

Element Seven: Public Services, Facilities & Infrastructure

The Public Facilities, Services and Infrastructure Element addresses several types of public facilities and services (police and fire) and infrastructure systems (water, sanitary sewer and stormwater) provided by the Village of Northbrook. The Element also looks at important utilities and services provided by other governmental agencies (schools, parks and library) as well as private corporations (electricity, telecommunications and solid waste removal).

Northbrook's Water Supply

Northbrook remains the only offshore community in the Chicago area to draw water directly from Lake Michigan and process it at its own *inland* water filtration plant. Since 1963, Northbrook has increased its rated water production capacity from 6 million gallons per day (MGD) to approximately 20 MGD.

The Village has had a longstanding policy of only providing municipal water service to properties located within the corporate limits of the Village. In 1996, the Village entered into an agreement with the Mission Brook Sanitary District that serves the Mission Hills Country Club area in unincorporated Cook County to sell the District water to serve their customers. In 2005 the Village of Riverwoods approached the Village indicating an interest in purchasing bulk delivered potable water from Northbrook to assist them in meeting the growing demand of its customers. On September 26, 2006, the two Villages executed a contract for Riverwoods to purchase water from Northbrook.



Figure 7-A: the Village's Lake Michigan Pump Station in Glencoe

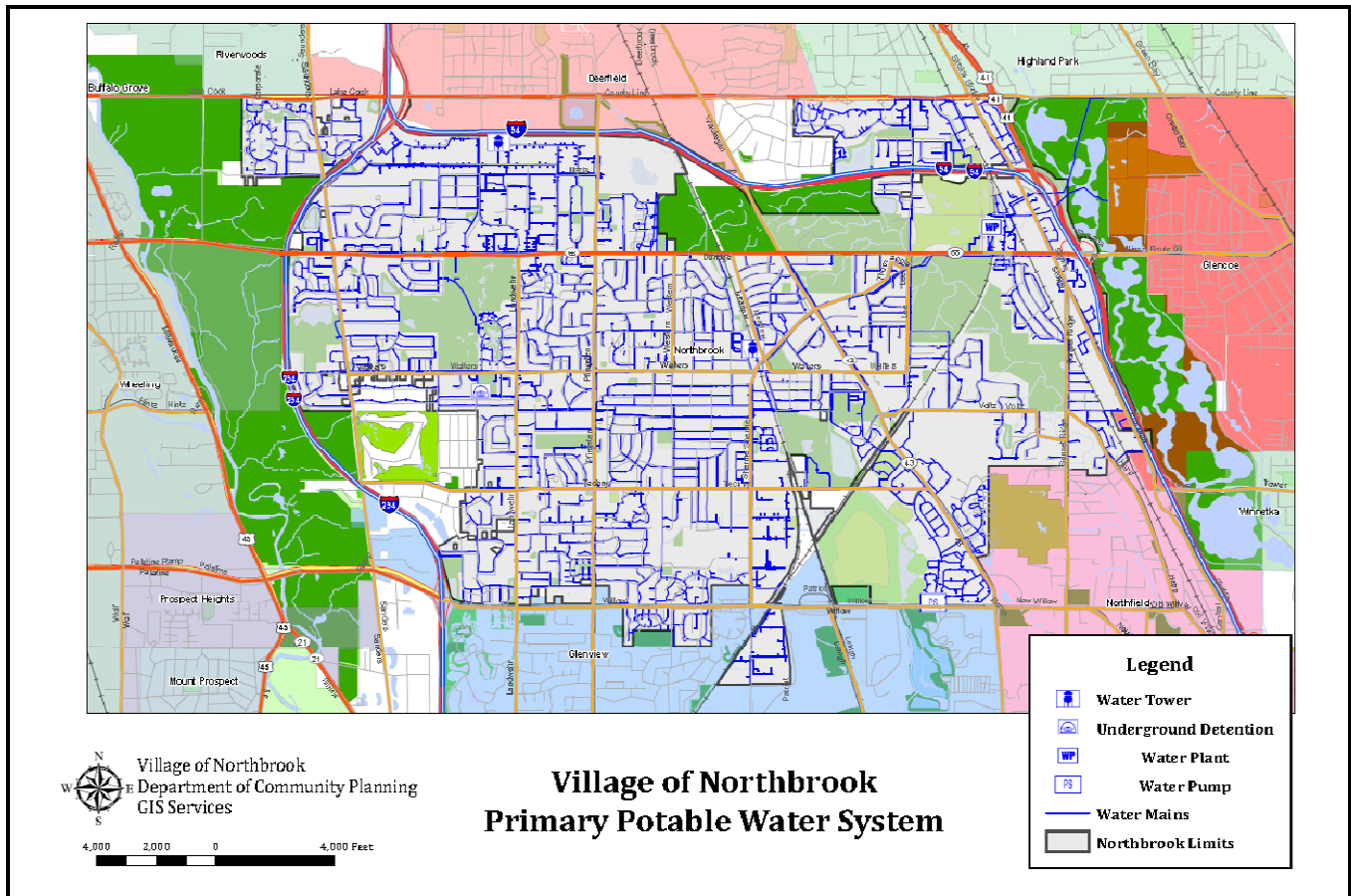


Figure 7-B: the Village's Water Distribution System

Lake Michigan water use is overseen by the Illinois Department of Natural Resources (IDNR). IDNR's "Rules and Regulations for the Allocation of Water from Lake Michigan" sets forth the detail of the allocation process, including criteria for granting allocations and specifying mandatory practices, including conservation efforts. Lake water allocations were originally established in March 1977 through 1981. In October 1980 the Village of Northbrook received its permanent allocations through September 30, 2020. In 1988 we requested, and were granted, an increase in future water allocation in order to serve the Techny properties.

