implement recommendations in this plan. For instance, the city could work with the Madison Metropolitan Sewerage District to make Greenway investments that would help the District meet its suspended solid reduction targets. Such an arrangement could be mutually beneficial for both parties.

ANNOUNCING THE GREENWAY CITY

Momentum for funding and implementation can be supported by dedicated and far-reaching promotion of Middleton as a Greenway City. Middleton is pioneering the Greenway City concept, and this study has provided a strong framework. Generating and growth awareness of Middleton's Greenway system and its benefits will inspire and create confidence in potential funders and investors. Branding will also support the Greenway's role in attracting, retaining, and growing businesses in Middleton.

The Middleton Chamber of Commerce and the Middleton Tourism Commission should play a role in this marketing campaign. They can further support the Greenway City concept by coordinating events to attract visitors to the Greenway and its commercial areas. Events could include 5K/10K races, other sporting competitions using Greenway facilities, ice climbing expositions, golf tournaments, movie nights, candlelight hikes, or scavenger hunts. Promotional events announcing the Greenway City concept could involve establishing new events or rebranding of existing events to focus on the Greenway and the value it brings to the community.









ESTABLISH AN OVERSIGHT COMMISSION

The city should create a Greenway Commission to make decisions related to preserving, enhancing, and expanding the Greenway. This commission should contain representatives from a wide variety of city committees, employers, conservation groups, user groups (golfing, mountain biking, skiing, etc.), and other stakeholders. The commission's role would be to address Greenway-specific issues as they relate to the three greenway roles identified in this document – economic, environmental, and community. The Greenway Commission would be advisory to the Plan Commission and Common Council. A separate commission is necessary because there are a number of other city committees which relate to the Greenway (e.g., Parks, Recreation, and Forestry Commission; Pedestrian, Bicycle & Transit Committee; Pleasant View Golf Course Advisory Committee; Water Resources Management Commission; Conservancy Lands Commission; and more), but no single entity has sole jurisdiction of the Greenway. The commission could also help evaluate whether potential land additions to the Greenway meet the goals of the city's Conservancy Lands Plan.

An example of the commission role would be to review and provide recommendation for large projects such as the construction of a parkway connecting Pleasant View Golf Course and Middleton Bike Park with the potential Sports Training Center to the north. The commission would be able to guide the parkway project through the comprehensive knowledge of the commissioners. This group should not review smaller projects or those that fall solely under the jurisdiction of a separate committee. An example is the recent construction of the patio at the Pleasant View Golf Course. This type of project would continue to be guided by the Pleasant View Golf Course Advisory Committee, Plan Commission, and Common Council.

The commission could also guide coordination with private parties to aid the implementation of the Greenway goals. For example, the managers of the potential Sports Training Center are bringing a ski trail designer to the site in late fall of 2016 to identify the best trail routes. This would be a good time for the Greenway Commission, city's TID #3 team, the ski trail designer, and the Sports Training Center team to walk the site and determine a suitable route and location for the parkway that would connect the Pleasant View Golf Course to the Sports Training Center.

PLEASANT VIEW ROAD RECONSTRUCTION

The planned reconstruction of Pleasant View Road into a four lane divided road is a major driver of this study. The City of Middleton should closely monitor the upcoming road design project to ensure that study goals, future land uses, and future local road connections are incorporated into the roadway design project. The city and road design team should work closely with owners of properties adjacent to the road right of way to ensure their future property goals are achievable with the road expansion.

The Pleasant View Road reconstruction may impact the Pleasant View Golf Course. The roadway will most likely be widened to the west along the golf course due to topography and existing development on the east side of the road. For this reason, this study recommends the city hire a golf course architect to analyze the road widening project effects on golf operations. These effects include impact on Hole 2 of the Lake Course, golf course access, potential ATC power pole relocations, and earthwork necessary to grade the edges of the roadway, as previously outlined in this study. The architect should be encouraged to rethink the golf course arrival experience to best serve golf course, bike park, and future parkway users and improve safety of all access points along Pleasant View Road.

PLAN ADOPTION

The TID #3 Urban Greenway Area Study was led by the City of Middleton Planning Department and developed by the city's TIF Redevelopment Team. This study is a key planning document with significant economic development and planning implications throughout the city; therefore Planning Staff recommends its adoption as part of the City of Middleton's Comprehensive Plan, either by reference or as a distinct chapter of the Comprehensive Plan. The city's Future Land Use Map should reflect the land uses described in Part III of this document.

Implementing the land use plan and associated improvements put forth in this plan will continue to grow Middleton's tax base, employment base, and overall economic success. Establishing Middleton as a Greenway City formalizes the community's long-standing environmental ethic. This study will guide these sustainable strategies in the years to come.

Appendices:






Appendix A: ATC Impacts

Appendix B: Water and Sanitary Sewer Impacts

Appendix C: Traffic Operations Assessment

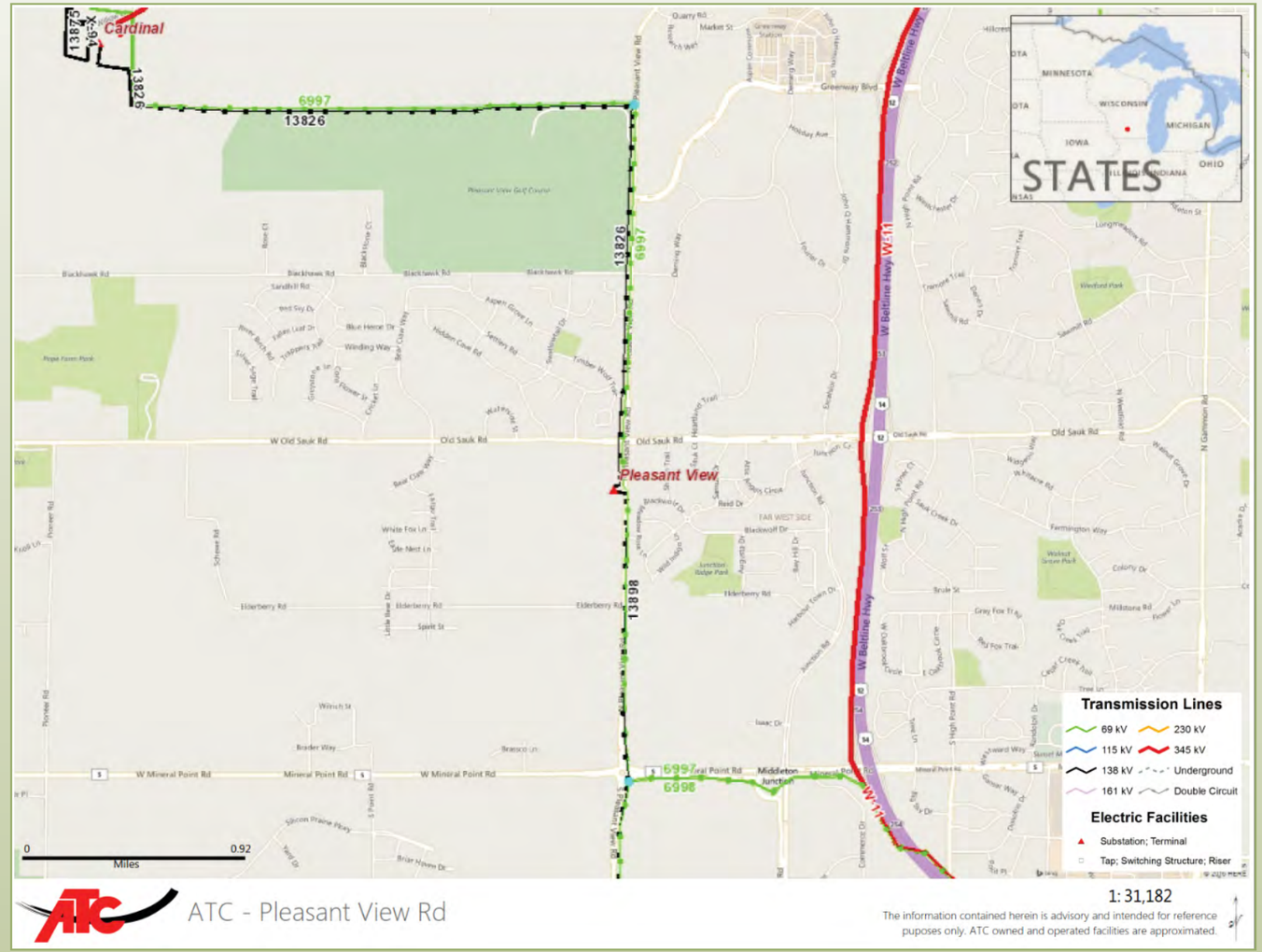
Appendix D: Golf Course/Bike Park Area Potential Road Alignments

APPENDIX A: ATC IMPACTS

ATC has a double circuit transmission line adjacent to the west side of Pleasant View Road with voltages of 138kV and 69kV. This transmission line will be in conflict with the future Pleasant View Road reconstruction project. The existing poles are located approximately 25 feet west of the existing roadway and will be in alignment with the future southbound travel lanes when the roadway is reconstructed.

The relocation of these facilities will be a significant effort. ATC typically requires a minimum of 18 months from project request date to relocation completion. Relocation costs could start at approximately $60,000 per pole location for standard poles with additional costs for angle poles or switch structures, similar to the large corner pole at the northeast corner of the golf course property.

ATC will need to be contacted early in the design of the Pleasant View Road project to discuss impacts. If ATC is required to move their facilities, ATC will redesign their facilities to avoid conflict with the new roadway and move them prior to construction.



APPENDIX B: WATER AND SANITARY SEWER IMPACTS

Below is a summary of the potential impact of reconstruction of Pleasant View Road on the Middleton sewer and water systems.

General

The section of Pleasant View Road that was reviewed was from Blackhawk Road on the south to approximately 1,000 feet north of STH 14. The total length of this portion of Pleasant View Road is about 6,100 feet.

This section of Pleasant View Road lies within and along three jurisdictions, City of Middleton, City of Madison, and the Town of Middleton.

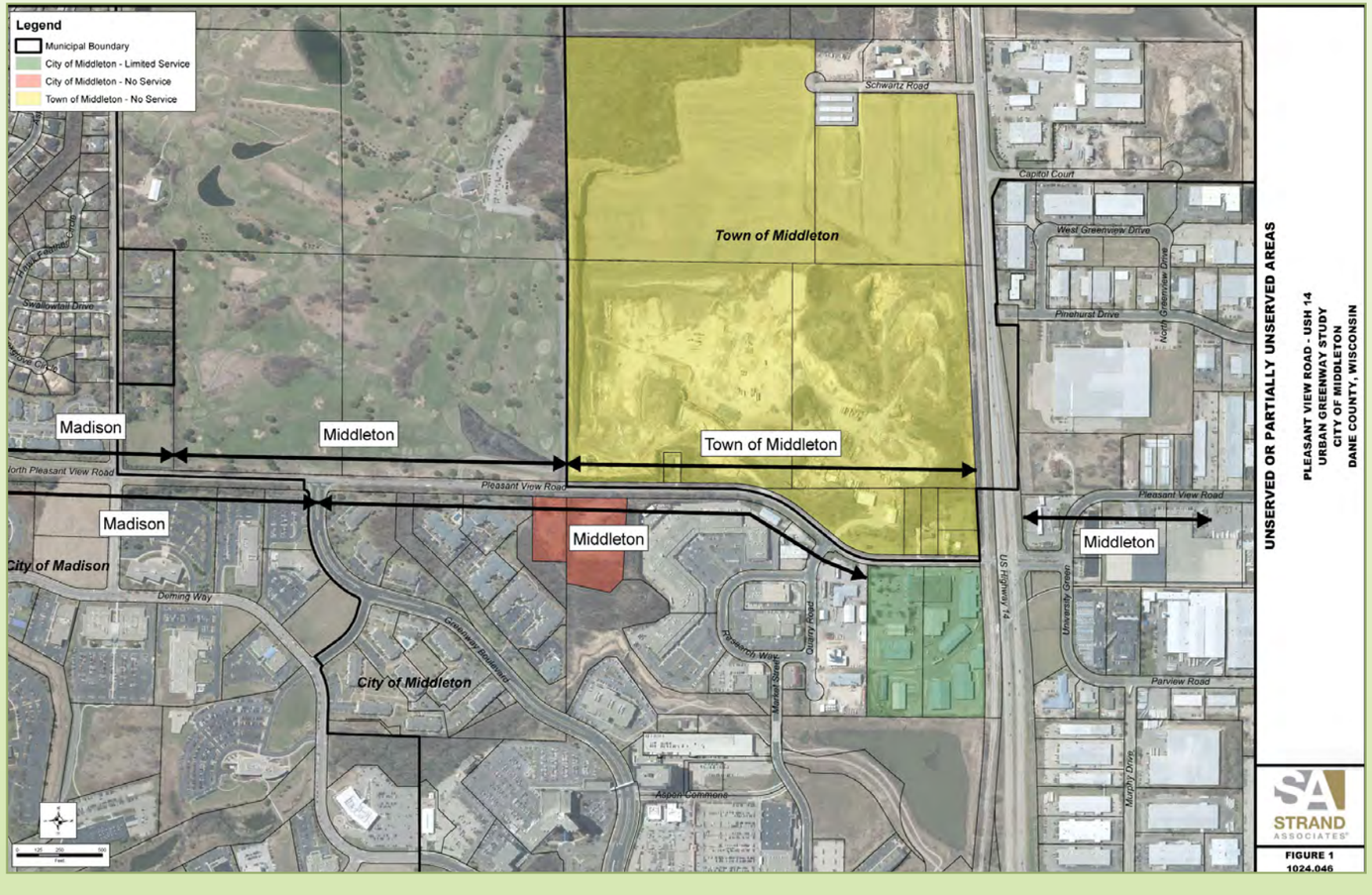
The current expectation is expansion of Pleasant View Road in Middleton from its current rural cross section to four traffic lanes with bike lanes, curb and gutter, and sidewalk urban section. The project may include a median along much of its length, and potentially signals or roundabouts at the intersections of STH 14, Quarry Road, Greenway Boulevard, and Blackhawk Road

Lands on either side of section of Pleasant View Road are provided with municipal water and sewer service by either City of Middleton or City of Madison as shown in Figure 1. One area fronting Pleasant View Road within the City of Middleton is currently not served with municipal services. A second area is provided limited City of Middleton water through a private main, but it does not have City of Middleton sewer service. The third area is in the Town of Middleton and has neither sewer nor water service. It is possible that the lands west of Pleasant View Road that are currently in the Town could be annexed into the City of Middleton at an undetermined time in the future and are not currently served by municipal services. These three areas are highlighted in Figure 1.

The Pleasant View Golf Course has Middleton water and sewer service at its clubhouse. It is assumed that additional development requiring water and sewer will not occur within the footprint of the golf course.

More detailed discussion of sanitary sewer and water system impacts follows.

Figure 1. Unserved Areas



Sanitary Sewer

There are no Middleton sanitary sewers along South Pleasant View Road. However, Middleton has two sanitary manholes in Pleasant View Road. One is at the intersection of Quarry Road. Its reported invert elevation is 939.95 feet mean sea level (ft. msl). This manhole drains east through a 10-inch main. The second is at the intersection of Greenway Boulevard. Its reported invert elevation is 1002.30 ft. msl. It drains east through a 10-inch main. The location of these manholes is shown on Figure 2.

Figure 2. Existing MHs



A. South of Pleasant View Golf Course

There are no parcels without sanitary sewer service generally south of the north line of the Pleasant View Golf Course. As a result there is no need to extend sanitary sewer in Pleasant View Road south of this line.

B. North of Pleasant View Golf Course

It will be difficult to install sewer north of Quarry Road in Pleasant View Road because of lack of depth, with the projected invert of the northernmost future manhole at or just below existing grade. See Figure 3. Regardless of the final alignment of Pleasant View Road, it will not be possible to provide gravity sanitary sewer from Pleasant View Road into the area immediately east of Pleasant View Road and south of STH 14. However, first floor gravity sanitary sewer service in this area can be provided by extension of the existing sewer at the intersection of Quarry Road and the eastern loop of Research Way north within new easements into this area. A gravity sewer will need to be extended south of Quarry Road along Pleasant View Road to provide service to the property on the east side of Pleasant View Road at the crest of the hill adjacent to the golf course.

If the areas currently in the Town of Middleton are annexed into the City and sanitary sewer is extended into this area, gravity sewers will likely only be able to be extended to the western boundary of the quarry property. Due to the geography in this area, any areas west of the existing quarry will likely require the construction of a sanitary sewer pumping station.

Water Supply

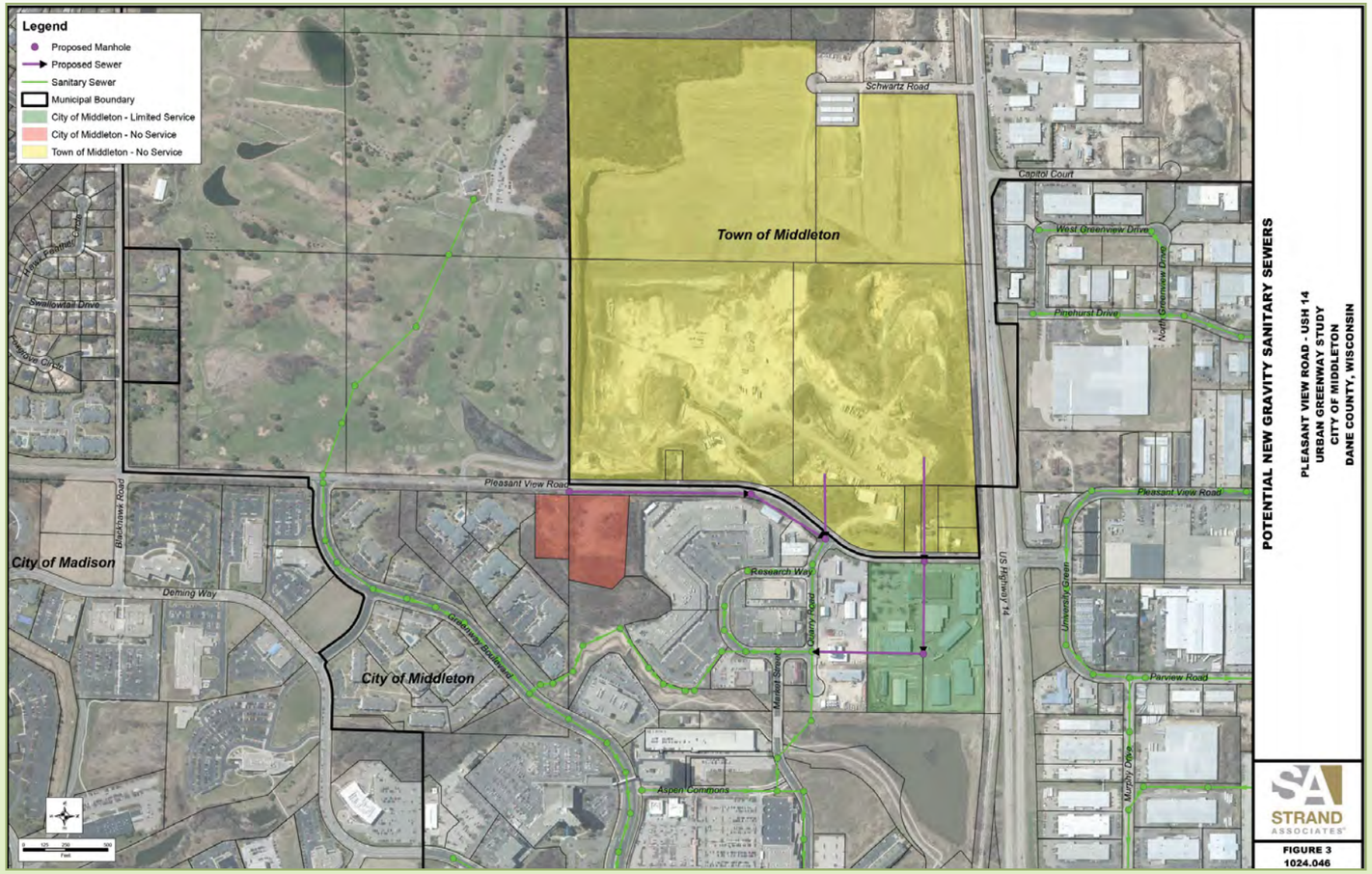
Existing water main in this area is shown in Figure 4. The main in this area serves two pressure zones, the normal service zone, and the West Middleton High Zone. The approximate boundary between the two pressure zones is determined by the main service zone's ability to provide 40 psi minimum pressure. Using this criteria, Middleton's normal service zone can provide water service up to about elevation 980 ft. msl. The approximate location, based on existing topography, of the pressure zone boundary is shown in Figure 5.

Ground areas above this elevation in southwestern Middleton are served by the West Middleton High Zone. Boosted water service is provided by the Greenway Boulevard Booster Station. This facility provides water service to about elevation 1080 ft. msl.

Providing Middleton water service along Pleasant View Road in this area is complicated by a number of factors.

1. The service zone of the lands within the quarry may change, depending on the final depth reached before mining ends and on the final disposition of large spoil piles and unmined overburden.
2. The West Middleton High Zone will almost extend from the golf course to STH 14 on the west side of Pleasant View Road. Farther west, higher elevations retreat south away from STH 14, resulting in ground elevations that would be served by the normal service zone, if these lands are developed. Providing normal service zone pressure along this portion of STH 14 and lands in the normal service pressure zone farther west along the south side of STH 14 is constricted by this section of higher ground and the resulting intervening West Middleton High Service Zone.
3. There is no short-term or long-term way to provide a second supply loop in or to the West Middleton High Zone. This reduces the reliability of supply in this area. There is a generator at the Greenway Boulevard Booster Station, which provides a high level of redundancy at the facility. However, there is only a single supply main into and out of this pumping station.

Figure 3. Potential New Sewer



Past water system studies have recommended a 12-inch reinforcing main between Parview Road and Pinehurst Drive. This should be taken into account during reconstruction of Pleasant View Road.

However, the location, size, and connectivity of this reinforcement should be refined as planning in this area matures. This main is considered further.

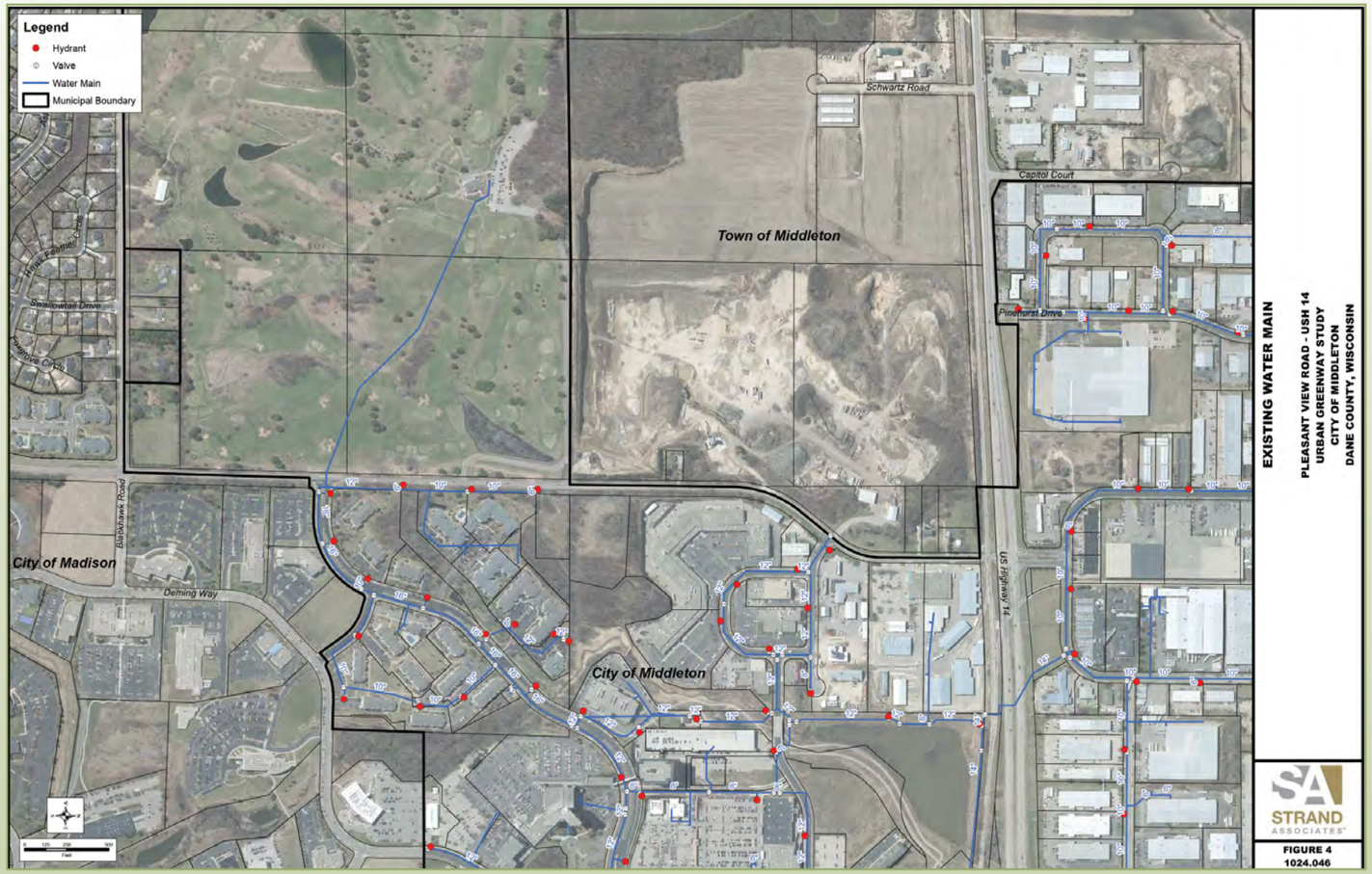
Implementing the land use plan and associated improvements put forth in this plan will continue to grow Middleton's tax base, employment base, and overall economic success. Establishing Middleton as a Greenway City formalizes the community's long-standing environmental ethic. This study will guide these sustainable strategies in the years to come.

A. Water Service in Areas without Public Mains

Three areas do not have public water mains as indicated in Figure 1.

The first area lies east of Pleasant View Road, approximately on the north line of the golf course. Ground elevations in this area range between 1060 ft. msl and 1000 ft. msl. This is within the service range of the West Middleton High Zone. Capacity to serve this area was included in the original design of the Greenway Booster Station and the finances of the local assessment district. This area can be served from a proposed 12-inch main extension on Pheasant Branch Road.

Figure 4. Existing Water Main



Ground elevations in the second area unserved by public mains (although there is a private main serving this area) in the southeastern quadrant of Pleasant View Road and STH 14 are between 940 ft. msl and 950 ft. msl. This area can be served by the normal service zone.

If Pleasant View Road is rebuilt on its current alignment, a 12-inch normal service zone main can be extended north from the existing 12-inch main at Quarry Road and Pleasant View Road to connect to the existing 10-inch main on University Green. Figure 5 shows this alternative. It also shows the option of moving the 12-inch reinforcement south of STH 14 to serve potential normal service zone development directly adjacent to and south of STH 14. This main would be available to serve additional normal service zone development farther west of Pleasant View Road and south of STH 14, if it occurs. The reinforcement would be completed by installing main north to connect to Pinehurst Drive.

The third area is in the Town of Middleton and lies in the southwest quadrant of Pleasant View Road and STH 14. These lands are as low as 920 ft. msl, which as previously discussed, places them in the normal service zone. Maximum elevation is about 1100 ft. msl, which requires service from the West Middleton High Zone.

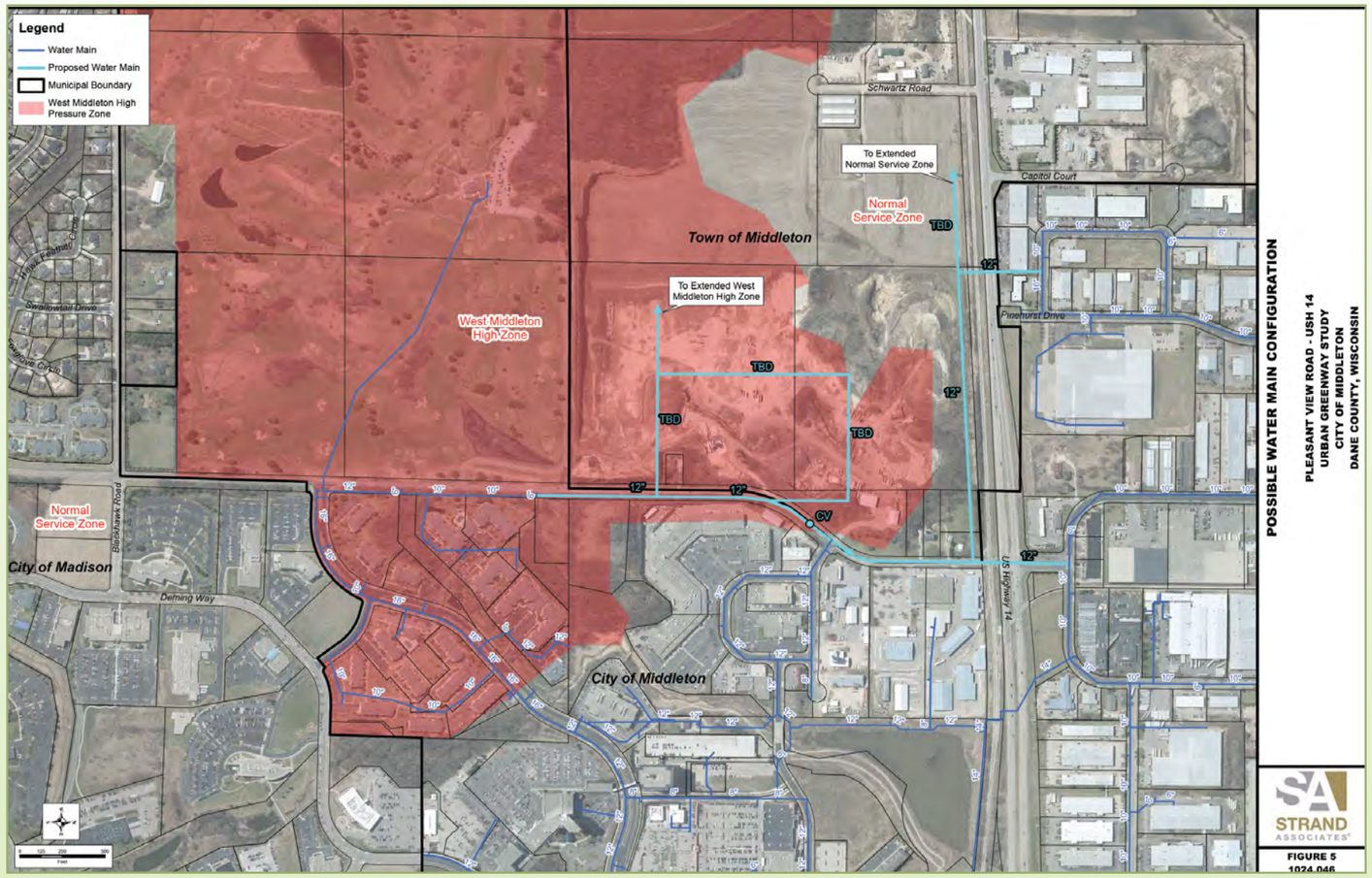
Figure 5 assumes the quarry will be in the Middleton West High Zone with water service being provided from the Greenway Boulevard Booster Station by an extension of the existing 12-inch main north on Pleasant View Road.

The original design of the Greenway Boulevard Booster Station did not include capacity to serve lands west of Pleasant View Road. As planning for this area progresses, the ability of this facility to meet the additional water demands should be evaluated.

B. Middleton West High Zone Redundancy

As a partial solution to the supply redundancy issue presented earlier, a check valve can be installed in a manhole along the pressure zone boundary. Potential locations for this valve are labeled "CV' in Figure 5. This installation would be similar to others in Middleton. Normally closed, it would open in case of a significant pressure reduction within the West Middleton High zone. The resulting flows and pressures would be significantly lower than provided by the pumping station but would provide some pressure to most parts of the high zone in an emergency.

Figure 5. Main Configuration



The water demand in the West Middleton High Zone may increase significantly if the areas west of Pleasant View Road and south of STH 14 develop. If this occurs, it may also be prudent to consider a second pumping station.

The sizes and connections of future mains are tentative. We recommend that the options presented here be verified during computer modeling as planning for this area is refined.

APPENDIX C: TRAFFIC OPERATIONS ASSESSMENT

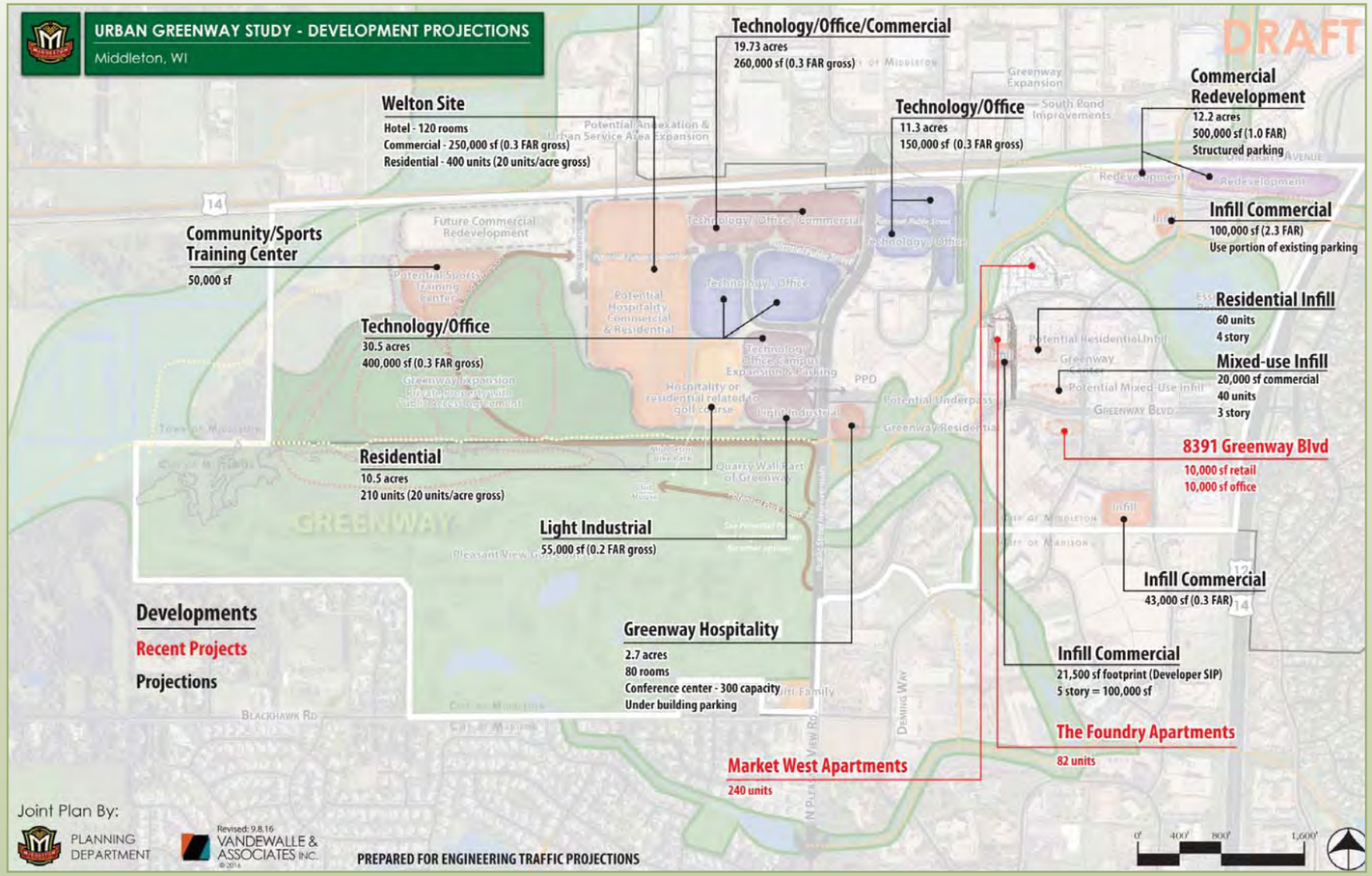
General Roadway Conditions

The study team assessed general traffic conditions on streets serving the Urban Greenway Study area using the Madison Area Transportation Planning Board's Dane County Travel Demand Model (TDM) as well as through detailed trip generation for recent and anticipated future development.

Along Pleasantview Road (PVR), current traffic volumes are approximately 8,000 to 9,000 vehicles per day near US 14. Based on the future TDM and trip generation performed by the study team, this volume is expected to grow to approximately 14,000 to 17,000 vpd by 2025 after development in the area is essentially complete. This is comfortably in the volume range requiring a four-lane PVR corridor, as is currently planned. These volumes are approaching the existing traffic levels on County V/ Grand Avenue in Sun Prairie near the big box retail sites north of US 151. County V/Grand Avenue is a four lane divided road with slotted left-turn lanes and signal or roundabout controlled intersections.

Along Quarry Road, current traffic volumes are approximately 2,000 to 3,000 vpd near PVR. This is expected to grow to approximately 6,000 to 7,000 vpd west of PVR and 9,000 to 11,000 vpd east of PVR by 2025. East of PVR additional intersections may warrant improved traffic control (traffic signal or roundabout) sometime in the future, but the current two-lane street section should be adequate between the intersections.

Figure 6. Urban Greenway Study - Development Projects



Along Greenway Boulevard, current traffic volumes are approximately 5,000 to 6,000 vpd near PVR. This is expected to grow by 2025, however, the existing four-lane street section should have sufficient capacity to accommodate the future traffic. The intersections farther west at Deming Way, John Q. Hammons Drive, and/or the Beltline interchange may need added capacity to accommodate future development and traffic growth.

As opportunities arise to make transportation improvements in the area, the City should continue its policy of providing pedestrian and bicycle facilities that offer an alternative to travel by motor vehicle. The upcoming reconstruction and capacity expansion of PVR will offer an opportunity to improve north-south mobility for alternate modes in the study area.

Detailed Intersection Operations

The study team assessed traffic operations along the Pleasantview Road Corridor and specifically at the US 14 and PVR intersection as well as the Quarry Road and PVR intersection. Traffic counts from April of 2012 were used at the US 14 and PVR intersection, while counts from September of 2016 were used at the Quarry Road and PVR intersection. The team generated trips for recent and anticipated development using the Institute of Transportation Engineer's (ITE) Trip General Manual: 9th Edition -Volumes 1,2,3. Assumptions for the trip generation codes were made based on the Exhibit X 'Urban Greenway Study -Development Projections' map. The analysis considers development of the following: two hotels, eight commercial centers, six apartment complexes, one recreational community center, four general office buildings, two research and development centers, and one general light industrial building. A linked trip reduction of 20% was assumed to account for travel between multiple destinations. New Development Trips totaled nearly 55,000 daily trips with about 1,520 trips in the AM-peak hour and 2,240 trips in the PM-peak hour.

The study team distributed the new trips to the street network and also assumed background traffic growth of one percent per year over a 10-year study period. The new trips were assigned to the network assuming 25 percent would travel through the two study intersections mentioned above. The numbers calculated from the trip distribution were entered into Synchro traffic modeling software and three conditions were evaluated: 2015 volumes with the existing streets and intersections, 2025 conditions with the new development trips and with the existing streets and intersections, and 2025 conditions with modified streets and intersections.

2015 Volumes with Existing Layout: This condition is provided as a baseline for evaluating the 2025 scenarios. Signal timings were allowed to be adjusted but no other motor vehicle capacity changes were made. The layout maintains PVR as a two-lane road and the Quarry Road intersection as two-way stop controlled. At the intersection of US 14 and PVR, the AM peak and PM peak both achieved an overall intersection Level of Service (LOS) of D or better. Some individual motor vehicle movements are near or slightly over capacity in the AM peak. At the intersection of Quarry Road and PVR, the AM peak-hour operations are LOS C or better for all movements, but the westbound (WB) movements during the PM peak operate at LOS F with delays over 50 seconds on average and the volume approaching the capacity of the stop controlled approach.

2025 Volumes with Existing Layout: This scenario reveals how the existing layout would function in the year 2025 with the projected growth of one percent per year and the new trips forecasted from recent and anticipated future development. Signal timings were allowed to be adjusted, but no other changes were made. The layout maintains PVR as a two-lane road and the Quarry Road intersection as two-way stop controlled. At the intersection of US 14 and PVR, several individual movements operate at LOS F in the AM peak and PM peak. The intersection operates at LOS F overall in both peaks as well, with a weighted average delay of over 100 seconds for vehicles traveling through the intersection. At the intersection of Quarry Road and PVR, the AM peak-hour operates with low delays, but the PM peak-hour operations are poor for both the eastbound (EB) and WB approaches and both are over capacity.

2025 Volumes with Future Layout: This scenario evaluated the future layout of PVR and the study intersections. Modeling confirms that PVR should be expanded to a four-lane roadway. In addition, enhancements would be needed at both Quarry Road and US 14 intersections with PVR. The Quarry Road intersection would need to be upgraded from the current two-way stop controlled intersection to a traffic signal or roundabout. When the intersection is expanded at least one shared through/right turn lane and one left-turn bay should be provided on Quarry Road EB and WB, and the need for dedicated right-turn bays should also be considered. The PVR approaches should include at least two through lanes and one left-turn bay northbound (NB) and southbound (SB). With these modifications, the intersection will operate at LOS C or better during the AM peak-hour, and LOS D or better during the PM peak-hour, with no movements at LOS F. At US 14 and PVR, additional capacity including possible dual left turn lanes NB and/or WB may also be needed, in addition to the two through lanes NB and SB.

There is the possibility of a future access point being added between the intersection of US 14 and PVR and the intersection of Quarry Road and PVR. A full access sidestreet stop controlled intersection would likely operate poorly and could someday result in crash concerns. Also, the intersection spacing is not adequate to provide another controlled intersection (signal or roundabout) on PVR between the controlled intersections at US 14 and Quarry Road. If a future access point is added, the study team recommends it only provide for right-in, right-out and possibly left-in motor vehicles movements only.

Although traffic is projected to increase due to population growth as well as added trips from new developments, traffic projections for the future conditions show that with some intersection and roadway modifications the Urban Greenway Area will be able to operate with acceptable levels of service at the two study intersections.

Figure 7. Trip Generation

Side of PVR	Site Description		Specified	ITE Land Use			Weekday Average Rate	AM - Peak Hour Distribution			PM - Peak Hour Distribution			Daily	AM - Peak Hour Trips			PM - Peak Hour Trips		
	Description	# Assigned	Land Use	Code	Given Units	Unit	'Daily Rate'	Hour Rate	% In	% Out	Hour Rate	% In	% Out	Trips	AM - In	AM - Out	Trips	PM - In	PM - Out	Trips
West	Welton Site	1	Hotel	310	120	Rooms	8.17	0.53	59%	41%	0.6	51%	49%	981	38	26	64	37	35	72
West	Welton Site	2	Shopping Center	820	250	1000 GSF	42.70	0.96	62%	38%	3.71	48%	52%	10675	149	91	240	445	483	928
West	Welton Site	3	Apartment	220	400	Dwelling Units	6.65	0.51	20%	80%	0.62	65%	35%	2660	41	163	204	161	87	248
West	Community/ Sports Training Center	4	Recreational Community Center	495	50	1000 GSF	33.82	2.05	66%	34%	2.74	49%	51%	1691	68	35	103	67	70	137
West	Technology/ Office	5	General Office	710	200	1000 GSF	11.03	1.56	88%	12%	1.49	17%	83%	2206	275	37	312	51	247	298
West	Technology/ Office	6	Research and Development Center	760	200	1000 GSF	8.11	1.22	83%	17%	1.07	15%	85%	1622	203	41	244	32	182	214
West	Residential	7	Apartment	220	210	Dwelling Units	6.65	0.51	20%	80%	0.62	65%	35%	1397	22	86	108	85	46	131
West	Light Industrial	8	General Light	110	55	1000 GSF	6.97	0.92	88%	12%	0.97	12%	88%	384	45	6	51	6	48	54
East	Greenway Hospitality	9	Hotel	310	80	Rooms	8.17	0.53	59%	41%	0.6	51%	49%	654	25	18	43	24	24	48
East	Market West Apartments	10	Apartment	220	240	Dwelling Units	6.65	0.51	20%	80%	0.62	65%	35%	1596	25	98	123	97	52	149
East	The Foundry Apartments	11	Apartment	220	82	Dwelling Units	6.65	0.51	20%	80%	0.62	65%	35%	546	8	34	42	33	18	51
East	Infill Commerical	12	Shopping Center	820	22	1000 GSF	42.70	0.96	62%	38%	3.71	48%	52%	919	13	8	21	38	42	80
East	Infill Commerical	13	Shopping Center	820	43	1000 GSF	42.70	0.96	62%	38%	3.71	48%	52%	1837	26	16	42	77	83	160
East	8391 Greenway Blvd	14	Genreal Office	710	10	1000 GSF	11.03	1.56	88%	12%	1.49	17%	83%	111	14	2	16	3	12	15
East	8391 Greenway Blvd	15	Shopping Center	820	10	1000 GSF	42.70	0.96	62%	38%	3.71	48%	52%	427	6	4	10	18	20	38
East	Mixed-use Infill	16	Apartment	220	40	Dwelling Units	6.65	0.51	20%	80%	0.62	65%	35%	266	4	17	21	16	9	25
East	Mixed-use Infill	17	Shopping Center	820	20	1000 GSF	42.70	0.96	62%	38%	3.71	48%	52%	854	12	8	20	36	39	75
East	Residential Infill	18	Apartment	220	60	Dwelling Units	6.65	0.51	20%	80%	0.62	65%	35%	399	6	25	31	25	13	38
East	Infill Commerical	19	Shopping Center	820	100	1000 GSF	42.70	0.96	62%	38%	3.71	48%	52%	4270	60	36	96	178	193	371
East	Commerical Redevelopment	20	Shopping Center	820	500	1000 GSF	42.70	0.96	62%	38%	3.71	48%	52%	21350	298	182	480	890	965	1855
East	Technology/ Office	21	Research and Development Center	760	75	1000 GSF	8.11	1.22	83%	17%	1.07	15%	85%	609	76	16	92	12	69	81
East	Technology/ Office	22	General Office	710	75	1000 GSF	11.03	1.56	88%	12%	1.49	17%	83%	828	103	14	117	19	93	112
West	Technology/ Office/ Commercial	23	Research and Development Center	760	87	1000 GSF	8.11	1.22	83%	17%	1.07	15%	85%	703	88	18	106	14	79	93
West	Technology/ Office/ Commercial	24	General Office Building	710	87	1000 GSF	11.03	1.56	88%	12%	1.49	17%	83%	956	120	16	136	22	108	130
West	Technology/ Office/ Commercial	25	Shopping Center	820	87	1000 GSF	42.70	0.96	62%	38%	3.71	48%	52%	3701	52	32	84	155	167	322
														Total Trips:	**61,642**	**1,777**	**1,029**	**2,806**	**2,541**	**3,184**	**5,725**
														*Linked Trip Reduction:	(2,520)	(136)	(107)	(243)	(115)	(149)	(264)
														Total Driveway Trips:	**59,122**	**1,641**	**922**	**2,563**	**2,426**	**3,035**	**5,461**
														**Passby Reduction:	(4,403)	(62)	(38)	(100)	(184)	(199)	(383)
														Total New Development Trips:	**54,719**	**1,579**	**884**	**2,463**	**2,242**	**2,836**	**5,078**

Linked Trip Reduction
20%
Passby Reduction
10%

Notes:

*Linked trips applied as follows:

220 20% of Apartment trips also visit Shopping Center
1373 daily trips

710 20% of General Office trips also visit Shopping Center
820 daily trips

310 20% of Hotel trips also visit Shopping Center
327

Total Daily Linked Trip Reduction is
2520 trips
Same methodology applied to AM and PM peak trips

** Passby trips applied as follows:

820 10% of Shopping Center trips are passby
4403 daily trips

Total Daily Passby Traffic is
4403 trips
Same methodology applied to AM and PM peak trips

Figure 8. Traffic Balancing - AM Peak Hour

AM Peak Hour: Traffic Balancing

Base Traffic (2015)

	15	110	120	
58	US 14 & PVR			188
825	2015 Traffic			320
180				116
	64	195	168	

-19
+/-
96

	1	373	128	
3	Quarry Rd & PVR			24
0	2015 Traffic			0
1				14
	1	419	141	

Base Balanced Traffic (2015)

		12			
	15	122	120		
	58	US 14 & PVR		188	
	825	2015 Traffic		320	
15	195			128	12
	64	200	173		
		5	5		

-4
+/-
0

	0	-45	-12		
	1	328	116		
	3	Quarry Rd & PVR		24	
	0	2015 Traffic		0	
	1			14	
	1	414	141		
		-5			

Figure 9. Traffic Balancing - PM Peak Hour

PM Peak Hour: Traffic Balancing

Base Traffic (2015)

	49	210	202	
22	US 14 & PVR			114
371	2015 Traffic			662
78				163
	156	116	115	

-73
+/-
175

	3	593	30	
4	Quarry Rd & PVR			103
1	2015 Traffic			0
3				130
	1	353	37	

Base Balanced Traffic (2015)

		40			
	49	250	202		
	22	US 14 & PVR		114	
	371	2015 Traffic		662	
15	93			193	30
	176	131	130		
	20	15	15		

2
+/-
0

	0	-85	-5		
	3	508	25		
	4	Quarry Rd & PVR		98	-5
	1	2015 Traffic		0	
	3			130	
	1	333	37		
		-20			

Figure 10. Traffic Distribution - AM Peak Hour

AM Peak Hour: Trip Gen

Base Balanced Traffic (2015)

	15	122	120	
58	US 14 & PVR			188
825	2015 Existing Traffic			320
195				128
	64	200	173	

	1	328	116	
3	Quarry Rd & PVR			24
0	2015 Existing Traffic			0
1				14
	1	414	141	

2025 Base Traffic (assuming 1%/yr over 10 years)

	17	134	132	
64	US 14 & PVR			207
908	2025 Projected Traffic			352
215				141
	70	220	190	

	1	361	128	
3	Quarry Rd & PVR			26
0	2025 Projected Traffic			0
1				15
	1	455	155	

New Development Traffic

	-	56	-	
-	US 14 & PVR			-
-	Development Traffic			-
90				59
	18	58	50	

	-	-	204	
-	Quarry Rd & PVR			126
-	Development Traffic			-
-				95
	-	-	190	

Adjust to consider development split East/West of PVR

	-	-	-	
-	US 14 & PVR			-
-	Passby Traffic Adjustment			-
-				-
	-	-	-	

Percent of planned development west of PVR	44%
Percent of planned development east of PVR	56%

	89	-	115	
55	Quarry Rd & PVR			71
25	Passby Traffic Adjustment			25
41				53
	83	-	107	

2015 Total Traffic (Base + New Trips + Passby Adjustments)

	15	178	120	
58	US 14 & PVR			188
825	Total 2015 Traffic			320
285				187
	82	258	223	

	90	328	231	
58	Quarry Rd & PVR			95
25	Total 2015 Traffic			25
42				67
	84	414	248	

2025 Total Traffic With Development (= 2015 Total Traffic (Base+New+Passby)*1%/yr increase for 10 years))

	17	196	132	
64	US 14 & PVR			207
908	Total 2025 Traffic			352
314				206
	90	284	245	

	99	361	254	
64	Quarry Rd & PVR			105
28	Total 2025 Traffic			28
46				74
	92	455	273	

Figure 11. Traffic Distribution - PM Peak Hour

PM Peak Hour: Trip Gen

Base Balanced Traffic (2015)

	49	250	202	
22	US 14 & PVR			114
371	2015 Existing Traffic			662
93				193
	176	131	130	

	3	508	25	
4	Quarry Rd & PVR			98
1	2015 Existing Traffic			0
3				130
	1	333	37	

2025 Base Traffic (assuming 1%/yr over 10 years)

	54	275	222	
24	US 14 & PVR			125
408	2025 Projected Traffic			728
102				212
	194	144	143	

	3	559	28	
4	Quarry Rd & PVR			108
1	2025 Projected Traffic			0
3				143
	1	366	41	

New Development Traffic

	-	161	-	
-	US 14 & PVR			-
-	Development Traffic			-
60				124
	132	98	98	

	0	0	346	
0	Quarry Rd & PVR			328
0	Development Traffic			0
-				381
	-	0	215	

Adjust to consider development split East/West of PVR

	-	-	-	
-	US 14 & PVR			-
-	Passby Traffic Adjustment			-
-				-
	-	-	-	

Percent of planned development west of PVR	44%
Percent of planned development east of PVR	56%

	151	-	194	
143	Quarry Rd & PVR			184
75	Passby Traffic Adjustment			100
167				214
	94	-	121	

2015 Total Traffic (Base + New Trips + Passby Adjustments)

	49	411	202	
22	US 14 & PVR			114
371	Total 2015 Traffic			662
153				317
	308	229	228	

	154	508	219	
147	Quarry Rd & PVR			282
76	Total 2015 Traffic			100
170				344
	95	333	158	

2025 Total Traffic With Development (= 2015 Total Traffic (Base+New+Passby)*1%/yr increase for 10 years))

	54	452	222	
24	US 14 & PVR			125
408	Total 2025 Traffic			728
168				349
	339	252	250	

	170	559	241	
162	Quarry Rd & PVR			311
84	Total 2025 Traffic			110
187				379
	104	366	174	

Figure 12. Operations Results from Synchro 9 using Base and Future Volumes : AM Peak Hour

AM PEAK HOUR

US 14 (University Ave)/ PVR

2016 - No Build

Scenario:	Existing Geometry - No Build						
Approach	Movement	Volume	Delay	LOS	V/C	95th Queue (ft)	Intersection Delay
Northbound	NBL	64	21.4	C	0.14	60	54.7
	NBT	200	0.0	A	0.00	0	
	NBR	173	84.9	F	1.05	680	
Eastbound	EBL	58	17.3	B	0.19	45	
	EBT	825	88.5	F	1.10	740	Intersection LOS
	EBR	195	27.4	C	0.58	200	D
Southbound	SBL	120	21.9	C	0.58	100	
	SBT	122	0.0	A	0.00	0	
	SBR	15	14.4	B	0.22	100	
Westbound	WBL	128	23.9	C	0.63	110	Max Movement V/C
	WBT	320	22.1	C	0.38	145	1.10
	WBR	188	24.4	C	0.50	180	

2025 - No Build

Scenario:	Existing Geometry - No Build						
Approach	Movement	Volume	Delay	LOS	V/C	95th Queue (ft)	Intersection Delay
Northbound	NBL	90	24.6	C	0.23	50	106.6
	NBT	284	0.0	A	0.00	0	
	NBR	245	263.0	F	1.49	890	
Eastbound	EBL	64	17.7	B	0.22	30	
	EBT	908	136.0	F	1.22	555	Intersection LOS
	EBR	314	58.4	E	0.94	270	F
Southbound	SBL	132	23.2	C	0.61	65	
	SBT	196	0.0	A	0.00	0	
	SBR	17	15.1	B	0.33	90	
Westbound	WBL	206	84.9	F	1.01	190	Max Movement V/C
	WBT	352	23.0	C	0.43	90	1.49
	WBR	207	26.2	C	0.57	115	

2025 - Build

Scenario:	Build - PVR expanded to 4-lanes, add dual-lefts to PVR NB, etc.						
Approach	Movement	Volume	Delay	LOS	V/C	95th Queue (ft)	Intersection Delay
Northbound	NBL	90	55.8	E	0.69	40	34.3
	NBT	284	32.8	C	0.52	195	
	NBR	245	33.0	C	0.53	175	
Eastbound	EBL	64	17.1	B	0.19	30	
	EBT	908	39.2	D	0.90	360	Intersection LOS
	EBR	314	32.8	C	0.70	225	C
Southbound	SBL	132	44.6	D	0.69	110	
	SBT	196	26.1	C	0.26	60	
	SBR	17	26.1	C	0.26	65	
Westbound	WBL	206	52.3	D	0.79	90	Max Movement V/C
	WBT	352	20.4	C	0.31	95	0.90
	WBR	207	22.7	C	0.41	120	

Quarry Rd/ PVR

2016 - No Build

Scenario:	Existing Geometry - No Build						
Approach	Movement	Volume	Delay	LOS	V/C	95th Queue (ft)	Intersection Delay
Northbound	NBL	1	8.0	A	0.00	0	>300
	NBT	414	0.0	A	*	*	
	NBR	141	>300	F	*	*	
Eastbound	EBL	3					
	EBT	0	27.9	D	0.03	5	Intersection LOS
	EBR	1				*	F
Southbound	SBL	116	9.5	A	0.14	15	
	SBT	328	0.0	A	*	*	
	SBR	1	>300	F	*	*	
Westbound	WBL	14				*	Max Movement V/C
	WBT	0	21.5	C	0.17	15	*
	WBR	24				*	

* Results in an error due to being severely over capacity.

2025 - No Build

Scenario:	Existing Geometry - No Build						
Approach	Movement	Volume	Delay	LOS	V/C	95th Queue (ft)	Intersection Delay
Northbound	NBL	92	8.8	A	0.10	10	>300
	NBT	455	0.0	A	*	*	
	NBR	273	>300	F	*	*	
Eastbound	EBL	64				*	
	EBT	28	>300	F	*	*	Intersection LOS
	EBR	46				*	F
Southbound	SBL	254	12.2	B	0.37	45	
	SBT	361	0.0	A	*	*	
	SBR	99	>300	F	*	*	
Westbound	WBL	74				*	Max Movement V/C
	WBT	28	>300	F	*	*	*
	WBR	105				*	

* Results in an error due to being severely over capacity.

2025 - Build

Scenario:	Build - PVR expanded to 4-lanes, add NB/SB Left to PVR						
Approach	Movement	Volume	Delay	LOS	V/C	95th Queue (ft)	Intersection Delay
Northbound	NBL	92	4.9	A	0.15	25	10.6
	NBT	455	6.0	A	0.34	110	
	NBR	273	6.0	A	0.34	100	
Eastbound	EBL	64	34.4	C	0.37	40	
	EBT	28	0.0	A	0.00	0	Intersection LOS
	EBR	46	38.1	D	0.42	50	B
Southbound	SBL	254	5.1	A	0.58	70	
	SBT	361	0.3	A	0.21	5	
	SBR	99	0.3	A	0.21	5	
Westbound	WBL	74	33.9	C	0.33	50	Max Movement V/C
	WBT	28	0.0	A	0.00	0	0.77
	WBR	105	45.8	D	0.77	100	

*Note: *Base Volumes use balanced traffic counts from 2012/2016, **Future volumes for 2025 and use 1%/yr increase from balanced Base Volumes and include new development and passby traffic*

Figure 13. Operations Results from Synchro 9 using Base and Future Volumes : PM Peak Hour

PM PEAK HOUR

US 14 (University Ave)/ PVR

2016 - No Build

Scenario:	Existing Geometry - No Build						
Approach	Movement	Volume	Delay	LOS	V/C	95th Queue (ft)	Intersection Delay
Northbound	NBL	176	29.4	C	0.52	100	25.8
	NBT	131	0.0	A	0.00	0	
	NBR	130	29.7	C	0.72	155	
Eastbound	EBL	22	19.3	B	0.13	10	
	EBT	371	26.3	C	0.57	100	Intersection LOS
	EBR	93	24.5	C	0.32	50	C
Southbound	SBL	202	22.5	C	0.65	35	
	SBT	250	0.0	A	0.00	0	
	SBR	49	14.7	B	0.45	125	
Westbound	WBL	193	25.9	C	0.66	95	Max Movement V/C
	WBT	662	30.2	C	0.81	200	0.81
	WBR	114	21.7	C	0.31	55	

2025 - No Build

Scenario:	Existing Geometry - No Build						
Approach	Movement	Volume	Delay	LOS	V/C	95th Queue (ft)	Intersection Delay
Northbound	NBL	339	>300	F	1.77	680	110.8
	NBT	252	0.0	A	0.00	0	
	NBR	250	215.9	F	1.39	770	
Eastbound	EBL	24	19.7	B	0.15	10	
	EBT	408	26.9	C	0.61	115	Intersection LOS
	EBR	168	27.9	C	0.57	95	F
Southbound	SBL	222	64.9	E	0.96	125	
	SBT	452	0.0	A	0.00	0	
	SBR	54	21.3	C	0.76	270	
Westbound	WBL	349	170.0	F	1.27	410	Max Movement V/C
	WBT	728	35.2	D	0.88	240	1.77
	WBR	125	22.0	C	0.34	65	

2025 - Build

Scenario:	Build - PVR expanded to 4-lanes, add dual-lefts to PVR NB, etc.						
Approach	Movement	Volume	Delay	LOS	V/C	95th Queue (ft)	Intersection Delay
Northbound	NBL	339	65.4	E	0.89	165	41.7
	NBT	252	43.6	D	0.71	205	
	NBR	250	46.6	D	0.79	210	
Eastbound	EBL	24	24.1	C	0.12	15	
	EBT	408	31.3	C	0.49	145	Intersection LOS
	EBR	168	32.5	C	0.45	125	D
Southbound	SBL	222	69.4	E	0.94	140	
	SBT	452	38.8	D	0.76	195	
	SBR	54	39.0	D	0.77	200	
Westbound	WBL	349	57.1	E	0.87	165	Max Movement V/C
	WBT	728	26.5	C	0.62	250	0.94
	WBR	125	21.3	C	0.24	75	

Quarry Rd/ PVR

2016 - No Build

Scenario:	Existing Geometry - No Build						
Approach	Movement	Volume	Delay	LOS	V/C	95th Queue (ft)	Intersection Delay
Northbound	NBL	1	8.6	A	0.00		>300
	NBT	333	0.0	A	*		
	NBR	37	*	F	*		
Eastbound	EBL	4		A			
	EBT	1	21.7	C	0.04		Intersection LOS
	EBR	3		A			F
Southbound	SBL	25	8.2	A	0.02		
	SBT	508	0.0	A	*		
	SBR	3	*	F	*		
Westbound	WBL	130		A			Max Movement V/C
	WBT	0	67.6	F	0.89		*
	WBR	98		A			

* Results in an error due to being severely over capacity.

2025 - No Build

Scenario:	Existing Geometry - No Build						
Approach	Movement	Volume	Delay	LOS	V/C	95th Queue (ft)	Intersection Delay
Northbound	NBL	104	10.2	B	0.14	15	>300
	NBT	366	0.0	A	*		
	NBR	174	>300	F	*		
Eastbound	EBL	162					
	EBT	84	>300	F	*		Intersection LOS
	EBR	187					F
Southbound	SBL	241	10.1	B	0.28	30	
	SBT	559	0.0	A	*		
	SBR	170	>300	F	*		
Westbound	WBL	379					Max Movement V/C
	WBT	110	>300	F	*		*
	WBR	311					

* Results in an error due to being severely over capacity.

2025 - Build

Scenario:	Build - PVR expanded to 4-lanes, add NB/SB Left to PVR						
Approach	Movement	Volume	Delay	LOS	V/C	95th Queue (ft)	Intersection Delay
Northbound	NBL	104	38.8	D	0.47	85	36.4
	NBT	366	17.7	B	0.37	140	
	NBR	174	17.8	B	0.37	140	
Eastbound	EBL	162	36.2	D	0.69	110	
	EBT	84	34.8	C	0.26	60	Intersection LOS
	EBR	187	44.3	D	0.69	150	D
Southbound	SBL	241	50.0	D	0.73	195	
	SBT	559	31.5	C	0.48	270	
	SBR	170	31.5	C	0.49	260	
Westbound	WBL	379	26.0	C	0.71	240	Max Movement V/C
	WBT	110	0.0	A	0.00	0	0.97
	WBR	311	66.5	E	0.97	430	

*Note: *Base Volumes use balanced traffic counts from 2012/2016, **Future volumes for 2025 and use 1%/yr increase from balanced Base Volumes and include new development and passby traffic*

APPENDIX D: GOLF COURSE/BIKE PARK AREA POTENTIAL ROAD ALIGNMENTS

During the planning process three roadway options were explored to provide access to the Pleasant View Golf Course, Middleton Bike Park and a connection to the proposed parkway which would provide secondary access to the potential sports training facility. As described on page 40, the Pleasant View Golf Course Advisory Committee preferred the roadway alignment which maintains its current location. Option One is the recommended road alignment in this Urban Greenway study. Options two and three are provided below for record of the planning process. The Pleasant View Golf Course Advisory Committee may choose to further explore these options in the future as part of the Pleasant View Road expansion project. As previously recommended in this document, the Committee may chose to hire a golf course architect during that road construction project.

- **Roadway Option Two:** This option maintains the current park road alignment, but relocates the entrance to the intersection of Greenway Boulevard and Pleasant View Road. This entrance point would greatly improve visitor wayfinding as Greenway Boulevard directly connects to the Beltline (Hwy 12/14) at an interchange. The existing access point at the northeast side of the golf course would be closed and the parkway would connect into the existing park road near the bike park.
- **Roadway Option Three:** This option may be considered if the Pleasant View Road reconstruction project impacts Hole 2 of the Lake Course, requiring golf hole reconfiguration. The concept adds a second park road extending directly from Greenway Boulevard, focusing the arrival experience toward the clubhouse and golf activities. The existing park road would become the parkway, accessible from the new golf course park road. This option provides separation of golf and parkway traffic, improving circulation patterns though impacts the existing course configuration.





RESOLUTION #2018-32: CITY OF MIDDLETON RESOLUTION TO ADDRESS GLOBAL WARMING THROUGH CLEAN ENERGY

WHEREAS, the City of Middleton ballot referendum results on climate change in November 2016 showed a strong 81 percent mandate from our residents in support of mitigating climate change; and

WHEREAS, the mayor is a 2017 signatory to the Mayors' Pledge to support the Paris Climate Agreement; and

WHEREAS, the City has been committed to gradually reducing its carbon footprint since resolving to become an Energy Independent Community in 2008; and

WHEREAS, the City intervened in MGE's 2014 rate case at the PSC to support electric rates that encourage energy efficiency and renewable energy that are fair to all users; and

WHEREAS, the City has installed solar energy projects at City-owned buildings and cooperated with Madison Gas & Electric (MGE) to install a large community-solar array to provide clean electricity to its residents and businesses on the Middleton Operations Center roof; and

WHEREAS, low-income residents are often most burdened by energy rates and climate impacts, and the City is committed to ensuring all residents enjoy the benefits of energy efficiency and renewables, electrified transportation, fair utility rates, and employment opportunities; and

WHEREAS, youth and future generations will be more severely impacted by climate change, and it is the duty of current leaders to act promptly and resolutely to mitigate climate change for their benefit; and

WHEREAS, use of distributed solar and other renewable energy sources, paired with energy storage, and/or backed up by renewable co-generation, is an important strategy to build disaster resilience in the City; and

WHEREAS, in 2016, 88 percent of electricity delivered to Middleton consumers by Madison Gas & Electric was generated from fossil fuels - 68% coal and 22% natural gas (vs. the national average of 30% coal and 35% NG); and

WHEREAS, the City's energy use could be served by existing renewable energy technologies at reasonable cost, and the economic opportunities from a clean energy transition greatly exceed any economic opportunities from fossil fuels; and

WHEREAS, community-based environmental infrastructure development can benefit the entire City, and provide jobs, add to economic activity, and provide equity benefits; and

WHEREAS, given the accelerating rate of climate change, energy consumers, the City, and the utility serving the City must take strong action imminently to reduce carbon emissions, and shift to 100 percent renewable electricity by 2035 within practical and economic reach; and

WHEREAS, achieving these energy goals will require concerted action from individuals and the community, in urban and rural areas, from local and state governments, and from businesses and utilities; and

WHEREAS, climate scientists agree that local climate change impacts will continue to include increasingly severe and more frequents droughts, worsening heat waves, excessive flooding, dieback of native tree species, reduced winter sports opportunities, increased prevalence of algal blooms on area lakes and ponds; and loss of suitable trout stream habitat in Wisconsin; and

WHEREAS, virtually the entire world united in December 2015 with the Paris Climate Agreement to agree to attempt to limit global temperature rise to 1.5 degrees C; yet, federal and Wisconsin state government have since withdrawn from the Paris Climate Agreement and deny the urgency of climate change.

NOW, THEREFORE, BE IT RESOLVED, that given energy efficiency is the City's first and most economical choice for meeting energy needs and reducing our carbon footprint, the City will prioritize energy efficiency and conservation projects, programs and outreach; and

BE IT FURTHER RESOLVED, that the City will increase green infrastructure such as urban tree canopy, green streets, green roofs, electric vehicle charging stations, and bike and pedestrian paths as an effective strategy to reduce energy consumption and increase public health and well-being along with other climate resiliency strategies;

BE IT FURTHER RESOLVED, the City will reduce its energy use for city operations at least 15% by 2030, and 50% by 2050; and

BE IT FURTHER RESOLVED, the City will work to reduce community wide energy use at least 10% by 2030, and 40% by 2050; and

BE IT FURTHER RESOLVED, the City will meet 25 percent of its electric needs for City operations through renewable energy resources by 2025, 80 percent by 2030, and 100 percent by 2035; and

BE IT FURTHER RESOLVED, the City establishes goals to meet 66 percent of all City operations energy needs with renewable energy by 2030, 88 percent by 2035, and 100 percent by 2040; and

BE IT FURTHER RESOLVED, the City establishes goals with increasing targets to meet 20 percent of community-wide electric needs through renewable energy resources by 2025, 66 percent by 2030, 88 percent by 2035, and 100 percent by 2040; and

BE IT FURTHER RESOLVED, the City establishes goals to meet 21 percent of community-wide energy needs with renewable energy by 2030, 80 percent by 2040, and 100 percent by 2050; and

BE IT FURTHER RESOLVED, the City will prioritize energy resources and programs that benefit low-income residents and create more equity in energy use, rates and jobs in the community; and

BE IT FURTHER RESOLVED, the City opposes the rollback of science and climate policy at the federal and state levels and affirms its ongoing commitment to the goals of the Paris Climate Agreement and the City's responsibility to meet its greenhouse gas reductions based on the Paris Climate Agreement; and

BE IT FURTHER RESOLVED, the City will prioritize renewable resources and programs over purchasing renewable energy credits (RECs) to reduce reliance on RECs during the transition to 100 percent renewable resources; and

BE IT FURTHER RESOLVED, the City will prioritize community-based development of renewable energy in Dane and surrounding Counties; and

BE IT FURTHER RESOLVED, the City will collaborate with other governmental and public entities locally and regionally to facilitate all energy measures; and

BE IT FURTHER RESOLVED, the City will prioritize local and micro-grid-based renewable energy projects over remote generation and transmission, and provide renewable energy and energy storage at key public facilities to reduce vulnerability to main electric grid failure; and

BE IT FURTHER RESOLVED, the City will develop a resiliency plan to deal with anticipated changes associated with climate change.

Dated this 17th day of July, 2018.

The Common Council of the
City of Middleton, Wisconsin

By: _____
Gurdip Brar, Mayor

Attest: _____
Lorie J. Burns, City Clerk

VOTE:

Ayes: 6
Noes: 0

Council Resolution 2020-31
Honoring The Life of George Floyd with Our Actions

Whereas, on May 25, 2020, George Floyd, an African-American man, died at the hands of four Minneapolis, Minnesota, police officers; and

Whereas, the death of George Floyd is just one of the latest examples of violence against African Americans that has happened since the founding of our nation and continues to occur in many cities throughout our country; and

Whereas, the actions of those four Minneapolis, Minnesota, police officers do not represent the thousands of men and women that serve and protect their respective communities with the highest levels of professionalism, but their actions do highlight a pernicious, long-standing systemic problem in our country that impacts the relationship between some communities and their police departments; and

Whereas, this act of intolerable violence and other similar acts that have occurred across this country in recent years are unpardonable and must serve as a wake-up call to examine our systems and structures for embedded bias and racism.

Now, therefore, BE IT RESOLVED BY THE MIDDLETON MAYOR AND COMMON COUNCIL, as follows, that:

1. The Mayor and Common Council of the City of Middleton, Wisconsin, the City Administrator, the Middleton Police Department and all City employees join with America in sharing its sorrow; and

2. The Mayor and Common Council recognizes that we all come from a common thread as a single human race and call on all people to recognize the value of human life and to work together to identify and to eliminate systemic racism; and

3. The Mayor and Common Council fully support and strongly endorse peaceful unification throughout this country opposing acts of violence against persons of color and those of different ethnicity, religions, beliefs or expressions, both now and in perpetuity; and

4. The Mayor and Common Council call upon our community to join with us in committing to introspective evaluation of ourselves, our systems, policies, and procedures to identify issues of bias, discrimination, and racism; and

5. Furthermore, the Common Council calls for the community to reformulate the Middleton Equity Team. As Dr. King reminds us, 'The arc of the moral universe is long, but it bends toward justice.' Let us mourn those that we have lost to these cruel and unjust acts and honor their memory by doing everything we can to build a system that finally fulfills the promise of liberty and justice for all

This resolution was adopted at a regular meeting of the Middleton Common Council this 16th day of June, 2020.

ATTEST:

Gurdip Brar, Mayor

Lorie J. Burns, City Clerk

Council Resolution 2020-34
Recognizing Racism as a Public Health Crisis

Whereas, race is a social construction with no biological basis; and

Whereas, racism is a social system with multiple dimensions; individual racism is internalized or interpersonal; and systemic racism is institutional or structural, and is a system of structuring opportunity and assigning value based on the social interpretation of how one looks, that unfairly disadvantages some individuals and communities, unfairly advantages other individuals and communities, and saps the strength of the whole society through the waste of human resources; and

Whereas, racism causes persistent racial discrimination in housing, education, employment and criminal justice; and an emerging body of research demonstrates that racism is a social determinant of health; and

Whereas, more than 100 studies have linked racism to worse health outcomes; and

Whereas, in Wisconsin, the highest excess death rates exist for African American and Native Americans, at every stage in the life course, and our infant mortality rate for infants of non-Hispanic black women is the highest in the nation; and

Whereas, the American Public Health Association (APHA) launched a National Campaign Against Racism; and

Whereas, Healthiest Wisconsin 2020 states that, "Wisconsin must address persistent disparities in health outcomes, and the social, economic, educational and environmental inequities that contribute to them"; and

Whereas, the Wisconsin Public Health Association has adopted in 2010 the resolution "Achieving Health Equity" and in 2014 the resolution "Promoting a Health in all Policies (HIAP) Framework to Guide Policymaking" and in 2017 convened a Racial Equity Workgroup; and

Whereas, public health's responsibilities to address racism include reshaping our discourse and agenda so that we all actively engage in racial justice work; and

Whereas, while there is no epidemiologic definition of "crisis", the health impact of racism clearly rises to the definition proposed by Galea: "The problem must affect large numbers of people, it must threaten health over the long-term, and it must require the adoption of large-scale solutions."

Now, therefore, *BE IT RESOLVED BY THE MIDDLETON MAYOR AND COMMON COUNCIL*, together with City Staff:

1. Asserts that racism is a public health crisis affecting our entire society
2. Directs the City Administrator to develop a strategic plan that includes goals and objectives to ensure racial equity is a core element of the City's operations
3. Works to create an inclusive community and identifies specific activities to increase diversity
4. Incorporates inclusion and equity, and offers educational training to expand City leadership's understanding of how racism affects people
5. Advocates for policies that improve health in communities of color
6. Encourages other local, state and national entities to recognize racism as a public health crisis

This resolution was adopted at a regular meeting of the Middleton Common Council this 21st day of July, 2020.

Gurdip Brar, Mayor

ATTEST:

Lorie J. Burns, City Clerk

Council Resolution 2020-39
Repudiating Racist Covenants in Local Real Property Records

Whereas, in discussion at the Council meeting of June 16 concerning racism and violence against African-Americans, a Middleton resident property owner mentioned her horror in discovering a racist covenant in her property's chain of title; and

Whereas, the subject covenant in the Park Lawn neighborhood reads in part that "no part of said platted premises shall ever be conveyed to, used, owned or occupied by any persons other than of the Caucasian race, either as owner or tenant"; and

Whereas, the aforementioned language is morally repugnant, immoral and has no basis in law having been declared unenforceable under the 14th Amendment to the Constitution of the United States in 1948 by the U.S. Supreme Court in Shelley v. Kraemer, 334 U.S. 1 (1948); and

Whereas, real property laws are governed by state law, and the City is pre-empted from creating any local ordinance that would change the legal framework governing the formal amendment of existing deed restrictions or covenants; and

Whereas, such racist covenants are modifiable by the homeowners but the process may, in some instances, prove to be relatively time consuming and costly; and

Whereas, the City Attorney advises that individual property owners could record a form of repudiation of such covenants on their own property. One such example reads:
"We, [name], owners of the property at [address], acknowledge that this deed is subject to an unenforceable, unlawful, restriction or covenant excluding non-Caucasians from this neighborhood. We repudiate this clause and state that we welcome with enthusiasm and without reservation neighbors of all races and ethnicities.

Now, therefore, BE IT RESOLVED BY THE MIDDLETON MAYOR AND COMMON COUNCIL, as follows, that:

The Mayor and Common Council of the City of Middleton, Wisconsin, repudiate racist covenants that are remaining signs of embedded and systemic racism in our society, and we further state our dedication to exposing and rooting out systemic racism wherever we find it.

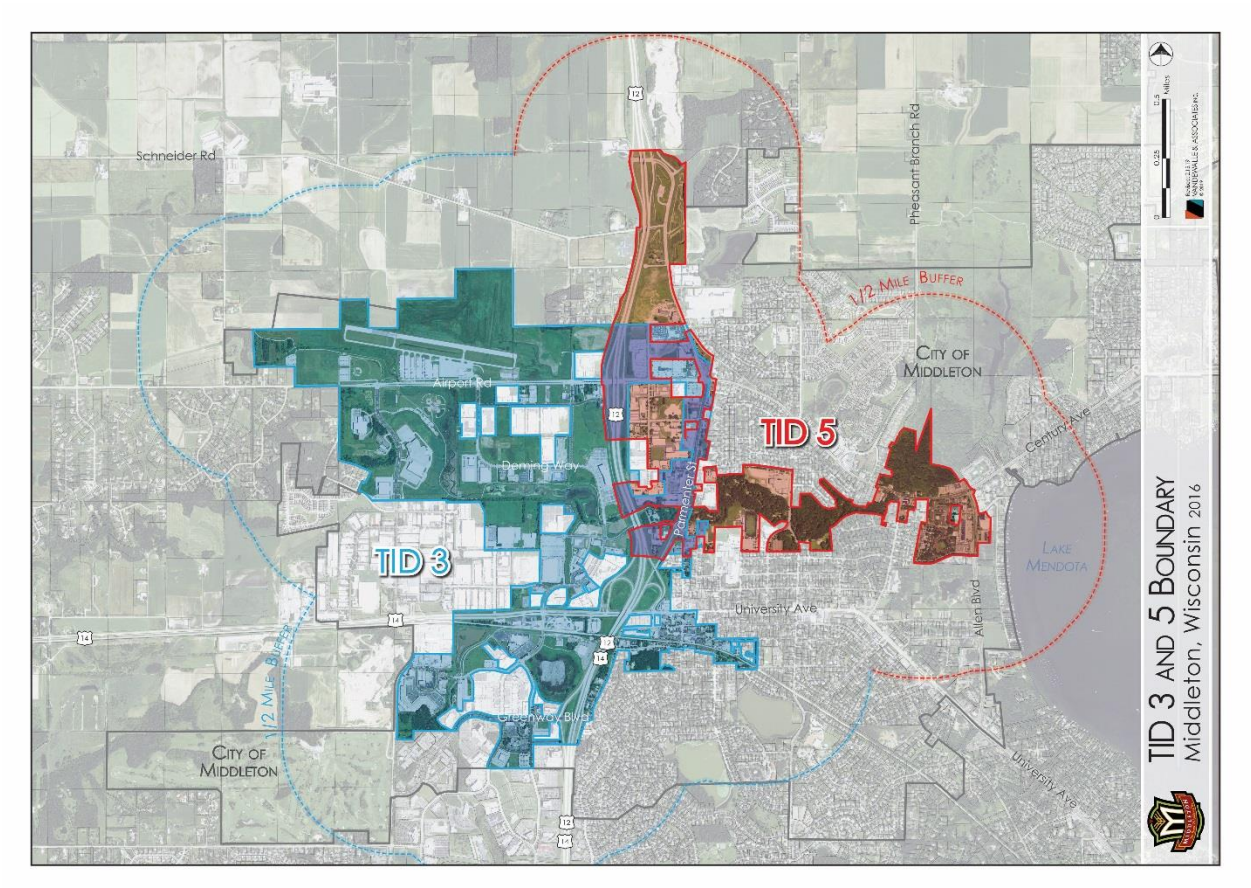
This resolution was adopted at a regular meeting of the Middleton Common Council this 21st day of July, 2020.

Gurdip Brar, Mayor

ATTEST:
Lorie J. Burns, City Clerk

City of Middleton, Wisconsin

Tax Increment Financing (TIF) Policy



Adopted by the Middleton Common Council on January 7, 2020

Introduction

The Common Council in its sole authority may approve or disapprove any TIF requests as it deems appropriate. Approval or disapproval of any TIF request does not establish precedent obligating the Common Council to approve or disapprove any future TIF requests.

TIF is a financing tool where cities can use the increased property tax revenue from new development or redevelopment in an area (called a TIF District or TID) in order to pay for public infrastructure projects or economic development projects in the TID. TIF works by temporarily capturing a portion of property tax revenues collected in the TID to pay for eligible project costs as described in the TID project plan. When project costs have been repaid through tax increments, the TID closes and the total value of properties in the TID are added to the tax base of the city, county, and school district. TIF is the main economic development tool available to Wisconsin cities.

Financial assistance from the City of Middleton TIF program for private development or redevelopment projects shall be evaluated according to Wisconsin law and this policy. Variations from this policy may be considered for projects that provide extraordinary benefits to the community in terms of tax base, job creation or retention, improvements to public infrastructure, or other advantages to the Middleton economy.

The City of Middleton shall evaluate all requests for TIF assistance using the "but for" standard and utilizing a financial gap analysis. Each project must demonstrate that "but for" TIF, the project would not be financially feasible. The financial gap analysis should demonstrate the minimal amount of TIF assistance needed as gap financing to make the project financially feasible.

Section 1: TIF Goals

1. Growing the property tax base
2. Fostering the creation and retention of quality jobs for individuals of all backgrounds and abilities
3. Redeveloping blighted areas that are obsolete or detrimental to public health and wellbeing
4. Promoting infill development and redevelopment that can achieve highest and best use of land
5. Remediating contaminated brownfield sites
6. Incentivizing the development of a range of workforce housing options that can close the housing affordability gap
7. Mitigating climate change and adapting to our changing environment
8. Funding public improvements that enhance livability, improve the City's infrastructure, enhance the urban greenway, improve multi-modal transportation options and access to employment areas, enrich the aesthetics of key areas and corridors within the City

through the use of streetscaping and art amenities, and boost the stormwater management capabilities
9. Leveling the playing field for sites that are challenging to develop due to extremely poor soil quality
10. Implementing adopted City plans and policies, particularly the City's Comprehensive Plan.
11. Ensuring that sufficient increment is available to fund public infrastructure projects as described in TID project plans.

Section 2: TIF Policy Guidelines

1. All TIF considerations shall be consistent with the approved TIF Project Plan(s).
2. If Middleton provides TIF assistance to developers, it will do so primarily through developer-financed methods, to minimize the risk of public participation wherever possible. Middleton may consider up front TIF incentives on a case-by-case basis where gap financing is required.
3. Middleton will consider TIF requests only after determining that "but for" TIF, the project would not be financially viable.
4. Middleton will give preference to TIF assistance for projects that are occurring on sites that are already developed (redevelopment projects) over greenfield development projects which typically have lower costs.
5. Middleton aims to minimize the percentage of increment applied to a development project, especially within TID 5, where the remaining life of the TID is longer, and therefore offers more years to reimburse development projects.
6. Middleton will adhere to the principles of regional collaboration in economic development. Middleton will avoid disparaging or selling against other communities and will avoid recruiting and/or assisting to relocate businesses currently located in other communities in the region. Middleton may use TIF to retain and/or assist in expansion for employers currently in the region who have outgrown their current space.
7. For development projects that will include competitive funding resources allocated by any state or federal agency, Middleton may evaluate TIF assistance with the standards of the state or federal funding source and seek to design incentives that increase the chances of securing state or federal funding.
8. In special circumstances, Middleton may provide economic incentives for job creation or retention. If economic incentives are offered, there will be a job maintenance and lookback provision requirement.
9. Middleton will include lookback provisions on actual construction costs and TIF-eligible expenses for all TIF agreements.
10. Middleton may require heightened design standards for TIF projects.

Section 3: TIF Project Types & Costs

The following project types may be TIF eligible if they meet the City's TIF Goals (Section 1):

1. Projects that are consistent with the approved TIF Projects Plans.
2. Redevelopment projects, including but not limited to office, research & development, medical uses, light manufacturing, housing, and mixed-use projects
3. Expansions and renovations that increase the valuation of the property
4. Blight elimination
5. Greenfield office, research & development, medical uses, light manufacturing, mixed-use, and affordable housing developments
6. Preservation and adaptive reuse of historic buildings

The following project costs may be TIF eligible if they meet the City's TIF Goals (Section 1):

1. Public infrastructure necessary for the proposed project
2. Demolition of existing structures for redevelopment projects
3. Remediation of soils that are contaminated
4. Remediation of soils that are of poor quality for construction purposes
5. Structured parking that maximizes the density on a site
6. Extraordinary costs related to affordable housing development
7. Whole-building energy modeling (BEM) for new construction and building retrofits
8. Renewable energy, including solar photovoltaics, geothermal, and wind energy
9. Microgrid technology that can support renewable energy and energy reliability
10. Green roofs that include gardens that can capture and retain stormwater
11. Blue roofs that capture and store stormwater to mitigate runoff effects
12. Under-parking water retention systems that capture and store stormwater to mitigate runoff effects
13. Stormwater management best practices that are above the State mandate
14. Purple pipe reclaimed water piping systems
15. Site-specific public art projects

The following project types are not TIF eligible:

1. Developments that occur outside the TIF district.
2. Market rate housing on greenfield sites are not typically TIF eligible. Market rate housing projects will be evaluated on a case-by-case basis and may be considered for assistance to the degree they demonstrate a financial gap and promote the City's TIF goals articulated in Section 1.
3. Retail-only buildings on greenfield sites (hospitality and leisure, retail stores, service-oriented retailers like daycares, etc.).
4. Buildings that are already constructed.

5. Developments that are exempt from the payment of property taxes.

The following project costs are not TIF eligible:

1. Land costs that exceed market land costs.
2. Ordinary or typical development costs that are normally provided in the market for the the type of land use that is being proposed or that are required to meet City or State requirements or codes. Examples could include (but are not limited to): 1) costs related to meeting building or plumbing code requirements; 2) costs related to meeting City or County stormwater management requirements; 3) costs related to soil remediation, land alteration, site preparation or grading that are not attributable to remediating poor quality or contaminated soils.
3. In housing developments, the first level of underground parking.
4. Energy efficiency improvements (including high-efficiency windows or shadings, energy efficient appliances, LED lighting, enhanced insulation, et cetera) within a building. These are expected in all TIF projects, but they are not TIF-eligible costs.
5. City fees (impact, park dedication, park improvement, stormwater management, etc.).
6. TIF may not pay for infrastructure that is normally paid for by special assessments or other city charges.
7. Other costs that are deemed to be normal development costs.

Section 4: Application and Approval Process

1. Pre-Application Meeting: The developer shall meet with City staff to discuss the project in concept including the need for TIF financing, potential TIF-eligible costs, project timeline, and economic benefits.
2. Application and Review Fee: If the developer wishes to proceed with a request for TIF financing they shall submit a TIF request letter and completed application form along with a TIF Review Fee of $1,000 which will be used to cover the cost for staff TIF and City consultants in reviewing the TIF request. The TIF Review Fee is non-refundable. Upon request, the City may provide applicants with the appropriate discount rate, interest rate, inflation or property value growth rate, future mill rate, and cap rate it determines to be appropriate for analysis. As part of the application the developer shall submit a proforma for the project showing the total sources and uses of funds, anticipated project valuation, and projected rate of return.
3. Staff Review and Recommendation: The City's TIF team will review the request with assistance from the City's consultants (TIF Planner, TIF Engineer, Financial Advisor, and City Attorney) and from the City Assessor as needed. Depending on the complexity of the project the developer may be invited in for additional meetings with the City's TIF Project Management Team (PMT) or TIF staff.
4. Term Sheet: Staff will prepare a term sheet outlining the key terms of a recommended TIF agreement including the type and amount of TIF assistance, TIF-eligible costs, percentage of TIF increment to be applied to the project, the projected rate of return for

the project with and without TIF assistance, and other key terms of a TIF agreement. The term sheet will be provided to the developer and the Finance Committee and City Council.

5. Plan Commission: If the project is not a permitted land use (requires a rezoning or a conditional use permit), then the Plan Commission should review the project for concept approval (at a minimum) prior to concept review of the TIF request by the Finance Committee and City Council. Normally, the Plan Commission will not review TIF requests.
6. Finance Committee Conceptual Review: The Finance Committee will meet to review the TIF request and term sheet. The Committee may meet with the developer in open session to ask questions regarding the request. The Finance Committee will then have the opportunity to meet in closed session without the developer to discuss negotiations of the terms of the TIF agreement. The Finance Committee will make a recommendation to the City Council on the terms of a TIF agreement. The City Council will consider the Finance Committee's recommendation at the next regularly scheduled meeting, but will not consider the recommendation on the same date that it is made. This will allow City Council members time to ask questions of staff and perform their own review prior to taking action on the recommendation.
7. Common Council Conceptual Review: The City Council will review the term sheet and Finance Committee recommendation and take action on the conceptual approval of the terms of the TIF agreement.
8. Drafting of TIF Agreement: Following conceptual approval by the City Council, staff will work with the City Attorney to draft the formal TIF agreement based on the term sheet and the direction of the City Council.
9. TIF Agreement Approval: The Finance Committee will review the TIF agreement and make a recommendation to the City Council who shall take action to approve or reject the agreement.
10. Lookback and Review of TIF-Eligible Costs: Following completion of the project, the developer shall submit the final action sources and uses (costs) for the project. If there is an increase in sources of funds or a reduction in costs, the amount of the TIF incentive may be reduced by a prorated share based to 50% of the savings or additional funds. In addition, the developer shall provide documentation of the actual amount of TIF-eligible costs. The amount of the TIF incentive shall be limited to the actual amount of TIF-eligible costs.
11. Issuance of TIF Bond and Payment of TIF Incentives: For developer-financed TIF incentives. staff will work with the City Attorney to prepare a TIF bond based on the amount of documented TIF-eligible costs and detailing the timing and amount of TIF payments. The TIF bond will go to the Finance Committee and City Council for approval.

