Walkabout Summary Report

Introduction

On May 5, 2014, eight participants met at Luray Middle School in Luray, Virginia to evaluate the walking and bicycling network around the middle school and the neighboring elementary School, and to identify potential improvements that could qualify for a Transportation Alternative Program (TAP) grant. Participants included representatives from Luray Elementary School and Luray Middle School as well as representation from the expected TAP grant sponsor, the Town of Luray. Participating Town staff included representatives from the planning department and the Town Manager's Office.

The Walkabout Team met for approximately two hours, which included a 30-minute pre-meeting at the middle school, a 20-minute observation of both schools' dismissal procedures, a 45-minute walk around the school and the nearby streets, and a 20-minute debrief to discuss findings and recommendations.

The Walkabout Team examined the streets surrounding the school for walking and bicycling conditions and opportunities. The table below summarizes the characteristics of the nearby streets:

Walkabout Streets

Walkabout Route: Luray Avenue – Hawksbill Heights Drive – Linden Avenue

Street	Number of Lanes	Road Width*	Lane Markings	Sidewalk width and continuity, if present*
Luray Avenue (east of Blue Ridge Avenue)	2	24 feet (13.5 feet westbound & 10.5 feet eastbound)	Centerline	4 feet (north side, between Blue Ridge Ave & Amiss Ave)
Luray Avenue (in front of elementary and middle schools)	2	37 feet (23 feet westbound &14 feet eastbound)	Centerline	4.75 feet (south side, between 1st St & Blue Ridge Ave)
Hawksbill Heights Drive	2	21 feet (10.5 feet each)	Centerline	None
Amiss Avenue	2	27 feet (13 feet southbound & 14 feet northbound)	Centerline	4.5 feet (east side)
Linden Avenue (near school)	2	22 feet (11 feet each)	Centerline, edgelines	None
Linden Avenue (near trail entrance)	2	30 feet (14 feet & 16 feet)	Center line, edgelines, trail center line	8 feet (trail north side, between Route 340 and trail entrance)
Blue Ridge Avenue	2	21 feet (10.5 feet each)	None	3 feet (east side)
1st Avenue	2	21 feet (10.5 feet each)	None	4 feet (east side)
2nd Avenue	2	21 feet (10.5 feet each)	None	None

*Street and sidewalk widths are approximate

Existing conditions

School location

Luray Elementary School is located at the intersection of 1st Street and Luray Avenue; however the main entrance to the school is on 2nd Street, one block south of Luray Avenue. Luray Middle School is across from the elementary school on 1st Street. Similar to the elementary school, the rear entrance to the middle school is on First Street. The front entrance of the middle school can be accessed by Linden Avenue or Cliffside Drive, east of Hawksbill Heights Drive.

The schools are located in a neighborhood setting and over half of the students live within two miles of the school. Over a third of students live within one mile of the school, which is considered to be a walkable distance for elementary and middle school students. The Walkabout Team suggested that infrastructure improvements and a Safe Routes program could lead to a significant number of students walking to school.

The schools are also approximately one-third of a mile from the entrance to the Hawksbill Greenway, a shared use trail that follows the Hawksbill Creek and runs through Luray's center of town.

Student travel to school mode, logistics and processes

The Walkabout Team observed dismissal from the intersection of First Street and Luray Avenue. The majority of students travel to and from school either by riding the school bus or by traveling in a family vehicle. Approximately 30 students were observed walking home from school, the team took note of their walking routes and also observed the bus dismissal process.

Both schools dismiss students at 3:15 p.m. Students riding the bus are picked up at the rear entrance of each school, and buses pick up elementary and middle school students together. Students riding in family vehicles are picked up at the schools' front entrances, where a student pick-up line is organized for each school.

Among students who walked home from school, the Walkabout Team observed Middle school students using a sidewalk leading from the side of the school to Luray Avenue and elementary school students using the rear exit of the school to access the sidewalk on First Street, walking toward Luray Avenue. A police officer was posted at the intersection of First Street and Luray Avenue directed traffic until the dismissal period ended.