**Table 7-1
LAKE MICHIGAN WATER ALLOCATION
(million gallons per day)**

| Year | <u>Northbrook</u> | <u>Mission Brook</u> | <u>Total</u> |
|-----------|-------------------|----------------------|--------------|
| 2006 | 6.216 | .347 | 6.563 |
| 2007 | 6.265 | .347 | 6.612 |
| 2008 | 6.364 | .347 | 6.711 |
| 2009 | 6.414 | .347 | 6.761 |
| 2010-2015 | 6.661 | .347 | 7.008 |
| 2016-2020 | 6.924 | .347 | 7.271 |

Sanitary Sewers

The Village of Northbrook is responsible for over 124 miles of sanitary sewer network. The system must provide a reliable waste water collection, conveyance and disposal system to its users. The Village's system is operated as a local collector conveyance system within the area served by the Metropolitan Water Reclamation District of Greater Chicago (MWRD). MWRD provides regulatory control and guidelines on the amount and type of acceptable raw waste discharges that can be deposited into their interceptor lines for conveyance to regional treatment facilities. Services in the Fire Protection District are funded by user fees.

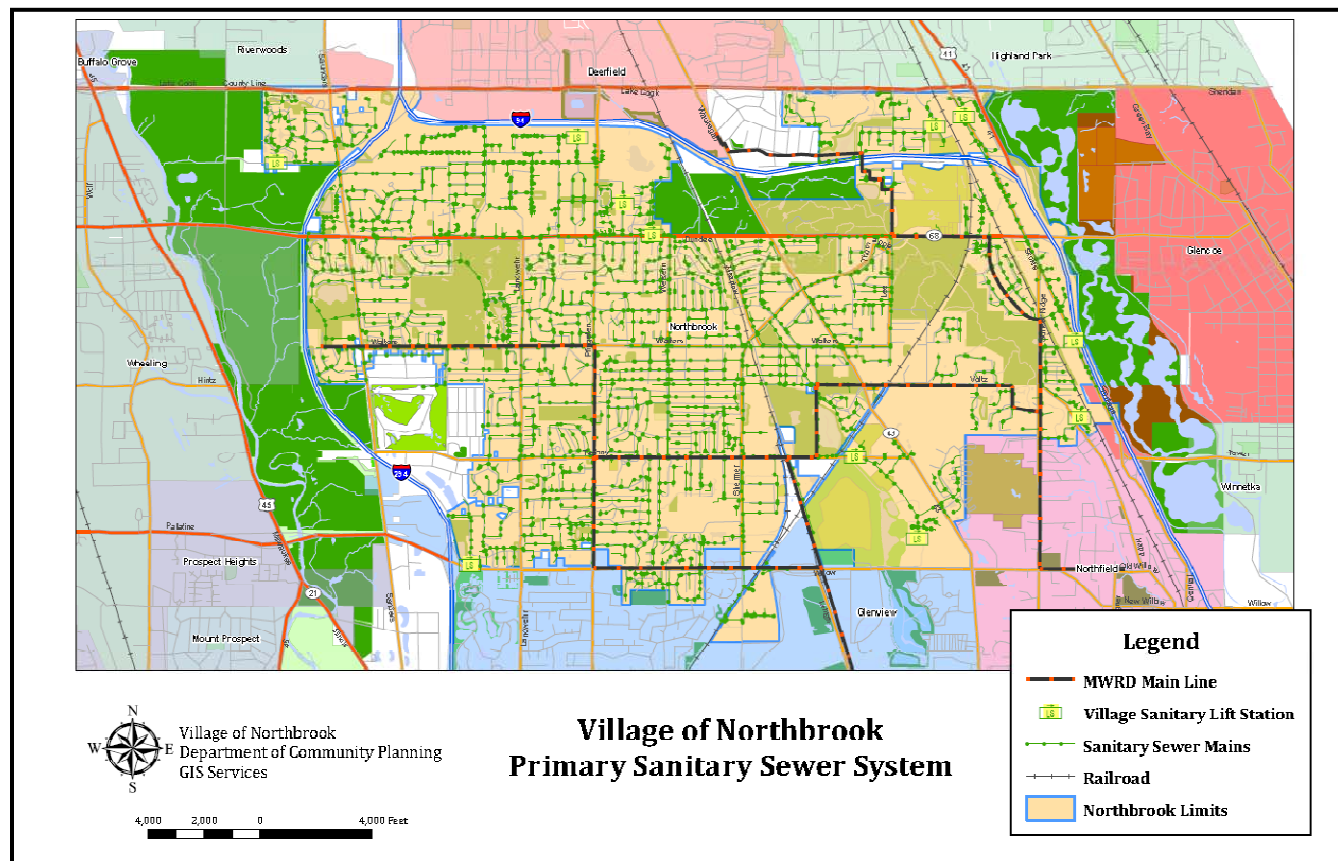


Figure 7-C: the Village's & MWRD Sanitary Sewer System

Storm Sewers

While the Village's water and sanitary systems do not have capacity issues, the storm sewer system has a much different set of design issues. When it rains in Northbrook, storm water flows to one of the five different water courses (streams and rivers); the Skokie Lagoons/River, the Middle Fork of the North Branch Chicago River, the West Fork of the North Branch Chicago River, the Techny Drain and the Des Plaines River. The Techny Drain is tributary to the West Fork. The areas that drain to these particular water courses are also referred to as drainage basins. Water normally reaches these water courses either by storm sewers or ditches. In flooding situations where the sewers and ditches are at capacity, water will then flow overland to these drainage basins utilizing the path of least resistance.

