



# VILLAGE OF SUGAR GROVE

The Sugar Grove Community  
Bicycle and Pedestrian Short-term Connectivity Plan

Version 1.0

November 2010



# Village of Sugar Grove

## Background

Over the past year an ad hoc committee has been preparing the attached inaugural draft of the **Comprehensive Bicycle and Pedestrian Short-Term Connectivity Plan**. The ad hoc committee is comprised of interested cyclists, residents, and staff from both the Village of Sugar Grove and Sugar Grove Park District and reports to an advisory committee with similar interests and backgrounds.

## Discussion

The intent behind this plan is that it be adopted as an amendment to the Village of Sugar Grove's Comprehensive Plan. The Comprehensive Plan contains a bike and pedestrian component (**see Appendix 7, Map 4**). This 3-5 year plan for neighborhood connectivity uses a combination of existing trails and roadway networks. The plan includes a list of capital improvements that the Village of Sugar Grove may consider implementing as part of their annual Capital Improvement Program. A great deal of technical data has been gathered as a basis for their recommendations included in the Bicycle and Pedestrian Plan draft.

We are extremely pleased with the work accomplished to date but realize much more work needs to be done in order to adopt this draft as an amendment to the Village of Sugar Grove's Comprehensive Plan. At this time, we recommend that the Village of Sugar Grove Board and Sugar Grove Park District pass a resolution in support of this plan to demonstrate their commitment to the work completed thus far and as a necessary document for future grant submittals with regard to potential bicycle and pedestrian projects.



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# Section 1

## Introduction

**The Village of Sugar Grove wants to be a bicycle/pedestrian-friendly community.**

Bicycling is a very popular activity that provides a moderate form of exercise within reach of the physical capabilities of most people. For many, bicycling means **recreation**. A bike-friendly town is associated with a higher quality of life and a sense of community. As evidenced by the downtown areas in the Fox River Valley, bicycling can be a local asset and development tool. The demand for trails and other bikeways continues to grow around the country.

Nationally, 52% of bike travel is for recreation and exercise, but 43% is destination-based<sup>1</sup>. Much planning focuses on bicycling as an **alternative transportation** for short, local trips throughout town. When considering that 27% of all car trips are one mile or shorter; 40% are less than two miles – these become practical distances to bike if reasonably safe and convenient.

Sugar Grove is home to the trailhead of the Virgil L. Gilman Trail which bisects the Village in a generally east/west direction. The northwest terminus of the trail is at Waubensee Community College, and the trail stretches 11.2 miles southeast into Aurora and Montgomery intersecting both the Mid County and Fox River trail systems along the way. This trail corridor connects Sugar Grove to the balance of Kane County and the Greater Chicagoland Trail Systems. There are many miles of additional pathways in Sugar Grove but most have been developed with new growth and lack connectivity to the Gilman Trail and other destinations.

### Purpose

The purpose of this plan is to provide a strategy for developing an arterial network of bikeways/pedestrian pathways throughout Sugar Grove using the Virgil L. Gilman Trail as the backbone of this plan. This plan outlines ways to improve bicycling for both recreation and transportation. This proposed bike/pedestrian plan consists of a combination of off-road trails and bike-friendly roads.

### Goals

- Bring connectivity to Sugar Grove neighborhoods and popular destinations;
- Connect arterial bikeways with other popular destinations;
- Improve the safety of existing bikeways;
- Encourage bicycle use for short distance travel.

### Objectives

- Propose and prioritize improvements to existing bikeways and other new projects;
- Identify funding sources to support these improvements and projects.

<sup>1</sup> 2001 National Household Travel Survey



## Section 2

# Public and Agency Involvement

### Sugar Grove Bicycle/Pedestrian Plan Committees

The planning process was guided by an ad hoc committee consisting of residents, village and park district staff. This committee took guidance from an advisory committee with a similar make up of representation. In **Appendix 1** a list of these committee members has been provided.

It is the intent of the committees to continue to meet and refine this draft document until such time that it is fully adopted by both the Village and Park District Boards. Continued involvement by energetic and dedicated individuals is imperative to the success of this bike plan. For this reason, an on-going Sugar Grove Bicycle/Pedestrian Advisory Committee or Commission is recommended.

### Agency Involvement

Input was provided by the Village's planning, engineering and public works staff as well as staff of the Sugar Grove Park District. Discussions were held with relevant jurisdictions including the Sugar Grove Township Road District and Kane County Division of Transportation. Members of the ad hoc committee attended planning sessions offered by Ed Barsotti, Executive Director of the League of Illinois Bicyclists and regular meetings for bike planning offered by the Kane/Kendall Council of Mayors and the Chicago Metropolitan Agency for Planning. In addition, several bike plans of neighboring municipalities were referenced for content and structure.



## Section 3

# Bikeway Types in the Sugar Grove Plan

This plan recommends a mixture of on-road bikeways and off-road regional trails and local pathways to provide a network of bicycle/pedestrian routes linking the various areas of Sugar Grove.

### AASHTO Guide

The 1999 Guide for the Development of Bicycle Facilities by the American Association of State Highway and Transportation Officials (**AASHTO**) forms the technical basis for the plan recommendations. The Illinois Department of Transportation recommends that this publication be utilized when developing a bicycle plan. A summary of the types of bikeways is included below with engineering details in the guide. The AASHTO guidelines are generally recognized by the industry – and the court system – as the standard for bicycle facility design.

### Trails

Multi-use trails are physically separated from motor vehicle traffic, except at road crossings. Trails accommodate a variety of users, including pedestrians, bicyclists, and others, for both recreation and transportation purposes. Trails away from roads, on easements or their own rights-of way, tend to be more pleasant and popular. Examples in Sugar Grove would include the Virgil L. Gilman Trail, Fox Metro Water Reclamation District easement along Blackberry Creek & the Settler's Ridge development easement along the adjacent Burlington Northern R.O.W.



Figure 3.1 – Virgil Gilman Trail

### Side-paths

Side-paths are trails running immediately parallel to a roadway, like a sidewalk. Sugar Grove examples include the Galena Extension, Municipal Dr. and Norris Rd. trails (**Figure 3.2**). Many believe side-paths or sidewalks are *always* safer than on-road bicycling. Surprisingly, this is *not* the case where there are many side streets, residential driveways, and commercial entrances – especially for “contra-flow” cyclists biking against the flow of traffic.

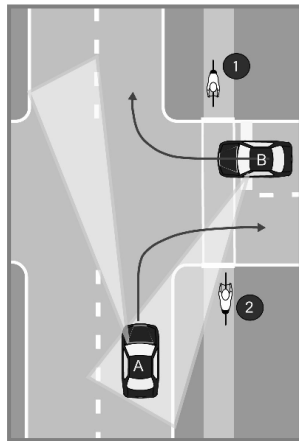


Figure 3.2 –Norris Rd. side-path in Sugar Grove

In (**Figure 3.3**) and (**Figure 3.4**) an illustration of the visibility problems leading to



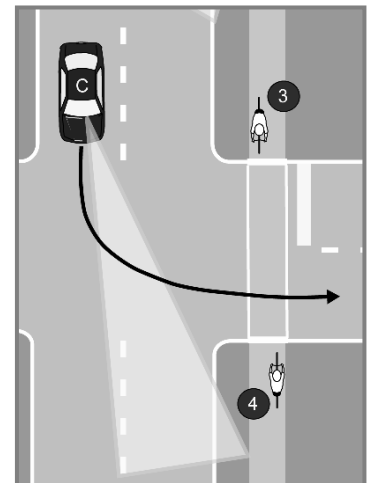
intersection conflicts is provided. Note that in each case, an on-road cyclist on the right side of the road is within the motorist's viewing area.



**Figure 3.3 – Right turns across side-paths**

In **(Figure 3.3)**, Car B crosses the side-path to turn right onto the parallel street. Rarely do motorists stop at the stop-line. Usually, stops are in the crosswalk or at the street edge. Many do not fully stop. Many will look only to their left. Cyclist 2 might be seen. Car A turns right off the parallel road then crosses the side-path. Again, Cyclist 2 might be seen but Cyclist 1 is less visible. Particularly where a large turning radius permits fast turns, many motorists do not yield to cyclists entering or already in the crosswalk.

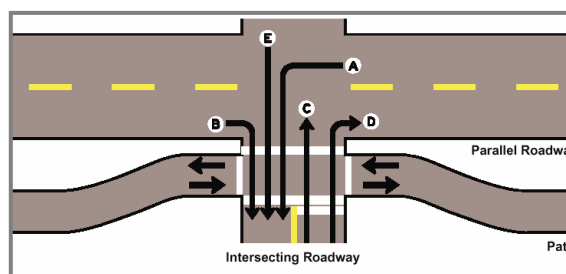
In **(Figure 3.4)**, Car C looks ahead, waiting for a traffic gap to turn left, then accelerates through the turn while crossing the crosswalk. Cyclist 4 might be seen. Again, the contra-flow cyclist (3) is less likely to be seen. If the traffic gap is short, sudden stops would be difficult.



**Figure 3.4 – Left turns across side-path**

The AASHTO guide describes these and other side-path issues to discourage their use in inappropriate locations. This plan considers the feasibility of the side-path option in specific cases. In general, side-paths may be better choices than on-road bikeways for faster, busier roads without lots of crossings and with well-designed intersections. Side-path conflicts can be reduced by:

- Bringing the side-path closer to the road at intersections, for better visibility during all turning motions and better stop-line adherence for right-turners
- Using pedestrian refuge islands to break up major crossings and right-in-right-out entrances
- Using high visibility crosswalks or color differences – at commercial entrances, too
- Using experimental signs, such as those used in St. Charles and elsewhere (below)
- Occasional police enforcement of stop-line adherence at side-path crossings.



**Figure 3.5 – Intersection design method to reduce side-path conflict bringing crossing closer**



**Right-turn refuge islands**



**Warning signage**



## Bike Lanes

Bike lanes are portions of the roadway designated for bicyclist use. Bike lanes are at least five feet wide (including gutter pan) on each side of the road with a stripe, signage, and pavement markings. Cyclists in each bike lane travel one-way with the flow of traffic. Sample results around the country for roads with bike lanes include:

- More predictable movements by both cars and bikes
- Better cyclist adherence to laws about riding on the right side of the road
- Dramatic increases in bike usage with lower car-bike crash rates
- Decreased car-car crashes, too possibly from a traffic calming effect



**Figure 3.6 – Bike Lanes (Other side not shown)**

Parking is not permitted in designated bicycle lanes. Although not applicable in this plan, when a road has bike lanes and adjacent parking, the bike lanes should be striped between the parking space and the travel lanes. Regular sweeping is important, as bike lanes tend to collect debris. Currently, these are not considered in our plan since the roads in Sugar Grove's plan do not have enough width.

## Bike Routes



**Figure 3.7**

Some roads may be identified by signage as preferred bike routes, because of particular advantages to using these routes compared to others. These signed shared roadways may be appropriate where there is not enough room or less of a need for dedicated bike lanes. This is the predominate signage recommended on route in the Sugar Grove plan. AASHTO specifies spacing and placement for Manual of Uniform Traffic Control Devices (**MUTCD**) standard D11-1 Bike route signs (**Figure 3.7**).

For these signs to provide way-finding assistance at turns, supplemental destination plates (**MUTCD D1-1**) and arrows (**MUTCD M7 series**) should be placed beneath them. Key destinations could be given, or the cross street at the end of the bike route designation. Some Illinois towns have put two or three destinations on a single sign, with mileages.

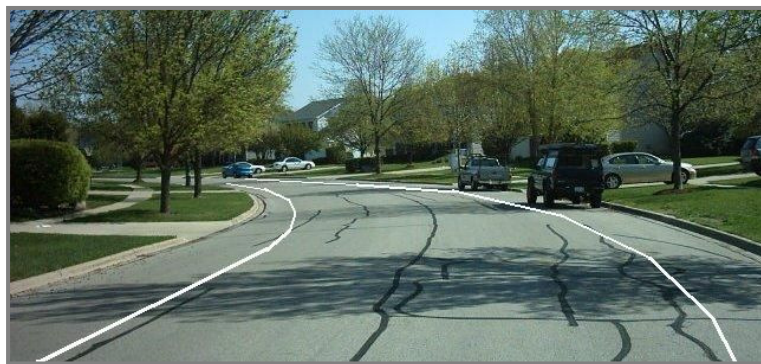
A road does not require a specific geometry to be signed as a bike route, providing flexibility. A bike route may be an unstriped street, a road with paved shoulders, or a street with shared bike/parking lanes, described next.

## Shared Bike/Parking Lanes

Some residential collector streets with wide lane widths permit on-street parking, but parked cars are sparse or rare. While this may be an opportunity for dedicated bike lanes, removal of parking on even one side may be unpopular with effected residents– even though the wider lanes often encourage faster traffic speeds. Another option is to stripe off 7-8 feet (including the gutter pan area) for the occasional parked car. This space may be used by bikes, too. Sign the road as a Bike Route, but do not include any bike lane signage or pavement markings. Cyclists in this space would pass parked cars just as they do on road shoulders and un-striped roads. Benefits include:

- An increased perception of comfort by the cyclist
- Lower likelihood of the occasional parked car being hit by another car
- The traffic-calming effect of narrower lanes, i.e., slowing car speeds

Shared bike/parking lanes allow parking, but bike lanes do not. Steps should be taken to avoid confusion. Shared bike/parking lanes should use signage indicating parking permission information. Bike lanes should use “no parking” signs.



**Figure 3.8 Simulated striping for shared bike/parking lanes.**

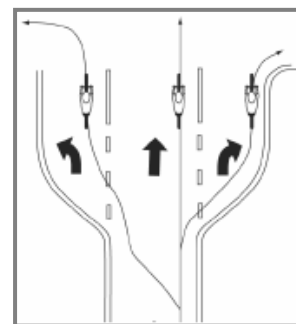


**Figure 3.9 “Sharrow” Pavement Marking**

### “Sharrows” Pavement Markings

Bicycle positioning on the roadway is the key to avoid crashes with cars turning at intersections and doors opening on parked cars. In **(Figure 3.9)** a diagram shows a sharrow marking, approved recently by the National Committee on Uniform Traffic Control Devices for potential inclusion in the next (2009) federal MUTCD edition. Chicago and Northbrook are examples of two Illinois cities using sharrows.

The marking is used only for streets without bike lanes but with occupied on-street parallel parking and speed limits below 40 mph. The center of the marking shall be 11 feet (or more) from the curb, placed right after an intersection and spaced at intervals of 250 feet thereafter. Also, the sharrow markings can be used to indicate correct straight-ahead bicycle position **(Figure 3.10)** at intersections with turn lanes.



**Figure 3.10 Proper turn lane positioning**

# Section 4

## Guidelines for Bicycle/Pedestrian Plan

### General

The following guidelines were used for the overall bicycling and pedestrian plan:

- Plan for a target audience of occasional/casual adult cyclists. At the same time, address the needs of those who are more advanced and those who are less traffic-tolerant, including children.
- Select a network that is continuous. Consider both on-road and off-road improvements, as appropriate.
- As much as possible, choose routes with lower traffic, ample width, directness, fewer turns and stop signs, 4-way stops or stoplights at busy roads, and access to destinations.
- Look for spot improvements, short links, and other small projects that make an impact.
- Seek at least one bridge or tunnel of the most difficult roads/waterways to cross – i.e. Blackberry Creek - while looking for opportunities to improve the at-grade crossings.
- Be opportunistic, implementing improvements during other projects and development.

