

Executive Summary: Bonney Lake Bicycle and Walking Audits

Prepared for the City of Bonney Lake by the Bicycle Alliance of Washington

February 2011

The City of Bonney Lake contracted with the Bicycle Alliance of Washington and Feet First to conduct bicycling and walking audits around six schools. The audits, funded through a Safe Routes to School grant, examined the roads surrounding the schools for safety and functionality for children walking or bicycling to school.

Four main areas for improvement arose during the course of the walking and bicycling audits. Each area for improvement is discussed below, followed by specific recommendations for improvement.

For details on recommendations for specific schools, refer to the original walking and bicycling audit documents. A map of recommendations is included at the end of this summary. An interactive version of the map is available online at <http://tinyurl.com/BonneyLakeAudit>.

Connectivity. Because most of the areas surveyed were laid out as disparate developments that incorporated winding roads and culs-de-sac, students can live within sight of school but still be obliged to travel over half a mile by roads to reach the school. Travel distance from home to school is one of the greatest factors preventing children from bicycling or walking to many of the schools.

Improving connectivity in these cases will require the city to focus on providing designated cut-throughs and shortcuts between neighborhoods. Many shortcuts already exist unofficially as beaten paths between houses and through green spaces.

Specific actions to take:

- Obtain permission or ownership of these undesignated shortcuts and convert them into city-approved connections.
- Fund projects that provide shortcuts and enhancements to bicycling and walking connectivity around schools.

Safety. Many of the informal paths discussed above are unlit and pass through wooded, isolated areas. The trails behind Mountain View Middle School and around Bonney Lake High School exemplify what can happen when trails are left unsupervised and unclaimed by the city. Although the trails have the potential to connect many neighborhoods to the east and southeast of Mountain View Middle School and Bonney Lake High School, students avoid them because of the illicit activities that take place there.

In conjunction with providing paved shortcuts between neighborhoods, the city should focus on improving and maintaining trails for legitimate users.

Additionally, nearly all the schools surveyed offer secondary entrances, but those entrances often lacked the lighting, infrastructure, and adult monitoring that primary entrances offer.

Specific actions to take:

- Improve lighting on campuses. Neither secondary entrances to the schools nor cut-throughs were observed to have good illumination for winter use at any of the schools.

- Involve the community. Encourage students around the schools to adopt their trails. Engage parents and school staff to monitor and help maintain the areas. For high school students, offer trail maintenance as a volunteer or Honor Society opportunity.
- Add visible police monitoring. Implement and advertise police presence during morning and afternoon school commuting times on trails known to foster illicit activities. For problematic trails such as those behind Mountain View Middle School, police presence could provide a sense of security for legitimate users.
- Evaluate crosswalks and modify as needed. All the schools had crossings near major roads, but most offered too few crossings or not enough signage to notify drivers of students on the roads. Add well-marked crossings where appropriate.

Accessibility. Nearly all the schools observed offered limited accessibility to wheeled vehicles such as bicycles or wheelchairs. Most schools had few or no curb ramps or inefficiently-located curb ramps. Children bicycling to school should be able to transition from road to sidewalk fluidly; lack of curb ramps impedes such movement.

Additionally, many of the shoulders were unpaved on roads that provide access to schools and paths from secondary entrances; at best they were graveled, but often they were simply beaten trails. Roads only rarely offered sidewalks or paved paths leading to schools. Lack of paved connections such as parallel paths, bicycle lanes, or sidewalks to schools creates an obstacle for pedestrians and cyclists.

Specific actions to take:

- Evaluate all schools for curb ramp placement and ADA compliance. Add curb ramps at points where students might transition from sidewalk to road on the way to and from school.
- Provide paved access to the school from the secondary entrances.
- As funding allows, improve sidewalk connectivity and add bicycle lanes or parallel paved paths, particularly around middle schools and high schools.
- Complete the projects laid out in the Non-Motorized Transportation Plan, many of which will resolve issues observed in the audits.

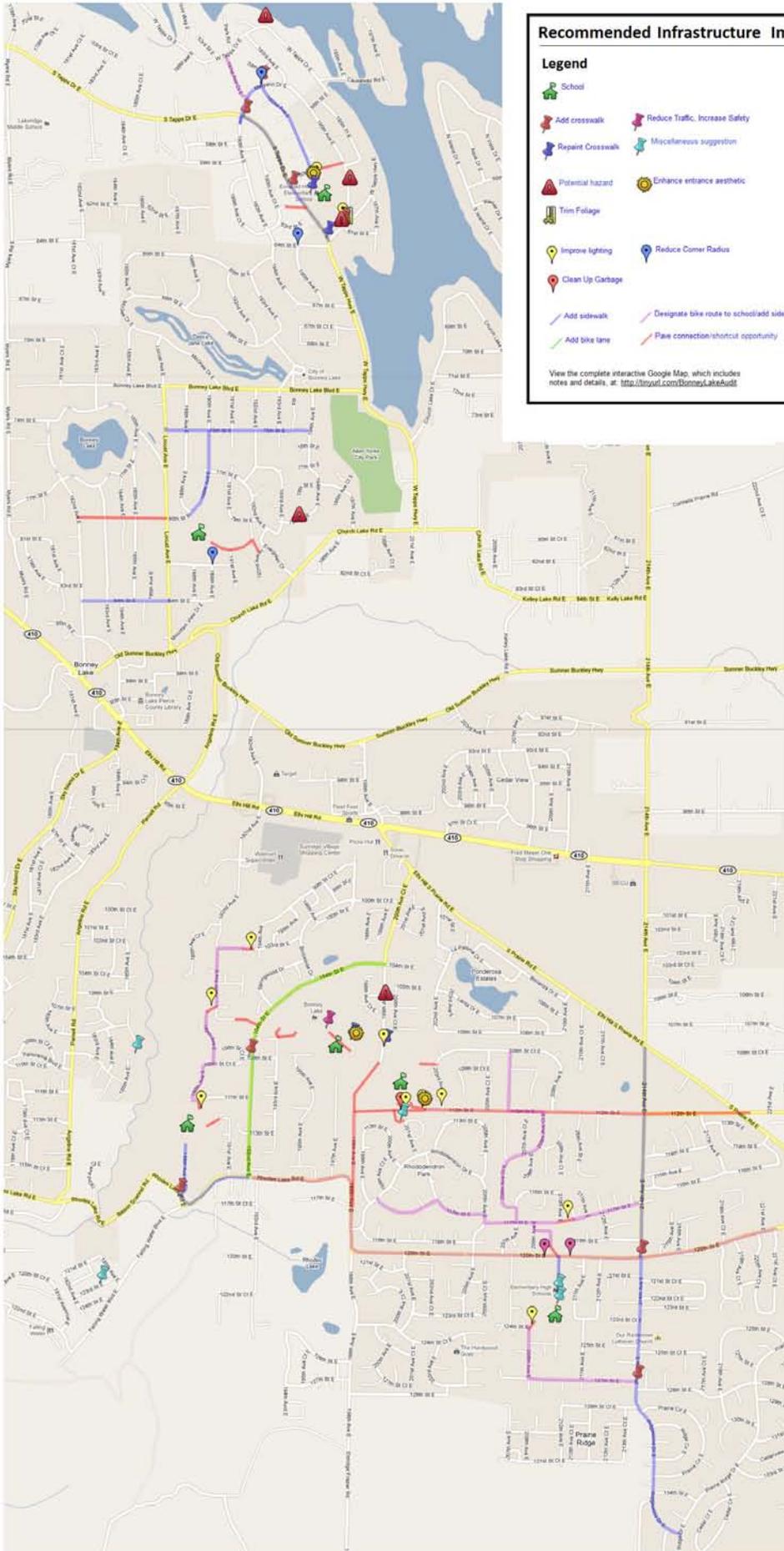
Note: Although sidewalks are acceptable bicycle routes for young children, sidewalks are not a safe alternative for middle and high school students, who can ride bicycles faster than the design speed of sidewalks will support. Students in 5th grade or above are old enough to learn how to use bicycle lanes and similar bicycle infrastructure.

Routes. In many older neighborhoods, the streets are too narrow to accommodate the addition of a sidewalk or parallel paved path. These streets also tend to have poor sightlines and lighting. Where adding paths or sidewalks is not feasible, designating specific roads for pedestrian and bicycle use can provide students a safe route while also allowing drivers to avoid those roads during strategic hours.

Specific actions to take:

- Create designated walking and bicycling routes on roads. Mark roads with walk or bike route signs and educate parents and students about those routes. Expand the designated routes out to one mile for bicycling.

- Consider converting key roads to one-way streets, either permanently or during peak student commuting hours, with half of the road for motor vehicles and the other half configured for use by pedestrians and cyclists.
- Add pedestrian and bicyclist visibility signs. Most of the schools would benefit from better driver awareness of students' presence.
- Encourage land owners to keep trees and bushes trimmed away from the road, particularly on dangerous curves or designated walking and bicycling routes.



Recommended Infrastructure Improvements

Legend

- School
- Add crosswalk
- Repair Crosswalk
- Potential hazard
- Tim Foliage
- Improve lighting
- Clean Up Garbage
- Add sidewalk
- Add bike lane
- Reduce Traffic, Increase Safety
- Miscellaneous suggestion
- Enhance entrance aesthetic
- Reduce Corner Radius
- Designate bike route to school/di sidewalk
- Pave connection/shortcut opportunity

View the complete interactive Google Map, which includes notes and details, at: <http://tinyurl.com/BonneyLakeAudit>

2011

Bonney Lake Walking Audits



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**Washington State
Department of Transportation**



February 8, 2011

Executive Summary

In 2009 the City of Bonney Lake was granted a Safe Routes to School grant from the Washington State Department of Transportation. As part of its administration of the grant, the City contracted with Seattle-based non-profit organization Feet First to conduct walking audits, in order to identify challenges and community assets regarding walkability in the neighborhoods of six schools – Bonney Lake High School, Mountain View Middle School, Emerald Hills Elementary School, Bonney Lake Elementary School, Liberty Falls Elementary School, and Victor Falls Elementary School. Members of the community participated in the audits at Bonney Lake High School, Mountain View Middle School and Emerald Hills Elementary School, and their observations and proposed solutions were integrated into the audit reports.

The neighborhoods of these six Bonney Lake schools were observed to be suburban in nature, with associated disconnected street networks and general lack of pedestrian amenities. Some significant recent improvements, in particular new sidewalk stretches, were observed in most of the schools' neighborhoods, and these have made walking much safer. The street networks remains disconnected, though, and the circuitous routes required to walk to school likely dissuade many students from walking. Many of the recommendations herein therefore involve the creation and enhancement of cut-throughs to connect features like cul-de-sacs and dead-ends with other streets and directly with school grounds.

Many of the recommendations require some funding, but in many cases significantly less than most road construction. A gravel or paved cut-through connecting 192nd Street with 107th Street E, for example, would cost far less than the \$14 million street segment currently planned for this corridor, and could be put in place in the near future while funding for the street segment is identified. Some of the recommendations would require little funding and more commitment from school administration and teachers to bring to fruition. Creating more ownership, and increasing the safety of the trail segments at the southeast corner of Mountain View Middle School's grounds, for example, and at the southwest corner of Bonney Lake High School's grounds, could involve school art projects, biology lessons, and other means to engage the student body. Other actions recommended would involve the City's Police Department, for example in enforcing new parking regulations at Bonney Lake High School, keeping dogs on leash and noting whether drivers are adequately slowing down at intersections that have wide turning radii but would slow traffic down more with reduced turning radii.

The City undertook a highly successful speed limit enforcement campaign several years ago, and the benefits have been long-lasting. Highly courteous driving was observed, along with speeds within the speed limit. This campaign addressed the need many communities have of slowing down traffic and improving driver behavior. While walking audit reports often include many recommendations on improving driver behavior and slowing speeds, this was generally not a concern at the six schools observed.

The production of this report was a collaborative effort involving Feet First walking audit experts, city officials, law enforcement, school faculty and staff, parents, students, and other city residents. The intended audience for this report is these groups and other local stakeholders, as it will take a continued collaborative effort to adopt this report's recommendations into the City's Non-Motorized Transportation Plan, and to make the report's recommendations a reality.

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Safe Routes to School in Bonney Lake

Safe Routes to School (SRTS) is a growing movement to encourage and support “active commuting” on the part of school children and families. At the intersection of public health, public safety, education and transportation, SRTS helps communities create a balanced alternative to an automobile-centered culture. In 2009 Seattle-based nonprofit Feet First contracted with the City of Bonney Lake, which had applied for and been granted Safe Routes to School federal funds through the Washington Department of Transportation. The grant, in the amount of \$384,000, was awarded to fund programs at six schools in the Sumner School District. The project spans the “5 E’s” of SRTS: Education, Encouragement, Enforcement, Engineering and Evaluation.

These six walking audits identify and prioritize the next steps to leveraging funds for future projects. Additionally, the recommendations can be incorporated into the City of Bonney Lake’s update to its Non-Motorized Transportation Plan, anticipated to occur in 2013.

Methodology

Three of the six schools were chosen for community walking audits, and all neighborhoods around the six audited schools were observed and “ground-truthed” (comparing what is known from maps with what is observed on the ground) by bicycle on two all-day trips, one in December 2010 and the other in early January 2011. Notes and photographs were taken on pedestrian infrastructure-related assets and issues. Based on these observations, walking audit points of interest were chosen and maps were prepared for the community walking audits.

Dates were set for the community walking audits based on availability of the City’s Community Services Director, Gary Leaf, and of our primary school contacts. Dates chosen were January 19 for Emerald Hills Elementary, January 20 for Mountain View Middle School, and January 24 for Bonney Lake High School. The community walking audits started at the end of the school day, and lasted 1.5 hours. Audit participants were given maps on clipboards, and digital cameras. They recorded their observations directly onto the maps, and took photographs to go along with their written observations. Their comments and the cameras were collected after the audit, and these records were integrated into the final reports.

Community Participation

In order to gather participants for the community walking audits, contacts were made with the three community audit schools. The principals at Emerald Hills Elementary and at Mountain View Middle School- Chuck Eychaner and Curtis Hurst, respectively- volunteered to gather a group of participants, and the Learning Specialist at Bonney Lake High School – Grant Sulham, who also chairs the City’s Planning Commission – gathered participants at his school. Feet First created fliers (see Appendix 1) and emailed these to the school’s main contacts, to Gary Leaf at the City of Bonney Lake, and to members of the City Council.

Community Walking Audit participants included:

Emerald Hills Elementary:

- Emerald Hills Elementary Principal - Chuck Eychaner
- Emerald Hills Elementary Safety Patrol Coordinator – Karen Harris
- City of Bonney Lake Community Services Department Director – Gary Leaf
- Feet First Executive Director – Lisa Quinn
- Feet First Walking Audit Consultant – Sander Lazar

Mountain View Middle School:

- Mountain View Middle School Principal – Curtis Hurst
- Mountain View Middle School teachers – Mandy Grams, Carrie Rice, and Alex Walker
- Mountain View Middle School parents – Cary Baker and Carina Trimm
- Mountain View Middle School students – Tyler Barger, Alex McNeely, and Cassie Selle
- City of Bonney Lake Community Services Department Events Coordinator – David Wells
- Feet First Safe Routes to School Community Organizer – Will Beard
- Feet First Walking Audit Consultant – Sander Lazar

Bonney Lake High School:

- Bonney Lake High School Learning Specialist/City of Bonney Lake Planning Commission Chair – Grant Sulham
- City of Bonney Lake City Councilman – Dan Swatman
- City of Bonney Lake Police Officer – Daron Wolschleger
- City of Bonney Lake Community Services Director – Gary Leaf
- Bonney Lake resident – Sean Corwin
- Bonney Lake High School parent – Maureen Evans
- Bonney Lake High School students – Carly Mingo, Taylor Foster, Sierra Espinal and Madisen Liddle
- Feet First Executive Director – Lisa Quinn
- Feet First Walking Audit Consultant – Sander Lazar

“Thank you so much for the opportunity to work with you....We look forward to implementing many of these suggestions, in hopes that we can increase the number of students who walk and bike to school.”

*Thank you again!
Sincerely, Karen Harris
Safety Patrol Advisor,
Emerald Hills
Elementary*

All walking audit participants were emailed a draft copy of this report and given the opportunity to review it and provide further input, which was then integrated into the report.

Integration of Feet First Walking Audits with the City's Non-Motorized Transportation Plan (NMTP)

Lack of street connectivity was observed throughout the City of Bonney Lake, and was determined during these walking audits to likely be the greatest barrier to walking. Most students are dropped off from automobiles, or drive themselves in the case of Bonney Lake High School, and this is understandable considering that most students considering walking would be required to walk more than .5 miles and most often much longer. Many recommendations, therefore, involve the enhancement of existing neighborhood shortcuts and the creation of more official shortcuts (or "cut-throughs") through the neighborhoods near the school and directly accessing school grounds. Part 4 of the City's downloadable Non-Motorized Transportation Plan includes the Washington State Department of Transportation's "School Administrator's Guide to School Walk Routes and Student Pedestrian Safety," and in this document can be found one mention of providing shortcuts, one page 38:

Consider Easements and Shortcuts: Use easements with walkways through parks or other available areas only after evaluating safety. Check the information from the local law enforcement agency to ensure that the area is not known for drug trafficking or other illegal activity. Physically walk the route to ensure no other concerns are present on the route. Do not endorse a "student short cut" through private property.

Safety concerns are paramount, and are an current concern on existing shortcuts. This is why enhancing the existing short-cuts by making them official paths and creating ownership of these areas by involving school administrators, teachers, parents and students will be important, as this efforts will help address these safety concerns.

These walking audits should act as a complement to the NMTP since they include recommendations of key corridors and locations likely to get high levels of use if official multi-use community connectors can be put in place of the existing unofficial footpaths. Adoption of these recommendations when the NMTP is updated in 2013 would be a significant first step toward establishing more official multi-use community connectors.

Further Resources

Resources on the subjects of community connectivity, Americans with Disabilities Act requirements, and benefits of pedestrian-friendly communities can be found in Appendix 2.

Emerald Hills Elementary School Walking Audit



Introduction to the School and Neighborhood: Emerald Hills Elementary is in an older suburban neighborhood close to Lake Tapps. In recent years there has not been much turnover in the neighborhood, resulting in an aging population. The population of the school, at 650 a decade ago, is now at 400 students. Most streets are fairly narrow and almost none have sidewalks. , Similar to the rest of Bonney Lake, drivers are generally courteous and move at reasonable speeds. Despite the fairly safe walking conditions, only an estimated fifty students walk to school, according to principal Chuck Eychaner. A significant factor contributing to this low rate is the lack of connectivity between the school and nearby streets, and between streets. With this walking audit, the school is continuing to build on its annual walk-a-thon and a successful education campaign implemented in the spring of 2010 that vastly improved the school’s parent pick-up and drop-off situation.

Walk Audit Route: The walk route started at the school during pick-up, continued down S Tapps Drive E to its intersection with W Tapps Hwy E where it turned east, then north for several minutes up 195th Ave E. The route then retraced its steps back to the school, where participants observed an old path through the woods, to the north school entrance, and finally back to the school’s entrance.

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Top Observations:

1. Crosswalks through the parking lot do not line up.
2. The north entrance looks uncared for and uninviting.
3. The crosswalk at intersection of is faded where tires travel over it.
4. Quite a few dogs off leash were observed, and may be dissuading some children from walking to school.
5. Wide corner radii exist at several intersections throughout the neighborhood.
6. The school is not well connected to the neighborhood; the walk to school take much longer than necessary.

Participants: This walking audit was joined by five people representing the following groups and stakeholders:

- Emerald Hills Elementary Staff and Principal
- City of Bonney Lake Community Services Department Staff
- Feet First

Special Thanks Go To: Chuck Eychaner, Principal of Emerald Hills Elementary School

Top Recommendations for Walkability:

- Re-paint the parking lot’s crosswalks to more clearly and safely lead through the parking lot.
- Provide landscaping, gardening in planter boxes to increase the visual appeal of the north entrance. Paint a mural on the blank wall near the north entrance, and integrate the painting and gardening and public space/safe routes into school lessons.
- Work with the City of Bonney Lake to have the crosswalk at S Tapps Drive E and W Tapps Hwy E re-painted, with hatches placed such that tires are less likely to run over it. This will increase the crosswalk’s longevity.
- Ask neighbors to place their dogs on chains, especially those with particularly threatening dogs.
- Work with enforcement officers to monitor intersections where drivers tend to take fast turns without adequately slowing down, and where it is a problem, work with traffic engineers to have the corner radii tightened up.
- Investigate land ownership at key corridors, across S Tapps Dr E from the school and in the forest to the school’s northeast, that could enable better connection to the neighborhood, and work on creating official trail connections.



