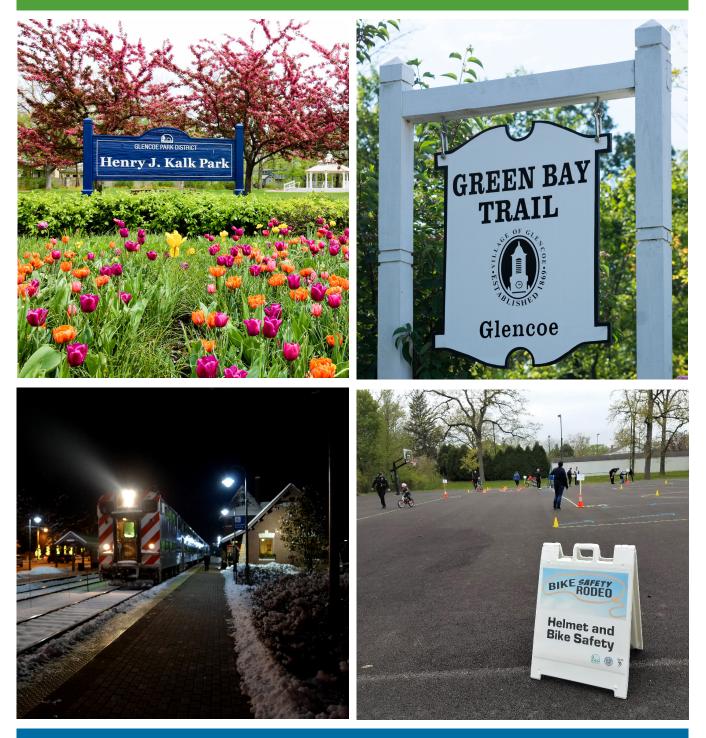
GLENCOE Active Transportation Plan



November 2018



ACKNOWLEDGMENTS

Active Transportation Plan Steering Committee

In 2017, the District 35, Park District, Sustainability Task Force and Village officials came together to create a long-term vision for increasing the number of local trips taken via walking and biking. This plan summarizes the vision, strategies, goals and priorities outlined by the agencies and by residents that provided feedback during the planning process. It should be used as a guiding document to implement changes in the near- and long-term. Thank you to the following people who volunteered on the plan as steering committee members and to the Glencoe Park District, District 35 and Village of Glencoe Boards for bringing this project to fruition:

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Josh Lutton, Commissioner	Barb Padiak
Lisa Sheppard, Executive Director	

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About the Consultants

Active Transportation Alliance is a coalition of people who want safer, healthier, and more equitable transportation choices. We envision walkable communities, networks of trails and other types of bikeways, reliable transit, and safe and easy biking. Our staff includes, planning and policy experts who developed many of the best practice programs and recommendations included in this plan.

GLENCOE Active Transportation Plan

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INTRODUCTION

Active transportation includes walking, biking, and other physically active forms of travel. Why does it matter to Glencoe?

1.1 WHY ACTIVE TRANSPORTATION MATTERS

Communities across the nation are beginning to recognize the value of designing streets to enable people to incorporate walking and biking into their daily routines. By creating safe and comfortable sidewalks, intersections, and streets, communities can encourage more walking and biking trips to schools, parks, stores, and work. There are many health, social, and environmental benefits to creating a walkable, bikeable community, which Glencoe can realize through implementation of this plan.

The Glencoe Sustainability Task Force, District 35, Glencoe Park District, and Village of Glencoe recognize the importance of designing a community that promotes active transportation and the benefits that can be derived. This plan summarizes the goals outlined by the aforementioned agencies and community members, and provides a framework for moving them forward. Each recommendation has an eye toward shifting the culture of Glencoe to focus on active modes of travel.

- Health: Walking and biking are easy, affordable and convenient ways to not only get exercise, but also to travel. With inactive lifestyles and chronic disease on the rise, promoting walking and biking is more important than ever. People are encouraged to get at least 30 minutes of physical activity per day, which can easily be achieved by substituting one short car trip with a trip on a bike or on foot.
- Equity: About 1/3 of our population either cannot drive or does not have reliable access to a car. This includes children, seniors, people with disabilities and people with limited means. These groups depend on walking, bicycling and public transit, but often do not have a safe and efficient network of sidewalks, bikeways and public transit amenities to reach destinations like work, school, and grocery stores.
- Safety: Active transportation facilities have safety benefits for all roadway users. Many of the built environment changes that support walking and biking have positive safety benefits for all roadway users by creating a safe place for pedestrians and cyclists, and by encouraging more cautious driver behavior though complete design.

- Economic: Walking and biking are an affordable way to travel and create positive economic outcomes for communities. The cost to an individual to own, maintain and drive a car on a regular basis is about 12 times higher than transportation costs for a person who relies on bicycling. A complete and wellconnected bicycle and pedestrian network also has a positive effect on local spending. Cyclists and pedestrians make more frequent trips to local shops, resulting in more dollars for the local economy.
- Social: People who walk and bike have more opportunities to connect with each other. More connections encourage people to be active, happy and socially engaged.
- Environment: Nearly half of all trips are less than three miles, and more than a quarter of trips are less than one mile. Shifting these shorter distance motor vehicle trips to walking, biking or transit reduces greenhouse gas emissions and contributes to cleaner air and reduces traffic congestion.

1.2 VISION

Vision

Imagine a Glencoe where people of all ages are encouraged to walk and bike to its many amenities. Its streets and sidewalks are packed with children each day on route to schools and parks. Its downtown bustles with activity as people shop, eat and linger. Its lakefront bike racks are full on summer days. Its trails burst with walkers, runners, and bikers of all ages and abilities.

Mission

Walking and biking are healthy and fun modes of transportation for people of all ages, but Glencoe residents do not yet have complete access to all active transportation options. By working together to build a consistent network of sidewalks, bike facilities, safe crossings and increasing awareness of transportation options, the District 35, Glencoe Park District, Sustainability Task Force, and the Village of Glencoe can provide the tools necessary to reach our vision and derive the many benefits of a walking and biking friendly community. These include:

- A better quality of life
- Improved public health
- Reduced negative impacts to the environment
- New opportunities for economic development

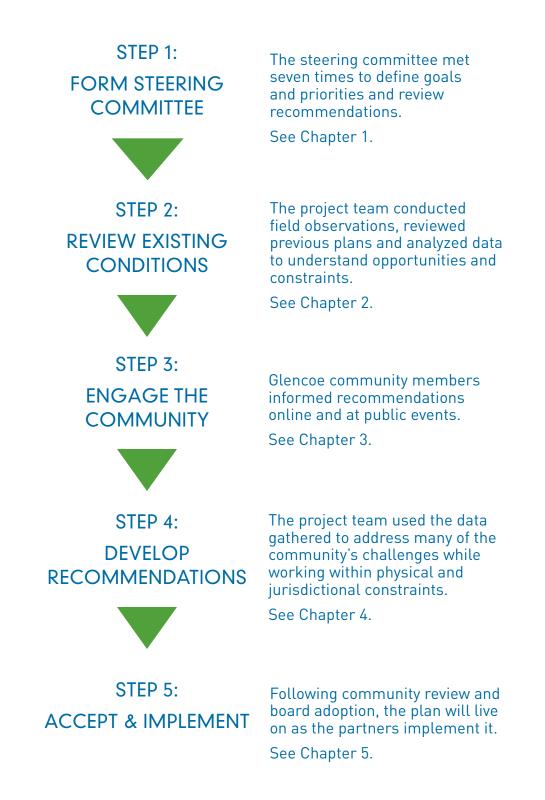
Actions We Will Take

The goal of this plan is to cement partnerships across local institutions to create an environment and systems that support and encourage active transportation use to schools, parks and other Glencoe destinations. This plan outlines a comprehensive list of actions to attain the vision, and mission The actions listed in this plan are grouped into the following categories:

- Build a comprehensive network of comfortable sidewalks in good repair
- Create a network of bikeways that connect to local destinations and link to the neighboring communities
- Create safe crossings for pedestrians and cyclists
- Develop a community-wide campaign to promote walking and biking

1.3 PLANNING PROCESS & PLAN OVERVIEW

Below is a summary of the steps taken during the planning process, the purpose of each step, and the way it relates to the chapters in this plan.





EXISTING CONDITIONS

What is Glencoe's active transportation network like today?

2.1 OVERVIEW

A successful active transportation network has three key components: 1) its sidewalks, streets, 2) its intersections are comfortable for people of all ages and abilities and 3) a variety of destinations are within walking or biking distance.

This chapter looks at the existing active transportation infrastructure in Glencoe, the plans it has already developed for improvements and other publicly available data related to walking and biking in the community.



West School students cross with bikes at Dundee at Hohlfelder. Source: David Rongey

2.2 DESTINATIONS

Creating an active community is not just about transportation infrastructure, but it is also about having a good mix, density and distribution of destinations that are accessible. Provided that the built environment is walking and biking friendly, most people are willing to walk one-half mile to a destination and many are willing to walk one-mile, or about 10-minutes and 20-minutes respectively. People are willing to bike further, about three-miles or 20-minutes. Glencoe already has a strong foundation to work with:

- Retail: Glencoe's density and mix of local retail establishments in its downtown and near Hubbard Woods make it easy to run many errands on-foot. In fact, most Glencoe homes are within a 20-minute walk of its downtown and all are within a 20-minute bike ride. However, neighborhoods on Glencoe's northwest and southwest sides are farther, making walking trips to downtown less likely. Large regional retail areas are located west of the I-94, which is a barrier to walking and biking for many.
- Parks and Open Space: Glencoe is home to 24 parks that are dotted around the community with a variety of programming and infrastructure. More than 67% of Glencoe residents live within one-half-mile of a park. The Takiff Center, Glencoe's main Park District building, is centrally located, but is challenging to access via walking and biking due to its proximity to Green Bay Road and the UP-N railroad tracks.
- Schools: Glencoe has three public schools. South Elementary serves kindergarten through second grade, West School serves third through fourth grade and Central School serves fifth through eighth grade. Because the schools are age-centered, the distance a

student must travel to reach school varies. All schools are within a 20-minute bike ride of all homes, but the school walkshed is smaller. For example, students living within a 20-minute walk of West School generally live north of South Avenue and west of Green Bay Road. Likewise, students who live within a 20-minute walk of South School generally live south of Park Avenue. Most students live within a 20-minute walk of Central School, except for the far northwest and southeast sides of the village.

- Public Transit: Nearly three-quarters of Glencoe residents work in the City of Chicago. The remaining 25% work in Glencoe, Evanston, Northbrook and Winnetka. While the majority of commuters are unlikely to walk or bike to work in Glencoe, they generally have good access to one of the three Metra Stations within reach – Glencoe, Braeside and Hubbard Woods. Only homes on the far northwest and far southwest sides of the community are located greater than a 20-minute walk from one of the three stations. In addition to Metra, a PACE bus line runs along Green Bay Road.
- Attractions: Glencoe has many local and regional destinations that draw residents and visitors in their free time. These include the Chicago Botanic Garden, Skokie Lagoon, the Writer's Theatre, Glencoe Beach, the North Branch Trail, and the Green Bay Trail.

Travel Times and Distances from Key Destinations

West School Service Area



Central School Service Area



South School Service Area



Downtown Service Area



Takiff Center Service Area



Walking and Biking Distance to/from destinations in minutes



*Based on an average walk time of 20 minutes/mile and an average bike time of 10 minutes/mile

Data Source: American Community Survey 2012-2016 5-year estimates for Glencoe by Block Group

2.3 SIDEWALKS

Glencoe has a strong network of existing sidewalks. The Village of Glencoe is working to document its existing network, assess future maintenance needs, and monitor conditions.

Existing Sidewalks

The Village maintains 70 miles of sidewalks. There are intermittent gaps throughout the community, including Elm Ridge Drive, Skokie Ridge Drive, Valley Road, Stonegate Terrace, Oak Drive, Hohlfelder Road, Lake Cook Road, Old Elm Lane, Forestway Drive, Country Lane and parts of Sheridan Road, Green Bay Road, Dundee Road and Grove Street.

Sidewalk Condition Assessment

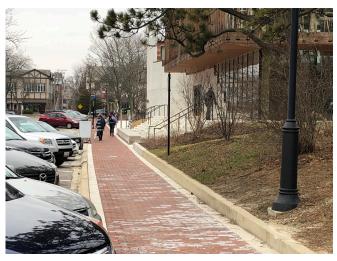
In addition to its sidewalk inventory, the Village of Glencoe has a database of sidewalk conditions that includes segments in need of updating. The Village also maintains a portal for residents to report concerns about sidewalks, which feed its inventory. The inventory includes many reasons for sidewalk replacement, such as standing water, lack of ADA ramps, trip hazards, cracks, upended by tree roots, and crumbling concrete. Each reported issue is visually inspected and is evaluated to assess the level of hazard.