### Strategic

To improve public support for plan implementation, these approaches are suggested:

- Achieve early, easy successes to gather momentum.
- Do not remove on-road parking if at all possible.
- Where appropriate, use road striping to serve not only bicyclists but adjacent residents, as well. Cite the traffic calming (slowing) and other benefits of striped, narrower roads.
- Try to avoid widening sidewalks to 10' side-path widths where at least some residential front yards would be impacted.
- Do not widen residential roads solely for bikeways.



**Trail**



**On Road Bike lane**

## Selecting Bikeway Type

These guidelines were used for specific route segments:

- Where on-road bikeways are recommended, try to achieve a BLOS rating of B or better for designation in the network. This is an appropriate goal for accommodating the casual adult bicyclist. Depending on the situation, use Bike Lane or Bike Route signage (and way-finding directional signage) to indicate inclusion in the network.
- Address the fact that advanced cyclists often use busier roads not meeting this standard for inclusion in the network. For preferred roads with a BLOS score of High D or Low C, use Share the Road signage as a message to motorists to be alert for cyclists. Do not include way-finding signs on these roads.
- For both the roads in the network (Bike Routes and striped lanes) and those having Share the Road signs, raise the priority of filling sidewalk or side-path gaps on at least one side of the road. This recognizes that children – and more traffic-intolerant adults – will ride on the sidewalk. However, do not mark sidewalks as Bike Routes.
- Do not recommend side-paths where there are too many crossing conflicts (driveways, entrances, cross streets). Where side-paths are recommended, use the design techniques described above to somewhat reduce the risks at intersections.
- Where there is sufficient width and need, stripe roads for dedicated bike lanes – with no parking permitted in these lanes.
- On sufficiently wide roads with sparse parking occupancy, stripe a Shared Bike/Parking lane and sign as a Bike Route.
- Use sharrows and bike signal actuation pavement markings to indicate proper on-road bicycle position where there is heavy bicycle traffic.



# Section 5

## Bikeway Network Recommendations

### Present Conditions

The Sugar Grove service area is comprised by a growing community with approximately 10,000 people and a geographic area of over 10 square miles. Major roadways intersect the community including U.S. Rte. 30, Illinois Rte. 47, Illinois Route 56 and a County road, Bliss. Additionally, the community is bisected by Blackberry Creek, I-88 and Burlington Northern Santa Fe R.O.W. The village has grown over time through residential developments in all quadrants of the Village. Bike/Pedestrian pathways have been put in residential developments as the Village has grown. However, while the road network offers residents easy motorized access to Chicagoland it is currently limited in its ability to interconnect non-motorized access within our residential neighborhoods as well as between them. This urban sprawl and its noteworthy impact on non-motorized connectivity is a primary reason for the effort put forth here. A lack of bicycle and pedestrian friendly infrastructure such as improved shoulders, pavement markings for at-grade crossings in high traffic areas, signage, and other control measure are absent to a large degree.

A major amenity in the area is the 11.2-mile Virgil-Gilman bike/pedestrian trail which parallels the north side of Blackberry Creek. This trail is considered the backbone of the Sugar Grove Bike and Pedestrian Plan connecting the Village to the Mid County and Fox Valley Trail Network. Currently this trail is safely accessible by bike or foot to the residents on the north side of Blackberry Creek in two locations— at the Hannaford Woods Trailhead west of Bliss Rd. or at the Prestbury Park Trailhead east of Bliss Rd.. *The residents to the south do not have safe accessibility by bike or foot to the Virgil L. Gilman trail.* Additionally, the residents to the north do not have safe bike or foot access to the local shopping and commercial areas which are south of Blackberry Creek. **This creates a community of motorists.**

Bliss Rd. crosses Blackberry Creek and some residents choose to walk/bike on this road to access the Virgil Gilman Trail at great risk to themselves and motorists. The shoulder is narrow and unimproved. Future plans by the County call for expanding this road and the road bridge over Blackberry Creek. Unfortunately, the right-of-way does not exist to accommodate a safe path for bicyclists or pedestrians in the future. In most cases residential streets are bike friendly but connectivity to trail systems is not obvious without the addition of way-finding directional signage, pavement markings, bicycle maps, or other means.

#### **Appendix 3 lists the following for each route segment:**

- Road name and segment endpoints (and which side of the road, if the sides are different)
- Roadway geometry, including number and width of lanes, shoulder or parking striping, pavement condition, and other comments
- Traffic conditions, including average daily traffic volume, speed limit, parking usage percentage, and percent of heavy truck traffic
- The current Bicycle Level of Service score and grade
- Sidewalk status, including which sides of the road, gaps, and any scheduled construction of sidewalks by the Village or Township.

**Map 1** is an illustration summarizing present-day conditions including existing trails, bridges, way-finding signage, at grade crossings (pavement markings), signal activation and the BLOS ratings of affected roadways identified in the study.



# Overview of Bikeway Network Connectivity

This plan identifies **existing** and **proposed** major bike/pedestrian friendly crossings and access points as follows:

## I. Virgil Gilman

- Bike/pedestrian friendly access points North of Blackberry Creek
  - **Prestbury Spur**
  - **Hannaford Woods Trail Spur**
- Bike /pedestrian friendly access points South of Blackberry Creek
  - **Bike/Pedestrian Bridge North of Windsor Pointe (Grant Proposal)**
  - **Bike/Pedestrian Bridge South of Galena through Ingham Park Subdivision (Fox Valley Park District Fall 2010)**

## II. Rte. 47

- Bike/pedestrian friendly at-grade crossings with pavement markings and signal activation
  - **Waubensee Community College (north entrance) at Old Oaks Road**
  - **Bliss Rd. /Wheeler Rd.**
  - **Cross St.**

## III. Bliss Rd.

- Bike/pedestrian friendly at-grade crossings with pavement markings only
  - **Windstone/Lakes of Bliss Woods Subdivisions Entrances at Bliss Rd.**
  - **Strafford Woods Subdivision and Prestbury entrance at Windsor Rd. / Hanks Rd.**
  - **Virgil Gilman Trail**
  - **East Side of Rte. 47 at Bliss Rd.**

## IV. Route 56

- Bike/pedestrian friendly bridge crossings
  - **Virgil Gilman Bridge**
  - **Hanks Rd. Bridge (IDOT)**

## V. Gordon Rd.

- Bike/pedestrian friendly at grade crossings with pavement markings only
  - **Bike/pedestrian friendly at grade crossing at Parkside Dr.**

## VI. Rte. 30

- Bike/pedestrian friendly bridge crossing
  - **Bike/Pedestrian Bridge at Municipal Dr.**

## VII. Wheeler Rd.

- Bike/pedestrian friendly at grade crossings with pavement markings
  - **West Side of Rte. 47 at Wheeler Rd. (and signal activation)**
  - **Windsor West Subdivision entrance**

## Summary of Bikeway Network Connectivity

The Maps included with this plan make clear the proposed changes as follow:

**Map 1** Existing Condition/trails

**Map 2** Improvements proposed in this plan

**Map 3** Routes proposed by this plan combining Map 1 and Map 2

**Map 4** Long Term Bike Map which falls outside the scope of this plan

The neighborhoods of Black Walnut Trails, Carriage Hill, Chelsea Meadows, Hannaford Farm, Historic Sugar Grove, Homestead of Prestbury, Lakes of Bliss Woods, Meadowridge Villas, Prairie Glen, Settlers Ridge, Strafford Woods, Townhomes of Prestbury, Walnut Woods, Waterford, Windsor Pointe, Windsor West and Windstone will have bike/pedestrian friendly connectivity. Moreover, access to the college, schools, library, parks, forest preserves, retail and industrial areas of the Village will also be achieved. Additionally, connectivity includes neighboring regional trails, Prestbury, Aurora and beyond.

However, three neighborhoods of the Village that would still lack bike/pedestrian friendly connectivity in the short term are the subdivisions of Dugan Woods, Mallard Point and Rolling Oaks. Connectivity for these neighborhoods needs to be considered as a part of the existing Comprehensive Plan through the development of a long range bike/pedestrian transportation plan. As the Village continues to develop and annex areas between established neighborhoods to form the core of the Village, considerations at this time will make for the most effective implementation process.

The spreadsheet in **Appendix 3** has fields on the feasibility of various options for each route segment studied and is outlined as follows:

- Feasibility and type of any possible on-road bikeway, including any striping dimensions and signage details
- The BLOS score and grade, after any re-striping from the above
- Suggestions for filling any sidewalk gaps, including which side of the street
- Feasibility of an off-road side-path, including any reasons if not appropriate
- Recommendation for this segment, by type

**Map 2** summarizes the improvement recommendations, which were made according to the guidelines in Section 4: Guidelines for Bicycle/Pedestrian Plan Recommendations. On-road bikeway types in the Village consist predominantly of bike route signage without striping, and “Share the Road” signs. Off-road bikeways consist of trails already being planned, newly proposed trails or side-paths, and proposed sidewalks from the Village’s Capital Improvement Program.

Overall, there were not many opportunities for pavement marking/striping, due to a lack of sufficient pavement width on most roads in Sugar Grove. Most locations appropriate for side-paths are already identified in the Village’s Comprehensive Plan along arterial and collector roads and will be addressed as development continues. However, side-paths included in the short-term connectivity plan are along Hanks Rd., Wheeler Rd., Esker Dr. and Harter Rd. (**See section 5 for details**).

## Priority and Implementation Readiness

Lastly, the spreadsheet in **Appendix 3** has fields on suggested priority and implementation “readiness” of bikeways involving the road segments that were studied. Priority was assigned as high, medium, or low based on the following:

- BLOS evaluation and rating
- Guidance from the ad hoc and advisory committee
- Importance to the overall network and connectivity





Implementation readiness suggests timing of adding a segment to the Village's bikeway network:

- Ready – could be implemented at any time
- Conditional – something else (described in “Implementation Notes” in **Appendix 3**) must happen first before adding this route to the network
- Temporary – a short-term network segment until another conditional segment is ready
- Future – opportunistic as part of development or if a denser network is desired

High priority, ready-to-go network segments include:

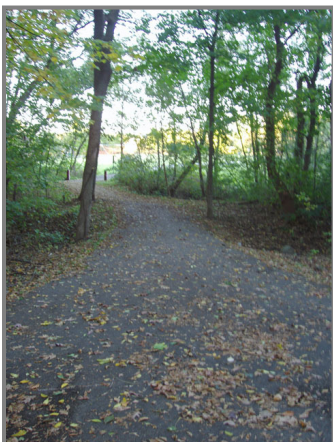
- Pavement markings and Bike Route signs
  - Arbor Ave
  - Bedford Ave.
  - Cross St.
  - Gillett St.
  - Parkside Dr.
  - McDole Dr.
  - Harkison Blvd.
  - Winthrop New Rd.
  - Buckingham Dr.
  - Merrill New Rd.
  - Bastian Dr.
  - Patricia Ln.
  - Maple St.
  - Windsor Rd.

## New Trails and Links

When looked at as a whole, the Comprehensive Bicycle and Pedestrian Short -Term Connectivity Plan logically divide into three distinct routes. What also becomes evident is a central hub that provides access to any of these routes. This central hub consists of a portion of the Virgil L. Gilman trail, Bliss Woods Forest Preserve Trails, Windsor Pointe/ Waterford trails and requires three key improvements

1. The proposed bike bridge over Blackberry Creek
2. Rte. 47 and Bliss/Wheeler Rd. intersection improvements
3. Capitol Dr. side path installation

We will look at improvements required to complete each of these routes. For reference purposes the routes are named and color coded as noted below:



1. The South Route
2. The North Route
3. The West Route



### Virgil Gilman Trail

The backbone of the Sugar Grove trail system (**Figure 5.1**)

**Figure 5.1 – Virgil Gilman Trail**



## SOUTH ROUTE

The South Route starts off at the Park District's Administration Building located at 61 Main St. and goes south to Cross St. and heads east across Rte. 47 following an on-street route to the Village of Sugar Grove's water treatment facility. The route continues east on Ag-lime road which runs parallel to the railroad tracks into Settlers Ridge. Trail continues across Gordon Rd. through Ingham park on-street route and trails to Virgil Gilman trail just south of Galena Rd. Riders can then take Virgil – Gilman trail north to the proposed bridge crossing Blackberry Creek to the Ag lime trail that runs parallel to the south side of Blackberry Creek through the Waterford subdivision. The trail then links Waterford across Capitol Dr. to a retail side-path and the Rte. 47/Bliss Rd. Intersection. Riders will need to cross Bliss Rd. northward, cross Rte. 47 on the north side of the intersection and then cross back south across Wheeler Rd. to a side path that runs along the EEL property and to the Windsor West east side trail. This trail continues south across Galena Blvd. and then users can take the Galena Blvd. and Municipal Dr. side-paths towards the Village Hall. The trail continues on-street down Bastian Dr., through Volunteer Park and back to the Park District's building.

1

### ***On-street route from Park District building on Main St. to Cross St.***

Use way-finding signage on existing posts to guide users on street both northbound and southbound on Main St. between the Park District Building and the Cross St. and Main St. intersection. Main St. is marked no parking in this area but some signs need to be upgraded or replaced. A striped crosswalk for northbound on-street users is necessary along with an arrow directing users onto the bike path north of the Park District Building.

2

### ***Cross St. to Rte. 47 and Cross St. intersection***

All users will be directed to use recommended route of Cross St. north side sidewalk to/from intersection since a striped crosswalk and signalization exist on the north side of Rte. 47 and Cross St. intersection ("Use sidewalk" signage).

3

### ***Mark on-street route from east side of Historic Sugar Grove through Chelsea Meadows to Water Treatment Facility***

Users will continue east of Rte. 47 on north side sidewalk across Richard. This will require signage, curb-cuts and striped crosswalks at Frontage and Richard. Users will be directed back to an on-street route just east of Richard by way of signage and a striped crosswalk across Cross St. It should be noted that these improvements will also prove beneficial to Post Office patrons.

Once on-street, way-finding signage on existing posts will be necessary to guide users through these neighborhoods.

Eastbound:

Cross to Arbor Ave all the way to Water Treatment Facility.

Both Cross and Arbor are marked "No Parking Anytime" or "No Parking this Side" eastbound.

West bound from Water Treatment on Arbor to Bedford to Cross. Again, Cross is "No Parking Anytime".



**Figure 5.3 – Arbor Ave. and Arbor Ave.**



**Figure 5.2 – Arbor Ave. and Cross St.**

### ***Arbor Ave. transition to bike path by Water Treatment Facility***

Need curb cut from Arbor and short addition of trail to access path for both east and west bound users. (See Figure 5.4) Also need sign with arrow from street to path. For westbound riders need striped crosswalk to take bikers to north side of road.