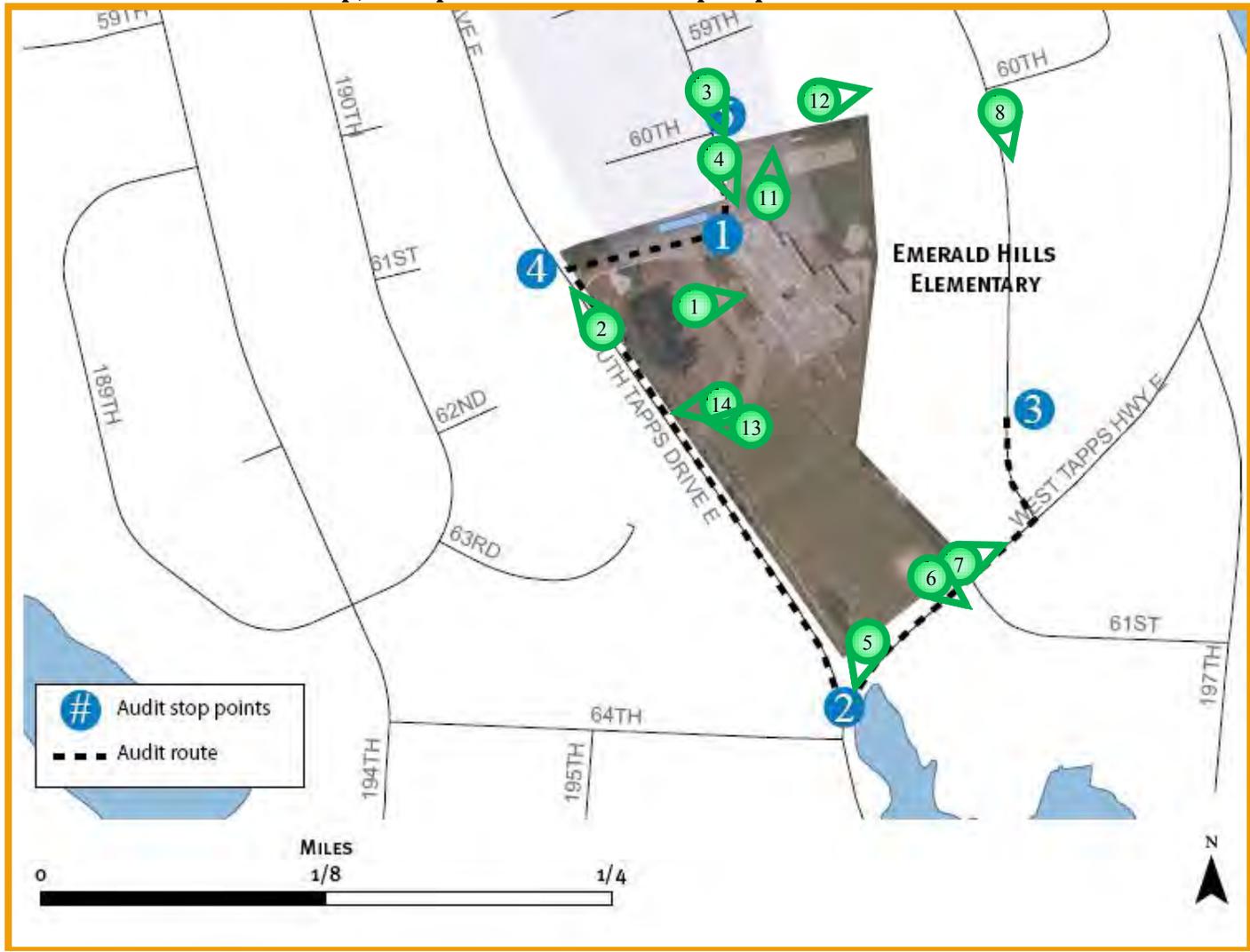
Organizers: Feet First
Audit Leaders: Lisa Quinn and Sander Lazar
Write-up: Sander Lazar
Reviewed by: Lisa Quinn, Executive Director
Audit Date: January 19, 2011

Safe Routes to School Emerald Hills Elementary School

Safe Routes to School (SRTS) is a growing movement to encourage and support “active commuting” on the part of school children and families. At the intersection of public health, public safety, education and transportation, SRTS helps communities create a balanced alternative to an automobile-centered culture. In 2009 Seattle-based nonprofit Feet First contracted with the City of Bonney Lake, which had applied for and been granted Safe Routes to School federal funds through the Washington Department of Transportation. The grant, in the amount of \$384,000, was awarded to fund programs at six schools in the Sumner School District. The project spans the “5 E’s” of SRTS: Education, Encouragement, Enforcement, Engineering and Evaluation.

This community walking audit, conducted at Emerald Hills Elementary School on January 19, 2011, identifies and prioritizes the next steps to leveraging funds for future projects. Additionally, the recommendations can be incorporated into the City of Bonney Lake’s update to its Non-Motorized Transportation Plan, anticipated to occur in 2013.

Walk Audit Detail Map, with photo numbers and perspectives



3 Photo Number and Perspective

Walking Audit Field Notes

Item Key

Issues and action items are labeled with four color-coded icons that identify what action is recommended to make improvements. Additionally, as most of the action recommended is in the public domain, each item includes a specification for the category area that can facilitate coordination with or by the appropriate local or state agency.

- ✱ - Emerald Hills Elementary can address this problem
- ☎ - Existing partners, programs or services can be tapped to make improvements
- 📄 - Policy change or new funding may be required to implement changes
- ⌘ - Informational item

Issues and Action Items

Item	Location	Description	Photo
<p>1</p> <p>☎</p> <p>📄</p>	<p>School parking lot</p>	<p>Crosswalks in school parking lot do not line up.</p> <p>Recommendation: Repaint the crosswalks so that they line up.</p>	
<p>2</p> <p>☎</p> <p>📄</p>	<p>On S Tapps Dr E, looking north</p>	<p>Sidewalk continues north along the school, then disappears at the point that the speed limit goes up to 35 mph. This makes walking along this stretch of S Tapps Dr E very dangerous, since it has no shoulder.</p> <p>Recommendation: Place a crosswalk either at the school's south or north driveways, along with a sidewalk or sufficiently wide gravel walkway on the west side of S Tapps Dr E. Ideally, a sidewalk would be placed on both sides of S Tapps Dr E north of this point, at least as far as Mayann Dr E.</p>	

Item	Location	Description	Photo
<p>3</p>    	<p>North pedestrian and bicyclist entrance, as seen from 192nd Ave E.</p>	<p>The school's north entrance from 192nd Ave E appears unfinished and uncared for. While this may not deter students from using this entrance, there is much that could be done to make this entrance more visually appealing, which could interest some students in walking who are currently driven.</p> <p>Recommendation: Involve students, teachers, and the community in envisioning a new look for this entrance, which could involve gardening, planting native species, an educational vegetable garden, a mural on the wall (which could depict students walking and biking to school) or whatever else is exciting to those involved in the envisioning process.</p>	
<p>4</p>    	<p>A closer view of the north entrance</p>	<p>This closer view of the large blank wall greeting those using the north school entrance shows how much space there is to put a painting on the wall.</p> <p>Recommendation: Look to Mountain View Middle School as an example of an outdoor painting done several years ago by the students as part of an art project, in their case painted on surface pavement. At Emerald Hills the students could be involved with painting the lower portion, and with envisioning what could be painted higher up.</p>	
<p>5</p>  	<p>Intersection of S Tapps Dr E and W Tapps Hwy E</p>	<p>This crosswalk is faded where vehicle tires pass over it.</p> <p>Recommendation: A repainting of the crosswalk should be mindful of automobile trajectory over it. A slight adjustment of the placement of individual hatch marks should prevent premature fading.</p>	
<p>6</p>   	<p>Intersection of W Tapps Hwy E and 61st St E</p>	<p>Children likely travel across this intersection, but there is no visual indication to drivers to look for students or other pedestrians.</p> <p>Recommendation: Paint a crosswalk at this intersection, and place a school zone sign on W Tapps Hwy E to the east of this intersection.</p>	

Item	Location	Description	Photo
<p>7</p>  	<p>Intersection of W Tapps Hwy E and 61st St E</p>	<p>There is a short, fairly sharp turn in W Tapps Hwy E right by the southwest pedestrian entrance to the school grounds. While not way out into the street, the tree shown here still hides students exiting the school grounds who may forget to look both ways.</p> <p>Recommendation: In addition to installing a crosswalk, it would be advisable to explain the situation to the resident on whose property this tree lives, and to ask them to cut back the branches. Alternately, if the branches are in the public right of way, it may be city's responsibility to trim back the branches.</p>	
<p>8</p>  	<p>At several locations around the neighborhood</p>	<p>Dogs off leash were observed in several locations in the neighborhood, often barking menacingly at us as we went by. This could frighten some children and deter them from walking, regardless of the actual degree of threat.</p> <p>Recommendation: Observe off-leash dogs in the neighborhood, and if threatening barking close to the street appears to be a common occurrence, consider explaining the situation to the dogs' owners and asking the owners to place their dogs on a leash, to erect a fence, or to keep the dogs in the back yard.</p>	
<p>9</p>  	<p>Corner of 192nd Ave E and Maryann Drive E</p>	<p>Wide turning radii at intersections are fairly common. This enables drivers to make fast turns, endangering pedestrians who may be present, including but not limited to Emerald Hills students.</p> <p>Recommendation: Speeding drivers were not observed during the audit. If speeding were to become an issue at some point, tightening up intersection corners like this could be considered as a means to slow drivers down, at least at intersections, which is precisely where the most accidents occur.</p>	
<p>10</p>  	<p>Corner of 195th Ave E and 64th St E</p>	<p>This is another example of a large turning radius, a design feature that makes right-turning drivers less likely to come to a complete stop since it is so easy to roll through. Large turning radii also make right-turning drivers more likely not to see automobiles, bicyclists and pedestrians approaching from the left, as it requires a larger look over the shoulder rather than a mere glance to the left.</p> <p>Recommendation: Observe drivers at these intersections, and if insufficient slowing is occurring, consider tightening up the corners.</p>	

Item	Location	Description	Photo
<p>11</p>  	<p>Northeast quadrant of the school grounds</p>	<p>This forest to the north of the school's back field would provide fantastic access to 195th Ave E and beyond, a trip of at least .5 mi + currently. This trip could be cut back to about 500 to 195th Ave E, making walking to school far more attractive to students living to the east.</p> <p>Recommendation: If this land is owned by the school, then it should be considered an ideal location for a new trail with access straight to the school. This could be a dirt trail, or gravel or paved, and could connect either to 192nd Ave E or directly to the northeast corner of the school grounds.</p>	
<p>12</p>  	<p>Trail in forest just north of the school grounds</p>	<p>There is currently a trail into the forest in the picture above, but it appeared to only access a couple properties and an informal dirt bike play area.</p> <p>Recommendation: Place a formal trail through this forest connecting to 195th Ave E. It is possible and encouraged to leave the dirt bike play area intact so those kids using that area could continue to enjoy it.</p>	
<p>13</p>  	<p>On the west side of S Tapps Dr E, right across from the school</p>	<p>There is a sign reading "Private Property/ No Trespassing" directly across S Tapps Dr E from the school. Karen Harris, the school's safety patrol coordinator, remarked that kids used to cut through the forest to access 190th Ave Ct E, a move that cut a walk of .5 mi + down to 500 feet +. The sign was put in place nearly a decade ago and has been a significant deterrent to walking.</p> <p>Recommendation: Investigate the potential for an official trail through this area. The land is apparently slated for development at some point, but no specific development plans were known to the audit participants. The land owner may be receptive to coordination on a multi-use trail accessing 190th Ave Ct E. Painting of a crosswalk would go along with a new trail.</p>	
<p>14</p>  	<p>On the west side of S Tapps Dr E, right across from the school</p>	<p>This is a close-up of the same sign shown above.</p>	

Contacts & Project Information

For more information about this report or Feet First, please contact:

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Feet First is a 501(c)(3) non-profit organization. Feet First promotes walkable communities through advocacy, community organizing, research, and education.

Mountain View Middle School Walking Audit



Introduction to the School and Neighborhood: Mountain View Middle School, with a student population of approximately 600, is in a residential neighborhood, about one mile south of WA State Highway 410. Hwy 410 is also called Elhi Hill Road, which is a commercial strip, and the northern boundary of the area from which Mountain View draws its students. The residential area is a mix of older and newer suburban developments, and housing types range from larger new houses to mobile homes. The area north and west of the school is predominantly newer development, and many of the streets have sidewalks. The areas to the east and south are a little older, and lack sidewalks. Just to the south of the school grounds is a narrow strip of forest with unofficial footpaths, where drug dealing and using is reported to happen. Just south of there is an older suburban development called Rhododendron Park, which is one of the poorer areas of the city. The street network around the school, like in most of Bonney Lake, is discontinuous, with many cul-de-sacs and dead ends. Mountain View Middle School is not well connected to its neighborhood.

Walk Audit Route: The walking audit route started at the school's main entrance, continued across the school grounds to the southeast entrance to the grounds, then west along the perimeter, south to investigate a footpath leading to 201st Ave Ct E in Rhododendron Park, then back to the school grounds and north along the eastern perimeter of the grounds, and finally back to the main entrance.

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Top Observations:

1. A faded crosswalk in the parking lot that leads from a diagonal path is largely faded; students are already encouraged to use a nearby crosswalk instead, so it may be best to let it fade completely.
2. The school is poorly connected to neighborhoods to the east, south, and west.
3. An informal network of footpaths to the south of the school reportedly has illicit activities going on, and appears uncared-for, with a fair amount of garbage.
4. One of these footpaths, heading south from the entryway south of the running track, leads past a largely burnt house to a street in the Rhododendron Park neighborhood, making it by far the most direct path to this area from school.
5. Many students use the southeast entryway to the school grounds, however no pedestrian signs are in place on the streets leading to this entryway.

Participants: This walking audit was joined by nine adults and three students representing the following groups and stakeholders:

- Mountain View Middle School students, parents, staff and principal
- City of Bonney Lake Community Services Department
- Feet First

Special Thanks Go To: Curtis Hurst, Mountain View Middle School Principal

Top Recommendations for Walkability:

- Investigate creating an official pedestrian and bicycle pathway leading to 201st Ave Ct E in Rhododendron Park south of the school grounds.
- Investigate creating a trail from campus to the east to 202nd Ave Ct E or 203rd Ave E. This would involve working with local residents interested and willing to consider creating a trail easement or sell a strip to create a right of way.
- Work with Pierce County, student clubs, members of the community and other stakeholders to clean the garbage out of the trail network to the south of campus, and utilize the area for experiential learning in the fields of biology and art installation.



Organizers: Feet First
Audit Leaders: Will Beard, Sander Lazar
Write-up: Sander Lazar
Reviewed by: Lisa Quinn, Executive Director
Audit Date: January 20, 2011

Safe Routes to School Mountain View Middle School

Safe Routes to School (SRTS) is a growing movement to encourage and support “active commuting” on the part of school children and families. At the intersection of public health, public safety, education and transportation, SRTS helps communities create a balanced alternative to an automobile-centered culture. In 2009 Seattle-based nonprofit Feet First contracted with the City of Bonney Lake, which had applied for and been granted Safe Routes to School federal funds through the Washington Department of Transportation. The grant, in the amount of \$384,000, was awarded to fund programs at six schools in the Sumner School District. The project spans the “5 E’s” of SRTS: Education, Encouragement, Enforcement, Engineering and Evaluation.

This community walking audit, conducted at Mountain View Middle School on January 20, 2011, identifies and prioritizes the next steps to leveraging funds for future projects. Additionally, the recommendations can be incorporated into the City of Bonney Lake’s update to its Non-Motorized Transportation Plan, anticipated to occur in 2013.

Mountain View Middle School Neighborhood Map, with photo numbers and perspectives



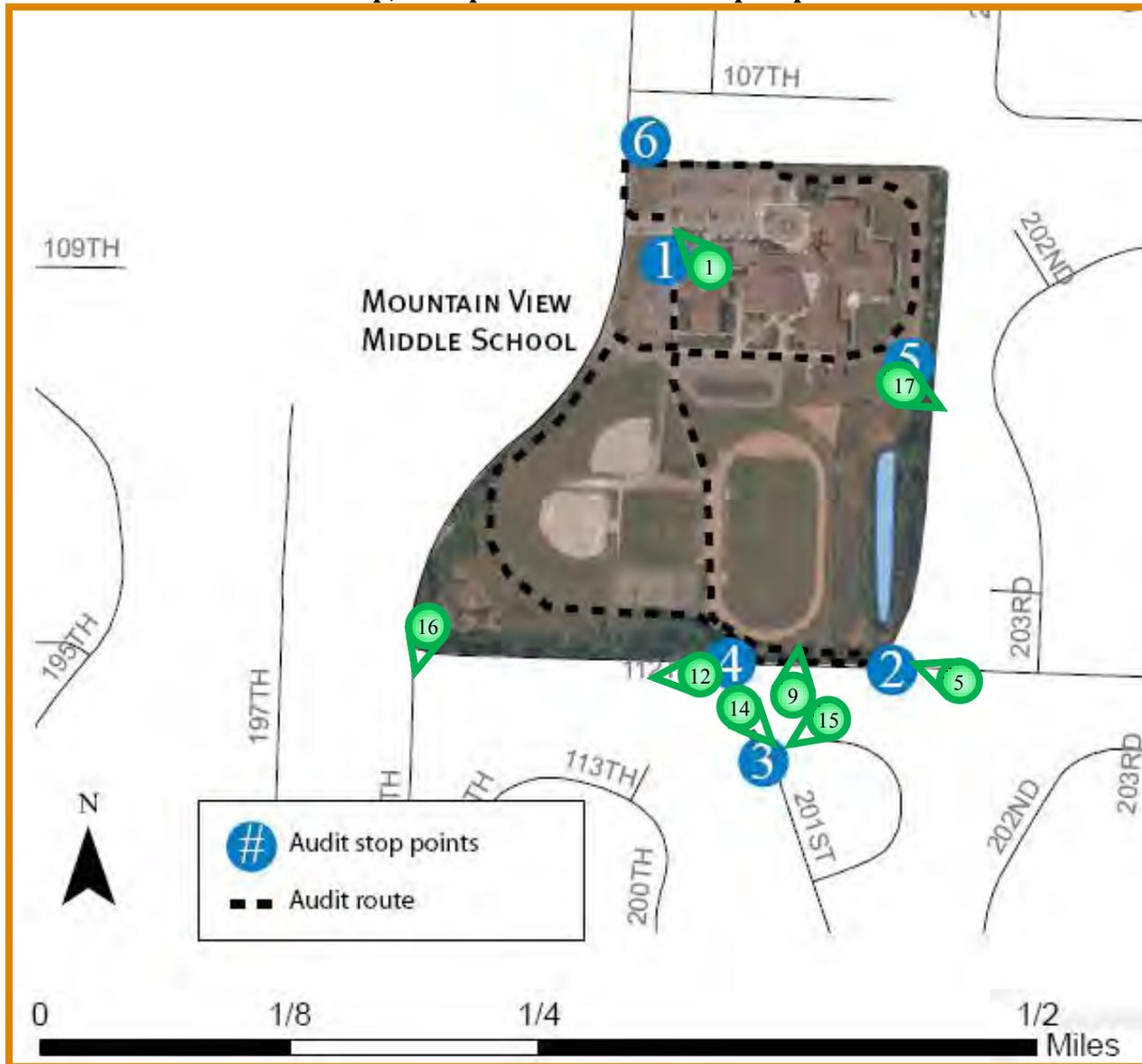
■ School Grounds

🏠 Crossing Guard Location

4 📍 Photo Number and Perspective



Walk Audit Detail Map, with photo numbers and perspectives



3 Photo Number and Perspective. Not shown are photos 2, 3, 6, 7, 8, 10, 11, and 13, as they were taken from nearly identical spots as other photos.

Walking Audit Field Notes

Item Key

Issues and action items are labeled with four color-coded icons that identify what action is recommended to make improvements. Additionally, as most of the action recommended is in the public domain, each item includes a specification for the category area that can facilitate coordination with or by the appropriate local or state agency.