Project Requirements

All developers requesting TIF assistance must demonstrate that:

1. The project is not financially feasible without the use of the requested TIF funding.
2. The TIF request complies with Wisconsin statutes and the TIF District Project Plan.

Project Evaluation Criteria

The following criteria will be used in evaluating requests for TIF assistance. Other factors may be considered as well on a project by project basis.

- Does the project conform to existing plans and zoning?
- How does the project increase and improve the City's tax base?
- What portion of the tax increment is applied to the project compared to total TIF district?
- What is the economic impact of the project including job creation and retention?
- Does the project support the City's affordable housing and sustainability goals?
- What impact would the project have on current City businesses?
- What are the qualifications of the developer and the development team?
- What level of private equity and financing is included in the project budget?
- Does the project rely on reasonable assumptions of real property value increases?
- Would the proposed project assist in achieving other policy goals established by the City Council?

City of Middleton, Wisconsin

Tax Increment Financing (TIF) Request Application Form

Please complete and submit the following information to the Department of Planning and Community Development for a more detailed review of the feasibility of your request for Tax Increment Financing (TIF) assistance.

Applicant Information

Name of Applicant: _____

Business Name and Address: _____

_____

_____

Primary Contact: _____

Phone Number: _____ E-Mail Address: _____

Type of Business Entity: _____

Property Information

Address of the Proposed Project: _____

Parcel Number(s): _____

Currently, does the applicant own or lease the property? (Check one)

___Own ___Lease ___Neither

At project completion, will the applicant own, lease, or convert the property to condo ownership? (Check one) ___Own ___Lease ___Convert to Condo Ownership

At project completion, who will occupy (operate business on) the site? (Check one)

___Owner ___Renter ___Both

If the applicant is the current or prospective tenant of the property, attach a description of the premises to be leased (legal description, floor plan, etc).

Evidence of Site Control

A. If the Applicant owns the project site, attach a copy of the applicant's deed. Also indicate:

Mortgage Holder(s): _____

Total annual mortgage payment (principal & interest): $_____

Total outstanding balance of existing mortgage(s): $_____

Name, address, and phone numbers of other persons or entities having an ownership interest in the property to be redeveloped, if applicable:

_____

_____

_____

_____

B. If the Applicant has a contract or option to purchase the project site, attach a copy of the purchase or option contract. Also indicate:

Date contract was signed: _____/_____/_____

Closing/expiration date: _____/_____/_____

C. If the Applicant currently leases or will lease the project site, attach a copy of the lease or lease option contract. Also indicate:

Legal name of Owner as noted on the deed(s): _____

Name of person who signed lease for Tenant (lessee):_____

Landlord/Owner's name and address: _____

_____

_____

Owner Affidavit. If the applicant currently leases or plans to lease the property, have the owner (and all entities having ownership interest in the property) sign an Owner's Consent Letter.

Project Description

Describe the project and the proposed use: _____
_____
_____
_____
_____

Is the proposed project consistent with the existing zoning of the property? ☐ Yes ☐ No
If no, what zoning change will be requested? _____

Land Area (in square feet) of project site:
Current: _____ square feet
Proposed: _____ square feet

Building Area (in square feet) of project building:

	Gross	Net Leasable
Current:	_____	_____
Proposed:	_____	_____

Number of Stories: _____ Number of Units: _____

Residential Unit Breakdown

Unit Type	# of Units	# of Bedrooms	Avg. Sq. Ft.	Avg. Rent*	Avg. Sale Price**
A					
B					
C					
D					
E					
F					

* Utilities included in apartment rent (check all that apply):
None _____ Electric _____ Heat _____ Other (specify: _____) _____
* Additional costs:
Parking _____ Storage _____ Other (specify: _____) _____
**If condo project.

Job Creation and Retention Information
List the current and projected number of part-time and full-time jobs in the City of Middleton before and after project completion.

	Current Jobs	Projected Jobs	Average Wages / Salary	Average Total Compensation
Full-Time				
Part-Time				
Total				

Project Budget

Type of assistance being requested:

☐ Developer-Financed TIF Incentive ☐ City-Financed (Upfront) TIF Incentive
☐ Waiver of Impact Fees (For affordable housing projects)
☐ Other (Describe: _____)

Indicate the total amount of TIF assistance requested: $_____

Anticipated assessed value of the project at completion: $ _____

Project Budget Sources and Uses of Funds

SOURCE OF FUNDS	AMOUNT
Private Financing	
Secondary Financing	
Developer Equity	
Investor Equity	
Grants	
TIF Assistance	
Other:	
Other:	
Other:	
TOTAL SOURCES	

USES OF FUNDS	AMOUNT
Property Acquisition	
Demolition	
Environmental	
Public Infrastructure	
Hard Construction Cost	
Architect & Engineering Fees	
Other Soft Costs & Permits	
Financing Costs	
Development Fee	
Contingency	
Other:	
Other:	
Other:	
TOTAL COSTS	

Please attach a detailed project proforma showing projected revenues, expenditures, net operating income, and anticipated after-TIF rate of return.

TIF-Eligible Costs

Only extraordinary costs beyond those of a typical development will be considered as potential TIF-eligible costs. For each item where TIF funding is requested list the total estimated cost of the item, the normal development cost, and the portion of the cost that is being requested for TIF funding.

Item	Total Cost Estimate	Normal Development Cost	Requested TIF-Eligible Cost
TOTAL			

Project Financing

Private Financing Lender: _____

Loan Amount $ _____ Interest Rate: _____ Preapproved? ☐ Yes ☐ No

TIF Loan Lender: _____

Loan Amount $ _____ Interest Rate: _____ Preapproved? ☐ Yes ☐ No

Are any grants or tax credits involved? ☐ Yes ☐ No

If yes, what programs: _____

_____

Application status: _____

_____

Likelihood of award: _____

_____

Other funding: _____

Signature

I, the undersigned, affirm that the project descriptions, numerical and financial estimates, and all other information I have provided in this application are true and complete to the best of my knowledge. I have read and understood the requirements described in this application. I understand this application and the supporting documents are considered public records and may be subject to disclosure under Wisconsin's Public Records laws. Furthermore, I certify that I am authorized to initiate the TIF application process on behalf of the project described.

Signed: _____ Date: _____
Title: _____

Legal Disclaimer
Completion of this application does not entitle the applicant to financial assistance. Any such assistance must be approved by the appropriate City boards, committees, authorities, and the City Council.

Please attach:

- A letter describing the project, its impact, and the need for TIF assistance
- A detailed proforma showing projected revenues, expenses, net operating income, and the after-TIF assistance anticipated rate of return
- Loan pre-approval or commitment letter (if applicable)

A non-refundable TIF application fee in the amount of $1,000 is required with this application to help reimburse the cost of City TIF staff and consultants in reviewing the TIF request.



CITY OF MIDDLETON
BICYCLE & PEDESTRIAN PLAN 2009

ADOPTED
NOVEMBER 17, 2009

With assistance from
MSA PROFESSIONAL SERVICES, INC

ACKNOWLEDGEMENTS

The City of Middleton would like to thank and acknowledge the many residents who have participated in this planning process as well as the various people who reviewed and commented on the draft plan. In particular, we also wish to acknowledge the contributions of the following individuals:

COMMON COUNCIL

Kurt Sonnentag, Mayor
Gurdip Brar
Jon DiPiazza
Hans Hilbert
Paul Kinne
Steve Leo
Howard Teal
Susan West
James Wexler

PLAN COMMISSION

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Ed Elskamp
Derek Hungness
Leif Hubbard, Parks Board representative
Kurt Sonnentag, Mayor
James Wexler, Council representative
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EXECUTIVE SUMMARY

The 2009 Bicycle & Pedestrian Plan is intended to represent the City of Middleton's vision for making these transportation modes an integral part of the community. The plan recommends specific projects, programs and policies to encourage residents and visitors to travel around the City by bicycle or on foot. A summary of the Plan's recommendations is provided in the Plan Map.

Much has changed since the City of Middleton adopted its first comprehensive bicycle and pedestrian plan in 1999. Over the past decade, the City has made significant investments in its bicycle and pedestrian network, including the expansion of the Pheasant Branch Trail to the west and east, the addition of bicycle lanes along several arterial and collector roads, and the construction of sidewalks alongside roads serving new developments. During this time, the City's population has continued to grow and the use of City trails and streets by both residents and visitors has substantially increased. The expansion of the City's urban footprint has provided opportunities for further bicycle and pedestrian facility expansion to the north, east, and west. As the City continues to grow, it is imperative that bicycling and walking remain viable and safe transportation options.



The 2009 Bicycle and Pedestrian Plan builds on the 1999 Plan, creating a broader network of multi-modal routes that more effectively accommodate bicyclists and pedestrians through the City's neighborhoods, business areas and projected growth areas. Toward that end, this planning process has focused on the especially challenging areas within the network—areas where multiple transportation modes are competing within limited public right of way, thereby raising safety concerns.

The plan identifies actions that should be taken to improve conditions along four key Bicycle and Pedestrian corridors (see Concept Map). These measures can be summarized as follows:

1. Continue to make improvements to the Pheasant Branch Trail so that it serves as the east-west spine and centerpiece of the City's bikeway and pedestrian network while at the same time assessing and addressing concerns about reducing user conflicts.

2. Develop a path along the WisDOT / Wisconsin & Southern railroad corridor to connect Middleton with the existing bike network in Madison (east of Whitney Way) and to the proposed Good Neighbor Trail along Black Earth Creek to Mazomanie.

3. Establish bike lanes along the High/Park/Gammon street corridor to develop a north-south route through the heart of Middleton and to facilitate access to the Rail Corridor, Pheasant Branch, and North Mendota trails.

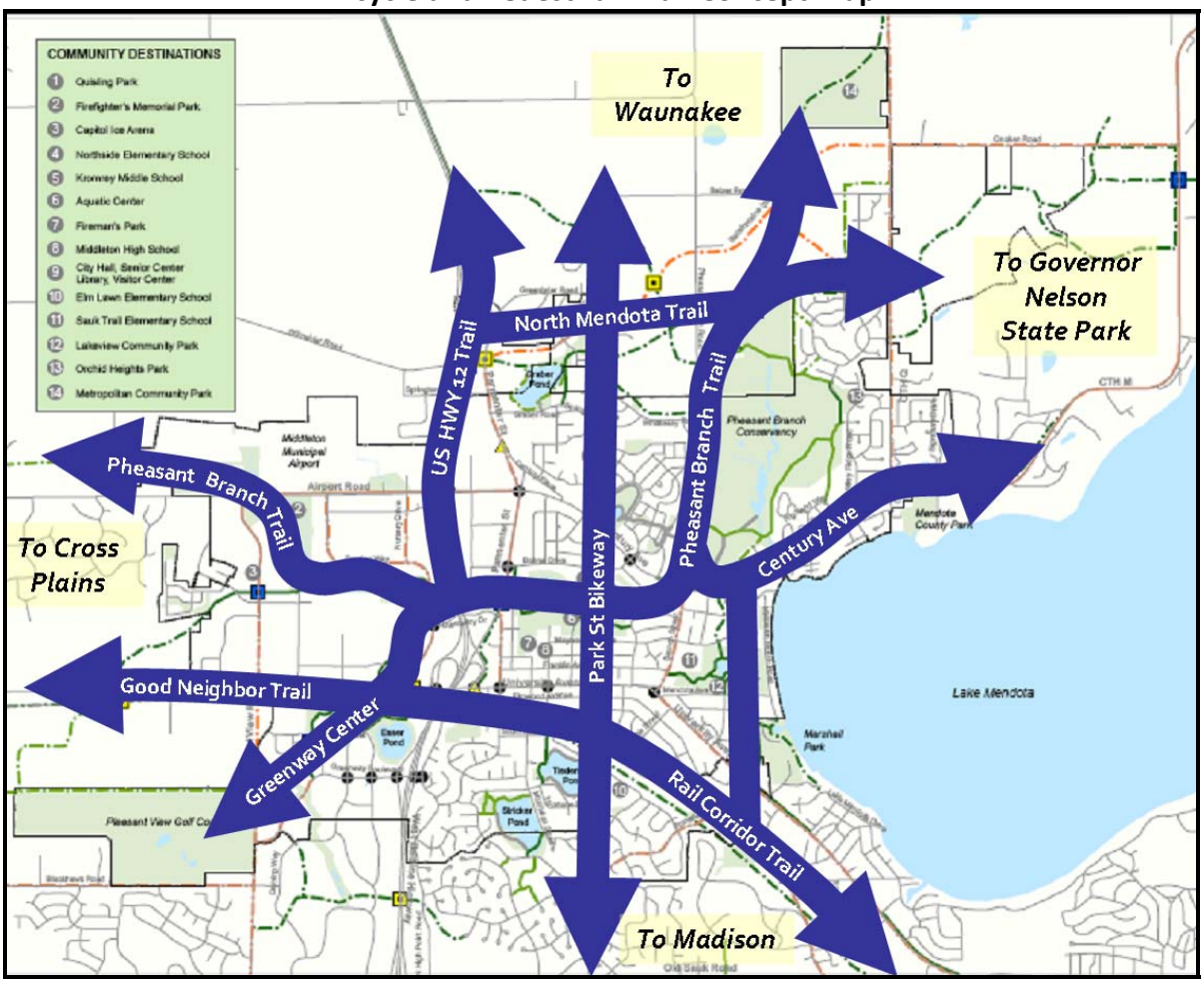
4. Develop an integrated side path and bike lane network on the north side of Century Ave. between Allen Blvd. and the eastern city limits.

Improvements to these four areas as well as other trails and streets will significantly improve and enhance the bicycle and pedestrian system, providing enhanced access to schools, government centers, major employers, shopping centers, recreation areas, and adjacent communities.

Following a public hearing on the final draft of the plan, it should be adopted by the City's Plan Commission and Common Council as an element of the City of Middleton's Comprehensive Plan to provide a legal justification for implementing the recommendations contained herein. Full implementation of these recommendations will be a long-term effort that will require coordinated actions of the City of Middleton, Dane County, Wisconsin Department of Transportation, other public agencies (including neighboring communities), and the private sector.

City officials are grateful for all the input that was provided during this planning process. Hopefully, this document represents the collective will of the community with respect to its desire for future improvements and investments in its bicycle and pedestrian infrastructure.

Bicycle and Pedestrian Plan Concept Map



PLAN ORGANIZATION

This plan is organized into the following Chapters:

- **Chapter 1: Introduction** – describes the intent of the plan, previous bicycle and pedestrian planning efforts, facility improvements completed since adoption of the 1999 Plan, as well as the planning process undertaken in the development of the 2009 Plan.

- **Chapter 2: Goals, Policies and Actions** – describes the overall goals and policies for the City as well as specific actions related to Planning; Design, Construction & Maintenance; and Education, Enforcement and Encouragement.

- **Chapter 3: System Plan** – identifies specific bicycle and pedestrian facility improvements around Middleton and in its growth area, with particular attention devoted to four key bicycle and pedestrian corridors.

- **Chapter 4: Implementation** – provides a table outlining specific facility improvements by roadway or road segment, the estimated costs for these improvements, and a timeframe for completion.

The appendix of this plan provides additional standards to support the implementation of components of this Plan.

1 INTRODUCTION

1.1 INTENT OF THIS PLAN

This document is an update to the 1999 Bicycle and Pedestrian System Plan and is part of an effort to maintain planning documents that are current and meaningful to the Middleton community. Like its predecessor, the 2009 Bicycle & Pedestrian Plan is intended to serve as a blueprint for developing and implementing a safe, ADA accessible, convenient, and comprehensive bicycle and pedestrian circulation network in order to encourage City residents and visitors to bike or walk as a means of transportation and recreation.

The plan builds on the City's recent infrastructure investments by enhancing opportunities to access a comprehensive bikeway and pedestrian network linking major destinations throughout Middleton and its surrounding communities. Most of the recommendations are devoted to reducing existing barriers (e.g., congested streets and intersections) and filling in key gaps in the network, thereby making it safer and more convenient for residents and visitors to bike or walk around the community, particularly for short trips. Benefits of increased bicycling and walking include:

- Reducing traffic congestion and automobile emissions, thereby contributing to cleaner air
- Conserving limited energy resources, thereby reducing reliance on foreign supply sources
- Integrating healthy, physical activity into everyday travel, thereby fostering more active lifestyles and improved personal fitness
- Lowering transportation costs and the need for automobile parking, thereby making more efficient use of the land and increasing community sustainability; and
- Investing in infrastructure that attracts visitors of all abilities to Middleton.

1.2 PREVIOUS PLANNING ACTIVITIES

On April 20, 1999, the City of Middleton adopted its first comprehensive bicycle and pedestrian plan. The Bicycle and Pedestrian System Plan (1999) was the City's first effort to develop a comprehensive policy for these transportation modes. The plan identified goals and opportunities to make walking and biking viable transportation options in Middleton. The plan aimed to make biking and walking both safe and convenient throughout the City so that short trips could be made without the use of a car. It contained numerous recommendations for improving streets and developing trails within the community.

The 1999 Plan was reinforced by the 2000 Dane County Bicycle Transportation Plan, which brought more focus to connecting the City's existing and planned bicycle network with various regional facilities and amenities. In particular, it called for connecting the Pheasant Branch Trail with trails extending into the Black Earth Creek watershed and to Governor Nelson State Park. The County's 2006-2011 Parks & Open Space Plan advocates for the creation of the North Mendota Regional Trail, a route that is envisioned to link Middleton with Governor Nelson State Park and the Schumacher Farm near Waunakee. (Middleton and Waunakee have already constructed segments of trail that could potentially be incorporated into this system, and the Dane County Highway and Transportation Department constructed a bicycle/pedestrian underpass beneath CTH M in 2005 in anticipation of future construction of this trail.) Other pertinent planning activities by the City since the 1999 Plan include adopting a new comprehensive plan in 2006, updating its own Parks & Open Space Plan (2007-2012) and Conservancy Lands Plan (2005), developing a Transportation Network Plan (adopted in 2006), and launching an initiative to make Middleton a more sustainable

community. These plans, the subsequent implementation of a number of their recommendations, and community input greatly influence the content of this updated planning document.

1.3 IMPROVEMENTS SINCE THE 1999 PLAN

Substantial improvements have been made to the City's bicycle and pedestrian infrastructure since the adoption of the 1999 Bicycle and Pedestrian Plan. In fact, over 80% of the bicycle and pedestrian trails (excluding sidewalks) that exist within Middleton today were built just within the past decade. In 1999, the only portion of the Pheasant Branch Trail network that existed was an unimproved, non-accessible, hiking-only segment between Parmenter Street (Old Highway 12) and Century Avenue, as well as a 2,000 ft. long segment extending northward into the Pheasant Branch Conservancy from the intersection of Century and Branch St. This short segment essentially ended at a footbridge crossing Pheasant Branch Creek because the dirt trail beyond the bridge had become rutted from erosion and overgrown with shrubs to the point where it no longer provided a passable connection with Pheasant Branch Road and the parking lot overlooking the Conservancy. Ten years ago, short trail segments also existed in Greenway Center, Lakeview Park, along University Ave. east of Allen Blvd., and portions at Tiedeman and Stricker Ponds (except for the trail around Stricker Pond, all of these segments were paved). Short, inter-block walks also existed in several neighborhoods as shown in Map 1 of the 1999 Plan.



Today, the Pheasant Branch Trail forms the backbone of the City's off-street trail network, as envisioned in the 1999 Plan. This east-west path connects the business parks and the developing Hidden Oaks neighborhood near the western edge of the City with the Pheasant Branch Conservancy and residential neighborhoods in northeast Middleton. It is only interrupted by three at-grade street crossings—Century Avenue, Park Street, and Evergreen Road. All other streets (Parmenter Street, Highway 12, Deming Way, and Airport Road) can be traversed via underpasses. The Capitol Ice Arena, the athletic fields at Firefighters Memorial Park and Quisling Park, the City's aquatic center, and the middle and high schools are all connected to one another via one continuous trail, uninterrupted by any at-grade street crossing. This same multi-use trail network is able to serve over 2,000 people whose jobs are located within only 1,000 feet of this important off-street route, thereby facilitating both commuting and lunchtime exercise and recreational activities. Some of the City's trails are maintained only for pedestrian use and passive recreation, including segments in the Pheasant Branch Conservancy and around Tiedeman and Stricker Ponds. The entire trail system has garnered state and national recognition in recent years, beginning with the 2004 National Trails Award for Design & Layout. In 2008, the City received the 2007 Wisconsin Parks & Recreation Association Award of Merit for its Pheasant Branch Trail System.



In terms of on-street bicycle facilities, in 1999, the only marked bike lanes that existed in the City were short segments along Deming Way near Esser Pond, on Park Street near Kromrey Middle School, on Park

Lawn Place near the aquatic center, and on Allen Blvd. Most signalized intersections had pedestrian-activated walk signals, but few (if any) had well-functioning, in-street, bicycle-activated sensors. Over the past decade, the City added bike lanes and sidewalks along the new or reconstructed sections of Airport Road, Parmenter Street (Old Highway 12), and Pleasant View Road; Dane County added a wide shoulder to accommodate bicyclists along Highway M from the Middleton city limits east to Highway 113; and WisDOT developed the 9-mile bike path alongside Highway 12.

Since 1999, the City has also installed traffic calming devices along various residential streets, including constructing medians (pedestrian refuges) at two Park Street crosswalks and installing speed humps along N. High Point and Valley Ridge Roads. In addition, the City collaborated with the school district, other agencies and the private sector to pursue various enforcement and education initiatives, such as utilizing a portable speed feedback display. Over the past ten years, the City has enjoyed strong success in securing grants for trail development and various safety-related initiatives, including a Safe Routes To School grant award of $44,000 in 2007.



1.4 Planning Process: The Development of This Plan

Preparation of this plan began during the summer of 2008 when the City of Middleton engaged MSA Professional Services, Inc. to help develop the document. In particular, MSA was retained to assess and provide expert advice on improvements to identified problem and opportunity areas throughout the bicycle and pedestrian system.

On July 16, City planning staff held a kick-off meeting to identify and obtain input on the issues facing bicyclists and walkers in the community. This meeting was attended by approximately 40 community residents and visitors. In total, the City received about four dozen comments and inquiries as a result of publicity generated by this meeting.

During the remainder of 2008, planning and MSA staff worked on various components of this document. In particular, MSA staff analyzed key policies and issues and created the maps in close consultation with City staff, who periodically provided the Plan Commission with progress reports. The first draft of the plan was completed in December, 2008 and presented at a public informational meeting on January 6, 2009. A formal public hearing was held on January 13, 2009, to obtain input on the key plan recommendations and to guide staff in the preparation of a final draft of the plan. On January 27, Plan Commission members expressed general support for the draft plan recommendations, but requested that staff develop alternatives to paving the north and west trail segments in the Pheasant Branch Conservancy to address perceived issues with potential user conflicts, aesthetics, and environmental impacts.

Over the next several months, staff discussed the draft plan with the following groups: Conservancy Lands Commission (Feb. 4), Public Works Committee (Feb. 23), Parks, Recreation & Forestry Commission (March 16), Water Resources Management Commission (April 15), a joint meeting of the City Council, the Plan Commission, and Community Development Authority (April 25), and a monthly educational seminar sponsored by the Ad Hoc Sustainability Committee (May 14). In addition, the City received correspondence in opposition to trail paving from two Middleton

High School groups (the Cross-Country Team and Ecology Club) and the Friends of Pheasant Branch. Conversely, a national trail consultant, Mike Riter of Trail Design Specialists, endorsed porous paving the spine (main link) of the City's trail network after leading an on-site trail design workshop in March. Others with wetlands and trail development expertise also provided statements in support of the use of asphalt on certain trails. As the draft plan was being prepared, staff also obtained feedback from WisDOT, the Metropolitan Planning Organization, and Dane County (both Parks and Transportation planners).

On July 14, a public hearing was held on the second draft of the plan. Nearly all of the comments at the hearing pertained to the concept of developing both a paved and unpaved route along the existing western and northern segments of the trail that encircles the Pheasant Branch Conservancy. (There appeared to be general consensus on the remainder of the recommendations in the draft plan.) Based on this input and a petition submitted in opposition to this concept, in August the Plan Commission voted to revise the draft plan so that no paving is planned along any of the existing trails in the Conservancy north of Century Avenue.[1] In September, after reviewing input stemming from a mailing to adjacent property owners, the Plan Commission decided to retain in the plan on-street bicycle lanes along Branch St., Parmenter St., and the High/Park/Gammon Road corridor.

The Plan Commission held a public hearing on the final draft of the plan on November 10, 2009. No speaker expressed opposition to the plan, although a couple people stated that the plan does not adequately address the needs of pedestrians and neighborhood safety. The Plan Commission recommended approval of the plan with the understanding that minor editing would continue prior to consideration by the Common Council.

On November 17, 2009, the Middleton Common Council adopted this Bicycle & Pedestrian Plan as an element of the City's Comprehensive Plan.



[1] The 1.2 mile trail segment between Parmenter St. and Century Ave. had already been authorized for paving as part of a Federal Transportation Enhancements grant that was awarded in 2006. The City installed three bridges and a trail consisting of porous asphalt and a parallel unpaved surface in this "creek corridor" during Fall 2009.

2 GOALS, POLICIES & ACTIONS

2.1 INTRODUCTION

The City's 1999 Bicycle and Pedestrian System Plan adopted a mission statement to guide the planning and development of a comprehensive pedestrian and bicycle system for the City of Middleton. Still relevant today, the mission statement reads as follows:

> **Mission Statement:**
> Integrate land use options and transportation opportunities, particularly for bicyclists and pedestrians, to allow people the opportunity to reduce their need for motorized vehicular trips, for conservation of energy and protection of air quality, and to provide a safe and convenient integration of bicycle and pedestrian movement within the community.

Stated another way, the central purpose of the 2009 Bicycle & Pedestrian Plan is to establish a pedestrian and bikeway network that is an integral part of the region' s multimodal transportation system while at the same time serving all Middleton residents and neighborhoods. "Bikeways" are portions of streets and/or trails specifically designed for bicyclists. City officials should ensure that pedestrian and bicycle circulation is incorporated into the community's design so that sidewalks, pedestrian paths, bike lanes, shared use (multi-use) trails, and other signed bike routes form an integrated network that is accessible to all residents and visitors.

The 1999 Plan listed numerous goals, objectives, and policies to help carry out this mission statement. The goals and objectives were intended to express the basic values and aspirations of the community with respect to its bicycle and pedestrian infrastructure. The policies were written to provide specific guidance and standards for planning, constructing, maintaining, and utilizing pedestrian and bicycle facilities within the City of Middleton. The policies "expressed the City's position with regard to various factors that in some way influence bicycle and pedestrian facilities."

The goals, objectives and policies of the 1999 plan have been revised and updated as Goals, Policies and Actions for the 2009 Plan. The goals, policies and actions included in this chapter are organized as follows:

- Planning
- Design, Construction, and Maintenance
- Education, Enforcement and Encouragement



This chapter should be read in conjunction with the proposed detailed bicycle and pedestrian improvements listed in Chapter 3 and outlined in the Plan Map. Pursuing these goals, policies and actions will help infuse the needs of bicyclists and pedestrians into all aspects of planning for Middleton's future.

2.2 PLANNING

Bicyclists and pedestrians could be considered an indicator species for a healthy community – the more of them one sees, the more vibrant and "livable" that community is. Increased bicycling and walking lead to reduced traffic, improved air quality, and greater physical fitness within a community. Accommodating bicyclists and pedestrians benefits all of Middleton, and it begins with the City's efforts in community planning and development.

GOAL: Plan for the needs of bicyclists and pedestrians—including people with disabilities—in all new developments and as part of redevelopment and reconstruction projects.

Policy: Link major activity centers and trip generators such as schools, libraries, parks, employment centers, and shopping areas through a comprehensive bikeway and sidewalk network.

Actions:

- Officially map existing and planned bicycle and pedestrian facility rights-of-way.
- Expand the use of bike lanes on streets with high traffic volumes, including those classified as arterial and collector routes, or at a minimum designate and sign suitable parallel routes.
- Consider providing bike lanes along low volume streets where the street serves as a major link between other parts of the bikeway network.
- Designate and maintain official bicycle routes through a combination of way-finding signage and pavement markings in order to guide bicyclists to key activity centers and destinations.
- Investigate various funding alternatives for constructing sidewalks where none exist along streets serving business areas (e.g., Middleton Business Park) and along collector and arterial routes that are under the City's jurisdiction. It may be appropriate to allow for cost-sharing with adjacent property owners for facilities that meet regional needs.



Policy: Continue planning for a land use pattern in Middleton that is supportive of bicycle and pedestrian system usage and allows residents to live, work, shop and engage in recreational and civic opportunities within a 15 minute walk (half a mile) of their homes.

Actions:

- Modify the City's Comprehensive Plan and Zoning subdivision ordinance to incorporate bicycle and pedestrian system design principles, including ADA design standards.
- Modify zoning standards to require multi-family residential, commercial, industrial and institutional land uses to include design elements which meet the special needs of pedestrians and bicyclists. This includes requiring a direct pedestrian path from the sidewalk to the major building entrance(s) of all properties other than single or two family residential dwellings.
- Follow access control regulations in order to reduce the number of access drives along streets. This will make on-street bicycle lanes safer by reducing potential bicycle/motor vehicle conflict points.
- Consult this Plan when reviewing development proposals.

Policy: Promote intermodal transportation and reduce motorized vehicle dependency.

Actions:

- Plan for the development of a regional intermodal facility that integrates travel by foot, bicycle, wheelchair, scooter, Segway, in-line skates, automobile, bus, and potentially commuter rail.
- Monitor regional initiatives pertaining to passenger rail and Metro Transit bus service, particularly as they relate to improving opportunities for walking and biking to work.

Policy: Coordinate with neighboring communities, regional and state entities to create a continuous and interconnected pedestrian and bikeway network.

Actions:

- Monitor the strategies and recommendations of the evolving bicycle and pedestrian plans of local, regional and state planning agencies.
- Identify weak links and discontinuities in the existing network (beyond those listed in this plan), and develop a plan for prioritizing and funding solutions.
- Continue active participation by City staff in regional bicycle and pedestrian planning activities such as those undertaken by the Madison Area Transportation Planning Board, Dane County, WisDOT, and WisDNR.

Policy: Provide adequate bicycle parking opportunities and promote the availability of bike lockers in high volume bike parking areas.

Action:

- Adopt by ordinance bicycle parking requirements for new development. Suggested requirements are provided as an appendix to this Plan.

Policy: Locate off-street bicycle and pedestrian facilities in unique and aesthetically pleasing locations in order to attract a wide variety of residents and visitors.

Actions:

- Work with land owners, developers, and other jurisdictions to establish shared-use trails as integral components of new greenways and along environmental corridors to complete, complement, and expand the existing bikeway and pedestrian system.
- Retain designated hiking trails that are limited to pedestrian use to minimize user conflicts and enhance opportunities for more passive recreation and enjoyment of the natural environment. In areas where a hard surface trail is desired (e.g., to provide regional route continuity, improved ADA access, safer routes to school, or connections between neighborhoods), consider designs that provide hard surface and soft surface options for use.



Policy: Identify potential funding sources to support implementation of the Plan.

Actions:

- Pursue bicycle and pedestrian related grants, including Federal Transportation Enhancement Grants, Safe Routes to School, and various trail development grants (e.g., WisDNR, county).
- Ensure adequate funding is available in the City's annual operating and capital budgets to support design, implementation and maintenance activities for bike / pedestrian facilities.

2.3 Design, Construction and Maintenance

For numerous decades in the 20th century, major streets and highways were designed and built primarily to address the mobility needs of private motor vehicles. This trend created communities where roads create barriers between neighborhoods, resulting in pedestrians and bicyclists finding it unsafe and/or inconvenient to reach nearby destinations. Over the past decade in particular, the City of Middleton has begun taking steps to modify its practices and shift toward more of a multimodal, "complete streets" focus when designing and constructing new or reconstructed roadways. In addition, the City has begun developing an extensive, multi-use trail network that complements on-street bikeways and sidewalks. Proper development and maintenance of bikeways and sidewalks are not only key factors for promoting safety—they are also an important consideration in people's decision to use their bicycles and feet for transportation and recreation.

GOAL: Ensure that Middleton's public rights-of-way (including streets and trails) are safe and convenient for bicycling and walking.

Policy: Design streets as "Complete Streets" that safely accommodate users of all ages and abilities, including pedestrians, bicyclists, transit riders, and motorists.

Action:

- Adopt by Common Council resolution a policy statement in accordance with Complete Streets (see http://www.completestreets.org/policies.html). Through this policy, the City of Middleton would commit to routinely plan, fund, design, construct, operate, and maintain its streets in a manner that creates an attractive, connected, multimodal network that balances the needs of all users, except where there are demonstrated exceptional circumstances.

Policy: Develop safe bikeway and pedestrian facilities based on current standards.

Actions:

- Continue to revise City roadway policies and design standards, including lane widths, design speeds, corner turning radii, the placement and design of crosswalks, the use of countdown timers and lead pedestrian intervals in traffic signal installations, bike lanes, and the inclusions of on-street parking, as necessary to balance competing interests of all users.
- Design all new street construction and reconstruction to meet AASHTO and ADA guidelines and other related, applicable, Federal and State design standards.
- Post and maintain in-street "Yield to Pedestrian in Crosswalk" signs in accordance with City policy.
- Modify traffic signals to include a lead pedestrian interval to give bicyclists and pedestrians a "head start" at intersections where there are a lot of pedestrian/vehicle conflicts.



- Consider the use of countdown timers and accessible pedestrian signals at intersections where bicyclists and pedestrians may have difficulty crossing the street.
- Continue to apply appropriate traffic calming techniques in locations where they would benefit bicyclists and pedestrians.
- Address and mitigate existing safety hazards resulting from outdated design standards. Examples of this include identifying and replacing inlet grates that trap bicycle wheels, and using lane markings at skewed railroad crossings to give bicyclists more space to approach tracks as close to perpendicular as possible.

Policy: Design and construct off-street bikeway and pedestrian facilities that accommodate the wide variety of users of the City's trail network.

Actions:

- Refine as necessary design standards for the shared use of off-street routes that accommodate bicyclists, pedestrians, skaters, skiers, and persons with disabilities (see Conservancy Lands Plan). To help reduce user conflicts, mark the centerline of paved trails and post signage in key locations to remind all trail users of safety precautions and proper trail etiquette.
- Provide off-street bicycle and pedestrian facilities adjacent to arterial and collector streets only in situations where it would be unsafe to locate such facilities on the street, with full consideration of the potential safety problems that such "side paths" can create (see Appendix B).

Policy: Develop or improve on-street bicycle and pedestrian facilities in conjunction with the redevelopment and reconstruction of existing roads.

Actions:

- Incorporate marked bike lanes along all arterial and collector streets to the extent practicable, particularly where no suitable parallel route exists. Bike lanes can oftentimes be established by realigning travel lanes, removing a lane, and/or narrowing a median. The City should develop roadway planning procedures to ensure that bikeways are routinely established as part of roadway construction projects.
- Make new and reconstructed intersections bicycle-friendly wherever possible, to reduce the higher incidence of bicycle crashes at or near intersections. Bicycle-friendly intersections should have appropriate lane widths, pavement markings, and adequate signal time for bicyclists to cross safely. Where appropriate, the City should include bike lanes and/or new actuated traffic signals that detect bicycles.



- Ensure that new and refurbished bridges and underpasses are safe for bicycling. Bridges and underpasses provide critical links for bicycling. It is therefore especially important that they are well designed, with safe surfaces and adequate accommodation for bicycling.

- Ensure that traffic calming projects do not compromise a bicyclist's ability to travel safely. Measures to redirect or reduce vehicular traffic and speeds should not discourage bicycling.
- Consider the use of "pedestrian refuge" crossing islands. These are raised islands placed in the center of a street at intersections or midblock to help protect crossing pedestrians from motor vehicles. Center crossing islands allow pedestrians to deal with only one direction of traffic at a time, enabling them to stop partway across the street and wait for an adequate gap in traffic before crossing the second half of the street.
- Examine potential conflicts related to diagonal parking and intersection alignments. City staff should periodically review Middleton Police Department data to identify locations where there are collisions and near-collisions between vehicles and bicyclists or pedestrians. In addition, they should investigate the feasibility of creating "reverse diagonal" parking spaces that require drivers to back their motor vehicles into on-street, diagonal parking stalls. (This maneuver would be similar to backing a vehicle into a parallel parking stall.) This could provide a better opportunity for a driver pulling out of a stall to see an approaching bicyclist as well as other motorized vehicles.

Policy: Regularly maintain bikeways and sidewalks so that they provide safe and comfortable conditions for bicyclists and pedestrians.

Actions:

- Continue the established practice of assessing sidewalks every eight years (one-eighth of the City each year) to identify and mitigate safety hazards such as heaving squares and broken edges.
- Regularly trim vegetation over sidewalks so as to provide at least eight feet of vertical clearance.
- Develop a procedure for routine inspection and maintenance of all bicycle lanes and paved trails. This includes keeping bikeway surfaces free of encroaching vegetation, sand, mud, broken glass, and other debris. (At a minimum, bike lanes and trails should be inspected on an annual basis. Ideally, this would be done using a bicycle as opposed to doing a "vehicle survey.")
- Repair potholes, repave streets and trails, and replace worn pavement markings, bike symbols, and damaged street signs as necessary.
- Adopt a policy to remove snow from all paved trail surfaces within 24 hours after the end of a snowfall.
- Review the City's 5-year street improvement program to integrate trail repair/reconstruction, or develop a separate bike path resurfacing program that is consulted during annual budget deliberations and capital improvement programming. The North Fork Trail west of Deming warrants short-term attention.



Trails must be regularly monitored to ensure hazards such as this wash-out are properly addressed.



Cracked pavement poses a danger to bicyclists in the street because it may cause them to fall or to swerve into traffic to avoid the hazard.

Policy: Avoid practices that accelerate the deterioration of bikeway surfaces.

Actions:

- Only allow the operation of heavy motor vehicles on bikeways when necessary.
- Ensure prompt repair of pavement cuts into bike lanes and trails. Pavement cuts can cause bicyclists to lose control, resulting in accidents and injuries.
- Require private contractors and utility companies that damage bikeways to promptly repair them to a specified standard.
- Use porous asphalt when possible to decrease maintenance costs and issues.

2.4 Education, Enforcement and Encouragement

If the City's bikeways and sidewalks are considered safe, convenient, and accessible, more people will feel encouraged to travel around the community by bicycle or on foot. Physical design greatly influences safety, ADA access, and convenience, but adherence to "rules of the road" and "trail etiquette" are just as vital to shaping how well Middleton is perceived to be bicycle- and pedestrian-friendly.

Bicycle and pedestrian collisions with motorists typically result from improper actions on the part of pedestrians, bicyclists, motorists, or some combination thereof. Therefore, crash reduction efforts need to include educational and enforcement programs geared to all three groups. There were 13 collisions involving bicyclists and 10 collisions involving pedestrians reported to the Middleton Police Department between 2005 and 2008. The growth of the metropolitan area and the increasing popularity of walking and bicycling make it likely that more incidents will occur without an on-going campaign to promote bicycle and pedestrian safety. Focusing educational and enforcement efforts on behaviors that most frequently endanger bicyclists and pedestrians should reduce the frequency and severity of these collisions and make more effective use of limited resources.

GOAL: Improve the skills, knowledge, and road-sharing behavior of bicyclists, pedestrians and motorists, and promote safety and convenience throughout Middleton so that residents and visitors feel encouraged to travel around the community by bicycle or on foot.

Policy: Integrate the promotion of bicycle and pedestrian safety and mobility throughout City government and its community partners.

Actions:

- Establish a committee (e.g., a Bicycle & Pedestrian Advisory Committee) to advise the City on matters pertaining to bicyclists, pedestrians (which include transit riders), and people with disabilities. Membership could include a combination of city and school officials, design experts, as well as citizens interested in working on ways to enhance bicycling and walking in Middleton.
- Familiarize key City officials with the exemplary bicycle and pedestrian safety initiatives adopted by the City of Madison and other leading communities.
- Provide periodic training for the City's transportation planners and engineers so that they can incorporate appropriate bicycle and pedestrian accommodations into City projects and their review of private sector projects, as well as monitor opportunities for grants to help fund various safety initiatives.
- Support and fund National Trails Day events to help provide trail etiquette education.



- Provide training to Police Department personnel on bicycle/pedestrian issues and laws, including the "rules of the road" for bicyclists, types of dangerous or illegal motorist behaviors that endanger bicyclists and pedestrians (and vice versa), most common causes of bicycle/pedestrian crashes, and the importance of reporting such crashes.
- Consider designating a "Middleton Bicycling Ambassador" who helps educate and encourage the public to bike and walk more, and to do so safely. This would build on the safety and encouragement programming already being done by the Middleton Police Department. An Ambassador could help give face-to-face demonstrations to kids, teens and adults and could work with community partners to identify and address safety concerns.
- Apply for grants that will help fund projects or programs that promote safety of the bicycling and pedestrian network. For example, the City received $44,000 from the 2007 Federal Safe Routes to School (SRTS) program to erect various signs, install two pedestrian refuges, and undertake an air quality study in a school drop-off zone. The purpose of SRTS is to increase the number of children who walk or bicycle to school by funding projects that remove the barriers that currently prevent them from doing so. The City should continue to actively monitor such grant opportunities.
- Challenge employers and organizations throughout Middleton to participate in Dane County's annual "Bike to Work Week" activities, a "Car-Free Day" event, or some form of incentive program.
- Work with community partners, including the Chamber of Commerce and Tourism Office, to establish a "Shop by Bike" program. Such a program encourages residents to shop locally by using their bikes for short errands, which in turn adds physical activity to their day, helps relieve parking issues, and supports local businesses.

Policy: Support and enhance existing programs that promote safe vehicle and bicycle operation, and make safety information available through schools, work sites, and general publicity efforts.

Actions:



- Work with the City of Middleton Police Department (MiPD), Middleton-Cross Plains Area School District, private schools, and various local clubs and organizations, to investigate and, as appropriate, implement other safety programs that should be taught to school-aged children as well as adults. Ideally, traditional driver's education courses should be broadened into "mobility education" courses so that people learn more about sharing the road with others, regardless of their mode of transportation.
- Support and build on existing Police Department initiatives to promote the use of bicycle helmets.
- Continue to maintain pedestrian crossing flags in high use areas, and consider expanding this Police Department-

administered program to other locations.



- Install a "911 trail marker system" to help coordinate emergency response.
- Expand bike/pedestrian safety programs as part of the MiPD's annual National Night Out in early August.
- Acquire literature promoting bicycle laws, safety tips, bike commuting, etc., for dissemination to the general public, and provide links to this information on the City's website.
- Educate property owners about keeping debris (including yard waste) off of sidewalks and out of bike lanes.
- Use signs as needed to educate motorists about sharing the road with bicyclists and pedestrians.
- Install "trail etiquette" signs to reduce user conflicts along multi-use trails.
- Expand the use of portable message centers and speed feedback displays along key routes, particularly near schools, midblock crosswalks and trail/street intersections. (The City of Middleton installed speed feedback signs in the vicinity of most schools in 2009.)
- Publicize a City Hall phone number and e-mail address for people to report maintenance needs, suggest locations for bike racks, etc.

Policy: Enforce bicycle and pedestrian rules and regulations to reduce violations and crashes, and improve reporting initiatives.

Actions:

- Analyze bicycle, pedestrian and vehicle crash records and focus enforcement efforts on specific problem areas. If resources are limited, focus these efforts on traffic violations that are most likely to lead to personal injury.
- Utilize community volunteers, such as through the Police Department's Volunteers in Policing (VIP) program or the Volunteer Trail Stewards (VTS), to help monitor areas where violations are known or have been reported to occur.
- Investigate new approaches for reporting bicycle and pedestrian crashes. Emphasize to the public that it is important to report all incidents so that problem areas can be identified before a serious injury occurs.
- Conduct and analyze trail surveys and user counter data.

Policy: Make bicycle parking as convenient as possible.

Actions:

- Install and maintain modern bicycle racks designed for short-term parking in highly visible locations, including near business entrances. The City installed about half a dozen red bike racks on public land in the downtown area during the spring of 2009. Additional locations should be identified around the community where bicyclists are likely to congregate, although business and schools should also be encouraged to provide (or upgrade) bike racks on their own properties.
- Work with larger employers and owners of multi-unit residential buildings to establish long-term bicycle parking areas that offer a higher level of security, including lockers or indoor

parking. Bike lockers provide an added level of security and convenience, protecting the bicycles from theft, vandalism and weather.

- Add bicycle parking requirements to the zoning ordinance. Requiring developers to include bicycle parking with new or renovated buildings is a cost-effective way to increase bicycle parking throughout the City. This in turn would allow the City to spread its resources to other areas. (See Appendix A for more information on bicycle parking standards.)
- Develop and maintain guidelines for bicycle rack installation and make them available to business owners and developers.
- Remove abandoned bicycles that are blocking the public right-of-way, and work with the private sector to ensure that abandoned bicycles are not taking up bike rack space at businesses and multi-family complexes. Abandoned bicycles tend to rust or get pilfered for parts, which in turn deters others from using the bike parking area. They also can take up valuable parking space.



Policy: Promote programs that reduce the incidence of theft and other crimes against bicyclists.

Actions:

- Continue the City's existing bicycle-licensing system.
- Periodically patrol the City's off-street trail system, focusing in particular on bridge underpasses, remote trail segments, and routes near schools.
- Follow good land management practices to remove not only invasive species, but also to reduce the number of shrubs which could be used for hiding.

Policy: Improve public awareness of the City's bicycle & pedestrian system and initiatives.

Actions:

- Provide a comprehensive bicycle and pedestrian system map and wayfinding signage system along trails and place at other strategic locations throughout the City.
- Place bicycle and pedestrian system maps in public buildings (including schools), the Middleton Chamber of Commerce, large employers, bike shops, and fitness centers.
- Encourage public participation at appropriate committee meetings and forums.
- Publish an annual report summarizing activities and accomplishments pertaining to walking and bicycling in Middleton.
- Report on key bicycling and pedestrian issues using the City's spring and fall newsletters, the City's website, and its free E-government subscription service. Information could also be posted in kiosks and in public buildings. Examples of information that could be communicated include the availability of new or improved bikeways, information about the benefits of walking and bicycling and its relationship to zoning and land use.
- Write a periodic "bicycle/pedestrian column" for the *Middleton Times-Tribune*.
- Encourage businesses to accommodate the needs of employees who choose to bike or walk to work (for example, by making available showers and changing areas).
- Investigate City co-sponsorship of events that promote walking and bicycling.
- Collaborate with other area communities and their conventions and visitors bureaus to promote Middleton and the greater Madison area has a destination for bicycle tourism.
- Encourage local bike shops and hotels to make bicycles available for rent.

3 SYSTEM PLAN: BUILDING MIDDLETON'S BICYCLE AND PEDESTRIAN NETWORK

3.1 CITY-WIDE SYSTEM PLAN

The City of Middleton's Bicycle and Pedestrian System Plan is illustrated in the fold-out Plan Map. This map is intended to provide an overall view of existing and proposed bicycle and pedestrian facilities, whereas the text in this chapter conveys more of the details. Collectively, the map and text represent the City's vision for making these two transportation modes an integral part of the community.

Because of their importance to the network (both in terms of location and route continuity), the recommendations of this plan center on the four key bicycle and pedestrian corridors:

- The **Pheasant Branch Trail**, which is the east-west spine (main link) and centerpiece of the City's off-street bikeway network. (Section 3.2.1)
- The **Railroad Corridor**, which is planned to connect Middleton with Madison as well as communities to the west along the future "Good Neighbor Trail". (Section 3.2.2)
- **Century Avenue**, the only direct route that connects Middleton northeastern neighborhoods with the rest of the community. (Section 3.3.6)
- The **Park Street Corridor**, the City's new, on-street, north-south route through the heart of Middleton. (Section 3.3.14)

Section 3.2 and 3.3 describe existing conditions and planned improvements for each of these four corridors **as well as for numerous other streets and trails within the city.** Section 3.4 focuses on sidewalks.

If all the components shown in the System Plan are implemented, then nearly every Middleton bicyclist will be able to reach at least one of the four main bikeways within a short five minute ride of his or her residence or place of employment. Pedestrians would also realize substantial benefit to their ability to walk safely around the community, including to neighborhood schools and shopping areas. Priorities and estimated costs for the development of the comprehensive bicycle and pedestrian system illustrated in the Plan Map are outlined in Chapter 4, Implementation.

3.2 OFF-STREET TRAIL NETWORK

This section provides detailed bicycle and pedestrian facility improvements for **multi-use segments** of the City's trail network. Some of the City's unpaved trails are restricted to pedestrians only and have a surface or width that is intended to discourage other users---for example, portions of the loops around Stricker and Tiedeman Ponds, certain Conservancy trails, and most of the trail network through Middleton Hills. Multi-use trails consist of either paved or unpaved surfaces and accommodate bicyclists and pedestrians engaged in a range of activities. They are not intended for motor vehicle use, although a police or maintenance vehicle may periodically travel on them. Bicyclists who use trails for transportation / commuting proposes should recognize that these routes are designed for slower speeds than streets.

The improvements identified below (and depicted on the Plan Map) are intended to help establish and improve the network of on- and off-street facilities so that bicyclists and pedestrians have convenient connections to major destinations, recreational trails, and neighboring communities.

The City considers most of its shared-use trails to be regionally-significant trails that serve the needs of a wide range of users, including bicycle commuters. Regional trails provide intra-urban and inter-urban links for pedestrians and bicyclists. For example, the Pheasant Branch Trail will connect the Good Neighbor Trail that is planned to link the communities along Black Earth Creek to the west with the North Mendota Trail that is planned by Dane County to link the Pheasant Branch Conservancy with Governor Nelson State Park to the east. Between Deming Way and the Beltline, the Pheasant Branch Trail also provides access to the Highway 12 Trail, which extends northward toward Springfield Hill. In the future, the City envisions an overpass across Highway 14 to connect the Pheasant Branch and Highway 12 Trails with Downtown Middleton and a path extending along the rail corridor eastward into Madison.

Trail Surface:

The surfacing material on shared-use paths significantly affects which user groups will be capable of negotiating the terrain. Shared-use paths that have been built using crushed aggregate (stone) generally are unusable by inline skaters and tend to slow down the speed of bicyclists. While they are generally more suited to seasonal (6 to 8 month) use, they require more frequent maintenance to address erosion or loose gravel issues. Paved surfaces, which are generally used where bicyclists or inline skaters are common users, provide better all-weather conditions and require less frequent maintenance. Trails paved with porous asphalt are less dense than regular asphalt and, when properly designed, enable water infiltration. Safety along such trails is enhanced year-round because there are no puddles in the summer and less snow and ice accumulation in the winter. Porous asphalt also provides a softer surface for runners compared to traditional asphalt.



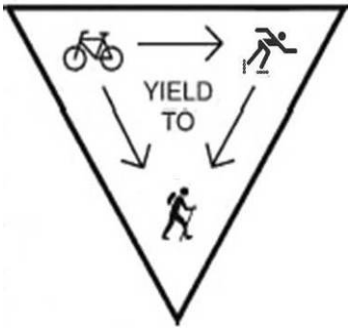
Ruts and washouts result from water runoff across a gravel trail. This tends to lead to frequent maintenance needs.



Transition from porous asphalt to gravel along West Trail. Because of its absorptive quality, porous asphalt dries more quickly following rain or snow.

Reducing user conflict:

While trail surface materials and design can mitigate user conflicts on shared use trails, these conflicts can be a result of many other factors and can be managed in a variety of other ways. To reduce user conflicts along trails, the City should undertake various facility improvements.



Actions pertaining to all shared-use trails:

- Install 11”x17” signs indicating trail etiquette at all trail heads and at key intersections, to help reduce conflicts among different user groups (see example and photo to the right).

- Apply lane markings, including a yellow centerline along paved trails and center markers along gravel trails, to help guide users.

- Pursue the development of an off-road site or trail designed specifically for off-road recreational bikers to provide for a more "fast paced" recreational facility for bicycle users. This could be either an "adventure bike trail" or a more constrained recreational area. The development of a "Pump Track" facility (for example, see www.leelikesbikes.com) was raised during the initial public meeting as a means of creating space for recreational mountain biking. The location of this facility should be accessible to the existing or proposed bicycle trail network to ensure safe access to and from the facility. One possibility is a portion of the Pleasant View Golf Course property. The location should be coordinated with the Parks, Recreation and Forestry Commission.

- Install gates at trail entrances to discourage motor vehicle trespassing while retaining ADA access and bicyclists with trailers to travel safely through the opening. Gates must be designed so that drivers of maintenance and emergency vehicles can easily maneuver through them. Some existing gates have too narrow of an opening. In other locations, gates or bollards are lacking altogether (for example, at access points to trails at Firefighters' Park, Capitol Ice Arena, and Deming Way). The Public Lands Department is in the process of addressing these issues.



Examples of trail etiquette signs.
(Source: Washington Area Bicycle Association)



City staff have applied these markings along trails in various locations around Middleton.



Without a gate, it is easy to drive a vehicle from this parking lot onto the North Fork Trail.

3.2.1 Pheasant Branch Trail

Continue to make improvements to the Pheasant Branch Trail so that it serves as the east-west spine and centerpiece of the City's bikeway network while designating other areas for more passive use.

As was identified in the 1999 Bicycle & Pedestrian Plan, and consistent with the Open Space Plans adopted by the City for its Parks and Conservancy Lands systems, the backbone of the City of Middleton's bicycle and pedestrian trail system is the Pheasant Branch Trail network. The east-west, multi-use route consisting of the North Fork, Creek Corridor, and Conservancy Loop trails connects the Capitol Ice Arena, Quisling Park, and Firefighters Memorial Park on the far west of the City with the northeastern neighborhoods of Northlake and Orchid Heights. This distance spans nearly six miles and is interrupted by only two at-grade street crossings (Century Avenue and Park Street). The South Fork trail connects this east-west route with Greenway Center via Discovery Springs.

Many of the City's activity and employment centers are located along or within a few blocks of the Pheasant Branch Trail network, including the middle and high schools, the aquatic center, several community parks, and numerous large employers and service centers. Several segments of the trail play a key role in facilitating circulation within the community. The west segment of the Conservancy Loop provides the most direct and level route between the Century Ave./Branch St. intersection and Whittlesey Road (the Pheasant Branch Ridge neighborhood); the east and north branches of the trail loop provide residents of northeast Middleton with direct connections to the rest of the city, including the schools that serve their neighborhoods; the trail segment extending west from the Century/Branch intersection provides a direct and comparatively level way to reach Park Street (versus using Century Avenue).

Because of its continuous route through the heart of the community, the Pheasant Branch Trail network provides shared recreational use for pedestrians, bicyclists, birders, joggers, dog-walkers, skiers, and in-line skaters of all ages and skill levels while at the same time accommodating a growing number of bicycle commuters seeking an alternative to traveling along higher-speed roadways. Utilization is heavy along most segments of the trail network, particularly east of Parmenter Street and along the loop that encircles the conservancy. (In 2009, the City installed counters in key locations to begin automatically tracking trail usage.)



To facilitate all-weather use, a 10 ft. wide paved surface exists west of the Century Ave. / Branch St. intersection. The segment between Parmenter and Century consists of porous asphalt and a gravel shoulder so as to better accommodate bicyclists, runners, and skiers. Aside from a few sections of asphalt and boardwalk (including an 800 ft. segment, one of the longest in Dane County), the multi-use routes north of Century Avenue consist of a crushed stone surface ranging in width from 8 feet to 10 feet.

While acknowledging the regional nature of the Pheasant Branch Trail and its use by a range of users, the City wishes to remain sensitive to concerns raised about perceived ecological impacts, potential user conflicts, and changes to the ambiance of the Conservancy. There have also been numerous requests from trail users who desire more passive recreational opportunities. **As a result, this plan calls for leaving all existing Conservancy trails north of Century Avenue unpaved.** Bicyclists who live in northeastern neighborhoods will continue to be allowed to use multi-use trails in the conservancy, but they will need to find alternate routes during snowy or very wet conditions. In the short-term, Century Avenue and Balzer Road (a narrow township road located half mile north of Middleton) will continue to serve as the only two paved connections with the rest of city. (Section 3.3 describes actions that should be taken immediately to improve bicycling conditions in the Century corridor). Looking long-term, the completion of Belle Fontaine Blvd. and a paved North Mendota Trail will provide additional connections for all-weather bicyclists traveling between northeastern neighborhoods and the rest of the city. However, it could be at least a decade before these alternate routes are fully constructed.

To develop the trails as they exist today, the City spent approximately $680,000 over the past decade on the Pheasant Branch and North Fork trail networks. State grants covered the remainder

of the approximate $915,000 total.[2] Several minor projects (linkages) are still planned in order to enhance bicycle and pedestrian access to these two trails.

Actions:

- Where space permits along paved trails, add a 2- to 3-foot-wide, level, unpaved shoulder with a compacted surface (consisting of native limestone screenings) on at least one side to accommodate joggers and others who prefer it. To minimize user conflicts between bicyclists travelling in different directions and with slower moving trail users, a 4" yellow centerline should be added to delineate separate lanes.

- When paving trails, utilize a "green product" and sustainable porous asphalt surface to mitigate water run-off and erosion. Middleton's Public Lands Manager has determined that, based on late-winter field experiments and consultation with paving specialists, there is faster snow melt and less ice build-up on porous asphalt paths. When trails erode, become muddy, or have loose materials on them, they become less safe. This in turn encourages users to go off-path, causing damage to natural resources and further increasing maintenance costs. Porous asphalt also can provide a more desirable running surface because it contains more air voids, is less dense, and has been scientifically found to be softer than hard packed gravel paths or regular asphalt paths. Examples of where porous asphalt has already been used include the recently completed Pheasant Branch Trail segment between Parmenter and Century, paths at Parisi Park and Firefighters Memorial Park, the path connection with Dahlia Court, and the parking lots at Metropolitan Community Park Dog Park and the Pheasant Branch Conservancy west overlook.



- Retain gravel paths (ideally 10' wide) on the existing Pheasant Branch Conservancy Loop Trail to provide for a more serene environment for passive recreation and runners. While bicyclists will continue to be able to use this loop (except during wet or snowy conditions), their speeds are likely to be reduced by the trail surface type, width, additional trail markings, and signage. An unpaved surface likely reduces the number of people who use the trail loop.

- Consider the needs of users with mobility impairments, including wheelchair users. Paths must have flat enough slopes (grades) so that they do not present a hazard. They should also have a firm and stable surface. Asphalt (including porous) and concrete are firm and stable in all conditions. Other shared use path materials, such as crushed limestone, are firm and stable for much of the year, but they tend to be less firm and stable after a heavy rainfall or during the spring thaw. Existing trails that have improper slopes (either vertical or horizontal) should be reconstructed to at least minimum design standards. This includes a short section of the North Fork Trail west of the Deming bridge, where there is an unsafe cross-slope. Nearby trail surface has also deteriorated.

[2] This total does not include the cost to construct bridges in conjunction with road projects, nor does it include development of the South Fork Trail (including the links through Discovery Springs, Greenway Center, and near Esser Pond).

New or improved connections to the existing trail network:

The Pheasant Branch Trail can be accessed at every street crossing and, of course, from connecting trails. A good example is the side path along the east side of Parmenter Street, which connects the trail with Donna Drive. The planning process identified several additional desirable sublinks.

Actions:



- Construct a short but critical 10' paved trail along the west side of Deming Way, between Highway 14 and the Esser Place development. This is a glaring gap in the South Fork Trail network because there are no bike lanes or sidewalks in this block of Deming and the west leg of the Deming & Highway 14 intersection lacks a suitable crosswalk nor does it have pedestrian-activated signals. City staff have obtained official permission to modify the railroad crossing, but design and coordination work needs to be completed with the two property owners to the west from whom right-of-way or an easement must be obtained. This "missing link" should be constructed as soon as possible, either as a "stand-alone" project or in conjunction with a Federally funded project to construct a nearby transit center and reconstruct Deming Way so that it travels beneath the railroad corridor.

- Construct "Cayuga Connection" along the east side of the Highway 12 ramps to connect the Parmenter/Discovery roundabout with Downtown Middleton. This 10' paved trail link will provide trail users with a way to reach downtown without traveling along Parmenter Street. It will also provide access to vacant land that could potentially be used for a mini-park serving the residences west of Parmenter Street. Care must be taken to coordinate trail design and construction with WisDOT and adjacent property owners, including the Middleton Fire District. This project also requires design modifications to the University / Cayuga intersection.



- Replace the sidewalk with a 10' wide paved side path along the west side of Park Street to connect the trail with Kromrey Middle School and the Aquatic Center and Middleton High School. The existing sidewalk is narrow and heavily used, particularly by groups associated with both Kromrey and MHS. Grading, tree removal, and a retaining wall would likely be necessary to expand the sidewalk to the west, but this would have the benefit of improving sightlines between the western trail approach to Park Street and drivers approaching from the south via Park Lawn Place.

- Establish a new 10' wide shared-use trail connecting the southern end of the overlook parking lot near the Pheasant Branch Road / Gaylord Nelson Road intersection with the west segment of the Conservancy Loop trail. The existing pedestrian-only trail is only 6' wide, has steep sections that limit access to the conservancy, and is subject to frequent erosion. A properly designed

trail will accommodate ADA and bicycle access while blending better with the natural topographical features just east of Pheasant Branch Road. The City will attempt to minimize potential erosion without the use of porous asphalt.

- Construct a new, 10' wide shared-use trail segment (with boardwalk section) connecting Marina Court and Allen Court with the southeast segment of the Conservancy Loop. This would enhance access to the Conservancy and its trail system by residents of the multi-family communities near the Century and Allen intersection. At the same time, it would provide residents of northeastern neighborhoods with a more direct connection to the Middleton Springs commercial area. This project would also likely reduce trail access/egress at Harbor Village Condominiums by non-residents.

3.2.2 Rail Corridor Trail ("Good Neighbor Trail")

Develop a path along the WisDOT / Wisconsin & Southern (WSOR) railroad corridor to connect Middleton with the existing bike network east of Whitney Way as well as the future "Good Neighbor Trail" extending westerly through communities along Black Earth Creek.

The rail corridor runs east-west through southern Middleton, connecting downtown Madison, the University of Wisconsin campus, and the Hilldale area with communities to the west of the City along Highway 14 (see the Plan Map). In 2007, the City of Madison conducted a study and design of a trail adjacent to the rail corridor along Campus Drive. This trail was constructed in 2008 and, for now, connects rather indirectly with the Blackhawk Path extending farther west to near Whitney Way. In the next few years, Madison plans to extend the Blackhawk Path across Whitney Way and northwest to the City of Middleton. The rail corridor has been identified by both cities and Dane County as a key regional trail corridor connecting Madison with communities to the west. In fact, representatives from Middleton, Mazomanie, and the communities in between have been meeting regularly for over a year to discuss the creation of a shared-use "Good Neighbor Trail" along the rail corridor.



Developing a "rail with trail" facility requires adhering to facility design standards or guidelines related to shared use paths, pedestrian facilities, railroad facilities, and/or roadway crossings of railroad rights-of-way. In addition, rail operators can set requirements for setbacks or buffers between active rail lines and trail facilities. The WSOR/WisDOT mainline to mainline offset distance minimum is 18 feet, and the shared use path setback is 11 feet minimum (measured from the centerline of the rail to the edge of path). It is expected that the WSOR will require the same offset distance for a trail within the City of Middleton. The City has had preliminary discussions with railroad officials.

The planning and implementation of a shared use trail along the existing rail corridor will need to address a variety of issues related to future track enhancements and the potential implementation of commuter rail. These issues include roadway crossings; the need for trestles, bridges, or tunnels (if required); environmental constraints; trailheads and parking areas; landscaping; drainage; signs and marking; possibly fencing and lighting; and liability.

Estimates costs for the development of the Rail Corridor Trail are included in Chapter 4 and in an appendix to this plan. In order to begin the planning and design work for this trail, the City should:

Actions:

- Undertake a topographic study of the corridor, collecting and collating necessary data on existing structures and utilities. This will provide a base map allowing for the general layout planning, including the identification of obstacles to be considered through the design process.

- Coordinate additional meetings with representatives of the Wisconsin Southern Railroad (WSOR) and the Wisconsin Department of Transportation to explain the project and to verify the design standards they would require for the path to co-exist with the active rail line on their property.

- Work with City of Madison policymakers, street engineers, and the Madison Area Transportation Planning Board to ensure that trail planning, design and funding is well coordinated.

- Integrate the trail with adjacent Park & Ride facilities. In particular, the southwest quadrant of the Highway 14 and West Beltline interchange has been identified as an ideal location for a multimodal Transit Center. In addition to being at the junction of two major highways and well suited to support regional transit operations, this site could serve as the junction for the future rail corridor trail (Good Neighbor Trail) and an extension of the Highway 12 trail, which currently ends at the Pheasant Branch Trail just north of Discovery Drive. For this reason, the City is planning for a bridge for pedestrians and bicyclists across Highway 14 just west of the Beltline. Very few locations in the region have such a high potential for integrating autos, transit, bicycle and pedestrian facilities in a way that enables people to transfer seamlessly between different modes of transportation.

3.2.3 Lakeview Park Trail Connections

Develop a path linking the Pheasant Branch Conservancy with community parks to the south.

For the first time, Middleton's Bicycle and Pedestrian Plan envisions connecting the Pheasant Branch Conservancy with Lakeview Community Park and Madison's Marshall Park. Lakeview Park is already bisected by paved trails that connect the park with the streets that encircle it to the north, south, east and west. Redevelopment of various properties in the Middleton Springs neighborhood may present an opportunity to establish a trail that connects the Lakeview trailhead at Maywood Avenue with Century Avenue, which is across the street from the Conservancy. Such a trail, particularly if it's constructed with a vegetative buffer, could help spur interest and activity in the Middleton Springs area. While crossing Century would present a challenge, it would be easier to do so where the boulevard (median) exists along Century at Middleton Springs Drive. At a minimum, well-marked crosswalks and signage would be necessary near this intersection. A pedestrian-activated signal system may also be desirable here because, at the same time as providing trail continuity, an improved



crossing in this location would improve the ability of residents who live south of Century to access the commercial area on the northwest quadrant of the Century / Allen Blvd. intersection.

South of Lakeview Park, this Plan proposes routing trail users across Allen Blvd. at an improved intersection with Mendota Avenue in order to reach Marshall Park and a multi-use trail leading into Madison. The Allen/Maywood intersection should be considered for installation of traffic signals or, at a minimum, a pedestrian-activated (e.g., HAWK) signal system. The trail would skirt the soccer field and lead into Marshall Park, from which it would be ideal if it could connect with Lake Mendota Drive, a low-volume street that leads through Shorewood Hills to the UW campus. This direct route would require traversing private property in Madison. Nevertheless, Middleton should welcome any efforts by Madison and affected property owners to make such a route a reality. Alternately (or in addition), the two cities could work with property owners to establish a trail linking Marshall Park with Overlook Pass, which would lead to the path along University Avenue.

Though not shown on the Plan Map at this time, another off-street trail could extend along the east side of Allen Blvd., connecting Marshall Park with the commercial area just south of Harbor Athletic Club. Nearly all of this street frontage is publicly owned. Extending such a trail even farther north might be possible as well, but then path users would need to cross the busy east leg of the Century/Allen intersection in order to access the Pheasant Branch Conservancy.

Actions:

- Improve access points (ADA ramps) serving Lakeview Park trails, particularly at Branch St. and Maywood Ave.

- Ensure that redevelopment discussions for the Middleton Springs area include consideration for developing a trail and "greenway corridor" connecting Lakeview Park with the Pheasant Branch Conservancy.

- Pursue improvements at the Allen / Mendota intersection so that trail users can more safely cross Allen Blvd. (See Allen Blvd. in Sec. 3.3 for more details.)

- Encourage Madison officials to identify opportunities to extend a trail from Marshall Park southeast to Lake Mendota Drive, and/or possibly south to Overlook Pass.

3.2.4 Future Trails in Middleton's Growth Areas

Develop paths in conjunction with land development and conservation north, east, and west of the City to connect with existing trails, proposed developments, and regional destinations.

As the City of Middleton grows northward in conformance with intergovernmental agreements with the Towns of Springfield and Westport, the City is planning for the development of trails to serve new development and environmental corridors. The Misty Valley subdivision west of High Road provides a good example of how Middleton expects developers to construct planned trails at the time the rest of the neighborhood's infrastructure is installed, before residents begin occupying new homes. This approach enables prospective lot or home buyers to have a better understanding of the bicycle and pedestrian facilities that serve their area, and it eliminates the potential for future residents to oppose trail improvements after they have moved into the neighborhood.

The Plan Map shows anticipated trail connections in the City's growth area, but their exact locations will be determined as adjoining neighborhoods are designed. The following is a description of the shared use, paved trails that have been identified in this plan.

On the north side of Middleton, the tentatively named "**Misty Valley Trail"** will connect the existing Highway 12 Trail with the west segment of the trail encircling the Pheasant Branch Conservancy. This segment was first identified in the city's 1999 Bicycle & Pedestrian Plan. The portion through the Misty Valley subdivision was constructed in 2008. This 10' wide paved trail currently terminates at High Road at its intersection with Caneel. A paved sublink of the trail is anticipated to encircle Graber Pond, and a paved sublink of this trail needs to extend south toward the Graber Road/Lynn Street intersection so that residents of this developing neighborhood have a safer connection with the rest of the city. (Such a link would provide pedestrians and bicyclists with an alternative to the gap in sidewalk that currently exists along High Road where the adjoining land is not within Middleton's corporate limits. Misty Valley residents requested a better connection with the rest of the city during the planning process.)

To the west of the Misty Valley subdivision, the trail will serve a planned mixed-use development and travel along the south side of Belle Fontaine Blvd. as it approaches Parmenter Street and the Highway 12 Trail. Due to anticipated growth in traffic volumes at this intersection and the raised elevation of Parmenter, this plan recommends that the trail travel through a box culvert beneath the south leg of the Parmenter/Belle Fontaine intersection. East of High Road, a paved trail could connect the neighborhood with the Pheasant Branch Conservancy by either running along a berm just north of residences along Whittlesey Road in the Pheasant Branch Ridge subdivision or by running along the north side of an existing tree line which partially demarcates an area with wetter soil conditions. This latter location is currently outside of the city limits and would likely be better received by homeowners along Whittlesey, but it may not be as easy to construct.

As envisioned in Dane County's 2006-2011 Parks & Open Space Plan, the **"North Mendota Trail"** will link Middleton's trail system with Governor Nelson State Park and the Schumacher Farm near Waunakee. From its connections with the Misty Valley Trail at High Road and the north segment of the Conservancy Loop west of Frederick's Hill, the North Mendota Trail will extend east along the northern edge of the Northlake subdivision[3] before crossing Highway Q (ideally via an overpass due to traffic volumes and topography) and heading into the planned Community of Bishops Bay development. Ideally, the trail will be constructed within a wide natural corridor to buffer trail users and adjacent residents from one another. For the most part, the plan map depicts the route that is preferred by the developer as of July 2009. However, near the eastern end of the Bishops Bay development, the map identifies a more direct route to the CTH M underpass that was constructed by Dane County in 2005 in anticipation of future construction of the North Mendota Trail.



[3] A 10 ft. wide bike path easement exists across the northern border of the northernmost tier of lots in the Northlake subdivision. This easement was put in place in 1995 at the time of subdivision approval to help convey to lot buyers that an east-west path would some day be located in this area. Additional land should be set aside from the adjacent farmstead in order to preserve a wider corridor to accommodate a paved multi-use trail of at least 10 ft. in width.

Based on public feedback provided during the planning process, this plan calls for the North Mendota Trail to extend farther west than previously planned in order to connect with the Misty Valley Trail at the High/Caneel intersection. The purpose for this connection is to maintain a continuously paved trail connecting western Middleton with Governor Nelson State Park. From a regional perspective, the North Mendota Trail will function similarly as the Capital City Trail does on the south side of the Madison metropolitan area. Trail users desiring a paved surface would be able to use the North Mendota, Misty Valley, and Highway 12 Trails in order to travel between the state park and the "trailhead junction" near the confluence of the north and south forks of the Pheasant Branch Creek (between Deming Way and the Beltline). The Pheasant Branch Trail also provides a connection for people traveling between these locations, but about half of that route is envisioned to remain unpaved.

Farther north, the tentatively named **"Quarry Trail"** is intended to connect the northwestern corner of the Pheasant Branch Conservancy with the ridge abutting the east side of the Yahara quarry before dropping in elevation to link with the Highway 12 Trail just south of Highway K. Due to anticipated traffic volumes, this plan recommends a grade-separated crossing in the location where the trail crosses the future extension of Belle Fontaine Blvd. It will likely be at least five years before any portion of the Quarry Trail is developed. As was stated for the North Mendota Trail, ideally developers will make the paved trail a centerpiece of their neighborhoods by locating it within a natural corridor at least 200 feet in width and providing sublinks with hilltops, parks, and any other public attractions that develop in this area.

To the north of the Pheasant Branch Conservancy, this plan identifies a paved trail connecting **Metropolitan Community Park** (also known as the Metropolitan Refuse District site) and points beyond (including potentially Waunakee) with the north segment of the Pheasant Branch Conservancy Loop. The trail could follow in part the ridgeline extending north of Frederick's Hill before dropping in elevation west of the hill, where it would intersect with the North Mendota Trail extending east to Governor Nelson State Park. As with the Quarry Trail, the "MCP Trail" could have a grade-separated crossing where it intersects with future Belle Fontaine Blvd. and a planned road that connects with the Northlake subdivision (this latter road will carry less traffic, which makes having a grade-separated less necessary). Here again, the ideal trail design would be to locate it within a wide natural corridor, consistent with planning that has taken place as part of the North Mendota Parkway discussions with Dane County.

The plan map also shows a trail branching northward across Oncken Road to connect with Dorn Creek and points beyond, as well as links extending southward to provide better connections with existing and proposed neighborhoods. The only other shared use trail that is specifically proposed in City's northern growth area is the partial loop around the **Larwood Hills** subdivision in the Town of Westport, just south of Balzer Road. This loop was found in one of the plans consulted during preparation of this plan.

As they review developer plans, the City and Town of Westport should consult with the Dane County Parks Division on the design of these trails and work to ensure that the number of street crossings are minimized, particularly if the trails are located as a side path along any of the roadways. Side paths can create safety issues at intersections with streets and driveways. (See Appendix B for more information about side paths.)

West of Middleton, this Plan anticipates the extension of four trails. The paved portion of the **North Fork Trail** currently terminates at the Tallard Conservancy west of Middleton Municipal Airport.

During Fall 2009, the Town of Middleton constructed an unpaved extension of this trail west to Capitol View Road. This plan anticipates that this trail will eventually extend farther west to several Town subdivisions and possibly Sunset Ridge Elementary School.



To the south, a trail currently ends on the southern edge of the developing **Hidden Oaks** subdivision. This trail is envisioned to extend southwesterly across undeveloped Dane County parkland to connect with the proposed Good Neighbor Trail and the Erdman property. This would create a direct, nearly uninterrupted connection between Park Street in Middleton and the Black Earth Creek watershed. However, this trail extension will require a grade-separated crossing of Highway 14.

The "**Good Neighbor Trail"** itself is planned to extend generally along the rail corridor, connecting Middleton with Cross Plains, Black Earth, and Mazomanie. A group of residents and officials of these communities has been meeting for over a year to begin planning for the development of this shared use trail. The present design concept is to construct a 10 ft. paved trail alongside a 12' gravel surface to accommodate a wide range of users including equestrians, snowmobilers, bicyclists and pedestrians.

Finally, the City of Middleton is planning to extend the **South Fork / Greenway Center Trail** westward across Pleasant View Road and along the northern edge of the Pleasant View Golf Course. (This could be done in conjunction with development of a 10-acre parcel on the east side of the road.) The trail would also connect with the Erdman property and other lands in the Town of Middleton. A few contours will be necessary for the trail to traverse the hill between the south fork and Pleasant View Road. A less desirable alternative would be to route the trail westward along Greenway Blvd. and then north along Pleasant View Road to the driveway serving the golf course.

Actions:

- Work with land owners and prospective developers to identify opportunities for reserving trail corridors that provide access to natural amenities (such as vistas, woods, and prairies) while at the same time establishing routes that help trail users circulate safely and conveniently around the community.
- Consult with the Dane County Parks Division on the design of trails and work to ensure that the number of street crossings is minimized, particularly if the trails are located as a side path along any of the roadways.

3.3 On-Street Bicycle and Pedestrian Network

This section details planned bicycle and pedestrian facility improvements for the City's major street corridors. Most people who use their bicycle for commuting or errands will travel on city streets as long as they feel safe and adequately separated from motor vehicles. Streets enable bicyclists to travel at a higher speed than on trails, and they usually provide a more direct route between origin and destination.

Since the adoption of the 1999 Bicycle and Pedestrian Plan, the City has made significant strides toward developing suitable bicycle facilities along arterials and collectors—generally in the form of marked bike lanes. However, several key routes lack adequate bicycle and pedestrian

accommodations and therefore fall short of a "Complete Street" (see Sec. 2-3). Nearly all of the streets listed below (and depicted on the Plan Map) are arterial or collector streets that carry a higher volume of traffic than local, neighborhood streets. Routes not listed in this section can be assumed to be suitable for bicycling due to their low traffic volumes or because they already have adequate facilities (e.g., marked bike lanes). Carrying out the actions identified in this section will give bicyclists and pedestrians safer and more convenient connections to major destinations, shared use trails, and neighboring communities.

3.3.1 Allen Boulevard / CTH Q

This four-lane boulevard, which carries over 20,000 vehicles on an average weekday, is a key route for bicyclists who are traveling around Lake Mendota. As is the case with Century Avenue east of Allen, there is enough room to mark 4 ft. bike lanes in each travel direction. A continuous sidewalk and path system (connecting Century and University) is currently limited to the west side of Allen.

To mitigate the barrier presented by this relatively high volume corridor, this Plan identifies two intersections—Maywood and Mendota—where, at a minimum, some sort of pedestrian-activated signal system would be useful. Alternately, the installation of traditional traffic signals could also help drivers, bicyclists and pedestrians maneuver onto or across Allen at these intersections.

KEY INTERSECTIONS ALONG ALLEN BLVD. CORRIDOR

Allen Blvd. and Century Ave.: See Century Ave. section.

Allen Blvd. and Maywood Ave.

Action:

- Plan for the installation of a traffic signal in conjunction with redevelopment of the former Sentry grocery store and other properties in the Middleton Springs area. This will help pedestrians and bicyclists travel between residences and commercial establishments on both sides of Allen.

Allen Blvd. and Mendota Ave.

Actions:

- Review and update (if necessary) existing engineering studies (including a warrants analysis) to determine whether a traditional signalized intersection might be justifiable.
- At a minimum, install a pedestrian-activated (HAWK) signal system to help pedestrians and bicyclists travel between Lakeview Park west of Allen and Marshall Park and the soccer fields east of Allen. This intersection is also the key linkage between trails on both sides of Allen Blvd.

3.3.2 Belle Fontaine Boulevard and Other Streets in Northern Growth Area

The City of Middleton has incorporated bicycle lanes into the ultimate design for the entire length of Belle Fontaine Blvd., which is being built in conjunction with adjacent development. Upon its completion, which probably won't happen for over a decade, Belle Fontaine will connect Parmenter Street (at the Schneider intersection) with CTH Q. This route will help relieve (or at least reduce the increase in) traffic along Century Avenue and Balzer Roads. In the short-term, only one side of Belle

Fontaine is being constructed, meaning bicyclists will not have marked bike lanes until the street is fully built out. The only section built to date is in the Misty Valley subdivision west of High Road.

Another major (collector) street is planned to connect Belle Fontaine with the Northlake neighborhood and CTH Q south of the Larwood Hills subdivision. This street could also directly serve the planned Bishops Bay development. For these reasons, the street should be designed with bike lanes to facilitate circulation north of the Pheasant Branch Conservancy.

Actions:

- Plan for the construction of the other half of Belle Fontaine Blvd. as traffic volumes warrant, but before the route becomes hazardous to bicyclists.
- Capitalize on opportunities where natural topography could facilitate grade-separated trail crossings to accommodate the planned "Quarry Trail" and "MRD Trail" (see Section 3.2.4). At a minimum, any on-street trail crossings need to be carefully designed so that they are as safe as possible with minimal disruption to trail continuity.
- Plan for bike lanes along the collector street that is planned to connect Belle Fontaine with the Northlake subdivision and CTH Q.

3.3.3 Blackhawk Road

Blackhawk Road is a popular "urban escape route" for bicyclists because it carries lower traffic volumes than the adjacent parallel routes of Old Sauk Road to the south and U.S. Highway 14 to the north. A portion of Blackhawk forms a boundary between the cities of Madison and Middleton. In June 2009, the City of Madison (with Middleton's consent) authorized the reconstruction of Blackhawk Road with bicycle lanes from its intersection with Pleasant View Road west to Rose Court. This work should be completed by Fall 2010. The Town of Middleton's portion farther to the west was recently rebuilt without designated bike lanes, but they may consider adding lanes as a nearby school site develops. For the foreseeable future, the City of Middleton does not need to take any action to ensure that the needs of bicyclists and pedestrians are addressed along its portion of this route.

3.3.4 Branch Street

Portions of Branch Street carry between 7,000 and 9,000 motor vehicles on an average weekday, as well as numerous bicyclists and pedestrians, because it is one of Middleton's few direct north-south routes and because it serves Sauk Trail Elementary School. This street is also a key southern gateway to the Pheasant Branch Conservancy trail network. The City's current Five-Year Street Improvement Plan calls for Branch Street to be reconstructed in 2013. However, this Bicycle and Pedestrian Plan recommends that the City reconstruct the street sooner because its surface is already quite deteriorated and is particularly hazardous to bicyclists. If the entire street cannot be rebuilt sooner, then the City should consider temporary repairs. Because of the relatively high traffic volumes, bike lanes should be added along Branch Street at the time of reconstruction. This will require the removal of parking from one side of the road. During the planning process, some adjacent residents expressed concern about the potential removal of on-street parking.

Actions:

- Consider accelerating the schedule for reconstructing Branch Street. If the street cannot be rebuilt in the near future, the City should pursue spot repairs as needed to improve safety for bicyclists.

- Install bike lanes in conjunction with street reconstruction.

- Install a pedestrian refuge(s) at the intersection with Franklin Ave. to make it easier and safer for pedestrians and bicyclists to cross the street, thereby enhancing neighborhood connectivity. It would be desirable to re-align the Lakeview Park trail access and ADA ramp to one of the crosswalks. (ADA ramps should align with crosswalks and be perpendicular to the street when possible.)

- Consider the installation of a pedestrian refuge(s) at the intersection with Columbus to make it easier and safer for pedestrians to cross the street, thereby enhancing neighborhood connectivity. (It should be noted, however, that neither side of Columbus currently has a sidewalk.)

- Consult closely with the Sauk Trail Elementary School community on measures to improve pedestrian safety around the school. The addition of bike lanes along Branch would likely affect school-related parking as well as student drop-off and pick-up procedures.

3.3.5 Cayuga Street

Because of its short length and placement of mailboxes in the median, Cayuga has slower traffic than most streets. Although motor vehicles frequently are turning into midblock driveways, this one block long street is relatively safe for bicycling. The importance of this route to bicyclists and pedestrians will increase if the "Cayuga Connection" trail link is constructed and the University/Cayuga intersection is improved to better accommodate those modes. The street will become even more important as a bicycle route if a connection is constructed between the Elmwood/Cayuga intersection and the planned trail along the rail corridor.

Action:

- Study how best to accommodate bicyclists along Cayuga in conjunction with efforts to implement the "Cayuga Connection" trail link and/or a link to the rail corridor.

3.3.6 Century Avenue / County Trunk Highway M

EAST OF ALLEN BLVD.

Existing conditions:
Century Avenue (CTH M) east of Allen Blvd. is a principal arterial road that provides a vital route around Lake Mendota. In addition to being a county trunk highway carrying over 25,000 vehicles per day (between Allen Blvd. and CTH Q/Hedden Rd.), this corridor is the most direct route for bicyclists traveling around the lake, and it is the only direct road connection between Middleton's northeastern neighborhoods and the rest of the community. Although wide shoulders currently exist along CTH M east of the city limits, there currently are no designated bicycle facilities along Century Avenue. Bicyclists are allowed to use the roadway and narrow sidewalks on either side of the road, but neither facility provides an adequately safe or comfortable ride, and there isn't room for a bicyclist to pass a pedestrian on the sidewalk.[4] This illustrates the hazard of bicycling along a

[4] In 2008, a bicyclist traveling eastbound on the southern sidewalk was struck by a vehicle and seriously injured in part due to a different vehicle blocking his path in the crosswalk. This illustrates the hazard of bicycling along a sidewalk or a poorly designed side path. Also see Appendix B.

sidewalk or a poorly designed side path.) The 1999 Bicycle and Pedestrian Plan identified the need for improved bicycle accommodations along this corridor, but until this plan there had not been a good solution researched and recommended for this corridor.



Bicyclists and pedestrians traveling west on Century Ave

The difficulty in constructing bicycle facilities along Century Avenue east of Allen Blvd. is due to:

- Vehicle volumes and speeds along Century Ave (the posted speed limit is 35 mph)
- The sidewalks are located at the outer edges of the street right-of-way, which itself is quite narrow
- The terraces are narrow, and the northern terrace contains utility poles and pedestals
- The bridge over Pheasant Branch Creek is narrow and lacks separation between the street and the two sidewalks
- Driveway conflicts, particularly on the south side of Century.

Alternatives:

The only potential parallel route is the southeast portion of the Pheasant Branch Conservancy trail loop, but that gravel trail segment is planned to remain unimproved and it does not adequately serve the needs of most bicyclists who wish to travel along the Century Avenue corridor. For example, bicyclists who are heading west around Lake Mendota would not want to travel along several streets in the Orchid Heights neighborhood just to reach a trail access point and then have to exit the trail at Branch Street, west of their Allen Blvd. destination. Discouraging such higher-speed bicyclists from using conservancy trails was also a desire frequently mentioned as part of the public input guiding the development of this plan.

Actions:

- Establish a marked bicycle lane in each direction on the roadway to accommodate Class A (highly confident) bicyclists. The existing lane markings will be shifted "inward" toward the median to convert the existing 12' lanes to two 10' travel lanes and one 4' bicycle lane (not counting curb and gutter). The Dane County Highway Commissioner's office has indicated it can support this change in lane configuration given the 35 mph posted speed limit. The primary purpose of establishing these lanes (in addition to the side-path described below) is to accommodate commuters and touring bicyclists, including those who already travel around Lake Mendota along Highway M's wide shoulders. These shoulders currently only exist outside of the city limits, just east of Mendota County Park. The bike lanes would end at Allen Blvd., at which point bicyclists would need to share a lane. (Just west of Allen, near Middleton Springs Drive, the median ends and the roadway narrows enough to make it impossible to safely include bike lanes and existing travel lanes while maintaining the existing curbs.)

- Replace the existing narrow sidewalk with an off-street, 10 foot side-path on the north side of the roadway to better accommodate Class B & C bicyclists and pedestrians. This will require acquiring up to 6 feet of right-of-way from adjacent properties. (Expansion toward the terrace is not a viable option due to its narrow width and the presence of utility poles.) The north side of Century is the better location for a side-path because it has fewer intersections with side streets and driveways, meaning fewer potential conflicts between bicyclists and motor vehicles.



Developing a 10 foot side-path on the north side of Century would not be easy to accomplish in all locations, however. The segment between the two Highway Way intersections would necessitate grading, installation of retaining walls, and relocation of fences. If this becomes a desirable course of action, the City should consider assuming responsibility for maintaining this portion of the shared use path.[5] (It is presently very impractical for adjacent property owners to clear snow from the existing sidewalk.) As a short-term option, or in lieu of constructing this segment altogether, bicyclists using the shared path to the west and east could be routed along the Highland Way loop or along Cedar Ridge Road.

It would be impossible to maintain an 8-to-10 foot side-path atop the existing bridge over Pheasant Branch Creek east of Marina Drive. The best option here might be to add a new span cantilevered out from the existing bridge structure, adjacent to the railing, to provide some separation from motor vehicles. Most other locations along the shared path would require relatively minor grading and landscaping.

It should be noted that developing side paths is generally discouraged because of the potential for bicycle conflicts with vehicles at intersections (including driveways). However, a well-designed side path incorporating ample signage oriented to both vehicles and path users (e.g., stop signs and marked crosswalks at driveways) and unobstructed sight lines would be an improvement over existing conditions. The City should also consider the use of different pavement color within crosswalks utilized by the side path. For more information about side-paths, see Appendix B.

WEST OF ALLEN BLVD.

Existing Conditions:

Century Avenue (CTH M) west of Allen Blvd. is classified as a principle arterial road and carries 15,000 to 20,000 vehicles per day. Although traffic volumes are not quite as heavy as the eastern segment, this stretch of Century is nevertheless not very conducive to on-street bicycling for much of the day. Unfortunately, the sidewalks on both sides are narrow, and the northern sidewalk between Old Creek Road and Branch Street is oftentimes encroached upon by vehicles parked in short driveways. This makes it rather unpleasant—if not an outright challenge—for pedestrians and bicyclists to travel along this part of the corridor in order to get to and from Branch Street and the Pheasant Branch Trail. Because the right-of-way and street width are narrower than east of Allen and there is no center median, it is not possible to reduce the four travel lane widths enough to make room for a bike lane in each direction.