**Figure 5.4 On-Street Arbor Ave. to side-path transition**

### ***Water Treatment Facility to Settlers Ridge***

Currently an Ag lime graded road is present North of Railroad Tracks between the Water Treatment facility and Settlers Ridge that was developed during the construction of the water treatment facility. This path is not often used and is in need of re-grading. (Figure 5.5) To make this connection the following would need to be completed:

- 600' linear feet of Ag lime or asphalt x 10' wide pathway adjacent to water treatment facility property.
- Cooperative agreement between Pathway constituents and KH
- SRAVI LLC, current owner of the three lots comprising the Ag lime cinder graded road
- Re-grading 4190' road and marking with proper signage to both east bound and west bound trail users.



**Figure 5.5 Ag-lime graded road north of rail road tracks**

## On-street route and trails through Settlers Ridge

Use way-finding signage on existing posts to guide users through Settlers Ridge and complete connectivity of existing trails. Two-way Signage is needed on Gillett and Parkside Dr. with a directional sign noting way to Virgil Gilman Trail. It is also recommended that Isbell/Coneflower Circle is marked as an on-street route to complete the exterior pathway around developed Settlers Ridge.

## Settlers Ridge to Virgil Gilman Trail

Use way-finding signage through Settlers Ridge to Gordon Rd at Parkside Dr. Stripe crosswalk across Gordon Rd. to Slater Ave. in Ingham Park (Slater Ave. is Parkside Dr. West of Gordon). Through Cooperative agreement with Fox Valley Park District, City of Aurora and Ingham Park HOA mark on-street Route from Slater Ave. to Fletcher Ln. to Virgil Gilman Trail.



Figure 5.6 – Gordon Rd. Crossing in Settlers Ridge at Parkside Dr.

A way-finding kiosk at the intersection hub in Aurora south of Galena at new Galena/Virgil-Gilman Bridge (to be completed 2010 by the Fox Valley Park District) would be beneficial to all travelers

Splash Country	XXXX miles with Arrow
Blackberry Farm	XXXX miles with Arrow
Fox River Trail	XXXX miles with Arrow
Waubensee Community College	XXXX miles with Arrow
Mid County Trail	XXXX miles with Arrow



Figure 5.7 Virgil Gilman Kiosk



Figure 5.8 Current Crossing of Virgil Gilman at Galena Blvd.



## 8 **Virgil Gilman Trail to proposed bridge crossing to connect Windsor Pointe**

Currently there are no bicycle/pedestrian friendly access points to the Virgil Gilman trail in Sugar Grove from the south. Given the Virgil Gilman trail parallels Blackberry Creek to the north, Blackberry Creek is a barrier for those to the south. A 100' shared-use path bridge over the Blackberry Creek and a 2,300 LF connection path to existing pathways on the south would rectify this situation. This improvement would provide a critical connection to link our village through a path system and allow the residents on the South of Blackberry Creek safe access to the County's growing system of trails including the Virgil Gilman, the Fox River and the Mid-County Trails and the residents on the north to access the retail area of our Village safely on bike or foot.

This is a critical connectivity point, but expensive and will most likely require grant assistance. A potential grant source is CMAQ.

Additionally, work with Windsor Pointe HOA to define best on-street route and use way-finding signage on existing posts to guide users through this neighborhoods. Potential routes would Bellevue and Exeter.



**Figure 5.9 Proposed Bridge Crossing Blackberry Creek**

## 9 **Capital Dr. to Waterford bike path**

When the southeast corner of Bliss Rd. and Rte. 47 develops, the developer will be required to put bicycle/pedestrian sidepaths along Rte. 47, Bliss Rd. and Capitol Dr. Additionally, a curb cut and crosswalk should be placed on the east side of the Property for access through Waterford. (Figure 5.10) This will be the main access to the proposed bicycle/pedestrian bridge leading to the south entry point of the Virgil Gilman trail via the Ag lime trail that runs south of Blackberry Creek adjacent to Windsor Pointe subdivision (Figure 5.11).



**Figure 5.10 – Capital Dr. near entrance to Waterford Subdivision**



**Figure 5.11 – Ag lime trail south of Blackberry Creek**

## ***Rte. 47 and Bliss Rd. intersection improvements***

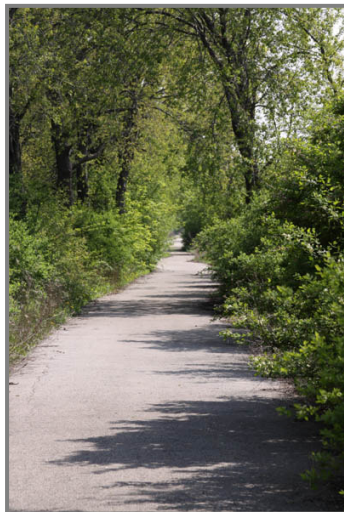
This is proposed to be the major intersection crossing in this part of the Village. After careful consideration, Park Ave. does not appear feasible with no signalization, left turn lanes and no island refuge and uncomfortable approaches to the intersection. The Rte. 47/Bliss intersection will be improved concurrent with the development of the SE corner commercial development. This improvement will be a collaborative effort of IDOT, KDOT, the Village and the southeast corner developer. The intersection improvements should include pedestrian refuge islands, high visibility crosswalks, signage and bicycle/pedestrian signal activation on three sides; the east and west side of Rte. 47 across Bliss Rd. and the north side of Bliss Rd. across Rte. 47. This will bring connectivity to the side path on the north side of Wheeler Rd.

Westbound trail users will need to cross northbound on the east side of Rte. 47 to the crosswalk on the north side and then back south on the west side. It is proposed that a side path be extended on the south side of Wheeler to Division Dr. and a striped crosswalk and signage installed directing users direct west on a new path running adjacent to EEI offices to the trail behind the EEI offices. This path would be approximately 800 linear feet. This will alleviate bike/pedestrian on-street traffic on Division and Park.



**Figure 5.12 – Rte. 47/ Bliss Rd/ Wheeler Rd. intersection**

## ***East side of Windsor West path from Wheeler Rd. to Galena Blvd.***



Currently this path terminates just about 212 linear feet shy of Galena Blvd. This path should be completed in the near term with a crosswalk and pedestrian refuge in the center of Galena to gain access to the Galena Blvd side-path on its south side. The configuration is a bit off at present and should be run to the east of the existing future entrances. To accommodate future traffic patterns a striped crosswalk and way-finding signage will be necessary across the south side Galena traffic entrance.

**Figure 5.13 – Pathway east side of Windsor West**

12 ***Mark on-street route through Windsor West***

Windsor West currently has a pathway network throughout its subdivision. Improvements could be made by adding way-finding signage where appropriate. An additional on-street route could be added on West Park to the dead-end on the west. As Municipal Dr. is extended, or before if appropriate, the Municipal Rd. side-path could be extended to West Park for another loop trail. To provide for a safe crossing at Galena, curb cuts, a striped crosswalk with an island refuge would be necessary. A short spur off the existing trail would be needed on the south side of Galena.

13 ***Galena Blvd. and Municipal Dr. side-path***

The Village constructed 6,175LF of shared use path and 5,775 LF of sidewalk along Municipal Dr. and Galena Blvd. when it improved Municipal Dr. and Galena Blvd. in 2009. This additional pathway will provide key connectivity between historic Sugar Grove and development north.

14 ***Rte. 30 bicycle/pedestrian overpass at Municipal Dr.***

IDOT has specified a future bike/pedestrian overpass at Municipal Dr. and Rte. 30. Engineering at this improved intersection has laid the ground work for this future bridge. Given this future requirement no way-finding bicycle/pedestrian signage is appropriate at this time. However this is an important connectivity point and will most likely require grant assistance. The most likely grant source would be the Illinois Transportation Enhancements Program, because of the high cost. An engineering study would be needed to determine feasible alignments and more specific cost estimates.

15 ***Prairie Glen Connectivity***

Prairie Glen has approximately 2,570 linear feet of pathway but is missing about 365 linear feet of pathway to connect to the Library and Municipal Dr. pathways. This trail system should be linked.

16 ***Mark on-street route from the west side of Historic Sugar Grove to the Park District building***

Use way-finding signage on existing posts to guide users through this neighborhood. Currently propose two-way traffic on Bastian to Volunteer Park trail and back to Park District Building. It should be noted that sidewalks exist along this route for less experienced riders. These routes destinations will encompass John Shields Elementary School, Sugar Grove Library, Village Hall, Fire Department, Volunteer Park and the Park District Building.





## NORTH ROUTE

The North Route starts off Virgil Gilman Trail at Prestbury Spur Trail and encompasses Prestbury, Meadowridge Villas, Walnut Woods, Black Walnut, Windstone, Lakes of Bliss Woods, Hannaford Farm, Strafford Woods Subdivisions as well as Hannaford Woods and Bliss Woods. Users come back to the Virgil Gilman trail via the Windsor Rd./Hankes Rd. route or may use the Hannaford Woods route.

1

### ***Prestbury Spur to Meadowridge Villas and Walnut Woods***

Use way-finding signage on existing posts to guide users through Prestbury. A cooperative agreement is necessary to use the Prestbury spur from the Virgil Gilman. From here signage would guide bikers/pedestrians down the southbound sidewalk along Hankes Rd. to on-street signage along Winthrop New and Buckingham. (Hankes Rd. lacks the appropriate width or shoulder for safe bicycle/pedestrian conditions on road.)



Figure 5.14 – Winthrop New Rd.



Figure 5.15 – Buckingham Dr.

1A

### ***Alternative to Prestbury spur connection to Black Walnut and Meadow Ridge Villas***

This pathway connection could be considered an alternative to the Prestbury Spur Connectivity or this could be considered another major route.

From Virgil Gilman trail use Sugar Grove right of way by golf course to Golfview Rd. to Hankes. This would require approximately xxxxx 'of 10' Ag lime path. Add side-path trail along golf course eastbound on Hankes to Norris Rd. Provide striped road crossing and way-finding signage across Hankes to Norris side-path trail. Norris side-path trail needs to be completed to Hankes Rd., about xxxx' more.

Opportunities to close gaps and improve sidewalks to 5' width should also be pursued as many less advanced riders and pedestrians will continue to seek out these routes. The sidewalk in Figure 5.12 is north of Winthrop New on Hankes Rd. Running this sidewalk to the Norris Rd. side-path would provide another safe route for pedestrians/bikers.

Another major opportunity that should be pursued in this area of the village is a bike/pedestrian friendly crossing over Route 56 at the Hankes overpass on the south side of the road. This bridge is slated to



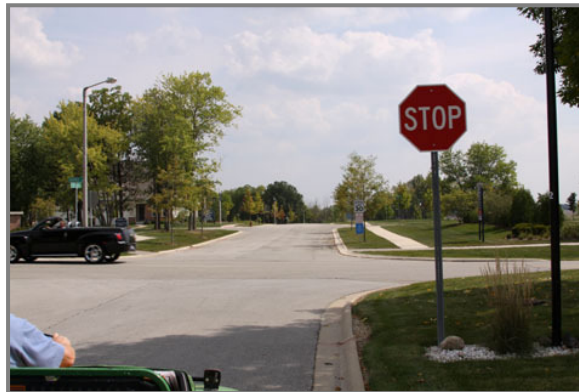
Figure 5.16 – Hankes Rd. Sidewalk

be replaced in the future by IDOT. When this bridge is designed this should be pursued. Directly to the east of the bridge is the north-south Mid County Trail which the county is aggressively working to expand and connect to bring another major north-south pathway west of the Fox River Trail. Immediately east of the bridge on the south side is a Forest Preserve service road that could be used for connectivity directly to the Mid County Trail.

2

### ***Meadowridge Villas and Walnut Woods on street connectivity***

Provide way-finding signage and crosswalk across Norris on north side of Buckingham to side-path on east side of Norris. East side Norris Rd. side-path also needs striped crosswalk and signage across Buckingham. Buckingham on west side of Norris should also have striped crosswalk and signage for east bound on-street riders to cross to left side crosswalk before crossing Norris. (Figure 5.17) West of Norris Rd., sidewalk only exists on north side of Buckingham for less experienced riders. Curb cut should be considered for sidewalk at crosswalk.



**Figure 5.17 – Buckingham Dr. and Norris Rd.**

3

### ***Walnut Woods improvements***

Currently, Walnut Woods has xxxx linear feet of bicycle/pedestrian pathway. A couple of improvements needed to this existing trail system are:

- Striped crosswalk and trail markers are necessary across Dorr Dr. by McDole Park to existing pathway
- Striped crosswalk and trail markers at Hall St. and McDole Dr.
- Bike/pedestrian pathway through HOA common area to McDole Park contiguous to Harkison Blvd.

Additionally a two-way on-street route on Harkison Blvd and McDole Dr. would complete a subdivision perimeter trail.



**Figure 5.19 – Harkison Blvd. and McDole Dr.**



**Figure 5.18 – Southbound McDole Dr.**

### ***Walnut Woods loop back to Virgil Gilman Trail***

Until 4A or 4B can be completed to complete an Outer North Route, this portion of the route will be directed back to Hanks Rd.

### ***Walnut Woods to Black Walnut Trails***

A potential north side connection exists between Walnut Woods and Black Walnut subdivisions that should be pursued concurrent with the fate of the Carson Wetlands Property along Norris and Denny Rd. Path from Walnut Woods to Black Walnut.

From Walnut Woods Park a striped crosswalk and way-finding signage could be added across Norris Rd. to the east side of the wetlands. A meandering trail could follow the northern perimeter of the wetlands. There is an asphalt trail on the east end of Black Walnut Trails that runs parallel to one of its retention ponds. These two trails could be connected with a 200' Boardwalk over the wetlands. This path would take a cooperative effort with Mr. Carson or the future owners of the Carson property.

### ***Walnut Woods, Meadowridge Villas and Prestbury to Black Walnut Trails/Windstone***

An informal walkway already exists through Prestbury Woodland. Improving this to a wider improved trail would create bike/pedestrian friendly connectivity between the Windstone and Black Walnut neighborhoods and Black Walnut trail systems. The steep grade is a problem and some of the trail runs through a flood plain— an engineering assessment is needed for these concerns. This would need to be a cooperative effort with the Park District, the Village and Prestbury Homeowners Association. Depending on cost, this project might be an excellent candidate for an IDNR State Bike Path Grant.

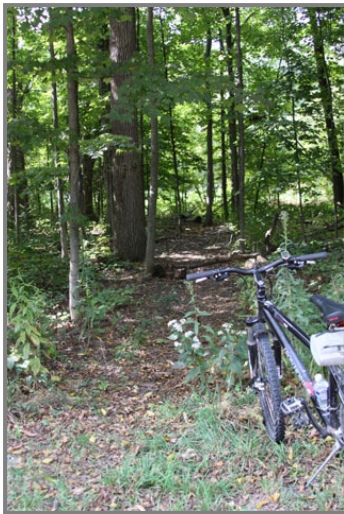


Figure 5.20 – Prestbury Woodland Trail



Figure 5.21 – Prestbury Woodland Trail

### ***Mark on street route through Windstone and Black Walnut***

Work with HOA to define best on-street route and use way-finding signage on existing posts to guide users through these neighborhoods. Potential routes would include Merrill New Rd., Queens Gate Circle, Pembridge Place, Black Walnut Dr., Wild Ginger Rd. and Greenfield Rd.