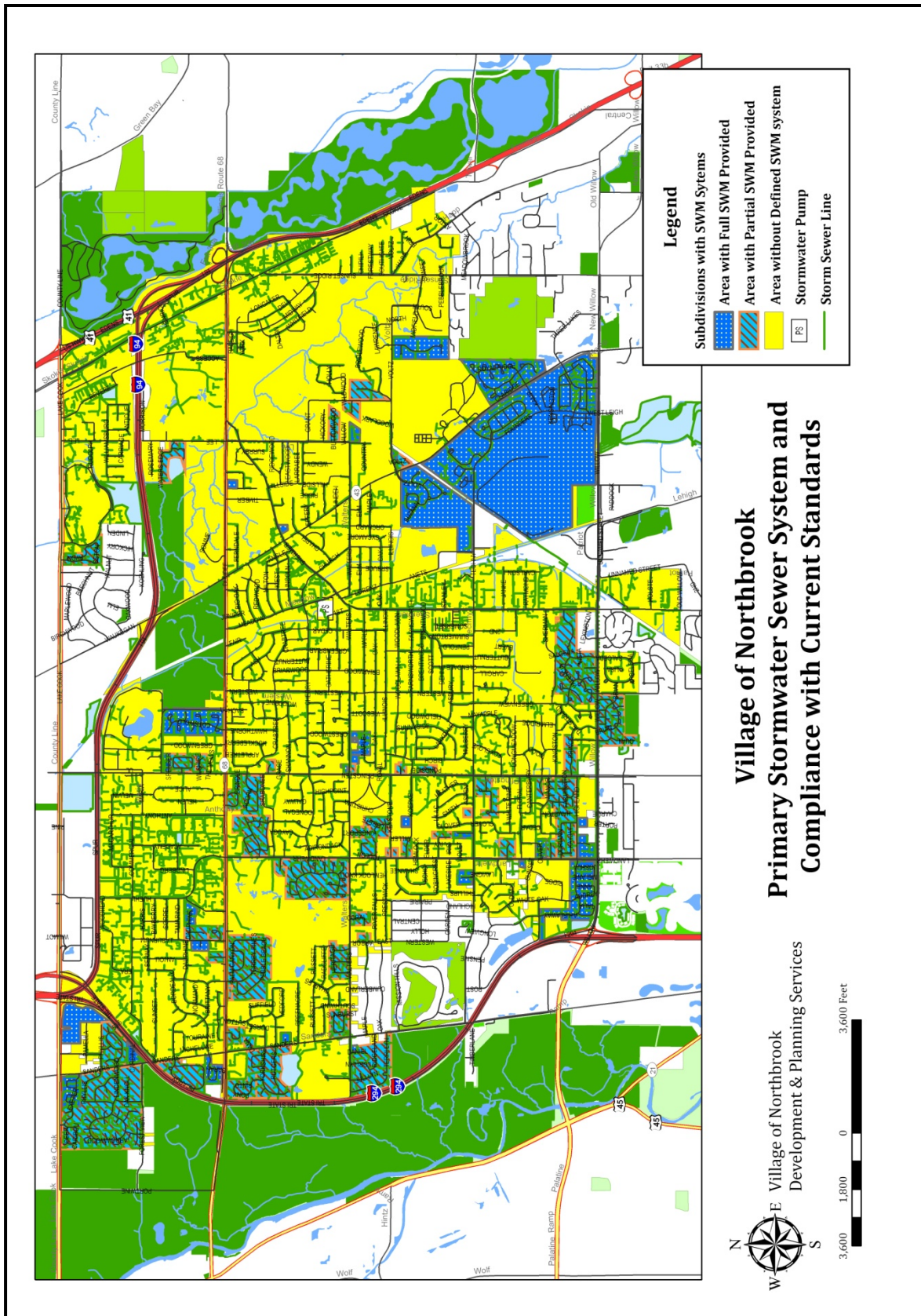


Figure 7-D: the Village's Stormwater Sewer System

Northbrook Comprehensive Plan

The Village's storm sewer system is a network of pipes, swales, ditches, streets, streams and rivers. Streets are designed to provide temporary detention during high intensity rainstorms as long as vehicle access is not impeded. Storm water enters this system from yards, fields, streets, parking lots, footing tiles, downspouts and exterior drains.

Approximately 30 years ago, the Village modified its standards for new development to require stormwater to be held on-site and not immediately released into the public storm drainage system. The standards have been updated over the years to require additional stormwater to be retained on-site. Because the vast majority of the roads, sewers and other infrastructure in the Village were constructed prior to the time that on-site storm detention was required, only a small fraction of the properties in the Village meet the current drainage standards. The map below shows those properties that partially or completely meet the latest storm drainage requirements.