Alternatives:

The only alternate route for bicyclists who wish to travel between Branch Street and Pheasant Branch Road is the west leg of the Pheasant Branch Conservancy trail loop, which is planned to remain unpaved. However, this route would not adequately serve the needs of bicyclists during wet

[5] The City has committed to maintaining short segments of "regional" shared use paths along Deming Way and Parmenter Street, so this would not be setting a precedent.

or snowy conditions, and it wouldn't accommodate bicyclists who wish to travel west toward the Middleton Hills commercial area.

Actions:

- Continue the planned 10' wide side path along the north side of Century from Allen Blvd. west to Old Creek Road. (From this point, pedestrians and bicyclists are able to follow Old Creek Road to the Middleton Hills street network.) This will necessitate the acquisition of up to 6' of land from adjacent properties, except for in the vicinity of the CVS property where an easement exists to accommodate a wider side path. Acquiring land may be especially difficult in front of the four homes between Old Creek Rd. and the Pheasant Branch Creek bridge because of their extraordinarily narrow front yards. Any redevelopment of these lots should result in a greater building setback and, ideally, shared driveways to reduce conflict points with the side path. As is the case with the bridge in the eastern segment, a cantilevered bridge would be desirable to hang off the north side of Century at the creek crossing west of Branch St. There also needs to be ample cautionary signage installed along this side path because of several intersecting driveways.

KEY INTERSECTIONS ALONG CENTURY AVENUE CORRIDOR

Century Avenue and CTH Q / Hedden Road:

The intersection of Century Ave and Highway Q has been identified as a problem intersection for both bicyclists and pedestrians. There has been at least one pedestrian fatality (and several close calls) in the vicinity of this intersection. The fatality occurred on Century Avenue near the west crosswalk as a vehicle turned right from Highway Q west onto Century Avenue. Currently, no designated bicycle facilities exist at this intersection. Unless they are very confident riders, bicyclists tend to use crosswalks to traverse this intersection.



At many arterial street intersections, pedestrians have difficulty crossing due to right-turn movements and wide crossing distances. The large curb radii at the northeast and northwest corners of this intersection allows for faster moving right-turn vehicle movements, creating unsafe conditions for pedestrians and bicyclists. The right turn "slip-lane" at the northeast corner of the intersection also requires cyclists and pedestrians to cross in two stages. Improvements to bicycle and pedestrian safety at the intersection of Century Ave and Highway Q will need to address these issues as well as sight lines of right-turning vehicles and wide crossing distances for pedestrians. City staff should work with Dane County highway engineers to identify and implement improvements.

Actions:

- Evaluate potential modifications to intersection geometry to reduce pedestrian, bicycle and motor vehicle conflicts. This should include a consideration of ways to reduce the crossing distance for pedestrians and cyclists using the proposed side-path by allocating more space to median islands. Median islands should be at least 6 feet wide to be used as bicycle refuges.
- Consider the installation of curbside pedestrian/bicycle detection systems, as well as the impact on maintenance costs and pedestrian expectations. Curbside detection of pedestrians at a

signalized intersection can be used to automatically place a call to the traffic signal controller for a pedestrian WALK indication. Curbside detection is commonly used in conjunction with the standard pedestrian push button. The automatic detection can be added to increase the safety of children who may not always use the push button.

- Improve sight lines between turning vehicles and pedestrians. This may involve relocating crosswalks.

Century Avenue and Baskerville Avenue / Highway Way:

The City of Middleton recently installed a traffic signal here in part to help accommodate pedestrians in their attempt to cross Century Avenue to travel between the Highland neighborhood (which provides access to the conservancy) and Baskerville neighborhood (which features the neighborhood park).

Action:

- No changes at this intersection are recommended at this time other than accommodating the bike lanes on the west and east approaches and replacing the sidewalk with a wider, shared path on the north side of Century. (See beginning of this section.)

Century Avenue and Allen Boulevard:

This signalized intersection experiences significant congestion during the morning and afternoon peak travel periods. Traffic volumes are heavy and, even though there are pedestrian-activated signals, pedestrians crossing the western, southern, and eastern legs must cross multiple lanes of traffic and a median. For the foreseeable future, bicyclists approaching from the east and wishing to turn south onto Allen will need to merge into the center lane (which is a shared left-turn and straight-through lane) or use the crosswalk at the west leg. The City's 2006 Transportation Network Plan recommended further study of developing a potential roundabout at this intersection.

Action:

- Consider the use of countdown timers at this intersection, particularly on the west and southern legs, and accommodate bike lanes on the west, east and south approaches (also Allen Blvd. corridor). Otherwise, no other changes are recommended at this time. The needs of bicyclists and pedestrians will need to be taken into account whenever the City decides to reconstruct this intersection.

Century Avenue and Middleton Springs Drive (or some nearby location):

If a trail is constructed to connect the Pheasant Branch Conservancy with Lakeview Park, there will likely be a need to install a pedestrian-activated signal somewhere between Middleton Springs Drive and Amherst Rd. Such a signal would also help overcome the barrier that Century creates between residents who live south of Century and the shopping area on the north side. (Currently, pedestrians desiring to cross at a signal need to walk west to Branch St. or east to Allen Blvd.)

Action:

- Evaluate the ramifications of installing a crosswalk with pedestrian-activated signals in conjunction with redevelopment south of Century.

Century Avenue and Branch Street:

This intersection has some of the highest pedestrian and bicyclist activity in the City because the Pheasant Branch Trail crosses Century on the west side of Branch St. Unfortunately, there is not enough vertical and horizontal clearance for the trail to cross Century beneath the existing bridge over Pheasant Branch Creek. Until such time as the bridge is reconstructed, bicyclists and

pedestrians using the trail need to be able to cross safely the west leg of this intersection. Given the high number of pedestrians and bicyclists, the City should pursue short-term measures to improve crosswalk visibility, trail approaches, and signage, as well as modify the traffic signals so that they can be more easily utilized by both groups. In particular, this plan recommends making this location the first in Middleton to have a pedestrian-activated countdown timer.

Actions:

- Widen and make more prominent the crosswalks across the west and south legs of this intersection.
- Re-align ramps and trail approaches as necessary (some utility pole relocation may be necessary on the north side of the intersection).
- Install countdown signal timers that can be easily accessed by both pedestrians and bicyclists.
- Widen the sidewalk on the south side of Century from Branch Street west to the bridge because this is part of the Pheasant Branch Trail route. This may require some minor property acquisition.

3.3.7 County Trunk Highway (CTH) Q

This county route carries nearly 10,000 vehicles on the average weekday. Traffic volumes will likely increase quite a bit in the coming years as development occurs in Middleton's northern growth area and other communities. Although CTH Q has wide, paved shoulders north of the city limits, there are no marked bicycle lanes along the urban (curbed) section with Middleton. In addition, this isn't a "pedestrian-friendly" route because the only sidewalk that exists is one that immediately abuts the curb along the west side of the road. Fortunately, there is ample room to mark bicycle lanes within the city limits while maintaining one travel lane in each direction.



Narrow sidewalk and no terrace on west side of CTH Q.

Actions:

- Mark bicycle lanes within the urban cross-section located with the city limits. This should be done at the same time as the reconfiguration of lanes along Century Ave.

- Plan for a sidewalk along the east side of CTH Q. Some easements will need to be obtained in order to avoid tree impacts, and significant landscaping work will be necessary.

- Ensure that traffic impact analyses prepared for proposed developments to the north consider the likely impact to pedestrian and bicycle circulation along this corridor.



A short section of sidewalk was installed on the east side of CTH Q in conjunction with the development of the Frisco Court Condominiums. However, several obstacles to the south will make it challenging to extend the sidewalk to Century Avenue.

3.3.8 Deming Way

Traffic along Deming Way has increased significantly in the past few years, particularly near Highway 14 in conjunction with development in Discovery Springs. Between University and Discovery Drive in early 2009, the City implemented a center-lane TWLTL (two-way-left-turn-lane) with a narrow travel lane in each direction alongside a shared on-street bicycle and parking lane. This street configuration appears to be working well. On-street parking is permitted after 6:00 p.m. to help accommodate periodic overflow parking from nearby restaurants. As traffic volumes increase in conjunction with nearby land development, bike lanes and possibly one or more parking lanes should be delineated along Deming within the Airport Road Business Park.

South of University Avenue, the first block of Deming is hilly and lacks any bicycle lanes or sidewalks, a situation which is one of the greatest obstacles to bicycle and pedestrian circulation in Middleton. This block is the only gap in the South Fork Trail, which currently terminates on the south side of the tracks and on the northwest quadrant of the Deming/University intersection. In 2008, the City approached the property owners on the west side of Deming about the need to acquire some land to construct a side path. In addition, it received approval from railroad authorities to construct the path cross the tracks. In 2009, plans were developed to lower Deming so that it would pass under the railroad tracks. This work was included as part of a City grant application to develop a nearby transit center and parking structure. The City and WisDOT also began studying the Deming/University intersection in order to improve traffic flow. Pedestrians are currently accommodated very poorly (lack of crosswalks and traffic signal walk displays). The decision on how to proceed with accommodating bicyclists and pedestrians is tied to the outcome of the grant application and the decision by WisDOT over how to improve the intersection.

Bike lanes and side paths exist along Deming between Terrace Avenue and the roundabout at John Q. Hammons Drive. No changes are necessary in this block. Bicycle and pedestrian accommodations are also adequate farther south, where Deming runs through the Greenway Station shopping center.

Actions:

- Construct a shared sidewalk and bike path along the west side of Deming between USH 14 and Esser Place. Aside from providing necessary pedestrian accommodations alongside a busy road, a 10’ wide path would complete the “missing link” in the South Fork Trail.
- Accommodate pedestrians and bicycles as part of any redesign of the intersection with Highway 14.
- Extend bike lanes and a TWLTL northward along Deming from Discovery Drive as traffic volumes increase in conjunction with adjacent development.



3.3.9 Greenway Boulevard

Greenway Boulevard is not well suited for bicycling because it has four 12’ travel lanes and closely-spaced, signalized intersections (including the Beltline on- and off-ramps). Due to space constraints, particularly beneath the Beltline bridge, it would be difficult to modify the road to accommodate

bicyclists, although it would be possible to establish a 4' wide bike lane if the travel lanes were reduced to 10 ft. Greenway Blvd. does have at least 5' wide sidewalks on both sides that are used by both bicyclists and pedestrians. Though not ideal, the sidewalks seem to be the best way to accommodate the less confident Class B and C bicyclists who don't wish to cross the Beltline at the Terrace Avenue underpass about 2,000 feet to the north.

It is easier to bike along Greenway Blvd. west of Deming Way because of lower traffic volumes. This plan recommends adding bike lanes along Greenway between its intersection with South Fork Trail and Pleasant View Road because this route is used by bicyclists who wish to head into the countryside along Blackhawk Road.

Actions:

- Add bike lanes along Greenway, between Pleasant View Road and the South Fork bike path (just west of Aspen Commons). Alternately, investigate the potential use of "sharrows" in the outside lane once they become an accepted MUTCD standard.
- Promote the development of a grade-separated crossing of the Beltline south of Greenway Blvd. so that pedestrians and bicyclists can travel between residential neighborhoods and the Old Sauk Trails and Greenway Center office parks. Based on preliminary planning by Madison, one potential location for such a crossing is near where the South Fork of Pheasant Branch Creek crosses the Beltline.
- Study the remainder of the Greenway Blvd. corridor to identify potential improvements for bicyclists.

3.3.10 Nursery Drive

Nursery Drive is the most direct route for drivers traveling between Discovery Drive and the Beltline ramps at Airport Road. Traffic levels are currently relatively light, but they will significantly increase as adjacent land development occurs. The road width (40 ft.) is the same as Deming Way to the south. As traffic volumes increase, bike lanes and possibly one or more parking lanes should be delineated along Nursery. The City should also ensure that adjacent developments have adequate off-street parking to meet their needs.

Action:

- Mark 5' bicycle lanes along the length of Nursery Drive as traffic increases in conjunction with adjacent development.

3.3.11 Old Middleton Road

The City of Madison is planning to reconstruct Old Middleton Road with bicycle lanes and sidewalk in 2010. This project will significantly improve bicycle and pedestrian connections between Middleton and Madison. This will particularly benefit pedestrians who currently walk along the shoulder to travel between Countryside Drive and Cypress Trail. Middleton's city engineer has been actively working with Madison staff to coordinate Middleton's involvement in this project.

Action:

- Continue coordination with Madison to implement bike lanes and a sidewalk along Old Middleton Road in 2010.

3.3.12 Park Street / Gammon Road / High Road

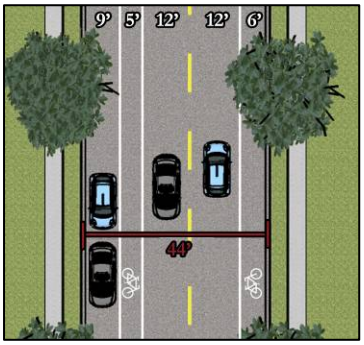
Establish bike lanes along the Park/Gammon/High street corridor so as to develop a north-south route through the heart of Middleton and to facilitate access to the Pheasant Branch and Rail Corridor trails.

The City of Middleton currently lacks an uninterrupted, north-south bicycle facility. This planning process identified the High Road – Park Street – Gammon Road corridor as an appropriate route for connecting Middleton's growing north side (e.g., the Misty Valley neighborhood) with its southern neighborhoods straddling Gammon Road. Until 2009, the only bicycle facilities that existed along the corridor were a short bike lane south of Kromrey Middle School and a narrow path running along a never-constructed section of Park Street between Maywood Ave and Parisi Park. In the summer of 2009, the three-block segment of Park Street between Maywood and University was reconstructed with two bike lanes and on-street parking on the west side of the street. No bicycle accommodations exist south of University, and it is often difficult for pedestrians to cross that part of the corridor due to traffic volumes ranging from about 11,000 to 13,000 vehicles on an average weekday.

The purpose of upgrading bicycle facilities along the High/Park/Gammon corridor is to provide a safer passage for bicyclists traveling north-south through Middleton. This route provides the best, most direct option for linking the two trail networks east of the Beltline (the Pheasant Branch Trail and the planned trail along the rail corridor). The roadway configurations below are designed to provide bicycle facilities as well as calm (slow down) traffic along the entire length of the corridor. To accommodate varying roadway characteristics, bicycle facilities and street cross-sections are planned to vary as shown for each of the following segments.

Actions:

- Mark bicycle lanes and adjust parking and travel lanes along the corridor as follows:



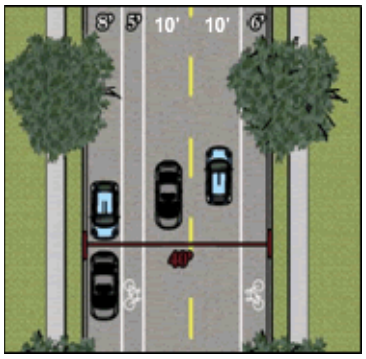
High Road north of Century Avenue (44 feet face to face of curb)

- 12-foot travel lanes
- On-street parking: Removed on eastern side, 9-foot parking lane remains on western side
- Bicycle lanes to be marked with bicycle symbol in the curb lane on the eastern side and between the parking and travel lanes on the western side. (A parking lane is planned to remain on the west side to serve adjacent residences and Northside School.)



Century Ave. to south of Pheasant Branch Trail intersection (44 feet face to face)

- 12-foot travel lanes
- On-street parking: Removed on the western side, 9-foot parking lane remains on eastern side
- Bicycle lanes to be marked with bicycle symbol in the curb lane on the western side and between the parking and travel lanes on the eastern side.



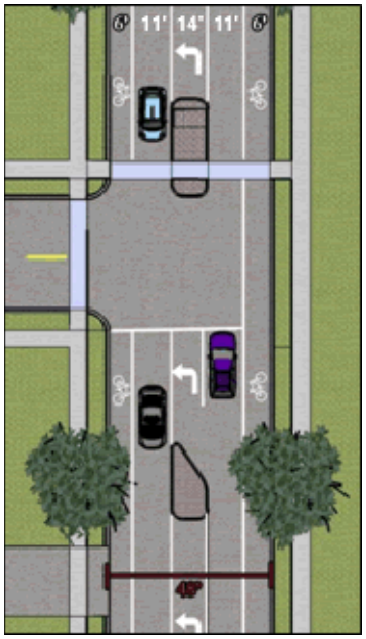
Maywood Ave. to University Ave. (40 feet face to face)

- Note: This cross-section was constructed in Summer 2009
- 10-foot travel lanes
- On-street parking: Removed on the eastern side, 6-foot (plus gutter) parking lane remains on western side
- Bicycle lanes are marked with bicycle symbol in the curb lane on the eastern side and between the parking and travel lanes on the western side.
- See Pages 41-44 for facility improvement options for the Park / University intersection and the University-to-Elmwood block.



Elmwood Ave to the Railroad tracks (36 feet face to face)

- 12-foot travel lanes
- On-street parking: Removed on both sides of the street
- Resurface the street to reduce noise and provide safer surface for bicycling.
- Bicycle lanes (6') are provided adjacent to curb and marked with bicycle symbols for bicycle use on both sides of the street
- See Pages 41-44 for facility improvement options for the Park / University intersection and the University-to-Elmwood block.



Gammon Rd. to southern City limits (48 feet face to face)

- 11-foot travel lanes (one in each direction)
- Median refuges at intersection crosswalks (at Railroad crossing, Gammon/Fortune and—depending on the distance this section extends southward into Madison—possibly at Gammon/Middleton, Gammon/Stone Glen, and Gammon/ Stonefield)
- A two-way left-turn lane (14-foot) interspersed between the median refuges.
- No on-street parking on either side of the road (same as current conditions)
- Bicycle lanes (6') to be provided adjacent to curb and marked with bicycle symbols for bicycle use on both sides of the street

The provision of on-street bicycle facilities along the Park Street Corridor will also need to address:

- Conflicts with on-street parking (see below);
- Safe intersection crossings, particularly at the intersection of University Ave. and Park St.; and
- Where bicycle facilities are adjacent to the curb, the replacement of existing inlet drainage grates to bicycle-safe grates.

Parking:

The proposed bicycle facilities described above will remove existing on-street parking along a portion of Park St. As part of this planning process, the City notified adjacent residents about this prospect. Response was mixed, ranging from outright opposition to removing on-street parking to seeing this as an opportunity to calm traffic and improve driveway sight lines. Various alternatives to enable both on-street bicycle facilities while retaining on-street parking, such as time of day restrictions, could be investigated along Park St. Some cities, for example, have experimented with "time-of-day" bicycle lanes (for example, a parking lane becomes a bicycle lane during school hours and then reverts to on-street parking for evening and overnight). One disadvantage to this concept is that overnight parking may block the bicycle lane during the start of the bicycle lane hours. Allowing off-peak parking would also hinder bicycle access to the planned rail corridor trail during non-peak hours, thereby reducing the use of Park Street as a backbone route as intended by this plan. In all cases, on-street parking will remain available on nearby cross-streets.

KEY INTERSECTIONS ALONG HIGH / PARK / GAMMON CORRIDOR

High Road / Park Street and Century Avenue:

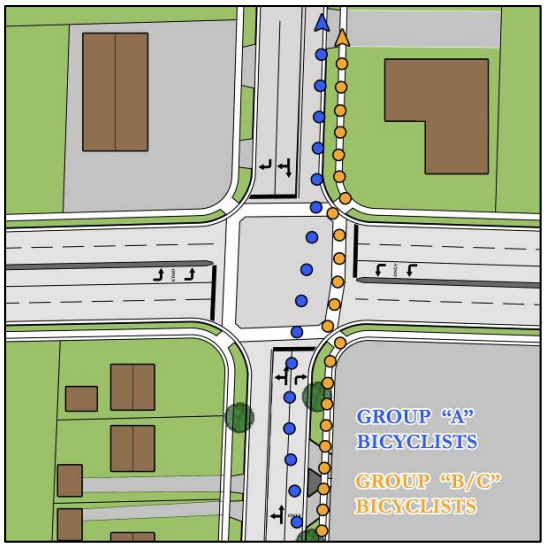
The west leg of this intersection is used quite heavily by middle school-aged school children as well as some elementary students. The school district does offer bus transportation to students who need to cross Century to access either Northside or Kromrey.

Actions:

- Consider changes to increase safety of pedestrian crossings, such as through enhanced pavement markings and a countdown timer.
- Evaluate the potential to widen the street toward the east in order to carry bike lanes through the intersection.

Park Street and University Avenue:

The intersection of Park St. and University Ave. is a challenging intersection for pedestrians, bicyclists, and motorists. The City's Traffic Management Plan proposed the construction of a roundabout in this location, but that is unlikely to happen in the foreseeable future due to the need for right-of-way acquisition. The success of the Park Street bike lanes (discussed above) relies on the safe movement of bicycles, as well as vehicles, across University Ave. There are currently no designated bicycle facilities through the intersection, and the northbound travel lane is not properly aligned. In preparation of this plan, the movement of bicyclists travelling along Park St. north and south through the intersection was noted and categorized into two user groups (see figure right).



The first user group, largely defined as Group A bicyclists[6], approach the intersection in the parking

[6] **Group A - Advanced Bicyclists:** Consists of experienced riders who can operate under most traffic conditions, and compose the majority of users of collector and arterial highway systems.
Group B - Basic Bicyclists: Consists of new or casual adult or teenage riders who are less confident and/or less competent (than Group A riders) to operate in traffic without special provisions for bicyclists. Group B riders prefer comfortable access to destinations, by a direct route or bicycle facility, which they perceive as safe.
Group C - Child Bicyclists: This group consists of pre-teen riders whose roadway use is initially monitored by their parents.

lane or shoulder. To travel northbound through the intersection, this group would move to the center right of the through lane to avoid vehicles turning right at the intersection.

The second user group, largely defined as Group B and Group C bicyclists, would approach the intersection in the parking lane or shoulder and before reaching the intersection would move onto the sidewalk in order to cross the intersection at the pedestrian crossing. A diagram of these northbound movements is highlighted in the figure above. Southbound movements are much the same.



To improve the safety of bicyclists and pedestrians crossing University Ave, Middleton can pursue the short-term and long-term actions as follows:

Actions:

- Implement a short-term solution, Option 1, consisting of:
  - South of University Ave: A 5 foot bicycle lane on the west side; one 10 ft. southbound travel lane; one 10 ft. northbound straight and left-turn lane; and an 11 foot northbound shared bicycle and right turn lane on the east side. The northbound bicycle lane approaching from the south would end just north of the Elmwood intersection. (Note: The two 10 ft. travel lanes are 1 foot less than the minor arterial cross-section standard approved by the City Council in 2006, but this helps avoid expanding the roadway.)
  - North of University Ave: An 11 foot shared bicycle and right turn lane on the west side and a 5-foot bicycle lane on the east side of Park Street. (Bike lanes were added to this leg of Park Street during the 2009 reconstruction project.)

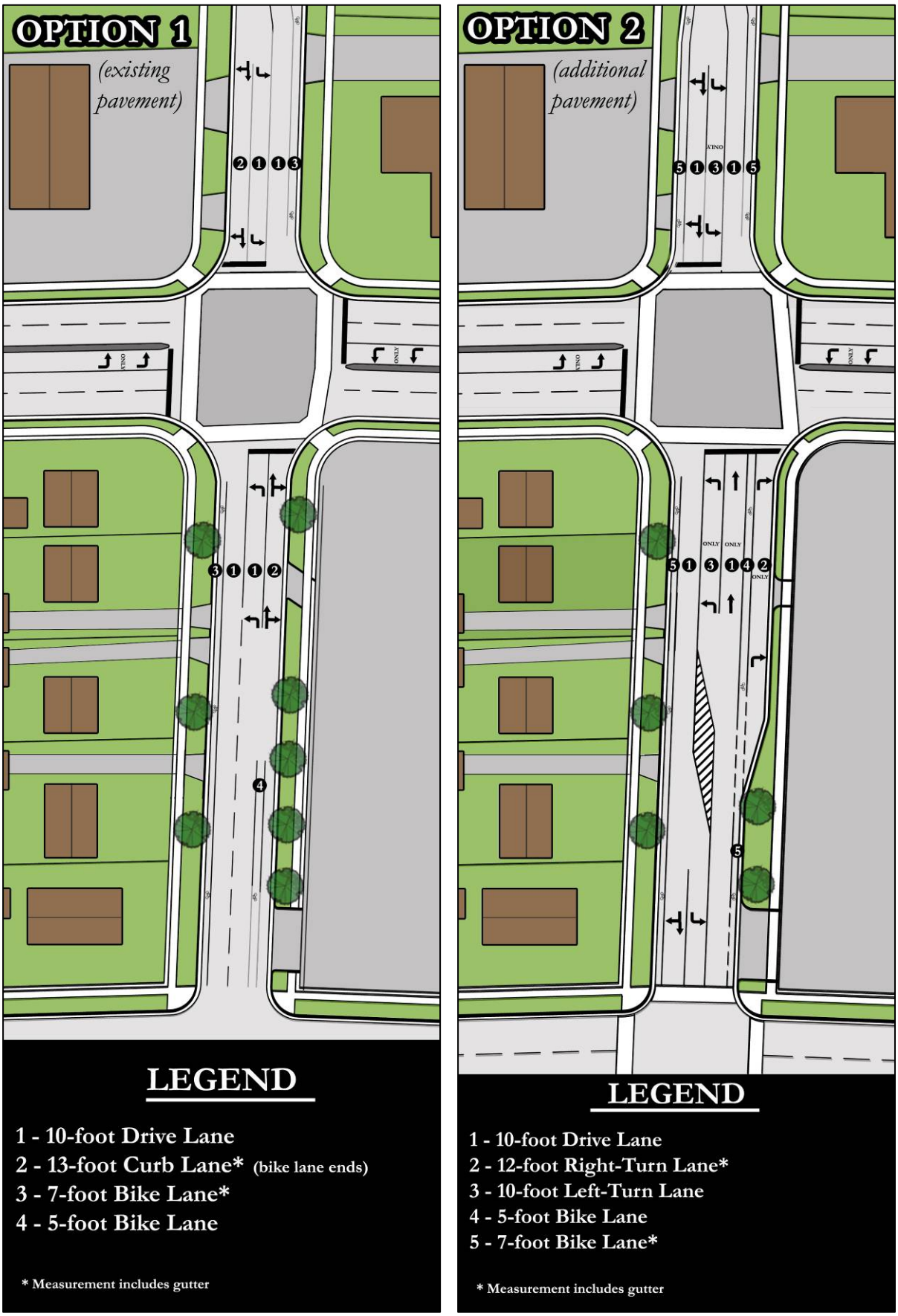
- Evaluate and refine a preferred longer-term solution, Option 2, consisting of:
  - South of University Ave: 3 separate lanes for left, straight and right northbound traffic movements, with a 4-foot bicycle lane between the straight and right turn lane on the east side of Park Street and a 5 foot bicycle lane on the west side of Park Street. This will require the acquisition of an approximately 12-foot-wide strip of land from the adjacent commercial center for the additional traffic lane. This would likely result in the loss of 16 parking spaces. In addition, five relatively mature terrace trees would have to be replaced. It will have to be determined whether this impact is worth the anticipated benefits of improved safety and reduced congestion. This lane configuration is one potential course of action; it does not supplant the need for more detailed analysis and design work.
  - North of University Ave: Similar to Option 1 except for the addition of bike lanes up to the intersection.

- Investigate bicycle detection devices to improve the safe movement of bicycles through the intersection.

- Upgrade to ADA-compliant pedestrian push buttons. Investigate pedestrian detection devices to automatically detect pedestrian presence. This increases the safety of the crossing by allowing extra walk time for pedestrians who may need more time to make the crossing. The crossing's efficiency is also improved by truncating the walk phase if the crossing has cleared.

- Replace drainage grates with bicycle-safe drainage grates (see examples in previous section).

Proposed configuration options for bicycle facilities at the intersection of Park Street and University Avenue



It should be noted that pursuing the long-term safety measure is not guaranteed to solve all safety issues at a congested intersection like Park & University, where there are a lot of turning movements. Indeed, at least some of the pedestrian/vehicle collisions in recent years are due to pedestrians deciding to cross against a red light. Nevertheless, educational and enforcement initiatives combined with the pursuit of short- and long-term safety measures will benefit all street users, not just the bicyclists who use the newly established bike lanes along the Park Street corridor.



Park Street's Intersections with Elmwood, Hubbard, and South:

Aside from serving as a barrier between adjoining residential neighborhoods, the high traffic volumes along Park Street impede residents' access to basic community resources such as Elm Lawn Elementary School, nearby businesses, and parks and conservancy areas. This planning process elicited public comments that the street has a "toxic combination of traffic speed and volume" that make it "virtually impenetrable to children, elderly, and other physically impaired pedestrians." This plan proposes specific steps at these three intersections to help overcome this barrier. These improvements should be considered in concert with the corridor improvements described above.

Actions:

- Clearly mark and maintain all pedestrian crosswalks.

- Investigate potential improvements to facilitate use of crosswalks. One option to consider is the addition of an in-pavement flashing warning light system, particularly at South Ave. because it is a designated school crosswalk.

- Regularly enforce the posted speed limit (25 mph, except for 15 mph within the school zone when children are present). A speed feedback sign installed by the City near South Avenue in 2009 indicates that vehicles routinely travel over the speed limit, and some vehicles have been observed to travel more than 20 mph over the limit.

Park Street and Railroad Tracks:

The planned construction of a shared use path along the rail corridor will create demand for bicyclists and pedestrians to cross Park Street at a location where few people currently cross. The installation of median refuges will help channelize traffic (particularly northbound vehicles) and would enable bicyclists and pedestrians to cross one direction of travel at a time. Developing a trail crossing at the railroad tracks would also have the added benefit of improving access to the Tiedeman Pond trail loop for people who live east of Park St. There should be adequate pavement width to maintain bike lanes across the tracks.

Actions:

- Coordinate with railroad officials to site pedestrian refuges (minimally 6' wide) at the center of both the north and south approaches to the railroad tracks.
- Develop an enhanced crosswalk.

Gammon Road and Fortune Drive

Giving Gammon a "road diet" will provide space to install a pedestrian refuge on the north leg of this three-legged intersection. Drivers approaching from the south will be able to use the center lane to turn left into Fortune Drive, but no complementary turning maneuver is possible for southbound traffic. The installation of a pedestrian refuge will enable bicyclists and pedestrians to cross one direction of travel at a time, making it easier for people to travel between residential neighborhoods and to and from Elm Lawn Elementary School.

Action:

- Install a pedestrian refuge within the TWLTL on the north leg of the intersection in conjunction with converting Gammon from a 4-lane to a 2-lane-with-a-TWLTL cross-section.

3.3.13 Parmenter Street

The Highway 12 bypass enabled the City of Middleton to convert this corridor into a bicycle- and pedestrian-friendly route intended to serve an area that is planned to redevelop with greater density as an extension of downtown Middleton. The segment of Parmenter between Century Avenue and the roundabout at Discovery Drive now consists of a boulevard with bike lanes and sidewalks on both sides of the street. It carries approximately 6,500 vehicles on an average weekday. The section of Parmenter north of Century is planned to be reconstructed with bike lanes and sidewalks in conjunction with the planned Tribeca development.

South of the roundabout, Parmenter is 36 feet wide with sidewalks and relatively narrow (5.5 ft.) terraces on both sides. Due in part to changing traffic patterns prompted by the Highway 12 bypass, this segment of Parmenter now carries around 5,000 vehicles on an average weekday. In order to extend the bike lanes from the new section of Parmenter south to downtown Middleton without widening the road (something which would require expensive right-of-way acquisition), it will be necessary to remove the parking lane from one side of the street.

KEY INTERSECTIONS ALONG PARMENTER STREET CORRIDOR

Parmenter and Schneider Road / Belle Fontaine Blvd.:

Although currently a lightly used three-legged intersection, the extension of Belle Fontaine Blvd. westward from the Misty Valley subdivision will introduce a fourth leg to this intersection and help spur a steady increase in traffic. The planned Misty Valley Trail will also approach this intersection from the east along the south side of Belle Fontaine. This plan recommends that the trail take advantage of existing topography and cross beneath the south leg of Parmenter so as to give regional trail users an alternative to crossing what is likely to become a pretty congested corridor. It is likely that the future four-legged intersection will be a strong candidate for a roundabout.

Action:

- Ensure that regional bicycle and pedestrian circulation is factored in to the design of this future intersection. Both an at-grade and grade-separated crossing may be desirable.

Parmenter and Century Place:

A gate has long separated the end of Century Place from Parmenter Street (dating back to when this corridor functioned as Highway 12). Now that nearly all regional traffic has been rerouted to a bypass, the City may want to consider reconnecting this street to facilitate access and circulation in the area (this would provide an alternative to using the Century Avenue and Century Place

intersection). Even if Parmenter and Century Place remain disconnected for motor vehicle circulation, it would be desirable to restore a connection for bicyclists and pedestrians.

Action:

- Construct a 10' paved path connecting Parmenter with Century Place (absent a decision to connect the two streets for motor vehicle circulation).

Parmenter and University Avenue:

This intersection is significantly constrained by development, particularly on the west side of Parmenter. Vehicle congestion has steadily increased as Middleton's business parks have grown, its downtown has rejuvenated, and traffic patterns have shifted due to the Highway 12 Bypass. As the City evaluates ways to improve traffic flow through this intersection, it is imperative that the needs of bicyclists and pedestrians be taken into consideration. Facilitating the ability to travel by bike or on foot will enhance the connection between downtown Middleton and the mix of residential, commercial, and institutional land uses that are already found along Parmenter north of University.

Action:

- Install pedestrian countdown signals on all four legs of the intersection.
- Monitor opportunities for potentially acquiring adjacent property so as to widen the two Parmenter approaches for the purpose of carrying bike lanes through the intersection.

3.3.14 Pleasant View Road

The City of Madison and Dane County are planning to extend Pleasant View Road from its junction with Mineral Point Road south to CTH M, which leads to Verona. While that project is located in Madison, it will accelerate the growth in traffic along Pleasant View Road in Middleton because it provides area residents with an alternative to a congested Beltline. Already, approximately 7,500 vehicles travel on the south leg of the Pleasant View / Highway 14 intersection on a typical weekday. This plan reinforces regional interest in having bike lanes included with any Pleasant View Road redesign, both south and north of Highway 14. When the City of Middleton extended the road north from Fairway Place in the early 2000s, Pleasant View Road was constructed wide enough to accommodate a bike lane along two travel lanes in each direction.

Actions:

- Add bike lanes on Pleasant View Road and University Green from Evergreen Road south to the city limits.
- Support WisDOT efforts to improve the USH 14 intersection, possibly even with a new interchange. Ensure that bicycles and pedestrians are accommodated during any design process.

3.3.15 Stonefield Road

Although officially designated a collector street, Stonefield Road carries on average just over 2,000 vehicles per day. It connects the St. Dunstan's Drive bike path on the east with the Wexford Village neighborhood across Gammon Road to the west. The relatively low traffic volume and limited on-street parking already make this a fairly safe route for bicyclists. However, it would still be appropriate to enhance bicycle accommodations along Stonefield Road because it offers the most direct route through the Stonefield neighborhood. The addition of bike lanes would likely require the removal of parking on one side of the street.

Action:

- Add bike lanes along the length of Stonefield Road. Alternately, consider the use of signage designating this area as a key bicycle route.

3.3.16 University Avenue

Like Century Avenue, University Avenue is one of two arterials that run east-west through Middleton. Average weekday traffic volumes exceed 20,000 vehicles throughout the corridor, and approach 30,000 vehicles east of the Allen Blvd. intersection. Sidewalks exist along both sides of University east of the Beltline. To help make it easier for pedestrians (and bicyclists) to cross University, the City installed a traffic signal at Bristol Street during Fall 2009. Pedestrian-activated signals also exist at the Parmenter, Park, Branch, and Allen Blvd. intersections. Due to narrow right-of-way (66 feet in some places), short building setbacks, and numerous driveway conflicts, it is unfeasible to add bicycle lanes along University Avenue west of Branch Street. Fortunately, the local streets that parallel this section of University (Franklin Avenue to the north and Elmwood Avenue to the south) provide suitable bicycle accommodations, although bicyclists need to use caution to cross the Park Street corridor, particularly at Elmwood Ave.

East of Branch Street, a parallel street does not exist on the north side of University, and bicyclists who wish to travel from Franklin Avenue to Elmwood Avenue must follow a convoluted route through a public alley or along the sidewalk in order to reach Maple Street and get to Elmwood. This segment of University has fewer driveways, wider terraces, and greater building setbacks. Therefore, this plan recommends establishing bike lanes along University east of Branch. These would connect with the bicycle lanes that are planned to be added when University Avenue is reconstructed east of Allen Blvd.

Actions:

- Install bike lanes between Allen Blvd. and Branch Street, to extend the section that will have bike lanes upon completion of the University Avenue reconstruction project in 2012.
- Install “Bike Route” signs to direct bicyclists to parallel streets (Franklin and Elmwood).

KEY INTERSECTIONS ALONG UNIVERSITY AVENUE CORRIDOR

University and Allen Boulevard:

This intersection carries some of the highest traffic volumes in the City and has substantial turning movements between the north and east legs. Crosswalks exist across the north, west, and south legs, but it is particularly hazardous for pedestrians to cross Allen Blvd. due to a near constant flow of westbound drivers turning right onto northbound Allen. Drivers sometimes do not stop even when pedestrians have activated the walk signal and triggered a red light for turning vehicles. Madison is investigating alternatives for addressing this situation. This intersection needs to be analyzed further for safety improvements as part of the University Avenue reconstruction project.

Action:

- Analyze methods for improving pedestrian and bicyclist safety, particular for those traveling across the north (Allen Blvd.) leg of this intersection.

University and Branch Street:

Because of adjacent commercial land uses and because Branch serves as a gateway to the Pheasant Branch Conservancy, quite a few pedestrians and bicyclists travel through this intersection. The City could enhance pedestrian safety at this intersection with a very modest investment.

Action:

- Install enhanced crosswalk markings and a countdown timer.

University and Park Street: See Park Street corridor.

University and Bristol Street:

A traffic signal was installed during Fall 2009 in response to concerns about the safety of pedestrians (oftentimes teenagers) who are traveling to and from Middleton High School.

Action:

- Monitor the conditions caused by the introduction of this traffic signal and make adjustments as necessary.

University and Parmenter Street:

This intersection is crowded by commercial activities in the northwest and southwest quadrants, thereby severely limiting options for widening the approaches for the purpose of improving traffic flow. On the other hand, narrower street approaches mean that pedestrians have a shorter distance to cross the street. In the short-term, the City could enhance pedestrian safety at this intersection with a fairly modest investment. Looking long-term, pedestrian safety and convenience may be compromised as traffic increases and the intersection becomes even more congested. It may be necessary at some point for the city to look at ways to widen the intersection.

Actions:

- Install enhanced crosswalk markings and countdown timers on all four legs of the intersection.
- Monitor opportunities for potentially widening the intersection.

University and Cayuga Boulevard / Beltline ramps:

If the "Cayuga Connection" trail link is built, the east leg of this intersection will require modification.

Action:

- Install enhanced crosswalk markings and a countdown timer on the east leg of the intersection, in conjunction with construction of the "Cayuga Connector" (a trail extending north to the Parmenter/Discovery roundabout).

University / Highway 14 and Deming Way: See Deming Way section.

University / Highway 14 and Pleasant View Road:

This intersection currently lacks pedestrian and bicycle accommodations. This situation will need to be remedied in conjunction with any plans to construct a new intersection (or possibly an interchange) in this area. Accommodating pedestrians across Highway 14 is not a high priority until there are such accommodations along the Pleasant View Road corridor.

Action:

- Monitor and support regional efforts to plan and design a new intersection or interchange in this area.

3.4 SIDEWALKS

While sidewalks exist along most Middleton streets, there are a few residential and commercial areas where sidewalks are lacking. In general, where sidewalks are missing from residential neighborhoods (such as Baskerville and Saks Woods), residents appear to be content with present conditions. No changes are recommended in these areas because sidewalks are located along all collector and arterial streets, enabling neighborhoods to be connected with one another. However, in commercial areas such as the Middleton Business Park, the lack of sidewalks is a more serious issue because pedestrians must walk in the street (particularly during snowy conditions) in order to access businesses or obtain exercise. It is quite common to see employees walk in these streets during work breaks. Many delivery vehicles (including semi-trailers) use these streets. Installing sidewalks in these areas will require extensive coordination with adjacent property owners so as to minimize impact to vegetation and utilities.

Particular care should be given to the condition of sidewalks in the vicinity of Middleton's three elementary schools, Kromrey Middle School, and Middleton High School. The City should step up efforts to work with school administrators, teachers, parents, and students to identify hazards and conditions that inhibit walking or bicycling to school. The national Safe Routes To School Program provides an excellent guide for steps that can be taken to address safety concerns around schools.



Actions:

- Plan for the installation of sidewalks in conjunction with street reconstruction projects along the following corridors:
    - Donna Drive (west of Parmenter)
    - Graber Road
    - Laura Lane
    - Lisa Lane
    - East side of CTH Q
    - East side of High Rd. (between Frank Lloyd Wright Ave. and Century)
    - Along Old Middleton Road east of Countryside Dr. (planned for 2010).

  Note: Donna, Laura, and Lisa could potentially be reconfigured as part of a TIF-assisted redevelopment project.



- Initiate a dialogue with businesses in the Middleton Business Park (west of Discovery Springs, north of Highway 14). None of these streets currently have sidewalks, yet quite a few employees and visitors walk in the streets for travel or exercise.

- Work more proactively with school officials to identify and mitigate potential safety hazards that inhibit walking or bicycling to school.

- Work with the Public Works Department and neighborhood groups to install pedestrian refuges at midblock crosswalks to promote safety and traffic calming. This may necessitate the removal of on-street parking for a short distance around the crosswalk so as to leave

room for on-street bicyclists. Pedestrian refuges should be considered where the midblock path connecting Franklin Avenue with Parisi Park crosses North Avenue and Maywood Avenue. Midblock paths also exist in several other neighborhoods, including Foxridge, Stonefield, Northlake and the area around Northside School.

4 IMPLEMENTATION

The implementation chapter provides a compilation of local actions necessary to achieve the vision, goals and policies of this plan. The section provides a compilation of actions outlined in Chapter 2 and a description of bicycle and pedestrian improvements outlined in the City's system plan as illustrated in the Plan Map and described in Chapter 3. This chapter includes a timeline for each action or improvement and identifies potential funding strategies. The goal of the City is to complete a majority of the bicycle and pedestrian improvements listed in this plan by 2015.

PLANNING ACTIONS (see Sec. 2.2)

ACTION	RESPONSIBLE PARTY	TIMEFRAME
1. Officially map existing and planned bicycle and pedestrian facility rights-of-way.	Planning, PW staff Plan Cmsn, Council	Continual
2. Expand the use of bike lanes along streets with high traffic volumes, including those classified as arterial and collector routes or at a minimum designate and sign suitable parallel routes.	Planning, PW	Continual
3. Consider providing bike lanes along low volume streets where necessary or where the street serves as a major link between other parts of the bikeway network.	Planning, PW	Continual
4. Designate and maintain official bicycle routes through way-finding signage and pavement markings.	PW	Short term (<1 year)
5. In business areas, along collector and arterial routes where no sidewalks currently exist, investigate funding alternatives. Explore cost-sharing potential with adjacent property owners.	Planning, PW	Medium term (2-5 yrs)
6. Modify the City's Comprehensive Plan and Zoning subdivision ordinance to incorporate bicycle and pedestrian system design principles.	Plan Cmsn, Council	Short term (2 years)
7. Modify the City's zoning standards for multi-family residential, commercial, and industrial land uses to incorporate elements to meet the needs of pedestrians and bicyclists.	Plan Cmsn, Council	Short term (2 years)
8. Follow access control regulations in order to reduce the number of access drives along streets.	PW	Continual
9. Consult this Plan when reviewing development proposals.	Planning	Continual
10. Plan for the development of a regional intermodal facility.	Planning	Short-term (<2 years)
11. Monitor regional initiatives pertaining to commuter rail and Metro Transit bus service.	Planning	Continual
12. Monitor the strategies and recommendations of the bicycle and pedestrian plans of local, regional and state planning agencies.	Planning	Continual
13. Identify weak links and discontinuities in the existing network.	Planning, PW	Short term (<1 year)
14. Continue participation in regional bicycle and pedestrian planning activities.	Planning	Continual
15. Adopt by ordinance bicycle parking requirements for new development. Suggested requirements are provided as an appendix to this Plan.	Plan Cmsn, Council	Short term (<1 year)
16. Work with land owners, developers, and other jurisdictions to establish shared-use trails as integral components of new greenways and along environmental corridors.	Planning, PW	Continual
17. Retain designated hiking trails that remain unpaved and are limited to pedestrian use to enhance passive recreation opportunities.	Public Lands	Continual
18. Establish shared-use trails as integral components of new greenways and along environmental corridors.	Planning, Pub Lands, Developers	Continual
19. Pursue bicycle and pedestrian related grants, including Enhancement Grants, Safe Routes to School, and various trail development grants.	Planning	Continual
20. Ensure adequate funding is available in the City's annual operating and capital budgets to support planning and implementation activities.	Council (with input from Planning, PW and Public Lands)	Continual

DESIGN, CONSTRUCTION, AND MAINTENANCE ACTIONS (see Sec. 2.3)

ACTION	RESPONSIBLE PARTY	TIMEFRAME
1. Adopt by Common Council resolution a "Complete Streets "policy statement.	PW Cmte, Plan Cmsn, Council	Short term (< 1 year)
2. Continue to revise City roadway policies and design standards as necessary to accommodate all users.	PW staff & Cmsn	Continual
3. Design all new construction and reconstruction to meet AASHTO and ADA guidelines and all other related, applicable, Federal and State design standards.	PW, Public Lands staff and city consultants	Continual
4. Post and maintain additional "Yield to Pedestrian in Crosswalk" signs in accordance with City Policy	PW staff	Short-term (< 2 yrs)
5. Modify traffic signals to include a lead pedestrian interval where there are a high number of pedestrian/vehicle conflicts.	PW	Continual
6. Consider the use of countdown timers and pedestrian signals at intersections.	PW	Continual
7. Continue to apply appropriate traffic calming techniques in locations where they would benefit bicyclists and pedestrians.	PW	Continual
8. Address safety hazards from outdated design standards, such as unsafe inlet grates	PW	Short-term (<2 yrs)
9. Refine as necessary design standards for the shared use of off-street routes that accommodate all users. (See Conservancy Lands Plan)	PW, Public Lands	Short-term (<2 yrs)
10. Provide off-street bicycle and pedestrian facilities when it would be unsafe to locate such facilities on the street.	Planning, PW, Public Lands	Continual
11. Construct sidewalks in the Middleton Business Park.	PW	Medium-term (2-5 yrs)
12. Incorporate marked bike lanes along all arterial and collector streets to the extent possible.	PW	Continual
13. Make new and reconstructed intersections bicycle-friendly wherever possible.	PW	Continual
14. Ensure that new and refurbished bridges and underpasses are safe for bicycling.	PW	Continual
15. Ensure that traffic calming measures do not hinder bicycle travel.	PW	Continual
16. Consider the use of "pedestrian refuge" crossing islands.	PW	Continual; as needed
17. Examine potential conflicts related to diagonal parking and intersection alignments. Investigate feasibility of creating "reverse diagonal spaces."	Planning, PW	Short-term (2 years)
18. Assess all sidewalks every eight years to identify and mitigate safety hazards.	PW	Continual
19. Regularly trim vegetation over sidewalks	Public Lands, homeowners	Continual
20. Develop a procedure for routine inspection and maintenance of bicycle facilities.	Planning, PW, Public Lands	Short-term (2 years)
21. Repair potholes, repave streets and trails, and replace worn pavement markings, bike symbols, and damaged street signs as necessary.	PW	Continual
22. Adopt a policy to remove snow from all paved trail surfaces within 24 hours after the end of a snowfall.	Public Lands	Short-term (2 years)
23. Review the City's 5-year street improvement program to integrate trail resurfacing or reconstruction, or develop a separate bike path resurfacing program that is consulted during annual budget deliberations and capital improvement programming.	PW	Continual
24. Only allow the operation of heavy motor vehicles on bikeways when necessary.	PW, Public Lands	Continual
25. Ensure prompt repair of pavement cuts into bike lanes and trails.	PW	Continual
26. Require private contractors and utility companies that damage bikeways to repair them immediately to a specified standard.	PW	Continual

EDUCATION, ENFORCEMENT, AND ENCOURAGEMENT ACTIONS (see Sec. 2.4)

ACTION	RESPONSIBLE PARTY	TIMEFRAME
1. Establish a committee to advise the City on matters pertaining to bicyclists and pedestrians.	Council (upon staff guidance)	Short term (< 1 year)
2. Familiarize key City officials with the exemplary bicycle and pedestrian safety initiatives adopted by the City of Madison and other leading communities.	Planning, PW	Short-term (<2 years)
3. Provide periodic training for the City's transportation planners and engineers in order to incorporate bicycle and pedestrian accommodations, review projects, and monitor grant opportunities.	Planning, Administration	Continual
4. Provide training to Police Department personnel on bicycle/pedestrian issues and laws.	MiPD	Continual
5. Consider designating a "Middleton Bicycling Ambassador."	Planning, MiPD	Short term (< 1 year)
6. Apply for grants that will help fund projects or programs which promote safety of the bicycling and pedestrian network.	Planning, MiPD	Continual
7. Challenge employers and organizers throughout Middleton to participate in a bicycle incentive programs, such as Dane County's "Bike to Work Week."	Planning	Annually
8. Work with community partners, including the Chamber of Commerce and Tourism Office, to establish a "Shop by Bike" program.	Planning, Cmty Devel	Short-term (<2 years)
9. Work with various organizations to investigate and, as appropriate, implement other safety programs that should be taught to school-aged children as well as adults.	Planning, MiPD, MCPASD	Continual
10. Support and build on existing Middleton Police Department initiatives to promote the use of bicycle helmets.	MiPD	Continual
11. Continue to maintain pedestrian crossing flags in high use areas, and consider expanding the program to other locations.	PW	Continual
12. Expand bike/pedestrian safety programs as part of the Police Department's annual National Night Out.	MiPD	Annually
13. Acquire and disseminate literature that promotes appropriate bicycle laws, safety tips, and bike commuting for the general public. Provide links to this information on the City's website.	MiPD, Planning, IT	Continual
14. Educate property owners about keeping debris (including yard waste) off of sidewalks and out of bike lanes.	PW	Continual
15. Use signs to educate motorists to share the road with bicyclists and pedestrians.	PW	Continual
16. Install "trail etiquette" signs to reduce use conflicts along multi-use trails.	Public Lands	Short term (< 1 year)
17. Expand the use of portable message centers and speed feedback displays along key routes, particularly near schools, midblock crosswalks, and trail intersections.	MiPD, Community Services Manager	Continual
18. Publicize a City Hall phone number and e-mail address for people to report maintenance needs, suggest bike rack locations, etc.	Administration, IT (with guidance from others)	Continual
19. Analyze bicycle, pedestrian and vehicle crash records and develop a focused enforcement effort as necessary	MiPD, PW	Continual
20. Utilize community volunteers to help monitor areas where violations are known or have been reported to occur.	MiPD, Public Lands	Continual; as needed
21. Investigate new approaches for reporting bicycle and pedestrian crashes.	MiPD	Continual
22. Continue the City's existing bicycle-licensing system.	MiPD	Continual

ACTION	RESPONSIBLE PARTY	TIMEFRAME
23. Periodically patrol the City's off-street trail system, focusing in particular on bridge underpasses and remote trail segments.	MiPD	Continual
24. Install and maintain modern bicycle racks designed for short-term parking in highly visible locations, including near business entrances.	Cmty Devel, PW, private sector	Short-term (2 years)
25. Work with larger employers and owners of multi-unit residential buildings to establish long-term parking areas that offer a higher level of security, including lockers and indoor parking.	MiPD, Planning, private sector	Continual
26. Add bicycle parking requirements to the zoning ordinance.	Plan Cmsn, Council	Short-term (2 years)
27. Develop, maintain, and make available guidelines for bicycle rack installation.	Planning staff	Short-term (2 years)
28. Remove abandoned bicycles that are blocking the public right-of-way. Work with private sector to ensure that abandoned bicycles are not taking up bike rack space.	PW, MiPD, private sector	Continual
29. Provide a comprehensive bicycle and pedestrian system map and signage system and place at strategic locations throughout the City.	Public Lands, Planning, PW	Short-term (2 years)
30. Distribute a bicycle and pedestrian system map to public buildings (including schools), the Middleton Chamber of Commerce, large employers, bike shops, and fitness centers.	Public Lands, Planning	Annually
31. Encourage public participation at appropriate committee meetings and forums.	Everyone	Continual
32. Publish an annual report summarizing activities and accomplishments pertaining to walking and bicycling.	Planning	Annually
33. Report on key bicycling and pedestrian issues in the City's spring and fall newsletters, the City's website, and its free E-government subscription service. Post information in appropriate venues, including public buildings and kiosks.	Planning, PW, Public Lands	Continual
34. Write a periodic "bicycle/pedestrian column" for the *Middleton Times-Tribune*.	Planning	Continual
35. Encourage businesses to accommodate the needs of employees who choose to bike or walk to work.	Planning, private sector	Continual
36. Investigate City co-sponsorship of events that promote these modes of transportation.	Planning, Cmty Devel	Continual
37. Collaborate with other area communities to promote Middleton and the greater Madison area as a destination for bicycle tourism.	Planning, Cmty Devel	Continual
38. Encourage local bike shops and hotels to make bicycles available for rent.	Planning, Cmty Devel	Continual

FACILITY IMPROVEMENTS: OFF-STREET TRAIL NETWORK (see Sec. 3.2)

	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
GENERAL / ALL SEGMENTS	All segments	Install trail etiquette signs (20)	$2000	CLC Capital	2010
	All segments	Apply lane markings where necessary to help guide users	$2,000	CLC Capital	2010
	General	Consider the development of "fast paced" recreation facility for mountain biking and similar activities	T.B.D.	PRFC Capital, private sponsors, grant(s)	Short-term (<2 years)
	All segments	Install gates/bollards to discourage vehicles from trespassing onto trails.	$500	CLC Capital	2010
	Total Cost		**$4,500 +**		

	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
PHEASANT BRANCH TRAIL	All paved segments (where space permits)	Add unpaved shoulder on one side to accommodate users who prefer not to travel on pavement.	T.B.D.	CLC Capital	Dependent on user requests
	Segments that are planned for paving or reconstruction.	Utilize porous asphalt surface.	$1.25 / sf (same as reg. asphalt)	CLC Capital	---
	Conservancy Loop Trail	Retain unpaved surface along existing loop trail.	$0 (not counting maintenance)	---	---
	All segments	Accommodate users with mobility impairments.	Varies	T.B.D.	As needed
	North Fork trail just west of Deming bridge	Correct horizontal cross-slope and reconstruct deteriorated section.	$10,000	CLC Capital	2010
	South Fork Trail, between Highway 14 and Esser Place.	Construct 10' paved shared-use trail west side of Deming Way (if Deming underpass is not built)	$100,000	TIF #3	Short-term (<2 yrs)
	Cayuga Connection (along east side of Highway 12 ramps)	Construct 10' paved trail (approx. 2,500')	$50,000	CLC Capital, possibly TIF	Medium term (2-5 yrs)
	Kromrey Middle School & Aquatic Center connections	Replace sidewalk with 10' wide paved trail along west side of Park Street (safety, capacity).	$40,000	Capital (CLC, PW)	Short-term (<2 yrs)
	Link between overlook parking lot and West Trail	Replace existing eroded, ped-only trail with 10' wide shared-use trail	$2,000	CLC Capital	2010
	Link between Allen Ct. and Southeast Trail	Construct 10' wide shared-use trail w/ boardwalk to enhance access and reduce trespassing.	$80,000	CLC Capital	Complete in 2010
	Total Cost		**$282,000 +**		

	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
R AILROAD CORRIDOR	Within City municipal boundary	Meet with w/ WSOR, WisDOT, Madison to coordinate project	$0	Grants, Madison and Middleton capital project	Continual
		Study & Preliminary Design	$197,000		Short-term (<2 yrs)
		Final Plans & Preparation	$146,000		
		Path Construction (with lighting if desired)	$2,245,000		Medium-term (2-5 yrs)
	West of Beltline	Integrate trail with Park & Ride facility and transit center.	T.B.D.	Fed. TIGER grant	Medium-term (2-5 yrs)
	Total Cost	**(See Appendix C)**	**$2,588,000**		

LAKEVIEW PARK TRAIL CONNECTIONS	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
	Lakeview Park	Improve trail access points with ADA ramps. (2)	$1,000	PW Capital	Short-term (<2 yrs.)
	Middleton Springs neighborhood	Plan for developing a trail and greenway corridor in conjunction with any redevelopment.	T.B.D.	Developer, possibly TIF assistance	Ongoing & as opportunities arise
	Allen/Mendota intersection	See ALLEN BLVD CORRIDOR	---	---	---
	Southern extension into Madison	Work with Madison officials to extend a trail to Lake Mendota Drive and/or Overlook Pass	T.B.D.	Capital; possible grant	Medium-term (2-5 yrs.)
	Total Cost		**$0**		

FUTURE TRAIL EXTENSIONS	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
	Urban growth areas	Identify opportunities for reserving key, natural, trail and greenway corridors.	---	---	Continual
		Consult with Dane County Parks on trail design issues.	---	---	As needed
	"Misty Valley Trail" (Hwy 12 to West Conservancy Trail)	10' wide off-street paved trail (grading & construction est.)	T.B.D. (depending on route)	Developer, CLC Capital	Medium-term (2-5 yrs)
	"Graber South" link (Misty Valley to Graber Road.)	10' wide off-street paved trail	$30,000	CLC Capital	2010
	"North Mendota Trail" (High Rd. to Gov. Nelson State Park)	10' wide off-street paved trail	T.B.D.	Developer, County, Grants	Medium-term (5-8 yrs)
		Overpass at Highway Q	T.B.D. (>$1 million)	Grants, Fed $ thru MPO, County, City assistance	Long-term (8+ years)
		Connecting links to north and into development(s)	T.B.D.	Developer	In conjunction with devel.
	"Quarry Trail" (Hwy 12 from north of quarry to PB Conserv)	10' wide off-street paved trail	T.B.D.	Developer	In conjunction with devel.
	Metropolitan Community Park	10' wide off-street paved trail	T.B.D.	CLC Capital, Developer, possibly County	Long-term, in conjunction with devel.
	Larwood Hills loop	Trail (surface & width T.B.D.)	T.B.D.	Developer	In conjunction with devel.
	North Fork Trail – westward extension	10' wide shared-used trail (surface T.B.D.)	T.B.D.	Town of Middleton	Up to Town
	Hidden Oaks Trail – southwest extension	10' wide off-street paved trail	T.B.D.	County	Up to County
	"Good Neighbor Trail" (Middleton to Mazomanie)	10' wide off-street paved trail alongside unpaved trail	T.B.D. (cost estimates currently being developed)	Multi-jurisdiction capital, Grants, possibly National Park Service, private funding (user groups)	Long-term
	South Fork / Greenway Center Trail (westward extension across Pleasant View Road)	10' wide off-street paved trail; surface along golf course T.B.D.	T.B.D.	CLC Capital	Medium-term (2-5 yrs)
	Total Cost		**$0**		

FACILITY IMPROVEMENTS: ON-STREET NETWORK (see Sec. 3.3)

	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
ALLEN BLVD.	Maywood Ave. intersection / Middleton Springs area	Plan for traffic signal in conjunction with Sentry site redevelopment (also consider enhancements at Lake St.)	T.B.D.	TIF #5 and/or developer	Short term (<2 yrs)
	Mendota Ave.	Review/update engineering studies; install HAWK signal system at minimum	T.B.D.	PW Capital	Medium-term (2-5 yrs)
	Total Cost		**T.B.D.**		

	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
BELLEFONTAINE BLVD.	Southern side of street, from west to east	Construct southern lane and add bike lanes when traffic volumes warrant.	Part of street expansion project	City, developer	Long-term (as volumes warrant)
	Between High Rd. and CTH Q	Investigate opportunities for grade-separated trail crossings in conjunction with road design	T.B.D. (Box culverts much cheaper than bridges)	City, developer (Incorporate into road design & construction costs)	In conjunction with development planning
	Collector street extension to Northlake	Construct street with bike lanes	T.B.D.	Developer	As area develops
	Total Cost		**T.B.D.**		

	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
BRANCH ST.	Entire length	Consider accelerating reconstruction schedule; at minimum, make spot repairs where bikes travel	$10,000	PW Operating	Medium-term (2-5 yrs)
		Mark 5' bike lanes to improve access to school, conservancy, Lakeview Park, and future bike lanes on University	$4,000	PW Operating	After spot repairs are completed
	Franklin intersection	Install pedestrian refuge and re-align trail access.	$4,000	PW Capital	Medium-term (2-5 yrs)
	Columbus intersection	Consider pedestrian refuge.	$4,000	PW Capital	Medium-term (2-5 yrs)
	Total Cost		**$22,000**		

	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
CAYUGA ST.	Entire length (University to rail corridor)	Study how best to accommodate bikes as part of Cayuga Trail connection	T.B.D.	PW Capital, possibly TIF	At time of trail construction
	Total Cost		**$0**		

CENTURY AVE CORRIDOR	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
	Allen Blvd. to East city limits.	Shift existing travel lanes to make room for 4' bike lane in each direction	$5,500	PW Operating	Short-term (<2 yrs)
	Old Creek Road to East city limits	Acquire strip of land wide enough to replace sidewalk with an 8-to-10' side path .	$250,000 (to be refined with Sales studies)	PW Capital, Fed $ thru MPO (County likely would not participate)	Medium-term (2-5 yrs.)
	CTH Q / Hedden intersection	Evaluate potential modifications to intersection geometry to reduce ped/bike/veh. conflicts	(staff work)	---	Short-term (<2 yrs)
		Consider installation of curbside ped/bike detection systems	$2,000 - $10,000	PW Capital	Medium-term (<2 yrs)
		Improve sight lines between turning vehicles and peds.	T.B.D.	Depends on nature of work	Short-term (<2 yrs)
	Allen Blvd.	Consider installation of countdown timers (10) (assuming no short-term intersection reconstruction)	$5,000	PW Capital, possibly TIF	Short-term (<2 yrs)
	Near Middleton Springs Drive intersection	Evaluate ramifications of installing signalized crosswalk to accommodate Lakeview Park trail connection	T.B.D.	T.B.D.	Short-term (in conjunction w/ redevelopment planning)
	Branch St. intersection	Widen / accentuate crosswalks on west and south legs.	$2,000	PW Capital	Short-term (<2 yrs)
		Re-align ramps / trail approaches	$3,000	CLC Capital	Short-term (<2 yrs)
		Replace southern sidewalk with an 8-to-10' side path to connect with P.B. Trail	$3,000 (not counting new bridge crossing)	CLC Capital	Short-term (<2 yrs)
	Total Cost		**$280,000 +**		

COUNTY TRUNK HWY Q	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
	Century north to city limits	Mark bike lanes	$1,000	PW Operating (County assistance unlikely)	Short-term (<2 yrs)
	CTH Q Intersection to north city limits	Plan for sidewalk along east side	T.B.D. (numerous obstructions, incl. trees; may require easements to reduce impacts)	Assessment (City policy is 100%; though some PW Capital may be justified due to conditions; County does not assist with sidewalk construction)	Medium-term (2-5 yrs.)
	Park Intersection	Ensure TIAs consider potential impacts to ped/bike circulation	(staff time)	----	Continual
	Total Cost		**$0**		

DEMING WAY	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
	USH 14 – Esser Place (one block)	Construct shared-use trail along west side (unless full reconstruction is planned in short term)	$100,000	PW Capital, possibly TIF #3	Short-term (<2 yrs) unless full reconst.
	Discovery Dr. – Airport Road	Extend bike lanes and TWLTL as traffic volumes increase	$6,000	PW Operating	As volumes increase
	Total Cost		**$106,000**		

GREENWAY BLVD CORRIDOR	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
	South Fork (Greenway Center) Trail west to Pleasant View Rd.	Mark bike lanes or investigate use of "sharrows"	$1,000	PW Operating	Short-term (<2 yrs.)
	South of Greenway	Promote development of grade-separated trail crossing of Beltline	(staff time)	----	Continual
	East of South Fork Trail access point	Study to identify potential improvements for bicyclists	(staff time)	---	Short-term (<2 yrs.)
	Total Cost		**$1,000+**		

NURSERY DRIVE	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
	Entire length	Mark 5' bike lanes as traffic volumes increase	$1,500	PW Operating	As volumes increase
	Total Cost		**$1,500**		

OLD MID. RD.	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
	Countryside to East city limits	Continue coordination with Madison to implement bike lanes and sidewalk	Part of City's $300,000 share of project	PW Capital (sidewalk to be assessed)	2010
	Total Cost				

	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
PARK ST. / HIGH RD. / GAMMON RD. CORRIDOR	Entire length	Mark bike lanes and adjust parking and travel lanes as indicated in plan	$10,000	PW Capital	Short-term (<2 yrs)
	Century Ave. intersection	Consider crosswalk enhancements such as improved pavement markings and countdown timers	$4,000	PW Capital	Short-term (<2 yrs)
		Evaluate potential to widen High/Park to the east to accommodate bike lanes	T.B.D.	PW Capital	Short-term (<2 yrs.)
	University Ave. intersection	Implement "Short-term solution" to improve ped/bike circulation through intersection	$2,500 (est.)	PW Capital	Short-term (<2 yrs)
		Evaluate / refine "Longer-term solution" to improve ped/bike/motor vehicle circulation through intersection	T.B.D.	PW Capital	Medium-term (5-8 yrs. or beyond)
		Investigate use of bike detection devices	(staff time)	---	Short-term (<2 yrs)
		Upgrade to ADA-compliant ped push buttons & other related improvements	$5,000	PW Capital	Short-term (<2 yrs)
		Install bike-safe drainage grates	$300 each	PW Capital	Short-term (<2 yrs)
	Elmwood, Hubbard, South intersections	Clearly mark & maintain crosswalks	Part of annual maintenance	PW Operating	Continual
		Investigate potential crosswalk improvements (e.g., in-pavement flashing warning light system)	(staff time; costs of improvements T.B.D.)	PW Capital	Short-term (<2 yrs)
		Regularly enforce speed limits	---	MiPD Operating	Continual
	Railroad crossing	Install ped refuges and enhanced crosswalk in conjunction with trail development	$6,000	PW Capital	At time of trail development
	Fortune Drive	Install ped refuge within the TWLTL on north leg	$5,000	PW Capital	Short-term (<2 yrs)
	Total Cost		**$35,000 +**		

	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
PARMENTER ST	University – Discovery Dr. AND Parmenter to north city limits	Add 5' bike lanes (will require removal of one parking lane)	South: $1,000 North: Part of reconstruction	South: PW Operating North: TIF	South: Short-term (<2 yrs)
	Schneider / Belle Fontaine intersection	Accommodate future "Misty Valley Trail" crossing and other bike/ped circulation	T.B.D.	T.B.D.	Medium-term (2-5 yrs.)
	Century Place "intersection"	Construct 10' paved connection (absent decision to connect the two streets for vehicles)	$2,000	PW Capital	Short-term (<2 yrs.)
	University Ave. intersection	Install ped countdown signals on all four legs	$4,000	PW Capital	Short-term (<2 yrs.)
		Monitor property acquisition options to enable intersection widening for bike lanes	(staff time)	---	Continual
	Total Cost		**$0**		

PLEASANT VIEW ROAD CORRIDOR	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
	From Evergreen Rd. to southern City Limits, including along future alignment straddling Highway 14	Add 5' bike lanes	North of Hwy: $1,000 South: w/ road reconstruction	North: PW Capital South: Regional project (Fed $)	Medium-term (2-5 yrs)
	USH 14 / University Ave. intersection	Support WisDOT / regional efforts to improve or re-align intersection, or to construct possible interchange	(staff time)	---	Continual
	Total Cost		**$1,000 +**		

STONEFIELD RD	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
	Entire length	Mark 5' bike lanes OR consider use of bike route signage	$2,000	PW Operating	Medium-term (2-5 yrs.)
	Total Cost		**$2,000**		

UNIVERSITY AVENUE	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
	Branch St. to east city limits	Support Madison and County Plans to reconstruct University with bike lanes east of Allen, and carry bike lanes west to Branch.	$4,000	PW Operating (may be able to combine with reconst. project to the east)	2011
	Allen Boulevard Intersection	Analyze methods for improving ped/bike safety	(staff time)	---	2010
	Branch St. & Maple St. intersections	Install "Bike Route" signs to direct bicyclists to parallel streets	$500	PW Operating	At time of marking bike lanes
	Branch St. intersection	Install enhanced crosswalk markings and countdown timers	$4,000	PW Capital	Short-term (<2 yrs)
	Park St. Intersection	See Park Street corridor above	---	---	---
	Bristol St. Intersection	Monitor conditions resulting from installation of traffic signal	(staff time)	---	2010 and beyond
	Parmenter St. intersection	See Parmenter St. above.	---	---	---
	US-12 Ramp / Cayuga St. Intersection	Install enhanced crosswalk markings & countdown timer on east leg of intersection in conjunction with development of the "Cayuga Connection" trail	$3,000	PW Capital	At time of Cayuga trail construction
	Deming Way Intersection	See Deming Way above	---	---	---
	Pleasant View Rd. intersection	See Pleasant View above.	---	---	---
	Total Cost		**$11,500+**		

FACILITY IMPROVEMENTS: SIDEWALKS (see Sec. 3.4)

	SEGMENT	IMPROVEMENTS	COST	FUNDING	TIMEFRAME
SIDEWALKS	Donna (west of Parmenter) Graber Rd. Laura Ln. Lisa Ln. East side of CTH Q East side of High Rd. (part) Old Middleton Rd.	Plan for installation of sidewalks in conjunction with street reconstruction projects	$30 per sq. ft.	City assessment	In conjunction with street reconstruction projects
	Middleton Business Park	Engage business community to discuss pedestrian needs due to absence of sidewalks.	(staff time)	City policy is to assess 100%	Short-term (<2 yrs)
	Around schools	Work proactively with school officials and other stakeholders to identify / mitigate potential safety hazards.	(staff time)	---	Continual
	Midblock crosswalks (e.g., Maywood Avenue)	Consider the installation of pedestrian refuges at midblock crosswalks to promote safety and traffic calming	$5,000 (each)	PW Capital	Short-term (<2 yrs)
	Total Cost		**T.B.D.**		

APPENDIX A: BICYCLE PARKING STANDARDS

Bicycle parking is required for all new structures within ¼ mile of existing or proposed bicycle facilities (on-street paths or off-street trails) and are highly encouraged for all other new structures.

The number of bicycle parking spaces shall be determined by the following standards:

- Minimum for all structures – 2 spaces
- Multi-family Residential Dwellings – 1 per dwelling unit
- Hotels/lodging houses - 1 per 20 employees
- All other uses - 1 per 10 auto spaces

Bicycle Parking Space Size, Access Aisles, and Vertical Clearance:

- Required bicycle parking spaces shall be at least 2 feet by 6 feet.
- An access aisle of at least 5 feet shall be provided in each bicycle parking facility.
- Such space shall have a vertical clearance of at least 6 feet.

Bicycle parking shall include a bicycle rack designed to allow the use of a U-shaped lock that secures the frame to the rack. The City of Middleton requires that bicycle racks be designed as follows:

1) Bicycle Rack Design:

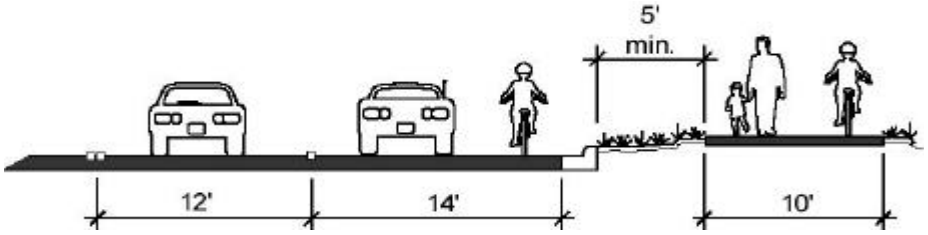
    a. Structures that require a user-supplied locking device shall be designed to accommodate U-shaped locking devices.
    b. All lockers and racks must be securely anchored to the ground or the building structure to prevent the racks and lockers from being removed from the location.
    c. The surfacing of such facilities shall be designed and maintained to be mud and dust free.

2) Bicycle Rack Location:

    a. Bicycle parking facilities shall be located in a clearly designated safe and convenient location.
    b. The design and location of such facility shall be harmonious with the surrounding environment.
    c. The facility location shall be at least as convenient as the majority of auto parking spaces provided.

APPENDIX B: DESIGN STANDARDS AND USE OF SIDE PATHS[7]

Side paths are trails running immediately parallel to a roadway. Side paths are not recommended in most applications due to conflicts with motor vehicles at intersections. However, careful facility design can be incorporated to minimize conflicts. Where present, bicycle accommodation on adjacent roadway via wide curb lanes should also be provided.



Source: Kane County Bicycle and Pedestrian Plan

Many bicyclists who are uncomfortable cycling in traffic consider side paths a safe alternative because of the perceived safety of being removed from the traffic stream. However, safety professionals and experienced bicyclists tend to disagree because crash statistics indicate that side path riders are more frequently involved in bicycle/motor vehicle collisions at intersections. This, coupled with travel delays, causes many bicyclists to continue to use the roadway.

Only when it has been determined that on-road improvements are not feasible along arterial streets, should a side path be considered as a bicycle route. Then, additional criteria must be met to ensure user safety:

Available Right-of-Way
To accommodate the minimum standard for bicycle/shared use paths, there should be 18 feet of available right-of-way. This is necessary to provide for a 3-foot clear zone from obstructions, a 10-foot wide trail, and a 5-foot buffer/open space that separates the path from the road. If there is less than a 5-foot buffer width, a 4.5-foot high physical barrier is required.

Number of Street and Driveway Intersections
Side paths should not be considered when there are more than 12 residential driveways, 6 commercial drives/minor streets, or 3 major street intersections per mile. Beyond this, a cyclist would face more than 1 driveway every 30 seconds, or 1 street every minute, whereby the safety and utility of the path deteriorates dramatically. Commercial strips and other areas with heavy vehicular turning movements are particularly dangerous.

Other Design Considerations
When the side path moves into the design and construction phase, additional problems will need to be resolved, including providing access to destinations located on the opposite side of the street from the side path, modifying signal timing to permit non-motorized users to move through an intersection, removing obstructions from sight triangles, locating crosswalks a proper distance from the parallel roadway, and providing curb cuts and transition areas so that bicyclists may access the path from both the parallel and intersecting streets. In no instance should development of a side path preclude bicyclist use of the adjacent roadway.

[7] Source: Kane County Bicycle and Pedestrian Plan, Illinois: http://www.co.kane.il.us/

APPENDIX C: RAILROAD CORRIDOR TRAIL PRELIMINARY COST ESTIMATES

The City of Middleton is planning for the design and construction of a bicycle/pedestrian path along the existing rail system throughout the City limits. The path is anticipated to be 13,500 lineal feet in length and 10 feet wide pavement with 2 feet of shoulder on each side. The path is anticipated to be lighted and fenced between the path and railroad. The preliminary costs following are based on the Campus Drive bike path planned in 2006/2007 and constructed in 2007/2008. This path occupies the same railroad corridor that exists through the City of Middleton.

The proposed path is anticipated not to have any structural design including bridges or major retaining walls. The path will cross seven roadways in which improvements may be necessary and costs are included for these improvements. The main crossings will include Pleasant View Road, Deming Way, High Point Road, Parmenter Street, South Avenue, Park Street, and Stonefield Road. Signals are not anticipated at all intersections, although each intersection shall be analyzed for bicycle/pedestrian crossing safety.

Preliminary Engineering Cost Estimate:

Site Evaluation	
Topographic/Boundary Survey	$ 17,500.00
Environmental, Archeological, and Historical Site Assessment	$ 12,000.00
Soil Borings	$ 7,500.00
Preliminary Design (Includes Route Alternatives)	$160,000.00
Gather Existing Information	
Meetings	
Preliminary Plan Preparation	
Presentation Preparation	
Traffic Counts	
Final Plans and Specifications	$125,000.00
Bidding	$ 5,000.00
Construction Site Visits (Not Full-Time Inspection)	$ 10,000.00
Easement Preparation	$ 6,000.00
TOTAL	**$343,000.00**

Preliminary Construction Cost Estimate:

General Requirements	$ 50,000.00
Erosion Control	$ 55,000.00
Removals	$ 50,000.00
Grading	$340,000.00
Asphalt Path	$420,000.00
Storm Sewer	$ 50,000.00
Intersection Improvements	$ 55,000.00
Lighting (Includes Code Blue Stations)	$800,000.00
Landscaping (Fencing and Seeding)	$400,000.00
Railroad Flagging	$ 25,000.00
TOTAL	**$2,245,000.00**

Note: Aside from being expensive, lighting the trail would likely be unpopular with adjoining residents. It may be preferable to rely on the use of flashlights or strong headlights.

Sustainable City Plan

November 2010



City of Middleton

PREPARED BY MSA PROFESSIONAL SERVICES, INC.
SEVENTH GENERATION ENERGY SYSTEMS, AND GDS ASSOCIATES

THIS REPORT IS FORMATTED FOR DOUBLE SIDED PRINTING

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1. EXECUTIVE SUMMARY

The City of Middleton is a thriving City of approximately 17,000 residents. In recent years, the City has earned many accolades including being named the "Best Place to Live" in America in August 2007 by *Money Magazine*. Upon receiving this award and others, the City realized that it must continue to innovate in order to become a truly resilient, sustainable City. To this end, the City has undertaken numerous sustainable initiatives including the formation of a Sustainability Committee, receiving a grant to replace streetlights with LED lights, updating the Bike and Pedestrian Plan, creating a community garden space, and many others too numerous to list.

While the City embraced these actions, it has also become apparent that the City had no mechanism in place to measure the cumulative success of these initiatives. To that end, in 2009 and 2010, the Middleton Green Team Committee created a Middleton Sustainable City Plan: a systems approach to making the City efficient, sustainable, and resilient.

This document explains the Sustainable City Plan, as well as the intensive public process through which the system was developed.

The Sustainable City Plan addresses seven separate, yet interconnected aspects of life within the City of Middleton: Energy, Transportation, Land Use, Water, Waste, Economy/Food/Fair Trade, and Public Outreach and Education. For each of these seven categories, the City created a vision statement; identified indicators by which performance can be measured; selected desired performance trends; and prioritized a list of possible actions to accomplish these objectives.

The Sustainable City Plan is a living document – a system – and continual improvement and annual updates are an integral part of the system. This living Plan is designed to help the City adapt and improve performance each year through incremental changes that will cumulatively result in increased efficiency, cost-savings, environmental benefits, and long-term resilience. Each year the City will evaluate performance, adjust the desired targets if appropriate, and revise the action plan.

The public process through which this Sustainable City Plan was developed included:

- The creation of a City Green Team consisting of key City personnel and members of the Sustainability Committee
- Numerous public working meetings with the City Green Team, May 2009 through July 2010
- A Public Visioning Session, July 8, 2009
- A Community Survey, late July through September 2009
- Progress reports to the City Council, periodically
- A Public Draft Review Meeting, May 12, 2010
- Adoption by City Council on November 16, 2010

Through this intensive public process, the City has made strides toward integrating sustainability and resiliency into all facets of the City, ensuring that the City will not only be able to gauge the success and merits of initiatives, but also that the City will continue to be a desirable place to live.

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2. WHAT IS THE SUSTAINABLE CITY PLAN?

This document does not map out a specific path to a sustainable Middleton. This document describes the process by which the City of Middleton will pursue sustainability year by year, and it includes commitments to actions for the next 1-3 years. This system includes six essential components:

- **Vision statements**

  These describe, in qualitative terms, what a sustainable Middleton looks like and how it functions

- **Baseline sustainability indicators (performance, calculated in 2009[1])**

  These are specific metrics, aligned with the vision statements, by which the City can quantify performance and progress toward the Vision

- **Performance Targets (the City's improvement goals)**

  These are specific, measurable goals to which the City aspires

- **Actions**

  These are specific projects, programs, and initiatives to help the City achieve its Targets and Vision

- **Annual Renewal Commitment**

  This is the commitment to measure performance toward the Targets each year, and to recommit to a set of actions each year

- **Adoption**

  The Middleton City Council adoption formalizes the Sustainable City Plan by Resolution.

Together, the above six components constitute the Middleton Sustainable City System.

[1] Most of the 2009 baseline indicators use data for 2008, unless otherwise noted.

3. PUBLIC PARTICIPATION PROCESS

Because the Sustainable City Plan is a living document that is constantly evolving and growing to meet the needs of the City, an essential component to the System is an active public process. Opportunities for public participation included a series of Green Team working meetings, a public kickoff visioning event, an internet survey, the public presentation of the System, and finally, adoption of the System by the City Council.

Green Team Committee Meetings

The City formed a Green Team to coordinate the development of the Sustainable City System. The Green Team consisted of members of the Middleton Sustainability Committee and City staff including members of the Planning, Water Resources, Building Inspection, Police, and Library Departments. The Green Team met on a monthly basis to develop the Sustainability System, beginning in June 2009. As the process progressed, the Green Team also formed a Work Team that met periodically to keep the process moving forward. The Green Team kept the Sustainability Committee, the Plan Commission, and the City Council informed on progress throughout the process.

Public Kickoff Meeting

On July 8, 2009 the Sustainability Committee hosted a public visioning session to help kick off the project. The meeting's activities were organized around the seven categories or systems upon which this project focuses: Energy, Transportation, Land Use, Economy/Food/Fair Trade, Water Resources, Solid Waste Generation and Management, and Public Outreach and Education. During the meeting, participants moved from table to table, and examined their personal views of a sustainable future for Middleton. The visioning session was attended by more than 50 community members. This exercise resulted in two sets of ideas offered by participants: vision statements and actions.



The visions generated at this public meeting were synthesized and refined by the Green Team into the following Vision Statements:

Solid Waste

The residents, businesses, and government of Middleton utilize the most efficient and effective methods available to reduce, reuse, compost, and recycle waste. City government uses incentives and policies to limit unnecessary waste and to promote the profitable reuse of materials. Middleton is a leader in the application of technologies and practices that keep physical resources cycling within the local economy.

Water

Middleton has an abundance of clean water, including surface water and groundwater resources. All public and private users limit their use of groundwater while also seeking to maximize infiltration of stormwater so that there is equilibrium between water used and water returned to the ground. The City is vigilant in its efforts to keep harmful substances out of all water resources, to protect its aquatic ecosystems, and to ensure

that development is not vulnerable to flooding.

Transportation

Middleton has an extensive multi-modal transportation network that is accommodating to the needs of all people, regardless of age, ability or income. City transportation infrastructure is integrated with a regional system that combines timely, cost-effective public transportation options with a safe and ubiquitous network of routes for walking and bicycling.

Energy

The City of Middleton is a leader in energy efficiency and renewable energy generation and use. Public and private energy users are using innovative technologies to make Middleton a "net zero" City that produces all of its energy needs from renewable sources within the City limits.

Land Use

Land uses in the City of Middleton are smartly integrated and development is designed for flexibility and longevity. The City directs development to infill sites near existing mixed-use centers and corridors, thereby preserving surrounding agricultural land and open space around the City. The City also preserves land strategically within the City to enable recreation and small-scale community agriculture and to preserve bio-diversity.

Economy/Food/Fair Trade

Middleton has a balanced, diversified economy which meets the needs of Middleton residents locally. There are unique nodes of retail, service, and office uses throughout the City such that all residents can satisfy at least a portion of their daily needs within walking distance of their homes. The City has a stable employment base which provides attractive, appealing, living-wage jobs to local residents. The skills and contributions of all citizens are valued and appreciated. Middleton residents understand how and where the goods they buy are produced and are empowered to make informed purchasing decisions. Middleton is a leader in the production and consumption of healthy food grown within the community and the region.

Public Outreach and Education

The City of Middleton promotes an environment of creative, innovative learning. It is a City where people of different ages, cultures, and languages respect and learn from each other. Local schools collaborate with the City to help make sustainability a part of every citizen's life in Middleton. Together, as a community, the City focuses on finding the solution to any problem.

Survey Results

In the fall of 2009, the Green Team and the City of Middleton hosted an online survey in order to gain a deeper insight into Middleton citizens' existing knowledge and participation in sustainability issues and activities, and desired future direction for the City. The online survey tool was focused on residents of Middleton; however, a business survey was also available should local business-owners want to voice their opinions. In addition, members of the Green Team and the Sustainability Committee completed some random door-to-door samples to help increase participation in the survey.

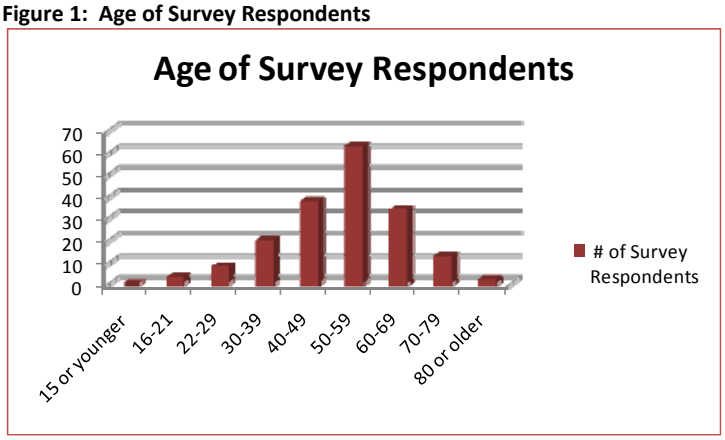
While an online survey is an excellent tool for gathering information, it should not be confused with a statistically significant research study. It is possible for people who live outside of the City of Middleton to respond and for people to take the survey more than one time; therefore the results of this online survey were used simply as a means of gathering increased public participation. Comments and ideas from the community survey, the public meetings, as well as input from City staff and elected officials were used to inform the action items found in the next section of this document.

As with any survey, there were a wide range of responses, ranging from people who are very excited and passionate, as well as knowledgeable, about sustainability issues to respondents who were neither interested nor willing to support the efforts; and there were many responses that fell in between these two extremes. In general, survey respondents embraced many of the different facets of sustainability presented in the survey; however, there was also a general concern with the expenses of implementing many of the actions and with duplicating efforts that were already underway by other organizations. Each section of the survey included a question on willingness to pay. While survey respondents were often willing to pay *some* amount for the programs or services, one common complaint was that the survey did not provide enough information on specific costs and savings to answer the willingness to pay questions in an educated fashion.

The following section presents a brief summary of responses, and complete survey result can be found in Appendix C. In addition, the survey results were posted on the City's website.

There were 189 respondents (177 finished the survey completely). Seven of the respondents volunteered that they don't live in the City. The remaining 182 resident respondents represents a response rate of approximately 1% of the City's population. The majority of the respondents (55.8%) are between 40 and 60 years old; however there were at least a few respondents in each age category except the 15 years of age and younger category. The majority of the respondents (56.5%) have lived in the City for more than 10 years.

Figure 1: Age of Survey Respondents



The survey was divided into different sections, each gathering information on a certain topic:

- Trash and Recycling
- Water
- Transportation
- Energy
- Land Use
- Economy
- Public Outreach and Education
- Other
- A bit about the respondent

Trash and Recycling

In general, survey respondents were well-educated and proactive about recycling. The majority of the respondents answered "yes, always" when asked if they recycle at home and work. Not one survey respondent replied "never". In addition, 68% of the respondents use the Clean Sweep Program to dispose of hazardous household waste. Only 12.2% of the survey respondents did not know about this program. Participation and education on food composting was much less widespread.

Figure 2: Programs and Services related to Trash and Recycling

Would it help you reduce the amount of food you put in your trash if the City did any of the following? (Check all that apply)		
	Response Percent	Response Count
Give out instructions on how to compost	37.8%	62
Sell compost bins at a discounted cost ($40)	37.8%	62
Collect compost in a separate container along with trash and recycling	48.2%	79
The City should not be involved in this matter	22.6%	37
answered question		164
skipped question		25

Water

In general, survey respondents were supportive of activities to reduce water consumption and improve stormwater management. This was one area, however, where many of the comments reflected concern that this may duplicate the efforts of other organizations.

Figure 3: Programs and Services related to Water Reduction

The average Middleton household uses 172 gallons of water from the City wells each day. Should the City do any of the following to help households and businesses reduce water usage? (check all that apply)		
	Response Percent	**Response Count**
Give out information on indoor and outdoor water efficiency tips	66.7%	116
Offer rebates for low-flow showerheads, toilets and faucets that use less water	68.4%	119
Prohibit lawn watering during extended dry weather	56.9%	99
Offer water efficiency audits	50.6%	88
Encourage use of xeriscaping (plants that don't have to be watered to survive) for residential and business landscaping	68.4%	119
answered question		**174**
skipped question		**15**

Figure 4: Programs and Services related to Stormwater

Stormwater runoff is water from rain or melting snow that "runs off" hard surfaces like parking lots and roofs instead of soaking into the ground. This runoff can pick up pollution like road salt, oil, and trash before it goes to storm sewers and ends up in the Pheasant Branch Creek and eventually Lake Mendota. What should the City do to further reduce stormwater runoff? (Check all that apply)		
	Response Percent	**Response Count**
Offer a hands-on class on how to build a rain garden	57.4%	101
Give out information on chemical-free lawn and garden care	73.3%	129
Paint all City storm drains with "Drains to Creek" to discourage the dumping of pollutants	48.9%	86
Give out information on how to reduce your home's stormwater runoff	79.0%	139
Provide free mulch to City residents each spring.	42.6%	75
answered question		**176**
skipped question		**13**

Transportation

In the Transportation section, the most interest was generated in regards to biking as walking as alternative modes of transportation; very few respondents utilized other forms of mass transit (carpooling, Metro bus, etc.). In general, most of the survey respondents felt that the City ought to undertake activities which make walking and/or biking *safer* (more bike paths, fix hazardous sidewalks, safer crosswalks, etc.)