**6     *At-grade intersection crossing at Bliss Rd. and entrances to Windstone and Lakes of Bliss Woods subdivisions***

This intersection should serve bicycle/pedestrian traffic on the south side of Windstone Lane via sidewalk. Both entries are narrow and may be safest to direct bicycles and pedestrians to sidewalks. Sidewalks are complete on the east side and west side of Bliss to the south of the intersection. Curb cuts at the intersection will be necessary in addition to striping bike/pedestrian crossings and signage.

**7     *Mark on-street route through Lakes of Bliss Woods***

Work with HOA to define best on-street route and use way-finding signage on existing posts to guide users through these neighborhoods. Potential routes would include Elm to Spruce to Denny and Elm to Willow.

**8     *Mark on-street route through Hannaford Farm***

Hannaford Farm currently uses bicycle signage to direct users to its pathway system. Additional on-street signage on Wheatfield would create a loop within the subdivision.

**9     *Merrill Rd. improvements to bring connectivity to Strafford Woods, Hannaford Farms and Hannaford Woods Forest Preserve***

There is currently a 100' gap that exists from the end of the Hannaford Farms' Merrill Rd. side-path and the proposed Windsor Rd. on-street path. This gap is on the west side of the Sugar Grove Cemetery. An easement agreement with the Sugar Grove Cemetery Association may be necessary to complete a 100' x 10' asphalt pathway and connectivity. In addition, way-finding signage and crosswalk markings should be added.

**10     *Mark on-street route through Strafford Woods***

Sign on-street route on both sides of Windsor Rd.



**11 Bliss Rd. crossing at Strafford Woods Subdivision and Prestbury entrance at Windsor Rd. and Hanks Rd.**

This is an awkward intersection as the entrance into Strafford Woods (Windsor Rd.) is narrow and has a divided median. Additionally, all sidewalks dead end several feet before the intersection. Further, the entrance in Prestbury (Hanks Rd.) does not provide adequate shoulder. Given the existing conditions, it seems the Hanks Rd. sidewalk should be extended on the south side to the intersection. This sidewalk should be continued on the south side of Windsor Rd. to Shelburne Ln. Bicycle and pedestrian traffic should be instructed to continue on sidewalk until Shelburne Ln. going east and then directed to the proper side of the road in Strafford Woods with signage and a striped crosswalk. Striped crosswalks and signage should be installed across Bliss. On the east side of Bliss, two way bike and pedestrian traffic should continue on the south sidewalk to Merrill New Rd. Two curb-cuts and striped crosswalks are necessary parallel to Merrill New Rd. for a bicycle/pedestrian safe crossing to/from the Windstone/Black Walnut subdivisions down Merrill New Rd.

It should be noted that KDOT currently has plans in place for the improvement of this intersection and these considerations should be brought up to KDOT as soon as possible for possible inclusion in their planned improvements.

**12 On-sidewalk route along Hanks Rd. from Bliss Rd. back to Prestbury Spur**

Hanks Rd. lacks appropriate width or shoulder for safe bicycle/pedestrian conditions on road. Instead, it would be appropriate to use the sidewalk on the south side of Hanks Rd. from Bliss Rd. to Winthrop New Rd.



**Figure 5.22 - Sidewalk trail sign**

## WEST ROUTE

The West Route will include an extension of the Virgil Gilman trail continuing to the east side of Waubonsee Community College to the north end of the college. From here, the West Route will cross Rte. 47 at Waubonsee's north entrance and skirt the south side of the Old Oaks Subdivision continuing along a property border to Esker Drive and Harter Road. The path will continue on the Esker Dr. sidepath southbound to Wheeler Rd. The West Route then continues east along Wheeler Rd. to the Rte. 47 intersection at Bliss Rd. It continues on through the Village Bible Church Property and the Bliss Woods Forest Preserve back to the Virgil Gilman Trail.

### 1 ***Virgil Gilman Trail Extension***

After discussions with the KCFP and WCC the preferred route is to continue The Virgil Gilman northward along the east side of Waubonsee Community College and to the west of Blackberry Creek. The trail will then run along the north side of WCC with an bike/pedestrian friendly at-grade crossing at the North end of Waubonsee Campus at the Rte 47/Old Oaks Road/Waubonsee North Intersection. This is a 5185' path extension.



**Figure 5.23 – Virgil Gilman Trail**

### 2 ***Bike/pedestrian friendly at-grade crossing at Waubonsee Community College Rte. 47 North Entrance and Old Oaks Rd.***



**Figure 5.24 – Rte. 47 /Waubonsee Community College North Intersection**  
**NEED NEW PICTURE**

Waubonsee Community College has just received permission from IDOT to put a light at the North Campus Entrance. This is the opportune time to make this crossing bike/pedestrian friendly at-grade with signalization and median improvements. This would be a cooperative effort between WCC, KC Forest Preserve, IDOT, SG Township and the Village of Sugar Grove as well as property owners on the west side of Rte. 47.

### ***Waubonsee Community College connectivity to Harter Middle School***

This will require an additional 3888' of sidepath to run along property lines west of Rte. 47 and south of Old Oak Subdivision. Easements will be required. This property is currently undeveloped and such an effort seems reasonable. The sidepath costs could be included as a cooperative grant effort lead by the KCFP.



Figure 5.25 –West Side Sidepath Location  
**NEED NEW PICTURE**



Figure 5.26 –HarterRd./Esker Dr. Crossing  
**NEED NEW PICTURE**

### ***Harter Middle School connectivity from the south***

Further, Kaneland District 302 intends to extend Esker Dr. south to Wheeler Rd. in 2010. The side-path that exists on the east side of Esker should be continued south with the extension to Wheeler Rd. and turn east along Wheeler Rd. to the end of the School District Property.



Figure 5.27 – Esker Dr. sidepath

### ***Connectivity to Sugar Grove Sports Complex from Esker Rd.***

A cooperative effort between the park district, the school district, the village and some private landowners could connect the Wheeler Rd. Sports Complex to Esker Rd.. This pathway would need to be approximately 3,100 linear feet (240' on School District Property, 710' through the Sports Complex and a 2,150 feet easement along the back of a private landowner's field) This would provide connectivity to not only Kaneland Middle School but the Village south. This may facilitate shared use of facilities between the middle school and the park district.



### ***Wheeler Rd. north side-path from Esker Dr. to Rte. 47***



**Figure 5.28 – Windsor West subdivision entrance**

The side-path along the north side of Wheeler Rd. east of the school district property should be completed with development east towards Rte. 47. A striped crosswalk should be added across Wheeler Rd. at Hampstead Dr. (Windsor West subdivision entrance). Bicycle/Pedestrian users should be directed down the south side Wheeler Rd. sidewalk connecting to the Windsor West east side bike path. Eventually, when the south side Wheeler Rd. sidewalk is in need of repair it should be replaced with a 10' trail.

Wheeler Rd. and Esker Dr. designate the southeast corner of the Pattermann Property which is planned for industrial development. This industrial park will install a bicycle/pedestrian side-path along its south boundary and fronting Wheeler Rd. almost to Heartland Dr. (An alternative path would be through the property along the future Cardinal Dr. extension with an additional leg on the east property to Wheeler Rd.). Portions of this path on Wheeler Dr. will need to be installed by the Village.

### ***Rte. 47 and Bliss Rd. intersection improvements***

S

This is proposed to be the major intersection crossing in this part of the Village. After careful consideration, Park Ave. does not appear feasible with no signalization, left turn lanes and no island refuge and uncomfortable approaches to the intersection. The Rte. 47/Bliss intersection will be improved concurrent with the development of the southeast corner commercial development. This improvement will be a collaborative effort of IDOT, KDOT, the Village and the southeast corner developer. The intersection improvements should include pedestrian refuge islands, high visibility crosswalks, signage, and bicycle/pedestrian signal activation on three sides; the east and west side of Rte. 47 across Bliss and the north side of Bliss Rd. across Rte. 47. This will bring connectivity to the side path on the north side of Wheeler Rd.

Westbound trail users will need to cross northbound on the east side of Rte. 47 to the crosswalk on the north side and then back south on the west side. It is proposed that a side-path be extended on the south side of Wheeler Rd. to Division Dr. and a striped crosswalk and signage installed directing users direct west on a new 10' x 820' linear foot path running adjacent to EEI offices to the trail behind the EEI offices. This will alleviate bike/pedestrian on-street traffic on Division and Park.

### ***Bliss Woods and Village Bible Church connectivity***

Currently a side-path exists along Village Bible church property and an informal walkway exists between Village Bible Church Property through Bliss Woods Forest Preserve connecting the Forest Preserve Road network to the side-path. Once the Rte. 47/Bliss Intersection improvement is made, improvements to the walkway should be pursued with the Kane County Forest Preserve to bring another connectivity link to the Forest Preserve and Virgil Gilman trail.



**Figure 5.29 – Rte. 47 side-path near Village Bible Church**

# Section 6

## Other Recommendations

### Bicycle Parking

Providing secure bicycle parking is a necessary part of a bikeway network, allowing people to use their bikes for transportation and reducing parking in undesirable places. Successful bicycle parking requires a good bike rack in a good location.

A good bicycle rack provides support for the bike frame and allows both the frame and wheels to be secured with one lock. The most common styles include the inverted “U” (two bikes, around \$150) and the wave or continuous curve style (more than two). Racks which secure only one wheel are a poor choice for today’s bicycles. The best locations for bike parking are near main building entrances, conveniently located, highly visible, and preferably, protected from the weather.

**It is recommended that the Village address bike parking by adopting a zoning ordinance requirement. (Village Zoning Ordinance #)**



**Figure 6.1 Inverted "U" bike rack**

Ideally, all multi-family and non-residential buildings should provide parking for at least a couple bikes. A simple ordinance may call for one bike parking space for every 20 required car spaces, with a minimum of two spaces. The City of Naperville has an ordinance (Section 6-9-7) specifying bike rack standards and a very detailed list of required spaces per land use. Most uses call for 5% of car spaces, with higher amounts for multi-family dwellings, schools, recreation facilities, etc.

Bike racks currently exist at several locations throughout the Village, including:

- Sugar Grove Library
- Settler's Ridge Parks
- Kaneland Harter Road Middle School
- Waubensee Community College Student Center, Gymnasium and Erickson Hall
- McDole Park and Walnut Woods Park in Walnut Woods

### Additional Bike Racks

It is recommended that the Village work with property owners to install a minimum of one inverted-U rack at the following locations:

- John Shields Elementary School
- Sugar Grove Township Administration Building
- Sugar Grove Community Center
- Sugar Grove Park District Administration building and all applicable park sites
- Village of Sugar Grove Administration Building and Public Works Building
- Sugar Grove Fire Department
- Sugar Grove Post Office
- Jewel, Aldi and all applicable commercial sites

Bicycle rack installation recommendations as presented in the Kane County Bicycle and Pedestrian Plan:

- Anchor racks into a hard surface
- Install racks a minimum of 24" from a parallel wall
- Install 30" from a perpendicular wall (as measured to the closest inverted U.)
- Allow at least 24" beside each parked bicycle for user access, although adjacent bicycles may share this access
- Provide a 6 feet aisle from the front or rear of a bicycle parked for access to the facility.

When placing a bicycle rack in the public right-of-way or in a parking lot, it should be removed from the natural flow of pedestrians, avoiding the curb and area adjacent to crosswalks. Racks should be installed a minimum of 5'-7' from other street furniture. Racks should be placed at least 15 feet away from other features, such as fire hydrants or bus stop shelters.

## Pathway Logo

An identifying logo like Illinois Prairie Path or Fox Valley Trail system would be beneficial to users and builds awareness of the system (See Figures 6.2 and 6.3)



Figure 6.2 Fox River Trail Logo



Figure 6.3 Proposed Sugar Grove Path Logo

## Signal Activation



Figure 6.4 Signal activation marking and sign

### Signal Activation by Bicycles

Both bicycles and motorcycles have difficulty activating demand-actuated traffic signals. Cars may not be present to trip the signal, or cars may be stopped too far back of a bike. Pedestrian push-button actuation, if present, is often inconveniently located for on-road bikes.

The MUTCD-approved Bicycle Detector Pavement Marking (**MUTCD Fig. 9C-7**) in (**Figure 6.4**), together with the R10-22 Bicycle Signal Actuation sign, can indicate a detector trigger point for actuating the signal. Correct tuning of the detector is needed. Quadruple loop detectors could be used, too, as they are more sensitive to bikes and motorcycles. The detector marking also serves to indicate proper bicycle position at an intersection. These should be considered at Bliss Rd./Rte. 47, Cross St. and Rte. 47 and Waubensee and Rte. 47.

## Map Kiosks

To build awareness of the Village of Sugar Grove Bicycle/Pedestrian trail system it is recommended map kiosks are anchored at major trail intersections. (**Figure 6.5**)

- Volunteer Park
- Settler's Ridge (Parkside and Gordon)
- Windsor Pointe Park (bridge site)
- Walnut Woods Park
- Wheeler Park
- Hannaford Farm Park
- Waubensee Community College
- Bridge at Galena Blvd.



**Figure 6.5 Fox River Trail**

## Bicycle Level of Service

The Bicycle Level of Service<sup>2</sup> (**BLOS**) measure is an emerging national standard for quantifying the “bike-friendliness” of a roadway. It indicates bicyclist comfort level for specific roadway geometries and traffic conditions. Roadways with a better (lower) score are more attractive – and usually safer – for cyclists. BLOS is used in the Kane County and IDOT bicycle maps and by the Chicago Agency for Metropolitan Planning (previously CATS) and will now be in the Highway Capacity Manual. An on-line calculator to calculate BLOS is at [www.bikelib.org/roads/blos/losform.htm](http://www.bikelib.org/roads/blos/losform.htm). BLOS is used in the Sugar Grove Bicycle Plan to measure existing and future conditions, to set standards for the bikeway network, and to justify recommendations. A BLOS grade level of B or better was targeted for the casual cyclist as recommended by the LIB. Also, the Pedestrian Level of Service (PLOS) measures walking conditions and is available at the same link and has been considered throughout the analysis, when appropriate. See (**Appendix 3**) for more detailed information.

## On - road Bikeway Liability

Since 1998, Illinois towns have faced a liability disincentive for on-road bikeways, such as those listed above. When towns designate that a particular route is “intended” for use by bikes, they raise their liability for cyclist injury due to road condition from zero to a negligence standard of care. This has dissuaded many communities from adding on-road bikeways.

On the other hand, at least 20 other Illinois communities are known to be proceeding with designated bike lanes and bike routes, despite the situation<sup>3</sup>. Signed bike routes from before 1998 remain in dozens of other towns. The number of known lawsuits resulting from these on road bikeways has been very minimal, demonstrating that the reaction of the more risk-averse towns may be out of proportion with the actual risk exposure incurred.

Local governments regularly weigh risk exposure against policy implications and services provided to residents for all sorts of facilities and programs. It is recommended that the Village proceed with the on-road bikeways listed in this plan, after verifying the risk exposure involved.