- ✳ - Mountain View Middle School can address this problem
- ☎ - Existing partners, programs or services can be tapped to make improvements
- 📄 - Policy change or new funding may be required to implement changes
- ⌘ - Informational item

Issues and Action Items

Item	Location	Description	Photo
<p>1</p>	<p>Near 199th Ave Ct E, along driveway leading to school's main entrance</p>	<p>Diagonal pathway from 199th Ave Ct E onto the school grounds is the most direct path from the street to the school grounds. The crosswalk is faded and students are encouraged to use another crosswalk about 40 ft to the west. Most students, due to encouragement from school staff and crossing patrol, are reportedly using the other crosswalk.</p> <p>Recommendation: If a time comes when more students resist using the other crosswalk, consider repainting this one and stationing crossing patrol at both crosswalks.</p>	
<p>2</p>	<p>Near 199th Ave Ct E, along driveway leading to school's main entrance</p>	<p>This is the same faded crosswalk discussed above, looking toward the school.</p>	
<p>3</p> <p>📄</p> <p>☎</p>	<p>Intersection of 199th Ave Ct E and the main driveway into the school parking lot</p>	<p>Audit participants mentioned that the intersection at the entrance to the school gets a lot of automobile traffic during drop-off and pick-up, and is insufficiently lit at the crosswalks to make more safe crossing conditions during winter mornings. Audit participants also recorded in their written observations that the crosswalk at 199th Ave Ct E and 104th St E is insufficiently lit. A student was hit by a car at that location.</p> <p>Recommendation: Install more lighting at these key intersections.</p>	

Item	Location	Description	Photo
<p>4</p>  	<p>Intersection of 198th Ave E and 199th St E</p>	<p>The area to the side of 198th Ave E appears to be used by pedestrians, ATVers and bicyclists. This path leads north along a dirt road straight to Mountain View Middle School. Much of the trail is in relatively poor condition, and is by no means an officially sanctioned route to school.</p> <p>Recommendation: Make this a gravel or paved community trail for pedestrians and bicyclists travelling between this area and the Mountain View Middle School neighborhood.</p>	
<p>5</p>   	<p>Southeast entrance to school grounds, at the western end of 112th St E.</p>	<p>The southeast entrance to the school grounds is not labeled as such, and provides no other visual indication that this is a place where middle school students are welcome. In addition, audit participants mentioned that this entrance is very poorly lit during the winter early morning walks to school.</p> <p>Recommendation: Provide signage designating this as an official entrance to school grounds. Establish “ownership” of the area among middle school students by involving them in art projects to be installed at this entrance. In addition, add lighting here and along the trail leading to the school.</p>	
<p>6</p>   	<p>Southeast entrance to school grounds, at the western end of 112th St E.</p>	<p>This entrance is narrow and confined, creating a sense that one could be trapped there if cornered by bullies. The rock next to it has spray-painted graffiti on it, is known among the students as “make-out rock,” and is also a place where a student on the audit reported observing people taking drugs.</p> <p>Recommendation: Reposition the chain link fence to create a less confining gateway experience. Work with middle school students to get ideas and create projects that would establish a sense of ownership for this school entryway among middle school students, which could include art, landscaping, carpentry or similar types of projects. Consider involving the students in painting the rock in an appealing, creative way.</p>	
<p>7</p>  	<p>Southeast entrance to school grounds, at the western end of 112th St E.</p>	<p>Looking east down 112th St E, an area reportedly travelled frequently by both middle school students and high school students, one sees no signage alerting drivers to the presence of pedestrians.</p> <p>Recommendation: Place one or more pedestrian signs along this approach.</p>	

Item	Location	Description	Photo
<p>8</p>  	<p>Southeast entrance to school grounds, at the western end of 112th St E.</p>	<p>This trail, starting from the western end of 112th St E, heads west into the forest along the southern boundary of school grounds. This is on Pierce County land, but has no signs marking what the intended use of the trail is or who may use the trail. According to the school's principal, uses of this trail that keep it an unsafe or uncomfortable place for students to travel include bullying, drug dealing, drug taking, and intercourse. Students on the audit said they were afraid to use this trail, and even a student living nearby the school had never been on it.</p> <p>Recommendation: The network of trails here is an ideal place to build several official trails that can act as neighborhood connectors. Making them nice, appealing trails will make them likely to be used not only by students but other members of the community, and this would likely result in a reduction of threatening behaviors.</p>	
<p>9</p>  	<p>South entrance to school grounds, south of the running track</p>	<p>This entrance on the south end of the school grounds appears to give a fair amount of foot traffic. The user can see that Mountain View Middle School is in the distance, yet this area feels very much beyond the school grounds, and very few students dare walk through this area because of the stories they've heard about its activities.</p> <p>Recommendation: Create a more official feeling to this entrance with signage and art. An audit participant, herself a parent, recorded in her audit notes that engaging parents to help watch this entrance and the southeast entrance during school start and end times could make it safer for more kids to walk through here.</p>	
<p>10</p>  	<p>South entrance to school grounds, south of the running track</p>	<p>This is a close-up view of the southern entrance, where the trail from the forest meets up with the trail through school grounds from the southeast entrance at 112th St E. There is little indication that this area is cared for.</p> <p>Recommendation: Work with school clubs, groups, and community groups to clean trash out of the area, and provide recognition of these efforts with a sign and art, similar to the Adopt-a-Highway program.</p>	
<p>11</p> 	<p>Trail along south perimeter of school.</p>	<p>The trail then heads northwest toward both Mountain View Middle School and Bonney Lake High School. Students of both schools were observed during the audit to be using this trail. The narrowness of the trail indicates some use but not much by more than one person at a time.</p> <p>Recommendation: Bringing in gravel and creating a wider, hard gravel surface would indicate, and could invite, more use in general and more use by groups. It would also enable a drier walk during rainy days. Audit participants also suggested creating a gravel or paved path along the eastern side of the track that would lead directly to the school's south entrance.</p>	

Item	Location	Description	Photo
<p>12</p> <p> </p>	<p>On trail to the south of school grounds, near the south entrance.</p>	<p>Lots of garbage was observed on the trail and in the forest south of school grounds, further giving a sense of the area as being uncared for and discarded.</p> <p>Recommendation: Work with school clubs and members of the community to clean up the garbage on a regular basis.</p>	
<p>13</p> <p> </p>	<p>On trail to the south of school grounds</p>	<p>Larger trash piles exist in places, and this one has profanities painted on it. The volume of trash would necessitate a concerted clean-up effort.</p> <p>Recommendation: Encourage members of the community to be a part of a clean up day to help haul out the larger trash. School students could be involved in the clean up too, bagging smaller trash. This could be part of a fall and spring cleaning event.</p>	
<p>14</p>	<p>Just south of the school grounds, in unofficial trail network</p>	<p>This trail leads south from the school grounds, and then can be followed east, beside a burnt- down house (next photo) , to 201st Ave Ct E.</p>	
<p>15</p> <p> </p>	<p>Northwest corner of the 201st Ave Ct E loop</p>	<p>This house appears to have burnt because of an explosion, and the fact that the grass is growing right up to the house indicates it was not a recent fire. The property is not likely in high demand, and no “for sale” sign was erected. There is an unofficial foot path just to the left of the house which connects the unofficial trail network to 201st Ave Ct E.</p> <p>Recommendation: With the edge of this property being an ideal location to place a new official community trail to provide access between this neighborhood and Mountain View Middle School, now may be the ideal time for the City to purchase a right of way along the property edge, if such an arrangement can be made.</p>	

Item	Location	Description	Photo
<p>16</p>  	<p>South of the southwest corner of the school grounds</p>	<p>This dirt road connects 199th Ave Ct E to the north and 198th Ave E to the south. New development is planned for this area, along with paving this road and connecting the roads at the two ends. The timeline for the project has been delayed due to economic hardship faced on the part of the developer, Cascadia Project.</p> <p>Recommendation: This is a beautiful forested area, which could be treated as an asset until it is developed, through treatment of the road as a community connection. The City of Bonney Lake could work with Pierce County to develop this as a community trail.</p>	
<p>17</p>  	<p>Along the eastern school perimeter fence</p>	<p>The fence on the eastern side of the school prevents students from direct access to the neighborhood to the east. The alternative is to walk to the southeast school grounds entrance, and then back north up 203rd Ave E.</p> <p>Recommendation: Engage the school community and residents on the west side of 203rd Ave E to to creating a trail easement or public right of way in order to make it possible for more students to walk to school.</p>	

Contacts & Project Information

For more information about this report or Feet First, please contact:

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Feet First is a 501(c)(3) non-profit organization. Feet First promotes walkable communities through advocacy, community organizing, research, and education.

Bonney Lake High School Walking Audit



Introduction to the School and Neighborhood: Bonney Lake High School is in a residential neighborhood, about one mile south of Highway 410. It is also just to the west of Mountain View Middle School, with which it has a shared boundary. It is one of two high schools in Sumner School District and the only high school in the City of Bonney Lake, and serves approximately 1,500 students. The neighborhood is suburban in style, with housing being single-family, and a relatively disconnected street network: cul-de-sacs and dead ends. New developments to the north, northeast and west have sidewalks, while older suburban developments to the south and east do not.

Walk Audit Route: The walking audit route started in the main school parking lot on the eastside, continued to the east of the parking lot to view crosswalk and sidewalk conditions, then returned back west to near the southwest corner of the school grounds where an unofficial footpath appears to be used frequently. We followed this path down to 193rd Ave E, where we walked to 192nd Ave to observe another unofficial footpath heading toward 107th St E before returning to the school.

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Contacts & Project Information.....	BLHS-10

Top Observations:

1. It appears pedestrian and American Disability Act (ADA) access to the school from the east was given insufficient attention when the parking lot was built, as there are no cuts in the curb where the sidewalk meets a parking lot intersection.
2. Access to the school grounds is limited, particularly for students traveling from the west. Students have created access by pulling back chain link fences in several places.
3. The neighborhood streets are also disconnected from each other, and several opportunities exist for creating better connections for pedestrians.
4. Traffic gets very backed up in the parking lot during after-school pick-up, with drivers lining up and parking along the sidewalk leading up to the front entrance.

Participants: This walking audit was joined by 8 adults and 4 students representing the following groups and stakeholders:

- Bonney Lake High School students, parents, and staff
- City of Bonney Lake Community Services staff, City Council, and Planning Commission
- Bonney Lake Police Department
- Local residents
- Feet First

Special Thanks Go To: Grant Sulham, Learning Specialist at Bonney Lake High School and primary school contact for this walking audit

Top Recommendations for Walkability:

- Work with city traffic engineers to place curb cuts in the sidewalks where they meet intersections, and repaint faded crosswalks.
- Create official paths for pedestrians and bicyclists from 193rd Ave E and from the east side of the school where the chain link fence has been pulled back. ADA standards should be followed where possible and where not cost-prohibitive (see Appendix 2).
- Create an official pathway, gravel or paved, between 192nd Ave E and 117th St E, and connect the east and west ends of 103rd St E by the same means.
- Engage the student body and teachers in creating ownership of pedestrian pathways to the school, through an art installation, integration of the school grounds into curricula, and other means.
- Install one or two more crosswalks on 192nd Ave E, and a pedestrian median to facilitate safe crossings.
- Initiate an educational campaign to get drivers to park in the lot for pick-up, instead of along the sidewalk.



Organizers: Feet First
Audit Leaders: Sander Lazar, Lisa Quinn
Write-up: Sander Lazar, Walking Audit Consultant
Reviewed by: Lisa Quinn, Executive Director
Audit Date: January 24, 2011

Safe Routes to School Bonney Lake High School

Safe Routes to School (SRTS) is a growing movement to encourage and support “active commuting” on the part of school children and families. At the intersection of public health, public safety, education and transportation, SRTS helps communities create a balanced alternative to an automobile-centered culture. In 2009 Seattle-based nonprofit Feet First contracted with the City of Bonney Lake, which had applied for and been granted Safe Routes to School federal funds through the Washington Department of Transportation. The grant, in the amount of \$384,000, was awarded to fund programs at six schools in the Sumner School District. The project spans the “5 E’s” of SRTS: Education, Encouragement, Enforcement, Engineering and Evaluation.

This community walking audit, conducted at Bonney Lake High School on January 24, 2011, identifies and prioritizes the next steps to leveraging funds for future projects. Additionally, the recommendations can be incorporated into the City of Bonney Lake’s update to its Non-Motorized Transportation Plan, anticipated to occur in 2013.

Audit Route Detail Map, with photo numbers and perspectives



3 Photo Number and Perspective. Photo 3, not shown, was taken from the same spot as photo 2; photos 7 and 8 taken from the same spot as photo 6; photos 13 and 14 taken from the same spot as photo 12.

Walking Audit Field Notes

Item Key

Issues and action items are labeled with four color-coded icons that identify what action is recommended to make improvements. Additionally, as most of the action recommended is in the public domain, each item includes a specification for the category area that can facilitate coordination with or by the appropriate local or state agency.

- ✳ - Bonney Lake High School can address this problem
- ☎ - Existing partners, programs or services can be tapped to make improvements
- 📄 - Policy change or new funding may be required to implement changes
- ⌘ - Informational item

Issues and Action Items

Item	Location	Description	Photo
<p>1</p> <p>📄</p> <p>☎</p>	<p>East fence of school grounds, visible from Mountain View Middle School</p>	<p>A chain link fence has been removed on eastern perimeter of school grounds, presumably by students approaching school from the dirt road that runs south to 198th Ave E.</p> <p>Recommendation: Make this an official footpath with access toward Rhododendron Park.</p>	
<p>2</p> <p>✳</p>	<p>Drop-off area in front of main school entrance</p>	<p>Despite signs that say “Drop-off” at the school’s front entrance, the roundabout is also used for pick-up. During these times, audit participants reported, traffic gets very backed up. Much of this is due to parents waiting in their cars before the end of school and then the pick up process when they wait for students to arrive.</p> <p>Recommendation: Add signs to discourage pick-up at the roundabout. Educate drivers, as they have at both Mountain View Middle School and at Emerald Hills Elementary, to park in the parking lot during pick-up. Require teachers to park in the furthest spots, and incentivize carpooling by providing priority parking nearest to the school for carpoolers. This would reduce traffic and increase safety around school grounds, and could be monitored by the school administration through quarterly placards. Parking further away would be designated for people who were SOV. If such an educational campaign were insufficient, consider staggering school start times by 15 minutes between Mountain View and Bonney Lake High, so that traffic can move more freely.</p>	

Item	Location	Description	Photo
<p>3</p>  	<p>Drop-off area in front of main school entrance</p>	<p>This crosswalk leads the pedestrian to a median planted with bushes, and there is no crosswalk beyond this point. This crosswalk may have been intended only for access for the handicapped parking spot. It is also the only pedestrian route toward the parking lot other than the sidewalks flanking the lot on either side.</p> <p>Recommendation: Remove the bushes on the other end of this crosswalk, and continue the crosswalk on the other side of the median toward parking lot destinations. This will give the visual indication that walking between cars in the parking lot and the school is expected, and could help with the pick-up traffic problem.</p>	
<p>4</p>  	<p>On east approach to school</p>	<p>Curb in foreground of photo should have a break in it where it meets the crosswalk, and crosswalk needs to be repainted. “No Parking” signs along here have been vandalized with spray paint, or removed, lending a sense of the area being uncared for.</p> <p>Recommendation: Create curb cuts here and in sidewalk on other side of the driveway, and repaint the faded crosswalk. Replace the “No Parking” signs.</p>	
<p>5</p>   	<p>Along driveway approaching the school's main entrance from the east</p>	<p>There is a lot of open grassy area on school grounds, including along pedestrian approaches. These areas serve as a general green backdrop, and some audit participants viewed the area as being underutilized.</p> <p>Recommendation: Add more visual interest to these areas. Several audit participants suggested using this space for edible landscapes. Other ideas recorded during the audit to add visual interest include a sundial and benches. This would make the experience of walking more engaging, and provide students lessons related to food and natural cycles.</p>	

Item	Location	Description	Photo
<p>6</p>   	<p>North end of 193rd Ave E, just south of school grounds</p>	<p>An informal footpath was noted leading to southwest portion of school grounds, from where 193rd Ave E dead ends. The chain link fence has once again been peeled back.</p> <p>Recommendation: Make this an official entry point for pedestrians and bicyclists, with a gravel or paved path and Bonney Lake High School welcome sign. Check whether this access point would be required to be ADA compliant or if other existing ADA-compliant access points suffice.</p>	
<p>7</p>	<p>North end of 193rd Ave E, just south of school grounds</p>	<p>This is a closer look at the spot where the fence has been peeled back at this unofficial southwest school grounds entrance.</p>	
<p>8</p>   	<p>Just east of the unofficial southwest entrance to the school grounds shown in the photo above</p>	<p>This footpath is an unofficial route for pedestrians to access the high school from 193rd Ave E. The police officer assigned to the high school checks on this area frequently. "420" is etched into a tree, and the officer finds students smoking marijuana here. The peeled-back chain link fence makes it clear that this is an unofficial path whose users are not supposed to be there, and this environment supports illicit activities.</p> <p>Recommendation: In addition to making this an official pedestrian and bicyclist entrance to the school grounds, audit participants suggested several other ways to create ownership of and belonging to the area, including an after-school program for science or nature observation, placing garbage and recycling bins along the trail or at the trail ends, a bench, more colorful plants and flowers, and enhancement of the retention ponds for wildlife.</p> <p>An alternate pathway from this entryway to school would be along the left (west) side of the retention pond. Boulders to demarcate a path could be used instead of a chain link fence to discourage access to (and potential danger from) the pond, in order to enhance the visual appeal of this route.</p>	

Item	Location	Description	Photo
<p>9</p>  	<p>Intersection of 192nd Ave E and 109th St E.</p>	<p>The crosswalk across 192nd Ave has been removed. It was apparent during the walking audit a crosswalk here would be convenient for some users, and it was unclear why it was removed.</p> <p>Recommendation: Investigate why the crosswalk was removed, and consider repainting it. In addition, paint a crosswalk and construct a median to facilitate safe crossing of 192nd Ave E toward the school's southern-most driveway.</p>	
<p>10</p>  	<p>Trail leading west from 192nd Ave E where 107th St E would be if it continued east to intersect with 192nd</p>	<p>Several "Private Property" signs have been posted next to this footpath that provides access from 192nd Ave E to 107th St E. Gary Leaf, the City's Community Services Director, mentioned that a road is planned to bridge this gap, when \$14 million in funding is available. In the meantime, access is at one's own risk, and requires walking through private property.</p> <p>Recommendation: Enable sanctioned access for pedestrians and bicyclists between 192nd Ave E and 107th St E by creating a gravel or paved corridor through the city-owned property adjacent to these private property signs. This would be an inexpensive access solution until the road is built.</p>	
<p>11</p>	<p>Brookside Drive E, looking south back toward the school</p>	<p>Newer development to the north of the school grounds has sidewalks in excellent condition, though the neighborhood is still largely lacking in connections to surrounding neighborhoods.</p>	
<p>12</p>  	<p>Where 103rd St E dead-ends, near its intersection with 194th Ave</p>	<p>This unofficial footpath in the same neighborhood depicted in the photo above is once place where a more official trail would benefit pedestrians. It is unclear to the casual pedestrian whether travel on this trail is allowed.</p> <p>Recommendation: Check to see if this path is private property or within public right of way. Create an official pedestrian and bicyclist path bridging the street gap.</p>	

Item	Location	Description	Photo
<p>13</p>  	<p>Same as above, slightly further west</p>	<p>The property owner adjacent to (or owning) this footpath has erected a swing set in the middle of the path. These are easy to get around, but indicate that the path travels through private property, whether or not this is true. Use of the swing set by residents would obviously create an awkward moment if others were to use this path.</p> <p>Recommendation: If this path is on public right of way, inform the neighbors of this and make a request that they place the swing set on their property.</p>	
<p>14</p>  	<p>Same as above, slightly further west, looking west toward another segment of 103rd St E</p>	<p>This footpath meets up with 103rd St E on the west side of the path. This cut-through, if used, can greatly decrease the distance students would have to walk to school.</p> <p>Recommendation: When putting in place an official trail, place a sign at either end making it clear this is a public path providing connections between the ends of 103rd St E.</p>	

Contacts & Project Information

For more information about this report or Feet First, please contact:

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Walking Audits Based on Feet First Observation

Bonney Lake Elementary Walking Audit



Introduction to the School and Neighborhood: The neighborhood surrounding Bonney Lake Elementary has streets that are relatively narrow, lacking both shoulders and continuous sidewalks. In addition, there are some fairly sharp curves with somewhat limited sightlines. All of the above factors decrease the safety around walking. In contrast to other Bonney Lake schools, the school is well-connected to the surrounding neighborhood, with the exception of streets west of Locust Ave E, including 185th Ave E, 184th Ave E, 183rd Ave E, and 182nd Ave E. Drivers were observed to be courteous and driving under the speed limit.

The site was under construction during the time of this audit, so an evaluation of the walkability of school grounds was not possible.

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Top Observations:

1. Narrow streets with few sidewalks and very limited shoulders give pedestrians little room to walk and drivers little room for passing.
2. Sidewalks have been built alongside newer developments, however these segments are disconnected from each other. Overall the sidewalks are discontinuous and often end abruptly.
3. Several long streets to the west of Locust Ave E demand of the pedestrian either long walks to the north or the south before being able to head east toward school.