Figure 5: Survey Respondents who walk or bike to work or shopping (not specifically for exercise)

How often do you walk or bike to get to work or go shopping?						
Answer Options	**Never**	**1-2 times a month**	**1-2 times a week**	**3-4 times a week**	**Every day**	**Response Count**
April - September	47	45	32	33	21	178
Oct - March	66	49	30	8	11	164
					answered question	**179**
					skipped question	**10**

Figure 6: Programs and Services Related to Transportation

What would make you walk or bike more often to get to work or go shopping? (Check all that apply)		
	Response Percent	**Response Count**
More sidewalks	11.0%	15
More bike paths or marked bike lanes	53.7%	73
Stores closer to where I live	61.8%	84
Working closer to where I live	36.8%	50
answered question		**136**
skipped question		**53**

Energy

The section on energy was divided into questions on municipal energy use and individual energy consumption. The majority of the respondents valued renewable energy and energy efficiency, and many were willing to pay the up-front expenses of implementing these technologies. For example, 55% of the respondents thought that City ought to implement strategies and technologies to reduce electricity and natural gas usage *even if* the savings do not cover the cost. The survey respondents displayed a lot of interest in various programs and/or services that the City could offer to help reduce individual energy consumption. It is important to note, that this was another area of the survey where many of the comments cautioned against duplicating the efforts of other organizations.

Figure 7: Programs and Services Related to Individual Energy Consumption

As it pertains to energy usage in homes, which of the following City actions do you support? (Check all that apply)	Response Percent	Response Count
Give out information about energy efficient appliances, practices, and home construction	66.3%	120
Offer a class on weatherizing your home	53.6%	97
Offer a class on no-cost tips to save energy	58.6%	106
Give out free compact fluorescent light bulbs	32.6%	59
Require more energy-efficient building construction standards than current code requires	63.5%	115
Establish a loan fund for residents and businesses for energy efficiency upgrades	42.5%	77
Provide rebates for Focus on Energy Home Energy Audits	51.9%	94
Provide free hot water piping insulation to City residents	26.0%	47
Start a thermostat recycling program where residents can bring in their old thermostat in exchange for a low-cost 7-day programmable thermostat	47.0%	85
Waive or reduce the building permit fee if installing a renewable energy system	50.8%	92
Sell shade trees to residents each spring, at the City's cost, to be planted near homes to help reduce cooling costs	51.4%	93
I do not think that it is the role of the City to be involved in these activities	8.3%	15
answered question		**181**
skipped question		**8**

Land Use

The section focused on two general questions about land use patterns within the City. Survey respondents were in strong agreement that the City ought to encourage more shopping and service businesses within walking distance of existing neighborhoods; and they also were agreement that the City ought to encourage a mix of shopping, office, and multi-family buildings as part of future housing developments. In addition, there were many write-in comments encouraging infill over green field development. There were also many comments stating that Middleton ought to concentrate on existing businesses and developments before constructing new ones.

Economy/Food/Fair Trade

This section questioned respondents shopping habits, as well as the location of their place of employment. While many of the respondents would prefer to shop from local merchants, the majority of the respondents spend less than 50% of their budget for retail goods and services within the City of Middleton, most commonly leaving the City for better selection. There were many comments specifically mentioning that the City lacks good grocery store options within close proximity to residential neighborhoods. When questioned about the location of their employment, only 12.5% of the respondents reported that they would prefer to work in the city of Middleton but cannot find a job.

Public Outreach and Education

This section of the survey questioned respondents about how they receive information and what activities they would support to increase the public education of sustainability issues within the City of Middleton. Many of the programs and services presented elsewhere in the survey and in this summary would also increase the public outreach and education of Middleton residents.

Figure 8: Preferred contact method

How would you prefer to be informed about City news, initiatives, events, etc.? (Check all that apply)	Response Percent	Response Count
Local cable	11.5%	21
Local newspaper	48.4%	88
City website	56.0%	102
Mailing to your home address	29.1%	53
Email/Listserves	71.4%	130
answered question		**182**
skipped question		**7**

Figure 9: Public Education interest

What educational forums should the City support/promote to encourage greater sustainable practices in Middleton? (check all that apply)	Response Percent	Response Count
Study Circles centered on community sustainability (i.e. Natural Step)	31.8%	55
Neighborhood action teams (i.e. Madison Environmental Group's EnAct groups)	44.5%	77
Sustainability related presentations at a school or the library	71.1%	123
Environmental service-learning projects with the schools	70.5%	122
None – The City should not take an active role in this effort	12.1%	21
answered question		**173**
skipped question		**16**

4. SUSTAINABILITY FRAMEWORK

The Sustainability Framework is the core of the City of Middleton Sustainability System. This System is organized into seven interrelated categories: Solid Waste, Water, Transportation, Energy, Land Use, Economy, and Public Outreach/Education.

Within each category are five types of information:

- Vision Statement
- Sustainability Indicators (performance, baseline calculated in 2009[2])
- Targets (the City's improvement goals)
- Progress Indicators (future performance, to be updated annually)
- Actions

The indicators in each category were prioritized in accordance with the following criteria:

1. Is the indicator worth tracking to see a pattern over time?
2. Does the indicator measure an area where action items can have an impact?
3. Does the indicator have a large impact on the reduction of CO2 and/or impact on overall sustainability?
4. Is the indicator easy to measure?
5. Are the action items related to the indicators accomplishable?

❖ **High Priority Indicators** are coded in orange in the following tables. High Priority indicators often have more specific targets and actions. In addition, high priority indicators will be monitored annually.

❖ **Low Priority Indicators** are coded in yellow in the following tables. Low priority indicators are indicators which the City has deemed important enough to monitor; however, the targets and actions associated with these indicators may be less specific. In addition, low priority indicators may not be monitored and updated annually.

[2] Most of the 2009 baseline indicators use data for 2008, unless otherwise noted.

Solid Waste

VISION STATEMENT

The residents, businesses, and government of Middleton utilize the most efficient and effective methods available to reduce, reuse, compost, and recycle waste. City government uses incentives and policies to limit unnecessary waste and to promote the profitable reuse of materials. Middleton is a leader in the application of technologies and practices that keep physical resources cycling within the local economy.

Indicator	Baseline	Target	Performance		
			2010	2011	2012
Total solid waste (including recycling) collected per capita per year (lbs)	829.8	DECREASE by 10% by 2015 (746.8 lbs)			
Percentage of solid waste that is recycled	25%	INCREASE to 40% by 2015			

Solid Waste Actions	Timeframe	Responsible Party	Cost
Produce an A-Z Guide for Waste Mangement	Completed	Public Works Committee Solid Waste Task Force	$$ Time Reproduction costs
Update the web version of the A-Z Guide on an on-going basis.	On-going	Public Works Committee Solid Waste Task Force	$ Time
Implement an Automatic garbage collection system	Completed	City Council	No cost to City
Enlarge the amount of items accepted at the Clean and Green event, including a metals drop-off area	2010	Sustainability Committee	No cost to City
Form a Task Force to investigate the use of plastic bags within the City.	2010	Sustainability Committee	--- No cost
Add a permanent MedDrop location	2010	Sustainability Committee	$
Research current construction waste recycling efforts to determine how to improve recycling rates	2011	Planning Dept. and Public Works Dept	-- No cost
Determine whether Middleton participation in compost bin sale with Dane County can be resumed	2011	Sustainability Committee	-- No cost
Implement City-wide food compost collection services	2012	Sustainability Committee	$
Research creation of permanent location for scrap metal, plastic bag, Styrofoam, cardboard, hard plastics, and other items that cannot be recyclied curbside	2012	Planning Dept	$
***Highlighted Actions have begun and/or been completed. These actions ought to be celebrated!			

Water

VISION STATEMENT

Middleton has an abundance of clean water, including surface water and groundwater resources. All public and private users limit their use of groundwater while also seeking to maximize infiltration of stormwater so that there is equilibrium between water used and water returned to the ground. The City is vigilant in its efforts to keep harmful substances out of all water resources and to ensure that development is not vulnerable to flooding.

Indicator	Baseline	Target	Performance		
			2010	2011	2012
Gallons of Groundwater Pumped Per Capita per year	42,688	DECREASE			
Percentage of groundwater lost	8-9%	DECREASE			
Gallons of Groundwater Delivered to Residential Users per capita	17,383	DECREASE by 10% by 2020 (15,645 gallons)			
Gallons of Groundwater Delivered to Commercial Users per square foot	49	DECREASE by 10% by 2020 (44.1)			
Gallons of Groundwater Delivered to Industrial Customers per square foot	Data on industrial square footage not available	DECREASE			
Gallons of Groundwater delivered to Municpal customers per square foot	150	DECREASE			

Water Actions	Timeframe	Responsible Party	Cost
Examine how to incentivize measures which encourage reduced water usage and increased water infiltration (possibly including rain barrels, rain gardens, low-flow fixtures, etc.)	2010	Sustainability Committee	$$
Evaluate all municipal buildings for water use, indentify and install water saving fixtures where appropriate	2012		$$
Research water use on residential and commercial lawns, including automatic sprinklers and make recommendations on improving efficiency of water use	2011		-- No cost
Research how City golf course utilizes water, determine if additional policies or technologies can improve water efficiency	2011		
Explore current pesticide and herbicide use on City property and develop recommendations for using environmentally safer products to minimize health impacts on children, animals, and water quality	2011	Public Lands Sustainability Committee	
Review the City's water rate structure, and eliminate incentive to use large volumes of water, while balancing the needs to business	*2011*	Public Works Committee	No cost to City
Recommend the use of porous pavement where appropriate	on-going	Plan Commission	No cost to City

Transportation

VISION STATEMENT

Middleton has an extensive multi-modal transportation network that is accommodating to the needs of all people, regardless of age, ability or income. City transportation infrastructure is integrated with a regional system that combines timely, cost-effective public transportation options with a safe and ubiquitous network of routes for walking and bicycling.

Indicator	Baseline	Target	Performance		
			2010	2011	2012
Percentage of Collector Streets with Marked Bike Lanes	11% (3.1 miles)	INCREASE to 65% by 2015 (18.1 mile)			
Metro Bus Trips per capita per year	8%	INCREASE 10% by 2014 (9.273)			
Ratio of Off-street Bike Path Miles to Total Street Length	18% (15.4 miles)				
Percentage of Collector Street with Sidewalks on Both Sides of the Street	71% (10.2 miles)	INCREASE			
Community Car members	61	INCREASE			
Morey Airport Non-Training Flights	6528	TRACK			
City Accidents per capita	0.0250	DECREASE			

Transportation Actions	Timeframe	Responsible Party	Cost
Adopt an ordinance requiring that all streets in Middleton are "complete streets" *	Completed	City Council	No cost to City
Add marked bike lanes through the City**	2010	Public Works	$$
Submit a TIGER grant application to fund parking/transit center	Completed	Planning Department	Time $
Construct the Good Neighbor Trail and the bike path along the railroad corridor to Madison	2010-2020	Public Lands	$$$
Work with the High School to encourage students to use alternative forms of transportation	2010	Sustainability Committee	No cost to City
Determine whether part-time telecommuting for certain city staff functions is feasible and develop policies	2011	City Administration	-- No cost
Use Safe Routes to School Air Quality grant for the Northside School to determine air quality and create program for improving air quality, including signs, that focuses on reduding idling	2010-2011		
Develop recommendations for bicycle parking in commercial areas	2011	Planning Department	-- No cost
Research potential uses for hybrid or alternative energy vehicles in the City fleet	2012		$$
Evaluate City vehicle idling policies and make recommendations	2011		-- No cost
Highlighted Actions have begun and/or been completed. These actions ought to be celebrated!			

*Complete streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists, and public transportation users of all ages and abilities are able to safely move along and across a complete street.

**Allen Blvd (1 mile), Century Ave (1.3 miles), CTH Q (.5 miles), branch Street (.6 miles), University Ave (1.1 miles), Stonefield Rd (.9 miles), Century Ave (2.5 miles), Parmenter St. north (.75 miles), Parmenter St. south (.3 miles), Deming way (1.25 miles), Nursery Dr (.3 miles), Greenway Blvd (.5 miles), Pleasant View Rd (1.5 miles), Park/High Point/Gammon Rd. (2.5 miles)

Energy

VISION STATEMENT
The City of Middleton is a leader in energy efficiency and renewable energy generation and use. Public and private energy users are using innovative technologies to make Middleton a "net zero" City that produces all of its energy needs from renewable sources within the City limits.

Indicator	Baseline	Target	Performance		
			2010	2011	2012
Total Electricity Consumption (kWh)	301,900,191	REMAIN THE SAME, EVEN WITH GROWTH			
Residential electricity (kWh) consumed per capita	4,639 kWh	DECREASE 10% by 2020 (4,175.4)			
Commercial electricity (kWh) consumed per SF	28	DECREASE by 10% by 2020 (25.2)			
Industrial electricity (kWh) consumed per SF	Data not available on SF				
Municipal electricity (kWh) consumed per square foot	6.6	DECREASE by 20% by 2020 (5.28)			
Municipal electricity (kWh) consumed per streetlight	487	DECREASE 243.5 per streetlight			
kWh consumed by Water Utility/Total Gallons	0.19	DECREASE			
Percentage of Electricity Consumed in the City Generated by Renewable Sources	1.6%	INCREASE to 25% by 2025			
Total Natural Gas Consumption (therms)	11,347,396	REMAIN THE SAME, EVEN WITH GROWTH			
BTU Consumed by RESIDENTIAL USES per capita per HDD (Heating Degree Day)	*3,340*	DECREASE			
BTU Consumed by COMMERCIAL USES per square foot per HDD	12.04	DECREASE			
BTU Consumed by INDUSTRIAL USES per square foot per HDD	Data not available on SF				
BTU consumed by MUNICIPAL USES per square foot per HDD	4.56	DECREASE by 10% by 2020 (4.104)			
Liquid fuel energy consumed per acre of land area maintained	1.15	DECREASE			
Vehicle miles traveled per acre of land maintained	Data not available	DECREASE			

Energy Actions	Timeframe	Responsible Party	Cost
Replace 82 City streetlights with LED	2010	City Council	$$$ - grant funding available
Upgrade government buildings so they are more energy efficient	On-going	City Council	$$$
Adopt a lighting ordinance to encourage energy efficient lights and decrease light wastage	2010	City Council	--- No cost
Install solar panels or a wind turbine in a public place for educational purposes	2010	City Council	$$-$$$$
Offer Focus on Energy literature at City Hall and City of Middleton Library	2010		-- No cost
Evaluate the adoption of a more strict commercial building code to mandate increased energy efficiency	2010	Planning Department Building Inspection Department Plan Commission City Council	--- No cost
Verify municipal computers, where appropriate, are set to hibernate, encourage employees to turn off machines at night if they don't need to be kept on. Identify sources of vampire power use in municipal buildings and provide powerstrips to encourage turning them off when not in use	2010	Planning Intern	$ powerstrips
Survey City staff on use of personal appliances including heaters, refridgerators, etc. and develop policies for acceptable use to maximize safety, energy efficiency, and staff productivity	2011	City Administration	Low cost
Determine whether set back thermometers are being used (and properly programmed) in all municipal buildings and implement where appropriate	2011	Planning Intern	$
Review where motion sensor lighting is and is not currently being used in municipal buildings, and install where appropriate	2011	Planning Intern	$
Research possible incentives to encourage residential building beyond minimum energy efficiency code	2011	Building Inspection Department	-- No cost
Purchase Energy Star rated office equipment, whenever possible	As updates are made	Purchasing Policy	
Require commissioning of all future City structures and determine whether recommissioning is warranted in existing city structures.	2012	City Administration	$$
Create a policy for temperature controls in municipal buildings	2011	City Administration	No cost
Highlighted Actions have begun and/or been completed. These actions ought to be celebrated!			

Land Use

VISION STATEMENT
Land uses in the City of Middleton are smartly integrated and development is designed for flexibility and longevity. The City directs development to infill sites near existing mixed-use centers and corridors, thereby preserving surrounding agricultural land. The City also preserves land strategically within the City to enable small-scale community agriculture and to preserve bio-diversity.

Indicator	Baseline	Target	Performance		
			2010	2011	2012
Residents per square mile of land in City limits	1,407	MAINTAIN OR INCREASE			
Area OF Community Gardens (Acres)	0.25	INCREASE			
Percentage of Land Devoted to Parks/Recreation/Open Space	20%	MAINTAIN OR INCREASE			
Proximity to Bus Stops (1/4 and 1/2 mile)	88% / 98%	INCREASE			
Proximity to Grocery Stores (1/4 and 1/2 mile)	8% / 24%	INCREASE			
Proximity to Middleton Parks (1/4 and 1/2 mile)	95% / 100%	TRACK			
Proximity to Conservation Areas (1/4 and 1/2 mile)	97% / 100%	TRACK			
Percentage of Housing Units in Multi-Unit Buildings	57%	DECREASE			
Percentage of Housing that is Owner Occuppied	52%	DECREASE			

Land Use Actions	Timeframe	Responsible Party	Cost
As a part of the Plan Commission design review process, encourage new residential subdivision over 10 units (both single and multi-family) to provide garden spaces for their residents.	2010	Planning Commission	-- No cost
Open an additional community garden site	2011	Sustainability Committee	$$
Revise zoning standards to reflect parking maximums in commercial areas	2011	Plan Commission	$$
Review zoning and building codes to identify impediments to green and sustainable building practices such as green roofs, grey water systems, etc.	2010	Planning Department Plan Commission	$ Time

VISION STATEMENT
Middleton has a balanced, diversified economy which meets the needs of Middleton residents locally. There are unique nodes of retail, service, and office uses throughout the City such that all residents can satisfy at least a portion of their daily needs within walking distance of their homes. The City has a stable employment base which provides attractive, appealing, living-wage jobs to local residents. The skills and contributions of all citizens are valued and appreciated. Middleton residents understand how and where the goods they buy are produced and are empowered to make informed purchasing decisions. Middleton is a leader in the production and consumption of healthy food grown within the community and the region.

Economy/Food/Fair Trade

Indicator	Baseline	Target	Performance		
			2010	2011	2012
City median household income	$50,786	TRACK			
% of studentfs that qualify for free and reduced lunch - Elm Lawn Elementary	7.46%	TRACK			
% of studentfs that qualify for free and reduced lunch - Northside Elementary	14.07%	TRACK			
% of students that qualify for free and reduced lunch - Sauk Trail Elementary	40.31%	TRACK			
% of students that qualify for free and reduced lunch - Kromrey Middle	18.40%	TRACK			
Number of jobs in the City per capita	0.84	INCREASE			
% of City residents with jobs within the City	16.00%	INCREASE			
Number of businesses per capita	0.036	INCREASE			

Economy/Food/Fair Trade Actions	Timeframe	Responsible Party	Cost
Develop sustainability guidelines for City purchasing including office supplies, building and remodeling supplies (paint, carpet), and services to encourage local, environmentally-friendly products and/or fair trade purchases	2010	Sustainability Committee	No cost to the City
Research and institute green cleaning practices in municipal buildings	2011	Sustainability Committee	No upfront costs, on-going maintenance costs

Public Outreach and Education

VISION STATEMENT

The City of Middleton promotes an environment of creative, innovative learning. It is a City where people of different ages, cultures, and languages respect and learn from each other. Local schools collaborate with the City to help make sustainability a part of every citizen's life in Middleton. Together, as a community, the City focuses on finding the solution to any problem.

Indicator	Baseline	Target	Performance		
			2010	2011	2012
Residents who receive an environmental message (related to the implementation of this document)	Unknown	INCREASE			
Sustainability Seminar participation hits on site	Unknown	INCREASE			
Clean and Green particpation by # of participants	Unknown	INCREASE			
MedDrop participation by # of lbs collected	2,509 (in 2009)	INCREASE			
Participants per year at Green Thursdays	Unknown	INCREASE			
Compost Bins Sold	N/A	INCREASE			

Public Outreach and Education Actions	Timeframe	Responsible Party	Cost
Offer Green Thursday Sustainability Events to provide information on a variety of sustainbility topics to Middleton residents	on-going	Sustainability Committee	-- No cost
Promote at least one EnAct group annually	on-going	Sustainability Committee	-- No cost
Provide information on the City's website on renewable energy and available incentives	2011	Sustainability Committee	No cost to City
Encourage low water plans and vegetable gardens for productivity	2011	Sustainability Committee	No cost to City
Host a Green Home and Business Tour	2010	Sustainability Committee	$
Provide information through neighborhood associations and alders (targeting older neighborhoods) on Focus on Energy home energy performance contracts	on-going	Sustainability Committee	No cost
Highlighted Actions have begun and/or been completed. These actions ought to be celebrated!			

5. METHODS

INDICATOR CALCULATIONS

The indicator calculations are based upon obtainable data that is normalized for the community in order to compare similar data from year to year. This data generally has several components and ensuring that the same calculation occurs every year, the following data is required.

Global Variables

The most common way to normalize data is to provide a common denominator that can be used by all components of the indicator category. Community wide data can most commonly be normalized using the following data:

- **Population** – City of Middleton
  - **Source**: Annual Department of Administration Estimate
  - **Baseline**: 2009 Estimate = 17,020
  - **Update**: Annually
  - **Definition**: This number is used to define the indicators of consumption of residents.

- **Population** – Dane County
  - **Source**: Annual Department of Administration Estimate
  - **Baseline**: 2008 Estimate = 471,559
  - **Update**: Annually
  - **Definition**: This number is used to define the indicators of consumption of the region.

- **Building Square Footage - Residential** – City of Middleton Residential Buildings
  - **Source**: City Assessor's Office
  - **Baseline**: 2008 = 14,081,813
  - **Update**: Annually
  - **Definition**: This number can be used to obtain a measure of residential building stock energy efficiency in the City that can be compared to the rest of Wisconsin and the Nation.

- **Building Square Footage - Commercial** – City of Middleton Commercial Buildings
  - **Source**: City Assessor's Office
  - **Baseline**: 2008: 7,156,144
  - **Update**: Annually
  - **Definition**: This number can be used to obtain a measure of commercial building stock energy efficiency in the City that can be compared to the rest of Wisconsin and the Nation.

- **Building Square Footage - Industrial** – City of Middleton Industrial Buildings
  - **Source**: State Assessor's Office
  - **Baseline**: Not obtained in time for this report; The State Assessor is in the process of revising their records to electronic. At that point it will be possible to obtain this record.
  - **Update**: Annually
  - **Definition**: This number can be used to obtain a measure of industrial energy use in the City.

- **Industrial Customers** – City of Middleton Industrial taxed customers

- **Source**: State Assessor's Office
- **Baseline**: 2008 = 53
- **Update**: Annually
- **Definition**: This number is used to define indicators to measure the industrial businesses in the City in the absence of square footage data.

❖ **Building Square Footage – Municipal** – City of Middleton Municipal Buildings
- **Source**: City Assessor's Office
- **Baseline**: 2008: 168,700
- **Update**: Annually
- **Definition**: This number can be used to obtain a measure of municipal building stock energy efficiency in the City that can be compared to the rest of Wisconsin and the Nation.

❖ **Land Area** – City of Middleton
- **Source**: City GIS Mapping
- **Baseline**: 2008 = 5,243 acres
- **Update**: Annually
- **Definition**: This number is used to define indicators that measure land area.

❖ **Heating Degree Days**
- **Source**: Wisconsin Department of Administration
- **Baseline**: 2008: 7,714
- **Update**: Annually
- **Definition**: This number is used to normalize the natural gas use in the residential and commercial sectors to annual temperature variations.

Transportation Data & Indicators

Transportation indicators provide a measurement of the opportunity for all forms of transportation within the City of Middleton.

❖ **Road Lengths** – City of Middleton
- **Source**: City GIS Mapping
- **Baseline**: 2008 = 86 miles

A) Total miles of principal arterials - Other Freeways (mi)	2.8
B) Total miles of other principal arterials (mi)	7.6
C) Total miles of minor arterials (mi)	5.9
D) Total miles of Urban Collectors (mi)	14.3
E) Total miles of Local Roads (mi)	49.0
F) Total miles of Private roads	6.4

- **Update**: Annually
- **Definitions**:
  - Principal Arterial = restricted access freeway (Hyw 12)
  - Other Principal Arterial =
  - Minor arterial =
  - Urban Collector =
  - Local roads =

- Private Roads =

❖ **Sidewalk Length –** City of Middleton
- **Source**: City GIS Mapping
- **Baseline**: 2008
  - 10.2 miles along collector street
  - 107.5 miles of total sidewalk
- **Update**: Annually
- **Definitions**: Does not include 4.8 miles of unpaved pedestrian only paths.

❖ **Bike Path Length –** City of Middleton
- **Source**: City GIS Mapping
- **Baseline**: 2008
  - 3.1 miles along collector street
  - 15.4 miles off street path
- **Update**: Annually
- **Definitions**: Does not include 4.8 miles of unpaved pedestrian only paths.

❖ **Flights –** Middleton Municipal Airport
- **Source**: Airport Manager
- **Baseline**: 2009 = 6,528
- **Update**: Annually
- **Definitions**: This is an estimated count of non-training flights at the airport.

❖ **Community Car Usage**
- **Source**: Business owner
- **Baseline**: 2008 = 61 "rentals"
- **Update**: Annually
- **Definitions**: This is defined as the number of times a Middleton based car is "rented" by the vehicle communal owners.

❖ **Public Transit Bus Trips**
- **Source**: Metro Bus
- **Baseline**: 2008 = 143,000
- **Update**: Annually
- **Definitions**: The number of rides originating in the City of Middleton.

❖ **Shared Ride Access Points**
- **Source**: City Planning Department
- **Baseline**: 2009 = 1
- **Update**: Annually
- **Definitions**: The number of available park and ride areas as designated by City Planning Staff.

❖ **State Van Pool Trips**
- **Source**: State Department of Administration
- **Baseline**: 2008 = 0
- **Update**: Annually
- **Definitions**: This is an estimated number based upon the State's record of van pool pickups in

the City of Middleton.

- **Police Calls for Traffic Accidents –** City of Middleton
  - **Source**: Comprehensive Plan – Chapter 5 (Police Department)
  - **Baseline**: 2008
    - 373 police calls for public street accidents
    - 51 police calls for private street accidents
  - **Update**: Annually
  - **Definitions**: Police calls are not recorded for every accident.

❖ INDICATORS: To What Extent Does the City Enable Alternative Modes of Transportation?

- **Indicator**: Percent of Collector Street miles with sidewalk on both sides.
  - **Calculation**: Collector street miles with sidewalk on both sides ÷ collector street miles.
  - **Update**: Annually
  - **Definition**: These percentages measure the opportunity for pedestrian travel on the urban collector streets.

- **Indicator**: Percent of Collector Street miles with marked bike lanes.
  - **Calculation**: Collector street miles with marked bike lane ÷ Total collector street miles.
  - **Update**: Annually
  - **Definition**: These percentages measure the opportunity for bicycle travel on the major roads within the City of Middleton.

- **Indicator**: Ratio of Off-Street Bike Path Miles to total Street Length
  - **Calculation**: Measurement of total off-street bike path miles ÷ total street length
  - **Update**: Annually
  - **Definition**: The number of miles of off-street paths creates an alternative transportation system for non-motorized transportation where they are not competing with motor vehicles for space. The ratio provides a comparative analysis to determine if non-motorized travel services are keeping a similar growth pattern to motorized vehicle amenities solely on a length basis.

- **Indicator**: Middleton Municipal Airport Non-training Flights
  - **Calculation**: Number of data point collected
  - **Update**: Annually
  - **Definition**: Tracks the number of long haul trips from the local small airport.

- **Indicator**: Community Car Use
  - **Calculation**: Number from Data Point
  - **Update**: Annually
  - **Definition**: An increasing number of community car rentals indicates the acceptance of community members to not purchase an additional car for the small amount number of trips where it is necessary. This in turn will reduce the number of underutilized resources of the community and decrease the incidental fuel use from “convenience” vehicle trips.

- **Indicator**: Shared ride access points
  - **Calculation**: Number from Data Point
  - **Update**: Annually
  - **Definition**: An increasing number of shared rides indicated the ease of travel within and outside the City without operating a personal vehicle. Assuming the access points are used, the number of points will indicate the ease of operating on limited personal vehicle mileage budget.

- **Indicator**: State Van Pool Trips
  - **Calculation**: Number from Data Point
  - **Update**: Annually
  - **Definition**: An increasing number of van pool rides indicated the ease of travel within and outside the City without operating a personal vehicle. The State van pool represents a tracked number of customers for a service that is designed to increase car pooling to employment centers.

❖ INDICATOR: How Safe are the Middleton Streets?

- **Indicator**: Accidents per capita
  - **Calculation**: Number of police calls for traffic accidents on public and private streets ÷ population of Middleton.
  - **Update**: Annually
  - **Definition**: The number of police calls is an indicator of the number of traffic accidents; the number of accidents that do not have a police officer called to the scene is not determinable. Vehicle and pedestrian/bicycle accidents without injury typically are the highest percentage of unreported accident types. Assuming that accident reporting remains a relatively consistent percentage of total accidents, this indicator will provide information regarding the overall safety of the transportation system in Middleton.

Solid Waste Indicators

Solid Waste indicators provide a measurement of the efficiency with which the City of Middleton residents utilize the materials in the environment. This includes measuring the amount of material disposed, the amount of which is recycled, and the proper disposal of hazardous material.

❖ INDICATOR: How Much Waste Does the City Produce?

- **Indicator**: Pounds of residential solid waste per capita
  - **Calculation:** Total waste collected by City contracted waste hauler ÷ residents
  - **Source**: City contracted waste hauler records
  - **Update**: Annually, collected monthly
  - **Definition**: This indicator is a measure of the efficiency of consumption within the community. Decreasing consumption or decreasing the waste associated with the consumption will reduce this number. Recycling is included as collected waste.

- **Indicator**: Percentage of waste that is recycled
  - **Calculation:** Total waste recycled by City contracted waste hauler ÷ Total waste collected by City contracted waste hauler
  - **Source**: City contracted waste hauler records
  - **Update**: Annually, collected monthly

- **Definition**: This indicator is a measure of the residential use of the recycling system in place to handle their waste. Increasing the types of material and creating easier handling of materials will create increased recycling in the waste stream.

Energy Indicators

Energy indicators will measure the amount of energy consumed in different sectors of Middleton and how it is produced. A table following indicator definitions has the relevant data from the past five year and a duplicate blank table to be filled in future years:

❖ INDICATOR: How Much Energy does the Middleton Community consume each year?

- **Indicator**: Total Electricity Use
  - **Calculation**: Total community electricity delivered through regulated electric distribution grid
  - **Source**: MG&E and Alliant Energy
  - **Update**: Annually from Electricity supplier
  - **Definition**: This number is obtained by adding together the residential, commercial, industrial, agricultural and municipal consumption.

- **Indicator**: Residential Electricity Use per square foot
  - **Calculation**: Electricity delivered to residential customers of the regulated electric distribution grid ÷ Residential building square footage
  - **Source**: MG&E and Alliant Energy
  - **Update**: Annually from Electricity supplier
  - **Definition**: This number is obtained by summing the monthly data provided by the Electricity provider based upon billing record breakdown.

- **Indicator**: Commercial Electricity Use per Square Foot commercial space
  - **Calculation**: Total Electricity delivered to commercial customers through regulated electric distribution grid ÷ Building square footage commercial
  - **Source**: MG&E and Alliant Energy
  - **Update**: Annually from Electricity supplier
  - **Definition**: This number is obtained by summing the monthly data provided by the Electricity provider based upon billing record breakdown.

- **Indicator**: Industrial Electricity Use
  - **Calculation**: Total Electricity delivered to industrial customers through regulated electric distribution grid
  - **Source**: MG&E and Alliant Energy
  - **Update**: Annually from Electricity supplier
  - **Definition**: This number is obtained by summing the monthly data provided by the Electricity provider based upon billing record breakdown.

- **Indicator**: Total Natural Gas Use per Capita
  - **Calculation**: Total community natural gas delivered through regulated electric distribution system ÷ Population
  - **Source**: Alliant Energy, Harvey Dorn

- **Update**: Annually from natural gas supplier
- **Definition**: This number is obtained by adding together the residential, commercial, industrial, agricultural and municipal consumption.

➢ **Indicator**: Natural Gas Consumption
- **Calculation**: Natural gas delivered to all customers of the regulated gas distribution grid
- **Source**: MG&E
- **Update**: Annually from natural gas supplier
- **Definition**: This number is obtained by summing the monthly data provided by the natural gas supplier.

➢ **Indicator**: Residential Natural Gas Use per Square Foot residential space per HDD
- **Calculation**: Total natural gas delivered to residential customers through regulated gas distribution system ÷ Building Square Footage Residential ÷ Heating Degree Days (in BTU)
- **Source**: MG&E, Alliant Energy, and Wisconsin DOA
- **Update**: Annually from natural gas supplier
- **Definition**: This number is obtained by summing the monthly data provided by the natural gas provider based upon billing record breakdown.

➢ **Indicator**: Commercial Natural Gas Use per Square Foot commercial space
- **Calculation**: Total natural gas delivered to commercial customers through regulated gas distribution system ÷ Building Square Footage Commercial ÷ Heating Degree Days (in BTU)
- **Source**: MG&E, Alliant Energy, and Wisconsin DOA
- **Update**: Annually from natural gas supplier
- **Definition**: This number is obtained by summing the monthly data provided by the natural gas provider based upon billing record breakdown.

➢ **Indicator**: Industrial Natural Gas Use per Square Foot industrial space
- **Calculation**: Total natural gas delivered to industrial customers through regulated gas distribution system ÷ Building Square Footage Industrial ÷ Heating Degree Days (in BTU)
- **Source**: MG&E, Alliant Energy, and Wisconsin DOA
- **Update**: Annually from natural gas supplier
- **Definition**: This number is obtained by summing the monthly data provided by the natural gas provider based upon billing record breakdown.
- **Note**: The industrial building square footage was not obtained by the deadline for the report. In order to track this indicator, the square footage will have to be obtained from the State assessor's office.

❖ How Much Energy does the Middleton Government Consume Each Year?

➢ **Indicator**: Municipal Electricity Use per Square Foot municipal space
- **Calculation**: Total Electricity delivered to the municipality properties through regulated electric distribution grid ÷ Building square footage municipal
- **Source**: MG&E and Alliant Energy
- **Update**: Annually from Electricity supplier
- **Definition**: This number is obtained by summing the monthly data provided by the Electricity provider based upon billing record breakdown.

- **Indicator**: Municipal Electricity consumer per street light
  - **Calculation**: Electricity estimate consumed by street light type * number of streetlights of that type/total number of streetlights
  - **Source**: MG&E and Alliant Energy
  - **Update**: Annually from Electricity supplier
  - **Definition**: This is the annual average consumption per streetlight fixture based upon the utility estimates of electricity consumption per various street light types.

- **Indicator**: Water utility Electricity consumption
  - **Calculation**: Total Electricity consumed by water utility ÷ total gallons pumped
  - **Source**: MG&E and Alliant Energy and Water utility
  - **Update**: Annually from Electricity supplier and Water utility
  - **Definition**: This number is obtained by summing the monthly data provided by the Electricity provider based upon billing record breakdown and dividing it by the total number of gallons pumped into the Middleton potable water distribution system.

- **Indicator**: Municipal Natural Gas Use per Square Foot municipal space per HDD
  - **Calculation**: Total natural gas delivered to municipal customers through regulated gas distribution system ÷ Building Square Footage Municipal ÷ Heating Degree Days (in BTU)
  - **Source**: MG&E, Alliant Energy, and Wisconsin DOA
  - **Update**: Annually from natural gas supplier
  - **Definition**: This number is obtained by summing the monthly data provided by the natural gas provider based upon billing record breakdown.

- **Indicator**: Municipal Liquid Fuel Use per Acre of Land
  - **Calculation**: Total municipal liquid fuel receipts (in MMBTU) ÷ Land Area acres
  - **Source**: City records
  - **Update**: Annually
  - **Definition**: This number is obtained by summing the annual bulk/tracked diesel and gasoline purchases from all applicable departments.

- **Indicator**: Municipal Vehicle Miles Traveled per Acre of Land
  - **Calculation**: Total municipal tracked vehicle miles traveled ÷ Land Area acres
  - **Source**: City records
  - **Update**: Annually
  - **Definition**: This number is obtained by summing the mileage associated with City business for all vehicles and department.

Water Indicators

Water indicators provide a measurement of the clean water used per resident in the community. Once extracted from the ground the water is subject to water quality issues and can carry those pollutants back to the underground aquifer. Extracting the water and treating it also consumed electricity within the municipal energy consumption indicator. The indicators measure the amount of use and the efficiency of the delivery and collection system.

❖ How efficiently is Our Use of Water in the City?

- **Indicator**: Gallons of groundwater pumped per capita
  - **Calculation**: Metered gallons at groundwater extraction point ÷ population
  - **Source**: City Water department records
  - **Update**: Annually, collected monthly and reported annually to Wisconsin PSC.
  - **Definition**: These indicators measure the amount of water that is extracted to serve the community water distribution and fire protection system. These measurements are taken at the groundwater extraction point prior to insertion into the distribution system.

- **Indicator**: Gallons of groundwater lost
  - **Calculation**: 100% - Total billed gallons ÷ total metered gallons at groundwater extraction point
  - **Source**: City Water department records or as Calculated by the Wisconsin PSC
  - **Update**: Reported annually to Wisconsin PSC.
  - **Definition**: This indicator measures the efficiency of the water distribution system to provide potable water. Losses include fire protection services, system losses, unmetered services, and meter calibration losses.

- **Indicator**: Gallons of groundwater delivered to residential customers, per capita
  - **Calculation**: Billed gallons for residential services ÷ residents
  - **Source**: City Water department records
  - **Update**: Annually, collected monthly and reported annually to Wisconsin PSC.
  - **Definition**: This indicator measures the amount of water that is consumed by each resident at their home per year. This measurement is taken at each customer meter after transmission through the potable water distribution system.

- **Indicator**: Gallons of groundwater delivered to commercial customers, per square foot
  - **Calculation**: Billed gallons for commercial services ÷ Building square footage Commercial
  - **Source**: City Water department records
  - **Update**: Annually, collected monthly and reported annually to Wisconsin PSC.
  - **Definition**: This indicator measures the amount of water that is consumed by each commercial service at the property line. This measurement is taken at each customer meter after transmission through the potable water distribution system.

- **Indicator**: Gallons of groundwater delivered to industrial customers, per square foot
  - **Calculation**: Billed gallons for industrial services ÷ Building square footage industrial
  - **Source**: City Water department records
  - **Update**: Annually, collected monthly and reported annually to Wisconsin PSC.
  - **Definition**: This indicator measures the amount of water that is consumed by each industrial service at the property line. This measurement is taken at each customer meter after transmission through the potable water distribution system.

- **Indicator**: Gallons of groundwater delivered to the municipal facilities, per square foot
  - **Calculation**: Billed gallons for municipal services ÷ Building square footage municipal
  - **Source**: City Water department records
  - **Update**: Annually, collected monthly and reported annually to Wisconsin PSC.
  - **Definition**: This indicator measures the amount of water that is consumed by each municipal service at the property line. This measurement is taken at each customer

meter after transmission through the potable water distribution system.

Land Use Indicators

Land Use indicators provide a comparative measurement of the existing City community. Goals can be set to alter the makeup of the community make up or they can be compared against similar communities.

❖ How efficiently are we using land?

- **Indicator**: Density
  - **Calculation**: Number of residents ÷ Total land area
  - **Source**: General Data; residents ÷ land Area (in square miles)
  - **Update**: Annually
  - **Definition**: This indicator of residents per square mile is easily calculated by many communities. It measures how efficiently we are using our developed land within a community.

❖ How Much City Land is protected as open Space, either for public use of Preservation?

- **Indicator**: Percentage of Land devoted to Parks/Recreation/Open Space
  - **Calculation**: Acres of Park/Recreation + Open Space ÷ Total land acre acres
  - **Source**: City GIS mapping
  - **Update**: Annually, or when GIS mapping land use layer is updated.
  - **Definition**: This percentage is the land amount of area that is not available for development.

- **Indicator**: Community Garden Area
  - **Calculation**: Cumulative land area of Community garden properties
  - **Source**: City records
  - **Update**: Annually, or when additional community gardens are set up.
  - **Definition**: The number of Community garden locations is an indicator of the potential for all residents to supply a portion of their own food from within the City limits.

❖ What percentage of properties are within walking distance of basic services?

- **Indicator**: Proximity to Transit Stop
- **Indicator**: Proximity to Grocery Store
- **Indicator**: Proximity to Open Space
  - **Calculation**: This is an interactive calculation utilizing GIS capabilities and known locations of open space, transit stops, and grocery stores. It will provide a percentage of land area or properties that are within ¼ mile or ½ mile of known amenities
  - **Source**: City GIS Map and GIS operator
  - **Update**: Annually, or when GIS mapping land use layer is updated.
  - **Definition**: The number of people within close proximity to these basic services is an indicator of how efficiently the City is using land and successfully the City is supplying basic services to its residents.
  -

❖ Is the Supply of Housing Balanced and Meeting the Needs of All that Would Like to Live Here?

- **Indicator**: Percentage of Housing that is other than single family detached.
  - **Calculation**: Number of Multiple unit family homes ÷ (Number of Single family homes **+** Number of Multiple family homes)
  - **Source**: Federal Census
  - **Update**: 10 years on release of Census Data
  - **Definition**: This indicator is based upon the number of units available. It does not matter the size of each of the units.

- **Indicator**: Percentage of Housing that is owner-occupied.
  - **Calculation**: Number of owned homes ÷ (Number of owned homes **+** Number of rental homes)
  - **Source**: Federal Census
  - **Update**: 10 years on release of Census Data
  - **Definition**: This indicator is based upon the number of units available. It does not matter the size of each of the units.

Economy/Food/Fair Trade Indicators

Economy indicators provide a theoretical analysis of the number of jobs available for residents and the number of different businesses offering those positions.

❖ Is there adequate employment with a living wage accessible to City residents?

- **Indicator**: City Household median income
  - **Calculation**: Data point from US Census.
  - **Source**: Federal Census
  - **Update**: 10 years on release of Census Data
  - **Definition**: This indicator is a data point developed by the US Census.

- **Indicator**: Number of jobs in the City per capita
  - **Calculation**: Economic census number of jobs data point ÷ population
  - **Source**: Federal Economic Census
  - **Update**: 10 years on release of Economic Census Data
  - **Definition**: This indicator is based on a data point developed by the US Economic Census which occurs approximately two years after the US Census.

- **Indicator**: Percentage of City Residents with jobs in the City
  - **Calculation**: Data points from US Census for number of city residents who have jobs within the city and number of residents that work from home ÷ population
  - **Source**: Federal Census
  - **Update**: 10 years on release of Census Data
  - **Definition**: This indicator is based on a data point developed by the US Census.

❖ To What Extent do families within the City and the entire school district have the resources to meet basic needs?

- **Indicator**: Percentage of students in elementary and Middle School that qualify for free and reduced lunch (Broken out per school)
  - **Calculation:** Number of students at Elm lawn Elementary/North side Elementary/Sauk Tail Elementary/Kromrey Middle schools ÷ total number of student
  - **Source**: Middleton School District
  - **Update**: Collected every year
  - **Definition**: This indicator provides a basis of the ability of families to provide basic needs for school aged children.

Public Education and Outreach Indicators

Public Education and Outreach indicators provide a level of knowledge within the community of the work being done. This is critical because the overall success of the communities initiative rely upon the individual actions of the residents. A better informed community will make the best long term decision.

❖ What is the Awareness Level of Middleton's Sustainability Initiatives?

- **Indicator**: Percentage of residents who receive an environmental message
  - **Calculation:** Number of residents on the email list serve ÷ population
  - **Source**: Email list serve administrator
  - **Update**: Annually
  - **Definition**: This is an indicator of the level of activity and support that the residents will provide to the City's communal goals.

- **Indicator**: Sustainability Seminar participation hits on website.
  - **Calculation:** Number of website hits on the City supported Sustainability Seminar website.
  - **Source**: Webmaster
  - **Update**: Annually
  - **Definition**: This is an indicator of the level of activity and support that the residents will provide to the City's communal goals.

- **Indicator**: Clean and Green Participation
  - **Calculation:** number of visits to clean and green Drop sites
  - **Source**: Site employees and volunteers
  - **Update**: At each clean and green Event
  - **Definition**: This is an indicator of the level of awareness residents have regarding disposal of materials.

- **Indicator**: Med Drop participation
  - **Calculation:** Pounds of material collected by MedDrop events
  - **Source**: med drop employees and volunteers
  - **Update**: at each med drop event
  - **Definition**: This is an indicator of the level of awareness residents have regarding disposal of materials.
- **Indicator**: Green Thursdays Participation
  - **Calculation:** number of participants at Green Thursday Events
  - **Source**: Site employees and volunteers at events
  - **Update**: Monthly

- **Definition**: This is an indicator of the level of awareness residents have regarding sustainability, which is the topic of the event.

- **Indicator**: Compost Bins Sold
  - **Calculation:** number of compost bins sold
  - **Source**: Site employees and volunteers at event
  - **Update**: Per event
  - **Definition**: This is an indicator of the level of awareness residents have regarding disposal of materials.

North Mendota
Future Urban Development Area Planning

FUDA Study

North Mendota Future Urban Development Area Study

January 2013

"The work that provided the basis for this publication was supported by funding under an award with the U.S. Department of Housing and Urban Development. The substance and findings of the work are dedicated to the public. The author and publisher are solely responsible for the accuracy of the statements and interpretations contained in this publication. Such interpretations do not necessarily reflect the views of the Government."



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210 Martin Luther King Jr. Blvd. Room 362
Madison WI 53521

RESOLUTION OF THE NORTH MENDOTA FUTURE URBAN DEVELOPMENT AREA (FUDA) STEERING COMMITTEE

RELATED TO THE NORTH MENDOTA FUTURE URBAN DEVELOPMENT AREA STUDY

WHEREAS, the City of Middleton, Village of Waunakee, Town of Westport and Town of Springfield ("participating local governments") partnered with the Capital Area Regional Planning Commission ("CARPC") to engage in a collaborative, locally-driven planning effort, known as Future Urban Development Area ("FUDA") planning for the North Mendota FUDA study area; and

WHEREAS, the purpose of FUDA is to protect vital natural resources, promote efficient development, and preserve farmland through cooperative planning for long-term growth; and

WHEREAS, a FUDA Steering Committee of local Board members, Plan Commissioners and other officials were appointed by the participating local governments to guide the FUDA process; and

WHEREAS, through extensive research, data gathering and analysis, public outreach, and FUDA Steering Committee review, the North Mendota FUDA Study was produced to provide information and analysis on environmental resources, present a future urban development scenario with natural resource and agricultural preservation areas, and provide implementation methods to achieve that scenario; and

WHEREAS, the FUDA Study may be advanced by the participating local governments through subsequent activities, such as amendments or updates to their Comprehensive Plans.

NOW, THEREFORE, BE IT RESOLVED, the North Mendota FUDA Steering Committee hereby:

1. Accepts the North Mendota FUDA Study dated January, 2013 as representing the wishes and direction of the Committee.
2. Encourages that the participating local governments consider incorporating the FUDA Study's recommended future urban development scenario and implementation measures, when and where practical, into their comprehensive plans and other plans, ordinances, and related activities.
3. Forwards the FUDA Study dated January, 2013 to the Plan Commissions and governing bodies of the participating local governments for review and acceptance, to then be forwarded by the participating local governments in unity to CARPC as a guide for future regional planning efforts affecting the FUDA study area.
4. Recognizes that the applicability, content, and/or recommendations of the FUDA Study dated January, 2013 may change as policies, circumstances, and conditions of and within the participating local governments change over time.

Thomas M. Liebe, Committee Co-Chair

Kenneth Sipsma, Committee Co-Chair

Date Adopted: 1/25/13 Vote: 5-0

Project Team & Qualifications

The project team includes a diverse and well-qualified membership of both appointed steering committee members and local and regional planning staff. Steering Committee members represent three different jurisdictions and several areas of expertise including urban and rural development, agriculture, natural resources, and government process and relations. The steering committee members spent several months reviewing and vetting data and forming Future Urban Development Area (FUDA) recommendations for local and regional consideration. Steering Committee Members include:

Steering Committee

City of Middleton

- Derek Hungness P.E., PTOE, AICP – Plan Commission member, former Middleton Public Works Committee member; M.S., Civil and Environmental Engineering; Master of Community and Regional Planning; B.S., Political Science; Graduate Certificate, Transportation Management and Policy
- Duane Barmore – Plan Commission member, Retired

Village of Waunakee

- Gary Hertzberg – Village Trustee
- Tom Liebe – Village Plan Commissioner, Waunakee/Westport Joint Plan Commissioner, former Public Works Committee and Emergency Medial Services member, VP of Government Affairs, Wisconsin Credit Union League, B.A., Political Sciences and Government

Town of Westport

- Ken Sipsma – Town Board member, Waunakee/Westport Joint Planning Committee member, Middleton Fire District Board member, former Plan Commission member and former Parks Committee Chair; Partner at Sipsma, Hahn & Brophy, L.L.C., Attorneys at Law; J.D., University of Wisconsin Law School; B.A., Economics and Education, University of Wisconsin-Madison
- Mark Trotter, A.I.A – Plan Commission member, Parks Committee member; Regional Healthcare Leader at Flad Architects; B.S. Architecture, University of Wisconsin-Milwaukee, Post graduate studies at London Architectural Association and University of Houston MBA Program

Town of Springfield

- Don Hoffman – Town Chair; Former Plan Commission Chair, former member of Dane County Towns Association and Wisconsin Towns Association
- Jan Barman – Deputy Clerk/Treasurer/Office Manager and Secretary of the Plan Commission; Associate of Arts, Accounting, Madison Business College

The Steering Committee members requested and reviewed materials, made regular progress reports to their local plan commissions and boards, and considered significant amounts of data and community input before developing the recommendations presented in this Study.

Project staff included both local and regional planners, clerks, directors, and administrators. Staff brought significant expertise and practice to the FUDA process and outcomes. Local and regional staff also gave regular reports to local and regional planning commissions.

Staff

City of Middleton

- Eileen M. Kelley AICP – Planning Director and Zoning Administrator, M.S., Business Administration; B.S., Community and Regional Planning
- Abby Attoun-Tucker AICP – Assistant Director of Community Development, M.S., Urban and Regional Planning; B.S., Community and Regional Planning

Village of Waunakee

- Todd Schmidt – Administrator
- Kevin Even – Public Works Director

Town of Wesport

- Thomas G. Wilson – Attorney/Administrator/Clerk-Treasurer; J.D., University of Wisconsin Law School; B.A., Political Science, University of Wisconsin-Madison

Town of Springfield

- Mark Roffers – Planning Consultant, MDRoffers Consulting LLC, Masters, Urban and Regional Planning
- Jan Barman – Deputy Clerk/Treasurer/Office Manager and Secretary of the Plan Commission

Capital Area Regional Planning Commission

- Kamran Mesbah P.E. – Deputy Director, M.S. & B.S., Civil & Environmental Engineering; B.A., Urban Studies
- Steve Steinhoff – Senior Community Planner, Masters, Urban Planning & Policy; B.S., Biology & Environmental Studies
- Bridgit Van Belleghem – Senior Community Planner, M.S., Urban & Regional Planning; B.S., Environmental Biology & Management, LEED Legacy Certification, Facilitation Certificate
- Dan McAuliffe – Senior Community Planner & Urban Designer, Masters, Urban Planning; Masters, Architecture; B.S., Architectural Studies
- Rachel Holloway – Community Planner; M.S., Urban & Regional Planning; B.A., Liberal Studies
- Mike Kakuska – Senior Environmental Planner, M.S., Water Resources Management; B.S., Limnology
- Mike Rupiper P.E. – Environmental Engineer; M.S., Environmental Studies; B.S., Civil & Environmental Engineering
- Jason Granberg – Restoration Ecologist/ Biologist, M.S. & B.S., Biology; A.S., Biology
- Steve Wagner – Information Specialist, B.F.A., Graphic Design; A.D., Commercial Photography
- Aaron Krebs – GIS Specialist, B.S. Cartography GIS UW Madison, B.S. in History and Human Geography, A.D.s in Arts, Science, and Applied Science (weather technology)
- Heath Anderson – GIS Specialist, MS, Urban & Regional Planning, concentration in Geographic Information Systems (GIS), UW-Milwaukee (2011); Carthage College, Geography specializing in GIS and Demographics (2005-2008); University of Wisconsin Baraboo/Sauk County (2004-2005); University of Cincinnati (2003-2004)

FUDA Study

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Supplement A: Enabling Resolutions and Authorizing Actions
Supplement B: North Mendota FUDA Public Participation Description
Supplement C: Scenario Creation and Process
Supplement D: North Mendota FUDA (HIA) Health Impact Assessment
Supplement E: North Mendota Environmental Conditions Report (ECR) (Included on cd)

Summary

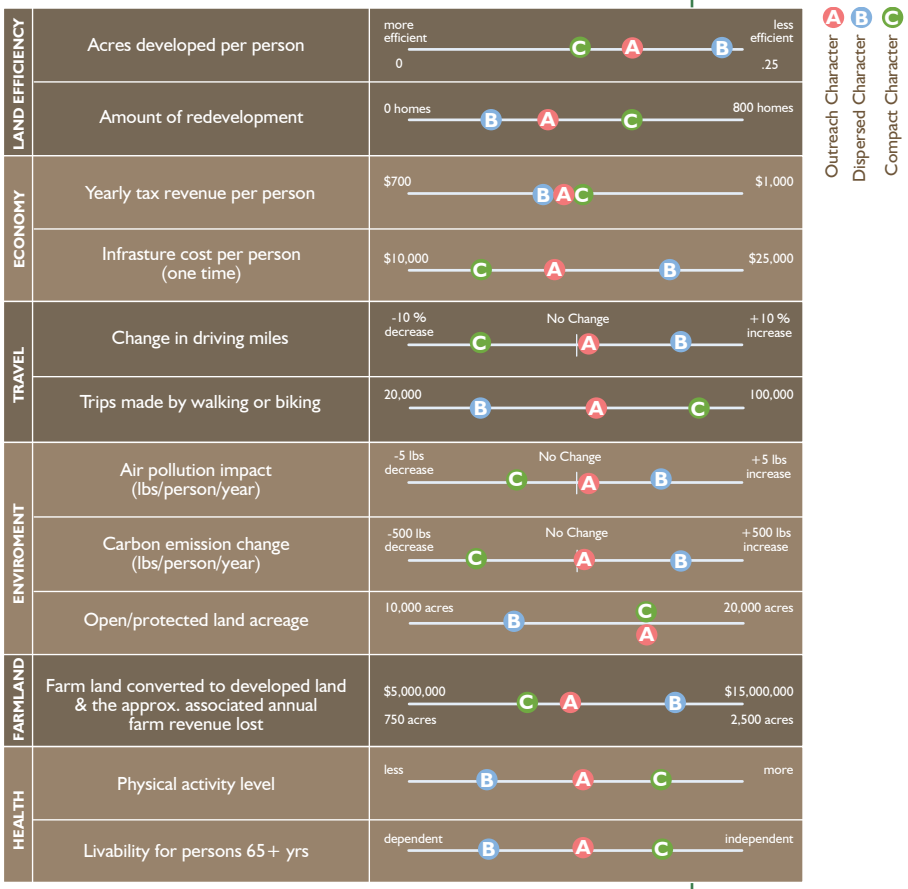
In late 2010, the City of Middleton, Village of Waunakee, Town of Westport and Town of Springfield began working with the Capital Area Regional Planning Commission (CARPC) to pursue a joint North Mendota FUDA project (see enabling resolution in Supplement A). This study describes the North Mendota steering committee's Recommended Scenario and presents several implementation measures and next steps for future urban development and rural preservation in the North Mendota area.

A multi-jurisdictional steering committee directed project staff to design and implement a process to review existing plans and municipal agreements, historic trends and future demographic projections, natural and agricultural resources, and to gauge public opinion for future development and preservation in the North Mendota Study Area (see Map 1). This steering committee directed 3 major activities: (1) Environmental Conditions Report (ECR), (2) Scenario Evaluation (3)Future Urban Development Area (FUDA) Study. Each activity included public outreach and engagement to inform the steering committee, process, and outcomes. Supplement B describes these methods in greater detail.

FUDA Scenario Overview and Recommendations

The Steering Committee and public evaluated 3 scenarios (see Figure: 1) for the projected 16,000 new residents in these Urban Service Areas. This population growth is anticipated to require 2,600 acres for homes, jobs, schools, roads and other needs. Some of this growth could be accommodated through redevelopment and infill in the existing Urban Service Area. In Middleton and Westport, a significant portion of the projected growth could be absorbed into approved developing neighborhoods, such as Bishops Bay, while the remaining unmet demand could occur on land currently outside the Urban Service Area. Waunakee's projected growth will require additional land to be added to the Urban Service Area. This land can be added in a phased manner based on demonstrated needs.

Figure 1: Indicator Evaluation for Polling Scenarios



Considering existing plans and inter-jurisdictional agreements, environmental and agricultural conditions, community goals and trends (Supplement E), scenario impacts (Supplement C), citizen participant opinions (Supplement B), and the many opportunities for the future, the steering committee recommends the Future Urban Development Area and conceptual future land use pattern designated in Map 2.

The Recommended Scenario is a hybrid of locally adopted plans and intergovernmental agreements, enhanced with opportunities presented in the Compact Character and Public Outreach Scenarios. Analysis was performed on the Recommended and other Scenarios for several indicator categories including: population; land use and efficiency; housing; taxes, jobs, and shopping; travel; environment; farmland; health; and water (stormwater, water use and waste, and groundwater).

General recommendations for implementing this scenario include:

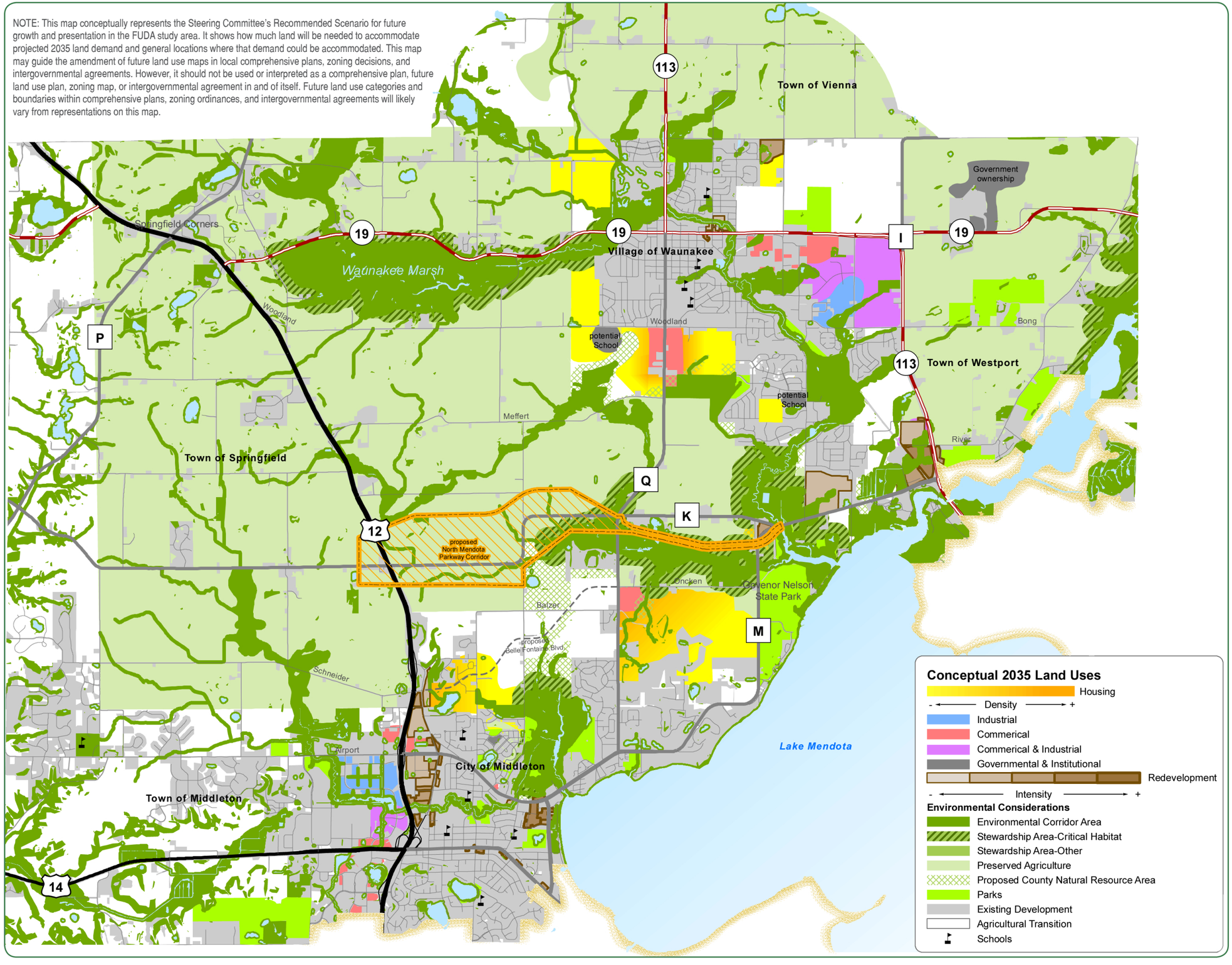
Redevelopment & Infill Recommendations

1. Middleton, Waunakee, Springfield and Westport are advised to establish additional redevelopment/infill areas respectively.
2. Middleton, Waunakee and Westport are advised to continue to use incentives and other programs to facilitate a higher redevelopment/infill implementation probability for adopted and recommended sites.

Community and Neighborhood Design Recommendations

3. Middleton, Waunakee, Springfield and Westport are advised to allow for greater density in strategic locations (see Map 2).
4. Middleton, Waunakee and Westport are advised to permit complete neighborhoods that integrate a range of quality residential, civic, open/public and business spaces in the Urban Service Area.
5. Westport is advised to develop and implement streetscaping and community design/character guidelines in its Town Center including necessary ordinance or comprehensive plan revisions, along the central Town corridors, including CTH M, STH 113, the Town Center, and the Yahara River Redevelopment project area.
6. The City of Middleton is advised to continue progress and seek funds for implementing their Sustainability Plan and work with surrounding jurisdictions in the region to enhance efforts in Middleton.
7. The Village of Waunakee is advised to expand its sustainability efforts and incorporate sustainability into its plan updates.
8. North Mendota communities are advised to collaborate to advance sustainability goals and leverage investments made to advance the goals.

The North Mendota FUDA Recommended Scenario is illustrated in Map 2 below and is further described by the recommendations that follow:



Mobility and Access

9. Middleton, Waunakee and Westport are advised to establish a connected street, sidewalk, bike-path and trail network that promotes walking, biking, and transit in addition to motor vehicles in the Urban Service Area and that connects to regional trails, bike-paths and roadways in surrounding rural areas including Westport and Springfield.

Intergovernmental Cooperation

10. North Mendota Communities are advised to continue or establish intergovernmental agreements with each other and surrounding jurisdictions.

Natural Resources (beyond legal requirements for environmental corridors)

11. Middleton, Waunakee, Westport and Springfield are advised to incorporate Stewardship Areas in development planning.
12. Middleton, Waunakee, Springfield and Westport are advised to utilize Environmental Corridors and Stewardship Areas as open-space amenities in developments for residents and patrons.
13. Middleton, Waunakee, Springfield and Westport are advised to protect mineral resource areas (ECR Map 3), evaluate the areas for infiltration and groundwater recharge (ECR Map 9), and extract the resource and reclaim the land before development is permitted.
14. Middleton, Waunakee and Westport are advised to continue to improve stormwater management for new and existing development and protect water quality in Sixmile Creek, Dorn Creek, Pheasant Branch Creek, Black Earth Creek and Lake Mendota.
15. North Mendota Communities are advised to improve public access to outdoor recreational activities.
16. Municipalities and their local water and wastewater utilities are advised to continue their water conservation and reuse practices, and enhance infiltration measures to help mitigate the municipal water withdrawal impacts.

Working Lands

17. North Mendota Communities are advised to support and implement methods to prevent the premature conversion of farmland to developed land.
18. Middleton, Waunakee, Springfield and Westport are advised to prevent agricultural land conversion permanently in locally agreed locations.
19. Springfield and Westport are advised to examine the scope and scale of land management practices to identify, enhance and maintain ecological services and functions on or adjacent to agricultural land.

Utilities

20. Middleton, Waunakee and Westport are advised to ensure effective public water supply, wastewater infrastructure planning and the cost effective provision of drinking water and sewer service for future development areas.

21. Support the use of and appropriately site alternative energy production, such as the biodigester and the EPIC Health Systems wind farm proposed in Springfield and Vienna.

The Study also presents existing conditions and recommendations for seven further analysis areas within the North Mendota study area.

1. Central Springfield
2. Town of Springfield, Vienna and Waunakee Boundaries Interface
3. Community Separation Between Middleton and Waunakee
4. Proposed Dane County 'Dorn Creek Natural Resource Area' Preservation and Enhancement
5. Highway 19 corridor East of County Highway I and West of Interstate 90/94/39
6. Transit Corridor Potential and Opportunity
7. Additional Reinvestment and Redevelopment areas

Implementing Recommendations

The Study also outlines additional opportunities for analysis in the following locations: DeForest and Vienna between Conservancy Place and Hickory Lane, wetland/floodplain preservation area east of Morrisonville, east of the Interstate between Hahn Road and North Street, Highway 19 Corridor West of Interstate, and additional reinvestment and redevelopment sites.

Recommended Scenario Impacts

Many of these recommendations and implementation measures could be incorporated in comprehensive plans, agreements, ordinances, and other governing documents (see Figure 8). Table 8 lists these recommendations and identifies the plans and agreements, ordinances, and other governing documents that could also be updated to reflect the recommendations of this Study. A full assessment of zoning and other ordinances is best completed at the local level.

Finally, the Study is accompanied by several supplements. The most significant supplement is Supplement E: The Environmental Conditions Report (ECR). The ECR provides and analyzes several variables relating to natural resources and systems, agricultural lands and community population growth and land use characteristics. Another valuable tool is the Health Impact Assessment (HIA) conducted by public health professionals. The HIA takes a deeper look into how the scenarios could impact the health of its citizens and offers methods for ensuring a physical active and accessible community.

This FUDA Study is submitted for local consideration and incorporation into existing plans and policy, or in some cases developing new tools, to enhance the quality of life for current residents and generations to come.

North Mendota FUDA Study

Introduction

More and more, communities nationwide are realizing the interconnected and regional nature of their environmental and community challenges, and are coming together to identify where and how they should grow and where they want to preserve ecosystems and "working lands" (e.g., farmland and forestland). One way communities in the region collaborate to guide growth is through Future Urban Development Area planning, or FUDA planning for short. The purpose of FUDA planning is to protect vital natural resources, promote efficient development, and preserve farmland through cooperative planning for long-term growth. FUDA planning focuses on areas that are, or could be, served by municipal water and sewer over the next 25 years. In this study, any development with public water and sewer infrastructure is called "urban."

Urban

Any development (business, housing, government, schools, etc) with public water and sewer infrastructure.

In restoring the Regional Planning Commission in Dane County in 2007, communities recognized the need for proactive long-range planning to advance local and regional planning and inform the Urban Service Area (USA) amendment process. The USA amendment process is a tool for implementing part of the federal Clean Water Act. Typically, communities seek approval from CARPC and the WI Department of Natural Resources to expand Urban Service Areas. Item 7 in the petitioning resolution reads,

> "The *Dane County Water Quality Plan* shall also define a 25-year Future Urban Development Area with 5-year updates. The Plan shall be developed in cooperation with area communities, including towns, and shall consider adopted comprehensive plans and intergovernmental agreements" (for more, see Supplement A).

FUDA planning empowers local jurisdictions with a set of tools and resources to make informed planning decisions and facilitate local comprehensive planning, intergovernmental coordination, the USA amendment review process and regional plan updates.

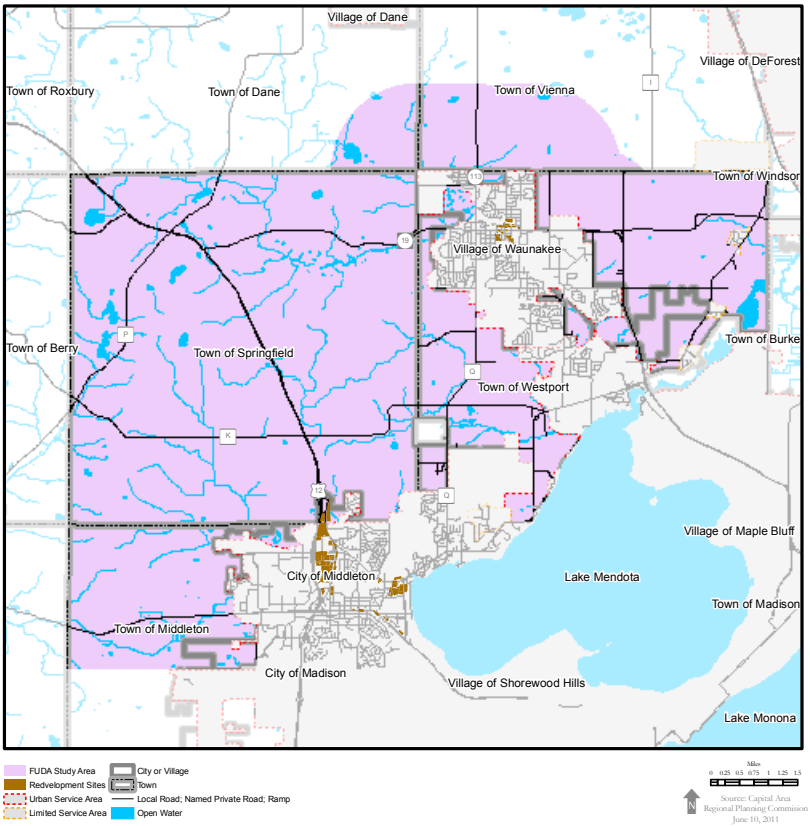
In late 2010, the City of Middleton, Village of Waunakee, Town of Westport and Town of Springfield began working with the Capital Area Regional Planning Commission (CARPC) to pursue a joint North Mendota FUDA project (see enabling resolution in Supplement A). This study describes the North Mendota steering committee's Recommended Scenario and presents several implementation measures and next steps for future urban development and rural preservation in the North Mendota area.

The North Mendota FUDA steering committee submits these recommendations to respective local governments and CARPC to review and incorporate the recommendations, in whole or in part, into local plans, policies, and implementation decisions. The intent expressed in the enabling resolutions is to update this study every five years to account for significant changes in existing conditions, such as unforeseen population fluctuations and policy changes.

Process and Methodology

A multi-jurisdictional steering committee directed project staff to design and implement a process to review existing plans and municipal agreements, historic trends and future demographic projections, natural and agricultural resources, and to gauge public opinion for future development and preservation in the North Mendota Study Area (see Map 1). The committee met over 20 times to complete this process. This steering committee directed 3 major activities:

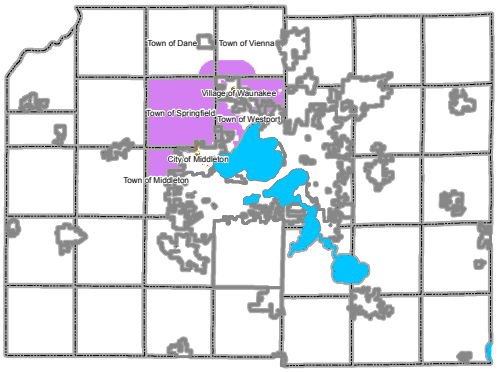
Map 1: North Mendota Study Area and Regional Context



Breakdown by Jurisdiction

C. Middleton*	545 acres
V. Waunakee*	877
T. Middleton	4,536
T. Springfield	23,010
T. Westport	9,692
T. Vienna	3,090
T. Dane	1,130
Total	*42,880*

*Includes only those parts of the city and village not in the 2012 USA



Environmental Conditions Report (ECR) development – an in-depth inventory and assessment of the natural and agricultural resources and historic population trends and projections for the study area. The data was used to develop, evaluate, and inform scenarios and implementation measures presented in this FUDA Study. The ECR is provided as a supplement to this Study (though it is not itself part of this FUDA Study). The ECR provides information for planning, engineering, real estate and other related professionals working in these communities.

Scenario Evaluation – the creation and evaluation of different 25-year growth scenarios was based on findings in the ECR, adopted local land use plans and community and steering committee input. Scenarios were derived from locally adopted future land use maps located in participating communities local comprehensive plans. Three public polling scenarios depicting various development areas, land use mixes, redevelopment and densities were developed to illustrate the amount of land acreage required to meet the 25-year population projection. These scenarios are presented in more detail in Supplement C. The steering committee derived a hybrid scenario based on the polling scenarios and community input

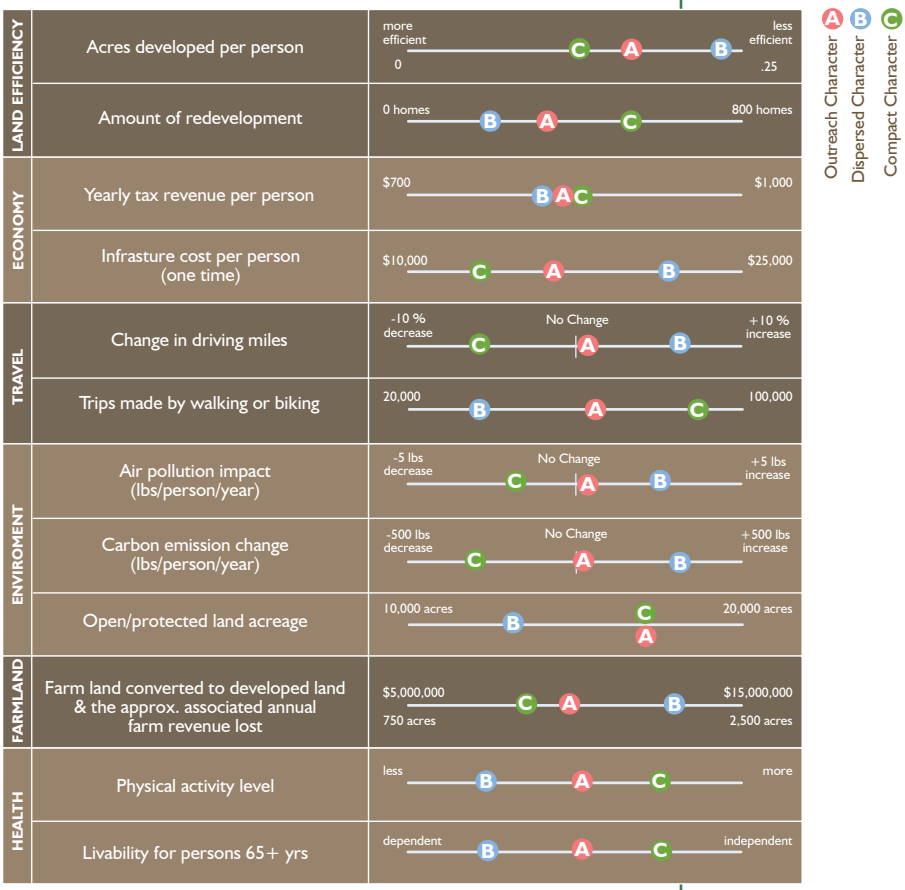
called the “Recommended North Mendota FUDA Scenario,” or “Recommended Scenario.” Evaluation and analysis for the Recommended Scenario is in the Scenario Evaluation section of this Study.

Future Urban Development Area (FUDA) Study— this document illustrates and describes the FUDA scenario the steering committee endorses and the recommendations the jurisdictions could take to implement this Recommended Scenario. The Study analyzes potential impacts of the proposed development pattern and outlines comprehensive plan or other governing document updates the communities could make to implement the FUDA study recommendations. This document is the **North Mendota FUDA Study**.

Each activity included ***public outreach and engagement*** to inform the steering committee, process and outcomes. The steering committee adopted a Public Participation Plan and engagement strategies that exceeded the requirements in the state comprehensive planning statute (Wis. Stat. 66.1001). Public participation was organized into five phases:

1. Information gathering, preparation and publicity,
2. Introduction to FUDA, community goal affirmation and visual preference survey,
3. Existing conditions education and conceptional scenario mapping,
4. Scenario polling and
5. Municipal and regional commission/board processes.

Figure 1: Indicator Evaluation for Polling Scenarios



Phases 1-4 informed the findings and recommendations in this study. Phase 5 occurred with the release of this report and may continue at the municipal and regional levels until comprehensive and regional plan updates are complete. Supplement B provides more detail on the public participation approach, materials, activities and results.

Each activity also included research on trends, projections, satellite imagery analysis and geographic information systems (GIS) analysis. ECR development included site visits and analysis for environmental quality. Scenario evaluation included calculating various indicators to evaluate community impacts of each scenario.

FUDA Scenario Overview and Recommendations

The steering committee and its staff developed three "polling scenarios" that could accommodate the 2035 projected population to poll the community at large: (A) Dispersed Character Scenario, (B) Public Outreach Scenario (most similar to development proposed in adopted plans and current trends) and (C) Compact Character Scenario.[1] Land use designations (commercial, residential, institutional, natural land, agricultural land, etc.) and implementation standards (density, housing mix, etc.) were adjusted based on input from community members, existing plans, and potential opportunities the steering committee and staff identified.

The projected 16,000 new residents in these Urban Service Areas are anticipated to require 2,600 acres for their homes, jobs, schools, roads and other needs. Some of this growth can and should be accommodated through redevelopment and infill in the existing Urban Service Area. In Middleton and Westport, a significant portion of the projected growth could be absorbed into approved developing neighborhoods, such as Bishops Bay, while the remaining unmet demand could occur on land currently outside the Urban Service Area. Waunakee's projected growth will require additional land to be added to the Urban Service Area. This land can be added in a phased manner based on demonstrated needs.

The steering committee compared each scenario across indicators, or impacts, on the communities' future states. Indicator categories include: land efficiency, economy, travel, environment, farmland, and health. See Figure 1 for a complete list of indictors and how the scenarios compare and Supplement C for the methodologies used to develop and analyze the scenarios and indicators. The three scenarios were displayed at seven polling stations and online for a month in spring 2012 for community feedback.

Recommended North Mendota FUDA Scenario

Considering existing plans and inter-jurisdictional agreements, environmental and agricultural conditions, community goals and trends (Supplement E), scenario impacts (Supplement C), citizen participant opinions (Supplement B), and the many opportunities for the future, the steering committee recommends the Future Urban Development Area and conceptual future land use pattern designated in Map 2.

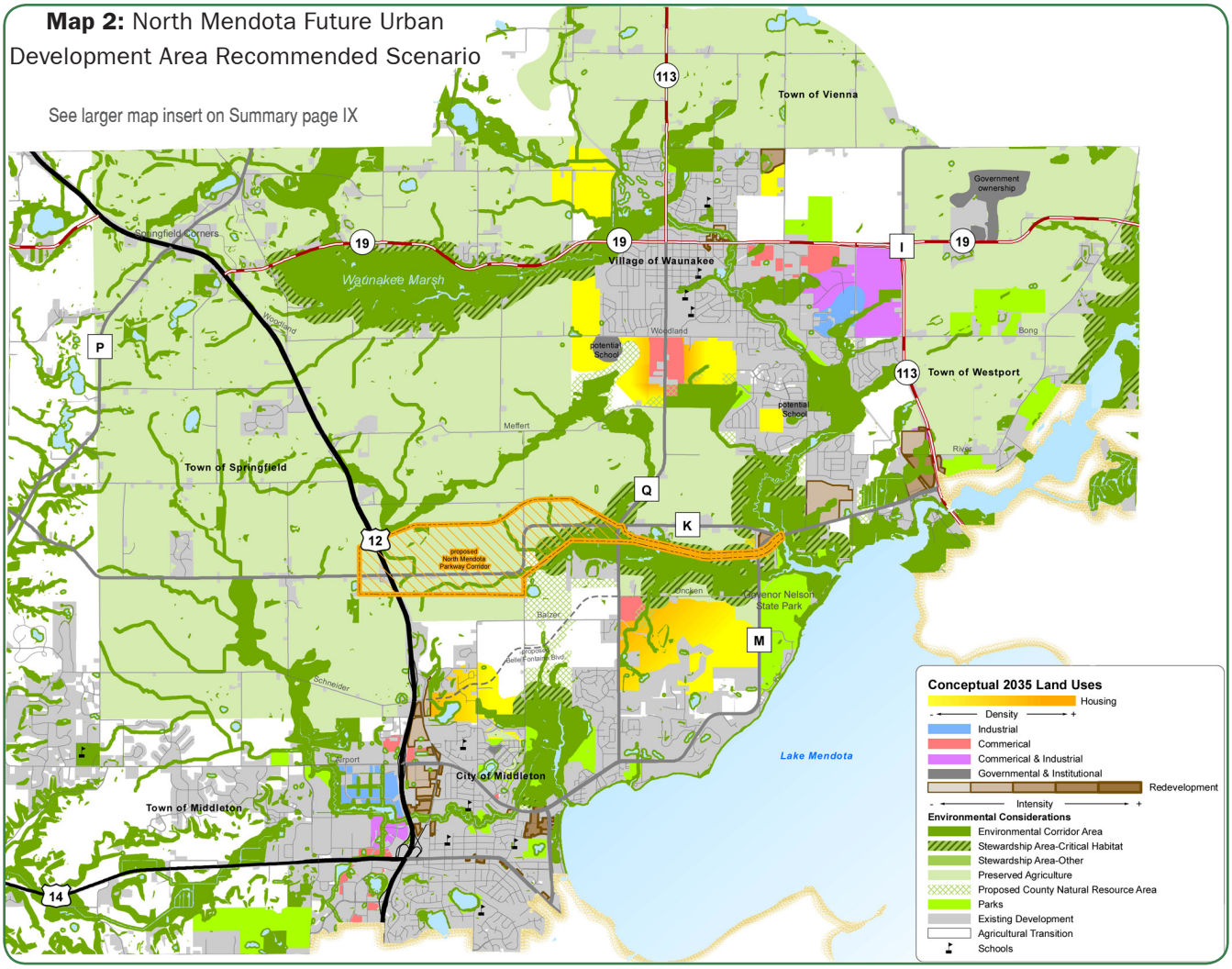
The Recommended Scenario is a hybrid of locally adopted plans and intergovernmental agreements, enhanced with opportunities presented in the Compact Character and Public Outreach Scenarios. Most public participants preferred the Compact and Public Outreach Scenarios over the Dispersed Character Scenario.

Recommendations are divided into two major sections: ***Recommended Scenario,*** and ***Further Analysis Areas.*** Each section contains recommendations and associated implementation measures. The steering committee rationale is presented next to the recommendation(s). Following the recommendations, the Study includes potential amendments to local comprehensive plans and other governing documents to advance the recommendations.

1 Additional scenarios were developed or proposed. The current trends and adopted plans scenarios showed little distinguishable variation compared to the selected scenarios. The steering committee considered the proposed fixed USA boundary scenario and determined that in Middleton a significant of the growth within this time horizon could be within the existing USA and the unmet growth could require additional lands outside the service area; and Waunakee will require more land in the Urban Service Area for the projected growth even if all redevelopment and infill were to occur in the planning horizon.

Map 2: North Mendota Future Urban Development Area Recommended Scenario

See larger map insert on Summary page IX



NOTE: This map conceptually represents the Steering Committee's Recommended Scenario for future growth and presentation in the FUDA study area. It shows how much land will be needed to accommodate projected 2035 land demand and general locations where that demand could be accommodated. This map may guide the amendment of future land use maps in local comprehensive plans, zoning decisions, and intergovernmental agreements. However, it should not be used or interpreted as a comprehensive plan, future land use plan, zoning map, or intergovernmental agreement in and of itself. Future land use categories and boundaries within comprehensive plans, zoning ordinances, and intergovernmental agreements will likely vary from representations on this map.

Redevelopment and Infill Recommendations

1. Middleton, Waunakee, Springfield and Westport are advised to establish additional redevelopment/infill areas respectively.

1.1 Middleton, Waunakee and Westport are advised to evaluate and plan, or update an existing plan, for redevelopment/infill sites identified in the Land Demand and Supply Section of the Environmental Conditions Report (see brown features on Map 2, Table 1 and Maps 3-6).[2]

1.2 Middleton and Waunakee are advised to identify additional new redevelopment/infill areas presented in "5. Additional Redevelopment Areas."

1.3 Springfield is advised to reevaluate and enhance its development plan for the potential development and redevelopment options for Springfield Corners that have been included within its Comprehensive Plan in light of evolving priorities and significant changes to Highway 12 access WisDOT is evaluating (e.g. interchange).

1.4 Track redevelopment progress and market strength and opportunities.

1.5 Proactively plan for large infill opportunities in accordance with local plans, such as large parcels in Westport.

2 Redevelopment estimates in Middleton are assumed higher than the baseline level in existing plans because the land demand projection estimates more commercial demand by 2035 than is planned for.

Rationale for Recommendations 1 & 2

Existing Plans/Goals: Includes existing planned redevelopment and infill sites. Plans reveal a lack of available land for commercial/industrial growth in or outside Middleton's Central USA .

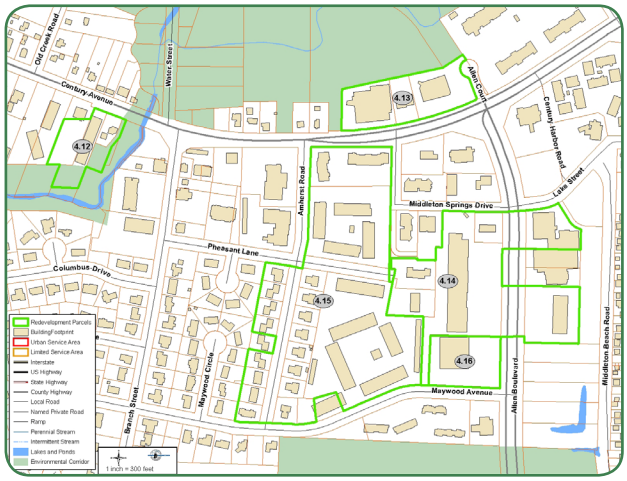
Participant Opinion: Respondents supported redevelopment at greater levels.

Steering Committee Recognizes:

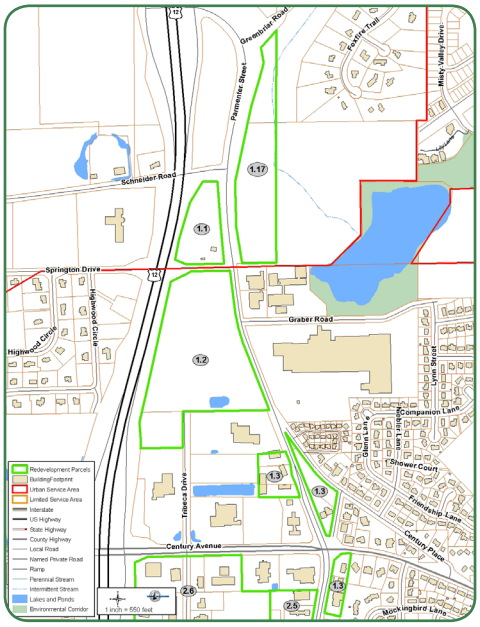
Middleton and Waunakee downtowns and the Westport Town Center are areas with further opportunity for redevelopment and reinvestment than identified in existing BUILD Plans.

- Opportunities for walking and biking exist in these areas.
- Several existing civic uses exist.
- Logistical and market challenges in redevelopment and infill projects. May warrant public action.

Map 3: Middleton TID #5 Century-Allen Sub-area



Map 4: Middleton TID#5 Parmenter US12 North Sub-area



1.6 Middleton is advised to work with large-scale developers and property owners to intensify existing commercial/office developments, including opportunities for incorporating compact residential. This is especially relevant in areas with excellent highway access, such as Greenway Station and other properties west of Highway 12 and south of the Town of Springfield.

1.7 Continue to allow well-designed intensification in appropriate existing urban residential areas including subdividing large parcels into smaller lots, accessory dwelling units, duplex conversion and multi-family.

2. Middleton, Waunakee and Westport are advised to continue to use incentives and other programs to facilitate a higher redevelopment/infill implementation probability for adopted and recommended sites.

2.1 Continue to attract and retain high-activity uses (civic and festive uses) to downtowns to support existing and new business and reduce financial risk for developers.

2.2 Continue to identify funding resources to incentivize redevelopment including Tax Increment Financing, Business Improvement Districts, and specific economic development funds.

2.3 Continue to help assemble redevelopable lands and distribute Request for Proposals (RFPs) to developers.

Community and Neighborhood Design Recommendations

3. Middleton, Waunakee, Springfield and Westport are advised to allow for greater density in strategic locations (see Map 2).

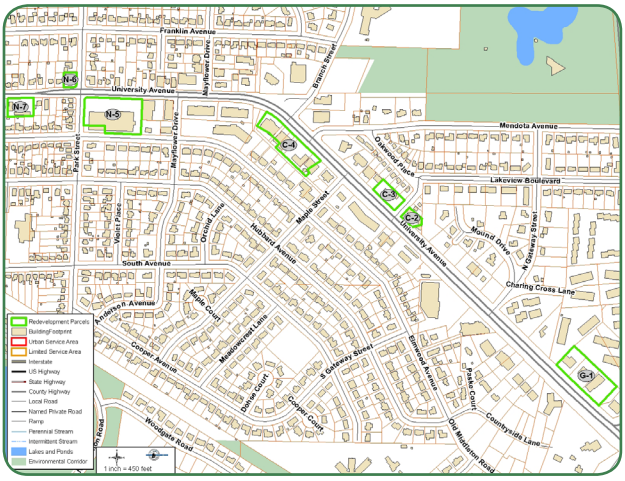
3.1 Westport is advised to permit higher residential and commercial densities and mixed-use development in the Town Center Area, along proposed transit corridors, and in redevelopment infill projects, such as the Yahara River Redevelopment project (created as a capstone project by a UW landscape architecture student).