SRTS program support

Both the school community and the Town of Luray support students walking and biking to school where conditions are safe and comfortable. While there are limited sidewalks surrounding the school, the Town has identified opportunities for improvement in the Town's comprehensive plan. Additionally, the Town's investment in a four-mile shared use trail that ends near the schools suggests support for bicycling and walking, not only as recreation but also as an active transportation mode. The Town of Luray has also supported the extension of the shared use trail to the schools in its comprehensive plan. The Walkabout Team expressed the opinion that existing traffic speeds and lack of sidewalks influence a parent's decision to allow their children to walk or bike to and from school and efforts to calm traffic around the school would make the walking and bicycling environment more comfortable for students. They also noted that there is community support for connecting the shared use trail to the school as a means of increasing the number of students walking and bicycling to and from school.

Walkabout Summary

During the walkabout, the Team started on 1st Street and walked between the two schools to Luray Avenue, then walked west along Luray Avenue, then south along Hawksbill Heights Drive, and returned to the middle school by using Linden Avenue. See Map A for the Walkabout route.

Luray Avenue, originally designed to be the Town's main street, is wider than the other streets near the school. There is a sidewalk along the south side of the road between 1st Street and Blue Ridge Avenue and on the north side of the road between Blue Ridge Avenue and Hawksbill Heights Drive/Amiss Avenue. At the intersection of 1st Street and Luray Avenue, there is a ladder-style crosswalk on the south side of 1st Street and the west side of Luray Avenue. Also, at the intersection of Luray Avenue and Blue Ridge Avenue there are two ladder-style crosswalks on Luray Avenue. At both of these intersections, the curb ramps do not meet Americans with Disabilities Act (ADA) guidelines.

The Walkabout Team observed the intersection of Hawksbill Heights Drive at Luray Avenue, which is an irregularly shaped intersection with stop signs to the east and west, no traffic controls to the north and south, and no crosswalks. Sidewalks are present on the northeast corner of the intersection, on the north side of Luray Avenue and the east side of Amiss Avenue. The intersection has a large turning radius and the Team observed a vehicle turning at a speed perceived to be faster than the speed limit.

Hawksbill Heights Drive is a block west of the middle school and runs north and south. The road is approximately 21 feet wide and does not have sidewalks. The Walkabout Team conveyed that this street is a major travel corridor in Luray and that at intersections, stop signs are placed on the intersecting streets only, allowing cars to drive along Hawksbill Heights Drive without stopping. Additionally, the Team identified this street as potential barrier to safe walking and biking to school.

The Walkabout Team noticed that there are crosswalk signs and schools zone signs placed at 1st Street and Luray Avenue, Blue Ridge Avenue and Luray Avenue, and on Hawksbill Heights Drive; however, these signs were not consistent with each other nor do they conform to the Manual on Uniform Traffic Control Devices (MUTCD) guidelines. Additionally, there were no pavement markings to alert motorists to the fact that they are entering a school zone.

Key Barriers and Issues

<u>Incomplete sidewalk network</u>

Sidewalks are a necessary component to increase safety for students to walk or bike to school. Although there are sidewalks from each school to Luray Avenue and on portions of Luray Avenue, there is not a complete sidewalk network surrounding the school. Hawksbill Heights Drive, one of the main roads used to access the schools and downtown Luray, does not have sidewalks south of Luray Avenue. Luray Avenue, another main road for accessing the schools, does not have a continuous sidewalk.

Additionally at the intersection of Luray Avenue and Blue Ridge Avenue, the sidewalks do not connect to the existing crosswalks. The disconnect between the sidewalks and crosswalks should be addressed to meet ADA guidelines and to create a more comfortable walking experience for all pedestrians.

Finally, there are no sidewalks along Linden Avenue, which connects the Town's main pedestrian and bicycle route – the Hawksbill Greenway – to the middle school. The lack of sidewalks, along with the vegetation and curves of road, do not make a comfortable pedestrian or bicycling environment.