Organizer: Feet First
Write-up: Sander Lazar, Walking Audit Consultant
Reviewed by: Lisa Quinn, Executive Director
School vicinity evaluated in January, 2011

Top Recommendations for Walkability:

- Until funding is available to widen shoulders to provide gravel pathways or sidewalks, make certain streets one-way for vehicles by painting delineation between the vehicular travel lane and the pedestrian/bicycle lane. This would be particularly effective on streets with relatively limited sightlines, such as on 79th St E, east of the school. This has already been done on the street loop surrounding Bonney Lake.
- Shorten the walk for residents of 182nd Ave E through 185th Ave E to Locust Ave E by means of creating a multi-use path, if possible.
- When public funding is available, connect the currently disconnected sidewalk segments with either more sidewalk or with gravel pathways.

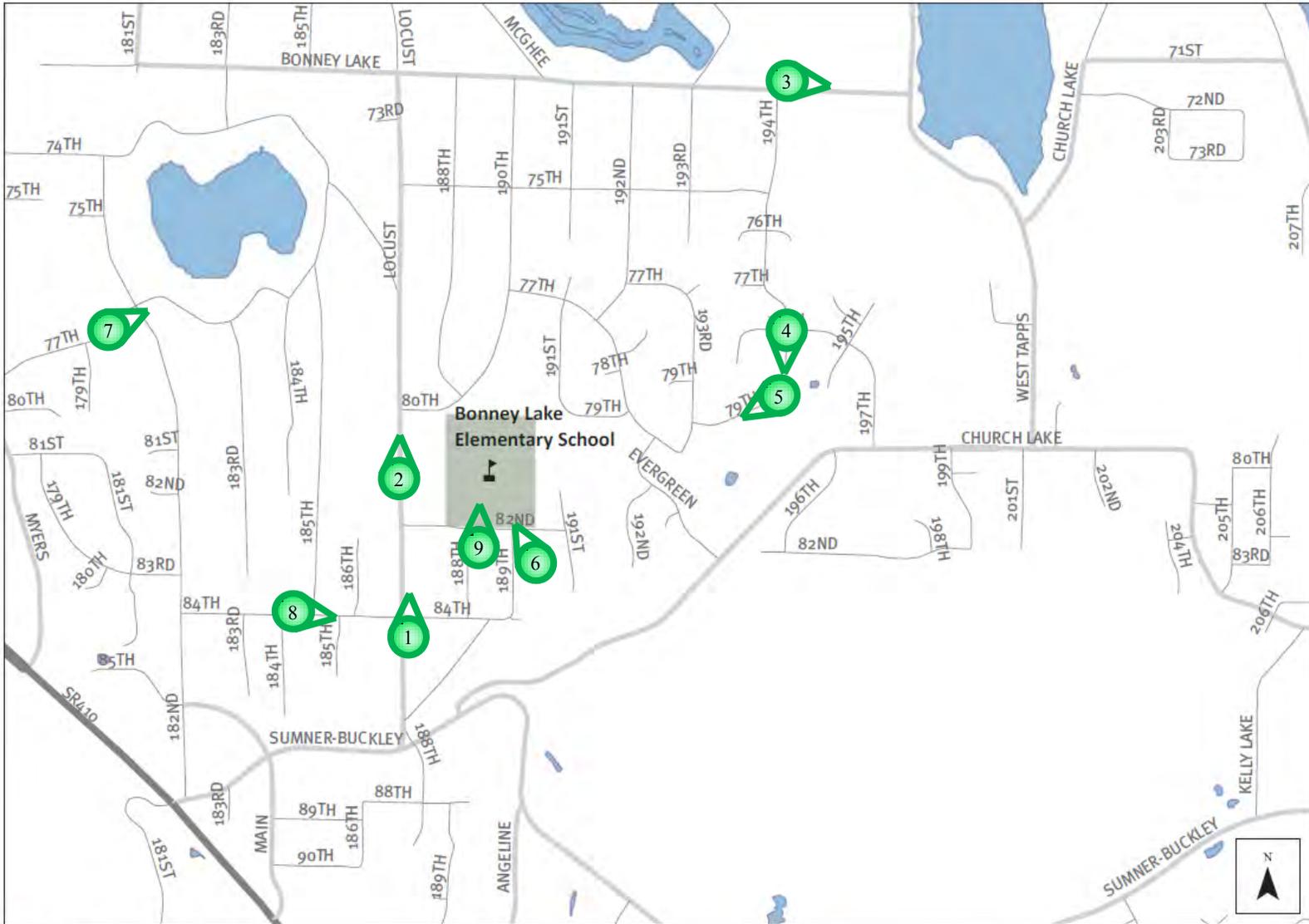


Safe Routes to School Bonney Lake Elementary School

Safe Routes to School (SRTS) is a growing movement to encourage and support “active commuting” on the part of school children and families. At the intersection of public health, public safety, education and transportation, SRTS helps communities create a balanced alternative to an automobile-centered culture. In 2009 Seattle-based nonprofit Feet First contracted with the City of Bonney Lake, which had applied for and been granted Safe Routes to School federal funds through the Washington Department of Transportation. The grant, in the amount of \$384,000, was awarded to fund programs at six schools in the Sumner School District. The project spans the “5 E’s” of SRTS: Education, Encouragement, Enforcement, Engineering and Evaluation.

This walking audit, conducted at Bonney Lake Elementary in January, 2011, identifies and prioritizes the next steps to leveraging funds for future projects. Additionally, the recommendations can be incorporated into the City of Bonney Lake’s update to its Non-Motorized Transportation Plan, anticipated to occur in 2013.

Bonney Lake Elementary School Neighborhood Map, with photo numbers and perspectives



School Grounds

3 Photo Number and Perspective



Walking Audit Field Notes

Item Key

Issues and action items are labeled with four color-coded icons that identify what action is recommended to make improvements. Additionally, as most of the action recommended is in the public domain, each item includes a specification for the category area that can facilitate coordination with or by the appropriate local or state agency.

- ✳ - Bonney Lake Elementary can address this problem
- ☎ - Existing partners, programs or services can be tapped to make improvements
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- ⌘ - Informational item

Issues and Action Items

Item	Location	Description	Photo
1	Locust Ave E, near 84 th St E, looking north.	Locust Ave E has continuous sidewalks in excellent condition, and pedestrian signage near the school. This is essential on this street considering the relatively fast-moving traffic.	
2	Looking north on Locust Ave E, just south of 80 th St E	This school zone speed limit sign and signal are well-placed, to the side of the sidewalk instead of obstructing it. The bright neon sign further down the street (barely visible in the background of this photo) is a newer, brighter sign color that is very noticeable.	
3 ☎ 📄	75 th St E and 194 th Ave E	A standard street in the vicinity of Bonney Lake Elementary has little to no shoulder, or shoulder in some areas but not others. Recommendation: Look for opportunities to create continuous gravel paths where shoulders allow but currently are only pedestrian-friendly in segments.	

Item	Location	Description	Photo
<p>4</p>  	79 th St E	<p>Even where decent shoulders exist and give room for pedestrians, this space is sometimes taken up by parked vehicles.</p> <p>Recommendation: Any new or extended gravel, asphalt or other pathway must be clearly for pedestrians through construction of a curb or other means; merely providing a shoulder can invite motorists to park there.</p>	
<p>5</p> 	79 th St E	<p>Some narrow streets, like 79th St E shown here, are often in the shade, and this coupled with curves can make for poor visibility for pedestrians.</p> <p>Recommendation: Make this a one-way street in order to create adequate street room for pedestrians and bicyclists.</p>	
<p>6</p>  	189th Avenue East and 82nd Street East	<p>The wide radius of this and many other corners do not make it necessary for drivers to slow down much or at all when turning, thus creating danger for pedestrians in the area.</p> <p>Recommendation: These intersections can be noted for reconstruction in a manner that makes for a smaller radius, thus forcing drivers to slow down more before turning.</p>	
<p>7</p> 	77 th St E and 182 nd Ave E	<p>Looking down 77th St E toward the one-way street encircling Lake Bonney. This one-way street is an example of a narrow street where approximately 1/3 of the street is devoted to pedestrians and bicyclists, who otherwise would have no space on the street.</p> <p>Recommendation: Consider other very narrow streets with highly limited room for pedestrians and bicyclists as good candidates for one-way treatment.</p>	

Item	Location	Description	Photo
<p>8</p>  	<p>84th Ave E west of Locust Ave E</p>	<p>This is an example of discontinuous sidewalk on 84th St E.</p> <p>Recommendation: As funding permits the sidewalk should be made continuous, especially closer to the school.</p>	
<p>9</p>	<p>Southeast school grounds entrance, near 188th Avenue East and 82nd Street East</p>	<p>This is a good access point on the southeast of the school grounds. It allows both pedestrians and bicyclists through comfortably while forcing bicyclists to dismount or slow down significantly.</p>	

Contacts & Project Information

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Liberty Ridge Elementary Walking Audit



Introduction to the School and Neighborhood: The City of Bonney Lake, WA, has a relatively disconnected street network typical of post-World War II suburban development, with frequent dead ends and cul-de-sacs, and the neighborhood surrounding Liberty Ridge Elementary is no exception. The student body of approximately five hundred students can access the school from the north or south, but access to school grounds from the east and west is blocked by a chain-link fence and the narrow strip of forest land and then single family houses beyond the fence. Surrounding residential streets are of moderate to wide width, and are mostly devoid of pedestrian amenities. Despite this, the neighborhood streets were observed to be fairly safe for pedestrians, as traffic volume was generally quite low, with drivers behaving courteously and within the speed limit due to a recent highly effective speed limit enforcement campaign.

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Top Observations:

1. Streets around the school are relatively wide, and though they have no sidewalks, most appear wide enough to allow gravel pathway or sidewalk construction.
2. Drivers on residential streets were observed to be generally courteous and driving under the speed limit.
3. There are only two approaches to school grounds, from the north from 209th Ave Ct E, and from the south from 208th Ave E. Students living to the east or west, living as little as 300-500 feet away, must travel upwards of .5 miles.
4. There is a walkway that cuts from 120th Street E to 209th Ave Ct E, which could serve neighborhood kids living north of 120th, but due to its signage (“Private Property/No Trespassing/ No Soliciting/ Violators Will Be Prosecuted”) is uninviting.
5. The greatest barrier to walkability is lack of neighborhood connectivity, necessitating much longer walks than necessary.

Organizers: Feet First
Write-up: Sander Lazar, Walking Audit Consultant
Reviewed by: Lisa Quinn, Executive Director
School vicinity evaluated in December, 2010

Top Recommendations for Walkability:

- Put time, effort and funding into improving connectivity, as it will likely go a long ways toward promoting walking and biking between home and school. Encourage residents of 209th Ave Ct E, north of 120th St E, to remove the private property sign, and follow this with looking for opportunities to create paths connecting school grounds with streets to the east and west.
- Encourage walking along 209th Ave E between school and neighborhoods to the north by constructing a continuous gravel walkway or sidewalk, and a sidewalk along 120th St E.
- Investigate the possibility of a right-of-way purchase or a trail easement that would enable the provision of a direct pathway to neighborhoods to the east and west of school grounds.

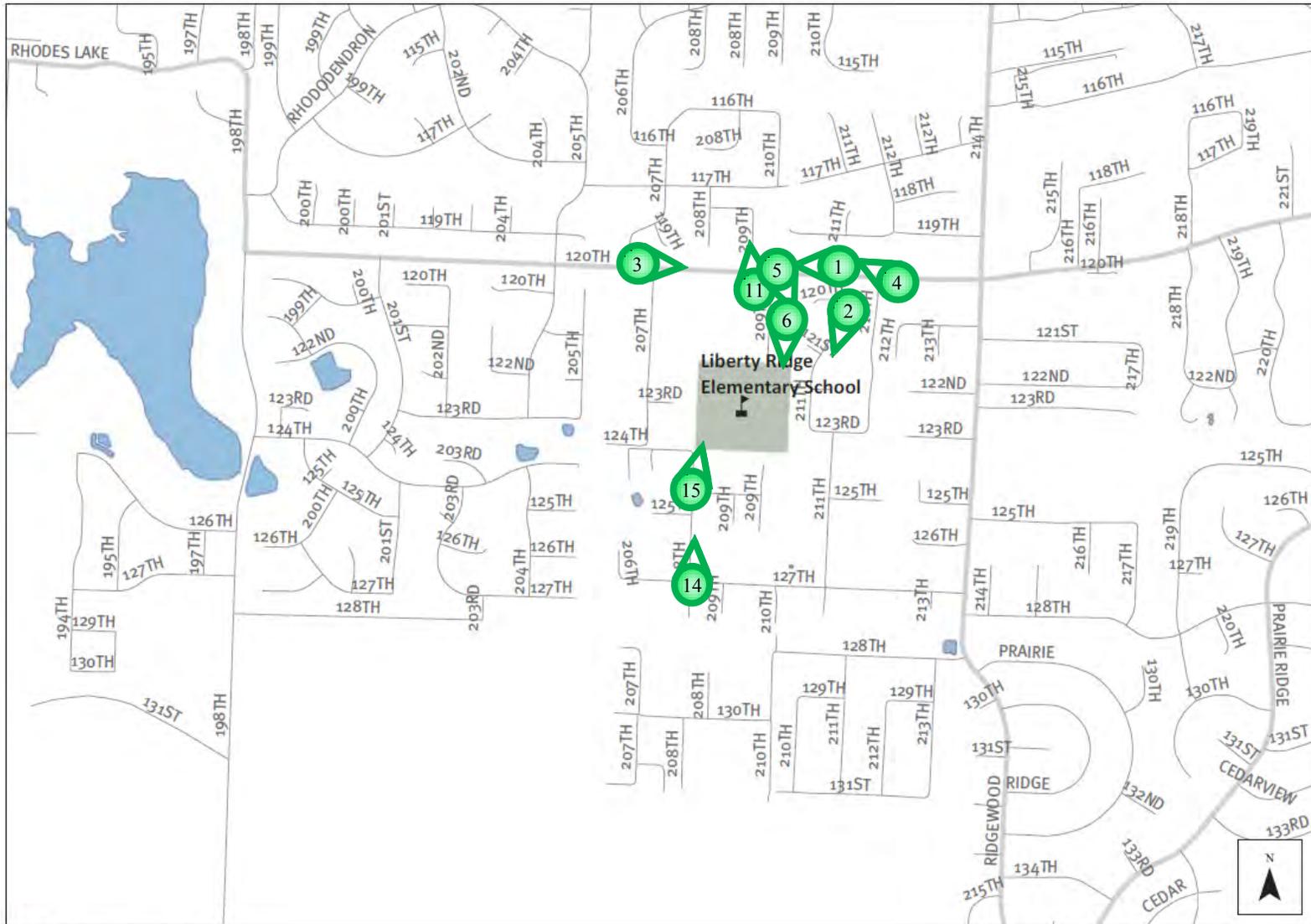


Safe Routes to School Liberty Ridge Elementary School

Safe Routes to School (SRTS) is a growing movement to encourage and support “active commuting” on the part of school children and families. At the intersection of public health, public safety, education and transportation, SRTS helps communities create a balanced alternative to an automobile-centered culture. In 2009 Seattle-based nonprofit Feet First contracted with the City of Bonney Lake, which had applied for and been granted Safe Routes to School federal funds through the Washington Department of Transportation. The grant, in the amount of \$384,000, was awarded to fund programs at six schools in the Sumner School District. The project spans the “5 E’s” of SRTS: Education, Encouragement, Enforcement, Engineering and Evaluation.

This walking audit, conducted at Liberty Ridge Elementary School in January, 2011, identifies and prioritizes the next steps to leveraging funds for future projects. Additionally, the recommendations can be incorporated into the City of Bonney Lake’s update to its Non-Motorized Transportation Plan, anticipated to occur in 2013.

Liberty Ridge Elementary School Neighborhood Map, with photo numbers and perspectives



School Grounds

3 Photo Number and Perspective. Not shown are photos 7, 8, 9, 10, 12, and 13, as they were also taken from nearly identical spots as other photos.



Walking Audit Field Notes

Item Key

Issues and action items are labeled with four color-coded icons that identify what action is recommended to make improvements. Additionally, as most of the action recommended is in the public domain, each item includes a specification for the category area that can facilitate coordination with or by the appropriate local or state agency.

- ✳ - Liberty Ridge Elementary can address this problem
- ☎ - Existing partners, programs or services can be tapped to make improvements
- 📄 - Policy change or new funding may be required to implement changes
- ⌘ - Informational item

Issues and Action Items

Item	Location	Description	Photo
1	South side of 120 th St E, east of 209 th Ave Ct E	Wide gravel shoulder on the south side of 120 th St E provides plenty of space for students and teachers to walk to school.	
2	Looking south down 211st Ave E, near 120 th St E	Many of the residential streets in this area have wide streets and adequate shoulders to allow students and other pedestrians to travel safely.	

Item	Location	Description	Photo
<p>3</p> 	<p>Looking east down 120th St E, just west of 209th Ave Ct E</p>	<p>This speed limit sign is in the middle of the gravel pathway used by students and other pedestrians. This sign placement communicates that this pathway is more of a shoulder than an pathway intended for pedestrians.</p> <p>Recommendation: While it is a minor obstacle, a gesture as little as moving the speed limit sign toward the street, leaving the path unobstructed, gives an improved signal that this is a walkway and not just a shoulder.</p>	
<p>4</p> 	<p>120th St Ct E, and 211th Ave E</p>	<p>Other street obstructions like mailboxes are more substantial physical barriers to walking than speed limit signs.</p> <p>Recommendation: Move the mailboxes closer to the street or further away in order to create a more obvious and clearer walking path for pedestrians.</p>	
<p>5</p>	<p>Looking south down 209th Ave Ct E from a spot just south of 120th St E</p>	<p>Nice wide gravel shoulder on the east side of 209th Ave Ct E just north of school provides a good space for walkers approaching and leaving school, for most of the length of the street.</p>	
<p>6</p> 	<p>209th Ave Ct E, about halfway between 120th St E and Liberty Ridge Elementary</p>	<p>This gravel shoulder/walkway is largely replaced by driveways and cars parked in those driveways close to school, making it necessary to walk in the street.</p> <p>Recommendation: Build a sidewalk or continuous path of gravel all the way down this street. In the meantime, paint a white strip demarcating the public right of way, and carry out a campaign to educate residents about where they are allowed to park.</p>	

Item	Location	Description	Photo
<p>7</p>   	<p>Looking north up 209th Ave Ct E from a spot just north of the school</p>	<p>Larger vehicles parked on the shoulder and in driveways force pedestrians to walk squarely in the middle of the travel lane.</p> <p>Recommendation: Build a sidewalk or continuous path of gravel all the way down this street. Before this is accomplished, paint a white strip demarcating the public right of way, and carry out a campaign to educate residents about where they are allowed to park. Education of police officers and their enforcement efforts will likely be needed at first. These actions would likely keep this area more open for pedestrians, Organized walks from the school, as part of walk-a-thons or other events, will demonstrate to students where walking is allowed.</p>	
<p>8</p>  	<p>North portion of school's eastern parking lot</p>	<p>The placement of the crosswalk does not match the likely walking trajectory of pedestrians taking the shoulder of 209th Ave Ct E to school. It may be that the location of the crosswalk was chosen before the fence was put in.</p> <p>Recommendation: Remove this portion of the fence, or re-stripe the crosswalk to meet up with the gravel path.</p>	
<p>9</p>  	<p>North portion of school's eastern parking lot</p>	<p>While other amenities for those with physical disabilities exist and the school appears to be largely accessible to this population, more comprehensive compliance with the Americans with Disabilities Act (ADA) would include curb ramps at locations like this.</p> <p>Recommendation: Provide more comprehensive compliance with ADA regulations.</p>	
<p>10</p>  	<p>In front of the school</p>	<p>This crosswalk connects the handicapped parking spot with the sidewalk fronting the school, but there is no curb ramp for someone who would use this crosswalk.</p> <p>Recommendation: ADA compliance would likely include a curb ramp, at the far end of the crosswalk shown here.</p>	

Item	Location	Description	Photo
11	Looking north from intersection of 120 th St and 209 th Ave Ct E	This gate, with the white sign, opens to a paved pathway that provides access from 120 th Street E to the portion of 209 th Ave Ct E that is just north of 120 th St E. This pathway enables a short trip of under 200 feet between 120 th St E and the segment of 209 th Ave Ct E to the north- a trip that otherwise comes to .5 miles. Such stellar accommodation for pedestrians and bicyclists was observed in a couple instances throughout Bonney Lake, and is precisely the kind of accommodation that is needed in the city, for students and members of the broader community.	
12  	On north side of 120 th St, at 209 th Ave Ct E	Unfortunately for pedestrians and bicyclists, this path appears to be on private property, and the portion of 209 th Ave Ct E that it directly accesses is a private road. This sign would likely discourage most use by students living in the neighborhoods north of 120 th St E. Recommendation: Investigate whether the public is in fact not allowed on this path or on the short segment of private roadway on the other side. If not allowed currently, work with the Home Owners Association to create a trail easement or other means of allowing public access.	
13	On pathway connecting 120 th St E and northern segment of 209 th Ave Ct E	This is the same paved pathway referred to above, here seen from the north from 209 th Ave Ct E. The path is paved and is in an ideal cut-through location for pedestrians. Recommendation: Provide more paved community cut-throughs like this in the neighborhood and throughout Bonney Lake. Include signage to provide wayfinding and that use of the path by the public is sanctioned.	
14	Looking north up 208 th Ave E from 127 th St E	A pedestrian crossing sign alerts drivers to the presence of students on streets outside the school zone, near the back entrance to the school grounds. These types of signs are very important, particularly to alert non-residents that they are likely to encounter pedestrians in areas where they may not otherwise be expected.	

