

The City of Shorewood wishes to acknowledge and thank the following individuals for their time and dedication in completing the City's 2040 Comprehensive Plan Update.

Their commitment, cooperation and contributions are greatly valued and appreciated.

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INTRODUCTION

The City of Shorewood has undertaken an update of its current 2030 Comprehensive Plan both in response to a mandate received from the Metropolitan Council and to identify community issues and concerns. In part, these considerations will serve to direct and focus the work effort.

As a means of obtaining input and gaining insight into local needs and opinions, a series of interviews were undertaken with City Council members, Planning Commissioners, and City staff. The interviews provided significant and valued perspectives on objectives and needs to be addressed in planning the future of Shorewood. This information is summarized in the "Planning Tactics" section of this document (attached as Appendix A). To be stressed however, is that this initial feedback process does not end, but rather will be a continuing theme of the Plan Update process.

Additionally, the city held three open houses and completed a community survey to allow residents and property owners to voice their opinions on what they desire for the City and their respective areas of interest.

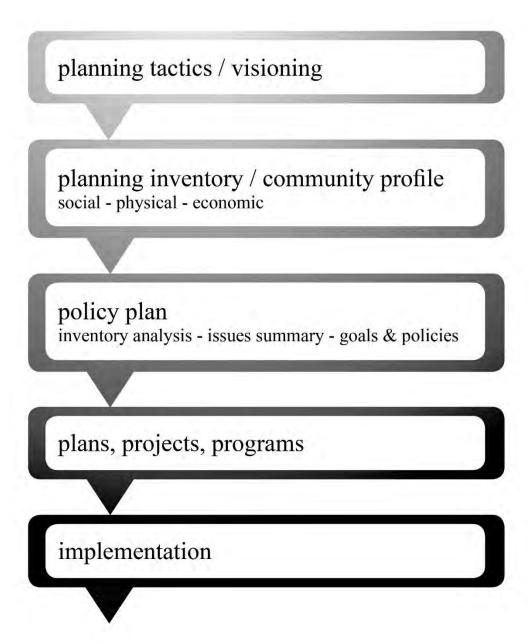
Following this input from citizens and property owners, "draft" materials were presented to the Planning Commission and City Council prior to conducting formal and required public hearings. It is through this participation process that community concerns were raised and addressed.

Beyond the desires and needs of the local representatives, it is important to note that the regional planning directives of the Metropolitan Council will also influence the content of the Comprehensive Plan Update. More specifically, the Metropolitan Council's *Thrive MSP 2040* Regional Development Guide establishes a regional context within which the City of Shorewood must define its role and direct its future. *Thrive MSP 2040* mandates specific regional criteria that must be addressed in the 2040 Comprehensive Plan Update.

In the material that follows, a description of the Comprehensive Plan Update process is provided first. Next, a discussion of local and regional planning history is presented. The major component of this Plan is dedicated to the comments, opinions, needs, and issues that were identified through a series of interviews held to receive input from community officials and City staff. Again, a summary of this information is provided in the "Planning Tactics" report which is attached as Appendix A. The report concludes with a summary of key issues and focus areas that will be further reviewed and refined during the Visioning process of the 2040 Comprehensive Plan Update.

PLANNING PROCESS

Comprehensive planning is a broad base problem solving process. As such, the effort involves well-defined steps, beginning with problem and objective identification and progress to proposed solutions and actions. The diagram on the following page graphically illustrates the general series of stages which have been undertaken in planning for the City's future.



The general comprehensive planning process must, however, be specifically tailored and designed for the jurisdiction it serves. In the case of Shorewood, the 2040 Comprehensive Planning work

program has been divided into five phases with various sub-components intended to cover both macro and micro perspectives of the community.

The first phase was the Planning Tactics which identified local concerns and needs. Through the Tactics interviews, open houses and survey, input was received from City Council members, Planning Commission members, and residents.

The second phase of the planning process involved the assembly of a technical Inventory to document the City and its facilities as they currently exist. The Inventory addresses social, environmental and physical conditions of the City.

Phase three involved the formulation of a Policy Plan. Following the Inventory and Issues Identification, the City defined desired community planning goals that it wishes to accomplish over the next 20-year period. In this regard, policies have been formulated to define actions for accomplishing the desired community goals.

Phase four involved the formulation of the Community Framework guide plan which provides specific plan recommendations for natural resources, land use, housing, transportation, utilities, and community facilities.

The fifth and final stage is Implementation, which involved an analysis of the City's implementation tools (development regulations and capital improvement plans) to ensure that they will effectively serve to implement the Comprehensive Plan goals.

Subsequently, the draft Plan will be sent to adjacent jurisdictions and affected school districts for comment and the Metropolitan Council for review and approval.

To ensure that the City's Comprehensive Plan is truly reflective of the community's interests and objectives and is responsive to constituent concerns, the work must be directed from the outset by the views and opinions of officials, citizens, and property owners. As one of the initial phases of Shorewood's Comprehensive Plan Update, a broad cross-section of individuals was consulted to gain a portion of this local perspective and orientation. Additionally, comments from surrounding and affected units of government will be solicited. This information, when combined with the pending technical community inventory, will establish the basis for Plan formulation.

PLANNING HISTORY

The Lake Minnetonka area, of which the City of Shorewood is a part, was a major tourist destination in the late 19th Century. The area was characterized by luxurious hotels and inns and was accessible via the railroad and State Highway 7.

The City of Shorewood was organized as a village in 1956. Prior to that time, it was part of the former Excelsior Township, as were the nearby Cities of Excelsior, Tonka Bay and Deephaven. The former Village of Shorewood became a statutory City in 1974. Incorporation efforts were



prompted by concerns that remaining property in Excelsior Township would be "lost" by ongoing annexation activities.

Shorewood is primarily a residential community and includes shorelines on Lake Minnetonka, Christmas Lake, Como Lake, Galpin Lake, Silver Lake, Lake Virginia, and Lake William.

The City of Shorewood took its initial steps to control its destiny in 1956 with the development of a Zoning Ordinance. The City adopted its first Comprehensive Plan in 1981, which outlined the type community that the City of Shorewood desired to become. In this regard, the Plan established related goals and policies, as well as a Land Use Plan.

Since 1981, the Plan has undergone several amendments (updates) and, most recently in 2009, as the City's 2030 Comprehensive Plan.

REGIONAL PLANNING

As part of the mandated comprehensive planning process, the City of Shorewood is required to coordinate its Comprehensive Plan in a manner consistent with the *Thrive MSP 2040* Regional Development Guide, as adopted by the Metropolitan Council.

To build the foundation for a prosperous, equitable, livable, and sustainable future, the *Thrive MSP* document identifies seven general policies to guide land use and regional development. These policies are as follows:

Orderly and Efficient Land Use: Align land use, development patterns, and infrastructure to make the best use of public and private investment.

<u>Natural Resources Protection:</u> Conserve, restore, and protect the region's natural resources to ensure availability, support public health, and maintain a high quality of life.

<u>Water Sustainability:</u> Conserve, restore, and protect the quality and quantity of the region's water resources to ensure ongoing availability, support public health, and maintain a high quality of life.

<u>Housing Affordability and Choice:</u> Promote housing options to give people in all life stages and of all economic means viable choices for safe, stable, and affordable homes.

Access, Mobility and Transportation Choice: Sustain and improve a multimodal transportation system to support regional growth, maintain regional economic competitiveness, and provide choices and reliability for the system's users.

<u>Economic Competitiveness:</u> Foster connected land use options to provide businesses and industries with access to materials, markets, and talent.

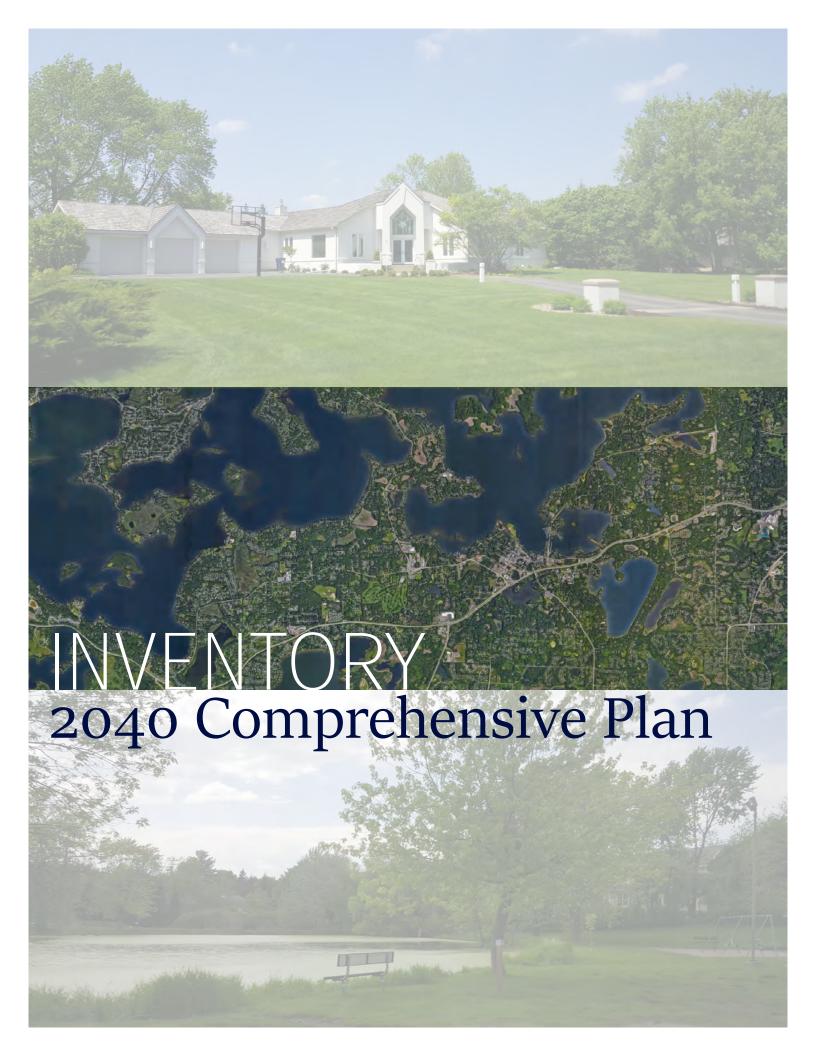
<u>Building in Resilience:</u> Promote sensitive land use and development patterns to achieve Minnesota's adopted greenhouse gas emissions goals at the regional scale, and to develop local resiliency to the impacts of climate change.

The Metropolitan Council has classified the City of Shorewood as a "Suburban" community. The *Thrive MSP 2040* Regional Development Guide provides the following specific growth strategies for "Suburban" communities to ensure orderly and efficient land use:

• Plan for forecasted population and household growth at overall average densities of at least five units per acre, and target opportunities for more intensive development near regional transit investments at densities and in a manner articulated in the 2040 Transportation Policy Plan.



- Identify areas for redevelopment, particularly areas that are well-served by transportation options and nearby amenities and that contribute to better proximity between jobs and housing.
- In collaboration with other regional partners, lead major redevelopment efforts.
- Lead detailed land use planning efforts around regional transit stations and other regional investments.
- Plan for and program local infrastructure needs (for example, roads, sidewalks, sewer, water, and surface water), including those needed to accommodate future growth and implement local comprehensive plans.





INTRODUCTION

The starting point for the Shorewood Comprehensive Plan Update is to document existing conditions and trends within the City that influence the City's future growth. The purpose of the Shorewood Inventory is to identify the type, amount, and pattern of growth that has taken place within the City. To this end, an inventory of existing conditions has been conducted. This Inventory encompasses seven general categories of information as highlighted below:

Socio-Economic Profile – This profile provides demographic information on population, households, age characteristics, income, and employment.

Natural Resources Profile – This profile identifies the characteristics of Shorewood's natural environment that influence land use development including topography, soils, watersheds, lakes, streams, and wetlands.

Land Use Profile – This profile describes, locates, and quantifies the various land uses within the City of Shorewood.

Housing Profile – This profile describes Shorewood's housing stock by age, tenure, value, and type.

Transportation Profile – This profile describes the transportation infrastructure available in Shorewood. The transportation profile includes functional classification of roadways, traffic volumes, aviation, and transit opportunities.

Utilities Profile – This profile provides insight on public utilities (waste water and municipal water

Community Facilities Profile – This profile provides insight on parks, schools, other utilities and public safety.

The sources of Inventory data have been gathered from a wide range of agencies, printed documents, and interviews. All the maps and tables have been provided with a source. Additional information regarding the source of any of the Inventory data can be obtained by contacting the City.

Together, these categories that make up the Shorewood Inventory provide an informational base which will be used to identify issues and set up a hierarchy of planning policies. These policies will help the community address a broad base of land use and development issues. With the help of a solid information base, decision-makers can evaluate and guide proposals in the short term to benefit the residents Shorewood and the surrounding area, while fulfilling the City's long-term goals and objectives.

Socio-Economic Profile



POPULATION AND HOUSEHOLD GROWTH TRENDS

The statistics in the following table illustrate the trends in population within Shorewood, surrounding cities, and Hennepin County. Between 2010 and 2020, the City is expected to grow at a rate of 1.3 percent, while Hennepin County is expected to grow at an 8.9 percent rate. From 2020 to 2040, Shorewood is expected to grow at a rate of 1.3 percent, while Hennepin County is expected to grow at a rate of 12.1 percent. The faster growth rate in Hennepin County is due to the amount of undeveloped and vacant land and the amount of redevelopment projects in the County.

The population of Shorewood is projected to stay relatively stable due to the following:

- 1. With the recent redevelopment of the Minnetonka Country Club property, the City has no large tracts of available vacant land for development and few clustered properties that may be suitable for redevelopment with higher residential densities.
- 2. An aging population with outmigration of young adults.
- 3. Impact of the lack of affordable starter homes and ability to "age in place."
- 4. The impact of shoreland regulations, which restrict development densities within 1,000 feet of a lake.

| | | | Populat | ion Growth 2 | 000 – 2040 | | | |
|---------------------|-----------------|----------------|---------------------------------|-----------------------|-----------------------|---------------------------------|---------------------------------|-----------------------|
| | 2000 Census | 2010 Census | 2020 Met Council Estimate | 2000-2020 % Change | 2010-2020 % Change | 2030 Met Council Estimate | 2040 Met Council Estimate | 2020-2040 % Change |
| Shorewood | 7,400 | 7,307 | 7,400 | 0% | 1.3% | 7,500 | 7,600 | 1.3% |
| Mound | 9,435 | 9,052 | 9,000 | -4.6% | -0.6% | 9,300 | 9,400 | 4.4% |
| Tonka Bay | 1,547 | 1,475 | 1,520 | -1.7% | 3.1% | 1,550 | 1,560 | 2.6% |
| Minnetonka Beach | 614 | 539 | 520 | -15.3% | -3.5% | 490 | 510 | -1.9% |
| Hennepin County | 1,116,200 | 1,152,425 | 1,255,220 | 12.5% | 8.9% | 1,329,580 | 1,406,640 | 12.1% |
| Source: Metrop | olitan Council, | U.S. Census B | ureau | • | | | | |

The table below represents the Metropolitan Council's population forecast for Shorewood through 2040. Population is shown to increase by approximately four percent from 2010 to 2040.





| Population Projections, 2010 – 2040 City of Shorewood | | | | | | | | |
|--|--------------|-------|-------|-------|--|--|--|--|
| 2010 2020 2030 2040 Census Forecast Forecast Forecast | | | | | | | | |
| Population | 7,307 | 7,600 | 7,800 | 8,000 | | | | |
| Households | 2,658 | 2,800 | 2,910 | 3,000 | | | | |
| Employment 1,113 1,600 1,600 1,600 | | | | | | | | |
| Source: Metropol | itan Council | | | | | | | |

The following table indicates that the number of households in Shorewood has increased while the average number of persons per household has slightly decreased (from 2.75 in 2010 to 2.53 persons per household expected in 2040). This is likely reflective of an increase in persons aged 65 and over. It also reflects the natural trend of people having fewer children and the dynamics of the modern family. If this trend is correct, the City will need to encourage additional new housing to accomplish the Metropolitan Council's forecasted population and household growth. However, as the baby boomer generation continues to age and look for alternative housing options, single family homes in Shorewood could be available to younger families, providing more housing options and increasing the average household size. Throughout the next decade, the City of Shorewood should monitor the movement of baby boomers, to help predict future housing needs.

| Population and Household Projections, 2010 – 2040 City of Shorewood | | | | | | | |
|--|---|------------|--------------------------|--|--|--|--|
| Year | Population | Households | Persons Per Household | | | | |
| 2010 | 7,307 | 2,658 | 2.75 | | | | |
| 2015 | 7,458* | 2,724* | 2.74* | | | | |
| 2020 | 7,400 | 2,800 | 2.64 | | | | |
| 2030 | 7,500 | 2,910 | 2.58 | | | | |
| 2040 | 2040 7,600 3,000 2.53 | | | | | | |
| | *Metropolitan Council Estimates Source: Metropolitan Council, US Census Bureau | | | | | | |

The following table illustrates 2000 and 2010 household type for the City of Shorewood. As the table indicates, the number of family households has increased from 2000 to 2010. In 2000, 83 percent of households were family households. In 2010, the number of family households decreased to 80 percent. The number of non-family households increased from 2000 to 2010, from 423 to 508. The Census does not provide data for non-family households with children in 2000 or 2010.



| Household Type City of Shorewood | | | | | | |
|-------------------------------------|----------------------------|-------|-------|-------------------|--|--|
| Household Type | Total Number of Households | | | eholds hildren | | |
| | 2000 | 2010 | 2000 | 2010 | | |
| Family-Married Couple | 1,914 | 2,000 | 1,035 | 1,000 | | |
| Family- Male Householder | 69 | 33 | 20 | 24 | | |
| Family- Female Householder | 123 | 58 | 79 | 28 | | |
| Total Family | 2,106 | 2,091 | 1,134 | 1,052 | | |
| Non-Family Households | 423 | 508 | - | - | | |
| Total Households | 2,529 | 2,599 | 1,134 | 1,052 | | |

^{*}The U.S. Census Bureau defines a family as two or more people (not necessarily including a householder) residing together and related by birth, marriage, or adoption.

Source: U.S. Census Bureau, 2000 and 2010

AGE CHARACTERISTICS

The following table illustrates Shorewood's population by age group. School-aged population (under 18) decreased between 2000 and 2010 by 4.5 percent. In both 2000 and 2010, the labor force represented the largest age group, at just over 60 percent in each year. The retired age group represented 7.9 percent of the total population in 2000, and 12.5 percent in 2010, an increase of 4.6 percent. It is expected that the retired age group will become the fastest growing segment of the population in the forthcoming decade. Changes in the City's demographics and surrounding areas will have significant planning implications for the future.





| | Age Character City of S | Shorewood | | |
|--------------------------------|----------------------------|-----------|--------|-------|
| | 20 | 000 | 2 | 010 |
| Age Group | Number | % | Number | % |
| Under 5 | 526 | 7.1% | 354 | 4.8% |
| 5 to 9 | 758 | 10.2% | 525 | 7.2% |
| 10 to 14 | 712 | 9.6% | 632 | 8.6% |
| 15 to 19 | 475 | 6.4% | 643 | 8.8% |
| Total: School Aged Children | 2,339 | 31.6% | 1,977 | 27.1% |
| 20 to 24 | 200 | 2.7% | 241 | 3.3% |
| 25 to 29 | 168 | 2.3% | 186 | 2.5% |
| 30 to 34 | 340 | 4.6% | 209 | 2.9% |
| 35 to 39 | 719 | 9.7% | 300 | 4.1% |
| 40 to 44 | 870 | 11.8% | 529 | 7.2% |
| 45 to 49 | 764 | 10.3% | 744 | 10.2% |
| 50 to 54 | 660 | 8.9% | 881 | 12.1% |
| 55 to 59 | 339 | 4.6% | 628 | 8.6% |
| 60 to 64 | 283 | 3.8% | 523 | 7.2% |
| Total: Labor Force | 4,475 | 60.5% | 4,418 | 60.5% |
| 65 to 69 | 194 | 2.6% | 285 | 3.9% |
| 70 to 74 | 199 | 2.7% | 237 | 3.2% |
| 75 to 79 | 112 | 1.5% | 168 | 2.3% |
| 80 to 84 | 58 | .80% | 147 | 2.0% |
| 85 to 89 | 17 | .20% | 54 | .70% |
| 90 + | 6 | .10% | 21 | .30% |
| Total: Retirement Age | 586 | 7.9% | 912 | 12.5% |
| Total | 7,400 | 100.0% | 7,307 | 100% |

Socio-Economic Profile



As shown in the table below, Shorewood has a lower median age than Spring Park, Tonka Bay, and Minnetonka Beach, and a higher median age than Mound. All adjacent communities also have a much higher median age when compared to Hennepin County. The cost of homes in the referenced communities plays a key role in the age of the populations which reside within them.

| Median Age of Population Compared to Surrounding Communities (Years), 2010 | | | | |
|--|------|--|--|--|
| Shorewood | 45.3 | | | |
| Spring Park | 49.2 | | | |
| Mound | 42.6 | | | |
| Tonka Bay | 47.8 | | | |
| Minnetonka Beach | 46.7 | | | |
| Hennepin County 35.9 | | | | |
| Source: U.S. Census Bureau, 201 | 0 | | | |

Socio-Economic Profile



EDUCATION

The following table illustrates education levels for residents ages 25 and over in 2010. An overall comparison of Shorewood to Hennepin County illustrates that Shorewood residents have attained a higher level of education than Hennepin County residents as a whole (according to the U.S. Census 2015 estimates). Shorewood has a high percentage of high school graduates or higher, at over 98 percent, compared to Hennepin County's 92.6 percent. Shorewood also has a higher percentage of residents with a Bachelor's degree or higher.

| 2015 Educational Attainment for Ages 25 and Over Shorewood and Hennepin County | | | | | | |
|---|-------------|--------------|-----------------|---------|--|--|
| | Shore | ewood | Hennepin County | | | |
| | 2015 | Percent | 2015 | Percent | | |
| <9 th Grade | 1 | 0% | 28,166 | 3.5% | | |
| 9 th to 12 th Grade (no diploma) | 71 | 1.4% | 32,337 | 3.9% | | |
| High School Graduate | 504 | 10.1% | 146,311 | 17.8% | | |
| Some College (no degree) | 926 | 18.5% | 160,152 | 19.5% | | |
| Associate Degree | 359 | 7.2% | 68,370 | 8.3% | | |
| Bachelor's Degree | 2,087 | 41.7% | 249,057 | 30.3% | | |
| Graduate Degree | 1,060 | 21.2% | 136,969 | 16.7% | | |
| Total | 5,008 | 100% | 821,362 | 100% | | |
| % of High School Graduate (or higher) 98.6% 92.6% | | | | | | |
| % of Bachelor's Degree (or higher) | 62.8% 47.0% | | | | | |
| Source: U.S. Census Bureau | American Co | mmunity Surv | ey | | | |



EMPLOYMENT

The following table represents the 2010 employment demographics for Hennepin County and the City of Shorewood. The table shows that in 2010, Shorewood had a similar breakdown of jobs as compared to Hennepin County. The biggest occupational sectors in both Hennepin County and Shorewood in 2010 were professional and business services and education/health services. The smallest sectors in both Hennepin County and Shorewood were natural resources and mining occupations.

| Occupation by Industry Breakdown, 2010 Shorewood and Hennepin County | | | | | | |
|---|---------------|---------|-----------------|---------|--|--|
| | Shore | ewood | Hennepin County | | | |
| | Number | Percent | Number | Percent | | |
| Natural Resources and Mining | - | - | 823 | 0.1% | | |
| Construction | 51 | 6.2% | 18,201 | 2.4% | | |
| Manufacturing | 16 | 1.9% | 70,933 | 9.2% | | |
| Trade, Transportation and Utilities, Wholesale Trade | 39 | 4.7% | 69,774 | 9.0% | | |
| Information and Retail | 70 | 8.4% | 90.752 | 11.8% | | |
| Financial Activities | 80 | 9.7% | 86,861 | 11.3% | | |
| Professional and Business Services | 155 | 18.7% | 170,201 | 22.0% | | |
| Education and Health Services | 199 | 24.1% | 164,310 | 21.3% | | |
| Leisure, Arts, and Hospitality | 105 | 12.7% | 59,905 | 7.8% | | |
| Other Services | 90 | 10.9% | 23,591 | 3.1% | | |
| Government | 22 | 2.7% | 17,235 | 2.2% | | |
| Total | 827 | 100.0% | 772,586 | 100.0% | | |
| Source: U.S. Census Bureau 2010, On | the Map – QCl | EW data | | | | |

As illustrated in the table below, the Metropolitan Council is predicting that Shorewood will have expanding employment opportunities within the community, increasing almost 70 percent from 2010 to 2040. These estimates appear unrealistic recognizing that Shorewood has limited commercial and industrial land uses within the City. Further, the City of Shorewood is considered fully developed with very few vacant parcels which have the potential to generate new jobs.

| Employment Projections City of Shorewood | | | | | | | |
|--|-------|--|--|--|--|--|--|
| 2010 2020 2030 204 Estimate Forecast Forecast Forec | | | | | | | |
| Shorewood | 1,600 | | | | | | |
| Source: Metropoli | | | | | | | |

Socio-Economic Profile



TRAVEL TIME TO WORK

As shown in the table below, approximately 36 percent of Shorewood residents have a commute time of 30 minutes or longer. The average (median) travel time to work for Shorewood residents is 26 minutes.

| Travel Time to Work, 2015 City of Shorewood | | | | | |
|--|------------------------|---------|--|--|--|
| | Number of Residents | Percent | | | |
| Less than 10 minutes | 331 | 9.7% | | | |
| 10 to 14 minutes | 423 | 12.4% | | | |
| 15 to 19 minutes | 468 | 13.7% | | | |
| 20 to 24 minutes | 539 | 15.8% | | | |
| 25 to 29 minutes | 423 | 12.4% | | | |
| 30 to 34 minutes | 509 | 14.9% | | | |
| 35 to 44 minutes | 253 | 7.4% | | | |
| 45 to 59 minutes | 352 | 10.3% | | | |
| 60 or more | 116 | 3.4% | | | |
| Total | 3,414 | 100% | | | |
| Worked at home | Worked at home 321 | | | | |
| Average travel time to work 26.1 minutes | | | | | |
| Source: U.S. Census Bureau, 2015 | | | | | |



HOUSEHOLD INCOME

The U.S Census data regarding median family income for Shorewood and Hennepin County is illustrated in the following tables. The household income table indicates household income ranges for Shorewood. The per capita income and median family income for the City is significantly greater than that of Hennepin County.

| Per Capita, Family, and Household Incomes Shorewood and Hennepin County | | | | | | | |
|--|----------------------|-------------------------|-------------------------------|-----------------------|--|--|--|
| | Per Capita Income | Median Family Income | Median Household Income | Percent in Poverty | | | |
| 2000 | | | | | | | |
| Shorewood | \$44,425 | \$104,100 | \$96,589 | 1.7% | | | |
| Hennepin County | \$28,789 | \$65,985 | \$51,711 | 8.3% | | | |
| 2010 | | | | | | | |
| Shorewood \$59,861 \$134,698 \$118,495 2.0% | | | | | | | |
| Hennepin County | \$35,902 | \$81,043 | \$61,328 | 12.1% | | | |
| Source: US Census, AC | S 2000, 2010, and | 2015 Five-Year Estin | nates | 1 | | | |

| Household Income City of Shorewood | | | | |
|---------------------------------------|-------------------------|--------------------------|-------------------------|--------------------------|
| | 2000 | | 2010 | |
| | Number of Households | Percent of Households | Number of Households | Percent of Households |
| Less than \$10,000 | 33 | 1.3% | 28 | 1.1% |
| \$10,000 to \$14,999 | 24 | .9% | 24 | .9% |
| \$15,000 to \$24,999 | 126 | 5.0% | 86 | 3.3% |
| \$25,000 to \$34,999 | 151 | 6.0% | 96 | 3.7% |
| \$35,000 to \$49,999 | 168 | 6.6% | 157 | 6.0% |
| \$50,000 to \$74,999 | 427 | 16.9% | 302 | 11.6% |
| \$75,000 to \$99,999 | 377 | 14.9% | 424 | 16.3% |
| \$100,000 to \$149,999 | 555 | 22.0% | 492 | 18.9% |
| \$150,000 to \$199,999 | 204 | 8.1% | 393 | 12.4% |
| \$200,000 or more | 463 | 18.3% | 597 | 23.0% |
| Total | 2,528 | 100.0% | 2,599 | 100.0% |
| Source: US Census Bureau, 2000, 2010 | | | | |



LAKES

Lake Minnetonka is the largest natural resource within the City of Shorewood. As a large recreational lake, it is of prime importance to the citizens of the community and their lifestyle. Shorewood has six named lakes (as classified by the Department of Natural Resources, including Christmas Lake, Silver Lake, Lake Como, Lake Virginia, Lake William, and Galpin Lake, which provide recreational opportunities for residents.

All areas of Lake Minnetonka have been classified as impaired by the Minnesota Pollution Control Agency. This classification is a result of development which surrounds the lake and the amount of direct stormwater runoff channeled into the waters.

There are many government agencies that have jurisdiction, in one form or another, over the City's lakes, including: individual municipalities, the Army Corps of Engineers, the Riley Purgatory Bluff Creek Watershed District, the Lake Minnetonka Conservation District, The Minnehaha Creek Watershed District, and the Minnesota Department of Natural Resources. Historically, the City manages its shoreland development while stormwater drainage is reviewed and approved by the Watershed Districts.

TOPOGRAPHY

There are several areas within Shorewood which exhibit slopes in excess of 18 percent. In these areas, there is a cause for concern because disruption of the existing ground cover or unauthorized grading may result in destabilization of the slope and result in erosion and sedimentation into lakes and/or adjacent wetlands. Those areas classified as bluffs within shoreland districts have additional protection.

SOILS

Many areas of Shorewood have been built upon soils that have questionable to moderate limitation in terms of building site suitability. Since Shorewood is fully serviced by sanitary sewer, the primary consideration regarding the soils is their suitability for new and existing building sites. Factors such as slope, depth to water table, bearing capacity, volume change (shrink-swell potential and potential for frost heave have definite influence on the development capability of a given site. In areas of questionable soils, soil testing and special construction techniques will be necessary to overcome the construction limitations.



TREE PRESERVATION

The City of Shorewood contains significant numbers of oak, elm and other deciduous trees which contribute to the aesthetic quality of the community. In addition, these trees play an important role in the function of the City's natural systems. The City Code includes a tree preservation ordinance which is intended to preserve or replace trees in new developments or redevelopments.

WETLANDS

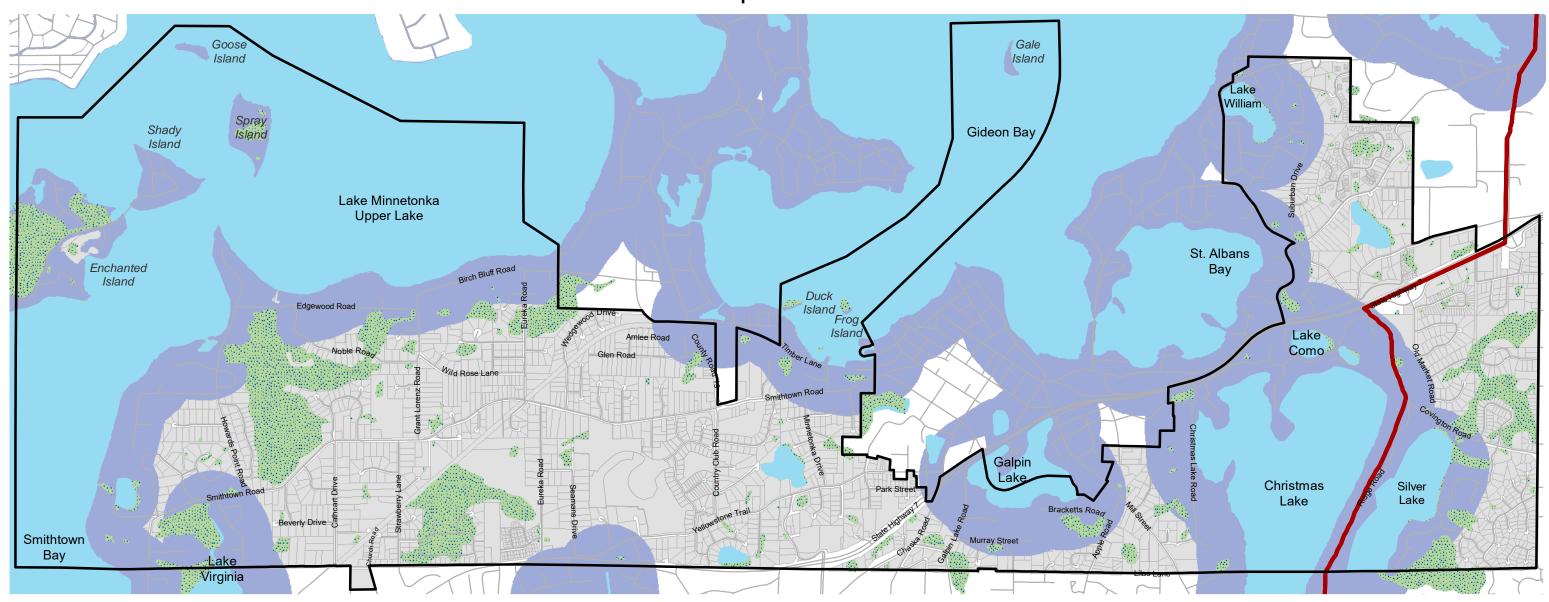
The Water Resources Map on the following page illustrates wetlands and natural buffer areas throughout the City. The wetlands serve an important buffer to the lakes which helps with water quality and preserve the natural environment in the City.

AGGREGATE RESOURCES

According to the Metropolitan Council's aggregate resources inventory contained in Minnesota Geographical Survey Information Circular 46, there are no known viable aggregate resource deposits available for extraction within the City of Shorewood.

Water Resources

City of Shorewood 2040 Comprehensive Plan



Legend

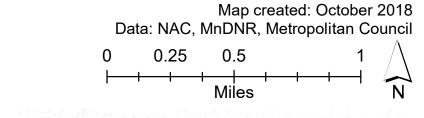
Shorewood Boundary

Watershed Boundaries

Wetlands (National Wetland Inventory)

Shoreland Protection Zone (1000' from Lake)

Lakes





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LAND USE

Shorewood is a fully developed City with 100 percent of the land within its municipal boundaries lying within the Metropolitan Urban Service Area (MUSA). The 3,000 acres of City land has an unusual boundary due to numerous abutting cities and lakes. The City boundary touches the cities of Chanhassen, Orono, Mound, Minnetrista, Victoria, Minnetonka, Greenwood, Deephaven, Tonka Bay and Excelsior. Most land use is classified as residential or commercial. There is a very limited amount of vacant land available for development in Shorewood. Most of the residential land is comprised of single-family homes with few other alternatives. A summary of 2017 land uses is provided in the table below.

| Existing Land Use - 2017 | | | |
|--------------------------------------|-----------------|-----------------------|-------------------------------------|
| Land Use | Acres | Percent of Total | Percent of Total without Open Water |
| Minimum Density Residential | - | - | |
| Low Density Residential | 2,128 | 41% | 64% |
| Low to Medium Density Residential | - | - | |
| Medium Density Residential | 137 | 3% | 4% |
| High Density Residential | 5 | <1% | <1% |
| Commercial | 55 | 1% | 2% |
| Industrial | 9 | <1% | <1% |
| Public/Semi-Public | 67 | 1% | 2% |
| Parks | 95 | 2% | 3% |
| Cemetery | 18 | <1% | <1% |
| Open Space | 238 | 7% | 11% |
| Right of Way | 384 | 7% | 11% |
| Vacant | 202 | 2% | 4% |
| Open Water | 1,874 | 36% | NA |
| Total | 5,212 | 100.0% | 100% |
| Source: City of Shorey | wood, Metropoli | tan Council, analyzed | l via GIS |

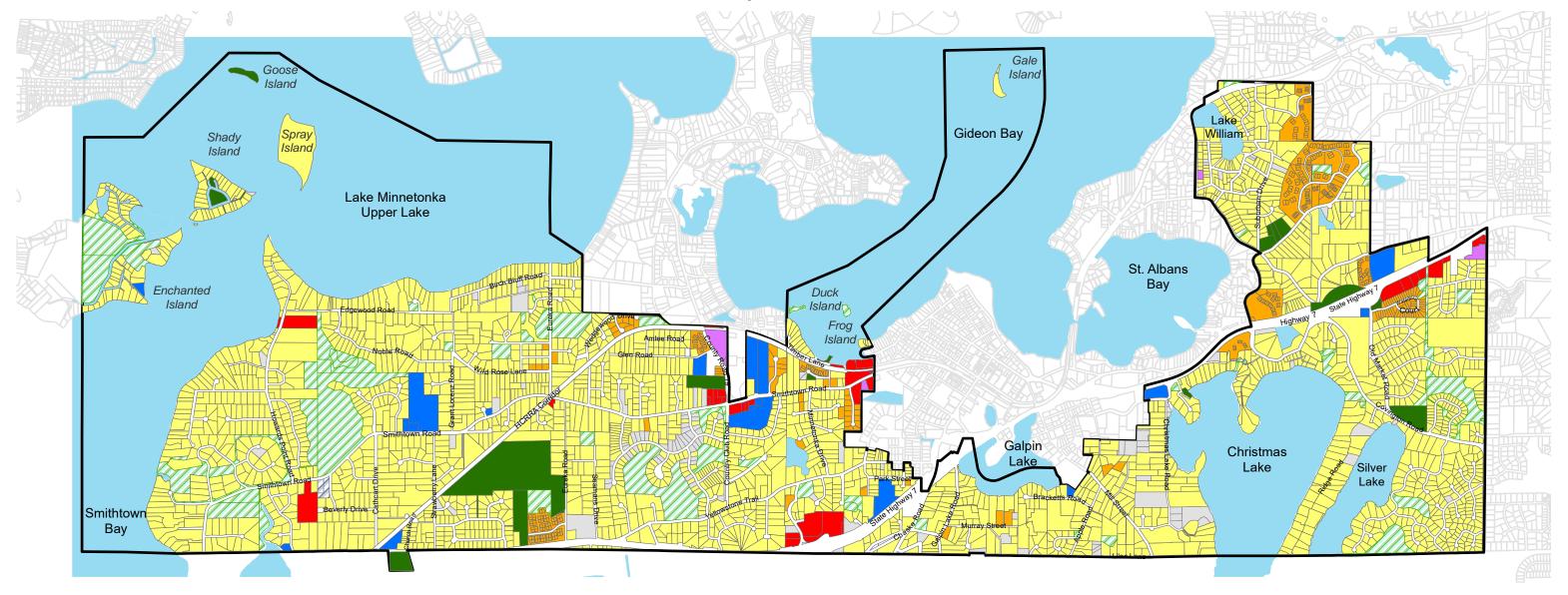
Parks: Public parks only.

Open Space: Land not suitable for development, including ponds, conservation easements, etc.

Vacant land: Includes lands that may be developed in the future or lots within developments that have no structure as of June, 2018.

Existing Land Use

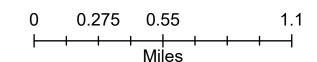
City of Shorewood 2040 Comprehensive Plan



Existing Land Use



Map created: December 2020 Data: NAC, MNDNR, Metropolitan Council





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ZONING DISTRICTS

The following summarizes the various districts of the Zoning Ordinance and how they are applied in the City. The zoning map follows these descriptions.

- **R-1A, Single-Family Residential District.** The R-1A District is intended to provide a district which will allow suitable areas of the City to be retained and utilized for low density residential, open space and/or agricultural uses.
- **R-1B, Single-Family Residential District.** The R-1B District is intended to provide a district which will retain a low density residential character, yet enable greater flexibility in design and provide economy in public expenditures for public utilities and service.
- **R-1C, Single-Family Residential District.** The R-1C District is intended to allow a greater concentration of single-family dwellings in areas served by municipal utilities and where appropriate reservations for open space have been established by means other than individual lot areas.
- **R-1D, Single-Family Residential District.** The R-1D District is intended to allow a greater concentration of single-family dwellings in areas served by municipal utilities and where appropriate reservations for open space have been established by means other than individual lot areas. The District also recognizes the existence of older areas of the community in which smaller lots exist.
- **R-2A, Single and Two-Family Residential District.** The R-2A District is intended to provide suitable areas of the City which will allow construction of single-family and two-family homes, yet maintain the character and amenities of low density single-family residential areas.
- **R-2B, Single and Two-Family Residential District.** The R-2B District is intended to provide suitable areas of the community which will allow construction of single-family and two-family homes of a more compact nature, while maintaining the character and amenities of low density single-family residential areas.
- **R-2C, Single and Two-Family Residential District.** The R-2C District is intended to provide suitable areas of the community which will allow construction of single-family and two-family homes of a very compact nature while retaining a low to medium density of approximately five units per acre.
- **R-3A**, Multiple-Family Residential District. The R-3A District is intended to provide a greater variety in the type of housing units available within the community, while retaining the

Land Use



environment and character of less intensive residential areas through carefully established bulk and lot area requirements.

- **R-3B, Multiple-Family Residential District.** The R-3B District is intended to provide a greater variety in the type of housing units available within the community by allowing construction of two-family, towhnouse, quadraminium and apartment dwellings at a density ranging up to ten units per acre.
- **R-C, Residential/Commercial District.** The R-C District is intended for a gradual transition between commercial and residential uses. More specifically, the R-C District is established to buffer residential uses from adjacent high intensity use areas by permitting residentially compatible service- oriented commercial uses and controlling those uses which can be compatible with residential areas given adequate control.
- C-1, General Commercial District. The purpose of the C-1, General Commercial District is to provide for low to moderately intense retail or service outlets that deal directly with the customer to whom the goods or services are furnished. The uses allowed in this district are to provide goods and services on a limited community market scale and located in areas that are well served by collector or arterial street facilities.
- C-2, Commercial Service District. The C-2 District is intended to recognize areas containing preexisting businesses that provide services primarily for the community and surrounding area. It is further intended that the location of the C-2 District may take advantage of transportation routes with existing high traffic volumes; however, activities allowed in the District will not create additional traffic.
- **L-R, Lakeshore Recreational District.** The L-R District is intended to recognize the desirability for areas to serve the lakeshore recreational needs of the City which of their very nature are by geographic necessity located in proximity and adjacent to residential areas of this community.

Lake Minnetonka is the largest single park and recreational facility available for use by Shorewood's citizens, providing of an opportunity for access to that facility is, in the opinion of the City, an adjunct of zoning by the City. Recognizing the primary residential nature of Shorewood, it behooves the City to subject the possible areas available for access to the lake to close scrutiny and limitation so as to insure that use of the land does not unduly infringe upon property rights and public health, safety and welfare of others residing on nearby residential sites.

Land Use



PUD, Planned Unit Development District. This District is established to provide comprehensive procedures and standards designed for district planned unit development to allow the development of neighborhoods or portions thereof incorporating a variety of residential types and nonresidential uses. Recognizing that traditional density, bulk, setbacks, use and subdivision regulations which may be useful in protecting the character of substantially developed areas may not be appropriate to control development in less developed areas. Specifically, PUD is intended to encourage:

- a. Innovations in residential development to the end that the growing demands for housing at all economic levels may be met by greater variety in tenure, type, design and siting of dwellings and by the conservation and more efficient use of land in the developments;
- b. Higher standards of site and building design through the use of trained and experienced land planners, architects and landscape architects;
- c. More convenience in location of commercial and service areas within a given project or area, allowing more efficient and desirable transitions between residential and nonresidential land uses;
- d. The preservation and enhancement of desirable site characteristics such as natural topography and geologic features and the prevention of soil erosion;
- e. A creative use of land and related physical development which allows a phased and orderly transition of land from rural to urban uses;
- f. An efficient use of land resulting in smaller networks of utilities and streets thereby lowering housing costs and public investments;
- g. A development pattern in harmony with the objectives of the City Comprehensive Plan;
- h. A more desirable environment than would be possible through the strict application of zoning and subdivision regulations of the City;
- i. To give the landowner and developer reasonable assurance of ultimate approval before expending complete design monies while providing city officials with assurances that the project will retain the character envisioned at the time of concurrence;
- j. To allow variation from the provisions of this chapter, including setbacks, height, lot area, width and depth, yards and the like internally within the project. Provisions of this chapter shall generally be maintained at the periphery of the project area.

Land Use



S, Shoreland District. Shorelands within the City are designated as shoreland districts and the requirements set forth in this chapter shall govern development and other activities within these districts. The classification of the shoreland areas shall govern the use, alteration and development of these areas according to the classification as per M.S., Chapter 105, and Minnesota Regulations parts 6120.2500 - 6120.3900.

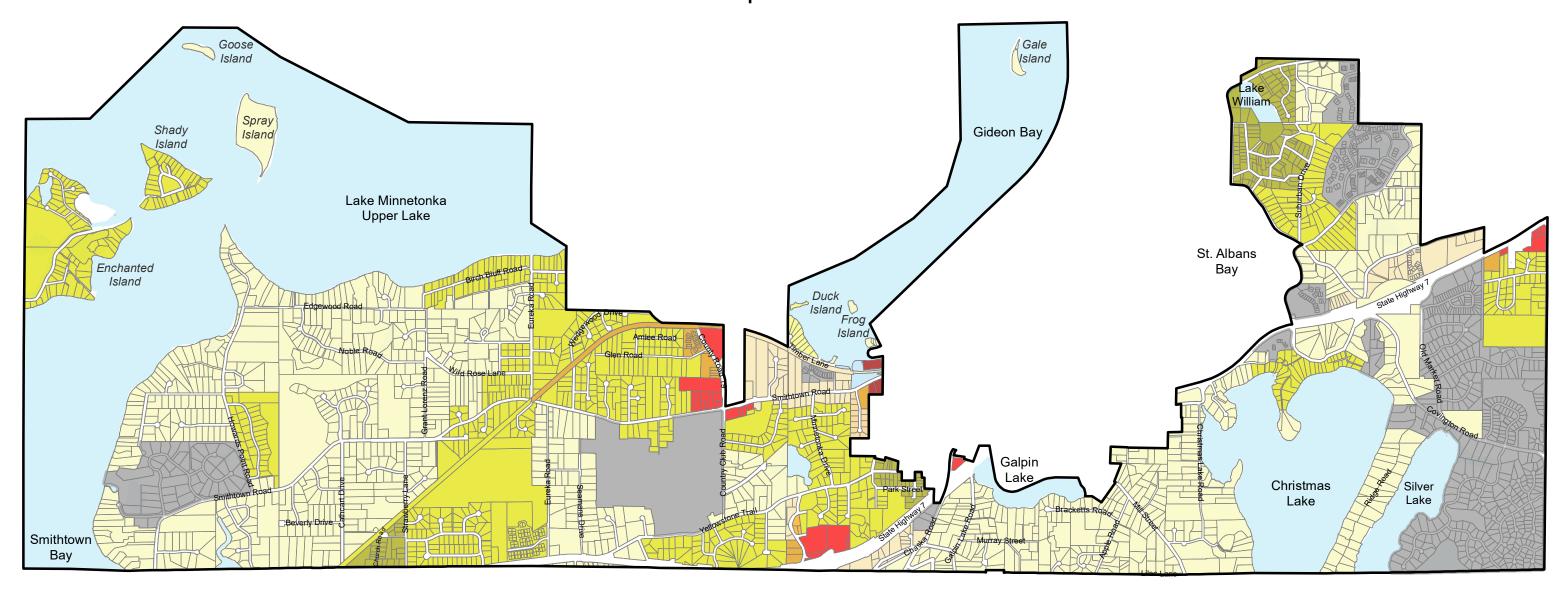
The S District is applied to and superimposed upon all zoning districts as contained herein as existing or amended by the text and map of this chapter. The regulations and requirements imposed by the S District shall be in addition to those established for districts which jointly apply. Under the joint application of districts, the more restrictive requirements shall apply.

HISTORIC PRESERVATION

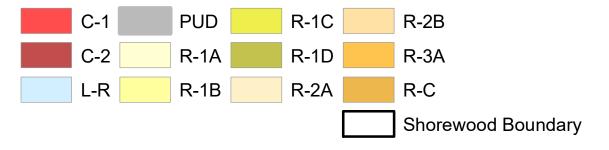
The City of Shorewood does not contain any buildings or structures which are listed on the National Register of Historic Places or that have been identified by the Minnesota Historical Society as being eligible for the National Register. The City is, however, committed to preservation of its history. As opportunities arise and funding is available, the City will evaluate appropriate steps toward preservation.

Zoning

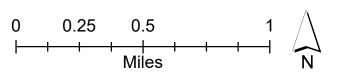
City of Shorewood 2040 Comprehensive Plan



Legend



Map created: May 2017 Data: NAC, MnDNR, Metropolitan Council





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HOUSING TYPES

As seen in the following table, the City of Shorewood is largely single-family residential, with 94 percent of the total housing units either detached or attached single family homes. Multi-family (medium and high-density units) account for less than 5 percent of the total housing in Shorewood.

| Housing Units by Type City of Shorewood | | | |
|---|--------------------|------------------|--------|
| Туре | Number of Units | Percent of Total | |
| 1 unit, detached | 2,373 | 81.9% | 02.00/ |
| 1 unit, attached | 349 | 12.0% | 93.9% |
| 2, 3 or 4 units | 81 | 2.8% | 2.8% |
| 5 to 9 units | 0 | 0.0% | |
| 10 to 19 units | 43 | 1.5% | 3.3% |
| 20 units or more* | 53 | 1.8% | |
| Total | 2,899 100.0% | | |
| Source: U.S. Census Bureau 2015 ACS estimates | | | |

^{*}The above table represents 2015 estimates from the U.S. Census Bureau. It does not include units from Shorewood Landing, a senior housing development built in 2017 on 3.67 acres with 28 independent living units, 52 assisted living units and 25 memory care units. This will add 105 total units, increasing the total units in buildings with 20 or more units to 158.



As is true in most cities, the majority of the single-family homes in Shorewood are owner occupied and the majority of the multiple family dwellings are renter occupied. Of the existing housing units which exist within the City, 84 percent are owner-occupied, 10 percent are renter-occupied, and 6 percent are vacant. The average rent in 2015 was \$978.

| Housing Tenure, 2015 City of Shorewood | | |
|--|----------|---------|
| | Number | Percent |
| Owner-Occupied | 2,455 | 84.2% |
| Renter-Occupied | 293 | 10.0% |
| Total Occupied Housing Units | 2,748 | 94.2% |
| Vacant Housing Units | 168 | 5.8% |
| Total Housing Units | 2,916 | 100.0% |
| | | |
| Average Household Size of Owner-Occupied Unit | 2.79 | |
| Average Household Size of Renter-Occupied Unit | 2.25 | |
| Source: U.S. Census Bureau, 2015 | <u> </u> | |

HOUSING COST

The table below illustrates rent rates within the City in 2015.

| Gross Rent, 2015 City of Shorewood | | | |
|---------------------------------------|-----------------|---------------------|--|
| Gross Rent Per Month | Number of Units | Percent of Total | |
| Less than \$500 | 24 | 9.8% | |
| \$500 to \$999 | 110 | 44.9% | |
| \$1000 to \$1,499 | 52 | 21.2% | |
| \$1,500 to \$1,999 | 29 | 11.8% | |
| \$2,000 to \$2,499 | 10 | 4.1% | |
| \$2,500 to \$2,999 | 8 | 3.3% | |
| More than \$3,000 | 12 | 4.9% | |
| Total | 245 | 100.0% | |
| | | | |
| Median Rent \$978 | | | |
| Source: U.S. Census Bureau, 2015 | | | |



The following table illustrates the estimated market value for owner-occupied housing units within Shorewood. The vast majority of these homes are above \$300,000 with the median value of homes being \$401,400. The City of Shorewood has few options for existing single-family homes to be considered low income housing.

| Estimated Market Value of Owner Occupied Housing Units, 2015 City of Shorewood | | | |
|--|------------|---------|--|
| Value | Properties | Percent | |
| Less than \$50,000* | 18 | .7% | |
| \$50,000 to \$99,999* | 7 | .3% | |
| \$100,000 to \$149,999 | 15 | .6% | |
| \$150,000 to \$199,999 | 73 | 3.0% | |
| \$200,000 to \$299,999 | 558 | 22.7% | |
| \$300,000 to \$499,999 | 943 | 38.4% | |
| \$500,000 to \$999,999 | 678 | 27.6% | |
| \$1,000,000 or more | 163 | 6.6% | |
| Total | 2,455 | 100.0% | |
| Median Value | \$401,400 | | |

Source: U.S. Census Bureau, 2015 ACS

^{*}These numbers are estimates from the Census, and the margin of error for these statistics is +/- 26 properties for those less than \$50,000 and +/- 11 properties for those under \$99,999. The number of properties in both these categories is likely closer to zero.



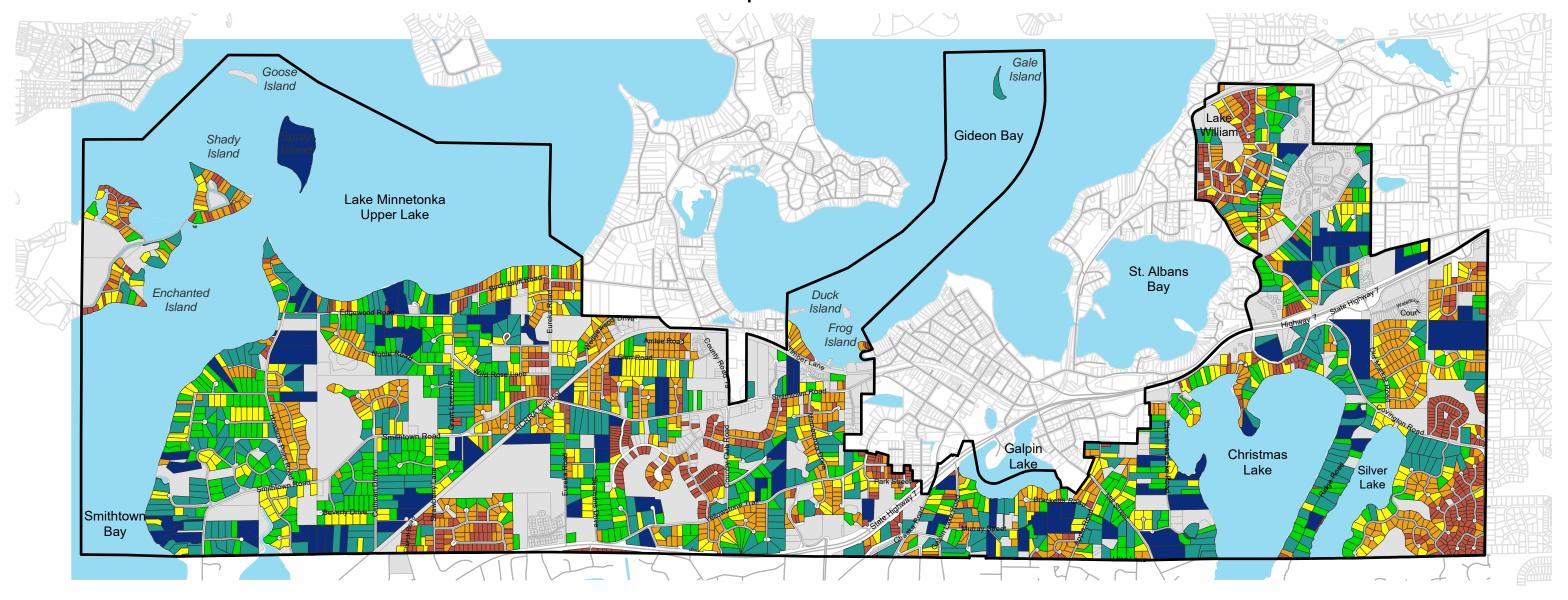
The City of Shorewood has a wide range of lot size options for residents. Municipal water supply is not available to all lots in Shorewood, which increases the need for larger lot sizes to accommodate private water supply. The strong demand for new lots has encouraged property owners with existing large lots to subdivide them into smaller lots. The City anticipates this trend will continue in the future. The average lot size (mean) is 38,000 square feet. Average single-family density is 1.31 units per acre (2,736 units on 2,095 acres.)

| Area of Single Family Lots (Square Feet) City of Shorewood | | | |
|--|------------|---------|--|
| Area | Properties | Percent | |
| < 20,000 sq. ft. | 549 | 22.7% | |
| 20,000 – 30,000 sq. ft. | 687 | 28.4% | |
| 30,000 – 40,000 sq. ft. | 371 | 15.3% | |
| 40,000 – 50,000 sq. ft. | 390 | 16.1% | |
| 50,000 – 100,000 sq. ft. | 337 | 13.9% | |
| > 100,000 sq. ft. | 88 | 3.6% | |
| Total | 2422 | 100.0% | |
| Source: Hennepin County, City of Shorewood, DNR, NAC, analyzed via GIS | | | |

Shorewood 2040 Comprehensive Plan

Single Family Lot Sizes

City of Shorewood 2040 Comprehensive Plan



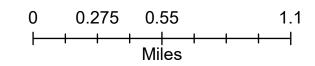
Lot Size, Square Feet

 < 20,000</td>
 40,000 - 50,000
 Non-Residential or Vacant

 20,000 - 30,000
 50,000 - 100,000
 City Boundary

 30,000 - 40,000
 > 100,000

Map created: December 2020 Data: NAC, MNDNR, Metropolitan Council





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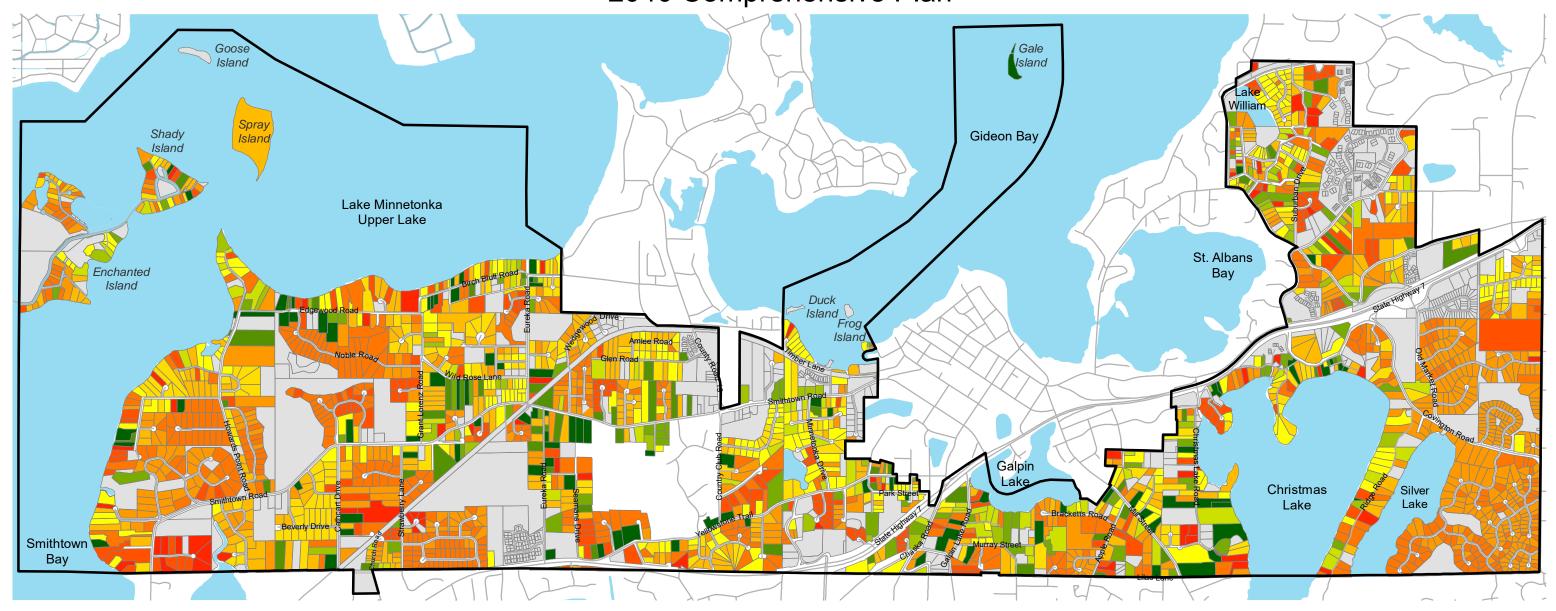
YEAR BUILT

Shorewood is a community with a mix of single-family homes. As shown in the table below, approximately 52% of homes in Shorewood were built since 1980.

| Age of Single Family Housing Stock City City of Shorewood | | |
|--|--------------------|---------------------|
| Year Built | Number of Units | Percent of Total |
| Pre-1900 | 8 | 0.3% |
| 1900s | 89 | 3.7% |
| 1910s | 63 | 2.6% |
| 1920s | 84 | 3.5% |
| 1930s | 45 | 1.9% |
| 1940s | 84 | 3.5% |
| 1950s | 279 | 11.6% |
| 1960s | 237 | 9.8% |
| 1970s | 260 | 10.8% |
| 1980s | 540 | 22.4% |
| 1990s | 471 | 19.5% |
| 2000s | 186 | 7.7% |
| Post-2010 | 66 | 2.7% |
| Total | 2,412 | 100.0% |
| Source: U.S. Cen | sus Bureau, 2010 | • |

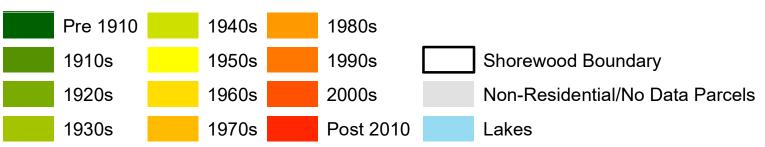
Single Family Housing Year Built

City of Shorewood 2040 Comprehensive Plan

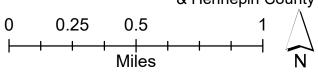


Legend

Year Built



Map created: October 2018 Data: NAC, MnDNR, Metropolitan Council & Hennepin County





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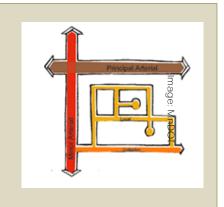


EXISTING ROADWAY SYSTEM

The sections below provide information about the existing roadway system in Shorewood, including existing number of lanes, existing roadway jurisdiction, existing functional classification, existing traffic, existing safety, and access management.