Inconsistent school zone signage and missing pavement markings

Along Luray Avenue there are various signs to remind motorists to be aware of pedestrians; however, these signs are not consistent with the current MUTCD guidelines are not consistent with each other. Additionally, there are no school zone pavement markings on Luray Avenue or Hawksbill Heights Drive.

Intersection: Hawksbill Heights Drive and Luray Avenue

This is a four way intersection with stop signs on the east and west approaches. North of this intersection Hawksbill Heights Avenue is named Amiss Avenue and east of this intersection Luray Avenue is named Jamison Road. This intersection is used when traveling between the schools and downtown Luray as well as for accessing homes northeast of the schools. There are no crosswalks crossing any approach to the intersection. There are no sidewalks on the south or east approaches of the intersection; however, there is a sidewalk on the west side of Amiss Avenue which connects to the sidewalk on the north side of Luray Avenue. Each sidewalk is about four feet wide, but neither has a buffer separating it from the street.

The intersection at Hawksbill Heights Drive and Luray Avenue is wide and can be difficult to navigate for pedestrians. This intersection is further complicated by the street geometry: Luray Avenue does not intersect Hawksbill Heights Drive at a right angle, which can make it easier for motorists to drive faster than the posted speed limit while turning from Amiss Avenue to Luray Avenue (and vice versa).

Hawksbill Heights Drive

Hawksbill Heights Drive lacks sidewalks along either side of this road and there are no crosswalks at any of the intersections, which can contribute to difficult crossing conditions for pedestrians. Also, this street is not stop controlled at any of the intersections near the schools, which can make it harder for pedestrians to cross and encourage faster vehicle speeds, reducing pedestrian comfort-levels.

Recommendations

Community Prioritized Infrastructure Projects

The following recommendations were identified by the Walkabout Team as the community prioritizes projects (see attached "Community Prioritized Recommendations" map). Luray Elementary School, Luray Middle School and the Town of Luray should focus on these projects in order to improve the comfort of the walking and bicycling environment around the schools. See Map B for the locations of community prioritized recommendations.

School zone signs

To improve motorist awareness of pedestrians at crossing locations, update pedestrian crossing signs to meet the current Manual on Uniform Traffic Control Devices (MUTCD) guidelines (S1-1 and W16-7P in MUTCD) at all existing crosswalks along Luray Avenue and Hawksbill Heights Drive.

Update school zone signs (S1-1 and S4-7P in MUTCD) to notify motorists of the upcoming school zone. Place school zone sign assemblies at the following locations to help inform motorists that they are within the immediate vicinity of the schools:

- Luray Avenue westbound, east of 2nd Street
- Luray Avenue eastbound, west of Blue Ridge Avenue
- Hawksbill Heights Drive northbound, south of Linden Avenue
- Hawksbill Heights Drive southbound, north of Hillcrest Drive
- Linden Avenue eastbound, west of Hawksbill Heights Drive

School zone pavement markings

In addition to school zone sign assemblies, install school zone pavement markings to provide an additional cue to motorists to be aware of students walking and bicycling in the area. Place the pavement markings in the following locations to reinforce awareness of the school zone:

- Luray Avenue westbound, east of 2nd Street
- Luray Avenue eastbound, west of Blue Ridge Avenue
- Hawksbill Heights Drive northbound, south of Linden Avenue
- Hawksbill Heights Drive southbound, north of Hillcrest Drive
- Linden Avenue eastbound, west of Hawksbill Heights Drive

Shared-use path extension

In order to create a direct route to the school and improve access from the north, extend the Hawksbill Greenway along Linden Avenue. The Town of Luray suggested extending the Hawksbill in its 2013 comprehensive plan and has developed conceptual designs of the extension.[1] The existing lack of sidewalks and limited sight lines on Linden Avenue can make pedestrian and bicycle travel uncomfortable, particularly for younger students, and acts as a barrier between the schools and the existing Greenway.

[1] Luray's Town Plan 2013: Beyond the Bicentennial. Town of Luray, 2013. Page 63-64.