The Village has constructed a regional detention basin along the Techny Drain-South Fork, just west of Glenbrook North High School to help address flooding problems in the community. In addition to the storm sewer system that is regulated by the Village, there are also three regional detention basins along the West Fork of the North Branch of the Chicago River and one along the Middle Fork that are maintained by MWRD. Future improvements to the Village's Stormwater Management system are planned by refining the recommendations of the community's Stormwater Master Plan.

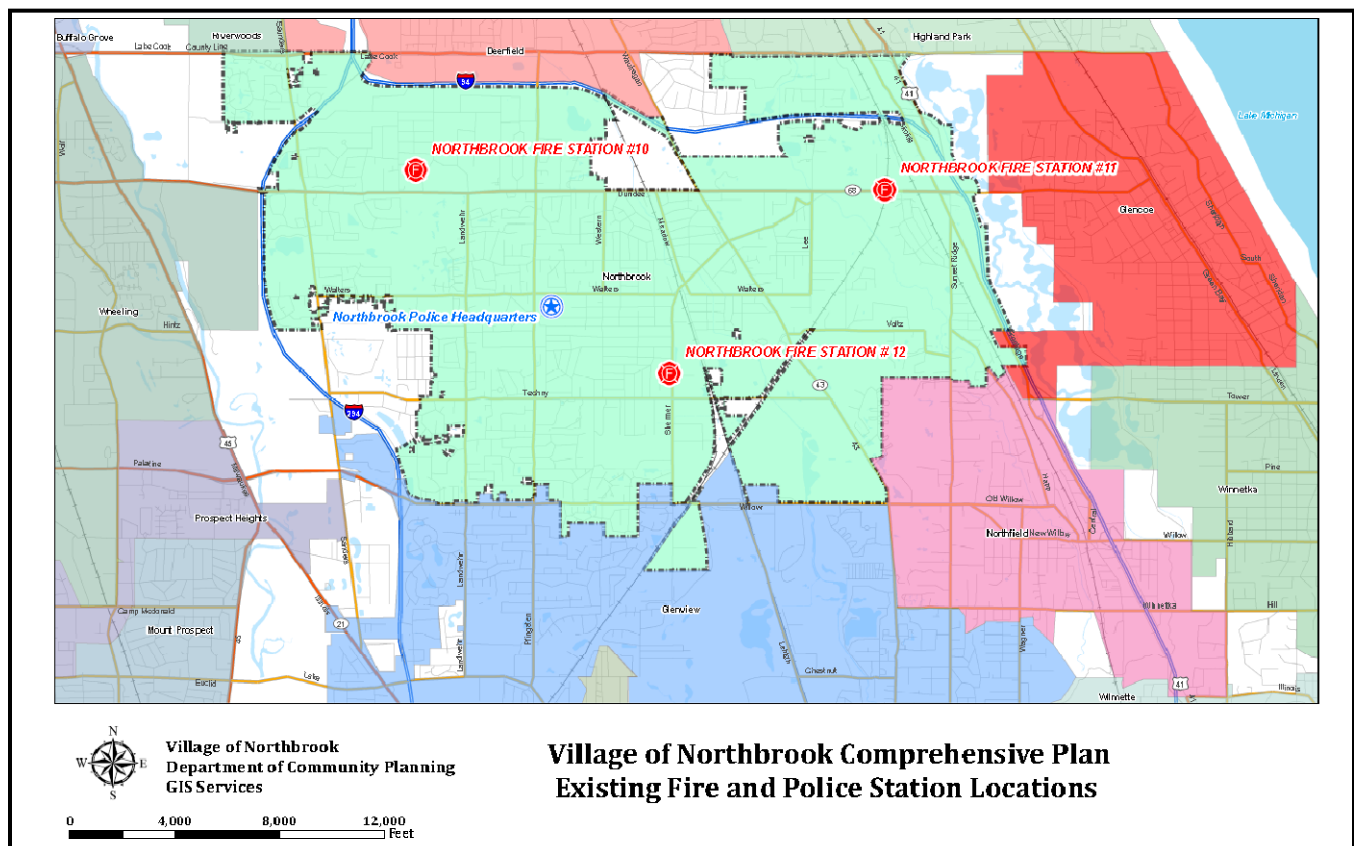


Figure 7-D: Fire & Police Stations

Fire and Rescue Services

The Northbrook Fire Department is a full service emergency agency, certified by Cook County and the State of Illinois as the Emergency Management Agency for the Village. In addition to serving all properties within the corporate limits of the Village, the Fire department also serves the Northbrook Rural Fire Protection District. The Fire Protection District was established for the purpose of providing fire and emergency medical transport services to residents and businesses in areas outside the corporate limits of the Village. The Fire Protection District contracts for services from the Village of Northbrook. The District includes unincorporated Cook County parcels in Glenbrook Countryside, Mission Hills, Citation Lake, Northbrook West, Mission Hills Estates, pockets of properties along Techny Road and on Sunset Ridge Road, and portions of the Village of Deerfield south of Lake Cook Road.