Item	Location	Description	Photo
<p>15</p> <p>★</p> <p>☎</p>	<p>Southwest entrance to school grounds</p>	<p>Good entrance on southwest corner of school grounds, allows through pedestrians, but forces cyclists to slow down, and does not allow through vehicles.</p> <p>Recommendation: Provide more gravel delineating a clear path through the grass could make this entrance more inviting while reducing the need to slosh through wet grass or mud.</p>	

Contacts & Project Information

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Victor Falls Elementary Walking Audit



Introduction to the School and Neighborhood: Victor Falls Elementary has approximately six hundred students, and is in a suburban area surrounded by a mix of older and newer developments and street types. Newer developments have sidewalks, and older developments do not. The school is well connected to neighborhoods to the south and north. An official multi-use pathway connects the school to the neighborhood to the north. This pathway between two private property plots is an excellent model of how to connect neighborhoods that could be applied through Bonney Lake. A trail is planned to connect the school to neighborhoods down the hill to the west, but until it is built there remain generally poor connections to neighborhoods to west, as well as to the east.

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Top Observations:

1. Poor trail and street connections to neighborhoods to the east and west constitute a great barrier to walking.
2. Some excellent and wide sidewalks exist, particularly within and along the new Falling Water development.
3. Other streets are lacking sidewalks or side gravel paths, most notably 188th Ave Ct E leading right to the school.
4. Soft curbs in the new Falling Water development make it possible for vehicles to easily park up on the sidewalk.
5. A network of trails within the development to the west should be connected to when a new trail from the school to the west is built
6. Several pathways exist in the nearby neighborhoods, which, if further developed, will allow enhanced access to the school.

Organizers: Feet First
Write-up: Sander Lazar, Walking Audit Consultant
Reviewed by: Lisa Quinn, Executive Director
School vicinity evaluated in January 2011

Top Recommendations for Walkability:

- Build a sidewalk along 188th Ave Ct E to the school.
- Place a crosswalk from 188th Ave Ct E across Rhodes Lk Rd E, have a crossing guard help students travelling from Falling Water.
- Encourage use of the existing pathway running from the end of 112 St Ct E, and investigate the possibility of constructing trail access between 191st Ave Ct E and 191st Ave E to promote access from school to the east.
- Create an official pedestrian/bicycle cut-through between 189th Ave E and 190th Ave E where a gravel path currently exists.



Safe Routes to School Victor Falls Elementary School

Safe Routes to School (SRTS) is a growing movement to encourage and support “active commuting” on the part of school children and families. At the intersection of public health, public safety, education and transportation, SRTS helps communities create a balanced alternative to an automobile-centered culture. In 2009 Seattle-based nonprofit Feet First contracted with the City of Bonney Lake, which had applied for and been granted Safe Routes to School federal funds through the Washington Department of Transportation. The grant, in the amount of \$384,000, was awarded to fund programs at six schools in the Sumner School District. The project spans the “5 E’s” of SRTS: Education, Encouragement, Enforcement, Engineering and Evaluation.

This community walking audit, conducted at Victor Falls Elementary School on January 24, 2011, identifies and prioritizes the next steps to leveraging funds for future projects. Additionally, the recommendations can be incorporated into the City of Bonney Lake’s update to its Non-Motorized Transportation Plan, anticipated to occur in 2013.

Walking Audit Field Notes

Item Key

Issues and action items are labeled with four color-coded icons that identify what action is recommended to make improvements. Additionally, as most of the action recommended is in the public domain, each item includes a specification for the category area that can facilitate coordination with or by the appropriate local or state agency.

- ✳ - Victor Falls Elementary can address this problem
- ☎ - Existing partners, programs or services can be tapped to make improvements
- 📄 - Policy change or new funding may be required to implement changes
- ⌘ - Informational item

Issues and Action Items

Item	Location	Description	Photo
<p>1</p> <p>☎</p> <p>📄</p>	Just west of intersection of 188 th Ave Ct E and Rhodes Lake Rd E	<p>The sidewalk ends at the intersection of Rhodes Lake Road E and 188th Ave Ct E. This is the final approach to the school and a corridor likely to get a fair amount of use from students approaching from the south and east. There is some room on the side of the road to walk, but the disappearance of the sidewalk sends the message that walking is less expected or anticipated beyond this point.</p> <p>Recommendation: Continue the sidewalk up 188th Ave Ct E to Victor Falls Elementary</p>	
<p>2</p> <p>☎</p> <p>📄</p>	Intersection of 188 th Ave Ct E and Rhodes Lake Rd E	<p>There is no crosswalk across Rhodes Lake Rd E to enable access from students coming from the Falling Water development.</p> <p>Recommendation: Place a crosswalk and crossing guard at the intersection of Rhodes Lk Rd E and 188th Ave Ct E. Place other standard school zone markings in the vicinity to alert drivers to the change.</p>	
<p>3</p> <p>☎</p> <p>📄</p>	192 nd Ave E ends where it intersects with Rhodes Lk Rd E.	<p>The sidewalk on 192nd Ave E ends where it intersects with Rhodes Lake Rd E, which leaves it unclear to pedestrians what path they should follow.</p> <p>Recommendation: Create a clearer delineation of the gravel path beyond this point toward Victor Falls, or continuation of this sidewalk toward the school.</p>	

Item	Location	Description	Photo
<p>4</p>  	<p>Throughout the new Falling Water development, off of Falling Water Blvd E</p>	<p>Curbs in the Falling Water development are “soft,” enabling the parking of cars well into the sidewalk. Though blockage of the sidewalk in this manner was not observed (and is not depicted in this photo), it is a common result of soft curb construction.</p> <p>Recommendation: Engage parking enforcement in observing driver behavior on these curbs to see if their parking is obstructing the sidewalk for pedestrians. Only after such a review should the City consider allowing further developments to be built with soft curbs.</p>	
<p>5</p>  	<p>Along Falling Water Blvd E</p>	<p>There are very wide sidewalks along the west side of Falling Water Blvd E that make walking very inviting, and adequately allow groups of walkers heading in opposite directions to pass each other comfortably. This is an excellent community asset.</p> <p>Recommendation: Replicate this robust sidewalk width throughout the neighborhood where possible, particularly on busier roads.</p>	
<p>6</p>  	<p>Near 109th St E and 185th Ave E</p>	<p>The network of pathways within the newer development down the hill to the west of Victor Falls lays the groundwork for promoting walkability to destinations in the future, though there are currently no community destinations in the area beyond other residences.</p> <p>Recommendation: Connect the trail planned to the west of school with this trail network.</p>	
<p>7</p>  	<p>Western end of 112th St Ct E</p>	<p>There is a gravel pathway leading between two houses toward Victor Falls that then leads one toward a spot where the chainlink fence surrounding the school grounds has been pulled back. This is not an official pathway to the school grounds, but appears to be used by some people.</p>	

Item	Location	Description	Photo
<p>8</p>  	<p>Western end of 112th St Ct E</p>	<p>There is a gap in the school grounds boundary chainlink fence, where the fence has been pulled back, enabling access from the pathway (shown above) to the school grounds.</p> <p>Recommendation: Investigate whether this access is officially allowed, and if not, take steps to provide a trail easement or public right of way. Develop the trail all the way to the school grounds and mark with appropriate wayfinding signage.</p>	
<p>9</p>  	<p>Just north of the school, connecting to 111th St E</p>	<p>This pathway leading from the north directly to the school grounds is an excellent example of an officially allowed community cut-through.</p> <p>Recommendation: Promote this kind of official cut-through throughout this neighborhood and beyond. Put in place wayfinding signage to mark this as an access path to Victor Falls Elementary, in order to further promote walking to school from this neighborhood.</p>	
<p>10</p>  	<p>Between 107th St E and 189th Ave E</p>	<p>This access point between 189th Ave E and 190th Ave E reduces a walk to school of up to 3.5 miles down to .5 miles.</p> <p>Recommendation: Improve this shortcut by making it a paved, more clearly-marked cut-through in order to make its use more inviting.</p>	

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Appendix 1- Walking Audit Fliers

Neighbors, Parents, Teachers, School Administrators, *and* Students:



You're invited to the

Bonney Lake High School Walking Audit

Monday, January 24, 2:00 – 3:45

Meet in the front office at Bonney Lake H.S. (10920 199th Ave. Ct. E.)

You may have heard it said that walking to school is fun and healthy, **but is that true for Bonney Lake High School?** What areas are safe for walking? Which places should be avoided? What can we do to make this area a great place for everyone to walk and hang out?

Join Feet First for a look at the Bonney Lake H.S. neighborhood from the pedestrian point of view. We will have tools on hand to gather input from your experience and observations. We will share information about positive plans to make this area more walkable for students. **Plus participants will receive gift cards for Emerald City Smoothies, iTunes, or Starbucks!**

The Walking Audit is part of the Bonney Lake Safe Routes to School Program, and is made possible by a grant from the Washington State Department of Transportation.

For more information, go to <http://feetfirst.info/events/feet-first-community-walking-audit-bonney-lake-high-school>

Please **RSVP** to Sander Lazar at 206-455-5810/ Sander@feetfirst.info



Sumner School District
a great place to learn!



Neighbors, Parents, Teachers, School Administrators, and Students:



You're invited to the
Mountain View Middle School Walking Audit
Thursday, January 20, 2:10-3:40

Meet in the front office at Mountain View (10921 199th Ave. Ct. E.)

You may have heard it said that walking to school is fun and healthy, **but is that true for Mountain View Middle School?** What areas are safe for walking? Which places should be avoided? What can we do to make this area a great place for everyone to walk and hang out?

Join Feet First for a look at the Mountain View Middle School neighborhood from the pedestrian point of view. We will have tools on hand to gather input from your experience and observations. We will share information about positive plans to make this area more walkable for students. **Plus participants will receive gift cards for Jamba Juice, iTunes, or Starbucks!**

The Walking Audit is part of the Bonney Lake Safe Routes to School Program, and is made possible by a grant from the Washington State Department of Transportation.

For more information, go to <http://feetfirst.info/events/feet-first-community-walking-audit-mountain-view-middle-school-bonney-lake>.

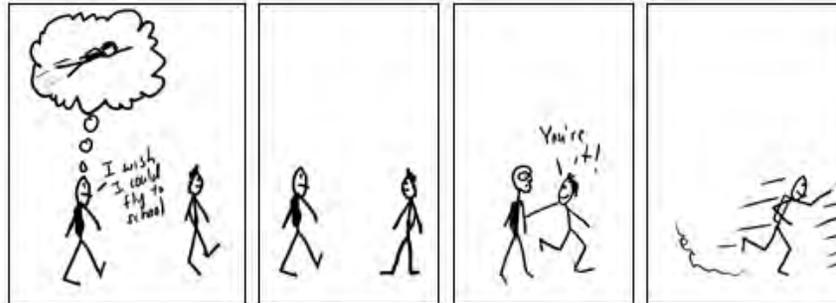
Please **RSVP** to Sander Lazar at 206-455-5810/ Sander@feetfirst.info



Sumner School District
...a great place to learn!



Neighbors, Parents, Teachers, School Administrators, *and* Students:



You're invited to the
Emerald Hills Elementary Walking Audit
Wednesday, January 19, 2:45 – 4:15 pm

Meet in the front office staff lounge at Emerald Hills (19515 S. Tapps Drive E.)
You may have heard it said that walking to school is fun and healthy for kids, **but is that true for Emerald Hills Elementary?** What areas are safe for our children? Which places should be avoided? What can we do to make this area a great place for children to walk and play?

Join Feet First for a look at the Emerald Hills Elementary neighborhood from the pedestrian point of view. We will have tools on hand to gather input from your experience and observations. We will share information about positive plans to make this area more walkable for children. **Plus participants will receive gift cards for Jamba Juice or Starbucks!**

This is a child-friendly event, though all children must be accompanied by an adult. The Walking Audit is part of the Bonney Lake Safe Routes to School Program, and is made possible by a grant from the Washington State Department of Transportation.

For more information, go to <http://feetfirst.info/events/walking-audit>

Please **RSVP** to Sander Lazar at 206-455-5810/ Sander@feetfirst.info



Sumner School District
...a great place to learn!



Appendix 2- Trails, ADA Requirements, and General Pedestrian Resources

Trails, Trail Easement and Right of Way Web Resources:

<http://www.catamounttrail.org/about-trail/trail-protection-campaign/interested-in-conveying-a-trail-easement/what-is-a-trail-easement/>

<http://www.americantrails.org/resources/devel/Economic-value-walking-homes.html>

<http://www.americantrails.org/resources/advocacy/10steps08.html>

<http://www.americantrails.org/resources/health/trailsforlife.html>

<http://www.americantrails.org/resources/land/MPrivateland.html>

<http://www.bicyclinginfo.org/faqs/answer.cfm?id=3466>

Americans with Disabilities Act Requirements:

The United States Access Board's ADA Accessibility Guidelines can be viewed at <http://www.access-board.gov/adaag/html/adaag.htm#4.1>.

In particular, sections 4.1.2 (1), and 4.1.3 (1)(a) are relevant to creating new paths:

4.1.2 Accessible Sites and Exterior Facilities: New Construction. An accessible site shall meet the following minimum requirements:

(1) At least one accessible route complying with [4.3](#) shall be provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones if provided, and public streets or sidewalks, to an accessible building entrance.

4.1.3 Accessible Buildings: New Construction. Accessible buildings and facilities shall meet the following minimum requirements:

(1)(a) At least one accessible route complying with [4.3](#) shall connect accessible building or facility entrances with all accessible spaces and elements within the building or facility.

General Pedestrian Resources:

<http://www.walkinginfo.org/>

http://www.rsa.unc.edu/ped_safety/

<http://www.vtpi.org/tdm/tdm92.htm>

<http://www.vtpi.org/tdm/tdm116.htm>



Bonney Lake Bicycle Audit

Prepared for
City of Bonney Lake

By
Bicycle Alliance of Washington

March 2011

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Introduction

During December 2010 and January 2011, the Bicycle Alliance of Washington conducted a bicycle audit for the City of Bonney Lake.

The goal of the audit was to evaluate the infrastructure around six Bonney Lake schools for bikeability by school-age users. The figure at right shows roads audited around each school. The six schools were Emerald Hills Elementary School (yellow), Liberty Ridge Elementary School (green), Bonney Lake Elementary School (purple and red), Bonney Lake High School (teal and red), Mountain View Middle School (teal and red), and Victor Falls Elementary School (blue and red).

At times, school names are abbreviated throughout the document. Abbreviations used:

EHE	Emerald Hills Elementary School
LRE	Liberty Ridge Elementary School
MVMS	Mountain View Middle School
BLHS	Bonney Lake High School
VFE	Victor Falls Elementary School
BLE	Bonney Lake Elementary School

Refer to Appendix A for a larger map of the area audited.

Refer to Appendix B for a map of all recommended bicycle infrastructure improvements.

Refer to Appendix C for images from the audits.

Methodology

An auditor from the Bicycle Alliance of Washington examined neighborhood streets around each school, evaluating the area from a student's perspective. The auditor assessed the streets for space and safety on the road, road surface and travel experience, and intersection safety. Additionally, where possible, the auditor assessed the school grounds to evaluate bikeability.

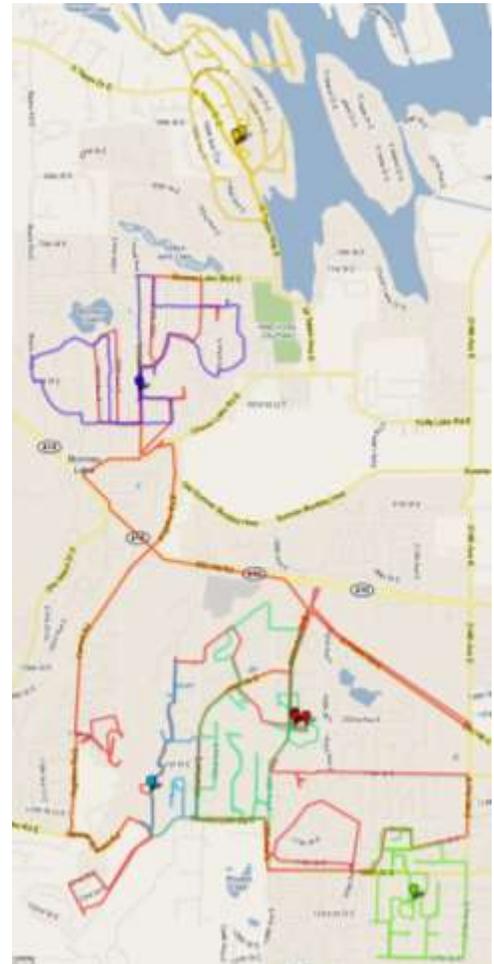


Figure 1 Bicycling Audit Routes

Features Evaluated

The following infrastructure features were evaluated during the audit.

Space and Safety on the Roads¹

- **Bicycle lanes:** Lanes a minimum of four feet wide, marked on the pavement for bicycle use
- **Shoulders (paved or gravel):** Paved or small-graveled shoulder at least four feet wide
- **Multiuse path:** Paved, gravel, or hard-packed dirt paths at least 10 feet wide that provide access to schools apart from existing road; gravel paths that were made of small, dense, well-packed and well-flattened gravel, bikeable by children, physically separated from the road, and connecting directly to the school
- **Sidewalks:** Raised, paved sidewalks, directly adjacent to road, and connecting directly to the school. Although sidewalks are not recommended for middle school or older bicyclists, elementary students can use sidewalks as bicycle infrastructure
- **Visibility:** Sight distance, lighting, hilliness, and curviness of road

Road Surface and Travel Experience

- **Paving quality:** Existence of potholes, cracks in the pavement, gravel, debris, or other small obstructions
- **Physical obstacles:** Barriers such as houses, fences, and gates that prevent access to schools
- **Drainage grates:** Storm drains with openings parallel to the direction of travel, or with other unsafe openings that could catch bicycle tires
- **Road lighting:** Location and frequency of lights on potential bicycle routes
- **Motor vehicle traffic:** Frequency and speed of traffic, motorist behavior

Intersections

- **Signalized intersections:** Stop lights or user-triggered lights
- **Crosswalks:** Road crossings marked with paint and signage

School Grounds

- **Entrances and accessibility from neighborhoods**
- **Ease of using bicycles on school grounds**
- **Bicycle parking:** Security, usefulness, protected from the elements

¹ Widths from AASHTO "Guide for Development of Bicycle Facilities," 1999.

Results Summary

The City of Bonney Lake offers two unique types of infrastructure around the schools audited. In recent developments, particularly around Victor Falls Elementary School, Bonney Lake High School, and Mountain View Middle School, sidewalks, crosswalks, and wide, well-lit roads offer safe bicycling routes for students. In these schools, strategic enhancement of existing infrastructure can be combined with additional education of students and parents to encourage bicycling to school.

In older developments, particularly around Emerald Hills Elementary School, Liberty Ridge Elementary School, and Bonney Lake Elementary School, roads tend to be narrow, with little bicycle infrastructure to facilitate bicycling to school. However, most such roads are low-speed neighborhood roads offering fairly safe routes to students despite lack of bicycling amenities. In these neighborhoods, improving key streets or crossings, marking specific streets as designated bike routes, and adding safety signs can improve the bikeability of the schools.

A few main roads – Rhodes Lake Road/198th Ave. E.; W. Tapps Hwy E.; 214th Ave. E.; and 120th St. E. – lacked bicycle facilities and should be considered for future improvements such as paved parallel paths (preferred) or sidewalks (acceptable, if a minimal number of driveways or intersections are crossed). Otherwise, these roads act as barriers preventing student access to schools.

Recommendation: Add bicycle facilities such as a parallel paved path or bicycle lanes to major roads near all schools. Include crosswalks where appropriate.

All of the schools were completely fenced, except at a few designated openings. The fences can present a real barrier to students who come from directions other than those served by designated entrances.

Recommendation: Consider providing more designated access points to each school. Emerald Hills Elementary School featured entrances that were not bicycle-friendly. Consider replacing those entrances to facilitate bicycles passing through.

Lighting on roads and around schools was not evaluated because audits were conducted during the daytime. However, auditors noticed many school entrances would be quite dark during the wintertime.