Additional Infrastructure Projects

Several additional infrastructure projects address concerns that were raised by the Walkabout Team, but were not identified as the community prioritized project. These recommendations can be viewed in the attached "Additional Recommendations" map and should be considered in future plans to improve the safety of walking and bicycling in Luray. See Map C for locations of additional recommendations.

Curb Extensions

Curb extensions on Luray Avenue at 1st Street would contribute to calming traffic in the area. Luray Avenue is a wider street than others in the area and vehicles can travel at speeds above the 25 mile-per-hour limit. Also, automobiles parked along Luray Avenue west of 1st Street can limit motorist visibility. Curb extensions could calm the traffic along Luray Avenue at the shared entrance for both schools, shorten the crossing distance for pedestrians, and increase visibility for motorists and pedestrians.

New or extended sidewalks

New and extended sidewalks in the immediate area around both schools would provide walking routes that are separated from vehicle traffic and encourage walking to and from school within the community. Additionally, at curbs and intersections, new and extended sidewalks would have curb cuts that meet Americans with Disabilities Act (ADA) guidelines. Extending existing sidewalks or adding new sidewalks along the following routes would contribute to creating a comprehensive walking and bicycling network in Luray:

New sidewalks:

- Luray Avenue south side, between 1st Street and 4th Street
- Luray Avenue south side, between Hawksbill Heights Drive and Blue Ridge Avenue
- Hawksbill Heights Drive east side, between Luray Avenue and Linden Avenue

Sidewalk extensions:

- Luray Avenue north side, extend to crosswalk on west side of Blue Ridge Avenue
- Luray Avenue south side, extend to crosswalk crossing Luray Avenue on east side of Blue Ridge Avenue
- Blue Ridge Avenue east side, extend to crosswalk crossing Luray Avenue on east side of Blue Ridge Avenue

Hawksbill Heights Drive/Amiss Avenue & Luray Avenue/Jamison Road intersection improvements

This intersection is listed as a *Future Action Item* in Luray's 2013 comprehensive plan.[2] The Town of Luray is working towards improving this intersection by extending the curbs at the southeast and northeast corners, as well as creating a separate right turn lane on Luray Avenue. The curb extensions would change the angle of the intersection, helping to reduce the existing wide turning radius which currently allows for higher-speed right and left turns onto Luray Avenue. According to the Walkabout Team, the town of Luray is already implementing the design and improvement of the geometry of this intersection.

[2] Luray's Town Plan 2013: Beyond the Bicentennial. Town of Luray, 2013. Page 57.

However, the existing upgrades do not include any additional pedestrian improvements. This intersection can be further improved for pedestrian use by adding high-visibility crosswalks on the east side of Luray Avenue and on the north side of Amiss Avenue. Additionally, pedestrian sign assemblies on Luray Avenue and Amiss Avenue should accompany the crosswalks.

Programmatic Recommendations

These programmatic recommendations are designed to work in conjunction with each other to instill safe walking and bicycling practices. Additionally, these strategies can complement future infrastructure improvements and support safe behavior as walking and bicycling to and from school increases. The recommendations are organized by four of the five Es of Safe Routes to School: Education, Encouragement, Enforcement, and Evaluation.[3]

Education

- Incorporate information on walking and bicycling to school in communications with parents. At the beginning of and throughout the school year, provide parents with information to clarify that Luray Elementary and Middle Schools support walking and bicycling to school. This communication can also be used to suggest ways that parents can support safe walking and bicycling, share tips on driving in the school zone, and promote the benefits of walking and bicycling to school.

- Hold a bicycle rodeo. Bicycle rodeos feature bicycling skills instruction, opportunities to practice riding, equipment inspections and helmet fittings. Bicycle rodeos also provide an opportunity to partner with local stakeholders such as local bicycle shops or law enforcement.

- Integrate pedestrian and bicycling safety education into the school curriculum. Pedestrian and bicycle safety education will ideally occur in advance of major walk or bike to school events, so that children are adequately prepared and have an opportunity to practice the skills they have learned. The Child Pedestrian Safety Curriculum produced by the National Highway Traffic Safety Administration (NHTSA) is an example a curriculum that might be used for this instruction.

