Utilities and Community Facilities

Introduction

Utilities and Community facilities serve as the framework on which the city is built and maintained. Utilities include steam, water, sanitary sewer, and storm sewer systems. They also include electricity, natural gas, telecommunications, and solid waste disposal systems.

Community facilities provide public or semi-public uses such as government services (administration, police, fire and public works). Other community facilities include public schools, libraries, community centers, museums, hospitals, or other uses that are open to public use either non-profit or for profit.

Planning for such facilities is important because these facilities provide essential support services for the community’s employees, residents, visitors and businesses. As Virginia continues to evolve, it will be important to plan for preservation, future enhancements or expansion of these facilities to serve its population.

The need for and capacity of these essential services depends on the physical size of the community, population, and expected growth. In addition many retail and service businesses, industrial companies, as well as potential residents, look to the availability of these facilities when considering locating or expanding in a particular community.

Guiding Principles

- Provide high quality, cost effective utility services to the community.
- Support smart growth by prioritizing new development that takes advantage of available capacity of existing utilities and public services prior to initiating utility extensions and expansions.

Existing Conditions

Water

Virginia takes advantage of an abundance of natural spring water which accumulates in a reservoir east of town. The city’s water treatment plant has a design capacity of approximately 5 million gallons per day (mgd).

- Average daily demand of 2 million gallons.
- Distribution system is comprised of 67 miles of city-owned main lines; 100 miles of customer-owned lines; 1,050 valves and 450 fire hydrants.

Wastewater Treatment / Sanitary Sewer

- Sanitary sewer mains and interceptors range in size from 8 inches to 24 inches with 10 lift stations.
- Virginia has primary, secondary, and tertiary waste treatment systems using an activated sludge process.
- Waste treatment plant has a design capacity of 2.7 million gallons per day (mgd) with peak flow of approximately 6 mgd.
• All plant’s effluent meets and exceeds Minnesota Pollution Control Standards.
• Sludge is disposed of at the land application facility on the outskirts of Virginia.

Storm Sewer

• City has separate storm and sanitary sewer systems.
• The city is required to develop and maintain a stormwater pollution prevention plan (SWPPP) for the power plant.

Virginia Public Utilities

The Virginia Department of Public Utilities (VPU), located in Virginia, Minnesota, is a city-owned entity which has been serving the City of Virginia since 1913. The Department of Public Utilities Commission governs the VPU.

The Utility produces electricity and steam with its co-generating facility, it has a state-of-the-art water treatment plant that produces high quality water, and it sells natural gas.

Electric Power

• Serves approximately 5,800 customers in the city of Virginia and certain area of Mt. Iron.
• Consists of 80 Miles of overhead distribution cable and 17 miles of underground cable.
• Electrical distribution plant consists of a combination of 2,400 Volt distribution and 13.8 Kilovolt (KV) distribution system.
• Virginia operates a 30-megawatt co-generation power plant and has a 20-Megawatt interconnect with Minnesota power.
  o Statistical Data
    ▪ Primary Voltage: 2.4KV and 13.8 KV
    ▪ Generation Capacity: 30 Megawatts
    ▪ Minnesota Power Interconnect: 20 Megawatts
    ▪ Peak Demand: 22 Megawatts
    ▪ Average Demand: 19 Megawatts
• Co-generation power plant
  o The power plant has four operating boilers, including a natural gas boiler, which was commissioned in 1993.
  o Two steam turbines generate power and provide exhaust and extraction steam to the distribution system. Electricity is generated as required to match the steam heating load.
• In addition to the Virginia Department of Public Utilities, Lake Country Power and Minnesota Power offer electric power to the areas surrounding Virginia

Natural Gas

• Virginia has supplied its own natural gas since 1965
• Provides approximately 2,300 residential and commercial customers.
• Approximately 56 miles of gas main lines and 44 miles of gas service lines.
• Future projects
Highway 53 Natural gas reroute. 2 miles of natural gas main and new Town Border Station for Midway.

Steam Heat

• Serves approximately 2,600 customers.
• 22 miles of steam main lines and 18 miles of steam service lines.

Waste Collection

• Virginia provides solid waste collection services. The system uses dumpsters and a volume-based system of special plastic bags “blue bag” for trash pick-up.

Recycling

• Curbside recycling is provided twice per month.

Public Safety and Fire Protection

Virginia provides police and fire protection services to its citizens, businesses and institutions. The police department includes 21 full time officers and a chief of police.