Recommendation: Add lighting and paved access from every entrance of each school to on-campus sidewalks or parking lots.

Finally, auditors noticed sidewalks at most schools lacked sufficient curb ramps to facilitate easy bicycling. Nearly every school evaluated had crosswalks leading to a curb; very few curb ramps were observed on school grounds.

Recommendation: Evaluate all sidewalks on school grounds for curb ramps. Consider adding curb ramps at strategic points on all school grounds.

In addition to infrastructure improvements, an educational outreach campaign to students and parents at each school highlighting safe bicycle routes, how to ride to school, and escorted morning “bike buses” could improve bicycling to the schools audited.

Top School-Specific Recommendations

Refer to each school's report for detailed school-specific summaries of recommended improvements.

Emerald Hills Elementary School

- Add sidewalks along the length of 192nd Ave E., as this is a known corridor for children walking and biking to Emerald Hills Elementary.
- Add sidewalks along Maryann Dr. E. from S. Tapps Dr. E. to 56th St. E. to connect 192nd Ave. E. to more neighborhoods.
- Evaluate school entrances and improving lighting at each as appropriate.
- Change fence entrances to style used at Liberty Ridge Elementary School.

Liberty Ridge Elementary School

- Add crosswalk facilities at the intersection of 214th Ave E. and 120th St. E. and at the intersection of 127th St. E. and 214th Ave E., including user-triggered crosswalk lights and designated bicycle facility signage.
- On 214th Ave E., add separate parallel paved paths or sidewalks on both sides of the road to the extent possible, as on the east side of 199th Ave. Ct. E. near Mountain View Middle School.
- Improve secondary southern access by creating an ADA-accessible and bicycle-friendly paved path up the hill from the entrance to the school.
- Evaluate school entrances and improving lighting at each as appropriate.

Mountain View Middle School and Bonney Lake High School

- Pave access from 112th St. E. to both available breaks in the fence, organize students, parents, and school staff to clean up and maintain the trails.
- Evaluate school entrances and improve lighting at each as appropriate. Add lighting at the secondary southern entrances.
- Evaluate usage patterns and establish designated bike to school routes with bicycle lanes connecting neighborhoods to schools.

Victor Falls Elementary School

- Pave the path and add a curb ramp at the secondary north entrance from 111th to facilitate access by wheeled vehicles.
- Pave inter-neighborhood cut-throughs to the north of the school, add lights for night visibility, and provide signage to encourage bicyclist through-traffic.
- Evaluate school entrances and improving lighting at each as appropriate.

Bonney Lake Elementary School

- Designate bicycle routes to school along neighborhood roads. Paint in bicycle and pedestrian space on those roads. During morning and afternoon school commuting hours, make those streets one-way or close them entirely.
- Connect sidewalk segments on 75th St. E. and 84th St. E.
- Enhance crosswalk at 84th St. E. and Locust Ave E.

Audit Results

Space and Safety on Road

Overall we observed arterials with narrow lanes or, in neighborhoods, narrow streets. Very few sidewalks or crosswalks were observed. Visibility was usually limited.

Bike Lanes: None observed.

Shoulders: Few paved shoulders, except directly adjacent to school property on S. Tapps Dr. E and W. Tapps Dr. E. At some points, gravel shoulders were available. Most frequently drainage ditches or hillside abutted the edge of the road, providing little safe biking space on the roads.

Recommendation: Create designated bicycle route and mark with “Designated Bicycle Route” signs. Improve roadside path by paving it or widening it using small, dense-packed gravel.

Multiuse Paths: A paved path within the school grounds was investigated, but it looped back to the school parking lot and did not contribute to bikeability. Another paved path paralleled the road along the school property on S. Tapps Dr. E., leading from the intersection of S. Tapps Dr. E., W. Tapps Dr. E., and 64th St. E to the school entrance. This paved path provides effective bicycle access to the school from sidewalk on W. Tapps Highway E.

Sidewalks: Sidewalks observed along W. Tapps Hwy E. leading to school.

Recommendations: Add sidewalks along the length of 192nd Ave E., as this is a known corridor for children walking and biking to Emerald Hills Elementary.

Add sidewalks along Maryann Dr. E. from S. Tapps Dr. E. to 56th St. E. to connect 192nd Ave. E. to more neighborhoods.

Extend sidewalk or add parallel paved path along S. Tapps Dr. E. to Maryann Dr. E.

Add signage similar to that along S. Tapps Dr. E. to the intersection of at S. Tapps Dr. E. and Maryann Dr. E.



Visibility: This area had gentle rolling hills, some significant tree cover along the roadsides, and a number of sharp curves. These factors, combined with the lack of sidewalks or wide roadside paths, made visibility of non-motorized vehicles difficult.

A – This curve of W. Tapps Dr. E. is particularly difficult to see around. There is no shoulder and obstacles come up to the edge of the road. This section would be dangerous for children trying to bike from the northeast and east.

Recommendation: Add mirrors, signs, and a bikeable paved path on one side of the curve of W. Tapps Dr. E. at this location.

Road Surface and Travel Experience

Overall, road surface quality was fair. Few potholes and minimal debris observed. Lanes on arterials were narrow and only rarely offered space on the side of the road to bicycle. Lighting may also be a concern.

Paving: Asphalt was in fair repair. No major potholes or cracks observed.

Physical Obstacles: The audit took place shortly after a windstorm, so a significant amount of tree debris was observed. The most notable obstacle was a fence around the school, which offered limited access to the school. Secondly, no breaks existed in the homes surrounding the school, which significantly decreased the number of routes to the school.

Drainage Grates: No hazardous grates observed.

Road Lighting: Not evaluated, as the audit was in daylight. However, placement of street lights indicated that the roads would be fairly dark at night.

Motor Vehicle Traffic: Overall, vehicle traffic was light but steady. Drivers exhibited courtesy while passing.

Speed: Most motor vehicles appeared to be traveling at speeds reasonable for the conditions.

Passing Distance: Motorists passed with at least three feet between the motor vehicle and bicycle. Most drivers were courteous and respectful of bicycles on the road.

Signaling: Used as appropriate.

Harassment/Aggression: None observed.

Other Concerns: Three times, unfenced, unleashed dogs chased the auditors as the bicycles passed the property. Unfenced dogs running free and barking are dangerous for bicyclists of all ages.

Recommendation: Discuss concerns with dog owners and request that dogs be kept leashed or fenced.

Intersections

Overall, few intersections offered crosswalks for safe crossing.

Signalized Intersections: None observed.

Crosswalks: One crosswalk at the intersection of W. Tapps Hwy E., S. Tapps Dr. E., and 64th St. was well marked. Blinking lights, lowered speed limit, pedestrian awareness signs were used effectively. However, no other such crosswalks were observed around Emerald Hills Elementary School.



Recommendation: Add crosswalk facilities across Maryann Dr. E. from 192nd Ave E, as many children are known to use 192nd Ave E. as an access to the school.

Recommendation: Add crosswalk facilities, including pedestrian-triggered lights, from Maryann Dr. E across S. Tapps Dr. E to connect the neighborhoods southwest of the school via Maryann Dr. E. and 192nd Ave E.

A – Intersection with crosswalk. According to principal, no crossing guard is stationed there because no children currently approach the school from that direction.

B – A wide shoulder on the north side of the road adjacent to school grounds provides access to the school entrance on W. Tapps Dr. E. (EHE images 0004 and 0005). However, this shoulder narrows and vanishes as children travel to the east leaving the school grounds. This channels children who are using the shoulder to walk home into oncoming traffic.

Recommendation: Add crosswalk across W. Tapps Dr. E. at 61st St. E. or 195th Ave. E. to encourage bicyclists to move into right lane when shoulder ends. About 10 children are known to approach the school from that direction.

C – Intersection of Maryann Dr. and 192nd Ave E. This is at the top of a hill with poor lines of sight. Safety improvements such as signage, crosswalks, and sidewalks along Maryann Dr. could provide access for children living to the north of Emerald Hills.

Recommendation: Add crosswalk and designated bicycle/walking route signage at this location.

Recommendation: Use 191st Ave. Ct. E. as a designated connector for the surrounding neighborhoods. Add sidewalk or graveled walkway and signage encouraging biking/walking.

D – Intersection of Maryann Dr./90th Ave. E. and S. Tapps Dr. E. Crosswalk here could open up southwest neighborhoods to safer bicycling to school.

Recommendations: Add designated bicycle route signs, lowering the speed limit, and providing a user-triggered blinking light at this location and along S. Tapps Dr. from the existing sidewalk in the south all the way north to Maryann Dr. Consider evaluating usage by children to determine whether a crossing guard at this intersection would be cost-effective.

General observation: Many intersections controlled with stop signs had wide curves that facilitate rolling stops. Other corners or turns in the region had poor sightlines and no space on the roadway for other users.

Recommendation: Consider assessing intersections like this to evaluate if there is an effective way to force drivers to slow in the turns (EHE images 0019 and 0020).

School Grounds

The grounds around Emerald Hills Elementary School are completely fenced except for four entrances. The entrances in the fence to the school were a very real obstacle to auditors, who struggled to maneuver bikes through (EHE image 0001).

Recommendation: Change fence entrances to style used at Liberty Ridge Elementary School.

Few curb ramps were observed on the sidewalks within the school. Lack of curb ramps increases the difficulty of transitioning from road to sidewalk by bike (image 0033).

Recommendation: Assess curb ramps on school grounds and modify to improve accessibility.

Emerald Hills Elementary School did have bicycle parking available behind the building (EHE images 0006 and 0032), but they were exposed to the elements and the entire school population, increasing risk of theft.

Recommendation: Move bicycle parking rack to a covered area that is within sight of school staff who can monitor usage to discourage theft of or tampering with bicycles.

Recommendation: Evaluate school entrances and improving lighting at each as appropriate.

Recommendation: Enhance north entrance to school to make it more inviting and easier to use.

Areas of Note



A – School grounds. A paved path goes around the field and back to the parking lot. It looks like it could go to the entrance on the other side of the field, but it doesn't. Sidewalks available, but lack of curb ramps makes bikeability difficult.

Along the school property parallel to S. Tapps Dr. E., there is a good wide shoulder and good signage (EHE image 0021). However, the speed limit increases to 35 mph and the shoulder goes away immediately after the school property ends. This road is clearly not a practical solution for getting kids to school (EHE images 0022 and 0023) as built; see recommendations above.

B – According to the principal, only about 10 kids walk home this way every day. There is a good paved path parallel to but separated from the road here. It's wide enough for two kids to walk abreast. Two-way bike traffic would be difficult at best on this (EHE images 0002 and 0003).

C – According to the principal, about 40 kids use this road to get to access the school. "On a good day" about five kids bike to school. We saw one bike in their bike rack (EHE image 0006). The north entrance has potential. The connecting road is low traffic and relatively flat until Maryann Dr. E., and it connects across to more neighborhoods via 191st

Ave Ct. E. There is a large blank wall on the school that could be painted with a bike-and-pedestrian mural to be welcoming and encourage kids to walk (EHE images 0007, 0030 – 0032).

D – This is a quiet neighborhood street typical of the area. It has no shoulder and minimal room at the edge of the road, but it also has very little traffic (EHE images 0016 – 0018).

E – This is the top of a fairly substantial hill, larger than most kids could ride a bike up. Also, the curve of the road limits visibility and makes it dangerous for bicyclists and pedestrians. As is typical in the area, no designated bicycle facilities are available.

A tree sticks out at the intersection of 193rd Ave E and Maryann Dr. E, on the south side of the road, and limits visibility unnecessarily (EHE images 0024 – 0025).

F – This is a typical intersection with very gentle turns, which encourage running stop signs and does not force drivers to slow down.

G – This road is fairly wide and low traffic. It lets out about halfway up the hill on Maryann Dr. E.

H – This was an almost blind curve; very poor visibility, no shoulder, and nowhere to get off the road (EHE images 0026 and 0027).

Liberty Ridge Elementary School

Date and Time Audited

December 15, 2010, 2:00 pm to 4:00 pm

Audit Route Map



Figure 3 Liberty Ridge Elementary Bicycle Audit Route

Audit Results

Space and Safety on Road

Overall we observed arterials with narrow lanes or, in neighborhoods, narrow streets. Very few sidewalks or crosswalks were observed.

Bike Lanes: None observed.

Shoulders: None observed.

Multiuse Paths: A paved path within the school grounds was investigated, but it looped around the fields to the school parking lot and did not contribute to bikeability.

A bikeable gravel path parallel to the road on either side of 120th St. E. provided access to 209th Ave. Ct. E., which debouches at the main access to the school.

Recommendation: Pave path parallel to 120th St. E. to enhance bikeability.

A beaten path from the secondary south entrance of the school leads up a steep slope from 208th Ave. E. to the play fields.

Recommendation: Improve this access by creating an ADA-accessible and bicycle-friendly paved path up the hill from the entrance to the school. As it currently exists, bicyclists would have to push their bicycles up the hill (see LRE image 0049).

Recommendation: Evaluate school entrances and improving lighting at each as appropriate.

A – A bikeable, paved access path from 209th Ave. Ct. E. let out very near the crosswalk on 120th St. E., directly across from the main access to the school (see LRE images 0045 and 0046). This path was gated and had a sign indicating it was private property.



Recommendation: Obtain permission for all children to use this pass-through as an access to Liberty Ridge from northern neighborhoods, if it is not already available for that use. Also recommend educating parents in northern neighborhoods about this access point.

B – A bikeable but narrow beaten path connects 117th St. E. between 210th Ave. E. and 211th Ave. E. (see LRE images 0043 and 0044).

Recommendation: Expand this pass-through by adding a paved bicycle and pedestrian path around the car barrier to connect the two roads, removing or repositioning boulders to allow easier bicycle maneuvering around the barrier, and adding lighting for night visibility.

Sidewalks: None observed.

Visibility: This area was mostly flat with some very gentle rolling hills. Visibility was limited only by curves in neighborhood roads, where speed limits are low enough to alleviate visibility concerns. Children could safely bicycle in the neighborhood streets without significant changes to infrastructure.

Recommendation: Add signage designating bicycle routes within neighborhood streets and lowering speed limit during school hours.

Road Surface and Travel Experience

Overall, road surface quality was good. Lanes on arterials were narrow and did not offer space on the side of the road for safe bicycle travel. Lighting may also be a concern.

Paving: Asphalt was in good repair overall. No major potholes or cracks observed.

Physical Obstacles: The audit took place shortly after a windstorm, so a significant amount of tree debris was observed. The most notable obstacle was a fence around the school, which offered limited access to the school. Secondly, although much of the school had wooded property around it, only one designated bike path led to the school through the available space.

At the northwest corner of the school property, evidence suggested that kids jumped the fence and cut through private property (see LRE image 0050).

Recommendation: Investigate usage of this corner of the property and discussing possibility with owners of designated bike paths through property if significant numbers of children use or could use this as an access point.

Drainage Grates: No hazardous grates observed.

Road Lighting: Not evaluated, as the audit was in daylight. However, placement of street lights indicated that the roads would be fairly dark at night.

Recommendation: Evaluate school entrances and improving lighting at each as appropriate.

Motor Vehicle Traffic: Overall, vehicle traffic was steady on 214th Ave E., fairly steady on 120th St. E., and light on neighborhood streets. Drivers exhibited courtesy while passing.

Speed: Most motor vehicles appeared to be traveling at speeds reasonable for the conditions.

Passing Distance: Most drivers were courteous and respectful of bicycles on the road. Some close passing occurred on 214th Ave. E.

Signaling: Used as appropriate.

Harassment/Aggression: None observed.

Other Concerns: 214th Ave. E. serves as a major connector road from the south to a shopping center and highway to the north. During the audit, pedestrians were observed walking along the side of the road, and residents indicated that many people use the road to walk or bicycle to the shopping center.

Recommendation: Add a bicycle lane or wide paved path separated from the road on at least one side of the road, or wide, bikeable sidewalks on both sides of 214th. Sidewalks are not recommended for bicyclists older than middle-school aged. Additionally, add crosswalks at 120th St. E. (see below).

Intersections

Overall, only one intersections offered crosswalks for safe crossing.

Signalized Intersections: No bicycle infrastructure or crosswalks were observed at the intersection of 120th St. E. and 214th Ave E.

Crosswalks: One crosswalk and a pedestrian awareness sign were used at the intersection of 120th St. E. and 209th Ave Ct. E. No other crosswalks were observed around Liberty Ridge Elementary School.

Recommendation: Add crosswalk facilities at the intersection of 214th Ave E. and 120th St. E. and at the intersection of 127th St. E. and 214th Ave E. Add user-triggered crosswalk lights, designated bicycle facility signage, and lowering speed limit on this road during school hours.



A – Intersection with crosswalk.

B – Intersection of 120th St. E. and 214th Ave E.

Recommendation: Add crosswalk here to facilitate bicycle access from the northeast.

C – Intersection of 127th St. E. and 214th Ave E.

Recommendation: On 214th Ave E., add separate parallel paved paths or sidewalks on both sides of the road to the extent possible, as on the east side of 199th Ave. Ct. E. near Mountain View Middle School.

School Grounds

The grounds around Liberty Ridge Elementary School were completely fenced except for two entrances. The entrances in the fence to the school did not present an obstacle to

maneuvering a bicycle through (see LRE image 0049).

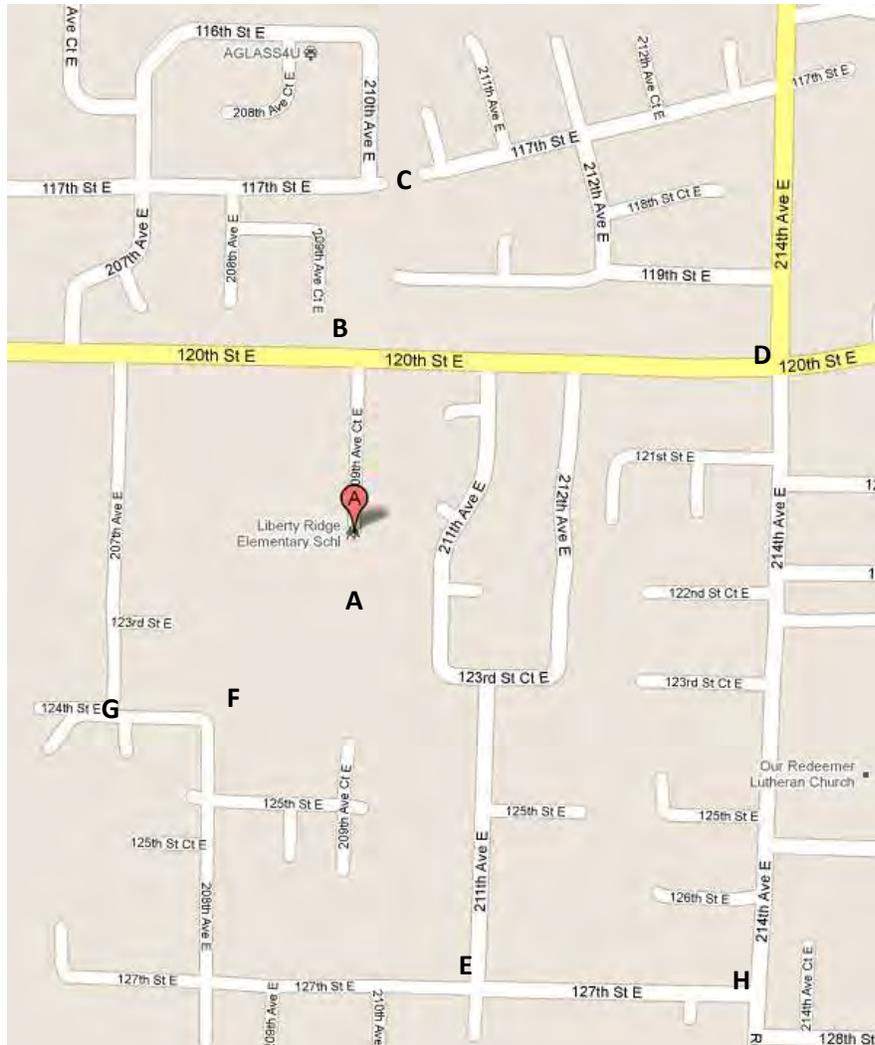
Few curb ramps were observed on the sidewalks within the school. Lack of curb ramps (see LRE image 0053) increases the difficulty of transitioning from road to sidewalk by bike.

Recommendation: Assess access points where kids might want to transition onto the sidewalk and add curb ramps.

Liberty Ridge Elementary School did have bicycle parking available in a fenced paddock adjacent to the school.

Recommendation: Add a rack for locking bicycles.