Table 1: North Mendota Planned and Proposed Redevelopment and Infill Areas

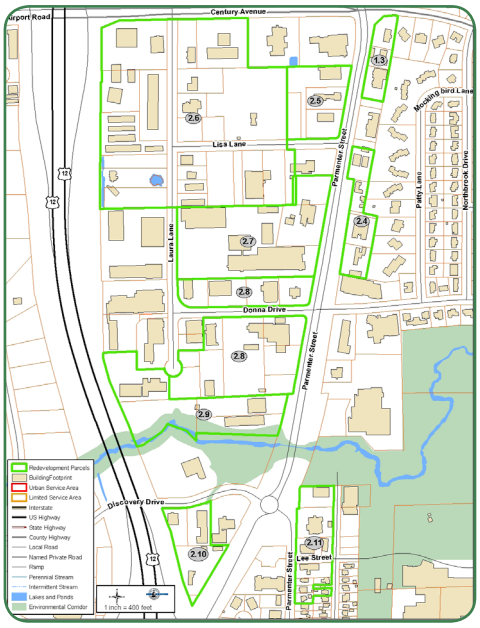
	Sub-Areas	Acres	Existing Uses	Existing Commercial SF	Existing Future Uses	Potential Future Uses	Anticipated Commercial Gain (sf)	Anticipated Res. Gain (units)
Middleton	1	8.97	Vacant and a house	0	1	Office/Research	190,044	-1
	1	27.25	Vacant	0	0	Tribeca Village: retail & office/research; residential	684,000	127
	1	7.97	Various commercial, 12-unit apt., cemetery	16,914	12	Mixed-use, commercial ground floor, residential above	24,281	59
	1	13.70	Vacant	0	0	Office/Research	462,308	0
	2	3.31	Gas station, hotel, apartment	23,147	5	Mixed-use, commercial ground floor, residential above	24,003	79
	3	4.49	Retail, warehouse	27,182	0	Retail and Office/Research	53,704	0
	2.6	31.94	Ballfields, fun park, vacant lots, public garage, bus barn, commercial	133,961	0	Retail and Office/Research	392,567	0
	2.7	12.13	Industrial and vacant auto dealership	16,275	0	Office/Research complimenting industrial use	147,941	0
	2.8	13.65	Office, retail and warehouse. Primarily landscape/nursery business	6,360	0	Reconfiguration and consolidation with retail/residential complementary to landscape/nursery business	40,841	88
	2.9	10.18	Warehouse/office/ retail	53,088	0	Residential - senior, workforce, condo/apt.	-13,272	87
	2	3.66	Vacant retail, SF home, and warehouse	19,189	1	Retail, office & hotel	71,443	-1
	2	3.86	SF and a duplex, bar, office, warehouse	41,444	6	"Comprehensive approach should be taken." Mixed commercial-residential or other multi-use	7,672	21
	4	2.66	Historic Stamm House, SF home, and multi-tenant warehouse/office	12,150	0	Relocate businesses into redevelopment area; redevelop into housing	-6,075	12
	4	3.49	Former grocery and new convenience store/pharmacy and bank buildings	31,960	0	Grocery into mixed residential/retail	-3,861	7
	4	9.97	Athletic club, shopping, restaurant, office & warehouse	64,906	2	Consolidation of athletic club, plus mixed retail/entertainment with residential above	4,958	35
	4	17.18	Residential (14 duplex, 3 apartment between 40 and 128 units, 2 townhouse, and 2 SF = 305 units	0	305	A complete range of apartments and condos to encourage diverse owner-occupants and renters	0	34
	4	2.15	Empty retail store	20,160	0	Retail with residential above	986	22
	University 1	1.46	Retail, Office Apt, Parking Lot	7,550	2	Mixed Residential Commercial	8,949	13
	University 2	0.97	Mixed Commercial	15,520	2	Mixed Residential Commercial	-2,298	8
	University 3	1.27	Drive Through Restaurant, Catering	1,835	0	Mixed Residential Commercial	8,001	27
	Greenway		Commercial, Office			Intensification of existing commercial site	1,446,240	0
Waunakee	1	1.54	E. Main & N. Madison	4,967	1	Commercial, Mixed Retail, Residential, Office, Public facility library	2,542	9
	2-3	5.93	Former Waunakee Alloy and vacant	0	0	Residential (12-16 du/ac N of Creek; 6-8 du/ac S of Creek), public facility/library	15,553	62
	4	0.90	315 to 321 E. Main St. Vacant & SF	0	1	Commercial, Mixed Commercial & Residential/Office	4,657	9
	6	4.03	American Legion Site	0	0	Residential (12-16 du/ac), office, civic	13,599	54
	7	1.42	Single-Family - N side of 400 E. Main St	0	7	Residential (6-8 du/ac), office, retail, B&B	5,894	8
	8	2.41	Single-family, commercial, vacant	13,115	2	Multi-family residential (12-16 du/ac)	-9,836	27
	9	0.91	Single-family, duplex, MF, and 1 commercial, vacant	1,694	8	Commercial, Mixed Commercial & Residential/Office	4,605	4
	10	1.81	Former Lumber Yard	39,016	0	Commercial, Mixed Commercial & Residential/Office	-8,439	11
	1a	9.02	Mixed commercial spaces, Village Hall, bowling alley	105,375	0	Infill of mixed use buildings on underutilized parking area; no lost development.	13,365	27
	1b	0.65	Mixed commercial, laundromat, St. Vincent De Paul, Manufacturing Residential	10,232	0	Mixed residential	-2,558	5
	2	1.82	Bank, gas station, vacant clinic building	10,160		Mixed-use, residential over commercial	5,773	22
	3	0.79	Oil change and car wash	4,949	0	Commercial, Mixed Commercial & Residential/Office	5,712	0
	4	1.56	Strip commercial, gas station	20,623	0	Mixed-use, residential over commercial	-1,007	19
	5	0.88	Residential, commercial conversions	6,598	2	Longterm conversion to commercial uses	7,267	-1
Westport	1	40.19	Vacant	0	0	Commercial, Mixed Office	264,457	0
	2	1.98	Commercial, Single Family Residential	9,550	1	Commercial Office	14,457	0
	3	27.96	Commercial	13,804	0	Mixed Commercial Residential	35,215	77
	5		Commercial			No Redevelopment Planned: Floodplain		
	6	1.30	Multi-family Residential	0	10	Mixed Commercial Residential	9,486	11
	7	109.21	Vacant	0	0	Mixed Commercial Residential	217,822	327
	8	7.75	Vacant Service Station	47,433	0	Mixed Commercial Residential	13,956	76

Table 1 summarizes CARPC staff analysis of all infill and redevelopment for areas identified in adopted plans and additional potential areas (grey text). While these opportunities exist, several barriers to redevelopment and infill, such as infrastructure enhancement, lack of staging space, citizen NIMBYism (Not in My Back Yard), and financing challenges for certain types of projects, reduce the likelihood of reinvestment. Consequently, only a portion of this redevelopment/ infill is likely to occur in the 25-year time horizon of this study. Adopted plans allow 2,834,027 commercial square feet and over 636 new housing units on infill and redevelopment sites. Analysis showed potential for an additional 1,316,979 commercial square feet and approximately 539 more housing units on these infill and redevelopment sites. The sites outlined in green on maps 3-9 highlight already adopted infill/redevelopment areas.

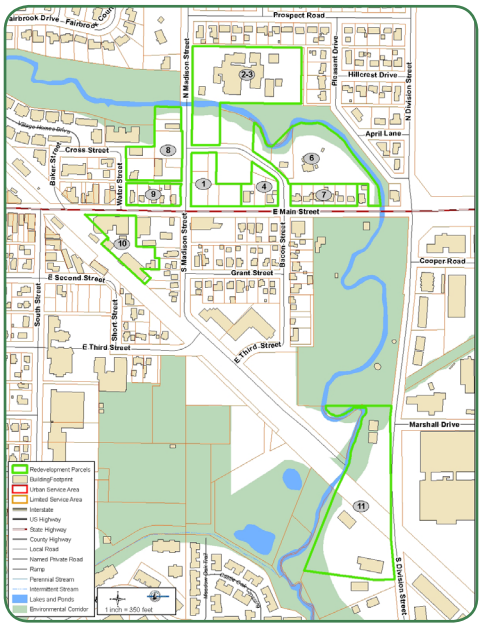
Map 5: Middleton University Avenue



Map 6: Middleton TID #5 Parmenter US12 South



Map 7: Waunakee Downtown Sub-area



3.2 Allow for higher density residential in and around downtowns/town centers to build community and strengthen the customer base for local businesses.

3.3 In general, allow for greater commercial and residential density and mixing these uses near existing and future destinations and transit corridors(such as civic uses, entertainment venues, retail) to encourage walking, biking, and when feasible, transit.

3.4 Springfield is advised to investigate different design concepts for Springfield Corners, potentially including senior housing.

3.5 Waunakee is advised to continue investigating design concepts for the Downtown, including North Century Avenue.

3.6 Middleton is advised to compile design guidelines from various BUILD Plans and the Middleton-Westport Joint Planning Area into a single reference document to identify common elements and illustrate the distinct design characters desired.

3.7 Ensure multi-family housing is well designed and arranged within the site, integrated amongst surrounding lower-density housing units and sites, and provided with the proper level of utilities and community services.

3.8 North Mendota communities are advised to implement traditional neighborhood design for future urban development and refer to Middleton Hills and Bishops Bay neighborhoods as models for future developments.

3.9 North Mendota communities are advised to consider total cost-of-living when modeling future land use decisions, including home ownership or rental, transportation costs, food access, utilities and access to amenities.

3.10 North Mendota communities are advised to ensure excess area is not being dedicated to future urban development by potentially reducing minimum requirements in ordinances and considering maximum requirements, such as for parking spaces.

3.11 Evaluate comprehensive plans and land use ordinances to identify and implement changes that support the outcomes in the Recommended Scenario (see “Implementing Recommendations Through Governing Document Updates” section).

4. ***Middleton, Waunakee and Westport are advised to permit complete neighborhoods that integrate a range of quality residential, civic, open/public and business spaces in the Urban Service Area.***

4.1 Permit senior residences (life-cycle housing), single-family lots and homes with a broad mix of sizes and price-points and multi-family housing, including homes accessible to people with disabilities.

4.2 Mix housing, civic, open/public, and retail and office uses, horizontally and vertically.

4.3 Design neighborhoods and street and trail networks to provide convenient walking and biking access for residents to civic, business and recreational uses.

4.4 Waunakee is advised to create, adopt, and implement a Traditional Neighborhood Design (TND) district in the Waunakee zoning code.

4.5 Leverage the recent investments in trails, and proposed park investments to build community image and enhance development potential and quality in the Urban Service Area.

4.6 Ensure commercial and residential uses with shared walls are constructed with adequate sound proofing and durable materials to reduce conflicts and operations and maintenance costs.

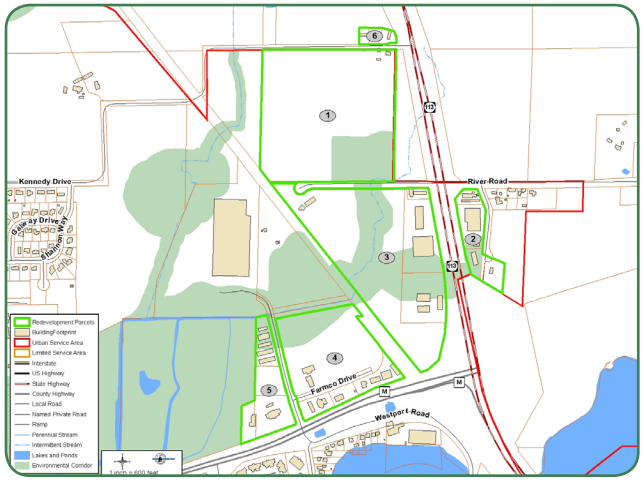
4.7 Ensure appealing opportunities exist for youth to be productive and engaged community members.

Rationale for Recommendations 3 & 4

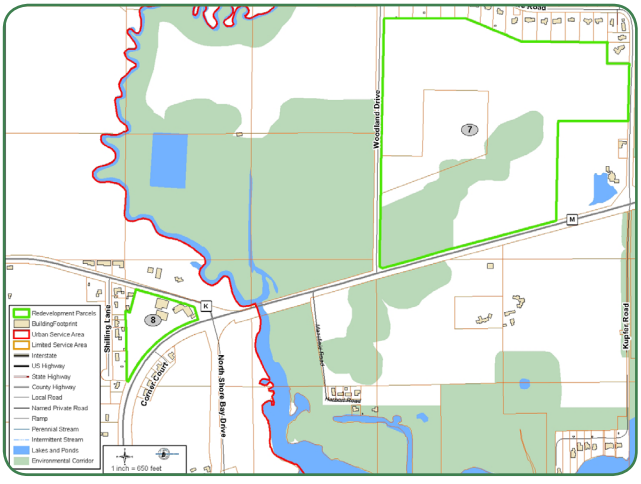
Existing Plans: Existing plans often call for separated commercial and residential uses.
Public Input: The Compact Character Scenario was more popular and proposes a larger commercial area, a mixed-use zone and higher density residential than in the Public Outreach Scenario.
Steering Committee Recognizes:

- The advantage of access off Highways 12, 19, and M in urban areas create opportunities greater intensity of uses.
- The increasing baby boomer population and changing preferences
- Decreasing household sizes and trends to-wards smaller homes.
- Co-locating residential, work and daily destinations fosters walking and social ties.
- Comprehensive Planning Law requires a TND ordinance when a population exceeds 12,500. Waunakee will reach this threshold within 25-years.
- A Transit Corridor Study exploring express bus service to and from the Middleton and Waunakee areas is underway through Sustainable Communities Planning Grant. Middleton, Waunakee and Westport can build on opportunities for transit supportive densities along this potential route.
- Affordability Considerations: Rents/mortgages within 30%, and transportation costs within 15% of household income (www.htaindex.org). Regulations and incentives for energy and maintenance efficient construction, efficient layout and design for non-automobile trips, ability to grow food onsite and age in place in life-cycle housing are some things these communities could do to keep living affordable.

Map 8: Westport Highway 13 and CTH M



Map 9: Westport CTH M & K



Rationale for Recommendation 5-8

Existing Plans/Efforts:
- North Mendota Parkway Planning.
- Town of Westport Comprehensive Plan regarding Town Center development sections.
- Yahara River Redevelopment student capstone project.
- Grant applications and attempts at Dane County BUILD grants by Westport for streetscape work in the Town Center.
- Middleton Sustainability Plan
- Sustain Main in Waunakee

Public Input:

In a visual preference survey, participants preferred images that showed attractive streets and other aesthetic improvements.

Steering Committee Recognizes:
- Middleton, Waunakee and Westport are making significant investments in parks, trails, and open space worth connecting and promoting.
- Westport could take advantage of its significant potential for outdoor recreation in the Town Center area with the Yahara River, Sixmile Creek, Lake Mendota and Daleo Soccer Fields/Westport Town Center Park and connect them to businesses and residents in that area.
- Natural resources are finite and sustainable use of resources is necessary to ensure current and future use.

5. Westport is advised to develop and implement streetscaping and community design/character guidelines in its Town Center including necessary ordinance or comprehensive plan revisions, along the central Town corridors, including CTH M, STH 113, the Town Center, and the Yahara River Redevelopment project area.

6. The City of Middleton is advised to continue progress and seek funds for implementing their Sustainability Plan and work with surrounding jurisdictions in the region to enhance efforts in Middleton.

7. The Village of Waunakee is advised to expand its sustainability efforts and incorporate sustainability into its plan updates.

8. North Mendota communities are advised to collaborate to advance sustainability goals and leverage investments made to advance the goals.

Mobility and Access

9. Middleton, Waunakee and Westport are advised to continue to establish a connected street, sidewalk, bike-path and trail network that promotes walking, biking, and transit in addition to motor vehicles in the Urban Service Area and that connects to regional trails, bike-paths and roadways in surrounding rural areas including Westport and Springfield.

9.1 Permit new development with a highly connected travel network for pedestrians, bikers, transit, vehicle, and other travelers.

9.2 Evaluate existing development to determine where connectivity can be improved.

9.3 Work with Dane County, State, and Federal governments to link recreational trails, identify gaps in the trails and bikeways. Use the communities' involvement in the Capital Region Sustainable Communities partnership to secure bonus points in federal grant applications.

9.4 Accommodate transit (traditional and para-transit), ride-share, walking, biking, and other non-vehicular forms of travel to accommodate persons of different ages and abilities.

9.5 Continue to establish interconnected transit, bike, and pedestrian networks between the North Mendota Communities and neighboring communities.

9.6 Waunakee is advised to establish a sidewalk retrofit plan for existing neighborhoods without sidewalks, evaluate and adjust street standards to ensure the ability to walk, limit impervious surfaces and maintain appropriate traffic speeds.

9.7 Middleton, Waunakee and Westport are advised to leverage potential investments in express bus service and ensure residential and employment opportunities are constructed at transit-supportive densities surrounding the proposed express bus corridors.

9.8 Improve Pheasant Branch Road to accommodate bicyclists and motorists simultaneously and/or construct a parallel alternative route.

9.9 Middleton, Waunakee and Westport are advised to develop safe and effective methods for youth living in the Bishops Bay Neighborhood to travel to Waunakee schools, especially if and when roadways, such as the North Mendota Parkway, expand or are constructed.

Rationale for Recommendation 9

Existing Plans:
- North Mendota communities have Transportation elements in their comprehensive plans.
- These communities share the North Mendota Parkway Study and Plan. Regional and State plans and projects also impact transportation infrastructure here.

Public Input:
The Compact Character scenario emphasized the ability to walk and bike.

Steering Committee Recognizes:
- The automobile is the dominant travel method.
- Many people, young, elder, blind, differently abled persons cannot use a car and are dependent on others to get around reducing their independence.
- Daily walking, biking, etc. are part of a healthy lifestyle.
- A Transit Corridor Study exploring express bus service to and from the Middleton and Waunakee areas is underway through Sustainable Communities Planning Grant.
- Transit and walking supportive density of both people and places can be strategically connected and leveraged for greater return on in-vestment.

Intergovernmental Cooperation

10. North Mendota Communities are advised to continue or establish intergovernmental agreements with each other and surrounding jurisdictions.

10.1 Springfield and Waunakee are advised to extend their intergovernmental boundary agreement, or expand it to be a cooperative plan under Section 66.0307 of Wisconsin Statutes, to address preservation, development, and transportation issues in northeast Springfield. See Further Analysis Area 2 for details.

10.2 Westport and Waunakee are advised to establish an intergovernmental boundary agreement or joint plan with DeForest to discuss preservation and development opportunities where the communities interface. See Further Analysis Area 3 for details.

Rationale for Recommendation 10

Existing Plans:
The North Mendota Communities are area leaders in intergovernmental cooperation on a variety of topics. Several intergovernmental boundary and service agreements are currently in place.

Public Input:
The North Mendota processes indicated strong support for farmland preservation, compact urban expansion, and community separation.

Steering Committee Recognizes:
- Westport, Waunakee, DeForest and Vienna comprehensive plans show the east edge of Westport for agricultural preservation.
- Existing cooperative efforts expand beyond land use agreements to joint community development, transportation, recreation, and farmland/open space preservation.
- The Village of DeForest has expressed interest in beginning intergovernmental discussions with Westport.
- Interjurisdictional competition can be debilitating, while working together can better advance the region on an international scale.
- Long-term agreements add predictability and reduce risk for municipalities and the many sectors that build them.
- The North Mendota FUDA project and Waunakee Future Land Use Map show current and future land development reaching the Waunakee/Vienna boundary.

10.3 Waunakee is advised to establish an intergovernmental boundary agreement with Vienna to discuss preservation and development opportunities. See Further Analysis Area 2 for details.

10.4 Westport and Waunakee are advised to extend their intergovernmental boundary agreement.

10.5 Maintain existing intergovernmental agreements, such as the Middleton-Springfield boundary agreement, and service agreements, and amend by mutual agreement as necessary.

10.6 Middleton, Westport and Waunakee are advised to participate in FUDA planning projects with the City of Madison.

10.7 The North Mendota communities are advised to continue to work with Thrive, Dane County Economic Development and the Capital Region Sustainable Communities partnership to foster, leverage and develop other opportunities for intergovernmental and public-private collaboration.

Natural Resources

11. Middleton, Waunakee, Westport and Springfield are advised to incorporate Stewardship Areas in development planning.

11.1 Incorporate "Stewardship Areas-Critical Habitat" and "Stewardship Areas-Other" as shown in Map 2: North Mendota FUDA Recommended Scenario into local plans and apply habitat loss mitigation and restoration management standards for new development (see Figure 2).

11.2 Explore potential opportunities to establish or expand riparian buffers in Stewardship Areas through pollutant trading between agricultural and urban sources involved in the Rock River Total Maximum Daily Load (TMDL) and the Yahara Watershed Improvement Network projects.

11.3 Explore opportunities through the Conservation Reserve Program and other voluntary cost-share/set-aside/nonpoint source control programs administered through the Dane County Land Conservation Department with willing land owners.

11.4 Plan for the area between and including Waunakee Marsh and Dorn Creek for long-term preservation to support existing agricultural and open space uses and provide community separation between Middleton and Waunakee. See Further Analysis Area 3 for details.

12. Middleton, Waunakee, Springfield and Westport are advised to utilize Environmental Corridors and Stewardship Areas as open-space amenities in developments for residents and patrons.

12.1 Prepare and adopt stewardship guidelines for new development and open space in these areas.

12.2 Identify viewsheds and vistas of community value that should be preserved and take steps to accomplish this.

Figure 2

Considerations and Best Practices for Recommendation 11

Ecological Restoration Guidelines: Natural resource area restoration will be necessary to maintain ecological functions and the services they provide to humans, flora, and fauna, and to maintain our natural heritage for future generations. While each location will require tailored designs, restoration projects should generally follow these guidelines:

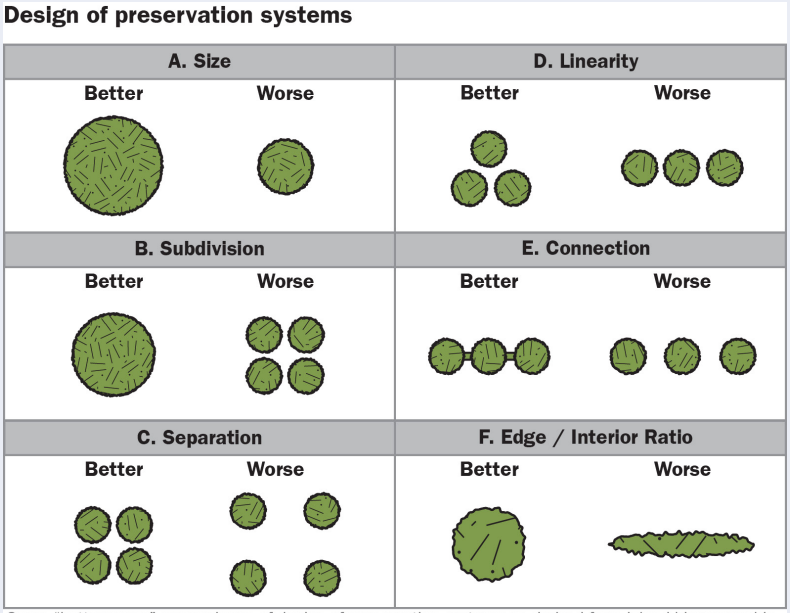
- Natural resource conservation and management is less costly than ecological restoration.
- For successful restoration, the factor causing the degradation must be identified and removed or abated.
- Often it is not possible to restore or create an ecosystem that is an exact copy of a previous or idealized state.
- Restoring physical attributes within an ecosystem will not always result in positive biotic responses or occupation by desired species.
- Restoration takes time. Depending upon the ecosystem, it may take a few years or several decades before restoration is complete.
- Restoration needs long-term management and monitoring to assess if more work is needed.
- Ecosystem restoration is complicated, not as easily manipulated as human engineered systems, and thus, it may not be possible to control for all aspects within a project.
- Each restoration project will have unique challenges requiring specific approaches.
- The restoration goal is to create a self-organizing and sustaining system that no longer requires active human intervention.
- Large sums of money, time and other resources will not solve ecological problems. Nor will waiting for advances in science and technology. Proactive restoration policies and actions are beneficial to preserving and improving our quality of life.

Habitat Connectivity Guidelines: Biodiversity is rapidly declining worldwide. Habitat fragmentation and loss of connectivity is one of the major reasons for decline and is largely from increasing agriculture, infrastructure and urbanization. Natural resource planning applies landscape ecology principles to overcome fragmentation. For the North Mendota FUDA Study Area, retaining connectivity in this landscape will require:

(1) Providing buffer protection for the natural resources near Sixmile, Dorn, and Pheasant Branch Creeks and the headwaters of Black Earth Creek. Ideally, these resources should be connected together through contiguous, restored corridors. Should any proposed habitat corridors connect to streams, the buffer around the stream should be expanded to 300 feet on one side.

(2) Creating restored habitat corridors that will connect Waunakee Marsh to Dorn Creek Conservancy, and Dorn Creek Conservancy to Pheasant Branch Conservancy.

(3) Providing buffer protection along surface water features and mitigating development impacts on wildlife using native landscaping, appropriate road and building orientation and ensuring low traffic.



Some "better-worse" comparisons of design of preservation systems as derived from island biogeographic theory. (Modified from Diamond 1975)

Rational for Recommendations 11-16

Existing Plans: Accommodate Environmental Corridor designations and identify critical resources in the Natural, Agricultural, and Cultural Resources comprehensive plan elements.

- Many of these resources and their preservation potential are identified in the Dane County Parks and Open Space Plan.
- In general, the Dane County Water Quality Plan maps Environmental Corridors in Urban Service area as 100 foot no-build buffers around surface water shorelands and the 100-year floodplain, a 200-foot buffer around natural and man-made drainage ways, include wooded slopes over 12 percent, existing and proposed parks, conservancy areas and natural resources areas, and does not include existing development.
- Dane County Shoreland Regulations require 75 foot buffers around floodplains, shorelands and wetlands over 2 acres.

Participant Input: Participants favored community separation, environmental protection of vital resources, and access to open space.

ECR: Stewardship Areas expand certain Environmental Corridors and indicate where development may need to meet stewardship standards.

- Stewardship Areas-Critical Habitat and Stewardship Areas-Other are locations where special conditions might be required to protect critical habitat (Map 38) and ecological services.
- The ECR contains several points of information that form the Environmental Corridor and Stewardship Areas, and other natural features including groundwater infiltration areas (Map 34), prairies (Map 39), woodlands (Map 4), extraction sites (Map 3), springs (Map 30), wetlands (Map 5), slopes (Map 4), watersheds (Map 10 and 11), etc.

The Steering Committee Recognizes:
The Environmental Corridor Expansion Areas in the Compact Character scenario and ECR Map 37, as being converted to "Stewardship Areas - Critical Habitat" in the Recommended Scenario.

- The North Mendota area headwaters include Sixmile, Dorn, and Pheasant Branch Creeks that lead into the Yahara Chain of Lakes.
- Black Earth Creek is a nationally recognized trout stream.
- Preservation requires willing landowners.
- Westport has an environmental conditions checklist for land division that applicants must complete in the filing process.

13. Middleton, Waunakee, Springfield and Westport are advised to protect mineral resource areas (ECR Map 3), evaluate the areas for infiltration and groundwater recharge (ECR Map 9), and extract the resource and reclaim the land before development is permitted.

14. Middleton, Waunakee and Westport are advised to continue to improve stormwater management for new and existing development and protect water quality in Sixmile Creek, Dorn Creek, Pheasant Branch Creek, Black Earth Creek and Lake Mendota.

14.1 Prioritize areas with sub-surface glacial till deposits for enhanced infiltration (ECR Map 36).

14.2 Middleton, Waunakee and Westport are advised to amend stormwater ordinances to maintain pre-development stay-on volumes and recharge rates.

14.3 Minimize impact from impervious areas in new construction using best management practices and pervious surfaces.

14.4 Increase financial resources to implement broad agricultural best management practices to reduce negative impacts on natural resources.

14.5 Increase financial resources for broader implementation of retrofit urban best management practices in older urban areas.

14.6 Explore restoring wetlands, woodlands, prairies, and pastures in appropriate areas (ECR Maps 5, 12, 23, and 39), including poorly drained hydric soils that regularly fail to produce cash crops in agricultural areas.

14.7 Capitalize on opportunities for capturing phosphorus within the watershed and exporting it outside the region, for example the proposed manure digester in Springfield.

14.8 Continue to develop and adopt reduction standards for both urban and agricultural nonpoint pollution sources (see Working Lands Recommendation 16.5).

14.9 Actively participate in the Yahara Watershed Improvement Network (WIN)Pilot Project with the Madison Metropolitan Sewerage District.

15. North Mendota Communities are advised to improve public access to outdoor recreational activities.

15.1 Middleton and Westport are advised to add public access to lake and river frontage where opportunities exist including small parks, boardwalks and water-river trails.

15.2 Communities are encouraged to build adult fitness opportunities in new developments and existing parks.

15.3 Consider an improved bicycle route or path along Highway 19/north side of Waunakee Marsh to connect Waunakee with Springfield Corners and the Highway 12 path, and to improve public enjoyment of the Waunakee Marsh.

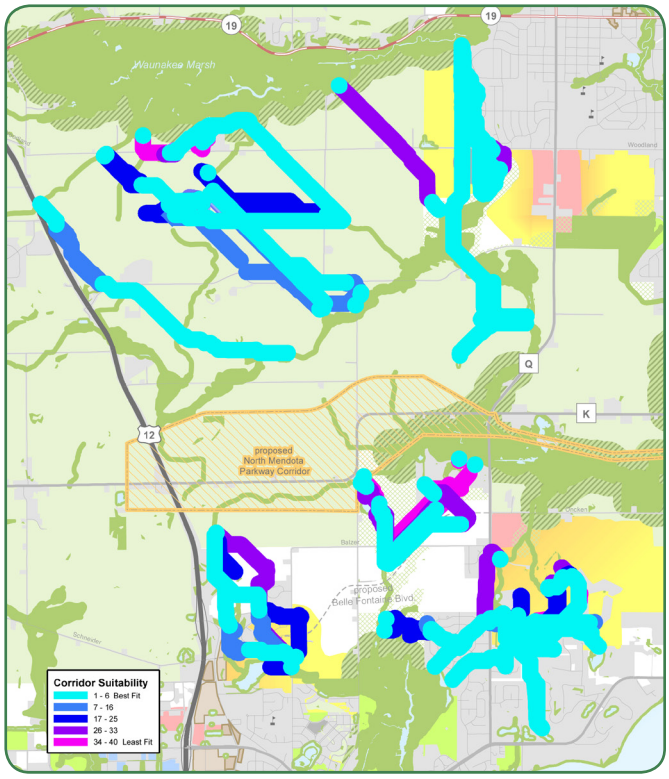
Rational for Recommendations 11-16 Continued

- Water quantity and quality management is a regional concern with responsibility dispersed among many jurisdictions. Numerous local and regional strategies will need to be implemented in these communities to protect the watershed and those downstream.
- Water quality impacts come from point sources and nonpoint sources. Extensive efforts for point sources have occurred. Nonpoint sources, e.g. agricultural or urban runoff, present challenges.
- Dane County is phosphorus rich while many places around the globe are reporting low phosphorus availability. Discussions about exporting phosphorus are beginning at the County level with the new biodigester.

15.4 The North Mendota communities are advised to establish an E-way through the area to leverage environmental, exercise, and educational opportunities. This E-way could follow the North Mendota Parkway corridor and link the Waunakee Marsh to rivers and creeks leading through the area communities towards Lake Mendota (see Further Analysis Area 3).

15.5 Explore potential to link E-way with natural resources in communities participating in the North Yahara FUDA project and the Black Earth Creek watershed.

Map 10: Best Fit Pathway Options for E-Way



The light blue lines represent best fit corridors for potential E-Way connections between Environmental Corridor features. The lighter shades, starting at teal and turning to medium blue, are the most efficient paths organisms could take between major habitats. If communities desire to implement E-Way connectors, they should select a two sets of lines; one to connect Waunakee Marsh to Dorn Creek, and another to connect Dorn Creek to Pheasant Branch Conservancy. These corridors will need to be 100 m (330 ft) wide, and restored with natural vegetation. In sections where the line is straight, communities have additional flexibility in the exact placement of the E-Way.

16. Municipalities and their local water and wastewater utilities are advised to continue their water conservation and reuse practices, and enhance infiltration measures to help mitigate the municipal water withdrawal impacts.

16.1 Middleton, Waunakee and Westport should continue to collaborate with each other and the large regional community on promoting water conservation, increasing the efficient operation of their municipal water supply systems, and minimizing the potential impacts of these systems on the local and regional water resources.

16.2 Employ a series of best management practices (BMPs) such as directing downspouts to vegetated areas and lawns, installing rain gardens, and constructing active infiltration basins as part of urban stormwater treatment and management.

16.3 Increase water conservation with low flow fixtures and rainwater harvesting for irrigation purposes.

Working Lands

17. North Mendota Communities are advised to continue to implement and enhance methods to prevent the premature conversion of farmland to developed land.

17.1 Support and help maintain the Agricultural Enterprise Areas (AEAs) Vienna/Westport/Dane, which is a State program that further denotes agricultural commitment and increases tax credit opportunities for included farmers.

17.2 Springfield and Westport are advised to identify and assist farmers to establish a new regional AEA spanning the two communities.

17.3 In new and extended intergovernmental agreements (see Recommendation 6) consider coming to mutual understanding on acceptable agricultural practices within mutually-agreed agricultural preservation areas (e.g., manure digesters, other value-added agricultural businesses). See the DeForest-Windsor Cooperative Plan, Recommendation 7, and Further Analysis Areas 1 and 3 for ideas and details.

17.4 Maintain A-1: Ag-exclusive zoning and allow housing at or below current "1 per 35" density ratios in planned Agricultural Preservation Areas in Springfield and Westport.

17.5 Increase financial resources to implement broad agricultural best management practices.

17.6 To minimize the impact of new development on agriculture and rural character, Springfield is advised to continue to utilize its Development Design Guidelines (included as an appendix to its Comprehensive Plan) and expand them as appropriate to address other types of development in the rural area.

18. Middleton, Waunakee, Springfield and Westport are advised to continue to prevent agricultural land conversion permanently in locally agreed locations.

18.1 Continue to use conservation easements and deed restrictions in farmland preservation areas in conjunction with new development approvals under Town density policies.

18.2 Westport is advised to continue utilizing its Comprehensive Plan policies regarding the allowance of farm related land divisions in rural preservation areas, and to make better use of Section 10-2-24, Westport Code, Land Development Policies to Preserve Rural Character.

18.3 Springfield is advised to implement its planned Transfer of Development Rights (TDR) program. The communities are advised to explore interjurisdictional transfers of development rights as part of new or expanded intergovernmental agreements, when TDR program success is proven in Springfield.

18.4 Attempt to identify mutually-agreed, permanent or very long term (20+ year) agricultural preservation areas as part of new, extended, or expanded intergovernmental agreements or cooperative plans.

18.5 Continue to incorporate Community Supported Agriculture, community gardens, edible landscapes, agrarian urbanism and other agricultural experiences into new and existing urban developments and parks to provide food, showcase and pass on the area's agricultural heritage to new residents and future generations.

19. Springfield and Westport are advised to examine the scope and scale of land management practices to identify, enhance and maintain ecological services and functions on or adjacent to agricultural land.

19.1 Use the Environmental Corridor Area in Map 2 as a guide and resource to create a network of permanent agricultural and open space conservation areas protected from development. Unify and reconcile the different labels and boundaries of "no build" areas as part of local comprehensive plan updates.

19.2 Encourage the restoration of former wetlands drained with underground drainage tiles and ditching, where opportunities exist. See Map 5 in ECR.

19.3 Where Environmental Corridors or Stewardship Areas are taken out of agricultural production, the land owner should continue to benefit financially from the land. This can be done through product sales from these conservation areas (e.g., switchgrass for energy) or through compensation for the ecosystem service being provided (through the CRP program or otherwise).

19.4 Continue to support and expand the potential for manure digesters, methane capture, and other creative ways to deal with agricultural waste in Springfield and Westport.

Rationale for Recommendations 17-19

Existing Plans: The North Mendota communities' comprehensive plans identify large areas west of Interstate 39-90-94 and on both sides of Highway 12 for agricultural preservation, use A-1 Agricultural Exclusive zoning, and include portions of an Agricultural Enterprise Area (AEA) in Westport. Several intergovernmental boundary agreements reinforce these intentions. A CSA farm is part of Bishops Bay development plans and agricultural buildings and animal areas are being proposed in commercial areas at the new southern entry development in Waunakee.

Participant Input: Participants rated agricultural preservation highly and supported the greater preservation in the Compact Character scenario.

Steering Committee Recognizes:

- The Springfield/Westport/Vienna area boasts a highly successful agricultural sector.
- This area boasts large areas of contiguous agricultural lands, enabling a stronger agricultural land base. See ECR Map 51.
- All local comprehensive plans show northeast Westport in agricultural preservation, and the North Yahara and North Mendota FUDA processes indicated support for community separation here.
- The Towns of Westport, Vienna and Dane established an AEA in 2012.
- Several agricultural support services exist in the urban areas and along County Highways.
- Waunakee growth is at the Vienna boundary.
- The conflict between ideal development conditions and ideal agricultural conditions often put large scale development and agriculture at odds. See ECR Map 43.
- Agricultural land is valuable in its own right, not only for holding land for development, and is worth protecting from development.
- Dane County provides AEA application assistance.

19.5 Support best management practices, such as vegetative buffers, improving farming practices, and reducing soil inputs, that will reduce the pollution burden on local and regional water resources.

19.6 Incorporate agriculture and agri-business curriculum in Middleton-Cross Plains schools, learning from the Waunakee Community School District model, or encourage students from the Middleton-Cross Plains District to participate in the Waunakee program via open enrollment.

Rationale for Recommendations 20-21

Existing Plans: Participating communities have Utilities and Community Facilities elements in their Comprehensive Plans. Middleton has and is advancing a Sustainability Plan. Springfield's "Rural Development Design Guidelines" do not yet incorporate siting for energy production.

Participant Input: Participants rated efficient and effective provision of infrastructure and services highly.

Steering Committee Recognizes:
- Collaboration on services works well for these communities.
- EPIC Systems is developing a wind farm and US Biogas/GL Dairie Biogas LLC is developing a manure biodigester in Springfield.
- Where and how utilities and infrastructure are sited can negatively impact human and natural environments. In some cases, these impacts and can be prevented.
- Leveraging investments across these communities can create scale and cost efficiencies.

Utilities

20. Middleton, Waunakee and Westport are advised to ensure effective public water supply, wastewater infrastructure planning and the cost effective provision of drinking water and sewer service for future development areas.

20.1 Coordinate and leverage investments in infrastructure and community building within the North Mendota communities and the greater region.

20.2 Continue municipal collaboration on utility services between the Middleton and Westport Utility Districts and between the Waunakee and Westport Utility Districts.

20.3 Continue to protect existing infrastructure from flooding and avoid placing new infrastructure in the 100-year floodplain where possible to maintain resilient infrastructure systems.

20.4 Evaluate the impact of future municipal water wells/withdrawal on sensitive springs and surface waters including Frederick Springs and Black Earth Creek. See ECR Map 31 and 32.

20.5 Water utilities should continue to foster and participate in collaborative strategies with other communities to mitigate well water withdrawal impacts on surface water features.

21. Support the use of and appropriately site alternative energy production, such as the biodigester and the EPIC Health Systems wind farm proposed in Springfield and Vienna.

Further Analysis Areas (FAAs) Recommendations

This section provides area recommendations, issues and opportunities for 7 further analysis areas within the North Mendota study area. Rather than coming to any definitive conclusions during this FUDA study process, these areas are presented for future study.:

1. Central Springfield
2. Town of Springfield, Vienna and Waunakee Boundaries Interface
3. Community Separation Between Middleton and Waunakee
4. Proposed Dane County 'Dorn Creek Natural Resource Area' Preservation and Enhancement
5. Highway 19 corridor East of County Highway I and West of Interstate 90/94/39
6. Transit Corridor Potential and Opportunity
7. Additional Reinvestment and Redevelopment areas

Recommendations and issues and opportunities are presented for each area. Note that pursuing recommendations to preserve or restore land will require willing landowners.

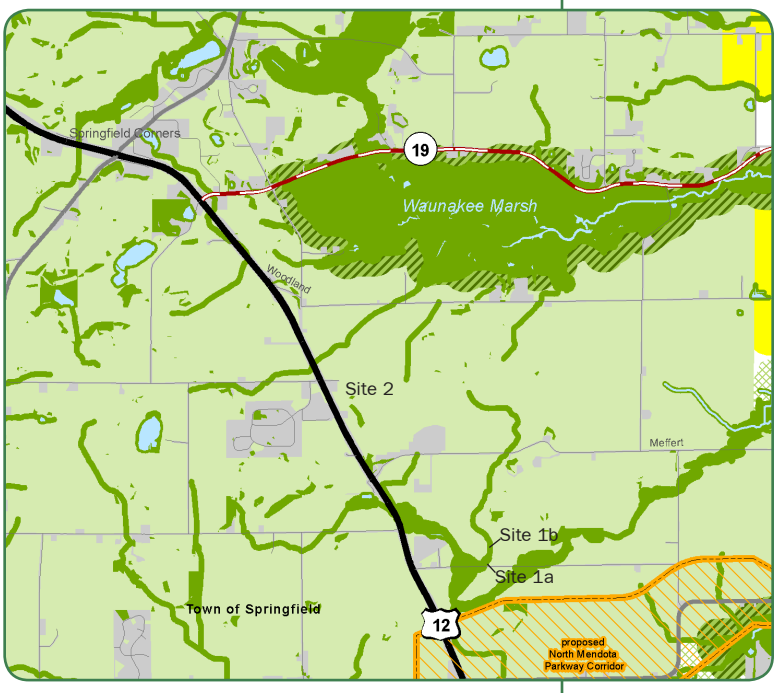
1. Central Springfield

This is a rich agricultural area with low hills, bisected with Highway 12 and other State and County highways. Concentrated non-farm development, including public facilities, exists in the Springfield Corners area bounded by Highway 12, Highway 19, Highway P, and Lodi-Springfield Road.

Area Recommendations

1. Continue to work with WisDOT and its consultants on plans to construct an interchange in the Springfield Corners area and otherwise further limit access in the Town.
2. Restrict new non-farm development in the proposed North Mendota Parkway Corridor to the extent practical, until a final corridor, timetable, funding, and jurisdictional approach for construction are finalized.
3. Reevaluate the Conceptual Neighborhood Plan for the Springfield Corners area that is included in the Springfield Comprehensive Plan, considering opportunities for senior housing and a park, and constraints and opportunities associated with a potential interchange. Include amendments to that Conceptual Neighborhood Plan in the Town's Comprehensive Plan update, anticipated by 2015.

Map 11: Further Analysis Area 1



4. Require a minimum 75 foot buffer for the wetland at Environmental Site 1a on Map 11. Include this area within an expanded Environmental Corridor/Conservancy District within Map 6 of the Springfield Comprehensive Plan.
5. In advance of any development in or near the area north of Fisher Road (Environmental Site 2), require a delineation to determine if there is a wetland. If the delineation report indicates that it is a wetland, require a minimum 75 foot buffer.
6. Encourage the private restoration and management the prairie at Environmental Site 2. The most common management tool for prairies of this size is reintroducing a fire regime. Attempt to collaborate with a group such as the Natural Heritage Land Trust on such an effort, and/or require or encourage restoration as part of any cluster development proposed for this general area. See Environmental Site 2 below for details.
7. Explore the potential for a safer bike route or bike path along Highway 19, between Waunakee and Springfield Corners/Highway 12 bike path.

Issues and Opportunities

Interchange and Parkway Proposals: Two major transportation projects could impact the future of this area. The North Yahara communities have adopted the North Mendota Parkway corridor presenting a general corridor for that roadway. The project is not funded and awaiting further action. Additionally, as part of its US Highway 12 Corridor Study, the State has released Highway 12 concepts for an interchange and elevated highway at Springfield Corners, which would replace existing at-grade intersections at Highways 19 and P. These two projects could impact a significant amount of agricultural land in Springfield and Westport and future development opportunities in Springfield Corners.

Environmental: Waunakee Marsh and the headwaters of regionally important streams are located in this area, which could be affected by the aforementioned roadway projects and potential development they spur. Future roadway and private development plans should incorporate design considerations that maximize protection, restoration and enhancement of these critical natural resources. The natural resources section of the Environmental Conditions Report provides useful information and guidance for tailoring more resource sensitive development plans and designs.

Environmental Site 1a: This small, degraded wetland is located east of Highway 12 and south of Fisher Road. This wetland is approximately 7 acres and has an unnamed, channelized, intermittent stream running through it. Reed canary grass (Phalaris arundinacea), a highly disruptive invasive species, almost entirely comprises the wetland. Satellite and aerial imagery taken from different years and seasons indicate that depressions intermittently fill with water. These depressions appear to be occasionally colonized by duckweed species (Lemna minor and Wolffia sp.). This wetland has low habitat forming species diversity and likely is not useful for higher organisms. Further, a lack of additional habitat or cover in the surrounding areas prevent a productive foraging site.

Environmental Site 1b: The area north of this feature, on the opposite side of Fisher Road, is not classified as a wetland according to DNR wetland data and appears to be colonized by reed canary grass, with inundation and disturbance patterns similar to the mapped wetland to the south (1a). This area appears to have engineered drainage throughout and has frequent vehicle traffic. This site has similarities in vegetation structure, topography, and hydric soil extent to Environmental Site 1a.

Environmental Site 2: This hillside prairie exists east of Highway 12, south of Kickaboo Road and north of Meffert Road. This prairie covers approximately 11.6 acres and is on a west facing slope of greater than 12 percent, with large sections having a slope greater than 20 percent. This steep topography is likely what prevented converting this area to cropland and may have preserved local plant genetic and species diversity. Still, this area has not been studied to determine if it qualifies as a prairie remnant. This site has shown degradation from continued vehicle activity and likely has not been managed by fire or mowing. If a fire regime is used for management, the following burning buffer distances are advised: 30-foot buffer away from adjacent agriculture, a 100-foot buffer from any buildings, and a 100 to 120-foot buffer from any above ground infrastructure. The remaining space between the prairie and any buildings can be landscaped with low flammability plants or roads. Power lines may be compromised if located within management buffer area. The existing trail parallel the eastern prairie border will help serve as an additional firebreak and should be preserved. Properties located near the southern tip will need to be cleared of excess woody debris to prevent fires from moving into the tree crowns. Woody species along the edge of the prairie should be retained for nesting habitat for bird species.

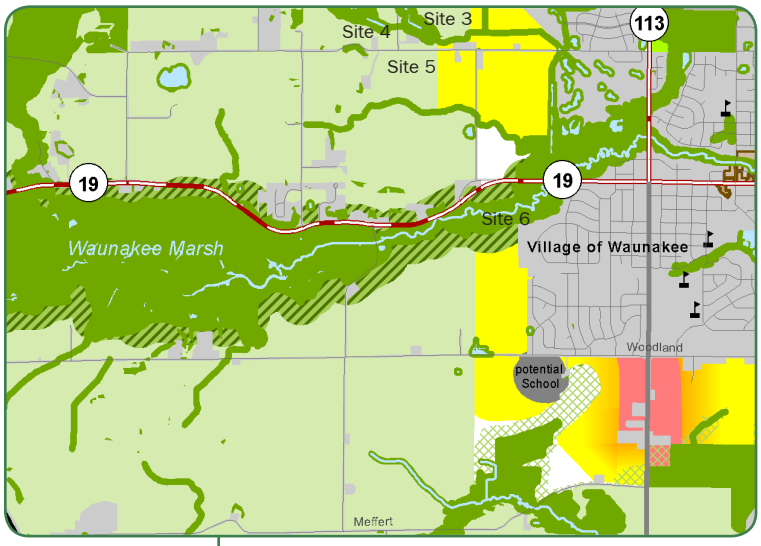
Agricultural: Currently, the Central Springfield FAA is predominantly zoned A-1 Exclusive Agricultural. Agricultural use amounts for roughly 65 percent of the land use in this area and increases to over 70 percent north of Highway 19. Moreover, a majority of this land is in large contiguous blocks with several agricultural land areas between 501 and 1,000 acres consisting primarily of row crops (corn, soy, oats, etc). Much of Springfield's highest quality soils are in this area, especially close to the Town of Westport border.

Public Input: Participants supported the Compact Character and the Public Outreach Scenarios featuring continued agricultural use in this area (except Springfield Corners). Participants strongly support local and regional goals to preserve agriculture. Participants also proposed recreational bike and trail way connections, such as along Highway 19.

2. Springfield, Vienna and Waunakee Boundaries Interface

The area is on the fringe of Waunakee's western municipal limits and planned urban expansion areas, and is bisected by the Waunakee Marsh, its tributaries, and Highway 19. Along Highway 19 in Springfield, there are pockets of small rural subdivision with no plans for expansion aside from very limited infill.

Map 12: Further Analysis Area 2



Area Recommendations

1. Extend the existing Waunakee-Springfield intergovernmental agreement in geographic area, timeframe, and/or topics coverage. For example, the agreement could also address future maintenance and upgrade responsibilities for Hellenbrand Road. Consider expanding this agreement to include Westport
2. Require a minimum 100 foot buffer for the wetland at Environmental Site 3 on Map 12. Include this area within an expanded Environmental Corridor/Conservancy District within Map 6 of the Springfield Comprehensive Plan.
3. Facilitate restoration of the wetland at Environmental Site 4 by removing invasive species, increasing available open water, and retaining the woodland features for the multiple species that use both woodlands and wetlands to fulfill life requirements.
4. Facilitate preservation of the woodland at Site 5, and when the area is proposed for non-farm development, require additional surveys to determine the herbaceous and shrub species content, structure and biomass.
5. Facilitate wetland management in Environmental Site 6, including retaining existing sedge meadow from further reed canary grass infestation and removing cottonwood and willow trees to allow for native species.

Issues and Opportunities

Existing Plans: The Waunakee expansion area in the Waunakee-Westport Joint Planning Area abuts the Town of Springfield border. Further, the Recommended Scenario suggests expansion of neighborhood development west of Hellenbrand Road and the recently approved Westbridge subdivision. As Waunakee continues to grow, urban development could expand to the west and occur on lands designated in the Springfield Comprehensive Plan and current Waunakee Comprehensive Plan for agricultural preservation.

Environmental: Waunakee Marsh is a significant natural resource feature in this area. Future development plans should incorporate design considerations that maximize protection, restoration, and enhancement of this critical natural resource. The natural resource section of the Environmental Conditions Report provides useful information and guidance for tailoring more resource sensitive development plans and designs.

Environmental Site 3: This area includes two wetlands located north of Kopp Road. The wetland east of Karls Road is degraded with an unnatural water boundary and predominantly colonized by reed canary grass.

Environmental Site 4: To the west of Karls Road is a larger wetland that contains cattails and open water habitat for some species. However, invasive reed canary grass surrounds the water.

Environmental Site 5: This site is a large woodland, south of Kopp Road that follows the road curve. This woodland covers nearly 28 acres—twice the area required to have a self-sustaining woodland ecosystem. The woodland also has the appropriate perimeter-to-area ratio for woodland core habitat functions. Oaks dominate the woodland. Oak woodlands are good representations of natural, pre-European, woodland ecosystems.

Agricultural: Currently, the land in Springfield is in A-1 Exclusive Agricultural zoning. Agricultural use amounts for roughly 65 percent of the land use in this area and increases to over 70 percent north of Highway 19. Moreover, much of this land is in large contiguous blocks with several agricultural land areas between 300 and 500 acres consisting primarily of row crops (corn, soy, oats, etc.) and pasture closer to Waunakee Marsh. Quality agricultural soils are present immediately adjacent to the Village of Waunakee limits north and south of Highway 19, with slightly poorer soils closer to Waunakee Marsh.

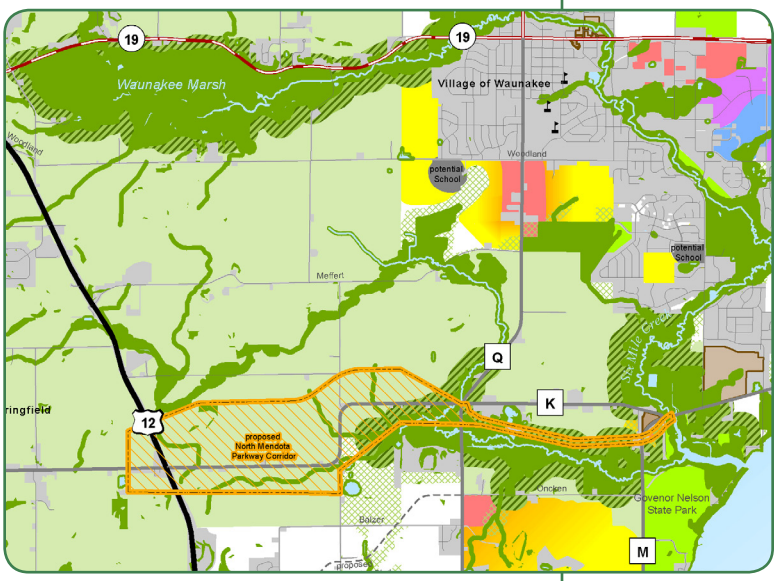
Public Input: Participants supported this area for community separation and identified a desire to have pathways and trails for passive recreation.

3. Community Separation between Middleton, Westport and Waunakee Developing Areas
This area primarily consists of agricultural and natural resource lands intersected with both highways and rural roads.

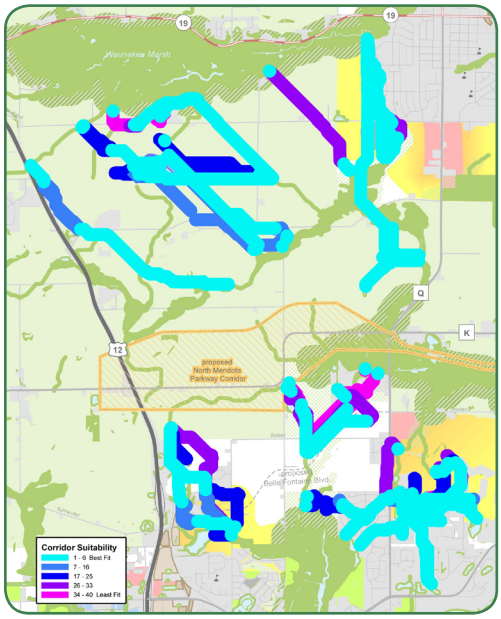
Area Recommendations

1. Maintain existing town, city and village plans and zoning to preserve this area from further development beyond "1 house per 35" acre housing.
2. Springfield and Westport are advised to work with land owners to guarantee preservation of the land in this area through conservation easements, TDR, PDR and Agricultural Enterprise Areas.
3. Work with land owners to implement best management practice for agriculture and natural resource protection.
4. Work with the County to identify lands for public acquisition in the Natural Resource Area identified in the North Mendota Park-

Map 13: Further Analysis Area 3



Map 14: Best Fit Pathway Options for E-Way



The light blue lines represent best fit corridors for potential E-Way connections between Environmental Corridor features. The lighter shades, starting at teal and turning to medium blue, are the most efficient paths organisms could take between major habitats. If communities desire to implement E-Way connectors, they should select a two sets of lines; one to connect Waunakee Marsh to Dorn Creek, and another to connect Dorn Creek to Pheasant Branch Conservancy. These corridors will need to be 100 m (330 ft) wide, and restored with natural vegetation. In sections where the line is straight, communities have additional flexibility in the exact placement of the E-Way.

way Impact Analysis and the Dane Parks and Open Space Plan.

5. Connect this area as part of a large E-way that travels through Waunakee, Middleton, and Westport to Lake Mendota, with the potential to connect with natural resource areas in DeForest, Vienna and Windsor (see Map 14).
6. Within future updates to local Comprehensive Plans, expand the Environmental Corridor around Dorn Creek (Environmental Site 7) to 300 feet on each side of the stream to facilitate organism movement. If this corridor will also be used as trail recreation, place the trail 130 to 170 feet away from the restored corridor edge and restrict access across the corridor.
7. Work with and leverage any investments in infrastructure in the proposed Badger Coulee Transmission lines to advance natural resource preservation goals in this area.

Issues and Opportunities

Existing Plans: Existing comprehensive plans and intergovernmental agreements recommend maintaining this area as agriculture and open lands in the 25 year FUDA Study horizon. The North Mendota Parkway Impact Analysis and the Dane County Parks and Open Space Plan (See ECR Map 41) identify the North Mendota and Pheasant Branch Natural Resource Areas. These areas show where Dane County indicated it might acquire land in the future.

Environmental: Waunakee Marsh, Dorn Creek, and Governor Nelson State Park are significant natural resources that should be protected and enhanced where opportunities permit. Joining these resources together via an E-way could enhance habitat for species and provide recreation. This area presents an opportunity to restore natural connectivity. A 300+ foot wide Environmental Corridor could link the southern edge of Waunakee Marsh to Dorn Creek, Governor Nelson State Park, and potentially to Pheasant Branch Conservancy (FAA #4 below). Map 14 represents the possible locations where an E-way connecting Environmental Corridors around Waunakee Marsh to Dorn Creek could be established. Environmental Corridors designed for wildlife help ensure the long term biodiversity, ecosystem function and ecosystem services. Habitat corridors that include recreation access should place trails 130 to 170 feet away from the edge of the corridor. Access across the corridor should be restricted to as few areas as possible.

Agricultural: Currently, the land in Springfield and Westport is predominately in A-1 Exclusive Agricultural zoning. Agricultural use amounts for roughly 65 percent of the land use in this area. Moreover, a majority of this land is in large contiguous blocks with several agricultural land areas between 501 and 1,000 acres consisting primarily of row crops (corn, soy, oats, etc.) and two areas over 1,000 acres. Much of Springfield's highest quality agricultural soils are in this area, especially close to the Town of Westport border.

Public Input: Participants supported the Compact and Public Outreach Scenarios. These scenarios designated this area as 'open/protected/community separation' and identified opportunities for enhanced preservation and passive recreation.

Other: The American Transmission Company and Xcel Energy is proposing alternative routes for electrical line infrastructure and several pass through this area. For more information visit http://www.atc-projects.com/projects/badger-coulee/.

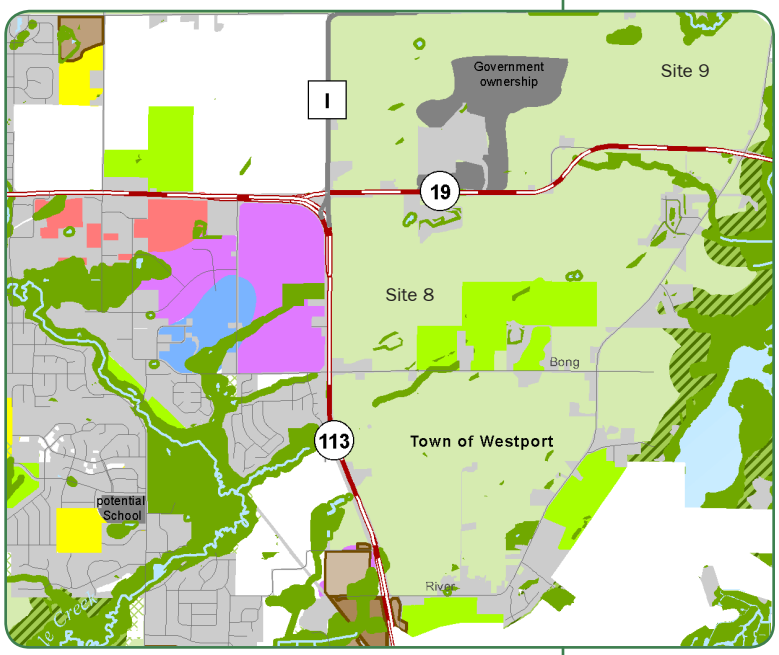
4. Highway 19 Corridor East of County Highway I and West of Interstate

This area is primarily agricultural and open lands north and south of Highway 19 and west of river Road with a major Dane County facility between the growing urban areas of Waunakee and DeForest.

Area Recommendations

1. Consider compatible land use transitions, progressive stormwater management, preservation and enhancement of the Yahara River corridor, and good transportation access.
2. Communicate with neighboring communities including DeForest on future plans.
3. Work towards an intergovernmental agreement with DeForest to discuss issues and areas of mutual concern for lands west of River Road.
4. Jurisdictions are advised to manage Environmental Site 8 prairies by reducing excess woody plant species and removing invasive species. If a burn management regime is used, then a 100 to 120 foot buffer is recommended.
5. Preserve Environmental Site 9 and the natural waterways that connect them, with 100 foot buffers. Retain the existing prairie resources adjacent to these wetlands if development occurs.

Map 15: Further Analysis Area 4



Issues and Opportunities

Existing Plans: Westport and Waunakee Plans designate this area as agricultural, open land or community separation. The Village of DeForest plans call for agricultural preservation for the area west of River Road. The North Yahara FUDA Study indicates the potential for intergovernmental planning between DeForest, Westport and Waunakee.

Environmental: Lands north of Highway 19 and east of River Road are undeveloped, have the Yahara River winding through them, are currently outside of the Urban Service Area, are partially held by development interests and are planned for future development in the Village of DeForest Comprehensive Plan. Future development plans should incorporate design considerations that maximize protection, restoration, and enhancement of this significant natural resource feature. The natural resource section of the Environmental Conditions Report provides useful information and guidance for tailoring more resource sensitive development plans and designs.

Environmental Site 8 Several isolated woodland and prairie features exist in the middle and west of this FAA. Most are small and cover less than 5 acres, with one exception being a 12 acre prairie on Dane County property. The woodland and prairie resources appear to be preserved from conversion to agriculture due to their steep topography. Almost all of the acreage for these resources are sloped with a 20 percent or higher grade. These small prairies may be remnants and contain native species. The prairies may host native plant species though does not persistently host higher vertebrates. If a burn management regime is used, then a 100 to 120 foot buffer is recommended. However, it may be possible to manage these areas using mowing.

Environmental Site 9: A chain of wetlands can be found in north-east corner of this FAA. The wetland follows constructed drainage and an unnamed perennial stream that drains into the Yahara River. The wetland resources are part of a longer chain of wetlands. Thin rows of trees that separate agricultural boundaries will not be a constraint on development. Prairie resources exist adjacent to these wetlands can be managed through mowing.

Agricultural: Lands west of River Road are in the Town of Westport, and currently planned by all local governments for agricultural preservation. During this FUDA Study process, committee members discussed the potential for future community separation and/or development west of River Road in the Highway 19 corridor. In Westport large agricultural blocks over 500 acres dominate the landscape over to Highway 113. High quality lands are present along Highway 19, especially along the eastern Waunakee border and dissipates going south approaching Lake Mendota. This area is not suggested in this FUDA Study or the North Mendota FUDA Study (involving the towns of Westport and Springfield, the Village of Waunakee and the City of Middleton) for future urban development at this time. Several conservation easements exist in this area preventing development on affected parcels.

Public Input: The participants generally supported this area for community separation between DeForest, Waunakee and Madison, and supported the broader community goal of community separation.

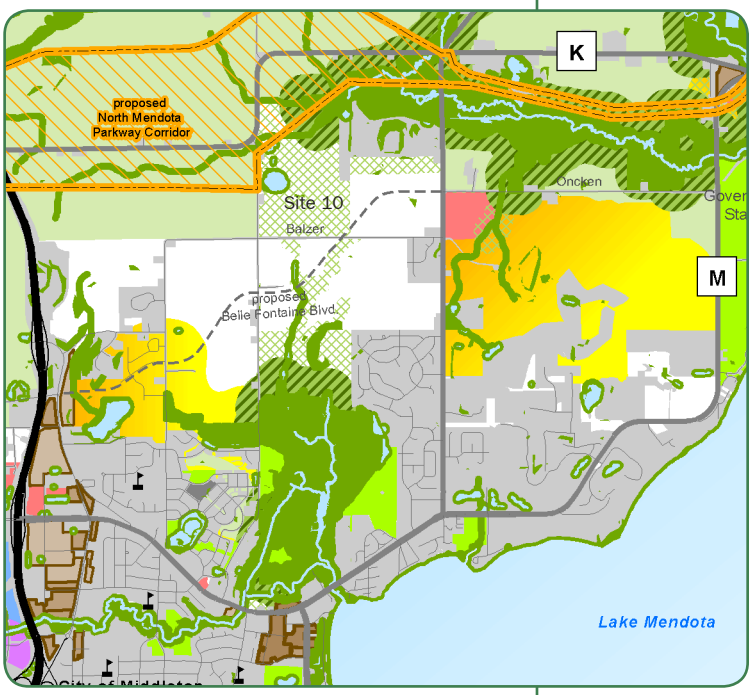
5. Proposed Dane County Dorn Creek Natural Resource Area Preservation and Enhancement

This area shows natural resource lands in Westport along and connecting Dorn Creek and Environmental Corridors directly south that lead to Frederick Springs, Pheasant Branch Marsh and Lake Mendota.

Area Recommendations

1. Middleton and Westport are advised to maintain an Environmental Corridor-Critical Habitat between Dorn Creek and Lake Mendota.
2. Middleton and Springfield are advised to connect this area with the recommended E-way in Further Analysis Area 3 (see Map 14).
3. Restore Environmental Site 10 to establish habitat connectivity, including potential for a 300+ foot wide corridor to link Dorn Creek to the Pheasant Branch Conservancy. A trail buffer should add another 300 feet to the width to the corridor to reduce the effects of human activity on wildlife. This corridor can be restored as a prairie, consistent with similar vegetation found in the northern areas of Pheasant Branch Conservancy, an area Dane County identified for potential acquisition.
4. Development plans should incorporate design considerations that maximize protection, restoration, and enhancement of these significant natural resource features.

Map 16: Further Analysis Area 5



Issues and Opportunities

Existing Plans: Existing comprehensive plans and boundary agreements recommend development in this area while maintaining the Natural Resource Areas as agriculture and open lands in the 25 year time horizon. The Dane County Parks and Open Space Plan identifies the Natural Resource Areas, shown in green cross hatching, where Dane County may acquire natural resource land in the future.

Environmental: Dorn Creek and Governor Nelson State Park are significant natural resource features in this area. The natural resources section of the Environmental Conditions Report provides useful information and guidance for tailoring more resource-sensitive development plans and designs.

Environmental Site 10: This site hosts prominent wetlands and habitat corridor connections that could also serve for recreational trails. Uninterrupted access to this site is important for some organisms to complete daily life cycle and for others it will help ensure long term population health.

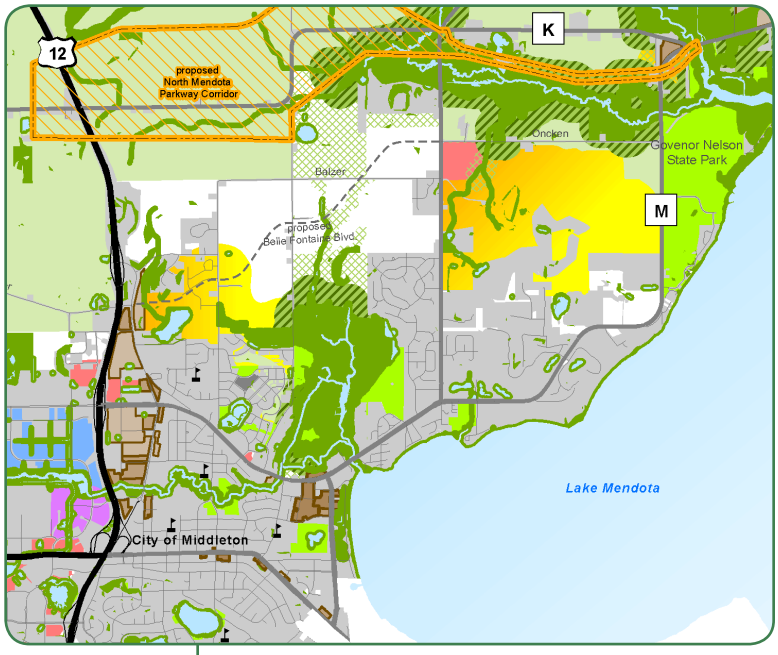
Agricultural: In Springfield, medium-sized agricultural blocks between 200 and 500 acres meet the City of Middleton border. These areas are dominated with row crops and some pasture. High quality agricultural lands exist in pockets.

Public Input: Participants supported the Compact and Public Outreach Scenarios designating showing the Natural Resource Areas as 'Environmental Corridor.' Participants identified opportunities for enhanced preservation and passive recreation in an around the corridors.

6. Transit Corridor Potential and Opportunity

Two areas have long-term potential for express bus or other form of regional transit (1) Highway Q Connecting Highway M in Middleton and Westport to Waunakee and (2) Highway 113 connecting Westport and Waunakee to the City of Madison.

Map 17: Further Analysis Area 6



Area Recommendations

1. In designated development areas, permit development at transit supportive density. Especially within a ½ mile trip of potential transit stops.
2. Work with the Madison Area Transportation Planning Board to develop best routes and context sensitive designs for stops and stations.
3. Middleton, Westport and Waunakee can develop alternatives for safe routes to school and ensure the perspective and safety of school aged children be a major determinant of transportation expansions or enhancements, such as North Mendota Parkway.

Issues & Opportunities

Existing Plans: Existing comprehensive plans identify these traffic corridors as regional routes. Express Bus Service to these areas is under investigation by the Madison Area Transportation Planning Board (Madison Area MPO).

Environmental: Several environmental features are present near and around the transit corridors. See the other FAAs for details and opportunities for alignments between the transit network stops and conservation.

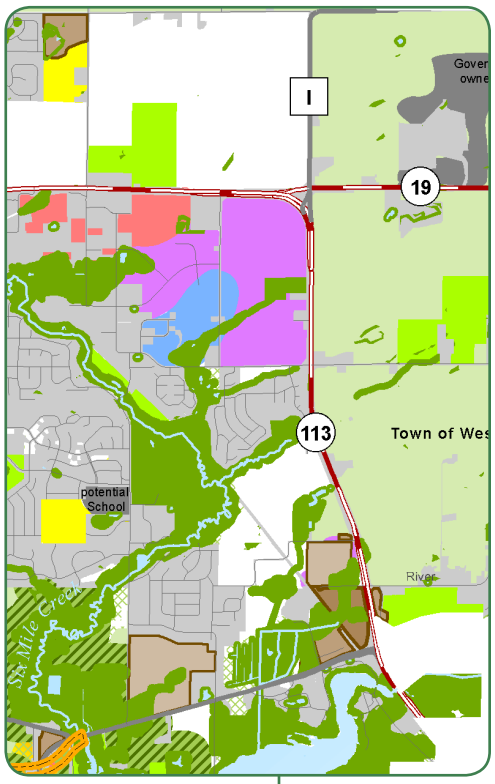
Public Input: Participants supported the Compact and Outreach Scenarios designating these development areas within the transit corridor with transit supportive densities.

Other: School children traveling from Bishops Bay to Waunakee schools could face obstacles

7. Additional Reinvestment and Redevelopment

The steering committee identified additional properties that might become redevelopable in the coming decades that are not yet included in local plans.

Map 18: Further Analysis Area 7



Area Recommendations

1. The City of Middleton is advised to explore redevelopment opportunities for properties along University Avenue and infill at large scale commercial centers such as Greenway Station (see Table 1).
2. Waunakee is advised to explore redevelopment potential for properties on Main Street and Century Avenue (see Table 1).
3. Identify the potential redevelopment market with regional developers and builders to determine where redevelopment is feasible and what development types have market support.
4. When redeveloping properties with or adjacent to Environmental Corridor features, Middleton, Waunakee, Westport and property owners are advised to restore features to capture the economic value and restore the ecological value.

Issues and Opportunities

Existing Plans: Adopted plans allow 2,834,027 commercial square feet and over 636 new housing units on infill and redevelopment sites across the communities.

Environmental: Explore stormwater retrofits in re-development designs that will help restore more natural flow regimes and reduce pollutant loads to Pheasant Branch Creek, Lake Mendota and the Yahara Lake Chain system.

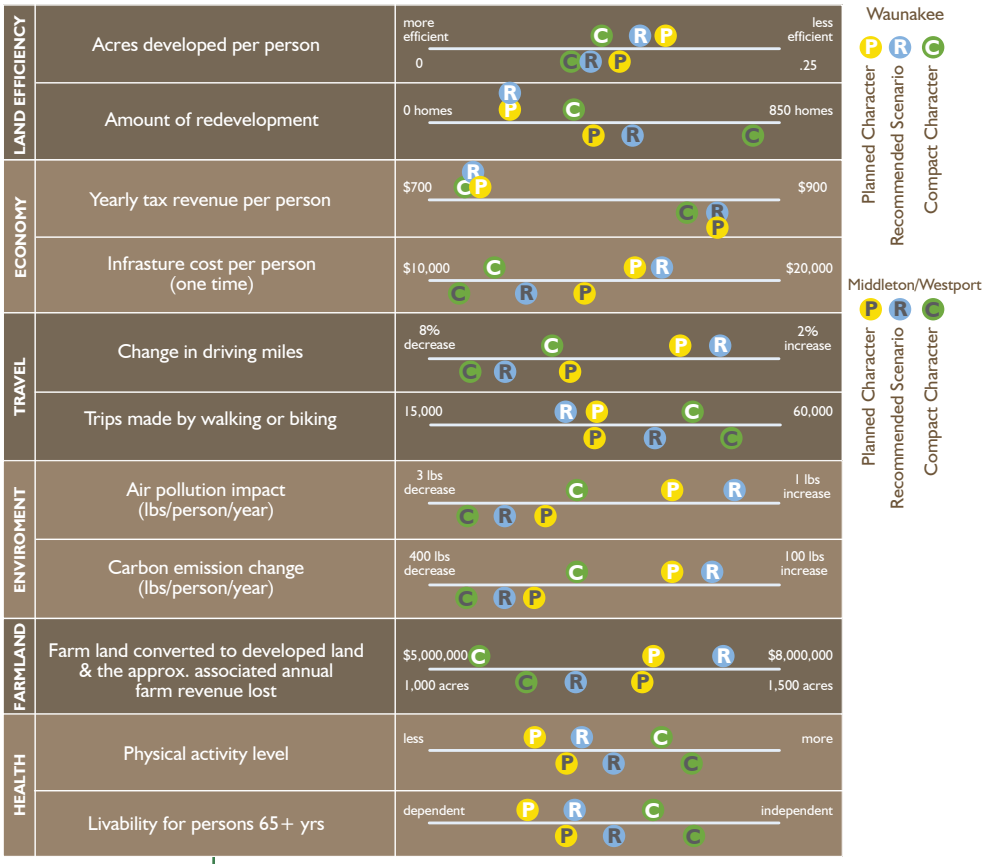
Public Input: Participants supported higher redevelopment levels and more locations.

Other: CARPC staff analysis showed potential for over one million commercial square feet and approximately 500 more housing units on these infill and redevelopment sites (see Table 1). In Middleton these areas primarily along University Avenue and in large commercial retail centers such as Greenway Station and in several sites in and around downtown Waunakee. When projects on these streets become feasible, communities are advised to ensure new development's design and character are coordinated with the central corridors as described in mobility recommendation #9.

Recommended Scenario Impacts

The Recommended Scenario presented earlier was developed using a series of information sources and analyses performed on the initial three scenarios (compact, public outreach and dispersed). For the purpose of this Study, analysis was performed on the Recommended Scenario for several variable and indicator categories including: population; land use and efficiency; housing; taxes, jobs, and shopping; travel; environment; farmland; health; and water (stormwater, water use and waste, and groundwater). Note that flexibilities in land use plans (such as a mixed-use districts allowing commercial and/or residential) could allow outcomes and impacts which are different from those discussed below. Note also that Waunakee's portion of the Recommended Scenario in Map 2 has a lower density than existing plans. This is because while the Compact Scenario was the most popular choice in overall numbers, the Public Outreach Scenario was the preferred alternative for those electing either the Compact or Dispersed Scenarios as their first choice.

Figure 3: Indicator Evaluation for Recommended and Compact Scenarios and Existing Plans



Population

The Recommended Scenario could accommodate about 16,400 new residents in houses with public water and sewer in Middleton, Waunakee and urban Westport in the future urban development area on Map 2. With roughly 31,500 residents within Urban Service Areas in these communities in 2010, this scenario represents over a fifty percent population increase in the future urban area plus the additional people accommodated through redevelopment and infill in the existing Urban Service Area.

Housing

The Recommended Scenario estimates roughly 7,400 homes could be built in this area to accommodate the future population, with an average of 2.45 people per housing unit in Waunakee and 1.98 people per housing unit in Middleton and urban Westport combined. According to plans and additional analysis, redevelopment and infill sites could accommodate nearly 200 housing units in Waunakee and nearly 500 units in Middleton and Westport.

The Recommended Scenario applied an average, density to all residential land. This figure averages a mix of residential characters, including higher density neighborhoods located adjacent to frequent destinations, such as commercial areas, schools and parks. Placing a greater portion of the population close to these destinations encourages more activity, reduces trip length and allows more options for walking and biking. The variability of housing also provides opportunity for more affordable options for both homeowners and renters.

In the Recommended Scenario, 74 percent of new housing units in Waunakee and 59 percent of housing units in Middleton and Westport are projected to be single family. While density would likely vary by location, new single family homes could be on lot sizes similar to lot sizes in Middleton Hills. For multi-family homes, the Recommended Scenario reflects the public participant preference for smaller multi-family buildings, including townhomes and duplexes; mixed-use buildings with apartment-style units over commercial space were also preferred.

The Recommended Scenario includes a projected FUDA-wide residential density increase to help preserve farmland and natural areas, maintain a compact and walkable community character, and respond to expected market demand in Middleton and Westport, while Waunakee is slightly less dense. The projected net residential density for 'greenfield' development within the Recommended Scenario is 7.1 housing units per acre in Middleton and urban Westport (higher than in adopted plans) and 4.2 in Waunakee (lower than in adopted plans). Net density assumes that 25 percent of land that is developed for new housing is actually in roads, stormwater areas or common open space.



Image from the Visual Preference Survey rated highly by public participants

Land use and efficiency

The Recommended Scenario would result in the development of approximately 1,500 acres in Waunakee and 1,679 acres in Middleton and urban Westport to accommodate demands for residential, commercial, industrial, civic and transportation uses. A majority of the population growth in Middleton and urban Westport will be accommodated in the Bishops Bay development. This development is already approved, in the Urban Service Area, and under construction.

As mentioned, the Recommended Scenario increases residential density above current rates and within the guidelines established by communities' comprehensive plans. Increasing residential density will cause the largest reduction on total land consumption in growing communities, as residential areas account for 40 percent of all developed land in Dane County[3]. The scenarios explored changing commercial densities, however the Recommended Scenario did not assume a change from existing commercial densities in the North Mendota area. Market forces arising from land values, site development standards



Image from the Visual Preference Survey rated highly by public participants

3 CARPC 2005 Land Use Inventory.

required for businesses (such as parking requirements), consumer and business preferences, conservative lending practices, production efficiencies for industrial uses, and other factors work against higher densities in suburban areas. Regional market studies currently underway, Return on Investment analysis (ROI) and continued conversation with developers may identify opportunities for greater densities and mixed-uses, increasing value to the developer and community.

Another area investigated was infill and redevelopment. The Recommended Scenario incorporates more redevelopment than identified in the Public Outreach Scenario in Middleton and Westport. The Public Outreach Scenario incorporated redevelopment sites identified in adopted plans, generally clustered in and around the downtowns of Middleton and Waunakee and Westport Town Center. Middleton and Westport plans estimate 450 dwelling units and commercial space equivalent to roughly 70 acres of greenfield development. The Compact Character Scenario incorporated additional sites in Middleton along University Avenue and assumed a higher redevelopment rate (a greater likelihood of redevelopment, not larger buildings or higher density development), increasing the total to nearly 500 dwelling units and 90 commercial acres. Additional redevelopment areas on University Avenue in Further Analysis Area 9.

Redevelopment estimates in Middleton were raised above a baseline level in existing plans because the land demand projection estimates more commercial demand by 2035 than is planned for. To give a more equal comparison of scenario indicators, it was assumed commercial demand beyond the capacity of greenfield land and a baseline redevelopment level would be accommodated in additional redevelopment areas. Increased redevelopment is one potential outcome, however redevelopment may not meet projected demand due to the complexity, costs and other challenges.

Overall, the Recommended Scenario estimates a total developed area per person of approximately 0.18 acres in Waunakee and 0.14 In Middleton and Westport. This compares to existing planned areas per person of 0.17 in Waunakee, Middleton and urban Westport. In Middleton and Westport, this is largely due to projected increases in residential density.

Taxes, jobs and shopping

The Recommended Scenario includes substantial amounts of commercial and industrial development, increasing the tax base and balancing the urbanized area with greater employment opportunities and local shopping opportunities for residents. The scenario projects 42 jobs for every 100 new residents in Waunakee and, 154 jobs for every 100 new residents in Middleton and Westport's future growth areas. Population growth could bring over $250,000,000 in new annual consumer spending, enough to support over 550,000 commercial square feet (110 stores at 5,000 sq. ft. each).

Travel

Transportation impacts were evaluated several ways during scenario evaluation. Communities with a more compact development pattern tend to result in lower amounts of driving (miles per person), due to shorter trips and greater ability to walk, bike or take transit. Following this pattern, new growth areas in the Recommended Scenario are projected to experience a six percent reduction in the amount of driving miles per person in Middleton when

compared to the existing community. A decrease in density will likely lead to more travel, however, ensuring connectivity could reduce the negative impacts of barriers in through movement for pedestrians and bicycle riders.



Increased street connectivity rated highly by public participants

Mixing uses and having more employment opportunities in the North Mendota area is expected to support this decrease in vehicle miles traveled per person. An estimated 62,000 trips per year could be made by walking or biking to commercial destinations in newly developed areas (based on the number of residents living within a quarter mile from those destinations and observed non-motorized trip data for Dane County).

Character images of this scenario also suggest a more interconnected street pattern. This allows more direct trips and further enables walking and biking. Many comments during the scenario evaluation process cited interest in a multi-jurisdictional path system to better connect areas of the City, Village and Towns.

Additionally, if homes and businesses are located closer together, fewer miles of local roads and other infrastructure are needed. The Recommended Scenario could require 55 percent less road miles per person than the Dispersed Character Scenario, providing significant cost savings to future home and business owners and reducing municipal maintenance costs from $61 to $46 per person in Waunakee and $60 to $39 per person in Middleton and Westport. According to the Compact Character Scenario evaluation. Even more compactness could reduce costs an additional $12 in Waunakee and $4 in Middleton and Westport.

Finally, the Recommended Scenario reflects existing transit in Middleton and a long-term desire to have increased transit service in areas not currently served in Middleton, Waunakee and urban Westport. This Scenario strategically locates higher density mixed-use areas on and near corridors with express bus service. The Madison Area Transportation Planning Board (aka MPO) is studying the potential for extended bus service, express bus service to the Middleton, Westport and Waunakee areas. The MPO is also studying the long-term potential to implement Bus Rapid Transit (BRT) along Middleton corridors connecting to the City of Madison's BRT network.

Environment

The Recommended Scenario incorporates protected areas from adopted plans and highlights other opportunities for preservation and restoration in the community separation area between these communities and neighboring communities. Environmental Corridors will protect water resources and enhanced buffers with Stewardship guideline offer habitat protection. Additionally, the E-way, if implemented, could provide additional habitat protection and enhancement and offer recreational opportunities between the Waunakee Marsh, area creeks, and Lake Mendota.

Beyond these land based protections, numerous other environmental factors are impacted by changes in other indicators. For example, increased walking and biking could indicate fewer car trips for short distances, and therefore less tail-pipe emissions. The Recommended Scenario models an approximate 315 pound reduction in annual carbon emissions per driver compared to adopted plans in Middleton and Westport.

Farmland

The Recommended Scenario, if built-out, could consume 2,600 acres of farmland. This is less farmland than in the Public Outreach and Dispersed Scenarios and about 400 more than in the Compact Scenario (see Supplement C for more details). The Recommended Scenario maintains all existing legal farmland preservation policies and plans as reflected in municipal boundary agreements. Several conservation easements and a recent AEA in Westport aim to preserve a small amount of farmland west of Interstate 39-90-94 and east of Waunakee. In general, the rural communities have their highest quality soils for cropping between Highway 12 and Waunakee, which are generally identified for continued preservation in this FUDA Study.

Figure 4:

Health Impact Assessment Process

- Screening - determines the added value and the potential impact of conducting an HIA
- Scoping - determines the focus of the HIA, including deciding on related indicators and research questions.
- Assessment - gathering information on the existing conditions and potential health impacts related to the proposed plan.
- Recommendations – develop relevant and reasonable recommendations based on information gathered during assessment to avoid, minimize, or mitigate adverse effects and to optimize beneficial ones.
- Reporting – disseminating recommendations and/or mitigation strategies to decision-makers, stakeholders, and community members.
- Monitoring - evaluates the ways in which the HIA recommendations impact the proposed plan's implementation, the process in which the HIA is conducted and the effect the results have on health outcomes.

While there are varying degrees in which HIA's are implemented in communities, this HIA was performed as a "rapid" HIA over the course of two months. The Wisconsin Public Health Association (WPHA) HIA Section is the project lead for this HIA.

Human health

The root causes of poor health are complex and extend beyond healthcare to a variety of community contextual factors. The UW Population Health Institute estimates that 50% of modifiable health determinants pertain to the social, economic, and environmental context.

According to the International Association for Impact Assessment, a Health Impact Assessment (HIA) is formally defined as a "combination of procedures, methods and tools that systematically judges the potential and sometimes unintended effects of a proposed project, plan or policy on the health of a population and the distribution of those effects within the population (2006)." An HIA also proposes enhancing positive impacts and managing or eliminating any negative effects. The steering committee asked the HIA project team to focus on two indicator areas (1) physical activity/obesity and (2) livability for persons 65 years and older. A full "rapid" HIA for the three polling scenarios and the Recommended Scenario is available as Supplement D.

Table 2: Physical Activity/Obesity Indicators used for HIA

1	Trails and bike lanes and walking and biking
2	Traffic-related accidents, complete streets and pedestrian and cyclist safety
3	Transit and transit oriented development
4	Social interaction, gathering places, recreational amenities, and crime prevention through environmental community design
5	Mixed-used development & clustered activities; linking existing and future housing development with employment and services; trip reduction and reduced VMT; walking and biking; senior services
6	Food Access: Local food production, contiguous agricultural land, healthy food outlets
7	Maps of large recreational facilities, community gardens, schools, large parks and open space

Table 3: 65+ Livability Indicators used for HIA

1	Affordable, good quality, life-cycle housing and energy efficient building codes
2	Developments with views of greenery/vistas for mental health and tree canopy preservation
3	Emergency department visits related to asthma
4	Climate change and allergic diseases
5	Greenhouse gases and pollutants

Table 4: Impact Analysis – Recommended Scenario

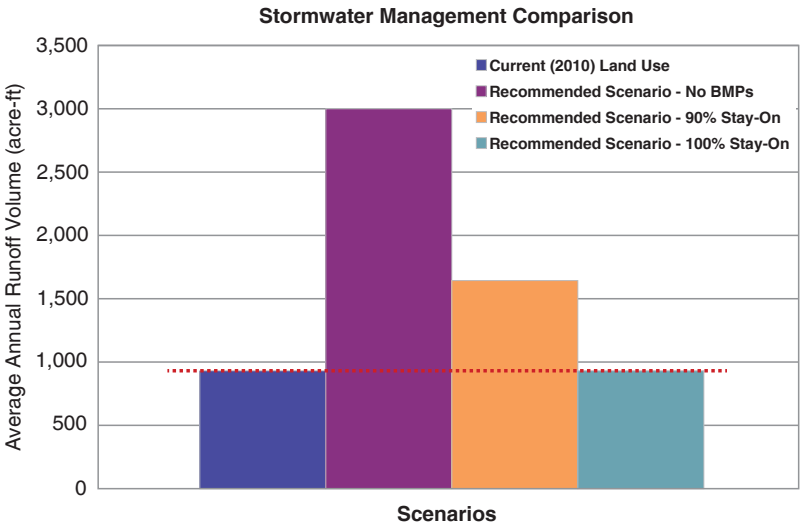
Determinant	Effect of Recommended Scenario on Indicators
Housing Impact	Higher density housing districts adjacent to frequent destinations encourages more physical activity through more walking and biking. Sensitive environmental areas will be preserved, allowing for views of greenery and tree canopy preservation, increasing mental health. Higher density reduces trip length, increasing air quality and reducing asthma triggers. More affordable housing options increase health through better quality housing, reducing exposure to allergen triggers, and reducing stress associated with unaffordable housing.
Environmental Impact	Higher density reduces trip length, increasing air quality, reducing air pollutants and greenhouse gas emissions. Sensitive environmental areas will be protected, and a balance will be created between preserving farmland and open space and maintaining small village character, increasing mental health and social cohesion.
Mobility and Access	Interconnected street patterns allow for direct trips and encourage walking and biking. Reduction in need for road space per person provides cost savings to home owners, business owners and municipalities, reducing financial stress and increasing disposable income available for other health related activities/issues/etc. as well as for public services. A long-term desire for transit service, which higher-density mixed-used areas in plan will support, will decrease vehicle miles traveled and encourage more walking and biking to and from transit stations.
Density	Increased residential density preserves farm and open spaces, providing green space beneficial to mental health. Infill and redevelopment increase density, providing health benefits and helping preserve green space, benefiting mental health. A mix of higher density residential and commercial uses encourages more physical activity through more walking and biking, reduces trip length, increasing air quality and reducing asthma triggers. Increased tax base and employment opportunities improve the quality and quantity of public services and increases income leading to lower stress levels. Local jobs decrease vehicle miles traveled, improving air quality and reducing greenhouse gas emissions.
Food Access	Mix of higher-density residential and commercial land uses will increase food access. Preservation of farmland will protect local food production. Dense residential areas may enable more farmer's markets, improving access to healthy foods.

The Recommended Scenario will benefit health in a number of ways, though mainly through increased density. The following methods will encourage or increase positive health effects of the scenario while at the same time mitigating any negative health effects of the proposed scenario.