Since August 1996, the Fire Department has deployed a three-station plan: (1) 740 Dundee Road, (2) 840 Shermer Road and 650 Huehl Road. All three fire stations are currently staffed with full time firefighter/paramedics. These three stations, as well as the Police Departments Headquarters, are shown on the map on the prior page.

Village Roadway System

There are over 260 "lane miles of roads in the Village of Northbrook. The vast majority of these are maintained by the Village's Public Works Department. Maintenance of roads includes street cleaning, repairs, resurfacing and snow plowing operations. The map above depicts the roads that are under the jurisdiction of the Village, IDOT, Cook County, the Illinois State Toll Highway Authority and owners' associations (private streets). Much more detail concerning the Village's roadway system is included in the Transportation Element of the Comprehensive Plan.

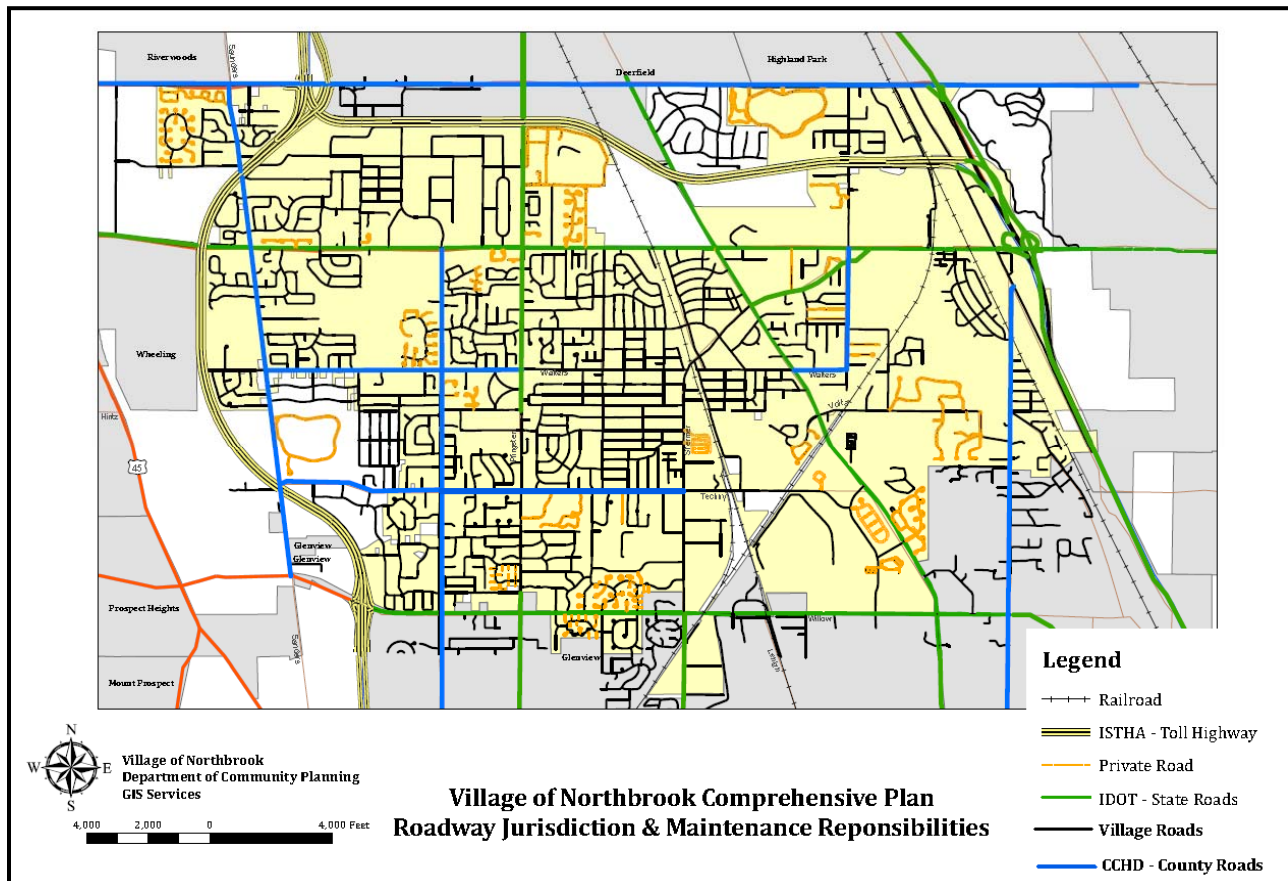


Figure 7-E: Jurisdiction & Maintenance Responsibilities of Area Roadways

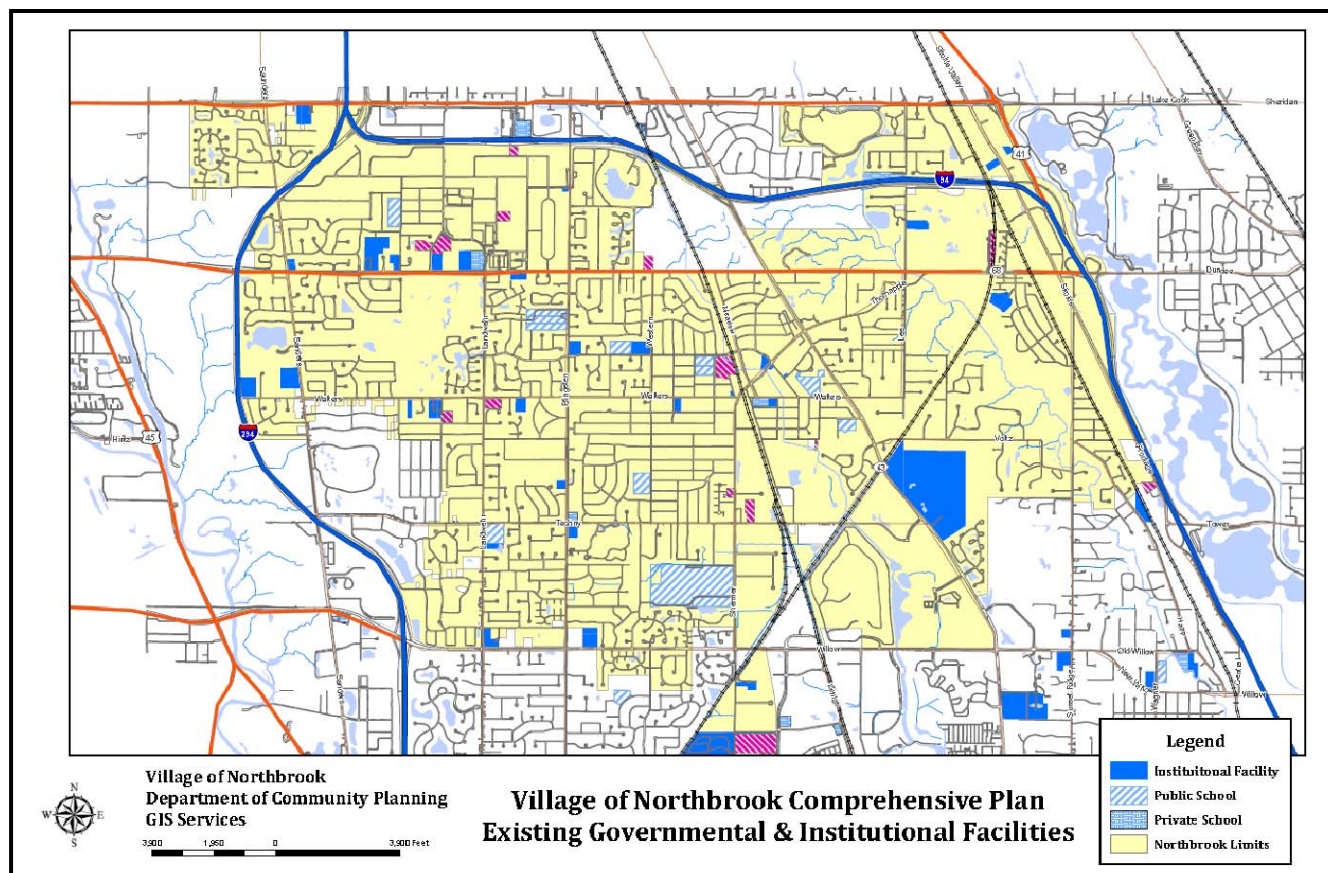


Figure 7-F: Existing Governmental & Institutional Uses

Parks and Recreational Services

The Northbrook Park District is primarily responsible for providing recreational services to the residents of Northbrook. The Park District has a national reputation as a leader in providing quality recreational services to residents of all ages. Like the School Districts, the Park District is often cited by new residents as a major reason for their decision to move into the community. The Village and Park District have a long tradition of working in concert to make certain that land is designated for any future open space or recreational areas in the community. The Village also consults with the Park District on other land use or property tax incentive matters to make certain that they are not adversely impacted by development or redevelopment activities.

The Cook County Forest Preserve District owns and maintains large expanses of open space areas in and around the Village of Northbrook. The Forest Preserve District was formed in 1915 and empowered by the Illinois Legislature to restore, restock, preserve and protect the natural environment for the education, pleasure, and recreation of the public. Forest Preserve land holdings are generally located along the Des Plaines River corridor (west of I-294), the Middle Fork of the Chicago River, and the Skokie Lagoons (east of I-94).