Functional Classification

The **functional classification system** groups roadways into classes based on roadway function and purpose. It organizes the roadway and street network that distributes traffic from local neighborhood streets to collector roadways, then to minor arterials and ultimately the principal arterial system. Roads are placed into categories based on the degree to which they provide access to adjacent land and mobility for through traffic. Functional classification is based on both transportation and land use characteristics, including roadway speeds, access to adjacent land, connection to important land uses, and the length of trips taken on the roadway.



The Seven-County Metropolitan Area's functional classification system includes 4 classifications of roadways: principal arterials, minor arterials, collector streets, and local streets. The figure on the following page shows the existing functional classification of each road in the City of Shorewood.

The following sections describe each functional class in greater detail and indicate which roadways fall into each classification.

Principal Arterials

Principal arterials are roadways that provide the greatest level of mobility and access control. Within the metropolitan area, the great majority of principal arterials are under MnDOT jurisdiction. Principal arterials are typically Interstate highways or other state or US freeways or expressways. These roads are usually for trips greater than 8 miles and express transit trips. Spacing between principal arterials varies within developing areas of the metropolitan area. Typically, these facilities are spaced between two and six miles apart and connect regional business and commercial concentrations, transportation terminals, and large institutions within the metropolitan areas. Principal arterials also connect to other cities, regions, and states outside of the metropolitan area.



These roadways are designed to maintain average speeds of 40 mph during peak traffic periods. To maintain mobility and speeds on principal arterials, driveway and other road connections are limited. There is little to no direct land access from driveways. Connection points are typically grade-separated or controlled with a signal and are spaced approximately one to two miles apart and include intersections with other interstate freeways, other Principal Arterials, and A Minor Arterials.

Within the City of Shorewood, TH 7 is the one existing principal arterial and no others are proposed. TH 7 generally traverses the city from the eastern border with Minnetonka to Chanhassen. TH 7 is an important metropolitan highway that serves east-west vehicular movements throughout the region.

Minor Arterials

Minor arterials maintain a focus on mobility but provide more land access than principal arterials. Within Shorewood, all minor arterials are under the jurisdiction of Hennepin County. Minor arterials are intended to serve trips of four to eight miles in length. Within developing areas of the metro, these facilities are spaced between one and two miles apart. Minor arterials connect cities and towns within the region and link to regional business and commercial concentrations. Access points along minor arterials are generally at-grade and typically controlled with signals or stop signs.

During peak traffic, minor arterials in developing areas are intended to maintain 30 mph average speeds. As a result, transportation system connections are limited to interstate freeways, other principal arterials, other minor arterials, collectors, and some local streets. Land access is limited to concentrations of commercial and industrial land uses. The Metropolitan Council has established a system of "A" Minor and "B" Minor arterials. "A" Minor arterials are eligible for federal funding administered by the Metropolitan Council. The Metropolitan Council has further split "A" Minor arterials into four types, described below:

- Relievers: Arterials located parallel to congested principal arterials. The purpose of "A" Minor Relievers is to provide additional capacity in congested corridors.
- Augmenters: Arterials that supplement the principal arterials system within urban centers and urban communities.



- Expanders: Arterials that supplement principal arterials in less-densely developed areas of the metro area.
- Connectors: Arterials that provide connections between rural towns and connect rural areas with the principal arterial system.

Given the purpose of "A" Minor Augmenters and Connectors, there are no existing or planned augmenters, connectors or relievers within the city. "A" Minor arterials in Shorewood include the following roadways:

"A" Minor Expanders

- CSAH 82 (Mill Street)
- CSAH 19 (Oak Street and Manitou Road)

"B" Minor arterials have a similar focus on mobility above land access. These roadways connect major traffic generators in the region. "B" Minor arterials are not eligible for federal funding. "B" Minor arterials are also referred to as "Other" arterials in the 2040 Transportation Policy Plan. There are no "B" Minor or "Other" arterials within the City.

Major and Minor Collectors

Major and minor collector roadways provide linkages to larger developments and community amenities. They generally do not link communities to one another. Collector roadways generally favor access to the system over mobility but try to balance the two competing needs. Collector roadways are generally lower speed than the principal or minor arterial routes. Collector roadways are often owned and operated by cities, although counties operate some of these facilities. Collectors link minor arterials, other collectors, and local streets.

Major collectors typically serve higher density residential areas and concentrations of commercial and industrial land uses. These facilities tend to serve longer trips than minor collectors. The Major Collectors in Shorewood include the following roadways:

Major Collector Roadways

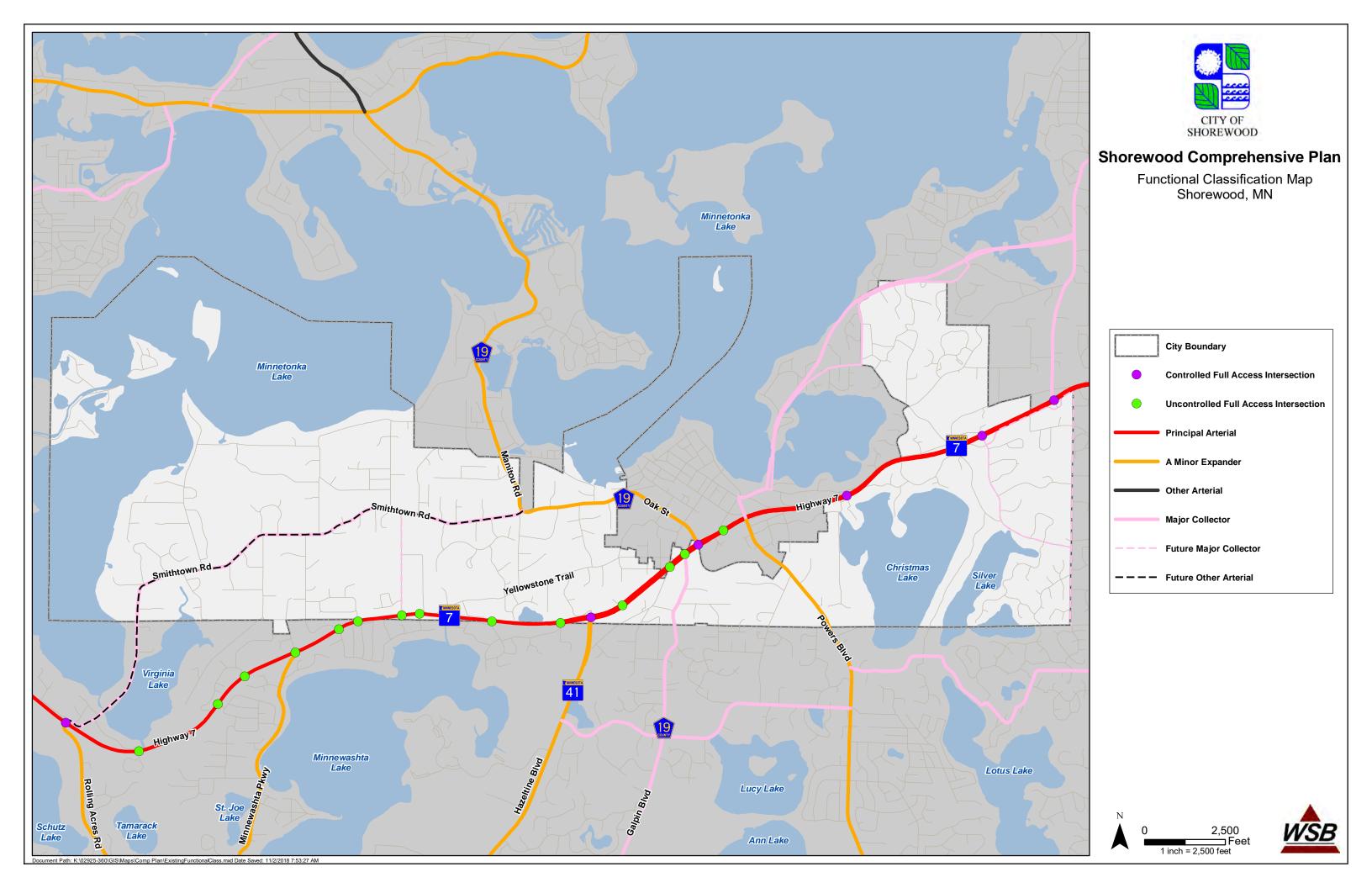
- Smithtown Road
- Galpin Lake Road
- Minnetonka Boulevard

There are no minor collectors identified within the City.



Local Roadways

The primary function of local roadways is land access. Local roadways connect individual land parcels with other local roadways and collectors. Trips on local roadways are typically under two miles. Speeds on local roadways are typically low. Longer trips are facilitated by local roadway connections to the collector and arterial systems. Local roadways are under the jurisdiction of the City of Shorewood. Local roadways are all roadways that are not arterials or collectors.





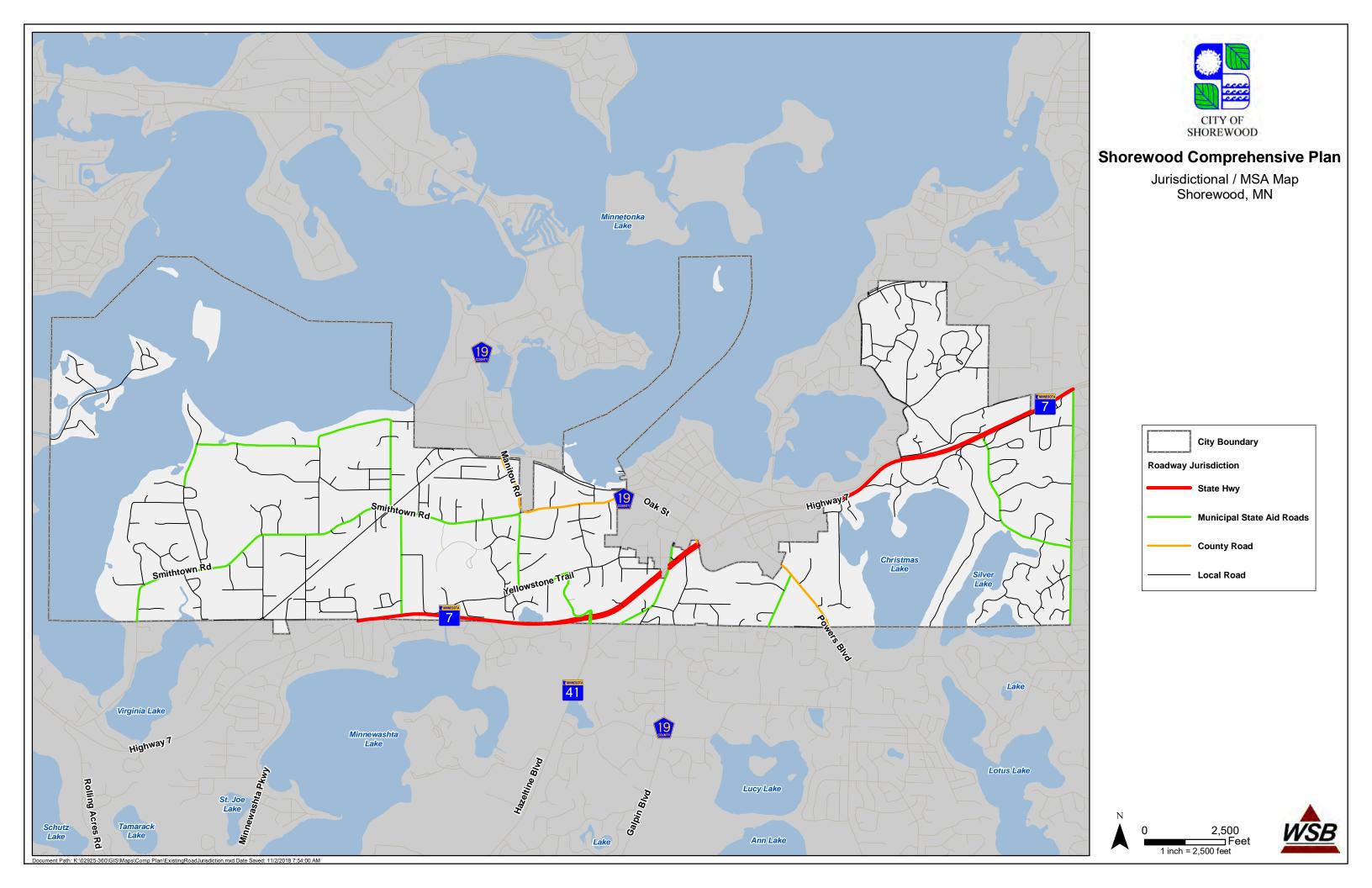
Jurisdictional Classification / Municipal State Aid Streets

Roadways are classified on the basis of which level of government owns and has jurisdiction over the given facility. The three levels of government that have involvement are the State of Minnesota (Mn/DOT, Hennepin County, and the City of Shorewood. Mn/DOT owns/maintains the Trunk Highway (TH system and Hennepin County the County State Aid Highway (CSAH and County Road (CR system. The City owns/maintains the local streets, including Municipal State Aid (MSA streets.

Cities in Minnesota with populations greater than 5,000 are eligible to receive Municipal State Aid (MSA funding from the state Highway User Tax Distribution Fund. The basic purpose of this program is to help local governments construct and maintain collector and arterial roadways which have consistent design standards, and which are well integrated into the overall network of collector and arterial roadways. The State Aid system typically consists of a maximum of 20% of the City's roadway mileage.

The State Aid office of MnDOT has established clearly defined design requirements for MSA streets. These requirements ensure that capacity, operational, and safety goals are met in a uniform manner from community to community, and that street systems are well coordinated with each other. Based on State Statute, Sections 169.80 and 169.87, MnDOT does not allow cities to restrict truck traffic on MSA streets.

The map on the following page depicts the jurisdictional classification of the overall roadway network serving Shorewood and its residents and businesses.





MASS TRANSIT

The City of Shorewood is served by Metro Transit bus routes 670 and 671. Route 670 is an express bus that runs to downtown Minneapolis through Hopkins, Minnetonka, and Excelsior; and has 10 morning pickup times and 10 evening pickup times Monday through Friday. There is no weekend service.

The City of Shorewood is also served by route 671, an express bus which runs from Orono to downtown Minneapolis through Tonka Bay, Excelsior, Greenwood, Deephaven, and Minnetonka. The route has 10 morning pickup times and 10 evening pickup times. There is no weekend service.

At present, the City of Shorewood and surrounding communities have sufficient transit stops along main transportation corridors.

PARK AND RIDE

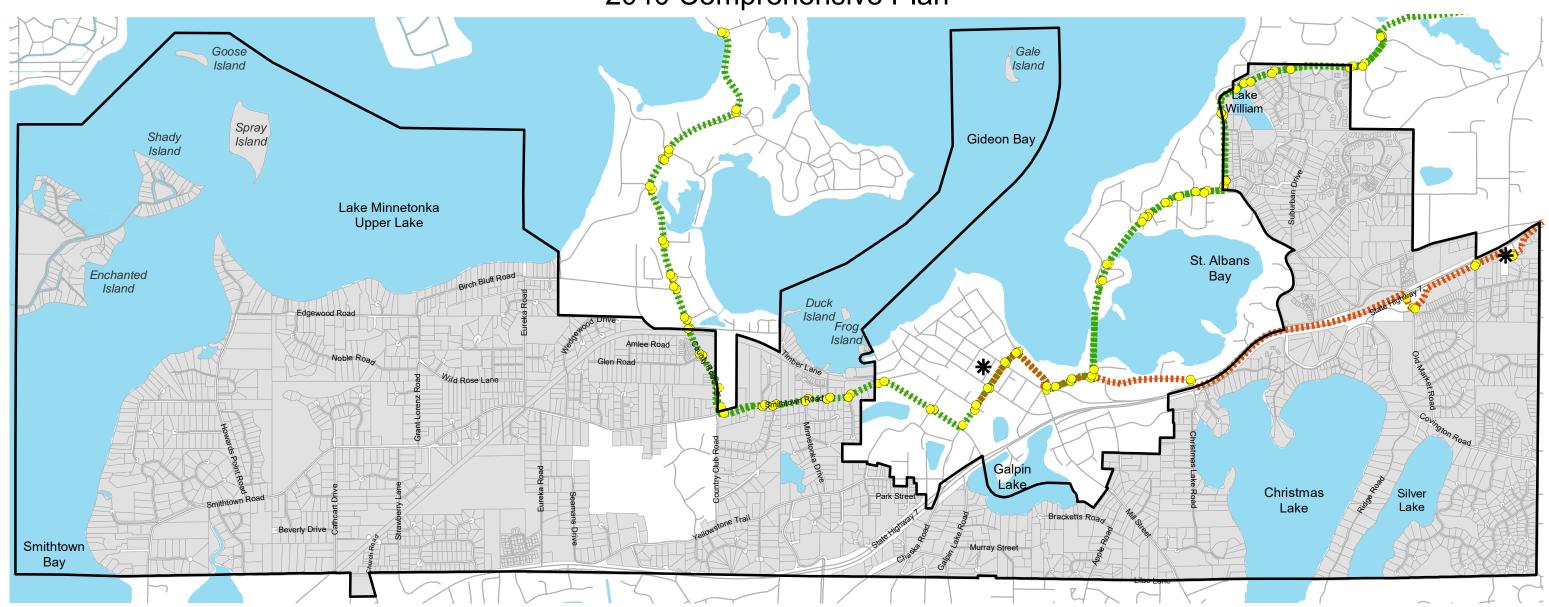
Shorewood has one main bus stop with a Park and Ride, located off Highway 7 on Delton Avenue and Vine Hill Road. The Park and Ride is located at the southwest corner of the intersection. Route 670 serves this station.

AIRPORT TRAFFIC

The Minneapolis-St. Paul International Airport (MSP serves as the area's primary scheduled commercial airline passenger facility. However, MSP does not have any direct effect on the Shorewood community. The Flying Cloud Airport in Eden Prairie is the closest airport to Shorewood and serves small and business aircrafts. Lake Minnetonka is occasionally accessed by sea planes, though these are not of major concern.

Transit

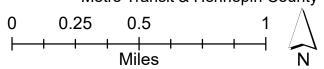
City of Shorewood 2040 Comprehensive Plan



Legend

Transit Route Transit Stops Parcels
Route 670 ** Park and Ride Lakes
Route 671 • Transit Stop Shorewood Boundary

Map created: May 2017
Data: NAC, MnDNR, Metropolitan Council
Metro Transit & Hennepin County





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PEDESTRIAN/BICYCLE TRAILS

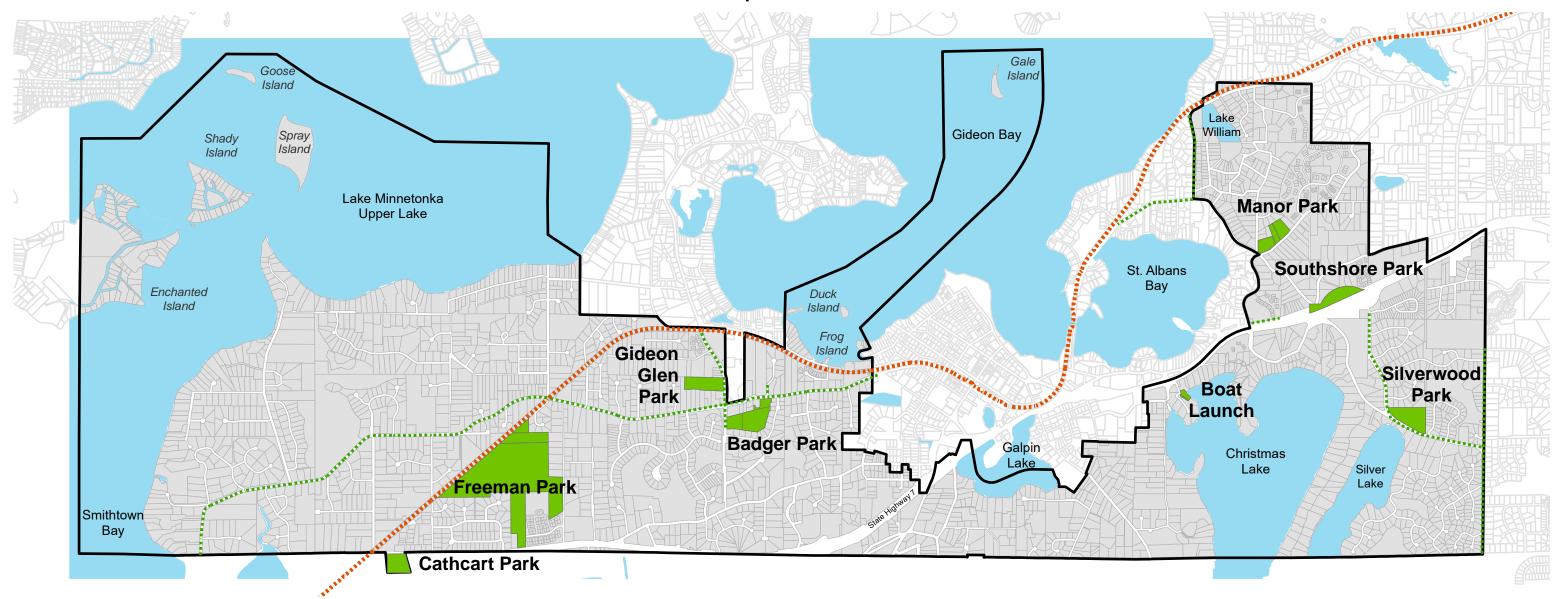
Existing sidewalks and trails in the City are illustrated on the map on the following page.

The Lake Minnetonka Light Rail Transit (LRT) Regional Trail runs east / west through the City of Shorewood. The trail links the City of Hopkins and the Carver Park Reserve and is constructed of crushed stone.

Also, to be noted, is that the Lake Independence Extension Regional Trail search corridor extends through the City of Shorewood. This regional trail search corridor was added to the Regional Parks System as part of the 2040 Regional Parks Policy Plan. The search corridor travels through Orono, Tonka Bay, and Shorewood as it extends the Lake Independence Regional Trail south connecting Luce Line State Trail, Dakota Rail Regional Trail, Lake Minnetonka LRT Regional Trail and Highway 41 Regional Trail Search Corridor in Chanhassen. Three Rivers Park District will lead a planning process in the future to determine the alignment of the regional trail.

Local Park and Trail System

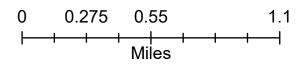
City of Shorewood 2040 Comprehensive Plan



Local Park and Trail System

Lake Minnetonka LRT Regional Trail City Boundary

Map created: December 2020 Data: NAC, MNDNR, Metropolitan Council



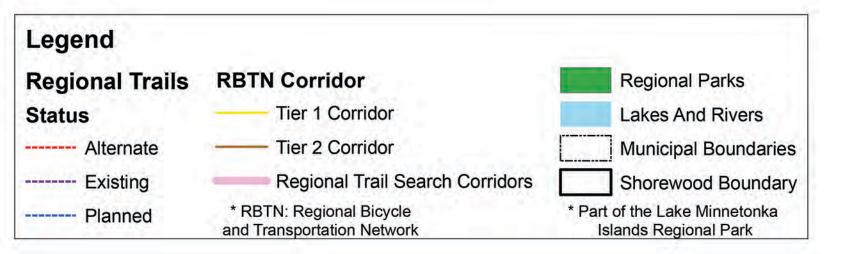


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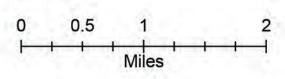
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Regional Parks and Trails

City of Shorewood 2040 Comprehensive Plan Gale Woods Big Island Park* Park Deephaven Mound Orono Orono Lake Minnetonka Wild Goose **Dakota Rail** LRT Regional Trail Chase Island* Regional Trail Tonka Bay Greenwood Minnetrista Minnetonka Wawatasso Baker - Carver Island* **Regional Trail** Excelsion **Lake Minnetonka** Regional Park Laketown Lake Minnetonka **LRT Regional Trail** Carver Park Reserve Eden Prairie Chanhassen Lake Minnewashta Regional Park



Map created: May 2021 Data: NAC, Hennepin County, Metropolitan Council







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WATER SUPPLY

About half of the homes are currently served by municipal water; the other half, including the islands, are served by private wells. Shorewood's water distribution system provides approximately 145 million gallons of water each year to nearly 1,500 service connections.

The existing water distribution system is shown on the following page. The overall system includes 30 miles of main and includes two separate water distribution systems (known as the West and East systems) operated by the City, and three small service areas supplied by the cities of Chanhassen, Excelsior, and Tonka Bay. Shorewood's west system provides service primarily to the developments to the west of Excelsior and the east system provides service to the developments to the east of Excelsior.

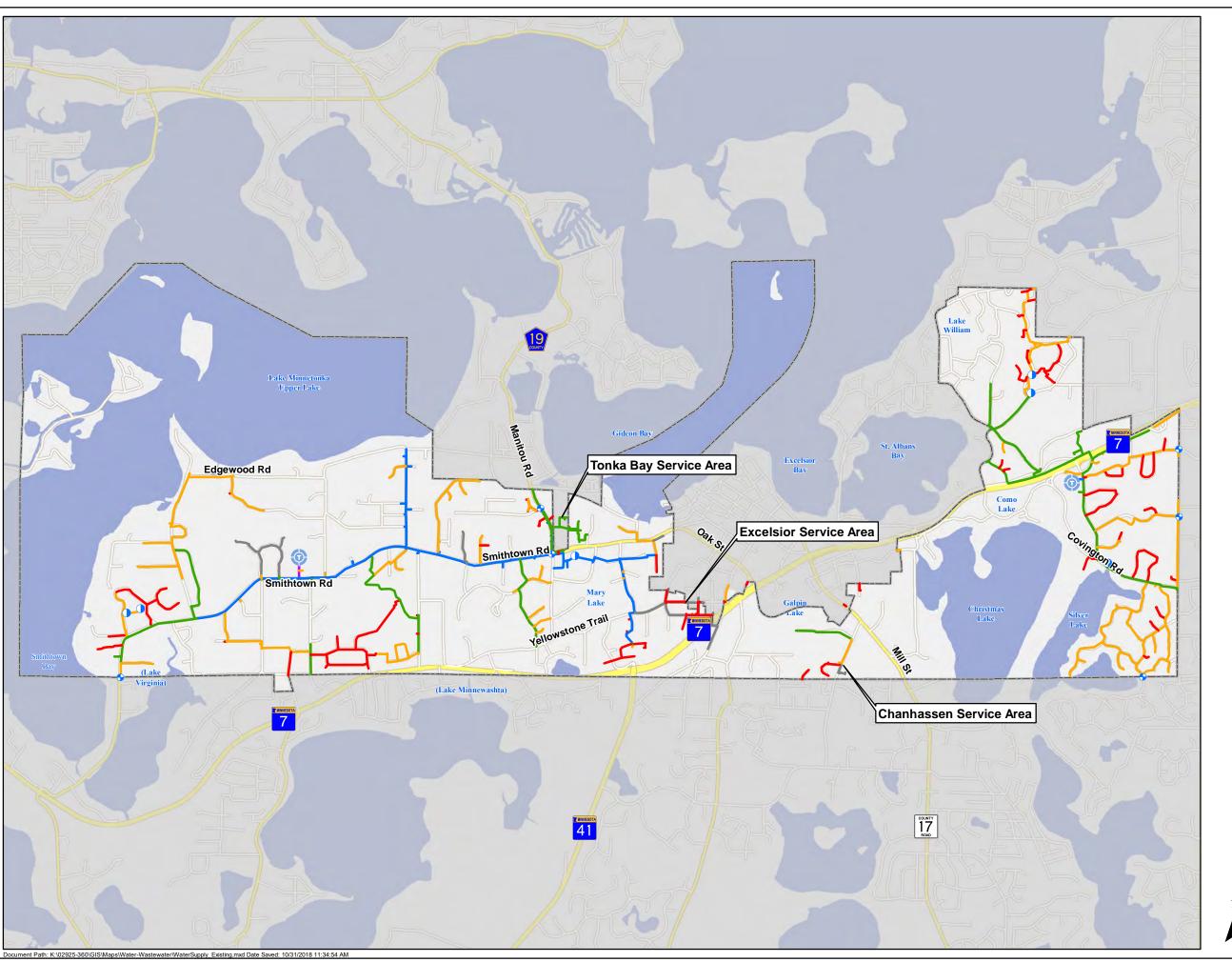
Each of Shorewood's two distribution systems is served by three groundwater wells and one water tower.

The population of the City has increased over the last ten years but the average daily water demand and the per capita water demand are decreasing as indicated below. Improved appliances, reduced irrigation, general attitudes toward conservation, and rainfall likely all play a role in this reduction.

| Year | Pop. Served | Total Connections | Total Water Use (MG) | Total Water Pumped (MG) | Percent Unmetered/ Unaccounted | Average Daily Demand (MGD) | Max. Daily Demand (MGD) | Date of Max. Demand | Residential Per Capita Demand (GPCD) | Total Per Capita Demand (GPCD) |
|-----------------------|----------------|----------------------|-------------------------------|----------------------------------|--------------------------------------|-------------------------------------|----------------------------------|---------------------------|---|---|
| 2005 | 3,463 | 1,195 | 154.4 | 152.3 | - | 0.42 | - | - | 110 | 120 |
| 2006 | 3,423 | 1,195 | 191.2 | 180.1 | - | 0.49 | - | - | 131 | 144 |
| 2007 | 3,383 | - | - | - | - | - | - | - | - | - |
| 2008 | 3,343 | 1,221 | 176.7 | 176.2 | - | 0.48 | - | - | 139 | 144 |
| 2009 | 3,751 | 1,320 | 170.7 | 177.7 | 3.9% | 0.49 | 4.30 | 5/26/2009 | 118 | 130 |
| 2010 | 3,721 | 1,329 | 136.0 | 141.1 | 3.6% | 0.39 | 0.62 | 7/16/2010 | 89 | 104 |
| 2011 | 3,721 | 1,332 | 162.7 | 164.4 | 1.0% | 0.45 | 1.04 | 7/5/2011 | 104 | 121 |
| 2012 | 3,634 | 1,300 | 182.3 | 187.9 | 2.1% | 0.51 | 1.40 | 7/11/2012 | 126 | 140 |
| 2013 | 3,562 | 1,374 | 156.0 | 156.0 | 0.0% | 0.43 | 1.19 | 8/14/2013 | 109 | 120 |
| 2014 | 3,853 | 1,372 | 145.3 | 145.3 | 0.0% | 0.40 | 1.40 | 8/7/2014 | 99 | 103 |
| 2015 | 3,865 | 1,388 | 130.2 | 133.2 | 2.2% | 0.37 | 0.59 | 7/23/2015 | 79 | 94 |
| 2016 | 3,870 | 1,400 | 111.6 | 123.8 | 0.0% | 0.34 | 0.85 | 8/3/2016 | 73 | 88 |
| Avg. 2012- 2016 | 3,757 | 1,367 | 145.1 | 148.9 | 0.9% | 0.41 | 1.09 | - | 97 | 109 |

MG = million gallons MGD = million gallons per day

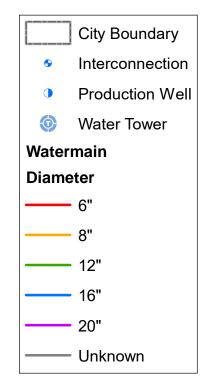
GPCD = gallons per capita per day

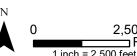




Shorewood Comprehensive Water Supply Plan

Existing Water Supply System









Water Conservation Policies

Although Minnesotans benefit from the state's abundant water supplies, those supplies are finite and potential threats exist that could impact the quality of our drinking water. Factors that can potentially limit water supply include population increases, economic trends, uneven statewide availability of groundwater, climate change, and degraded water quality. There are many benefits to enacting water conservation policies and many practical, feasible objectives the City has already and will continue to pursue.

The Minnesota DNR has established eight water conservation objectives and strategies. These are listed below with comments on the City of Shorewood's progress towards the completion of each.

- 1. Reduce unaccounted (non-revenue) water loss to less than 10%.
 - The City's average unaccounted water use from 2012 to 2016 was 0.9%, which is well below the recommended target of 10%. The City has an automated meter system to notify the City of leaky fixtures, and leak detection surveys are performed as needed.
 - There are a total of over 1,400 metered connections in Shorewood. The City completed meter replacement projects in 2007 and 2009. Meter replacement efforts consisted of converting the majority of the meters (1,393 or 99.5%) into automatic meters. Residential and commercial meters are tested as requested by the owner.
- 2. Achieve residential demand of less than 75 gallons per capita per day.
 - The average residential per capita water demand for the City of Shorewood from 2012 to 2016 was 97 gallons per capita per day (gpcd), which is greater than the DNR's 75 gpcd target. Data from the DNR and the City indicates that residential water demand has been decreasing since 2012. As previously discussed, the decrease in residential per capita demand may be attributed to improved appliances, reduced irrigation, general attitudes toward conservation, and rainfall.
 - In order to continue reducing residential demand, the City will review its ordinances on water efficient landscaping and water reuse annually, consider revising its ordinance to limit irrigation in 3-6 years, continue to make water system improvements, provide incentives for installing water efficient appliances and fixtures in 1-3 years, and provide incentives to reduce outdoor water use in 1-3 years following adoption of this plan. The City will also continue water conservation education and outreach.
- 3. Achieve at least a 15% reduction in per capita daily demand across all customer categories over the next 10 years.
 - The City of Shorewood will conduct facility water use audits annually, install
 enhanced water meters capable of automated readings to detect spikes in consumption,



install conservation fixtures and appliances, repair leaking system components, investigate water reuse, and reduce outdoor water use.

- 4. Achieve a decreasing trend in total per capita demand.
 - Residential water usage shows a fluctuating trend, although it has steadily decreased since 2012. Commercial, institutional, and industrial (C/I/I) water use follows a similar trend. Decreases in water usage since 2012 may be attributed to water efficient fixtures and public education on the importance of water conservation.
- 5. Reduce peak day demand so that the ratio of maximum to average day demand is less than 2.6.
 - The City's ten-year average (2005-2014) ratio of maximum to average day demand is 3.3. The position of the DNR has been that a peak day/average day ratio that is above 2.6 indicates that the volume of water being used for irrigation in a community is too high and that efforts should be made to reduce the peak day use by the community.
 - The City limits which hours of the day water may be used for irrigation in the summer to reduce peak day demand
- 6. Implement a conservation water rate structure
 - The water rates in Shorewood are based on an increasing block rate structure. This rate structure promotes water conservation because the price is volume-tiered. Water billing in Shorewood is on a quarterly schedule.
 - The City has also implemented restricted summertime lawn watering hours to reduce peak day demands during months of high water usage.
- 7. Additional strategies to reduce water use and support wellhead protection planning
 - The City of Shorewood will consider implementing a rebate program for water efficient appliances and fixtures.
- 8. Tracking success
 - The City will continue to monitor water usage by customer category, including the City's regular maintenance activities (hydrant flushing, street sweeping, etc.).

The following table lists the top water users by volume, from largest to smallest, for the City of Shorewood.



Large Volume Users

| Customer | Category | Use (gallons per year) | Percent of Total Water Use |
|--|-------------|------------------------------|-------------------------------|
| Kraus-Anderson, Inc. | Commercial | 1,600,000 | 1.29% |
| Cub Foods | Commercial | 1,096,000 | 0.89% |
| Minnetonka School District No. 276 | School | 1,052,900 | 0.85% |
| Shorewood Ponds Homeowners Association | Residential | 715,262 | 0.58% |
| Shorewood Oaks Partnership | Residential | 677,000 | 0.55% |
| Waterford Center LLP | Commercial | 504,000 | 0.41% |
| New Horizon Academy | Commercial | 484,102 | 0.39% |

Water Sources and Treatment

Well information by system is provided in the following table. The total well pumping capacities in the west and east systems are 1,750 gpm and 1,850 gpm, respectively. The west system has a firm capacity (capacity with the largest well out of service) of 1,000 gpm, and the east system has a firm capacity of 850 gpm.

| Well Name and ID | System | Year Installed | Capacity (gpm) | Depth (feet) | Aquifer | Status | Treatment |
|---------------------|--------|-------------------|-------------------|-----------------|------------------------------|--------|--|
| Well 1 #232331 | East | 1973 | 750 | 528 | Prairie du Chien - Jordan | Active | Chlorine & Fluoride |
| Well 3 #161414 | West | 1981 | 750 | 359 | St. Peter - Jordan | Active | Chlorine & Fluoride |
| Well 4 #171020 | West | 1981 | 500 | 640 | Tunnel City - Wonewoc | Active | Chlorine & Fluoride |
| Well 5 #171023 | West | 1981 | 500 | 640 | Tunnel City - Wonewoc | Active | Chlorine & Fluoride |
| Well 6 #122298 | East | 1982 | 100 | 280 | Prairie du Chien Group | Active | Chlorine & Fluoride |
| Well 7 #416160 | East | 1986 | 1,000 | 415 | Prairie du Chien - Jordan | Active | Chlorine, Fluoride, & Iron Removal |

Chemicals are applied to the raw water in each well house. Chlorine is applied for disinfection, and fluoride is applied to prevent tooth decay. Well House No. 7 also has filters for iron removal.



A city's treatment or production capacity should be equal to at least the maximum day demand with the largest well out of service (firm capacity). Since the City has two separate systems, each should be able to satisfy this constraint individually.

- The west system's firm capacity is 1,000 gpm. The daily demand for this system is projected to reach a maximum of 366 gpm by the year 2040. Thus, maximum day demand for this system is not projected to exceed its firm capacity by the end of the planning period.
- The east system's firm capacity is 850 gpm. The daily demand for this system is projected to reach a maximum of 414 gpm by the year 2040. Thus, maximum day demand for this system is not projected to exceed its firm capacity by the end of the planning period.

Water Storage/Distribution

The west system has one 500,000 gallon steel elevated storage tank located on Smithtown Road beside the Minnewashta Elementary School that was constructed in 1995. Pipe diameters in this half of the system range from 6-inch to 20-inch of ductile iron watermain, with most mains between 6 and 12 inches.

The east system has one 400,000 gallon steel elevated storage tank located on Old Market Road where it meets MN State Highway 7 that was constructed in 1986. This half of the system includes pipe diameters from 6-inches to 16-inches of ductile iron watermain, with most mains between 6 and 8 inches.

A system's total storage capacity should equal or exceed its average day demand.

- The west system's storage capacity of 500,000 gallons exceeds its projected 2040 average day demand of 203,000 gallons.
- The east system's storage capacity of 400,000 gallons also exceeds its projected 2040 average day demand of 229,000 gallons.



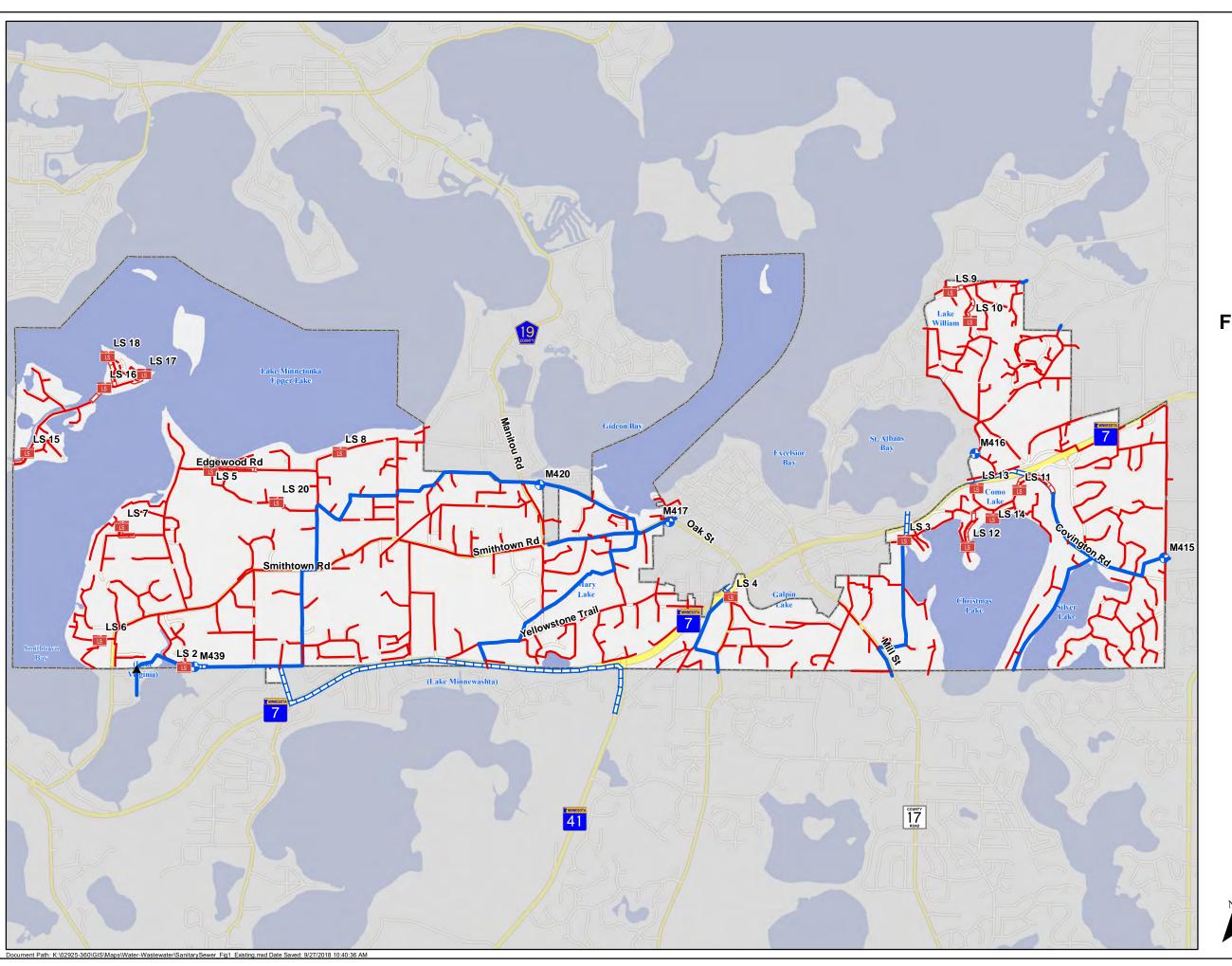
SANITARY SEWER SERVICES

The City's sanitary sewer system was first installed in the early 1970's. Capacity limitations in the Metropolitan Council Environmental Services (MCES) sewer system created service issues for Shorewood in the mid 1980's, but improvements to the regional interceptor system resolved those issues. Today, Shorewood is fully built-out and is served completely by the municipal sanitary sewer system. Given that no further expansion of the system is required, the City currently focuses on system maintenance and upgrades.

The City of Shorewood's existing sanitary sewer system collects and conveys wastewater to ten MCES interceptors and eight MCES meters. It includes fourteen local lift stations, see below. In this report, the system has been divided into service areas based on the receiving lift stations and MCES interceptors. A map of the existing sanitary sewer system and service areas is shown on the following pages.

| Lift Station No. | Lift Station Location | Year Constructed | Year Rehabilitated | Pumping Capacity (gpm) | |
|---------------------|-----------------------|---------------------|-----------------------|---------------------------|--|
| 5 | Edgewood Road | 1970 | 2012 | 250 | |
| 6 | Smithtown Road | 1972 | 2012 | 90 | |
| 7 | Woodside Road | 1972 | - | 90 | |
| 8 | Birch Bluff Road | 1972 | 2004 | 250 | |
| 9 | Minnetonka Boulevard | 1972 | - | 92 | |
| 10 | Lakeway Terrace | 1972 | - | 150 | |
| 11 | Radisson Road | 1972 | - | 200 | |
| 12 | Christmas Lake Point | 1972 | 2007 | 95 | |
| 13 | Radisson Entrance | 1972 | - | 30 | |
| 15 | Enchanted Lane | 1973 | 2010 | 135 | |
| 16 | Shady Island Road | 1973 | 2008 | 110 | |
| 17 | Shady Island Circle | 1973 | - | 100 | |
| 18 | Shady Island Point | 1973 | 2004 | 110 | |
| 20 | Noble Road | 1994 | - | 80 | |

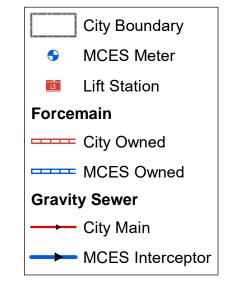
All wastewater collected in the City of Shorewood is conveyed through the MCES system to the MCES Blue Lake Wastewater Treatment Plant (WWTP) in the City of Shakopee. The Blue Lake WWTP has a capacity of 38 MGD, provides primary and secondary treatment, and discharges treated effluent to the Minnesota River.

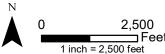




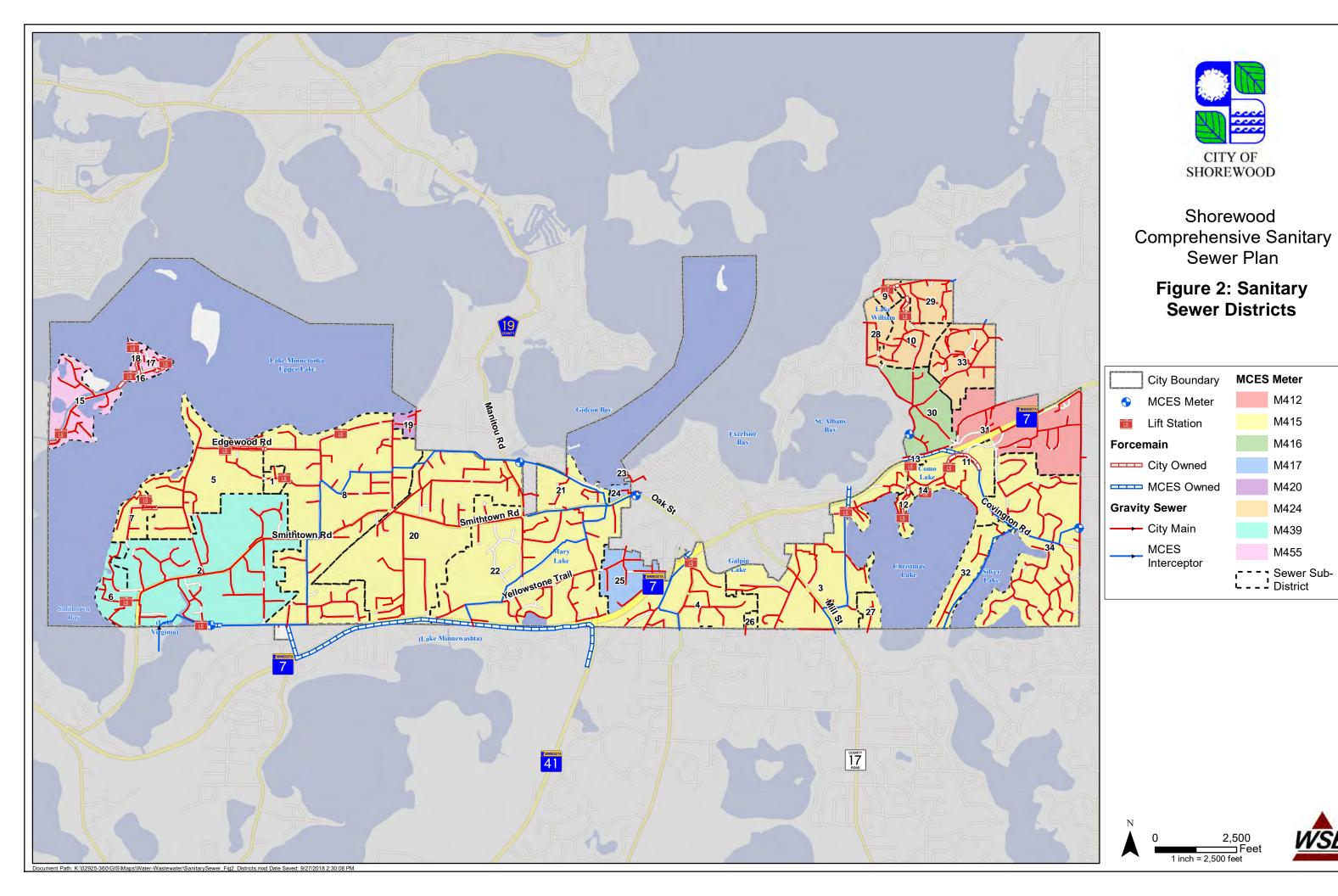
Shorewood Comprehensive Sanitary Sewer Plan

Figure 1: Existing Sanitary Sewer System











Individual Sewage Treatment Systems

The City of Shorewood requires that all new development connect to the sanitary sewer system and prohibits the installation of new individual sewage treatment systems (ISTS), or septic systems. The only ISTS that remain in use are on the following properties

- 6185 Mill Street
- 26750 Smithtown Road
- Gale Island
- Spray Island

The islands are not served by the public system. The section of Shorewood City Code regarding ISTS, Chapter 904: Sewer Code, is consistent with Minnesota Pollution Control Agency (MPCA) regulations (Minnesota Rules Chapters 7080-7083). The provisions, excerpted below, specify connection to the public sewer and abandonment of ISTS.

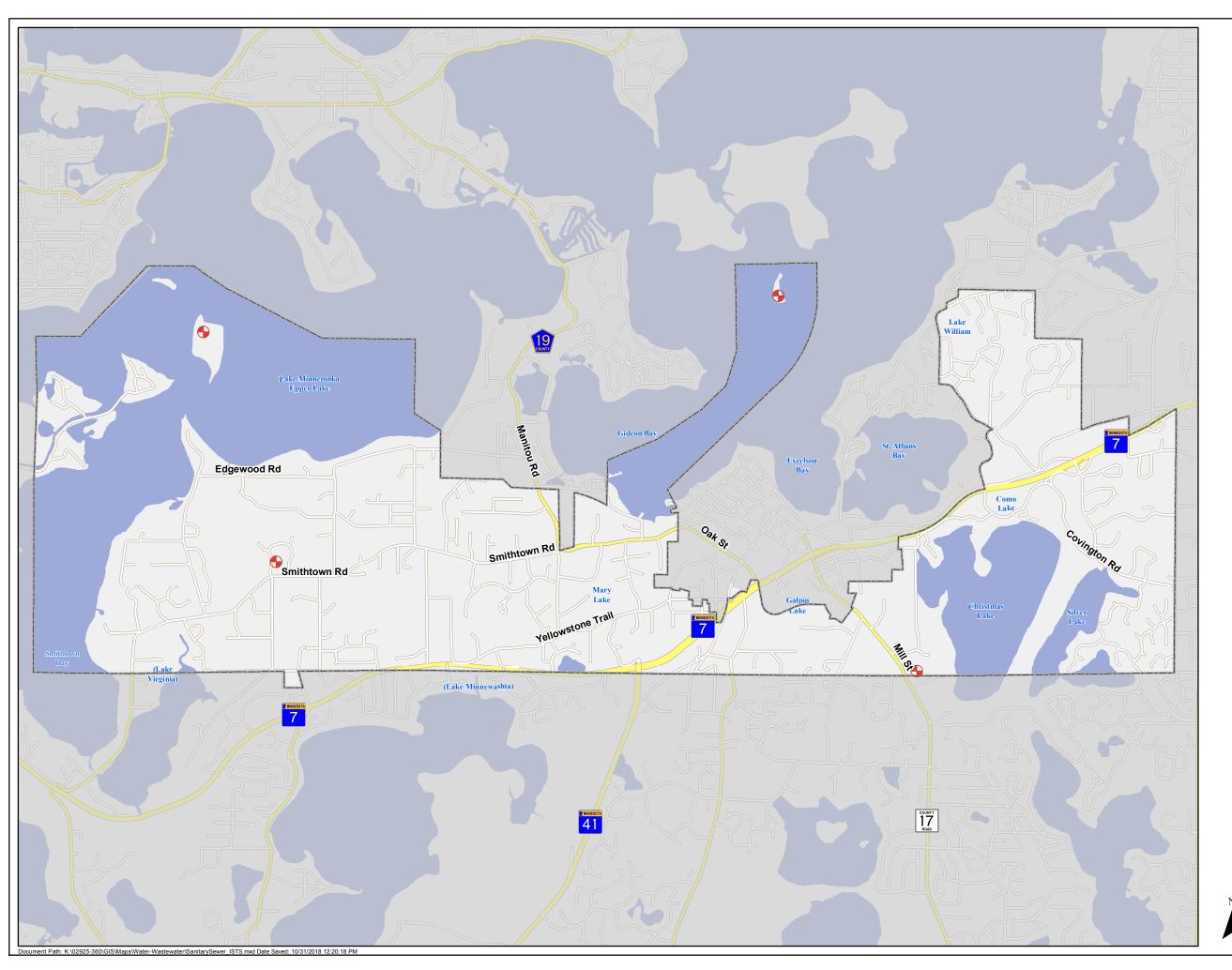
Subd. 3. Connection to public sewer, abandonment of systems.

- a. The owners of all houses, buildings or properties which abut upon or are served by a public sewer and where cesspools and septic tanks have been in existence prior to the construction of the sanitary sewer shall connect with the public sewer when public sewer becomes available to the property. Shoreland property shall be further governed by Minn. Rules § 6120.3400. Any septic tanks and cesspools and private sewage disposal facilities then existing shall be abandoned and filled with suitable material.
- b. At the time as a public sewer becomes available to a property served by a private sewage disposal system, as provided in § 904.05 of this chapter, a direct connection shall be made to the public sewer in compliance with this chapter. Any septic tanks, cesspools and similar private sewage disposal facilities then existing shall be abandoned and filled with suitable material.

The City of Shorewood has delegated the responsibility of permitting, inspecting, maintenance management, and compliance enforcement of remaining ISTS in the City in accordance with Hennepin County Ordinance 19. Therefore, Hennepin County actively oversees the City's subsurface sewage treatment system program.

Community Treatment Systems

There are no public or private community treatment systems within the City of Shorewood. All of the properties within the City are served by the public collection system or by individual sewage treatment systems, as described above.





Shorewood Comprehensive Sanitary Sewer Plan

Individual Sewage Treatment Systems (ISTS)









INFLOW AND INFILTRATION

Inflow is water, typically stormwater, which enters the sewer system through broken manhole covers, sewer cleanouts, sump pumps, foundation drains, and rain leaders. *Infiltration* is water, typically groundwater, which leaks into the sewer system through cracks in the sewer mains, laterals, joints, and manholes.

Water from inflow and infiltration (I/I can consume available capacity in the wastewater collection system and increase the flow into treatment facilities. In extreme cases, the added flow can cause bypasses or overflows of raw wastewater. This extra flow also requires a larger capacity in the city's collection and treatment components, which results in increased capital, operation and maintenance, and replacement costs. As a sewer system ages and deteriorates, I/I can become an increasing burden on a City's system. Therefore, it is imperative that I/I be reduced whenever it is cost effective to do so.

In 2006, the MCES began an Ongoing I/I Program which requires communities within their service area to eliminate excessive I/I. The MCES establishes annual I/I goals for each community discharging wastewater into the Metropolitan Disposal System (MDS based on average daily flows, adjustments for community growth, and I/I mitigation peaking factors.

Flow metering data is available for the metersheds within Shorewood, and an analysis of this data as it relates to I/I is presented on the following page. The City completed a three-year I/I reduction program in the early 1990's which included the televising, sealing, and repair of older sections of the system located in wet soils. In the 1990's, the City also began an aggressive sump pump inspection program to eliminate the discharge of stormwater from private properties to the sanitary sewer system. In the 2000's and 2010's, several segments of the sanitary sewer system were rehabilitated or replaced as part of the City's regular street and utility improvement projects. More information on these projects and the City's strategies, programs, investments, and goals for reducing I/I are listed in Chapter 3 (Community Framework.

Community facilities include those lands and buildings required to support suburban development and densities. They are essential for establishing and sustaining a quality life style in a suburban environment.

MUNICIPAL BUILDINGS

<u>City Hall.</u> First built in 1981, then expanded in 1988, the City's Administrative Offices were renovated and expanded in 2008. The renovation/expansion project included accessibility upgrades, increased office space and a new City Council Chambers. No expansion of the facility is anticipated at this time.



<u>Public Works Facility.</u> The City completed construction of the public works facility in 1992. The facility has more and better space for outdoor storage which is screened from view of nearby residential properties. The facility was designed to be expanded and that expansion is anticipated to occur prior to 2040, but an exact timeframe has yet to be determined.

<u>Shorewood Community and Event Center.</u> The facility was first constructed as joint venture between the cities of Shorewood, Tonka Bay, Excelsior, Greenwood and Deephaven in 1996. The City of Shorewood purchased the Center in 2017 and now owns and runs facility. The facility continues to provide meeting space for community groups, private events, and activities for area seniors.

PUBLIC SAFETY

The communities along the south shore of Lake Minnetonka realized the benefit of combining resources for provision of public safety services. Shorewood receives police service from the South Lake Minnetonka Police Department (SLMPD through a joint powers agreement between four communities - Shorewood, Tonka Bay, Excelsior and Greenwood. Cost sharing is based on a formula that includes demand, population, and tax capacity. The City intended to continue its joint powers agreement with the three above-mentioned communities in the foreseeable future.

The Excelsior Fire District (EFD is provided through a joint powers agreement between five communities – Shorewood, Deephaven, Excelsior, Greenwood, and Tonka Bay. The department has a full-time fire chief and 45 paid on call firefighters and operates out of two stations. Station 1 is located in Shorewood and Station 2 is located in the City of Deephaven. Fire Station 1 and South Lake Minnetonka Police Department occupy the South Lake Public Safety building located in Shorewood. The EFD provides service to all of the mainland portion of the City.

Shorewood's islands (Enchanted and Shady are protected by the Mound Fire Department. To enhance protection on the Enchanted Island and Shady Island, a system of dry hydrants has been installed which utilizes lake water and pumper trucks. Placement of three hydrants, as shown on the following page, is intended to reduce the need to backtrack to Mound to fill tank trucks.

The City considers the intergovernmental cooperation for public safety a models for exemplary intergovernmental cooperation and intends no change to these services for the foreseeable future.

PARKS AND RECREATION

At present, Shorewood's park system contains approximately 110 acres or one percent of total land, with 100 acres of usable recreation land. Existing parks include Freeman Park, Manor Park, Badger Park, Gideon Glen Park, Silverwood Park, Cathcart Park, South Shore Park, Crescent Beach (shared with Tonka Bay and one public boat launch (Christmas Lake and 10 public lake access points (called fire lanes to Lake Minnetonka and Lake William. There are also numerous privately-owned facilities throughout the City including homeowners association facilities, two



yacht/sailing clubs, and a marina. These private park facilities are not identified as parks on the Existing Land Use map nor included in the calculation of total land area for parks.

Classification System

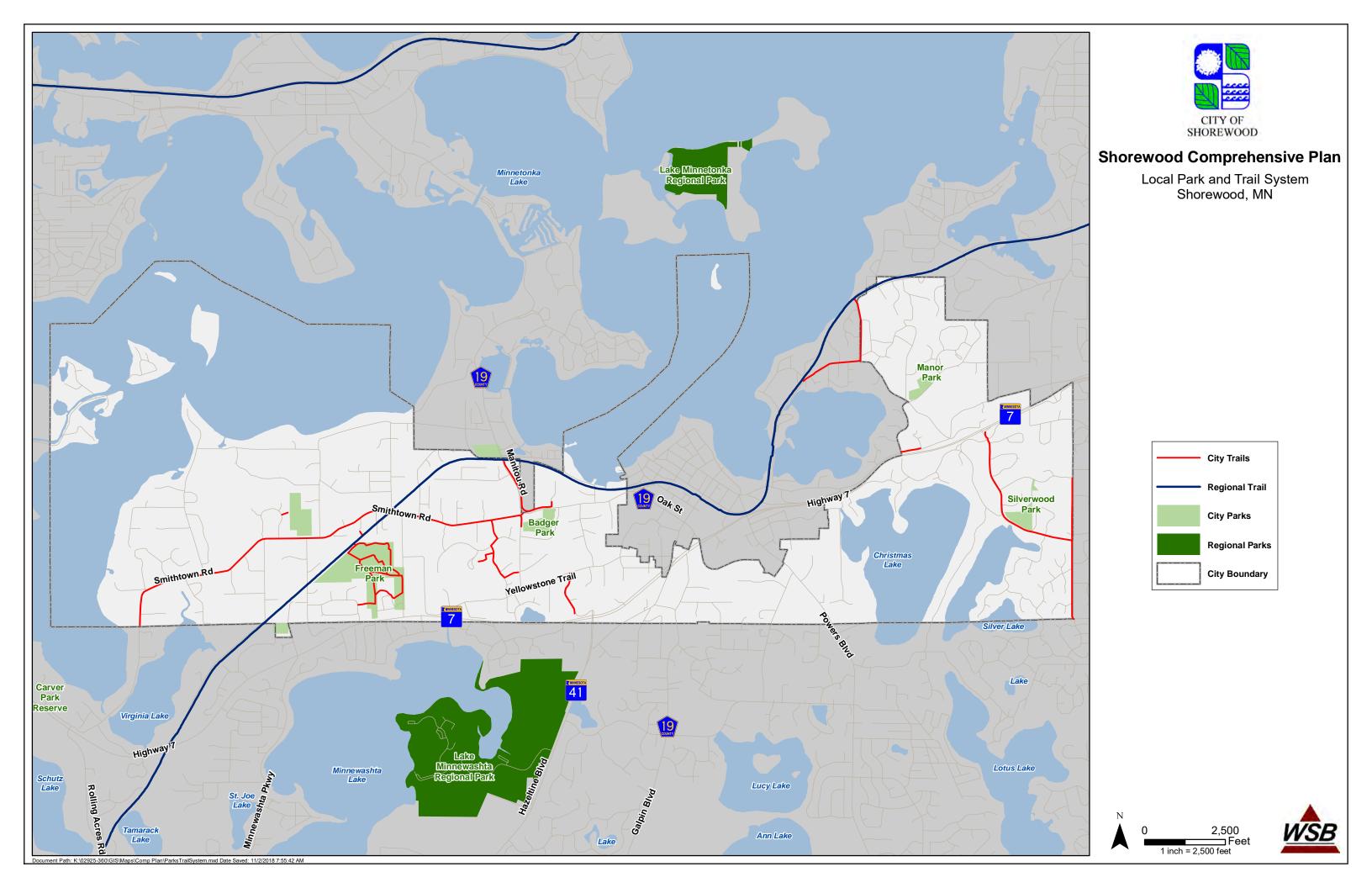
Shorewood has a variety of park types which are components of the City's overall park system. As a basis for examining existing parks and projecting future park needs, a regional system of park classification is utilized. The classification table from the Metropolitan Council's Thrive 2040 Regional Parks Policy Plan is provided in Appendix D and provides a description of various types of regional and local park facilities.