- *To both encourage and protect walkers incorporate sidewalks into redevelopment and new development plans and integrate them into existing neighborhoods where practical. Prioritize sidewalks and bike paths into denser neighborhoods with convenient access to destinations to maximize usage. In busy commercial districts, consider a "road diet," lowering speed limits for vehicles, adding button operated pedestrian signals, longer stop lights at popular crossings, more stops signs and bump outs for shorter pedestrian crossings.*
- *To both encourage and protect bikers designate bike lanes, bike sharrows (see image of pavement markings on shared roads) and bike paths be integrated into communities. To encourage and facilitate biking, incorporate bike racks into commercial districts. Reach out to the community with information on bike safety (helmets, lights, reflectors) and road rules.*
- *To facilitate aging in place and encourage physical activity of senior citizens, create walking paths that incorporate their needs such as frequent benches for resting, water fountains for rehydrating and shade trees. In addition, these walking paths could include low impact exercise structures to encourage physical activity. Other improvements include adding bump outs at busy intersections with signage and user-activated crossing signals that are clear and easy to understand for pedestrians with limited faculties (eye-sight, hearing, etc.).*
- *Creating a local food council could encourage more frequent farmers' markets with more local vendors, increasing access to healthy local foods. This food council could also provide community outreach a information on how to obtain, store, prepare and enjoy healthy foods.*

Figure 5: Stormwater Run-Off Volume



Stormwater

Stormwater modeling shows that without volume control stormwater best management practices (BMPs), the Recommended Scenario would significantly change runoff volume from pre-development conditions (2010 Land Use Inventory, CARPC). Existing stormwater ordinances in the North Mendota communities typically require volume control to a 90% pre-development stay-on standard. While this results in 45% less runoff volume on an average annual basis than no controls, it still allows 79% more runoff volume on an average annual basis than pre-development conditions or a 100% pre-development stay-on standard (see Figure 5). The City of Middleton does require a 100% pre-development stay-on standard in closed basins and the Town of Westport requires no increase in runoff volume for the 100-year storm. These communities have also agreed to require a 100% pre-development stay-on standard for the Bishops Bay Development.

Wastewater

Combined, the Village of Waunakee, the City of Middleton, and the five sanitary districts in the Town of Westport generated an average of 3,998,400 gallons of wastewater per day in 2011. This was about 10.3 percent of the average daily wastewater received at the Madison Metropolitan Sewerage District's (MMSD) Nine Springs Treatment Plant in 2011. A combined total of over 311 miles of sanitary sewer and force main are necessary for wastewater collection within these communities.

Under the Recommend Scenario, wastewater generation within the North Mendota Future Urban Development Area is expected to increase to a total of 5.92 million gallons per day in 2035 based on current water and wastewater rates and the projected population increase. In 2008 CARPC completed a collection system capacity evaluation for MMSD. The projected population increase and future urban development locations in the recommended FUDA scenario are generally consistent with the range of future development possibilities considered in the MMSD Collection System Study and do not change the results of the capacity evaluation.

Public Water System

The City of Middleton, the Village of Waunakee, and the Westport Water Utility District all operate public water supply systems. The population served by the public water supply in these communities in 2011 is estimated to be 30,412. Combined these public water supply systems distributed an average of 3,542,000 gallons per day of water in 2011. The public water demand within the North Mendota Future Urban Development Area is expected to increase to 5.38 million gallons per day in 2035 based on current water rates and the projected population growth and land uses in the Recommended Scenario. Table 5 breaks down this water use for this and the polling scenarios.

Table 5: Estimated Water Use for Various Alternative Development Scenarios

Well water withdrawals within the North Yahara FUDA are expected to increase to between 2.13 and 3.73 million gallons per day (mgd) based on four development scenarios and associated water use projections.

	2010	Recommended	Adopted Plans	Dispersed	Compact
Incremental Population Served[1]		16,340	16,340	16,342	16,346
Total Population Served[2]	30,271	46,611	46,611	46,613	46,617
Incremental Water Pumped (gpy)[3]		700,376,000	700,376,000	700,417,000	700,525,000
Incremental Water Pumped (mgd)		1.92	1.92	1.92	1.92
Total Water Pumped (gpy)[4]	1,262,596,000	1,962,972,000	1,962,972,000	1,963,013,000	1,963,121,000
Total Water Pumped (mgd)	3.46	5.38	5.38	5.38	5.38

Notes:
1 Projected population increases for each scenario
2 2010 population served is US Census population adjusted to remove those not served by the public water supply system.
3 Calculated from projected population growth + 2010 avg. Commercial and industrial water use per acre for each community projected future acres
4 Middleton, Waunakee, and Westport Water Utility District PSC Annual Reports for 2010
Source: Capital Area Regional Planning Commission 2012

Groundwater

Pumping and Diversion

Pumping groundwater from one location and then discharging it to another can alter the local ground and surface water balance; particularly in urban areas where concentrated pumping can lower water table levels and reduce baseflow to area waters.

Groundwater modeling was conducted to estimate the impacts of high capacity municipal well water withdrawals for the Dane County Regional Hydrologic Study (DCRPC 2004). As seen in Table 6, baseflows fell 65 percent in the Black Earth Creek headwaters and nearly half (45 percent) in the Yahara River (measured at McFarland), compared to pre-development conditions (no wells pumping). Note that these figures include the influence of other wells in the Madison Metropolitan Area. Projected future pumping is expected to result in additional reductions of between 24 percent and 12 percent, respectively, and 15 percent in the Sixmile Creek and the Upper Yahara River near Windsor. This provides important regional context since groundwater does not recognize political boundaries.

Table 6: Well Withdrawal Simulation Results for Dane County

	Pre-Development (Wells off)	2000 (% reduction)	2030 (% reduction)
Upper Black Earth Creek	1.70 cfs	0.60 (65%)	0.19 (89%)
Pheasant Branch Creek	2.20 cfs	0.85 (61%)	0.29 (87%)
Sixmile Creek	4.46 cfs	3.40 (24%)	2.27 (38%)
Upper Yahara River	11.71 cfs	10.00 (15%)	8.14 (30%)
Yahara R. @ McFarland	127.28 cfs	70.00 (45%)	54.21 (57%)

Source: Dane County Regional Hydrologic Study 2004

Groundwater modeling for the FUDA communities was conducted using projected well water withdrawals based on 2035 population estimates and historic per capita water use (Table 7). The modeled baseflow reductions in Table 7 account for a relative (smaller) portion of the reductions in Table 6. These results help reflect the local versus regional cumulative impacts to area waters. Both local efforts and regional collaboration will be needed to successfully address this issue.

Groundwater Modeling Methodology

Wisconsin Geological and Natural History Survey Groundwater modeling used projected well withdrawals based on future population projections and historic per capita water use without mitigation.

Table 7: Well Withdrawal Simulation Results for FUDA communities

	Pre-Development (Wells off)	2000 (% reduction)	2030 (% reduction)
Upper Black Earth Creek	0.78 0	0.60 (23%)	0.54 (31%)
Pheasant Branch Creek	1.39 cfs	0.85 (39%)	0.72 (48%)
Sixmile Creek	3.99 cfs	3.40 (15%)	2.97 (26%)
Upper Yahara River	10.16 cfs	10.00 (2%)	9.85 (3%)
Yahara R. @ McFarland	73.72 cfs	70.00 (5%)	67.66 (8%)
Source: Capital Area Regional Planning Commission 2012			

Groundwater Recharge Loss

When rain or snow melt soaks into the ground the water recharges groundwater and provides the baseflow for streams, keeps water temperatures low, augments oxygen levels, and favors habitat for fish and other sensitive aquatic species. Alternatively, water that does not infiltrate into the ground typically runs off the land picking up pollutants from impervious surfaces (roads, rooftops, parking lots), requiring treatment to protect surface waters. The increase in impervious surfaces absent active stormwater infiltration practices (such as rain gardens) causes substantial reduction in the natural groundwater recharge. Furthermore, additional runoff volumes, if not controlled, can result in higher stream flows and, if allowed to accumulate, can cause extensive stream bed and bank erosion and habitat damage.

In 2011, Dane County adopted a stormwater ordinance requiring runoff volume control for all new development to 90 percent of pre-development stay-on volumes. Municipalities in Dane County are required to meet these requirements. The Village of DeForest adopted an ordinance requiring runoff volume control to 100 percent of pre-development stay-on volumes and maintain pre-development groundwater recharge to provide additional mitigation and resource protection. Strategies focused on maintaining and restoring stormwater infiltration can reduce both volumes of stormwater and pollutant loads to receiving surface waters.

Implementing Recommendations

Many of these recommendations and implementation measures could be incorporated in comprehensive plans, agreements, ordinances, and other governing documents. Table 8 lists these recommendations and identifies the plans and agreements, ordinances, and other governing documents that could also be updated to reflect the recommendations of this Study. A full assessment of zoning and other ordinances is best completed at the local level.

Existing Area Plans and Agreements as of November 2012

Waunakee Comprehensive Plan
Waunakee South Downtown Area Plan
Waunakee BUILD Plan-N. Madison St. Area
Waunakee Central Business District Master Plan
Waunakee Park & Open Space Plan
Waunakee Economic Development Strategy Plan
Waunakee-Westport Joint Planning Area Plan
Town of Westport Comprehensive Plan
Town of Springfield Comprehensive Plan (includes Rural Development Design Guidelines and Springfield Corners Concept Plan)
Springfield TDR Program (Pending)
Springfield-Middleton Intergovernmental Agreement
Springfield-Waunakee Intergovernmental Agreement
City of Middleton Comprehensive Plan
City of Middleton Comprehensive Parks and Open Space Plan
Middleton Northwest Quadrant Plan
Middleton BUILD Plan-Allen Blvd
Allen Blvd. Concept Plan
Amherst-Redevelopment Concept Plan
City of Middleton Sustainability Plan
Middleton Parmenter Neighborhood Plan
Middleton Redevelopment District 3
Middleton TID 5 Plan
University Avenue BUILD Project
Middleton Food Initiative
North Mendota Parkway Impact Analysis

Regional Sustainability Consideration

In our region, conventional urban development pumps groundwater to provide the municipal drinking water supply. The wastewater is treated at a municipal treatment plant and discharged as surface water, typically far away from the drinking water source. This system can be made more sustainable by increasing the infiltration of stormwater to recharge groundwater, and/or returning treated effluent to recharge the groundwater used for the drinking water source.

Table 8:
Potential Comprehensive Plan and other Governing Document Updates (not an exhaustive list)

Recommendation	Plans to amend or update	Plan Element(s)	Other Documents to Prepare, Amend, or Update
Map 2	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Issues and Opportunities (Map 2), Land Use	
1.1 Evaluate/Update Redevelopment/infill	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Land Use, Economic Development	"Middleton Redevelopment District 3, Middleton TID 5 Plan, University Ave BUILD Project, Amherst-Redevelopment Concept Plan, Allen Blvd. Concept Plan, Middleton BUILD Plan-Allen Blvd, Middleton Northwest Quadrant Plan, Waunakee Economic Development Strategy Plan, Waunakee Central Business District Master Plan, Waunakee BUILD Plan-N. Madison St. Area, Waunakee South Downtown Area Plan"
1.2 Identify new redevelopment/ infill opportunities	Middleton Comprehensive Plan, Waunakee Comprehensive Plan	Land Use	"Middleton Redevelopment District 3, Middleton TID 5 Plan, University Ave BUILD Project, Amherst-Redevelopment Concept Plan, Allen Blvd. Concept Plan, Middleton BUILD Plan-Allen Blvd, Middleton Northwest Quadrant Plan, Waunakee Economic Development Strategy Plan, Waunakee Central Business District Master Plan, Waunakee BUILD Plan-N. Madison St. Area, Waunakee South Downtown Area Plan"
1.3/3.4 Springfield Corners	Springfield Comprehensive Plan	Land Use	County Zoning Ordinance
1.5 Plan for large infill	Westport Comprehensive Plan	Land Use	Waunakee-Westport Joint Planning Area Plan
1.6 Large-scale developers	Middleton Comprehensive Plan	Land Use	Middleton Northwest Quadrant Plan, Middleton BUILD plan-Allen Blvd, Allen Blvd Concept Plan, Amherst-Redevelopment Concept Plan, Middleton Redevelopment District 3, Middleton TID 5 Plan, University Avenue BUILD project
1.7 Allow well-designed intensification	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Land Use	Middleton TID 5 Plan, University Ave BUILD Project, Amherst-Redevelopment Concept Plan, Allen Blvd. Concept Plan, Middleton BUILD Plan-Allen Blvd, Middleton Northwest Quadrant Plan,
2.2 Redelopment infill incentives	Middleton Comprehensive Plan, Waunakee Comprehensive Plan	Land Use	Middleton TID Plans, Middleton Downtown Revitalization Plan, Waunakee Economic Development Strategy Plan, Waunakee Central Business District Master Plan
3.1 Mixed Use Development	Westport Comprehensive Plan	Land Use	County Zoning Ordinance

Table 8:
Potential Comprehensive Plan and other Governing Document Updates (not an exhaustive list)

Recommendation	Plans to amend or update	Plan Element(s)	Other Documents to Prepare, Amend, or Update
3.2 Higher Density	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan (Town Center), Springfield Comprehensive Plan (Springfield Corners)	Land Use	
3.3 Density and Mixing Uses in future destinations	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Land Use	City, Village and County Zoning Ordinances
3.6 Design Guidelines	Middleton Comprehensive Plan	Land Use	Middleton BUILD-Allen Blvd, University Avenue BUILD Project, Waunakee-Westport Joint Planning Area Plan
3.7 Multi-family Design Guidelines	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Land Use,	Site Plan Ordinances, Design Guidelines
3.10 Reduce Parking Standards	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Land Use, Transportation	Zoning Ordinance, Site Plan Ordinances
4.1 Permit affordable senior housing	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Land Use, Housing	
4.2 Mixed Uses horizontally and vertically	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Land Use	PUD Zoning Plans
4.3 Walking and Biking Access	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Transportation, Housing	Official Maps
4.4 Traditional Neighborhood Design (TND)	Waunakee Comprehensive Plan	Land Use, Housing	Zoning Ordinance

Table 8:
Potential Comprehensive Plan and other Governing Document Updates (not an exhaustive list)

Recommendation	Plans to amend or update	Plan Element(s)	Other Documents to Prepare, Amend, or Update
4.6 Building Guidelines	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Land Use, Economic Development	Site Plan Ordinances, Design Guidelines, Building Codes
5 Coordinate streetscaping and way-finding programs	Westport Comprehensive Plan	Land Use	Corridor Plan, Way-finding Sign Program
6-8 Sustainability Planning	Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Utilities and Community Facilities, Land Use, Issues and Opportunities, Implementation	Capital Improvement Plans
9.1 Highly connected travel network	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Transportation	PUD Zoning Plans, Official Map
9.2 Evaluate existing connectivity	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Transportation	Safe Routes to School Plan?
9.3 Connectivity of Trails and bikeways	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Transportation, Housing, Open Space	Waunakee Park & Open Space Plan
9.4 Transit, ride share, biking, walking, etc.	Middleton Comprehensive Plan, Waunakee Comprehensive Plan	Transportation	Safe Routes to School Plan
9.6 Sidewalk retrofit	Waunakee Comprehensive Plan	Transportation	Safe Routes to School, Neighborhood Plans
9.8 Pheasant Branch Road Deign	Middleton Comprehensive Plan	Transportation	
10.1 Springfield Waunakee boundary agreement	Springfield Comprehensive Plan, Waunakee Comprehensive Plan	Intergovernmental Cooperation	Waunakee-Springfield Boundary Agreement
10.2 Westport Waunakee Deforest boundary agreement	Westport Comprehensive Plan, Waunakee Comprehensive Plan	Intergovernmental Cooperation	Waunakee-Westport Joint Planning Area Plan, DeForest-Westport-Waunkaee Boundary Agreement

Table 8:
Potential Comprehensive Plan and other Governing Document Updates (not an exhaustive list)

Recommendation	Plans to amend or update	Plan Element(s)	Other Documents to Prepare, Amend, or Update
10.3 Waunakee Vienna boundary agreement	Waunakee Comprehensive Plan	Intergovernmental Cooperation	Waunakee-Vienna Boundary Agreement
10.4 Westport Waunakee boundary agreement	Westport Comprehensive Plan, Waunakee Comprehensive Plan	Intergovernmental Cooperation	Waunakee-Westport Joint Planning Area Plan
10.5 Middleton Springfield boundary Agreement	Middleton Comprehensive Plan, Springfield Comprehensive Plan	Intergovernmental Cooperation	Middleton-Springfield Boundary Agreement
11.1 Stewardship Areas	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Natural Resources, Land Use	
11.2 Expand riparian buffers	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Natural Resources, Land Use	
11.3 CRP, cost-share	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Natural Resources	
11.4 Open Space Preservation	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Natural Resources, Land Use	Waunakee Parks and Open Space Plan, Boundary Agreements, Springfield TDR Program
12.1 Stewardship Guidelines	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Natural Resources	Zoning Ordinance, Subdivision Ordinance, Development Design Guidelines

Table 8:
Potential Comprehensive Plan and other Governing Document Updates (not an exhaustive list)

Recommendation	Plans to amend or update	Plan Element(s)	Other Documents to Prepare, Amend, or Update
13. Mineral resources, recharge, and extraction	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Natural Resources	
14.2 Stormwater Ordinances	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Natural Resources	Stormwater Ordinance, Subdivision Ordinance
14.4 Financial resources for ag BMPs for natural resource protection	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Natural Resources	
14.5 Retrofit urban BMPs for natural resource protection	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Agricultural and Natural Resources	"Middleton Redevelopment District 3, Middleton TID 5 Plan, University Ave BUILD Project, Amherst-Redevelopment Concept Plan, Allen Blvd. Concept Plan, Middleton BUILD Plan-Allen Blvd, Middleton Northwest Quadrant Plan, Waunakee Economic Development Strategy Plan, Waunakee Central Business District Master Plan, Waunakee BUILD Plan-N. Madison St. Area, Waunakee South Downtown Area Plan"
14.7 Phosphorus Capture	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Springfield Comprehensive Plan	Natural Resources, Economic Development	
14.8 Reduction Standards nonpoint pollution sources	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Springfield Comprehensive Plan	Natural Resources	Stormwater Ordinance, Subdivision Ordinance
14.9 Yahara watershed improvement network	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Natural Resources	
15.1 Public access points	Middleton Comprehensive Plan, Westport Comprehensive Plan	Natural Resources, Community Facilities	
15.2 Fitness areas	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Natural Resources, Community Facilities	Waunakee Open Space and Parks Plan, City of Middleton Comprehensive Parks and Open Space Plan

Table 8:
Potential Comprehensive Plan and other Governing Document Updates (not an exhaustive list)

Recommendation	Plans to amend or update	Plan Element(s)	Other Documents to Prepare, Amend, or Update
15.4 E-way	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Natural Resources, Transportation	Waunakee Open Space and Parks Plan, City of Middleton Comprehensive Parks and Open Space Plan
15.1 Water resources	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Natural Resources	
16.3 Water conservation, fixtures, and harvesting	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Natural Resources	Building Codes, Stormwater Ordinance
17.1 & 17.2 AEA	Springfield Comprehensive Plan, Westport Comprehensive Plan	Agriculture	AEA Plan and Applications
17.3 BMPs for agriculture	Springfield Comprehensive Plan, Westport Comprehensive Plan	Agriculture	
17.6 Springfield Rural Design Guidelines	Springfield Comprehensive Plan	Agriculture, Housing	Springfield Design Guidelines Appendix
18.1 Deed restrictions	Springfield Comprehensive Plan, Westport Comprehensive Plan	Agriculture, Housing	
18.2 Conservation Easements	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Agriculture	
18.3 TDR	Springfield Comprehensive Plan	Agriculture, Housing	Springfield TDR Program Rules
18.4 Intergovernmental agricultural preservation	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Agriculture, Land Use, Intergovernmental Cooperation	Boundary Agreements

Table 8:
Potential Comprehensive Plan and other Governing Document Updates (not an exhaustive list)

Recommendation	Plans to amend or update	Plan Element(s)	Other Documents to Prepare, Amend, or Update
18.5 Urban agriculture	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Agriculture, Land Use, Housing	Zoning Ordinances
19.1-19.4 Rural Open space Corridors, former wetlands, and stewardship design	Westport Comprehensive Plan, Springfield Comprehensive Plan	Natural Resources, Land Use, Agriculture	Design Guidelines
20.1 Leverage investments in utilities and infrastructure	Middleton Comprehensive Plan, Waunakee Comprehensive Plan, Westport Comprehensive Plan	Utilities and Community Facilities, Issues and Opportunities	Intergovernmental Agreements
21 Alternative energies	Waunakee Comprehensive Plan, Westport Comprehensive Plan, Springfield Comprehensive Plan	Utilities and Community Facilities, Issues and Opportunities	Springfield Design Guidelines

Conclusion

This FUDA Study is submitted for local consideration and incorporation into existing plans and policy, or in some cases developing new tools, to enhance the quality of life for current residents and generations to come. According to the local resolutions petitioning the governor to establish CARPC, local communities requested that the findings of this Study be updated every five years to account for changing conditions. Participating governments should maintain contact to track progress toward implementation and evaluate the outcomes of the FUDA Study.

Supplement A: Enabling Resolutions and Authorizing Actions

Supplement A includes enabling resolutions and authorizing actions, taken by participating communities, regarding FUDA planning.

CARPC Resolutions

The Capital Area Regional Planning Commission (CARPC) was created on May 2, 2007, by Executive Order #197 of Wisconsin Governor James Doyle pursuant to §66.0309 Wis. Stats. The creation was requested in the form of adopted resolutions by local units of government in Dane County representing over 87 percent of the population and equalized property valuation in the county. The resolutions included language regarding Future Urban Development Area (FUDA) planning in Section 7 of the model resolution (used as the basis for resolutions adopted by local municipalities) that reads:

7. The CARPC shall work with communities to update the Dane County Water Quality Plan. In addition to the elements required by NR 121 of the Wisconsin Administrative Code, the Water Quality Plan shall also define areas that should be protected from development based on provisions to protect water quality as contained in NR 121 of the Wisconsin Administrative Code. The Plan shall also define areas that can be developed with measures to protect, restore or minimize degradation of water quality.

   The Plan shall also define a 25-year Future Urban Development Area with 5-year updates. The Plan shall be developed in cooperation with area communities, including towns, and shall consider adopted comprehensive plans and intergovernmental agreements. The Plan shall be developed as follows:

   a. CARPC staff shall provide communities with environmental condition reports consisting of maps, text, and information identifying environmental issues that should be addressed.
   b. The CARPC shall give priority to areas of the highest environmental sensitivity and growth pressure. These areas are: all communities within the Central Urban Service Area; all communities within the Northern Urban Service Area; all urban service areas with a year 2000 Census population of 3,000 or more; and the Black Earth Urban Service Area. The CARPC should, in general, provide assistance with planning for the Future Urban Development Area of other urban service areas after assisting the priority communities. The CARPC's Executive Director shall provide to the CARPC a 3-year work plan with points of reference and an annual progress report with recommendations.
   c. The Plan, which will identify the 25 Future Urban Development Area, shall be based on the requirements of NR 121 and shall also consider other factors including the impacts on natural and built systems, the efficient use of land including urban densities, and the ability to efficiently provide services to support the development and farmland preservation planning.
   d. There shall be separate rules and policies for limited service areas.

e. The CARPC shall adopt policies and procedures for the considerations of amendments to the Water Quality Plan between five-year updates of the Water Quality Plan.

f. The CARPC shall provide the information described in Item a. to areas with the highest environmental sensitivity and growth pressure within three years of the date the CARPC commences operations.

g. Communities shall submit their proposed Future Urban Development Area within 24 months of the date they receive the data from the CARPC. If a community does not meet this timeline, the CARPC shall not act on any individual USA expansion requests until the proposed plan is submitted. CARPC may grant one six-month extension to this timeline.

h. The CARPC shall act on the proposed Future Urban Development Area plan within a year of the plan's submission. If CARPC fails to do so, the plan shall be acted upon by the Budget and Personnel Panel.

i. The CARPC may not shift its staff work and analysis responsibilities to the local communities.

Resolutions with the above language were adopted by participating FUDA communities.

FUDA Steering Committee Appointments

Communities approved appointments to the FUDA steering committee. The following are excerpts from City, Village and Town Board meeting minutes, approving appointments.

City of Middleton: Excerpt from Village Board Meeting Minutes, September 14, 2010

10. Plan Commission Appointees for Steering Committee for the Future Urban Development Areas (FUDA) Planning Process
Barmore nominated Hungness for the steering committee. Sonnentag nominated Barmore for the steering committee. Moved by Hilbert, seconded by Hubbard, to approve Hungness and Barmore for the FUDA steering committee. Motion carried 6-0.

Village of Waunakee: Excerpt from Village Board Meeting Minutes, October 04, 2010

CONSENT AGENDA (Items under the consent agenda may be acted upon by one motion.
If, in the judgment of any Board Member, a consent agenda item needs discussion, the item may be moved to later on the agenda for discussion and/or action).
1. Approve September 20, 2010 Village Board Minutes
2. Approve Routine Bills
3. Approve Non-Routine Bills
4. Approve Proclamation Recognizing Waunakee Lions and Lioness Clubs
5. Approve Transfer of Current Green Valley Waste and Recycling Contract from Republic to Veolia
6. Approve Resolution Approving Fund Transfers and Budget Amendments
7. Approve Appointments to the FUDA Committee
8. Approve Temporary Class "B" Application for Knights of Columbus- Council 6371 for November 13, 2010
9. Approve Temporary Operator Applications for Richard H. Maier and James R. Kluck

Proclamation Recognizing Waunakee Lions and Lioness Clubs, transfer Green Valley waste and recycling contract from Republic to Veolia, subject to revisions requested by Village Attorney, Resolution Approving Fund Transfers and Budget Amendments, appointment of Gary Herzberg and Tom Liebe to the FUDA Committee, approve temporary Class "B"/"Class B" license for Knights of Columbus for annual Thanksgiving Dance for

November 13, 2010, licensed premise is identified as the kitchen, cafeteria, and gym located within the building at 114 East Third Street, approve temporary operator license application for Richard H. Maier and James R. Kluck. Motion carried, 6-0.

Town of Springfield: Excerpt from Town Board meeting Minutes, May 17, 2011

Discuss & Approve the Public Participation Plan for FUDA

Motion (Pulvermacher/Dresen) to approve to Public Participation as presented. Motion carried. 5-0 as Resolution #2011-411.

Discuss & Approve the Memo of Understanding for FUDA

Motion (Pulvermacher/Meinholz) to approve to Memo of Understanding for FUDA as presented. Motion carried. 5-0 as Resolution #2011-412.

Town of Springfield: Excerpt from Town Board meeting Minutes, June 2 1, 2011.

Assign staff rep for FUDA

FUDA Staff rep with be Jan Barman, also steering committee rep.

Town of Westport: Excerpt from Town Board meeting Minutes, February 14, 2011

Item 7: FUDA Steering Committee Report/Items for Action

An Oral Report will be given on this item. Ken and Mark are the Town members of this Committee.

Supplement B: North Mendota FUDA Public Participation Description

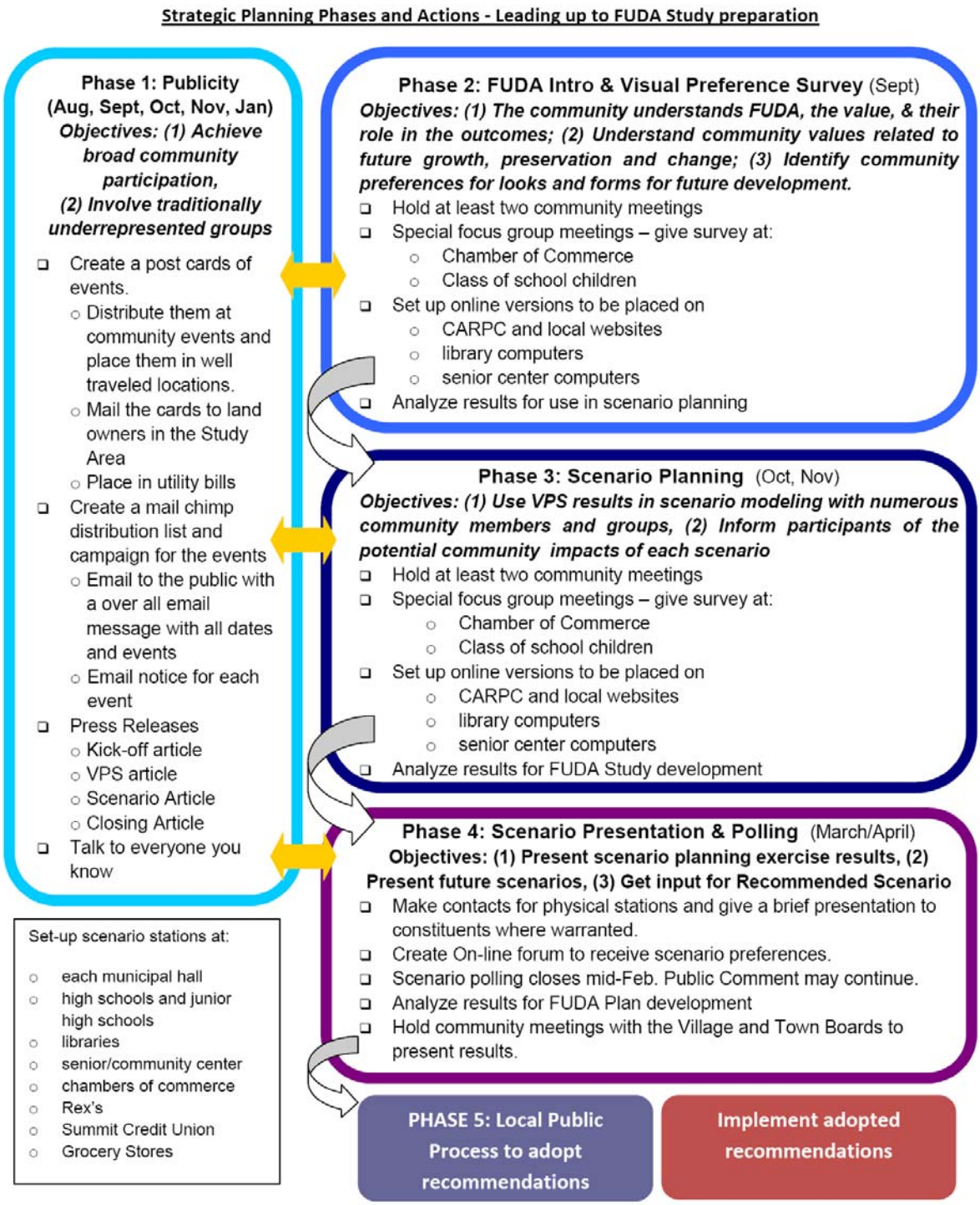
The following supplement discusses public participations efforts and results that occurred as part of the North Mendota Future Urban Development Area (FUDA) planning study.

Below is the contents of this supplement:

- Public Participation Overview
- North Mendota FUDA Public Participation Plan
- Participant Demographics
- Phase 2: Regional Goal Survey and Visual Preference Survey Responses (attached)
- Phase 3: Scenario concept maps generated at Phase 3 meetings
- Phase 4: Summary of scenario polling results and written comments (attached)
- Public Participation Plan (adopted)
- CARPC staff response to preliminary requests by Capital Region Advocacy Network for Environmental Stewardship (CRANES)
- CARPC staff response to CRANES request for a 2050 growth scenario within the current urban service area boundaries.

Public Participation Overview

In accordance with the Wis. Stat. 61001 the North Mendota steering committee adopted a Public Participation Plan (attached) and a subsequent Strategic Engagement Plan (below) outlining specific activities for outreach and engagement in four phases. A fifth phase will occur when FUDA results enter local processes.



Outreach included several methods feasible within the project timeline.

Below are some samples of outreach materials that include event details:

Outreach Materials:

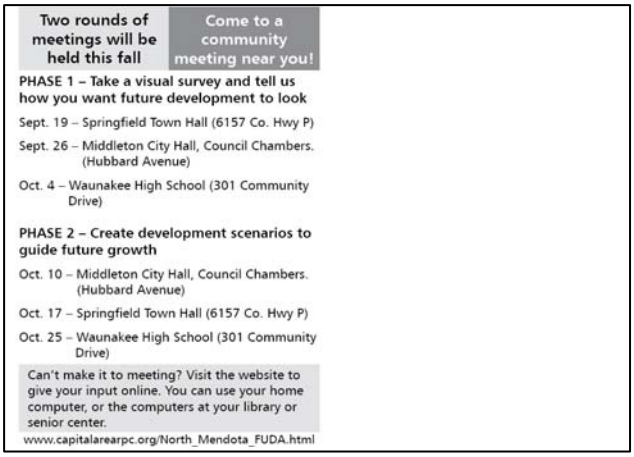
Postcard (mailed Sept.)
Press Release (Sept.)
Public Hearing Notice to local municipalities (Sept.)
Town Newsletter pieces (Sept.)
Poster for Middleton Senior Center (Nov.)
A-frame Ground Signs (for day of meetings)
Phase 4 "Coming Soon" Poster (Jan.)
Letter to the Editor (Feb.)
Phase 4 Press Release #1 (Feb.) and #2 (Mar.)
Email/phone outreach to community organizations (Mar.)
Town Newsletter pieces (Mar.)
Phase 4 Pamphlet
Phase 4 Polling Station Displays
Emails to local and project-based listservs (throughout)

Phase 2 & 3

Postcard mailed directly to residents in Westport and Springfield. Postcards were distributed by hand to local centers, businesses and at area football games.



front



back

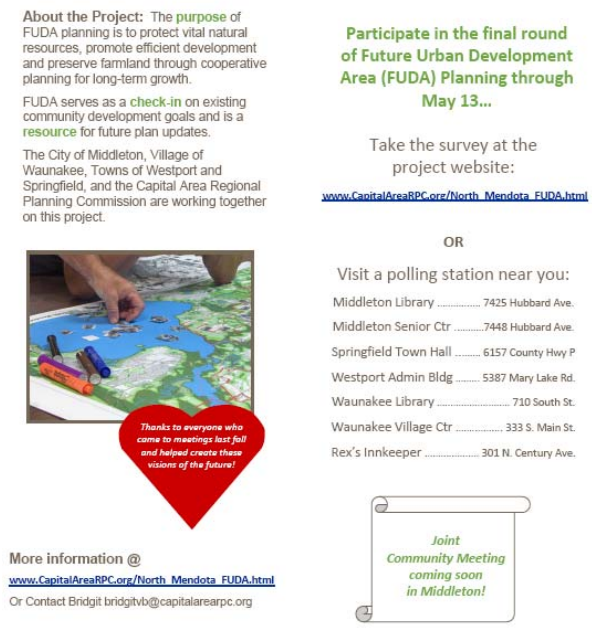
Phase 4

The "insert" graphic created for distribution in community newsletters:

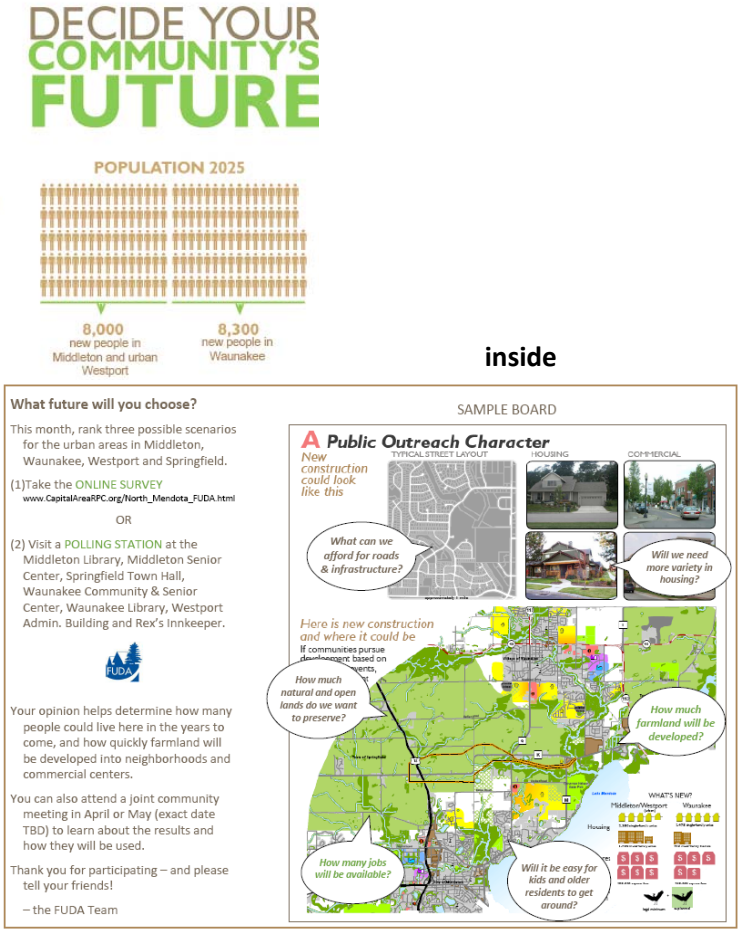


The tri-fold pamphlet, poster and postcard distributed through all local municipal offices, individual staff and steering committee members and at every polling station:

outside



inside



front



back



Public Participant Overview and Demographics

In phases 2-4 of the public participation plan, a total of 1,837 participants gave input into FUDA planning (individuals who attended multiple meetings are counted multiple times). This section summarizes data collected about who participated in this FUDA project and how their demographics compare to those of the FUDA communities as a whole. A standard form with demographic questions was provided at most meetings, [1]and in all online and paper opinion polls. These questions were voluntary and sometimes given as separate questionnaires to ensure confidentiality of individual responses..

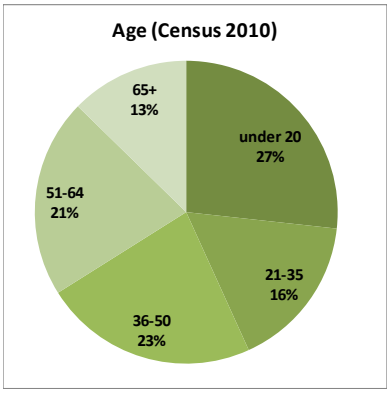
In general, participants at meetings were representative of those in typical municipal planning processes (such as affected land owners) and did not represent the full breadth of the communities. To engage a greater variety of residents, the outreach targeted people typically underrepresented in planning and government processes, with varying success. The project engaged women, rural residents, especially in Westport[2], and the elderly more effectively than it did youth, renters, people from medium to low-income households, and residents of color. Attempts were made to organize special activities with youth and low-income households that did not come together in the outreach time period. Charts comparing these phase to the overall community demographics illustrate how these participants differed from the overall citizenry.

Phase 2: 1,289 individuals took a community goals and visual preference survey in this phase. A total of 68 participated in one of three community meetings, either at a meeting (32) or online (199) on existing community goals and preferences for development and preservation.

Phase 3: 51 participants used the survey results to brainstorm scenario options for future development, growth and preservation using large printed maps, markers and a variety of chips representing different building styles.

Phase 4: 497 participants ranked their most preferred growth option during scenario polling.

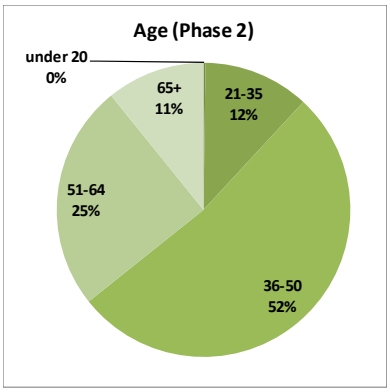
The following charts compare participant demographics to those of the overall FUDA study area.

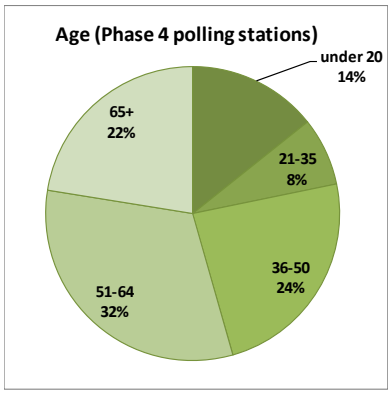


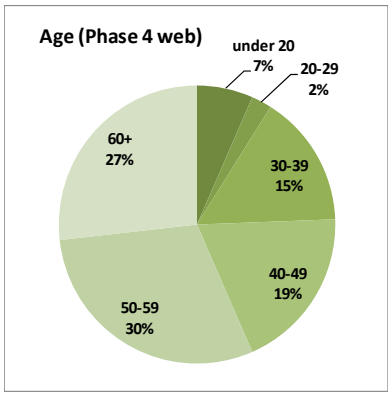
Age: Participants generally better represented older segments of the age spectrum. In phase 2, 36-50 year olds dominated participation with approximately half of responses, compared to less than ¼ of the population of the four communities. In phase 4, ages 50 and older accounted for over half the participants, while accounting for approximately 1/3 of the population. Ages 35 and

[1] Demographic forms were intended to be collected at every meeting, but in some Phase 3 meetings staff did not collect the forms before participants left. This is one area of improvement planned for future FUDA projects.
[2] The Town of Westport, while mostly rural, does have urbanizing areas and it is likely that some participants indicating Westport residence may live in more intensely developed areas.

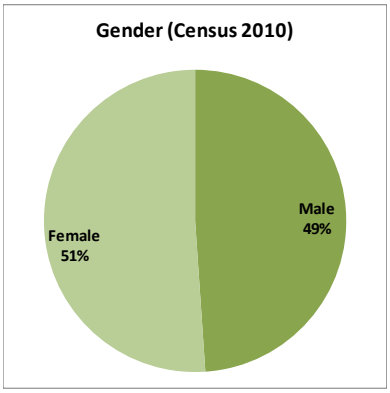
under were generally underrepresented in phase 2, but improved in phase 4 due to targeted outreach to high schools.

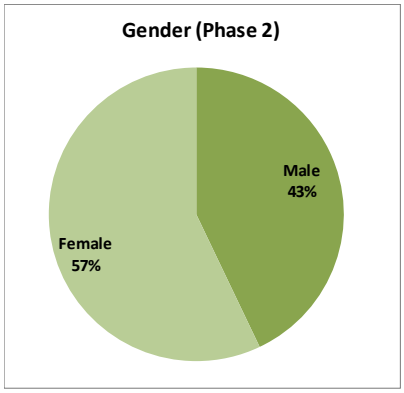


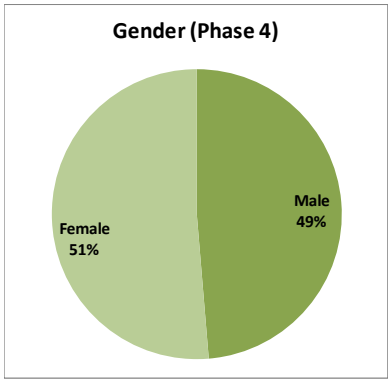




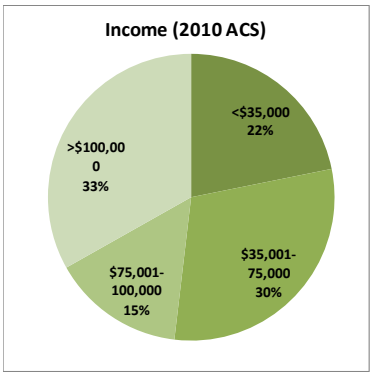
Gender: Gender was generally balanced among participants, with somewhat greater participation by women in the second phase. This may be attributed to utilizing the school districts listserv for promotion of the web-based survey.

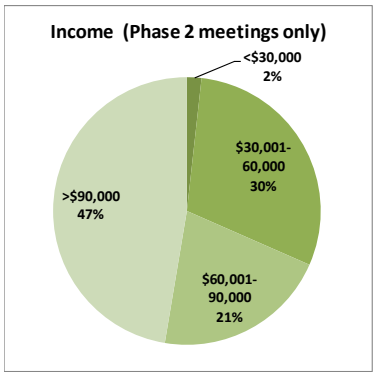


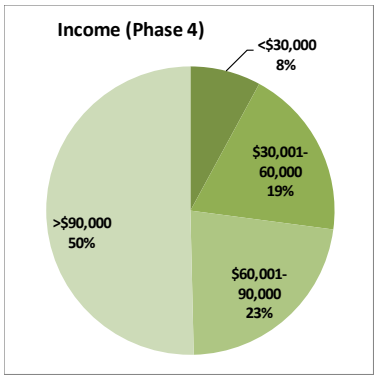




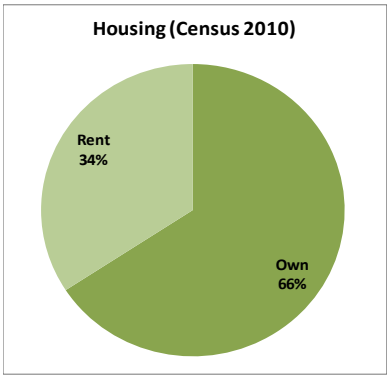
Income: Participants generally were of higher incomes however this is not atypical for the communities which have higher overall incomes. Residents with incomes below $30,000 had lower levels of participation, however it is difficult to compare to recent census data due to different intervals being used.

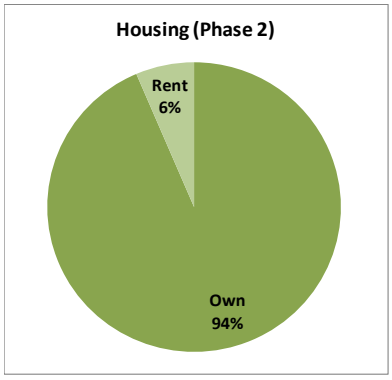


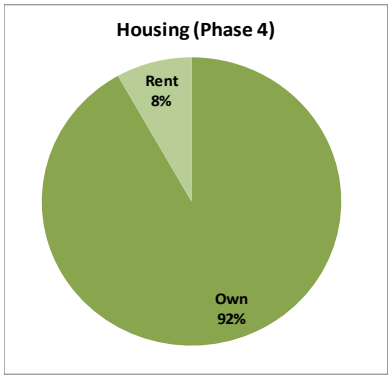




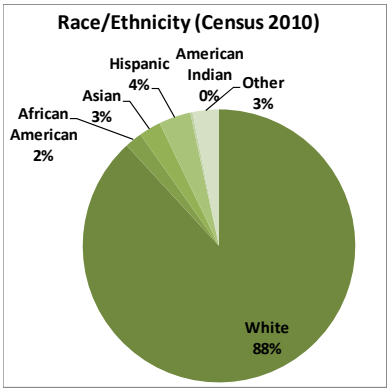
Housing: More than 92% of participants were part of an owner-occupied household. This is significantly higher than the overall communities rate of 66%, meaning renters were under-represented.

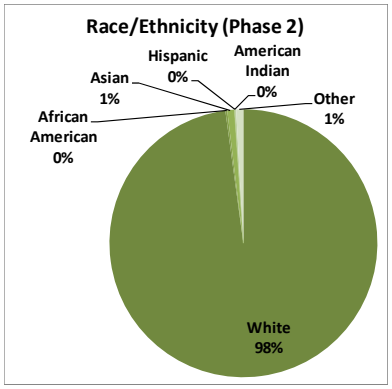


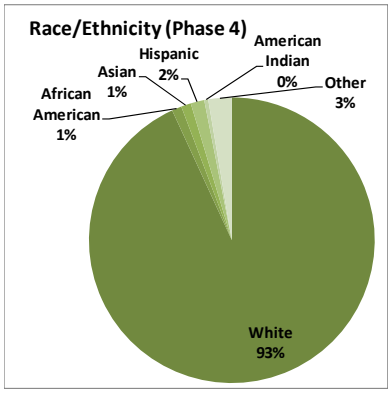




Race: Participants were largely white, with minorities comprising 2% of participants in phase 2 and 7% in phase 4. Overall, minorities comprise approximately 12% of the population in the four communities.







Results and Methodology

The following are the results that the steering committee drew upon from the community engagement activities. The methods used to get the information is explained in the text boxes complementing each section.

Phase 2: Intro to FUDA and Visual Preference Survey

Goals Affirmation Survey Results: Respondents supported existing goals (with a score from 3.5 to 5)

North Mendota Regional Goals	Rating
AGRICULTURAL, NATURAL AND CULTURAL RESOURCES	
1. Limit the loss of agricultural land to non-farm development.	3.8
2. Preserve and protect areas with prime agricultural soils.	4.1
3. Maintain active family farms and preserve the rural family farming lifestyle.	4.1
4. Protect surface and groundwater quality.	4.7
5. Protect scenic views and the visual character of the North Mendota communities.	4.2
LAND USE	
6. Promote balanced communities that provide adequate housing and offer commercial services and employment.	4.1
7. Preserve open space separation between communities.	3.8
HOUSING	
8. Provide a range of housing opportunities in the North Mendota communities, where appropriate, that meets existing and forecasted needs of persons of all income levels and age groups and persons with special needs.	3.4
9. Encourage housing that contributes to compact urban form.	3.3
TRANSPORTATION	
10. Address the region's transportation needs without encouraging development.	3.5
11. Transportation planning should be multi-modal, not just auto-oriented.	3.8
UTILITIES AND COMMUNITY FACILITIES	
12. Provide an integrated park and open space plan to link the communities in the region.	4.0
13. Identify and evaluate the impacts of new development on public services.	4.2
ECONOMIC DEVELOPMENT	
14. Promote the development of balanced communities with sufficient commercial, industrial, residential and open spaces to meet the needs of existing and future residents.	4.0
15. Maintain healthy and economically viable downtown business districts in Middleton and Waunakee that reflect a "small town" atmosphere.	4.4
16. Attract businesses and industries that are compatible with the character of the communities and do not adversely impact the environment.	4.3
INTERGOVERNMENTAL COOPERATION	
17. Coordinate planning between local governments, Dane County and Wisconsin.	4.0
18. Maintain a strong regional planning agency.	3.9

Visual Preference Survey Results: A large number of participants supported images with higher density housing than currently exists in the urban service areas (VPS images, ratings and comments are provided at the end of this section). Respondents generally reacted to the:

- Character and overall "feel"
- Placement and proximity
- Design and streetscapes
- Automobile and pedestrian accessibility
- Variety of building types available
- Scale/Size
- Land use as single or mixed

Outcome

The steering committee learned respondents support existing community goals and used the visual preferences for development densities, layout and construction to develop and describe the scenarios presented to participants in Phase 4 .

Phase 2 Methods

- Public meetings and Survey Monkey online
- Presented "introduction to FUDA" concepts and process
- Conducted a survey on community goals stated in comprehensive plans
- Conducted a visual preference survey (VPS) showing various images of development types that could occur in the area, in 5 categories: single-family and multi-family residential, commercial along highways and arterials, downtowns or neighborhood centers and open spaces. Images were selected to show a range of densities and forms, controlling where possible for aesthetic differences (such as building materials of landscaping). Out of nearly 100 images, 59 were included.
- Participants scored the images from -2 to 2
- Facilitated group discussion at meetings

Phase 3: Scenario Brainstorm Mapping

Four group brainstorm maps were created in 3 meetings, each illustrating a potential scenario based on the group's conversation. Staff analyzed the maps for the steering committee, identifying points of general agreement, stand-alone visions, and points of disagreement.

Outcomes

Areas of agreement:

- Preservation between Middleton and Waunakee from Waunakee Marsh to Lake Mendota.
- Mixed use infill and redevelopment in Middleton and Waunakee near downtown and highway access.
- Mixed use and highway commercial along Highway 12.
- Waunakee can grow on east side due to assets of airport and Interstate.

Phase 3 Methods

- Public meetings only
- Reviewed existing conditions for natural and agricultural resources, VPS image results, population growth, and land supply and demand data.
- In small groups, participants used the most popular VPS icons of different building types and densities and marked growth and preservation areas on a map. Scratch paper maps and discussion questions helped participants think through the options. They also helped convey residents' ideas to staff and steering committee.

Areas of disagreement:

- Preserve land in Westport east of Waunakee.

These areas of agreement and disagreement were used to inform the steering committee's scenario alternatives developed for Phase 4.

Phase 4: Scenario Polling

Polling Results

Majority Rules: Compact Scenario with 69%
Instant Runoff Voting (IRV): Adopted Plans Scenario with 64%

According to IRV results, most respondents will be content if these grow as planned for the next few decades. The majority of these selected the compact scenario as their first option, and in their comments made a strong case for more open/protected land and agricultural preservation and land efficiency. Respondents also cited increased redevelopment, employment, and physical activity options in supporting a more compact urban area.

All Respondents Overall Rankings

	Dispersed	Outreach	Compact
1st Choice	10%	30%	69%
2nd Choice	18%	61%	20%
3rd Choice	72%	12%	17%

Phase 4 Methods

Scenario polls open for one month:

- 4 polling stations with large poster display (at Middleton and Waunakee Libraries, Middleton Senior Center, Springfield and Westport Town Halls); matching online survey.

Information included:

- Polling instructions and intent
- Scenario titles ("public outreach," "dispersed," and "compact") and brief descriptions
- Images and info-graphics to show new population, housing and commercial development, and environmental protection standards; corresponding images of development types from the VPS; a conceptual map showing land use mix and density
- Indicators/performance metrics for each scenario to compare outcomes
- A ballot box, ballots, pamphlets, and pens.

Additional outreach:

- Student outreach options at Middleton High School and Middleton Alternative High School.
- Email and phone contact to area organizations

Using an Instant run-off methodology, the Compact Scenario was the most preferred scenario in Middleton and Westport presented and the Public Outreach Scenario was the most preferred in Waunakee. Instant run-off eliminated the lowest ranked scenario, Dispersed, then changed the first place votes of the eliminated scenario to those of its second place responses. In this case, nearly all of the respondents who chose Dispersed as their first choice selected the Public Outreach Scenario as their second choice. This method of analysis gave the Public Outreach Scenario nearly 50% of the remaining first choice responses.

All Respondents Instant Run-off Results

	Dispersed	Outreach	Compact
Instant Run-off	-	34%	**66%**

Reasons for Rankings: All Areas

Most respondents in the scenario polling indicated why they those a particular scenario as their first choice. A common theme seems to be emerging from the most popular responses of protecting open land, the amount of land used per person and the amount of farmland preserved. Other popular responses was the scenarios impact on driving, physical activity and livability for older persons.

Reasons for Preferring 1 Choice?	Responses
Open/protected land acreage	44
Acres developed/new resident	27
Change in driving miles	24
Farmland acres & revenue preserved	19
Physical activity	19
Livability for persons 65+ years	17
Amount of redevelopment	14
Air pollution per person	13
Infrastructure cost per person	13
Yearly tax revenue/person	8
Jobs	5
Stores (5,000 sq. ft. each)	2

Responses By Community:

Below are tables showing the responses for each community and their preferred scenario via the instant run off methodology. Web-polling indicated Middleton and Waunakee residents have the strongest support for the Compact Scenario, followed by the Public Outreach Scenario. Westport differed and preferred the Public Outreach Scenario followed by the Compact Scenario.

Middleton

	Total Rankings		63
	Dispersed	Outreach	Compact
1st Choice	3%	25%	73%
2nd Choice	15%	66%	17%
3rd Choice	82%	10%	10%
Instant Run-off	-	25%	**75%**

Waunakee

	Total Rankings		26
	Dispersed	Outreach	Compact
1st Choice	19%	23%	58%
2nd Choice	15%	58%	27%
3rd Choice	65%	19%	15%
Instant Run-off	-	35%	**65%**

Westport

	Total Rankings		10
	Dispersed	Outreach	Compact
1st Choice	10%	50%	40%
2nd Choice	40%	50%	10%
3rd Choice	50%	0%	50%
Instant Run-off	-	**60%**	40%

Outcome

This phase concluded with several presentations to local plan commissions. The rankings and comments informed the joint meetings' discussion and subsequent steering committee discussions developing the preferred scenario. They also inform implementation recommendations to their local plan commissions, councils and boards for future urban development.

North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

This document contains the final results from the Visual Preference Survey (VPS), held as part of the public outreach efforts for the North Mendota Future Urban Development Area (FUDA) plan. The purpose of the VPS is to gain a better understanding of the types of development the public feels are appropriate and desirable over the next 25 years. The VPS addresses single family and multifamily residential, development on highways and arterials, development in downtowns or neighborhood centers, and open spaces. A total of 59 images were scored by participants and the average scores and ranks of images are provided for each community. Comments that were made at public meetings or online were also compiled and summarized for each image.

Public outreach sessions were held on the following dates to reach participants of each community.

Sept. 19 – Town of Springfield (Town Hall)
Sept. 26 – City of Middleton (City Hall)
Oct. 4 – Village of Waunakee - Town of Westport (Waunakee High School)

An additional meeting was held at the Middleton Senior Center on November 4. A web-based survey was also available between September 22 and November 22.

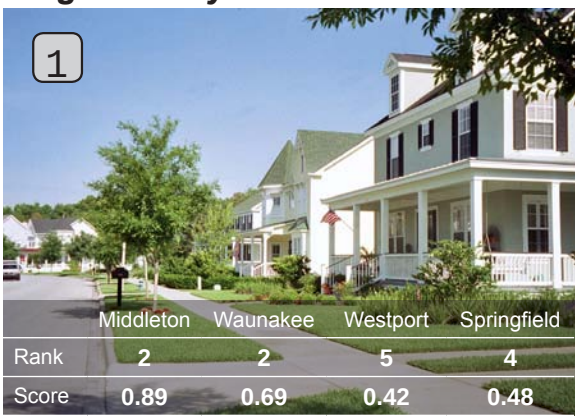
Over 1,000 participants completed the VPS at these meetings or online. The individual community response is as follow:

City of Middleton: 175
Village of Waunakee: 620
Town of Westport: 106
Town of Springfield: 120
Other participants (non-residents): 51

North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

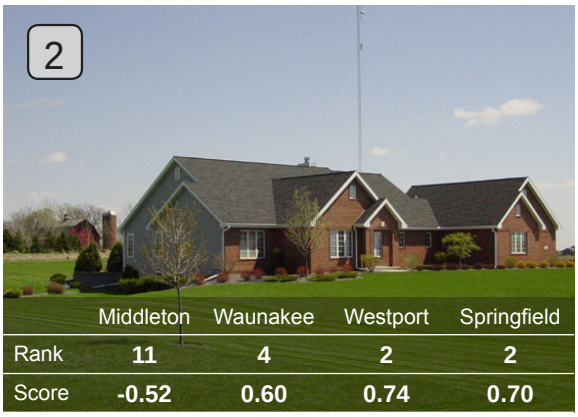
Single Family



	Middleton	Waunakee	Westport	Springfield
Rank	2	2	5	4
Score	0.89	0.69	0.42	0.48

Summary of comments:

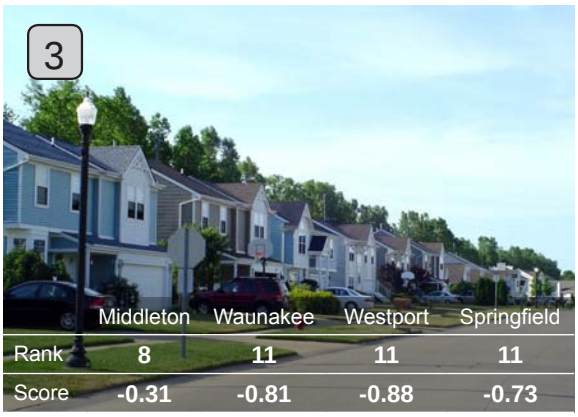
- Liked the individually of the homes, the presence of sidewalks, street trees and how garages were not visible.
- Side driveway creates spaces between homes while minimizing impervious surface.
- Front porches added to the appeal of the neighborhood.
- Portrays a calm, quiet and not crowded feeling.



	Middleton	Waunakee	Westport	Springfield
Rank	11	4	2	2
Score	-0.52	0.60	0.74	0.70

Summary of comments:

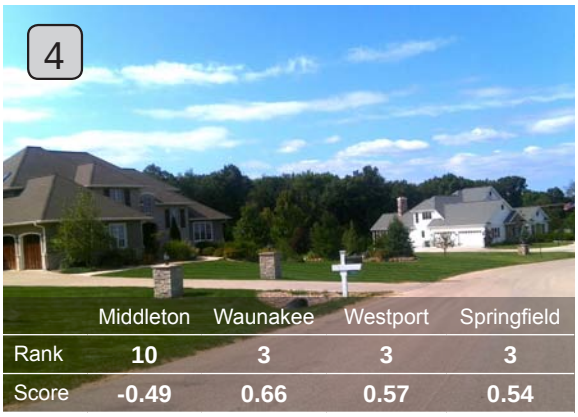
- Not efficient use of land; too spread out; would result in the loss of too much farm land.
- Liked the openness, space and privacy offered by this type of development.
- Grass requires too much water/fertilizer/pesticides



	Middleton	Waunakee	Westport	Springfield
Rank	8	11	11	11
Score	-0.31	-0.81	-0.88	-0.73

Summary of comments:

- Too monotonous as homes are very similar with like colors
- Garages/driveways/parked cars appear too prominently.
- Homes too close together.
- Lacks neighborhood character; feels anonymous.



	Middleton	Waunakee	Westport	Springfield
Rank	10	3	3	3
Score	-0.49	0.66	0.57	0.54

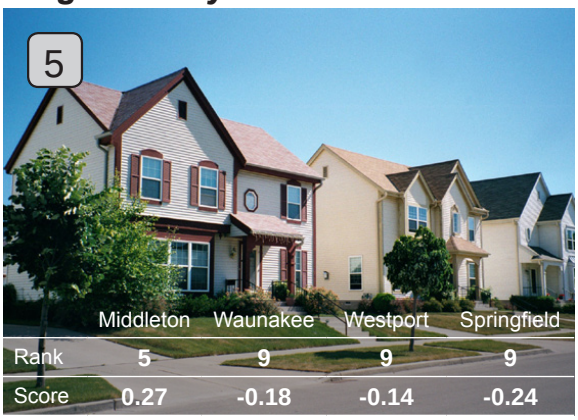
Summary of comments:

Not efficient use of land; not dense enough.
Nice to have space for each home.
Homes are different be feel monotonous and cookie cutter.
Homes are too expensive, should be more affordable.
Nice to have high end homes.

North Mendota Future Development Area (FUDA)

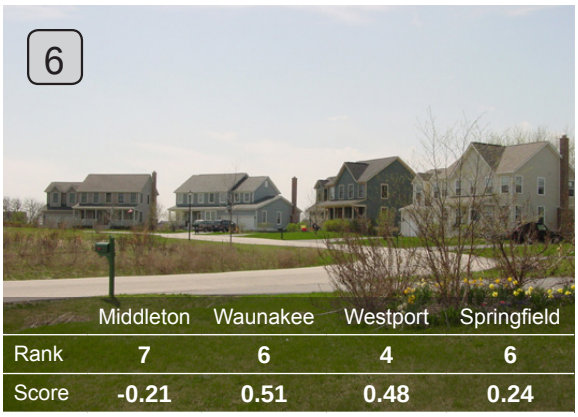
Visual Preference Survey Final Results: Nov. 23, 2011

Single Family



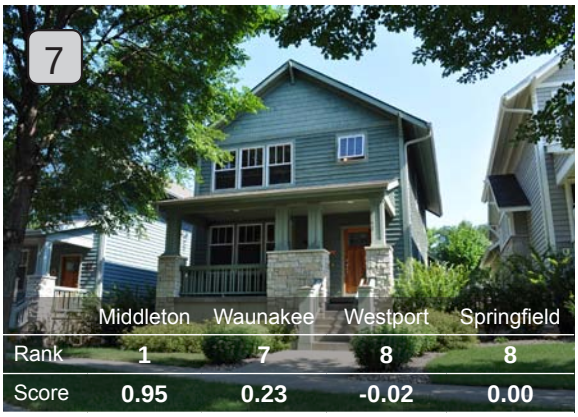
Summary of comments:

- Too repetitive in building form - cookie cutter
- Compact development is good use of land
- Houses a bit too close together; not enough space between houses
- Garages in back is nice



Summary of comments:

- Preserved open space nice, but could be better used as a community park instead of a field.
- Homes could be given more individual space.
- Lack of trees detracts from neighborhood.



Summary of comments:

- Like compactness of development, but understand its not for everyone.
- Some additional space between the homes would be desirable.
- Landscaping, mature trees, front porch create neighborhood feel.



Summary of comments:

- House too big and too expensive
- Lacks individual character - McMansion
- Wooded area next to home creates nice environment
- Sidewalks are important in subdivisions.
- Larger lot sizes and high-end homes are good to have in the community.

North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

Single Family



	Middleton	Waunakee	Westport	Springfield
Rank	6	8	7	7
Score	0.13	-0.03	0.19	0.21

Summary of comments:

- Affordable home with appropriate size
- Space in front/between houses nice
- Sidewalks would be preferable
- Garage facing street undesirable
- Should maintain/reinvest in older neighborhoods to limit need for outward development



	Middleton	Waunakee	Westport	Springfield
Rank	3	1	1	1
Score	0.87	1.03	0.85	0.88

Summary of comments:

- Well balanced density: home appears part of a neighborhood but provides some space between adjacent homes
- Liked the scale of the home, the landscaped front yard and the large porch
- Front-facing garage was practical for this condition, preferred over an alley configuration and results in less impervious surface



	Middleton	Waunakee	Westport	Springfield
Rank	4	10	10	10
Score	0.62	-0.47	-0.20	-0.31

Summary of comments:

- Like landscaping, open space
- Modest size, smaller scale, makes the homes more affordable, which is needed in the community
- Homes too close together; too cluttered
- Homes need individual space, not just shared open space.

North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

Multi-Family



	Middleton	Waunakee	Westport	Springfield
Rank	6	4	5	4
Score	0.41	-0.04	-0.05	-0.01

Summary of comments:

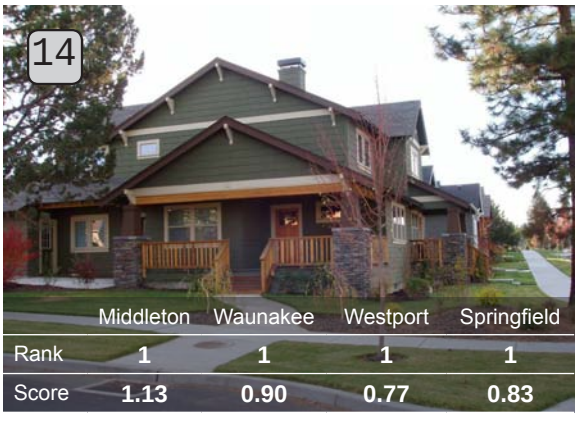
- Like that its facing the street, appealing
- Could use a bit more space between the sidewalk and building
- Relates to neighborhoods and creates a sense of community
- Prefer townhomes to apartment buildings



	Middleton	Waunakee	Westport	Springfield
Rank	5	6	6	6
Score	0.47	-0.21	-0.09	-0.13

Summary of comments:

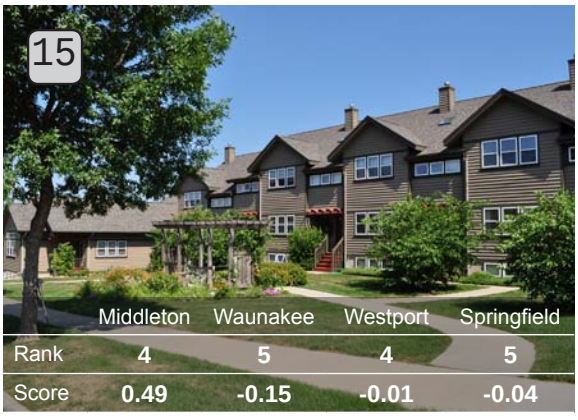
- Would be a good fit for a downtown area
- Like materials and quality of construction; appears high-end.
- Mature street trees help create pleasant environment
- Massing and flat roof make it too “urban”



	Middleton	Waunakee	Westport	Springfield
Rank	1	1	1	1
Score	1.13	0.90	0.77	0.83

Summary of comments:

- Multi-family (duplex) with a single-family character most desirable.
- Better fit for neighborhoods than large apartment buildings.
- Landscaping, open space, porch, create community character



	Middleton	Waunakee	Westport	Springfield
Rank	4	5	4	5
Score	0.49	-0.15	-0.01	-0.04

Summary of comments:

- Open space, landscaping and trees create inviting character.
- Architecture more residential with pitched roofs and frequent bays.

North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

Multi-Family



	Middleton	Waunakee	Westport	Springfield
Rank	3	3	3	3
Score	0.72	0.46	0.33	0.39

Summary of comments:

- Like smaller scale, better fit with residential neighborhoods.
- Parking not visible, behind the building, creates attractive street character.
- Like materials and variety of colors; attractive.



	Middleton	Waunakee	Westport	Springfield
Rank	8	7	7	7
Score	10.12	-0.49	-0.36	-0.28

Summary of comments:

- Building appears flat/mundane; could use better materials.
- Typical of existing multi-family; should have more variety.
- Small greenspace, large tree a nice addition.



	Middleton	Waunakee	Westport	Springfield
Rank	7	8	9	9
Score	-0.01	-0.51	-0.44	-0.34

Summary of comments:

- Too urban; “big city” character not appropriate.
- The buildings are too tall.
- Greenspace in front of the building very nice
- The combination of urban and community creates a desirable building; more of a city-look with nice greenery.



	Middleton	Waunakee	Westport	Springfield
Rank	12	11	11	10
Score	-0.62	-0.71	-0.52	-0.44

Summary of comments:

- Unappealing because of the fence, the building setback and the monotone architecture.
- Vinyl, blank building design seems mass-produced.
- Fence is off-putting to the community.

North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

Multi-Family



	Middleton	Waunakee	Westport	Springfield
Rank	9	10	8	8
Score	-0.28	-0.56	-0.41	-0.29

Summary of comments:

- Too tall, uninteresting.
- Open space is nice but should have features that encourage its use. Lawn doesn't appear to get much use.



	Middleton	Waunakee	Westport	Springfield
Rank	11	9	10	11
Score	-0.49	-0.54	-0.50	-0.50

Summary of comments:

- Bulky, too tall and too massive.
- Too urban, looks like a dormitory; not appropriate for this community.
- Cheap materials with no variation make for a boring facade.
- Lacks distinction.



	Middleton	Waunakee	Westport	Springfield
Rank	10	12	12	12
Score	-0.43	-0.97	-0.75	-0.89

Summary of comments:

- Building design, massing and flat roof have too urban of a character.
- Lack of green space: where do kids play?
- Too tall, dense for this area. Not compatible with the existing character.
- High-end condos like these could be nice for the downtown area.



	Middleton	Waunakee	Westport	Springfield
Rank	2	2	2	2
Score	0.78	0.57	0.48	0.45

Summary of comments:

- Nice residential character, compatible with and resembling single family homes.
- Maintains community/neighborhood feel while adding density; doesn't feel too congested.
- Small lawn adds to the attractiveness.
- Nice materials and building design.
- Like the front doors facing the street; walkable and inviting.

North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

Highway/Arterial Districts



	Middleton	Waunakee	Westport	Springfield
Rank	8	5	6	6
Score	-0.10	0.30	0.07	0.12

Summary of comments:

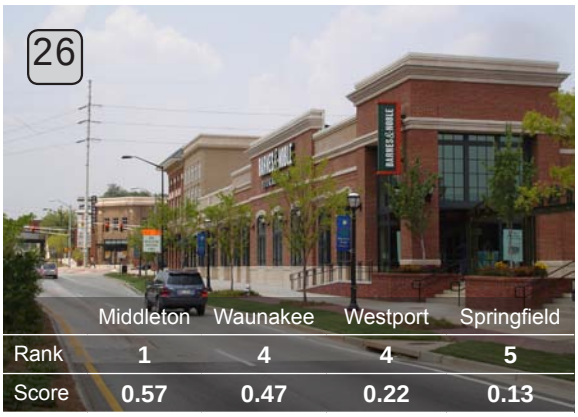
- Small town character, community feel.
- Typical retail architecture, not unique.
- Screening of parking by landscape nice, parking in front of the building ok in limited quantities.
- Clock tower away from building artificial, waste of space.



	Middleton	Waunakee	Westport	Springfield
Rank	9	7	7	7
Score	-0.14	0.12	-0.07	0.08

Summary of comments:

- Like two stories, higher density.
- Larger setback and parking on side good configuration for arterials.
- Bike lanes on road important.



	Middleton	Waunakee	Westport	Springfield
Rank	1	4	4	5
Score	0.57	0.47	0.22	0.13

Summary of comments:

- Like building at the street, parking in rear.
- Nice architectural character/materials.
- 1-2 story buildings a good scale
- Limited room for trees - could be bigger
- Sidewalks, nice - encourage walking.
- Boutique, small town character



	Middleton	Waunakee	Westport	Springfield
Rank	6	2	3	3
Score	-0.07	0.50	0.29	0.19

Summary of comments:

- Nice materials; attractive for a grocery store.
- Would like more landscaping, less parking as it appears underutilized.
- Parking should not dictate the appearance of the community.

North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

Highway/Arterial Districts



	Middleton	Waunakee	Westport	Springfield
Rank	2	1	1	2
Score	0.56	0.68	0.56	0.33

Summary of comments:

- Attractive building with nice details fits in nicely with the community aesthetic
- Individual buildings preferable to several abutting buildings.
- Clock on corner tower creates hometown character, sense of place.
- Signage tasteful; small but legible.
- Like that parking is not visible.



	Middleton	Waunakee	Westport	Springfield
Rank	11	12	11	12
Score	-0.71	-0.69	-0.63	-0.58

Summary of comments:

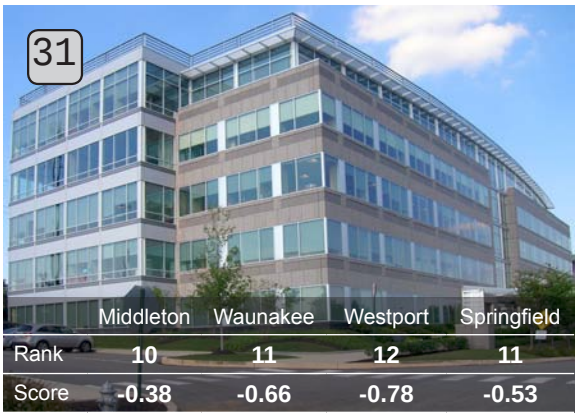
- Any-place, USA development; strip mall not individual or customized to a community.
- Unattractive building, stucco and bad signage detracts from appearance.
- Building too long, appears to extend forever.
- Landscaping at building base not well designed and not enough room for trees on street.



	Middleton	Waunakee	Westport	Springfield
Rank	12	8	8	9
Score	-0.78	-0.08	-0.21	-0.19

Summary of comments:

- Participants had divided opinions on whether big box retail was desirable/appropriate for the study area, however more felt it was not desirable/ appropriate.
- Too much parking; could be like Hilldale Target with structured parking.
- Should have more landscaping in parking lot.
- Setback too large; not accessible to pedestrians.



	Middleton	Waunakee	Westport	Springfield
Rank	10	11	12	11
Score	-0.38	-0.66	-0.78	-0.53

Summary of comments:

- Building is not attractive, too much glass, not enough details.
- Needs more space/buffering from street.
- Like density of employment but building too tall, too bulky.
- Maybe ok along Belt Line but not appropriate for other areas.

North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

Highway/Arterial Districts



	Middleton	Waunakee	Westport	Springfield
Rank	7	6	5	4
Score	-0.08	0.22	0.19	0.16

Summary of comments:

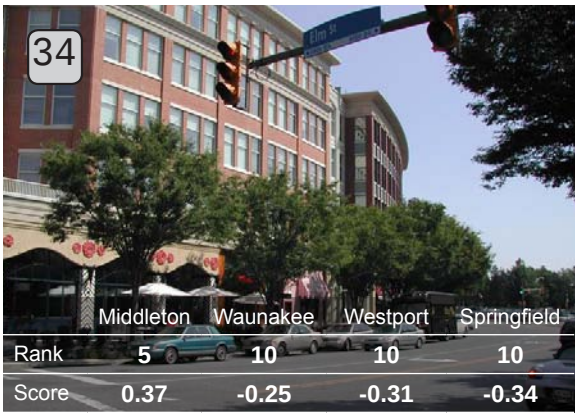
- Smaller scale and design make it unobtrusive and fit in well; compatible with residential development
- Could be put anywhere, no customization, not unique.
- Too much roof in the design of the building and fake dormers are simply tacked on.
- Like parking hidden by garden wall.



	Middleton	Waunakee	Westport	Springfield
Rank	3	3	2	1
Score	0.53	0.50	0.30	0.47

Summary of comments:

- Reasonable scale and attractive materials makes the building appealing.
- Like small setback of building with well-maintained landscaping present.
- Decorative paving and wide sidewalk enhance the scene; on street parking would be good in this condition.



	Middleton	Waunakee	Westport	Springfield
Rank	5	10	10	10
Score	0.37	-0.25	-0.31	-0.34

Summary of comments:

- Higher density is good in areas where it makes sense, though it may be too tall in some places.
- Mixed-use retail developments promote walkability and active places.
- Like the sidewalks with trees, landscaping and cafe tables. Makes the ground floor interesting.
- Parking a concern; should use underground parking.
- Signage design integrated into building design and does not detract from overall aesthetic.



	Middleton	Waunakee	Westport	Springfield
Rank	4	9	9	8
Score	0.40	-0.08	-0.27	-0.17

Summary of comments:

- Like mixed-use/higher density and the scale is reasonable and a good fit.
- Like materials and cohesive building design which has a lot of character but blends well with the context.
- Landscaping, trees along road provide good buffer for the building and sidewalk
- Parking not visible; parking behind the building and underground are both good options.
- Would be good for a downtown redevelopment site.

North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

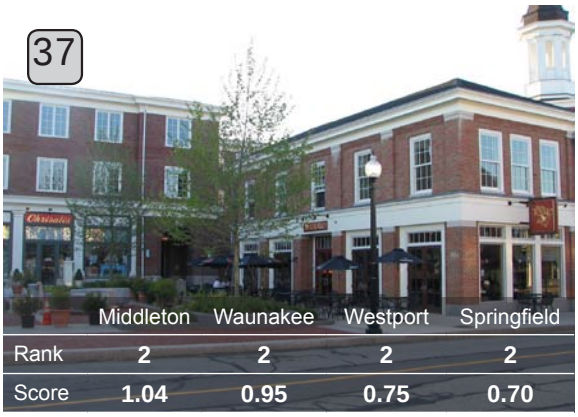
Downtown/Neighborhood Centers



	Middleton	Waunakee	Westport	Springfield
Rank	12	10	9	10
Score	-0.76	-0.56	-0.42	-0.33

Summary of comments:

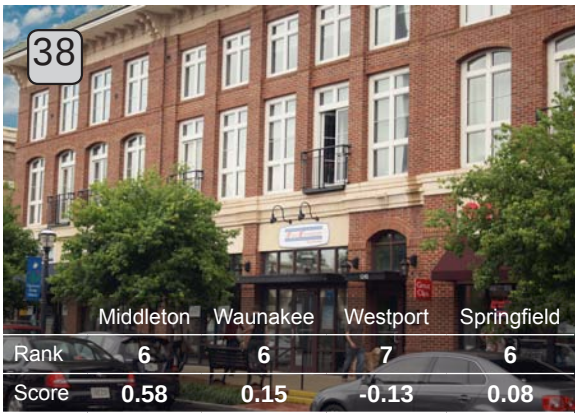
- Not downtown-like; single story buildings are too short/not dense enough.
- Building not interesting or inviting; not worth spending time or money in.
- Parking in front makes pedestrian connectivity difficult and detracts from the appearance of the development.



	Middleton	Waunakee	Westport	Springfield
Rank	2	2	2	2
Score	1.04	0.95	0.75	0.70

Summary of comments:

- Plaza, landscaping and tables create inviting character.
- Two to three story mixed-use buildings are an appropriate scale; not too big but enough to create activity.
- Attractive materials, timeless design with cohesive storefronts blends well with rest of downtown and maintain a community feel.



	Middleton	Waunakee	Westport	Springfield
Rank	6	6	7	6
Score	0.58	0.15	-0.13	0.08

Summary of comments:

- Like mixed-use buildings with retail on the ground floor.
- Traditional building design is attractive.
- Needs wider sidewalks with outdoor seating, not just trees, benches and planters.
- Good for downtowns but may be too urban of a character for certain places.



	Middleton	Waunakee	Westport	Springfield
Rank	7	7	6	7
Score	0.12	-0.13	-0.08	-0.08

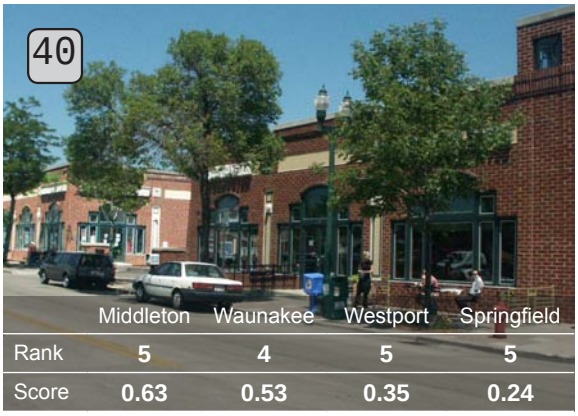
Summary of comments:

- Houses converted for commercial uses may be practical; acceptable if close to downtown areas.
- Not appropriate for residential neighborhoods.
- Renovations for commercial use should be better; not visually appealing and appears haphazard and unplanned.
- Makes a good transition to residential areas outside of downtown; takes a way a bit of the commercial look.

North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

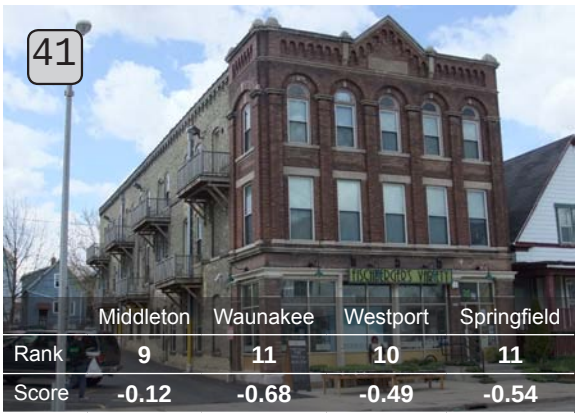
Downtown/Neighborhood Centers



	Middleton	Waunakee	Westport	Springfield
Rank	5	4	5	5
Score	0.63	0.53	0.35	0.24

Summary of comments:

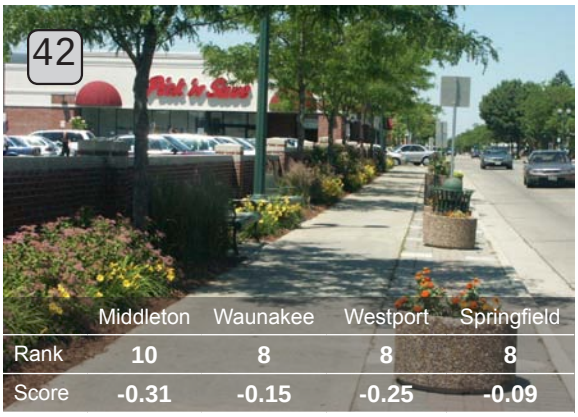
- Small parking area to the side of the building a better design than in front.
- Could be denser/taller, but acceptable for downtowns.
- Walkable street created by storefronts, trees and decorative lighting.



	Middleton	Waunakee	Westport	Springfield
Rank	9	11	10	11
Score	-0.12	-0.68	-0.49	-0.54

Summary of comments:

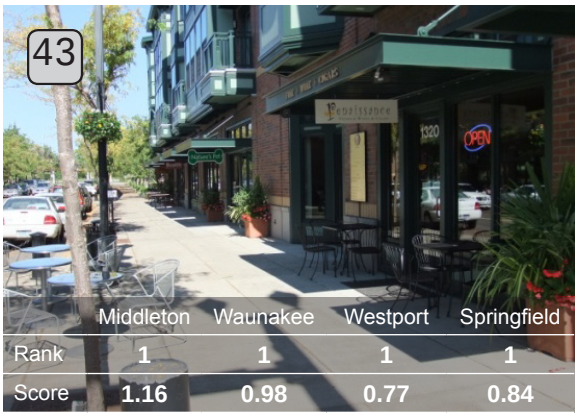
- Renovating/re-using of older building good in downtown areas.
- Side of the building and parking area seem run down a bit.
- New buildings should not be designed to look old.
- Very urban character; may not be most appropriate in certain areas.



	Middleton	Waunakee	Westport	Springfield
Rank	10	8	8	8
Score	-0.31	-0.15	-0.25	-0.09

Summary of comments:

- Contains lots of parking for downtown area.
- Wall, landscaping and trees improve the appearance of the area and do a good job of screening the parking lot.



	Middleton	Waunakee	Westport	Springfield
Rank	1	1	1	1
Score	1.16	0.98	0.77	0.84

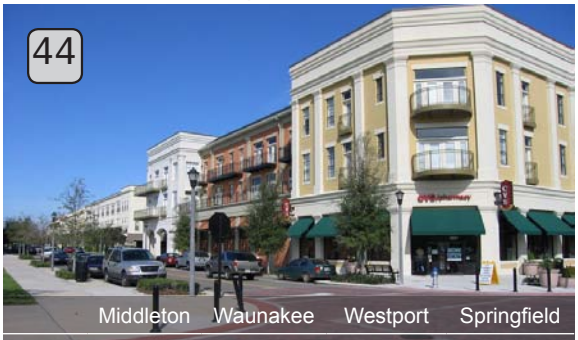
Summary of comments:

- Inviting, livable and walkable with a distinctive/ unique community feel.
- Wide sidewalks with tables and nice storefronts create an attractive character.
- Mixed-use multi-story buildings good for downtowns.
- Good mix of on-street parking and off street lots behind the building.

North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

Downtown/Neighborhood Centers



	Middleton	Waunakee	Westport	Springfield
Rank	3	3	4	3
Score	0.80	0.74	0.43	0.51

Summary of comments:

- Architecturally interesting buildings with nice details would work well in downtowns.
- Materials/designs creates a sophisticated without
- Streetscaping with brick pavers is a nice addition.
- Variety of design between buildings is cohesive and attractive.
- Buildings could use a bit more space from the street, could be used for a small seating area.



	Middleton	Waunakee	Westport	Springfield
Rank	11	12	12	12
Score	-0.67	-0.88	-0.85	-0.81

Summary of comments:

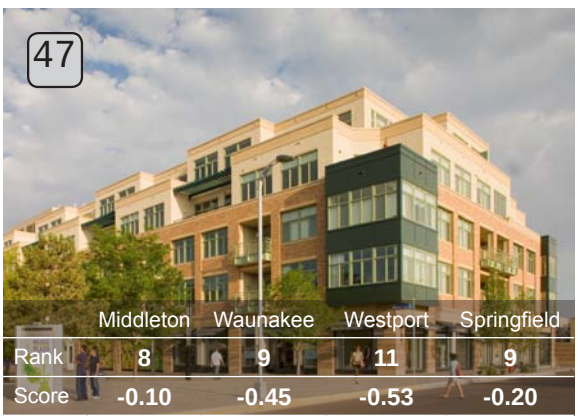
- Contemporary design is stark, cold and unattractive.
- Needs some landscaping or trees at the street.
- Roof garden/terrace is a nice feature.
- Scale is too big and design is bulky.



	Middleton	Waunakee	Westport	Springfield
Rank	4	5	3	4
Score	0.80	0.49	0.44	0.40

Summary of comments:

- Hometown character very appealing and inviting.
- Mixture of one to three stories creates a comfortable scale.
- Good blend of traditional character with new improvements and additions.



	Middleton	Waunakee	Westport	Springfield
Rank	8	9	11	9
Score	-0.10	-0.45	-0.53	-0.20

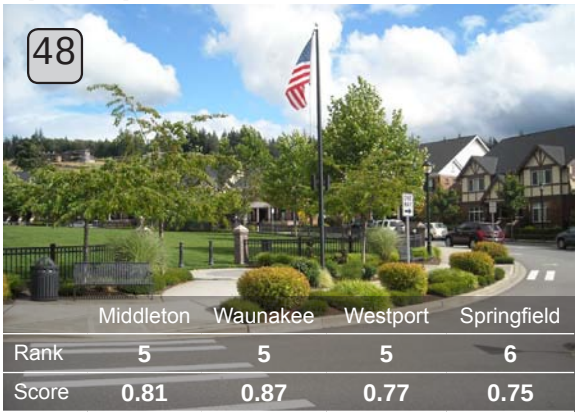
Summary of comments:

- Mix of uses is good but, the scale appears too large for a downtown area; difficult to create small town atmosphere with buildings this large.
- Blockiness of the building design is unattractive
- Plaza next to the building is a nice feature.