Sidewalk Replacement

The Village will replace 20,000 square feet of sidewalk this year through its 2019 CIP and aims to replace a percentage of its inventory each year. In addition to Village-funded sidewalk replacement, residents may also opt to replace a sidewalk adjacent to their own property at cost. Finally, Glencoe's 2019 CIP allocates \$75,000 to restore brick pavers on Park Avenue between Green Bay Road and Vernon Avenue.



Concrete sidewalk on Park Avenue with replaced segments

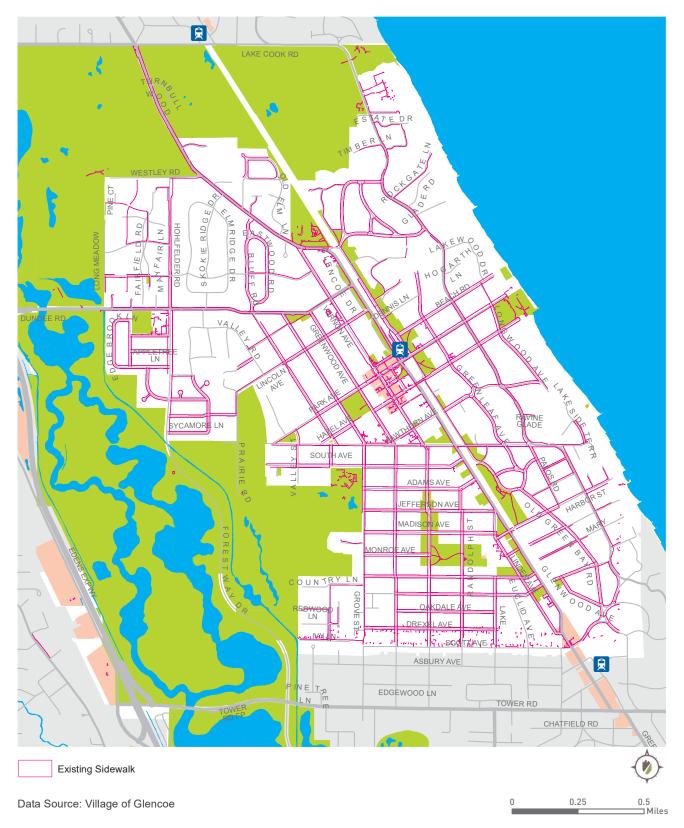


Newer brick sidewalk on Tudor Court



Sidewalk ends on Grove Street

Sidewalk Network



Glencoe is home to two major regional trails that run north/south along the east and west ends of the Village.

The Green Bay Trail

The Green Bay Trail runs from north to south along the Union Pacific North railroad tracks. It runs both on- and off-street through Glencoe. The on-street portions are between Ida Place and Hazel Avenue and Park Avenue to Maple Hill Avenue. The off-street segments are from Maple Hill Road to the northern Village limit and South Avenue to the southern Village limit. Between Hazel Avenue and Park Avenue, the segments are narrow sidewalks and are not compliant with AASHTO's minimum 8' standard for shared use trails. The trail has sporadic wayfinding and informational signage, but lacks a cohesive system. Glencoe's Community Improvement Program (CIP) includes an engineering study of the trail segment between South Avenue and Maple Hill Road. Other notable issues and initiatives include:

- Buckthorn removal: The Friends of the Green Bay Trail have been working to clear buckthorn along the trail. Their work has vastly improved sightlines along the path and is helping reduce the spread of the invasive species.
- Toole Design Study: In 2017, Glencoe commissioned Toole Design Group to study the trail crossing at Hazel Avenue. The study addresses near-term countermeasures to mitigate conflicts between pedestrians and cyclists, fix tight turns adjacent to the UP-N underpass on Hazel Avenue and achieve ADA compliance.

North Branch Trail

Though the North Branch Trail is within a short distance of many Glencoe homes, there are only a handful of access points, all of which are higher traffic streets. Lake Cook Road offers the only off-street connection to the North Branch Trail from Glencoe, but it is on the far north-end of the community. The North Branch Trail is difficult to get to for less confident cyclists who are unable to ride longer distances or on busier streets.

Local Access Paths

There are several local access paths through Glencoe parks that benefit the active transportation network. These help reduce the distances required for pedestrians and cyclists to walk and provide a low-stress experience.

Regional Trail Connectivity

While Glencoe benefits from two strong north/ south trail connections, it is more difficult to get east/west to connect to communities to the west, the Skokie Valley Trail, and the Des Plaines River Trail.



Green Bay Trail at Hazel

Multi-Use Trails and Paths



Data Sources: CMAP Bicycle Inventory System, Q2, 2018, Village of Glencoe Sidewalk Inventory, Active Transportation Alliance

2.5 BIKEWAYS

Local Bikeways

Glencoe has one dedicated bike lane on Sheridan Road between South Avenue and Estate Drive. The street is a popular route for cyclists and includes intersection markings.

Adjacent to the existing landscaped medians at Park Avenue and Maple Hill Road, the Village has striped a three-foot wide lane to narrow the vehicle travel lanes. These areas serve as a de facto bike route and help to calm traffic.

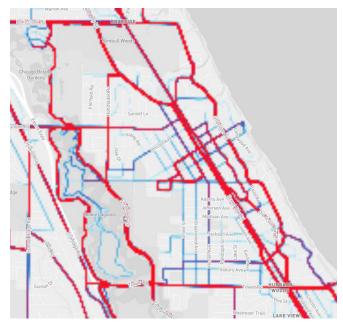
Popular Routes

Strava, an activity tracking app, produces publicly available heat maps depicting popular biking and running routes. While the app skews towards more confident cyclists, it can be helpful in understanding where a subset of the population rides regularly. Popular routes include the Green Bay Trail, the North Branch Trail, Sheridan Road, Green Bay Road, Lake Cook Road, Hohlfelder Road, and Old Green Bay Road. Many local roads are also used, like Vernon Avenue, Park Avenue, Scott Avenue, and Lincoln Avenue, though their rates of use are lower than the above mentioned roads. This is likely because the population of cyclists tracking rides on these streets is localized to Glencoe residents.

Regional Bikeways

There are several planning studies that have been completed or are underway that border Glencoe. These include:

- Bike Walk HP 2030: Highland Park's plan proposes a signed route along Lake Cook Road and a future trail on the south end of Lake Cook Road and "sharrows" along Sheridan Road.
- Winnetka Bike Plan: Proposes wayfinding signage along Scott Avenue, Old Green Bay Road, and Gordon Terrace, which would tie into Glencoe's roadway network.
- Skokie Valley Trail Extension: A Phase III engineering study is currently underway to extend the Skokie Valley Trail from Skokie to Lake Cook Road along the Union Pacific and Com Ed rights-of-way. The proposed trail would run parallel to I-94.



Heat map of bike routes frequently used by Strava app users. Source: Strava.com/heatmap



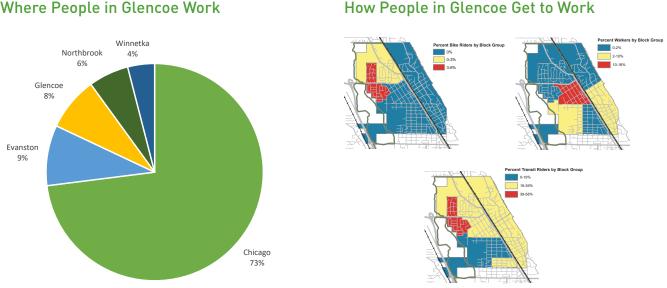
Planned & Existing Local and Regional Bikeways

Data Source: CMAP Bicycle Inventory System, Q2, 2018

2.6 ACTIVE TRANSPORTATION USE

There is limited data on active transportation trips. The most reliable source is the American Community Survey Journey to Work dataset, which asks a sample of people to report on their primary mode of transportation taken to reach work.

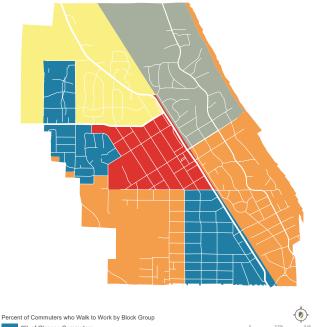
Glencoe's entire working population works within the immediate region in communities that are accessible via public transit, walking, or biking. Among workers in Glencoe, 25% commute via walking, biking or public transit, which is higher than the suburban Cook County average of 19%. The majority, 23%, take public transit to work, about 2% walk to work and less than 0.5% bike to work. The maps on page 19 show the percentage of commuters by Census Block Group that commute via walking, biking or public transit.



Where People in Glencoe Work

Data Sources: American Community Survey 2011-2016 Means of Transportation to Work Estimate and U.S. Census Bureau, Longitudinal- Employer Household Dynamics Program.

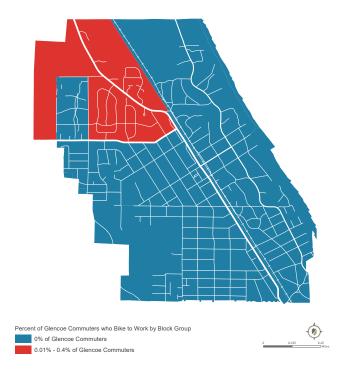
Commuters that Walk to Work



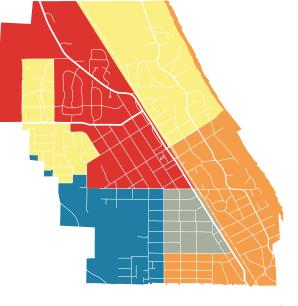


0% of Glencoe Commuters .01 - .20% of Glencoe Commuters .21% - .30% of Glencoe Commuters .31-.40% of Glencoe Commuters .41-.60% of Glencoe Commuters

Commuters that Bike to Work



Commuters that Take Public Transit to Work



Percent of Commuters who Ride Transit to Work by Block Group Less than 1.5% of Glencoe commuters 1.6% - 2% of Glencoe commuters 2.01% - 3% of Glencoe commuters 3.01% - 4% of Glencoe commuters 4.01% - 5% of Glencoe commuters

Data Source: American Community Survey 2011-2016 Means of Transportation to Work Estimate.

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2.7 PEDESTRIAN & BICYCLE CRASHES

The Illinois Department of Transportation maintains a database of police reports that are filed when an in-road traffic crash occurs. Data for the years 2010 to 2016 were reviewed to better understand where bicycle and pedestrian crashes have happened in Glencoe.

Pedestrian Crashes

Between 2010 and 2016, there were eleven pedestrian crashes, two of which resulted in severe injuries. Distracted driving was a factor in three of the crashes and failure to yield was a factor in seven of the crashes. Pedestrian crashes occurred along Park Avenue, Vernon Avenue, Tudor Court and Bluff Street.

Pedestrian Crashes



Data Sources: Illinois Department of Transportation Crash Datasets, 2010-2016.

Bicycle Crashes

Between 2010 and 2016, there were 16 bicycle crashes, two of which resulted in severe injuries to the cyclist. Crashes happened in various locations including along Green Bay Road, Dundee Road, Green Bay Trail crossings, Sheridan Road and Harbor Street.

Bicycle Crashes



Data Sources: Illinois Department of Transportation Crash Datasets, 2010-2016.

3

PUBLIC ENGAGEMENT

What did residents and stakeholders say about walking and biking in Glencoe?

3.1 OVERVIEW

Public engagement for the Glencoe Active Transportation Plan began with the formation of a steering committee. The group met seven times to discuss goals and priorities, develop a plan vision, identify issues and concerns and review and approve plan recommendations

Throughout the course of the plan, the Steering Committee also engaged the community to learn about opportunities and challenges related to walking and biking in Glencoe. The following community engagement approaches were used:

- Regular blog posts and updates were published on the Village's website, which included project updates, educational messaging and invitations to participate in community engagement opportunities.
- An online survey was distributed via the Village's list serve, Active Transportation Alliance's contacts and by Steering Committee members to their contacts aimed at identifying community member's challenging walking and biking routes and priority destinations. 192 responses were collected.
- An online survey was distributed to parents in District 35 aimed at assessing parents' attitudes about walking and biking to school. Exactly 200 parents participated.
- An online map was developed to enable people to identify challenging routes, intersections and priority destinations. Participants plotted 193 unique comments on the map.
- A community workshop was held at the Takiff Center to provide a deeper dive for residents on active transportation issues.



Steering committee members discussing infrastructure opportunities and challenges.

3.2 WHAT PEOPLE TOLD US: WALKING

The community participated in the planning process by responding to an online survey, marking up an online map and/or attending a workshop. Throughout the course of the plan, we heard from more than 200 people. Page 25 features routes the community identified as being in need of walking improvements during the planning process.

Where do people walk?