Encouragement

- Participate in statewide walking and biking to school events. International Walk to School Day, held in October, and National Bike to School Day, held in May, are great ways to celebrate walking and bicycling to school. These events provide an excellent opportunity to not only get students walking and bicycling, but also to teach them the benefits of an active lifestyle.

- Establish a walking school bus and a bike train. Walking school buses and bicycle trains are adult-led groups of students walking or biking to school. The status and visibility of walking school bus and bike train participants

[3] The fifth E is Engineering, wg.

could be enhanced by giving participants reflective vests. Additionally, walking and biking routes can be created to direct students to intersections with adequate pedestrian and bicycling facilities.

- Hold monthly or weekly walk or bike to school days. Formalized walking and biking events once a month will carry over the momentum from International Walk to School Day and National Bike to School Day. These events will also provide opportunities to partner with different stakeholder groups and community associations throughout the school year.

- Install bicycle racks at each school. A bicycle rack is a simple way to let students know that bicycling to and from school is encouraged. The bike rack also provides space for students to park and lock their bike during the day.

Enforcement

- Participate in Crossing Guard Appreciation Month. In Virginia, Crossing Guard Appreciation Month takes place in February and gives schools, students, parents, and the community the opportunity to recognize their school's crossing guard and to thank them for the service that they provide. Schools can hold events recognizing their school's crossing guards and parents can nominate their crossing guard as one of Virginia's Most Outstanding Crossing Guards of the Year.

Evaluation

- Conduct Student Travel Tallies. Student Travel Tallies are a great way to get baseline data for student travel patterns. In Virginia, Student Travel Tally Week is in September and schools across the state record how students are getting to school. This data can then be used to identify trends and help guide the types of projects that a school's Safe Routes program should develop.

- Conduct Parent Surveys. Parent surveys are similar to student travel tallies in that they help a school get a better sense of how students are getting to and from school, but the parent surveys also help collect information on parents' attitudes towards walking and bicycling and reasons why they may or may not allow their children to walk or bike to school. Surveys should be completed towards the end of the school year and can be used in conjunction with student travel tallies.

Walkabout Photos

The following photos were taken by Walkabout participants and highlight walking and bicycle conditions near the schools. All of the walkabout photos are available at:
https://www.dropbox.com/sh/sy2ez99tdaycahx/AADd8iQ-jwAioyYFXrDAR4M2a

Intersection of Hawksbill Heights Drive/Amiss Avenue and Luray Avenue – on Amiss Avenue looking south. A lack of crosswalks and the irregular intersection geometry can make this crossing uncomfortable for pedestrians. The vehicle in the photo is making a right turn onto Amiss Avenue.

Between the Luray Middle and Luray Elementary Schools – on First Street looking north. Students from Luray Elementary School use the sidewalk to exit the school grounds. These students either walk home or to family vehicles parked on Luray Avenue.