Northbrook Comprehensive Plan

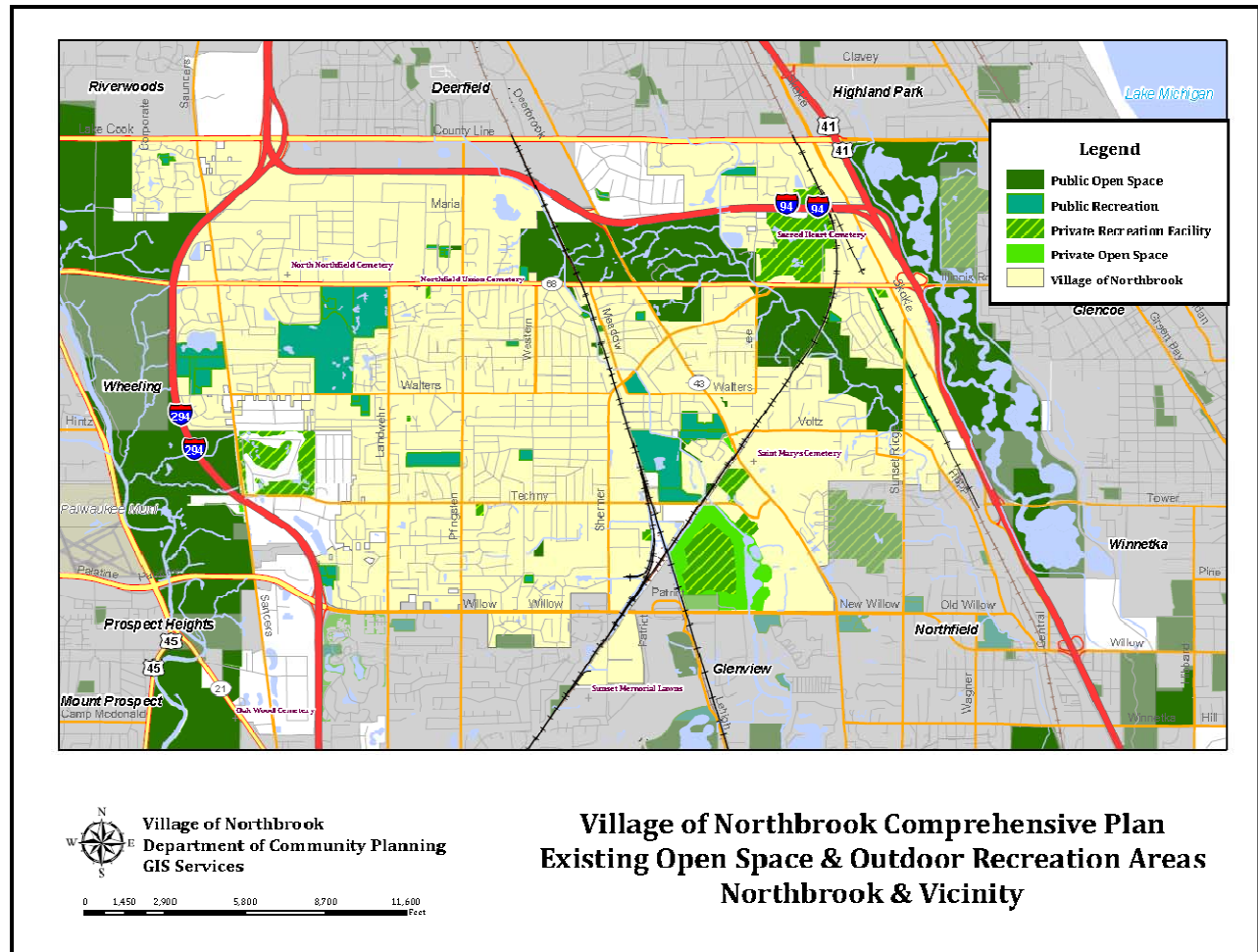


Figure 7-G: Parks & Recreation Areas

Library Services

The Northbrook Public Library, located immediately adjacent to the Village Hall in the center of the community is also a major community asset that is operated by a separate governmental unit. Since the Village Hall and the Northbrook Public Library are located side-by-side, the two operations function like a campus. The Library has a national reputation for quality and is an important function to have near the downtown.

School Districts

The Village is served by multiple public school districts that provide excellent education services to both elementary and high school students. In addition to the public schools, there are a number of high quality private schools that offer educational services to families in the general area. The high quality schools that serve Northbrook are among the greatest attractions to families moving and staying in the Village. The limits of the various public elementary school districts serving residents of Northbrook are shown in the maps that follow.