- Downtown in general or to a specific store or restaurant (196)
- Glencoe Beach and Lakefront Park (126)
- Glencoe Library (50)
- Glencoe Metra Station (49)
- Chicago Botanic Garden and the Green Bay Trail (31)
- Friends Park, Watts Park and Hubbard Woods (22 each)

Why do people walk?

- For exercise: 40% of respondents walk daily for exercise, and 42% walk weekly for exercise
- For transportation reasons: 45% walk weekly to shop or run errands, 33% to visit family and friends and 37% walk to parks.
- To access destinations or as an activity: Dog walking (12), shopping downtown (8), the beach and parks (3), the Green Bay Trail (2), the Chicago Botanic Garden (2), the library (1) temple (1), and schools (1).
- Distance: 41% of respondents are willing to walk one to two miles to reach a destination

What factors influence peoples' decision to walk?

- Presence of sidewalks (77% are greatly influenced)
- Clear sidewalks in the winter months (44% are greatly influenced)
- Ease of crossings at intersections (60% are greatly influenced)
- Positive interactions with drivers (57% are greatly influenced)

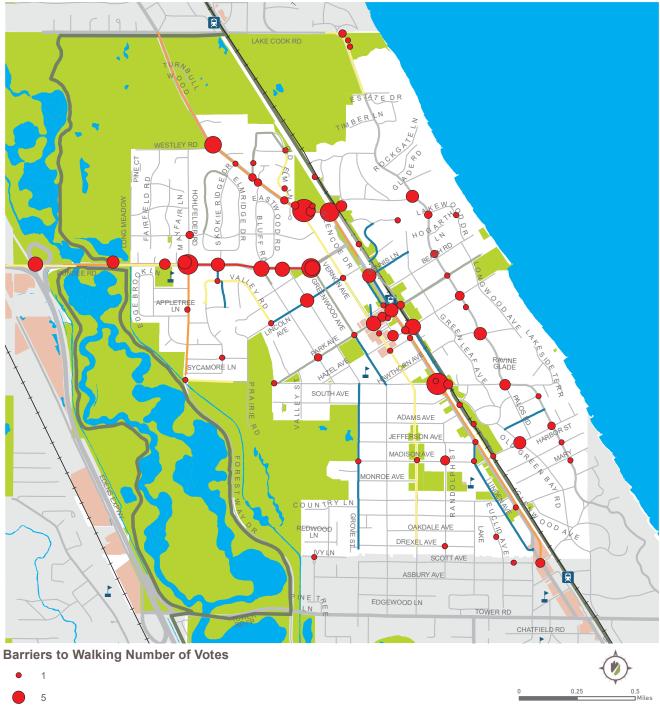
Where would people walk if improvements were made?

- Chicago Botanic Garden (33)
- Takiff Center (15)
- Green Bay Trail (10)
- Downtown (10)
- Skokie Lagoons, Along the Lake and Ravinia (6 each)
- West School (5)

What discourages people from walking?

- 57% would walk more often if more sidewalks were available
- 63% would walk more often if sidewalks were shoveled in the winter
- 51% would walk more often if street crossings were easier
- 52% would walk more often if driver interactions with pedestrians were improved

Public Engagement Results - Walking



10

Desired Walking Routes Number of Votes

- 1-2 votes
- 2-5 votes
- 5-9 votes
- 9-14 votes
- 14-21 votes

3.2 WHAT PEOPLE TOLD US: BIKING

The community participated in the planning process by responding to an online survey, marking up an online map and/or attending a workshop. Throughout the course of the plan, we heard from more than 200 people. Page 27 features all routes the community identified as being in need of biking improvements during the planning process.

Why do people bike?

- 65% at least once a week for exercise
- 33% at least once a week to run errands
- 33% at least once a week to see friends and family
- 31% of respondents are willing to bike two to five miles to reach a destination and 46% are willing to bike greater than five-miles.

What factors influence peoples' decision to bike?

People who responded to the survey bike if road conditions are good (82%), there are trails along the route (74%), street crossings are comfortable (77%), interactions with drivers are positive (76%), bike lanes are present (74%) and if they have knowledge of local routes (76%.)

Where do people bike?

- Chicago Botanic Garden (59)
- Downtown Glencoe (56)
- Glencoe Beach (52)
- Green Bay Trail (42)
- Skokie Lagoons (25)

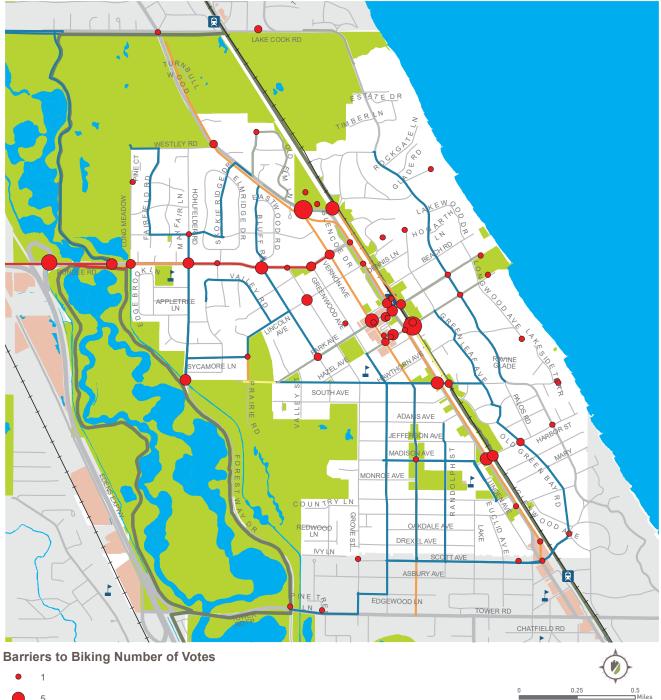
What discourages people from biking?

- 63% would bike more often if roadway conditions were better
- 63% would bike more often if trails were available on their route
- 56% would bike more often if there were onstreet bike facilities
- 51% would bike more often if interactions with drivers were improved
- 42% would bike more often if on-street bike parking were available

Which destinations would more people bike to if improvements were made?

- Dundee Road (14)
- Chicago Botanic Gardens (13)
- Green Bay Trail (13)
- Skokie Lagoons (11)
- Glencoe Beach (10)
- Takiff Center (8)

Public Engagement Results - Biking



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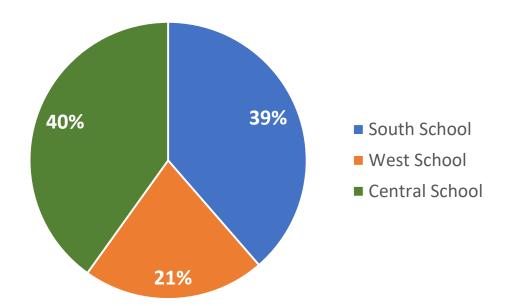
Desired Bike Routes Number of Votes

- **—** 1 2
- ______ 3 5
- 5 9
- _____ 10 14
- _____ 15 21

3.3 WHAT PARENTS TOLD US: WALKING & BIKING TO SCHOOL

District 35 sent out a survey to all parents to gauge attitudes and opinions about active transportation. We heard from 17% of the total parent population - 40% from Central School, 39% from South School, and 21% from West School. This section includes a summary of the survey results and compares the data to the trends tallied by the National Center for Safe Routes to School between 2007 and 2014.

Distribution of Responses by School





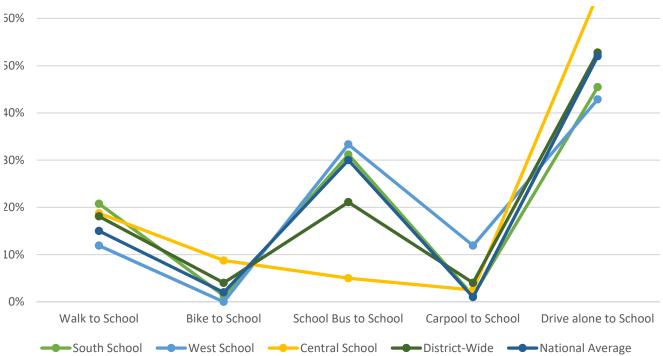
Bike racks at Central School

Dismissal at South School

GLENCOE ACTIVE TRANSPORTATION PLAN

Trip to School By Mode

Parents were asked to respond to the question, "How does your child typically get to school?" "Alone in a car," is the primary way that parents responding to the survey reported that their children get to school. This is consistent with the national average of 51.5% of students being driven alone to get to school each morning. Central students are more likely to walk (19%) or bike (9%) to school than the national average of 15% and 2% respectively. South Students are also more likely to walk to school than the national average.



Comparison of Mode of Travel Used to Get to School by Glencoe School District, and Nationwide*

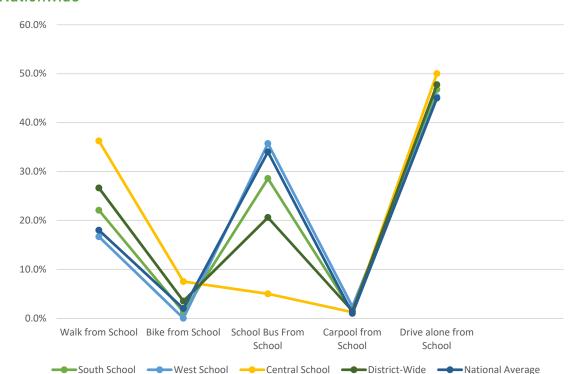
Comparison of Mode of Travel Used to Get to School by Glencoe School District, and Nationwide*

	Walk to School	Bike to School	School Bus to School	Carpool to School	Drive alone to School	Total
South School	21%	1%	31%	1%	45%	100%
West School	12%	0%	33%	12%	43%	100%
Central School	19%	9%	5%	3%	65%	100%
District-Wide	18%	4%	21%	4%	53%	100%
National Average	15%	2%	30%	1%	52%	100%

*Percentages for District 35 reflect the responses provided by the 200 parents who responded to the survey and may not capture all student travel behavior.

Trip from School By Mode

Parents were asked to respond to the question, "How does your child typically get home from school?" "Alone in a car," is the primary way that parents responding to the survey reported that their children get from school, with a 48% district-wide response rate. This is consistent with the national average of 45% of students being driven alone to get to school each morning. Across all grade levels, students are more likely to walk home from school than to school. Additionally, the district-wide average of 27% is much higher than the national walk home average of 18%.



Comparison of Mode of Travel Used to Get from School by Glencoe School, District, and Nationwide

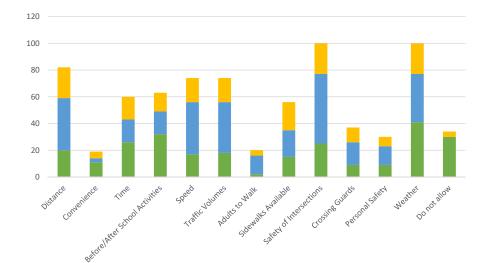
Comparison of Mode of Travel Used to Get from School by Glencoe School, District, and Nationwide

	Walk from School	Bike from School	School Bus from School	Carpool from School	Drive alone from School	Total
South School	22.1%	1.3%	28.6%	1.3%	46.8%	100%
West School	16.7%	0.0%	35.7%	2.4%	45.2%	100%
Central School	36.3%	7.5%	5.0%	1.3%	50.0%	100%
District-Wide	27%	4%	21%	2%	48%	100%
National Average	18%	2%	34%	1%	45%	100%

*Percentages for District 35 reflect the responses provided by the 200 parents who responded to the survey and may not capture all student travel behavior.

Top Barriers Reported by Parents

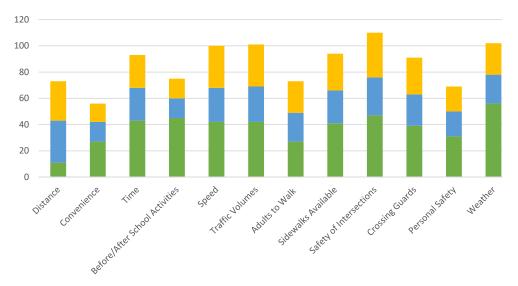
Parents were asked to respond to the question, "If you do not allow your child to walk or bike to school, why," and "If these factors were changed, would you allow your child to walk or bike more often?" Multiple responses were allowed. Safety of intersections and weather were the top two barriers selected by parents district-wide. Distance was also a factor district-wide and highly ranked amongst South School parents. South School parents had more traffic related reasons, such as speed and number of cars on streets, which is unsurprising given the age of students. Central School parents selected weather and before- or after-school activities most often. West School parents equally selected weather, distance and safety of intersections as the primary concern. Parents responding to the survey indicated that if the safety of intersections were improved, traffic volumes were reduced or speed were reduced on streets, they would be more likely to allow their children to walk or bike school.



Top Factors that Influence Glencoe Parents' Decision to Allow Children to Walk or Bike to School*

Central South West School





*Numbers for District 35 reflect the responses provided by the 200 parents who responded to the survey and may not capture all student travel behavior.