Existing System Analysis

Shorewood is fully developed. Given the fact that the City is not expected to see significant additional residential growth and that few vacant land parcels remain in the community, Shorewood is not expected to add new park sites. The City's existing parks are considered adequate in size and location to meet the future needs of the community, as shown in Figure XX.

Shorewood residents are generally well-served by the existing park system. With the exception of the islands and a small pocket south of Galpin Lake, most areas of the community are within a one-half to one-mile radius of neighborhood park facilities. As a result, the focus of future park planning will be on developing existing parks, as opposed to acquiring more land, with one possible exception. The City remains open to considering organization-supported expansion of Freeman Park as well as other existing sites. Also, as land becomes available through tax forfeiture, vacation of public right-of-way, donations and/or other means, it will be examined for possible inclusion in the park system.

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Existing Park Classifications

A considerable amount of planning has gone into Shorewood's park system as master plans for each of the City's parks have been developed. These master plans considered the classification system for local and regional parks which were previously identified. The following is an overview of Shorewood's existing park classifications:

Neighborhood Parks. Four of Shorewood's existing parks; Cathcart, Badger, Manor and Silverwood fall into this category. In addition, facilities at Freeman Park also serve the nearby neighborhoods, as do facilities at Minnewashta School.

Community Playfields. The Minnetonka School District has historically been heavily involved in providing playfields for local recreation. Within the City of Shorewood, Minnewashta Elementary School functions in part as a community playfield. Freeman Park is viewed as satisfying the majority of the community's need for playfields, but Badger, Cathcart and Manor Parks also satisfy this need.

Community Park. Besides its neighborhood functions, Freeman Park is the only community park in Shorewood's park system. Given the proximity of various regional parks, the need for an additional community park in Shorewood is not anticipated.

Regional Parks. There are no regional parks in the City of Shorewood.

Conservancy Lands. Shorewood's wetland system, while not suitable for active recreation, is preserved for its aesthetic value, as well as its environmental benefit.

Special Uses. Crescent Beach along Lake Minnetonka and the Christmas Lake access on Merry Lane are essentially single-purpose recreational facilities (or special use parks). Crescent Beach is used exclusively for swimming, while the Christmas Lake access is used for fishing and the launching of boats. Both sites provide winter access to the lakes.

South Shore Community Park was previously used as a skate park, but the community found that purpose was no longer needed. A new master plan should be prepared to determine the appropriate role for such park.

Gideon Glen Park also fulfills a function of a special use park as it serves as a natural / environmental interpretive center.

Linear Park. While not a City-owned park, the Lake Minnetonka LRT Regional Trail fulfills a linear park function by providing walking / bicycle trail linkages within and outside of the City's municipal boundary.



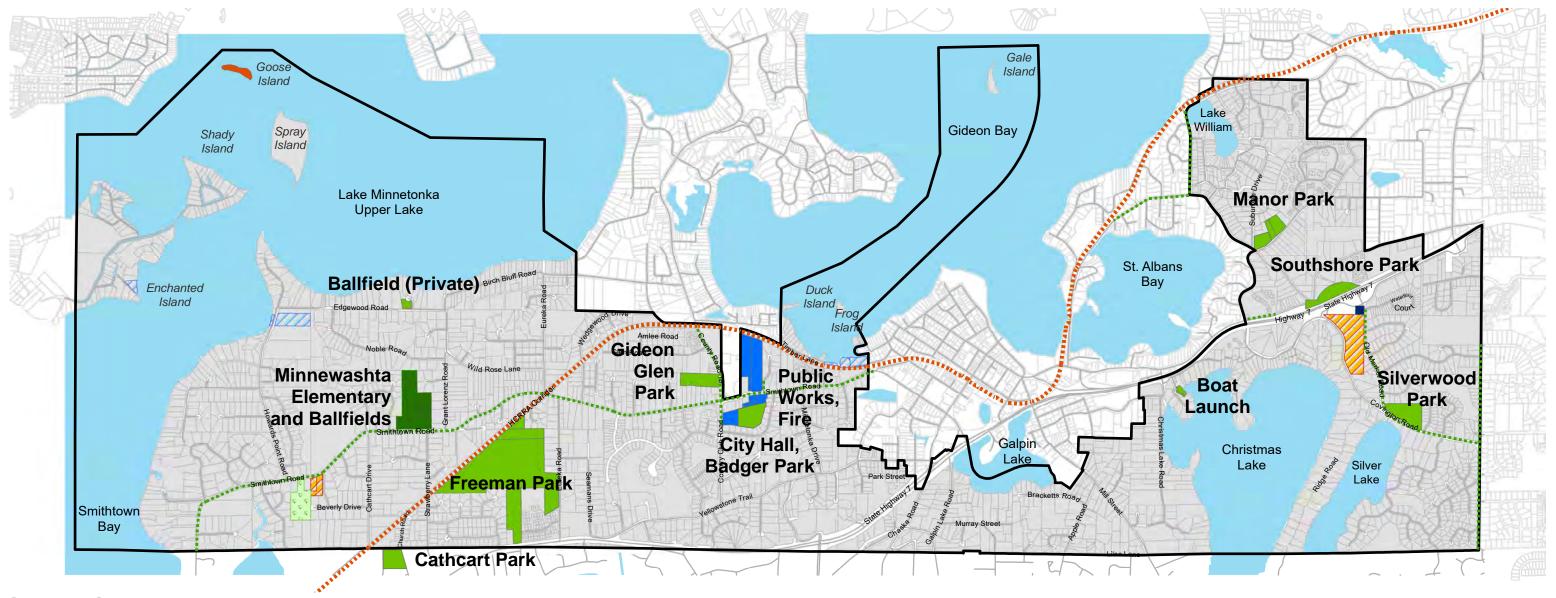
SCHOOLS

Residents of Shorewood are served by two school districts, the Minnetonka School District #276 and Westonka School District #277. Minnetonka School District #276 operates Minnewashta Elementary School in Shorewood and has approximately 9,600 students enrolled district-wide. Westonka School District #277, which serves approximately 2,200 students.

Population growth in the last several years has resulted in the need for expanded facilities throughout District 276. The City of Shorewood has one school located within its boundaries, Minnewashta Elementary School (District 276). The District has expanded Minnewashta Elementary School to meet the needs of the population and has not identified any additional land or locations for new facilities in Shorewood. Given that the city is fully built-out, the need for additional school facilities in Shorewood is considered unlikely.

Community Facilities

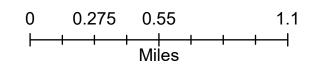
City of Shorewood 2040 Comprehensive Plan



Legend



Map created: December 2020 Data: NAC, MNDNR, Metropolitan Council





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WATERSHED DISTRICTS

The City has two watershed districts that operate within its boundaries, the Minnehaha Creek Watershed District (MCWD) and Riley Purgatory Bluff Creek Watershed District (RPBCWD). The watersheds are shown on the following map.

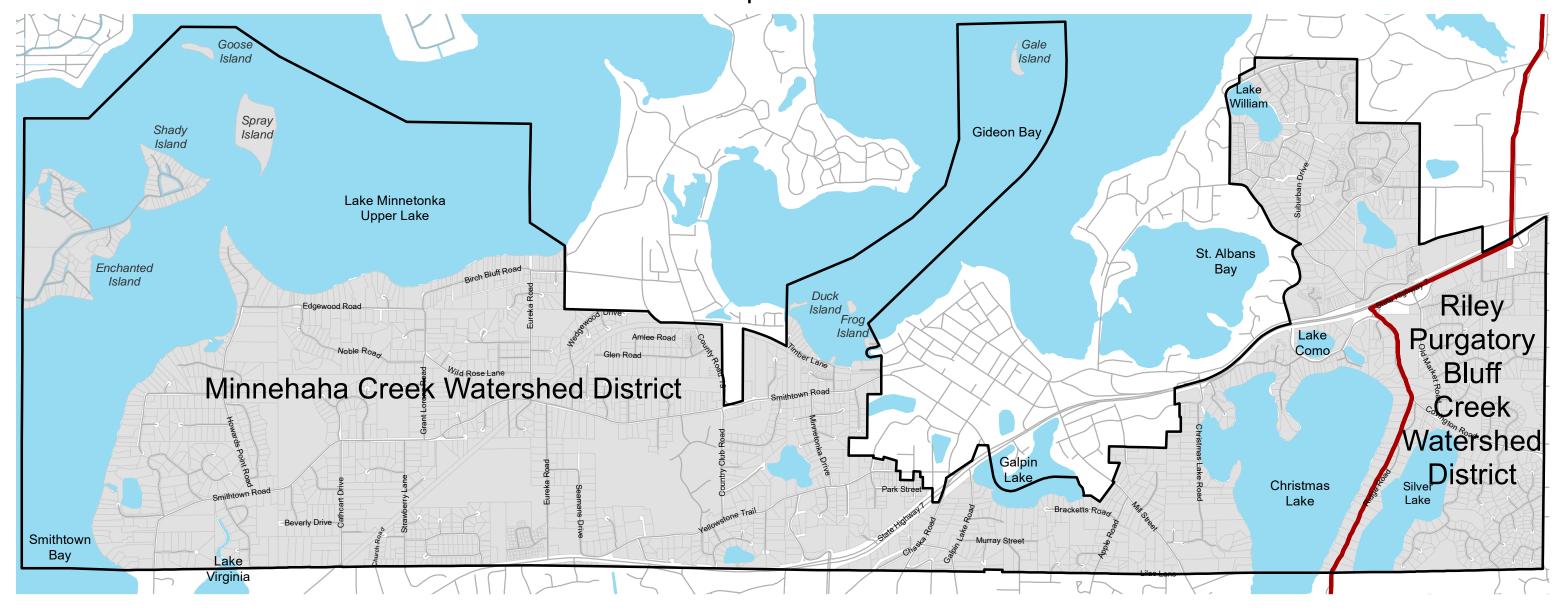
Both watershed districts have permitting jurisdiction over all construction projects within their respective boundaries, including Wetland Conservation Act administration.

If a permit is required for construction projects both the City and the watershed district reviews the permittee's application for compliance with the rules and regulations. The City of Shorewood has adopted the watershed districts' rules and regulations. A City issued building permit requires both City and watershed district approval of the projects stormwater management components.

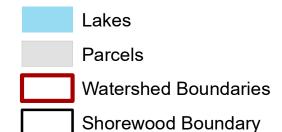
Construction phase erosion control inspection and enforcement and post construction storm water management facility and erosion control administration duties are shared and coordinated between the City and the watershed.

Watersheds

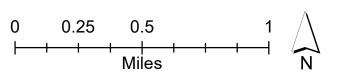
City of Shorewood 2040 Comprehensive Plan



Legend



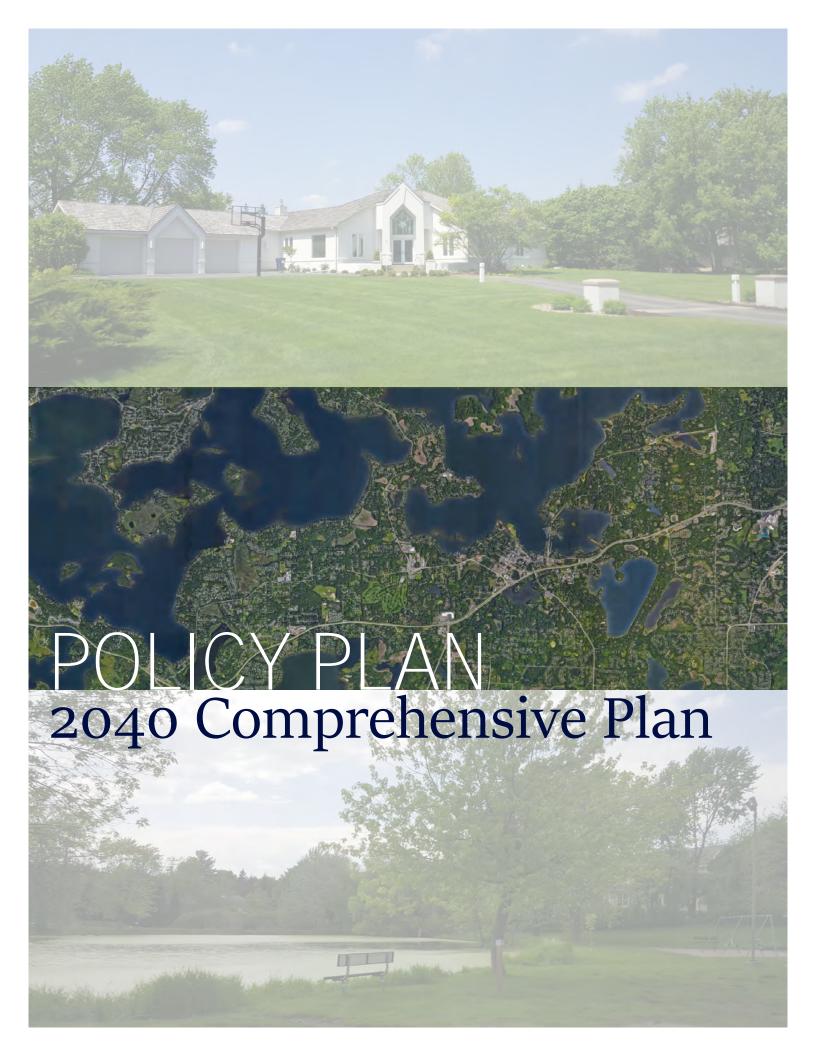
Map created: October 2018 Data: NAC, MnDNR, Metropolitan Council





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INTRODUCTION

The intent of the Policy Plan portion of the comprehensive planning process is to outline in written form what the community desires to be produced or accomplished relative to the physical environment. Secondly, the Policy Plan is intended to set forth guidelines as to how these desires are to be achieved. This chapter identifies general goals and supporting policies. These elements comprise a review and decision-making process and the basis upon which plans, programs and actions can be formulated and initiated.

It is emphasized that these goals, objectives and policies are the basic and fundamental plan for the development of Shorewood. In this regard, their purpose is to provide a decision-making framework to guide all public and private actions and the development of the City. In addition to the active function of guiding response and action, the goals, objectives and policies also serve the more passive function of establishing evaluation criteria for the development and change which subsequently occurs.

This Policy Plan should not be interpreted as an implementation program of actions and/or responses as no time framework or priority of action is intended or stated. The Policy Plan is a guide which directs action of the part of the public and private sectors of the community when responding to needs, problems and opportunities.

The policies are to be considered and utilized collectively. While in some instances a single policy may define and outline a course of action or decision, it is more commonly the case that several policies apply to a given situation. Reactions to individual policies should therefore be tempered pending consideration of all applicable statements.

Policy plans are used as the basis of graphic plans and decision-making due to their flexibility and adaptability. Policies can be applied and used for the basis of decision-making when unanticipated situations emerge. Such is not the case with a map plan in that it is static and fixed. Further, there may be instances when the policies contained in the Policy Plan do not reflect a change in policy direction or address an unanticipated issue. In such cases, the Plan should be amended to include policy statements which reflect the new direction or issue. Operating in such a fashion, the Comprehensive Plan will retain a current and effective status and will not become outdated.

The term "shall" within the framework of the Policy Plan is not to be considered an absolute regulation such as the case in the City's Zoning and Subdivision Ordinances.

The Policy Plan portion of the Comprehensive Plan is based upon an analysis of the preceding Planning Tactics and Inventory Chapters. To ensure that the Policy Plan reflects the desired ends

Policy Plan



of the local community and that such ends are to be accomplished, the Plan has been subjected to detailed and thorough review by the Planning Commission, City Council and City Staff.

To ensure a proper understanding and clarification, the terms utilized are defined as follows:

Goals: The generalized end products which ultimately result in achieving the kinds of

living, working and play areas that are desired.

Objectives: Conditions which must be attained in order to accomplish a particular goal.

Policies: Definite courses of action which lead toward goal achievement.

Many goals, objectives, and policy statements are generalized in nature and are directed simply toward community health and welfare. In this regard, many of the policies of the City's 2030 Comprehensive Plan remain valid and have been reiterated in this 2040 Plan. Certain Comprehensive Plan policies are more specific in nature and reflect different courses of action than those contained in the 2030 Plan. In those instances, specific policies have been added in response to new and/or higher priority issues raised as part of the community engagement process.

NATURAL RESOURCES

Goal:

The City will update (amend) its guidelines and regulations and enforce existing standards to ensure preservation and protection of the natural environment.

Objectives:

- 1. Development which occurs is to be compatible with features of the natural environment and preserve environmental features and natural amenities.
- 2. The natural and aesthetic quality of Shorewood's lakeshore is to be maintained and, where feasible, improved through the protection of shoreland impact zones, landscaping and shoreland buffers.
- 3. Creative development design to ensure the protection and enhancement of those portions of the community containing unique physical features (e.g. topography, woodlands, wetlands, etc.) is to be encouraged.



- 4. Natural wildlife habitats are to be provided protection to avoid loss where possible.
- 5. The environmental balance between natural and man-made physical features is to be maintained through land use development policy.
- 6. Shorewood's trees and vegetation are valuable assets and consideration is to be given to the preservation and protection of significant trees.
- 7. All environmentally sensitive areas (e.g. wetlands, shorelands and floodplains) are to be protected.
- 8. Area lakes' ecological systems are to be conserved and protected for future generations.
- 9. Where feasible, control over natural open space areas shall be obtained through conservation easements, acquisition or development regulation.

Policies:

- 1. All development in naturally or environmentally sensitive areas shall conform to state and federal regulations.
- 2. State and federal environmental regulations shall be incorporated into local policy.
- 3. Environmental regulations shall be formulated, updated and enforced to ensure the proper protection of natural environmental resources.
- 4. Environmental assessment worksheets and, when required, environmental impact statements, shall be prepared for developments of the type described in Minnesota Environmental Quality Board's Environmental Review Program, as may be amended.
- 5. The use of planned unit development cluster concepts shall be considered where protection of natural features is important to the community.
- 6. New development and the expansion of existing activities shall be restricted and regulated where environmental damage may result.
- 7. Development on or near shorelands, wetlands, floodplains and other natural features which perform important environmental functions in their natural state shall be restricted or prohibited.
- 8. Natural drainage patterns shall be preserved whenever feasible.



- 9. Development on, or alteration of, natural drainage system components shall be restricted so that the need for construction of storm sewer will be minimized.
- 10. Any adverse impact from increased surface water runoff to adjoining properties shall be avoided to the extent possible.
- 11. A drainage plan shall be established which utilizes intermediate ponding areas and provides municipal procedures for the acquisition, dedication, or control of areas so designated.
- 12. Environmentally sensitive areas such as wetlands and wooded areas are to be acquired or publicly controlled, when necessary to preserve their integrity as funds are available.
- 13. Conservation easements and similar methods of preserving open space shall be pursued to ensure that such areas remain in open space indefinitely.
- 14. Support shall be given to efforts aimed at reducing lake pollution.
- 15. Protect surface and ground water quality by continuing programs to educate the public and regulate the use of chemical lawn fertilizers.
- 16. Water bodies and watercourses shall be classified and zoned for specific uses giving due consideration to DNR and LMCD recommended regulations.
- 17. All reasonable measures shall be taken to mitigate adverse impacts resulting from development on natural wildlife habitats.
- 18. The location, condition and species of existing significant vegetation shall be indicated in all development requests.
- 19. Programs designed to protect Shorewood's trees through disease control measures and reforestation shall be encouraged.
- 20. Preserve existing wooded areas and develop programs and regulations to replace lost tree cover.
- 21. Incorporate the goals and policies of the Shorewood Surface Water Management Plan into the development review process.
- 22. Use available natural resources inventories and environmental data.



- 23. Review existing tree preservation regulations to ensure that such ordinance provisions adequately reflect desired preservation objectives.
- 24. Consider increased funding for stormwater management efforts in the City.
- 25. Consider the adoption of regulations which protect bluffs which lie outside of the City's shoreland districts.

LAND USE

Goals:

- The City shall continue a pattern of land uses which is consistent with the residential and recreational functions of the community.
- The land use plan shall promote harmonious relationships between various land uses (e.g. homes, commercial outlets, churches, parks, schools, etc.) through proper development and application of transitions between different land uses.
- Land use regulations shall discourage land uses which are inconsistent with the residential and natural character of the community.

Objectives:

- 1. A cohesive land use pattern that ensures compatibility and functional relationships among activities is to be formulated and implemented.
- 2. Community planning and development is to consider the impact to surrounding neighbors, neighborhoods and cities and mitigate the impact with transitions (landscaping, berming, etc.) where possible.
- 3. Development that is not accompanied by a sufficient level of supportive services and facilities (utilities, parking, access, etc.) is to be prevented.
- 4. Land uses and environmental quality are to be maintained and, where necessary, upgraded.
- 5. Community development is to be compatible with features of the natural environment and is to be accommodated without destroying environmental features and natural amenities.
- 7. Neighborhoods are to be maintained and where necessary, strengthened in character, while at the same time improving and reinforcing community identity.



- 8. A creative approach to the use of land and related residential development is to be encouraged.
- 9. Commercial development shall be safe, convenient, attractive, and compatible with the residential character of the community.
- 10. Establish and maintain a consistent approach to the development of fragmented land parcels (i.e. larger lots having the potential to be subdivided) which encourages cooperation between landowners and provides for access and utility service which complies with City standards.
- 11. Identify parcels of land with the potential to be set aside as permanent open space and explore means of obtaining conservation easements or financing the acquisition of such parcels.
- 12. As opportunities present themselves, attempts shall be made to satisfy the Metropolitan Council's minimum residential density directives for "suburban" communities (at least five units per acre for new development and redevelopment).

Policies:

General

- 1. Whenever possible, the impact of physical barriers shall be reduced in order to increase relationships between isolated areas and reinforce continuity and a sense of community.
- 2. Major streets are to border, not penetrate, neighborhoods.
- 3. All development proposals shall be analyzed on an individual basis from a physical, economic and social standpoint to determine the most appropriate uses within the context of the planning district in which it is located and within the community as a whole.
- 4. Land use development shall be related to and reflect transportation needs, desired development and community priorities.
- 5. Land use development shall be planned so as not to isolate or create landlocked parcels.
- 6. The use of easements and private streets for the purpose of lot access is to be discouraged.

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- 7. "Flag lot" development shall not be permitted. Adequate access must be established and provided to avoid creating nonconforming property.
- 8. Intensification of land use activity and development will only be allowed if accompanied by sufficient corresponding increases in related supportive and service facilities such as parks, off-street parking, fire and police protection, etc.
- 9. Transitions between distinctly differing types of land uses shall be accomplished in an orderly fashion which does not create a negative (economic, social or physical) impact on adjoining developments.
- 10. Wherever possible, changes in types of land use shall occur either at center, mid-block points so that similar uses front on the same street, or at borders of areas separated by major manmade or natural barriers.
- 11. The removal of land from the tax rolls shall be considered only when it can be clearly demonstrated that such removal is in the public interest (e.g. the preservation of greenspace).
- 12. Programs and incentives for continuing privately initiated maintenance, improvements for energy conservation, and redevelopment of existing land use development shall be created and implemented.
- 13. Where practical, problems with conflicting and non-complementary uses shall be resolved through removal and relocation.
- 14. To the maximum extent possible, development policies and regulations shall be applied consistently and uniformly.
- 16. Shorewood's land planning and development shall be on a cooperative basis with neighboring communities, when consistent with Shorewood's adopted goals.
- 17. Shorewood's lakeshore shall be protected from over-intensification of use and development.
- 18. Shorewood shall consistently enforce ordinances related to property (and structure) maintenance.



Residential

- 1. Low density residential neighborhoods shall be protected from encroachment or intrusion of higher density residential uses and non-residential development via the use of buffering and separation techniques.
- 2. Residential neighborhoods shall be protected from penetration by through traffic.
- 3. Access to major streets shall be provided on the periphery of residential neighborhoods.
- 4. Residential development shall be protected from adverse environmental impacts, including noise, air and visual pollution.
- 6. Housing styles and development techniques that conserve land and increase energy efficiency shall be encouraged.
- 7. All new housing shall adhere to the highest community design, planning and construction standards.
- 8. Innovation in subdivision design and housing development shall be considered through the use of devices such as the cluster and planned unit development concepts.
- 9. Residential development shall be prohibited on floodplains, bluffs, wetlands and other natural features that perform important protection functions in their natural state.
- 10. New residential development shall maintain the natural environmental character of Shorewood through the preservation of significant trees, protection of bluffs and wetlands, and maintenance of shoreland impact zones.
- 11. Integration of housing types or styles within a development shall be allowed when applicable provided the total number of units conforms to the prescribed density for the total development.
- 12. Shorewood's housing planning and development shall be in cooperation with neighboring south shore communities.
- 13. City regulations related to "teardowns" and "rebuilds" of single family homes shall be examined, and modified if determined necessary, to ensure that adequate provisions are in place to ensure neighborhood compatibility.



- 14. In consideration of new or redeveloped housing projects, the minimum density directives of the Metropolitan Council (five units per acre) shall be given due attention.
- 15. To limit on-street parking and protect adjoining properties from nuisance concerns associated with construction projects, staging plans shall be required for all infill development projects. Minimally, such plans shall address contractor parking locations, construction material storage, construction hours and keeping the streets clean.

Commercial

- 1. The City of Shorewood's commercial development shall be oriented towards "convenience" type of shopping geared toward neighborhood or community scale markets.
- 2. Commercial and service centers shall be developed as cohesive, highly interrelated units with adequate off-street parking.
- 3. Existing and proposed service and commercial uses shall be adequately and appropriately landscaped according to community requirements as may be amended.
- 4. All existing and proposed service and commercial uses shall be adequately screened or buffered from any adjacent residential development.
- 5. Orderly transitions between commercial and residential areas shall be established and maintained.
- 6. Uncoordinated linear commercial development shall be strongly discouraged in favor of a unified development pattern.
- 7. Joint utilization of parking, access, and other related supportive services shall be promoted in service and commercial districts and individual developments.
- 8. Safe and convenient pedestrian movement shall be provided within service and commercial developments.
- 9. When possible or when opportunities arise, major street access for service and commercial development shall be at the periphery of the area.
- 10. Locate neighborhood convenience centers along minor arterial or major collector streets.



- 11. Commercial development at street intersections shall be limited and restricted. Development of one quadrant does not indicate or dictate commercial use of the remaining quadrants.
- 12. Ensure that neighborhood convenience centers are provided with safe and convenient accessibility for both motorists and pedestrians.
- 13. It shall be the responsibility of higher density residential and non-residential developments to buffer or provide transitions to protect lower density residential uses.
- 14. Redevelopment of the Smithtown Crossings commercial area shall occur in a manner which promotes Shorewood's community identity.
- 15. Future commercial development in the City shall consider the character of the community and adhere to the highest possible standards of quality (in terms of both design and finish materials).

Commercial Services

- 1. The existing commercial service development in Shorewood shall be upgraded and improved to the highest possible standards of operation.
- 2. It shall be the responsibility of existing commercial service developments to assume the burden of making necessary improvements to ensure compatibility with surrounding residential uses.

HOUSING

Goals:

- Healthy and quality housing shall respect the natural environment of the community.
- Maintain the present variety of housing options and provide sufficient housing types, sizes and values to meet the needs of varying segments of the population.
- Maintain and strengthen, where necessary, the character of individual neighborhoods within the community.



- Address local and sub-regional housing issues through cooperative efforts with neighboring communities.
- The City shall promote safe, healthy and affordable housing options.

Objectives:

- 1. Review local development regulations, and amend as necessary, to promote a balanced housing supply.
- 2. As opportunities present themselves, attempts shall be made to satisfy the Metropolitan Council's affordable housing directives (48 new units between 2021 and 2030).
- 3. Identify locations for alternative residential housing types and densities.
- 4. Make available to residents and property owners educational programs on such topics as renter/landlord rights, home buying, home maintenance, etc.
- 5. Continue the City's rental housing license program to maintain current standards for rental housing.
- 6. Promote private sector maintenance, rehabilitation and redevelopment of existing properties through improved communication of available community services and financial assistance programs.
- 7. Continue to allow accessory apartments to allow seniors to remain in their single family homes.
- 8. Encourage housing types that are designed to appeal to senior citizens to allow existing residents to downsize and remain in the City of Shorewood.

Policies:

Maintenance, Rehabilitation and Redevelopment

- 1. Programs for housing structural condition maintenance shall be pursued to protect the health and safety of residents and ensure stability of neighborhoods within the community.
- 2. Maintenance problems and code violations shall be addressed to improve and strengthen the character of neighborhoods and avoid spreading the impact of deterioration.



- 3. Substandard housing units shall be rehabilitated whenever possible.
- 4. Work with Hennepin County to administer programs which provide financial assistance for the rehabilitation of substandard housing units within the community (as funding sources and market conditions permit).
- 5. Residential redevelopment of substandard housing within the community shall be encouraged whenever compatible with adjacent land uses and economically feasible.
- 6. Appropriate regulations shall be established for development upon lawful nonconforming lots.
- 7. Staging plans shall be required for all residential infill projects. Minimally, such plans shall address contractor parking locations, construction material storage and construction hours.

Compatibility

- 1. Low density residential neighborhoods within the community shall be protected from encroachment or intrusion of incompatible higher density residential land uses, as well as nonresidential use categories, through adequate buffering and separation.
- 2. The character of individual residential neighborhoods shall be respected and maintained.
- 3. Residential developments shall be protected from and located away from sources of adverse environmental impacts including noise, air and visual pollution.
- 4. Home occupations, commercial and other nonresidential activities shall be minimized and are not to be evident within residential neighborhoods.
- 5. Accessory buildings within the community shall be of a compatible design and size to maintain a residential character. These buildings shall be limited exclusively to residential use related activities.
- 6. Outdoor storage is to be minimized and, in those instances, when it is acceptable, it shall be conducted in an orderly, confined and limited fashion which is consistent with City Code requirements.
- 7. Violations of property maintenance standards that infringe upon residential neighborhood quality, pose public health and safety problems and threaten neighboring property values shall be aggressively eliminated.

Variety of Housing

- 1. Owner occupied housing shall be encouraged.
- 2. Shorewood's housing needs, as well as the needs of the overall Lake Minnetonka subregion, shall be addressed by providing and maintaining a variety of housing types, styles and values.
- 3. The emergence of a polarizing age distribution within the Lake Minnetonka sub-region is to be prevented through the provision of diverse housing that reflects life-cycle stages and economic considerations.
- 4. A range of property values and rent rates within the Lake Minnetonka sub-regional housing stock shall be encouraged as a means of diversifying the population and sustaining individual communities in the area.
- 5. Adequate living space and fully utilized housing are to be encouraged and promoted through the provision of a range of choices among housing types and values throughout the Lake Minnetonka sub-region.
- 6. The development of housing for special needs populations (e.g., elderly, physically challenged) within the Lake Minnetonka sub-region shall be supported by financial assistance programs that may be available as funding sources and market conditions allow.
- 7. In consideration of new or redeveloped housing projects, the affordable housing directives of the Metropolitan Council (48 units by 2040) shall be given due attention.

TRANSPORTATION

Goals:

- The City shall provide and maintain a safe and efficient system of transportation, sensitive to the needs of residents and the environment of the community.
- The City should establish a plan for an interconnected system of trails, enhancing the safe movement of pedestrians, bicyclists and other modes of non-motorized travel.

Objectives:

- 1. Reduce the need for transportation facilities by combining or concentrating various land use activities, when and where feasible.
- 2. Promote regional transportation facilities that are safe, direct, convenient and environmentally sound and coordinate plans with other jurisdictions.
- 3. Design safe, efficient and economical local transportation facilities based upon the needs of neighborhoods, integrating these facilities into the community and regional systems.
- 4. Utilize a comprehensive system and approach to transportation, giving due attention to all modes and related facilities.
- 5. Assign priorities to various travel routes, modes and programs, then formulate and implement a corresponding action and development effort.
- 6. Provide safe trail connections to points of interest in the community and link to trails provided by Hennepin County and adjacent municipalities.
- 7. Implement trail segments on an incremental basis consistent with an overall plan.
- 8. Explore all outside funding resources to implement local transportation plans.
- 9. Address automobile traffic, pedestrian movements, on-street parking and stormwater management within local street right-of-way improvements, where feasible.

Policies:

General

- 1. Transportation facilities shall be planned and improved to function in a manner compatible with adjacent land use.
- 2. All means of transportation and related facilities shall be considered as one system and therefore coordinated and related comprehensively.
- 3. Transportation facilities shall be planned and designed to conserve natural resources and minimize ongoing public investment.
- 4. The transportation system shall be developed to focus on activity centers of Shorewood and neighboring south shore communities, and to promote safe and efficient movement of traffic through and out of the city to the Metro Area.
- 5. Transportation planning and implementation shall be coordinated with neighboring and affected jurisdictions.
- 6. Special consideration and attention shall be given to persons who must rely on means other than the automobile for transportation.
- 7. Dependency upon automobile-oriented transportation shall be reduced where feasible, and where possible higher priorities shall be assigned to pedestrian/bicycle and mass transit travel.
- 8. The State and County highway systems shall complement and facilitate local movements provided by local streets, bicycle trails and pedestrian facilities. A line of communication shall be maintained with County and State highway officials in order to ensure that planned improvements are consistent with the goals and objectives of the community.
- 9. Early and continuing citizen involvement shall be provided for and encouraged in transportation planning and implementation projects.

Streets

- 1. A functional classification system for the street system in Shorewood has been established and shall be maintained, giving due consideration to the Metropolitan Council's Functional Classification System for streets and highways, as may be amended.
- 2. The classification system should be monitored as needed to revise the classification of streets as traffic and land use patterns evolve.



- 3. All local or residential streets shall be designed to limit penetration of through traffic and shall direct traffic to collector or arterial streets.
- 3. Land access onto expander and arterial streets shall be limited or prevented wherever possible.
- 4. Vehicular access onto arterials streets shall be minimized and limited to points of adequate distances between intersections with proper signalization and/or merging.
- 5. Street parking shall be prohibited or limited on arterial streets.
- 6. All intersections shall have proper visibility, design, and control to prevent accidents and violations.
- 7. Service roads paralleling major arterials shall be controlled to reduce traffic conflicts, hazards and resulting accidents.
- 8. Single-loaded frontage roads shall be discouraged in the future.
- 9. Street improvement shall be related to, and phased with, area land development to avoid interrupted or inadequate access.
- 10. Curb and gutter shall be required in new development and reconstruction of existing streets. Other drainage solutions may be considered where more economical and practical.
- 11. In those areas where incomplete street facilities exist, action shall be taken to plan, design and develop a street system that reflects the highest standards and relates land use to transportation needs and policies. Action shall be taken immediately to reserve required rights-of-way to prevent redundant additional cost and difficulties.
- 12. Where feasible and practical, provisions for other transportation modes (i.e. pedestrian, bicycles, etc.) shall be included in street and highway improvement plans.
- 13. The City shall strive to minimize damage to City streets and prevent premature street decay by enforcing seasonal weight restrictions and by considering options to reduce the number of regularly scheduled heavy vehicles on such streets, including, but not limited to, those utilized for organized trash collection.
- 14. The City shall work with State and/or County officials to explore possible solutions to ongoing traffic congestion issues at Highway 7 access points.

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- 15. Maintain a system of evaluating street conditions and prioritizing street maintenance/improvement efforts.
- 16. Timeframes for street improvement/replacement efforts shall be identified within the City's capital improvement program (CIP).
- 17. A design template for local street right-of-way improvements shall be developed which addresses automobile traffic, pedestrian movements, on-street parking and stormwater management.
- 18. As opportunities present themselves, existing unpaved public streets shall be paved in compliance with City street standards.

Parking

- 1. No development or expansion of activities and uses shall be permitted unless adequate offstreet parking is provided.
- 2. Parking requirements imposed by the City shall be periodically reviewed and studied to ensure supply is reflective of demand.
- 3. Parking shall be developed in a fashion that conserves land, allows joint utilization and minimizes conflicts with moving vehicular traffic, pedestrians and cyclists.
- 4. Parking lot access to public streets shall be limited to the functional minimums.
- 5. The City shall enforce standards for parking lot landscaping.
- 6. The City shall seek reduction in the demand and resulting space requirements for parking through improved pedestrian and transit facilities and land use development coordination.
- 7. Consideration shall be given to limiting on-street parking to one side of the street in areas determined by the City to address problematic parking conditions on narrow streets. Alternatively, staggered parking on alternating sides of a street may also be considered.

Mass Transit

- 1. Increased service and the use of mass transit shall be encouraged by the City of Shorewood.
- 2. The City shall work with adjacent City of Excelsior, as determined necessary, to ensure that Shorewood residents are provided reasonable access to transit services.
- 3. Strive to develop transit service for those who do not have other transportation alternatives.
- 4. Transit service, through related improvements and land use policies, shall be encouraged by the City during non-peak, non-rush hour periods in addition to peak and rush hour periods.
- 5. Shorewood business districts shall be encouraged to establish themselves as transit "stations" or suburban collection points through provisions for park and ride, transfer routes and direct express service to other commercial and employment activity centers of the metropolitan area and southwestern sub-region.
- 6. Availability of transit service, notably during rush hours, to activity areas and regional centers in other communities shall be encouraged.
- 7. All potential means and methods of providing and improving transit service (school buses, taxis, etc.) shall be explored.

Pedestrian/Bicycle

- 1. Where possible and economically feasible, a separated traveled surface shall be provided for pedestrians and cyclists.
- 2. Special attention shall be directed toward and facilities provided for pedestrian movement and access in areas in and surrounding schools, churches, parks, commercial and service centers.
- 3. Pedestrian street crossings on heavily traveled streets shall be clearly marked and lighted.
- 4. All street improvement programs and projects shall take into consideration facilities for pedestrians and bicycles as identified in the City's Trail Concept Plan.
- 5. Non-local streets in Shorewood shall be designed to protect pedestrian and bicycle movement paralleling traffic.
- 6. New development shall be encouraged to respect the pedestrian/bicycle system and, where possible, contribute to the City right-of-way and development costs.



- 7. Construction and maintenance of trails shall be based on established standards and specifications to ensure safe conditions.
- 8. Shorewood will establish development standards for the construction of trails, as well as maintenance standards and programs, to ensure safe conditions.
- 9. Trail segments shall be established within parks to provide connections between various facilities and to accommodate recreational usage.
- 10. Priorities for the funding of the construction of trails shall be established based on safety concerns, funding conditions and neighborhood acceptance.
- 11. Shorewood will explore all funding sources, including outside grant funds for the construction of trails, provided that such funding sources accommodate local needs and design criteria.
- 12. Shorewood will cooperate with other jurisdictions, including the School Districts and Hennepin County, in providing a trail system that meets local and regional needs.
- 13. Shorewood will work with other area communities to investigate the establishment of a trail network that could provide connections to points of interest and environmental features, including continuous access around Lake Minnetonka.
- 14. Shorewood will work with other area communities to investigate the establishment of bicycle and mass transit linkages that would serve bicycle commuters.
- 15. As part of street improvement/reconstruction planning, due consideration shall be given to the construction of trails and/or sidewalks.
- 16. Shorewood will identify and prioritize incomplete trail links within the City and develop a plan to improve pedestrian trail connections.
- 17. Shorewood will collaborate with the adjacent City of Excelsior to improve inter-city vehicle and pedestrian connections.
- 18. As part of the development of the City's trail system, due consideration shall be given to pedestrian and bicyclist safety.
- 19. Shorewood will strive to implement sidewalk and trail directives of its Transportation Plan and Park and Recreation Plan.

COMMUNITY FACILITIES

Goals:

- The City shall provide those basic facilities and services that ensure the health, safety and general welfare of the public, the cost of which facilities and services are most efficiently shared by the general public.
- The efforts of varying government agencies shall be coordinated to avoid duplication of efforts, unnecessary expense and improper location of public facilities.
- Maintain a sound financial planning program for capital improvements, relating such improvements to actual need, proper location and timing.

Objectives:

- 1. Existing services are to be maintained and improved where needed.
- 2. New community facilities and services are to be developed to meet the needs and interests of the Shorewood community.
- 3. Public facilities and services are to be planned and provided in a comprehensive coordinated and economic fashion.
- 4. Full utilization of existing facilities and services is to be accomplished prior to additional investment.
- 5. Implement policies to provide City water service where financially feasible and where demand can be demonstrated.
- 6. Facilities and services on a joint-use basis between units of government is to be promoted, improved and increased.
- 7. Each individual in the community is to be assured safe, equitable and easy access to public facilities and services.
- 8. Shorewood residents are to continue to have safe, reliable energy services to meet their needs.
- 9. Energy service conservation is to be constantly promoted and facilitated.



- 10. Efforts shall be made to improve the City's water supply and stormwater management systems.
- 11. When opportunities arise, efforts shall be made to promote Shorewood's community identity through public improvements.

Policies:

Parks and Recreational Open Space

- 1. Shorewood's park and recreational open space system shall be classified in accordance with standards established by the Metropolitan Council.
- 2. Funding for park maintenance and necessary improvements (as determined by the City) shall be considered a community priority.
- 3. The allocation of funds for park improvements for specific facilities will be made on the basis of balancing overall community park needs of Shorewood residents with the specific needs of each facility.
- 4. The community shall provide for an appropriate balance among active, passive, and cultural recreational areas and activities, tailored to the needs of the total population.
- 5. Recreational facilities and a year-round program of activities suited to the varied recreational needs of all age groups within the community shall be provided.
- 6. Parks and recreational facilities shall be distributed throughout the community, based upon neighborhood needs and characteristics of each planning and development district.
- 7. Sufficient park land to fulfill the needs of the present and projected future population of the community shall be acquired and reserved. Park development shall be undertaken as residential development demands and as funds are available.
- 8. Recreational open space improvements shall be programmed in accordance with a capital improvement program, updated on an annual basis.
- 9. Parks shall be designed and maintained with proper lighting, landscaping, shelter design, etc., to ensure a high degree of public safety and protection of public property.
- 10. Where necessary parks shall be screened, fenced and/or buffered for the safety and protection of the user as well as adjacent property owners.



- 11. Parks shall be improved and developed to take maximum advantage of natural features of the Shorewood.
- 12. Safe and convenient pedestrian, bicycle and vehicular access and adequate parking to serve recreational facilities shall be provided.
- 13. The use of motorized recreational vehicles shall be limited to designated areas.
- 14. Park and open space facilities and programming shall be planned and developed in cooperation and coordinated with similar services of surrounding communities, the school district, private organizations and the metropolitan area as a whole.
- 15. Studies shall be undertaken on a periodic basis to analyze the effectiveness and comprehensiveness of the community recreation program. These studies shall serve as the basis for recreation open space planning and programming.
- 16. Continual citizen participation in the planning, development and operation of recreational open space shall be maintained.
- 17. The City shall employ a pro-active approach to park development.
- 18. When opportunities arise, Shorewood shall consider the acquisition of parcels adjacent to the City's existing public beach (Crescent Beach) and conversion of such parcels to park land.

Lakeshore Use

- 1. Lake Minnetonka shall be considered a community recreational facility and appropriate actions shall be taken to permit utilization of the lake by all City residents.
- 2. Regulations shall be enforced to ensure accessibility to area lakes while at the same time minimizing any potential impact on surrounding uses and adjacent property owners.
- 3. In order to protect and preserve the amenity provided by area lakes, the City shall encourage uniform land use regulation and enforcement of lakeshore use.

Governmental Buildings and Facilities

1. Cooperation and coordination shall be promoted and actively pursued between governmental units in the provision of public facilities and services.



- 2. The full utilization of investments in public facilities and services shall be achieved prior to making new public investments.
- 3. Public facilities and services shall be located to the greatest extent possible so as to offer ease of access and minimal response time.
- 4. All public facilities shall be developed, improved and maintained according to the highest adopted standards of design and performance to serve as examples for private development.
- 5. All public buildings shall be designed and maintained to be safe, secure and resistant to vandalism while maximizing public and City usability.
- 6. Those areas, places, buildings, structures and other objects such as Indian mounds having significant architectural, historical, community or aesthetic interests and values shall be restored and preserved, as defined under the Minnesota Historic Sites Act of 1965, as may be amended.
- 7. Adequate screening, landscaping, and buffering of facilities shall be accomplished in order to minimize their impact on surrounding uses and enhance the community and areas in which they are located.
- 8. As part of future community facility improvement efforts, consideration shall be given to the creation or establishment of a visible and identifiable physical feature which distinguishes the City of Shorewood from the Cities of Excelsion and Tonka Bay.
- 9. The City shall examine alternatives and develop a plan for the future use of the Shorewood Community and Event Center.
- 10. The City of Shorewood shall seek and implement creative ideas for its public spaces which pay homage to the community's history and identity.
- 11. The City shall strive to make efficient use of its various municipal buildings by evaluating, on a periodic basis, the space needs of various City functions (to ensure adequacy).

Public and Semi-Public Utilities

1. City public utilities will be reviewed at the same time that the Capital Improvement Program (CIP) is reviewed each year.



- 2. Demand for urban services shall be anticipated, with emphasis to conserving existing facilities, in order to facilitate orderly, fiscally responsible extension of service systems.
- 3. Easements for utility systems shall be located according to uniform standards, providing for ease of access for maintenance and repair and minimal disruption of other activities or areas.
- 4. All utility systems and possible utility and service needs shall be periodically monitored, and all existing systems shall be maintained to assure a safe and high quality standard of service on an ongoing basis and to reduce inflow and infiltration into the city's sanitary sewer mains.
- 5. The impact of required utility facilities and services shall be minimized upon surrounding uses.
- 6. Underground installation of all new utility services shall be required and when economically feasible, existing overhead systems shall be converted to underground.
- 7. Coordination among all utility improvement programs shall be constantly pursued.
- 8. Telecommunication facilities shall utilize existing tower structures where feasible.
- 9. Gravity sewer systems are to be encouraged, and sewer lift stations should only be allowed when it is technically infeasible to achieve gravity flow.
- 10. Separate sanitary and storm sewer systems shall be maintained.
- 11. Run-off shall be managed to protect the groundwater recharge areas.
- 12. Benefiting property owners shall assume the burden of improvements made by the City in their behalf.
- 13. Natural drainage shall be preserved to the extent possible in order to minimize storm sewer costs.
- 14. Commercial development shall provide adequate water systems to insure proper fire protection.
- 15. To improve stormwater management within the City, Shorewood shall consider installing curb along problematic streets when opportunities arise.



- 16. Shorewood shall work toward the eventual connection of all properties to the City's municipal water system and all extensions shall be consistent with the overall plan for City water (i.e. pipe sizes).
- 17. Properties used for commercial purposes or residential uses involving four or more dwellings shall connect to the municipal water system. Residential developments of three or fewer dwellings shall connect to the municipal water system where it is available. The City reserves the right to deny permission for a subdivision development or redevelopment for subdivision if City water is not available at that property.
- 18. The overall water system is to remain financially self-supporting.
- 19. Allow water main extensions to provide water to residents where technically and financially feasible and where demand can be demonstrated. A super-majority of residents shall be considered a demand for water extensions.
- 20. In addition, the City will consider encouraging property owners with private wells to connect to the public system and will review funding mechanisms to assist this transition.
- 21. When opportunities present themselves, the City will consider the burying of existing and new power lines to reduce the frequency of power loss during storm events.
- 22. As part of the update of the City's Water Supply Plan and/or Wellhead Protection Plan, various requirements recommended by the Minnesota Department of Health to protect Shorewood's drinking water supply shall be incorporated.
- 23. Stormwater drainage facilities and underground utilities shall be considered integral elements of the City's street improvement projects.

Energy

- 1. Encourage use of alternative energy forms in new construction.
- 2. Continue to disseminate information on governmental energy conservation programs and helpful ideas on personal energy conservation methods.
- 3. Where practical, promote overall energy conservation in the community development process.

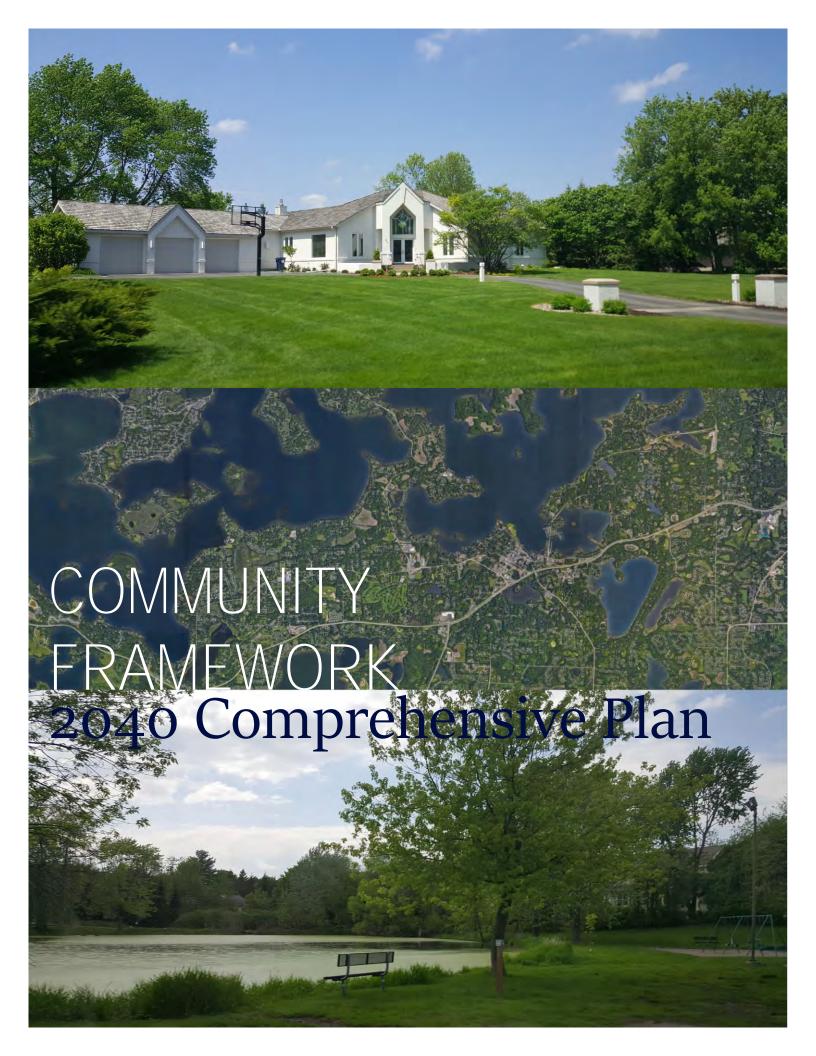
Policy Plan



- 4. The City of Shorewood will, by example, attempt to become a more energy efficient community via future investment in such systems.
- 5. Establish regulations to accommodate the installation of alternative energy systems (solar and geothermal) and clarify procedures.

Collaboration

1. To the extent possible, the City of Shorewood shall collaborate with nearby lake communities in regard to the handling of shared services.





INTRODUCTION

The Metropolitan Council requires that comprehensive plans for cities in the seven-county Metropolitan Area include a Natural Resources Plan. Such plan must address community goals, intentions and priorities concerning preservation, conservation or restoration of natural resources. Goals, objectives and policies related to the natural environment are provided in the Policy Plan chapter of this Plan.

Perhaps above all other characteristics of the community, Shorewood residents value the natural setting in which it is located and have found that protecting sensitive features such as wetlands, shorelands, floodplains and wooded areas has an aesthetic, economic, health and even psychological benefit to the community as a whole.

The natural setting makes Shorewood a very attractive place to live. Ironically, this attraction creates pressure for new development which can threaten natural amenities. Shorewood is committed to maintain its high quality natural environment.

NATURAL RESOURCES PLAN

Soils

Shorewood has numerous areas where poor soil conditions impose limitations on development. As prime land becomes developed, there is increasing pressure to develop on more marginal parcels. Most of the on-site sewer systems which pose environmental problems due to poor soil conditions have been connected to the public sanitary sewer system. Only a few such systems remain out of reach of City sewer, and all new development is required to connect to the City's system.

Bearing capacity for construction has been, and continues to be, an area of concern. The City requires testing in areas known for poor soil conditions or where poor soils are discovered during construction. Areas found to have questionable soils are subject to the recommendations of qualified soils engineers, as well as the requirements of the State Building Code.

The City of Shorewood has adopted standards for the control of erosion and sedimentation. In this regard, the following documents serve as a guide for the development of Shorewood's own local controls:

- MPCA Construction Stormwater Permit (Minnesota Stormwater Manual)
- MCWDs Erosion Control Permit
- MnDOT Erosion Control Handbook
- MS4 SWPPP Program



Going forward, the City will strive to use the most up-to-date standards for erosion control and sedimentation.

Slopes

The protection of the steep slopes and specifically bluffs which lie outside of the City's shoreland districts have been identified as an issue of community importance.

The type of slopes, along with surficial soil types, should be taken into consideration in the review of all development requests. Each site should be examined for problems of this nature, and in identified problem areas, the City will require test soils to determine if soil types are a problem on lesser slopes.

The Metropolitan Council has established two policies relative to development on erodible slopes:

- Slopes which because of their surficial soil type are susceptible to severe erosion should be maintained in a natural state. Counties and municipalities should adopt regulations to maintain or replace vegetative cover of these slopes to reduce erosion and slippage.
- Slopes subject to moderate erosion should be managed to minimize erosion and slippage; management may include special design and construction methods for development or appropriated vegetative or other cover.

Considering the amount of sloping land in Shorewood, 12 percent grades will be considered a "warning flag." While development may be allowed on slopes greater than 12 percent, such development shall be subjected to special scrutiny and examined for any potential environmental impact which might occur as a result of the proposed development. The City shall evaluate grading activities based on the following criteria:

- Development on slopes greater than 12 percent shall be reviewed and approved by the City Engineer. Any documentation needed to evaluate the development shall be provided by the developer.
- On large projects development activities shall be conducted and staged to minimize soil erosion. The smallest practical increment of land shall be developed at any one time; that increment shall be subjected to erosion for the shortest period of time, not to exceed a single construction season.
- Sufficient control measures and retention facilities shall be put in place prior to commencement of each development increment to limit soil loss.
- During construction, wetlands and other water bodies shall not be used as sediment traps.



• Except in extraordinary situations, development which results in disturbed slopes exceeding 3:1 (three horizontal to one vertical) shall not be allowed. Where unavoidable, steeper slopes must be designed by qualified professionals and will be subject to review and approval by the City Engineer.

Tree Preservation and Reforestation

The City of Shorewood recognizes trees and vegetation as valuable assets and that preservation and protective measures are a necessary community standard.

Shorewood's zoning regulations presently contain provisions for limiting the removal of vegetation in shoreland areas and requirements for landscaping of certain new developments. The City has adopted a tree preservation and reforestation policy which establishes the following three-part program:

1. Preservation

- identifies which developments require tree preservation
- identifies size and species of trees to be saved
- adopts construction protection measures
- considers residential clustering to preserve trees

2. Replacement

- requires replacement of those trees identified for preservation which must be removed for road and buildings
- establishes a required ratio between removed and replacement trees

3. Landscaping

- increases the types of development where landscaping is required
- increases size specifications for required landscaping
- establishes minimum quantity requirements
- amend subdivision regulations to require tree planting for all developments



 provides protection against invasive plant species and species which are susceptible to disease

During the development process, developers are required to submit tree inventories that become the basis for tree preservation and replacement plans. In certain instances where it is impractical or undesirable to replace trees on site, an alternative is provided that would allow developers and builders to contribute to a City fund. This fund would be used for placing trees on public property (e.g. City parks).

To ensure that existing Ordinance provisions adequately reflect desired preservation objectives, it is recommended that a review of existing tree preservation requirements be conducted.

Wetlands

The City of Shorewood has been a leader in preserving its wetlands, having adopted protective regulations in the early 1970's. These rules have been updated to include the provisions of the Wetland Conservation Act (WCA). The City has also adopted regulations protecting natural buffers adjacent to wetlands and establishing building setbacks from these buffers.

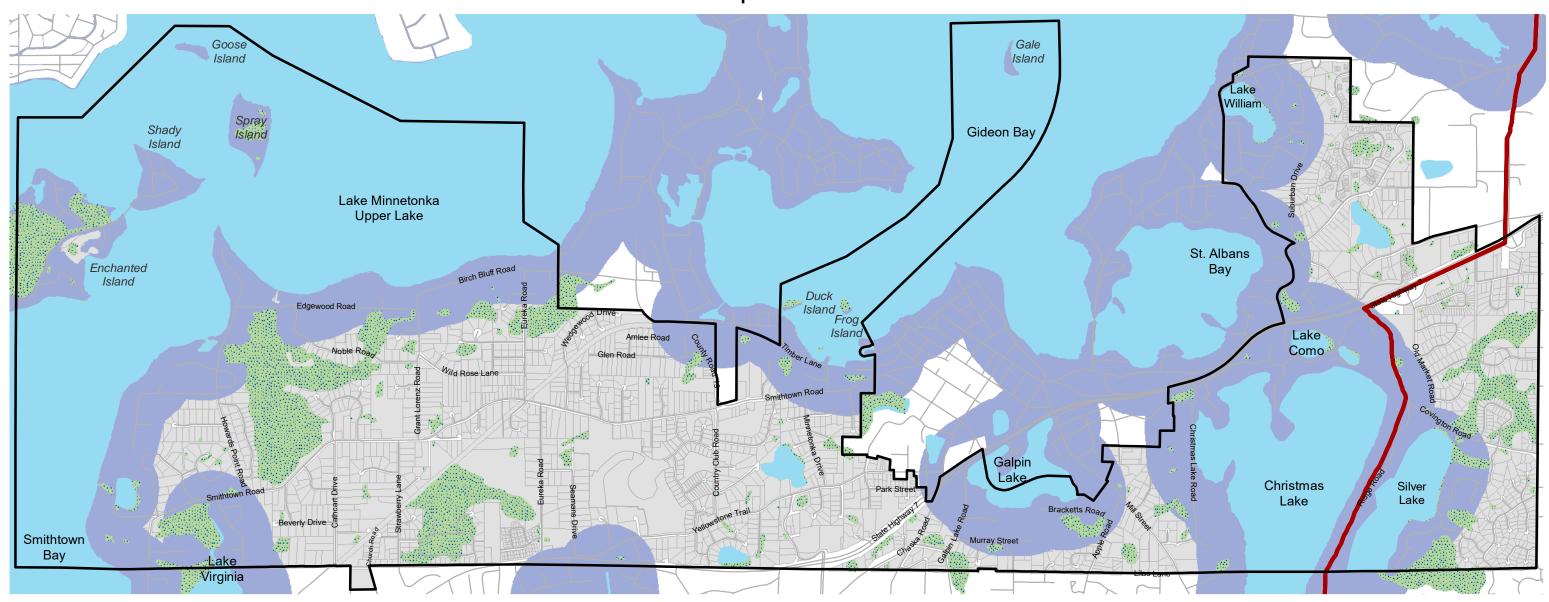
As illustrated on the map on the following page, nearly 10 percent (312 acres) of Shorewood's total land area exists as designated wetlands. Also, the City has begun enforcing the no-net-loss requirements of the Wetland Conservation Act of 1991 (WCA91).

The City has taken numerous steps to enhance the wetland protection program:

- 1. Adoption of the Minnesota Department of Natural Resources wetland classification system.
- 2. Requirement that all development proposals locate, identify and classify both City-designated wetlands and WCA91 wetlands.
- 3. Wetland delineations must be prepared by professionals certified by the State of Minnesota.
- 4. The applicable watershed districts will be the local governing unit (LGU) for administering the standards of the WCA91.

Water Resources

City of Shorewood 2040 Comprehensive Plan



Legend

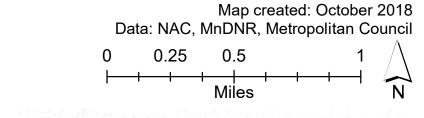
Shorewood Boundary

Watershed Boundaries

Wetlands (National Wetland Inventory)

Shoreland Protection Zone (1000' from Lake)

Lakes





NORTHWEST ASSOCIATED CONSULTANTS, INC.

4150 Olson Memorial Highway, Ste. 320, Golden Valley, MN 55422 Telephone: 763.231.2555 Website: www.nacplanning.com



- 5. The City will continue to work with the applicable watershed district and the Department of Natural Resources to enforce wetland protection laws.
- 6. The City may consider establishing minimum setbacks for construction adjacent to wetlands where no buffer has been dedicated. Shorewood's wetland regulations include a 35-foot natural buffer adjacent to wetlands in new development, plus a 15-foot building setback from the natural buffer area.
- 7. Requirement of retention ponds upstream of wetlands to collect and filter pollutants in storm water runoff before it reaches the wetlands.

Surface Water Quality

The management of surface water in the City has been highlighted by community residents as a high priority issue. The City of Shorewood partners extensively with other local, regional, and state agencies to ensure the protection of surface water quality.

The City of Shorewood contains portions of two watershed districts, Minnehaha Creek Watershed District (MCWD) and the Riley-Purgatory Bluff Creek Watershed District (RPBCWD). Each watershed district has various programs and permitting related to managing and improving surface water quality. The City also works with the Minnesota Department of Natural Resources (DNR), the Minnesota Pollution Control Agency (MPCA), and various other jurisdictions to maintain and improve surface water quality and flooding control where possible.

The City of Shorewood's Local Surface Water Management Plan (Appendix B) includes the following goals, strategies, and policies for the management of stormwater within the City and to complement those of our partners at other local, county, regional, or the state agencies. The goals of the City are as follows:

- 1. Minimize public capital expenditures needed to correct flooding and water quality problems.
- 2. Identify and plan for means to effectively protect and improve surface and groundwater quality.
- 3. Prevent erosion of soil into surface water systems.
- 4. Promote groundwater recharge.
- 5. Protect and enhance fish and wildlife habitat and water recreational facilities.
- 6. Secure the other benefits associated with the proper management of surface and ground water.