<sup>2</sup> Landis, Bruce, "Real-Time Human Perceptions: Toward a Bicycle Level of Service," Transportation Research Record 1578 (Washington DC, Transportation Research Board, 1997).

<sup>3</sup> “On-Road Bicycle Routes and Illinois’ Liability Disincentive”, League of Illinois Bicyclists, 2006.



## Education

Education of both bicyclists and motorists is crucial to improving real and perceived bicycling safety in Sugar Grove. Many are afraid to bike, or bike only on off-road trails, because of their concern about safety. Improving education can lessen these concerns and instill the skills and confidence to bike around town more safely. Some possibilities include:

### Bicyclists

Distribute bike safety materials through schools and PTAs; at public places such as Village Hall, the library, and the Park District; and on the Village's and Park District's websites:

- *Kids on Bikes in Illinois* ([www.dot.state.il.us/bikemap/kidsonbikes/cover.pdf](http://www.dot.state.il.us/bikemap/kidsonbikes/cover.pdf)), a free pamphlet from IDOT's Division of Traffic Safety
- League of Illinois Bicyclists' single-page summaries for children and their parents at [www.bikelib.org/education/kidsheets.htm](http://www.bikelib.org/education/kidsheets.htm)
- *Safe Bicycling in Illinois* ([www.dot.state.il.us/bikemap/safekids/cover.pdf](http://www.dot.state.il.us/bikemap/safekids/cover.pdf)), a free booklet directed to teens and adults, from IDOT Traffic Safety
- The Kane County Bicycle Map ([www.co.kane.il.us/DOT/COM/BikePed](http://www.co.kane.il.us/DOT/COM/BikePed)), a free map with road and trail bike safety information

Other resources for kids and adults are listed at [www.bikelib.org/education/resources.htm](http://www.bikelib.org/education/resources.htm), and range from bike safety classes to videos to a bike rodeo guide. Also, grant funding for grades K-8 education programs is available from the Illinois Safe Routes to School program.

### Motorists

Educate motorists on sharing the road with bicyclists and avoiding common mistakes that lead to crashes. Include a link to the League of Illinois Bicyclists' "Share the Road: Same Road, Same Rights, Same Rules" video ([www.bikelib.org/video](http://www.bikelib.org/video), available as a DVD) on the Village and Park district websites. Show the video on the local cable channel, especially during the warmer bicycling season.

### Encouragement

Sugar Grove can promote bicycling by encouraging visitors and residents to explore Sugar Grove by bicycle include:

- Actively distribute Kane County's bicycle map at public places. Consider a bicycle map for Sugar Grove.
- Proclaim the City's observance of National Bike Month in May (or June, when weather is more dependable).
- Declare a Bike to Work day to encourage bicycling to work, errands, or other destinations.
- With the park district, partner with local Bicycle Clubs to publicize organized rides. Consider running an organized bicycle tour of the Village.
- Promote Sugar Grove as a bicycle-friendly community in the Village's advertising.

### Enforcement

A vital component of a safe bicycling environment is enforcement with education to reduce common car-bike collision types.

Underscore the concept/mantra for safe bicycling – "**bike drivers**" as opposed to "bike riders". According to Illinois law, bicycles have both the rights and responsibilities of other vehicle users. Many



bicyclists do not know about the law as it applies to bikes, and how following the law leads to safe cycling. Other cyclists blatantly ignore the law while riding in traffic, not only creating dangerous situations but also causing motorist resentment toward other cyclists trying to share the road safely. Police are encouraged to stop cyclists if the situation dictates, to educate, issue warning citations, or issue tickets. Changing their behavior could save their lives. Resources include Illinois bike law cards from the League of Illinois Bicyclists and bicycle warning citations (e.g., Hoffman Estates Police Department).

In a car-bike crash, the motor vehicle does the most damage. Some aggressive motorists intentionally harass cyclists, while others simply don't know how to avoid common crash types. Police are encouraged to learn the common crash types and enforcement techniques to help ensure safer roads for bicycling.

The League of Illinois Bicyclists, LIB offers law enforcement agencies several resources to help them train officers on bicycling issues, educate motorists and bicyclists about safe bicycling and enforce traffic laws.

## Articles

- Kirby Beck, a Minnesota police officer, writes a compelling article on "[The Case for Bicycling Enforcement](#) (PDF)," which examines the arguments on why police should enforce traffic laws involving bicyclists and motorists.
- "[12 Things You Should Know about Bicycles, Crashes, and Safety](#) (PDF)" — a concise compilation of bicycling issues which officers should know.

## Training

- The League of Illinois Bicyclists has developed a PowerPoint presentation on "*Safe Roads for Bicycling*" that can be watched and downloaded by law enforcement agencies wanting to inform their officers on bicycling issues. Download the [Power Point file](#) or a [PDF handout](#) of that presentation.
- The above presentation is part of a free course the league offers to Illinois law enforcement. The course includes our video, "[Share the Road – Same Road, Same Rules, Same Rights](#)".

# Section 7

## Plan Implementation – Other Issues

### Implementation Funding

Recommendations in this plan range from low-cost or no-cost improvements to major capital investments. The following guideline taken from the League of Illinois Bicyclists website (<http://www.bikelib.org/>) has been used for estimating costs for different bike-way types:

#### Trail or Side-path

\$400-700K/mile. Higher end: cement, right-of-way needed. Cost can go much higher if there are bridges, more expensive right-of-way needed, etc.

#### Bike Lanes

\$10-25K /mile (if *no* additional pavement is added). Higher end: 4 stripes instead of 2 (when there is on-street parking to the right of the bike lanes), thermoplastic instead of paint.

#### Un-striped On-road Routes

\$3-5K/mile. Estimated cost includes signage (“Bike Route”), Shared Lane Markings/sharrow pavement markings.

Realizing the wide range of costs by type, the urgency of our short-term connectivity needs, and a desire to bring attention to the “bike-ability” of Sugar Grove, we have granted higher priority to the un-striped on-road routes unless a specific funding source is targeted. In general, recommendations may be funded in a number of ways.

First, the Village of Sugar Grove may dedicate a part of the annual capital improvement program (CIP) for bicycle and pedestrian improvements. Historically, the village has set aside money for sidewalk improvements. A similar earmark could go for incremental bicycle and pedestrian facilities. Additional funding may come from the Sugar Grove Park District, Kane County Forest Preserve District, Kane County Division of Transportation, Illinois Department of Transportation, and other relevant agencies that accommodate bikes and even Village H.O.A.’s for location specific projects.

Another major builder of bikeways is developers. Plan recommendations may be implemented opportunistically when a new subdivision or commercial development is added. Cooperative efforts with utility companies may also prove fruitful; Example of this being done is the NICOR easement trail west of Deerpath Rd. or Yorkville building a trail along a ComEd easement.

Other opportunities include road projects by the Village, County, or State. Including bikeways as part of a larger road project is substantially cheaper and easier than retrofit bike projects. Even resurfacing work can be used to add on-road bikeway striping, sometimes at no additional cost.

Road impact fees help pay for road improvements needed as an impact of development. Should the opportunity arise for the Village of Sugar Grove a novel approach would be to require a non-motorized transportation impact fee along with road impact fees.

Finally, outside government funding sources can be used for bikeway retrofit projects. A number of state and federal grant programs are available and summarized in **Appendix 4**. Included are tips on which source is best for a particular case.





## High Priority Action Items!

It should be noted that once this plan has sufficient backing from the Village, Park District and Township Administrations specific projects slated for planning/construction should be addressed sooner than later. While still in draft form, it is imperative to solicit support not only from Sugar Grove residents, but those agencies empowered to affect positive contributions to the plan which, aside from the aforementioned, include;

***Homeowner's Association's (HOA), Waubensee Community College (WCC), Kaneland Community Unit School District 302 (KCUSD), Kane County Department of Transportation (KDOT), Illinois Department of Transportation (IDOT), Kane County Forest Preserve District (KCFPD), Prestbury, et al.***

Specifically, some of these entities are currently planning improvements identified by the plan that could be modified at little or no cost. The following projects are examples of how this Plan would address these positive opportunities and more specifically, illustrate how the challenge of missed opportunities come and go so easily.

**Project 1** KDOT is planning to improve Bliss Rd. at the intersection of Hanks Rd. and Windsor Rd. this year, 2010.

**Opportunity** The plan references inclusion of sidewalk extensions on Hanks and Bliss, curb cuts, pavement striping, and signage in this area.

**Project 2** KCUSD is working on roadway improvement plans with the Village of Sugar Grove to extend Esker Dr. from the existing terminus at the Harter Middle School to Wheeler Rd. this year 2010.

**Opportunity** The plan references inclusion of a side-path in this area.

**Project 3** The commercial entities of Prairie Grove Commons and the Village of Sugar Grove are planning to extend Division Dr. to Galena Blvd. this year, 2010.

**Opportunity** The Windsor West side-path extension from its current terminus could be extended to Galena Blvd. in conjunction with this planned roadway improvement.

**Project 4** There are commercial and industrial activities anticipated between Waubensee Dr. and Rte. 47 intersection in the near term.

**Opportunity** The plan references inclusion of intersection signalization, pavement striping, signage and a side-path in this area.

**Project 5** The IDOT is planning on replacing the Hanks Rd. over-pass bridge in the future.

**Opportunity** The plan references inclusion of a future bike/pedestrian friendly bridge in this area.

IDOT is planning to replace this bridge and has recently requested input on this bridge improvement. Conversations need to ensure that considerations are made for safe bicycle/pedestrian crossing to the Mid County Trail.

## Policies and Ordinances

Policies and ordinances should be adopted by the local municipal entities (Village, Township, and Park District) to require standardized built-in trails with all new development and roadway (repaving/stripping



projects) as they are being planned and considered to make adequate bicycle and pedestrian accommodation.

## Reference Resources

- AASHTO Guide for the Development of Bicycle Facilities
- Manual on Uniform Traffic Control Devices (MUTCD) [www.mutcd.fhwa.dot.gov](http://www.mutcd.fhwa.dot.gov) Part 9 for Bicycles
- National Highway Institute/Federal Highway Administration NHI/FHWA's "Accommodating Bicycle and Pedestrian Travel" (policy guidance 2000)
- Consider "Complete Streets" Implementation (designed to enable safe access for all users: pedestrians, bicyclists, motorists and transit riders)

## Committee or Staff Time

Perhaps the key recommendation of this plan is to develop a way to ensure its implementation. It is common for a community to adopt their bicycle and pedestrian plan as an addendum to their comprehensive plan. However, to ensure continued progress, it may be necessary to dedicate some fraction of a staff member's time to serve as the Village or Park Districts' bicycle and pedestrian coordinator. This individual or group of individuals would work on implementation projects and other bicycle and pedestrian issues. Also, the coordinator(s) would regularly collaborate with other Village staff and relevant agencies to ensure their work conforms to the goals of the plan. Routine review of development plans and road project designs is a prime example.

In addition, consideration should be given to establishing an on-going Sugar Grove Bicycle and Pedestrian Advisory Committee.

In conclusion, it is understood that this is a short term plan and therefore, consideration must be made for the long term vision and the association to the long term plan (**see Appendix 7, Map 4**). As new developments are being planned and drafted, an ongoing bicycle/ pedestrian planning committee comprised of key members of staff from affected agencies needs to be a part of the ongoing process. This proposed committee of key staff should be consulted for their recommendations/insight as to bicycle and pedestrian pathway connectivity and amenities.

# Appendix 1

## Sugar Grove Bicycle and Pedestrian Plan Committee Members

### Ad Hoc Committee Members

Tim Betustak, President Windsor Pointe HOA  
John Clayton, Superintendent of Parks, Sugar Grove Park District  
Mike Ferencak, Village Planner, Village of Sugar Grove  
Mary Heineman, Resident  
Ed Sweeney, President Waterford HOA  
Geoff Payton, Supervisor Streets and Properties, Village of Sugar Grove  
Justin VanVooren, Director of Finance, Village of Sugar Grove  
Rich Young, Community Development Director, Village of Sugar Grove

### Advisory Committee Members

Dave Burroughs, Sr. Vice President, EEI, Village of Sugar Grove Engineering Consultant  
Brent Eichelberger, Administrator, Village of Sugar Grove  
Sean Michels, President, Village of Sugar Grove  
Mary Ochsenschlager, Board Member, Sugar Grove Park District  
Greg Repede, Executive Director, Sugar Grove Park District



# Appendix 2

## Community Benefits to Bicycle and Pedestrian Pathways

**Bicycle/Pedestrian Paths** create healthier places for healthier people

They encourage healthier, more mobile lifestyles by making possible places to walk, bike and more. They develop healthier economies by promoting tourism and local businesses, and increasing property values. They support a healthier climate and environment by making active transportation a viable alternative to the automobile. They contribute to healthier, more vibrant community interaction, connecting people to the places they live, work and play.

**Bicycle/Pedestrian Paths** create a healthier future for people of all ages and abilities

Trails and greenways are often seen narrowly when it comes to their benefits. People tend to focus on the recreational or environmental aspects of trails and greenways, failing to see the big picture - the total package of benefits that a trail or greenway can provide to communities including public health, economic and transportation benefits, and even the effect on community pride and identity. When seen as a whole, the evidence about the far-reaching benefits of trails and greenways is compelling, especially given the minimal public investment involved compared to other undertakings with the same community goals.

**Bicycle/Pedestrian Paths** and their benefits are outlined in the following statements

### ***Health***

Trails and greenways create healthy recreation and transportation opportunities by providing people of all ages with attractive, safe, accessible and low- or no-cost places to cycle, walk, hike, jog or skate. Trails help people of all ages incorporate exercise into their daily routines by connecting them with places they want or need to go. Communities that encourage physical activity by making use of the linear corridors can see a significant effect on public health and wellness.

### ***Transportation/Livability***

In addition to providing a safe place for people to enjoy recreational activities, greenways and trails often function as viable transportation corridors. Trails can be a crucial element to a seamless urban or regional multi-modal transportation system. Many areas of the country incorporate trails and similar facilities into their transit plans, relying upon trail facilities to "feed" people in to and out of transit stations in a safe and efficient manner. The ability to avoid congested streets and highways, and travel through natural areas on foot or by non-motorized means, is a large factor in a community's "livability."

### ***Conservation/Environment***

Linear green-spaces including trails and greenways have all the traditional conservation benefits of preserving green-space, but also have additional benefits by way of their linear nature. As tools for ecology and conservation, greenways and trails help preserve important natural landscapes, provide needed links between fragmented habitats, and offer tremendous opportunities for protecting plant and animal species. They also can be useful tools for wetland preservation and improvement of air and water quality. In addition, they can allow humans to experience nature with minimal environmental impact.





### ***Economy/Revitalization***

The economic effects of trails and greenways are sometimes readily apparent (as in the case of trailside businesses), and are sometimes more subtle, like when a company decides to move to a particular community because of amenities like trails. There is no question, however, that countless communities across America have experienced an economic revitalization due in whole or in part to trails and greenways.

### ***Historic Preservation/Community Identity***

Many community leaders have been surprised at how trails have become sources of community identity and pride. These effects are magnified when communities use trails and greenways to highlight and provide access to historic and cultural resources. Many trails and greenways themselves preserve historically significant transportation corridors.