CHAPTER 3 | COMMUNITY ENGAGEMENT

RECOMMENDATIONS

What can be done to increase walking and biking trips in Glencoe?

4.1 OVERVIEW

Glencoe's proposed active transportation network specifies street, sidewalk, trail, and intersection projects that are central to improving barriers to active travel. A complete build-out of the network will enable people of all ages and abilities to access destinations on foot and by bike, both inside and outside of the community.

This chapter includes the following sections:

Toolbox

This section includes pictures and descriptions of the different types of facilities recommended for Glencoe. For specific locations, see the following sections.

Proposed Improvements by Major Corridor

This section includes intersection, sidewalk and bikeway recommendations for Dundee Road, Forestway Drive, Green Bay Road, Sheridan Road and Lake Cook Road.

Sidewalk Improvements on Local Streets

The Village's existing sidewalk network is nearly complete, but needs gaps filled and some sidewalks reconstructed. This section addresses strategies for addressing a further build-out of the sidewalk network.

Proposed Intersection Improvements

This plan does not include a full intersection audit, but it does indicate where improvements should be made on major roads and at key school and park crossings.

Bicycle Improvements on Local Streets

The bicycle improvements proposed for Glencoe are focused on building bicycle facilities on specific streets within the Village. When developed as a whole, the network of bikeways will enable people to more comfortably reach priority destinations. Specific bicycle facility types are recommended for streets, based on their width, average daily traffic and speed limit.

Proposed Trail Improvements

This section includes recommendations for intersection and segment improvements along the Green Bay Trail, and proposes a new trail that could be developed in the future.

Community-Wide Walking and Biking Campaign

This section includes strategies to implement a community-wide campaign focused on getting more Glencoe residents to walk and bike to local destinations. The intent is for these strategies to be coordinated amongst the Village, District 35, Park District and Sustainability Task Force.

4.2 TOOLBOX

No two road are alike, and each requires assessment of existing and planned conditions to determine contextually appropriate bicycle and pedestrian improvements. For example, active transportation projects constructed on roads with four lanes and high traffic will require more protection for pedestrians and cyclists traveling along them than low speed neighborhood streets. Likewise, intersections on high speed, high volume streets will require more enhancements to reduce vehicle speed and increase visibility of non-motorized users of the road.

Pedestrian Network Tools

Sidewalks

Where possible, install sidewalks on at least one side of each block and each side of heavily traveled roads. When feasible, work with private property owners to build sidewalks where no public-right-of-way is available. Sidewalks should be at least 5-feet wide, but 8-10-feet is preferred in areas with high pedestrian foot traffic. Ideally, sidewalks will include buffer areas to provide additional protection from vehicle lanes, such as parking lanes or furniture zones. Sidewalks should continue across commercial driveways to better define the pedestrian space.

Landscaping Clearance

Glencoe's policy guides private property owners to maintain and trim back trees and landscaping that obstruct sightlines on corners and encroach on sidewalks. On corner lots, landscaping can be no higher than 30-inches in a 12x12 foot area. Shrubs and bushes should be trimmed back 1-foot from the edge of public sidewalks and trimmed up to allow a minimum of 8-feet of



Wide sidewalk in downtown Glencoe



Standard residential sidewalk



Properly maintained shrubs



Improperly maintained shrubs

Proper vs. improper landscaping maintenance. Source: Village of Glencoe

vertical clearance.

School and School Crossing Ahead Markings

Pavement markings provide a visual queue to drivers to remind them that they are approaching a school zone or school crossing. They help reinforce signage which is sometimes blocked or difficult to spot when driving. Markings also provide a visual queue to drivers in advance of a school zone or school crossing to stop for student pedestrians. They can be more visible than signage on roads with higher vehicle speeds.



School Crossing Pavement Marking. Source: Ulster County Transportation Council



School zone pavement marking. Source: Traffic Safety Store

Intersection Tools

Curb Ramps, Tactile Pads and Crosswalks

Equip all intersections with bi-directional curb ramps (where geometry allows), detectable warning pads and crosswalks. International or ladder style crosswalks should be used at signalized crossings, mid-block crossings, school and park crossings and along school and park walking routes. Decorative crosswalks may be used in place of ladder style crosswalks in business districts. Standard crosswalks can be used at all other intersections.

School, Pedestrian and Bicycle Crossing Signs

Bicycle crossing signs warn drivers that a school, pedestrian or bicycle crossing is ahead. When used, this treatment should include an advanced warning sign and a sign at the crossing.

"Must stop for pedestrians in crosswalk" signage can be placed at traffic signals, stop signs and uncontrolled crossings to remind drivers and bicyclists of the legal requirement to give pedestrians the right-of-way at intersections.

Pedestrian Waiting Areas and Standback Lines

Standback lines and concrete waiting areas provide a bigger space for large groups of students to wait when crossing the street. This treatment is helpful at crossings adjacent to schools or at traffic signals where large groups congregate. Where space permits, provide a larger concrete pad for students to gather. At narrower crossing areas, consider installing bollards or painting a standback line.



Bicycle crossing sign



Stop for pedestrians signage. Source: MUTCD



Standback line. Source: Mike Cynecki



Waiting area. Source: Mike Cynecki

Reduced Corner Radii

Reduced corner radii reduce the speed of rightturning vehicles and can help provide additional space for crossing pedestrians to wait where right of way is limited.

Pedestrian Crossing Islands

Refuge islands buffer and protect pedestrians and cyclists crossing wide or busy streets, enabling them to cross in two stages. Where possible, they should be wide enough to accommodate the length of a standard bicycle.

Bump-outs/Curb Extensions

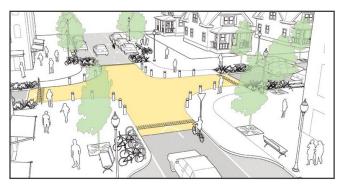
Bump-outs slow traffic, provide shorter crossing distances for pedestrians, and improve sightlines for both drivers and pedestrians.

Raised Crosswalks

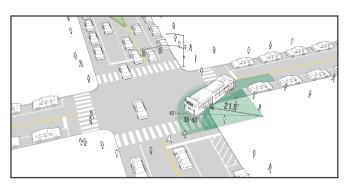
Raised crosswalks calm traffic at pedestrian crossings by raising the crosswalk to the height of the curb. Use a gradual incline to reduce issues for plows.

Raised Intersections

Similar to the concept of a raised crosswalk, it raises the intersection using a gradual incline to calm traffic at pedestrian crossings.



Raised Intersection. Credit: NACTO



Reduced corner radii. Source: NACTO



Pedestrian crossing island



Bump-outs/curb extensions



Raised crosswalk

Bicycle Loop Detector

Loop detectors are in-road sensors enable traffic signals to recognize waiting cyclists who do not trigger standard traffic signals.

Pedestrian Countdown Signal

Pedestrian countdown signals give people crossing information about the amount of time they have left to cross. Signals should be timed to allow at least 3.5 feet per second to cross safely.

Rectangular Rapid Flashing Beacons (RRFB)

RRFBs enable pedestrians and cyclists to activate a warning beacon at mid-block or unsignalized crossings. They can be solar controlled to reduce installation cost and complexity.

Bicycle Intersection Crossing Markings

Bicycle intersection crossing markings guide cyclists through an intersection. They can be highlighted in green paint to increase visibility.

Bicycle Crosswalk

Bicycle crosswalks are placed adjacent to pedestrian crosswalks where trails, sidepaths and protected bike lanes intersect streets. They can be highlighted in green to increase visibility.



Bicycle loop detector



Pedestrian countdown signal



Rectangular Rapid Flashing Beacon (RRFB)



Bicycle crosswalk



Bicycle intersection pavement markings

Trail Information & Wayfinding Signage

Trail information and wayfinding signage help users navigate trail junctions and on-street portions of trail systems, directing them to points of interest off of trails. Below are some examples of trail informational and wayfinding signage that can be used in Glencoe.



Distance, destination and direction sign for on-street use.



Signage at a junction between two trails.



Trail system map can be posted on trail signs or on kiosks.



Branded trail signs can be used along off-street portions of trails.



Information kiosks can be posted at access points and can include a roof to provide shelter from the sun.

Bicycle Network Tools

Bike Lanes

Bike lanes designate a space for cyclists on a road and encourage drivers and cyclists to behave predictably. They can reduce motor vehicle speeds and lower the risk of severe crashes. At minimum, bike lanes should be 5-feet wide. They can be used in conjunction with a lane rightsizing projects.

"Sharrows

Install "sharrows" on streets with high bike traffic, on-street parking and limited lane width. The marking indicates the proper lane position for cyclists and cautions drivers to expect cyclists on the road.

"De Facto" Bike Lane

Are used on roads with lanes that are too narrow to accommodate a traditional bike lane but are wider than necessary for vehicle traffic, a solid white line can be striped. This treatment both visually narrows the road to encourage drivers to slow down and serves as a de facto bike lane.

Bike Boulevards

Bike Boulevards are streets designed to prioritize bicycle travel by calming vehicular traffic. When designed as a network, the result is an attractive, safe and comfortable environment for cyclists of all ages and abilities, and more peaceful residential streets. As family friendly bicycling in Glencoe grows, the Village may want to consider installing bike boulevard treatments on select residential streets.



Bike lane



Sharrow



"De facto" bike lane



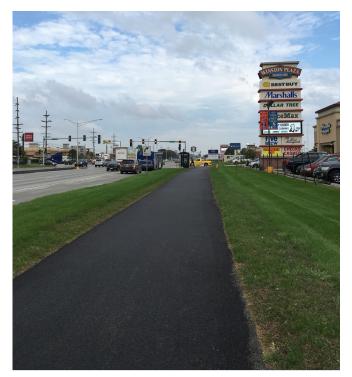
Bike boulevard

Sidepath

Sidepaths run parallel to a road and are shared by pedestrians and cyclists. They should be at least 8-feet wide, but can be as wide as 14feet. Where possible, a sidewalk should still be provided on the opposite side of a road with a sidepath.

Bike Parking

Bike parking should be visible and secure and provided throughout the Village, particularly at parks, schools and shopping areas. In areas where people park bikes long-term, such as the Metra station, consider installing covered bike parking. U-shaped racks are the most effective in deterring thefts.



Sidepath



U-shaped bike racks

4.3 DUNDEE ROAD

Dundee Road is an east/west corridor that provides connections to West School, the south entrance of the Chicago Botanic Gardens, AM Shalom, and the Skokie Highway. The road is controlled by Glencoe east of Hohlfelder Road and by the Illinois Department of Transportation (IDOT) west of Hohlfelder Road. The destinations along Dundee Road make it a popular walking and biking route. It is also one of the few east/west streets that connects outside of the community. Improvements on the latter segments will need to be coordinated with IDOT.

Key Issues

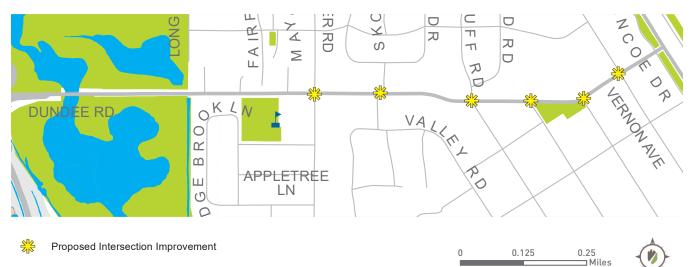
- Sidewalk gaps are located on the north side of Dundee Road from Glencoe Drive to Vernon Avenue, on the south side from Vernon Avenue to Greenwood Avenue and on the north side, west of Pebblewood Lane to the Chicago Botanic Gardens south entrance.
- Crossings along side streets are wide and crosswalks are not as visible.
- A difficult crossing at Forestway Drive/ Hohlfelder Road with a narrow waiting areas for West School students.
- Limited controlled crossings along Dundee Road. Currently, there are only crossings at the Chicago Botanic Garden entrance, Forestway, and Vernon Avenue.
- This is a popular bike route for more confident cyclists, but sidewalks are narrow for shared use and traffic makes the experience uncomfortable for less experienced cyclists.
- There are narrow sidewalks west of Forestway and a narrow buffer area across the corridor.
- Drivers coming off Skokie Highway travel faster than the posted speed limit.

- Install sidewalks between Glencoe Drive (north side) Vernon and Greenwood (south side) and between Hohlfelder Road and the Chicago Botanic Garden entrance (north side).
- Mark international crosswalks on side streets that intersect Dundee Road.
- Widen the waiting area for students on the southwest corner of Dundee Road and Forestway Drive. Mark standback lines or install bollards at northeast, southeast and southwest corners to provide added protection or awareness to students.
- Install school zone pavement markings on Dundee road.
- Conduct a traffic study to determine ways to create an additional pedestrian crossing on Dundee Road, such as an RRFB or fully signed and marked pedestrian crossing.
- Install "sharrows" on Dundee Road east of Forestway Drive/Hohlfelder Road.
- Continue to partner with IDOT to improve the pedestrian and bicycle experience west of Forestway Drive/Hohlfelder Road to improve access to the Chicago Botanic Garden.
- Establish Village gateways at Glencoe's corporate limits to welcome people and remind drivers they are entering a community.