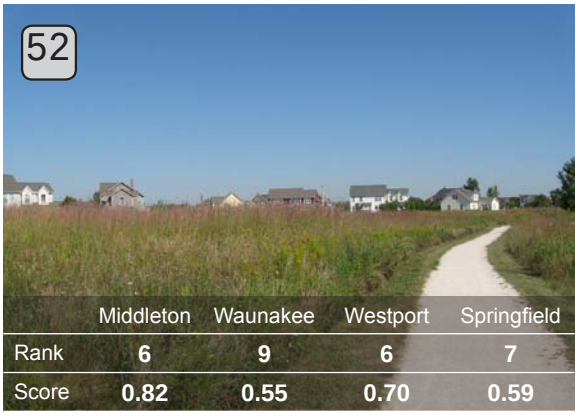
North Mendota Future Development Area (FUDA)

Visual Preference Survey Final Results: Nov. 23, 2011

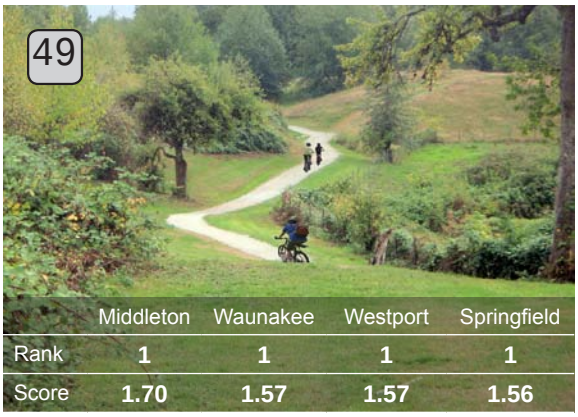
Open Space



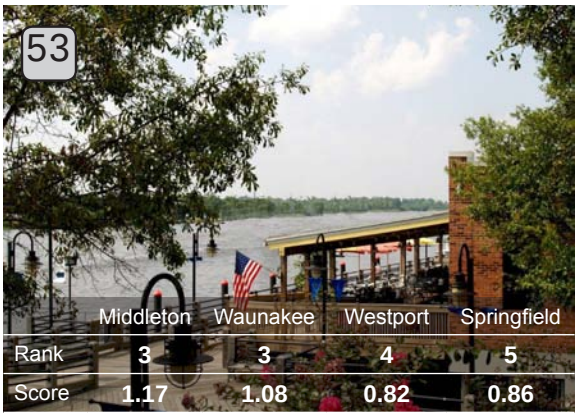
	Middleton	Waunakee	Westport	Springfield
Rank	5	5	5	6
Score	0.81	0.87	0.77	0.75



	Middleton	Waunakee	Westport	Springfield
Rank	6	9	6	7
Score	0.82	0.55	0.70	0.59



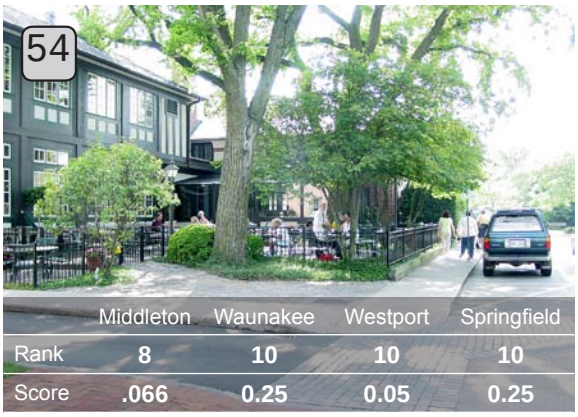
	Middleton	Waunakee	Westport	Springfield
Rank	1	1	1	1
Score	1.70	1.57	1.57	1.56



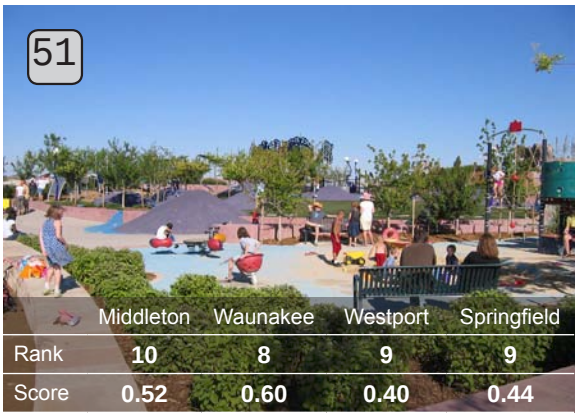
	Middleton	Waunakee	Westport	Springfield
Rank	3	3	4	5
Score	1.17	1.08	0.82	0.86



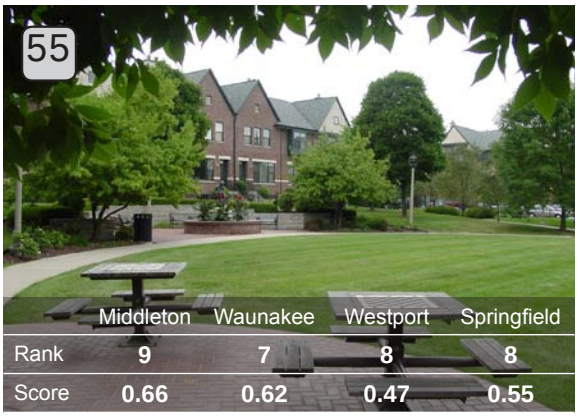
	Middleton	Waunakee	Westport	Springfield
Rank	11	11	12	11
Score	0.18	0.09	-0.20	-0.07



	Middleton	Waunakee	Westport	Springfield
Rank	8	10	10	10
Score	.066	0.25	0.05	0.25



	Middleton	Waunakee	Westport	Springfield
Rank	10	8	9	9
Score	0.52	0.60	0.40	0.44



	Middleton	Waunakee	Westport	Springfield
Rank	9	7	8	8
Score	0.66	0.62	0.47	0.55

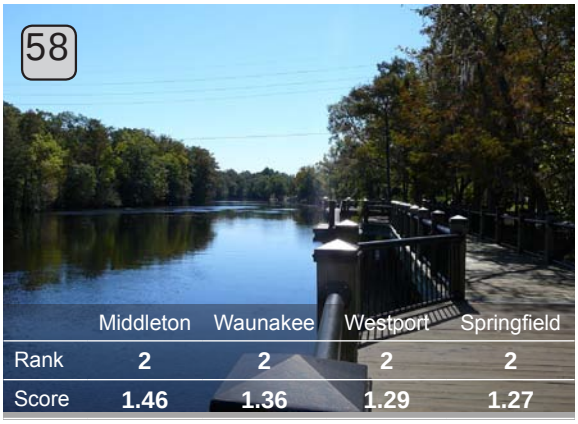
North Mendota Future Development Area (FUDA)

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Open Space



	Middleton	Waunakee	Westport	Springfield
Rank	12	12	11	12
Score	0.00	-0.07	-0.01	-0.09



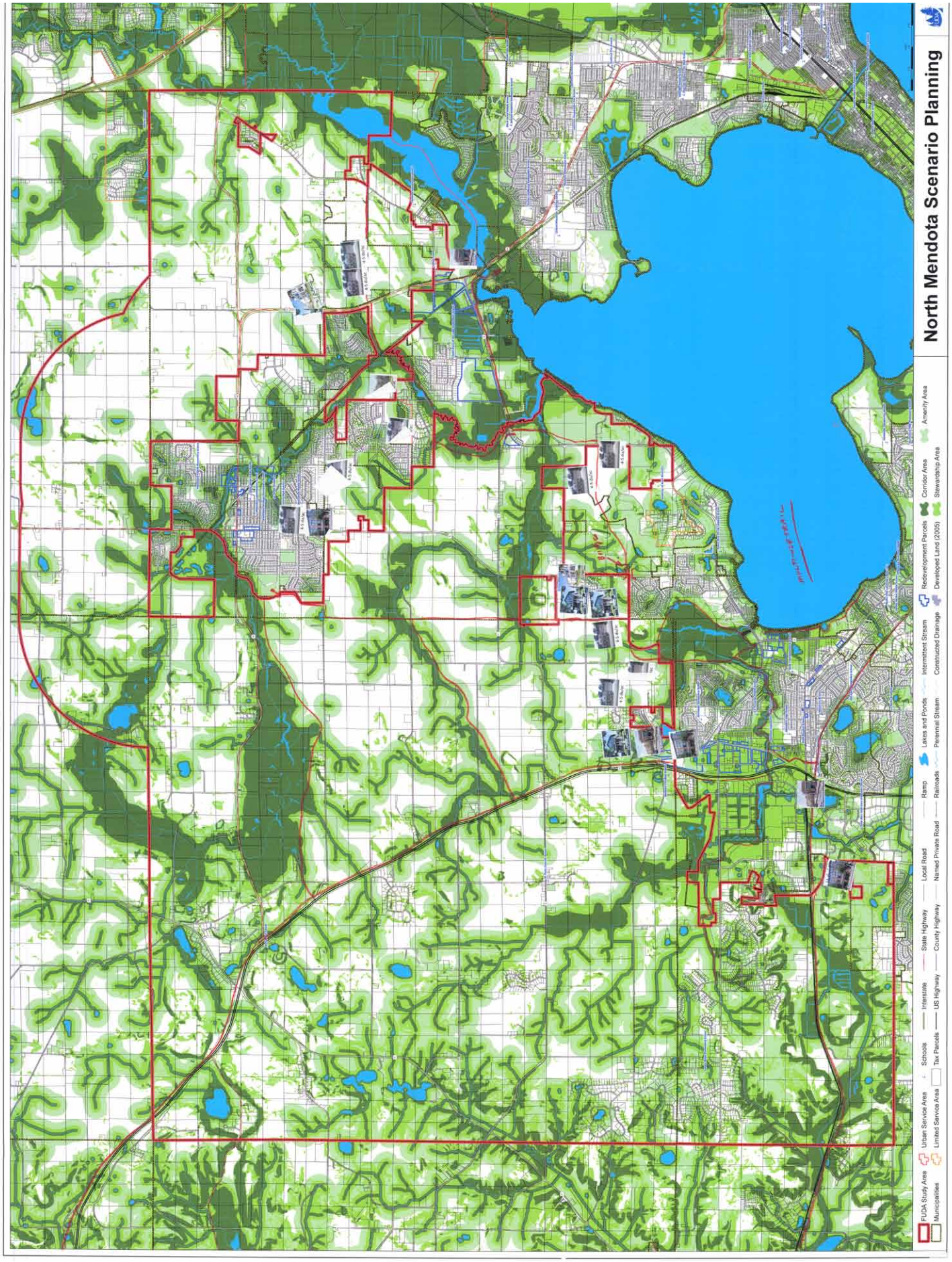
	Middleton	Waunakee	Westport	Springfield
Rank	2	2	2	2
Score	1.46	1.36	1.29	1.27

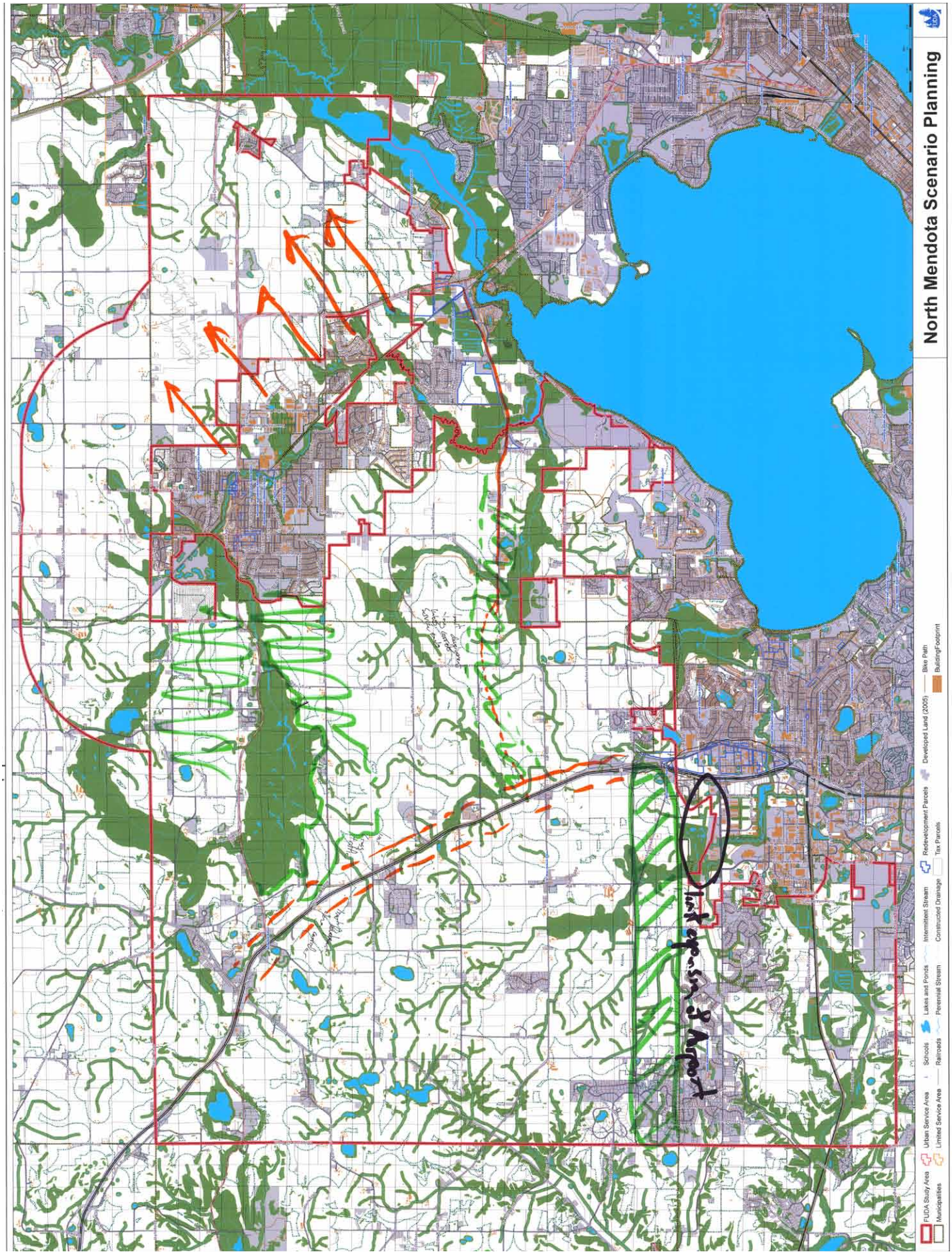


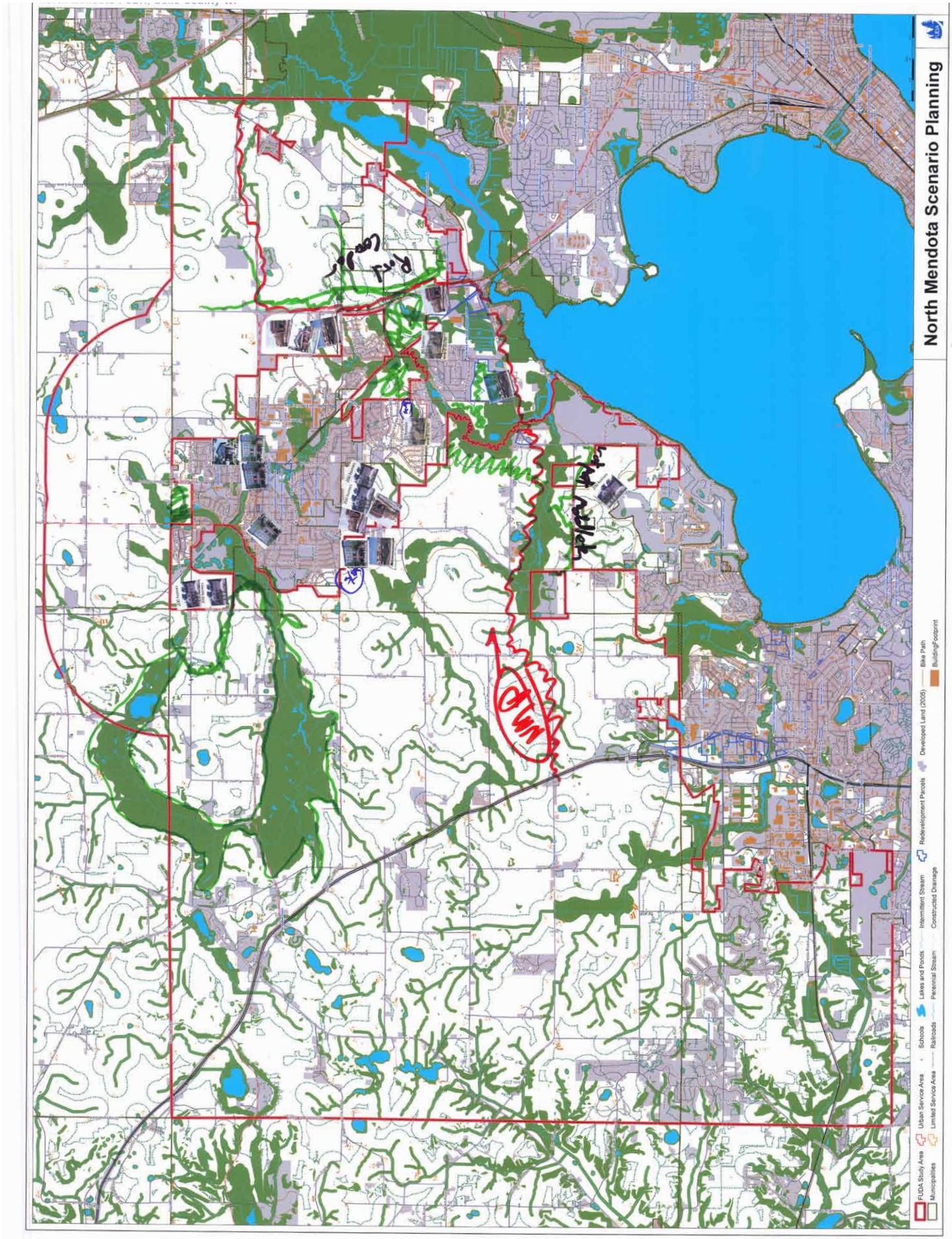
	Middleton	Waunakee	Westport	Springfield
Rank	7	6	7	4
Score	0.75	0.85	0.69	0.88

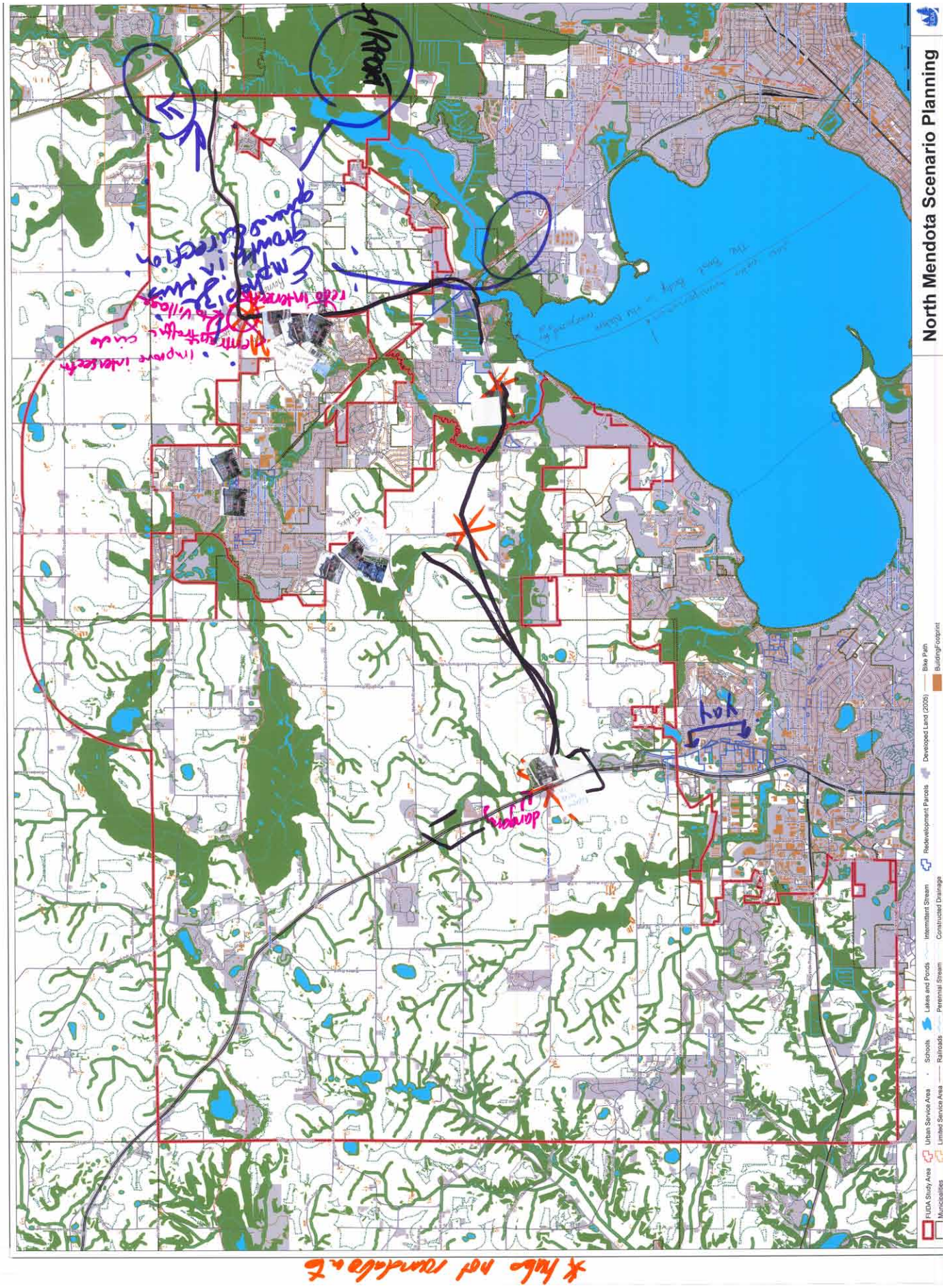


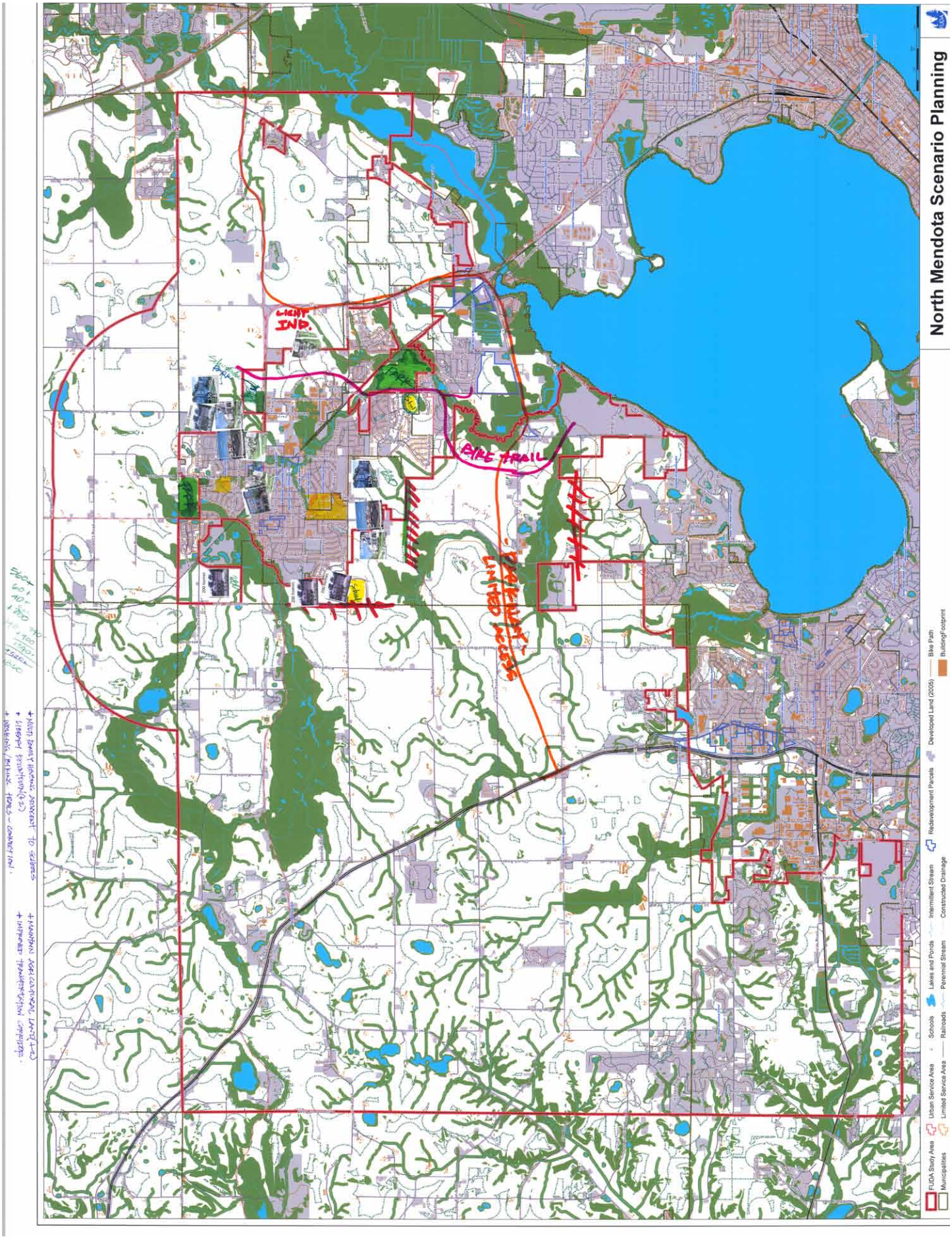
	Middleton	Waunakee	Westport	Springfield
Rank	4	4	3	3
Score	1.15	0.98	1.01	0.94

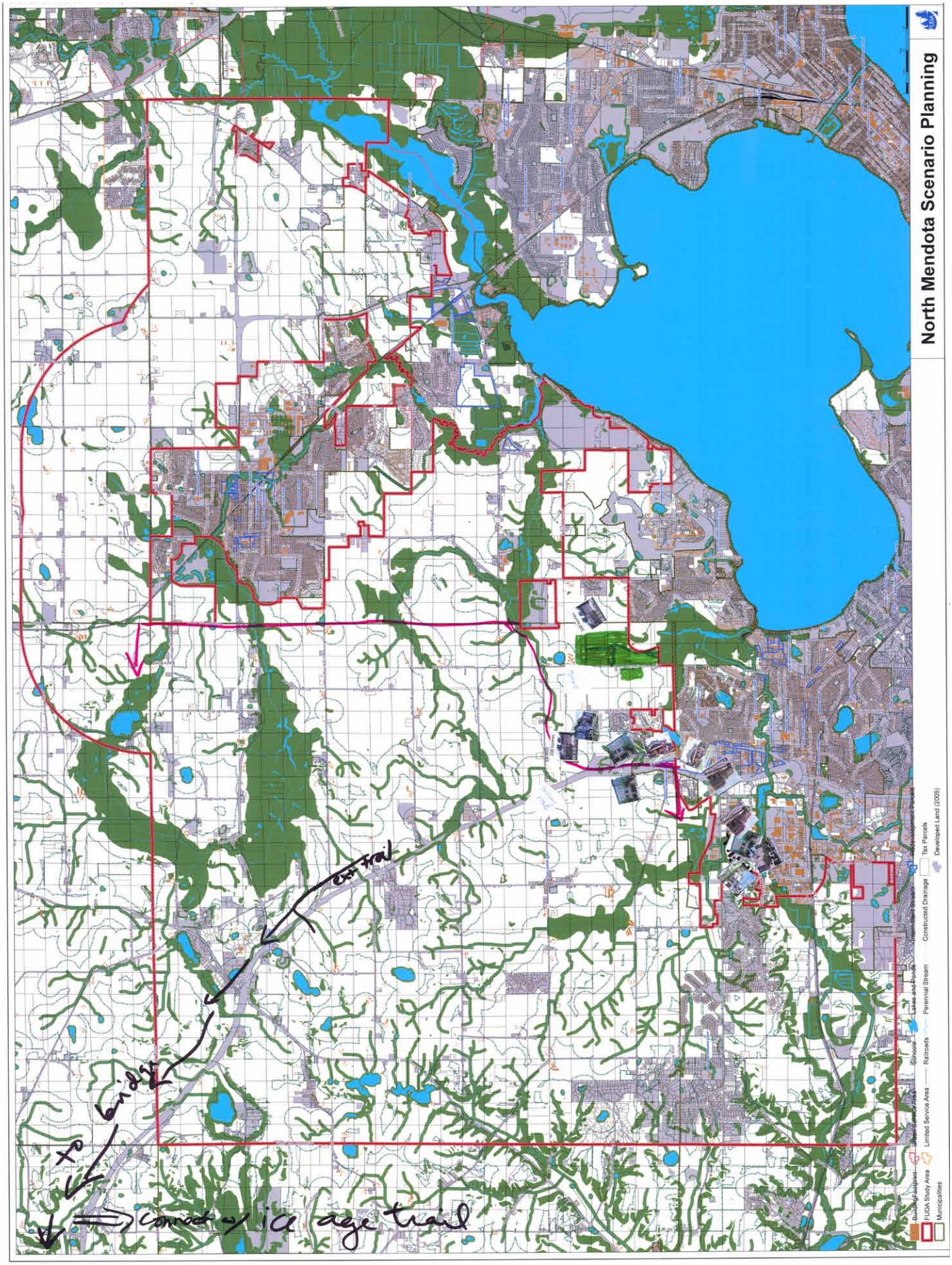

North Mendota Scenario Planning
FUDA Study Area
Municipalities
Urban Service Area
Limited Service Area
Schools
Tax Parcels
Interstate
US Highway
State Highway
County Highway
Local Road
Named Private Road
Ramp
Railroads
Lakes and Ponds
Perennial Stream
Intermittent Stream
Constructed Drainage
Redevelopment Parcels
Developed Land (2005)
Amenity Area
Corridor Area
Stewardship Area

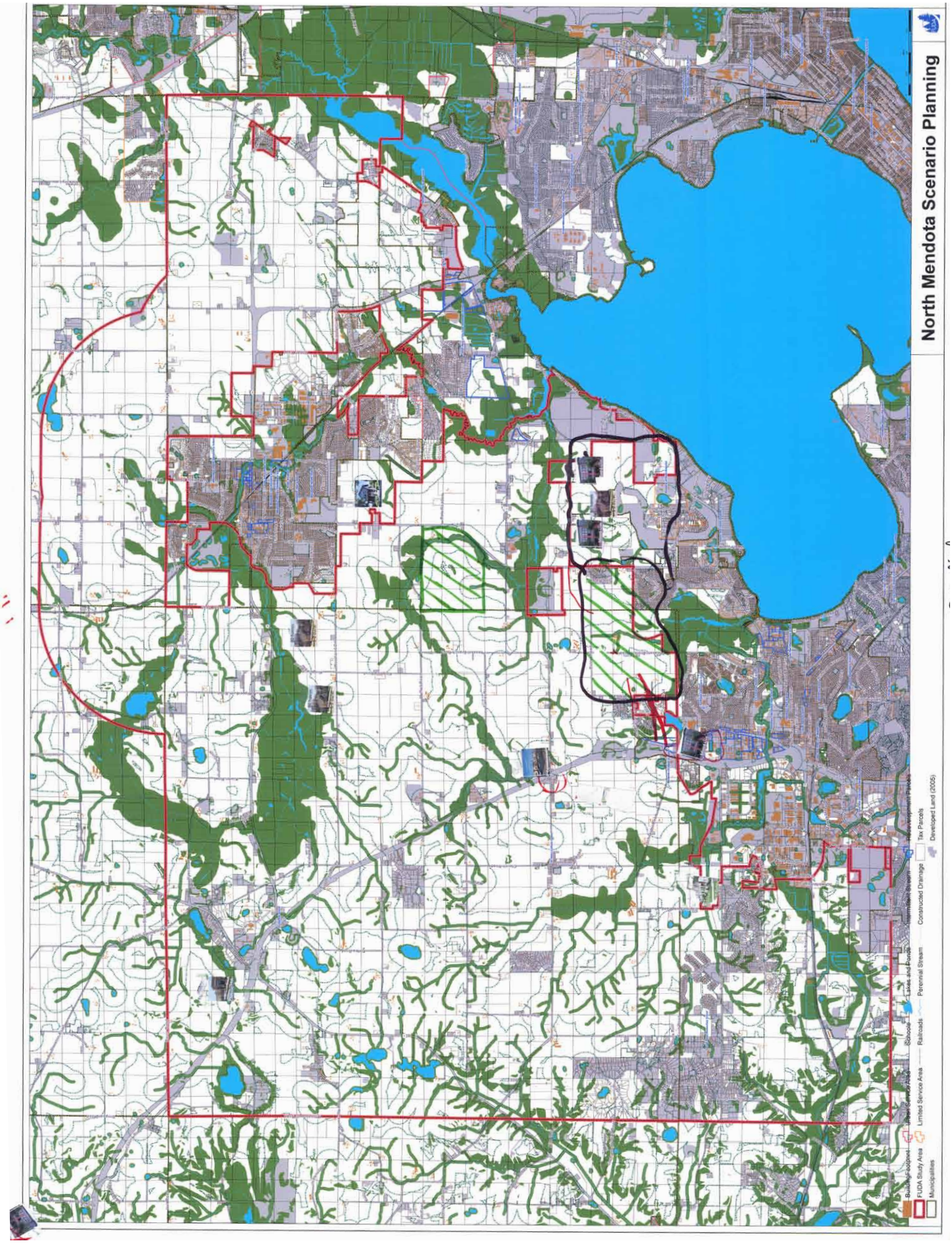

North Mendota Scenario Planning
Bike Path
BuildingFootprint
Developed Land (2005)
Redevelopment Parcels
Tax Parcels
Intermittent Stream
Constructed Drainage
Lakes and Ponds
Perennial Stream
Schools
Railroads
Urban Service Area
Limited Service Area
FUDA Study Area
Municipalities


North Mendota Scenario Planning
FUDA Study Area
Municipalities
Urban Service Area
Limited Service Area
Schools
Railroads
Lakes and Ponds
Perennial Stream
Intermittent Stream
Constructed Drainage
Redevelopment Parcels
Developed Land (2005)
Bike Path
BuildingFootprint


North Mendota Scenario Planning
Bike Path
Building Footprint
Developed Land (2005)
Redevelopment Parcels
Intermittent Stream
Constructed Drainage
Lakes and Ponds
Perennial Stream
Urban Service Area
Schools
Railroads
Limited Services Area
FUDA Study Area
Municipalities


North Mendota Scenario Planning
LIGHT IND.
BIKE TRAIL
LIMITED SERVICE AREA
FUDA Study Area
Municipalities
Urban Service Area
Limited Service Area
Schools
Railroads
Lakes and Ponds
Perennial Stream
Intermittent Stream
Constructed Drainage
Redevelopment Parcels
Developed Land (2005)
Bike Path
BuildingFootprint


North Mendota Scenario Planning
Developed Land (2005)
Tax Parcels
Constructed Drainage
Perennial Stream
Railroads
Limited Service Area
FUDA Study Area
Municipalities
trail
bridge
connect w/ ice age trail


North Mendota Scenario Planning
Tax Parcels
Developed Land (2005)
Constructed Drainage
Perennial Stream
Lakes and Ponds
Schools
Railroads
Limited Service Area
FUDA Study Area
Municipalities

Respondent's Community	First Choice Scenario	What do you like about your first choice scenario?	Other Comments
Middleton	Compact	Non auto centric - better for elderly, health	promotes community and interactions among neighbors, neighborhoods and communities
Middleton	Compact	more conservation of open space	
Middleton	Compact	Easier neighbors; open spaces	More redevelopment than other scenarios
Middleton	Compact	Like having a downtown/commericial area you can go to and walk around to get all shopping done.	
Middleton	Compact		Restrict development. Preserve the land.
Middleton	Compact	protection of open space; dense development	
Middleton	Compact	More multifamily housing, more compact, reduced driving, preserved open space	
Middleton	Compact	Protect open areas	I think we need to protect farmland and open spaces. Once they are gone, that's it. Focus on re-developing areas that have fallen "out of favor" rather than move into new areas just because they are new.
Middleton	Compact	Appears to be the most sustainable over time	
Middleton	Compact	Protection of environment and livability for older citizens	
Middleton	Compact	farm land protection, open space, protection of groundwater, exercise choices	I like the consideration of protecting Lake Mendota's water source. I opportunities for recreation and outside experiences. I like the lower infrastructure costs of plan C. I like the idea of living independently here in Middleton when I am older. It seems balanced between all the needs.
Middleton	Compact	More natural environment preserved and higher property tax base	The way I read the comparisons below, C scored best for every aspect considered.
Middleton	Compact	More sustainable with much less negative impact on the environment. Better public cost/benefit ratio.	Scenario C provides the most sensible, sustainable model. Allows controlled yet reasonable development but maintains the environmental character that makes Middleton a great place to live. Does the most to protect the Pheasant Branch Conservancy and allow for future trail expansion linking Pheasant Branch and Governor Nelson State Park.
Middleton	Compact	The diversity it would create in choices of lifestyle: there is already much development like scenarios A and B inside or near the study area.	
Middleton	Compact	It provides most environmental preservation and is least wasteful of resources.	
Middleton	Compact	green space preservation and alternative transportation options	
Middleton	Compact	environmental protection, variety of transportation, livability for older	

Respondent's Community	First Choice Scenario	What do you like about your first choice scenario?	Other Comments
Middleton	Compact	Like the protection of land, the infill development, the walking and biking opportunities, the increased opportunity for physical activity, and the independence for the +65 age group. Most important is the protection of open land for small farms and community agriculture and preserved parkland, in particular the preservation of open spaces for potential trails for skiing and biking which could connect communities	do not like the residential development of scenario B along Pheasant Branch Road. I much prefer that area to open space. I don't like the commercial development in the area of Pheasant Branch Road and CTH K. I really think that should wait until the North Beltlline corridor is developed and put commercial development along that corridor. It is premature to have commercial development where it is shown in all 3 scenarios. We don't want to bring traffic into that area where I prefer to see preservation of land.
Middleton	Compact	More to enjoy in the same amount of land. More walkable.	
Middleton	Compact	It's the best long term approach to address future health and well being of our community.	
Middleton	Compact	Environmental conservation and accessibility, and affordable housing are important.	
Middleton	Compact	Connectivity of streets & paths (ped, bike, carts & transit)	
Middleton	Compact	There should be energy savings along with preservation of open space	
Middleton	Compact	health and environmental benefits	
Middleton	Compact	more urban-y, more to do, less wasted space, less strip malliness	
Middleton	Compact	More effecient, easier transportation, on environment.	
Middleton	Compact	Better transport choices; affordable; increased human interactions	
Middleton	Compact	Less sprawl, more outdoor activity possible, less pollution from car emissions	
Middleton	Compact	best for environment	
Middleton	Compact	more options: transportation, housing, ages, conservancy attention	
Middleton	Compact	Less pollution, environmental preservation, multi-modal transporation options	Redevelop existing urban centers in Middleton and Waunakee for mixed-high density use (residential/retail-business). Dense urban cores will help reduce dependence on automobiles and reduce related pollution. Open space and protected water supplies are key for quality of life. A boost in yearly taxes would be worth adding additional open space. Quality of life features would be valuable in attracting businesses that required high skill work forces.
Middleton	Compact	density, min need for car, public spaces scattered throughout	physical activity, likelihood that aged can stay in their homes because they can walk to shopping, likelihood that neighborhood groups will form - people will have more contact with each other.

Respondent's Community	First Choice Scenario	What do you like about your first choice scenario?	Other Comments
Middleton	Compact	the additional environmental protections; elderly access; farmland preservation	
Middleton	Compact		We need preserve as much land for environmental protection and farming as possible.
Middleton	Compact	More preservation of open areas	
Middleton	Compact	Will allow more development with keeping our beautiful enviornment in mind	
Middleton	Compact	If natural and farm lands have to be taken for development, the compact character concept preserves the most land and it offers the best chance for a non-automobile-based transportation arrangement, and is better in pretty much every way.	The Dispersed Character plan is a terrible waste of resources across the board. It is not a good direction for Middleton and would be a detriment to those of us who live in a part of town that would be strongly affected by the development.
Middleton	Compact		Compact is more sustainable
Middleton	Compact	more open areas	
Middleton	Compact		Best scenario in all respects; to continue our present c ourse of dispersed development is wrong in every regard
Middleton	Compact	Preservation of Pheasant Branch Conserv Park and Road	
Middleton	Compact	adequate level of density	
Middleton	Compact	Efficiency, highest tax potential	
Middleton	Compact	True neighborhood community is possible with limited environmental impact	
Middleton	Compact	More preservation of open space and farmland	The dispersed plan would be so disruptive to the quality of the land and water.
Middleton	Compact		Farmland - greater percentage remains as is.
Middleton	Compact	Greater protection of natural resources and human health, more open space; concern about development of Pheas. Brnch Spgs recharge area. Put new housing out at Green way Station near bus line!	Very concerned about residential development on the Pheas. Branch Spgs recharge area. Strongly suggest putting new housing out at Green Way Station near bus line, stores, shops, businesses with trails that connect to downtown, conservancy, community(s), university, etc.!
Middleton	Compact	More environmental protection; less pollution.	
Middleton	Compact		help elderly be more independent
Middleton	Dispersed	Provides for more of a rural feeling - clearly not urban/city	
Middleton	Dispersed	gives greater sense of privacy less noise pollution	
Middleton	Dispersed	Gives more of a natural feel, not cramped and less concentrated pollution - noise and air	The compact scenarios seem like there would be more run off and to much hard surface in one concentrated area. I also fee this survey is not really allowing people to make their own decision it is very slanted to one side and is written to make the decision for the survey taker. Don't assume we are all that dumb that we can't think for ourselves. To much one side opinion and it is distracting.

Respondent's Community	First Choice Scenario	What do you like about your first choice scenario?	Other Comments
Middleton	Dispersed		Assumptions appear to be taken from Soviet style command and control by central planners- the central committee approach of knowing the future leaving little room for innovation or the acceptance of radical changes in individual transportation- biased towards mass transit controlled by unelected bureaucrats
Middleton	Dispersed		None of the choices are suitable, people are not invested in community.
Middleton	Dispersed		Models are biased towards Options A and C.
Middleton	Public Outreach		Unfortunate that Bishops Bay expansion is a forgone conclusion. Would have liked that discussion to be part of this larger one.
Middleton	Public Outreach	Compact Development near Middleton. Maintained space. Reasonable street/development plan.	
Middleton	Public Outreach	Fits with the current character of the area	
Middleton	Public Outreach	Least extreem	
Middleton	Public Outreach	Balance for all parties	Sadly, none of these scenarios have more schools indicated and how we'll pay for them. Building new houses is great, but not if the schools aren't able to handle new students. I also have concerns about increased traffic. I see what's happened on Cty M to Verona since living in Verona in the mid-90's and I hope we can avoid that here particularly on Cty Q.
Middleton	Public Outreach		The least impact on evironment, the better. Urban sprawl is not an option.
Middleton	Public Outreach	Fits the character of the area. Would blend in to existing development.	Option 2 is by far my least favorite. It appears to be too "suburban sprawl" like, and that is not what Middleton/Waunakee should be.
Middleton	Public Outreach	Seems to strike the best balance to meet the needs of the larger population.	
Middleton	Public Outreach	Design is compact, but not too dense. Also, the revenue per person is higher than my #2 choic3.	
Middleton	Public Outreach		I would like to see more bigbox options. I dont like to drive 10-20 miles to find a inexspensive place to buy food/lumber/cloths. Its an option vs little stores that may not have everything in one stop.
Middleton	Public Outreach		Would not prefer to live so close to neighbors, but value land preservation.
Middleton	Public Outreach	It's a good middle ground between B & C- not too spread out but not overly compact either.	
Middleton	Public Outreach	The correct blend of B and C. Not extreme to either side.	

Respondent's Community	First Choice Scenario	What do you like about your first choice scenario?	Other Comments
Middleton	Public Outreach	Has a good balance of green space and housing not too crowded look.	I prefer the Outreach version because I do think it keeps with the current feel of the city and towns.
Middleton	Public Outreach	Reasonable amount of personal living space	
Middleton	Public Outreach	mix of character	
Middleton	Public Outreach	Offers the best mix of all three options.	
Middleton	Public Outreach		Fix our streets, then bicyclists benefit too.
Waunakee	No Answer	the all suck	the only reasonable option is to designate the road north of waunakee.to much time was wasted in this process and the job loss when puting the road in your current area is completly unacceptable but right in line with this areas liberal base
Waunakee	No Answer		None of the above options.
Waunakee	Compact	It uses less resources and has less carbon emissons	
Waunakee	Compact	It's better for the environment.	
Waunakee	Compact	preserves open space	decrease driving required
Waunakee	Compact	better sense of neighborhood-greater density	
Waunakee	Compact	preserves open land, and healthier for people	Development decisions should limit the amount of urban sprawl
Waunakee	Compact	It is more environmentally friendly, and there is the oppertunity for more housing,	My one concern for Option C is having small yards for young children.
Waunakee	Compact	I like how it will help the air pollution problem	
Waunakee	Compact	Offers the most overall benefits and the least environmental impacts	
Waunakee	Compact	It is the best of both worlds.	
Waunakee	Compact	preservation of natural areas	I have traveled extensively in the midwest and found that very few communities are walkable. I believe a walkable community is much more user friendly. It also encourages residents to get involved and shop locally.
Waunakee	Compact	Less costly government, more efficient, preserves ag.	C reduces public cost to support an aging population. Easier on families.
Waunakee	Compact	preserving open space and agricultural land; encouraging strong neighborhood relationships	
Waunakee	Compact	Lowest environmental impact and preserve small/agricultural community	
Waunakee	Compact	I like how the scenario decreased the amount of undesireable things, like pollution. Pollution and subjects of the like are very important.	Scenario C seems to be a very positive change and expansion.
Waunakee	Compact	land use/preservation	
Waunakee	Compact	Promotes best environmental long range sustainability, especially farmland and pollution	

Respondent's Community	First Choice Scenario	What do you like about your first choice scenario?	Other Comments
Waunakee	Compact	Relatively improved energy efficiency, transit capability, and open space preservation.	I question whether more and more driving is even plausible in the "long term" under any scenario. Looking forward, we all need to face practical constraints: fuel availability (and costs), household budgets, traffic congestion, and finite minutes per day. This region desperately needs high quality transportation alternatives at the regional scale if it is to pursue any new development beyond infill. New fringe and leapfrog developments - however compact they may be - will fail or become a detriment to the regional housing market if they, too, are designed predominantly for cars and not equipped with adequate transit service.
Waunakee	Compact	Allow's better access to businesses by walking or biking, preserves more land for agriculture	
Waunakee	Compact		don’t like number of new homes
Waunakee	Compact		slower growth
Waunakee	Compact		slower growth
Waunakee	Dispersed	Not too close	
Waunakee	Dispersed	Freedom and Privacy	We are a suburban community not a city. We don't want to walk we want to drive our cars. If you want compact living go to Madison or Milwaukee.
Waunakee	Dispersed	less traffic on road used between Waunakee and Madison/Middleton	
Waunakee	Dispersed	Space - I do not like living on top of my neighbors.	
Waunakee	Dispersed	Less crowded,less burden on schools, higher property values, more suburban feel and look.	Downtown main street in Waunakee needs to have strict building and architectural guidelines and a remodeling/redevelopment program. Currently it is not very prosperous looking and does not attract retail shoppers.Needs a total updating.
Waunakee	Dispersed		need hwy 19 bypass
Waunakee	Public Outreach	it's right in the middle... not too packed, not too spread out	
Waunakee	Public Outreach	Homes still provide the people with comfortable living space and it is much better than scenario B in terms of cost and efficiency aspects.	
Waunakee	Public Outreach	Walkable, bikeable communities with more diverse development and less environmental impact and more undeveloped open space.	
Waunakee	Public Outreach	Balance	
Waunakee	Public Outreach	least offensive	Plan to leave the county for retirement anyway. Dane county is so messed up. Madison controls everything. Born and raised here, but don't plan to stay. Taxes are outrageous! What a mess that's been made of this once great place.

Respondent's Community	First Choice Scenario	What do you like about your first choice scenario?	Other Comments
Waunakee	Public Outreach	Logical controlled growth as chosen by the people through planning and input	scenario b is too costly. A and C are much better and fairly similar. Since A is current plan driven and confirmed by public input, it is my chosen scenario.
Waunakee	Public Outreach		lower taxes
Waunakee	Public Outreach		individual property rights
Westport	Compact	all the forward thinking indicators on which it leads: less air pollution, greater land use mix, mor physical activity per person, etc.	This non-sprawl version has so many social benefits inaddition to the land & resource benefits!
Westport	Compact	Most important to me is the reduced carbon emissions, and the protection of undeveloped land. I also look forward to an increase in physical activities and alternate transportation methods, all of which become more available with a compact design.	
Westport	Compact	More efficient density, better suited for high oil prices, least agricultural land wasted	
Westport	Compact	Seems to preserve more open space & separation between communities.	
Westport	Compact	Less conversion of farm land.	
Westport	Compact	best on almost every indicator	
Westport	Compact	open/protected land acreage	I
Westport	Compact		I like straighter street grids than all of these.
Westport	Compact		Compact.
Westport	Dispersed	more open/green space at more places than option C	
Westport	Dispersed		People will drive everywhere even in a more compact neighbhorhood.
Westport	Dispersed		I am not a homeowner or renter, but a student.
Westport	Dispersed		We have outgrown the school already.
Westport	Dispersed	more space	
Westport	Public Outreach		I would have pick C, but it isn't really the America dream of owning your own home and not sure about noise issues and the world we live in with everyone complaining about the other person.
Westport	Public Outreach	Preservation of open spaces	I believe current route for parkway will detract from our neighborhood and we will likely relocate away at that time.
Westport	Public Outreach	Seems a more reasonable approach and easier for people to accept	
Westport	Public Outreach	A is an ideal mix of the 3 options and similar to our current environment.	
Westport	Public Outreach	more prsonal space	
Westport	Public Outreach	middle-of-the road values on scales provided	
Westport	Public Outreach		Maintaining more rural and less dense character of area is important. Happy medium of the 3 options.

Respondent's Community	First Choice Scenario	What do you like about your first choice scenario?	Other Comments
Westport	Public Outreach		Not a homeowner or renter.
Springfield	Compact		more independence
Other	Compact	I think we need to preserve the length of trips(gas and time) for future generations. We are too dependent on foreign oil.	We can't spread out at the current rate indefinately. We will need the farmland as our population increases.
Other	Compact	Increased physical activity and access for walking/biking	
Other	Compact	Less CO2 emissions, less infrastructure costs	Why no mention of public transit?
Other	Compact	How little driving you need to do and the commercial areas.	I like the walkable busier feel of the commercial areas in C but I like the more community feel of the housing in A.
Other	Compact	better for the environment and least expensive long term	
Other	Compact	walkability, less driving, more greenspace options	
Other	Compact	C provides the most sustainable future.	
Other	Compact	Max. preservation and more sq. ft. for development	
Other	Compact	Most environmentally friendly choice.	
Other	Compact	Neighborhoods	
Other	Compact	It reduces amount of farmland that is lost while investing in redeveloping underused land in the village.	The compact scenario is the most efficient for meeting multiple important goals (everything from protecting high-quality farmland to liviablity for seniors).
Other	Compact	Keeping ag land in production	Makes a person stop and think about the extended future not just 2-5 years from now
Other	Compact	Works like a charm in California - lots of public use/park space	Keep all he green mumbo jumbo about alternative energy sources (other than geothermal) out of this. Solar and wind are incredibly inefficient and defeat any gains you might make in infrasructure cost. Prime goal is to chew up less land for housing.....
Other	Compact		live in vienna
Other	Compact		Please, no more "B" developments.
Other	Compact		more open land
Other	Dispersed	More open space for homes	
Other	Dispersed		Option A is between Options B + C.
Other	Public Outreach		Online survey does not work.

CRANES

Preliminary Requests for North Mendota Pilot Sub-FUDA ~ 16 SEP 2011

1. There should be an effort within the North Mendota Sub-FUDA study area to identify the larger remaining unfragmented or roadless parcels of natural resource lands and their potential for expansion to achieve ecological stability or sustainability, as well as an analysis of how to protect the viewsheds and soundscapes of these areas. There should also be an analysis of infiltration/recharge areas, similar to the micro-mesh study done for Pheasant Branch. I.e., for natural areas, there should be analyses similar to the effort by the RPC Pilot Sub-FUDA staffers to analyze and map agricultural lands for basic soils, farming types (e.g., appropriateness for row crops vs livestock) and contiguity.

2. Similar to #1, there should be an analysis of cultural landscapes and protection of their viewsheds/soundscapes. During the public participation phase, there should be an invitation to nominate additional areas of the study area for protection of their viewsheds/soundscapes. Dane County Example: Mt. Horeb (Vandewalle Associates).

3. Public participants should be offered a scenario that accommodates the DOA's 2010 USA census-based population forecasts for 2035 within the existing NUSA footprint. Similarly, there should be another scenario accommodating the population forecast for 2050. Both of these backcasting scenarios should include the resulting residential and commercial densities, as well as cost/benefit analyses (with data broken out for both municipalities and households).

4. There should also be an analysis of foreclosures and shadow stock, as well as realty demand by type, based on demographic trends and market studies. Additionally it should established whether or not fuel prices are affecting residential realty or commercial/business site decisions in the outlying municipalities of the Capital region. Additionally, there should be a USA 2010 census-based analysis of commuter traffic flow to/from the North Mendota Sub-FUDA study area, for Dane and adjacent counties.

5. There should be a cost/benefit analysis of the proposed North Mendota Parkway when compared with transit options (e.g., commuter rail, BRT, etc.) including the commuter rail option from Middleton to Downtown Madison to Sun Prairie, as proposed in the Dane Transportation 2030 study.

CRANES
Preliminary Requests for N. Mendota Pilot Sub-FUDA ~ 15 SEP 2011

Below are requests submitted by CRANES and staff responses (indented).

> Staff requests that CRANES respect the local FUDA process by calling it FUDA planning instead of "Sub-FUDA."

1. There should be an effort within the N. Mendota Sub-FUDA study area to identify the larger remaining unfragmented or roadless parcels of natural lands…

> Staff: this was done in the Scenario Base Map showing the Corridor, Stewardship and Amenity areas, although the presence of roads within these areas was not identified specifically on the map itself, these areas can be pulled out and discussed for preservation in the FUDA plan.

and their potential for expansion to achieve ecological stability or sustainability, as well as an analysis of how to protect the viewsheds and soundscapes of these areas.

> Staff: Staff is conducting an ecological investigation of the entire planning area. If something looks like it needs to be protected ecologically, staff will flag it. We do not have the capacity for further analysis for the first ecological inventory of FUDA areas. More detail may be possible with updates of these FUDAs.

There should also be an analysis of infiltration/recharge areas, similar to the micro-mesh study done for Pheasant Branch. I.e., for natural areas, there should be analyses similar to the effort by the RPC Pilot Sub- FUDA staffers to analyze and map agricultural lands for basic soils, farming types (e.g., appropriateness for row crops vs livestock) and contiguity.

> Staff: A detailed, telescoped study such as was done for the Pheasant Branch springs is beyond the scope of our current work. With the update of the groundwater model, better modeling capability will be available. However, a detailed study would only be justified for specific resources, and that would be contingent on the availability of funds and someone to do this study as a research project.

2. Similar to #1, there should be an analysis of cultural landscapes and protection of their viewsheds/soundscapes. During the public participation phase, there should be an invitation to nominate additional areas of the study area for protection of their viewsheds/soundscapes. Local Example: Mt. Horeb (Vandewalle Associates).

> Staff: We will try to incorporate viewshed identification into scenario planning. GIS Specialist is assessing resource requirements for conducing a GIS-based viewshed analysis, similar to that of Mt. Horeb or New Glarus.

3. Public participants should be offered a scenario that accommodates the DOA's 2010 USA census-based population forecasts for 2035 within the existing N. Mendota footprint.

> Staff: This will be done for scenario planning.

Similarly, there should be another scenario accommodating the predicted population for 2050. Both of these backcasting scenarios should include the resulting residential and commercial densities, as well as cost/benefit analyses with data broken out for both municipalities and household.

> Staff: A build-out scenario will be more useful than using highly uncertain 2050 population projections. Staff will try to incorporate a build-out scenario within the current North Mendota footprint and study area.

4. There should also be an analysis of foreclosures and shadow stock, as well as realty demand by type, based on demographics trends and market studies.

> Staff: Current foreclosure data is available from MLS. Foreclosure data can also be retrieved by identifying a time period (like how many foreclosures over the last 30 days) in a search of Wisconsin Court records in a couple hours. Vacancy rate comparisons can be made between 2000 and 2010. We are unaware of a source for local shadow stock information. Comparisons over time and between other areas may be needed to determine significance of local numbers, which would require further time and investigation.
>
> Presumably, the purpose of examining foreclosure and shadow rates is because they may indicate a lower growth rate than projected. However, there are many factors that could influence the rate of future development in either direction that should also be considered if the question of growth trends influences is considered.
>
> Regarding realty demand by type, staff has conducted a demographic analysis for Dane County of housing demand by age groups. A white paper on this topic is available.

Additionally it should established whether or not fuel prices are affecting residential realty or commercial/business site decisions in the outlying municipalities of the Capital region.

> Staff: This is beyond staff -capacity and FUDA scope.

Additionally, there should be a USA 2010 census-based analyses of commuter traffic flow to/from the N. Mendota, for Dane and counties.

> Staff: Staff can ask MPO for most recent commuting data as relevant to FUDA areas.

5. There should be a cost/benefit analysis of the proposed North Mendota Parkway when compared with transit options (e.g., commuter rail, BRT, etc.) including the commuter rail option from Middleton to Downtown Madison to Sun Prairie, as proposed in the Dane Transportation 2030 study.

> Staff: This is beyond staff capacity and FUDA scope.

Supplement C: Scenario creation and process

A major element of the FUDA process was to create and evaluate future growth scenarios. The scenarios are intended to provide public participants and the steering committee with information about the positive and negative consequences of future growth to make more knowledgeable decisions about preservation and growth options in their communities.

The scenarios were derived from a land demand analysis that was created by the staff team. This used a similar methodology as CARPC's state approved land demand methodology for urban service areas, though it differed in a couple significant ways. First, it utilized Wisconsin Department of Administration (DOA) population projections at the municipal level (CARPC's USA population projections, which frequently cross municipal lines, are calculated using regression-based formula based on county-wide growth). Second, historic residential development patterns were evaluated to determine how much of the municipal growth would urban (served by sewer) and how much would be rural. The urban population combined with recent residential density trends and non-residential development patterns yielded the baseline land demand.

After initial demands were established, a redevelopment inventory established the quantity of new space that could be accommodated on sites identified in existing redevelopment plans. This value was then factored based on existing site characteristics, such as assessments, the amount of built space on the site, and the age of buildings, to establish an estimated amount redevelopment that would be likely. The redevelopment was then translated into acres required for the equivalent amount of greenfield development and deducted from the overall land demand for greenfield development.

Prior to scenario evaluation, two rounds of public involvement were used to gain community input on future growth. The first round utilized a visual preference survey, where participants rated and discussed various development images. In the second round, participants created their own scenario by placing icons representing a specific amount of new development on the map where they deemed appropriate.

Initially, five different scenarios were envisioned, including baseline/trends, adopted plans, public input, dispersed and compact scenarios. They would all utilize an equal population and amount of commercial and other non-residential development, but would vary the density, levels of environmental protection, amount of open space, and other factors. The number of scenarios was eventually reduced to three (Adopted Plans/Public Input, Compact and Dispersed Characters) because of the difficulty in comparing multiple scenarios.

The three scenarios were developed based on the existing future land use plans, comments made during public outreach meetings, and input from the staff team and steering committee. Scenarios contained land use designations for every parcel within the defined scenario evaluation area (note the scenario evaluation area differed from the FUDA study area). A range of residential districts were used in each scenario, and each district defined density for single family, multifamily and their mix (ie % of all residential units that are single family). Mixed-use, commercial and industrial areas were also located and varied in each scenario. The amount of open space and environmental protection varied in each

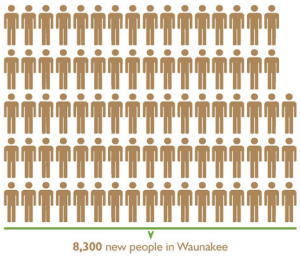
scenario. Certain scenarios featured community separation areas, expanded environmental corridors and other areas that could be appropriate for preservation.

- Public Outreach Scenario: This scenario closely followed residential density patterns that emerged from participants responses to the visual preference survey held in phase 2 of the public participation plan. Middleton's and Westport's densities were slightly higher than densities of their current plans or recent trends, while Waunakee's were slightly lower. Overall residential density averaged to 7.3 units per acre (net) with 58% single family housing in the Central Urban Service Area (Middleton and Westport) and 4.2 units per acre (net) and 74% single family in the Waunakee Urban Service area. This scenario also includes preserved areas to provide community separation.
- Compact Character Scenario: This scenario takes a more compact approach to future growth, using higher density residential and commercial development and more areas that would be classified as mixed-use. Placing more residence in closer proximity to frequently visited destinations, including commercial areas, parks, schools and natural areas, creates a more walkable/bikeable pattern and increased the potential for improved current and future transit service. Residential density averaged 7.8 units per acres and the portion of single family units decreasing slightly to 58% in the Central USA. Likewise in the Waunakee USA, residential density increases to 5.8 units per acre with the rate of single family also dropping 1%. Commercial density is assumed to increase from an assumed FAR of 0.2 to 0.28, allowing for a greater amount of commercial space per acre. In addition, the amount of redevelopment projected to occur is assumed to increase by 50% because policies will encourage reutilization. Commercial redevelopment is an especially important focus for Middleton, which has a shortage of land planned for commercial development (vs projected demand) and will have to rely on redevelopment to capture this growth. The Compact Scenario includes a larger community separation area at the periphery of the communities and incorporates a potential environmental corridor expansion area that would protect environmentally sensitive area beyond environmental corridors.
- Dispersed Character Scenario: This scenario shows a more dispersed future development pattern, with lower densities and fewer areas that mix uses. The residential density drops to 3.6 and 2.6 units per acre (which includes multi-family) in the Central and Waunakee USAs, and the portion of single family homes increase to 61 and 79% respectively. Commercial density decreased to an assumed FAR of .16 from .2). The scenario also sees a 50% decrease in the amount of redevelopment, as the density required for these project would not be consistent with dispersed community growth. No additional preservation efforts are contained in this scenario beyond environmental corridors.



DECIDE YOUR COMMUNITY'S FUTURE

POPULATION 2035- Where will they go?



WELCOME FUDA PLANNING POLLERS

The Future Urban Development Area (FUDA) project is a planning process in the City of Middleton, Village of Waunakee and Towns of Westport and Springfield, with the Capital Area Regional Planning Commission. The effort studies urban growth (served by sewer and water) for the coming 25 years.

MAKE YOUR OPINION COUNT

Please review scenario A, B, & C images, descriptions, maps, and impacts and consider how you might rank the options. After viewing the information, submit your ballot to:

1. Rank the 3 scenarios
2. Name 2 reasons you ranked your #1
3. Insert the ballot in the box
4. Spread the word!

FUDA NORTH MENDOTA

COMPARE SCENARIOS & OUTCOMES

Scenarios A, B, & C offer trade-offs in land development and preservation. For example, B leaves more space for yards and parking, making it hard to protect open land and encouraging people to drive more. C brings homes closer together, making is easier to protect open land and allowing for walking, biking, transit, and driving, lowering travel costs and reducing pollution. And A is somewhere in between B & C.

		A	B	C
LAND EFFICIENCY	Acres developed per person	more efficient 0		less efficient .25
	Amount of redevelopment	0 homes		800 homes
ECONOMY	Yearly tax revenue per person	$700		$1,000
	Infrastructure cost per person (one time)	$10,000		$25,000
TRAVEL	Change in driving miles	-10 % decrease	No Change	+10 % increase
	Trips made by walking or biking	20,000		100,000
ENVIRONMENT	Air pollution impact (lbs/person/year)	-5 lbs decrease	No Change	+5 lbs increase
	Carbon emission change (lbs/person/year)	-500 lbs decrease	No Change	+500 lbs increase
	Open/protected land acreage	10,000 acres		20,000 acres
FARMLAND	Farm land converted to developed land & the approx. associated annual farm revenue lost	$5,000,000 750 acres		$15,000,000 2,500 acres
HEALTH	Physical activity level	less		more
	Livability for persons 65+ yrs	dependent		independent

A B C
Outreach Character
Dispersed Character
Compact Character

A Public Outreach Character

New construction could look like this

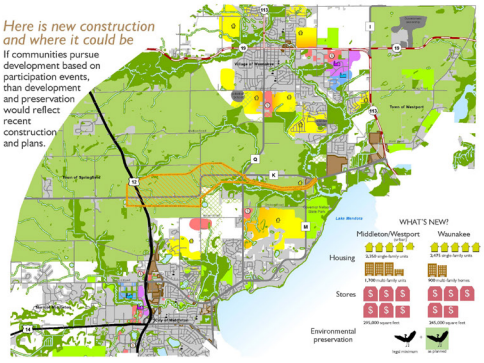
TYPICAL STREET LAYOUT | HOUSING | COMMERCIAL



2rd choice for 61% of participants, highest overall ranking

Here is new construction and where it could be

If communities pursue development based on participation events, than development and preservation would reflect recent construction and plans.



B Dispersed Character

3rd choice for 72% of participants, lowest overall ranking

New construction could look like this

TYPICAL STREET LAYOUT | HOUSING | COMMERCIAL

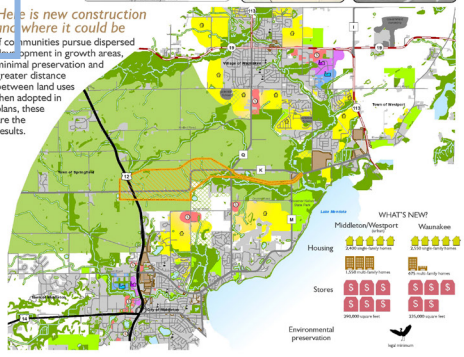


MAP & ICON LEGEND



Here is new construction and where it could be

If communities pursue dispersed development in growth areas, minimal preservation and greater distance between land uses then adopted in plans, these are the results.



C Compact Character

1st choice for 66% of participants, middle overall ranking

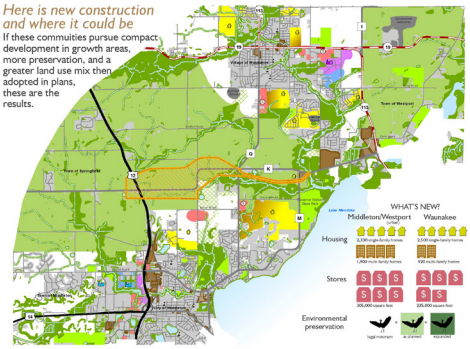
New construction could look like this

TYPICAL STREET LAYOUT | HOUSING | COMMERCIAL



Here is new construction and where it could be

If these communities pursue compact development in growth areas, more preservation, and a greater land use mix then adopted in plans, these are the results.



HOW WOULD YOU RANK OPTIONS A B & C?

Take a pamphlet or few and get others involved.

THANK YOU FROM:

Waunakee | Middleton | Westport | Springfield

Questions? Contact Bridgit Van Bellegehem - bridgitvb@capitalarearpc.org - (608) 266-4637

Additional scenarios were requested in public comment. These scenarios included all projected 2035 growth within the 2012 USA boundary and a build-out using projections out to 2060. The steering committee did not elect to evaluate these scenarios. The official comment and steering committee response are in Supplement B Public Comments.

While the scenarios were being created, a series of indicators were developed to evaluate the potential impacts of future growth. These are the indicators and how they were calculated:

- **Population and Housing:** Population and housing counts are based on Wisconsin Department of administration population projections. In each scenario, a specific residential mix was created, containing single family and multifamily densities and the percent mix of housing type. Both single family and multifamily units had a specific number of residents per units, which was used to calculate the population. The number of residential acres represent the general amount required to reach the population projections, but some small variations between the scenarios did occur.
- **Acres of Development Per New Resident:** The total amount of land developed per new resident, which includes land used for housing, commercial, industrial, civic/institutional and transportation.
- **Amount of Redevelopment:** Redevelopment potential is estimated on a site-by-site basis, with guidance from existing plans and local staff. The likelihood of redevelopment on each site was evaluated, and assigned a hypothetical to derive the anticipated amount of redevelopment. For example, if a redevelopment site could have a 10,000 square foot building, and has a 50% chance of redevelopment, 5,000 square feet would be anticipated. Different scenarios alter the amount of redevelopment by changing the likelihood of redevelopment, based on the idea that more compact development would accompany policies that encourage greater redevelopment. Middleton also uses an elevated level of redevelopment in its public input scenario to accommodate the commercial demand without identifying additional land for greenfield commercial development.
- **Yearly Tax Revenue Per Person:** Tax revenue is estimated from an average value for each single family and multi-family home and an average commercial and industrial use value per acre. Total revenue is divided by the new population to determine the per-capita revenue. This is not the amount of tax paid by each resident. Rather, a higher revenue per person reflects a greater amount of commercial and industrial uses (residential tax revenue is generally constant).
- **Infrastructure Costs Per Person:** This estimates the costs of new roads, sewer and water lines associated with new development. The amount of new roads needed is based on an analysis of the length of road and housing units in 4,500 census blocks in Dane County. Costs were estimated by reviewing several infrastructure replacement projects in the City of Madison.
- **Commercial Space and Stores:** Future commercial space is estimated in a couple of ways. First, the communities' future land use plans identify where commercial is to go and the amount of acres it will occupy. An average ratio of commercial building space to land area (known as floor area ratio or FAR) estimates building square feet. This ratio changes between the scenarios; more building space on the same amount of land is used in the compact scenario and less building in the dispersed scenario. Secondly, concepts discussed in existing community plans are used to estimate commercial redevelopment space. Finally, retail space is determined using an average of how much retail each household could support.
- **Jobs:** The total number of jobs is estimated by using employment data reported in the 2007 Economic Census and the number of acres used by employers, including commercial and industrial uses. Increases or decreases in the scenario's commercial space per acre were reflected.
- **Change in Driving Miles and Air Pollution:** The change in driving miles per person is based on findings of multiple studies evaluating how the built environment impacts peoples' driving habits. Generally, these studies conclude that people in more compact neighborhoods drive less because more destinations are closer. Trips in the car are shortened and some can be made by walking or biking. The reduction/increase in driving miles is used to calculate the impact on air pollution.

- **Yearly Water Use:** Yearly water use measures the total water use of the community, attributable to residential, commercial and industrial uses. This is based off water usage reports submitted by local utilities to the Public Service Commission. The statistic is presented per-resident though much of the water is sold to commercial and industrial users, not residential; it is not the amount of water used by each person. Greater water use will generally reflect a greater amount of commercial and industrial users. Water use is essentially the same in all scenarios since they have the same population.
- **Open/Protected Area:** The scenarios have a varying levels of environmental protections in them. All include existing legal standards that protect environmental corridors and other sensitive areas. The Adopted Plan and Compact scenarios require less land per person, and therefore are able to incorporate a community separation area that is envisioned to remain open in the future. The Compact scenario also includes recommendations to incorporate additional lands into the legally-protected environmental corridor, based on the findings of a restoration biologist.
- **Farmland and Annual Agricultural Revenue Lost:** This measure the amount of farmland consumed by future development and the estimated revenue loss attributed to that farmland. Revenue loss is estimated by the average revenue per agricultural acre in Dane County.
- **Health:** Physical Activity and Livability (independence) for persons at or above 65 years of age. These summary indicators were prepared by staff at the Wisconsin Department of Health. Several aspects of the scenario are incorporated into these indicators, including factors that encourage physical activity and overall well-being (such as the ability to walk between destinations, proximity of parks and open spaces, etc.).

North Mendota Future Urban Development Area Health Impact Assessment

Prepared by:

Wisconsin Public Health Association Health Impact Assessment Section

Denise Attard-Sacco, Paula Tran Inzeo, Colleen Moran

Contributors: Megan Christenson, Marjory Givens, Shelly Feaver Shaw

December, 2012

Executive Summary

Similar to individual and population health, the health of a community is multifaceted and complex. Healthy community design is a comprehensive strategy for shaping and organizing our communities, taking into account the myriad factors, such as policies, plans, and programs, which affect physical and mental health and social well-being. Health Impact Assessment (HIA) are one way to help shape and organize our communities for health, focusing on the complicated intersection between health and social, economic and environmental factors in a systematic way, to see how various policies, plans and programs may positively and/or negatively affect health. One important advantage of HIA is that it can pinpoint and focus on the needs of disadvantaged populations, thus attempting to address some of the health disparities in a community.

The Wisconsin HIA Collaborative, a newly emerging entity and the project lead, in collaboration with Capital Area Regional Planning Commission (CARPC) conducted this HIA in four communities in Dane County, Wisconsin (the city of Middleton, village of Waunakee, and town of Westport and Springfield). The Wisconsin HIA Collaborative is currently composed of nonprofits, academic institutions, government agencies, and residents. The Wisconsin Public Health Association (WPHA) HIA Section, established in March 2011, has played a role in convening and tracking Wisconsin HIA efforts; this was the first HIA demonstation project conducted by the Section and will inform future HIAs conducted by the group. The other partner in this HIA process, CAPRC, was created in 2007 and is charged with the duty of preparing and adopting a master plan for the physical development of Dane County, and maintaining a continuing area wide water quality management planning process in order to manage, protect and enhance the water resources of the region, including consideration of the relationship of water quality to land and water resources an uses.

The six main steps of an HIA were addressed in this rapid HIA process, though because the HIA is a demonstration project, some steps were addressed differently than a traditional HIA. Those steps include: Screening, Scoping, Assessment, Recommendations, Reporting and Monitoring & Evaluation.

During the Screening phase, the goals of the project were outlined, and background research was conducted on the policies being addressed in the HIA. These policies focused mainly on the FUDA process and alternatives and the Capital Regional Sustainable Communities Initiative.

The Scoping phase, due to time constraints, moved forward with the information already gathered. Scoping meetings were held during which the pathway diagram with prioritized health indicators and research question tables were generated. It was at this point

that the project focus prioritized the aging populations and physical activity and obesity as important health issues.

During the Assessment phase, research questions were developed based on the prioritized health areas outlined in the Scoping phase. Despite data limitations both in existing conditions of various health indicators and in lack of information available regarding the three original scenarios, the scenario that best fit each health determinant was discussed and a comprehensive impact analysis is provided ranking each scenario against the various health determinants. Based on these rankings, Scenario C (Compact Character), ranked most highly when graded based on health determinants. The final impact analysis was determined based on the recommended hybrid scenario which was derived from community feedback and created by the steering committee. The recommended hybrid scenario will likely enhance public health through its denser land use plans.

The Recommendations chosen were prioritized based on the specific health issues the communities involved were most interested in addressing: aging populations and physical activity and obesity. The Recommendations were tailored to address the plans outlined in the recommended hybrid scenario and include the following (for full Recommendations, see pgs. 55-56):

- *Physical Activity – Safe Routes to Schools*: To ensure that school children receive physical activity getting to and from school, implement a Safe Routes to Schools program in the communities as mentioned in Further Analysis Areas (FAA), issue 6.
- *Physical Activity – Walking and* Biking: Ensure that Recommendations in Section 6 of FUDA Scenario Overview and Recommendations are implemented (establishing connected streets, sidewalk, bike-path and trail networks that promote walking, biking).
- *Physical Activity – Aging Population*: To facilitate aging in place and encourage physical activity of senior citizens, walking paths and "adult fitness circuits" should be created that incorporate the needs of seniors.
- *Physical Activity & Social Cohesion*: Ensure that as part of the hybrid scenario, social gathering places and open spaces for recreational use are included in the design.
- *Access to Healthy Foods*: The creation of a local food council could encourage more frequent farmers' markets with more local vendors, increasing access to healthy local foods.

- *Access to Primary Care Physicians (PCS)*: Ensure that there are PCPs easily accessible to the aging population and provide transportation services to ensure accessibility.

The HIA report will be disseminated to public health professionals and will be through CAPRC's brochures, posters and public community meetings. The HIA section will create and disseminate a PowerPoint presentation and brief handout to the public through the Wisconsin Public Health Association (WHPA) and its HIA website. The report will be made available to stakeholders as well as the general public who can review and comment.

Because this HIA was a demonstration project, the Monitoring and Evaluation steps are recommendations rather than having been conducted as they would have been if this had been conducted as a traditional HIA.

The HIA process helped inform recommendations for mitigating potentially negative health outcomes and increasing positive health outcome. The HIA process was able to accomplish this by looking at the complicated intersection between health and social, economic and environmental factors in a systematic way. The HIA process also provided these communities with the ability to focus on specific health, aging populations and physical activity and obesity issues, and address health disparities.

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1. Introduction: The Relationship between Health and Community Planning

The U.S. Department of Health and Human Services *Healthy People 2010* report describes a healthy community as one that is, "designed and built to improve the quality of life for all people who live, work, worship, learn, and play within their borders," and in which there are a variety of options available that are healthy, accessible and affordable (CDC, 2009). Healthy community design is a comprehensive strategy for promoting public health and the creation of healthy communities (CDC, 2009). Healthy community design accomplishes this goal through planning, designing, developing, revitalizing, and building our communities with a lens towards health (CDC, 2009). Population health can be improved through healthy community design when comprehensive planning aims to improve physical and mental health, and social well-being.

Health Impact Assessment (HIA) has strong potential to promote healthy community design by sustainably integrating health factors into decision-making processes and fostering multidisciplinary, nontraditional partnerships. According to the International Association for Impact Assessment, an HIA is formally defined as a "combination of procedures, methods and tools that systematically judges the potential and sometimes unintended effects of a proposed project, plan or policy on the health of a population and the distribution of those effects within the population" (Human Impact Partners, 2006). HIA is a multi-step process that draws upon community input, prioritizes health concerns using multiple criteria, and utilizes data to project the health implications of a decision on a population and the distribution of impacts within a community (Human Impact Partners, 2006). HIA offers a flexible framework for timely application to inform proposed policies, plans or projects prior to their execution, placing an emphasis on multidisciplinary, non-traditional partnerships (e.g., land use planning, transportation, business, and environmental experts) and stressing consideration of vulnerable populations and health equity (Human Impact Partners, 2006). Based on the synthesis of the best available evidence, HIA then disseminates recommendations or mitigation strategies to ameliorate the negative and bolster the positive elements of a proposed policy, plan or project (Human Impact Partners, 2006). Finally, HIA entails monitoring and evaluating the utility and influence of the methodology on the decision-making process and health outcomes (Human Impact Partners, 2006).

The root causes of poor health are complex and extend beyond healthcare to a variety of community contextual factors. The UW Population Health Institute estimates that 50% of modifiable health determinants pertain to the social, economic, and environmental context (What Works for Health, 2010). If Wisconsin's communities are to reduce chronic diseases,

promote physical activity, secure access to basic community resources and eliminate health inequities, we must address the complicated intersection between health and social, economic, and environmental factors. HIA, given its ability to look at complex issues in a systematic way, can address this need. With increased consideration of health factors in decision-making processes, many of the root causes of poor health outcomes and health inequities will begin to be addressed at the community contextual level, which can then have a significant impact on population health.

A Wisconsin HIA Collaborative is emerging and is currently composed of nonprofits, academic institutions, government agencies, and residents. This project builds on recent HIA-related momentum in Wisconsin, moving the state closer increasing efforts to include health perspectives in decision-making processes and building capacity among local community leaders who can advocate for public health as a priority early in decision-making processes. The Wisconsin Public Health Association (WPHA) HIA Section is the project lead for this HIA.

The WPHA HIA Section was established in March 2011 and has played a key role in convening and tracking Wisconsin HIA efforts. This project is the first HIA conducted by the Section and will inform future HIAs conducted by the group.

2. Community Context

The communities participating in this project include the City of Middleton, Village of Waunakee, Towns of Westport and Springfield. All four communities are in Dane County, Wisconsin.

Community Information	Village or Township			
	Middleton	**Waunakee**	**Westport**	**Springfield**
Latitude & Longitude	43.10 N, 89.50 W	43.19 N, 89.45 W	43.16 N, 89.43 W	43.17 N, 89.55 W
Zip Codes	53562	53597	53597	53529
2010 Population	17,442	12,097	3,778	2,762
Elevation	940 feet	925 feet	680 feet	1,056 feet
Land Area	8.07 sq miles	5.96 sq miles	22.2 sq miles	36.4 sq miles
Population Density	2160 people per sq mile	2031 people per sq mile	170 people per sq mile	76.3 people per sq mile
Estimated household income (2009)	$59,790 (WI $49,993)	$74,176 (WI $49,993)	$75,884 (WI $49,993)	$68,663 (WI $49,993)
Estimated per capita income (2009)	$39,503	$36,692	$51,071	$26,946
Racial Make-up (2000 data)				
Total	17,442	12,097	3,778	2,762
White alone	14,694	11,412	3,483	2,598
Black alone	582	117	22	15
Hispanic	984	269	28	20
Two or more races	375	127	11	22
Asian alone	730	142	31	15
American Indian	41	23	6	2
Other	36	7	5	10

Minority % of total	15.8%	5.7%	2.8%	6.1%
Educational attainment (Population 25 yrs and over)				
High school or higher	95.0%	92.2%	94.8%	n/a
Bachelor's degree or higher	50.3%	32.3%	38.2%	n/a
Graduate or professional degree	21.2%	7.7%	16.8%	n/a

(City-Data.com, zipcodes.com, Wikipedia.com)

3. HIA Process

3.1 HIA Benefits

Health Impact Assessment can provide a mechanism for different sectors to consider potential positive and negative health impacts of decisions on communities and populations. HIA can help to advance the well-being of all individuals, by improving community health and focusing on the needs of disadvantaged populations (Gostin & Powers, 2006).

HIA was founded on the core values of democracy, equity, sustainable development, and the ethical use of evidence. In addition to clear implications for improving decision-making, particularly as decisions relate to health promotion and protection, HIA also improves evidence, raises awareness of policy-makers and the general public, provides a tool for cross-sector partnerships, and enhances the participatory nature of decisions (National Research Council "Improving the Health in the United States: the Role of Health Impact Assessment 2011). There are six main steps to an HIA process are outlined below.

- *Screening* - determines the added value and the potential impact of conducting an HIA
- *Scoping* - determines the focus of the HIA, including deciding on related indicators and research questions
- *Assessment* - gather information on the existing conditions and potential health impacts related to the proposed plan
- *Recommendations* – develop relevant and reasonable recommendations based on information gathered during assessment to avoid, minimize, or mitigate adverse effects and to optimize beneficial ones
- *Reporting* – disseminates the recommendations and/or mitigation strategies to decision-makers, stakeholders, and to community members
- *Monitoring* - evaluates the ways in which the HIA recommendations impact the proposed plan's implementation, the process in which the HIA is conducted and the effect the results has on health outcomes

While there are varying degrees in which HIA's are implemented in communities, this HIA was performed as a "rapid" HIA over the course of two months.

3.2 Health Equity

Addressing equity concerns within a HIA helps in identifying and responding to the requirements and needs of diverse communities within populations being served. HIA provides the opportunity to assess health equity concerns and to develop and implement measures to mitigate or eliminate negative health and maximize positive health opportunities for vulnerable and marginalized groups. These communities identified that they are particularly concerned about potential impacts on the aging population.

4. HIA Process: Screening

The goals of this project are to: conduct a rapid HIA to assess potential impacts of the Future Urban Development Area (FUDA) alternate scenarios, provide recommendations to the community steering committee, and to disseminate this project as a case study to inform future partnerships between community planners and public health in Wisconsin.

4.1 Background of Policy

4.1.1 FUDA Process and Alternatives

The Capital Area Regional Planning Commission (CARPC) was created in 2007 by Wisconsin Governor James Doyle. The creation was requested in the form of adopted resolutions by local units of government in Dane County representing over 87% of the population and equalized property valuation in the county. The territory of the CARPC is Dane County and the cities and villages with incorporated areas in Dane County. The Commission is composed of thirteen Commissioners appointed by the Mayor of the City of Madison (4), the Dane County Executive (3), the Dane County Cities and Villages Association (3), and the Dane County Towns Association (3). The Commission is charged with the duty of preparing and adopting a master plan for the physical development of the region, and maintaining a continuing area wide water quality management planning process in order to manage, protect, and enhance the water resources of the region, including consideration of the relationship of water quality to land and water resources and uses.

4.1.2 Capital Region Sustainable Communities Initiative

Last fall, the U.S. Department of Housing and Urban Development (HUD) awarded the Capital Region a $2 million, three-year Sustainable Community Regional Planning Grant (SCRPG). The Sustainable Communities is a federal partnership initiative between the HUD, the Department of Transportation, and the Environmental Protection Agency (http://www.epa.gov/smartgrowth/partnership/). Twenty-seven governmental and private entities came together as Capital Region Sustainable Communities (CRSC) to successfully compete for these grant funds. CARPC serves as the lead agency for the CRSC. Recognizing that regional challenges - healthy environment, mobility, economic opportunities for all, and quality of life - require collaborative and integrated approaches, (CRSC) fosters regional collaboration, conducts planning and pursues demonstration projects for sustainable communities. One of the major projects is CARPC's Future Urban Development Area (FUDA) planning.

The intent of FUDA planning is to protect vital natural resources, promote efficient development, and preserve farmland through cooperative planning for long-term growth. The FUDA plans shall also consider other factors including the impacts on natural and built systems, the efficient use of land including urban densities, and the ability to efficiently provide services to support the development and farmland preservation planning. Though the grant specifies health as a key priority, health and public health partners have not been formal partners.

After months of conversations with CARPC staff, the FUDA plans emerged as an opportunity to collaborate with public health. A rapid HIA would add value to the FUDA process by bringing a health lens to the table. In addition, it would be feasible based on the number of people willing to contribute time to conduct the HIA. A local steering committee acts as the decision-maker in determining the scenario that would eventually be selected. After a brief presentation to the FUDA community steering committee, we received the go-ahead to conduct the rapid HIA.

5. HIA Process: Scoping

By the time the decision was made to include an HIA in the FUDA process, CARPC had been working with the community for over a year. During this time they had established a steering committee and conducted surveys to better understand the desires of the community. The information gathered from the steering committee and the community surveys informed the scoping process for the rapid HIA.

Though more in-depth community engagement would be ideal, due to time constraints the HIA team, including CARPC staff and members of the WPHA HIA Section, decided to move forward with the information already gathered.

5.1 Scoping Meeting

The Scoping Meeting to determine vulnerable populations, decide health pathways, and identify research questions occurred during the winter and spring of 2012. Present at this meeting were three CARPC staff and five WPHA HIA Section members. The process was informal and was informed by the knowledge the CARPC staff had of the community, work to date done by the CARPC team related to land use indicators, and information gathered by WPHA HIA Section members related to comprehensive planning and HIA. Much of the information gathered were resources and reports prepared by the Minnesota Department of Health.

The pathway diagram and research question table generated represents prioritized health areas. A broad overview of the potential links to health of the FUDA plan can be found in Appendix 1, pg. 71. The health areas included in the pathways are largely based on areas CARPC was considering and areas identified in previous related work done by the Minnesota Department of Health. Based on the knowledge of the community, CARPC staff felt strongly about prioritizing pathways that would impact the aging population and physical activity and obesity. Three alternatives would be compared for the assessment phase: (A) “Community Outreach” reflecting preferences expressed at public meetings and earlier on-line polling with modestly higher levels of density and mix of uses than their Adopted Planss, (B) “Dispersed Character” which includes the most sprawl of the three plans, and (C) “Compact Character”.

CARPC was already doing a significant amount of assessment and modeling regarding related impacts of each of the alternatives. In order to complement this work, the HIA team decided to conduct literature reviews to link existing CARPC indicators to health and then to fill in the gaps with existing data sources related to the two priority areas of aging populations and physical activity and obesity.

5.2 Economic Determinants

Links to Health: Job Access

People of low socioeconomic status are more likely to suffer economic marginalization. Areas concentrated with low-income populations are also likely to suffer a migration of jobs, increasing the rate of unemployment in such populations (Giles & Liburd, 2007). Low income earners are also known to have lower perceived control over life events, resulting in higher levels of stress. This, coupled with a lack of resources to cope with stressful events, including lack of access to adequate health care, may result in such populations reverting to coping mechanisms which may consist of risky behaviors, such as alcoholism or smoking, which could adversely affect both mental and physical health (MMWR, 2003).

Negative health outcomes themselves can have severe impacts on economic development, since they can lead to economic inactivity, loss of productivity and loss of income due to ill health (Voskuil, Palmersheim, Glysch, & Jones, 2010). Providing opportunities for sustainable business growth and industrial diversity may bring new jobs to the area and thus aid in attaining a better quality of life for insecurely employed and low income earners living in the areas under consideration (Minnesota DOH, 2011).

Town	Current Employment and Poverty Conditions
Middleton	⌖ Unemployment in March 2012: 5.0% (WI 7.5%) ⌖ Percentage of residents living in poverty in 2009: 5.6% (WI 8.7%) ⌖ Workers who live and work in this city: 2,308 (24.8%)
Waunakee	⌖ Unemployment in March 2012: 5.0%, (WI 7.5%) ⌖ Percentage of residents living in poverty in 2009: 3.1% (WI 8.7%) ⌖ Workers who live and work in this village: 1,346 (27.6%)
Westport	⌖ Unemployment in March 2011: 5.0%, (WI 7.5%) ⌖ Percentage of residents living in poverty in 2009: 3.0% (WI 8.7%) ⌖ Workers who live and work in this town: n/a
Springfield	⌖ Unemployment in March 2011: n/a (WI 8.1%) ⌖ Percentage of residents living in poverty in 2009: n/a (WI 8.7%) ⌖ Workers who live and work in this town: n/a

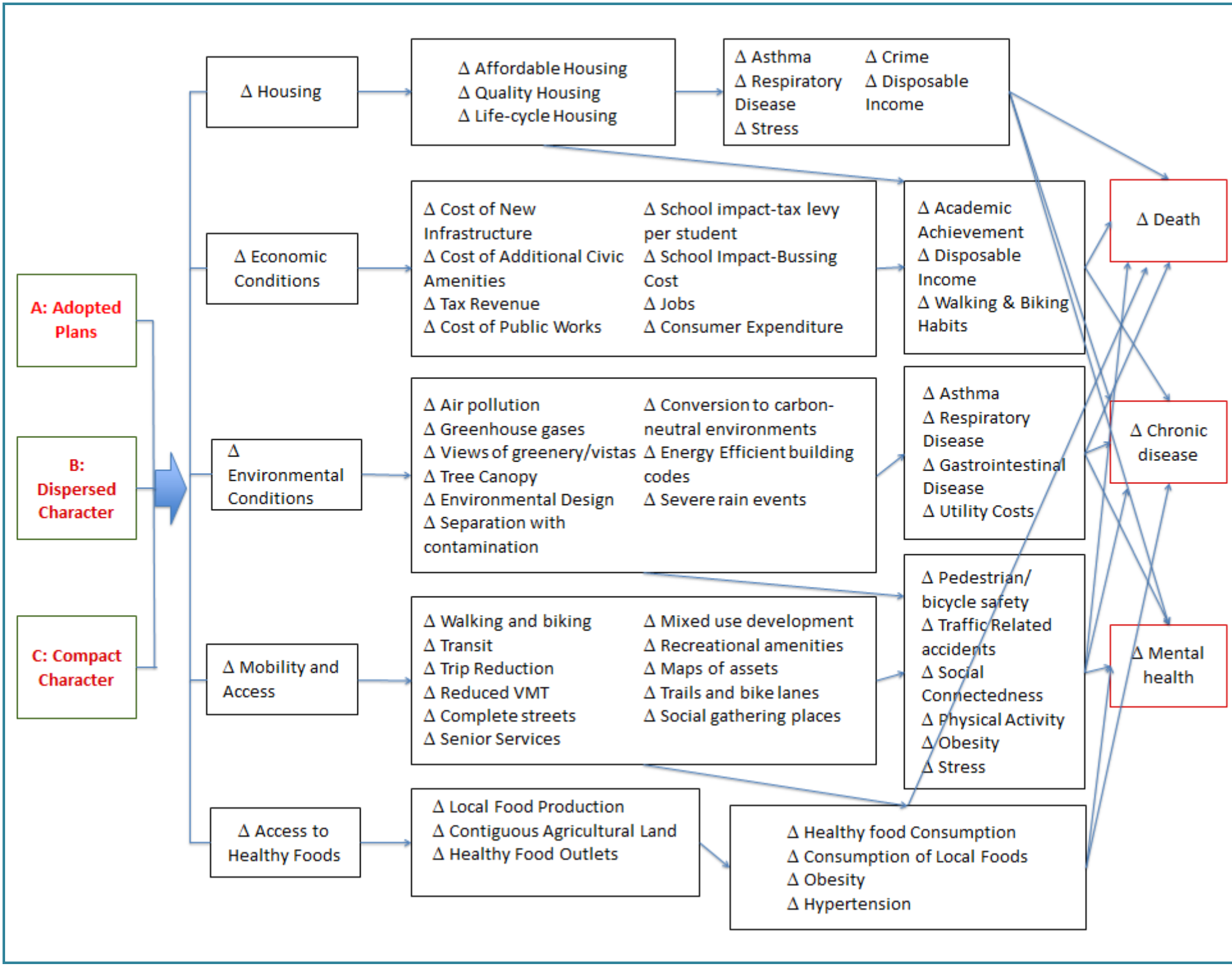
The reason economic indicators were not included in this HIA was because the information CARPC will provide in their analysis will cover this area. We did not feel an additional analysis would add value. However, we included to information regarding the link to health so that it is clear that economic factors do shape health. In the future, considering the current employment and poverty conditions in each of the respective areas, as well as the impact of job access on health outcomes may be useful for the community, therefore the following research questions to assess current job opportunities in the area are provided.