To implement these goals, the Local Surface Water Management Plan also includes an assessment of existing and potential water resource-related problems and corrective actions, including storm



water pond maintenance, discharging to impaired waters and aquatic invasive species. Specifically the problems and proposed corrective actions include:

| Problem | Corrective Action |
|---|--|
| Needed stormwater pond maintenance for | The City, in cooperation with MCWD, will |
| improved water quality treatment, flood | complete a feasibility study to identify |
| control, and aesthetics at Manor Park Pond. | methods to improve Manor Park Pond as funds |
| | are available. |
| Storm water discharge to the following | The City will work with MCWD and |
| impaired waters: Lake Minnetonka, Christmas | RPBCWD to develop and implement any |
| Lake, Lake Virginia, Silver Lake, and Lake | necessary total maximum daily loads for the |
| Minnewashta | impaired waters within its boundaries. |
| A stream in the upper Christmas Lake | The City will work with MCWD to look into |
| subwatershed that is not listed as impaired for | potential projects to reduce the total |
| nutrients but has a total phosphorus | phosphorus concentration of the stream by |
| concentration significantly higher than state | improving the water quality of the runoff |
| river eutrophication standards. | entering the stream. |
| An established zebra mussel population in | The City will work with MCWD to continue |
| Christmas Lake and Lake Virginia. | to educate its residents on the importance of |
| | proper boat maintenance and boat draining to |
| | reduce the spread of invasive species. The |
| | City will also consider continuing to help the |
| | Christmas Lake association fund the |
| | inspection of boats entering and leaving the |
| | Lake. |
| Silver Lake has been identified as an impaired | The City will work with RPBCWD to |
| water for nutrients/eutrophication due to a | implement projects to reduce the phosphorus |
| high phosphorus load. | load concentration entering the lake. |

The Local Surface Water Management Plan also includes numerous goals and detailed policies relative to review of development proposals regarding stormwater runoff. All new developments are required to construct sedimentation ponds designed to National Urban Runoff Program (NURP) standards or contribute toward the construction of sub-regional NURP facilities. Because the majority of Shorewood developed prior to the adoption of these standards and because of the number of wetland and shoreland areas in Shorewood, the City has adopted impervious surface requirements for all lots. Shorewood limits the amount of hardcover on all non-shoreland residential properties to 33 percent with nonresidential properties limited to 66 percent. Redevelopment within the City, such as tear-down and rebuilds and additions, require an infiltration feature, if the soils are conducive.

Shorewood has also committed to assisting in greater education relative to stormwater runoff. The Local Surface Water Management Plan includes an education strategy to foster responsible



water quality management practices by educating residents, business owners, City staff, City Council, and developers about proper stormwater management. Strategies include the following:

- Implementing a public education program as part of the National Pollutant Discharge Elimination System (NPDES) Phase II program.
- Updating the City's website for water resource management information.
- Developing and distributing an annual newsletter in other City mailings aimed at
 fostering responsible water quality management practices. Topics may include, but are
 not be limited to, wetland buffers, groundwater quality and protection, controlling
 invasive species, water conservation and the water cycle, proper hazardous waste
 disposal, yard waste management, the importance of pet waste disposal, and illicit
 discharge.
- Collaborating with MCWD, RPBCWD, and Lake Minnetonka Conservation District (LMCD) in stormwater management education efforts.
- Providing annual training opportunities to City staff regarding maintenance and construction of best management practice (BMP) and the NPDES permit requirement.
- Conducting pre-construction meetings with contractors to review erosion control methods and inspections for projects that disturb one acre or more for City projects.
- Encouraging programs aimed at fostering responsible water quality management practices by its residents, including educating residents on the proper use of fertilizer as identified in the City's NPDES Storm Water Pollution Prevention Plan.
- Submitting a public notice 30 days in advance for an annual public meeting to review the storm water pollution prevention plan (SWPPP), SWMP, and BMPs.
- Maintaining a means to report (by phone and/or website) construction site erosion control concerns and waste disposal infractions.
- Working with landowners through public education efforts to reduce the amount of animal or pet waste entering local water bodies.
- Preparing and distributing information on pertinent water management issues to residents at least once per year, as required as part of the NPDES Phase II program, in the City's newsletters. This would include providing an opportunity for residents to participate in watershed management activities.

Shorelands and Floodplains

A primary objective of this Comprehensive Plan is the maintenance and, where feasible, improvement of Shorewood's lakeshore through the protection of shoreland impact zones, landscaping and shoreland buffers.

Shorewood first adopted shoreland regulations consistent with Minnesota Department of Natural Resources standards in 1985 and amended them in 1992 to reflect changes in state guidelines. The City included land within 1000 feet of lakes or 300 feet from Purgatory Creek (see Wetlands and Shorelands map) in the shoreland overlay zoning district. That overlay imposes shoreland



requirements in addition to the underlying zoning requirements. These water bodies have been classified by the Department of Natural Resources as Natural Environment (NE), Recreational Development (RD), or General Development (GD), based upon their development characteristics. Lake Minnetonka, Lake William, Galpin Lake, and Purgatory Creek are all classified GD. The remaining lakes are classified RD with the exception of Silver Lake which has a NE classification.

Having been among the first of the Lake Minnetonka communities to adopt shoreland regulations, Shorewood is committed to keeping the shoreland areas as natural as possible. Development in the shoreland district is closely monitored for compliance with site alteration requirements, hard cover restrictions and building setbacks.

Shorewood's floodplain regulations date back to 1979. These rules are intended to protect life as well as property in areas which are subject to periodic flooding. The most recent amendments were completed in 2016 to reflect changes in Federal requirements.

Air and Noise Pollution

The Minnesota Pollution Control Agency (MPCA) establishes the standards for permissible levels of noise and air pollution. The only source of noise or air quality problems in Shorewood is vehicular traffic. Recorded levels have not exceeded State or Federal standards.

In several cases, air quality standards as set by the State of Minnesota are more restrictive than Federal standards. In this regard, two sets of air quality standards have been adopted. The "primary standards" are those ambient air quality levels necessary to protect public health with an adequate margin of safety. Secondary standards refer to those ambient air quality levels necessary to protect public welfare, such as prevention of air pollution damage to crops, natural vegetation, materials and structures.

Although the sources of noise and air pollution in Shorewood are limited, the City does regulate these pollutants through adoption of Minnesota Pollution Control Agency standards by reference in the Zoning Ordinance.

State standards for noise levels suggest that decibel measures of 65 dBA are the point at which action may be taken to reduce noise. No permit system has been established to control noise resulting from existing or future sources. Within the City of Shorewood, State Highway 7 has been and continues to be a primary source of noise pollution.

The Minnesota Department of Transportation (MnDOT) has two programs under which the construction noise barriers along State highways are studied.

<u>Major Reconstruction Projects</u>. The first program applies to major reconstruction projects in which roadways are expanded with additional lanes of traffic or are modified to have



significantly changes to the vertical or horizontal alignment of the roadway. This type of project usually requires an in-depth environmental review process in which many issues are examined, one of which is noise and noise mitigation. Under this type of project, existing and future noise levels are modeled and if levels exceed Federal Standards then mitigation is analyzed.

To have an area be eligible for mitigation, it must meet MnDOT criteria of a 5-dBA reduction with at least one home receiving at least a 7-dBA reduction in noise and meet with our cost-effectiveness of \$78,500/benefited home. As an example, if a barrier costs \$700,000 and would reduce noise levels by 5 decibels for 10 homes, the total calculated cost-effectiveness would be \$70,000, which would meet the cost effectiveness criteria and the barrier would be proposed as part of the project. It should be noted that even with a 20' high barrier, noticeable noise reductions are limited to usually 300-400' away from the barrier.

<u>Retro-Fit Projects.</u> The second program is commonly referred to retro-fit projects. It applies to stand-alone noise walls where major reconstruction is not planned in the near future. In this study, highway segments in the Metropolitan Area are ranked by existing noise levels, length of barrier, and number of homes adjacent to the highway. Typically funding for this program allows MnDOT to construct 1-3 sites per year. The most recent priority ranking in the Metropolitan Area was conducted in 2016, the results of which are available on the following website:

https://www.dot.state.mn.us/environment/noise/metro.html

Aggregate Resources

There are no known aggregate resources in the City of Shorewood.

Renewable Energy Systems

It is the intent of the City of Shorewood to provide a sustainable quality of life for its residents, making careful and effective use of available natural, human and economic resources and ensuring that resources exist to maintain and enhance the quality of life for future residents. In accordance with this intent, the City has chosen to encourage and promote, rather than restrict, development of renewable energy sources which have a positive impact on energy production and conservation while not adversely impacting the community or where the economic and social impacts can be mitigated.

While the City's Zoning Ordinance specifically recognizes solar, wind and geothermal (ground source heat pump) energy systems, only solar energy and geothermal systems are currently permitted. Shorewood 2040 Comprehensive Plan



Solar Resources

As noted in the Policy Plan chapter of this document, the City of Shorewood promotes energy conservation and encourages the use of alternative energy systems in new construction. In this regard, it is important on both a regional and local scale that solar resources, and specifically the solar access be protected for the development of solar energy systems.

The City of Shorewood is also committed to becoming a more efficient community via future investment in alternative energy systems.

Recognizing the regional importance of solar energy, the Metropolitan Council requires comprehensive plans for Metropolitan Area communities to include the following information:

- 1. A map which illustrates the City's gross solar potential.
- 2. A calculation of the City's solar resources.
- 3. A policy (or policies) which relate to the development of access to direct sunlight for solar energy systems.
- 4. Strategies to be applied to implement established solar resource policies.

Solar Potential. The map below, developed by the University of Minnesota and provided by the Metropolitan Council, illustrates annual sun energy dispersed throughout the City with "high end" potential areas shown in yellow and areas having "low end" energy potential illustrated in black. Such information can be used to predict the productivity of solar installations. According to the Metropolitan Council, the primary issue in the consideration of solar energy installations is intermittent shading due to nearby structures and trees. In this regard, areas which are shown to have "high end" potential in the City are those areas with very little tree cover.

<u>Solar Resource Calculations</u>. The following table provides an approximation of Shorewood's solar potential expressed in megawatt hours per year (Mwh/yr). To be noted is that the calculations estimate the current potential resource of the City (prior to the removal of areas considered unsuitable for solar development or factors related to solar efficiency).



Community Framework - Natural Resources Plan

| Shorewood: | | | | | |
|------------------------------------|--|-------------------|--------|--|--|
| | Gross Solar Potential | | | | |
| | (Megawat | t Hours per Year) | | | |
| Gross | Gross Rooftop Gross Rooftop Generation | | | | |
| Potential | Potential Potential Generation Potential Potential | | | | |
| (Mwh/yr) (Mwh/yr (Mwh/yr) (Mwh/yr) | | | | | |
| 3,156,882 | 282,655 | 315,688 | 28,265 | | |

Metropolitan Council Notes:

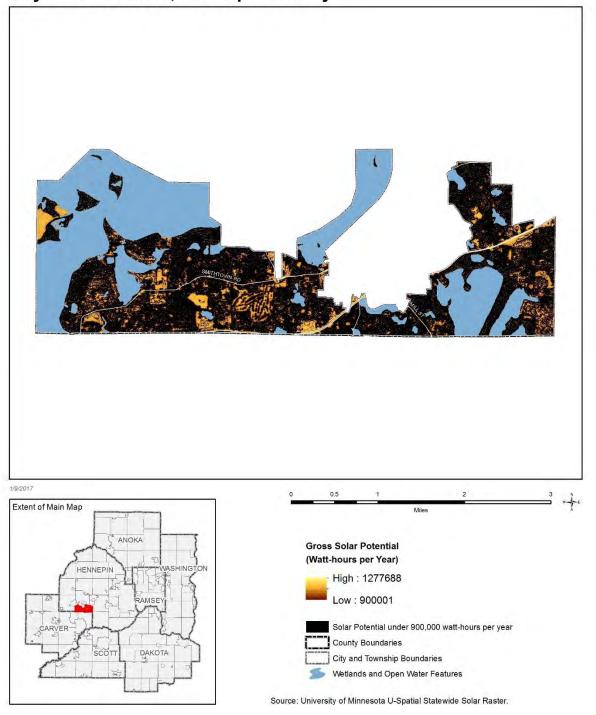
- In general, a conservative assumption for panel generation is to use 10 % efficiency for conversion of total insolation into electric generation.
- The rooftop generation potential does not consider ownership, financial barriers or buildingspecific structural limitations.

Source: Metropolitan Council, 2017

The estimated gross solar generation potential and gross solar rooftop potential are intended to convey how much electricity could be generated in the City of Shorewood using existing technology and assumptions on the efficiency of conversion. According to the Metropolitan Council, for most cities, the rooftop generation potential is equivalent to between 30 and 60 percent of a community's total electric energy consumption. There is no minimum amount of solar resource development required for cities in the Metropolitan Area.



Gross Solar Potential City of Shorewood, Hennepin County



Community Framework - Natural Resources Plan



<u>Policy.</u> The City of Shorewood recognizes that providing adequate solar (sunlight) access to properties is a priority not only for potential solar energy systems, but for the protection of property and aesthetic values as well. In this regard, the City will promote reasonable access to solar energy by controlling artificial blockage of solar radiation for optimum long-term economic and environmental benefits. Related to this issue, it should be recognized that tree preservation is also a considered a community priority.

<u>Implementation</u>. Solar access protection is provided for by the uniform implementation of the City's land management tools. Specifically, such protections are provided via lot and building performance standards contained within Shorewood's Zoning Ordinance. Requirements such as maximum building height and yard setback standards are implemented for the purpose of creating separation between structures and allowing equal sunlight access such that a property is not in the shadow of an adjacent building.

As noted, the City established specific regulations which accommodate solar energy systems. Such systems are a permitted accessory use in all zoning districts subject to various conditions to mitigate adverse impacts (limitations related to height, location, size, aesthetics etc.).

NATURAL RESOURCES PLAN SUMMARY

Shorewood is committed to all efforts at maintaining the high quality of its natural environment. The City's goal in this regard is as follows:

The City will update (amend) its guidelines and regulations and enforce existing standards to ensure preservation and protection of the natural environment.

Shorewood has made considerable progress in natural resource protection. As a supplement to the goals, objectives and policies included in the Policy Plan chapter of this document, the following practices would continue, as indicated below:

- 1. Soil conditions will continue to be taken into consideration in all types of development proposals.
- 2. Ordinances incorporating Hennepin Conservation District standards related to filling, grading and excavating will continue to be enforced.
- 3. The City will continue to enforce standards regulating development on steep slopes. For example, grading or construction which results in disturbed slopes of 3:1 (three horizontal to one vertical) shall be restricted.
- 4. The City will continue to require tree preservation and replacement and site landscaping for all developments.

Community Framework - Natural Resources Plan



- 5. The requirements of the Wetland Conservation Act will continue to be actively enforced.
- 6. A 35-foot buffer will continue to be required adjacent to all wetlands in new developments. A 15-foot building setback from the natural buffer shall be required.
- 7. New developments will continue to be required to construct sedimentation ponds designed to National Urban Runoff Program (NURP) standards.
- 8. Shorewood will continue to expand its environmental educational programs, such as buckthorn removal, raingardens, organics collection, and recycling.
- 9. Shorewood's shoreland regulations will continue to be enforced in order to preserve and restore the natural character of area lakes.
- 10. Shorewood's floodplain regulations will be updated as necessary to reflect any changes in State or Federal requirements.
- 11. Shorewood will consider the establishment of regulations pertaining to wind energy systems.



INTRODUCTION

The Land Use Plan is formulated to show logical relationships between a variety of major land use types, including residential, public, semi-public, commercial, and undeveloped open space. The locations of various land uses are a result of applying the general planning concepts and the specific policies contained in the Policy Plan. For the most part, land use patterns in the City are well-established. In this regard, it is the City's intention to implement desired future uses through zoning. In deciding the amount which is desired of each land use type, the following factors have been considered:

<u>Community Function.</u> Within the context of the Metropolitan Area, the primary role of Shorewood has been the provision of housing. As such, planning must be geared toward providing a quality living environment with adequate supportive services (i.e. park and recreational facilities, neighborhood convenience commercial areas, etc.).

<u>Community Character.</u> Shorewood's current character is primarily single family residential. Shorewood will strive to maintain its character.

<u>Housing.</u> Current residential development in Shorewood consists mainly of single family units. Few new housing units are available to young singles and newly married couples. While housing opportunities for the elderly have increased over the past decade, demand for such housing types continues to exist. As land becomes increasingly scarce, market forces often conflict with what would be considered affordable housing by Metropolitan Area standards. Given Shorewood's desire to maintain its low density residential character, the Land Use Plan attempts to preserve the community's present variety of housing.

<u>Preservation of Open Space.</u> Past planning efforts in the City assumed that any land that is not set aside for wetland protection or parks will ultimately be developed. This does not necessarily need not be the case. This section of the Comprehensive Plan explores means of establishing permanent green space areas such as the use of zoning tools, assisting neighborhoods in purchasing land, obtaining conservation easements, or outright land acquisition by the City.

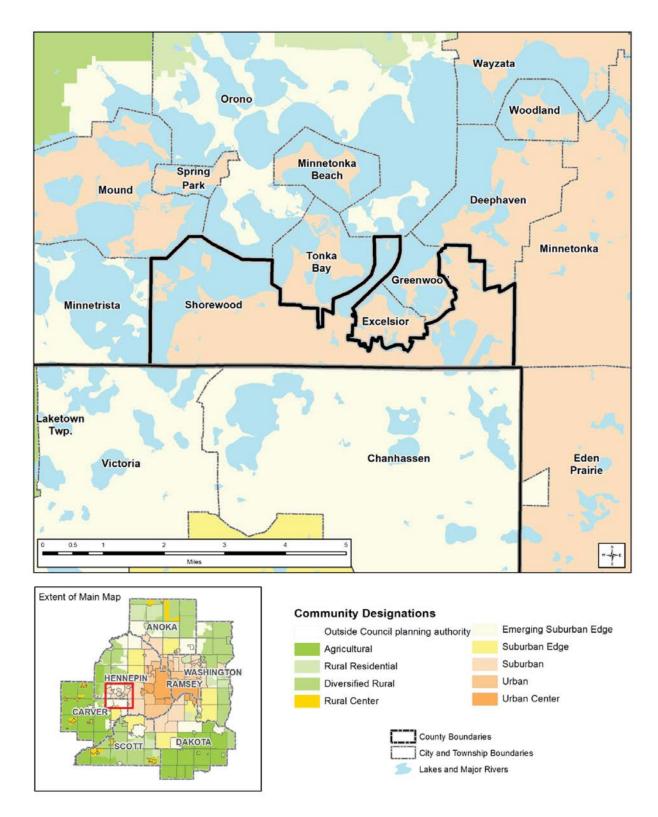
Regional Growth Management Objectives. As indicated in the Policy Plan, an established goal of the City of Shorewood is to satisfy the Metropolitan Council's minimum residential density objectives for "suburban" communities. It is further the intent of the City to promote growth strategies for orderly and efficient land use which are consistent with the Metropolitan Council's *Thrive MSP 2040* regional development guide. In this regard, the Metropolitan Council has established certain land use-related expectations for designated "suburban" communities such as the City of Shorewood. These expectations are as follows:



- Plan for forecasted population and household growth at overall average densities of at least five units per acre.
- Target opportunities for more intensive development near regional transit investments at densities and in a manner articulated in the 2040 Transportation Policy Plan.
- Identify areas for redevelopment, particularly areas that are well-served by transportation options and nearby amenities, that contribute to better proximity between jobs and housing.
- In collaboration with other regional partners, lead major redevelopment efforts.
- Lead detailed land use planning efforts around regional transit stations and other regional investments.
- Plan for and program local infrastructure needs (for example, roads, sidewalks, sewer, water, and surface water), including those needed to accommodate future growth and implement the comprehensive plans.

Shorewood recognizes its role and responsibility in the attainment of the Metropolitan Council's regional planning objectives.





CONCEPT PLAN



The preceding principles serve as an initial reference guiding community or neighborhood planning and improvement. The next reference point is the Concept Plan. The Concept Plan forms the basis from which categorical elements of the Comprehensive Plan are developed. The plans for environmental protection, land use, transportation and community facilities will relate to the concepts set forth in this section of the document. The physical development and design concepts are derived from the established goals, objectives and policies and an assessment of the community's function within the context of the Metropolitan Area.

Shorewood has adopted as one of its goals the preservation of the community's residential and natural character. For the purpose of this Plan, a community is defined as an entity possessing a common likeness or character. Since the basic character of Shorewood is that of a residential community, it is essential that each residential neighborhood be maintained as a unit with a sense of continuity and focus. Moreover, as certain supportive services and facilities are required in order for a residential community to function properly, nonresidential uses should be likewise maintained. Thus, proper attention to each constituent part of the community is essential to the establishment of an identity or sense of community.

In order to enhance or reinforce the sense of community identity in Shorewood, it is essential that a strong sense of place be provided. In this regard, it is proposed that neighborhood parks ranging in size depending on the circumstance serve as focus or unifying elements. This concept is illustrated on the sketch shown on the following page.

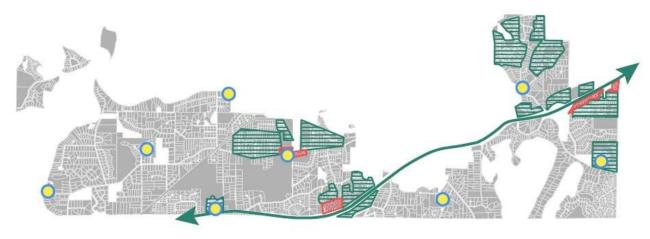
In order to relate neighborhoods on a community scale, community focal points should be developed (see concept plan sketch). Typically, a community would have one central activity center to serve this purpose. However, given the elongated shape of the City of Shorewood, multiple activity centers are proposed. While these focal points already exist to a certain extent, planning for the community should recognize and attempt to enhance these activity centers.

The commercial center should remain easily accessible to all residential districts. The center should also project a unified image with individual components of the center arranged so as to create functional and complementary use relationships. Circulation within the core should be, to the extent possible, largely pedestrian-oriented. In order to increase the continuity of the center, while at the same time increasing pedestrian safety, major traffic flow should be routed around the periphery of the center, penetrating it as little as possible. Finally, commercial property maintenance should represent and reflect the vitality and stability of the entire community.

The shopping center at Lake Linden Drive and Highway 7 is a primary commercial focus for the City. More recently, the commercial areas abutting County Road 19 have come to the forefront. The City's County Road 19 Corridor Study emphasizes the issue of identity, going so far as to identify the corner of Smithtown Road and County Road 19 as "Smithtown Crossing." Smithtown Crossing is another significant entry point into the City and efforts to enhance the area should continue.



The Waterford commercial area located south of Highway 7 between Vine Hill Road and Old Market Road is also considered a commercial focal point. Neighborhood and/or convenience type commercial as well as office uses should continue to be encouraged in this area.

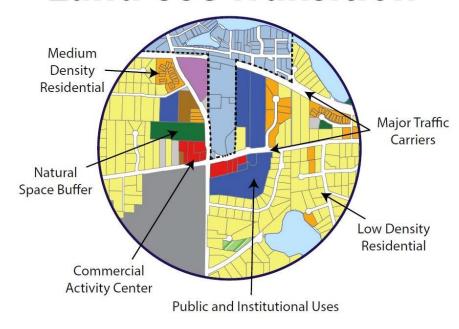


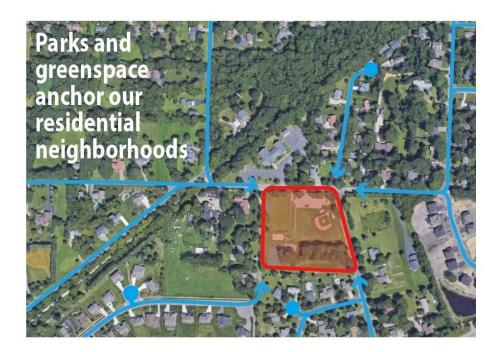
Community Focal Points





Land Use Transition







The City Hall and surrounding City property is another community focal point and serve as the civic center for Shorewood. Development of this area should be representative of community attributes and set an example for private development in the community.

Community parks have been developed within the community to serve the recreational needs of the City. Additionally, trails developed as a result of the trail planning process serve to tie the community together.

Land Use Classifications

The following maps illustrate Existing Land Use in Shorewood and the Land Use Plan for the community. The Land Use Plan map shows the proposed juxtaposition of a variety of land use types and densities. These land uses are described in general below.

<u>Open Space</u>. This category consists primarily of wetlands, conservation areas and other areas set aside from development. Open Space areas are indicated on the Existing Land Use Map. These areas are scattered throughout the community and range in size from small wetlands/ponds to large tracts of land found near Howard's Point Road and east of Christmas Lake. Protection of these natural areas is considered important, both in terms of Shorewood's natural drainage system and retention of community aesthetics.

As undeveloped land in Shorewood becomes scarcer, there is increasing interest in preserving at least some of it as permanent open space. Given the high cost of remaining land in Shorewood, the focus of the City's efforts should be acquisition of conservation easements versus outright purchase of land.

Minimum Density Residential. While the City has recognized a need for providing areas that allow a somewhat higher density than one-acre lots, there is still demand for large lots. The areas indicated on the Land Use Plan map consist of land where such development is already prevalent. Any residential infill development should be compatible with existing neighborhood densities to retain the character of neighborhoods. This is consistent with past City practices and approved comprehensive plans.

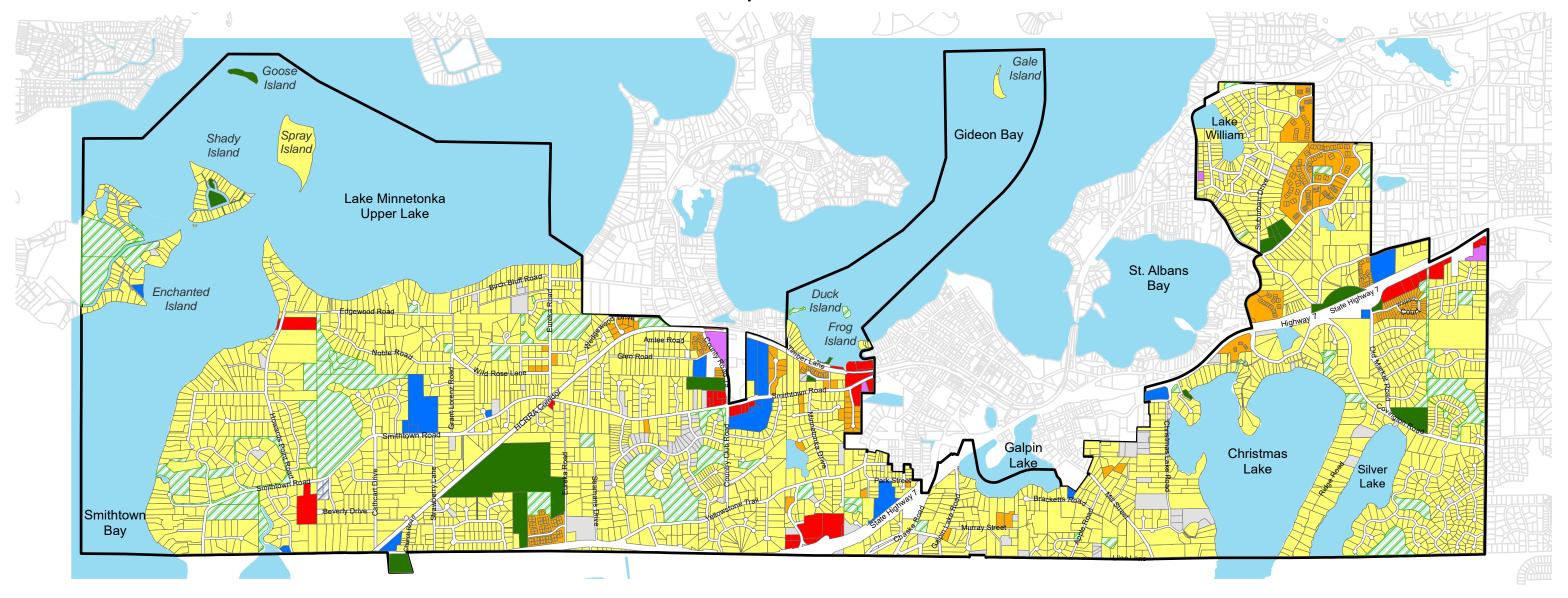
Overall density is proposed at .1 to 1 unit per acre. Most of the areas proposed as minimum density are near natural areas, such as lakes or wetlands. The City must ensure that any changes in density to surrounding areas have a minimum of impact on the lower intensity use.

The following is a summary of the City's single family residential zoning districts and the minimum lot sizes which could be applied within the Minimum Density Residential land use category. The City Council may also find other districts, including the Planned Unit Development district, consistent with the Comprehensive Plan.

R-1A, Single-Family Residential District 40,000 square feet R-1B, Single-Family Residential District 30,000 square feet

Existing Land Use

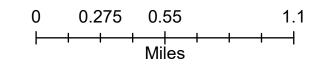
City of Shorewood 2040 Comprehensive Plan



Existing Land Use



Map created: December 2020 Data: NAC, MNDNR, Metropolitan Council



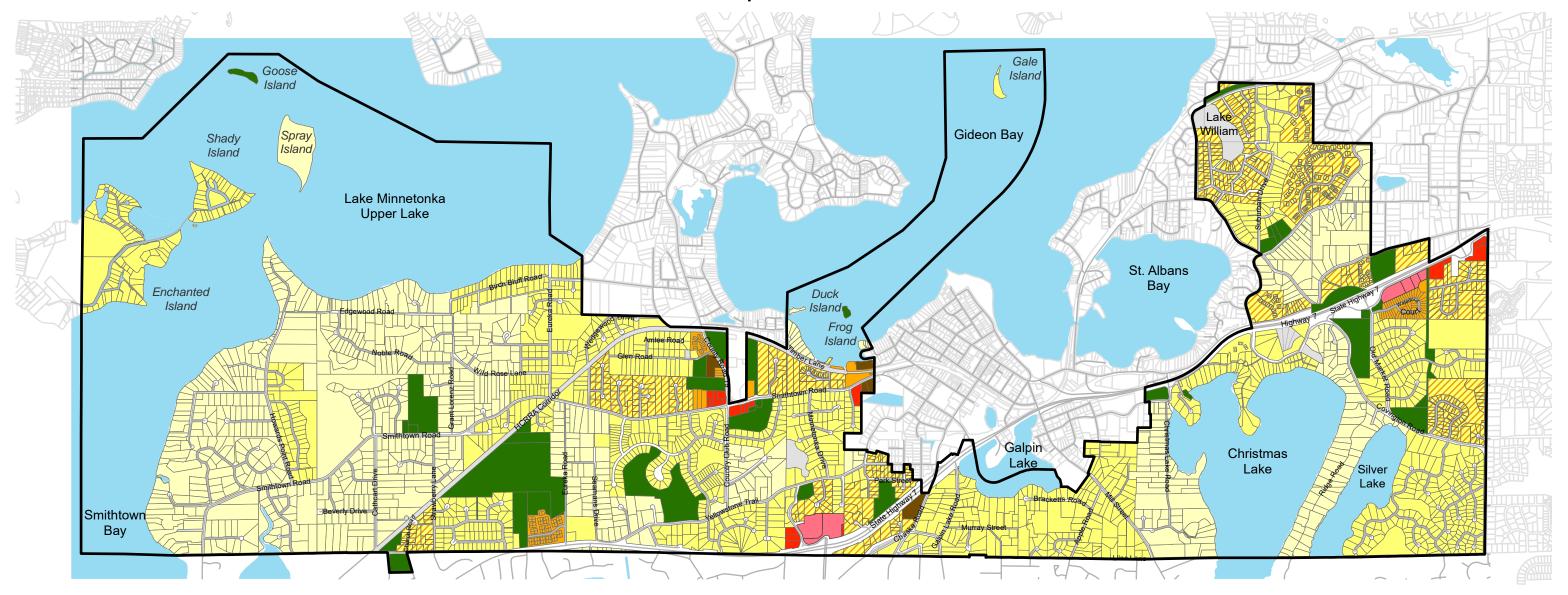


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Future Land Use

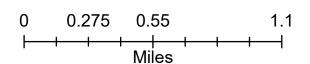
City of Shorewood 2040 Comprehensive Plan



Future Land Use



Map created: December 2020 Data: NAC, MNDNR, Metropolitan Council





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<u>Low Density Residential.</u> This land use category basically consists of single or two family residential uses at a density of one to two units per acre. Most of the area designated as low density residential on the Land Use Plan is already zoned for this type of development. The following is a summary of the City's single family residential zoning districts and the minimum lot sizes which could be applied within the Low Density Residential land use category. The City Council may also find other districts, including the Planned Unit Development district, consistent with this Comprehensive Plan.

| R-1A, Single-Family Residential District | 40,000 square feet |
|--|---------------------------|
| R-1B, Single-Family Residential District | 30,000 square feet |
| R-1C, Single-Family Residential District | 20,000 square feet |
| R-2A, Two-Family Residential District | 20,000/30,000 square feet |
| R-2B, Two-Family Residential District | 15,000/20,000 square feet |

Low to Medium Density Residential. This category of land use is provided to allow residential development at a density of three to six units per acre. This density begins to allow a greater variety of housing types. Small lot single family residential, two-family homes and medium density townhouse development may be permitted in these areas.

Residential development at this density is viewed as serving two purposes: 1) proper location creates a transitional area between lower density residential uses and higher intensity uses such as commercial (see concept plan), and 2) applies the concept of locating a greater density of population nearer to activity centers and major traffic carriers.

The following is a summary of the City's residential zoning districts and the minimum lot sizes which could be applied within the Low to Medium Density Residential land use category. The City Council may also find other districts, including the Planned Unit Development district, consistent with this Comprehensive Plan:

| R-1D, Single-Family District | 10,000 square feet |
|--------------------------------------|---------------------------|
| R-2A, Single and Two-Family District | 20,000/30,000 square feet |
| R-2B, Single and Two-Family District | 15,000/20,000 square feet |
| R-2C, Single and Two-Family District | 10,000/15,000 square feet |
| R-3A, Multiple Family District | 20,000/30,000 square feet |
| R-3B, Multiple Family District | 15,000/20,000 square feet |

Medium Density Residential. This land use category directs residential uses at densities of six to eight units per acre. Types of housing allowed in these areas would include medium density townhouse development and potentially small-scale apartment or condominium units.

The areas proposed for medium density residential are relatively limited in area and number so as to have a minimum effect on the overall density of the community. These areas include primarily the properties immediately adjacent to the existing commercial uses. Once again, the concepts of land use transition and higher density near activity centers have been applied.



The following is a summary of the City's residential zoning districts and the minimum lot sizes which could be applied within the Medium Density Residential land use category. The City Council may also find other districts, including the Planned Unit Development district, consistent with this Comprehensive Plan.

R-3A, Multiple Family Residential District

20,000/30,000 square feet

(dwellings with up to four units)

R-3B, Multiple Family Residential District

15,000/20,000 square feet

(up to 10 dwelling units per acre)

<u>High Density Residential</u>. This land use category represents the highest density residential use proposed within the City of Shorewood. Specifically, the category makes an allowance for residential densities ranging from eight to 30 units per acre. It is anticipated that greater densities could potentially be accommodated via planned unit development for projects which fulfill PUD development objectives and for which adequate services can be provided.

This category is applied to the existing "Shorewood Landing" senior housing facility and Shorewood Place Apartments sites. Additionally, potential redevelopment sites near the intersection of County Road 19 and Smithtown Road may be considered for high density residential use in the future. The Planned Unit Development district would likely be used to implement this district, although other options are also discussed.

<u>Commercial</u>. This land use category includes locations where commercial retail and service uses are desired. As in the case of the City 2030 Comprehensive Plan, the City prefers commercial uses in Shorewood be confined to cohesive, compact activity centers.

Existing commercial development in Shorewood is relatively limited. While Shorewood lacks a traditional downtown commercial center, adjacent commercial centers located in abutting communities supplement the commercial needs of Shorewood residents. Nearby Downtown Excelsior and the Tonka Village commercial strip center located in Tonka Bay are two primary examples. In recognition of such neighboring commercial uses, the demand for additional commercial services in the City of Shorewood may be limited.

The only existing commercial uses shown in the western portion of the community are an existing marina on Howard's Point Road and an auto repair operation on Smithtown Road near Eureka Road. Both uses presently exist as lawful non-conforming activities.

While the City's marinas are lawful non-conforming uses (which lie within residential zoning districts), they are viewed as community amenities. In this regard, the City will investigate zoning mechanisms which make an allowance for the uses in a manner which is compatible with surrounding residential neighborhoods.



Most of the commercial land use in Shorewood is located near the center of the community (along the County Road 19 corridor) and on the east end between Vine Hill Road and Old Market Road. The area near the intersection of Smithtown Road and County Road 19 is devoted primarily to auto-oriented commercial uses. The shopping center lies within the City of Tonka Bay, but serves as a general commercial area for Shorewood residents as well.

Commercial development along the County Road 19 corridor through Shorewood is prime for redevelopment. The City has expressed a strong preference to see the northwest quadrant of Smithtown Road and County Road 19 redeveloped in a unified manner. This may require the assembly of various parcels and is well-suited for a combination of multiple family residential and commercial uses. The auto-oriented strip of commercial uses on the south side of County Road 19, adjacent to Smithtown Crossing, could be redeveloped with more retail or office uses as well.

Shorewood's has a shopping district located on Highway 7 north of the intersection with Highway 41. A portion of this site is guided for future Mixed Use development, and the area surrounding the shopping center has been designated for low to medium density residential use on the Land Use Plan.

The area located on the south side of Highway 7, between Vine Hill Road and Old Market Road is primarily neighborhood and convenience-type commercial. A portion of this area is also guided for future Mixed Use.

Commercial Mixed Use. While the City aims to maintain vibrant commercial areas to serve community residents, certain commercial areas have been identified as being appropriate for the Commercial Mixed Use designation. The City has identified certain key existing commercial areas that are capable of providing for housing units in conjunction with maintaining commercial activity. These housing units would provide adequate density to aid in increasing the commercial customer base while also providing for a greater range of housing choice within the community.

These sites may merit redevelopment into mixed use, provided the development plan is appropriate for the context of the area, traffic issues are properly mitigated, and it fits within the goals and policies of the City. The City requires a minimum of 50% of the site to be maintained as a Commercial land use, to continue the important commercial presence within these areas.

Residential uses with a minimum of 15 units per acre and a maximum of 30 units per acre shall be used for a minimum of 40% of the site, provided it can be established in a manner that is consistent with the character of the immediate vicinity.

<u>Public/Semi-Public.</u> This land use classification includes all existing public buildings, a school, parks and recreational facilities in the community. It also includes semi-public uses like churches, cemeteries and the Xcel property on County Road 19. All areas so designated on the Land Use Plan map are already in existence. No new areas are proposed for semi-public use nor are any existing semi-public uses proposed to be eliminated. Since light rail is not anticipated in the



foreseeable future, the former Chicago and Northwestern rail right-of-way will continue to be operated by Three Rivers Park District and used for regional trail purposes.

Land Use/Zoning Changes

As in the case of the Shorewood's 2030 Land Use Plan, the City's zoning map must be consistent with the proposed 2040 Land Use Plan map. To achieve such consistency, some changes to the zoning map may be necessary to implement the Land Use Plan:

Going forward, it is anticipated that the following issues should be addressed through future Zoning Code amendments:

High Density Residential Zoning District. As previously indicated, the City's zoning ordinance does not presently include a high density residential zoning district. While the City's R-3B, Multiple Family Residential zoning district makes an allowance for apartment buildings, it establishes a density cap of 10 units per acre. Considering that the "High Density Residential" land use category provided on the City's 2040 Land Use Plan makes reference to a density range of eight to 30 units, the following processing alternatives may wish to be considered to accommodate future high density residential housing projects in the City:

- 1. Amend the City's R-3B, Multiple Family Residential District to accommodate residential densities up to 30 units per acre.
- 2. Utilize PUD, planned unit development to accommodate residential development densities which exceed those allowed in the City's base zoning districts.
- 3. Establish a new "High Density Residential" zoning district which corresponds with the density range identified on the 2040 Land Use Plan.

<u>Teardown and Rebuild Regulations</u>. Like many communities throughout the country, Shorewood has become concerned about the construction of very large homes on existing lots in existing neighborhoods. While the City cannot do much about the seemingly increasing market for large homes, it can, through its zoning regulations, attempt to maintain the scale of existing neighborhoods. In this regard, the City could consider incorporating FAR (floor area ratio) into its Zoning Code. This establishes a maximum amount of building area relative to lot area, further addressing the issue of residential scale.

<u>Alternative Energy Regulations.</u> While the City's Zoning Code specifically recognizes solar, wind and geothermal (ground source heat pump) energy systems, specific regulations have only been stablished for solar and geothermal energy systems at this point. In the future, the City may also consider regulations that would allow wind systems.

While the City encourages solar energy systems, it is important that the allowance of such systems be balanced with the community's desire to protect and preserve significant trees. As noted on the

Planning Tactics chapter of this Plan, the preservation of significant trees in the community is considered a community priority.

<u>Construction Staging Plans.</u> As noted in the Policy Plan, efforts should be made to limit on-street parking and protect adjoining properties from nuisance concerns associated with construction projects. In this regard, staging plans should be required for all infill development projects. Minimally, such plans should address contractor parking locations, construction material storage, construction hours, and street cleaning.

Residential Development Density

As previously indicated, the Metropolitan Council's Thrive MSP 2040 regional development guide stipulates that "suburban" communities such as Shorewood should plan for forecasted population and household growth at overall average densities of at least five units per acre. In this regard, such minimum densities apply to new residential subdivisions or redevelopment projects. To the extent possible, densities of new projects will be sensitive to and compatible with surrounding residential densities. The regional development guide also notes that higher densities are expected in locations with convenient access to transportation corridors and adequate sewer and water capacity.

The City has established certain areas for development and redevelopment that will provide additional housing units for the City in this planning period. For this purposes, the areas classified as Commercial Mixed Use are established as 40% residential at 15 units per acre.

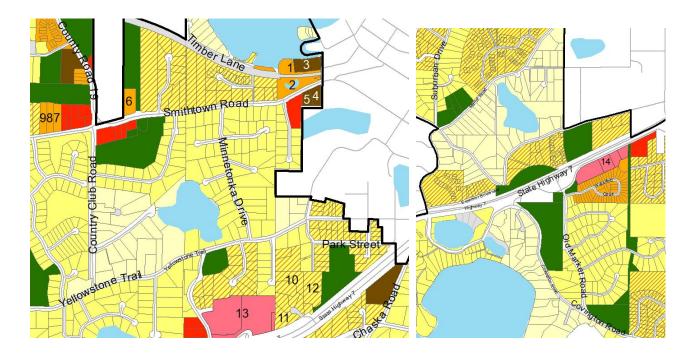
| Shorewood Staging of Residential Land Use Development | | | | | |
|---|-----------|-------|-----------|-------|--|
| | 2021-2030 | | 2031-2040 | | |
| Land Use Category | Units | Acres | Units | Acres | |
| Low-Medium Density Residential | 6 | 1.7 | 15 | 4.7 | |
| Medium Density Residential | 12 | 2.0 | 32 | 5.2 | |
| High Density Residential | 30 | 3.7 | 0 | 0.0 | |
| Commercial Mixed Use | 40 | 2.8 | 75 | 5.0 | |
| Totals | 87 | 10.2 | 120 | 14.9 | |

| Shorewood Development Capacity | | | | | |
|--------------------------------|-----------|-----------------|---------------|--|--|
| Property | Net Acres | Minimum Density | Minimum Units | | |
| 1 | 1.7 | 6 | 11 | | |
| 2 | 1 | 6 | 6 | | |
| 3 | 1.7 | 8 | 14 | | |
| 4 | 1 | 8 | 8 | | |



| 5 | 1 | 8 | 8 |
|--------|----------------------|--------------------|-----|
| 6 | 1.5 | 6 | 9 |
| 7 | 1 | 6 | 6 |
| 8 | 1 | 6 | 6 |
| 9 | 1 | 6 | 6 |
| 10 | 1.8 | 3 | 6 |
| 11 | 1.7 | 3 | 6 |
| 12 | 2.9 | 3 | 9 |
| 13 | 12.5 (5 residential) | 15 | 75 |
| 14 | 7 (2.8 residential) | 15 | 42 |
| Totals | 25.1 | 8.4 units per acre | 212 |

The location of the development sites is noted in the graphics below:





Land Subdivision

Controlling the way land is subdivided goes hand in hand with zoning regulations in ensuring the quality of urban development. As Shorewood's larger tracts become developed, increasing pressure will occur to re-subdivide smaller parcels and land once considered to be marginal. The City's subdivision regulations should periodically be reviewed and updated to better address these situations. Further, all subdivisions of land should be examined for opportunities to preserve open space.

The current Subdivision Code requires developers to extend streets and utilities as necessary to accommodate the development of adjacent properties. Also, the Code prohibits private streets except where determined "to be absolutely essential to the enjoyment of property rights." With these rules in mind, the review of all subdivision requests should consider how nearby land might develop in the future. In all cases, steps should be taken to ensure that new subdivisions do not negatively impact surrounding neighborhoods and street systems.

To address City concerns related to narrow street widths, related on-street parking and sidewalks/trails, Shorewood could develop a local street template.

More often than not, when one landowner is ready to subdivide its property, the adjoining landowner is not. Timing then becomes an obstacle to avoid detrimental, piece-meal development. The City can, in certain instances, overcome such obstacles by carefully crafting development agreements and restrictive covenants that provide for future development. For example, public right-of-way can be required for future streets with provisions that further development will result in street and utility assessments. Also, planned unit development can be used as a tool to accommodate the different timing of various landowners' development requests.

As smaller pieces of land are re-subdivided, lot configurations become a problem. Backlot divisions, flag lots and gerrymandered property lines undermine the benefits of building setbacks and disrupt continuity of open spaces. All subdivisions, regardless of size, should adhere to good planning and design principles. To this end, the use of formal platting procedures will be encouraged, while lot splits with metes and bounds descriptions will be approved only in the very simplest of cases.

Tree Preservation

As previously noted, the preservation of Shorewood's natural features is considered a community priority. With this in mind, the City's should periodically review the Tree Preservation and Reforestation Policy to ensure that existing policies adequately reflect desired preservation objectives.

Presently, the terms and provisions of the Tree Preservation and Reforestation Policy apply to all activities which require the issuance of a Land Disturbance Permit. At some point, the City should



consider formerly incorporating the "policy" provisions into the City's Zoning and Subdivision Codes.

Housing Variety/Affordability

Shorewood's attempts to provide affordable housing have been thwarted in the past by market forces. The desirability of the area, coupled with scarcity of available land make it very difficult to achieve housing that is considered affordable by Metropolitan Area standards. The City's efforts have been focused on preserving the existing housing stock. For example, limitations have been imposed relative to combining small buildable parcels of land into larger lots. With respect to housing variety, the City may consider updating its current zoning regulations to accommodate and encourage senior housing that includes dependent living such as assisted living and dependent care facilities.

The Metropolitan Council has forecast affordable housing needs for all cities and townships within the seven-county Metropolitan Area for the period from 2021-2030. The housing plan element of local comprehensive plans is required to reflect the allocated portion of the forecasted demand for affordable housing. Shorewood's share of this affordable housing allocation is 48 units for the referenced time period.

The City has guided 3.7 acres for development as High Density Residential at 8 units per acre (30 units). The City has guided an additional 19.5 acres as Commercial Mixed Use, which allows for a minimum of 40% and a maximum of 50% residential development at 8 units per acre. This results in a minimum of 7.8 acres for residential uses (64 units). In total these land use designations will provide for 64 units of affordable housing based on density. Of the Mixed Use Areas, 2.8 acres (23 units) are anticipated for redevelopment within the 2021-2030 staging period, which gives the City 53 units of affordable housing based on density.

Programs, initiatives, and actions relative to housing are included in the Housing chapter of this Plan.

Lake Access

In 1988, after considerable study, the City adopted zoning controls that addressed the use of old existing fire lanes within the community. Originally platted as public rights-of-way leading to Lake Minnetonka and Lake William, these lanes have been classified and regulated based upon their historic use. This effort concluded that the fire lanes should not be vacated, but rather should be preserved for public use.

Access to Shorewood's lakes is also provided by a marina and two yacht clubs as described below:

<u>Howard's Point Marina</u>. While limited in size, Howard's Point Marina is considered a community amenity. In this regard, its continuance as a functional marina is encouraged.



<u>Upper Minnetonka Yacht Club.</u> Like Howard's Point Marina, the Upper Lake Minnetonka Yacht Club located on Enchanted Island is considered a community amenity.

<u>Shorewood Yacht Club.</u> The City recently relaxed a restriction on the mooring of power boats at the Shorewood Yacht Club, located on the north side of County Road 19, east of Timber Lane. Over the next several years, the City will monitor activity at the Yacht Club to determine if such activities are compatible with surrounding residential uses.

While the marina and yacht clubs are lawful non-conforming uses (which lie within residential zoning districts), they are viewed as community amenities. In this regard, they should continue to function as they have in the past, but not be expanded due to their residential neighborhood context and limited accessibility. In this regard, the City will investigate zoning mechanisms which make an allowance for the uses in a manner which is compatible with surrounding residential neighborhoods.

The Minnesota Department of Natural Resources and the LMCD continue to search for lake access parking spaces adjacent to Lake Minnetonka. The City should cooperate with these agencies to provide small, scattered facilities compatible with nearby land uses.

Historic Preservation

From a land use perspective, historic structures oftentimes have not only local significance but regional importance as well. In this regard, The Metropolitan Council suggests that 2040 comprehensive plan updates include a plan for the protection of historic sites.

The City of Shorewood recognizes that historic assets help to promote community pride and create a sense of community. In this regard, the City of Shorewood should consider the creation of an inventory of historically significant features, landmarks and buildings and evaluate tools for preserving these areas and structures. Where feasible, the City could potentially assist with the acquisition of historically significant sites or structures, in order to provide educational or recreational opportunities.

1

Community Framework - Land Use Plan

Population and Household Projections Based Upon Land Use Plan

The following table shows the acreages of various categories of land use based upon the Existing Land Use Map and the 2040 Land Use Plan.

| Shorewood Forecasts | | | | | |
|---------------------|------------------------------|---------------|-------|-------|-------|
| | 2010 Census | 2018 Estimate | 2020 | 2030 | 2040 |
| Population | 7,307 | 7,693 | 7,600 | 7,800 | 8,000 |
| Households | 2,658 | 2,845 | 2,800 | 2,910 | 3,000 |
| Employment | 1,113 | 1,600 | 1,600 | 1,600 | 1,600 |
| Source: Metro | Source: Metropolitan Council | | | | |

| Shorewood Existing Land Use | | | | |
|-----------------------------|--------|--------|--|--|
| Land Use | Acres | Pct | | |
| Single-Family Residential | 2169.5 | 72.86% | | |
| Two-Family Residential | 137.2 | 4.61% | | |
| Multiple-Family Residential | 7.1 | 0.24% | | |
| Commercial | 54.7 | 1.84% | | |
| Industrial | 8.8 | 0.30% | | |
| Public/Institutional | 69.4 | 2.33% | | |
| Parks | 99.3 | 3.33% | | |
| Open Space | 280.5 | 9.42% | | |
| Cemetery | 2.6 | 0.09% | | |
| ROW | 35.6 | 1.20% | | |
| Vacant | 85.7 | 2.88% | | |
| Open Water | 27.2 | 0.91% | | |
| | 2977.6 | 100% | | |

| Shorewood Future Land Use | | | | |
|-----------------------------|----------|--------|--|--|
| Land Use | Acres | Pct | | |
| Minimum Density Residential | 1141.703 | 38.34% | | |
| Low Density Residential | 1110.797 | 37.31% | | |
| Low to Medium Residential | 349.7 | 11.74% | | |
| Medium Density Residential | 37.8 | 1.27% | | |
| High Density Residential | 9.7 | 0.33% | | |
| Commercial | 18.7 | 0.62% | | |
| Commercial Mixed Use | 19.5 | 0.65% | | |
| Public/Semi-Public | 226.7 | 7.61% | | |
| ROW | 35.6 | 1.20% | | |
| Open Water | 27.4 | 0.92% | | |
| | 2977.6 | 100% | | |

The amount of land shown as undeveloped is somewhat deceiving in that there is a considerable amount of land included in developed categories which has potential for additional development. For example, an existing home on a three-acre lot could eventually, and often likely will be, resubdivided into several residential lots. Therefore, the best way to project future land use, and ultimately population, is by comparing the Vacant and Underdeveloped Land map with the 2040 Land Use Plan. The Vacant and Underdeveloped Land map illustrates not only undeveloped land, but also "underdeveloped" land, that is, land already accounted for in a land use category, but which has potential for further development.

The Metropolitan Council provides forecasts for population, households, and employment which are shown on the table below. The Metropolitan Council forecasts that Shorewood has the potential for 3,000 households (or 155 additional households) by the year 2040.

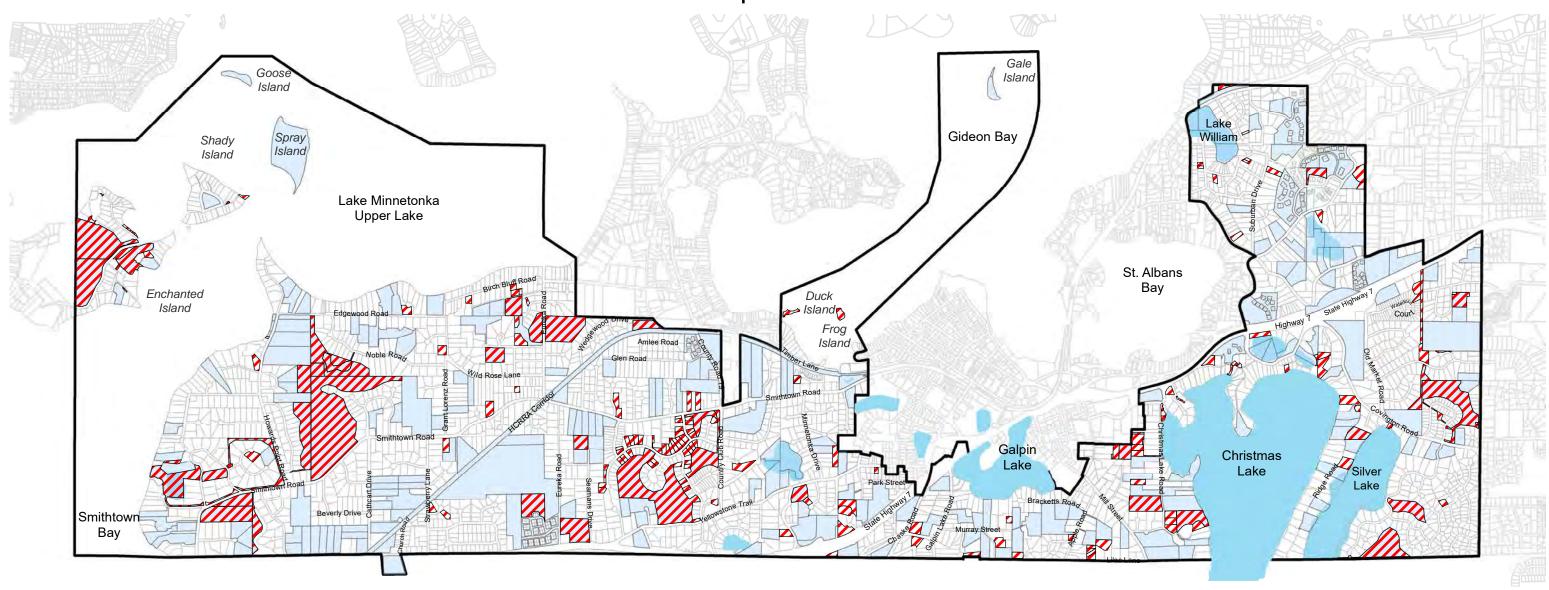
| Population Projections, 2010 – 2040 City of Shorewood | | | | | |
|--|--------------|-------|-------|-------|-------|
| 2010 Census (estimate) 2020 2030 2040 Forecast Forecast | | | | | |
| Population | 7,307 | 7,693 | 7,600 | 7,800 | 8,000 |
| Households | 2,658 | 2,845 | 2,800 | 2,910 | 3,000 |
| Household Size | 2.75 | 2.70 | 2.71 | 2.68 | 2.67 |
| Employment | 1,113 | 1,600 | 1,600 | 1,600 | 1,600 |
| Source: Metropo | litan Counci | 11 | | • | |

The Metropolitan Council estimates that the 2018 average household size for Shorewood was 2.70 persons per household. For the seven-county region, the Metropolitan Council projects a decline in household size to 2.46 persons per household in 2020 and 2.43 in 2030 and 2040. While this may be true for the region as a whole, the decline in household size in Shorewood is expected to be less considering the City is predominantly comprised of single-family homes.

The projections referenced above do not account for redevelopment where several existing lots are combined then re-subdivided to create additional lots. While this requires extraordinary cooperation between property owners, it will increasingly occur as land prices continue to outstrip the value of some of the older housing stock.

Vacant and Undeveloped Land

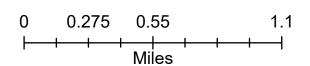
City of Shorewood 2040 Comprehensive Plan



Vacant and Undeveloped

Vacant or Open Space Parcels over 80,000 SQFT City Boundary

Map created: December 2020 Data: NAC, MNDNR, Metropolitan Council





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Future Study Areas

Prior to establishing establishing development plans for certain areas, the City may need to conduct specific area plans. The three acre Medium Density area west of County Road 19 needs to be reviewed to confirm the site can accommodate this density due to its location and configuration. Prior to establishing firm controls regarding the Mixed Use areas, the City will need to conduct studies related to land use and traffic.



CHAPTER SUMMARY

The Land Use Chapter sets forth goals, objectives and policies which serve as a guide for how land within the City is to be developed and used. Shorewood has established itself as a predominantly residential community. Any nonresidential activities which are allowed should be located and designed to support a quality living environment. The City's land use goals are as follows:

- The City shall establish a pattern of land uses which is consistent with the residential and recreational functions of the community.
- The land use plan shall promote harmonious relationships between various land uses (e.g. homes, commercial outlets, churches, parks, schools, etc.) through proper development and locational planning.
- Land use regulations shall discourage land uses which are inconsistent with the residential and natural character of the community.

The following summary of recommendations is reflective of the City's goals, objectives and policies:

1. Create and enhance focal points within City neighborhoods.



- 2. Concentrate commercial development in the following primary locations:
 - A. Smithtown Road / County Road 19
 - B. Lake Linden Drive / Highway 7
 - C. South of Highway 7 between Vine Hill Road and Old Market/Road
- 3. Require commercial development to be consistent with the residential character of the community.
- 4. Allow for mixed use development within commercial areas where appropriate for the site.
- 5. Promote the use of sound planning and design principles, including planned unit development.
- 5. Coordinate the development of small land parcels to ensure that access and utility service comply with City standards.
- 6. Maintain a Land Use Plan to illustrate the relationship of various densities of residential development and non- residential uses.
- 7. Keep the City's land use controls (e.g. Zoning and Subdivision Ordinances) up to date as a means to implement the Land Use Plan.
- 8. Identify areas which are best suited for planned unit developments.
- 9. Require formal platting procedures for the subdivision of land, allowing metes and bounds divisions only in the simplest of cases.
- 10. Establish zoning provisions which are intended to accommodate the continuance of the City's marinas in a manner which is compatible with surrounding neighborhoods.
- 11. Promote and implement programs for the preservation of open space.

INTRODUCTION

Shorewood is a suburban, residential community. Less than one percent of the City is devoted to commercial uses. As a predominantly residential community, housing is an important aspect of this Comprehensive Plan.

Past planning efforts in Shorewood have focused on housing quality and maintaining the character of existing neighborhoods. Residential densities have historically been kept low to minimize the demand for public utilities and services. This has also resulted in low traffic volumes relative to other suburban communities in the Metropolitan Area.

Over the past several years, attention has been given to the lack of housing options, particularly to accommodate an increasing elderly population. Shorewood's zoning regulations have been amended to address senior housing.

Also, to be noted is that the City of Shorewood is willing to work with other Lake Minnetonka cities to address housing issues from a sub-regional perspective.

As in the case of other Development Framework chapters of this Plan, the Housing Plan considers housing-related issues identified in the Planning Tactics chapter and the goals, objectives and policies included in the Policy Plan.

HOUSING PLAN

Housing Condition and Maintenance

While some minor housing maintenance issues exist in the City, housing conditions are not considered significant enough to warrant the preparation and adoption of a maintenance code at this time. Nevertheless, the City may want to consider the adoption of a "point of sale" ordinance in the future. This type of regulation attempts to identify certain deficiencies in housing at the time of sale, putting buyers on notice of problems. The objective is to create an incentive for property sellers to improve maintenance conditions prior to the sale.

Often more noticeable than the condition of structures is the outside maintenance of property. Shorewood has historically addressed problem sites on a complaint basis. Although this "neighborhood standard" method has worked reasonably well, it is recommended that local nuisance ordinances be reviewed and periodically updated. The City's annual spring clean-up event is also viewed as an effective tool for encouraging residents to maintain their properties.

In 1993, the City adopted a rental housing code that presently affects approximately 300 rental units in the City. This code establishes standards and a licensing procedure for all types of rental dwellings. The program has been successful in that a number of rental units were improved. The



City has received no tenant complaints since the adoption of the code. Continuation of this effort is recommended.

For many years, Shorewood has allocated a portion of its Community Development Block Grant (CDBG) funds for rehabilitation of substandard housing. The CDBG program is administered by Hennepin County. Since the early 1990's, the City has had seven households which received a total of \$90,000 to fund home repairs for persons in need of assistance. Not only is it suggested that the CDBG program be continued, it is recommended that it and other assistance programs be better publicized on the City's website.

Other housing/renovation programs which are available to the City include the following:

- Minnesota Fix Up Fund. Through this statewide program, funds are available to City residents that offer loans at below market interest rates to homeowners. The fix up fund was established to improve the basic livability and/or energy efficiency of the borrower's home. Eligible project included interior or exterior improvements, general remodeling or maintenance items.
- <u>Minnesota Housing Rehabilitation Loan Program.</u> This Statewide program assists low income homeowners in financing basic home improvements that directly affect the safety, habitability, energy efficiency or accessibility of their homes. Eligible improvements include, but are not limited to, electrical wiring, furnace replacement and plumbing repairs.

Variety of Housing Options

Shorewood's housing stock consists primarily of large lot, single-family homes. While the City's development regulations have historically encouraged this type of housing, a strong market for larger single-family homes has had an even greater influence on housing type in Shorewood.

The City has attempted to introduce some variety in lot size, housing type, and value in the past. For example, in the mid 1980's, the Near Mountain development in the southeast area of the City was approved which called for a mixture of single-family homes on lots ranging from one quarter to three-quarters of an acre in size. The project also included quadraminiums and townhouses in the original plan. Citing a very strong market for single-family homes, the developer ultimately requested that the quadraminiums and townhouses be eliminated from the project, resulting in 70 fewer units by the time it was completed. Similarly, houses in the Covington Vine Ridge neighborhood were built larger and were more expensive than originally suggested by the developer, this despite quarter acre lot sizes.