The Virginia Fire Department has positions for 27 sworn full time Firefighter/Paramedics, and Administrative/IT Assistant, and EMS Coordinator, Fire Marshal and a Fire Chief. The department has five state licensed Advanced Life Support ambulances equipped with state of the art medical equipment.

Telecommunications/Broadband

Three telecommunications and broadband service providers operate within the City:

• CenturyLink
• Mediacom
• Access Broadband

Library

The Virginia Public Library is located at 215 S 5th Ave. within the downtown and operates Monday through Friday. The Library is advised by a seven member commission. Library materials may be searched and ordered using the library’s web site http://www.virginia.lib.mn.us as well as through the Arrowhead Library System.

Virginia Public Schools

• Parkview Elementary School and Learning Center: 506 9th Avenue North
• Roosevelt Elementary School: 411 S 5th Ave
• Virginia Senior High School: 411 S 5th Ave
• Virginia is also served by private and religious schools
Mesabi Range Community and Technical College

The Mesabi Range College is a two-year college offering AAAS degrees and certificate programs. The college has two campuses, one Virginia, and one in Eveleth, Minnesota. Average enrollment is 1,700 students. The Virginia Campus is located at 1001 West Chestnut Street.

Offer a Master’s in Engineering through (formerly MnSCU) MN State University Mankato...

Virginia Regional Medical Center

The Virginia Regional Medical Center serves as the medical hub for the Iron Range region. The approximately 83 acute care facility also includes a heliport is located at 901 9th Street. Hospital, emergency medical and convalescent services are provided by Essentia Health-Virginia. Additional elder care is provided by Edgewood Vista with independent and assisted living, memory care, adult day care and short stays.

Virginia Heritage Museum

The Museum complex is located in Olcott Park on 9th Avenue and consists of the former park superintendent’s residence, a Finnish log house and a 1930s tourist cabin. The facility includes permanent exhibits depicting logging and lumbering industries, Virginia’s fires of 1893 and 1900, area shirt factories and Olcott Park’s Master Gardener Gunnar Peterson.

Additional Cultural and Arts Facilities and Activities

Virginia Area Historical Society, which operates the Heritage Museum out of the former Virginia Park Superintendent’s residence in Olcott Park offers exhibits depicting the region’s rich logging and lumbering history, as well as the Virginia fires of 1893 and 1900.

The Lyric Center for the Arts First Stage Gallery is a prominent Virginia arts group that promotes local arts efforts. The mission of the Lyric Center for the Arts is to provide arts and educational opportunities for children and adults across the Iron Range while renovating the Historic Lyric Building.

Additional arts and cultural organizations and activities include:

- The First Stage Gallery
- B’nai Abraham Cultural Center
- Kaleva Hall
- Virginia Public Library
- Goodman Auditorium, Virginia Secondary School
- Mesabi Range College Theater
- Mesabi Symphony Orchestra
- Virginia Community Band
- Range of Voices Chorale
- Mesabi Musical Theater Company
- Small Parts Players Children's Theater Company
- Virginia Concert Series Association
- Choralaires Men's Chorus
- Downtown Dance Academy
- Iron Range Original Music Association
Goals and Policies
The following Goals and corresponding policies are intended to guide the preservation, enhancement and or development of Virginia’s utility infrastructure and community facilities in the coming years:

1. Provide residents with clean water supply, sewer collection and wastewater treatment system which meets applicable laws and regulations in a cost effective manner.
   
   **Policies:**
   a. Maintain an infrastructure replacement program for the city.
   b. Use the city’s Capital Improvements Plan for planning and budgeting of public service improvements.
   c. Evaluate the costs and benefits of new industries that place high demands on the city’s water system and Waste Water Treatment Plant.
   d. Develop a plan to upgrade utility connections and controls to existing buildings in the downtown area.

2. Improve Virginia power system to provide an economically stable and environmentally responsible power source.
   
   **Policies:**
   a. Evaluate the ongoing viability of public power generation and steam.

3. Promote community growth and redevelopment through integrated planning of clean energy, energy conservation, environmental stewardship and timely emergency response infrastructure.
   
   **Policies:**
   a. Promote development in areas that are contiguous to existing public infrastructure such as sewer, water, power and streets.
   b. Encourage the use of energy and water conservation practices in development and redevelopment projects such as “EnVision Rating System”
   c. Utilize best management practices (BMPs) to reduce the impacts of stormwater runoff, control sediments, prevent erosion and protect ground water.
   d. Integrate waste reduction and recycling programs into all City-owned facilities and buildings. Continue to improve energy efficiency in all city-owned facilities.