Research Questions: Employment, Job Access and Economic Conditions	
1.	What is the current level and security of employment in the area?
2.	What is the proportion of area residents who are employed?
3.	What is the proportion of area residents living in relative or absolute poverty?
4.	Are there any hazardous employment conditions/work environments in the area?
5.	What are the current employment quality or job benefits in the area?
6.	Which share of jobs in the area meet health supporting criteria: self-sufficiency incomes, paid sick leave, health insurance, etc.?
7.	What is the level of industrial diversity and resilience in the area?
8.	What is the cost of new infrastructure?
9.	What is the cost of including additional civic amenities?
10.	What are the costs of public works/road maintenance?
11.	What is the cost of emergency services?
12.	What is the tax revenue in the area?
13.	What will the potential cost savings to school districts be as a result of walking not bussing?
14.	Do the FUDA plans promote economic opportunities for low income and underemployed or insecurely employed individuals?
15.	What is the current consumer expenditure in the area and how will this be impacted by the FUDA plans?

(Adapted from CDPH, 2010, p. 14, 27)

5.3 Pathway diagram

Scoping pathway diagram on following page


A: Adopted Plans
B: Dispersed Character
C: Compact Character
Δ Housing
Δ Economic Conditions
Δ Environmental Conditions
Δ Mobility and Access
Δ Access to Healthy Foods
Δ Affordable Housing
Δ Quality Housing
Δ Life-cycle Housing
Δ Cost of New Infrastructure
Δ Cost of Additional Civic Amenities
Δ Tax Revenue
Δ Cost of Public Works
Δ School impact-tax levy per student
Δ School Impact-Bussing Cost
Δ Jobs
Δ Consumer Expenditure
Δ Air pollution
Δ Greenhouse gases
Δ Views of greenery/vistas
Δ Tree Canopy
Δ Environmental Design
Δ Separation with contamination
Δ Conversion to carbon-neutral environments
Δ Energy Efficient building codes
Δ Severe rain events
Δ Walking and biking
Δ Transit
Δ Trip Reduction
Δ Reduced VMT
Δ Complete streets
Δ Senior Services
Δ Mixed use development
Δ Recreational amenities
Δ Maps of assets
Δ Trails and bike lanes
Δ Social gathering places
Δ Local Food Production
Δ Contiguous Agricultural Land
Δ Healthy Food Outlets
Δ Asthma
Δ Respiratory Disease
Δ Stress
Δ Crime
Δ Disposable Income
Δ Academic Achievement
Δ Disposable Income
Δ Walking & Biking Habits
Δ Asthma
Δ Respiratory Disease
Δ Gastrointestinal Disease
Δ Utility Costs
Δ Pedestrian/ bicycle safety
Δ Traffic Related accidents
Δ Social Connectedness
Δ Physical Activity
Δ Obesity
Δ Stress
Δ Healthy food Consumption
Δ Consumption of Local Foods
Δ Obesity
Δ Hypertension
Δ Death
Δ Chronic disease
Δ Mental health

5.4 FUDA HIA Scope

Baseline Conditions				
Existing Conditions	**Impact Research Questions**	**Indicators**	**Data Sources/ Methods**	**Notes**
What are the existing demographics of the area?	How will the FUDA alternative plan impact the demographics of the area?	Age	CARPC	*Community has a particular interest in elderly population
		Income	CARPC	
		Employment	CARPC	
		Race/Ethnicity	CARPC	
What is the existing health status of the area?	How will the FUDA alternative plan impact the health status of the area?	Overweight/obesity	DPH	*Community Interest
		Common diseases	DPH	
		Health Insurance	DPH	
		Physical Activity	DPH	*Community Interest
		Elder Health	DPH	*Community Interest
		Mental Health	DPH	
		Social Cohesion	DPH	
		Respiratory diseases	DPH	
		Emergency Department data	DPH	
		Crime	DOC	

Baseline Conditions				
Existing Conditions	**Impact Research Questions**	**Indicators**	**Data Sources/ Methods**	**Notes**
		Traffic Related Injury	IRC	

Health Priority: Aging Populations				
Existing Conditions	**Impact Research Questions**	**Indicators**	**Data Sources/ Methods**	**Notes**
What is the current status of housing availability in the area?	How will the FUDA alternative plan impact housing availability?	Affordable housing (MN)	CARPC	Affordable housing goal
		Quality housing (lead, air quality, temperature, humidity)	DPH	
		Life-cycle housing (Douglas)		Town homes, senior housing, apartments, and rental unites
What are the current environmental (broadly defined) conditions of the area?	How will the FUDA alternative impact the area environmentally (broadly defined)?	Air pollution	CARPC	
		ED visits related to Asthma	DPH	
		Greenhouse gas	CARPC	
		Climate Change (CC) and allergic diseases	DPH	
		Developments have views of greenery/vistas for mental health (Douglas)		

Health Priority: Aging Populations				
Existing Conditions	**Impact Research Questions**	**Indicators**	**Data Sources/ Methods**	**Notes**
		Tree canopy preservation (MN)	CARPC	
		Energy efficient building codes (LEED)	Local ordinances	
		Severe rain events or increased precipitation (MN) Storm water Generated (CARPC)	CARPC	
		Transit	CARPC	Portion of new residents within walkable (1/4 mile) distance to "high capacity" transit stop
		Trip Reduction	CARPC	Trips reduced due to proximate land uses
		Reduced VMT	CARPC	Reduction in VMT due to reduced trips
		Complete streets, shared streets, and traffic calming (Douglas)	Local ordinances	
		Senior Services (Douglas)		Hospitals, healthcare facilities, churches, shopping malls, and community centers
		Transit Oriented Development (MN)	CARPC	

Health Priority: Aging Populations				
Existing Conditions	**Impact Research Questions**	**Indicators**	**Data Sources/ Methods**	**Notes**
		Mixed Used Development (MN)	CARPC	
		Social Interaction or gathering places (MN)		
What is the current access to healthy foods in the area?	How will the FUDA alternative impact the area's access to healthy food?	Local food production (MN)		Community gardens, protection of agricultural land
		Contiguous Ag land	CARPC	
		Healthy Food Outlets	DPH	

Health Priority: Physical Activity and Obesity				
Existing Conditions	**Impact Research Questions**	**Indicators**	**Data Sources/ Methods**	**Notes**
What are the current environmental (broadly defined) conditions of the area?	How will the FUDA alternative impact the area environmentally (broadly defined)?	Air pollution	CARPC	
		ED visits related to Asthma	DPH	
		Greenhouse gas	CARPC	
		Developments have views of greenery/vistas for mental health (Douglas)		

Health Priority: Physical Activity and Obesity				
Existing Conditions	**Impact Research Questions**	**Indicators**	**Data Sources/ Methods**	**Notes**
		Tree canopy preservation (MN)	CARPC	
What is the current state of mobility and access in the area?	How will the FUDA alternative impact the area's mobility and access?	Walking and Biking	CARPC	Portion of new residents within walkable (1/4mile) and bikable (2 miles) distance to one or more common destinations (schools, park, grocery store, employment)
		Trails and bike lanes	DPH	
		Pedestrian/bicycle safety (MN)		
		Trip Reduction	CARPC	Trips reduced due to proximate land uses
		Reduced VMT	CARPC	Reduction in VMT due to reduced trips
		Complete streets, shared streets, and traffic calming (Douglas)	Local ordinances	
		Maps of large recreational facilities, community gardens, schools, large parks and open space, trails and bike lanes (Douglas)		Will the final plan include this? Checklist
		Transit	DPH	
		Transit Oriented Development	CARPC	Transit: Portion of new residents within walkable (1/4 mile) distance to

Health Priority: Physical Activity and Obesity				
Existing Conditions	**Impact Research Questions**	**Indicators**	**Data Sources/ Methods**	**Notes**
		(MN)		"high capacity" transit stop
		Mixed Used Development (MN)	CARPC	
		Social Interaction (MN)		
		Gathering places and recreational amenities (MN)	DPH	
What is the current access to healthy foods in the area?	How will the FUDA alternative impact the area's access to healthy food?	Local food production (MN)		Community gardens, protection of agricultural land
		Contiguous Ag land	CARPC	
		Healthy Food Outlets	DPH	

6. HIA Process: Assessment

Building off of work completed in the Scoping Phase, research questions were developed based on the prioritized health areas to begin the Assessment Phase. To answer the research questions the following work plan was drafted.

Tasks	2012				
	February	March	April	May	July – Dec.
Group Meetings	→	→	→	→	
Existing Conditions Data Collection	→	→			
Literature Review	→	→			
Data and Literature Synthesis		→	→		
Impact Analysis			→	→	
Recommendation Development			→	→	
Complete report					→

6.1 Baseline Conditions: Dane County

Dane County (WI) Population 2010: 488,073	
Factor	**Population number 2010**
Age	
0	5,933
1-14	83,054
15-24	80,121
25-44	143,637
45-64	125,184
65-84	42,370
85+	7,774

Gender	
Female	246,662
Male	241,411
Race	
White	430,790
Black	29,777
American Indian	2,666
Asian	24,840
Ethnicity	
Hispanic	28,925
Non-Hispanic	459,148

(http://www.dhs.wisconsin.gov/population/10demog/dane.htm)

Baseline Conditions: Dane County	Dane County	Error Margin	National Benchmark*	Wisconsin	Rank (of 72 counties)
Health Outcomes					9
Mortality					6
Premature death	4,753	4,542-4,964	5,564	6,230	
Morbidity					35
Poor or fair health	9%	8-11%	10%	12%	
Poor physical health days	3.2	2.8-3.6	2.6	3.2	
Poor mental health days	3.0	2.6-3.3	2.3	3.0	
Low birthweight	6.3%	6.0-6.5%	6.0%	6.8%	
Health Factors					3

Baseline Conditions: Dane County	Dane County	Error Margin	National Benchmark*	Wisconsin	Rank (of 72 counties)
Health Behaviors					2
Adult smoking	17%	15-19%	15%	21%	
Adult obesity	25%	22-29%	25%	28%	
Excessive drinking	24%	22-27%	8%	25%	
Motor vehicle crash death rate	11	10-12	12	15	
Sexually transmitted infections	325		83	375	
Teen birth rate	20	19-21	22	32	
Clinical Care					7
Uninsured adults	13%	10-15%	13%	11%	
Primary care physicians	464:1		631:1	744:1	
Preventable hospital stays	48	47-50	52	61	
Diabetic screening	91%	85-97%	89%	89%	
Mammography screening	74%	68-79%	74%	71%	
Social & Economic Factors					6
High school graduation	90%		92%	89%	
Some college	79%		68%	63%	

Baseline Conditions: Dane County	Dane County	Error Margin	National Benchmark*	Wisconsin	Rank (of 72 counties)
Unemployment	5.7%		5.3%	8.5%	
Children in poverty	10%	8-12%	11%	14%	
Inadequate social support	14%	12-17%	14%	17%	
Children in single-parent households	25%		20%	29%	
Violent crime rate	263		100	283	
Physical Environment					8
Air pollution-particulate matter days	4		0	5	
Air pollution-ozone days	0		0	1	
Access to healthy foods	71%		92%	59%	
Access to recreational facilities	18		17	12	

(http://www.countyhealthrankings.org/wisconsin/dane

Dane County (WI) Poverty Status and Health Insurance Coverage, 2007-2009		
Status	**Estimated Number**	**Estimated Percent**
Dane County Population	**445,000**	**100%**
Poverty Status		
Less than 100% of FPL	39,000	9%

100%-199% of FPL	59,000	13%
200% or more of FPL	349,000	76%
Unknown	9,000	2%
Insurance Status		
Insured all of the past year	414,000	91%
Insured part of the past year	13,000	3%
Uninsured all of the past year	28,000	6%
Primary Insurance Type		
Currently uninsured	39,000	9%
Employer-sponsored	347,000	76%
Private	16,000	3%
Medicaid	25,000	5%
Medicare	21,000	4%
Others	9,000	2%

(http://www.dhs.wisconsin.gov/localdata/pdf/fhs/0709dane.pdf)

N.B. The Wisconsin Family Health Survey is a random-sample telephone survey conducted each year by DHS. An adult in each sampled household answers the survey questions on behalf of all people living in that household. Survey data represent all household residents. **Persons living in group quarters such as nursing homes, dormitories, and jails are not represented by survey results.** More information about the survey is on-line: http://dhs.wisconsin.gov/stats/healthinsurance.htm

6.2 HIA Process : 65+ Livability Indicators

Indicators Reviewed in this Section	
1	**Affordable, Good Quality, Life-Cycle Housing and Energy Efficient Building Codes**
2	**Developments with Views of Greenery/Vistas for Mental Health and Tree Canopy Preservation**
3	**Outdoor Air Quality (Emergency Department Visits related to Asthma Climate Change and Allergic diseases Greenhouse Gases and Pollutants Trip Reduction & Reduced VMT)**

6.2.1 Affordable, Good Quality, Life-Cycle Housing & Energy Efficient Building Codes

- ***Link to Health***

Affordable housing not only provides residential stability but also frees up family resources which can be used for other essential needs such as nutritious food and health care requirements (ECP Inc. &CHP, 2007). For example, homeless people are less likely to maintain treatment regimes for chronic diseases (such as HIV/AIDS and hypertension). Residential stability in itself reduces stress and can restore self-esteem. Evictions and frequent housing moves have been known to lead to feelings of helplessness and depression, with homeless children being at a greater risk of developing mental health problems. Crowding, such as doubling up with other families or living in very small homes, increases the risk for psychological distress, hypertension, and even acquiring infectious diseases (ECP Inc. &CHP, 2007).

Affordable housing also provides low income families and individuals with access to neighborhoods of opportunity and amenities (ECP Inc. &CHP, 2007). People removed from public housing in high poverty neighborhoods into low poverty neighborhoods were found to report significantly less distress than people who remained in high poverty neighborhoods (Leventhal & Brooks-Gunn, 2003). Affordable housing provides an opportunity for victims of domestic violence to leave abusive homes and not end up homeless in the process. It thus plays an important role in improving both the physical and mental health of such victims (ECP Inc. &CHP, 2007).

Good quality housing can improve health outcomes by reducing health problems generally associated with substandard housing (such as those arising from exposure to allergens and neurotoxins). The table found in Appendix 2, pg. 77, provides examples of indoor pollutants or elements associated with poor quality housing and their impacts on health.

Life-cycle housing incorporates fixed accessible and adaptable features which could easily be modified to meet the changing requirements of the home-owners overtime, thus ensuring that they maintain a good quality of life. Such changing needs may include old age, disability, having children, and caring for ageing parents (University of Kentucky). Life-cycle housing can thus reduce the strain on nursing homes by providing independent living alternatives for senior generations and for people with disabilities. They are also a means to provide safer working environments for home care workers (Disability Council of NSW).

Energy efficient building codes are useful for community design and building strategies because they aim to achieve sustainable site development. They focus on sustainable material selection for building projects, water-savings mechanisms and infrastructure, energy efficient design and infrastructure, and measures required to achieve a healthy indoor-environment quality. Energy efficient building codes establish minimum energy efficiency requirements for

buildings which provide energy savings throughout the lifetime of the building (U.S Department of Energy, 2011). An example of an energy efficiency certification mechanism is provided by LEED, the Leadership in Energy and Environmental Design (U.S. Green Building Council, 2011.)

Some of the environmental health benefits of 'green' building and energy saving building practices include:

- Protecting occupant's health through appropriate physical and mechanical design as well as building materials;
- Protecting community health through sustainable land-use and transportation planning (reduction in vehicle trips);
- Promoting sustainable production thus reducing emission of a number of toxic pollutants including persistent/ bioaccumulative toxic compounds, carcinogens, endocrine disruptors; this leads to improved air and water quality, as well as a reduction in generated waste streams (including construction and demolition waste);
- Enhancing and protecting biodiversity and ecosystems;
- Conserving and restoring natural resources; and
- Limiting climate change impacts
  (San Francisco Department of Public Health, 2006; U.S. Department of Energy, 2011; U.S. Environmental Protection Agency, 2010).

Other benefits of energy efficient building code include:-

- Preventing long-term financial burdens for owners/tenants which can arise from short-term design and construction decisions;
- Optimizing the life-cycle economic performance of buildings;
- Monetary savings from consumer energy bill savings, air pollution remediation and reduction in greenhouse gas emissions. These can all improve the state's economy by strengthening consumer spending power and through reducing environmental costs to the state.
  (U.S. Department of Energy, 2011; U.S. Environmental Protection Agency, 2010)
- Reduced energy expenditures which correlate to a reduced dependency on foreign oil which impacts national security (U.S Department of Energy, 2011).

- ***Existing Conditions***

Good Quality Housing	
Child Lead Poisoning Prevalence, Dane County WI 2009	
Age	**Lead Poisoning Prevalence**
0 - <1	0.19%
1 - <2	0.29%

2 - <3	0.81%
3 - <6 NPT	0.31%
3 - <6 PT	0.00%
Total	0.35%
Carbon Monoxide Poisoning Emergency Department Visits, Dane County WI 2009	
Rate per 10,000 population	4.96 – 10.62.

(http://www.dhs.wisconsin.gov/epht/CHP/Dane_profile.pdf)

Affordable Housing				
Community Information	**Village or Township**			
	Middleton	**Waunakee**	**Westport**	**Springfield**
Mean prices in 2009: • **All housing units** • **Detached houses** • **Townhouses or other attached units** • **In 2-unit structures** • **In 3-to-4-unit structures** • **Mobile Homes**	• $321,434 • $333,396 • $331,607 • $306,345 • $185,972 • n/a	• $318,115 • $320,948 • $294,367 • $277,114 • $371,353 • n/a	• $461,637 • $528,548 • $285,461 • $372,194 • $263,961 • n/a	• n/a • n/a • n/a • n/a • n/a • n/a
Median gross rent in 2009	$803	$819	n/a	n/a
Estimated median house or condo value in 2009	$280,846	$286,440	$298,497	n/a
Percentage of residents living in poverty in 2009	5.6% (WI 8.7%)	3.1% (WI 8.7%)	3.0% (WI 8.7%)	n/a (WI 8.7%)
Estimated median household income in 2009	$59,790	$74,176	$75,804	$68,663
Estimated per capita income in 2009	$39,503	$36,692	$51,071	$26,946

- ***Impact Assessment: Which of the 3 different scenarios best fits each indicator?***

Indicator **(outlined in Scoping Phase)**	**Best Fit FUDA Scenario**
	Scenario A (Adopted Plans), Scenario B (Dispersed Character), or Scenario C

	(Compact Character)
Affordable Housing	Scenario C (Compact) provides the most affordable housing. It has the densest (6 units/acre) land use plan as well as the most multi-family housing, resulting in the greatest number of affordable housing units.
Good Quality Housing	It is not clear from the information provided on the scenarios which scenario would provide the best quality housing.
Life-Cycle Housing	It is not clear from the information provided on the scenarios which scenario would provide life-cycle housing.
Energy Efficient Building Codes	It is not clear from the information provided on the scenarios which scenario would provide energy efficient building codes.

- ***Recommendations see Appendix 4, pg. 85***

6.2.2 Developments with Views of Greenery/Vistas for Mental Health and Tree Canopy Preservation

- ***Link to Health***

Inclusion of green spaces into urban designs has been found to improve both social and cognitive functioning and result in decreased episodes of depression (Dannenberg et al, 2003). Research has shown that interactions with nature and natural environments have shown to lead to marked increases in cognitive control, as opposed to interaction with urban environments. Moreover, lack of access to natural environments in a community can lead to increased feelings of isolation and an increased incidence of mental illness. Inclusion of natural spaces and community gardens into urban designs can provide people with opportunities for socializing, thus overcoming feelings of isolation, and ultimately strengthening community cohesion (Maller et al, 2005).

Tree canopies play an important part in reducing air pollution by absorbing gaseous air pollutants (such as carbon dioxide) through their leaves. They have also been found to reduce concentration of ground level ozone, and airborne particulate matter (City of Covington, 2012; Nowak et al, 2006). Trees and tree roots conserve soil and prevent erosion into nearby water bodies thus maintaining high water quality (City of Covington, 2012). Extensive paving, typically occurring in urban environments for new roads and parking spaces and rooftops, can reduce the ground's natural absorption and filtering capacities which can lead to flooding and an accumulation of runoff pollutants in water supplies and associated negative health outcomes such as gastroenteritis (Dannenberg et al, 2003). Tree canopies provide shade for sidewalks and buildings, and can play a part in reducing the urban heat island effect through the process of

transpiration whereby trees lose water by evaporation from leaves, which works towards cooling the urban environment (City of Covington, 2012).

- ***Impact Assessment: Which of the 3 different scenarios best fits each indicator?***

Indicator (outlined in Scoping Phase)	Best Fit FUDA Scenario Scenario A (Adopted Plans), Scenario B (Dispersed Character), or Scenario C (Compact Character)
Developments with Views of Greenery/Vistas for Mental Health	The best Scenario for mental health based on views of greenery/vistas is Scenario A. This Scenario provides the most views of greenery/vistas through less dense development/redevelopment (4 units/acre residential) while limiting farmland development which also provides views of greenery/vistas.
Tree Canopy Preservation	Scenario C has the most Natural Resource Protection, preserving the most tree canopy. Scenario C also provides the densest redevelopment/ development plan thus preserving already existing tree canopies and reducing the need for new development that could potentially destroy existing tree canopies.

- ***Recommendations see Appendix 4, pg. 85***

6.2.3 Outdoor Air Quality (Emergency Department Visits Related to Asthma; Climate Change and Allergic Diseases; Greenhouse Gases and Pollutants; Trip Reduction & Reduced VMT)

- ***Link to Health***
  - There is a body of literature that supports the association of ground-level ozone (O_3) exposure and asthma exacerbation.
    - One study focused on emergency department (ED) rates of asthma in New York City and ground-level ozone levels to project future childhood asthma ED cases; it concluded that increased ozone levels would cause childhood asthma visits to increase by 7.3% in the region by the 2020s (Sheffield et al. 2011).
    - A different study examined the Olympic Game time period in Atlanta, Georgia, and found a significant reduction in childhood asthma events (hospitalizations, acute care visits) after a reduction in ozone pollution (Friedman et al. 2001).

- A study by Bell et al. examined ozone concentrations in 50 US cities as related to predicted health impacts (2007). The study concluded that climate change-induced increases in ground-level ozone would increase hospital admissions for asthma.

- Studies have shown that climate change could have an impact on aeroallergen concentrations. Since the development scenarios have an impact on climate change, by extrapolation they also could have an impact on allergic diseases. More research is needed to support the link between climate change and allergic diseases, but there is some literature that supports the link between climate change and aeroallergen concentrations:
  - Kinney's paper reviewed pollen studies and found that there was consistent evidence supporting the link between the onset of pollen seasons and warming trends. However, Kinney cautioned that more evidence is needed to establish whether or not this relationship extends to the trends to allergic diseases (2008).
  - D'Amato and Cecchi's review paper stated that airway mucosal damage induced from air pollution can make it easier for allergens to enter the immune system. Furthermore, climate change may cause the pollen season to be extended and warmer temperatures may produce stronger allergenicity in tree pollen (2008).
  - One experimental study compared pollen production of ragweed in warmed versus unwarmed plots and found that total pollen production increased by 84% in the warmed plots. This has implications for allergies since ragweed is an allergenic species (Wan et al. 2002).
- By mitigating greenhouse gases, air pollution can be reduced, which has a powerful impact on human health. Exposure to air pollution can contribute to negative health impacts such as premature death, asthma, bronchitis, lost days of work, restricted-activity days, and lung damage (Cifuentes et al. 2011).
- Short-lived greenhouse pollutants include sulphates, which have been researched in exposure studies that have linked them to increased mortality, specifically from all-cause mortality, cardiopulmonary and cardiovascular mortality, and lung cancer (Krewski et al. 2009).
- Another short-lived greenhouse pollutant, black carbon, is linked to negative health impacts (Smith et al. 2009).

Existing Conditions

- In a comprehensive report about asthma in Wisconsin, Dane County was ranked 62 (out of 72 counties) in terms of ED visit rate per 10,000 and was ranked 24 in terms of

asthma hospitalizations (WI DHS, 2010). Note that lower ranks signify higher county rates.

- On a finer geographic scale there were 707 emergency department cases of asthma in 2010 for the zip codes of residence that were pertinent to this study (53562, 53597, 53529). Cases of asthma were defined as those that used a principal diagnosis code of 493, the ICD-9 code for asthma. The total population of these five ZCTA's according to the 2010 Census was 55,793; thus, prevalence rates can be calculated. Furthermore, the 2010 asthma cases can be stratified by age:

Age (yr)	FUDA study area (zip codes of 53562, 53597, 53529) in 2010	
	ED Asthma cases	Prevalence per 1,000 (cases/55,793)x1,000
<10	13	.31
10-19	10	.24
20-29	10	.24
30-39	**	**
40-49	11	.26
50-59	6	.14
60-69	**	**
70+	**	**
All ages	54	1.27

****Suppressed data because the number of cases was under 5.

- In addition to being able to stratify how many cases of asthma occur in particular zip codes by age, we can also characterize the cases by race, gender, and co-occurring morbidities. Likewise, other health outcomes (e.g., injuries) available in the emergency department dataset can be described in these categories. Furthermore, when linked with demographic data from the U.S. Census, rates can be calculated.

- ***Impact Assessment: Which of the 3 different scenarios best fits each indicator?***

Indicator	Best Fit FUDA Scenario
	Scenario A (Adopted Plans), Scenario B (Dispersed Character), or Scenario C

	(Compact Character)
ED visits related to asthma	Scenario C provides the most affordable, multi-family housing, cutting back on exposure to asthma triggers through quality, affordable housing, reducing ED related asthma visits. This scenario also provides for the densest plan, reducing the most VMT, thus reducing air pollutants, another asthma related trigger.
CC & Allergic diseases	Scenario C provides the most affordable, multi-family housing, cutting back on exposure to allergic triggers through quality, affordable housing, thus reducing allergic diseases. This scenario also reduces VMTs, reducing green-house gas emissions which are linked to climate change which could have an impact on aeroallergen concentrations.
Greenhouse gases and pollutants	Scenario C provides for the densest plan, reducing the most VMT, thus reducing air pollutants, another asthma trigger, and reducing climate changing emissions which could impact aeroallergen concentrations.
Trip Reduction	Scenario C provides a mixed use plan with dense, connected street grids with that will decrease trips, and length of trips, reducing air pollution and green-house gas emissions. This scenario allows for more pedestrian and bike travel, thus reducing trips and increasing physical activity.
Reduced VMT	Scenario C provides a mixed use plan with dense, connected street grids with that will decrease trips, and length of trips, reducing air pollution and green-house gas emissions.

- ***Recommendations see Appendix 4, pg. 85***

- ***Comprehensive Impact Assessment: Scenario rankings based on indicators***

Indicator (outlined in Scoping Phase)	**Rankings 1-3** (1 = best, 3 = worst)		
	Scenario A	**Scenario B**	**Scenario C**
Affordable Housing	2	3	1
Good Quality Housing	N/A	N/A	N/A
Life-Cycle Housing	N/A	N/A	N/A

Energy Efficient Building Codes	N/A	N/A	N/A
Developments with Views of Greenery/Vistas for Mental Health	1	3	2
Tree Canopy Preservation	2	3	1
ED visits related to asthma	2	3	1
CC & Allergic diseases	2	3	1
Greenhouse gases and pollutants	2	3	1
Trip Reduction	2	3	1
Reduced VMT	2	3	1
Total	1.875	3	1.125

6.3 HIA Process : Physical Activity & Obesity Indicators

Indicators Reviewed in this Section	
1	Trails and Bike Lanes & Walking and Biking
2	Complete Streets and Pedestrian and Cyclist Safety
3	Transit and Transit Oriented Development
4	Neighborhood Characteristics (Social Interaction, Gathering places & Recreational Amenities, & Senior Services)
5	Mixed Used Development
6	Food Access: Local Food Production, Contiguous agricultural land, healthy food outlets

6.3.1 Trails and Bike Lanes & Walking and Biking

- ***Link to Health***

Outdoor physical activity yields both health benefits, such as reducing the incidence of chronic disease and social benefits, through providing opportunities for people to meet and thus strengthen community ties (Addy et al, 2004). Barriers to outdoor physical activity include lack of pedestrian oriented infrastructure, poorly maintained footpaths and dangerous street crossings and the volume of traffic passing through a neighborhood (Adyy et al, 2004; Pikora et al, 2003). Good neighbor hood designs which include sidewalks, adequate street lighting and easily accessible public recreational facilities such as parks, playgrounds, walking and biking trails, tend to encourage outdoor physical activity (Pikora et al, 2003). Low traffic speeds and low volumes of traffic, as well as the presence of wide bicycle lanes have been found to be important determinants in using a bicycle as a means of transport (Pikora et al, 2003).

- ***Existing Conditions***

Dane County Data	
Overweight or Obese, 2010	
Not overweight (BMI <25.0)	35.2%
Overweight (BMI 25.0-29.9)	45.3%
Obese (BMI 30.0 or greater)	19.4%
Any Exercise, 2010	
Yes	85.9 %
No	14.1 %
Myocardial Infarctions (Heart Attack) Hospitalizations, 2009	
Age-adjusted rate per 10,000 population	6.04 – 13.64

(http://www.dhs.wisconsin.gov/epht/CHP/Dane_profile.pdf)

- **Trails and Bike Lanes**

(http://madisonareampo.org/maps/documents/public_bike_map_2012_new_design_web.pdf)

- ***Impact Assessment: Which of the 3 different scenarios best fits each indicator?***

Indicator (outlined in Scoping Phase)	Best Fit FUDA Scenario
	Scenario A (Community Outreach Plan), Scenario B (Dispersed Plan), or Scenario C (Compact Plan)
Trails & Bike Lanes	It is not clear from the information provided on the scenarios which scenario would provide the most trails and bike lanes.
Walking and Biking	Scenario C provides for the most compact street pattern, encouraging and best enabling walking and biking.

- ***Recommendations see Appendix 4, pg. 85***

6.3.2 Complete Streets and Pedestrian and Cyclist Safety

- ***Link to Health***

Research has shown that vehicle volumes, traffic speeds exceeding 25 mph, and even high densities of curb-side parking are directly proportional to traffic collision rates as well as injury severity from such collisions (CDPH, 2010; IPH Ireland, 2006). Elderly people and children are particularly susceptible to pedestrian-traffic related injuries. High speed traffic may also discourage parents from letting children engage in outdoor physical activities, thus leading to more sedentary lifestyles. Such behavioral patterns set in childhood can result in negative health impacts in adulthood. Adequate and appropriate road design can be employed to reduce care speeds and in turn encourage outside physical activities and thus social interaction opportunities (IPH Ireland, 2006).

Complete street designs provide safe access of a number of users including pedestrians, bicyclists, motorists and transit riders of all ages and abilities (National Complete Streets Coalition, 2011; Wisconsin Department of Transportation, 2011). Enhancing street access to pedestrians and people with disabilities improves transportation equity within a community, particularly for people who cannot afford modes of private transport, and rely on walking,

cycling and public transport for their transportation needs. This reduces the risk of social isolation (Minnesota complete Streets Coalition & Blue Cross Blue Shield, 2010).

Improving the convenience of alternative modes or transport, reduces dependency on automobiles, and encourages people to engage in outdoor physical activity, which reduces the risk of diseases associated with a sedentary lifestyle including type 2 diabetes and heart disease (Minnesota complete Streets Coalition & Blue Cross Blue Shield, 2010). Adequate and integrated bicycle and pedestrian features and facilities include sidewalks, striped bike lanes or wide paved shoulders, frequent pedestrian crossing signals and crosswalks, bicycle parking (bike racks) and adequate lighting (DHSS, 2010). Complete street designs may also contain the following elements: special bus lanes, comfortable and accessible public transportation stops, median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts (National Complete Streets Coalition, 2011), and small block sizes to achieve good pedestrian street connectivity (DHSS, 2010).

- ***Existing Conditions***

Dane County Data	
Number of traffic-related deaths, 2004	
Total	49
15-44 age group	32
45-64 age group	10
65+ age group	5
Number of Count of Injury Hospitalizations resulting from Motor vehicle traffic crash, 2010	10

(http://wish.wisconsin.gov/results/)

- ***Impact Assessment: Which of the 3 different scenarios best fits each indicator?***

Indicator (outlined in Scoping Phase)	**Best Fit FUDA Scenario**
	Scenario A (Adopted Plans), Scenario B (Dispersed Plan), or Scenario C (Compact Plan)
Complete Streets & Pedestrian and Cyclist Safety	Scenario C provides for the densest compact street grid which will require lower speed limits, increasing biker and pedestrian safety and thus encouraging bikers and pedestrians.

- ***Recommendations see Appendix 4, pg. 85***

6.3.3 Transit and Transit Oriented Development

- ***Link to Health***

Transit oriented development (TOD) facilitates transport access for community members by maximizing access to public transportation systems and services, and through creating walkable environments (TransitOrientedDevelopment.org). Adequate and easy access to employment and educational facilities as well as parks and health care facilities, is essential to maintain a healthy lifestyle. Those lacking private transport may find such access to be hindered (CDPH, 2010).

The design of a TOD neighborhood has a center with a transit bus-station, train station or a tram stop. Such a center is generally surrounded by high density development which becomes progressively less-dense away from the center (Victoria Transport Policy Institute, 2011).

Health and other benefits of TOD design include reduced traffic congestion and driving (and thus less air pollution), reduced car accidents and injuries, adoption a healthier lifestyle with more walking and less stress, reduced household spending on transportation, diversion of resources for more affordable housing, an increased incentive for compact development (less urban sprawl), and increased foot traffic and customers to area businesses (TransitOrientedDevelopment.org).

- ***Existing Conditions***

Community Information	Village or Township			
	Middleton	Waunakee	Westport	Springfield
Nearest Amtrak Stations	• 6.2 miles: MADISON (800 LANGDON ST.) - Bus Station. Services: enclosed waiting area, public payphones, public transit connection. • 19 miles: COLUMBUS (359 LUDINGTON ST.).	• 12.8 miles: MADISON (800 LANGDON ST.) - Bus Station. Services: enclosed waiting area, public payphones, public transit connection. • 19 miles: COLUMBUS (359 LUDINGTON ST.).	• 9.9 miles: MADISON (800 LANGDON ST.) - Bus Station. Services: enclosed waiting area, public payphones, public transit connection. • 19 miles: COLUMBUS (359 LUDINGTON ST.).	• 14.6 miles: MADISON (800 LANGDON ST.) - Bus Station . Services: enclosed waiting area, public payphones, public transit connection. • 19 miles: COLUMBUS (359 LUDINGTON ST.) .

	Services: ticket office, partially wheelchair accessible, enclosed waiting area, public restrooms, public payphones, free short-term parking, free long-term parking, call for car rental service, call for taxi service.	Services: ticket office, partially wheelchair accessible, enclosed waiting area, public restrooms, public payphones, free short-term parking, free long-term parking, call for car rental service, call for taxi service.	Services: ticket office, partially wheelchair accessible, enclosed waiting area, public restrooms, public payphones, free short-term parking, free long-term parking, call for car rental service, call for taxi service.	Services: ticket office, partially wheelchair accessible, enclosed waiting area, public restrooms, public payphones, free short-term parking, free long-term parking, call for car rental service, call for taxi service.
Mean travel time to work	17.1 minutes	20.5 minutes	21.3 minutes	n/a

- ***Impact Assessment: Which of the 3 different scenarios best fits each indicator?***

Indicator (outlined in Scoping Phase)	**Best Fit FUDA Scenario**
	Scenario A (Adopted Plans), Scenario B (Dispersed Character), or Scenario C (Compact Character)
Transit	It is not clear from the information provided on the scenarios which scenario would provide the best transit options, if any, though it can be assumed that Scenario C is most likely to provide the opportunity for transit because of its density, mixed use, and compact pattern.
Transit Oriented Development	It is not clear from the information provided on the scenarios which scenario would provide transit oriented development, though it can be assumed that Scenario C is most likely to provide the opportunity for transit oriented development because of its density, mixed use, and compact pattern.

- ***Recommendations see Appendix 4, pg. 85***

6.3.4 Neighborhood Characteristics (Social Interaction, Gathering Places & Recreational Amenities; Senior Services; Maps of Large Recreational Facilities, Community Gardens, Schools, Large Parks and Open Space)

- ***Link to Health***

Social support networks and social interaction can positively impact a community's health by providing emotional, instrumental (such as residential resources), informational (such as knowledge how to access health care systems), and appraisal (a sense of belonging) support to communities (Chavez, 2008). This support can be particularly essential for low income and ethnically segregated community groups, who may experience a higher rate of negative health outcomes and social isolation (Cave & Coutts, 2002; CDPH, 2010). It prevents isolation, feelings of helplessness and ultimately depression (Chavez, 2008; CDPH, 2010). Instrumental support in the form of adequately planned and maintained neighborhoods (which include the availability of recreational facilities such as parks, playgrounds and walking and biking trails, and adequate street and neighborhood lighting) are great incentives for communities to participate in outside physical activity and thus engage in social interaction (Addy et al, 2004).

Crime and fear of crime may prevent people from using public spaces and thus discourage outdoor physical activity and lead to social isolation. Other health impacts associated with fear of crime include loss of productivity related to continual anxiety and stress of being a victim of crime (Dolan & Peasgood, 2007; IPH Ireland, 2006). Fear of crime may also result in people being reluctant to use public transport. In such cases, people not having access to a private means of transport may become even more socially isolated (Cave & Coutts, 2002). Children living in neighborhoods deemed as unsafe may be at a greater risk of developing behavioral disorders such as hyperactivity, aggression or withdrawal (IPH Ireland, 2006). Social cohesion can thus serve to prevent crime and violence in a community (CDPH, 2010). Formation of clubs and neighborhood based organizations can create solidarity and mutual trust amongst community members (Benard, 2007).

- ***Existing Conditions***

Violent Crime Rates	
Dane County WI, 2010 (Population: 491,677)	
Total violent crime	261 per 100,000 population
Murder	0.8 per 100,000 population
Forcible Rape	24.2 per 100,000 population
Robbery	87 per 100,000 population
Aggravated Assault	149 per 100,000 population
Middleton, WI, 2010 (Population: 17,442)	

Total Violent Crime reported by the Middleton PD	18 per 100,000 residents
Murder	0 per 100,000 population
Forcible Rape	3 per 100,000 population
Robbery	10 per 100,000 population
Aggravated Assault	5 per 100,000 population
Waunakee, WI, 2010 (Population: 11,623)	
Total Violent Crime reported by the Waunakee PD	9 per 100,000 residents
Murder	0 per 100,000 population
Forcible Rape	0 per 100,000 population
Robbery	2 per 100,000 population
Aggravated Assault	7 per 100,000 population

(http://oja.wi.gov/docview.asp?docid=21985&locid=97)

Property Crime Rates	
Dane County WI, 2010 (Population: 491,677)	
Total Property Crime	2,878 per 100,000 population
Burglary	511 per 100,000 population
Theft	2,236 per 100,000 population
Motor Vehicle Theft	113 per 100,000 population
Arson	18 per 100,000 population
Middleton, WI, 2010 (Population: 17,442)	
Total Property Crime reported by the Middleton PD	2,407 per 100,000 residents
Burglary	336 per 100,000 population
Theft	2,002 per 100,000 population
Motor Vehicle Theft	64 per 100,000 population
Arson	6 per 100,000 population
Waunakee, WI, 2010 (Population: 11,623)	
Total Property Crime reported by the Waunakee PD	998 per 100,000 residents
Burglary	155 per 100,000 population
Theft	817 per 100,000 population
Motor Vehicle Theft	26 per 100,000 population
Arson	0 per 100,000 population

(http://oja.wi.gov/docview.asp?docid=21985&locid=97)

Open Spaces and Recreational Areas	
Location	**Park/Conservancy**
Middleton	Quarry State Park Lakeview Park Firemen's Park Parisi Park Orchid Heights Park

	⊕ Middleton Hills Neighborhood Park ⊕ Stricker Park ⊕ Quarry Park ⊕ Middleton Bike Park ⊕ Metropolitan Community Park ⊕ Stonefield Park ⊕ Parkside Heights Park ⊕ Meadows Park ⊕ Boundary Road Park ⊕ Hillcrest Park ⊕ Baskerville Park ⊕ Hawkridge Park ⊕ Pheasant Branch Creek Resource Area ⊕ Stricker Pond ⊕ Tiedeman Pond ⊕ Graber Pond ⊕ Esser Pond ⊕ Middleton Dog Exercising Area ⊕ Keva Sport Center ⊕ Capitol Ice Arena ⊕ Middleton-Cross Plains Area Indoor Swimming Pool
Waunakee	⊕ Centennial Park ⊕ Hanover Park ⊕ Ripp Park ⊕ Savannah Village Park ⊕ Tierney Park ⊕ Village Park ⊕ Waunakee Marsh State Wildlife Area
Westport	⊕ Schumacher Farm Park ⊕ Christina Park ⊕ Mary Lake Neighborhood Park ⊕ Westshire Conservancy-Jackson's Landing Park/Trails ⊕ Steeplechase Park ⊕ Town Center Park ⊕ Governor Dodge Nelson State Park ⊕ Yahara Heights County Park ⊕ Cherokee Marsh Natural Resource Area ⊕ Mendota County Park ⊕ Dorn Creek Fishery Wildlife Area ⊕ North Mendota Natural Resource Area ⊕ Madison Street Land & Water Legacy Wetland Site ⊕ Yahara River Open Space/Hunting Area

	◆ Six Mile Creek Open Space and Trails ◆ Cherokee Marsh State Natural Area ◆ Empire Prairie State Natural Area ◆ Governor Nelson State Park ◆ Holy Wisdom Prairie Preservation/Trails ◆ Westport Drumlin Preservation Area ◆ Daleo Soccer Fields ◆ Willows Softball Field ◆ Bishops Bay Country Club Golf and Tennis Facilities ◆ Cherokee Golf and Tennis Club Facilities
Springfield	◆ Dane County Highway Garage

http://www.ci.middleton.wi.us/Default.htm; http://www.waunakee.com/index.aspx?NID=4; http://townofwestport.org/index.htm

Gathering Places	
Public Buildings/Spaces	◆ Middleton High School Indoor Pool ◆ Walter R. Bauman Outdoor Aquatic Center ◆ Middleton Senior Center ◆ Middleton Public Library ◆ Middleton-Cross Plains School District ◆ Westport Town Hall ◆ Village of Waunakee Village Center ◆ Waunakee Public Library ◆ Waunakee Community High School ◆ Waunakee Prairie Elementary School ◆ Waunakee Arboretum Elementary School ◆ Waunakee Community Intermediate School ◆ Waunakee Community Middle School ◆ Waunakee Heritage Elementary School ◆ Springfield Town Hall ◆ City Center West ◆ Middleton Municipal Court
Churches/Places of Worship	◆ St. Mary's Of the Lake ◆ Crossroads United Methodist ◆ Mission Hill Lutheran Church ◆ St. Andrew Lutheran Church ◆ First Presbyterian Church ◆ St. Michael's Parish ◆ St. Peter's Catholic Church ◆ St. John the Baptist Catholic Church ◆ First Baptist Church ◆ Christian Life Assembly of God ◆ St. Therese Chapel ◆ St. .Martin's Catholic Church ◆ Vineyard Church of Christ ◆ Metro Believer Church

	• Kingdom Hall of Jehovah's Witnesses • Church of Jesus Christ of Latter Day Saints • Middleton Community United Church of Christ • Northern Light Church • St. Bernard Parish • Gateway Community Church

(Google Earth 7-18-12)

- ***Impact Assessment: Which of the 3 different scenarios best fits each indicator?***

Indicator (outlined in Scoping Phase)	**Best Fit FUDA Scenario** **Scenario A (Adopted Plans), Scenario B (Dispersed Plan), or Scenario C (Compact Plan)**
Social Interaction	Scenario C provides the most opportunity for neighborly interaction with its denser residential patterns, mixed use compact design that will allow neighborhoods to meet one another walking and biking to various destinations.
Gathering Places & Recreational Amenities	It is not clear from the information provided on the scenarios which scenario would provide the most gathering places and recreational amenities. It can likely be assumed that Scenario C is most likely to provide for gathering spaces and recreational amenities because of its density, mixed use, and compact pattern which will likely incorporate such spaces into its design.

- ***Recommendations see Appendix 4, pg. 85***

6.3.5 Mixed Used Development

- ***Link to Health***

Compact development, integration of different land uses (for example having retail outlets, food markets, drug stores and offices in close proximity to each other), and pedestrian oriented urban designs facilitate neighborhood accessibility and lead to a decrease in car dependency and associated air pollution (Krizek, 2003; & Kockelman, 2007) while sprawling developments and suburbs encourage use of automobiles (Dannenberg et al, 2003). The presence of destinations such as retail facilities and services in a neighborhood has been shown to serve as incentives for people to engage in walking activities (Pikora et al, 2003). Mixed use and pedestrian friendly neighborhood designs are thus more likely to promote social networking, by encouraging people to perform daily chores without the use of automobiles (Leyden, 2003). The quality of life amongst older generations can be improved by anticipating

as well as responding to ageing-related needs in the community environment (WHO, 2007). Compact development can serve to address these needs.

- ***Existing Conditions***

Community Information	City, Village or Township			
	Middleton	**Waunakee**	**Westport**	**Springfield**
Daytime population change due to commuting	+3,657 (+23.2%)	-719 (-8.0%)	n/a	n/a
Workers who live and work in this town/village	2,308 (24.8%)	1,346 (27.6%)	n/a	n/a
Nearest hospitals/medical centers	• Madison VA Medical Center (Acute Care - Veterans Administration, Government Federal, about 3 miles away; MADISON, WI) • University of Wisconsin Hospitals and Clinics (Acute Care Hospitals, Government - Hospital District or Authority, provides emergency services, about 5 miles away; MADISON, WI) • Meriter Hospital (Acute Care Hospitals, Voluntary non-profit - Private, provides	• Madison VA Medical Center (Acute Care - Veterans Administration, Government Federal, about 8 miles away; MADISON, WI) • University of Wisconsin Hospitals and Clinics (Acute Care Hospitals, Government - Hospital District or Authority, provides emergency services, about 9 miles away; MADISON, WI) • Meriter Hospital (Acute Care Hospitals, Voluntary non-profit - Private, provides	• Madison VA Medical Center (Acute Care - Veterans Administration, Government Federal, about 7 miles away; MADISON, WI) • University of Wisconsin Hospitals and Clinics (Acute Care Hospitals, Government - Hospital District or Authority, provides emergency services, about 7 miles away; MADISON, WI) • Meriter Hospital (Acute Care Hospitals, Voluntary non-	• Madison VA Medical Center (Acute Care - Veterans Administration, Government Federal, about 14 miles away; MADISON, WI) • University of Wisconsin Hospitals and Clinics (Acute Care Hospitals, Government - Hospital District or Authority, provides emergency services, about 14 miles away; MADISON, WI) • Meriter Hospital (Acute Care Hospitals, Voluntary non-profit - Private,

	emergency services, about 6 miles away; MADISON, WI) • St. Mary's Hospital partner with Dean (non-profit provides emergency services, about 6 miles away; MADISON, WI)	emergency services, about 10 miles away; MADISON, WI) • St. Mary's Hospital partner with Dean (non-profit provides emergency services, about 10 miles away; MADISON, WI)	profit - Private, provides emergency services, about 7 miles away; MADISON, WI) • St. Mary's Hospital partner with Dean (non-profit provides emergency services, about 7 miles away; MADISON, WI)	provides emergency services, about 18 miles away; MADISON, WI) • St. Mary's Hospital partner with Dean (non-profit provides emergency services, about 6 miles away; MADISON, WI)
Local PCP and Podiatry Clinics	• Dean Health Systems Inc 8301 Old Sauk Rd • Middleton Village Nursing 6201 Elmwood Ave • Associated Physicians 6201 Elmwood Ave • Meriter Medical Group Elmwood Ave. • Meriter Deming Way • University Podiatry Associates 6255 University Ave Ste 204 • Preferred Podiatry Group PC 8301 Old Sauk Rd Attic Angel Community • Isthmus Eye Care	• Dean Health Systems Inc Century Ave. • Aggeus Healthcare, P.C. 801 S Klein Dr • Stellar Rehabilitation, LLC 5469 Westshire Cir • Preferred Podiatry Group PC 5475 Westshire Cir	• N/A	• N/A

	SC 7601 University Ave Ste 102			

www.city-data.com; http://www.medicare.gov/find-a-doctor/practice-results.aspx?searchtype=GP&loc=53562&pref=No&lat=43.1156039&lng=-89.53089030000001

- ***Impact Assessment: Which of the 3 different scenarios best fits each indicator?***

Indicator (outlined in Scoping Phase)	**Best Fit FUDA Scenario**
	Scenario A (Adopted Plans), Scenario B (Dispersed Plan), or Scenario C (Compact Plan)
Mixed Used Development	Scenario C incorporates the most mixed used development into its plan.

- ***Recommendations see Appendix 4, pg. 85***

6.3.6 Food Access Impact: Healthy Food Outlets and Local Food Production

- ***Link to Health***

Good nutrition is essential for good health. It helps with disease prevention and is essential for children's growth and development. Evidence shows that a diet of healthy, nutritious foods, in conjunction with physical activity, can help reduce the incidence of the leading causes of death in the United States, namely heart disease, cancer, and diabetes (CDC, 2010).

Access to healthy foods is a key issue, especially for individuals lacking private transport. To ensure access to healthy foods, supermarkets or fruit and vegetable stores need to be located within a mile of residents or convenient transit needs to be available within half a mile (.8 km) to go to such stores (Univ. Minn., 2007).

Evidence from numerous cross-sectional studies consistently demonstrates that some elements of food environments are associated with obesity. People who live in communities with easy access to healthy foods tend to have more healthful diets. Minority and low-income communities have disparities in access to healthful foods (Sallis & Glanz, 2009). The food environment thus plays role in peoples' ability to access and purchase affordable, healthy and nutritious foods (Walker, Keane, & Burke 2010). Research shows that neighborhood residents with better access to supermarkets and limited access to convenience stores tend to have healthier diets and lower levels of obesity (Larson, Story & Nelson, 2009).

The current food production system puts financial pressures on food producers to grow cheap food which is linked to the current rise in obesity levels (O'Kane, 2011). Community foods systems might play an important role in mitigating the environmental, economic and social effects of the current food production system through the use of more sustainable food production which create fewer environmental impacts (reduced fuel consumption and pollution), develop local economies by creating local jobs, and foster ties between farmers and consumers, creating stronger social networks and healthier communities (Pederson RM, Robertson A, & deZeeuw H., 2000; O,Kane, 2011).

- ***Existing Conditions: Food Outlets***

Food outlets are licensed retail establishments that include gas stations and convenience stores that sell at least one perishable item such as dairy, as well as grocery stores and coffee shops or delis that sell milk or prepared foods (DPH, Licensed Food Estb.). There are a total of 226 Food Outlets in the five zip code area.

Type of Food Outlet	Number of Outlets	Additional Information
Farmers Market	3	• Middleton: 2 • Waunakee: 1
Primarily Restaurant	128	• tavern, pub, pizza, burger, sports bar, saloon: 23 • chain fast food restaurants: 14 • travel center, snack bar: 6 • school: 6 • apartment/inn/hotel/motel: 8 • bakery/café: 2 • sandwich shop: 8 • other restaurant: 61
Restaurant Mobile Base/Cart	7	• mobile food base:3 • mobile food cart:4
Retail Food Establishment	52	• gas station: 15 • drug store:4 • hardware store:1 • grocery store: 4 • liquor store: 2 • specialty store: 20 • dollar store: 2 • concessions/snacks: 3 • unknown: 1

(Wisconsin DPH, Licensed Food Establishments, http://www.reapfoodgroup.org/farmers-markets/farmers-markets)

- ***Existing Conditions: Local Food Production***

This area of Wisconsin is rich in commercial farming. In the five zip code region under investigation, there are commercial farms that produce animal products (beef, poultry, eggs, lamb, etc.), berries, fruit and tree nuts, milk and other dairy, orchard products, and vegetables. The table below provides a break-down of the number of each type of commercial farmer in the area:

Type of Product	Number of Farms
Animals	260
Berries	3
Fruit & Tree Nuts	7
Milk & Other Dairy	125
Orchards	7
Vegetables	21
Total	423

(http://quickstats.nass.usda.gov/?agg_level_desc=ZIP%20CODE#BDD9F7A5-1D07-340E-9EDE-A52274D1B500)

This three zip code area of Wisconsin also contains one CSA (Community Supported Agriculture), Equinox Community Farm. There are three farmers markets in the area.

- ***Impact Assessment: Which of the 3 different scenarios best fits each indicator?***

Indicator (outlined in Scoping Phase)	**Best Fit FUDA Scenario**
	Scenario A (Adopted Plans), Scenario B (Dispersed Character), or Scenario C (Compact Character)
Healthy Food Outlets	Scenario C will provide the most access to healthy food outlets because of its mixed used layout and compact nature that allows for multiple modes of transportation to access food outlets.
Local Food Production	Scenario C plans for the most redevelopment, reducing new development, thus providing for the most farmland preservation, allowing for the most local food production.

- ***Recommendations see Appendix 4, pg. 85***

- ***Comprehensive Impact Assessment: Scenario rankings based on indicators***

Indicator (outlined in Scoping Phase)	**Rankings 1-3** (1 = best, 3 = worst)		
	Scenario A	**Scenario B**	**Scenario C**
Trails & Bike Lanes	N/A	N/A	N/A
Walking and Biking	2	3	1
Complete Streets & Pedestrian and Cyclist Safety	2	3	1
Transit	2	3	1

Transit Oriented Development	2	3	1
Social Interaction	2	3	1
Gathering Places & Recreational Amenities	2	3	1
Mixed Used Development	2	3	1
Healthy Food Outlets	2	3	1
Local Food Production	2	3	1
Total	2	3	1

7. Impact Analysis

FUDA planning intends to empower local jurisdictions with a set of tools and resources to make informed planning decisions and facilitate local comprehensive planning, intergovernmental coordination, the USA amendment review process and regional plan updates. In order to do within the current HIA for Middleton, Waunakee, Westport and Springfield, the FUDA process initially began with three scenarios for future growth and land use. The creation and evaluation of these three growth scenarios were based on findings in the Environmental Conditions Report (ECR), a land demand analysis that was created by the CARPC staff team and developed based on existing future land use plans, adopted local land use plans and community and steering committee input. Those original scenarios included Scenario A (Adopted Plans), Scenario B (Dispersed Character), and Scenario C (Compact Character) and were presented to the public who were given the opportunity to vote on each scenario and whose input helped inform steering committee decisions. The health impacts and outcomes discussed in this rapid HIA were based on the original three scenarios laid out by the steering committee. However, the public polling process and community input resulted in a recommendation by the steering committee of a hybrid scenario, incorporating elements of both Scenario A and Scenario C, called the "Recommended North Mendota FUDA Scenario." Because the process moved forward with the "Recommended North Yahara FUDA Scenario," the Impact Analysis in this section is based on the recommended hybrid scenario rather than any of the original three scenarios.

Impact Analysis – FUDA Hybrid Scenario	
Determinant	**Effect of Hybrid Scenario on Indicators**
Housing Impact	Higher density housing districts adjacent to frequent destinations encourages more physical activity through more walking and biking. Sensitive environmental areas will be preserved, allowing for views of greenery and tree canopy preservation, increasing mental health. Higher density reduces trip length, increasing air quality and reducing asthma triggers. More affordable housing options increases health through better quality housing, reducing exposure to allergen triggers, and reducing stress associated with unaffordable housing or low-income housing.
Environmental Impact	Higher density reduc es trip length, increasing air quality, reducing air pollutants and greenhouse gas emissions. Sensitive environmental areas will be protected, and a balance will be created between preserving farmland and open space and

	maintaining small village character, increasing mental health and social cohesion.
Mobility and Access	Interconnected street patterns allow for direct trips and encourage walking and biking. Reduction in need for infrastructure per person provides cost savings to home owners, business owners and municipalities, reducing financial stress and increasing disposable income available for other health related activities/issues/etc. as well as for public services. A long-term desire for transit service, which higher-density mixed-used areas in the plan will support, will decrease VMTs and encourage more walking and biking to and from transit stations.
Density	Increases residential density (in Middleton and Westport), preserving farm and open spaces, providing green space beneficial to mental health. Infill and redevelopment will preserve green space, benefiting mental health. A mix of higher density residential and commercial land encourages more physical activity through more walking and biking. Higher density reduces trip length, increasing air quality and reducing asthma triggers. Increases in the tax base and employment opportunities increase quality and quantity of public services and increases income which promote health. Local jobs decrease VMTs, improving air quality and reducing greenhouse gas emissions.
Food Access	Mix of higher-density residential and commercial land uses will increase food access. Preservation of farmland will protect local food production. Dense residential areas may encourage an increase in farmer's markets, increasing access to healthy foods.

8. HIA Process: Recommendations

Prioritized Health Impact	Recommendation to Maximize Health Gain/Reduce Health Loss	Party responsible for Implementing the Recommendation
Physical Activity: Safe Routes to School	To ensure that school children receive physical activity getting to and from school, implement a Safe Routes to Schools program in the communities as mentioned in Further Analysis Areas (FAA), issue 6.	TBD
Physical Activity: Pedestrian Walking and Biking	For all communities, ensure that Recommendations in Section 6 of FUDA Scenario Overview and Recommendations are implemented (establishing connected streets, sidewalk, bike-path and trail networks that promote walking, biking). The community of Waunakee should ensure that they implement recommendation 6.6 (establishing a sidewalk retrofit plan for exiting neighborhoods without sidewalks, evaluating and adjusting street standards to include sidewalks, street trees, and limit impervious surfaces and traffic speeds), particularly since they will be decreasing density.	CARPC
Physical Activity: Aging Population	Recommendation 12.2 should be implemented with a focus on making these "adult fitness circuits" accessible for seniors as explained below: To facilitate aging in place and encourage physical activity of senior citizens, walking paths (or "adult fitness circuits") should be created that incorporate the needs of seniors such as frequent benches for resting, water fountains for rehydrating, and shade trees to protect from the sun. In addition, these walking paths could include low	CARPC

	impact exercise structures to encourage increased physical activity. Additional senior fitness focused plans: Create bump outs at busy intersections and longer stop lights to facilitate pedestrian crossings. Make sure road signs and traffic signals are clear and easy to understand for pedestrians who may possibly have limited faculties (eye-sight, hearing, etc).	
Physical Activity and Social Cohesion	Ensure that as part of the hybrid scenario, social gathering places and open spaces for recreational use are included in the design. Social gathering places will increase social cohesion and open spaces that provide greenery and vistas will not only increase mental health but will also provide space for physical activity and social cohesion. Emphasize that these open spaces be located near senior and multi-family housing where density may limit open space and there may be less financial ability to participate in private recreational facilities.	CARPC
Access to Healthy Foods	The creation of a local food council could encourage more frequent farmers' markets with more local vendors, increasing access to healthy local foods. This food council could also provide community outreach and information on how to obtain, store, prepare and enjoy healthy foods. Emphasis should be placed on locating farmer's markets in areas otherwise not well served with healthful food outlets and near senior and multi-family housing where need for access to healthy foods may be greatest.	CARPC
Access to Primary Care Physicians	Accessibility to PCPs is a particular concern to the aging population. Make sure that this need is addressed in future planning conversations and ensure that there is adequate public transportation or shuttle services to provide access.	

9. HIA Process: Reporting

Capital Area Regional Planning Commission (CARPC)

- To ensure The HIA report will be widely and appropriately disseminated, the report will be shared with our partner, CAPRC. CARPC will include the HIA report in their dissemination to the community by including it in their Future Urban Development Area (FUDA) report and presentations.

Wisconsin HIA Collaborative

- The Wisconsin HIA Collaborative will create a brief PowerPoint presentation as well as a brief brochure to be disseminated through Wisconsin Public Health Association (WPHA) and online via the WPHA HIA website. Additionally, the HIA section created a case study (see below) for further dissemination.

Case Study

Case Study: Capital Area Regional Planning Commission: Public Health in Regional and Local Comprehensive Planning

Sector: Government Agency

Taking steps to: Implement Strategies

Organizational Description

The Capital Area Regional Planning Commission (CARPC) was created in 2007 by Wisconsin Governor James Doyle. The creation was requested in the form of adopted resolutions by local units of government in Dane County representing over 87% of the population and equalized property valuation in the county. The territory of the CARPC is Dane County and the cities and villages with incorporated areas in Dane County. The Commission is composed of thirteen Commissioners appointed by the Mayor of the City of Madison (4), the Dane County Executive (3), the Dane County Cities and Villages Association (3), and the Dane County Towns Association (3). The Commission is charged with the duty of preparing and adopting a master plan for the physical development of the region, and maintaining a continuing area wide water quality management planning process in order to manage, protect,

and enhance the water resources of the region, including consideration of the relationship of water quality to land and water resources and uses.

Capital Regional Sustainable Communities Initiative

In the fall of 2010, the U.S. Department of Housing and Urban Development (HUD) awarded the Capital Region a $2 million, three-year Sustainable Community Regional Planning Grant (SCRPG). The Sustainable Communities partnership is a federal initiative between the HUD, the Department of Transportation, and the Environmental Protection Agency (http://www.epa.gov/smartgrowth/partnership/). Twenty-seven governmental and private entities came together as Capital Region Sustainable Communities (CRSC) to successfully compete for these grant funds. CARPC serves as the lead agency for the CRSC. Recognizing that regional challenges - healthy environment, mobility, economic opportunities for all, and quality of life - require collaborative and integrated approaches. CRSC fosters regional collaboration, conducts planning and pursues demonstration projects for sustainable communities. One of the major projects is CARPC's Future Urban Development Area (FUDA) planning.

Need for Public Health Lens

The Sustainable Communities Regional Planning Grant prioritizes livability principles (http://www.epa.gov/smartgrowth/partnership/index.html#livabilityprinciples) and all have important public health implications; however, the CRSC does not have formal public health partners. After ongoing outreach, the Wisconsin Public Health Association's Health Impact Assessment (HIA) Section and CARPC staff went through an informal assessment process to understand how each partner might benefit from working together.

Action Steps Highlight

- ***Assess Needs & Resources*** Nationally, urban growth continues to accelerate and mixed-use land redevelopment initiatives proliferate. Increasingly, public health practitioners need evidence-based methodologies to effectively engage in the policy-making process and encourage informed decision-making about critical public health strategies for reducing chronic disease, promoting physical activity, and securing access to basic community resources, among others. Wisconsin's public health community is no exception to the national trends. The public health community faces an intensifying need to measure the health impact of the built environment as it evolves with community growth and public policy. In fact, Wisconsin passed legislation requiring municipalities to develop "smart-growth" plans (includes public participation) to comprehensively plan for policy or infrastructure changes in both urban and rural settings.[1] Historically, public health was missing in conversations on community

planning. Thus, this is an optimal time for Wisconsin public health practitioners to seek new partnerships with municipalities, agencies and organizations at many levels to engage in this comprehensive planning process and begin evaluating health impacts from changes in the built environment.

- ***Pick Priorities*** Understanding the potential for planners and public health, the HIA Section and CARPC staff determined that conducting rapid HIAs (http://www.dhs.wisconsin.gov/hia/) on the FUDA scenarios would be an opportunity to partner. The purpose of FUDA planning is to protect vital natural resources, promote efficient development, and preserve farmland through cooperative planning for long-term growth. Dane County's Water Quality Plan will identify the 25-year FUDA and will consider other factors including the impacts on natural and built systems, the efficient use of land including urban densities, and the ability to efficiently provide services to support the development and farmland preservation planning.

- ***Find Programs & Policies That Work*** HIA is a combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, program or project on the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects (International Association for Impact Assessment, 2006). The purpose of the HIAs is to provide a public health lens to inform the communities' decision-making processes as they select their FUDA plans.

- ***Implement Strategies*** The HIAs will be conducted from February 2012- April 2012 and will focus on potential health impacts on the aging population and determinants and outcomes related to physical activity.

- ***Evaluate Efforts*** Intended outcomes for this process include: (a) assessing the health impacts of two future urban development area pilot projects to aid in the decision of the selection of a final scenario and associated implementation measures; and (b) the development of a case study to guide future public health and planning partnerships.

10. HIA Process: Monitoring & Evaluation

Because this rapid HIA was a demonstration project, the monitoring and evaluation processes were enacted differently than they would have been for a full HIA. That being said, there is still important monitoring and evaluation information that can be shared through this rapid HIA process to get a better understanding of how these steps of an HIA are important to the overall process.

Monitoring Plan

In general, a monitoring plan for a full HIA is done for the following reasons and should be done in the following ways:

- To determine whether the recommendations set forth were actually implemented.
- The monitoring plan should include provisions on how to report monitoring findings to decision makers and HIA stakeholders.
- Indicators required for monitoring and measuring the health impacts and long-term effects of the proposal need to be determined and set up during the scoping stage, rather than at the end of the HIA process. Monitoring of the proposal's implementation should be a continual process.

Evaluation Process

In general, the evaluation process is meant to accomplish the following:

- To determine whether the HIA was effective in carrying out its objectives and ultimately achieving its health goals.
- To determine whether the methodologies employed were effective or suitable.
- To determine the HIA's usefulness as seen by its target audience(s).
- To assess the accuracy of predictions made during appraisal stage of the HIA.
- To establish how effective the process was in influencing decision-making processes and developments.

More specifically, had this HIA been conducted as a full HIA rather than a rapid demonstration HIA, various process, impact and outcome questions would be asked as part of the evaluation process. Examples of these evaluation questions appear below:

- ***Process Evaluation***:

- Where the individuals in the communities that the identified health priorities focus on (the aging population and overweight/obese populations) fully incorporated into the HIA process to ensure that their needs, concerns, and comments were heard and addressed?
- Where the health needs of the communities that the identified health priorities focus on (the aging population and overweight/obese populations) addressed in the hybrid scenario because of the HIA process?

- ***Impact Evaluation***:

  - Does the chosen hybrid scenario disproportionately affect the health of one or more groups of individuals? If so, what groups of individuals and how are they disproportionally affected?
  - Were the recommendations for the aging population, specifically to create walking paths and cross walks that address their needs, as well as recommendations for physical activity, such as including more sidewalks and biking facilities enacted? If not, why?

- ***Outcome Evaluation***:

Because of the long term time frame of these growth plan scenarios, it is difficult to track the long term health impacts of HIA recommendations. Typical HIAs are better able to determine the long-term health effects of HIA recommendations because the time frame they are working with is generally shorter than a 20+ year comprehensive plan such as is the case with the particular rapid demonstration HIA.

If this were a full HIA, the following outcome questions could be asked as part of the outcome evaluation:

- Did levels of physical activity increase due to better sidewalks, walking paths and bike paths/facilities as recommended by the HIA? If so, can this increase in physical activity be linked to any decreases in overweight/obesity?
- Did the health of the aging populations increase do to better access to recreation and better access to healthful foods?

11. Discussion

- ***Strengths***

The rapid HIA conducted was able to add value to the FUDA process by bringing a health lens to the table. It did so by assessing potential impacts of the Future Urban Development Area (FUDA) alternate scenarios, providing recommendations to the community steering committee, and to disseminating this project as a case study to inform future partnerships between community planners and public health in Wisconsin. The HIA was also able to bring attention to the specific health concerns of the community members in the FUDA area (the aging population and physical activity and obesity) and provide recommendations to help address these specific health concerns.

The partnership created between CAPRC and DPH has value outside of this HIA process. There are many projects the two organizations can partner on in the future that incorporate plans, policies or programs that focus on both planning and health issues.

Finally, as a demonstration project, this HIA adds value to the HIA community because it provides experiences and information on how HIA can be used in the field of community planning to help bring a health lens to the planning process.

- ***Limitations***

Due to the time constraints associated with this project, this HIA was conducted as a rapid HIA. This means that the data collection process was less intensive than in a traditional, longer term HIA. There were limitations in ability to obtain data which restricted the impact analysis. Some data limitations were related to data on existing conditions, while others were related to details about how the three original scenarios related to each indicator.

For example, data limitations on existing conditions were related to affordable housing, good quality housing, life-cycle housing, and energy efficient building codes: no data was obtained regarding the percent of families/individuals who live in affordable housing, and no data was obtained and/or available on good quality housing, life-cycle housing, and energy efficient building codes.. Other existing conditions data that was lacking related to emergency department (ED) visits related to asthma and climate change (CC) and allergic diseases. Finally, other existing conditions data that was not available related to healthy food outlets and local food production: no data was available on the “healthiness” of foods at local foods outlets, and no data was available on what percent of locally produced foods are sold and/or consumed locally.

Some of the data limitations were related to lack of detailed information in the three original scenarios related to the prioritized health determinants. It was not possible from the

information provided on the three scenarios to determine which scenario would have the most views of greenery/vistas for mental health or which would provide for the most tree canopy preservation. This was also true for health indicators such as trails and bike lanes, transit, transit oriented development and gathering places and recreational amenities. In these cases, it was necessary to make a recommendation based on the limited information related to these health indicators or to make no recommendation at all.

Because this rapid HIA was conducted in conjunction with a long-term comprehensive plan for these communities, the monitoring phase will not be followed through to completion. This type of long-term comprehensive plan is usually a 20 to 50 year plan and thus makes it difficult to evaluate the long term outcomes of conducting an HIA.

12. Conclusion

Just like individual and population health, the health of a community is multifaceted and complex. Healthy community design is a comprehensive strategy for shaping and organizing our communities, taking into account the myriad factors, such as policies, plans, and programs, which affect physical and mental health and social well-being. HIA is one way to help shape and organize our communities for health, by looking at the complicated intersection between health and social, economic and environmental factors in a systematic way, to see how various policies, plans and programs may positively and/or negatively affect health. One important advantage of HIA is that it can pinpoint and focus on the needs of disadvantaged populations, thus attempting to address some of the health disparities in a community.

This rapid HIA addressed the traditional six steps of the HIA process in a slightly different fashion than a traditional HIA because it was a demonstration project. After deciding to move forward with an HIA, the goals of the HIA were articulated, certain health pathways were prioritized, and vulnerable populations were identified. This rapid HIA was able to provide the communities involved with information on which of the original three scenarios best fit each health determinant, to help inform and educate community members on how various health determinants are affected by different land use plans. The HIA process was also able to provide these communities with recommendations on how to best promote health and mitigate any potential negative health effects of the recommended hybrid scenario.

This demonstration HIA will help inform future HIA projects. The partnership that has been established between CARPC and the Wisconsin HIA Collaborative will be beneficial in the future.

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Appendix 1 Additional FUDA HIA Scoping

Existing Conditions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
What are the existing demographics of the area?	How will the FUDA alternative plan impact the demographics of the area?	Age	CARPC			*Community has a particular interest in elderly population
		Income	CARPC			
		Employment	CARPC			
		Race/Ethnicity	CARPC			
What is the existing health status of the area?	How will the FUDA alternative plan impact the health status of the area?	Overweight/obesity	DPH			*Community Interest
		Common diseases	DPH			
		Health Insurance	DPH			
		Physical Activity	DPH			*Community Interest
		Elder Health	DPH			*Community Interest
		Mental Health	DPH			
		Social Cohesion	DPH			
		Respiratory diseases	DPH			
		Emergency Department data	DPH			
		Crime	DOC			

Existing Conditions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
		Traffic Related Injury	IRC			
What is the current status of housing availability in the area?	How will the FUDA alternative plan impact housing availability?	Affordable housing (MN)	CARPC			Affordable housing goal
		Quality housing (lead, air quality, temperature, humidity)	DPH			
		Life-cycle housing (Douglas)				Town homes, senior housing, apartments, and rental unites
What are the current economic conditions of the area?	How will the FUDA alternative impact the area economically?	Cost of new infrastructure	CARPC			
		Cost of additional civic amenities	CARPC			
		Cost of public works/road maintenance	CARPC			
		Cost of emergency services	CARPC			
		Tax revenue	CARPC			
		School impact: Assessment	CARPC			Comparison of tax levy per student
		School impact: Bussing	CARPC			Potential saving to school districts due to walking not bussing

Existing Conditions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
		Jobs	CARPC			New employees added between 2010 and 2035, and between 2010 to "build out)
		Job Access (Douglas)				Does the plan promote economic opportunities for low income and underemployed or insecurely employed individuals
		Consumer Expenditure	CARPC			Additional Spending by new residents
What are the current environmental (broadly defined) conditions of the area?	How will the FUDA alternative impact the area environmentally (broadly defined)?	Air pollution	CARPC			
		Asthma/ Respiratory diseases	DPH?			
		ED visits related to Asthma	DPH?			
		Greenhouse gas	CARPC			
		Developments have views of greenery/vistas for mental health (Douglas)				
		Tree canopy preservation (MN)	CARPC			
		Crime Prevention through environmental	Local ordinances			

Existing Conditions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
		community design				
		Separation of potentially contaminating land used with residential areas and natural resources (MN)	CARPC			
		Conversion of community facilities, fleets and operations to carbon-neutral environments (MN)	Local ordinances			
		Energy efficient building codes (LEED)	Local ordinances			
		Severe rain events or increased precipitation (MN) Storm water Generated (CARPC)	CARPC			
What is the current state of mobility and access in the area?	How will the FUDA alternative impact the area's mobility and access?	Walking and Biking	CARPC			Portion of new residents within walkable (1/4mile) and bikable (2 miles) distance to one or more common destinations (schools, park, grocery store, employment)

Existing Conditions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
		Pedestrian/bicycle safety (MN)				
		Transit	CARPC			Portion of new residents within walkable (1/4 mile) distance to “high capacity” transit stop
		Trip Reduction	CARPC			Trips reduced due to proximate land uses
		Reduced VMT	CARPC			Reduction in VMT due to reduced trips
		Traffic related accidents (Douglas)	IRC			
		Complete streets, shared streets, and traffic calming (Douglas)	Local ordinances			
		Senior Services (Douglas)				Hospitals, healthcare facilities, churches, shopping malls, and community centers
		Linking existing and future housing development with employment and services (Douglas)				

Existing Conditions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
		Recreational amenities (Douglas)				Parks, open space, and recreational facilities
		Maps of large recreational facilities, community gardens, schools, large parks and open space (Douglas)				Will the final plan include this? Checklist
		Trails and bike lanes (Douglas)				
		Clustered activities (Douglas)	CARPC			Mixed-used developments, planned unit develops, transit-oriented developments
		Transit Oriented Development (MN)	CARPC			
		Mixed Used Development (MN)	CARPC			
		Social Interaction or gathering places (MN)				
What is the current access to healthy foods in the area?	How will the FUDA alternative impact the area's access to healthy food?	Local food production (MN)				Community gardens, protection of agricultural land
		Contiguous Ag land	CARPC			
		Healthy Food Outlets	DPH			

Existing Conditions	Impact Research Questions	Indicators	Data Sources	Methods	Priority	Notes
What is the current level of preparedness for emergencies?	How will the FUDA alternative impact the area's level of preparedness for emergencies?	Documented Risks	SOVI			Extreme heat, winter weather, chemical spills
		Documented plans or resources	SOVI/DPH?			

Appendix 2 Additional Good Quality Housing Information

1. Good Quality Housing

Indoor Air Pollutants and their Health impacts	
Indoor Pollutant/Element	**Impacts in Health**
Air Pollutants (Elderly people, children and people with respiratory conditions/diseases are particularly susceptible to indoor air pollution)	
Lead (from lead-based paint)	⌖ Lead exposure in fetuses and children can lead to delays in their physical and mental development
Radon: radioactive gas released from the ground that can migrate into buildings	⌖ Damages lung cells and can lead to lung cancer
Volatile organic compounds (VOCs): emitted by furniture and building materials, as well as when using household cleaning products	⌖ Some are carcinogenic ⌖ Other health impacts include: - • Eye, nose, and throat irritations • Headaches • Dizziness • Visual disorders • Memory impairment
Asbestos: used in fire proof materials	⌖ Causes mesothelioma and cancer
Indoor Temperature	⌖ Low indoor temperatures increases the risk of elderly mortality ⌖ Temperature extremes can exacerbate negative health conditions and lead to increased morbidity.
Humidity	⌖ Dampness and mold growth in homes can cause respiratory diseases, allergies as well as skin problems. Other negative health impacts include fatigue, headache, chronic anxiety and depression.
Noise	⌖ Exposure to noise pollution can lead to depression and may have negative impacts on cardiovascular, respiratory musculo-skeletal systems in adults. ⌖ In elderly people, exposure to noise pollution has been associated with increased risk of stroke.

	⌖ Exposure to noise pollution in children has been associated with an increased risk of respiratory disease. ⌖ Exposure to noise pollution has also been linked to asthma, due to an inability to open windows as a means to minimize noise impacts.
Light	⌖ Lack of adequate daylight has been associated depression.
Space	⌖ Inadequate space inside the home has been associated with poor mental health outcomes. ⌖ Children living in high rise housing may be at a greater risk of developing behavioral problems and have poor mental and general health outcomes than children living in low rise or single family housing due to overcrowding and a restricted access to play areas.
Pests such as dust motes, rats and cockroaches	⌖ These are all sources of allergens that can lead t asthma and other respiratory diseases.
Unsafe condition inside the home	⌖ Can lead to an increased risk of accidental burns and injuries.

(IPH Ireland, 2006; US EPA, 2011).

Appendix 3 Additional Considerations per Indicator

Affordable, Good Quality, Life-Cycle Housing & Energy Efficient Building Codes

- What current proportion of the population in the area is living in overcrowded conditions?
- Does the plan incorporate a variety of housing densities? Variety of housing cost?
- Are at least 50% of residential units affordable to persons at or below the medium household income, and/or is there at least a 20% ownership and 20% rental unit housing mix in a neighborhood or census tract?
- How many of the existing buildings in the area are LEED or Green Point certified? Map the locations of life-cycle housing (i.e. town homes, senior housing, apartments, and rental units).
- Do current development plans include integrated pest management plans, allergen removal plans and lead-paint testing and removal?
- Are housing vouchers available to help families move to healthier and safer housing?
- Do all homes have smoke detectors and window guards?

Developments with Views of Greenery/Vistas for Mental Health and Tree Canopy Preservation

- What is the quality, proximity to and the current number of acres of natural spaces, habitats and parks in the area under consideration?
- What is the current proportion of population living within ¼ mile of neighborhood or regional park, open space, or publicly accessible shoreline?
- Is a tree canopy provided in parks, open space, and streetscapes to establish a 50% to 100% canopy coverage in the development area?

Trails and Bike Lanes & Walking and Biking

- Is an off-street trail system planned to serve all residential areas, preferably within 400-600m of all residential areas?

Traffic-Related Accidents, Complete Streets and Pedestrian and Cyclist Safety

- What are the current number, type, and location of traffic collisions, in the area?
- Are all residential areas, schools, day care facilities, playgrounds and sports fields required to be more than at least 200 m (656 ft) from a major road?
- What is the current hazard or frequency of transportation related accidents?

- What are the current vehicle volumes or speeds and how shall these be impacted by the plan?
- Are any of the following features or traffic calming measures included in the current and /or future street plans? :

Accessible pedestrian signals	☐ Yes ☐ No ☐ Not Sure	**Police Enforcements**	☐ Yes ☐ No ☐ Not Sure
Bike Lanes (or wide paved shoulders)	☐ Yes ☐ No ☐ Not Sure	**Raised Crossings**	☐ Yes ☐ No ☐ Not Sure
Bump Outs	☐ Yes ☐ No ☐ Not Sure	**Roundabouts**	☐ Yes ☐ No ☐ Not Sure
Center Islands	☐ Yes ☐ No ☐ Not Sure	**Sidewalks (five feet wide)**	☐ Yes ☐ No ☐ Not Sure
Comfortable and accessible public transportation stops	☐ Yes ☐ No ☐ Not Sure	**Signage**	☐ Yes ☐ No ☐ Not Sure
Curb extensions	☐ Yes ☐ No ☐ Not Sure	**Small block sizes**	☐ Yes ☐ No ☐ Not Sure
Frequent and safe crossing opportunities	☐ Yes ☐ No ☐ Not Sure	**Special bus lanes**	☐ Yes ☐ No ☐ Not Sure
Landscaping	☐ Yes ☐ No ☐ Not Sure	**Speed Humps**	☐ Yes ☐ No ☐ Not Sure
Median Islands/Barriers	☐ Yes ☐ No ☐ Not Sure	**Striping**	☐ Yes ☐ No ☐ Not Sure
Narrower travel lanes	☐ Yes ☐ No ☐ Not Sure	**Other**	

(Douglas County PH & Minnesota PH Department, 2011; DHSS, 2010; National Complete Streets Coalition, 2011)

- Does the development plan supporting cycling and walking? How will it impact the number of walking and bicycling trips?
- How will the plan impact the current vehicle miles traveled (VMTs) in the area?

Transit and Transit Oriented Development

- What is the current availability and convenience of public transit services? Are the current public

transport services reliable and frequent (including services at night and at weekends)?

- What is the current transit access to jobs, goods, services, and educational resources?
- What is the current proportion of households commuting to work by public transit?
- Are there existing or planned transit stops for all residential areas in urbanizing and redevelopment areas as well as in employment areas (preferably within 1200m of all such areas)?
- Are there a variety of nearby destinations for residents (e.g., employment, health care, grocery stores, etc.) and can these destinations be reached by a variety of transportation modes (e.g., bicycling, walking, automobile, transit)?
- What is the proportion of new residents living within walkable (1/4 mile) distance to a "high capacity" transit stop?
- Are there sufficient specialized transport services available for people with disabilities?
- Are public transit vehicles age-friendly (e.g. have floors that lower, have low steps, have wide seats, have clear signage indicating vehicle number and destination?
- Are the current public transport services affordable to all older people?
- Do the current public transport services enable older people to reach key destinations such as hospitals, health centers, public parks, shopping centers, banks and senior centers?
- Are all areas well-serviced with adequate, well-connected transport routes within the city (including the outer areas) and between neighboring cities?
- Are current transport routes well-connected between the various transport options?
- Are designated transport stops located in close proximity to where older people live?
- Are transport stops provided with seating and with shelter from the weather, are they clean and safe, and are adequately lit?
- What is the current proportion of the senior population living within ½ mile of regional transit stop and ¼ mile of local public transit stop?
- What will be the proportion of new residents living within walkable (1/4 mile) distance to a "high capacity" transit stop?

Neighborhood Characteristics (Social Interaction, Gathering places & Recreational Amenities, Senior Services)

- What is the current quality or frequency of contacts with friends, family members, and neighbors?
- What are the current attitudes towards or stereotypes of racial, social, and ethnic groups in the area?
- What is the current residential segregation by race/ethnicity and income, in the area?
- What is the current proportion of voting age population participating in elections in the area?

- What is the current level of and access to participation in voluntary organizations and activities?
- What is the current degree of inequality in income or wealth, or segregation by race, ethnicity, or income?
- What is the current degree or quality of participation in public decision making?
- What is the current perceived level of safety and "trust" of neighbors in the area?
- Are there sufficient specialized transport services available for people with disabilities?
- Are public transit vehicles age-friendly (e.g. have floors that lower, have low steps, have wide seats, have clear signage indicating vehicle number and destination?
- Are the current public transport services affordable to all older people?
- Do the current public transport services enable older people to reach key destinations such as hospitals, health centers, public parks, shopping centers, banks and seniors' centers?
- Are all areas well-serviced with adequate, well-connected transport routes within the city (including the outer areas) and between neighboring cities?
- Are current transport routes well-connected between the various transport options?
- Are designated transport stops located in close proximity to where older people live?
- Are transport stops provided with seating and with shelter from the weather, are they clean and safe, and are adequately lit?
- What is the current proportion of the senior population living within ½ mile of regional transit stop and ¼ mile of local public transit stop?
- What will be the proportion of new residents living within walkable (1/4 mile) distance to a "high capacity" transit stop?
- What is the current proportion of the senior population living within a 30 minute transit or walking commute of a hospital or health care facility?
- Are residential care facilities, such as retirement homes and nursing homes, located close to services and residential areas so that residents remain integrated in the larger community?
- Are home care services offered in the community, such as health services, personal care and housekeeping?
- Does current emergency planning include the needs of older people, taking into account their capacities in preparing for and responding to emergencies?
- What will be the proportion of new residents living within walkable (1/4mile) and bikable (2 miles) distance to one or more common destinations (schools, park, grocery store, employment)?
- Does the plan allow for clustering of different activities together (to make it easier to access a variety of services at one stop via public transit, bicycling, walking, and by car)?
- Does the plan link existing and future housing development with employment and services?

Mixed Used Development

- Are there appropriate ordinances or policies used for mixed-use design of neighborhood, village, town, and city centers?
- What is the proportion of new residents living within walkable (1/4mile) and bikable (2 miles) distance to one or more common destinations (schools, park, grocery store, employment)?
- Are services clustered as well as located in close proximity to where older people live?
- Can services be easily accessed by elderly customers (e.g. are located on the ground floor of buildings)?
- What is the current proportion of the senior population in the area living within ½ mile of a full-service grocery store or fresh produce, shopping malls, community centers, places of worship?
- What is the current proportion of the senior population living within a 30 minute transit or walking commute of a hospital or heath care facility?
- Are residential care facilities, such as retirement homes and nursing homes, located close to services and residential areas so that residents remain integrated in the larger community?
- Are home care services offered in the community, such as health services, personal care and housekeeping?
- Does current emergency planning include the needs of older people, taking into account their capacities in preparing for and responding to emergencies?
- What will be the proportion of new residents living within walkable (1/4mile) and bikable (2 miles) distance to one or more common destinations (schools, park, grocery store, employment)?
- Does the plan allow for clustering of different activities together (to make it easier to access a variety of services at one stop via public transit, bicycling, walking, and by car)?
- Does the plan link existing and future housing development with employment and services?

Appendix 4 Recommendations per Indicator

Affordable, Good Quality, Life-Cycle Housing & Energy Efficient Building Codes

- The development plan must include at least 50% of residential units affordable to persons at or below the medium household income.
- The development must include at least a 20% ownership and 20% rental unit housing mix in a neighborhood or census tract.
- The development plan should include an evaluation program of lead-bearing substances in exposed surfaces of dwelling units (as well as child care facilities, schools, or recreation facilities) used by children. The program should also include assistance schemes for lead-paint testing, removal, coverall or tenant relocation.
- The development plan should also include integrated pest management plans, and assistance programs provided for allergen-testing, removal (for example carpet replacement etc), coverall or tenant relocation.
- Household quality evaluations should include assessments for heavy metals, inorganic solvents, pesticides, crowding and transportation noise, and required safety standards such as smoke detectors.
- The development plans should also include schemes/policies which facilitate the transfer rental housing from neglectful owners to owners who take their maintenance and management responsibilities seriously.

Developments with Views of Greenery/Vistas for Mental Health and Tree Canopy Preservation

- The development plan should require that all developments have views of greenery for mental health benefits.
- The development plan should strive to incorporate greenways to provide natural, non-motorized open space corridors (often following roadways, ridge tops and waterways).
- The plan should require that at least a small amount of green space be provided for all development.
- The development plan should encourage the inclusion and maintenance of the natural environment in the area.
- The development plan should include a tree planting/tree canopy plan. The tree planting/ tree canopy plan should cater for 50% to 100% tree canopy coverage in the development areas,

provided in parks, open spaces, and streetscapes.

Traffic-Related Accidents, Complete Streets and Pedestrian and Cyclist Safety

- Speed limits in the locality should be set at or below 35 mph (optimally 20 mph) for 70-90% of streets, to ensure pedestrian/bicyclist safety.
- The development plan should ensure that adequate street lighting is provided along all major streets.
- All residential areas, schools, day care facilities, playgrounds and sports fields should be required to be located more than at least 200 m (656 ft) from a major road.
- The development plan should make use of pedestrian overlay zones. The pedestrian overlay zones should include policies that encourage walking and bicycling through streetscape amenities, such as benches, trash receptacles, planters, pole lights, kiosks, telephones, news-stands, drinking fountains and bike racks. Pedestrian plans should also provide protection through parallel parking and street trees as features.
- Traffic calming measures should also form part of the development plan.

Transit and Transit Oriented Development

- The development plan should ideally incorporate neighborhood commercial and/or mixed use development to encourage transportation related walking.
- The development plan should also include a multimodal transportation plan that connects all residential areas to services (i.e. employment centers, grocery stores, hospitals, etc), as well as policies/plans that prioritize the transportation needs of underserved populations (e.g., seniors, children, persons with disabilities, low-income residents, etc.).

Neighborhood Characteristics

- Planned residential areas should be located with 600m (preferably 400m) of playing areas, parks, and trails.
- Adequate lighting should be provided in parks so that pedestrians on paths see other pedestrians at least 200 meters away.

Supplement E: North Mendota FUDA Environmental Conditions Report

(Included on CD)