Some variety of housing types was achieved in the 1990's. A number of two-family dwellings were built in the Waterford area and on Lawtonka Drive, west of Timber Lane. The Seasons senior housing project offers low-maintenance twinhomes for residents who qualify under Federal Fair



Housing Act guidelines. Shorewood Ponds provides "step down" single-family, attached cottages in four-unit buildings as an option to seniors 62 years of age and older. This community currently has a waiting list of households eager to purchase dwellings in the subdivision.

More recently, the City approved the Minnetonka Country Club housing project which involved the redevelopment of the former 117-acre Minnetonka Country Club golf course site located south of Smithtown Road and west of Country Club Drive. The project was approved in 2016 and calls for the construction of 142 single family residential homes upon the property. Of the 142 homes, 103 are considered traditional and 39 are targeted toward empty-nesters. Lot sizes within the project range from 7,200 square feet to 45,780 square feet.

Although these projects have increased the variety of housing types in Shorewood to some degree, housing values remain high relative to Metropolitan Area standards, even though higher densities have been allowed. Housing values in Shorewood have risen steadily over the years. In 2014, the median housing value for owner-occupied units was \$391,600. In 2015, housing values had risen to \$401,400 and by 2017, the median value increased to \$428,000. Given the limited amount of land remaining for development in the City, the relatively high cost of utilities and often soil correction, the high value of land in the Lake Minnetonka area, this trend is anticipated to continue.

Future opportunities for increasing housing variety in Shorewood are limited. Consequently, maintenance of the existing mixture of housing will be important. In this regard the City's policy of keeping house sizes proportionate to lot size should continue to be implemented. This simply means that smaller lots will accommodate smaller houses.

The City acknowledges that the City of Shorewood, within its municipal boundaries, is not necessarily consistent with regional housing goals. When the City of Shorewood is viewed as part of a larger South Lake Minnetonka community, a relatively traditional model town emerges. Excelsior serves as the downtown core, with multiple-family housing and small, urban lots. Shorewood, Tonka Bay, Greenwood and Deephaven exist as surrounding suburbs with larger lots and lower densities. Higher density project in any of the adjacent communities, like new proposals in Tonka Bay on County Road 19 directly adjacent to Shorewood properties, also affect the market for higher-density residential in Shorewood.

Senior Housing

In the early 1990's, the City recognized that there was shortage of housing options in Shorewood and that senior citizens who were no longer able remain in their single-family homes, were not able to relocate to a senior housing facility within the Shorewood. In 1991, a study was prepared for the City which demonstrated that a market existed for senior housing in the Lake Minnetonka area. In response to an increasing elderly population and recognizing the importance of keeping senior citizens in the community, the City set a goal to promote the development of safe, healthy and affordable housing options for seniors.



In conjunction with the referenced study, Shorewood updated its zoning regulations to address senior housing. It was determined that the impact of senior housing on streets, parks and utility services was less than that of other types of residential development. Consequently, senior housing is now allowed to be built at somewhat higher densities than otherwise provided by existing zoning. The City also reduced the park dedication fees and sewer connection charges for senior housing in order to minimize development costs.

The City then actively sought developers of senior housing to build in Shorewood. Response was limited, however, due to several factors: 1) limited funding resources; 2) relatively high land costs in the area; 3) lack of municipal water; and 4) conflict with many residents' desire to retain a low-density character throughout the City. Nevertheless, the following senior housing projects presently exist in the City:

- The Seasons (24 units)
- Shorewood Ponds (62 units)
- Shorewood Landing (105 units)

In total, 191 senior housing units are provided within the preceding facilities. This accounts for approximately seven percent of the City's total housing units.

It is important to note that, as part of a recent cooperative effort, land which previously straddled a municipal boundary shared by the Cities of Shorewood and Excelsior was recently conveyed to the City of Excelsior to accommodate *The Waters of Excelsior* senior housing project. *The Waters of Excelsior* project includes 115 units and, due its location adjacent to the City of Shorewood, is expected to supplement the community's senior housing needs.

In administering the current zoning regulations, a number of issues have arisen. For example, there is some question, given land and development costs, as to the feasibility of developing senior housing on land zoned for one-acre lots (R-1A zoning district). Finally, the site analysis used to identify sites suitable for senior housing is considerably outdated. Some land previously considered as suitable has since been developed. New sites for affordable housing will be considered as they become available.

Many seniors wish to stay in their homes as long as possible. Their ability to do so is enhanced by services provided within the community. For example, programs such as "Meals on Wheels" are administered through Senior Community Services. Transit services such as "Metro Mobility" and "Dial-a-Ride" are also available. The City will continue to work with surrounding communities and various agencies to ensure that these services remain available to seniors.

Affordability

The City of Shorewood recognizes its responsibility to provide opportunities for its share of the region's need for low and moderate-income housing. Affordable housing provides housing options for a diverse population.

As noted in the Inventory chapter of this Plan, the Metropolitan Council defines the terms "affordable housing" and "low income" as follows:

Affordable Housing. Housing is "affordable" for low and moderate-income households when they pay no more than 30 percent of gross household income on housing.

<u>Low Income</u>. A household is considered "low income" if it makes 80% or less of the median income of the seven-county region.

The tables below depict the number affordable housing units, publicly subsidized units and the number of households burdened by housing costs in the City of Shorewood. Such numbers, as provided by the Metropolitan Council, relate to a 2016 housing count of 2,857 units.

| AFFORDABILITY | | | | | |
|--|----|-----|--|--|--|
| Units affordable to households W Units affordable to households Units affordable to households | | | | | |
| income at or below 30% of AMI with income with income | | | | | |
| 31% to 50% of AMI 51% to 80% of AMI | | | | | |
| 79 | 51 | 306 | | | |

| PUBLICLY SUBSIDIZED UNITS | | | | | |
|--|--------------|-----------------------|--------------------|--|--|
| All publicly Publicly subsidized Publicly subsidized Publicly subsidized | | | | | |
| subsidized units | senior units | units for people with | units – all others | | |
| disabilities | | | | | |
| 0 | 0 | 0 | 0 | | |

| HOUSING COSTS BURDENED HOUSEHOLDS | | | |
|-----------------------------------|---------------|---------------|--|
| Income at or below | Income 31% to | Income 51% to | |
| 30% of AMI | 50% of AMI | 80% of AMI | |
| 127 | 93 | 108 | |

Source: Metropolitan Council 2016 Housing Estimates



The Metropolitan Council's Thrive MSP 2040 Plan (Housing Element) assigns a low and moderate-income housing need for the City of Shorewood for the decade of 2021 through 2030. Specifically, the Council has identified a need for 48 new affordable units within this timeframe. Of these new units, 23 need to be affordable to households earning at or below 30 percent of the area median income, 16 need to be affordable to households earning 31 to 50 percent of the area median income and 9 need to be affordable to households earning 51 to 80 percent of the area median income. These needs are summarized in the table below:

| AFFORDABLE HOUSING NEED ALLOCATION (2021-2030) | | | |
|--|---------------|---------------|--|
| Income at or below | Income 31% to | Income 51% to | |
| 30% of AMI | 50% of AMI | 80% of AMI | |
| 23 | 16 | 9 | |

The City has guided 3.7 acres for High Density Residential development at a minimum of 8 units per acre or more. This would provide for 30 units of affordable housing by acreage. An additional 19.5 acres are identified as Commercial Mixed Use which requires a minimum of 40% of the property (7.8 acres) to be residential development at a minimum of 8 units per acre. Of this 7.8 acres, 2.8 (23 units) is staged for development within the 2021-2030 time frame. This results in 53 units of affordable housing being provided by density within the 2021-2030 staging period.

In regard to rental units, the definition of an affordable unit varies depending upon the number of bedrooms in the unit. Like owner-occupied housing, the affordability limit for renter-occupied housing is 80 percent of the area median income (AMI). For rental units, affordability is based upon the number of bedrooms in the unit. For the year 2017, the Metropolitan Council's affordability rates were as follows:

| Rental Housing Affordability Limits, 2017 City of Shorewood | | | |
|---|----------|--|--|
| Number of Bedrooms | 80 % AMI | | |
| Efficiency | \$1,265 | | |
| 1 Bedroom | \$1,356 | | |
| 2 Bedroom | \$1,627 | | |
| 3 Bedroom | \$1,880 | | |
| 4 Bedroom | \$2,097 | | |
| Source: Metropolitan Council | | | |

According to the Metropolitan Council, the median rent paid in the City of Shorewood in 2016 was \$1,139. Consequently, most of the rental housing is affordable based on the standards in the above table.



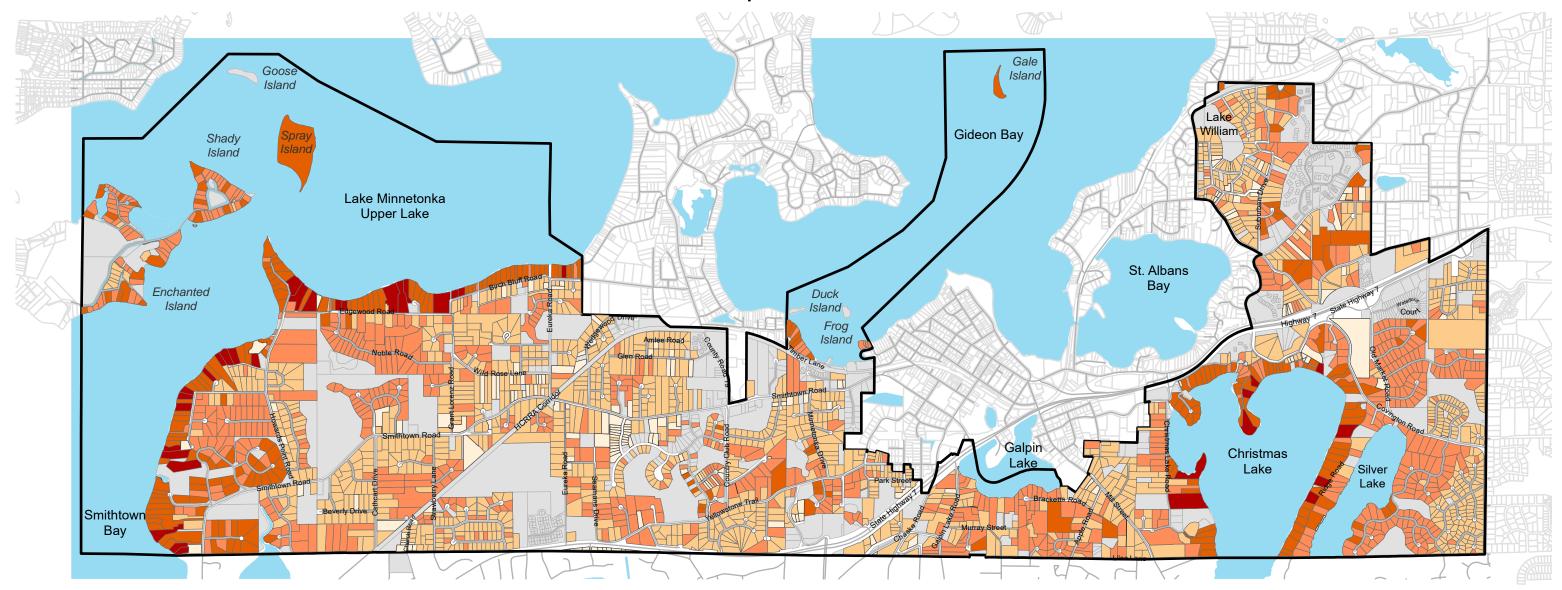
With the preceding Metropolitan Council directives in mind, the City finds it important to understand the number of affordable housing units which presently exist in the City. For 2017, the Metropolitan Council has determined that homes with a purchase price of \$243,500 or less are considered "affordable" in the seven-county metropolitan area. According to the Metropolitan Council, 2,770 housing units existed in the City in 2016. Of these units, 2,527 were owner-occupied. Of these, 478 units had a value of \$243,500 or less. As a result, 17 percent of the City's existing owner-occupied housing stock at that time was considered "affordable."

Between 2008 and 2016, the City added 105 owner-occupied housing units and 105 renter-occupied units. While the owner-occupied units were added at a relatively consistent rate over this time period, all 105 renter-occupied units were added in 2016. Within this time period, none of the added housing units (owner and renter-occupied) were considered affordable.

Housing values within the City are depicted on the map on the following page. The map specifically identifies locations of single family homes which exceed the affordable housing threshold (\$243,500) and locations of homes which are considered affordable. The City of Shorewood routinely encounters teardowns of lower value single family homes and replacement with new, higher value homes. This activity results in a reduction in the number of affordable single-family homes in the City. Between 2008 and 2016, 52 units were demolished and new homes built on the lots. Not all of the homes demolished met the criteria for affordable as several were on riparian lots on Lake Minnetonka, but the number of demolitions speaks to a trend to redevelop affordable homes in Shorewood.

Estimated Market Value of Single Family Homes

City of Shorewood 2040 Comprehensive Plan



Estimated Market Values

\$250,000 or Less \$1,000,000 - \$2,500,000 Parcels \$250,000 - \$500,000 Over \$2,500,000 City Boundary \$500,000 - \$1,000,000



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Map created: December 2020

Data: NAC, MNDNR, Metropolitan Council

The City of Shorewood understands the intent of the Metropolitan Council's affording housing allocation (48 units between 2021 and 2030) and supports the idea of providing alternative housing choices in the community. There are, however, conditions which are unique to the Shorewood which raise questions related to the ability of the community to realistically reach the noted affordable housing objectives. These include the following:

- 1. A limited amount of land exists within the City for development (vacant parcels and redevelopment sites).
- 2. Current market conditions and land values in the City are such that new rental housing would likely demand higher rents.
- 3. Much of the City of Shorewood is not served by mass transit. This condition is not expected to change in forthcoming years.
- 4. Presently, the City Shorewood has a limited amount of commercial land. With no plans to increase the amount of land devoted to such uses, minimal employment opportunities exist for persons to live and work in the City.

Housing Programs

To achieve the housing goals of this Plan, the following will be considered:

Programs which provide for the maintenance, management and preservation of existing housing stock:

Rental Licensing and Inspection Program.

The City of Shorewood has an active rental licensing and inspection program to ensure that its rental housing stock is maintained and provides a safe living environment.

<u>City Ordinances.</u> The City's Zoning Ordinance establishes minimum performance standards which are intended to ensure continued property maintenance.

The City of Shorewood will continue to enforce its ordinances which relate to property upkeep/maintenance.

<u>Local Funding Sources.</u> The City of Shorewood may, if deemed appropriate by City Officials, explore programs offered through the Twin Cities Habitat for Humanity and Minnesota Housing and Finance Agency.

<u>Repair and Rehabilitation Support.</u> The Community Action Partnership of Suburban Hennepin (CAPSH) provides home repair and rehabilitation assistance to County residents who meet certain eligibility requirements.

The City of Shorewood recognizes the existence of this program and is supportive of residents who choose to pursue program assistance.

Programs which provide access to public programs and financial programs:

<u>Referrals.</u> One of the simplest and most cost-effective ways to serve households in need of affordable housing is by making effective referrals. Being aware of programs and services or being able to provide appropriate references is considered beneficial.

Shorewood's Planning Department will strive to remain familiar with the relevant programs and provide effective referrals.

<u>Homebuyer Assistance Programs.</u> Homebuyer assistance programs funded directly by Hennepin County HRA are currently not available.

The City of Shorewood encourages residents to contact the Minnesota Homeownership Center regarding homebuyer assistance programs which are currently available.

<u>Foreclosure Prevention.</u> The Community Action Partnership of Suburban Hennepin (CAPSH) provides foreclosure counseling to County residents.

The City of Shorewood recognizes the existence of this service and is supportive of residents who choose to pursue foreclosure counseling.

<u>Energy Assistance.</u> The Community Action Partnership of Suburban Hennepin (CAPSH) administers the energy assistance program for County residents who meet the eligibility requirements.

The City of Shorewood recognizes the existence of this program and is supportive of residents who choose to pursue program assistance.

Programs which support senior housing:

<u>Tax Increment Financing.</u> Cities may create a housing district to create a tax increment financing district. The tax increment financing bonds issued on the district are used to support the construction of affordable housing. Property taxes received above the original tax value (increment) from the development are utilized to finance these bonds.

Housing Plan



The property tax revenue that otherwise would be available to pay for City services would be restricted and not available to pay for the services.

Considering that two large senior housing projects have recently opened within or near the City of Shorewood, the market may not support additional senior housing developments at this time. The City may, however, support the use of tax increment financing in the future depending on the project location, the extent of the request, etc.

<u>Referrals.</u> Shorewood's Planning Department will strive to have the ability to refer residents to applicable senior housing programs which are outside of the City's scope of services.

Programs which expand housing options:

<u>Comprehensive Planning.</u> As stated in the Policy Plan, the City of Shorewood will strive to present a variety of housing options which meet the needs of varying segments of its population. In this regard, the Land Use Plan directs a variety of residential densities (housing types) through future development or redevelopment.

Zoning and Subdivision Ordinances. The City's Zoning and Subdivision Ordinances will be used to implement the land use directives of the Comprehensive Plan. In this regard, opportunities for land uses which are promoted in the Plan are provided via the establishment of zoning districts which make an allowance for the directed land uses.

To be noted is that the City has the ability to provide "flexibility" from its zoning and subdivision regulations through planned unit development (PUD). Through PUD, the City specifically has the ability to allow increased residential densities for projects which fulfill a variety of PUD objectives which are intended to result in a higher quality development project than that which would otherwise be allowed through standard zoning.

<u>Land Banking and Site Assembly.</u> Land banks are nonprofit or governmental entities created to acquire, manage, maintain, and repurpose properties that are vacant, abandoned, underutilized, or foreclosed to a productive use. Banking and site assembly can provide an opportunity to ensure that vacant property is maintained and does not negatively impact the area. Such efforts also provide an opportunity to influence the ultimate use of the property.

There is very little vacant or abandoned property within the City of Shorewood which is in need of assembly, holding or maintenance. As a result, the City does not anticipate utilizing land banking and site assembly and cannot anticipate precise circumstances in which it would do so. The City may, however, consider doing so if opportunities arise



and City Officials determine that such an effort is appropriate (to support economic development, including potential opportunities for affordable housing).

Programs which promote affordable housing needs:

<u>Comprehensive Planning.</u> As stated in the Policy Plan, the City of Shorewood will attempt to satisfy the Metropolitan Council's affordable housing directives of 48 new units between 2021 and 20130. The Land Use Plan directs high density residential use upon a number of undeveloped sites and sites which are expected to be redeveloped at some future point. In this regard, the Land Use Plan provides opportunities for future affordable housing.

Zoning and Subdivision Ordinances. As previously indicated, the City's zoning and subdivision regulations will be used to implement the land use directives of the Comprehensive Plan. As a result, uses directed for high density residential use by the Plan, will be implemented via the application of corresponding zoning districts.

<u>Development Authorities.</u> The Hennepin County Housing and Redevelopment Authority (HRA) provides services for affordable housing and redevelopment.

While the City of Shorewood has not utilized such services in the recent past, it would consider partnering with the HRA in the future.

<u>Tax Abatement.</u> Local governments are permitted to offer tax abatement for a public benefit, including the creation of housing which is affordable to low and moderate-income households. If a portion of the tax collected from a property is abated, such amount would need to be offset through increased taxes levied on other properties.

Recognizing the of administrative needs and potential impacts on the City's remaining tax capacity, the City of Shorewood does not anticipate using tax abatement.

<u>Livable Communities Act Programs.</u> Livable Communities Act programs are intended to provide incentives for addressing various issues facing the seven-county Metropolitan Area. Metropolitan Area municipalities which elect to participate in the Livable Communities Program are eligible to compete for funding for community development activities.

Unlike many other Lake Minnetonka communities, the City of Shorewood does not participate in the Livable Communities Program. Such current exclusion is based upon Shorewood's lack of available building sites. The City may, however, consider the possible benefits of program participation at some future date.

Housing Plan



Minnesota Housing Consolidated Request for Proposals. The Minnesota Housing Finance Agency provides a request for proposal (RFP) on an annual basis whereby developers of affordable housing projects can apply for funding to construct such housing.

The City of Shorewood is supportive of developers who apply for funds to support the development of housing units which meet the City's needs for affordable housing.

Community Development Block Grants (CDBG). The U.S. Department of Housing and Urban Development (HUD) provides CDBG funds to communities with over 45,000 residents for the use of providing and maintaining affordable housing. Hennepin County HRA administers these CDBG funds through a pool with various communities. The City of Shorewood pools its Community Development Block Grant funds into the Hennepin County program for housing rehabilitation assistance.

The City of Shorewood believes that addressing housing issues in a cooperative manner with other Hennepin County communities is worthwhile and is therefore willing to participate in such cooperative efforts.

<u>Home Investment Partnerships Program (HOME)</u>. The HOME is a flexible federal grant program that allows Hennepin County to fund affordable housing activities for very low and low-income families or individuals, homeless families, and persons with special needs.

The City of Shorewood recognizes the importance of this program and is supportive of residents who choose to pursue program assistance.

Affordable Housing Incentive Funds (AHIF). AHIF funds are administered by the Hennepin County Housing and Redevelopment Authority. This loan program funds the development of affordable housing units for very low-income households.

The City of Shorewood recognizes the existence of AHIF funds and is supportive of developers who apply for such funds to support development of housing units which meets the City's affordable housing needs.

<u>4(d) Tax Program.</u> The 4(d) Tax Program provides a property tax rate reduction for rental properties which include affordable housing units. This program is administered through the Minnesota Housing Finance Agency.

The City of Shorewood encourages owners of eligible rental properties which include affordable housing units to seek 4(d) Tax program assistance.

Housing Plan



<u>Fee Waivers or Adjustments.</u> Cities have the ability to waive or reduce fees to reduce the cost of construction of affordable housing. Conversely, State rules require that city fees must correlate to the cost of providing the services.

Fee waivers or reductions could create a deficiency in the funding for services, causing the City to rely on general funds to make up the deficiency. For this reason, the City of Shorewood will not consider a fee waivers or reduction for affordable housing projects.

West Hennepin Affordable Housing Land Trust. The mission of the West Hennepin Affordable Housing Land Trust (dba Homes Within Reach) is to use the Community Land Trust practice to provide permanently affordable homeownership for low to moderate income working families that would otherwise be unable to purchase a home in the suburban communities of Hennepin County; offering both communities and homebuyers the ability to sustain long-term affordable homeownership. The Land Trust service area is the 44 communities of suburban Hennepin County and is currently active in twelve (12) suburban communities in Hennepin County.

If approached, the City Shorewood will evaluate and determine if joining the West Hennepin Affordable Housing Land Trust is an appropriate partnership (to meet the City's housing affordable housing objectives).

Educational Programs:

<u>Organizations</u>, <u>Partnerships and Initiatives</u>. Participation in housing-related organizations, partnerships and initiatives with other stakeholders provides learning opportunities. In this regard, discussions of housing needs with other cities, counties, the Metropolitan Council is considered beneficial for all involved. Recognizing the value of such collaborations, the City of Shorewood has taken the following steps:

- The City of Shorewood partners with the Hennepin County Housing and Redevelopment Authority.
- City Staff are members of various professional organizations which provide resources and educational opportunities related to housing including the Minnesota Chapter of the American Planning Association.
- City Officials routinely take part in trainings related to land use and housing and are active in groups with other city officials.

CHAPTER SUMMARY

As a predominantly residential community, housing and issues related to housing are an important aspect of Shorewood's Comprehensive Plan. Following are the City's goals relative to housing:

- Provide safe, healthy and quality housing that respects the natural environment of the community.
- Maintain the present variety of housing options and provide sufficient housing types, sizes and values to meet the needs of varying segments of the population.
- Maintain and strengthen, where necessary, the character of individual neighborhoods within the community.
- Address local and sub-regional housing issues through cooperative efforts with neighboring communities through organizations such as the Lake Minnetonka Area Cooperating Cities.
- Promote safe, healthy and affordable housing options.

Following are recommendations intended to achieve these goals:

- 1. Review local development regulations, and amend as necessary, to promote a balanced housing supply.
- 2. As opportunities present themselves, attempts shall be made to satisfy the Metropolitan Council's affordable housing directives (48 new units between 2021 and 2030).
- 3. Identify locations for alternative residential housing types and densities.
- 4. Make available to residents and property owners educational programs on such topics as renter/landlord rights, home buying, home maintenance, etc.
- 5. Continue the City's rental housing license program to maintain current standards for rental housing.
- 6. Consider the adoption of a "point of sale" ordinance to address housing maintenance issues.
- 7. Promote private sector maintenance, rehabilitation and redevelopment of existing properties through improved communication of available community services and financial assistance programs.

- 8. Continue to allow accessory apartments to allow seniors to remain in their single family homes.
- 9. Encourage housing types that are designed to appeal to senior citizens to allow existing residents to downsize and remain in the City of Shorewood.
- 10. Maintain programs for housing condition to protect the health and safety of residents and ensure stability of neighborhoods.
- 11. Maintain code enforcement programs to improve and strengthen the character of neighborhoods.
- 12. Undertake both proactive and reactive code enforcement to maintaining the City's existing housing stock.
- 13. Rehabilitate substandard housing units whenever possible.
- 14. Work with Hennepin County to administer programs which provide <u>financial</u> assistance for the rehabilitation of substandard housing units within the community (as funding sources and market conditions permit).
- 15. Redevelop of substandard housing whenever compatible with adjacent land uses and economically feasible.
- 16. Establish and maintain regulations for development upon lawful nonconforming lots.
- 17. Require construction management plans for all residential infill projects. Minimally, such plans shall address contractor parking locations, construction material delivery and storage, street cleaning and construction hours.
- 18. Protect lower density residential neighborhoods from encroachment or intrusion of incompatible land uses as well as nonresidential use categories, through adequate buffering and separation.
- 19. Respect and maintain the character of individual residential neighborhoods.
- 20. Protect residential developments from and locate them away from sources of adverse environmental impacts including noise, air and visual pollution.
- 21. Minimize home occupations, commercial and other nonresidential activities so as to be invisible within residential neighborhoods.



- 22. Accessory buildings within the community shall be of a compatible design and size to maintain a residential character. These buildings shall be limited exclusively to residential uses and related activities.
- 23. Minimize outdoor storage where possible and allow it only conducted in an orderly, confined and limited fashion which is consistent with City Code requirements.
- 24. Aggressively eliminate violations of property maintenance standards that infringe upon residential neighborhood quality, pose public health and safety problems and threaten neighboring property values.
- 25. Encourage owner occupied housing.
- 26. Address Shorewood's housing needs, as well as the needs of the overall Lake Minnetonka sub-region, by providing and maintaining a variety of housing types, styles and values.
- 27. Prevent polarizing age distribution within the Lake Minnetonka sub-region through the provision of diverse housing that reflects life-cycle stages and economic considerations.
- 28. Encourage a range of property values and rent rates within the Lake Minnetonka subregional housing as a means of diversifying the stock and sustaining individual communities in the area.
- 29. Develop housing for special needs populations (e.g., elderly, physically challenged) within the Lake Minnetonka sub-region and provide financial assistance programs as funding sources and market conditions allow.
- 30. Give due attention to the directives of the Metropolitan Council for new or redeveloped housing projects.



INTRODUCTION

The purpose of the Transportation Plan is to set a multimodal transportation vision through the year 2040. The City's multimodal transportation system includes facilities for vehicles, freight, walking, bicycling and transit. Facilities are operated by a number of agencies, including the City of Shorewood, Hennepin County and the Minnesota Department of Transportation (MnDOT).

As the owners of the transportation network in Shorewood (i.e. City of Shorewood, Hennepin County and MnDOT) advance their respective Capital Improvement Programs (CIPs), this Plan is intended to serve as an important resource and reference in establishing priorities and advancing transportation projects for implementation. Advancing these projects from a planning to implementation phase will require collaborative discussions among the City, County, MnDOT, adjacent communities, Metropolitan Council, residents and others to conduct traffic studies, finalize designs, preserve rights-of-way, obtain environmental clearances and leverage necessary financial resources.

Effective transportation planning is an important part of the City's Comprehensive Plan. Residents must be provided with transportation facilities and services which meet mobility needs in an efficient and safe manner. Transportation facilities, at the same time, need to be planned and constructed so as to limit negative social, environmental, and aesthetic impacts to the greatest degree feasible. In addition, residents who cannot or choose not to drive need to have transportation options to meet their daily needs.

This transportation chapter has been prepared in compliance with State of Minnesota Statutes and applicable Metropolitan Council guidelines. As part of this Plan, the City has reviewed existing and future conditions for each mode and identified safety, operations, and network improvements that will be important to address over the 2040 planning horizon. Goals, objectives and specific strategies have been identified collaboratively by the City, Hennepin County, MnDOT and citizens within the framework of Metropolitan Council requirements.

Although emphasis in this element of Shorewood's Comprehensive Plan is placed on the street circulation plan, there are a number of other transportation related components that deserve consideration. They include mass transit, pedestrian/bicycle circulation, freight, railroads and aviation.



The vision and associated strategies outlined in this Plan were established by considering existing and forecasted conditions, City of Shorewood priorities and regional travel patterns.

Objectives

There are three primary objectives of this Transportation chapter:

- To provide guidance for City staff and elected officials regarding the planning and implementation of effective transportation facilities and systems.
- To give private citizens and businesses background on transportation issues and allow them to be better informed regarding the City's decision-making on transportation issues.
- To communicate Shorewood's perspectives and intentions regarding transportation planning issues to other government agencies.

The preparation of the document also has provided stakeholders with the opportunity to have input into the transportation planning process.

Transportation Glossary

CIP: Capital Improvement Program – five-year plan for capital investments in the transportation system and in other capital assets owned by the City (equipment, buildings, etc.).

CR: County Road – county-owned roadway that does not receive State funding.

CSAH: County State Aid Highway – county-owned roadway that receives State Aid funding.

LRT: Light Rail Transit – public transportation mode consisting of rolling train stock on an exclusive right-of-way

MnDOT: Minnesota Department of Transportation.

RBTN: Regional Bicycle Transportation Network – existing and planned regional bicycle network established by the Metropolitan Council.

TH: Trunk Highway – State highway owned and operated by MnDOT.

TPP: Transportation Policy Plan – Regional transportation plan for the Twin Cities metropolitan region, developed by the Metropolitan Council.



SUMMARY OF REGIONAL STRATEGIES

This plan has been prepared to be consistent with the regional transportation strategies outlined in the Metropolitan Council 2040 Transportation Policy Plan (TPP). The TPP is a regional plan that evaluates the existing transportation system, identifies transportation challenges to the region, and sets regional goals, objectives, and priorities to meet the transportation needs of current residents while accommodating the region's anticipated growth. The TPP also guides local agencies in coordinating land use and transportation and established regional performance measures and targets.

The TPP is guided by the following goals:

- Transportation system stewardship: Sustainable investments in the transportation system are protected by strategically preserving, maintaining, and operating system assets.
- Safety and Security: The regional transportation system is safe and secure for all users.
- Access to Destinations: People and businesses prosper by using a reliable, affordable, and efficient multimodal transportation system that connects them to destinations throughout the region and beyond.
- **Competitive Economy:** The regional transportation system supports the economic competitiveness, vitality, and prosperity of the region and State.
- **Healthy Environment:** The regional transportation system advances equity and contributes to communities' livability and sustainability while protecting the natural, cultural, and developed environments.
- Leveraging Transportation Investment to Guide Land Use: The region leverages transportation investments to guide land use and development patterns that advance the regional vision of stewardship, prosperity, livability, equity, and sustainability.

The TPP acknowledges funding is a key constraint. Current transportation revenue will not meet the region's transportation needs through 2040. As a result, the TPP includes two long-term investment scenarios: a fiscally-constrained scenario that identifies projects anticipated to be



funded based on current revenue projections, and an increased revenue scenario that identifies project priorities should additional transportation funding become available.

Under the current fiscally constrained revenue scenario, the TPP is focused on operations and maintenance of the existing transportation system. Investments in highway mobility and access are limited to those that address multiple TPP goals and objectives.

The increased revenue scenario would allow additional investments in operations and maintenance, as well as regional mobility, access, safety, and bicycle/pedestrian improvements. However, congestion cannot be greatly reduced under even the increased revenue scenario. Under both scenarios, proposed investments are focused on areas of the metro with the greatest existing and future challenges and anticipated growth.

The Metropolitan Council classifies Shorewood under the Suburban Community Designation. Based on *Thrive MSP 2040*, Suburban areas are expected to plan for forecasted population and household growth at average densities of at least five units per acre for new development and redevelopment. These communities are also expected to target opportunities for more intensive development near regional transit investments. The TPP does not include any planned regional investments in Shorewood.

Planned Functional Classification

Recommended changes to the functional classification system will be adopted by the City as part of the adoption of the overall Comprehensive Plan Update. Changes that involve "Other" Minor arterials, Major Collectors or Minor Collectors may be made without the approval of another agency, provided these changes are consistent with State and County Plans. However, the changes and the resulting functional classification should be officially reported to the Metropolitan Council under separate communication to ensure that the Metropolitan Council has the opportunity to update their records. The City is proposing the following changes:

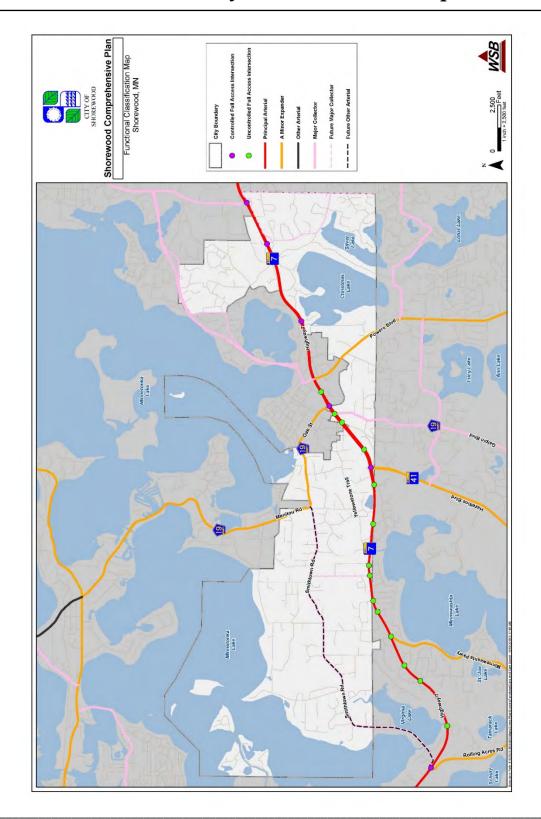
- Smithtown Road: CASH 19 to City Limits Major Collector to "Other" Arterial
- Vine Hill Road: TH 7 to City Limits Local Street to Major Collector
- Old Market Road: TH 7 to Vine Hill Road Local Street to Major Collector
- Eureka Road: Smithtown Road to TH 7 Local Street to Major Collector
- Delton Avenue: Minnetonka City limits to Old Market Road Local Street to Major Collector

Shorewood 2040 Comprehensive Plan



Any proposed change to a Principal Arterial or 'A' Minor Arterial designation will need to be approved by the Transportation Advisory Board (TAB) of the Metropolitan Council. Since these changes are likely to involve either State or County roadways, the City should work closely with these agencies to ensure that the process of approval is carried forward. No functional classification changes are recommended within the city at this time.







Jurisdictional Classification / Municipal State Aid Streets

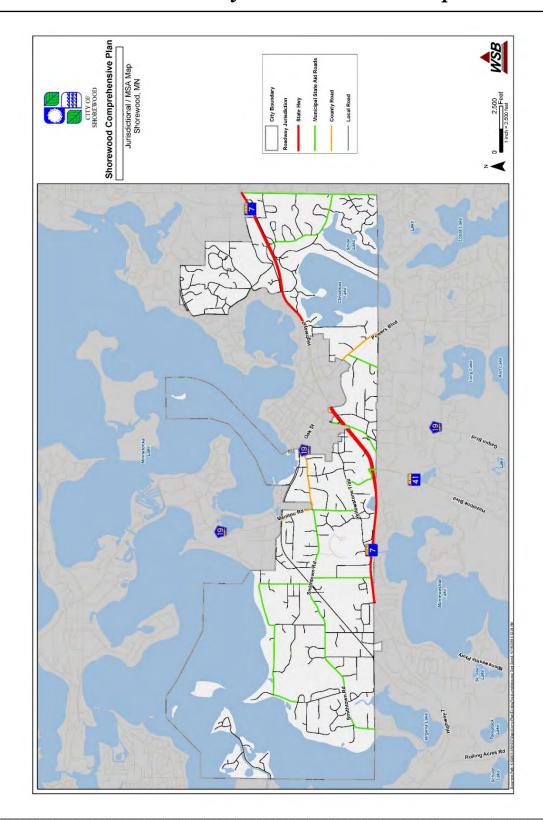
Roadways are classified on the basis of which level of government owns and has jurisdiction over the given facility. The three levels of government that have involvement are the State of Minnesota (Mn/DOT), Hennepin County, and the City of Shorewood. Mn/DOT owns/maintains the Trunk Highway (TH) system and Hennepin County the County State Aid Highway (CSAH) and County Road (CR) system. The City owns/maintains the local streets, including Municipal State Aid (MSA) streets.

Cities in Minnesota with populations greater than 5,000 are eligible to receive Municipal State Aid (MSA) funding from the state Highway User Tax Distribution Fund. The basic purpose of this program is to help local governments construct and maintain collector and arterial roadways which have consistent design standards, and which are well integrated into the overall network of collector and arterial roadways. The State Aid system typically consists of a maximum of 20% of the City's roadway mileage.

The State Aid office of MnDOT has established clearly defined design requirements for MSA streets. These requirements ensure that capacity, operational, and safety goals are met in a uniform manner from community to community, and that street systems are well coordinated with each other. Based on State Statute, Sections 169.80 and 169.87, MnDOT does not allow cities to restrict truck traffic on MSA streets.

Figure 2 provides a map depicting the jurisdictional classification of the overall roadway network serving Shorewood and its residents and businesses







Existing Roadway Capacity and Safety

Roadway capacity and roadway safety are two key indicators of how well the roadway system is meeting the city's transportation needs. The sections below provide information to better understand capacity and safety issues within Shorewood.

Existing Roadway Capacity

A roadway's capacity indicates how many vehicles may use a roadway before it experiences congestion. Capacity is largely dependent upon the number of lanes. The table below lists planning-level thresholds that indicate a roadway's capacity (measured in annual average daily traffic, AADT). Additional variation (more or less capacity) on an individual segment is influenced by a number of factors including: amount of access, type of access, peak hour percent of traffic, directional split of traffic, truck percent, opportunities to pass, and amount of turning traffic, the availability of dedicated turn lanes, parking availability, intersection spacing, signal timing and a variety of other factors.

Planning-level Urban Roadway Capacities

| | Daily Two | -way Volume |
|--|--------------------|---------------------|
| Arterial Roadways | Lower Threshold | Higher Threshold |
| Two-lane Undivided | 10,000 | 12,000 |
| Two-lane Divided or Three-lane Undivided | 15,000 | 17,000 |
| Four-lane Undivided | 18,000 | 22,000 |
| Four-lane Divided or Five-lane Undivided | 28,000 | 32,000 |

Source: FHWA Highway Capacity Manual and WSB Experience from Previous Projects

Existing Capacity Problems on Arterial Roads

At the planning level, capacity problems are identified by comparing the existing number of lanes with current traffic volumes. The table on the following page shows existing number of lanes on collector and arterial roadways within the city.

Daily traffic volumes are based on 2016 conditions from the MnDOT State Aid traffic volume maps supplemented with 2017 data from the City of Shorewood and Hennepin County.



As shown in the table, TH 7 has either four or five lanes (with turn lanes) and CSAH 19 has 2 or 3 lanes (with turn lanes) throughout the City. All other Arterial or Major Collector roadways have two lanes.

Existing number of lanes on arterial roads

| Functional | Roadway Name | Location | Number of |
|--------------------|---|---|-----------|
| Classification | | | Lanes |
| Principal Arterial | TH 7 | Minnetonka Border to Chanhassen Border | 4 / 5 |
| "A" Minor | CSAH 82 (Mill St) | Chanhassen Border to Excelsior Border | 2 |
| Expander | CSAH 19 (Oak St/Smithtown Rd/Manitou Rd | Excelsior Border to Tonka Bay Border | 2/3 |
| | Smithtown Road | CSAH 19 to Victoria Border | 2 |
| Major Collector | Galpin Lake Road | Chanhassen Border to TH 7 | 2 |
| | Minnetonka Blvd | Deephaven Border to Greenwood Border | 2 |

The only roadway that is approaching capacity is CSAH 19 north of Smithtown Road. All other Arterials and Major Collectors in Shorewood currently exhibit traffic volumes below or within the range of the planning level capacity thresholds shown in the previous table. This indicates that these roadways are typically not experiencing high levels of congestion.

The methodology described above is a planning-level analysis that uses average daily traffic volumes and is not appropriate for all traffic conditions. Traffic conditions that do not fit the average daily traffic criteria (i.e., weekend travel, holiday travel, special events, etc.) are likely to produce different levels of congestion. Further, this methodology does not take into account specific geometric conditions that exist at the intersection nodes, potential peaking characteristics of these roadways or directional flow disparities, which can greatly impact the order of magnitude of the deficiency (either meaning there is not a deficiency, or it is more significant than what is indicated by the ADT alone). However, for purposes of the transportation planning process, this volume to capacity (v/c) methodology is widely accepted and applicable. For detailed design consideration of access management, intersection traffic control and congestion



mitigation, the city may require a traffic study providing detailed operational analysis for specific developments.

Identified Capacity and Safety Concerns

The primary issue locations are identified below:

1. Trunk Highway System Congestion: Peak-period congestion occurs on the Trunk Highway segments passing or adjacent to the City including TH 7 and TH 41.

Current traffic volume on TH 7 ranges from 20,000 to 35,000. With the number of streets and access locations, together with the traffic volume levels, the mainline congestion and queuing at existing signalized and un-signalized intersections provides a source of localized congestion on the City street system.

The City will continue to work with MnDOT, Hennepin County and adjacent Cities in reviewing and improving traffic flow on TH 7. Specific intersections that the City will continue to monitor and support future improvements include:

- TH 7 at Minnewashta Parkway/Church Road
- TH 7 at Vine Hill Road
- **2. Traffic Committee:** In 2015 and 2017 the City Council established a "Traffic Committee" to advise the City Council on traffic issues, with an initial focus on the review of the Smithtown Rd., Country Club Road, Yellowstone Trail and Lake Linden Drive corridors. A summary of the findings and improvement alternatives include:



Smithtown Road at County Club Road

Dual Roundabout (Country Club Road and CSAH 19) - Includes reconstruction of both CSAH 19 and County Club Rd with two interconnected roundabouts. This improvement would involve significant design, right of way impacts and coordination with Hennepin County.

Signalized intersection coordinated with CSAH 19 - Includes a traffic signal at the intersection of Smithtown Road and Country Club Road with additional lanes on Country



Club Road and Smithtown Road. Signal coordination with CSAH 19 intersection would require review and approvals with Hennepin County.

Smithtown Road

Widen roadway from Wooden Cleek to Country Club Road - Includes addition of a left turn lane, a through/right turn lane and a separated bike/pedestrian path



without addition of any traffic control at Country Club Road.

Country Club Road

Widen roadway approaching Smithtown Rd - Includes addition of a left turn lane and right turn lane without addition of any traffic control at Country Club Rd.

Widen add bike lanes with 25 mph Speed Limit - Includes widening Country Club Road to provide a through lane in each direction with a minimum 6 foot on road bike lanes with a 25mph speed limit. An off road bike trail was added adjacent to County Club Road from Smithtown Road to Lake Mary Trail as part of the Mattamy development.

Yellowstone Trail – County Club Rd to Lake Linden Drive

Stop Sign Enhancements - Change existing stop signs to Blinker Stop signs at County Club Road and Lake Linden Drive intersections

Improve Sight Lines - Cut back trees along corridor especially at intersections

Intersection Improvements - At the Lake Linden Drive intersection add a street light, a pedestrian crosswalk, and pedestrian crossing signs.

Yellowstone Trail – West of Lake Linden Drive

Improve Sight Lines - Trim trees and add additional curve signing at Seamans Drive (delineate curve).

Improve Sight Lines - Realign Yellowstone Trial at Seamans Drive to a 90 degree intersection with Blinker Stop signs.



Lake Linden Drive

Improve Sight Lines - Fix grade changes north of Cub development access for left turning vehicles.

Lake Linden Drive at Cub Entrance/TH 7/TH 41

Access Improvements - Close Cub development exit from the east at frontage road (Lake Linden Drive) maintaining inbound movement.

Roadway Improvement - Widen Lake Linden Drive eastbound to two approaching lanes (one right turn/through to westbound TH 7 and to TH 41 and one left turn to eastbound TH 7) and one exiting lane westbound.

Roadway Realignment - Move the westbound right turn lane from the intersection at TH 41 to a free right with acceleration lane at approximately the existing Lake Linden Drive extended. (Movement would be removed from the TH 7/TH 41 intersection)

Miscellaneous

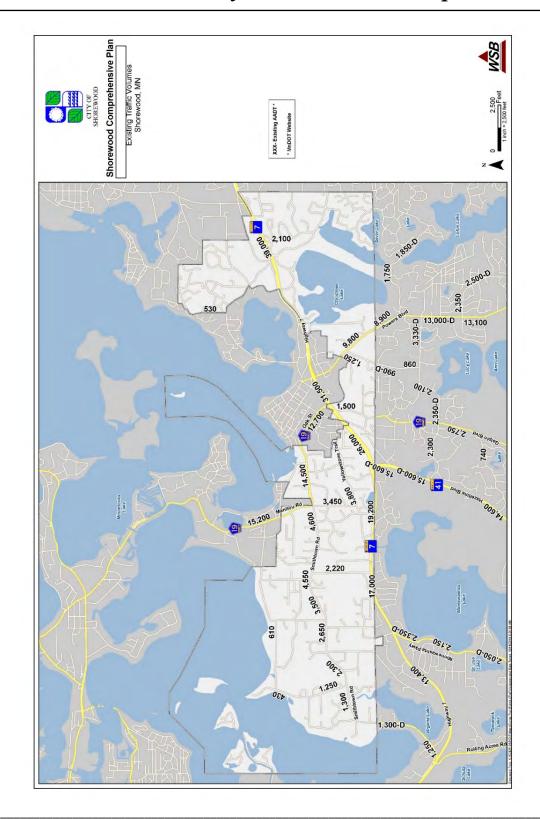
Technology Improvements - Remove use of Country Club Road, Yellowstone Trail and Lake Linden Drive from Google Maps directions.

Enforcement - Improve/Enhance enforcement of speeding and traffic control on area roadways.

Traffic Calming - Add Driver Feedback speed control signs at selected locations on Yellowstone Trail and Lake Linden Drive









Access Management

The purpose of access management is to provide adequate access to adjacent land development while maintaining acceptable traffic flow on higher level roadways. Access management consists of carefully controlling the spacing and design of public street intersections and private access points to the public roadway system. Arterials, being designed for higher speed and longer distance trips, generally have reduced or restricted access while local streets can accommodate much greater access. Collector roadways fall in between arterials and local roadways regarding the amount of access that is permitted.

The agency with jurisdiction over a roadway sets access management guidelines. Access to TH 7 must meet MnDOT access management guidelines and is permitted subject to conditions. See the table on the following page for MnDOT Access Management Guidelines.

Hennepin County has established access management guidelines for urban areas (within the 20-year MUSA boundary) and rural areas (outside the MUSA boundary). Hennepin County access management guidelines are displayed in the table on page 148. Hennepin County requires permits for new driveway access to county roads and when land uses change at a site adjacent to a county road. Hennepin County typically requires that new access points meet its guidelines; however, the county can make exceptions to the guidelines with sufficient justification.

Driveway Access on City Streets (Collectors and Local Roads)

Driveways contribute to accidents and reduced traffic flow on major streets in municipalities because they add to the number of locations where vehicle conflicts can occur. Hence, it is desirable to have guidelines in place that:

- Limit the number of driveways to those that are actually needed to safely accommodate the traffic generated by each development.
- Provide adequate spacing between driveways so conflicts (and resulting accidents) between vehicles maneuvering at adjacent driveways do not arise.
- Ensure proper design to accommodate driveway traffic and minimize vehicle conflicts without significantly reducing roadway capacity.

Occasionally topographic features of a particular site or the needs of a particular land use may require special access features in a proposed development. The City may wish to withhold approval of these developments or site changes until a study has been made of the potential



impacts on the affected roadways and the adequacy of the proposed access design is determined. The City may require that the following steps be included in the traffic study for the site:

- Estimate site traffic generation and future non-site traffic.
- Determine directional distribution of trips.
- Estimate turning movements at driveway and the resulting level of service.
- Analyze current and future access requirements.
- Provide necessary geometric and operational improvements to safely accommodate the site's access requirements without negative impacts to traffic operation on the adjoining roadways

MnDOT Access Management Manual Summary of Recommended Street Spacing for IRCs

| | | | Public Street | Spacing | |
|------------|---------------------------|--------------------------------|---------------------------------------|----------------------------------|-------------------|
| Category | Area or Facility Type | Typical Functional Class | Primary Full- Movement Intersection | Secondary Intersection | Signal Spacing |
| 3 | Regional Corrido | rs | | - | |
| 3AF | Non-Interstate Freeway | | Interchange A (see Section 3 spacing) | access Only 3.2.7 for interim | Interim |
| 3A | Rural | Principal and Minor | 1 mile | 1/2 mile | See Section 3.2.5 |
| 3B | Urban/Urbanizing | Arterials | 1/2 mile | 1/4 mile | 1/2 mile |
| 3 C | Urban Core | | 300-660 feet, upon block le | • | 1/4 mile |



Hennepin County Access Spacing Guidelines

| | | | Rural Arterial | | Urban a | Urban and Urbanizing Arterial | y Arterial |
|--|------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|--------------------------|
| Access Type | Movements Allowed | Greater than 7,500 ADT | Less than 7,500 ADT | Collector | Undivided | Divided | Collector |
| Single family residential driveway | Full movements allowed | 1/4 mile (1,320 feet) | 1/8 mile (660 feet) | 1/8 mile (660 feet) | Not allowed | Not allowed | 1/8 mile (660 feet) |
| or farm field entrance | Limited access | Not allowed | 1/16 mile (330 feet) |
| Low Volume Driveway (less than | Full movements allowed | 1/4 mile (1,320 feet) | 1/8 mile (660 feet) | 1/8 mile (660 feet) | Not allowed | Not allowed | 1/8 mile (660 feet) |
| or equal to 500 trips per day) | Limited access | Not allowed | Not allowed | Not allowed | Not allowed | 1/8 mile (660 feet) | 1/16 mile (330 feet) |
| High Volume Driveway (greater | Full movements allowed | 1/4 mile (1,320 feet) | 1/4 mile (1,320 feet) | 1/8 mile (660 feet) | 1/4 mile (1,320 feet) | 1/4 mile (1,320 feet) | 1/8 mile (660 feet) |
| than 500 trips per day) | Limited access | Not allowed | Not allowed | Not allowed | Not allowed | 1/8 mile (660 feet) | Not allowed |
| Low Volume Public Street (less than or | Full movements allowed | 1/4 mile (1,320 feet) | 1/4 mile (1,320 feet) | 1/8 mile (660 feet) | 1/4 mile (1,320 feet) | 1/4 mile (1,320 feet) | 1/8 mile (660 feet) |
| equal to 2,500 ADT) | Limited access | Not allowed | Not allowed | Not allowed | Not allowed | 1/8 mile (660 feet) | Not allowed |
| High Volume Public Street (greater than | Full movements allowed | 1/2 mile (2,640 feet) | 1/4 mile (1,320 feet) | 1/4 mile (1,320 feet) | 1/4 mile (1,320 feet) | 1/4 mile (1,320 feet) | 1/4 mile (1,320 feet) |
| 2,500 ADT) | Limited access | Not allowed | Not allowed | Not allowed | Not allowed | 1/8 mile (660 feet) | Not allowed |



FUTURE ROADWAY SYSTEM

This section addresses future roadway improvement needs and roadway design guidelines.

Roadway Capacity - Traffic Forecasting

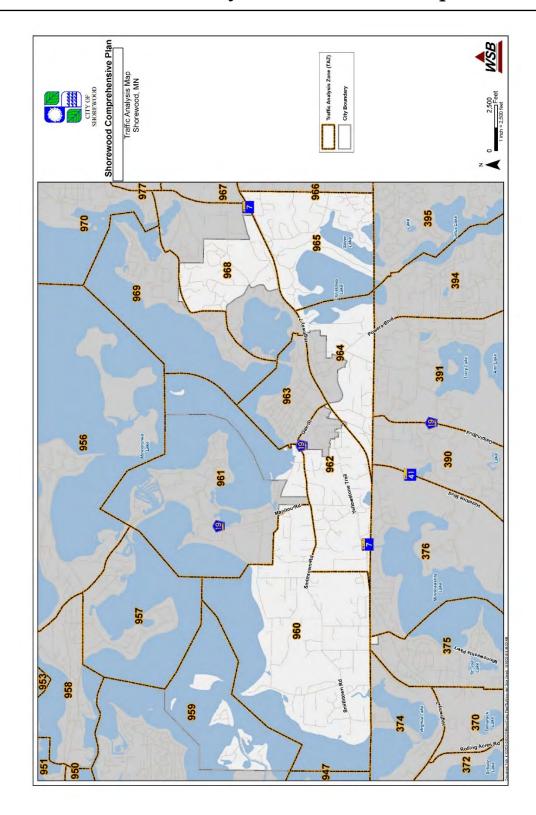
To determine future roadway capacity needs, year 2040 traffic forecasts were prepared using the Metropolitan Council travel demand model. The model was refined for application specifically for Shorewood. The 2040 projections were compared against the assumed 2040 roadway network to see where roadway segment capacity deficiencies may result. The 2040 roadway network assumed for this analysis is the same as the current roadway network, as the City and County Capital Improvement Programs (CIPs) do not include any projects that add significant capacity to the roadway network.

While the travel demand model is a valuable tool for identifying future traffic based on the proposed land use impacts, it is not meant for use in detailed traffic operations studies. For a more accurate representation of the transportation impacts from specific developments, detailed traffic studies should be conducted to determine the operational impacts on adjacent roadways and intersections.

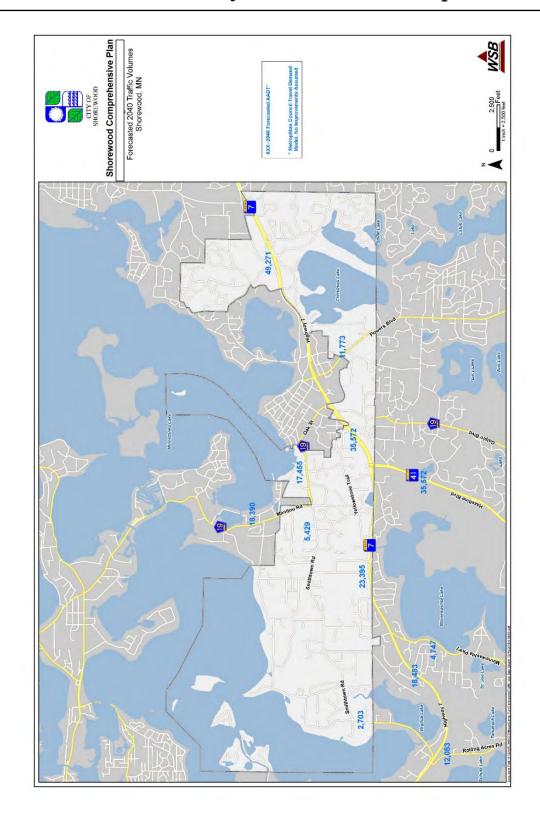
A central concept of travel demand forecasting is the use of Transportation Analysis Zones (TAZs). Each forecast study area, in this case the City of Shorewood, is divided into a series of TAZs. Each TAZ has land use data which indicates trip generation and trip attraction including population, household, and employment data. The map on the next page displays Metropolitan Council TAZs within Shorewood.

The results of the Shorewood modeling process are summarized on page 151, which displays 2040 projected average daily traffic volumes. The table on page 152 provides the initial population, household, and employment allocations by TAZ assumed in the Metropolitan Council model.











Metropolitan Council Current TAZ Data - City of Shorewood (Raw Data - Unadjusted)

| | | 2010 Census | 10 | | 2020 Forecast | | | 2030 Forecast | | | 2040 Forecast | |
|--------|------------|-------------|------------|------------|---------------|------------|------------|---------------|------------|------------|---------------|------------|
| TAZ | Population | Households | Employment | Population | Households | Employment | Population | Households | Employment | Population | Households | Employment |
| 959 | 184 | 72 | 33 | 213 | 82 | 20 | 237 | 95 | 47 | 262 | 107 | 45 |
| 096 | 2920 | 1012 | 262 | 2797 | 1046 | 223 | 2796 | 1066 | 227 | 2791 | 1079 | 224 |
| 961 | 116 | 49 | 2 | 131 | 53 | 11 | 134 | 95 | 31 | 138 | 59 | 74 |
| 962 | 892 | 341 | 533 | 937 | 351 | 471 | 937 | 358 | 476 | 926 | 363 | 466 |
| 964 | 616 | 226 | 51 | 209 | 234 | 194 | 595 | 233 | 173 | 588 | 231 | 164 |
| 965 | 1688 | 280 | 142 | 1725 | 979 | 214 | 1835 | 089 | 252 | 1928 | 725 | 296 |
| 896 | 891 | 378 | 28 | 886 | 407 | 138 | 365 | 422 | 133 | 292 | 435 | 130 |
| Totals | 7307 | 2658 | 1113 | 7398 | 2799 | 1301 | 7499 | 2909 | 1338 | 7600 | 2999 | 1399 |



2040 Future Roadway Capacity Improvement Needs

To identify the need for potential future capacity improvements, Metropolitan Council 2040 forecasts were compared to planning-level roadway capacities for Principal and A-Minor Arterial Roadways. Planning-level roadway capacities used for this analysis were discussed previously. Based on this comparison, the only roadways that will be experiencing congestion are: TH 7 east of TH 41 and CSAH 19 through the City. All other local City roadways have adequate capacity to accommodate forecasted Metropolitan Council 2040 travel demands.

As noted previously, this methodology is a planning-level analysis and some traffic conditions do not fit the average daily traffic criteria (i.e., weekend travel, holiday travel, special events, etc.) and are likely to produce different levels of congestion. For detailed design consideration of access management, intersection traffic control and congestion mitigation, the city may require a traffic study providing detailed operational analysis for specific developments.

Roadway Design and Right of Way Standards

This Transportation Plan does not attempt to show locations of new local streets other than those that exist currently. Location of new local streets would be determined with the development. However, in reviewing development requests, the City should carefully consider the following recommendations:

- 1. In new subdivisions, as opposed to simple re-subdivisions, all lots should abut on a publicly dedicated street. Exceptions should only be approved by PUD or Variance, subject to the following criteria. While it is the City's policy to discourage private streets, in certain limited cases of lot re-subdivision, the City has adopted the policy that as many as three lots may be allowed access by private easement, subject to the following criteria:
 - a. The land to be subdivided is not capable of being divided into more than three lots.
 - b. Consideration is given to surrounding undeveloped property.
 - c. A 50-foot easement and adequate turn-around must be provided.
 - d. Legal provisions are made for the use and maintenance of the road.
 - e. Where private roads are approved, protective covenants will be required stating that the City will not take over or maintain them.



- f. The minimum width of the paved surface for private streets shall be 20 feet where adequate off-street parking is provided. Where the potential exists for on-street parking the minimum shall be 24 feet.
- Subdivision circulation patterns should be examined from a broader perspective than just the individual site. In this regard, consideration must be given to surrounding undeveloped property as well as existing street patterns to ensure that the most efficient transportation network is achieved.
- 3. All streets should meet the minimum design standards established by the City. Existing standards such as minimum road width and length of cul-de-sac streets have been evaluated in terms of safety (emergency vehicles access) and street maintenance (snowplowing). The minimum right-of-way width for local streets is 50 feet and that the maximum length for cul-de-sac streets should be 700 feet.
- 4. In areas where existing streets have substandard right-of-way widths, the City shall acquire, to the extent possible, additional right-of-way through the subdivision process

For local streets the following criteria should be used to evaluate appropriate pavement widths:

24-foot street

- use in areas where zoning requires lots to be 20,000 square feet in area or larger
- on-street parking restricted to one side
- consider additional parking restrictions for through streets

28-foot street

- use in areas where zoning allows lots smaller than 20,000 square feet in area
- on-street parking restricted to one side

32-foot street

- use in areas where abutting properties are occupied or zoned for two-family or multiple-family dwellings or on through streets where on-street bicycle/pedestrian traffic is a factor
- if on-street parking is allowed on both sides of street, consider separated bicycle/pedestrian facilities



It should be noted that streets currently exist which are less than 24 feet in width. While substandard streets may be maintained at their current design, in no case shall streets be reconstructed at width less than 20 feet. Substandard streets shall be evaluated based on their use characteristics (i.e. land use intensity, on-street parking, bicycle/pedestrian traffic, etc.).

The City recognizes that it may not be feasible to reconstruct existing streets to the preceding standards. Specifically, existing streets may be rebuilt to their existing width (but not less than 20 feet). Curb and gutter will be installed where necessary for drainage purposes or where traffic dictates.

The City has completed a long-term pavement inventory which quantifies and prioritizes improvements and establishes a long-term strategy for financing those improvements. The plan includes a process for evaluating reconstruction projects, including early identification of project obstacles (i.e. lack of right-of-way) and early neighborhood involvement. In this regard, the City's standard Planning Process of strategy, inventory, policy planning, project planning, and implementation should be employed.

Based on the City's Subdivision Regulation minimum street right of way width has been established as follows:

- Arterial Street = 100 feet
- Collector Street = 60 feet
- Local Street = 50 feet

Traffic Calming

Traffic calming is an approach which is generally used to accomplish one or more of the following primary objectives:

- Reduce speeds on local streets.
- Reduce cut-through (non-local) traffic levels on local streets.
- Improve safety and usability for non-motorized traffic.

Under certain circumstances, traffic calming can be used on collector level roadways to reduce speeds, primarily at intersections. However, the focus is on "returning neighborhood streets to the neighborhood."