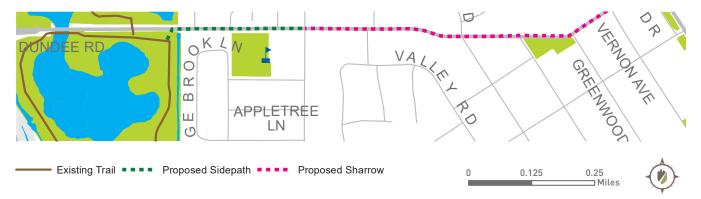
Proposed Sidewalk Improvements - Dundee Road



Proposed Intersection Improvements - Dundee Road



Proposed Bikeway Improvements - Dundee Road



4.4 FORESTWAY DRIVE

Forestway Drive is an north/south corridor that provides connections to West School and the North Branch Trail. The road is controlled by IDOT, and will require coordination with the agency. It is a popular walking area for students to access West School and many cyclists use the street to connect to the North Branch Trail.

Key Issues

- Limited connections to Glencoe's roadway network.
- Sidewalk gaps south of Elder Court on the east and south of Chestnut Lane to the west.
- Limited crossings to access the North Branch Trail.
- Unpaved shoulder along the length of Forestway Drive.

Recommendations

- Secure permission from the Forest Preserve District of Cook County to improve the trail that runs from Little House of Glencoe to Forestway Drive. Improvements could include clearing away brush, improving surface conditions with crushed limestone and installing wayfinding signage.
- Work with IDOT to determine appropriate crossing amenities at Forestway Drive and the Forest Preserve District of Cook County Trail, such as a rectangular rapid flashing beacon or a fully signed and marked pedestrian crossing.
- Fill in sidewalk gaps south of Elder Court and

between Sycamore Lane and Chestnut Lane. Install a new school crossing at Chestnut Lane.

- Work with the Skokie Country Club to install warning signage on the path that connects from South Avenue to Prairie Road. Signage should include warnings about respecting golfers and exercising caution.
- Partner with IDOT to pave the gravel shoulders on Forestway Drive.

Proposed Sidewalk and Intersection Improvements - Forestway Drive

Proposed Bikeway Improvements -Forestway Drive

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CHAPTER 4 | RECOMMENDATIONS

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4.5 GREEN BAY ROAD (NORTH SECTION)

For the purposes of this plan, the north section of Green Bay Road is north of Maple Hill Road and south of Lake Cook Road. The corridor gives access to the Takiff Center and Ravinia.

Key Issues

- No formal bikeway connecting to Lake Cook Road.
- Vehicle lanes are wide, but too narrow to accommodate traditional bike lanes.
- There are few controlled crossings along the road for pedestrians and cyclists.
- The crossing at the Takiff Center and Maple Hill Road is difficult.

- North of Westley Road, widen the sidewalk to at least 8-feet wide on the east side of the street to provide a sidepath for pedestrian and bicycle use.
- South of Westley Road, install bike route signage. Along wider segments of the road, stripe solid lines to visibly narrow the road and serve as de facto bike lanes.
- Improve the crossing at Westley Road by installing high visibility crosswalks, narrowing the corner radii and installing a pedestrian crossing island on the north leg where a median is currently painted.

- Study additional improvements that can be made to the Takiff Center pedestrian crossings, such as replacing the current flashing sign with a rectangular rapid flashing beacon.
- Remove curb ramp on the northwest leg of Green Bay Road at Maple Hill. Trim landscaping and re-grade the hill on the southwest corner of the Takiff Center property to improve pedestrian visibility. In addition, review curb ramp placements that have no functional receiving curb ramp on the other side of the street.



Crossing at the Takiff Center with "de facto" bike lanes.

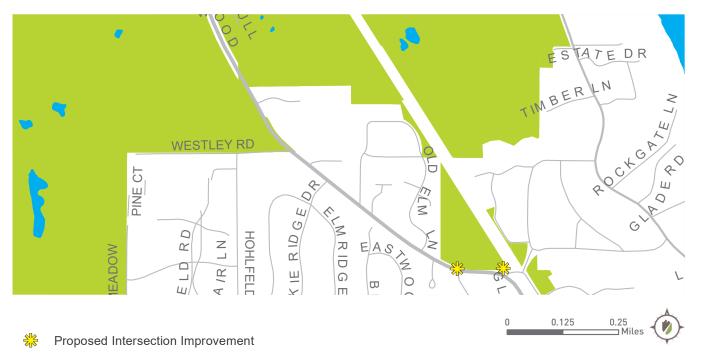


Approaching the Takiff Center crossing from the south on Green Bay Road



Proposed Bikeway and Sidewalk Improvements - Green Bay Road North Section

Proposed Intersection Improvements - Green Bay Road North Section



4.6 GREEN BAY ROAD (CENTRAL SECTION)

For the purposes of this plan, the central section, of Green Bay Road lies south of Maple Hill Road and north of South Avenue. Destinations along this segment include downtown Glencoe and the Glencoe Metra Station.

Key Issues

- There is no sidewalk on the east side of Green Bay Road and limited space available to install one.
- Drivers do not see or stop for pedestrians at the Metra pedestrian crossing.
- Cyclists are unable to trigger traffic signals at Park Avenue and must wait for cars to arrive to cross.
- The PACE schedule on Green Bay Road was recently adjusted and does not align with the New Trier East schedule.
- South Avenue is a busy school and trail crossing that has no traffic control.

- Widen the sidewalk on the west side of Green Bay Road to better accommodate pedestrians in the heavily used downtown area.
- Trim back landscaping at the Metra Station crossing to improve pedestrian visibility and install more visible crossing improvement, such as a rectangular rapid flashing beacon.
- Work with PACE to get ridership information, adjust the schedule to align with New Trier's start and end times, and better understand how to improve bus stop access and amenities.
- Install slow school crossing pavement markings on Green Bay Road at South Avenue and install an enhanced pedestrian crossing such as a rectangular rapid flashing beacon.



Mid-block crossing by Metra station on Green Bay road

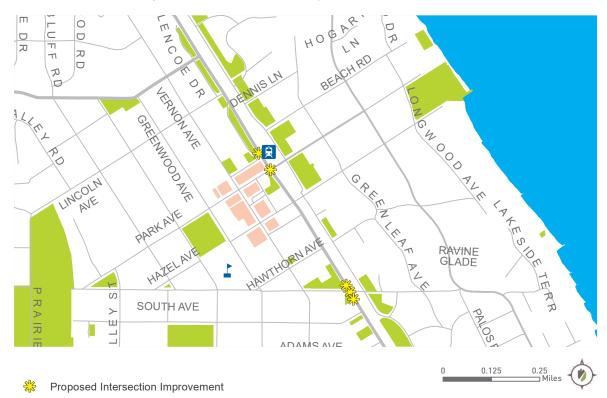


Striped "de facto" bike lanes on Green Bay road



Proposed Bikeway and Sidewalk Improvements - Green Bay Road Central Section

Proposed Intersection Improvements - Green Bay Road Central Section



4.7 GREEN BAY ROAD (SOUTH SECTION)

For the purposes of this plan, the south section of Green Bay Road lies between South Avenue and Scott Avenue. Destinations along this section include Linden Park, the Hubbard Woods Metra Station and the Hubbard Woods Shopping Center.

Key Issues

- No sidewalk on the east side of Green Bay Road and limited space available to install one.
- Cyclists are unable to trigger traffic signals at Harbor Street and must wait for cars to arrive to cross.
- Overgrown vegetation at the southwest corner of Linden Avenue and Green Bay Road blocks sightlines for pedestrians rounding the corner.

- Install bicycle intersection crossing markings at Harbor Street, bicycle loop detectors and a high visibility crosswalk on the west leg of the intersection. Widen sidewalks to create a standback area for students waiting to cross.
- Trim back landscaping on the southwest leg of Linden Avenue and Green Bay Road.
- Install bicycle wayfinding signage on Green Bay Road. Continue de facto bike lanes where feasible.



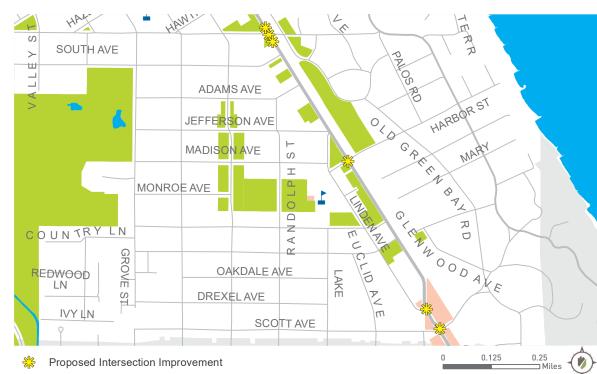
Bike club on Green Bay Road



Bus shelter on Green Bay Road



Proposed Bikeway Improvements - Green Bay Road South Section



Proposed Intersection Improvements - Green Bay Road South Section

4.8 SHERIDAN ROAD

Sheridan Road is another north/south route that spans the length of the Village. Nearly everyone going to Glencoe Beach must travel along or across it. It is a popular local and regional cycling route. To aid cyclists, the Village has installed bike lanes along the street and bike intersection crossing markings.

Key Issues

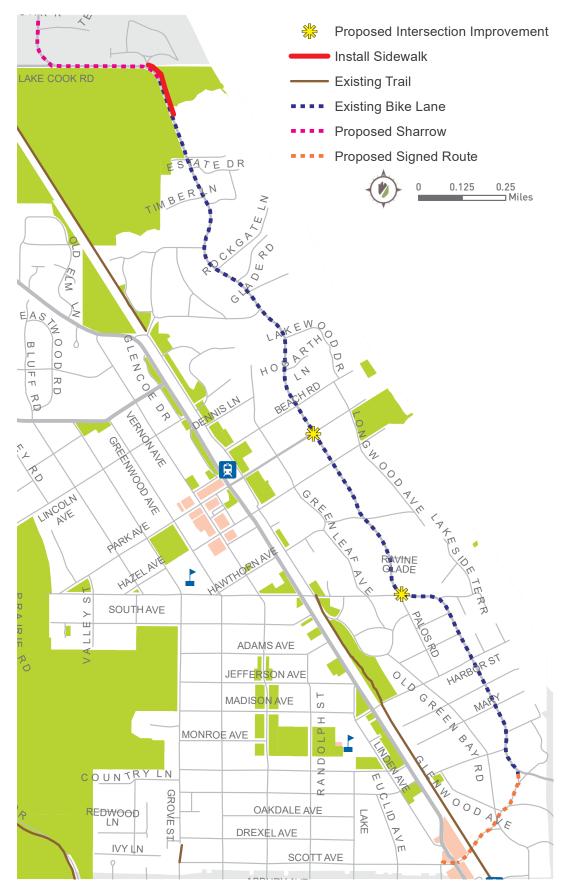
- There is no sidewalk adjacent to the Lakeshore Country Club and limited public right-of-way to construct a sidewalk.
- The Park Avenue traffic signal lacks pedestrian countdown timers.
- South Avenue is a difficult intersection for all modes to navigate.
- Bike lane ends at the Lake Shore Country Club.
- There are sidewalk gaps to the south of South Avenue.

- Partner with Lake Shore Country Club to identify ways to install a sidewalk.
- Upgrade traffic signal at Park Avenue to include countdown signals for pedestrians.
- Highlight the South Avenue intersection with green paint in the near-term. Realign intersection to create 90 degree angles in the long-term.
- Install bicycle wayfinding signage at Scott Avenue to direct people south to Winnetka and north to Highland Park.



Bike lane on Sheridan Road

Proposed Bikeway, Sidewalk, and Intersection Improvements - Sheridan Road



CHAPTER 4 | RECOMMENDATIONS

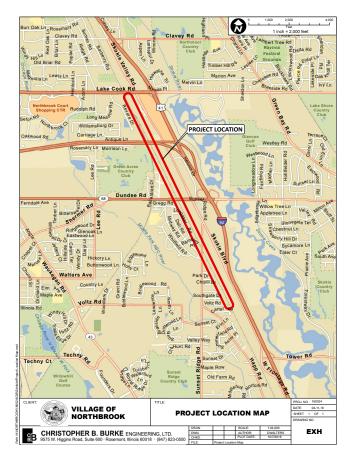
4.9 LAKE COOK ROAD

Lake Cook Road is a multi-jurisdictional road that is controlled by Cook County and IDOT. It is a key connector to the Chicago Botanic Garden northern entrance, Ravinia, the Braeside Metra Station and the Skokie Valley Trail. Future improvements on this road will need to be coordinated with the aforementioned roadway agencies and the City of Highland Park.