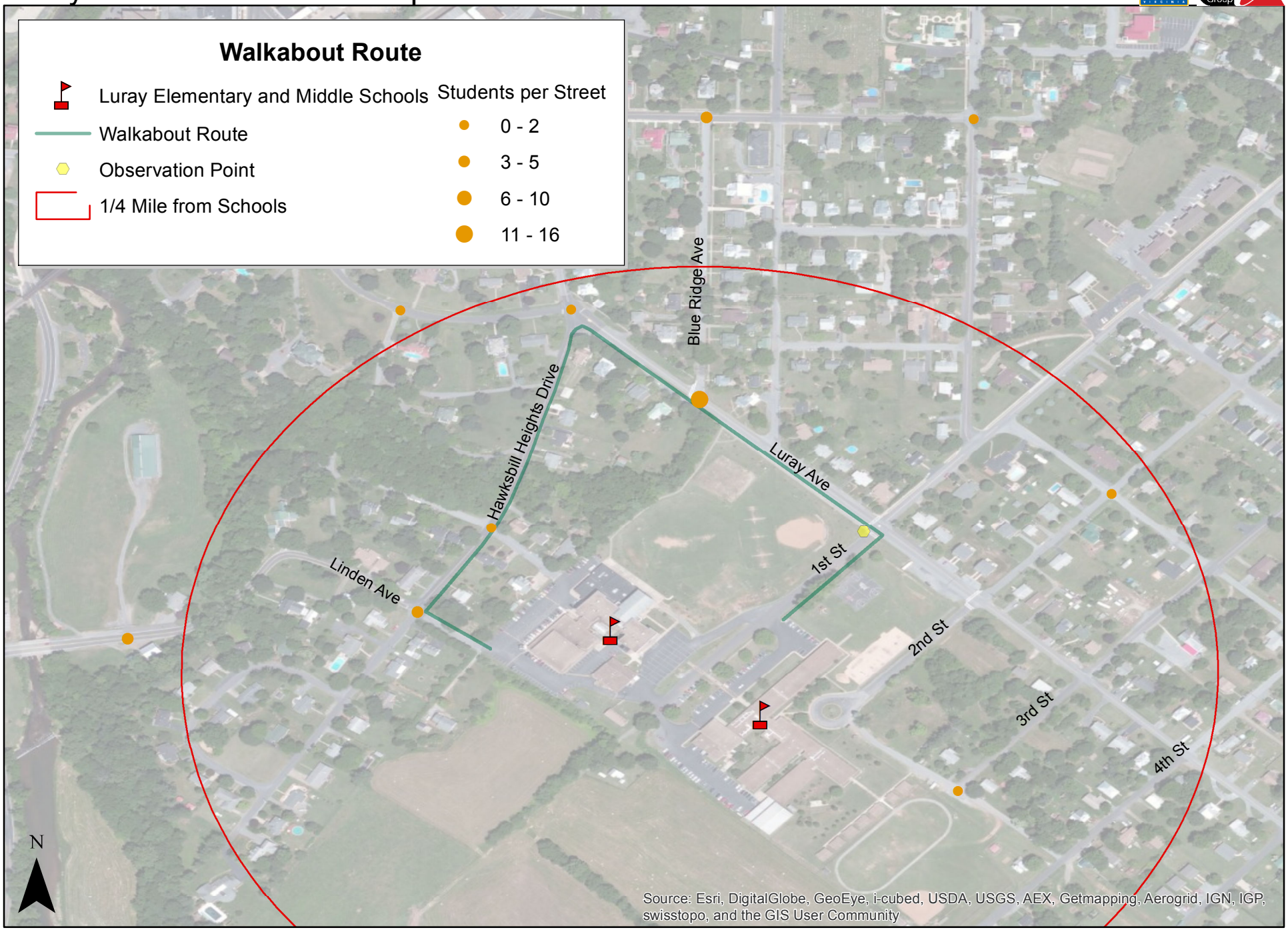
Intersection of Blue Ridge Avenue and Luray Avenue – on Blue Ridge Avenue looking north. A student and her parent use a crosswalk crossing Luray Avenue to walk home from the elementary school. This crosswalk helps remind motorists to be aware of pedestrians crossing the street, but it is not connected to the sidewalks.

Intersection of Second Street and Luray Avenue – on Luray Avenue looking east. Ladder-style crosswalks and pedestrian signage help make motorists aware of pedestrians crossing the street. However, these signs are inconsistent with each other and could be replaced with the neon yellow-green signs for higher visibility. Also, the lack of sidewalks along Luray Avenue can make pedestrians less comfortable when walking along the street.