Areas of Note



A – School grounds. A paved path goes around the field and back to the parking lot. It looks like it could go to the entrance on the other side of the field, but it doesn't. We saw only one small curb ramp in the sidewalks around the entrance, and several crosswalks led to sidewalks with no curb ramps. This makes the road-to-sidewalk transition difficult when bicycling. (LRE images 0053 and 0057)

B – A gravel path parallels 120th St. E. (LRE images 0034, 0035, and 0047), but could be challenging bicycling for young kids. Recommend paving this path. There is a small, gated cut-through from 209th

Ave. E. to 120th St. E here. It has a lock (unlocked when visited) and a very visible no trespassing sign (LRE images 0045 and 0046).

C – There is a pedestrian and bike connection here, although the road is blocked off for motorists. In conjunction with the cut-through on 209th Ave. Ct. E., this could provide a safe way for kids in the 117th St. E vicinity to walk to school (LRE images 0043 and 0044).

D – No safe crosswalks or signs here. According to two residents, 214th Ave. E. is a major transportation corridor, yet it does not have sidewalks, a shoulder, or even gravel paths (LRE image 0048). Auditors observed people walking along the side of the road during our audit.

E – Most of the other neighborhood roads were moderately wide but had no sidewalks or crosswalks (LRE images 0036 and 0037).

F – Back way into school, with some pedestrian awareness signage already in place (LRE images 0038, 0039, and 0049). This is a good entrance for walking, but the hill between the fence and the school is too steep for easy biking. As it currently exists, bicyclists would have to push their bicycles up the hill. Note the pass-through in the fence, which is easier to use with a bike than those at Emerald Hills Elementary.

G – There is a cut-through here. These roads are packed gravel private roads, and we cannot encourage kids to use them as a way to school. Additionally, there are not many homes along those roads. (LRE images 0040 – 0042).

H – This is a difficult crossing but with minor improvements could open up access from the south and east.

Mountain View Middle School and Bonney Lake High School

Date and Time Audited

January 3, 2011, 8:20 am to 10:50 am

January 11, 2011, 10:00 am to 1:30 pm

Audit Route Map

Note: January 3, 2011 Mountain View Middle School/Bonney Lake High School audit route shown in teal. January 11, 2011 combined audit route shown in red.

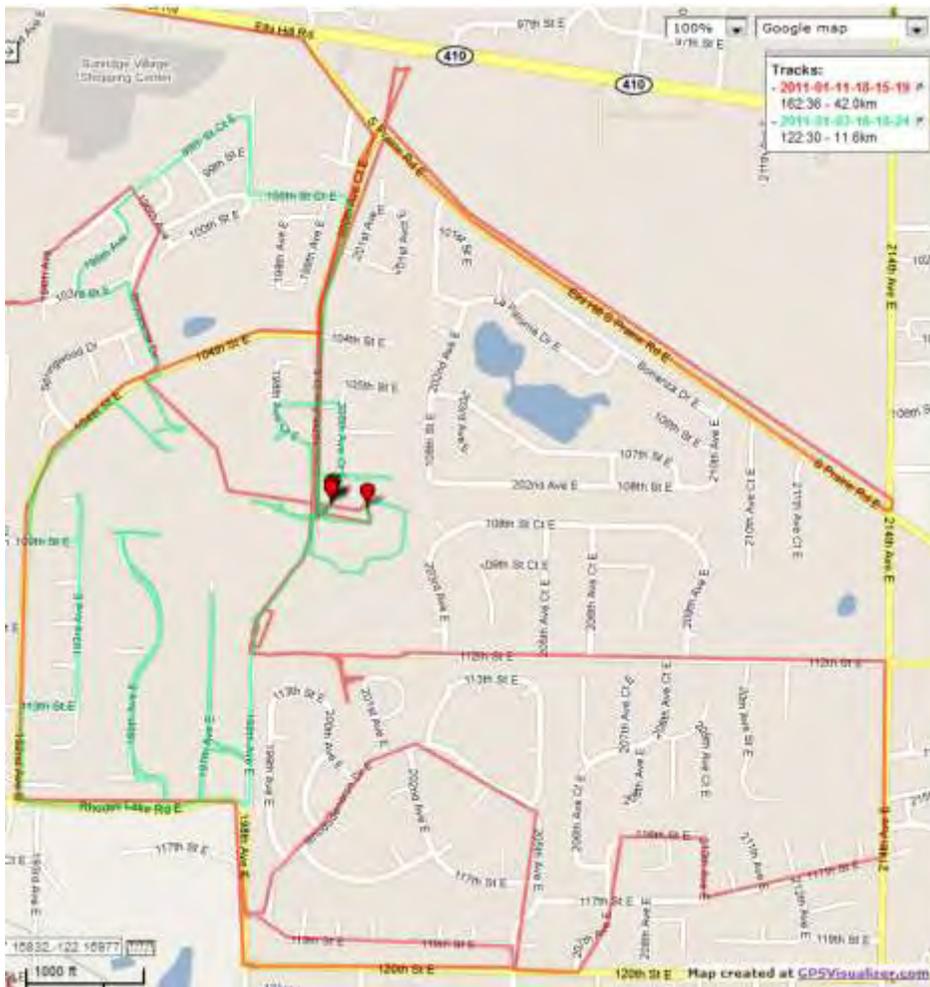


Figure 4 Mountain View Middle School/Bonney Lake High School Bicycle Audit Routes

Audit Results

Space and Safety on Road

Overall we observed arterials with average-width lanes or, in neighborhoods, slightly narrower streets. Most newer developments in the northwest had sidewalks and crosswalks, with frequent pedestrian signs. Older developments to the east and southeast were similar to those around Emerald Heights Elementary school, featuring narrow roads without bicycle infrastructure. For older students who can ride bicycles at high speeds, sidewalks are not a safe bicycle route.

Bike Lanes: None observed.

Recommendation: Add bicycle lanes on 104th St. E. and 112th St. E.

Shoulders: Some paved shoulders. In many areas, arterials had sidewalks on one or both sides of the road (see below).

Multiuse Paths: One paved designated multiuse path parallel to 200th Ave Ct. E./199th Ave Ct. E. led to Mountain View Middle School and Bonney Lake High School. This path was separated from the road with a gravel median. It is an effective bicycle route, and tracks in the snow indicated that bicyclists do use it to travel to those schools (see MVMS image 0004).

Recommendation: Add “Trail Crossing” signs at intersections between this trail and roads.

Additionally, access to Mountain View Middle School is available from 112th St. E., 198th Ave. E., and 201st Ave. E. on dirt trails (see MVMS images 0042 – 0057). This network of trails is not easily accessible by bicycle. It cuts through private property to access 198th Ave. E. and 201st Ave. E. Auditors observed significant amounts of trash (MVMS images 0049, 0051, 0052) on the trails. The trails are used by students for illicit activities and currently represent a potential hazard to legitimate users.

Recommendation: Pave access from 112th St. E. to both available breaks in the fence, organize students to clean up and maintain the trails, and add lighting at the southern entrances.



A – Access to school directly from 112th St. E. (MVMS image 0043).

B – Access to school farther along the path (MVMS images 0045 [view from 112th St. E.], 0046 [view from path towards Mountain View Middle School], and 0047).

Recommendation: Pave from 112th St. E. to point B, and add at least one light at point B to illuminate this entrance.

C – The trail branches and connects to 201st Ave. Ct. E. through a private back yard.

Recommendation: Investigate usage habits on this section of trail. If it is frequently used, recommend purchasing right of way to 201st Ave. Ct. E. and expanding this access into a complete paved path, including lights.

D – The trail continues on around Mountain View Middle School. Where the forest cover is most dense, the trail has significant trash accumulation (MVMS images 0049, 0051, and 0052).

Recommendation: Involve parents and students to clean up and maintain this area. Repair holes in fences (MVMS image 0055) and provide designated access to Bonney Lake High School from the paths where a hole has been cut in the fence (MVMS images 0056 and 0057).

Sidewalks: To the northwest of the school, sidewalks were observed along nearly all the arterials and many neighborhood streets. Many crosswalks were marked (see image MVMS 0030). To the east and southeast, particularly in Rhododendron Park, no sidewalks or bicycle facilities were observed.

Recommendation: Evaluate usage patterns and establish designated bike to school routes with bicycle lanes connecting neighborhoods to schools.

Recommendation: Add bicycle lanes along 192nd Ave. E./104th St. E. and implement a student education campaign to encourage use of bicycle infrastructure.

Visibility: This area was mostly flat with a few gentle rolling hills. There was very little obscuring tree cover along the roadsides, and a minimal number of sharp curves. Overall, visibility of nonmotorized road users was acceptable.

The exception to these observations was Rhodes Lake Road E./198th Ave. E., where a number of dangerous, sharp curves and obscuring hills were observed. These factors, combined with the lack of sidewalks or wide roadside paths, reduced visibility of non-motorized vehicles difficult (MVMS images 0014, 0015, 0019, and 0020). At this time, Rhodes Lake Road E. is a southern barrier to access for Mountain View Middle School and Bonney Lake High School.

Recommendation: Provide paved, lit path on Rhodes Lake Road E., as on the east side of 199th Ave. Ct. E.

Road Surface and Travel Experience

Overall, in the northwest road and sidewalk surface quality was good. Lanes on arterials were a reasonable width, and sidewalks offered a viable alternative to riding on the road. In the east and southeast the roads were fair and offered no bicycle facilities. Some potholes and debris were observed in Rhododendron Park.

Paving: Asphalt was in good repair overall. Potholes and road debris were observed in the Rhododendron Park neighborhood at the intersection of Rhododendron Dr. and 199 Ave. Ct. E. (MVMS images 0038 and 0039). Some gravel roads in neighborhoods had potholes or water damage (MVMS image 0017, taken on 197th Ave. E.).

Physical Obstacles: The initial audit took place shortly after a snow storm, so a significant amount of snow and ice was observed. Curb ramps were not available at all corners where bicycles would transition from the sidewalk to the road (MVMS image 0003). Both schools were fenced, but students consistently cut through fenced areas.

Recommendation: Evaluate holes in fence and establish designated entrances at those points if a sufficient number of students use those access points.

Bonney Lake High School provided good access from 104th St. E. and 199th Ave Ct. E.

Drainage Grates: One hazardous drainage grate was observed on 199th Ave. Ct. E. on the east side of the road, near 105th St. Ct. E. (MVMS image 0059).

Recommendation: Rotate the grate 90° or replacing it with a bicycle-safe grate.

Road Lighting: Not evaluated, as the audit was in daylight. However, placement of street lights indicated that some of the roads would be fairly dark at night. In particular, the trails behind Mountain View Middle School would be very dark.

Motor Vehicle Traffic: Overall, vehicle traffic was moderate. Drivers exhibited courtesy while passing.

Speed: Most motor vehicles appeared to be traveling at speeds reasonable for the conditions.

Passing Distance: Not observed, as auditor used sidewalks where available. One exception was on Rhodes Lake Road E., where the auditor experienced uncomfortably close passing.

Signaling: Not observed.

Harassment/Aggression: None observed.

Other Concerns: None.

Intersections

Overall, intersections on arterials offered crosswalks for safe crossing.

Signalized Intersections: None observed.

Crosswalks: Crosswalks were well marked along 192nd Ave. E./104th St. E. and 200th Ave Ct. E./199th Ave Ct. E. (MVMS images 0022 and 0030). Additional crosswalks connected the roadside path from Mountain View Middle School to Bonney Lake High School.

School Grounds

The grounds around Mountain View Middle School were completely fenced except at the front entrance and in two designated rear entrances, accessible by trails.

Intermittent use of curb ramps was observed on the sidewalks within the school. Lack of curb ramps increases the difficulty of transitioning from road to sidewalk by bike. At Bonney Lake high School, a curb that designated the path along the 199th Ave Ct. E. entrance to the school. This curb had no breaks to allow bicycles through, even at points where crosswalks intersected it (MVMS image 0033).

Recommendation: Evaluate both Mountain View Middle School and Bonney Lake High School grounds and adding curb ramps where bicycle users would naturally transition from road to sidewalk.

Bicycle parking racks were available at Mountain View Middle School (MVMS image 0033 and in covered area near front entrance, not pictured), but they were exposed to the entire school population, increasing risk of theft or tampering.

Bicycle parking racks were also available at Bonney Lake High School (MVMS image 0026). However, the racks provided parking for a maximum of 20 bicycles, which cannot effectively serve a high school of that size. Additionally, the racks were exposed to the entire school population, increasing risk of theft.

Recommendation: Increase security by instigating regular monitoring of the racks during the school day. Provide additional bicycle parking commensurate to the number of students who would ideally bicycle to school.

Recommendation: Evaluate school entrances and improving lighting at each as appropriate.

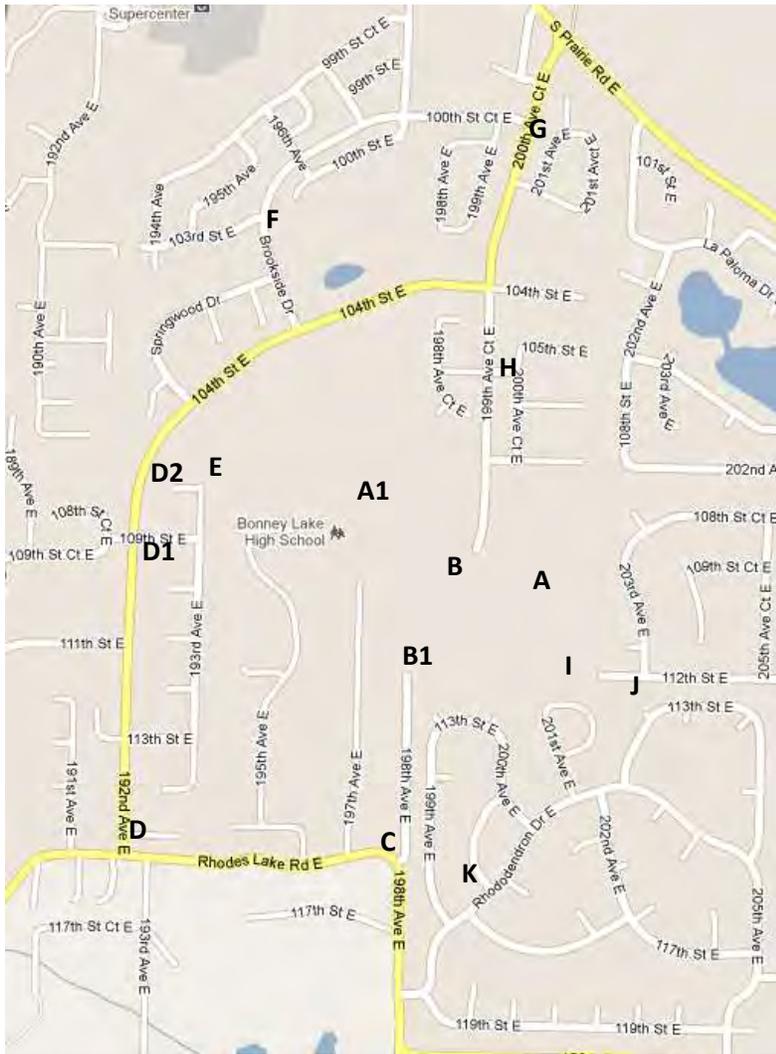
Additional Recommendations

Overall, the infrastructure around Mountain View Middle School and Bonney Lake High School was excellent to the northwest. However, Bonney Lake High School draws from the southeast, around Liberty Ridge Elementary School, and those roads have no bicycling facilities.

Because most of the infrastructure already exists, this is an area that could benefit from a strong educational campaign.

Recommendation: Create an educational program to encourage all students living along 192nd Ave E./104th St. E., 200th Ave. Ct. E./199th Ave. Ct. E., and 112th St. E. to use the facilities available.

Areas of Note



A – Mountain View Middle School; **A1** – Bonney Lake High School. At several points on the grounds of both schools, lack of curb ramps makes bicycle accessibility difficult (MVMS images 0001, 0002, 0003, 0033, and 0035). Bicycle parking facilities, although available, may not be sufficient to meet demand if more than about 20 students per school choose to bike on any given day.

The road leading to both schools, 199th Ave Ct E., has good signage to alert drivers to the presence of other users, and a well-paved path parallel to the length of the road (MVMS images 0004, 0030, and 0031). Bicycle tracks indicate that the path is used. Access is available from the south via paths; see point I.

B – A beaten trail leads south to 198th Ave Ct. E. and east to 112th St. E. and 201st Ave. E. (MVMS

images 0008 and 0010; **B1** – end of the trail, MVMS image 0013; MVMS images 0042 – 0057). This is not a viable bicycle route from 198th Ave Ct. E. as it exists now.

C – Rhodes Lake Road E. is a dangerous road with low visibility and minimal shoulders. It is not recommended for bicycle use by even high school students. (MVMS images 0014, 0015, 0019, and 0020).

D – This is an atypical but excellent arterial, as it provides good visibility and complete pedestrian facilities that can be used for students bicycling to school. Sidewalks the length of the road with pedestrian signs at road crossings provide excellent access to Bonney Lake High School (MVMS images 0021, 0022, **D1** – 0024, and **D2** – 0025).

E – This is a beaten path that extends from 193rd Ave. E. towards Bonney Lake High School (MVMS image 0023). No action necessary for this path, which is adequate for pedestrians but not necessary for bicyclists, who can be encouraged to use 104th St. E.

F – This is a typical intersection (MVMS images 0027 and 0028) in a newer development. Sidewalks and wide roads provide good bicycling facilities.

G – This paved path leads to Mountain View Middle School and Bonney Lake High School, and includes good designated signage (MVMS images 0029, 0030, and 0031).

H – Dangerous storm drain.

I – Rear entrance to Mountain View Middle School and Bonney Lake High School.

J – View of 112th facing east away from trails (MVMS image 0044).

K – Potholes and paving quality in Rhododendron Park (MVMS images 0038 and 0039).

D – About one mile from Victor Falls Elementary, an undesignated cut-through connects 103rd St. E. to 190th Ave E. (VFE images 0055 and 0056).

Recommendation: Evaluate potential for usage and obtaining the right of way to develop this path if enough students would use it. If developed, pave the path and add a light and designated bicycle route signage.

Sidewalks: Sidewalks observed along nearly all the arterials and most neighborhood streets. Many crosswalks were marked (see MVMS image 0030, VFE image 0044). Sidewalk is notably lacking along 188th Ave Ct. E., which leads directly to the school; the sidewalk ends at the intersection of 188th Ave Ct. E. and Rhodes Lake Rd. E. (VFE image 0054).

Recommendation: Extend sidewalk to Victor Falls Elementary along 188th.

Additionally, the sidewalk on the west side of 192nd Ave E. ends abruptly to the south as the road widens into two turn lanes at Rhodes Lake Rd. (see Areas of Note point E, below).

Recommendation: Clearly designate where southbound sidewalk users should go from that point.

Visibility: This area was almost completely flat, with access via low-traffic neighborhood roads. There was very little obscuring tree cover along the roadsides, and a minimal number of sharp curves. Overall, visibility of nonmotorized road users was acceptable.

The exception to these observations was Rhodes Lake Road E. as discussed in the Mountain View Middle School and Bonney Lake High School audit report. At this time, Rhodes Lake Road E. is a southern barrier to access for Victor Falls Elementary School.

Road Surface and Travel Experience

Overall, road and sidewalk surface quality was good. Lanes on arterials were a reasonable width, and sidewalks offered a viable alternative to riding on the road.

Paving: Asphalt was in good repair overall. No major potholes or cracks observed. Some potholes were observed on 190th Ave. E., which was a bikeable packed dirt road.

Physical Obstacles: The initial audit took place shortly after a snow storm, so a significant amount of snow and ice was observed. Unlike at most elementary schools, the fence around Victor Falls Elementary did not constitute the greatest physical obstacle. Instead, Rhodes Lake Rd. E. and similar large roads, in combination with cul-de-sacs that did not connect, dramatically reduced the area viable for bicycling to Victor Falls.

Recommendation: Enhance access from the north by purchasing right-of-ways and developing the undesignated cut-through paths as discussed. Evaluate potential routes for accessing from east and west.

Recommendation: Create signed designated route from the north of the school.

Drainage Grates: No hazardous grates observed.

Road Lighting: Not evaluated, as the audit was in daylight. However, placement of street lights indicated that some of the roads would be fairly dark at night.

Motor Vehicle Traffic: Overall, vehicle traffic was light in neighborhoods connecting directly to Victor Falls Elementary. Driver behavior was courteous.

Speed: Most motor vehicles appeared to be traveling at speeds reasonable for the conditions.

Passing Distance: Not observed, as auditor used sidewalks where available. One exception was on Rhodes Lake Road E., where the auditor experienced uncomfortably close passing.

Signaling: Not observed.

Harassment/Aggression: None observed.