Key Issues

- The bike lane along Sheridan Road ends and does not provide wayfinding into Highland Park or the destinations to the west.
- The Green Bay Trail does not connect across Skokie Highway.

- Work with the City of Highland Park to install wayfinding signage on Lake Cook Road between Sheridan Road and the Green Bay Trail.
- Work with Cook County, IDOT, the Village of Northbrook, and the City of Highland Park to explore ways to improve connection between the Green Bay Trail, the Skokie Valley Trail and the Des Plaines River Trail.



Map of proposed extension of the Skokie Valley Trail. Source: Village of Northbrook



Path to South School

4.10 SIDEWALK NETWORK ON LOCAL ROADS

While Glencoe's sidewalk network is nearly complete, there are opportunities for improvement. Some Glencoe neighborhoods have no sidewalks and others have gaps in key areas. The aging sidewalk network impacts pedestrian safety in some locations, and vegetation sometimes narrows pathways making them impassable.

Key Issues

- Some neighborhoods have no sidewalks.
- There are intermittent gaps in various locations throughout the Village.
- Some existing sidewalks are in disrepair.
- There are maintenance issues to address throughout the Village, including landscaping encroachment and unplowed sidewalks in the winter.
- Sidewalk segments throughout the Village are in need of repair (see map on the following page.) The Village's CIP is not able to meet the need for sidewalk replacement at current funding levels.
- Some curb ramps lead pedestrians into

driveways or curbs on the opposite side of the street.

- Continue to work with residents to fill in the sidewalk network on key streets such as Old Elm Lane and Skokie Ridge. Prioritize areas around schools and parks, and particularly along school and park walking routes and downtown Glencoe.
- Continue to fund the sidewalk replacement through the annual CIP.
- Establish guidelines for landscaping that ensure no encroachment on sidewalks and incorporate messaging into the landscaper training session.
- Evaluate options for a new sidewalk shoveling policy that re-prioritizes areas with high pedestrian volumes, such as school and park walking routes and downtown Glencoe.
- Consider expanding the Community Improvement budget or investigate alternative funding methodologies to accelerate needed sidewalk reconstructions, repairs and gap closures.
- Review curb ramp placements that have no functional receiving curb ramp on the other side of the street.

Average Sidewalk Condition by Block*



* Represents the mean score collected on sidewalk segments between 2016 and 2017. Condition data has not been collected for all sidewalk segments.

Data Source: Village of Glencoe, IDOT, CMAP, Cook County Forest Preserve District

4.11 INTERSECTION IMPROVEMENTS ON LOCAL ROADS

Glencoe has many quiet residential streets that are generally easy to walk and bike along, though some busier crossings can be uncomfortable for people.

Key Issues

- Inconsistent pedestrian and school signage and pavement marking standards are applied on Village streets.
- Stop-controlled intersections on Vernon Avenue in downtown Glencoe and adjacent to busier parks are difficult for all modes of travel.
- Loading zones and crossings on Village Court are difficult for pedestrians to navigate.

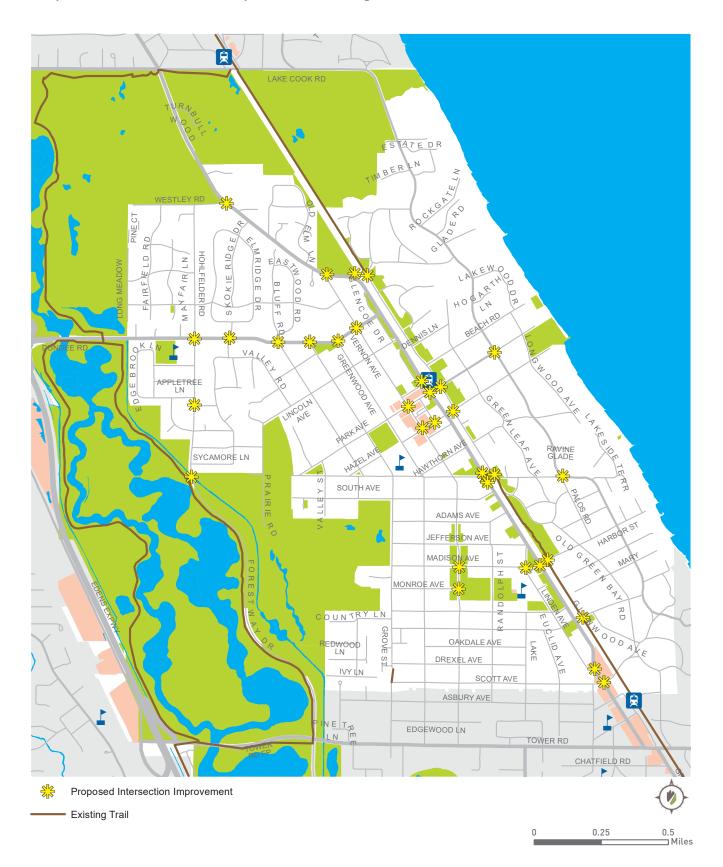
- Develop standards for consistent pavement markings and signage at crossings by typology. These should include when to use high visibility crosswalks versus standard crosswalks, where to install school crossing signs, where to install "must stop for pedestrians signs" and other ways to enhance pedestrian crossings.
- Identify crossing and/or traffic calming improvements to use along Vernon Avenue at Hazel Avenue, Park Avenue, Madison Avenue, Monroe Avenue, and Jefferson Avenue. These could include high visibility crosswalks, must stop for pedestrian signs, bump-outs or raised crossings.
- Move the crosswalk at Village Court and Hazel to the east side of Hazel. Implement other improvements suggested in the downtown plan.
- Implement other recommendations as described in previous sections of this plan and, specifically, in the trail section.



In-road school crossing sign on Vernon



Vernon Avenue bump-out



Proposed Intersections for Improvement- Village Wide

4.12 BIKE NETWORK IMPROVEMENTS ON LOCAL ROADS

Glencoe's low traffic streets are ideal for bicycling for many people. They are too narrow to accommodate traditional bike lanes. This plan proposes alternative treatments that help create a network of streets to get cyclists to destinations.

Key Issues

- A lack of east/west bikeways to connect between exiting trails.
- A need to balance narrow street widths with desire for bikeway improvements on streets.
- Limited bike parking is available downtown and at certain parks and schools.

Recommendations

- Install "sharrows" with the option to include future bike boulevard improvements on Vernon, South, Park, Hohlfelder, Bluff, Sunset Woodlawn, Maple Hill, and Westley.
- Install wayfinding signage on the aforementioned streets and on Old Green Bay Road, Scott Avenue, South Avenue and Woodlawn Avenue.
- Install additional bike parking at the Glencoe Library, near Grand Foods, at the Metra Station, near the Glencoe Post Office, near Park Avenue and Vernon Avenue, at the Takiff Center, at Walgreen's, at the Lakefront Park and upgrade the bike racks at South School.
- Establish a system for residents to report areas that need bike rack to be installed or improved.

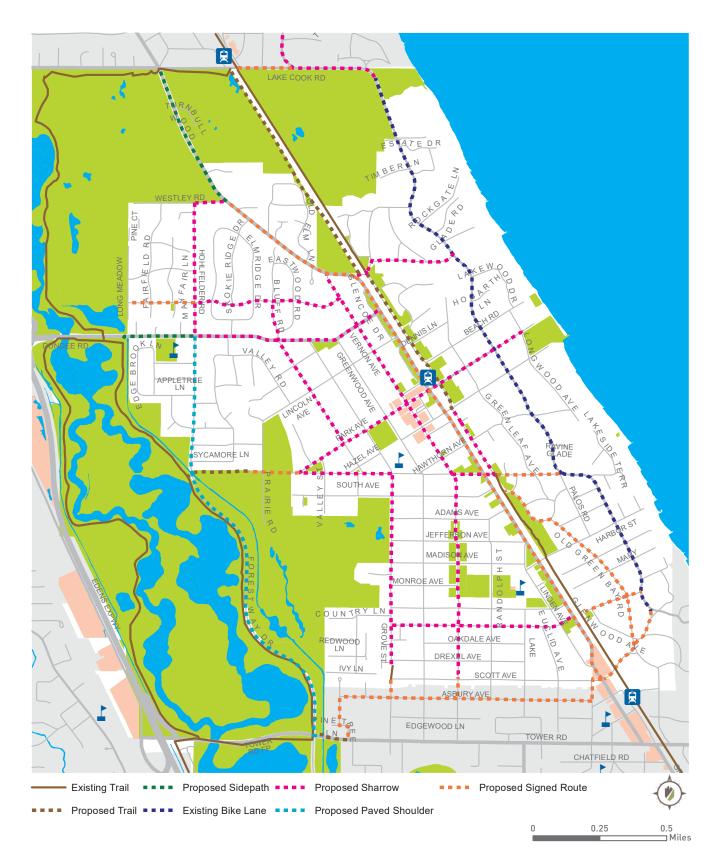
Consider taking additional measures to prevent bike thefts, such as:

- Develop messaging about bike theft prevention in public areas and at home.
- Create a public Flickr page that catalogs bikes recovered by the Village of Glencoe Public Safety Department.
- Continue to encourage residents to register bikes upon purchase with the Village of Glencoe.



Sheridan Road

Proposed Bike Network - Village Wide



4.13 TRAIL IMPROVEMENTS

The Green Bay Trail connects Glencoe to surrounding North Shore communities.

Key Issues

- Wayfinding along the trail is lacking.
- The trail is both on- and off-street through the Village and some cyclists are unsure if they should ride on-street or on adjacent sidewalks.
- There are difficult crossings at Hazel Avenue South Avenue, Harbor Street, Park Avenue, and Maple Hill Road.
- Buckthorn overgrowth is a persistent problem along the trail. The Friends of the Green Bay Trail (FGBT) have been working to eradicate the species.

Recommendations

- Trail-wide: Install consistent informational and wayfinding signage along the length of the Green Bay Trail, including confirmation signs and directional signs that point to Glencoe's downtown, lakefront, and other parks.
- On-Street Segments: In the near-term, the Village should install "sharrows" along the onstreet portions of the trail. In the long-term, the Village should explore installing a path.
- North of Maple Hill Avenue: Reapply limestone screenings and improve drainage.
- All trail crossings: Install green bicycle crosswalks and high visibility crosswalks for pedestrians at all trail crossings to increase visibility. Include trail crossing signs and advanced warning signs.
- Maple Hill Avenue Crossing: Explore the feasibility of realigning the trail to the east and moving the crossing away from the railroad tracks.
- Park Avenue: Bump-out the northeast and

southeast corners to reduce the crossing distance for trail users.

- Hazel Avenue: Implement the recommendations in the Toole Design Study, such as realigning the trail and installing bump-outs.
- South Avenue: Soften the angle of the sidewalk that connects to the Green Bay Trail on the southwest corner of the intersection.
- Wentworth and Woodlawn Avenues: Explore options for improving trail access points.
- Explore options for improving lighting conditions on the trail at night.
- Coordinate with the Glencoe Park District on entry-way improvements from the Green Bay Trail into the proposed Old Green Bay Road Linear Parks Project.



Green Bay Trail at Maple Hill Road

4.14 COMMUNITY-WIDE WALKING AND BIKING CAMPAIGN

In addition to making physical infrastructure improvements, the Glencoe Park District, District 35, Sustainability Task Force and Village can work together to educate and encourage residents to walk and bike more often, and enforce the rules of the road.

After adopting this plan, the steering committee can continue to work together to develop a campaign under which these initiatives can be promoted. The branding should be concise, such as Walk Bike Glencoe, and consistently used across all agencies.

The campaign should include a variety of educational opportunities for residents to learn about active transportation safety and benefits and encouragement opportunities that get people energized and excited about walking and biking to destinations and events.

The ultimate goal of the campaign should be to increase walking and bicycling rates throughout the community. At the start of the campaign, baseline data can be collected to better understand the distribution of modes used to access key places in Glencoe, such as parks, schools, the Metra Station and downtown businesses. Simple ways to gather data include counting bikes locked to bike racks and conducting intercept surveys. These methods should be repeated over time to track changes.



Helmet fitting instruction



Bike mechanics lessons

Education Campaign Ideas					
What can the Village and Sustainability Task Force do?	What can the District 35 do?	What can the Park District do?			
Continue to blog and post on social media about the benefits of walking and biking.	Continue to offer bicycle safety training to South School students and begin to offer walking safety education.	Offer learn to ride classes for adults.			
Distribute information to residents about the importance of landscaping maintenance and winter sidewalk maintenance.	Continue to offer biking safety to West School students.	Offer bike maintenance classes for people of all ages.			
Teach residents about rights and responsibilities when walking, biking, and driving. Themes could include: must stop for pedestrians, biking with lights at night, bike helmet fitting, teaching your children walking and biking safety, share the trail and road tips.	Teach bike maintenance at Central School.	Provide helmet fitting information.			
Continue to educate residents on landscaping maintenance issues that impact active transportation.	Educate parents about the benefits of walking and biking to school.	Educate Park District users about the benefits of walking and biking to park programs.			