*Example of solar powered electric vehicle charging station in Austin, MN.*
Green Stormwater Infrastructure Tools

Overview

Green City, Clean Waters promotes the use of green stormwater infrastructure throughout the city. These green tools use plants, trees and stone to filter store and manage stormwater in a smart and cost-effective way.

Example of Stormwater Best Management Practices (BMP’s) used by the City of Philadelphia, PA.

How do These Green Tools Work?

When it rains, stormwater runs off streets and sidewalks into a green stormwater infrastructure (GSI) tool. Water soaks into a stone bed below ground where it is absorbed by plant roots and released through transpiration. Some of the water evaporates from the surface and excess water is slowly released back into the sewer system. Storing water in these GSI systems significantly reduce pollutants entering our creeks and rivers.

What are the Benefits?

- Improves water quality by reducing combined sewer overflows*
- Improves the health of our stream banks and aquatic life
- Enhances the beauty of our streets and neighborhoods
- Promotes a safer and healthier community
- Reduce the urban heat island effect (city’s temperature)
- Improves air quality

*Combined sewer overflows occur during heavy rainstorms when treatment plants can’t clean all the water running through the system so polluted stormwater and sanitary waste overflow into local rivers.
4. Respect environmentally sensitive areas when extending and constructing public utilities and community facilities.

   **Policies:**
   a. Consider employing sustainability ratings systems such as the EnVision Program when building or reconstructing civic infrastructure in order to improve Virginia’s triple bottom line of social, environmental and financial performance and resiliency.
   b. Place overhead utilities underground when feasible.
   c. Establish proper buffer zones between overhead utilities, substation, and treatment facilities and residential and commercial uses.
   d. Encourage the use of comprehensive environmental impact analyses for public and private infrastructure extensions and expansions.
   e. Adhere to and enforce environmental regulations for all infrastructure and community facility extensions or expansions.

5. Develop civic infrastructure (community facilities and utilities) with concern for aesthetic appearance and integration with surrounding environments.

   **Policies:**
   a. Respect and emulate the visual character, scale, massing, and materials of buildings within Virginia’s historic downtown when renovating existing or designing new facilities.

6. Coordinate infrastructure improvements such as street reconstructions with storm and sanitary sewer, water, power, and attractive and functional streetscaping that includes provisions for ecological services.

   **Policies:**
   b. Where practical, employ sustainable, green infrastructure practices such as LED street lighting, street trees, permeable paving, rain gardens, etc. as an integral component of civic infrastructure.

7. Recognize Virginia’s investment in the Library system

   **Policies:**
   a. Support and perpetuate the use and quality of your Most frequently visited municipal building, the Virginia library
   b. Continue to support the Public Library system as a primary resource of civic information and lifelong learning.
   c. Work to expand the role of Virginia’s Public Library as a valuable civic asset and destination within the historic downtown environment.

8. Collaborate with community service and arts organizations, institutions and the private sector to develop and promote arts, culture and popular entertainment programs and venues that create active and engaging events to attract and retain Virginia residents and visitors of all ages.

   **Policies:**
a. Explore opportunities for public private partnerships in the development, operations and maintenance of arts, cultural and entertainment programs and facilities.
b. Promote opportunities for arts and culture, and entertainment in the city.
c. Actively pursue the development of programs and facilities that provide healthy activities of interest to youth, teens and young adults.
d. Continue to support programs and facilities serving senior citizens.
e. Continue to support existing arts, culture and popular entertainment organizations, programs and facilities.

9. Maintain essential emergency services to protect the public health, safety and welfare

Policies:

a. Ensure there are adequate emergency services of police, fire, rescue, hazardous event responses and emergency medical services.
b. Invest in partnerships with regional emergency service providers and municipalities (free trainings, etc.)

10. Maintain and enhance community facilities and services, which contribute to the quality of life for area residents.

Policies

a. Evaluate the Comprehensive Plan on an annual basis and develop needed utilities and community facilities as deemed necessary.
b. Continue to support having good health care and community education facilities that serve the city.
c. Identify future needs and locations for new or expanded community facilities.
d. Work with public schools to ensure long-term educational needs are being met and they stay an important part of the Virginia community.