More details regarding any of these benefits can be found at the Rails to Trails Conservancy website:  
<http://www.railstotrails.org/ourWork/trailBasics/benefits.html>

# Appendix 3 (Work in Progress)

## Road Segment Data

### Segment Definition

<b>Segment</b>	Street name of road segment
<b>From (W/N)</b>	West or North segment end
<b>To (E/S)</b>	East or South segment end

### Existing Conditions

<b>Lanes</b>	Number of through lanes (excludes center/other turn lanes)
<b>Traffic ADT</b>	Traffic count in vehicles/day. Gray or blue indicate estimates.
<b>Lane Width</b>	Width from lane edge (often the gutter seam/pavement edge) to next lane, in feet
<b>Gutter Pan</b>	Width of cement gutter pan in feet
<b>Extra Width</b>	Pavement width from outer lane edge to gutter seam/pavement edge. May include paved shoulders, parking areas, bike lanes.
<b>Speed Limit</b>	Posted speed limit
<b>Parking Usage</b>	Estimated % occupancy rate of on-street parking - excludes driveway areas. Averaged over 2-sides unless noted.
<b>% Truck Traffic</b>	Estimated % of heavy truck traffic
<b>Pavement condition</b>	FHWA's scale (5=best, 1=worst)
<b>BLOS score</b>	Bicycle Level of Service score of road segment - measure of on-road comfort level for a range of adult cyclists, as a function of geometry and traffic conditions
<b>BLOS grade</b>	BLOS converted to a grade range. B (or better) might be considered "comfortable" for casual adult cyclists, C (or better) for experienced cyclists
<b>Comments</b>	Further details
<b>Sidewalk Status</b>	Are there sidewalks (SW) or side-paths (SP) on each side (N-north, S-south, E-east, W-west)

### Recommendations

<b>Feasible on-road facility type</b>	Comments and some details on a feasible on-road bikeway treatment for that segment
<b>Rec. Lane Width</b>	Width from lane edge (often the gutter seam) to the next lane, if the above on-road bikeway is implemented. Different than existing only if re-striping is done.
<b>Rec. Striped Width</b>	Pavement width from outer lane edge to gutter seam/pavement edge, if the above on-road bikeway is implemented.
<b>New BLOS score</b>	BLOS score, if the above on-road bikeway is implemented. Again, only different if restriping is involved (in <b>bold</b> ).
<b>New BLOS grade</b>	Conversion of BLOS to a grade.

### Sidewalk

<b>Recommend</b>	Suggestions for missing sidewalks (SW) or side-paths (SP), such as developer requirements and prioritization in the City's sidewalk program
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### Sidepath

<b>Feasibility</b>	Suitability of a 10' sidepath. Reasons for "No": many existing residences (resid.), many and/or busy crossings (driveways, entrances, side streets)
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### On-road

<b>recommendation</b>	Recommendation for on-road treatment, if any
-----------------------	--

### Off-road

<b>recommendation</b>	Recommendation for off-road improvement, if any
-----------------------	---

### Implementation

<b>Priority</b>	Recommended implementation priority of segment
<b>Impl. Condition</b>	Segment's "readiness" for implementation: ready now; conditional (needs something else first); future (usu. development); or temporary (until something else is done)
<b>Implement Notes</b>	Further details on implementation, especially for the "conditional" implementation segments



# Appendix 4

## Summary of Major Bikeway Funding Sources

### Bike/Pedestrian Plan Funding:

A formally adopted bike/pedestrian plan should be considered as an essential part of the grant application process. Not to mention a much more favorable likelihood of receiving grants to assist in executing the plan. Plain and simple, grant selection committee members look for this basic, yet single most vital criteria when weighing-in on over-all awarding of grant applicants. Also, having a bike/pedestrian plan as part of your comprehensive plan will directly involve prospective developers to build part of your bike network, whenever and wherever such development may occur.

For relatively inexpensive projects, such as striping or adding signs to roads, it's often better to address these projects as part of an annual Bicycle and Pedestrian Plan Capital Improvement Program (CIP). For more expensive projects, the following grant sources should be considered.

### Illinois Transportation Enhancements Program (ITEP)

Subject to federal/state design standards and review process, adding big delays to project timeline. This source is better suited for larger (\$500K to \$1M+) bikeway projects and those requiring substantial engineering work anyway (grade separations). This grant is usually awarded for off-road trails. In 2006, IDOT's average grant amount dropped considerably, with many projects winning only a fraction of their requests.

- 80% federal/state, 20% local; IDOT-administered
- Irregular application cycle averaging every two years with another due in 2011 and long application-to-announcement times
- Historically, an average of \$15-25M/year (less last time) for 12 project categories including bikeways
- Very high demand to supply ratio (lately 10:1 or more). IDOT may not fully fund a grant

### Congestion Mitigation and Air Quality program (CMAQ)

Like ITEP, this is federal money, subject to more stringent standards and review processes adding to project timeline and costs. For larger bike infrastructure projects (at least \$200K and up to \$1M) including off – road trails and networks of on-road bikeways. Also funds non-infrastructure bicycle education and encouragement programs, as well as large-scale bike parking programs.

- 80% federal/state, 20% local; CMAP (CATS) administered; annually due end of January, announced in fall
- Funding *of bike/ped projects* ranges dramatically, usually \$5-7M/year with high demand Competitive (3:1 or more)
- Emissions reduced per cost is a key, strongly correlated to population density



## **Illinois State Bike Grant Program**

A much simpler process and standards as these remain local, not IDOT, projects. Good for simpler projects and those that can easily be phased. Has a history of consecutively funding two or more segments/phases of projects.

- 50% state, 50% local; reimbursement grant; IDNR-administered annually
- March 1 Deadline
- \$2.5-\$3M/year recently, with \$200K limit (does not apply to land acquisition projects)
- Typically a 2:1 ratio of applications to grants

## **Recreational Trails Program (RTP)**

This grant program has been an underutilized source. Trails serving other user groups (equestrian, hiking, cross-country ski, snowmobile) get priority, so partnering with these uses will increase chances for funding. A good target range is \$100-300K.

- 80% federal/state, 20% local; federal source administered by IDNR and IDOT.
- March 1 Deadline
- Now roughly \$1M/year for non-motorized trails with emphasis on other user groups – generally not bike paths

## **Illinois Safe Routes to School program**

Preparation of IDOT's on-line School Travel Plan is a prerequisite for grant applications with schools, school districts, towns and non-profits all eligible.

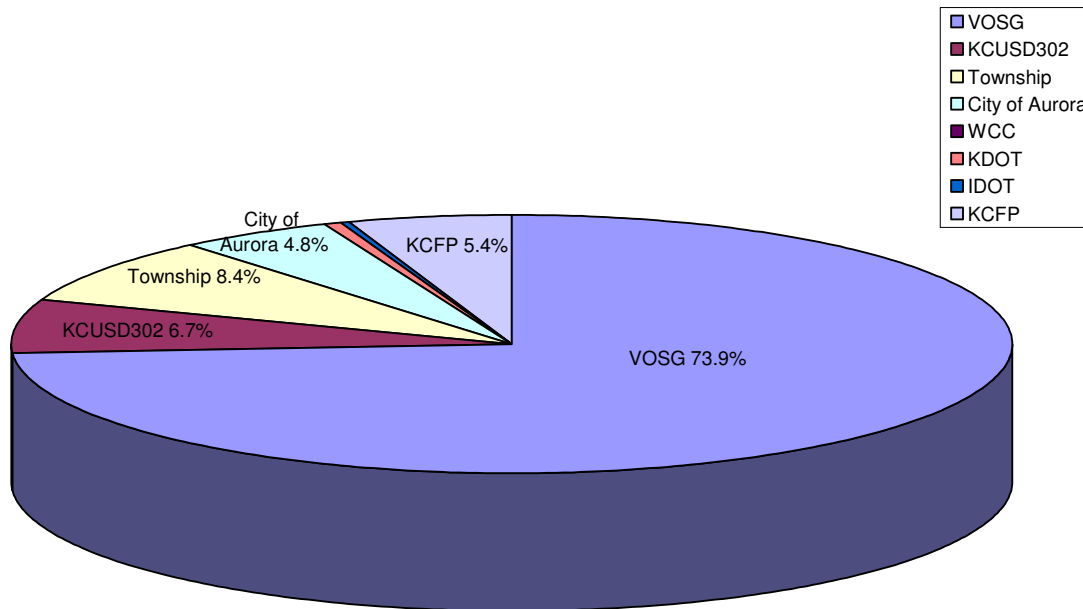
- 100% federal/state, IDOT-administered, \$5-7M/year; reimbursement grants
- First application cycle March-May 2010, expected annually
- 70-90% for infrastructure projects within 2 miles of K-8 schools, 10-30% for education and promotion programs

# Appendix 5

## Cost Summary Data

**Route Jurisdiction by Distance**

Total coverage: 18.9 miles



**Route Mile in Feet by Jurisdiction**

VOSG  
Township  
KCFP  
KCSC302  
WCC  
KDOT  
IDOT  
City of Aurora  
Total feet included  
Miles of Trail

South Route	North Route	West Route	Total	% of Total
32,455	28,121	13,229	73,805	73.9%
	8,338		8,338	8.4%
		5,405	5,405	5.4%
		6,725	6,725	6.7%
			-	0.0%
	569		569	0.6%
		200	200	0.2%
4,807			4,807	4.8%
37,262	37,028	25,559	99,849	100.0%
7.06	7.01	4.84	18.91	

Excludes 4.2 miles of Virgil Gilman Trail that is in Planning Area

Excludes mile and costs consider "not essential" to create basic routes. Specifically

**South Route**

- regrading 4142' of ag lime road between historic downtown and Settlers Ridge. Currently trail is acceptable.
- creating sidepath connecting West Park to Galena to form additional loop.
- Rt 30 Bridge per IDOT specs
- Prairie Glen Connectivity. This 380' should eventually be completed by developer.

**North Route**

- Hanks Road sidepath/Bridge improvements
- Carson Slough Improvements to Black Walnut
- Prestbury Woodland Trail Improvements

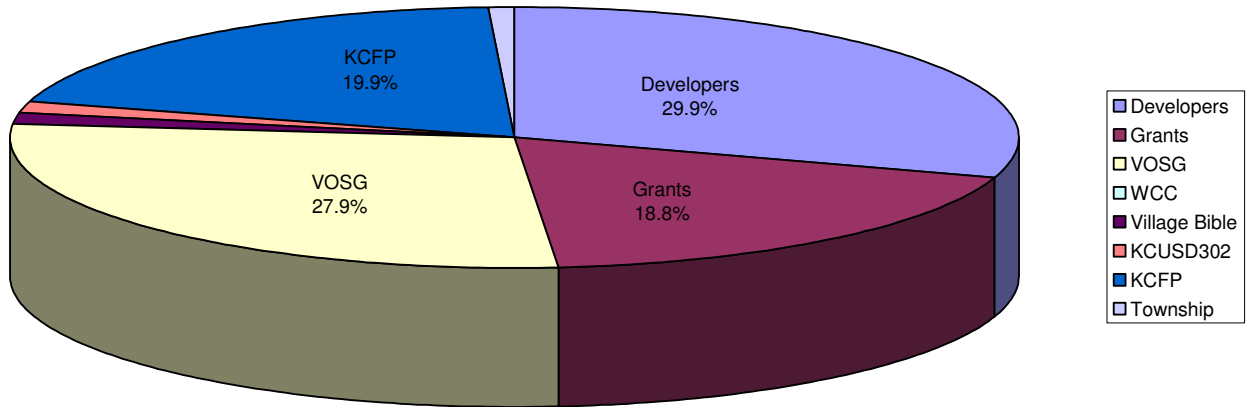
**West Route**

- Sidepath installation at KCSC302. This will eventually be completed by school district but service roads would provide adequate alternative.





**Route Cost Distribution by Jurisdiction**  
Total Estimated Cost for 18.9 miles improved \$2.6 million



Route Cost by Jurisdiction						% of Total
	South Route	North Route	West Route	Misc.	Total	
VOSG	\$ 218,679	\$ 21,969	\$ 467,317	\$ 8,000	\$ 715,965	27.9%
Township	\$ -	\$ 16,923	\$ -	\$ -	\$ 16,923	0.7%
KCFP	\$ -	\$ -	\$ 511,837	\$ -	\$ 511,837	19.9%
KCUSD302	\$ -	\$ -	\$ 33,652	\$ -	\$ 33,652	1.3%
WCC	\$ -	\$ -		\$ -	\$ -	0.0%
KDOT	N/A (1)	N/A (3)		\$ -	N/A	N/A
IDOT	N/A (2)	\$ -	N/A (4)	\$ -	N/A	N/A
Village Bible Church	\$ -	\$ -	\$ 39,299	\$ -	\$ 39,299	1.5%
Developer	\$ 221,402	\$ -	\$ 548,106	\$ -	\$ 769,508	29.9%
Grants	\$ 483,392	\$ -	\$ -	\$ -	\$ 483,392	18.8%
Total feet included	\$ 923,473	\$ 38,892	\$ 1,600,211	\$ 8,000	\$ 2,570,576	100.0%
Miles of Trail	7.06	7.01	4.84		18.91	

Cost Estimates are not available for the following items

N/A (1) Bliss/Wheeler/Rt 47 intersection improvements

N/A (2) Bliss/Wheeler/Rt 47 intersection improvements

N/A (3) Bliss/Hankes/Windsor intersection improvements

N/A (4) Waubensee North/Old Oaks/Rt 47 intersection improvements



## Estimated Cost By Routes

### SOUTH ROUTE

Improvement Description	Length(ft)	Jurisdiction	Financial Resp.	Cost/Mile	Est. Cost
1 sign on-street Main/Cross	1,002.0	VOSG	VOSG	\$ 4,000	\$759
2 sign intersection	182.0	VOSG	VOSG	\$ 4,000	\$138
3 sign on-streetCross/Arbor/Bedford	3,371.0	VOSG	VOSG	\$ 4,000	\$2,554
4 Curb cut transition		VOSG	VOSG	\$	250
5 600 ft path/ signage to SH	600.0	VOSG	VOSG	\$ 500,000	\$56,818
6 Settlers Ridge On- Street Signage	6,878.0	VOSG	VOSG	\$ 4,000	\$ 5,211
7 Signage through Ingham Park	4,807.0	City of Aurora	VOSG	\$ 4,000	\$ 3,642
8 Bridge over BB Creek	4,000.0	VOSG	Grant(80/20)	\$	604,240
9 Capitol/Bliss sidepath/markings/signs					
- signage to Capitol	2,620.0	VOSG	VOSG	\$ 4,000	\$ 1,985
- sidepaths to Rt 47	1,252.0	VOSG	Developer	\$ 500,000	\$ 118,561
10 Rt 47/Bliss/Wheeler intersection		KDOT/IDOT	KDOT/IDOT		N/A
sidepath s Wheeler to WW path	1,086.0	VOSG	Developer	\$ 500,000	\$ 102,841
11 212 ft sidepath WW path to Galena	212.0	VOSG	VOSG	\$ 500,000	\$ 20,076
12 Sidepath West Park to Galena		VOSG	VOSG	\$ 500,000	N/E
13 signage Galena/Municipal	4,510.0	VOSG	VOSG	\$ 4,000	\$ 3,417
14 Rte 30 Bridge per IDOT specs		VOSG	Grant		N/E
15 Prairie Glen Connectivity		VOSG	Developer	\$ 500,000	N/E
16 sign on-street Bastian to Volunteer pk	2,304.0	VOSG	VOSG	\$ 4,000	\$ 1,745
Existing Route Signage	4,438.0	VOSG	VOSG	\$ 4,000	\$ 1,237
	37,262.0	7.06 miles			\$ 923,473