Walking and Biking Safety Tips for Parents and their Children

Walking Safety Skills

- 1. Obey all traffic signs and signals.
- 2. Choose routes that have fewer cars driving at lower speeds.
- 3. Look for cars at all driveways and intersections.
- 4. Where possible, cross at intersections with traffic signals or stop signs.
- 5. When crossing, stop at the curb and look for cars in all directions (left, right, left, to the front and behind).
- 6. Wait until no traffic is coming and start crossing; keep looking for traffic as you cross the road.
- 7. Always walk across the road. Do not run.
- 8. Wear reflective gear if it is dark or conditions limit visibility, such as rain or snow.
- 9. Talk with your child about what you're doing and why as you walk.

Bicycling Safety Skills

- 1. Wear a helmet. The Village's ordinances require every person under the age of 16 to wear a helmet to protect from injuries during a fall.
- 2. Be aware on sidewalks. Children should ride on sidewalks until they gain skills to ride on streets around the age of 12. Teach them to be aware of driver blind spots such as shrubs, fences, and buildings and when crossing driveways.
- 3. Walk your bike in crosswalks: When crossing at a crosswalk, children should dismount and walk their bike.
- 4. Stop first and look. Teach children to look left, right, and left again for approaching traffic. Emphasize that they have to turn their head when looking for traffic.
- 5. Ride in the direction of traffic. Riding against the flow of traffic on a street or pathway is a major contributing cause of bicycle crashes for children.
- 6. Ride in a straight line. Teach your children not to swerve or weave in and out of parked cars when riding on streets.
- 7. Buy the right size bike. Your child should be able to stand over the top bar of the bike with their feet flat on the ground with an inch or two of clearance over the top bar.
- 8. Check their bike frequently. Inspect your child's bike and perform regular "quick checks."

Children Ages 4 to 6:

- 1. Have limited judgment, making it hard for them to know where or when it is safe to cross the road.
- 2. Cannot gauge the speed of oncoming traffic.
- 3. Can be impulsive and lose concentration easily.
- 4. Have a hard time staying focused on one task, such as crossing the road.

Children Ages 7 to 9:

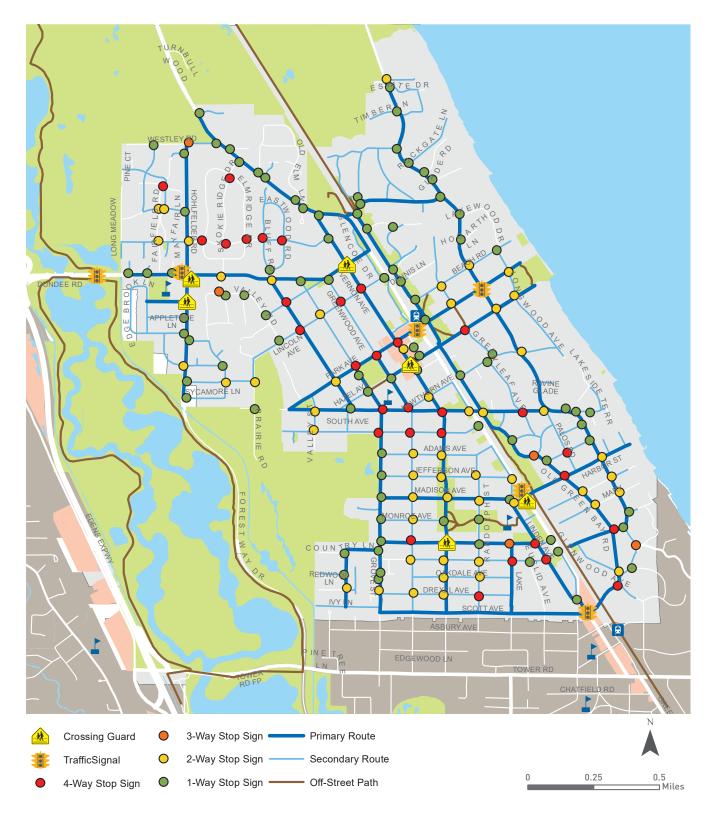
- 1. Need supervision as they learn more complicated safety skills.
- 2. Can begin to identify safe crossing sites with help and practice.
- 3. Can begin to learn how to identify traffic and stay focused while crossing the street with help and practice.

Children Ages 10 and Older:

- 1. Need specific instruction and modeling as they learn more complicated safety skills.
- 2. Can identify safe crossing sites with help and practice.
- 3. With help and practice, can identify traffic and stay focused while crossing the street.

Encouragement Campaign Ideas						
What can the Village and Sustainability Task Force do?	What can the District 35 do?	What can the Park District do?				
Continue to partner with community agencies and groups on special events and activities.	Continue to host Bike Safety Rodeo and Summer Safety.	Continue to host Bike Safety Rodeo				
Co-host a community-wide walking and biking challenge, offer rewards or incentives to encourage participation. Participants can track miles through an app, get stamps for walking/biking to- and from- an event or local business.	Co-host a community-wide walking and biking challenge, and offer rewards or incentives to encourage participation. Participants can track miles through an app, get stamps for walking/biking to/from and event or local business.	Co-host a community-wide walking and biking challenge, offer rewards or incentives to encourage participation. Participants can track miles through an app, get stamps for walking/biking to and from an event or local business.				
Encourage residents to walk/ bike to-from events held throughout the year.	Encourage students/parents to participate in walk/bike to-from events held throughout the year.	Encourage Park District visitors to participate in walk/bike to- from events held throughout the year. E.g., bike to the beach, walk/bike to camp.				
Update school and park walking route maps as infrastructure is improved.	Distribute school walking route maps to all parents at the beginning of each school year.	Distribute park walking route maps to all families enrolled in Park District activities and to parents of preschoolers at the Takiff Center.				

Suggested School and Park Walking Routes for Glencoe



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IMPLEMENTATION

Which strategies can be used to fund and prioritize active transportation?

5.1 OVERVIEW

The maps and recommendations in Chapter 4 show a complete build-out of the network; however, not all projects can be implemented at once. Many will require additional study, external funding, and/ or collaboration with other agencies and jurisdictions. The following guidance should be followed in implementing the Active Transportation Plan.

Best Practices in Implementation

Develop a project prioritization process

Generally, projects that enhance school and park walking routes, improve access to regional trails or fix an area with a crash history should be addressed first. Though some projects may be a good fit for a funding stream and should be prioritized as those opportunities arise. Some high priority projects were noted in this project, including improving the crossings at the Takiff Center, Dundee Road and Hohlfelder Road, the Green Bay Trail and Maple Hill Road and the Green Bay Trail and Hazel Avenue.

Look for opportunities to include pedestrian and bicycle facilities into existing efforts

- Combine "sharrow" projects with resurfacing projects.
- If applying for a federal grant for road reconstruction or stormwater management, include bicycle and pedestrian elements recommended in this plan in the scope of work.
- Work with IDOT to include Complete Streets elements in roadway projects. Start early in the scoping process.
- Require new development to include active transportation elements, such as sidewalks, pedestrian and bicycle friendly intersection elements.
- Develop a checklist for project review that includes Complete Streets elements.

Partner with agencies, businesses and residents to implement plan

- Continue to work across local Glencoe agencies to implement recommendations.
- Work with the Villages of Northbrook and Winnetka and the City of Highland Park on projects that touch their borders.
- Ask local businesses to sponsor projects in the public right-of-way and to install bicycle and pedestrian facilities on their properties. For example, business license renewals could include a requirement to install bike racks and/ or new businesses could be required to show bicycle and pedestrian circulation in site plan submissions.
- Invite community volunteers to help with projects. Events, bike rack counts and trail counts can be collected with the help of volunteers.

Establish a system for vetting and approving projects that impact roads

- Continue to provide staff support to the Sustainability Task Force and work with the group to prioritize implementation of this plan.
- Include appropriate staff and citizen in review of projects and develop a system to documenting exceptions.
- Train Sustainability Task Force, staff and elected officials in bicycle and pedestrian design.

Set realistic and measurable goals

Identify measures and ways to track plan progress, such as:

- Miles of sidewalks or bike infrastructure installed.
- Number of students walking and biking.
- Number of bikes in bike racks.

Inform the community about projects and measure project impacts

At the start of a new project, let the community know what the project is, why it matters, what impact will it have, what to expect during construction, and how to use it when its finished.

Establish a system for measuring the successful and unsuccessful outcomes of a project. Each project type will have different metrics, which could include pre- and post-crash assessment, behavior observation, pedestrian and/or bicycle counts and traffic flow.

Seek out grant funding

There are many dedicated funding streams for bicycle and pedestrian projects.. An overview of the programs available in northeastern Illinois is summarized in the tables on pages 71 and 72.

In addition to government sponsored grants, there are a handful of foundation grants available to government entities. These include:

- Places for Bikes: An annual grant program that provides up to \$10,000 in funding for bicycle infrastructure and non-infrastructure projects. Projects must be significant and must have a match. The call for proposals is typically announced in December.
- Local Technical Assistance Program: This program provides free planning assistance to communities in the (Chicagoland Metropoliran Agency for Planning (CMAP) region.
 Applicable projects include feasibility studies, parking studies and comprehensive plans. The call for proposals is typically announced in late spring.
- America Walks Micro Grants: Small grants up to \$1,000 are offered to communities to advance walking related initiatives.
- Coastal Management Grant Program: The Illinois Department of Nature Resources (IDNR) provides funds to communities along Lake Michigan to improve environmental impacts and bicycle and pedestrian access. The program is currently being evaluated by the agency, but is expected to be reopened in the next year.

Solicit private donations

Some of the initiatives, programs, and infrastructure recommendations included in this plan can be funded by private donors. The Village, Glencoe Park District, and District 35 should continue to cultivate relationships with donors in the community and target projects that will enhance local infrastructure and target projects or programs that will enhance active transportation.

Federal, State, and Regional Grants					
Application Process	Transportation Enhancements (ITEP)	Safe Routes to School (SRTS)	Highway Safety Improvement Program (HSIP)	Section 402- State and Community Highway Safety Grant Program	
Program Purpose	To foster cultural, historic, aesthetic and environmental aspects of our transportation infrastructure.	To enable and encourage children to walk and bike to school through the 5 Es.	To fund highway infrastructure safety projects aimed at reducing fatalities and serious injuries.	To create safety programs aimed at reducing traffic crashes.	
Program Administrator	IDOT	IDOT	IDOT Division of Traffic Safety	IDOT Division of Traffic Safety	
Eligible Projects	Bike/ped facilities, safety education programs and encouragement incentives.	Bike/ped facilities, safety education programs and encouragement incentives.	Bike lanes, paved shoulders, Trail/ Highway intersection improvements, crosswalks, signal improvement, and curb cuts as well as safety education and awareness programs.	Enforcement campaigns to improve bike/ped safety, helmet promotion, educational materials, and training.	
Key Project Requirements	Must relate to surface transportation.	Can only be spent within 1 ½ miles of a school.	Must address goals written in State Highway Safety Plan.	Must address goals written in State Highway Safety Plan.	
Application Process	Next anticipated call for projects Spring 2018.	Irregular schedule at call of IDOT.	Generally there is an annual update to the Plan at call of IDOT Division of Traffic Safety.	Generally each spring at call of IDOT Division of Traffic Safety.	
Local Match Required	Typically 20%	20%	10%	No match required	
Eligible Applicants	Local governments	Any governmental entity	Any governmental entity or non-profit	Any governmental entity or non-profit	

Federal, State, and Regional Grants							
Application Process	Recreational Trails Program (RTP)	Congestion Mitigation and Air Quality (CAMQ)	Surface Transportation Block Group Set Aside (formerly TAP)				
Program Purpose	To develop and maintain recreational trails and facilities for both motorized and non- motorized users.	To improve air quality and reduce traffic congestion in areas that do not meet air quality standards.	To support non-motorized modes of transportation.				
Program Administrator	IDNR	СМАР	СМАР				
Eligible Projects	Trails, Trail/Highway intersection improvements, trailheads, educational materials, and training.	Bike/ped facilities, safety education programs and encouragement incentives, active transportation plans, bike/ped maps, bike/ped coordinator position.	Bicycle and pedestrian facilities, streetscaping				
Key Project Requirements	30% allocated to non-motorized trail project, 30% for motorized, 40% for diversity of trail use.	1) Must be spent in non- attainment and maintenance areas. 2) Will be evaluated on air quality emissions.	 Phase I engineering must be nearly complete. Project must be included in a local, sub-regional or regional plan that was formally adopted. 				
Application Process	Irregular schedules at call of Illinois Department of Natural Resources.	Generally, an annual call for proposals.	Generally, an annual call for proposals in tandem with CMAQ announcement.				
Local Match Required	Typically 20%, some 50%	Typically 20%	20%				
Eligible Applicants	Any governmental entity or non- profit	Local or state governmental agencies	Local governments				

5.2 INFRASTRUCTURE IMPLEMENTATION

The below matrix identifies the complete list of projects recommended in this plan, coordinating partners, and an approximate cost. Projects are organized by the destination they aim to improve. Project costs are estimated and are classified as low (less than \$20,000) medium (\$20,000 - \$75,000) and high (>\$75,000). In most cases, additional engineering studies will need to be conducted prior to implementation. For more detail about each project time, refer to the appropriate section in Chapter 4. Projects recommended should be revisited and adjusted each year during the Village's annual budget process and adjusted to reflect current priorities, available funding, and coordination or grant opportunities.