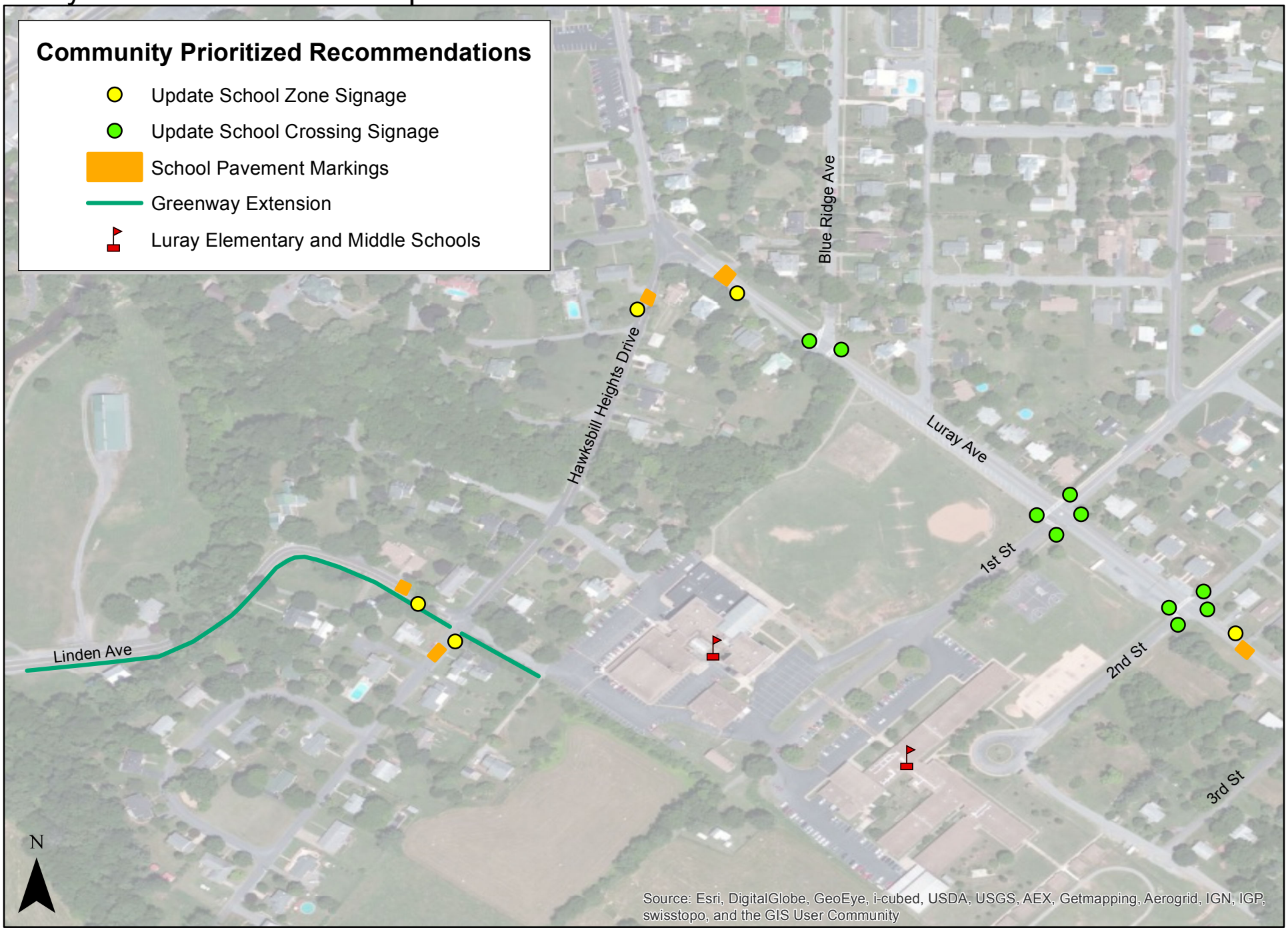
Intersection of Hawksbill Heights Drive and Cliffside Drive – on Hawksbill Heights Drive looking north. Hawksbill Heights drive lacks crosswalks and sidewalks, creating an environment that is less comfortable to students and pedestrians walking along or across the road. Luray Middle School is located one block east of this intersection.

Linden Avenue, at Hawksbill Greenway entrance – on Linden Avenue looking east. Linden Avenue connects the Hawksbill Greenway multiuse Trail to Luray Middle School. However, there are no pedestrian or bicycle facilities along this road.

Luray SRTS Walkabout - Map A



Luray SRTS Walkabout - Map B



Luray SRTS Walkabout - Map C