Traffic calming measures are best evaluated and implemented within the context of the overall transportation network serving the City. However, the types of measures identified below should be kept in mind as possible "tools in the toolbox:"

• Traffic circles/roundabouts



- Lateral lane shifts roadway striping
- Curb extensions/neckdowns at intersections



Raised crosswalks



• Diverters – close access to street





Driver feed-back (dynamic) speed signs



Traffic calming measures should be reviewed on a case-by-case basis but should be evaluated within the context of the overall street network and from the perspective broad based policy objectives.

The City has developed and adopted an evaluation process to document processes and procedures for locating and installing traffic devices, to include: signage, pavement markings and traffic calming devices specifically within neighborhoods to address speeding, traffic control (stop signs) and cut through traffic issues.

EXISTING AND PLANNED NON-MOTORIZED TRANSPORTATION NETWORK

This section addresses network needs for walking and bicycling within the City of Shorewood. This section also addresses the needs of people using wheelchairs and assistive mobility devices such as mobility scooters, as they are considered pedestrians.

Enhancing the non-motorized elements of Shorewood's transportation system is a key goal in terms of improving transportation sustainability in the city and in the region. This approach gives residents an alternative to driving, supports transportation options for people who do not have consistent access to a personal vehicle, and encourages healthy activities and lifestyles

Complete streets are a process for developing a transportation network that best accommodates

all modes of transportation. Planners and designers must systematically consider all modes when developing their long-range plans and short-term maintenance and construction projects. The City of Shorewood supports considering implementing a complete street process in roadway reconstruction projects where appropriate and feasible.

"Complete Streets" are streets that are designed, built and operated to enable safe access for all users, in that pedestrians, bicyclists, motorists and public transportation users of all ages and abilities are able to safely move along and across the street right-of-way.



Existing and Planned Non-Motorized Transportation Network

The non-motorized transportation network in Shorewood consists of sidewalks and multi-use paved trails. Sidewalks are located along selected local streets, providing connections to the trail system. Multi-use paved trail segments are also located along several key roadways. Existing Bicycle and Pedestrian Network facilities are illustrated on page 160.

Sidewalks and/or trails are recommended to be located adjacent to all new roadways within Shorewood to accommodate pedestrian and other non-motorized movement in a safe manner, separate from vehicular traffic. The City supports completing gaps in the system network when consistent with the City's trail plan as funding is available.

Planned Regional Non-Motorized Transportation Network

The Metropolitan Council 2040 TPP encourages the use of bicycles as a mode of transportation and establishes a Regional Bicycle Transportation Network (RBTN) to establish an integrated network of on street bikeways and off-road trails that complement each other to improve conditions for bicycle transportation at the regional level. The RBTN identifies Tier 1 and Tier 2 alignments where existing regional or other trails exist or where a specific alignment has been identified. The RBTN also identifies Tier 1 and Tier 2 corridors where specific alignments have not yet been defined.

Within Shorewood, the RBTN includes two Tier 1 RBTN corridors and one Tier 2 RBTN corridor. The Tier 1 corridors include: The Lake Minnetonka LRT Regional Trail running east/west through the City, linking the City of Hopkins and Carver Park Reserve, and; CSAH 19 north of Lake Minnetonka LRT Regional trail to the City of Tonka Bay. The Tier 2 corridor generally extends east-west along the TH 7 corridor and is consistent with planned improvements identified in Hennepin County's 2040 Bicycle Transportation Plan. With both of these corridors, existing land use patterns and major roadway barriers do not provide other opportunities for an efficient and successful bikeway route.

Non-Motorized Transportation Design Considerations

Design dimensions for sidewalks are recommended to be five-feet or wider, with a minimum of a four-foot wide boulevard between the sidewalk and the curb. Increased separation improves pedestrian comfort and provides space for street signs and snow storage.

Several types of bicycle facilities exist within the metropolitan area, with each having its own benefits and limitations depending on the surrounding environment and intended audience. Bicycle facilities include: off-street facilities, protected bikeways, buffered bicycle lanes, conventional bicycle lanes, bicycle boulevards, and wide paved shoulders.



Multi-use trails are recommended to be a minimum of eight-feet wide. Regional trails are recommended to be a minimum of ten-feet wide due to higher use and the design requirements to comply with federal funding. Trails must have a two-foot wide clear zone on either side to reduce hazards for bicyclists and provide a recovery zone if a bicyclist leaves the edge of the trail. The clear zone can be paved or turf surface. No signs, furnishings, trees, or other obstructions can be in the clear zone.

Paved shoulders should be a minimum of four-feet wide if intended for bicycle and pedestrian use. Four-foot wide shoulders are adequate on streets with traffic volumes below 1,000 vehicles per day. Six- to eight-foot shoulders are recommended when traffic volumes exceed 1,000 vehicles per day. A wider shoulder improves pedestrian and bicyclist safety and comfort when vehicle traffic speeds and volumes are higher.

As non-motorized facilities are planned and designed, the City should consult additional planning and design resources, including:

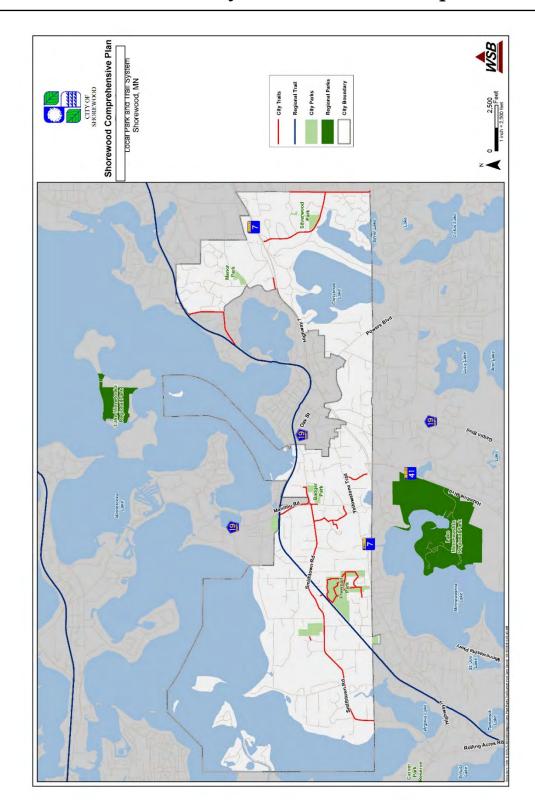
- Hennepin County Bicycle Transportation Plan
- Hennepin County Pedestrian Plan
- Hennepin County Bottineau LRT/Metro Blue Line Extension Bicycle Study
- MnDOT Bikeway Facility Design Manual
- MnDOT Complete Streets Implementation Resource Guide
- Minnesota Manual on Uniform Traffic Control Devices
- Guide for the Development of Bicycle Facilities American Association of State Highway and Transportation Officials
- Guide for the Planning, Design, and Operation of Pedestrian Facilities American Association of State Highway and Transportation Officials
- Public Rights of Way Accessibility Guidelines (PROWAG) US Access Board

Accessibility is a very important consideration for non-motorized design. All new pedestrian and bicycle facilities must meet the ADA (Americans with Disabilities Act) accessibility guidelines established in PROWAG. The guidelines in PROWAG address the design needs of people with physical and/or visual impairments. Accessibility will become increasingly important over the next 20 years due to demographic changes. Baby boomers are aging and the population over age 65 is increasing. People over 65 are more likely to have physical and/or visual impairments that affect their ability to get around. To address accessibility issues, it is recommended that the City



develop and implement an ADA transition plan to bring sidewalks, trails, and intersections into compliance with ADA.







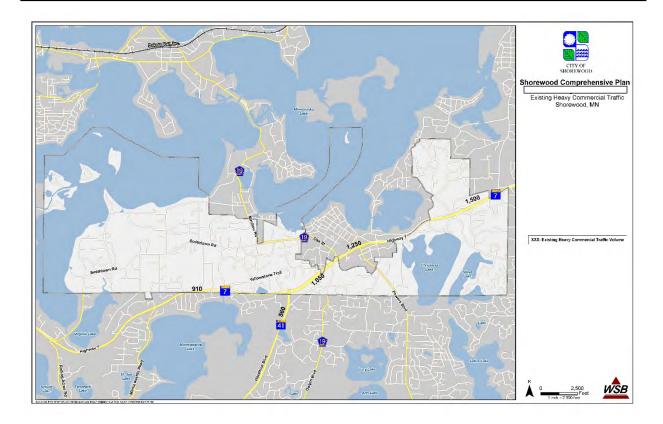
FREIGHT

Freight transportation in Shorewood is primarily served by arterial roadways. The graphic below shows the City's freight system and potential freight generators.

There are no large freight traffic generators or intermodal facilities within the city. Most truck is passing through Shorewood on trips to, from, and through the Twin Cities. Freight traffic generators within Shorewood are located along the TH 7. Freight generators include concentrations of commercial land uses along TH 7.

The graphic below also shows Heavy Commercial Average Annual Daily Traffic (HCAADT) within the City of Shorewood. TH 7 carries a number of heavy commercial vehicles (1250/1500 east of TH 41 and 910 west of TH 41).

The Metropolitan Council 2040 TPP acknowledges several freight challenges that impact the city and the region. Freight traffic is expected to increase and place pressure on the region's highway and rail systems. While land use adjacent to the city's primary freight routes is generally compatible with these uses (industrial, commercial, etc.), there are several areas of existing and planned single-family residential housing or mixed use that lie adjacent to the arterial roadways.



TRANSIT

Existing Transit Service

The City of Shorewood is located within Transit Market Areas 4 and 5 in the Transit Capital Levy District, as shown in the 2040 Transportation Policy Plan (TPP). Dial-a-ride services from Metro Mobility and Transit Link are both available in Shorewood.

Scheduled transit service for Shorewood residents is currently provided by Metro Transit (a division of the Metropolitan Council). The table below outlines the existing transit service in the City of Shorewood.



Existing Transit Serving Shorewood

| Route Number | Service Route/Area | Service Description |
|--------------|--|---------------------|
| 670 | Minnepolis, Hopkins, Minnetonka and Excelsior | Express |
| 671 | Minneapolis, Tonka Bay, Excelsior, Greenwod, Deephaven and Minnetonka | Express |

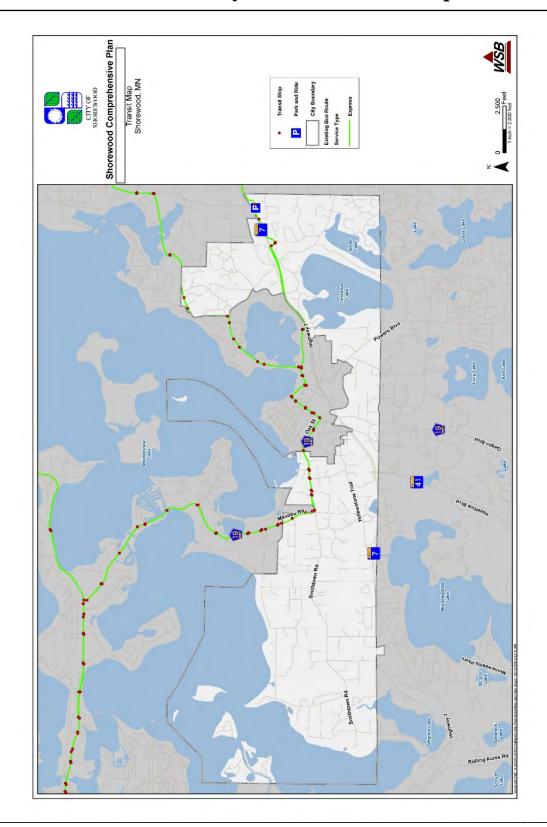
One Park and Ride facility is located within the City of Shorewood. The facility is located off of TH 7 on Denton Avenue and Vine Hill Road. shows the existing Transit Facilities in and adjacent to the City of Shorewood.

Transitway Service

LRT projects are very capital intensive because they require dedicated right-of-way with rail and electric power installations, and the cars themselves are expensive. Due to the costs involved, LRT corridors generally need to be on a regional scale to justify the necessary investments. Therefore, the planning and implementation of LRT systems are primarily the responsibility of the Metropolitan Council and the metro-area counties. Because of their size, the cities of Minneapolis and St. Paul have also been very involved in the planning process for certain corridors.

The TPP's transit investment plan does not show any transitway investments planned for the City of Shorewood in the current revenue scenario. The transitway corridor which has the most relevance for City of Shorewood is the Green Line Extension (Southwest Light Rail Corridor). This corridor is a 15-mile route between Eden Prairie and downtown Minneapolis that passes through Minnetonka, Hopkins and St. Louis Park approximately 7 miles from the City of Shorewood.







AVIATION

Cities are responsible for airspace protection to reduce hazards to air travel within its part of the region. There are no existing or planned aviation facilities within the City of Shorewood. The closest airport to Shorewood is the Flying Cloud Airport; one of seven publicly owned airports in the Metropolitan Airports Commission (MAC) system. The airport's role in the MAC system is to serve as a reliever to the Minneapolis-St. Paul International Airport, and serve personal, recreational, and some business aviation users in the northwest metropolitan area. MAC is updating the airport's long-term comprehensive plan to align with existing and forecasted activity levels. Due to the distance from Shorewood, no existing or future impacts from the airport are forecasted that may otherwise affect the City of Shorewood.

Given the distance to the nearest airports, there are no radio beacons or other air navigation aids located in off-airport locations in Shorewood. The city is not within the area of influence of any of the airports identified above, and is therefore not subject to associated land use restrictions.

Any proposed structure over 200 feet shall require notification to the Federal Aviation Administration (FAA) at least 30 days prior to construction, using FAA Form 7460-1 "Notice of Proposed Construction or Alteration," as defined under code of federal regulations CFR - Part 77. The City's zoning code limits structure height; therefore, it is unlikely that any structures in the city will require FAA notification. The City will support, as necessary, compliance with FAA and Metropolitan Council requirements concerning visual and/or electronic interference with airport communications, air traffic operations, and other aviation land-use capability guidelines. There are currently no heliports in Shorewood any known plans to construct one.

Seaplane and ultra-light operations are allowed on the surface water of Lake Minnetonka. Seaplane traffic in Shorewood has not been identified as a problem at the present time. However, as use of Lake Minnetonka increases, the potential for problems to arise also increases. This use of the lake should be monitored and at such time it is determined to be a problem, a regional study on the topic should be conducted to determine if there is a need for a specialized area of the lake to handle seaplane operations. This study should be a joint effort between all lake communities and may best be handled by the Lake Minnetonka Conservation District.

CONCLUSION AND NEXT STEPS

The purpose of this Transportation Plan is to set a multimodal transportation vision for the City of Shorewood through the year 2040. Goals and specific strategies have been identified



collaboratively by the City, Hennepin County, MnDOT and citizens within the framework of Metropolitan Council requirements. The vision and associated strategies outlined in this plan were established by considering existing and forecasted conditions, City of Shorewood priorities, regional travel patterns and a variety of other factors.

As the owners of the transportation network in the City of Shorewood (i.e. City of Shorewood, Hennepin County and MnDOT) advance their respective Capital Improvement Programs (CIPs), this plan is intended to serve as an important resource and reference in establishing priorities and advancing transportation projects for implementation. Advancing these projects from a planning to implementation phase will require collaborative discussions among the City, County, MnDOT, adjacent communities, Metropolitan Council, residents and others to conduct traffic studies, finalize designs, preserve rights-of-way, obtain environmental clearances and leverage necessary financial resources. The following are key objectives the City should consider with this transportation plan:

- 1. Revise the existing roadway Functional Classification system as follows:
 - a. Smithtown Road: CASH 19 to City Limits Major Collector to "Other" Arterial
 - b. Vine Hill Road: TH 7 to City Limits Local Street to Major Collector
 - c. Old Market Road: TH 7 to Vine Hill Road Local Street to Major Collector
 - d. Eureka Road: Smithtown Road to TH 7 Local Street to Major Collector
 - e. Delton Avenue: City of Minnetonka Boarder to Old Market Road Local Street to Major Collector
- 2. The only roadway that is approaching capacity is CSAH 19 north of Smithtown Road. All other Arterials and Major Collectors in Shorewood currently exhibit traffic volumes below or within the range of the planning level capacity thresholds. The City should work with Hennepin County on future design considerations for CSAH 19.
- As development or re-development continues, the City should determine detailed design consideration of access management, intersection traffic control and congestion mitigation, the City should require a traffic study providing detailed operational analysis be completed.
- 4. The City should continue to work with MnDOT, Hennepin County and adjacent Cities in reviewing and improving traffic flow on TH 7. Specifically at Minnewashta Parkway/Church Road and at Vine Hill Road.

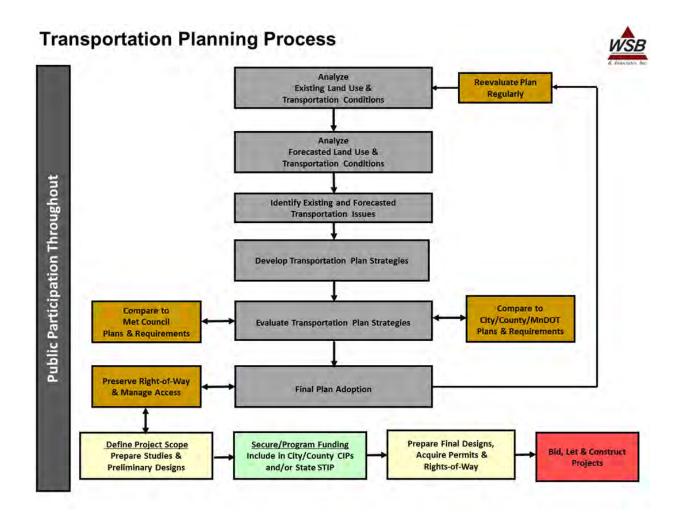
Shorewood 2040 Comprehensive Plan



- 5. The conclusions and recommendations identified by the "Smithtown Rd., Country Club Road, Yellowstone Trail and Lake Linden Drive" Traffic Committee should continue to be implemented.
- 6. Roadway design and right of way standards will follow the requirements outlined in the City's Subdivision Ordinance.
- 7. Traffic calming can be used on some local and collector level roadways to reduce speeds, primarily at intersections. Traffic calming measures should be reviewed on a case-by-case basis but should be evaluated within the context of the overall street network and from the perspective broad based policy objectives.
- 8. The City has developed and adopted an evaluation process to document processes and procedures for locating and installing traffic devices, to include: signage, pavement markings and traffic calming devices specifically within neighborhoods to address speeding, traffic control (stop signs) and cut through traffic issues.
- 9. The City of Shorewood supports considering implementing a complete street process in roadway reconstruction projects where appropriate and feasible.
- 10. Sidewalks and/or trails should to be located adjacent to all new roadways within Shorewood to accommodate pedestrian and other non-motorized movement in a safe manner, separate from vehicular traffic when consistent with the City's trail plan as funding is available.
- 11. Design and construction for sidewalks and trails will follow City, Hennepin County and MnDOT standards.

The figure below outlines the entire planning and project development process required for transportation projects from concept plans to construction implementation.







INTRODUCTION

Purpose

The Water Plan describes the City's existing water distribution system and water demand, projects future water demand through the year 2040, and proposes infrastructure improvements to accommodate that demand. This Plan has been prepared according to the guidelines established by the Metropolitan Council and the Minnesota Department of Natural Resources (DNR). The Water Supply Plan (included here by reference) follows the template provided by the DNR, while this Comprehensive Water Plan expands upon the template and provides further information for City and Metropolitan Council planning.

This Comprehensive Water Supply Plan has been prepared according to the guidelines established by the Metropolitan Council and the Minnesota Department of Natural Resources (DNR) per Minnesota Statute 473.859, which requires water supply plans to be completed by all local units of government in the seven-county Metropolitan Area. The Shorewood Water Supply Plan is included by reference and conforms to the template provided by the DNR, while this Comprehensive Plan expands upon the template and provides further information for City and Metropolitan Council planning.

Background

The scope of this study includes the population projections from the City's overall Comprehensive Plan, consistent with the Metropolitan Council Environmental Services (MCES) City System Statement, to project water system demands for the City of Shorewood through the year 2040. The 2040 service area was defined based on the Land Use Plan prepared for the City's 2040 Comprehensive Plan. Existing and future water demands were calculated for the City based on the historical data and the Thrive MSP 2040 Plan population projections.

Data Available

The following sources of information were used to prepare this report:

- Water Supply Plan for the City of Shorewood, prepared by WSB & Associates, Inc.
- MCES System Statement for the City of Shorewood
- Water usage data as reported by the City to the DNR's Minnesota Permitting and Reporting System (MPARS)



 Wellhead Protection Plan for the City of ShorewoodWater Use Categories and Definitions

General water use categories and definitions used in this report, as defined by the Department of Natural Resources, are as follows:

- **Residential** uses consist of water being used for normal household purposes, such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns and gardens.
- *Institutional* uses consist of those for hospitals, nursing homes, day care centers, and other facilities that use water for essential domestic requirements. This includes public facilities and public metered uses. Institutional water-use records are typically maintained for emergency planning and allocation purposes.
- *Commercial* uses consist of water used by motels, hotels, restaurants, office buildings, and commercial facilities.
- *Industrial* uses consist of water used for thermoelectric power (electric utility generation) and other industrial uses such as steel, chemical and allied products, food processing, paper and allied products, mining, and petroleum refining.
- Wholesale deliveries consist of bulk water sales to other public water suppliers.
- Unaccounted water is the volume of water withdrawn from all sources minus the volume sold.
- *Non-essential water uses* as defined by Minnesota Statutes 103G.291, include lawn sprinkling, vehicle washing, golf course and park irrigation, and other non-essential uses. Some of the above categories also include non-essential uses of water.

Community Engagement

The City of Shorewood has implemented regulation to reduce demand and improve efficiency in its water system. During May 1st through September 30th each year, residents can water lawns only before 11:00 a.m. and after 4:30 p.m. per Shorewood City Code, Chapter 9: Section 903.12 Subd. 2. This regulation helps prevent wasteful irrigation and reduces summer season water demands. A critical water deficiency ordinance has also been established in Shorewood City Code, Chapter 9: Section 903.12 Subd. 1.

The Minnehaha Creek Watershed District (MCWD) provides education about rain gardens and native and drought tolerant landscaping and has a cost share program to encourage clean-water landscaping.



The City has implemented the following education and outreach programs:

- Consumer Confidence Reports prepared annually
- Shore Report, the City newsletter, prepared each month
- Information available at utility and public buildings and on the City website (http://www.ci.shorewood.mn.us/)

Wellhead Protection

Long-term preventative programs and measures for the City's existing water system will help reduce the risk of emergency situations. The City of Shorewood has a number of programs to help reduce these risks. This includes a Wellhead Protection Plan (WHPP) that was adopted in December of 2015 and is due to be updated in 2025. It lists the following goals:

- 1. Maintain or improve the current level of water quality so that the municipal water supply will continue to meet or exceed all applicable state and federal water quality standards.
- 2. Continue to supply sufficient water quantity for system users and emergency needs.
- 3. Provide and promote activities that protect the source water aquifer that provides water to the municipal system. This will include increased public awareness of the Wellhead and Source Water Protection Program and groundwater-related issues as well as management of the identified potential contaminant sources and conveyance mechanisms within the Drinking Water Supply Management Area (DWSMA).
- 4. Continue to collect data to support future wellhead and source water protection efforts.

In order to achieve these objectives, the WHPP lists the following measures to be implemented:

- Well Management
 - o Promote proper sealing of abandoned, unused, unmaintained, or damaged wells
 - o Identify remaining unlocated wells within the DWSMA
 - o Educate the public about proper well management
 - o Identify new high-capacity wells within the DWSMA
 - o Continue to monitor the water quality from the City's wells
 - o Update the Inner Wellhead Management Zone (IWMZ) surveys
 - o Monitor and work to minimize impacts within the IWMZ area
- Public Education
 - o Foster public support for and understanding for the WHPP
 - Develop an understanding for the location of the gas and oil pipelines within the DWSMA



- Storage Tank Management
 - o Educate owners of the nine (9) storage tanks greater than 1,100 gallons within the moderate vulnerability area of the DWSMA on the importance of spill prevention
- Data Collection
 - o Continue to collect and maintain local geologic and hydrogeologic data
 - o Evaluate the water quality monitoring strategy and results
 - Maintain up to date information about wells and potential contaminant sources within the DWSMA
- Land Use Planning and Zoning
 - o Consider the location of the DWSMA during land use planning and zoning
- Implementation
 - Track and report WHPP activities
- Evaluation
 - o Evaluate the WHPP

GROWTH AND DEMAND PROJECTIONS

The City of Shorewood is projected to experience gradual growth and development. The City's projected population and water demands are listed in the following table. The population projections were calculated using the Metropolitan Council estimated rate of growth through the year 2040 for the City of Shorewood and the known population and population served values from 2016. As of 2016, any new population growth will be serviced by the municipal water system. The total per capita water demand of 109 gallons per capita per day was calculated from the average 2012-2016 demand. A peaking factor of 2.6, which is the City's average 2012-2016 peaking factor, was applied to calculate maximum day demand. The maximum day demand is expected to reach 1.165 million gallons per day by the year 2040.

It is important to note that there are several connections located in the south-central part of Shorewood that receive water from the Cities of Chanhassen, Excelsior, and Tonka Bay. The City estimates that 151 persons are served by intercommunity connections. Given the peaking factor and the total per capita water demand used in this study, the connections supplied by neighboring communities require an estimated maximum day demand of 0.043 million gallons per day. This maximum demand flow was removed from the City-wide maximum demand displayed in the table on the following page, prior to distributing total maximum demand between the East and West systems based on historical water pumping data.



The expected increase in demand through the year 2040 was assigned to each system based on the location of expected development or redevelopment.

Projected Annual Water Demand

| Year | Projected Population Served | Projected Per Capita Water Demand (GPCD) | Projected Average Demand (MGD) | Total Projected Maximum Demand (MGD) | East System Projected Maximum Demand (MGD) | West System Projected Maximum Demand (MGD) |
|------|-----------------------------------|---|---|--|--|--|
| 2017 | 3,880 | 109 | 0.423 | 1.100 | 0.591 | 0.465 |
| 2018 | 3,890 | 109 | 0.424 | 1.102 | 0.592 | 0.468 |
| 2019 | 3,900 | 109 | 0.425 | 1.105 | 0.592 | 0.471 |
| 2020 | 3,910 | 109 | 0.426 | 1.108 | 0.592 | 0.473 |
| 2021 | 3,920 | 109 | 0.427 | 1.111 | 0.592 | 0.476 |
| 2022 | 3,930 | 109 | 0.428 | 1.114 | 0.592 | 0.479 |
| 2023 | 3,940 | 109 | 0.429 | 1.117 | 0.592 | 0.481 |
| 2024 | 3,950 | 109 | 0.431 | 1.119 | 0.593 | 0.484 |
| 2025 | 3,960 | 109 | 0.432 | 1.122 | 0.593 | 0.487 |
| 2030 | 4,010 | 109 | 0.437 | 1.136 | 0.594 | 0.500 |
| 2040 | 4,110 | 109 | 0.448 | 1.165 | 0.596 | 0. |

GPCD = gallons per capita per day

MGD = million gallons per day

PROPOSED IMPROVEMENTS

The City of Shorewood's water system will require maintenance and trunk watermain expansions through the year 2040. The next table lists the improvements proposed, along with estimated dates of implementation and costs, in order to maintain the City's system. The City will consider expanding its water distribution system where feasible and where additional looping will improve distribution.

Proposed Capital Improvements

| Year | Improvement | Estimated Cost* | | | |
|------|---|-----------------|--|--|--|
| | Boulder Bridge Building | \$60,000 | | | |
| | Boulder Bridge Well Motor Control Center | \$200,000 | | | |
| 2018 | Well House Water Meters | \$6,000 | | | |
| | SE Area Well Residing | | | | |
| | Water Mains | \$750,000 | | | |
| | Amesbury Well Anti-Corrosion and Pipe Coatings | \$30,000 | | | |
| 2019 | Well House Water Meters | \$12,000 | | | |
| | Boulder Bridge Dehumidifier | \$5,000 | | | |
| | Boulder Bridge Well Motor | \$45,000 | | | |
| 2020 | Boulder Bridge Anti Corrosion and Pipe Coatings | \$30,000 | | | |
| | Well House Water Meters | \$6,000 | | | |

^{*}Values listed include both direct and indirect costs.

Proposed Distribution

To provide service to future and existing developments, the City will need to expand trunk watermain in several areas. Areas in need of expansion through the year 2031 were identified in the 2012 Water Distribution Plan Update, included with this report by reference. The main goal of the 2012 Water Distribution Plan was to provide recommendations for the City's water system expansion including a Capital Improvement Plan cost forecast for watermain segments, alternative construction methods to reduce overall project costs, policy alternatives to encourage residents to connect to the City's distribution system, and alternatives for funding the expansion of the system. The plan projected a \$26 million investment to expand the water distribution network over a twenty-year time span. The majority of the plan focused on the expansion of the system by proposing the addition of lateral watermain (8-inch diameter and smaller) to provide general distribution of water to properties, with a few trunk mains (10-inch diameter and greater) to provide water distribution to networks of lateral watermain.

The City of Shorewood anticipates expansion of the water distribution system by neighborhood request and where needed to provide looping for the existing system.

Community Framework - Sanitary Sewer



INTRODUCTION

The Sanitary Sewer Plan projects future wastewater flows, and outlines the timing and sequence of future improvements to accommodate those flows. It also allows the City and the Metropolitan Council to build and improve their sanitary sewer collection and treatment systems so that development can occur in the most efficient and cost-effective manner.

The City of Shorewood's Sanitary Sewer Plan was developed to align with the Metropolitan Council's Thrive MSP 2040 Water Resources Policy Plan. The Thrive MSP 2040 Plan was approved in May 2015 and outlines regional goals for the wastewater system, including environmental sustainability, water reuse, and water conservation. Additionally, the Thrive MSP 2040 Plan includes population, household, and employment projections, and projected wastewater flows.

Despite projected population increases, the Metropolitan Council forecasts that sanitary sewer flows from the City of Shorewood will decrease by approximately 5% by the year 2040 due to decreasing water use trends. This Sanitary Sewer Plan outlines the locations in which the Metropolitan Council can expect to see changes in wastewater flows, allowing the Council to determine if capacity upgrades will be required at regional wastewater treatment plants and interceptors. This plan also serves as a guiding document for City infrastructure improvements and expansion.

FORECASTS

Population

The Metropolitan Council publishes population and sewer usage forecasts for each city in the Metropolitan Area. These forecasts help cities prepare infrastructure for growth and promote continued maintenance of municipal infrastructure. The forecast data in the Population Projections table is from the Metropolitan Council's Local Planning Handbook Community Page for Shorewood. Nearly the entire population of Shorewood is served by the public sanitary sewer system, save the few Individual Sewage Treatment Systems (ISTS) described in Chapter 3. For the purposes of this analysis, the City assumed that the entire population is sewered.

Population Projections

| Total (Entirely Sewered) | | | | | |
|--------------------------|-------------------------|---|--|--|--|
| Population | Households | Employment | | | |
| 7,307 | 2,658 | 1,113 | | | |
| 7,400 | 2,800 | 1,300 | | | |
| 7,500 | 2,910 | 1,340 | | | |
| 7,600 | 3,000 | 1,400 | | | |
| | | | | | |
| | 7,307 7,400 7,500 | Population Households 7,307 2,658 7,400 2,800 7,500 2,910 | | | |

Community Framework – Sanitary Sewer

Population, households, and employment are all projected to increase gradually over the next few decades. The population of the City is projected to increase by approximately three percent between now and the year 2040. The following table shows estimates of which MCES Meters and Interceptors can expect to see growth and an increase in sanitary flow, based on existing land use and potential for development/redevelopment.

Household and Employment Projections by MCES Meter & Interceptor

| | | 20 | 2020 | | 2030 | | 2040 | |
|-------|-------------|------------|------------|------------|------------|------------|------------|--|
| Meter | Interceptor | Households | Employment | Households | Employment | Households | Employment | |
| M412 | 7016 | 157 | 322 | 157 | 330 | 157 | 339 | |
| | 7017 | 1,144 | 275 | 1,162 | 284 | 1,178 | 301 | |
| | 7017-1 | 271 | 589 | 339 | 592 | 388 | 601 | |
| M415 | 7017-2 | 117 | 34 | 122 | 41 | 127 | 54 | |
| | 7017-3 | 223 | 11 | 228 | 22 | 233 | 33 | |
| | 7017-4 | 52 | 0 | 53 | 0 | 54 | 0 | |
| M416 | 6-GW-649 | 94 | 0 | 95 | 0 | 97 | 0 | |
| M417 | 7017 | 41 | 46 | 43 | 48 | 45 | 49 | |
| M420 | 7017 | 15 | 0 | 15 | 0 | 15 | 0 | |
| M424 | 6-DH-645 | 138 | 0 | 140 | 0 | 143 | 0 | |
| W1424 | 6-DH-645A | 168 | 0 | 170 | 0 | 172 | 0 | |
| M439 | 7017 | 290 | 23 | 294 | 23 | 297 | 23 | |
| M455 | 6-MT-647 | 90 | 0 | 92 | 0 | 94 | 0 | |
| | Total | 2,800 | 1,300 | 2,910 | 1,340 | 3,000 | 1,400 | |

Projected Wastewater Flows

The wastewater flow is treated at the Blue Lake WWTP. The Total Wastewater Projections table lists projected total average wastewater flow from Shorewood to the Blue Lake WWTP, as estimated by this Sanitary Sewer Plan and by the MCES Water Resources Policy Plan (WRPP). Note that the projections used in this report, based on MCES meter data and unmetered flow estimates, are different from the flows projected in the WRPP. This is because the MCES WRPP projections were based on flow data from 2010, a year in which the City of Shorewood had uncharacteristically high wastewater flows. The projections used in this report are based on flow data from 2012-2016, which is more recent and captures a wider period of time.

Community Framework - Sanitary Sewer

Total Wastewater Projections

| | 2020 Average Flow (MGD) | 2030 Average Flow (MGD) | 2040 Average Flow (MGD) |
|---------------------|----------------------------|----------------------------|----------------------------|
| Sanitary Sewer Plan | 0.77 | 0.79 | 0.81 |
| MCES WRPP | 0.93 | 0.91 | 0.89 |

SANITARY SEWER DESIGN CRITERIA

Land Use

Detailed information and figures regarding Shorewood's land use are included in the Land Use Plan. Using existing land use, metering data, and future land use information, current and future flows were calculated and divided by meter service area as described below. This analysis considered the land use designations listed in the Assumed Wastewater Flow by Land Use Type Table. The largest development within Shorewood is the redevelopment of the Minnetonka Country Club site into 142 single-family residential lots, which was approved in 2016.

Estimated Average Flows – Existing

The existing wastewater flows within the City were estimated based on a combination of MCES meter data and land use designations. The MCES meter data provides flow rates for broad metersheds. The City estimated flow rates for the smaller sanitary sewer sub-districts and lift station service areas by calibrating flow estimates based on land use designations and acreages with the MCES meter data.

Estimated Average Flows – 2040 Build Out

Once existing flows were estimated, future flows were projected based on Land Use Plan. Parcels that are planned to be developed were assigned wastewater flow rates in accordance to their land use type. The following table lists the assigned flows, which include design considerations for inflow and infiltration (I/I). More information on I/I and how it relates to the sanitary sewer system is provided later in this section.



Community Framework – Sanitary Sewer

Assumed Wastewater Flow by Land Use Type

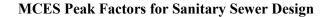
| Land Use | Daily Flow (gallons/acre) |
|-----------------------------------|------------------------------|
| Minimum Density Residential | 99 |
| Low Density Residential | 270 |
| Low to Medium Density Residential | 450 |
| Medium Density Residential | 810 |
| High Density Residential | 1,440 |
| Public/Institutional | 600 |
| Commercial | 800 |
| Office | 800 |
| Industrial and Utility | 800 |
| Park | 0 |

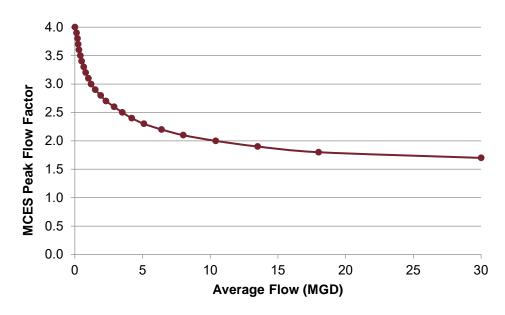
Future flows were added to existing flows to determine if existing pipe capacities will be sufficient. Recommendations are provided later in this section to address locations where development will lead to pipes that are under capacity.

Peak Flow Factors

To ensure that the sanitary sewer system is capable of handling flow fluctuations throughout the day, peak flows are calculated using peak factors based on average flows. The peak factors are provided by the Metropolitan Council and scale based on average flows. Pipes that serve small generator customers are more likely to experience large fluctuations in flows. Therefore, the peak factor decreases as average flow increases. The Metropolitan Council peak flow factors for sanitary sewer design used in this report are shown in the graphic below. Note that historical peak factors calculated from MCES meter data, as available, are used in lieu of the standard peak factors to calculate existing peak flows.







Intercommunity Flows

The City of Shorewood has several intercommunity flows, as listed in the Intercommunity Flows table below and indicated previously.

Intercommunity Flows

| Inflow to S | Inflow to Shorewood | | 1 Shorewood |
|-------------|---------------------|---------------|-------------|
| From | From Metershed | | Metershed |
| Chanhassen | M415 | Minnetrista | M455 |
| Greenwood | M424 | Victoria M439 | |
| <u> </u> | | Tonka Bay | M420 |
| | | | M417 |
| | | Greenwood | M416 |
| | | Deephaven | M424 |
| | | Minnetonka | M412 |

SANITARY SEWER TRUNK RECOMMENDATIONS

The firm capacity, existing flow, projected flow, and projected residual capacity for each of the City's lift stations are listed in the table below. The existing wastewater flows were estimated based on metering

Community Framework - Sanitary Sewer

and billing data from MCES for 2012-2016 and the land use designations within each lift station's service area. The increase in projected flows was estimated based on the land use designations of areas that are expected to develop or redevelop by 2040. Standard MCES peak factors for sanitary sewer design were used to calculate peak flows, except for those lift stations located within metershed M415, where a historical peak factor calculated from MCES meter data was used to calculate existing peak flows. The standard peak factors were applied to calculate all 2040 peak flows.

Lift Station Capacity Analysis

| LS No. | Lift Station Location | Firm Capacity (gpm) | Existing Average Flow (gpm) | Existing Peak Flow (gpm) | 2040 Average Flow (gpm) | 2040 Peak Flow (gpm) | 2040 Residual Capacity (gpm) |
|-----------|-----------------------|---------------------------|-----------------------------------|--------------------------------|----------------------------|-------------------------|------------------------------------|
| 5 | Edgewood Rd | 250 | 28.6 | 192 | 28.6 | 137 | 113 |
| 6 | Smithtown Rd | 90 | 7.8 | 32 | 7.8 | 32 | 58 |
| 7 | Woodside Ln | 90 | 5.5 | 31 | 5.5 | 22 | 68 |
| 8 | Birch Bluff Rd | 250 | 5.7 | 33 | 5.8 | 24 | 226 |
| 9 | Minnetonka Blvd | 92 | 1.3 | 5.4 | 1.3 | 5.4 | 87 |
| 10 | Lakeway Terrace | 150 | 7.8 | 32 | 8.3 | 34 | 116 |
| 11 | Radisson Rd | 200 | 8.4 | 60 | 8.4 | 44 | 156 |
| 12 | Christmas Lake Point | 95 | 2.2 | 13 | 2.2 | 9.0 | 86 |
| 13 | Radisson Entrance | 30 | 0.1 | 0.7 | 0.2 | 0.8 | 29 |
| 15 | Enchanted Ln | 135 | 7.2 | 43 | 7.2 | 43 | 92 |
| 16 | Shady Island Rd | 110 | 0.8 | 14 | 0.8 | 14 | 96 |
| 17 | Shady Island Cr | 100 | 1.2 | 4.9 | 1.2 | 4.9 | 95 |
| 18 | Shady Island Point | 110 | 1.3 | 5.2 | 1.3 | 5.2 | 105 |
| 20 | Noble Rd | 80 | 1.9 | 11 | 1.9 | 7.7 | 72 |

The Trunk Sewer Capacity Analysis table lists the capacity, existing wastewater flow, 2040 projected flow, and residual capacity of the City's trunk sewers. The City identified trunk sewers based on the sewer mains that convey the majority of the wastewater flow generated in each metershed. Peak factors used to calculate peak flows are based on the recommended MCES factors displayed in the graphic on the previous page. This report does not analyze the capacity of the MCES interceptor sewers that pass through the City of Shorewood.



Community Framework – Sanitary Sewer

Trunk Sewer Capacity Analysis

| Location | Diameter | Trunk Capacity (gpm) | Existing Average Flow (gpm) | Existing Peak Flow (gpm) | 2040 Average Flow (gpm) | 2040 Peak Flow (gpm) | 2040 Residual Capacity (gpm) |
|-----------------------|----------|----------------------------|-----------------------------------|--------------------------------|-------------------------------|----------------------------|------------------------------------|
| Enchanted Ln | 9" | 532 | 11 | 42 | 11 | 42 | 488 |
| Grant Lorenz Rd | 15" | 1,130 | 43 | 174 | 43 | 174 | 953 |
| W 62 nd St | 10" | 679 | 56 | 224 | 56 | 225 | 488 |
| Vine Hill Rd | 9" | 562 | 35 | 140 | 35 | 140 | 419 |
| Minnetonka Blvd | 9" | 562 | 21 | 84 | 22 | 86 | 474 |

As seen in the two tables above, there are no required upgrades to the existing list stations and trunk sewers to provide service through the specified planning period. Additionally, no new trunk sewers and lift stations will be needed. Lateral sewers may be extended as development or redevelopment occur.

MCES Interceptor Facility Forecasts

The MCES interceptors used by each meter service area, as well as the 2040 forecasted flow to those interceptors, are listed in the following table. Note that the total flow listed may not correspond to the flow at every point along the interceptor, as the flow may accumulate along the interceptor path through the metershed. Also, note that the flow listed is only the flow generated in Shorewood and does not include any flows from neighboring communities that may also discharge into the metershed.

Community Framework – Sanitary Sewer

Projected 2040 MCES Interceptor Use

| Meter | Interceptor | 2040 Average Flow (MGD) | 2040 Peak Flow (MGD) | |
|--------|-------------|----------------------------|-------------------------|--|
| M412 | 7016 | 0.050 | 0.202 | |
| | 7017 | 0.319 | 1.149 | |
| | 7017-1 | 0.119 | 0.463 | |
| M415 | 7017-2 | 0.031 | 0.124 | |
| | 7017-3 | 0.061 | 0.245 | |
| | 7017-4 | 0.014 | 0.054 | |
| M416 | 6-GW-649 | 0.023 | 0.092 | |
| M417 | 7017 | 0.020 | 0.079 | |
| M420 | 7017 | 0.002 | 0.009 | |
| M424 | 6-DH-645 | 0.036 | 0.143 | |
| IVI424 | 6-DH-645A | 0.042 | 0.167 | |
| M439 | 7017 | 0.081 | 0.324 | |
| M455 | 6-MT-647 | 0.015 | 0.061 | |

I/I Analysis

Shorewood's sanitary sewer system currently consists of approximately 60 miles of sanitary main, fourteen lift stations, and 2.6 miles of forcemain, which were installed from the early 1970's onward. Those lift stations that have not been rehabilitated since the early 1970's, and the surrounding sanitary sewers, are more susceptible to I/I. An estimated 29% of the residential housing within the City was built before 1970. Of the pre-1970 era private services, none have been evaluated for I/I aside from the sump pump inspections mentioned previously.

The amount of clearwater flow generated within the City was estimated by calculating the average annual and peak quarter I/I rates, equal to the average wastewater flow minus the base wastewater flow, using data from 2012-2016. The average flow, both annual and quarterly, was calculated from MCES meter data. Because much of the wastewater flow in the City of Shorewood is unmetered, the finest time scale for which flow estimates are available is quarterly. The peak quarter flow was determined for each year from 2012-2016 and those five values were averaged to give the peak quarter flow listed in the following table. The base flow was approximated as the winter water usage, which was calculated as the average water pumped in December through February from 2012-2016 times a historical ratio of water used to water pumped (presented as Total Water Delivered divided by Total Water Pumped in the City's Water

Community Framework - Sanitary Sewer



Supply Plan). Because the City has two separate water systems, West and East, a separate I/I estimate was made for each system based on the corresponding sanitary sewer districts.

I/I Estimate

| | West System | East System |
|-----------------------------------|-------------|-------------|
| Average Annual Flow (MGD) | 0.207 | 0.161 |
| Peak Quarter Flow (MGD) | 0.245 | 0.195 |
| Base Sanitary Flow (MGD) | 0.101 | 0.129 |
| Average Annual I/I Rate (MGD (%)) | 0.106 (51%) | 0.032 (20%) |
| Peak Quarter I/I Rate (MGD (%)) | 0.144 (59%) | 0.066 (34%) |

I/I Reduction

The City's strategy for preventing excess I/I includes requiring all development to conform to City standards. City code prohibiting the discharge of storm water to the sanitary sewer system and requiring the disconnection of existing I/I sources is excerpted below.

904.09 PROHIBITED DISCHARGES INTO THE SANITARY SEWER SYSTEM.

Subd. 1. Prohibited connections. No person shall discharge or cause to be discharged, directly or indirectly, any storm water, surface water, ground water, roof runoff, subsurface drainage or cooling water to any sanitary sewer. Any person having a roof drain, sump pump, unauthorized swimming pool discharge, cistern overflow pipe or surface drain connected and/or discharging into the sanitary sewer shall disconnect and remove any piping or system conveying the water to the sanitary sewer system.

In addition, the City has routine activities directed at recognizing and correcting I/I. The City's annual Street Improvement Projects include sewer televising, chimney seal installation, pipe lining, and manhole grouting. Some of the specific projects completed by the City of Shorewood to reduce I/I are shown in the next table. The costs listed only include sanitary sewer improvements.

Community Framework – Sanitary Sewer

I/I Activities Completed

| Project | Cost |
|---|----------|
| 2007 Wedgewood Dr, Teal Cir, Mallard Ln Improvements | \$7,369 |
| 2009 Reconstruction of Lift Station 16 | \$85,594 |
| 2010 Smithtown Ln, Harding Ln, Harding Ave Rehabilitation | \$5,014 |
| 2014 Utility & Street Improvements – Sunnyvale Ln | \$66,413 |
| 2014 Mill and Overlay Improvement Project (chimney seals) | \$4,375 |
| 2015 Mill and Overlay Improvement Project (chimney seals) | \$4,288 |
| 2015 Star Ln, Star Cir Improvements | \$14,026 |
| 2016 Mill and Overlay Improvement Project (chimney seals) | \$4,950 |

Given the public sanitary sewer and lift station improvements that have been completed to date, it is estimated that the majority of the remaining I/I in the system is from private sources. The City uses the sewer televising completed as part of its annual Street Improvement Projects to identify properties contributing I/I to the public system and works with property owners to remedy or eliminate these sources.

Although the rehabilitation that has been completed to date resulted in a reduction, the remaining I/I continues to be a concern and will be addressed. The City will continue to proactively identify I/I sources and take corrective actions. The City has budgeted \$70,000 annually for I/I reduction projects in addition to its other sanitary sewer improvement projects.

COST ESTIMATES AND FINANCING

The Capital Improvements table, below, lists the proposed capital improvements and their estimated costs. Because the City of Shorewood sanitary sewer system is largely built out, the capital improvements consist of maintaining and rehabilitating the existing system.

Capital Improvements

| Year | Description | Location | Estimated Cost |
|--------|--------------------------------|-----------------|-------------------|
| Annual | I/I Reduction | - | \$70,000 |
| 2019 | Lift Station 20 Rehabilitation | Noble Road | \$135,000 |
| 2020 | Lift Station 7 Rehabilitation | Woodside Road | \$120,000 |
| 2021 | Lift Station 10 Rehabilitation | Lakeway Terrace | \$140,000 |

Community Framework – Sanitary Sewer



SUMMARY AND OUTCOMES

The analysis is intended to provide assistance in planning for wastewater collection and treatment. The City anticipates that the design flows and criteria outlined will be used for utility planning as development continues. Tables and figures can be used to create budget-level estimates and schematic representations of infrastructure improvements, with specific sizing and routing to be determined during the design phase.



INTRODUCTION

Community facilities and services include lands, buildings, services and systems. The condition and availability of community facilities and services enhance the quality of life in the City. Community facilities should be well-planned and developed in a manner which serves as a good example for private development.

The purpose of this chapter is to present plans for the type and location of various community facilities. The Community Facilities Plan is not concerned with detailed schemes of development, operation, or programs of the various uses, rather, this Plan is offered as a general framework within which detailed plans and specific decisions regarding community facilities can be made and identify any future land needs. Many community facilities and services are most efficiently and economically provided on a joint basis with other nearby jurisdictions.

To be noted is that plans related to transportation, water supply, sanitary sewer and surface water management are technically considered "community facilities." Due to the amount of detail provide in such plans, they are provided as independent chapters of this Plan, or in the case of the Local Surface Water Management Plan, as an appendix. In this regard, plans for the following community facilities are provided in this chapter:

- Parks and Recreation
- Public Safety
- Solid Waste
- Natural Gas, Electrical Service, Cable Television and Street Lighting
- Municipal Buildings
- Schools



PARKS AND RECREATION PLAN

Introduction

At present, Shorewood's park system contains five major park facilities and a number of smaller areas which provide additional recreational opportunities. The City's park system contains approximately 100 acres of usable recreational land. Additional land exists which is part of the park system but is not considered suitable for active development. These areas, which contain wetlands or steep terrain, compliment the overall active park system by providing substantial areas of open space.

Classification System

Shorewood has a variety of park types which are components of the City's overall park system. As a basis for examining existing parks and projecting future park needs, a regional system of park classification is utilized. The following table, provided for reference in the Metropolitan Council's Thrive 2040 Regional Parks Policy Plan, provides a description of various types of regional and local park facilities.



| Component | Use | Service Area | Size | Site Attributes | Site Location |
|---------------------------------|--|--|--|---|--|
| Local Facilities | 1 | | | ı | |
| Mini-park | Specialized facilities that serve a concentrated or limited population or specific group such as tots or senior citizens. | Less than 1/4-mile radius | < 1 acre | | May be publicly or privately owned and/or incorporated into a development site, such as apartment, |
| Neighborhood park/playground | Area for intense recreational activities such as field games, court games, crafts, apparatus area, skating, and neighborhood centers. | ¼ to ½ mile radius to serve a population of 4,000 – 5,000 (one neighborhood) | < 25 acres | Physical geography suited for intense development. | Proximity to elementary schools or residential neighborhoods. |
| Community playfield | Area for intense recreational facilities such as athletic fields and swimming pools; could include a neighborhood use. | 3 - 5 neighborhoods or one community | 25 - 50 acres | Physical geography suited for intense development. | Proximity to secondary schools and other public facilities. |
| Community park | Area of natural or ornamental quality for outdoor recreation such as walking, viewing, sitting, picnicking; could have some field and court games. | 3 - 5 neighborhoods or one community | 25 - 100 acres | Affords natural features with varied physical geographic interest. | Proximity to community facilities and resources. |
| County park | Area of natural or ornamental quality for outdoor recreation such as walking, viewing, sitting, picnicking; could have some field and court games. | County | 25 - 100 acres | Affords natural features with varied physical geographic interest. | Proximity to community facilities and resources and/or where resource occurs |
| Conservancy lands | Area of natural quality such as watercourses and wetlands that are preserved for environmental or aesthetic benefits to the community and/or because of the negative environmental or economic effects of development in them. | Municipality, township, county | Variable, based on extent of resources. | Natural resources that merit preservation and that would be negatively affected by development | Where resource occurs. |
| | | | | | |



| Commonant | Hee | Service | C: | Site | Cito Location | | |
|--|--|--|---|---|---|--|--|
| Component | Use | Area | Size | Attributes | Site Location | | |
| Local Facilities | Local Facilities | | | | | | |
| Local linear parks, trail, corridors and parkways | Area developed for one or more varying modes of recreational travel such as hiking, biking, snowmobiling, horseback riding, cross-country skiing, canoeing and driving. | A neighborhood or several neighborhoods in a city or township | Contained within one city or township. Width and length minimums vary by locality. | On- or off-road trails that may or may not traverse scenic areas while assuring the trail treadway has no adverse effect on the natural resource base | Where needed to link neighborhoods to components of the local or regional recreation system and/or community facilities such as schools, libraries, commercial areas and to link to adjacent municipalities. | | |
| County linear parks, trail, corridors and parkways | Area developed for one or more varying modes of recreational travel such as hiking, biking, snowmobiling, horseback riding, cross-country skiing, canoeing and driving. | Several cities and/or townships in a county | Traverses one or more municipalities. Width and length minimums vary by county. | On- or off-road trails that may or may not traverse scenic areas while assuring the trail treadway has no adverse effect on the natural resource base | Often found adjacent to major roadways within the county. Other locations where needed to link cities to components of the local or regional recreation system and/or community facilities such as schools, libraries, commercial areas and to link to adjacent counties. | | |
| Regional Facilitie | es | | | | | | |
| Regional park | Area of natural or ornamental quality for nature-oriented outdoor recreation such as picnicking, boating, fishing, swimming, camping and trail uses. | 3 - 5 communities | 200 - 500 acres (100 minimum) | Complete natural setting contiguous to water bodies or watercourses where possible. | Where natural resource occurs particularly water | | |
| Regional park reserve | Area of natural quality for nature-oriented outdoor recreation such as viewing and studying nature, wildlife habitat, conservation, swimming, picnicking, hiking, boating, camping and trail uses. | County, multicounty area | 1000+ acres; sufficient area to encompass the resource envisioned for preservation | Diversity of unique resources, such as topography, lakes, streams, marshes, flora, fauna. | Where natural resource occurs. | | |
| | | | | | | | |



| Component | Use | Service Area | Size | Site Attributes | Site Location | |
|--|--|--------------------------------------|---|---|--|--|
| Regional Facilities Area Action Actio | | | | | | |
| Regional destination trail | Area developed for one or more varying modes of nonmotorized recreational travel such as hiking, biking, horseback riding, cross country skiing, and canoeing. | The entire metropolitan region | Sufficient corridor width to protect natural resources and can safely accommodate trail use. Sufficient length to be a destination itself, or to serve as a link between regional parks system units. | When feasible, off-road trails that utilize human made and/or natural linear resources such as utility corridors, railroad and highway rights of way, stream / river valleys, or at the edges of forest or prairie. Onroad trails are acceptable when off-road trails are not feasible. | Preferably adjacent to high- quality natural areas. The trail treadway should be placed where it has no adverse impact on the natural resource base. | |
| Regional linking trail | Area developed for one or more varying modes of nonmotorized recreational travel such as hiking, biking, horseback riding, cross country skiing, and canoeing. | The entire metropolitan region | Sufficient corridor width to protect natural resources and can safely accommodate trail use. Sufficient length to link regional parks system units. | When feasible, off-road trails that utilize human made and/or natural linear resources such as utility corridors, railroad and highway rights of way, stream / river valleys, or at the edges of forest or prairie. Onroad trails are acceptable when off-road trails are not feasible. | Linkages between components of the regional parks system. When feasible, linking trails should attempt to connect to population, economic and social centers along its route. The trail treadway should be placed where it has no adverse impact on the natural resource base. | |
| | | | | | | |



| Component | Use | Service Area | Size | Site Attributes | Site Location | | |
|----------------------------|---|-------------------------------|--|---|---|--|--|
| Regional Facilitie | Regional Facilities | | | | | | |
| Special recreation feature | Area that preserves, maintains, and provides specialized or single purpose recreational activities, such as nature center, marina, zoo, conservatory, arboretum, display gardens, hunter training education facilities, downhill ski area, sites of historic or archeological significance, and bridging facilities. Bridging facilities are specialized or single-purpose facilities that are intended to attract and introduce new outdoor recreation users to the Regional Parks System. | Regional metropolitan area | Specific standard applicable to desired feature. | Appropriate to particular special recreation feature. | Where most advantageous for the special recreation feature and the overall park system. | | |



Existing System Analysis

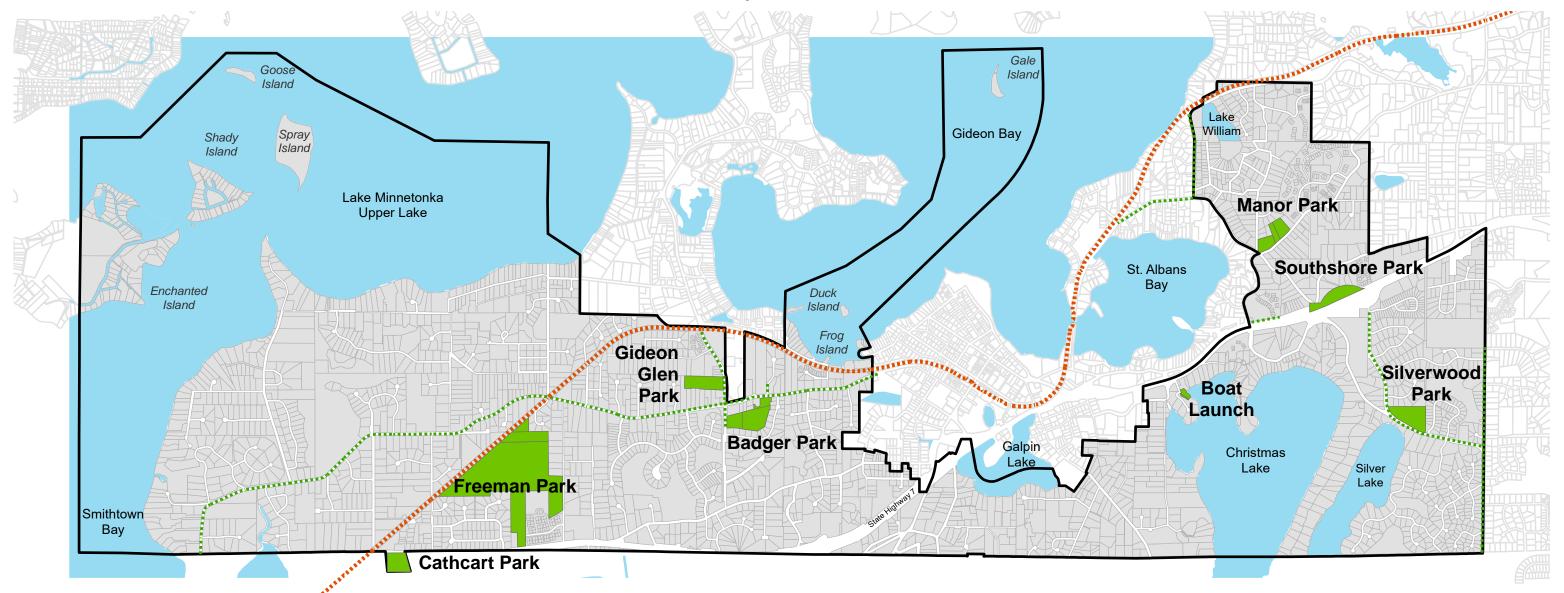
Shorewood is approaching full development. In their preliminary 2017 population estimates, the Metropolitan Council references a City of Shorewood population of 7,708 persons. Of interest is that such estimate exceeds the Metropolitan Council's 2040 population forecast for the City (7,600 persons) as provided in the City's system statement. Given the fact that the City is not expected to see significant additional residential growth and that few vacant land parcels remain in the community, Shorewood is not expected to add new park sites. The City's existing parks are considered adequate in size and location to meet the future needs of the community.

Shorewood residents are generally well-served by the existing park system. With the exception of the islands and a small pocket south of Galpin Lake, most areas of the community are within a one-half to one-mile radius of neighborhood park facilities. As a result, the focus of future park planning will be on developing existing parks, as opposed to acquiring more land, with one possible exception.

The City remains open to considering organization-supported expansion of Freeman Park as well as other existing sites. Also, as land becomes available through tax forfeiture, vacation of public right-of-way, donations and/or other means, it will be examined for possible inclusion in the park system.

Local Park and Trail System

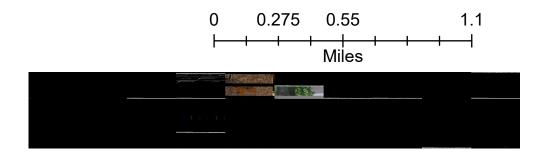
City of Shorewood 2040 Comprehensive Plan



Local Park and Trail System



Map created: December 2020 Data: NAC, MNDNR, Metropolitan Council





Existing Park Classifications

A considerable amount of planning has gone into Shorewood's park system as master plans for each of the City's parks have been developed. These master plans considered the classification system for local and regional parks which were previously identified. The following is an overview of Shorewood's existing park classifications:

Neighborhood Parks. Four of Shorewood's existing parks; Cathcart, Badger, Manor and Silverwood fall into this category. In addition, facilities at Freeman Park also serve the nearby neighborhoods, as do facilities at Minnewashta School.

Community Playfields. The Minnetonka School District has historically been heavily involved in providing playfields for local recreation. Within the City of Shorewood, Minnewashta Elementary School functions in part as a community playfield. Freeman Park is viewed as satisfying the majority of the community's need for playfields, but Badger, Cathcart and Manor Parks also satisfy this need.

Community Park. Besides its neighborhood functions, Freeman Park is the only community park in Shorewood's park system. Given the proximity of various regional parks, the need for an additional community park in Shorewood is not anticipated.

Conservancy Lands. Shorewood's wetland system, while not suitable for active recreation, is preserved for its aesthetic value, as well as its environmental benefit.

Special Uses. Crescent Beach along Lake Minnetonka and the Christmas Lake access on Merry Lane are essentially single-purpose recreational facilities (or special use parks). Crescent Beach is used exclusively for swimming, while the Christmas Lake access is used for fishing and the launching of boats. Both sites provide winter access to the lakes.

South Shore Community Park was previously used as a skate park, but the community found that purpose was no longer needed. A new master plan should be prepared to determine the appropriate role for such park.

Gideon Glen Park also fulfills a function of a special use park as it serves as a natural / environmental interpretive center.

Linear Park. While not a City-owned park, the Lake Minnetonka LRT Regional Trail fulfills a linear park function by providing walking / bicycle trail linkages within and outside of the City's municipal boundary.