Infrastructure Implementation Matrix

Destination: West School			
Corridor Name/ Category	Recommendation	Cost	Coordinating Partners
Corridor Name/ Category	Recommendation	Cost	Coordinating Partners
Dundee Road	Fill in sidewalk gaps	Medium	District 35
Dundee Road	Mark crosswalks on side streets	Low	
Dundee Road	Create stand back areas at Hohlfelder Road	Low	District 35
Dundee Road	Install school zone pavement markings	Low	District 35
Dundee Road	Conduct traffic study for additional pedestrian crossing	Low	
Dundee Road	Install "sharrows"	Medium	
Dundee Road	Partner with IDOT west of Hohlfelder Road	N/A	IDOT

Corridor Name/ Category	Recommendation	Cost	Coordinating Partners
Forestway Drive	Improve trail between Little House of Glencoe and Forestway Drive and improve crossing at Forestway Drive	Medium	Cook County Forest Preserve District, IDOT
Forestway Drive	Fill in sidewalk gaps	Medium	IDOT, abutters
Forestway Drive	Install warning signs on Skokie Country Club path	Low	Skokie Country Club
Forestway Drive	Improve gravel shoulders	High	IDOT
Forestway Drive	Improve trail between Little House of Glencoe and Forestway Drive and improve crossing at Forestway Drive	Medium	Cook County Forest Preserve District, IDOT
Forestway Drive	Fill in sidewalk gaps	Medium	IDOT, abutters
Forestway Drive	Install warning signs on Skokie Country Club path	Low	Skokie Country Club
Forestway Drive	Improve gravel shoulders	High	IDOT
Forestway Drive	Improve trail between Little House of Glencoe and Forestway Drive and improve crossing at Forestway Drive	Medium	Cook County Forest Preserve District, IDOT
Forestway Drive	Fill in sidewalk gaps	Medium	IDOT, abutters
Forestway Drive	Install warning signs on Skokie Country Club path	Low	Skokie Country Club
Forestway Drive	Improve gravel shoulders	High	IDOT

Destination: Takiff Center			
Corridor Name/ Category	Recommendation	Cost	Coordinating Partners
Green Bay Road	Conduct traffic study on Takiff Center crossing	Low	Glencoe Park District
Green Bay Road	Remove NW corner curb ramps at Takiff	Low	Glencoe Park District
Green Bay Road	Re-grade hill at Takiff Center	Low	Glencoe Park District

Corridor Name/ Category	Recommendation	Cost	Coordinating Partners
Trail Improvements	Install consistent informational and wayfinding signage on Green Bay Trail	Low	Glencoe Park District
Trail Improvements	Install "sharrows" on on-street segments (near-term) and explore feasibility of creating an entirely off-street trail (long- term)	Low - High	
Trail Improvements	Reapply limestone screening on the Green Bay Trail north of Maple Hill Road	Medium	
Trail Improvements	Install bicycle crosswalks, ladder crosswalks, and trail crossing signs at all grade crossings along the Green Bay Trail	Medium	
Trail Improvements	Explore feasibility of realigning the Green Bay Trail at Maple Hill Road to the east	High	
Trail Improvements	Install bump-outs on the northeast and southeast corners of the Green Bay Trail and Park Avenue	Medium	
Trail Improvements	Implement Toole Design Study recommendations at Green Bay Trail and Hazel Avenue	High	
Trail Improvements	Soften the angle of the sidewalk that connects to the Green Bay Trail on the southwest corner of South Avenue	Low	
Trail Improvements	Improve trail access points at Wentworth and Woodlawn Avenues	Low	
Trail Improvements	Explore options for improving lighting on Green Bay Trail at night	TBD	
Trail Improvements	Coordinate with Glencoe Park District on Linear Park.	High	Glencoe Park District (lead agency)
Lake Cook Road	Install wayfinding signage	Low	Highland Park, Cook County
Lake Cook Road	Study ways to connect to the Des Plaines River Trail	Medium	Cook County, Highland Park, Northbrook

Destination: Downtown Glencoe			
Corridor Name/ Category	Recommendation	Cost	Coordinating Partners
Green Bay Road	Widen sidewalk between Tudor Court and Hazel Avenue	Medium	Glencoe Chamber of Commerce
Green Bay Road	Improve Metra Crossing with trimming and RRFB	Low	

Destination: South School			
Corridor Name/ Category	Recommendation	Cost	Coordinating Partners
Green Bay Road	Install school crossing pavement markings at South Avenue	Low	District 35
Green Bay Road	Make pedestrian and bicycle crossing improvements at Harbor Street (loop detectors, crosswalk, widen stand back area)	Medium	

General Improvements: Prioritize areas around schools, parks, and downtown Glencoe			
Corridor Name/ Category	Recommendation	Cost	Coordinating Partners
Sidewalks on Local Roads	Continue to work with neighborhoods that want sidewalks	TBD	
Sidewalks on Local Roads	Continue to fund sidewalk replacement	TBD	
Sidewalks on Local Roads	Continue to educate residents on landscaping encroachment	N/A	
Sidewalks on Local Roads	Evaluate options for a new sidewalk shoveling policy	N/A	
Sidewalks on Local Roads	Consider expanding the CIP to fund additional sidewalk repairs each year	TBD	
Sidewalks on Local Roads	Review curb ramp placements that have no functional receiving curb ramp on the other side of the street	Low	
Intersections on Local Roads	Develop standards for pavement markings and signage	N/A	
Intersections on Local Roads	Identify crossing or traffic calming improvements for Vernon at Hazel, Park, Madison, Monroe, and Jefferson	Low - High	
Intersections on Local Roads	Move crosswalk at Village Court and Hazel	Low	

Corridor Name/ Category	Recommendation	Cost	Coordinating Partners
Bike Network Improvements on Local Roads	"Install "sharrows" with the option to include bike boulevard improvements on Vernon Avenue, South Avenue, Park Avenue, Hohlfelder Road, Bluff Street, Sunset Lane, Woodlawn Avenue, Maple Hill Road and Westley Road"	Medium - High	
Bike Network Improvements on Local Roads	Install wayfinding signage on Vernon Avenue, South Avenue, Park Avenue, Hohlfelder Road, Bluff Street, Sunset Lane, Woodlawn Avenue, Maple Hill Road, Westley Road, Old Green Bay Road, Scott Avenue, South Avenue and Woodlawn Avenue	Low	
Bike Network Improvements on Local Roads	"Install additional bike parking at the Glencoe Library, near Grand Foods, at the Metra Station, near the Glencoe Post Office, near Park and Vernon Avenues, at the Takiff Center, at Walgreen's, at the Lakefront Park and upgrade the bike racks at South School. Educate residents on preventing bicycle thefts."	Low	Glencoe Park District, District 35, Glencoe Chamber of Commerce
Bike Network Improvements on Local Roads	Establish a system for residents to report areas that need bike rack to be installed or improved	Low	Glencoe Park District, District 35, Glencoe Chamber of Commerce
Sheridan Road	Partner with private landowners to install sidewalks	High	
Sheridan Road	Install countdown signal at Park Avenue signal	Medium	
Sheridan Road	Improve intersection at south with green paint or re-aligning geometry	Low - High	
Sheridan Road	Partner with private landowners to install sidewalks	High	
Sheridan Road	Install countdown signal at Park Avenue signal	Medium	
Sheridan Road	Improve intersection at south with green paint or re-aligning geometry	Low - High	
Green Bay Road	Improve crossing at Linden Avenue with refuge island, crosswalk, and RRFB	Medium - High	Glencoe Chamber of Commerce
Green Bay Road	Trim back landscaping at Linden Avenue and Green Bay	Low	

The below matrix is a proposed schedule for implementing the walking and biking campaign. The schedule assumes that it will take several months to develop a coordinated campaign across agencies and accounts for six-months of planning. This matrix should be built out with additional action items at the campaign takes shape.

Walking & Biking Campaign Implementation Matrix			
Step	Agency	Timeline	
Establish a coordinating committee across all agencies	Village, Sustainability Task Force, Glencoe Park District, School District 35	Month 1-2	
Develop an approach for collecting baseline data	Village, Sustainability Task Force, Glencoe Park District, School District 3	Month 1-2	
Identify additional partners to include in campaign initiatives	Village, Sustainability Task Force, Glencoe Park District, School District 3	Month 1-2	
Collect baseline data	Village, Sustainability Task Force, Glencoe Park District, School District 3	Months 3-6	
Identify campaign branding, messaging, and logo	Village, Sustainability Task Force, Glencoe Park District, School District 3	Months 3-6	
Create schedule of events for campaign to target	Village, Sustainability Task Force, Glencoe Park District, School District 3	Months 3-6	
Research and identify educational materials to use in conjunction with the campaign	Village, Sustainability Task Force, Glencoe Park District, School District 3	Months 3-6	
Purchase collateral materials and giveaways	Village, Sustainability Task Force, Glencoe Park District, School District 3	Months 3-6	
Launch Campaign	Village, Sustainability Task Force, Glencoe Park District, School District 3	Month 7	
Track Campaign Progress through surveys, counts, and other data collection methodologies developed in months 3-6.	Village, Sustainability Task Force, Glencoe Park District, School District 3	Months 7+	

RESOURCES

Design Guidance

Guide for the Planning, Design, and Operation of Pedestrian Facilities

American Association of State Highway and Transportation Officials (AASHTO), 2004

http://www.transportation.org

Designing Sidewalks and Trails for Access

U.S. DOT Federal Highway Administration

http://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/sidewalks/index.cfm

Guide for the Development of Bicycle Facilities, 4th Edition

American Association of State Highway and Transportation Officials (AASHTO), 2012

http://www.transportation.org

Urban Bikeway Design Guide

National Association of City Transportation Officials

http://nacto.org/cities-for-cycling/design-guide/

Urban Street Design Guide

National Association of City Transportation Officials

http://nacto.org/publication/urban-street-design-guide/

Complete Streets Complete Networks: A Manual for the Design of Active Transportation

Active Transportation Alliance, 2012 www.atpolicy.org/design

Bicycle Parking Design Guidelines

Association of Pedestrian and Bicycling Professionals

http://www.apbp.org/?page=Publications

Manual on Uniform Traffic Control Devices

Federal Highway Administration, 2009

http://mutcd.fhwa.dot.gov/

Bicycle and Pedestrian Accommodations Bureau of Design & Environment Manual

Illinois Department of Transportation, 2011 Edition

http://www.dot.state.il.us/desenv/BDE%20 Manual/BDE/pdf/Chapter%2017%20Bicycle%20 and%20Pedestrian.pdf

Interagency Transit Passenger Information Design Manual

Regional Transportation Authority

http://www.rtams.org/pdf/planning/ SignageDesignManual.pdf

Transit Street Design Guide

National Association of City Transportation Officials

http://nacto.org/publication/transit-street-design-guide/

Transit Supportive Guidelines

http://pacebus.com/guidelines/index.asp

Parking Strategies to Support Livable Communities Chicago Metropolitan Agency for Planning

http://www.cmap.illinois.gov/documents/20583/ c224c06f-2735-4400-8281-d3c263ce5ba6

Education and Encouragement Resources

Illinois Bike Safety Quiz Challenge

http://www.bikesafetyquiz.com/

Encourage cyclists and drivers to test their bike safety and share the road knowledge in this online test designed by Ride Illinois.

National Safe Routes to School Partnership

www.saferoutespartnership.org

Offer an annotated bibliography of traffic safety curricula and other educational resources.

National Highway Traffic Safety Association

https://www.nhtsa.gov/pedestrian-safety/childpedestrian-safety-curriculum

Provides lesson plans by grade level on pedestrian and bicycle safety.

League of American Bicyclists

www.bikeleague.org

Sponsor the Bicycle Friendly Community program and offer resources for encouragement campaigns. It also certifies instructors to provide bike mechanic and traffic safety skills courses.

Association of Pedestrian & Bicycle Professionals

www.apbp.org

Offer webinars and other resources for professionals who implement education and encouragement campaigns.