Northbrook Comprehensive Plan

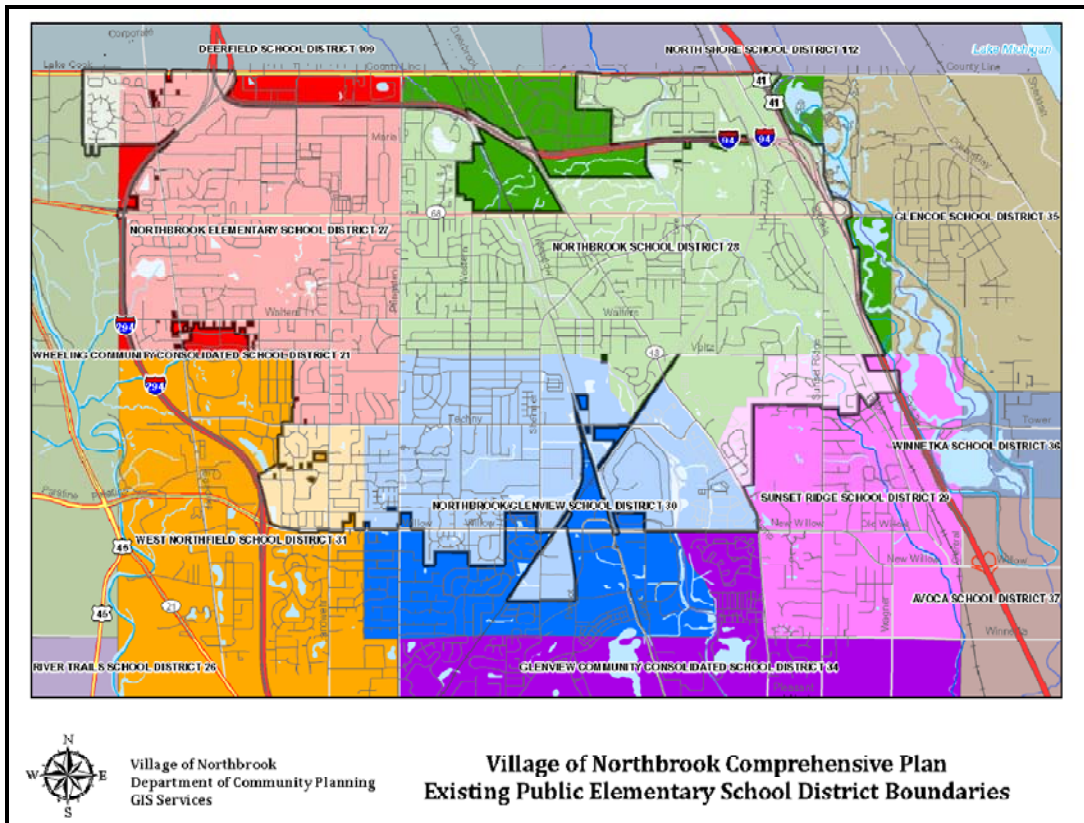


Figure 7-H: Public Elementary School District Boundaries

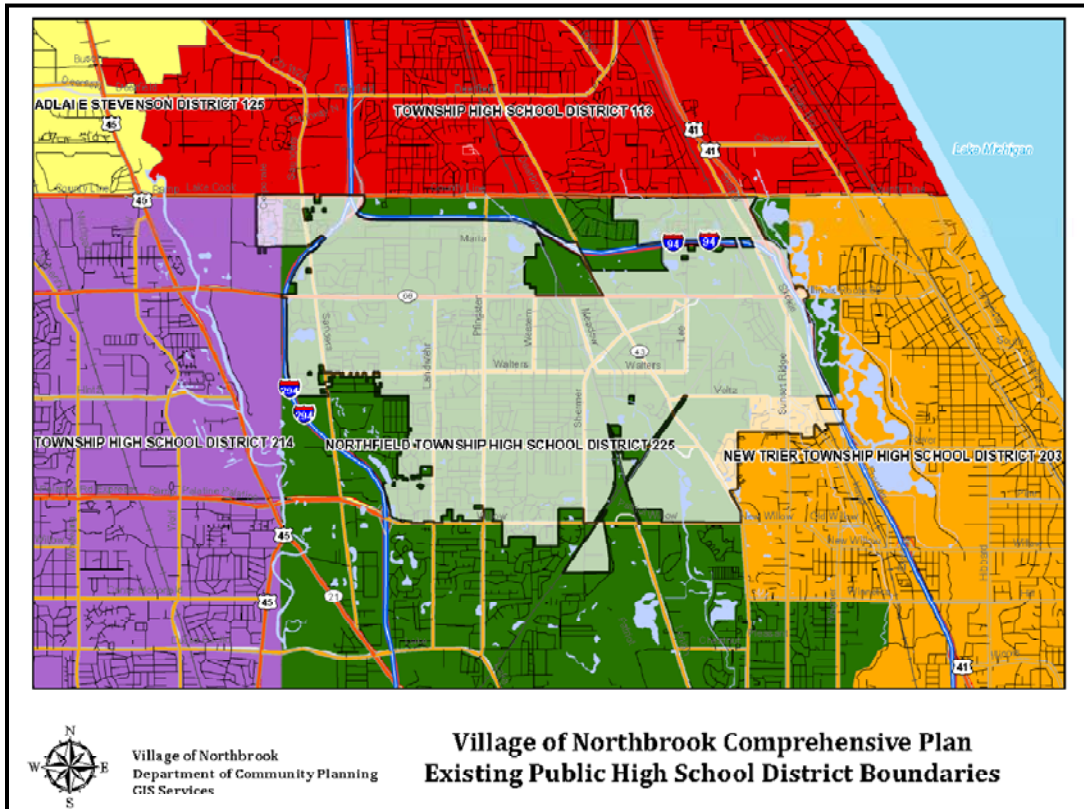


Figure 7-I: Public High School District Boundaries

Public Services, Facilities & Infrastructure Goals & Strategies

- PF 1. *Provide public utilities and support the provision of private utilities that meet and exceed the basic needs of residential, commercial, and industrial customers.***
- a. Future land development and public facilities and services should be mutually supportive.
 - b. Promote the delivery of reliable private utility services (electricity, natural gas, and solid waste removal) to residents and businesses in the Village.
 - c. Consider ways to impact the placement and appearance of utility infrastructure (including substations, transmission towers and lines, and switching boxes) to minimize visual disruption and negative effects on quality of life in our neighborhoods and enhance streetscapes in pedestrian-oriented districts.
- PF 2. *Provide a safe and healthy environment for all residents, businesses, and visitors.***
- a. Maintain the preparedness of the Village's high-quality emergency response systems (both Police and Fire services) as land use and demographic conditions evolve.
 - b. Assess existing conditions and emerging demographic projections when determining the Village's facility and service needs.
- PF 3. *Coordinate the provision of public services with other local taxing districts so as to provide the highest quality of services in the most cost effective manner.***
- a. Coordinate land use, open space, utility and environmental policies and programs with the Northbrook Park District to cooperatively implement the objectives of the Northbrook Comprehensive Plan and the Park District Master Plan.