Existing Parks and Plan Recommendations

Ten sites constitute the core of the Shorewood's park system. They include the following:

| Cathcart Park | 4.8 acres |
|---|------------------|
| Freeman Park | 67.8 acres |
| Badger Park (including City Hall) | 10.2 acres |
| Crescent Beach (joint use with Tonka Bay) | .4 acres |
| Manor Park | 4.5 acres |
| Silverwood Park | 8.1 acres |
| South Shore Community Park | 3.4 acres |
| Merry Lane Access | .5 acres |
| Gideon Glen | <u>5.8 acres</u> |
| Total | 105.5 acres* |

^{*} Land area devoted to LRT Trail not included in acreage calculation

Lake Minnetonka LRT Regional Trail 2.7 lineal miles

In addition to the preceding parks, Minnewashta Elementary School also has a playground. Ten fire lanes, which have been held by the City, provide lake access and limited recreational opportunities to various neighborhoods. The City has also adopted a Trail Plan (as provided in the Transportation Chapter of the Comprehensive Plan). Recently, a trail segment was constructed along Smithtown Road which extends from the City's southern boundary (in the southeast corner of the City) to Country Club Road.

The following is an overview of each of the primary parks and recommendations for future improvements:



Badger Park (10.2 Acres). Badger Park is a neighborhood park which functions as part of the "City Campus" and is integral to the community services provided at City Hall and the Shorewood Community and Event Center. The park focuses on organized sports, with limited individual/pick-up opportunities and is currently undergoing renovations.

The park serves both the surrounding neighborhood and the Shorewood Community Center. The park is currently undergoing renovations (as shown below) which are scheduled to be completed in 2019.

Facilities include:

- Multi-purpose field for lacrosse, soccer and football
- Playground equipment
- Tennis/pickle ball courts
- Picnic tables
- Open space, mowed and natural wooded area with a short nature trail by a stream
- Permanent restrooms and water-fountain (to be completed by 2019)
- Paved parking shared with Shorewood Community and Event Center and City Hall, short nature trail looping through wooded area on the east edge of the park
- Short paved looped trail (to be completed in 2019)
- Shelter (to be completed in 2019)

Population served: Badger Park serves persons of all ages.

Recommendation for further action:

• Increase programming within the Shorewood Community and Event Center which takes advantage of the facilities in Badger Park.





The Shorewood Community and Event Center



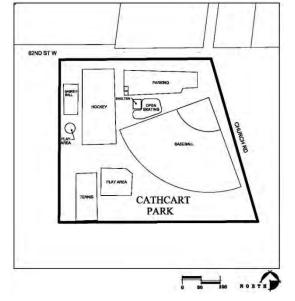
Badger Park Playground (pre-renovation)



Cathcart Park (4.8 acres). Cathcart Park is a neighborhood park with a mixture of uses, including organized sports and individual/pick-up opportunities.

Facilities include:

- Little League baseball field
- Hockey rink and seasonal warming house
- Family skating rink
- Basketball court
- Playground equipment
- Tennis court
- Picnic tables
- Open space
- Community adopt-a-garden
- Portable restrooms (no running water)
- Paved parking for 38 vehicles



Population served:

- Cathcart Park focuses primarily on the activities of youth and young adults, i.e., hockey, Little League and soccer.
- It serves the neighborhood and, through organized sports, a wider range of youth in the community.
- While the park's tennis court offers a recreational opportunity to adults, it is uncertain to what extent the court is used.

- Add pickle ball striping to the tennis court (as a recreational opportunity for seniors).
- Add additional parking.
- Pave the hockey rink for street hockey.



Manor Park (4.5 acres). Manor is a neighborhood park focusing on informal activities, with limited organized sports opportunities.

Facilities include:

- Pond skating rink/warming house
- Playground equipment
- Tennis/pickle ball court
- Picnic tables and shelter
- Open space
- One community adopt-a-garden

- Restrooms/water fountain
- Parking for 23 vehicles
- Softball field/multi-purpose field
- Shirley Rice Memorial Garden
- Sand volleyball court

Population served: Manor Park serves persons of all ages.

- Explore installation of horseshoe pits and bocce ball.
- Explore installation of perimeter walking trail.
- Provide needed dredging of the pond.
- Consider amphitheater or another central park feature.





Shirley Rice Memorial Garden

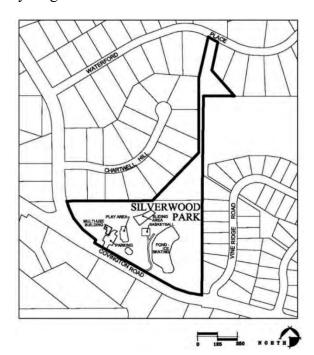


Silverwood Park (8.1 acres). Silverwood is a small neighborhood park utilized by young children and their families.

Facilities include:

- Playground equipment
- Slide
- Sledding hill
- Free skate on the pond
- Community adopt-a-garden
- Portable restrooms (no running water)
- Picnic shelter, tables and grills
- Practice tennis court
- Half basketball court with practice wall for tennis
- Trail
- Paved parking for 11 vehicles

Population served: Silverwood Park can serve all ages but primarily serves families with young children.





Silverwood Park playground and slide



Freeman Park (67.8 acres). Freeman Park is Shorewood's principal community park. It measures 68 acres in size and accommodates a wide variety of both active and passive recreational activities. The park's north fields in particular provide an opportunity for a variety of organized sports.

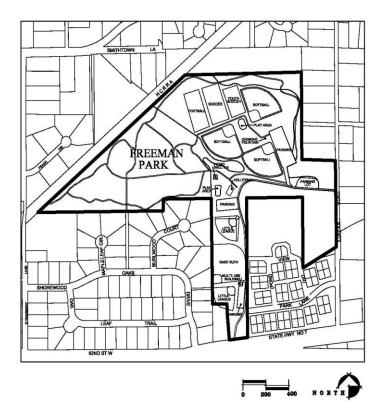
Facilities include:

- Softball fields (3)
- Baseball fields (2)
- Babe Ruth baseball field
- Soccer fields (6+ depending on field layout)
- Volleyball courts (2)
- Multi-use building (Eddy Station) with warming house, restrooms and concessions
- South concessions building
- Portable restrooms
- Free skating rink
- Picnic shelter
- Playground (2)
- Picnic tables
- Trails
- Off-street parking for approximately 390 vehicles
- Community gardens



Population served: Reflective of its diverse range of active and passive recreational opportunities, Freeman Park caters to persons of all ages. The park hosts baseball, softball and soccer games which are part of organized leagues, functions as a neighborhood park for the immediate area and provides open space and wooded walking trails for passive park uses. Freeman Park serves approximately 140,000 users on an annual basis. The park is adjacent to the Lake Minnetonka LRT Regional Trail.

- Expand parking facilities near the south end of the park or work with sports organizations to provide off-site parking.
- Provide signage for the connection to the adjacent Lake Minnetonka LRT Regional Trail and directional signage on the trails.
- Replace the south playground and consider equipment options for different age groups.









North Fields

Freeman Park multi-use building



Freeman Park playground



South Shore Community Park (3.4 acres). South Shore Community Park is as unique a recreational facility as the process that led to its creation. The park was previously used as a skate park, but due to aging infrastructure and lack of use, the City removed the skate park facilities. Future use of the park will require study by the City Council, Parks Commission and residents.

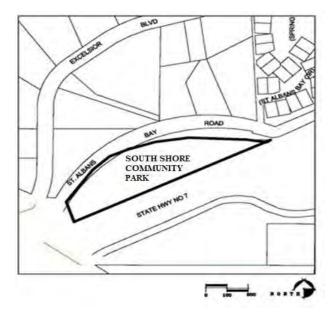
Facilities include:

- Open space
- Community Gardens
- Water fountain

Population Served:

The South Shore Community Park primarily serves adults.

- Investigate potential future uses and facilities within the park which are compatible with its size and location next to State Highway 7.
- Develop a new park master plan to determine the appropriate role of the park.
- Consider a name change with the new master plan.
- Increase the size of the community gardens.





Gideon Glen Park (5.8 Acres). Gideon Glen Park overlays 5.8 acres of land and features native trees, shrubs, grasses and wildflowers and a maple basswood forest, all of which are remnants of the "big woods" that once covered the Lake Minnetonka region of the State. Owned by the City of Shorewood, the park site was restored in 2005 in partnership with the Minnehaha Creek Watershed District (MCWD), Hennepin County, Metropolitan Council and Lake Fellowship of Unitarian-Universalists.

Facilities include:

- An approximate 600-foot crushed rock walking trail
- Overlook locations with benches
- Educational opportunities
- Restored wetlands
- A stormwater pond (which captures pollutants)

Population served: Gideon Park serves persons of all ages.

- Increase public education and learning opportunities.
- Seek out additional research projects.
- Add more interpretive signage.







Gideon Glen Park Photograph Source: Lake Minnetonka Magazine - April 2015

Lake Minnetonka LRT Regional Trail (2.7 lineal miles). In total, the Lake Minnetonka LRT Regional Trail stretches 15 miles between the City of Hopkins and the Carver Park Reserve with 2.7 lineal miles located within the City of Shorewood. More specifically, the trail passes through the communities of Shorewood, Minnetonka, Deephaven, Greenwood, Excelsior, and Victoria. The aggregate trail offers scenic views and a convenient transportation route for pedestrians and bicyclists.

The trail is managed by the Three Rivers Park District.

- Investigate means with the Three Rivers Park District to improve the upkeep of lands which flank the Lake Minnetonka LRT Regional Trail (within the trail trial right-of-way) and recommend removal of invasive species.
- Encourage adjacent communities to provide winter trail maintenance.
- Encourage the Three Rivers Park District to consider paving the trail with public input from the citizenry of the affected cities.



General Recommendation

The City should continue to work with adjacent communities and the School District to maintain a clear understanding of the total recreational needs of the area. The South Shore area has a highly cooperative recreational and transportation system that will continue to require constant coordination (playfields, parks, and trails). The Park Commission and City Council should continue to monitor the needs of area residents in implementing the City's park and recreation plan. The City will also need to continue responding to the strong local interest for the expansion of the Shorewood trail system.

The City should also study whether additional parks are needed or desired on Shady or Enchanted Islands.



SOLID WASTE

As mentioned in the Transportation Chapter, garbage trucks have been identified as inflicting more damage to City streets than any other type of vehicle. In response to this issue, the City is examining the current solid waste collection system and considering options to improve collection.

The City presently licenses refuse haulers and limits pickup activities to one specified day of the week, thus eliminating the presence of curbside refuse on the remaining days. The City has a contract with a single hauler to pick up recycling City-wide. In the future, the City should explore organized hauling to further reduce the number of trash collection vehicles on City streets and in neighborhoods.

NATURAL GAS, ELECTRICAL SERVICE, CABLE TELEVSION AND STREET LIGHTING PLANS

All areas of the community are currently serviced by natural gas, electricity and cable television service, or have such services available. As such, provision of these services will not influence development in Shorewood. The thrust of these efforts should be concentrated toward the elimination of overhead wiring. The City requires the underground placement of all utilities where practical. In previously developed areas, plans for placement of underground utilities should be incorporated with future roadway improvements. The City may also want to initiate a more aggressive program for systematically eliminating overhead wiring within the next 10 to 15 years.

Residents appear to be split on the issue of street lighting. Consequently, no comprehensive program of installing street lights is suggested. The City has adopted the following policies in response to neighborhood demands for street lighting:

- 1. <u>Location.</u> The City recognizes that street lighting in certain locations is necessary to promote safe travel for vehicular and pedestrian traffic. However, it is not the intent of the City to install street lights for the purpose of deterring criminal activity. Based on this the City will consider the authorization of placing street lights on City streets only at: 1) intersections; 2) the ends of cul-de-sacs; 3) sharp turns; and 4) steep grades.
- 2. <u>Requests for Street Lighting.</u> While requests will be considered from any resident, it is recommended that a petition of neighboring residents be submitted with the request.
- 3. <u>Cost of Street Lighting.</u> The City agrees to pay the cost of monthly electric service for an authorized street light. It will not pay for the installation of the light or for extending power to the proposed location of the light, or for any light other than a standard street light.



CHAPTER SUMMARY

Community facilities and services include lands, buildings, services and systems which are provided on a public or semipublic basis. The City's goals in this regard are as follows:

- The City shall provide those basic facilities and services which ensure the health, safety and general welfare of the public, the cost of which facilities and services are most efficiently shared by the general public.
- The efforts of varying government agencies shall be coordinated to avoid duplication of efforts, unnecessary expense and improper location of public facilities.
- Maintain a sound financial planning program for capital improvements, relating such improvements to actual need, proper location and timing.

The following is a summary of recommendations intended to achieve the preceding goals.

Parks and Recreational Open Space

- 1. Shorewood's park and recreational open space system shall be classified in accordance with standards established by the Metropolitan Council.
- 2. Funding for park maintenance and necessary improvements (as determined by the City) shall be considered a community priority.
- 3. The allocation of funds for park improvements for specific facilities will be made on the basis of balancing overall community park needs of Shorewood residents with the specific needs of each facility.
- 4. The community shall provide for an appropriate balance among active, passive, and cultural recreational areas and activities, tailored to the needs of the total population.
- 5. Recreational facilities and a year-round program of activities suited to the varied recreational needs of all age groups within the community shall be provided.
- 6. Parks and recreational facilities shall be distributed throughout the community, based upon neighborhood needs and characteristics of each planning and development district.
- 7. Sufficient park land to fulfill the needs of the present and projected future population of the community shall be acquired and reserved. Park development shall be undertaken as residential development demands and as funds are available.



- 8. Recreational open space improvements shall be programmed in accordance with a capital improvement program, updated on an annual basis.
- 9. Parks shall be designed and maintained with proper lighting, landscaping, shelter design, etc., to ensure a high degree of public safety and protection of public property.
- 10. Where necessary, parks shall be screened, fenced and/or buffered for the safety and protection of the user as well as adjacent property owners.
- 11. Parks shall be improved and developed to take maximum advantage of natural features of Shorewood.
- 12. Safe and convenient pedestrian, bicycle and vehicular access and adequate parking to serve recreational facilities shall be provided.
- 13. The use of motorized recreational vehicles shall be limited to designated areas.
- 14. Park and open space facilities and programming shall be planned and developed in cooperation and coordinated with similar services of surrounding communities, the school district, private organizations and the metropolitan area as a whole.
- 15. Studies on a periodic basis shall be undertaken to analyze the effectiveness and comprehensiveness of the community recreation program. These studies should serve as the basis for recreation open space planning and programming.
- 16. Continual citizen participation in the planning, development and operation of recreational open space shall be maintained.
- 17. The City shall employ a pro-active approach to park development.
- 18. When opportunities arise, Shorewood shall consider the acquisition of parcels adjacent to the City's existing public beach (Crescent Beach) and conversion of such parcels to park land.
- 19. The City shall investigate means with the Three Rivers Park District to improve the upkeep of lands which flank the Lake Minnetonka LRT Regional Trail (within the trail trial right-of-way).



Lakeshore Use

- 1. Lake Minnetonka shall be considered a community recreational facility and appropriate actions shall be taken to permit utilization of the lake by all City residents.
- 2. Regulations shall be enforced to ensure accessibility to area lakes while at the same time minimizing any potential impact on surrounding uses and adjacent property owners.
- 3. In order to protect and preserve the amenity provided by area lakes, the City shall encourage uniform land use regulation and enforcement of lakeshore use.

Governmental Buildings and Facilities

- 1. Cooperation and coordination shall be promoted and actively pursued between governmental units in the provision of public facilities and services.
- 2. The full utilization of investments in public facilities and services shall be achieved prior to making new public investments.
- 3. Public facilities and services shall be located to the greatest extent possible so as to offer ease of access and minimal response time.
- 4. All public facilities shall be developed, improved and maintained according to the highest adopted standards of design and performance to serve as examples for private development.
- 5. All public buildings shall be designed and maintained to be safe, secure and resistant to vandalism while maximizing public and city usability.
- 6. Those areas, places, buildings, structures and other objects such as Indian mounds having significant architectural, historical, community or aesthetic interests and values shall be restored and preserved, as defined under the Minnesota Historic Sites Act of 1965, as may be amended.
- 7. Adequate screening, landscaping, and buffering of facilities shall be accomplished in order to minimize their impact on surrounding uses and enhance the community and areas in which they are located.
- 8. As part of future community facility improvement efforts, consideration shall be given to the creation or establishment of a visible and identifiable physical feature which distinguishes the City of Shorewood from the Cities of Excelsior and Tonka Bay.



- 9. The City shall examine alternatives and develop a plan for the future use of the Shorewood Community and Event Center which compliments the adjacent park use.
- 10. The City of Shorewood shall seek and implement creative ideas for its public spaces which pay homage to the community's history and identity.
- 11. The City shall strive to make efficient use of its various municipal buildings by evaluating, on a periodic basis, the space needs of various City functions (to ensure adequacy).

Public and Semi-Public Utilities

- 1. City public utilities will be reviewed with the Capital Improvement Program each year.
- 2. Demand for urban services shall be anticipated, with emphasis to conserving existing facilities, in order to facilitate orderly, fiscally responsible extension of service systems.
- 3. Easements for utility systems shall be located according to uniform standards, providing for ease of access for maintenance and repair and minimal disruption of other activities or areas.
- 4. All utility systems and possible utility and service needs shall be periodically monitored and all existing systems shall be maintained to assure a safe and high-quality standard of service on an ongoing basis.
- 5. The impact of required utility facilities and services shall be minimized upon surrounding uses.
- 6. Underground installation of all new utility services shall be required and when economically feasible, existing overhead systems shall be converted to underground.
- 7. Coordination among all utility improvement programs shall be constantly pursued.
- 8. Telecommunication facilities shall utilize existing tower structures where feasible.
- 9. Benefiting property owners shall assume the burden of improvements made by the City in their behalf.
- 10. When opportunities present themselves, the City will consider the burying of existing and new power lines to reduce the frequency of power loss during storm events.



Energy

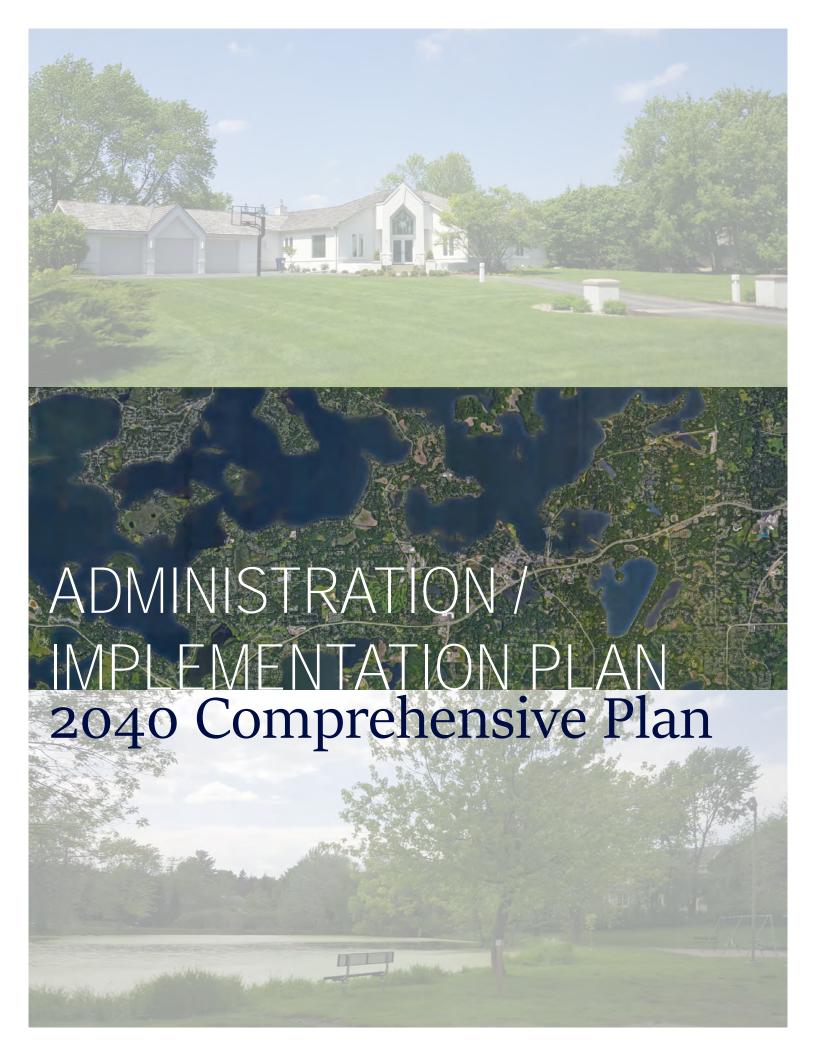
- 1. Encourage use of alternative energy forms in new construction.
- 2. Continue to disseminate information on governmental energy conservation programs and helpful ideas on personal energy conservation methods.
- 3. Where practical, promote overall energy conservation in the community development process.
- 4. The City of Shorewood will, by example, attempt to become a more energy efficient community via future investment in such systems.
- 5. Create a program to encourage installation of alternative energy systems (solar and geothermal) and clarify procedures.

Solid Waste

- 1. The City of Shorewood shall continue to evaluate its solid waste collection system and consider options to improve collection services.
- 2. The City shall explore organized solid waste hauling to further reduce the number of collection vehicles on City streets and neighborhoods.

Collaboration

1. To the extent possible, the City of Shorewood shall collaborate with nearby lake communities in regard to the handling of shared services.





INTRODUCTION

Administration and implementation of the Comprehensive Plan and related supportive ordinances are equally as important as the development of the Plan itself. Only through the proper coordination of the Comprehensive Plan with the City's related development tools can the City fulfill its development and redevelopment vision and goals.

BUDGETING AND FINANCE

The Comprehensive Plan recognizes Shorewood as a fully developed, mature community. The recommendations of the Plan emphasize the need for the preservation of the City's environmental features and natural amenities, encouragement of land uses which are compatible with the residential and natural character of the City and provision of quality public services in a cost-effective manner.

In regard to future public expenditures, the City will implement the following strategies:

- 1. Continue monitor and maintain public facilities to avoid significant disrepair or breakdown.
- 2. Continue to maintain an annual Capital Improvement Plan which identifies needed public capital improvements, assigns costs and schedules implementation based on project priority and funding availability.
- 3. Continue to pursue intergovernmental cooperation for sharing public services and facilities to avoid duplication and economize on City investments.
- 4. Promote the maintenance, modernization and expansion of local land uses to preserve and expand the City's tax base and revenues.
- 5. Pursue available Federal, State and County grants and aids, as appropriate, to facilitate community improvements and programs.
- 6. Utilize cost-effective financing programs when authorized to encourage development and re-development projects.
- 7. Manage City budgets and spending in order to maintain a healthy reserve fund as a means to respond to unexpected expenses or emergency improvement projects.

COMMUNITY SERVICES

Through good communication with the public and responsiveness to residents' needs, the City administration has been cited as a community strength. High quality service to Shorewood residents will continue to be the standard for City operations in the future.



The City will continue to take a proactive approach to ensure a high level of community services in a fiscally responsible manner. These efforts include:

- 1. Conduct regular inspections of streets, utilities, parks and facilities to identify areas of disrepair, or facility replacement to ensure that City maintenance or capital improvement funds are properly planned and utilized.
- 2. Utilize available new technologies to assist in the delivery of services in an efficient and cost-effective manner.
- 3. Maintain active communication with City residents and businesses through direct contact, open meetings, television, newsletters, media releases, the City's website and project bulletins.
- 4. Periodically utilize community surveys to solicit resident perceptions, issues, or comments on community concerns and/or operations.

ORDINANCES / CODES / GUIDELINES

As a means of implementing the stated land use goals for Shorewood, the City will investigate the following potential changes to City ordinances, codes and guidelines:

- 1. Following the adoption of the 2040 Comprehensive Plan, the City's Zoning Ordinance, including the zoning map, will be reviewed, and if necessary updated, to ensure consistency with the City's Land Use Plan.
- 2. Continue (and create as determined necessary) programs and incentives for privately initiated maintenance efforts, improvements for energy conservation and redevelopment of existing land uses.
- 3. Ensure that sufficient setback requirements exist for new development to prevent problems associated with street upgrades, including, but not limited to, the widening of narrow streets.
- 4. Examine City regulations related to "teardowns" and "rebuilds" of single family homes and modify, if determined necessary, to ensure that adequate provisions are in place to ensure neighborhood compatibility.
- 5. Consider zoning ordinance and zoning map modifications which could accommodate the achievement of higher residential densities (as promoted by the Metropolitan Council).
- 6. Require staging plans for all infill development projects to minimize impacts upon existing surrounding neighborhoods. Minimally, such plans shall address contractor parking locations, construction material storage and construction hours.



- 7. Ensure that commercial development standards take into account the character of the community and promote the highest possible standards of quality (design and finish materials).
- 8. Review development regulations, and amend if necessary, to promote a balanced housing supply in the City.
- 9. Establish appropriate regulations for lawful nonconforming lots.
- 10. Within the context of residential neighborhoods, establish a design template for local streets which considers right-of-way and travel lane widths, pedestrian/bicycle components, stormwater management and on-street parking.

HOUSING

As a means of maintaining the City's housing stock, the City will investigate the following implementation strategies:

- 1. Consider the adoption of a "point of sale" ordinance which identifies certain housing deficiencies at the time of sale, putting buyers on notice of problems.
- 2. Continue to work with surrounding communities and various agencies to ensure that services are provided which allow seniors to stay in their homes as long as possible.
- 3. Continue to enforce the City's rental housing code.
- 4. Publicize available assistance programs geared toward the rehabilitation of substandard housing in the City.
- 5. Examine home improvement programs through Metro HRA, Hennepin County, the Greater Metropolitan Housing Corporation, or Minnesota Housing Finance Agency to identify finance programs which may assist Shorewood property owners in housing improvement loans.
- 6. Consider the use of tax increment financing (TIF) to assist in housing redevelopment projects which involved the elimination of blighted properties. The use of TIF funding will be evaluated on a project-by-project basis and weighed against the goals of the City's Comprehensive Plan.

INTERGOVERNMENTAL COOPERATION

The City of Shorewood receives police services from the South Lake Minnetonka Police Department (SLMPD). All of Shorewood, including the islands are serviced by SLMPD.



The mainland area of the City of Shorewood receives fire service from the Excelsior Fire District. Service to its islands is however, provided by the Mound Fire Department.

The City of Shorewood will continue to explore opportunities for shared services where it provides a high level of community service to its residents in a cost-effective manner.

SOLAR ACCESS PROTECTION

The City of Shorewood will continue to promote reasonable access to solar energy by controlling artificial blockage of solar radiation for optimum long-term economic and environmental benefits. Related to this issue, it should be recognized that tree preservation is also a considered a community priority. Thus, a desire for solar access must be balanced with the City's a desire to preserve a community amenity which contributes greatly to its community character.

Solar access protection is provided for by the uniform implementation of the City's land management tools. In this regard, solar energy systems are a permitted accessory use in all zoning districts subject to various conditions which are intended to mitigate adverse impacts (limitations related to height, location, size, aesthetics etc.).

Specifically, protections are provided via lot and building performance standards contained within Shorewood's Zoning Ordinance. Requirements such as maximum building height and yard setback standards are implemented for the purpose of creating separation between structures and allowing equal sunlight access such that a property is not in the shadow of an adjacent building.

RENEWABLE ENRGY SYSTEMS

The City of Shorewood has chosen to encourage and promote, rather than restrict, development of renewable energy sources which have a positive impact on energy production and conservation while not adversely impacting the community or where the economic and social impacts can be mitigated.

While the City's Zoning Ordinance specifically recognizes solar, wind and geothermal (ground source heat pump) energy systems, only solar energy and geothermal systems are currently permitted. The City will consider the establishment wind energy system requirements and the periodic updating of solar and geothermal energy system regulations (to adequately respond to changing technologies) as determined necessary.





APPENDIX A

Planning Tactics (Issues Identification)

INTRODUCTION

This section of the Comprehensive Plan is the Planning Tactics effort, which is devoted to the summary of comments and concerns raised in the Tactics interviews conducted with Planning Commission members, City Council members, and City staff.

To be noted is that identification of each and every issue raised in the interview process was not attempted. Rather, issues presented herein represent a broad categorization of topics raised.

CITY PERCEPTIONS

Generally, there was a strong consensus on many topics, however, where opinions differ, both sides of the issue are presented. The following perceptions and issues represent topics which require specific attention throughout the comprehensive planning process. The following interview responses are numbered for ease of reference and are in no particular order of priority.

Opportunities and/or Strengths

Most of the interview/survey participants have a very positive image of the City of Shorewood, describing it as a community that offers desirable residential neighborhoods within a natural setting. The following opportunities and/or strengths were identified as contributing to Shorewood's quality of life and public image:

- 1. The most common interview response related to Shorewood's natural amenities. Specifically, the lakes, trees, and open space were referenced as highly desirable environmental features of the community.
- 2. Interviewees were highly complementary of Shorewood's parks and highlighted such facilities as a positive aspect of the City.
- 3. Somewhat related to the City's environmental features, large residential lots (which commonly include significant vegetation) were often highlighted as a positive aspect of the City which contributes greatly to its desirable atmosphere.



Marina and Lakefront



City Park



- 4. Trails and sidewalks were identified as a desirable community feature, and particularly the recently constructed sidewalk along Smithtown Road.
- 5. Many interviewees consider the City's proximity to Lake Minnetonka to be a community strength and stressed a need to protect its water quality.
- 6. Specially highlighted as a community strength is the Lake Minnetonka LRT Regional Trail, which provides recreational opportunities for both pedestrians and bicyclists.
- 7. A number of interviewees identified the City's location within Minnetonka School District 276 as a desirable community feature.
- 8. Several interviewees highlighted the quality of residential housing in the City as a distinct community strength.
- 9. Many interviewees view the City of Shorewood as a financially strong community with high level services and a quality City staff.
- 10. Many interviewees conveyed their belief that the City is occupied by "nice" people and that neighborhoods feel "closely knit."
- 11. Interviewees also noted Shorewood's proximity to the City of Excelsior as a positive community feature. Specifically, convenient access to Excelsior's commercial services was referenced.
- 12. Also highlighted as a positive City feature is that Shorewood is fully developed and thus, negative aspects



Large Single Family Home



Large Single Family Home



Single Family Home



commonly associated with urban growth are not an issue.

- 13. On a broader scale, interviewees highlighted the City of Shorewood's proximity to the Minneapolis and St. Paul Metropolitan Areas as a positive community feature.
- 14. The size (population) of the City was identified as a positive feature of the City which contributes to its "small town" feel.
- 15. Interviewees were generally complimentary of City government operations and delivery of services. Most were particularly satisfied with the accessibility of City staff.

Issues and /or Concerns

While interview respondents characterize the City of Shorewood as a desirable place to live, respondents also identified some community weaknesses. The following were viewed as issues and/or concerns:

- In terms of weaknesses, most interview 1. respondents cited water infrastructure as a common community concern. Specific relates concern to water supply infrastructure, although stormwater management was also identified as a community issue which needs to be addressed.
- 2. Traffic was also highlighted as a primary City concern. Specifically, highlighted was traffic congestion throughout the City but primarily at various Highway 7 access points. It was noted that such traffic congestion poses safety concerns for both motorists and pedestrians.
- 3. Incomplete trails were also cited as a community weakness. It was specifically noted by several interviewees that a lack of



Shorewood Water Tower



Commercial Strip Center

trail connections throughout the City forces pedestrians to use City streets as walkways which, in turn, creates safety concerns.



- 4. Several interviewees expressed concern over the City of Shorewood's working relationships with neighboring Lake Minnetonka communities. Specifically highlighted was a concern over the cost / benefit of shared Police services.
- 5. A lack of commercial services in Shorewood was frequently identified as a community drawback.
- 6. A number of interviewees expressed a desire for more housing choices within the City. Specific concern was cited over a lack of multiple family housing options and a lack of single family residential homes which are "affordable" to young families. Also conveyed is a belief that most persons who work in Shorewood cannot afford to live in the City (as a result of housing costs).
- 7. A few persons interviewed feel that the City presently lacks a community identity. Specifically noted was a lack of an identifiable physical feature which serves to distinguish the City of Shorewood from the City of Excelsior.
- 8. Many persons highlighted storm drainage as a significant community problem. Opinions were commonly expressed that curb and gutter along City streets may help address the issue.
- 9. Some interviewees expressed concern over the condition of Shorewood's streets. An opinion was expressed that



Multiple Family Residential Property



Single Family Home



On-Street Parking



City Baseball Field



- the use of local streets by several different garbage haulers has contributed to the premature decay of City streets.
- 10. On-street parking was identified as a significant problem in the City. Interviewees feel the issue is primarily a result of the narrowness of local streets within the City and is compounded during the winter months when on-street parking opportunities are minimized due to snow storage needs.
- 11. While interviewees were generally complimentary of the City's efforts to preserve trees in the City, one respondent expressed a belief that greater preservation efforts are needed.
- 12. A few interviewees cited the City's haphazard municipal boundaries as a negative aspect of the City.
- 13. Many interviewees feel strongly that additional funding is needed for park improvements.
- 14. Several interviewees expressed concern over single family home teardowns and rebuilds and the potential loss of historic character which could result.



House Under Construction

Challenges

Interviewees were asked to identify what they perceive to be the biggest challenges facing the City of Shorewood in the next 20 years (the approximate term of the Comprehensive Plan Update). In this regard, the following views were expressed in order of popularity (the most popular response being listed first):

- 1. Upgrading of the City's aging infrastructure including water supply, stormwater management, and streets.
- 2. Funding desired for City improvements including projects related to infrastructure, parks, and trails.
- 3. Providing additional multiple family housing choices in the City in a manner which will preserve Shorewood's unique character.
- 4. Providing additional housing opportunities for seniors who wish to continue to reside in the City.
- 5. Examining alternatives and developing a creative plan for the future use of the Shorewood Community and Event Center.
- 6. Promoting commercial redevelopment in the City which responds to the needs of Shorewood residents and is consistent with the desired community character.
- 7. Managing and/or improving vehicular traffic in a safe and functionally efficient manner, which considers the needs of pedestrian and bicyclists.
- 8. Striving to improve relationships with nearby lake communities in regard to the handling of shared services.
- 9. Improving connections (vehicular and pedestrian) between the Cities of Shorewood and Excelsior.



City Hall and Community Center Sign



Single Family Home

- 10. Redeveloping the Smithtown Crossing commercial area in a manner which promotes the City's identity.
- 11. Establishing appropriate zoning regulations for development upon legal non-conforming lots and single family residential teardowns.

2040 Vision

Persons interviewed/surveyed were asked to convey their 2040 vision of the City. In this regard, the following "visions" where conveyed:

- 1. Most persons interviewed do not expect to see any significant physical changes to the City by 2040. In this regard, a continuance of the City's residential/recreational character is considered their "vision" of the City for the year 2040.
- 2. Several interviewees did, however, convey their "vision" of the City moving forward. In this regard, the following changes are envisioned:
 - a. Shorewood will become a more energy efficient City.
 - b. The City will seek and implement creative ideas for the City's public spaces.
 - c. Infrastructure systems within the City will be much improved and all properties will be connected to City water service.
 - d. A greater mix of housing choices, including places which are affordable to young families and available to seniors will be provided.
 - e. Better (improved) vehicular and pedestrian linkages between the Cities of Shorewood and Excelsior will be provided.
 - f. City parks will be upgraded to respond to the recreational needs of Shorewood residents.
 - g. Shorewood will be a more "pedestrian friendly" City.
 - h. The City's population will be more diverse.
 - i. Traffic patterns within the City will be functionally improved (for vehicle movements and pedestrian safety).

Planning Tactics



| j. | The | City | will | promote | the | establishment | a | facility | which | pays | homage | to |
|----|-----|-------|--------|-------------|--------|------------------|-----|----------|-------|------|--------|----|
| | Sho | rewoo | d's hi | story (i.e. | , a hi | istory center or | a r | nuseum) | | | | |

Immediate Needs

Persons interviewed were asked to identify projects they feel are an immediate need in the City and should be addressed in the near term (next five years). In this regard, the following projects were identified:

- 1. Improvement of the Highway 7 /Vine Hill Road intersection.
- 2. City investments in alternative energy systems.
- 3. Trail system expansion (improved connections).
- 4. Shorewood Community and Event Center improvement.
- 5. Build-out of the Minnetonka Country Club single family residential subdivision.
- 6. General street improvements/ upgrades (including, but not limited to, features for improved stormwater management).
- 7. City-wide water service.
- 8. Redevelopment of the Smithtown Crossing commercial area.
- 9. Expansion of the City's Public Works building and/or relocation of impounded vehicle parking (to provide additional space for public works-related storage).
- 10. Park improvements (consistent with long term plans).
- 11. Improved maintenance of properties along the Lake Minnetonka LRT Regional Trail.



Country Club Subdivision



Public Works Building

Residential Land Uses

Persons interviewed were asked for their opinions related to existing and future residential uses in the City. In this regard, the following issues were identified:

- 1. Regarding the physical condition of the City's existing housing stock, most interviewees feel that such housing stock is either "good" or "very good."
- 2. Many interviewees expressed concern over a lack of residential housing choices in the City. In regard to planning for future residential uses, most interviewees feel it is important to consider a variety of housing options which cater to different age and income groups, but which would be consistent with the character of the City.
- 3. Several interviewees cited the two recently approved senior housing projects as being a benefit to the City (as such facilities provide an opportunity for long-time, elderly residents to stay in the community). A belief was also conveyed that a market for additional senior housing will likely exist in the future.
- 4. A number of interviewees expressed concern over the teardown of small, older housing and replacement with larger homes. It was suggested that appropriate zoning regulations should be in place to manage such activities and minimize potential adverse impacts.
- 5. Most interviewees do not feel there are significant property maintenance issues in the City. It was suggested, however, that the City undertake a pro-active approach related to code enforcement.



Single-Family Neighborhood



Single-Family Neighborhood

Commercial Land Uses

Interviewees expressed the following opinions regarding commercial land uses within the City:

- 1. Nearly all interviewees acknowledge there is a present lack of basic commercial services in the City, and that it is necessary to travel outside the City to obtain such services. Most interviewees do not, however, view this condition as a problem and cite the adjacent City of Excelsior as a convenient location for basic commercial goods.
- 2. Several interviewees expressed a belief that the redevelopment of the Smithtown Crossing area would be positive and would provide an opportunity for the City to establish a needed community identity.
- 3. One interviewee expressed an opinion that additional small office space is needed in the City.
- 4. A number of interviewees expressed an opinion that an assurance should be made that the physical appearance of new commercial development in the City should be of high quality (in terms of both design and finish materials).
- 5. A few interviewees suggested that the City should take steps necessary to ensure that new commercial buildings exhibit high quality finish materials and exhibit an architectural character which is consistent with an established vision for the community.



Existing Commercial Center

Transportation

Through the Tactics interviews, respondents offered several transportation-related comments. The following is a summary of comments and/or identified issues which were received:

- 1. The majority of interviewees indicated that roadway maintenance in the City is an issue. In this regard, it was suggested that funding for such efforts should be a community priority.
- 2. General concern was raised by interviewees regarding the ability of the City's collector streets to accommodate existing and future traffic volumes. Of primary concern are volumes on County Road 19. Most respondents acknowledge that such excessive traffic volumes are difficult to address.
- 3. Specific concern was cited over excessive traffic volumes which presently exist on Country Club Road, a designated minor collector street. In this regard, it was suggested that improvements are needed at the adjacent Smithtown Road/ County Road 19 intersection.
- 3. Most interviewees raised concern over congestion and unsafe intersections along Highway 7. To be noted is that unsafe conditions were referenced not only for vehicles but pedestrians and bicyclists as well.



Motorcycle Traffic



Narrow Residential Street

- 4. Bicycle safety was highlighted by interviewees as a major problem. It was noted that roadways and crossings are not equipped to manage the present volume of bicycle traffic encountered in the City. It was specifically noted that bicycle connections between commercial areas are needed.
- 5. A difference of opinion was expressed by interviewees regarding the long-term need for mass transit in the City. Many interviewees believe that existing and future residential densities cannot justify such service and thus, mass transit is not considered feasible.

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Others expect mass transit to be a community need in the future. One interviewee specifically suggested that mass transit opportunities would be better located in the adjacent City of Excelsior.

- 6. The City of Shorewood is characterized by narrow streets, many of which lack curb and gutter. Most interviewees consider the City's narrow streets to be a desirable community feature which contributes to the character of the City. Several Interviewees, however, expressed concern that many local streets create circulation problems and are in need of repair/improvement.
- 7. A number of interviewees feel that the use of local streets by multiple garbage haulers has contributed to the degradation of the City's local streets.
- 8. In was noted by one interviewee that a number of dirt (gravel) roads presently exist within the City. It was suggested that all City roads should be hard surfaced.
- 9. Without exception, all interviewees oppose a proposed closure of Pleasant Avenue in Tonka Bay. Interviewees believe that the City is presently lacking in street connections/linkages and that the closure of such street (to eliminate a City access to County Road 19) would be contrary to the City's transportation objectives.
- 10. One interviewee indicated that guardrails in certain areas of the City need to be replaced.
- 11. Also noted was a concern over vegetative "overgrowth" at certain street intersection limits vehicular visibility to oncoming traffic.
- 12. Several comments were received related to sidewalks and trails. These comments are summarized below:
 - a. Nearly all persons interviewed feel that sidewalks and trails in the City are a great community amenity.
 - b. Most interviewees feel the City's sidewalk and trail system is improving. The recently constructed sidewalk alongside Smithtown Road was highlighted as a significant system improvement.
 - c. While the system is perceived as improved, most interviewees believe that more sidewalk/trail connections are needed in the City. Of specific note was an expressed desire to provide sidewalk/trail connections to the City of Excelsior.



Existing Sidewalk

- d. Many interviewees feel that sidewalks and trails should be made a higher priority in the City. It was specifically indicated that walking paths (sidewalks and/or trails) are needed alongside City streets such that street surfaces are not utilized for pedestrian travel.
- e. Several interviewees feel additional funding should be provided to maintain existing sidewalks/trails in the City and to implement Shorewood's Trail Plan.
- f. Many interviewees consider pedestrian street crossings in the City to be unsafe. Interviewees suggested that additional attention be given to such crossings to ensure pedestrian safety. Specific safety concerns were cited along Strawberry Lane near the Minnewashta Elementary School, the Pleasant Avenue/County Road 19 intersection, and the Cathcart Drive/62nd Street intersection.
- g. Considering the volume of bicycle use in the City, an interviewee suggested that specific trails intended for use by bicyclists should be considered.
- h. One interviewee suggested that consideration be given to the construction of a pedestrian crossing of Highway 7.
- i. Also related to Highway 7, some concern was expressed related to traffic noise and impacts upon abutting neighborhoods. In this regard, it was suggested that the noise issue and the need for buffering be addressed at some future point.



Highway 7 Conditions

Community Facilities

<u>Parks.</u> As part of the interview process, the following comments and/or opinions were received which relate to parks:

- 1. Most persons interviewed consider Shorewood's existing park system to be "good" or "excellent."
- 2. Several interviewees feel that efforts should continue to be made to improve the City's park system including a response to the changing recreational needs of residents and providing necessary financial investments.
- 3. It was suggested that the park system lacks a "vision" and that the City should be more "proactive" in the development of its parks.
- 4. Many interviewees made note of the fact that Shorewood's parks are routinely used by residents of neighboring communities.
- 5. Several interviewees cited a City need to take a more pro-active approach (rather than reactive) to park development.
- 6. Through the interview process, the following park-related projects were highlighted as areas of need:
 - a. A storage building for park equipment.
 - b. A passive park.
 - c. General "facelifts" to several existing parks (park equipment upgrades).

d. Recreational facilities which respond to community desires (i.e., a pickle ball court).



Badger Park

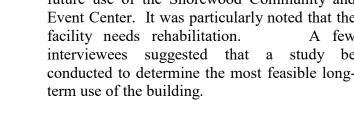
<u>UtilitySystems.</u> As part of the interview/survey process, the following comments and/or opinions were received which relate to the City's utility systems:

- 1. Regarding the City's existing utility systems, municipal water service and stormwater drainage were highlighted by nearly all interviewees as areas of concern. Most expressed their opinion that City water service should be provided to all residents in the City and that efforts need to be made to improve stormwater management.
- 2. Other utility-related comments included the following:
 - a. A desire to bury power lines to reduce the frequency of power loss in the City (as a result of storm events). Related to this comment was a concern over a common need for backup generators in the City.
 - b. A need for a new water treatment plant.
 - c. The City's well houses are in need of upgrades.
 - d. Water pressure in the City is adequate but not great. It was suggested that the City consider water system improvements which will increase water pressure.
 - e. In regard to stormwater management, concern was cited over "rural" (ditch) systems which are currently in place. It was suggested that the City consider the hiring of a "stormwater specialist" to assist in addressing stormwater issues.



MunicipalBuildings. As part of the interview process, the following comments and/or opinions were received which relate to the City's municipal buildings:

- 1. In general, most interviewees believe the City's municipal buildings are satisfactory. The City Hall, in particular, was highlighted as a source of community pride.
- 2. Most interviewees expressed interest in the future use of the Shorewood Community and Event Center. It was particularly noted that the facility needs rehabilitation. interviewees suggested that a study be conducted to determine the most feasible longterm use of the building.





City Hall

3. A number of interviewees noted that the Public Works building needs to be expanded to accommodate equipment storage needs.



City Park Building



Shorewood Community and Event Center

Environmental Issues

Interviewees offered several comments related to environmental issues. The following is a summary of comments and/or identified issues which were received:

1. While interviewees recognize that the waters of Lake Minnetonka are not under City jurisdiction, concerns over lake water quality were commonly identified. Specifically, concern was raised over invasive species and related lake impacts. Also, in regard to Lake Minnetonka, concerns were raised related to boat traffic (power boats) and lake refuse/garbage.

- 2. It was suggested by one interviewee that the City of Shorewood should strive to be a leader in environmental stewardship. Related to this comment was a desire by several interviewees to ensure that the City's ordinances strive to protect Shorewood's natural resources and promote alternative energy systems.
- 3. Several interviewees voiced concern over the private wells which exist in the City and the quality of the water extracted from such wells.
- 4. Drainage problems along the Lake Minnetonka LRT Regional Trail were highlighted as an environmental concern by several interviewees.
- 5. The quality of City water was raised as an environmental concern. Of specific issue is the "hardness" of the water and related sediment. In this regard, it was suggested that treatment (or additional treatment) of City water be considered.
- 6. Several interviewees suggested that greater funding for stormwater management efforts in the City needs to be provided.
- 7. It was also suggested that the City needs to continue to educate the general public on environmental issues.
- 8. It was indicated by one interviewee that a number of homes in the City were constructed upon hydrologic soil (prior to existing wetland regulations). Concern was raised regarding City responsibilities in the event of the structural failure of such homes.

Lake Access

Interviewees offered several comments related to lake access. A summary of received comments and/or identified issues is provided below:

- 1. Most interviewees believe existing lake access in the City (to Lake Minnetonka and Christmas Lake) is satisfactory.
- 2. A number of interviewees indicated that a future public access at the Howard's Point Marina property would be desirable.
- 3. A minority opinion expressed a desire to eliminate the existing public access on Christmas Lake.
- 4. Concern was expressed over "public" versus "private" boat launches on Lake Minnetonka in that "private" launches are typically less strict in regard to zebra mussel inspections (than "public" launches).



- 5. Also noted is a desire for a larger public beach on Lake Minnetonka. In this regard, it was suggested that the City consider the acquisition of parcels adjacent to the existing public beach when opportunities arise.
- 6. Related to Lake Minnetonka access, a desire was expressed to provide a bike path connection to Crescent Beach.





Boat Dock

Christmas Lake Access Area

CONCLUSION

The preceding comments are intended to help establish the basic direction of the 2040 Comprehensive Plan Update. In no order of priority, these comments identify a variety of community issues related to the following:

- Opportunities and/or Strengths
- Issues and/or Concerns
- Challenges
- 2040 Vision
- Immediate Needs
- Residential Land Uses

- Commercial Land Uses
- Transportation
- Community Facilities
- Environmental Issues
- Lake Access

The extent and scope of received comments speaks to the desirable features of Shorewood, while recognizing that many concerns/issues exist which should be addressed in the future. In this regard, there is an evident appreciation of the various issues which confront the City. Simultaneously, there appears to be an equal commitment to resolving those issues and preparing for an improved future.

To be stressed is that the provided views and opinions have not been prioritized nor do they include any positions or responses by appropriate professional staff. At this stage in the Plan Update process, only the directions desired by community representatives are a matter of concern. As may

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be appropriate in future policy and plan discussions, professional staff recommendations and alternatives will be offered for consideration.

Ultimately, it will be the jurisdiction of City Officials to resolve the content and the direction of the Plan Update. In this regard, attempts will be made to build consensus on priority issues facing the City of Shorewood (as identified in the Tactics interviews) and the general direction of the Plan.



APPENDIX B

Emergency Preparedness Procedures



EMERGENCY PREPAREDNESS PROCEDURES

Water emergencies can occur as a result of vandalism, sabotage, accidental contamination, mechanical problems, power failures, drought, flooding, and other natural disasters. The purpose of emergency planning is to develop emergency response procedures and to identify actions needed to improve emergency preparedness. In the case of a municipality, these procedures should be in support of, and part of, an all-hazard emergency operations plan.

Federal Emergency Response Plan

Section 1433(b) of the Safe Drinking Water Act, as amended by the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Public Law 107-188, Title IV – Drinking Water Security and Safety), requires community water suppliers serving over 3,300 people to prepare an Emergency Response Plan. The City of Shorewood's Federal Emergency Response Plan was revised and adopted in 2011.

Operational Contingency Plan

The State recommends that all utilities develop an operational contingency plan that describes measures to be taken for water supply mainline breaks and other common system failures, as well as for routine maintenance. The City maintains a contact list for contractors and suppliers and a water emergency telephone list that act as an Operational Contingency Plan.

Emergency Response Procedures

Quick access to concise and detailed information on water sources, water treatment, and the distribution system may be needed in an emergency. System operation and maintenance records should be maintained in secured central and back-up locations so that the records are accessible for emergency purposes. A detailed map of the system showing the water sources, treatment plant, storage facilities, supply lines, interconnections, and other information that would be useful in an emergency should also be readily available. It is critical that public water supplier representatives and emergency response personnel communicate about the response procedures and be able to easily obtain this kind of information both in electronic and hard copy formats (in case of a power outage).

The City of Shorewood maintains records and maps of the water system. City staff can access these resources from a central secured location in the event of an emergency, and appropriate staff know where these resources are located.

Procedures for Augmenting Water Supplies

The City of Shorewood has six interconnections with four neighboring communities, to be used only in the event of an emergency. Each interconnection has a capacity of 1,000 gpm. The interconnections are with Minnetonka at Vine Hill Road and Shady Hills Road and at Vine Hill

Appendix B



Road and Waterford Place; with Chanhassen at Silver Lake Trail; with Victoria at Smithtown Road; and with Tonka Bay at CSAH 19 and Glen Road and at CSAH 19 and Smithtown Road. The City is exploring a possible interconnection with the City of Excelsior and has identified potential locations for that interconnection.

In the case of a short-term emergency, the City would need to obtain and distribute bottled water. For a long-term emergency, the City will evaluate the cause of service disruption and will determine if a new water source or improved water treatment is necessary. The scale of the response will depend on the cause of the disruption. In this case, a feasibility study will be conducted to determine the most cost-effective solution to the issue.

Allocation and Demand Reduction Procedures and Triggers

The City must prepare procedures to address gradual decreases in water supply, as well as emergencies and the sudden loss of water due to line breaks, power failures, sabotage, etc. These allocation and demand reduction procedures must be consistent with Minnesota State Statute 103G.261 that identifies and defines the priorities in which water usage will be allocated in the event of an emergency. They are defined as follows:

- 1. Domestic water supply only, excluding industrial and commercial uses of municipal water supply. The first priority also includes uses for power production that meet contingency requirements. Domestic use is defined by MN Rules 6115.0630, Subp. 9, as use for general household purposes for human needs such as cooking, cleaning, drinking, washing, and waste disposal, and uses for on-farm livestock watering excluding commercial livestock operations which use more than 10,000 gallons per day or one million gallons per year.
- 2. Consumption of less than 10,000 gallons per day.
- 3. Agricultural irrigation and processing of agricultural products of more than 10,000 gallons per day.
- 4. Power production in excess of the use provided for in the contingency plan.
- 5. All other water use of more than 10,000 gallons per day.
- 6. Non-essential uses. These uses are defined by Minnesota Statutes 103G.291 as lawn sprinkling, vehicle washing, golf course and park irrigation, and other non-essential uses.

The table below lists the priority ranking, average day demand, and demand reduction potential for each customer category in the City.



| Customer Category | Allocation Priority | Average Day Demand (GPD) | Short-Term Emergency Demand Reduction Potential (GPD) |
|----------------------|------------------------|-----------------------------|---|
| Residential | 1 | 357,500 | * |
| Commercial | 2 | 22,100 | * |
| Irrigation | 3 | 6,800 | * |
| Non-Essential | 4 | - | 263,500 |
| Total | - | 386,400 | 263,500 |

GPD = gallons per day

The City of Shorewood will use the following conditions to trigger an emergency response:

- Contamination
- Loss of Production
- Infrastructure Failure
- Governor's Executive Order

The City of Shorewood has identified the following short-term and long-term actions to be implemented as part of an emergency response:

Short-term Actions

- Supply augmentation through interconnection(s)
- Enforce its critical water deficiency ordinance
- Allocate water through emergency action of the City Council

Long-term Actions

- Supply augmentation through interconnections
- Enforce its critical water deficiency ordinance
- Allocate water through emergency action of the City Council
- Meet with large water users to discuss their contingency plan

^{*}Non-essential use calculated as increased summer demand across all customer categories.



Notification Procedures

The City of Shorewood has developed the following plan to inform customers regarding conservation requests, water use restrictions, and suspensions; with the support of City staff, neighboring communities, and local news outlets:

Short-term demand reduction declared (within one year)

Long-term demand reduction declared (over one year)

Governor's Critical water deficiency declared

Frequency: Monthly

Website

- Social media (e.g. Twitter, Facebook)
- Direct customer mailing
- Press release (TV, radio, newspaper)
- Public alert community notification system

Frequency: Annually

- Website
- Social media (e.g. Twitter, Facebook)
- Direct customer mailing
- Press release (TV, radio, newspaper)

Frequency: As Needed

- Website
- Social media (e.g. Twitter, Facebook)
- Direct customer mailing
- Press release (TV, radio, newspaper)

Enforcement

Minnesota Statutes require public water supply authorities to adopt and enforce water conservation restrictions during periods of critical water shortages. As stated in Minnesota Statutes 103G.291, Subdivision 1, regarding public water supply appropriation during deficiency, if the governor determines and declares by executive order that there is a critical water deficiency, public water supply authorities appropriating water must adopt and enforce water conservation restrictions within their jurisdiction that are consistent with rules adopted by the commissioner. The restrictions must limit lawn sprinkling, vehicle washing, golf course and park irrigation, and other nonessential uses, and have appropriate penalties for failure to comply with the restrictions.

The City has a critical water deficiency ordinance defined in Shorewood City Code, Chapter 9: Section 903.12 Subd.1. This section authorizes the City Council to have the authority to implement water restrictions, which improves response times for dealing with water emergencies.