### NORTH ROUTE

Improvement Description	Length(ft)	Jurisdiction	Financial Resp.	Cost/Mile	Est. Cost
1 sign on street Winthrop New/Buckingham	7,838.0	Township	Township	\$ 4,000	\$ 5,938
1a Hanks Road sidepath/Bridge improvements		IDOT	IDOT		N/E
2 Curb cut/signage/stripping		VOSG	VOSG	\$	250
3 Walnut Woods signage McDole/Harkinson	4,158.0	VOSG	VOSG	\$ 4,000	\$ 3,150
4a Carson Slough Improvements to Black Walnut		KCFP	KCFP		N/E
4b Prestbury Woodland Trail Improvements		Prestbury	??		N/E
5 On Street Windstone/Black Walnut	10,877.0	VOSG	VOSG	\$ 4,000	\$ 8,240
6 Intersection Bliss/Windstone/Bliss Woods		VOSG	VOSG		
- signage	102.0	VOSG	VOSG	\$ 4,000	\$ 77
- curb cuts		VOSG	VOSG	\$	500
7 On Street Lakes of Bliss Woods	4,257.0	VOSG	VOSG	\$ 4,000	\$ 3,225
8 On Street signage Hannaford at Wheatfield	2,577.0	VOSG	VOSG	\$ 4,000	\$ 1,952
9 Hannaford trail connectivity to Strafford	112.0	VOSG	Township	\$ 500,000	\$ 10,606
10 On Street Strafford Woods	2,050.0	VOSG	VOSG	\$ 4,000	\$ 1,553
11 Intersection Bliss/Hanks/Windsor	569.0	KDOT	KDOT		N/A
12 On Sidewalk Route Hanks to Prestbury Spur	500.0	Township	Township	\$ 4,000	\$ 379
Existing Route Signage	3,988.0	VOSG	VOSG	\$ 4,000	\$ 3,021
	37,028.0	7.01 miles			\$ 38,892

### WEST ROUTE

Improvement Description	Length	Jurisdiction	Financial Resp.	Cost/Mile	Est. Cost
1 Waubensee/Virgil Gilman Path Improvements	5,185	KCFP/WCC	KCPF/WCC	\$ 500,000	\$ 491,004
2 Rt. 47/Waubensee North/Old Oaks Intersection Imp'ts	200	IDOT	IDOT		N/A
3 Old Oaks to Esker Drive	3,888	VOSG	VOSG	\$ 500,000	\$ 368,182
4 Signage on KCSD302 sidepaths/roads		KCSD302	KCSD302		
- Existing Esker Drive Path	951	KCSD302	KCSD302	\$ 4,000	\$ 720
- Esker to Wheeler	5,470	KCSD302	KCSD302	\$ 4,000	\$ 4,144
5 Sugar Grove Sports Complex Connectivity		SGPkDist	SGPkDist	\$ 500,000	N/E
6 Wheeler Rd Sidepath		VOSG	VOSG/Devel		
- Kaneland portion	304	KCSD302	Kaneland	\$ 500,000	\$ 28,788
- Pattermann portion	3,180	VOSG	Developer	\$ 500,000	\$ 301,136
- Existing Industrial Park	800	VOSG	VOSG	\$ 500,000	\$ 75,758
- Batavia Enterprises	2,608	VOSG	Developer	\$ 500,000	\$ 246,970
- Wheeler to Windsor West Crossing	1,604	VOSG	VOSG	\$ 4,000	\$ 1,215
7 RT 47/Bliss/Wheeler improvement see 10 above		KDOT/IDOT	KDOT/IDOT		N/A
8 Bliss Woods/Village Bible Church Connectivity		KCFP	KCFP		
- sidepath addition	230	VOSG	VOSG	\$ 500,000	\$ 21,780
- signage only	504	VOSG	VOSG	\$ 4,000	\$ 382
- Village Bible Church Addition	415	VOSG	Village Bible	\$ 500,000	\$ 39,299
- Forest Preserve Improvement	220	KCFP	KCFP	\$ 500,000	\$ 20,833
	25,559	4.84 miles			\$ 1,600,211
5000 maps				\$	5,000
6 Kiosks				\$	3,000
Virgil Gilman Trail		4.20 miles			\$ 1,608,211
N/E Non Essential					



# Appendix 6

## Short-term Connectivity Checklist

UPDATED 5/6/2010

### Completed Projects

- 1 ☒ Develop an ad hoc committee – Staff from the Village, Park District & Township, cyclists, and consider including; Prestbury, Kaneland School District, WCC & HOA's
- 2 ☒ Define the plan as **Comprehensive Bicycle & Pedestrian Plan**
- 3 ☒ Determine that it will be primarily an in-house project
- 4 ☒ Acknowledge that at some point assistance from a qualified Engineer, Grant Writer, and/or a professional consultant such as League of Illinois Bicyclists (LIB) and/or Association of Pedestrian and Bicycle Professionals (APBP) may be desired
- 5 ☒ Name staff person(s) in charge to over-see implementation ([Advisory Committee](#))

### Current Projects

- 6 ☐ Target key elements in the bike plan to include; the occasional/casual adult cyclist, on road Bicycle Level of Service rating of B or higher & in-fill any sidewalk gaps along designated on-road bikeways, for kids and others (P)
- 7 ☐ Include a bike safety lesson/message in the bike map that includes; Adult Cyclists, Child Cyclists & Motorists (share the road) (M,P)
- 8 ☒ Acknowledge that it is acceptable & preferred for children/young riders to utilize sidewalks (M,P)
- 9 ☒ Underscore the concept/mantra for safe bicycling - **bike drivers** as opposed to “bike riders” as cyclists legally have all the rights & responsibilities of the driver of a vehicle (M,P)
- 10 ☒ Develop a bike map of **identified preferred routes/network** (M,P) ([Mary/John/Mike/Geoff](#))
- 11 ☐ Conduct field work analysis for on-street & off-street options of identified preferred routes/network including; signage, pavement markings, re-striping (M,P) ([Mary/John/Mike/Geoff](#))
- 12 ☐ Perform an evaluation of identified preferred routes/network; Bicycle Level of Safety (BLOS) / Pedestrian Level of Safety (PLOS) with LIB on-line calculator (P) ([Mike/Geoff](#))
- 13 ☐ Perform an evaluation of identified preferred routes/network; “Sidepath Suitability Score” (SSS); (P) ([Mike/Geoff](#))

### Pending Projects

- 14 ☐ Recommend adoptive measures for local municipal entities (Village, Township, District) to require standardized built-in trails with all new development and roadway *re-paving/stripping projects* as they are being planned and considered (O) ([Mike/Geoff/EEI](#))
- 15 ☐ Implement Industry Standards & Guidelines; AASHTO Guide for the Development of Bicycle Facilities & Manual on Uniform Traffic Control Devices (MUTCD) New Version – Dec 2009 as a tool for standardization (O) ([Mike/Geoff/EEI](#))



- 16 ☐ Determine local policy inclusion such as; National Highway Institute / Federal Highway Administration NHI / FHWA's "Accommodating Bicycle and Pedestrian Travel" policy guidance (2000), Complete Streets (O) (Mike/Geoff/EEI)
- 17 ☐ Create a bicycle & pedestrian **preferred routes/network** (brochure/map) to be internet accessible with links to the Village, Township & District that may be updated similarly to the process for the Kane County Bike Map but at the local level and updated as necessary (M) (John)
- 18 ☐ Secure grant opportunities or other funding measures for "low-hanging fruit" projects and implement on an annually on-going basis i.e. CMAQ, ITEP, RTP (Geoff)
- 19 ☒ Attend continuing education /life-long learning opportunities such as; Introduction to Bicycle Planning (LIB), monthly webinars with the Association of Pedestrian and Bicycle Professionals (APBP) <http://www.apbp.org/>, Designing Pedestrian Facilities for Accessibility (APBP), Soles & Spokes Workshops, Complete Streets Workshop, etc...(Mary/John/Mike/Geoff)
- 20 ☐ Incorporate Annual Bicycle & Pedestrian Connectivity Plan into Capital Improvement Program (CIP) on an annually reviewed basis (Geoff)
- 21 ☐ Consider the long-term goal for Sugar Grove to achieve status as a **Bicycle Friendly Community** (Mary/Sean)

Component Key:      Bike Plan = (P)      Various Maps = (M)      Various Ordinances = (O)

# Appendix 7

## Section 4: Goals and Objectives

### Community Facilities and Services

## Excerpts from Village of Sugar Grove Comprehensive Plan

14. Promote attractive detention basins and retention ponds at appropriate locations that contribute to the desired character and appearance of the Village and promote aquatic biodiversity.
15. Require stormwater management facilities to provide enough capacity to ensure that new development does not contribute run-off that increases the likelihood of off-site flooding or degrades water quality in surface or ground water systems.
16. Promote new or upgraded facilities and services for key groups within the community, including the elderly, teens, and the handicapped.
17. Seek grants and other sources of revenue from outside agencies and organizations that can be utilized to help maintain the provision of top quality municipal services, facilities and infrastructure within the Village of Sugar Grove.
18. Establish and maintain intergovernmental cooperation and agreements with nearby communities, other governmental agencies, and public and private agencies to improve and expand the range, quality, and efficiency of public services and facilities available to Sugar Grove residents.

### Parks and Recreation

#### Goal:

Promote adequate, well-designed parks, open spaces and recreational facilities designed to serve the needs of all segments of Sugar Grove's population.

#### Objectives:

1. Cooperate with Sugar Grove Park District, the Kaneland School District and Kane County Forest Preserve District so that recreational and open space lands can be acquired to fulfill the

- expanding needs of the Village of Sugar Grove.
2. Encourage the development of parks and recreational facilities next to existing schools and proposed school sites.
3. Require developers to provide active and passive recreation areas within walking distance of all new dwellings, designed to serve the needs of the residential community; update existing ordinances as needed to achieve this objective.
4. Develop a large public park, commons, or village green as a part of the new Town Center development to create a central gathering place and activity area for all residents of Sugar Grove.
5. Develop a multipurpose trail system, using existing rights-of-way, protected greenbelts, open space corridors, and easements to provide connections between subdivisions, schools, parks, shopping areas, public facilities, open spaces, forest preserves, and other multi-use trails in the area to ensure safe and convenient pedestrian and bicycle access to all park sites and recreational areas.
6. Undertake more extensive landscaping and "greening" programs along major street corridors.
7. Develop community-scale parks that are accessible from collector roadways, and near existing or planned residential subdivisions.
8. Require developers to equip parks in the first phase of their residential subdivisions, to ensure that commitments for open space and recreation are maintained, and provided in a timely fashion.
9. Encourage the Park District to continue to upgrade existing parks and recreational facilities; undertake





## Section 6:

### *Transportation Plan*

The primary purpose of the Transportation Plan is to establish the basis for a long-range system of roadways that efficiently supports existing and anticipated development. The Village should use the transportation plan to achieve the desired goals and objectives of the community, and to:

- a) Secure the rights-of-way for new roadways and trail systems prior to or concurrent with land development;
- b) Determine the impact of proposed developments on the area-wide transportation system;
- c) Work with land developers to provide the transportation improvements required to serve new development;
- d) Establish design standards for the various types of new roadways and pathways to be provided within the planning jurisdiction; and
- e) Anticipate the long-range financial requirements for transportation system improvements and establish the basis for funding support and assistance.

The transportation plan is illustrated on Figure 4.

#### *Functional Classification System:*

The Village of Sugar Grove is served by a system of roadways under the jurisdiction of the State of Illinois (IDOT), Kane County (KDOT), Sugar Grove Township, and the Village of Sugar Grove. Classifying the various roadways according to their function is an important element in the planning process. Not all roadways within Sugar Grove's Planning Area are intended to serve the same purpose, and, therefore, should not have the same design characteristics.

The two major considerations in functionally classifying roadways are: a) the level of access, and b) the mobility which they provide. There is an inherent conflict in

addressing the need for a roadway to provide mobility, while allowing for adequate access to abutting properties.

Regulating the number of driveways and side streets is necessary on arterials to enhance their primary function of mobility. Conversely, the primary function of local roadways is to provide access, the implementation of which causes a limitation on mobility. Therefore, the extent and degree of access control is a significant factor in defining the functional category of a roadway.

Four functional classifications are recommended for public streets within Sugar Grove's Planning Area, as discussed below and illustrated in Figure 4.

#### *Expressways/Limited Access Highways*

Interstate highways provide access to destinations beyond Sugar Grove and the surrounding region. Their limited number of access points and physical design permits travel at higher speeds, and they are generally used for travel over longer distances than are the other classifications. The Federal Highway Administration has jurisdiction over the nation's interstate highway system.

*East West Tollway (I-88)* traverses the northern section of Sugar Grove's Planning Area. The expressway provides convenient access to the regional transportation system. The East-West Tollway is currently the only existing expressway within the Planning Area.

The *Prairie Parkway* is a proposed limited access highway connecting I-88 to I-80. The project is currently in its planning phases. A Corridor Protection Study was completed in 2002, to protect the anticipated right-of-way from development. The Village should be actively involved in the Parkway Study to ensure the best interests of the Village are considered. The Prairie Parkway currently serves as the Planning Area's western boundary.

### *Arterials*

Principal arterial routes serve the primary centers of activity within the Village. They are generally characterized by the highest traffic volumes and the longest trip lengths. They are roadways which have intercity continuity, regional importance, and provide reasonably continuous routes through the Village. For the purpose of this Plan, major arterials are roads that typically carry traffic volumes greater than 12,000 vehicles per day (vpd), and are usually under the jurisdiction of the state or county governments.

There are two arterials within the Village: Illinois Route 56/US Highway 30, and Illinois State Route 47. These principal arterial streets provide convenient access to nearly all points within the community, and help connect Sugar Grove to Interstate 88 and adjacent municipalities.

Although congestion has not been identified as a concern by the community, additional capacity will be needed in terms of widening, left turn lanes and coordinated traffic signals as the community continues to develop. Standards for setbacks and access controls are needed to reduce negative impacts of future development along these major roads.

Improvements are also needed to link these principal arterials to various neighborhoods and activity areas within the Village. The Village should connect principal arterials, other arterials and collectors. Improvements to these roads must be approved by the Illinois Department of Transportation.

As improvements are made to arterial roadways, sidewalks and/or bike trails should be installed within the right-of-way along both sides of the streets.