APPENDIX C

Capitol Improvement Program

City of Shorewood, Minnesota

Capital Improvement Program

2021 thru 2030

PROJECTS BY FUNDING SOURCE

| Source | # | Priority | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Total |
|--|----------|----------|---------|--------|---------|---------|------|--------|---------|---------|------|------|-----------|
| 201 - Community & Even | t Cente | er | | | | | | | | | | | |
| SCEC - Mechanical Systems | SCEC-19- | 01 n/a | 10,000 | 10,000 | 10,000 | | | | | | | | 30,000 |
| SCEC - Doors, Exterior | SCEC-21- | 01 n/a | 14,500 | | | | | | | | | | 14,500 |
| SCEC - Windows | SCEC-22- | 01 n/a | | 10,000 | | | | | | | | | 10,000 |
| SCEC - Fire Suppression Attic System | SCEC-22- | 02 n/a | | 23,000 | | | | | | | | | 23,000 |
| SCEC - Kitchen Exhaust System | SCEC-23- | 01 n/a | | | 30,000 | | | | | | | | 30,000 |
| 201 - Community & Event | Center | · Total | 24,500 | 43,000 | 40,000 | | | | | | | | 107,500 |
| 402 - Park Improvements | | | | | | | | | | | | | |
| Freeman Park Overlay Trails | P0105 | n/a | | | 200,000 | | | | | | | | 200,000 |
| Freeman Park Fence Repair | P0109 | n/a | | | 50,000 | | | | | | | | 50,000 |
| Freeman Park North Playground - Hand Rails | P0110 | n/a | | | 25,000 | | | | | | | | 25,000 |
| Cathcart Park Resurface Tennis Court | P0200 | n/a | | | | 15,000 | | | | 18,000 | | | 33,000 |
| Cathcart Park Hockey Boards | P0201 | n/a | | | | | | | 150,000 | | | | 150,000 |
| Cathcart Park Playground Equipment | P0202 | n/a | | | | 150,000 | | | | | | | 150,000 |
| Badger Park Tennis Courts | P0301 | n/a | | | | | | 30,000 | | | | | 30,000 |
| Manor Park Outdoor Ampitheatre & Perimeter Trail | P0403 | n/a | | | | | | | | 150,000 | | | 150,000 |
| Silverwood Park Playground Equipment | P0501 | n/a | 240,000 | | | | | | | | | | 240,000 |
| Silverwood Park Retaining Walls Replacement | P0502 | n/a | | | | | | | 27,900 | | | | 27,900 |
| South Shore Park Master Plan | P0700 | n/a | | | | | | | | 10,000 | | | 10,000 |
| South Shore Park Reconstruction Project | P0701 | n/a | | | | | | | | 90,000 | | | 90,000 |
| 402 - Park Improv | vements | Total | 240,000 | | 275,000 | 165,000 | | 30,000 | 177,900 | 268,000 | | | 1,155,900 |

| Source | # | Priority | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Total |
|--|----------|----------|-----------|-----------|--------|---------|---------|---------|---------|---------|---------|---------|-----------|
| 403 - Equipment Replace | ement F | und | | | | | | | | | | | |
| Dump Truck - Freightliner | 004 | n/a | | | | | | | | | | 233,500 | 233,500 |
| Truck - Ford 550 w/crane, tool box | 007 | n/a | | | | | | | | | 152,700 | | 152,700 |
| Pickup - 4 x 4 Ford F250 | 010 | n/a | | | | | | | | | | 46,700 | 46,700 |
| Pickup - 4 x 4 Ford F150 | 011 | n/a | | | | | | | | | 41,400 | | 41,400 |
| Mower - Toro Groundsmaster 7210 | 012b | n/a | | | | 30,000 | | | | | | | 30,000 |
| Trailer 24' - Felling Galvanized | 022 | n/a | | 18,800 | | | | | | | | | 18,800 |
| Sand Pro 3000 | 064 | n/a | 15,200 | | | | | | | | | | 15,200 |
| Pickup - 4 x 4 Ford F250 | 078 | n/a | 35,400 | | | | | | | | | | 35,400 |
| Pickup - 4 x 4 Ford F150 | 080 | n/a | 32,300 | | | | | | | | | | 32,300 |
| Pickup - 4 x 4 Ford F350 | 081 | n/a | | | | | | | | | | 49,400 | 49,400 |
| Mower - Toro Groundsmaster 7210 | 084 | n/a | | | 29,000 | | | | | | | 36,000 | 65,000 |
| Pickup - 4 x 4 Ford F350 | 090 | n/a | | | | | | | | | | 49,400 | 49,400 |
| Truck - Ford 550 One Ton Dump Truck | 091 | n/a | | | | 94,300 | | | | | | 17,100 | 94,300 |
| Mower - Toro Groundsmaster 7210 | 091b | n/a | | | 29,000 | | | 31,900 | | | | | 60,900 |
| Dump Truck - Freightliner | 092 | n/a | | | | | 200,200 | | | | | | 200,200 |
| Skid Steer - Case SV185 | 097 | n/a | 42,000 | | | | | | | | 53,700 | | 95,700 |
| Dump Truck - Freightliner | 098 | n/a | | | | | | | 212,900 | | | | 212,900 |
| Sweeper | 099 | n/a | | | | | | | | 235,900 | | | 235,900 |
| Attach Skid Steer - Blower | A03 | n/a | | | | | | 10,000 | | | | | 10,000 |
| Attach Skid Steer - V Plow | A04 | n/a | | | 6,700 | | | | | | | | 6,700 |
| Attach Skid Steer - snow bucket | A08 | n/a | | | | | | | 6,800 | | | | 6,800 |
| Attach MultiOne - Dirt Bucket | A10 | n/a | | | | | | | 11,000 | | | | 11,000 |
| Engine Analysis station & software | A13 | n/a | 4,900 | | | | | | | | | | 4,900 |
| Asphalt hot box insert for truck | A14 | n/a | 9,000 | | | | | | | | | | 9,000 |
| Attach skid steer broom | A15 | n/a | ,,,,, | 7,300 | | | | | | | | | 7,300 |
| Attach skid steer leveling bar | A16 | n/a | 3,100 | , , , , , | | | | | | | | | 3,100 |
| Color Copier Replacement | T-13-03 | n/a | | 10,000 | | | | | | | | | 10,000 |
| 800 Mhz Radio Replacement | T-19-01 | n/a | | | | | | | 36,000 | | | | 36,000 |
| Computer Upgrades | T-99-99 | n/a | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 100,000 |
| 403 - Equipment Replacement | ent Fun | d Total | 151,900 | 46,100 | 74,700 | 134,300 | 210,200 | 51,900 | 276,700 | 245,900 | 257,800 | 425,000 | 1,874,500 |
| 404 - Street Reconstructi | on Fun | d | | | | | | | | | | | |
| Maintenance-Bituminous Roadway | LR-99-10 | 0 n/a | 2,060,000 | 472,101 | 0 | 512,107 | 0 | 555,234 | 0 | 601,716 | 0 | 649,853 | 4,851,011 |
| Strawberry Ln ROW acquisition | ST-19-02 | n/a | 150,000 | | | | | | | | | , | 150,000 |

| Source | # | Priority | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Total |
|---|--|-----------------------------------|-----------|--------------------|-----------|-----------|------|-----------|-----------|-----------|-----------|-----------|---|
| Glen Rd, Amlee Rd, Manitou Ln reconstruction | ST-20-01 | n/a | 1,978,947 | | | | | | | | | | 1,978,947 |
| Edgewood Rd reconstruction | ST-21-01 | n/a | | | | 2,774,610 | | | | | | | 2,774,610 |
| Excelsior Blvd reclamation | ST-21-02 | n/a | | | | | | | | 919,420 | | | 919,420 |
| Minnetonka Blvd & St. Albans Rd w/ Greenwood | ST-21-05 | n/a | 210,000 | | | | | | | | | | 210,000 |
| Strawberry Ct | ST-22-01 | n/a | | 209,000 | | | | | | | | | 209,000 |
| Peach Circle | ST-22-02 | n/a | | 332,000 | | | | | | | | | 332,000 |
| Strawberry Ln reconstruction | ST-23-01 | n/a | | 1,896,238 | | | | | | | | | 1,896,238 |
| Grant Lorenz Rd reconstruction | ST-23-02 | n/a | | | | | | 2,136,427 | | | | | 2,136,427 |
| Eureka Rd N reconstruction | ST-23-03 | n/a | | | | | | | | | 2,129,076 | | 2,129,076 |
| Birch Bluff Rd reconstruction | ST-23-99 | n/a | | | 2,071,008 | | | | | | | | 2,071,008 |
| Noble Rd recon | ST-24-01 | n/a | | | | 1,168,500 | | | | | | | 1,168,500 |
| Noble Rd Reclaim | ST-24-02 | n/a | | | | 478,744 | | | | | | | 478,744 |
| Sweetwater Curve reclamation | ST-25-01 | n/a | | | | | | | 1,347,682 | | | | 1,347,682 |
| 2030 Street Reconstruction | ST-30-01 | n/a | | | | | | | | | | 2,000,000 | 2,000,000 |
| Mill Street Trail Construction | T004 | n/a | | | | 110,000 | | | | | | | 110,000 |
| Mill Street Trail ROW | T017 | n/a | | | 105,000 | | | | | | | | 105,000 |
| Smithtown Pond Trail Connection | T018 | n/a | 154,500 | | | | | | | | | | 154,500 |
| 404 - Street Reconstruct | on Fund | Total | 4,553,447 | 2,909,339 | 2,176,008 | 5,043,961 | 0 | 2,691,661 | 1,347,682 | 1,521,136 | 2,129,076 | 2,649,853 | 25,022,163 |
| 405 - MSA Road Reconst | ruction | Fun | | | | | | | | | | | |
| Hwy 7/Old Market Rd Signal | ST-21-03 | n/a | 100,000 | | | | | | | | | | 100,000 |
| 05 - MSA Road Reconstructi | on Fund | _ | | | | | | | | | | | 100 000 |
| | on runa | Total | 100,000 | | | | | | | | | | 100,000 |
| 406 - Trails | on Fund | Total | 100,000 | | | | | | | | | | 100,000 |
| | TOO3 | n/a | 100,000 | 500,000 | | | | | | | | | 500,000 |
| 406 - Trails Galpin Lake Rd Sidewalk | | n/a | 100,000 | 500,000 500,000 | | | | | | | | | |
| 406 - Trails Galpin Lake Rd Sidewalk | T003 | n/a | 100,000 | | | | | | | | | | 500,000 |
| 406 - Trails Galpin Lake Rd Sidewalk 400 | 7003 5 - Trails | n/a | 20,700 | | | | | | | | | | 500,000 |
| 406 - Trails Galpin Lake Rd Sidewalk 406 601 - Water Fund | 7003 5 - Trails | n/a | | | | | | | | | | | 500,000 500,000 |
| 406 - Trails Galpin Lake Rd Sidewalk 400 601 - Water Fund Air Compressor - Ingersall Rand 185 | 7003 5 - Trails 038 | n/a | | 500,000 | | | | | | | | | 500,000 500,000 20,700 |
| 406 - Trails Galpin Lake Rd Sidewalk 400 601 - Water Fund Air Compressor - Ingersall Rand 185 Freightliner Water Truck 50% Glen Rd, Amlee Rd, Manitou Ln | 7003 5 - Trails 038 085 | n/a Total n/a n/a n/a | 20,700 | 500,000 | | 540,244 | | | | | | | 500,000 500,000 20,700 57,350 |
| 406 - Trails Galpin Lake Rd Sidewalk 400 601 - Water Fund Air Compressor - Ingersall Rand 185 Freightliner Water Truck 50% Glen Rd, Amlee Rd, Manitou Ln reconstruction | 7003 5 - Trails 038 085 ST-20-01 | n/a S Total n/a n/a n/a | 20,700 | 500,000 | | 540,244 | | | | 1,008,349 | | | 500,000 500,000 20,700 57,350 693,311 |

| Source | # | Priority | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Total |
|--|----------|----------|-----------|-----------|---------|-----------|---------|---------|---------|-----------|---------|---------|-----------|
| Minnetonka Blvd & St. Albans Rd w/ Greenwood | ST-21-05 | n/a | 0 | | | | | | | | | | 0 |
| Strawberry Ct | ST-22-01 | n/a | | 265,000 | | | | | | | | | 265,000 |
| Peach Circle | ST-22-02 | n/a | | 103,000 | | | | | | | | | 103,000 |
| Strawberry Ln reconstruction | ST-23-01 | n/a | | 489,075 | | | | | | | | | 489,075 |
| Grant Lorenz Rd reconstruction | ST-23-02 | n/a | | | | | | 797,627 | | | | | 797,627 |
| Eureka Rd N reconstruction | ST-23-03 | n/a | | | | | | | | | 6,524 | | 6,524 |
| Birch Bluff Rd reconstruction | ST-23-99 | n/a | | | 866,533 | | | | | | | | 866,533 |
| Noble Rd recon | ST-24-01 | n/a | | | | 372,543 | | | | | | | 372,543 |
| 2030 Street Reconstruction | ST-30-01 | n/a | | | | | | | | | | 600,000 | 600,000 |
| Boulder Bridge VT Well Motor Replace | W-18-01 | n/a | | 35,000 | | | | | | | | | 35,000 |
| Amesbury Well Pipe Coatings and Corrosion Prev | W-19-02 | n/a | 25,000 | | | | | | | | | | 25,000 |
| Rebuild Well Pump SE VT Well | W-19-05 | n/a | | | | | 25,000 | | | | | | 25,000 |
| SE Area Well Motor Replace | W-20-03 | n/a | | 45,000 | | | | | | | | | 45,000 |
| Rebuild Well Pump Amesbury VT Well | W-20-05 | n/a | | | | | | 25,000 | | | | | 25,000 |
| Rebuild Well Pump Badger VT Well | W-21-02 | n/a | 30,000 | | | | | | 35,000 | | | | 65,000 |
| SE Area Well & Iron Plant LED Light Conversion | W-21-03 | n/a | 12,000 | | | | | | | | | | 12,000 |
| Badger Field Well LED Light Conversion | W-21-04 | n/a | 6,000 | | | | | | | | | | 6,000 |
| Rebuild Well Control Valve SE Well | W-21-05 | n/a | 15,000 | | | | | | | | | | 15,000 |
| SE Area Well Pipe Coatings and Corrosion Prev | W-22-01 | n/a | | 25,000 | | | | | | | | | 25,000 |
| Rebuild Well Pump Boulder Bridge VT Well | W-22-02 | n/a | | 30,000 | | | | | | 35,000 | | | 65,000 |
| FilterMediaChangeout/RehablronRe movalFilterSEPlant | W-22-03 | n/a | | 40,000 | | | | | | | | | 40,000 |
| Rebuild Well Pump Amesbury Submersible Well | W-23-01 | n/a | | | 30,000 | | | | | | 36,000 | | 66,000 |
| Rebuild Well Pump Boulder Bridge Submersible Well | W-24-01 | n/a | | | | 30,000 | | | | | | | 30,000 |
| East Water Tower Paint & Reconditioning | W-24-02 | n/a | | | | 380,000 | | | | | | | 380,000 |
| Replace VFD SE Area Well | W-24-03 | n/a | | | | 10,000 | | | | | | | 10,000 |
| Replace VFD Badger Well | W-26-01 | n/a | | | | | | 12,000 | | | | | 12,000 |
| Watermain Reconstruction Activity | W-99-01 | n/a | | | | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 1,050,000 |
| 601 - Wat | er Fund | l Total | 1,072,011 | 1,089,425 | 896,533 | 1,482,787 | 175,000 | 984,627 | 185,000 | 1,193,349 | 192,524 | 750,000 | 8,021,256 |

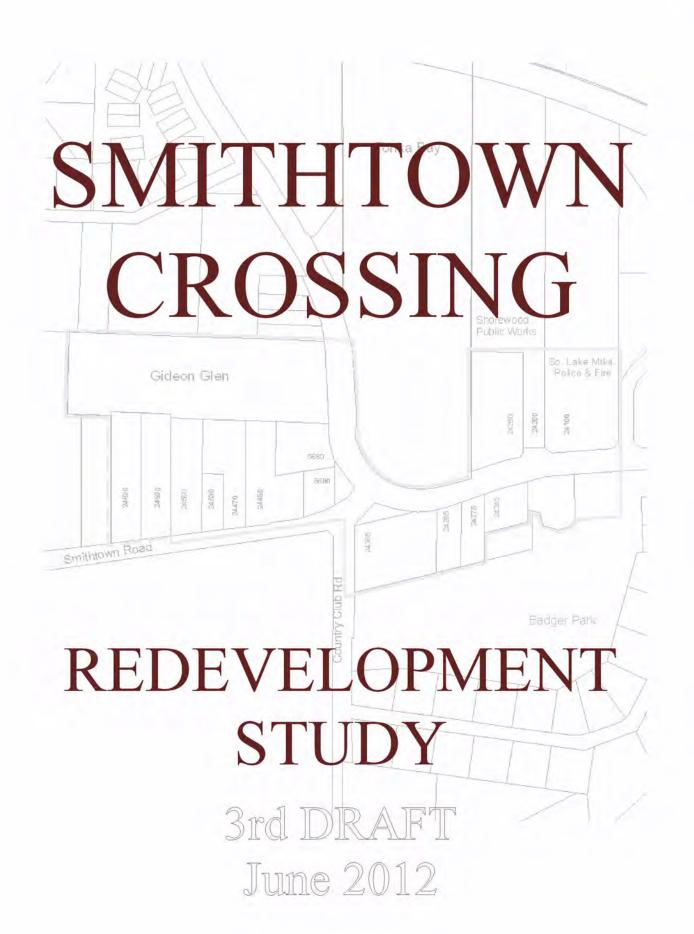
| Source | # | Priority | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Total |
|---|----------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|
| 611 - Sanitary Sewer Fu | nd | | | | | | | | | | | | |
| Freightliner Water Truck 50% | 085 | n/a | | 57,350 | | | | | | | | | 57,350 |
| Lift Station 11 Rehab - 20465 Radisson Rd. | SS-13-01 | n/a | | | 240,000 | | | | | | | | 240,000 |
| Lift Station 9 Rehab - 20995 Minnetonka Blvd | SS-14-01 | n/a | | 240,000 | | | | | | | | | 240,000 |
| Lift Station 7 Rehab - 5600 Woodside Road | SS-16-02 | n/a | 240,000 | | | | | | | | | | 240,000 |
| CIP Sewer Repairs Assoc with Roadway Reconstr | SS-99-01 | n/a | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 500,000 |
| Televising & Cleaning | SS-99-02 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sewer Additional | SS-99-04 | n/a | | | | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 175,000 |
| Infiltration and Inflow Reduction | SS-99-05 | n/a | 70,000 | 70,000 | 70,000 | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 | 80,000 | 770,000 |
| Glen Rd, Amlee Rd, Manitou Ln reconstruction | ST-20-01 | n/a | 110,326 | | | | | | | | | | 110,326 |
| Edgewood Rd reconstruction | ST-21-01 | n/a | | | | 185,709 | | | | | | | 185,709 |
| Excelsior Blvd reclamation | ST-21-02 | n/a | | | | | | | | 139,345 | | | 139,345 |
| Strawberry Ln reconstruction | ST-23-01 | n/a | | 175,049 | | | | | | | | | 175,049 |
| Grant Lorenz Rd reconstruction | ST-23-02 | n/a | | | | | | 131,346 | | | | | 131,346 |
| Eureka Rd N reconstruction | ST-23-03 | n/a | | | | | | | | | 143,525 | | 143,525 |
| Birch Bluff Rd reconstruction | ST-23-99 | n/a | | | 120,200 | | | | | | | | 120,200 |
| Noble Rd recon | ST-24-01 | n/a | | | | 185,709 | | | | | | | 185,709 |
| 2030 Street Reconstruction | ST-30-01 | n/a | | | | | | | | | | 200,000 | 200,000 |
| 611 - Sanitary Sec | wer Fund | d Total | 470,326 | 592,399 | 480,200 | 526,418 | 155,000 | 286,346 | 155,000 | 294,345 | 298,525 | 355,000 | 3,613,559 |
| 631 - Stormwater Manag | gement l | Fund | | | | | | | | | | | |
| Pump - 4' Discharge Trailer Mtd | 050 | n/a | | | 62,400 | | | | | | | | 62,400 |
| Culvert Replace - Galpin Lake Rd and Mayflower Rds | CR-21-01 | | 9,000 | | , | | | | | | | | 9,000 |
| Culvert Replace - 22630/22695 Murray St | CR-21-02 | n/a | 8,000 | | | | | | | | | | 8,000 |
| Culvert Replace - 22535 Murray St/6180 Cardinal Dr | CR-22-01 | n/a | | 11,000 | | | | | | | | | 11,000 |
| Glen Rd, Amlee Rd, Manitou Ln reconstruction | ST-20-01 | n/a | 819,867 | | | | | | | | | | 819,867 |
| Edgewood Rd reconstruction | ST-21-01 | n/a | | | | 678,682 | | | | | | | 678,682 |
| Excelsior Blvd reclamation | ST-21-02 | n/a | | | | | | | | 157,828 | | | 157,828 |
| Strawberry Ct | ST-22-01 | n/a | | 40,000 | | | | | | | | | 40,000 |
| Peach Circle | ST-22-02 | n/a | | 25,000 | | | | | | | | | 25,000 |
| Strawberry Ln reconstruction | ST-23-01 | n/a | | 469,066 | | | | | | | | | 469,066 |

| Source | # | Priority | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Total |
|--|-----------|----------|------------|-----------|-----------|-----------|---------|-----------|-----------|-----------|-----------|-----------|------------|
| Grant Lorenz Rd reconstruction | ST-23-02 | n/a | | | | | | 435,150 | | | | | 435,150 |
| Eureka Rd N reconstruction | ST-23-03 | n/a | | | | | | | | | 457,557 | | 457,557 |
| Birch Bluff Rd reconstruction | ST-23-99 | n/a | | | 410,866 | | | | | | | | 410,866 |
| Noble Rd recon | ST-24-01 | n/a | | | | 467,086 | | | | | | | 467,086 |
| Sweetwater Curve reclamation | ST-25-01 | n/a | | | | | | | 61,494 | | | | 61,494 |
| 2030 Street Reconstruction | ST-30-01 | n/a | | | | | | | | | | 500,000 | 500,000 |
| Shorewood Oaks Drainage | STM-20-04 | 1 n/a | 190,000 | | | | | | | | | | 190,000 |
| Grant Street Drainage | STM-20-05 | n/a | 250,000 | | | | | | | | | | 250,000 |
| 2021 Mill & Overlay - Drainage Improvements | STM-21-01 | n/a | 100,000 | | | | | | | | | | 100,000 |
| Noble Road Channel Widening | STM-24-01 | n/a | | | | 247,612 | | | | | | | 247,612 |
| Smithtown Pond | STM-24-02 | n/a | 3,065,280 | | | | | | | | | | 3,065,280 |
| Freeman Park Outlet | STM-24-03 | n/a | | | | 96,794 | | | | | | | 96,794 |
| Strawberry Lane Drainage (North) | STM-25-01 | n/a | | 1,071,509 | | | | | | | | | 1,071,509 |
| Strawberry Lane Drainage (South) | STM-25-02 | ? n/a | | 381,924 | | | | | | | | | 381,924 |
| Grant Lorenz Channel | STM-26-01 | n/a | | | | | | 262,692 | | | | | 262,692 |
| Shorewood Lane Ravine | STM-26-02 | n/a | | 280,000 | | | | | | | | | 280,000 |
| Catch Basin Reconstruction | STM-99-01 | n/a | 30,000 | 30,000 | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 | 40,000 | 40,000 | 350,000 |
| Disposal of Street Sweepings | STM-99-02 | n/a | 36,400 | 37,100 | 37,800 | 38,600 | 39,400 | 40,200 | 41,000 | 41,800 | 42,600 | 42,750 | 397,650 |
| Storm Water Additional | STM-99-03 | n/a | | | | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 700,000 |
| Storm Pond Sediment Cleaning & Disposal | STM-99-04 | 1 n/a | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 | 1,500,000 |
| 631 - Stormwater Managem | ent Fund | Total | 4,658,547 | 2,495,599 | 696,066 | 1,813,774 | 324,400 | 1,023,042 | 387,494 | 484,628 | 790,157 | 832,750 | 13,506,457 |
| GRA | AND TO | TAL | 11,270,731 | 7,675,862 | 4,638,507 | 9,166,240 | 864,600 | 5,067,576 | 2,529,776 | 4,007,358 | 3,668,082 | 5,012,603 | 53,901,335 |



APPENDIX D

Smithtown Crossing Project



Smithtown Crossing Redevelopment Study

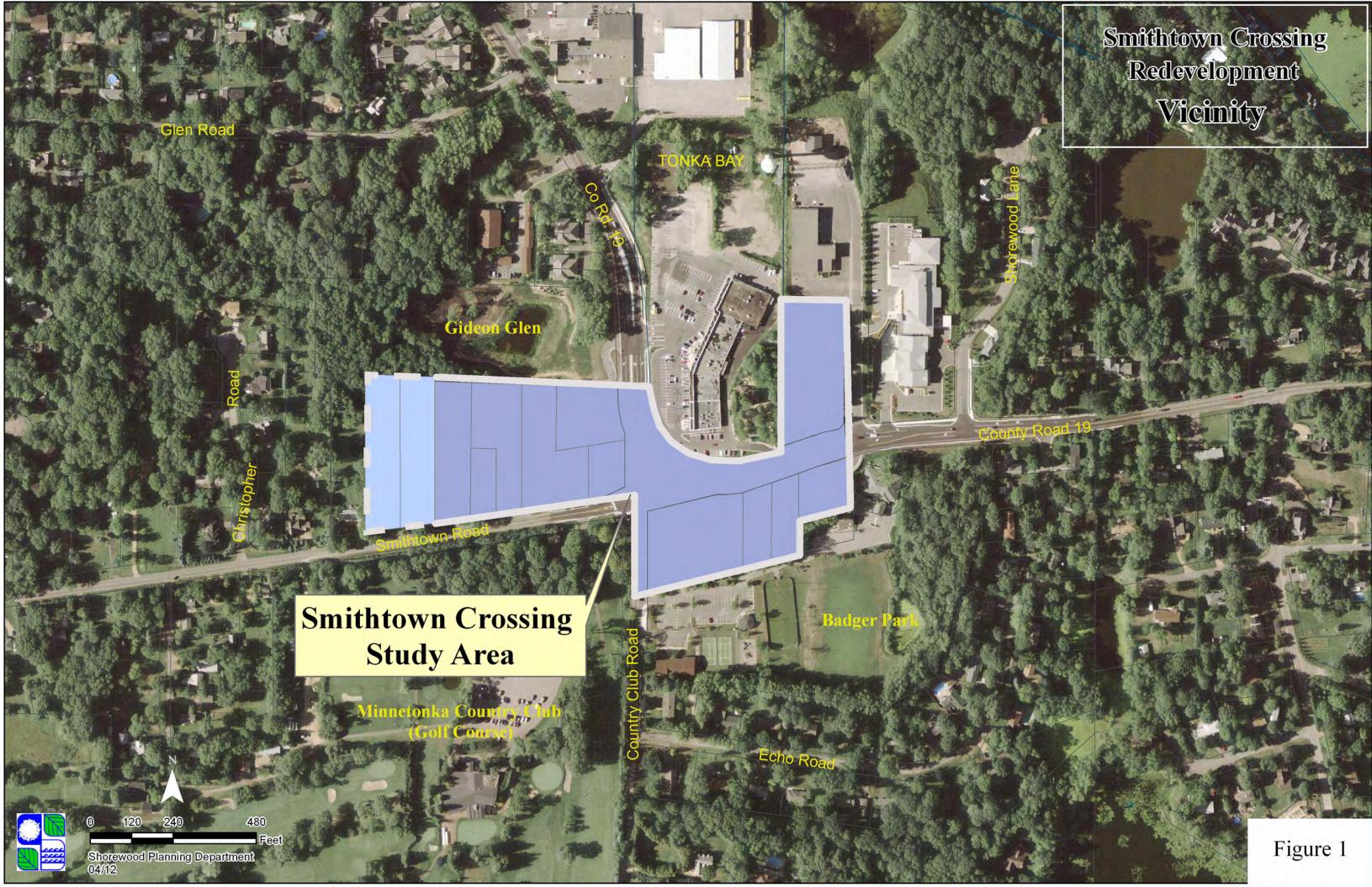
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| Redevelopment Guiding Principles | 11 |
| Plan | 13 |
| Zoning Parameters Commercial: C-1 Residential: R-3B Update Regulations Mixed Use Building Height Senior Housing Density Design Criteria Pedestrian/Bicycle Circulation Landscaping Architecture/Materials Concept Sketch City Participation Tax Increment Financing Land EDA | |
| Appendix Planning Inventory List of Meeting Dates Traffic Volume Map | |
| | |

Executive Summary

While readers are encouraged to read the entire Study, following is a summary of the recommendations included therein:

- Encourage unified/coordinated redevelopment versus a piece-meal/individual approach.
- Consider various incentives to achieve coordinated and higher quality development.
- ➤ Utilize Planned Unit Development (P.U.D.) and establish parameters for mixed use (residential and commercial).
- Incentives and rewards will be tied to compliance with the City's redevelopment "guiding principles".
 - Consider use of Tax Increment Financing (TIF) to encourage land assembly, common open area and high quality architecture and landscaping.
 - Consider City acquisition of land as it becomes available to help facilitate land assembly.
- Require marketability and traffic studies for proposed activities.
- Provide for bicycle/pedestrian connections and circulation within the Study Area.
- Require substantial, natural, low maintenance landscaping in order to create buffers and achieve incentives.
- > Include public/common open space internal to the project.
- Encourage well articulated architecture with pitched rooflines, tiered levels, interesting shadowing and natural materials.



Introduction

Geographically, the intersection of Smithtown Road and County Road 19 (Smithtown Crossing) is relatively centered in the City of Shorewood. The City considers the area surrounding the intersection to be somewhat of a northern gateway to the community. As such, considerable time, energy and money have been invested to enhance the area. The City has developed a "civic campus" including the Shorewood Public Works Facility, the South Lake Public Safety Building, the South Shore Community Center, and a newly remodeled City Hall. Badger Park and the Gideon Glen Conservation Open Space area provide active and passive recreational opportunities for the area, and proximity to the Lake Minnetonka Regional LRT Trail provides pedestrian and bicycle access for South Lake Minnetonka residents. Finally, the intersection itself was redesigned and reconstructed in 2005.

To date, private investment adjacent to Smithtown Crossing has not kept up with public investment. Commercial properties in the area are characterized as disjointed, with buildings that are low-valued and underutilized and, in many cases do not comply with current Shorewood zoning standards. In this regard, the Shorewood Comprehensive Plan has identified the area as being prime for redevelopment.

In order to facilitate redevelopment that makes better use of land, better serves the residents of the community, enhances tax base, reflects the quality and character of the community, and is commensurate with the highly desirable, highly visible Smithtown Crossing area, the City has begun exploring options and incentives to assist the area in realizing its true potential.

The Planning Commission began working on the Smithtown Crossing Redevelopment Study in early 2010. The study area boundary was established as shown on Figure 1, preceding, and Figures 2 and 3 in the following pages. The study area contains a total of 10.9 acres and consists of three locations: 1) the northwest quadrant of the intersection; 2) the southeast quadrant of the intersection; and 3) the area north of County Road 19, just west of Shorewood Lane. The study focused primarily on the northwest quadrant of the intersection, which contains anywhere from 4.52 to 6.56 acres, depending on how far west a project might extend. The southwest quadrant of the intersection contains another 2.74 acres. The area to the north of County Road 19 has 1.59 acres.

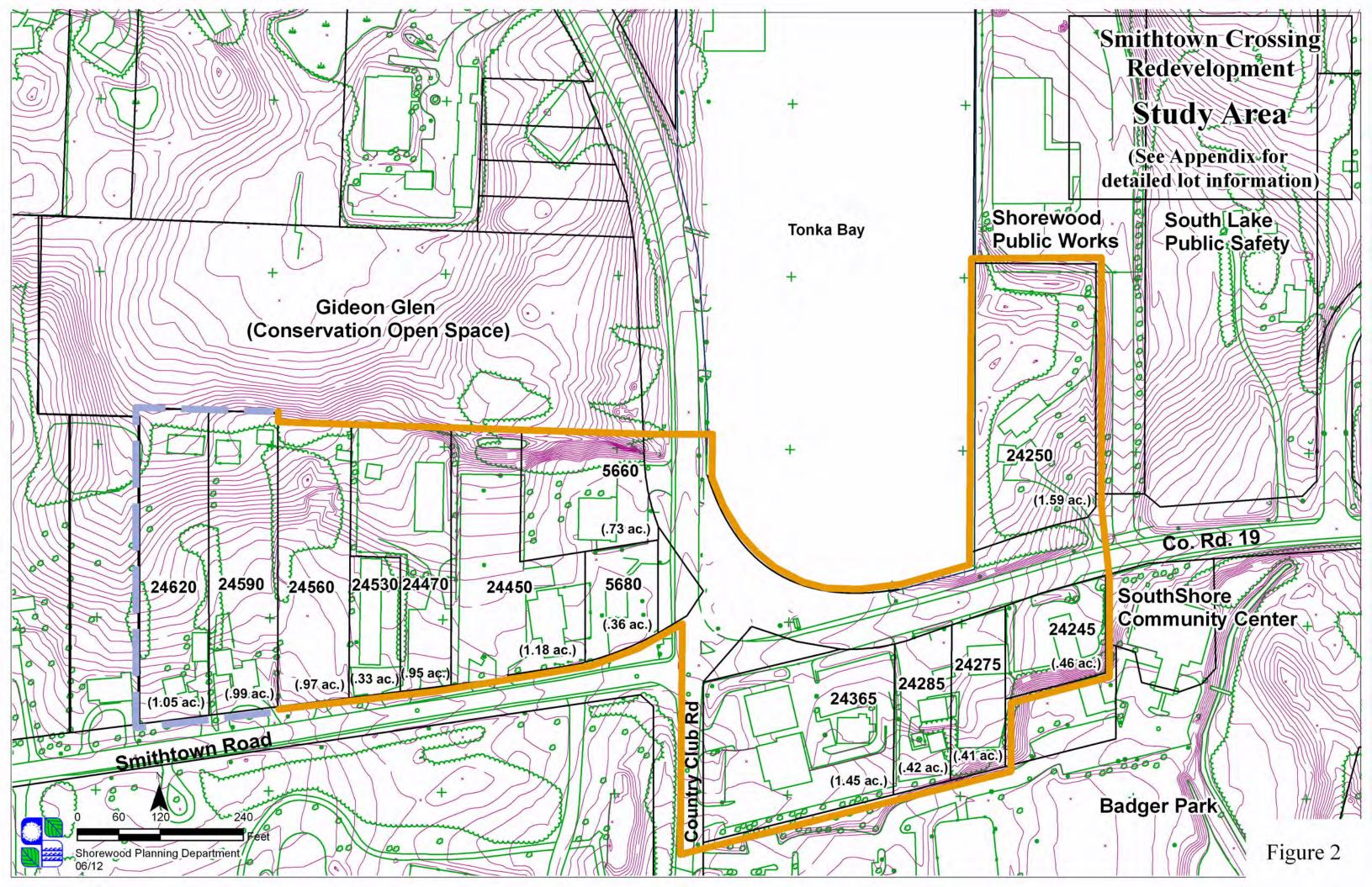
A brief planning inventory, examining the various uses in the district, property ownership, zoning and values was prepared and is contained in the Appendix of this report. With the exception of the American Legion, a retail/office building and a small, nonconforming apartment building, the area is predominantly occupied by auto-oriented uses (sales, auto repair, fuel station, car wash, etc.). Two single-family homes are also included in the study area.

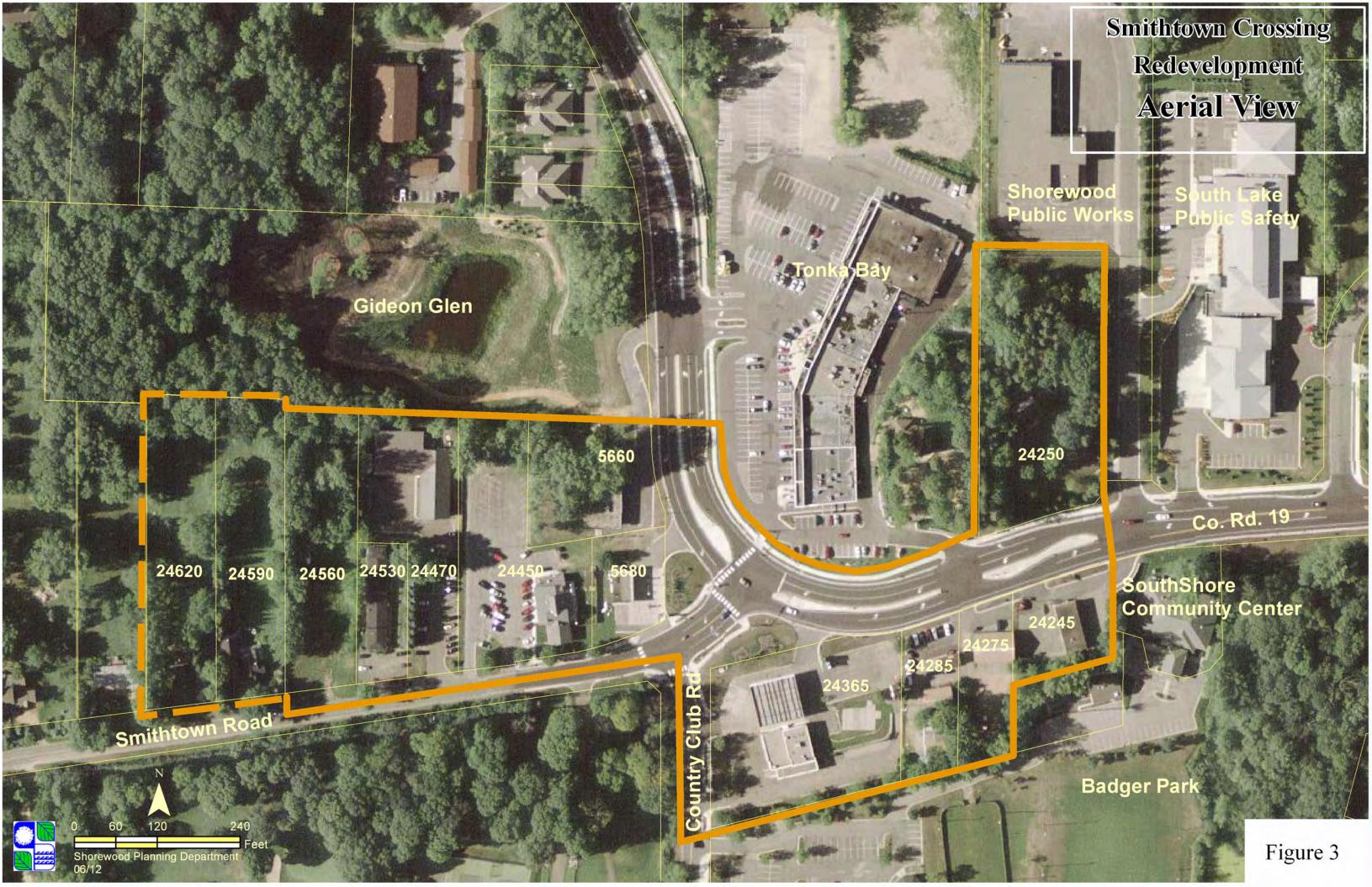


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Smithtown





Planning Issues

One of the first steps taken by the Planning Commission in its study was to identify planning issues associated with the study area. Following are a list of issues identified to date. These are also illustrated on Figure 2 on the following page.

- Study Area west boundary (it was decided that this edge of the study area could remain somewhat flexible, in the event a developer chooses to acquire one or more of the single-family residential lots that lie west of the commercial area)
- Land uses (considerable interest has been expressed in exploring mixed use for the Study Area
- Buffering and land use transitions
- Taking advantage of views into Gideon Glen while preserving natural views from across and within Gideon Glen
- Access (vehicular) to and from County Road 19 and to and from Smithtown Road
- Internal circulation vehicular and pedestrian
- Phasing
- Redevelopment of lots on an individual basis versus unified/coordinated development*
- Future development of golf course property
- Land use and zoning of single-familly residential property at 24250 Smithtown Road
- Pedestrian connection from Badger Park to north side of Smithtown Road
- Drainage**

*The table on the following page sets forth the advantages of unified/coordinated redevelopment versus a piece-meal approach.

**Note. This is a significant issue and supports the concept of a unified development effort. The City Engineer advises us that properties within the study area not only need to address rate control, but also the new volume of water that comes from redevelopment. This supports the concept of a coordinated redevelopment scenario versus piece-meal redevelopment of individual sites. Individually, the properties would have to come up with their own ponding for each site.

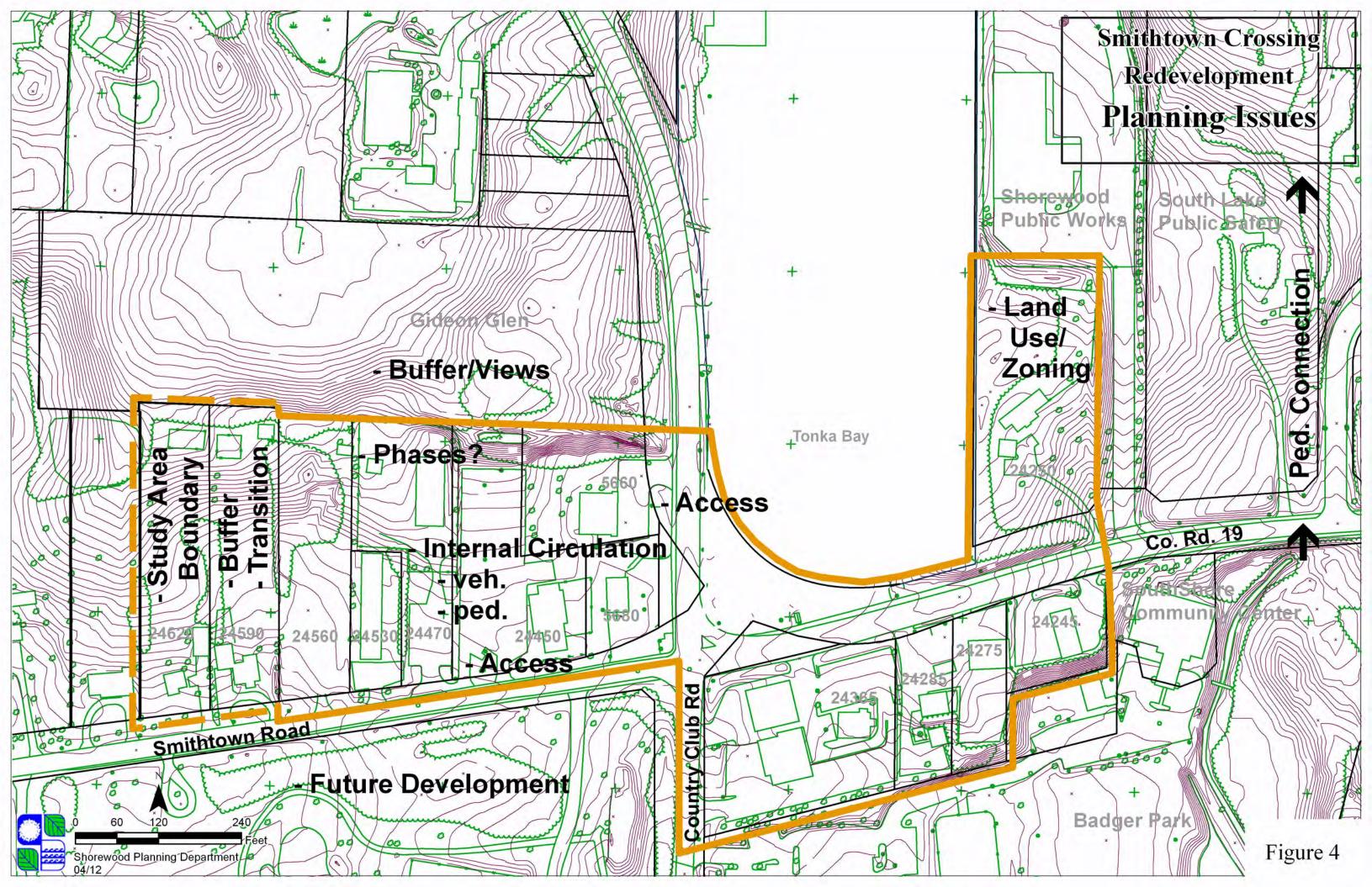


Unified/Coordinated versus Piece-meal Redevelopment Smithtown Crossing

| Unified/Coordinated | Piece-meal |
|--|---|
| Maximize exposure to County Rd 19 | Only two properties front on County Rd 19 |
| Maximize view of Gideon Glen | Two properties - no view |
| Efficient drainage | Each site provides its own seperate pond for rate control and volume storage; more land consumed by ponding |
| P.U.D. provides flexibility relative to internal setbacks - more efficient use of land | Strict adherence to setback requirements |
| Opportunity for joint-use parking | Each site provides its own parking, resulting in less efficient land use and circulation |
| Opportunity for 75% hardcover (site is large enough for on-site treatment) | Maximum 66% hardcover (individual sites too small for treatment solutions) |
| Consolidated access | Potential congestion from multiple access points |
| Project identity - "Smithtown Crossing" | Each business on its own |
| Possibility of City assistance (e.g. T.I.F.) | Each owner on its own |
| Pedestrian access/circulation | Less attractive to pedestrians (crossing driveways and parking lots |

Each site on its own

Efficiency of landscaping



Redevelopment Guiding Principles

Having identified issues associated with the study area, it was determined that a clear picture of what the City hopes to see for the subject area should be formulated – for lack of a better term, we will use "redevelopment guiding principles". This is the point where we step back and view the area as we would like to see it, say in the next 10-15 years. The redevelopment guiding principles should be a positive expression of what the City wants, rather than a list of what we don't want to see.

The proposed redevelopment guiding principles starts with the Shorewood Comprehensive Plan, which identified an interest in the following:

- Unified/coordinated development; assembly of land parcels
- Planned unit development
- Possible mixed use commercial/residential
- Opportunity for additional senior housing
- Predominant retail and office uses versus service commercial*

*Since this was written, the Planning Commission held a meeting with real estate development professionals, the consensus of whom indicated that there may not be a strong market for retail. It was suggested that a stronger market may exist for personal service commercial (i.e. banking, health and beauty services, etc.).

In addition to the above, the Planning Commission discussed other factors such as pedestrian/bicycle circulation and connectivity, architectural treatment (e.g. residential character and natural materials), natural landscaping, and compatibility with surrounding land use activities as parameters for the redevelopment of the area. From this, the following was derived:

Redevelopment Guiding Principles - Smithtown Crossing

- 1. The project will result in a unified/coordinated pattern of development.
- 2. The use or mixture of uses of property in the study area shall be based on market needs and analysis of detailed traffic study.
- 3. Site design should take advantage of views afforded by existing natural areas and parks.
- 4. Uses within the study area shall be arranged to create a transition between higher intensity commercial development and surrounding lower density housing. Any use of land not currently zoned for commercial development shall be limited in building height to 35 feet or two and a half stories. The westerly edge of the project area shall be densely landscaped to enhance the transition.



- 5. Any housing component should add to and enhance the variety of housing choices in the community.
- 6. Commercial activities should serve not only the residents of the project area, but the community as a whole.
- 7. Access to and egress from, and circulation within Smithtown Crossing must be pedestrian/bicycle friendly.
- 8. Useable, inviting outdoor spaces shall be integrated into the development.
- 9. Landscaping will be natural and substantial, diminishing parking lot massing and softening and framing buildings on the site.
- 10. Attractive and articulated architecture with pitched rooflines and natural materials will reflect the residential character and quality of the community.
- 11. Reduction of building mass may be achieved by using a combination of the following techniques:
 - a. Variations in roofline and form.
 - b. Use of ground level arcades and covered areas.
 - c. Use of protected and recessed entries.
 - d. Inclusion of windows on elevations facing streets and pedestrian areas.
 - e. Retaining a clear distinction between roof, body and base of building.



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Smithtown Crossing - Plan

From the very beginning of this study, it has been realized that properties within the study area may develop or redevelop individually. It is not the City's intent to stand in the way of property owners wishing to improve their land. Individual site development will be expected to adhere to the development regulations currently in place.

What <u>is</u> the intent of this study is to encourage a higher level of quality than might occur with piecemeal development under the current rules. In this regard, there are a number of ways that the City can reduce regulatory obstacles and even incite or reward development built to the higher standards envisioned by this study. The greater a project complies with the City's vision for the area, the greater the incentive with respect to zoning flexibility and even City participation in the project.

Zoning Parameters

With the exception of the public facilities located north of County Road 19 and the three residential properties in the study area, all of the subject lots are zoned C-1, General Commercial (see Figure 4). Individual lots must adhere to the standard of that zoning district, including height limitations. Any coordinated development of several or all of the subject properties should be done by Planned Unit Development (P.U.D.), using the C-1 District and the R-3B, Multiple-Family Residential District as the underlying standards for the project. Any use of currently zoned residential lots shall be residential with building heights not exceeding 35 feet and two and a half stories.

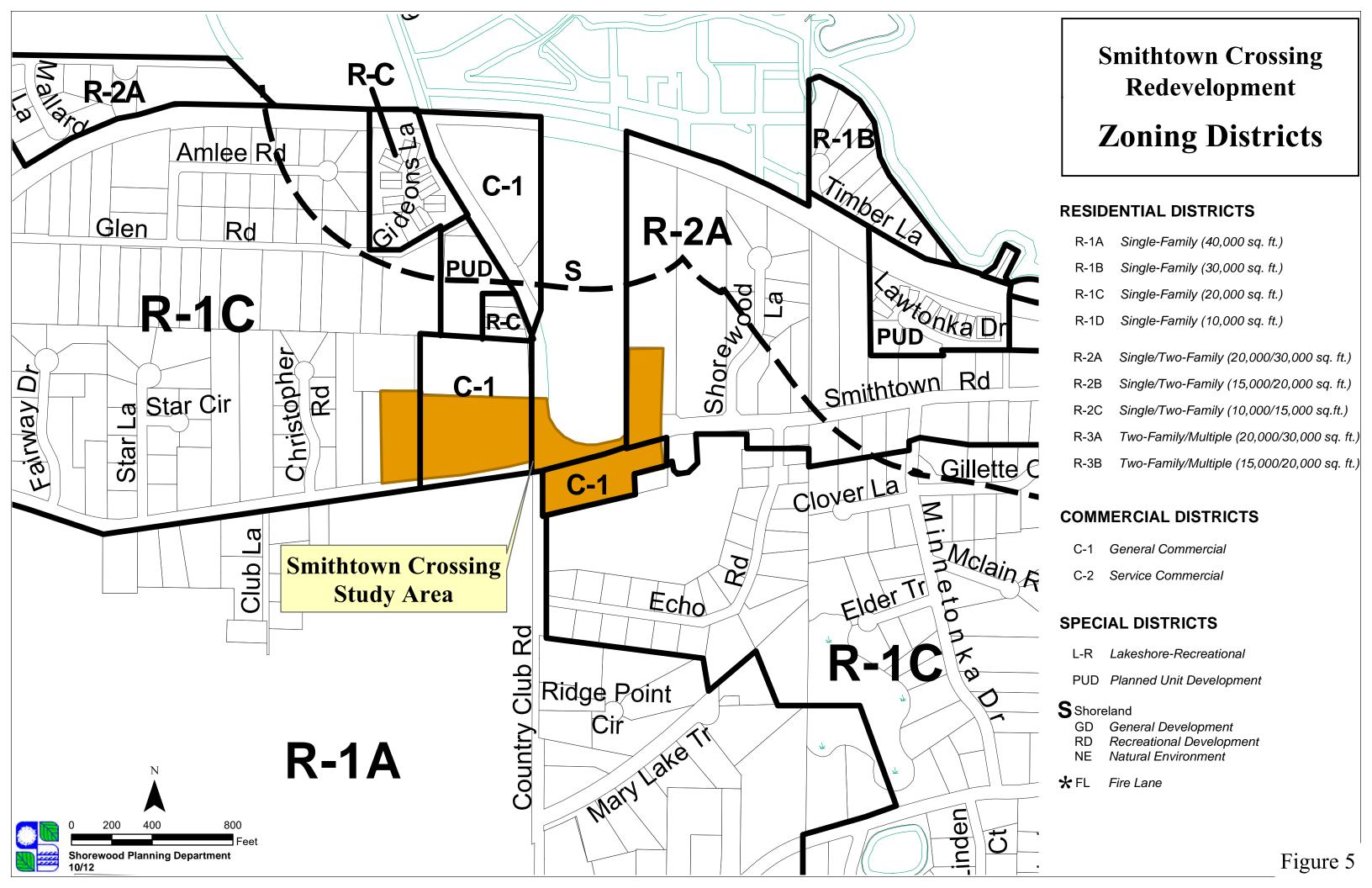
The single-family residential property on the north side of County Road 19 is surrounded by commercial development in Tonka Bay and public facilities (public works, police and fire). The City should be open to a rezoning of this site to R-C, Residential/Commercial.

Update Regulations

While the City's current P.U.D. provisions could be used to process a mixed use type of project, involving a mixture of commercial and residential development, it is recommended that the Shorewood Zoning Code be amended to specifically address mixed use. This update of the Code would include provisions tying flexibility and reward to the level of compliance with City's vision for the area. One such provision might include an allowance for additional building height based on architectural design and extent and type of landscaping. For certain types of housing in a mixed use project, higher densities than what current regulations allow might be considered where it could be demonstrated that the density would be compatible with surrounding uses and where resulting traffic volumes would not adversely affect existing streets. In this regard, a mixed use project would be required to submit a traffic study as part of its application submittals.

Design Criteria

Inherent to any mixed use development project is attention to pedestrian and bicycle circulation. Site planning should include both internal circulation as well as connections to existing and



future trails and sidewalk systems. Sidewalks built with the reconstruction of the intersection in 2005 will ultimately provide connection with the LRT Trail to the north and to the City Hall/Badger Field complex south and east of the intersection. The County Road 19 Corridor Study illustrates an entire network of pedestrian/bicycle segments to the east of the study area. Smithtown Crossing should link to that system as well as extend west along Smithtown Road to the westerly extent of the project.

Landscaping has long been recognized as an effective means of creating buffers, diminishing the impact of building massing, enhancing architecture and screening and cooling of parking lots. The County Road 19 Corridor Study, adopted in 2003 sets forth concepts for streetscaping along the corridor as it passes through Shorewood. These concepts should be implemented on both the County Road 19 and Smithtown Road sides of the project, converging at the northwest corner of the intersection. This public



Example: Landscaping, screening/cooling parking lots

right-of-way area should be redone and incorporated into the Smithtown Crossing design. Current landscape practice focuses on natural designs that require low to no maintenance, minimizing sprinkling and conserving water. Developers hoping to achieve additional density or



Example: Landscaping, public space

building height will want to substantially exceed the minimum landscaping requirements currently found in the City's zoning regulations, both in terms of size and quantities of plant materials.

Site planning and landscaping for Smithtown Crossing should incorporate some sort of public space or common area that invites visitors to spend a little more time in the area, relaxing or connecting with others. It is not the intent of this report to dictate a certain type of architecture. This does not, however, diminish the importance of this critical design element. Shorewood has in the past placed great value on buildings that are in keeping with the residential character of the community. While no formal definition of "residential character" exists, certain characteristics have been identified that begin to describe what the City is looking for. Well articulated buildings with pitched rooflines, tiered levels and interesting shadowing go far in mitigating the visual impact of larger, taller buildings. Similarly, features such



Example: Architecture—pitched roofs, natural materials, shadow, articulation

as awnings, natural building materials, balconies and lighting help to diminish building masses and create a human scale for the project. And, as mentioned in the previous section, nothing does more to soften and enhance a building than landscaping.

At present, the C-1 zoning district allows buildings to be three stories or 40 feet in height, whichever is least. The visual impact of such a building can be mitigated by the means discussed above as well as by building placement on the property and use of the natural terrain. For



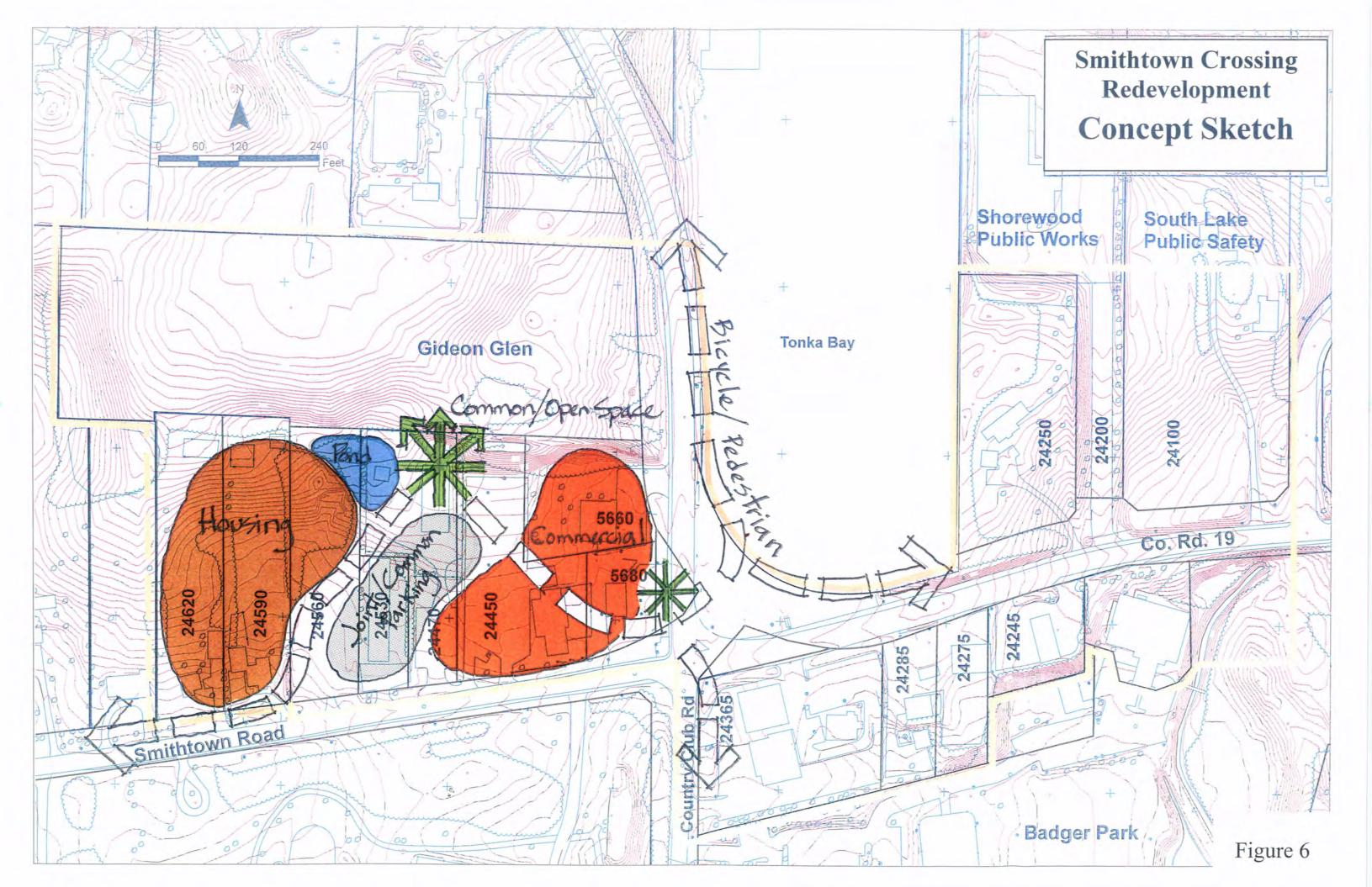
Example: Architecture—diminish visual impact of building height with construction materials, landscaping

example, the topography found in the northwest quadrant of the intersection may lend itself to partially below-grade levels or underground parking.

> s s i S m i t h t o w n g

Smithtown Crossing Redevelopment Concept

From the beginning of this study the City has deliberately avoided trying to dictate the design of the site or the buildings to be located within the project area. Rather, this plan is intended to convey the character of development the City wishes to see in the Study Area. During various public meetings at which the study was presented, it became clear that those interested in the project wanted more visual depictions of what was being described. Preceding pages include photographic examples of the types of buildings and landscaping the City desires. While no attempt has been made to produce an illustrative site plan for the Study Area, the Concept Sketch on the following page attempts to show the potential functional relationships of the various elements of future development.



City Participation

While the plan for the redevelopment of Smithtown Crossing includes reducing regulatory obstacles, that alone may not be enough to entice the type of development envisioned in this study. Since the City's vision for the area requires development to substantially exceed current regulations (e.g. extra landscaping, architectural standards, acquisition and combination of land parcels), it will likely take some investment on the City's part. The greater the City's involvement, the greater say the City has in how the property develops. Following are possible ways in which the City can be involved.

Tax Increment Financing

Early on in the conversations about redeveloping the Smithtown Crossing area, tax increment financing (TIF) was mentioned as a possible tool for enticing developers to invest in a project. TIF is a financing tool that uses future gains in tax revenues to finance the cost of current improvements, including - in some cases- writing down the cost of land. Shorewood has used TIF successfully in the past when building the intersection at Old Market Road and Highway 7. In that case, the City opted for a "pay-as-you-go" method where any future risk is assumed by the developer. This is what is recommended for Smithtown Crossing. While there are projects done involving cities assuming some or all of the risk, this method is not recommended for the Smithtown Crossing redevelopment project.

Acquisition of Land

One of the most difficult obstacles to overcome in a redevelopment project is assembling land for a unified, cohesive development. It is strongly suggested that, as parcels within the redevelopment area become available on the market, the City consider acquiring them. These properties should be viewed as an investment in the redevelopment and could be sold to an ultimate developer "at cost" as a demonstration of the City's commitment to the project. This would also provide leverage toward the City having more input on the type, quality and design of the project.

Economic Development Authority

Shorewood already has an Economic Development Authority (EDA) which has been used successfully in the redevelopment of the property currently occupied by the South Lake Public Safety facility. The EDA can be useful with regard to tax increment financing as well as in the acquisition of property. Assisting in the correction of problem soils is yet another function of an EDA.











Appendix

Smithtown Crossing Planning Inventory.xls

| Prop. Address | <u>Owner</u> | <u>Use</u> | Zoning | Area (Sq.Ft.) | Area (Ac.) | Land Val. | Struct. Val. | Tot. Val. | <u>Notes</u> |
|--------------------|--------------------------|--------------|-----------|---------------|------------|-------------|--------------|-------------|----------------------|
| 24620 Smithtown Rd | City of Shorewood | Vacant | R-10 | 45731 | 1.05 | \$150,000 | | \$150,000 | |
| 24590 Smithtown Rd | Hirsch | S.F. Res | R-10 | 43303 | 0.99 | \$115,000 | \$186,000 | \$301,000 | |
| 24560 Smithtown Rd | American Legion | Vacant | C-1 | 42107 | 0.97 | \$200,000 | n/a | \$200,000 | |
| 24530 Smithtown Rd | Femrite | M.F. Res | C-1 | 14632 | 0.33 | \$90,000 | \$295,000 | \$385,000 | Nonconforming use |
| 24470 Smithtown Rd | Triple B Equities (Bury) | Auto Sales | C-1 | 41258 | 0.95 | \$410,000 | \$190,000 | \$600,000 | Substandard building |
| 24450 Smithtown Rd | American Legion | Bar/Rest. | C-1 | 51431 | 1.18 | \$264,000 | \$136,000 | \$400,000 | |
| 5680 County Rd 19 | American Legion | Fuel Station | C-1 | 15804 | 0.36 | \$195,000 | \$105,000 | \$300,000 | |
| 5660 County Rd 19 | HopHerr Props (Heartbr) | Ret./Office | C-1 | 31694 | 0.73 | \$355,000 | \$45,000 | \$400,000 | |
| | | | Subtotals | 285960 | 6.56 | \$1,744,000 | \$1,017,000 | \$2,761,000 | |
| | | | | | | | | | |
| 24365 Smithtown Rd | T C Stores (Oasis) | C Store/Fuel | C-1 | 62970 | 1.45 | \$770,000 | \$170,000 | \$940,000 | |
| 24285 Smithtown Rd | Moore | Auto Sales | C-1 | 18199 | 0.42 | \$171,000 | \$169,000 | \$340,000 | |
| 24275 Smithtown Rd | Howe | Auto Repair | C-1 | 17871 | 0.41 | \$166,000 | \$154,000 | \$320,000 | |
| 24245 Smithtown Rd | Wash N Roll | Car Wash | C-1 | 20218 | 0.46 | \$177,000 | \$138,000 | \$315,000 | |
| | | | Subtotals | 119258 | 2.74 | \$1,284,000 | \$631,000 | \$1,915,000 | |
| | | | | | | | | | |
| 24250 Smithtown Rd | Justinak | S.F.Res | R-2A | 69154 | 1.59 | \$216,000 | \$243,000 | \$459,000 | |
| 24200 Smithtown Rd | | | | | | | | | |

Smithtown Crossing Meetings

The Shorewood Planning Commission has spent many months preparing the Smithtown Crossing Redevelopment Study. Following is a list of Planning Commission meetings at which the Study was discussed. Some of the "milestone" meetings have been highlighted and summaries of selected meetings are provided below. It is worth noting that some of the early discussions referred to Planning District 3 from the Shorewood Comprehensive Plan.

February 17, 2009

April 7, 2009

January 19, 2010

February 16, 2010

March 2, 2010

March 16, 2010

April 6, 2010 Tax Increment Financing (T.I.F.)

April 20, 2010 Vision Statement

May 4, 2010 Joint Meeting with City Council

May 18, 2010 Meeting with Landowners *

June 29, 2010 Meeting with Developers (Forum) **

July 20, 2010

August 17, 2010 Discussion of Mobile Tour ***

September 14, 2010 Mixed Use

February 15, 2011

March 1, 2011

^{*}The Planning Commission met with a number of owners of land within the study area. The purpose of the meeting was to get feedback from them on issues related to redevelopment and to illustrate to them the advantages of a unified, cohesive redevelopment versus a piecemeal approach. The consensus of those attending the meeting appeared to agree with the direction the Commission was proposing.

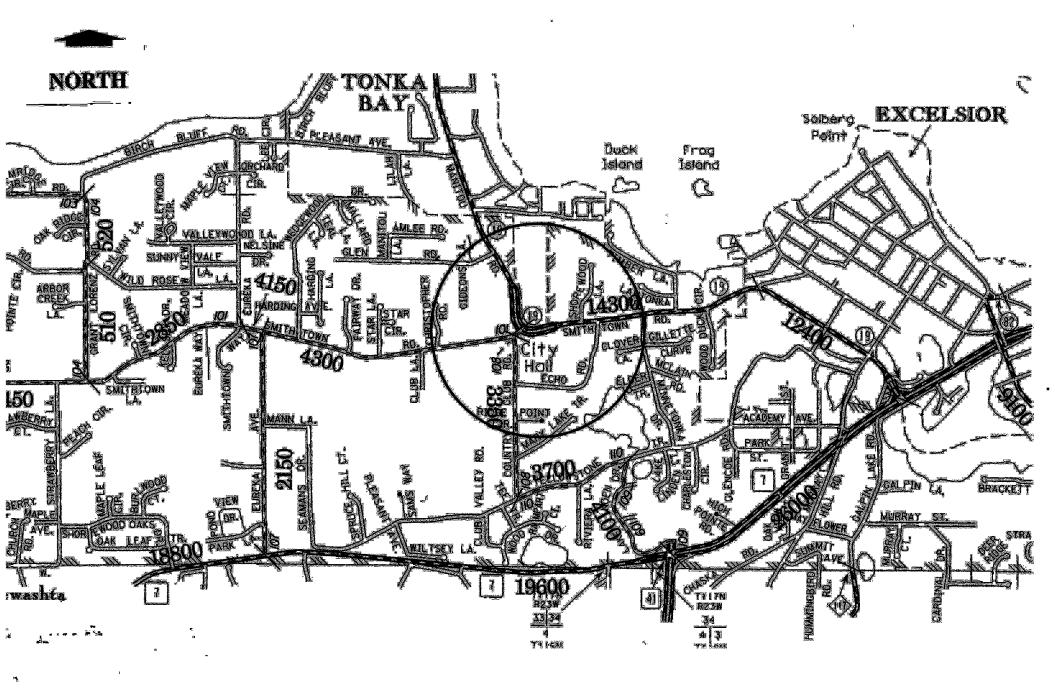
^{**}Early on it was determined that input from people who actually do projects was important to the ultimate success of the project. A panel of development professionals was asked to comment on the Vision Statement and the concept drawings that had been reviewed by the Commission. The panel members all commented on the materials and then answered questions from the

Meetings (continued)

Commission. The general consensus of the panel was that Shorewood's development regulations are in need of revision in order to make a redevelopment project viable. Four key points were made:

- 1) The site is not well suited for retail commercial. Rather, some sort of service commercial development (e.g. banking, personal services, possibly office, etc.) should be expected.
- 2) The City should consider allowing something higher than the three stories allowed under the current regulations.
- 3) Whether the housing element was market or senior, Shorewood's current density limits are too low.
- 4) In this economy, redevelopment may not occur for some time.

***The Commission spent an evening visiting mixed use and senior housing projects. There was consensus that two projects in Golden Valley, Town Square and the Commons, contained elements that would be desirable for Smithtown Crossing. A mixed use redevelopment project in Glen Lake (Minnetonka) illustrated how the impact of building height could be mitigated with construction materials, siting, and landscaping. Some of the photographs used in this report came from the mobile tour.



2009 Traffic Volumes

Source: Minnesota Department of Transportation



APPENDIX E

Local Water Supply Plan



APPENDIX F

Local Surface Water Management Plan