### *Collectors*

Collector streets provide both property access and traffic circulation within residential neighborhoods and commercial and industrial areas. Collectors differ from arterials in that they penetrate into these land use areas, distributing trips from the arterials throughout the area to their ultimate destination.

Development of a collector street system is critical to moving residents throughout the Village. A collector street system should be developed as a generalized grid throughout the Village, and connect all local streets to arterial roads.

Collector Streets in Sugar Grove should be designed to carry less than 12,000, but should accommodate more vehicles than a local street.

As improvements are made to collector roadways, sidewalks and/or bike trails should be installed within the right-of-way along both sides of the streets.

### *Local Streets*

Residential or local streets provide a means of access between a property and a collector or arterial street. Local streets are not designed to accommodate high volumes of traffic or traffic traveling at high speeds. Non-local motorists can create problems in neighborhoods along local streets and create concerns for safety.

The Village should discourage cut-through traffic through the development of a collector and arterial street system as identified in Figure 4. Collectors and arterials will provide a faster and more direct route of travel to most destinations and should be the preferred option by motorists. Local streets should be protected from high traffic volumes. Non-local, "cut-through" and commercial traffic on local streets should be minimized.



## Appendix 7 (continued)

# ***Excerpts from Sugar Grove Park District Master Plan & Citizen Survey***

### **EXECUTIVE SUMMARY**

#### Mission Statement:

The mission of the Sugar Grove Park District is:

*“To provide residents and guests opportunities to experience the benefits of parks and recreation.”*

#### Introduction:

This document provides a guideline for park, recreation, and open space development in the Sugar Grove Park District over the next decade. The master plan was developed in accordance with the Village of Sugar Grove's Comprehensive Plan, which was adopted in 2005. The plan also has taken into consideration the resident's opinions about the community as identified in the 2007 Citizen Survey administered by the National Research Center and the International City/County Management Association. The overall planning effort extended beyond nine months and involved input from many sources including focus groups, public forums, a new independent resident survey, and staff interviews.

#### Purpose:

The Park Board of Commissioners wanted a comprehensive plan that was publicly driven and hired Planning Resources Inc. to oversee the development of the plan. The Sugar Grove Park Board commissioned the study for the purpose of creating a comprehensive park planning tool that will provide a guideline for future park development, acquisition, public needs assessment, and the effective mitigation of existing parks and facilities. This master park plan will provide a framework for priority setting, decision making, and budget preparation.

#### Background:

The Sugar Grove Park District has been providing the residents with parks and recreation services since April of 2003 when the residents passed a referendum to create a Park District. Prior to that date, the Village of Sugar Grove administered the park services in the community. Upon the creation of the Park District, the Village deeded over all fifteen of its park sites.

The Park District is currently comprised of nineteen parks, totaling 117.62 acres located throughout the community. The ratio of existing park land acreage per 1,000 population is approximately 12. Ideally the District should provide 15 acres per 1,000 persons for future populations. A detailed inventory of the facilities within the park system was conducted and the condition of the facilities evaluated, paying particular attention to handicapped accessibility standards in the older parks. Should the Park District pursue state acquisition and development grants, this will become an important factor in the approval process.

The park system is made up of three classifications of parks: community, neighborhood, and mini parks. The community contains major roads carrying heavy volumes of traffic and a railroad line, which limits the accessibility of some of the parks by pedestrian means. Biking/walking paths are being installed with subdivision developments. However, these efforts, being tied to development, lead to a fractured system community-wide. The Park District, in partnership with the Village, will need to provide the vision for the community for the installation of future segments to ensure a comprehensive biking/walking path system. A comprehensive look at the park classifications, their locations, and proposed future park locations is also included in this open space master plan.



The Park District initiated an in-house Open Space Master Plan in 2005 to update the one prepared by the Village in 1997. The 2005 plan focused on assessing the physical and financial condition of the Park District. The vision of the Park Board of Commissioners and the Executive Director moved the district to create a new plan focusing on future development. Recognizing the projected population explosion as a result of development in the area, the Park District will be challenged to meet the needs of new residents with different expectations...

## *Major Survey Findings*

- *Walking and biking trails, indoor fitness center, playgrounds, an outdoor swimming pool and golf course/driving range are most important facilities to respondents*

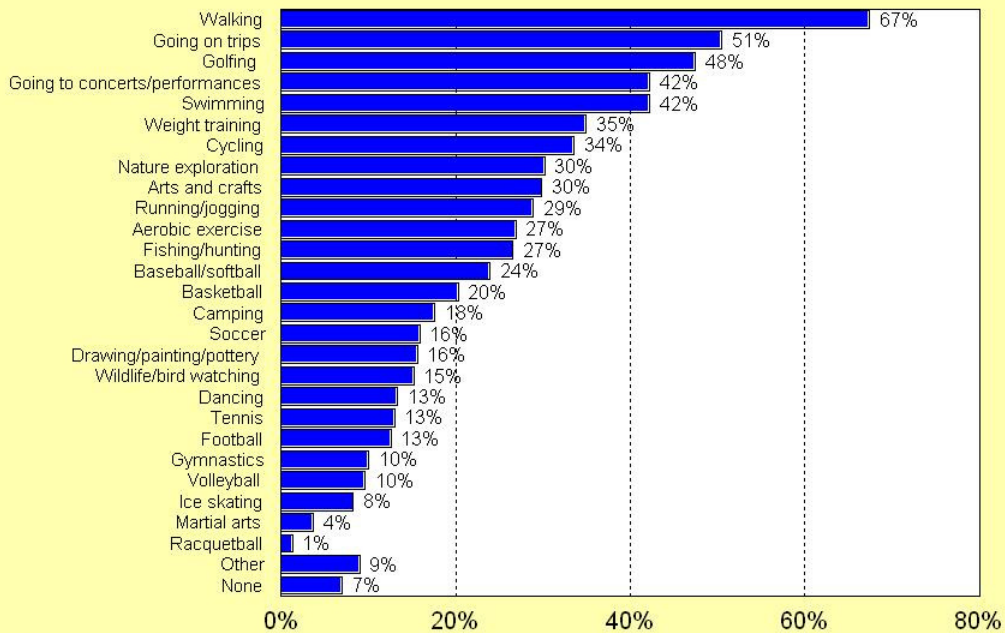
## *Major Survey Findings*

- *Development of a community center, walking and biking trails, and improvements to existing parks and recreation facilities are primary ways respondents would allocate \$100*



## Q7. Recreational Activities That Respondent Households Participate in

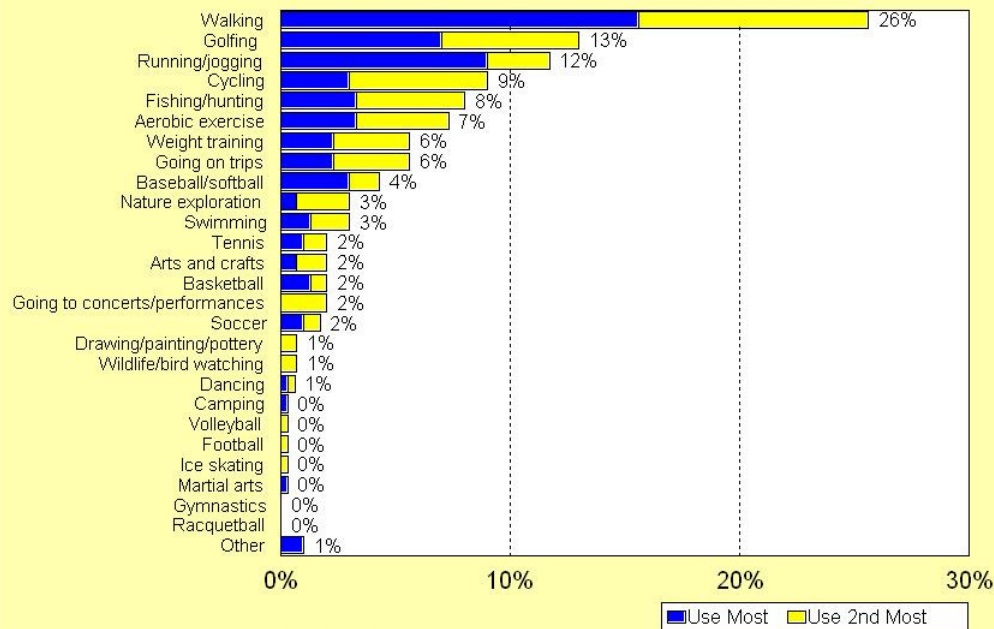
by percentage of respondents (multiple choices could be made)



Source: Leisure Vision/ETC Institute (November 2008)

## Q8. Recreational Activities That Respondent Household Members 19 to 54 Years Old Participate in the Most

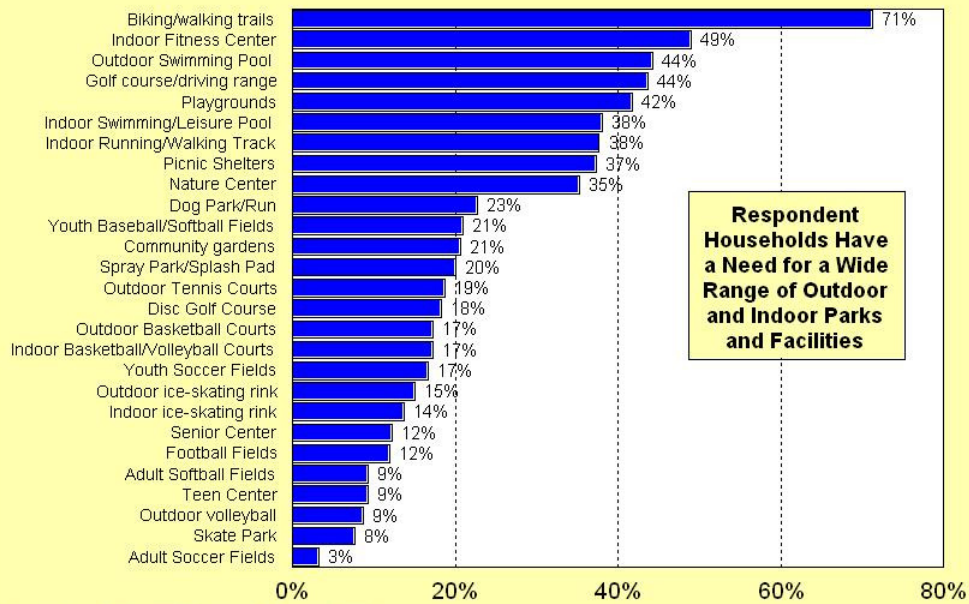
by percentage of respondents who selected the item as one of their top two choices



Source: Leisure Vision/ETC Institute (November 2008)

### Q13. Respondent Households That Have a Need for Various Recreation Facilities

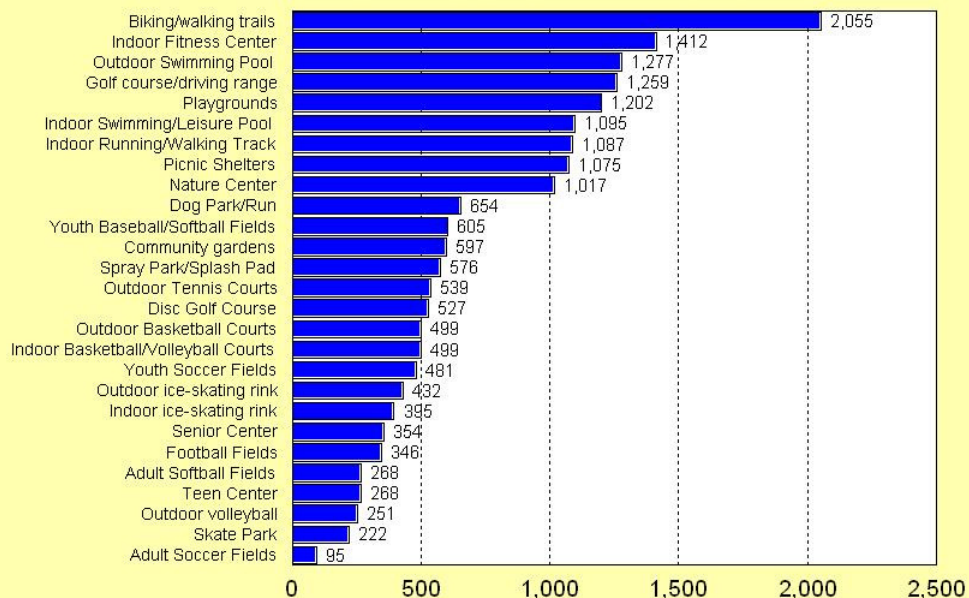
by percentage of respondents (multiple choices could be made)



Source: Leisure Vision/ETC Institute (November 2008)

### Q13a. Estimated Number of Households in Sugar Grove That Have a Need for Various Recreation Facilities

by number of households based on 2,882 households in Sugar Grove

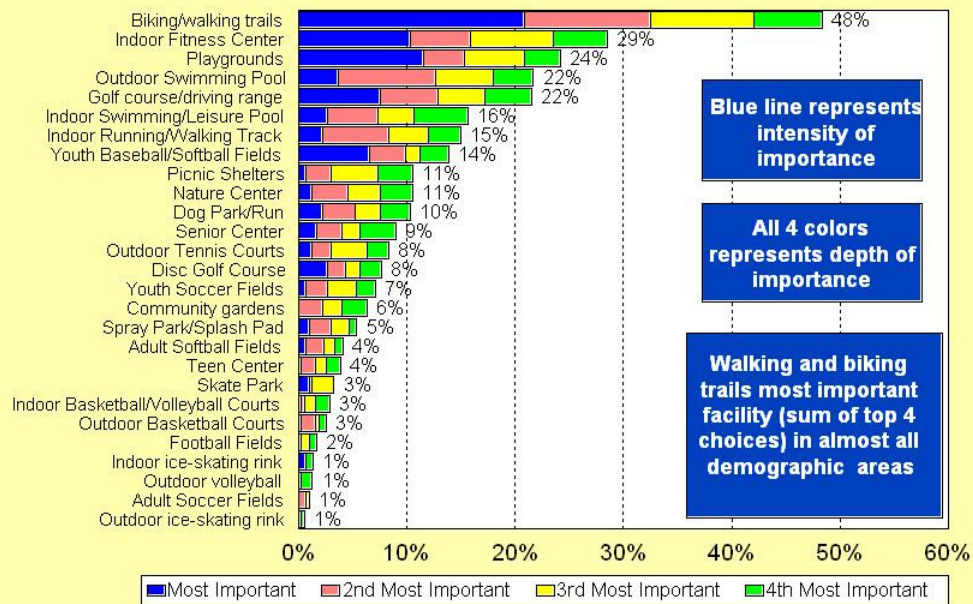


Source: Leisure Vision/ETC Institute (November 2008)



## Q14. Recreation Facilities That Are Most Important to Respondent Households

by percentage of respondents who selected the item as one of their top four choices



Source: Leisure Vision/ETC Institute (November 2008)

## Q21. How Respondents Would Allocate \$100 Among Various Parks, Trails, Sports and Recreation Facilities

by percentage of respondents



Source: Leisure Vision/ETC Institute (November 2008)