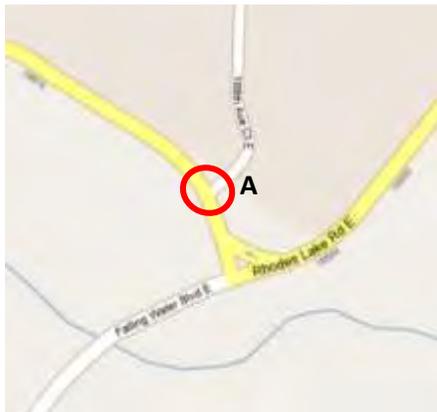
Other Concerns: None.

Intersections

Overall, most intersections offered crosswalks for safe crossing.

Signalized Intersections: None observed.

Crosswalks: Because most access was through neighborhood streets, crosswalks were minimal, but were not necessary. Crosswalks were well marked along 192nd Ave. E./104th St. E. (MVMS image 0022).



The exception was the intersection of 188th Ave Ct. E. and Rhodes Lake Rd. E. (VFE image 0054), where no crosswalk exists.

Recommendation: Add a crosswalk with significant safety features, including flashing lights and, if appropriate, a crossing guard, at point A.

This allows a safer connection from the Falling Water development (VFE images 0058 and 0059), which has good sidewalk connectivity to Victor Falls Elementary School.

School Grounds

The grounds around Victor Falls Elementary School were completely fenced except at the front and rear entrances.

Use of curb ramps appeared effective for bicycling.

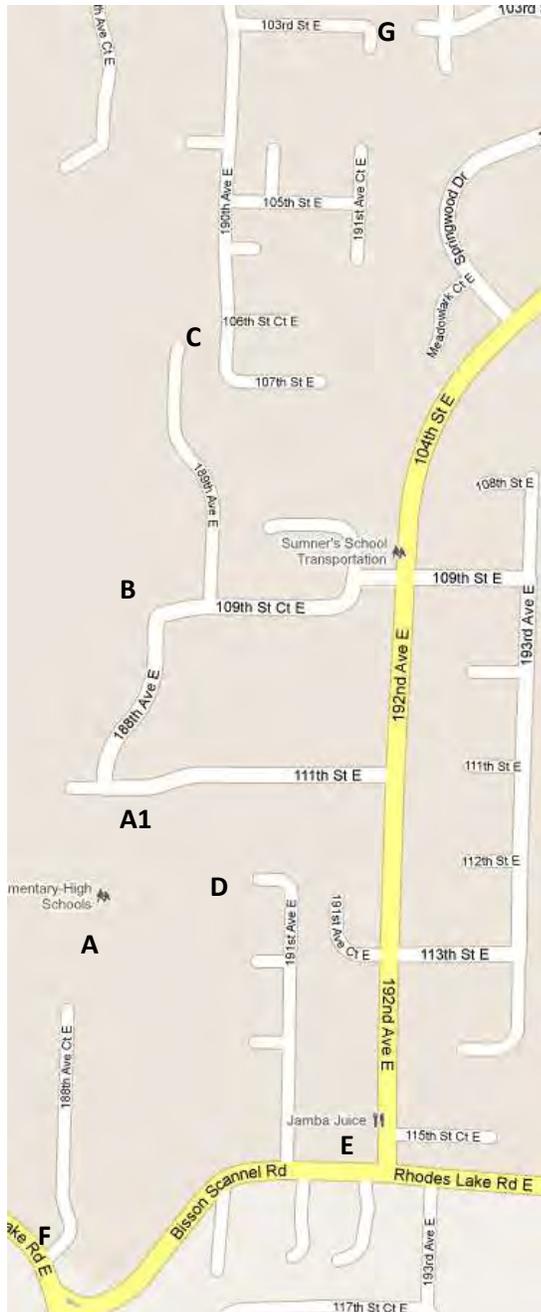
Bicycle parking racks were available at Victor Falls Elementary School (VFE image 0037), but they were exposed to the elements and the entire school population, increasing risk of theft and damage to bikes.

Additionally, the racks appeared able to accommodate a maximum of about eight bicycles, not sufficient when a significant portion of the students bicycle on the same day.

Recommendation: Add more bike racks and increase security by instigating regular monitoring of the racks during the school day.

Recommendation: Evaluate school entrances and improving lighting at each as appropriate.

Areas of Note



A – Victor Falls Elementary School (VFE image 0037).

A1 – As discussed above, north entrance to school via 111th St. E. This is a viable bicycle access point that connects via sidewalks on 192nd Ave E./104th St. E. all the way to the Brookside Dr. neighborhood.

B – An undesignated beaten trail leads into the woods from 188th Ave E. Graffiti on the fence indicates use by older students (VFE images 0039 – 0041).

C – As discussed above, an undesignated cut-through joins 189th Ave E. and 190th Ave E. (VFE images 0042 and 0043). VFE image 0044, taken at point C facing south, down 189th Ave E., shows neighborhood street typical of the area.

D – As discussed above, a road-width path between the rear of the private residences on 191st Ave E. and Victor Falls Elementary School begins at the end of 191st Ave E. (VFE images 0046 – 0050).

E – The sidewalk on the west side of 192nd Ave E. ends abruptly (VFE image 0045) to the south as the road widens into two turn lanes.

F – There is a sidewalk along the corner of the intersection of 188th Ave Ct. E. and Rhodes Lake Rd. E. (VFE images 0052 and 0054) that provides access from the Falling Water development.

G – As discussed above, path connecting both ends of 103rd St. E. (VFE images 0055 and 0056).

Not shown – Falling Water development to the south (VFE images 0058 and 0059) includes bikeable sidewalk

extending to intersection discussed in point F.

Bonney Lake Elementary School

Date and Time Audited

January 3, 2011, 12:45 pm to 2:30 pm

January 11, 2011, 2:30 pm to 3:30 pm

Audit Route Map

Note: January 3, 2011 Bonney Lake Elementary School audit route shown in green. January 11, 2011 combined audit route is shown in red.

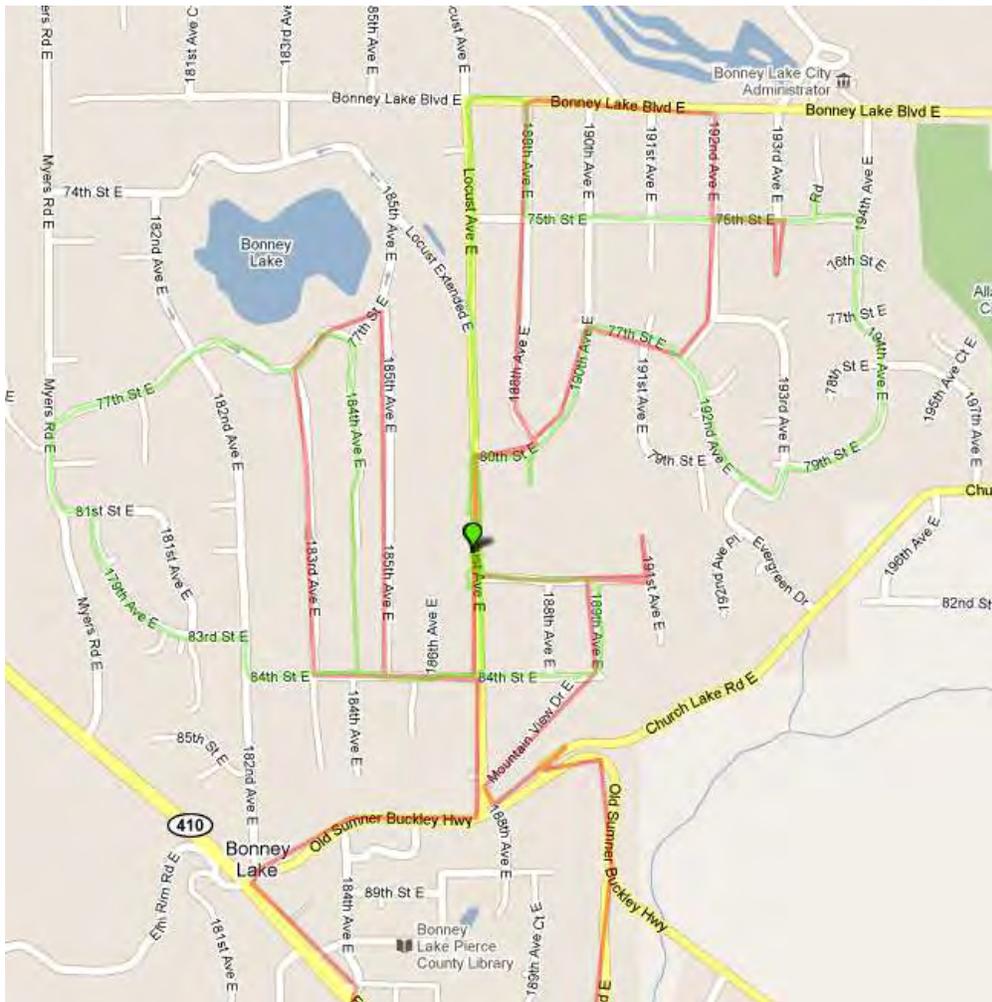


Figure 6 Bonney lake Elementary Bicycling Audit Route

Not shown: Audit extended south down Parnell Rd./Angeline Rd. to Rhodes Lake Rd. and investigated the 109th/110th St. E. neighborhood. This neighborhood is not discussed, as there is no viable way for elementary students to bicycle from that neighborhood to Bonney Lake Elementary School.

Audit Results

Space and Safety on Road

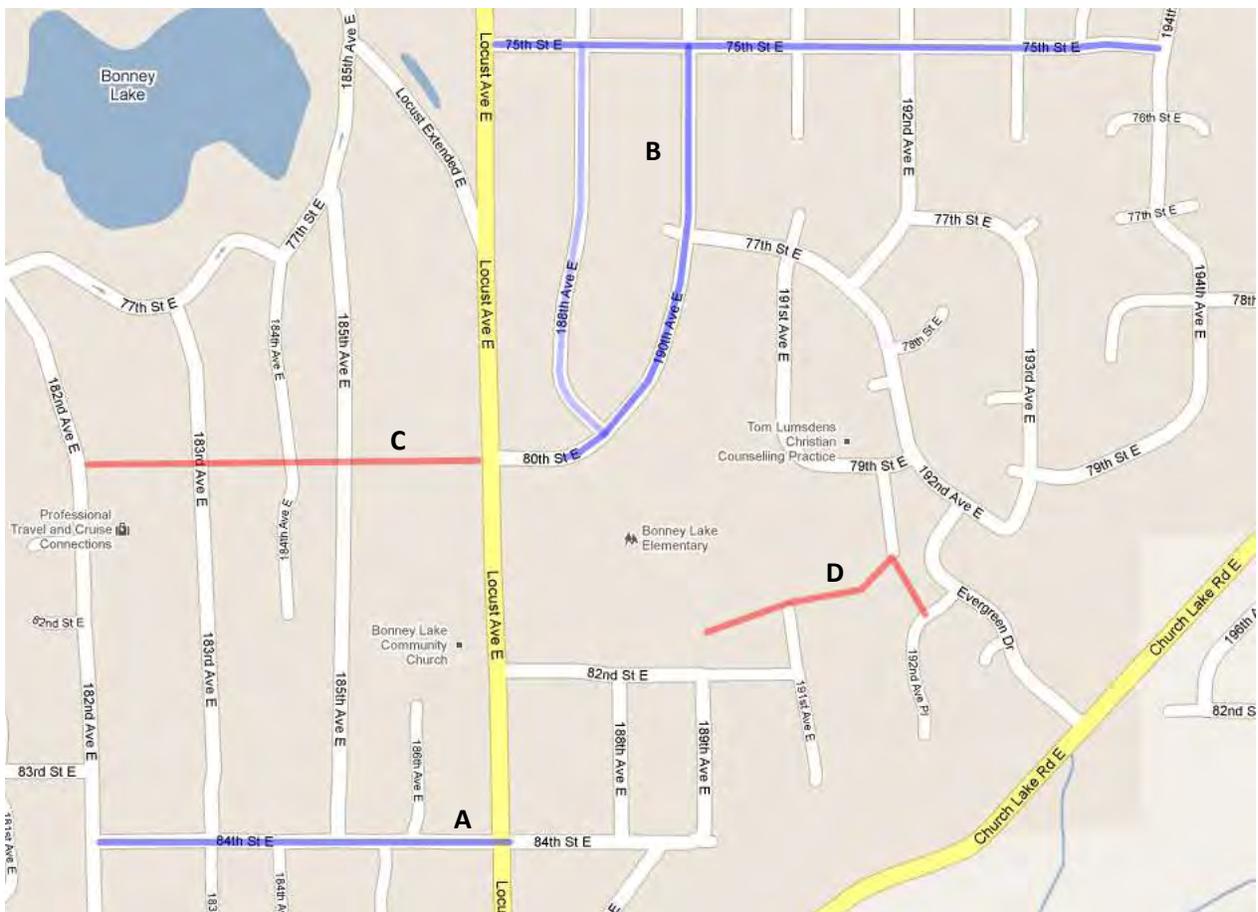
Overall we observed arterials with narrow lanes or, in neighborhoods, narrow streets. Within neighborhoods, few sidewalks or crosswalks were observed.

Bike Lanes: None observed.

Shoulders: None observed. Many of the neighborhood roads were narrow, curvy, with moderate hills obstructing views, and offered minimal space for nonmotorized users.

Multiuse Paths: None observed. Bonney Lake Elementary School was undergoing renovations during the time of the audit, so any designated paths around the school grounds were not observed.

Sidewalks: Sidewalks along Locust Ave E. (BLE image 0055) and Bonney Lake Blvd. E. provide good space for children on arterial-sized roads. However, minimal sidewalks were observed in surrounding neighborhoods (BLE image 0058).



A – On 84th St. E., sidewalks appeared intermittently near new housing developments.

Recommendation: Extend and connect sidewalk segments along 84th St. E to Locust Ave E.

Recommendation: Enhance crosswalk at 84th St. E. and Locust Ave E., as the auditor waited a significant time for traffic before being able to safely cross the road.

B – Create connections through neighborhoods to allow students safely travel from the neighborhoods to the northeast.

Recommendation: Designate bicycle routes to school along neighborhood roads. Paint in bicycle and pedestrian space on those roads. During morning and afternoon school commuting hours, make those streets one-way or close them entirely.

Recommendation: Add connecting the sidewalk segments or designated space on roadway along 75th St. E. to have complete connections the length of 75th St. E.

Recommendation: Add sidewalks along either 188th Ave E. or 190th Ave E., as discussed in the non-motorized plan. Sidewalks on 190th Ave. E. would draw more students.

Recommendation: Along 79th St. E. and 192nd Ave. E., add alternative route; or sidewalk or parallel paved path and safety signage to improve bikeability.

C – Recommendation: If feasible, obtain right of way to connect 182nd Ave E. and neighborhoods to the east directly to 80th St. E. with a paved multiuse path.

D – Recommendation: Add paved path from Bonney Lake Elementary School grounds connecting to 191st Ave. E., 192nd Ave. E., and 192nd Ave. Pl. to provide access to school from the east.

Visibility: This area had gentle rolling hills and notably curvy roads. Blinking lights on Locust Ave. E. in the school zone (BLE image 0057) contributed to added safety. However, visibility was limited in most neighborhoods, most notably on 79th St. E./77th St. E., where curves in the road and hills made it difficult for motorists to see bicyclists in the road (BLE images 0061 and 0062). Children would not be safe bicycling on this road without significant infrastructure improvements, such as adding a parallel paved path or a sidewalk.

Recommendation: Evaluate road for safety and add space on roadway and designated bicycle route signage where appropriate.

Road Surface and Travel Experience

Overall, road surface quality was acceptable. Lanes on arterials were narrow and did not offer space on the side of the road for safe bicycle travel. Lighting may also be a concern.

Paving: Asphalt was in fair repair. No major potholes or cracks observed.

Physical Obstacles: The initial audit took place shortly after a snow storm, so a significant amount of snow and ice was observed. School grounds were not observed for physical obstacles, but historically a fence around the school has offered a significant obstacle. Lack of designated bicycle facilities on neighborhood streets presents the largest physical obstacle.

Drainage Grates: No hazardous grates observed.

Road Lighting: Not evaluated, as the audit was in daylight. However, placement of street lights indicated that the roads would be fairly dark at night.

Motor Vehicle Traffic: Overall, vehicle traffic was steady on Locust Ave. E. and fairly steady on many of the neighborhood streets. Drivers exhibited courtesy while passing.

Speed: Most motor vehicles appeared to be traveling at speeds reasonable for the conditions.

Some potentially dangerous speeds were observed on 79th St. E. and 192nd Ave. E.

Passing Distance: Most drivers were courteous and respectful of bicycles on the road.

Signaling: None observed.

Harassment/Aggression: None observed.

Other Concerns: None.

Intersections

Overall, only one intersection offered crosswalks for safe crossing.

Signalized Intersections: None observed.

Crosswalks: Crosswalks were effectively placed along Locust Ave. E. and Bonney Lake Blvd. E. No other crosswalks were observed.



A – Intersection of 84th St. E. and Locust Ave E. As there was a slight hill just before this crosswalk, drivers tended to be traveling fairly rapidly at this intersection.

Recommendation: As discussed above, improve crosswalk here to facilitate bicycle access from the west.

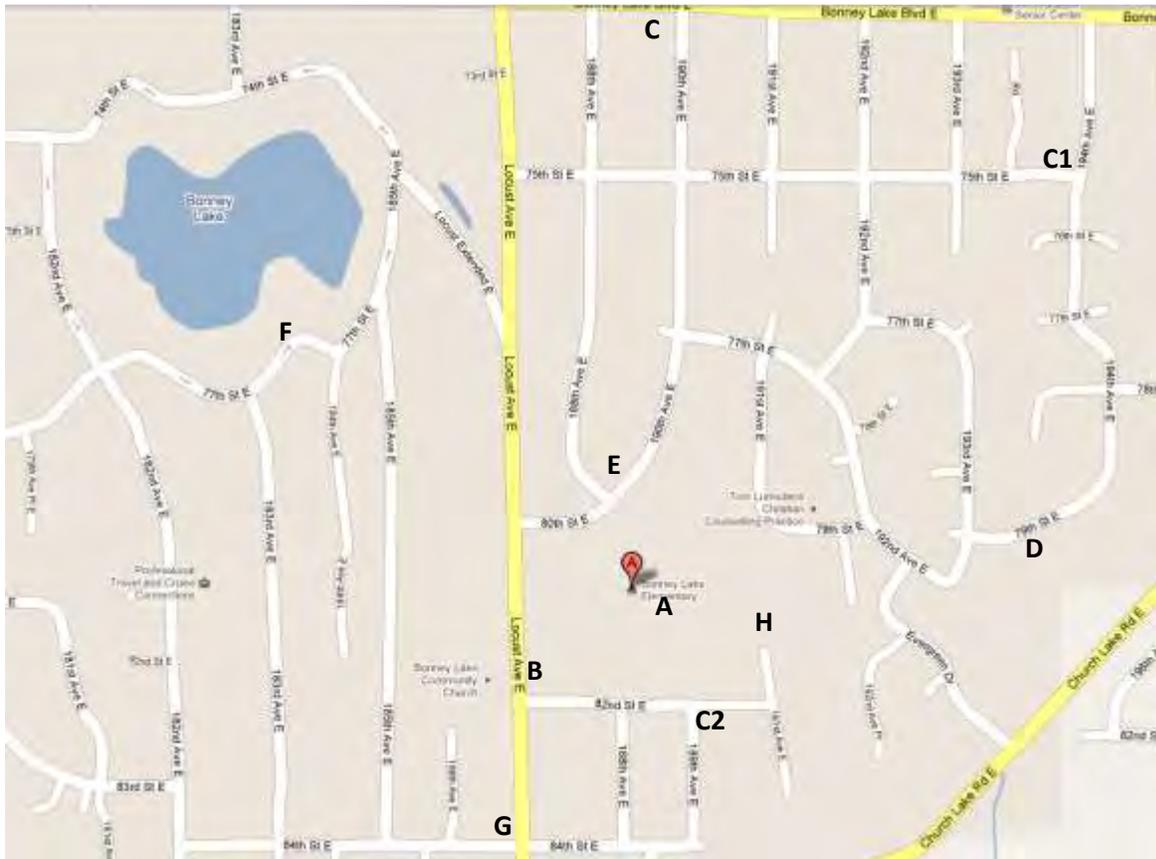
School Grounds

Not observed due to construction.

Recommendation: During school renovations, ensure that bicycle racks are included and located in a covered area within view of constant or frequent adult supervision.

Recommendation: Evaluate school entrances and improving lighting at each as appropriate.

Areas of Note



A – School grounds. Not observed, as they were under construction during the audit.

B – Sidewalk and school signs on Locust Ave. E. (BLE image 0055.)

C – Typical neighborhood streets are shown in BLE images 0058 (**C**), 0059 – 0060 (**C1**), and 0064 – 0065 (**C2**). These streets do not offer space along the edge for safe bicycling.

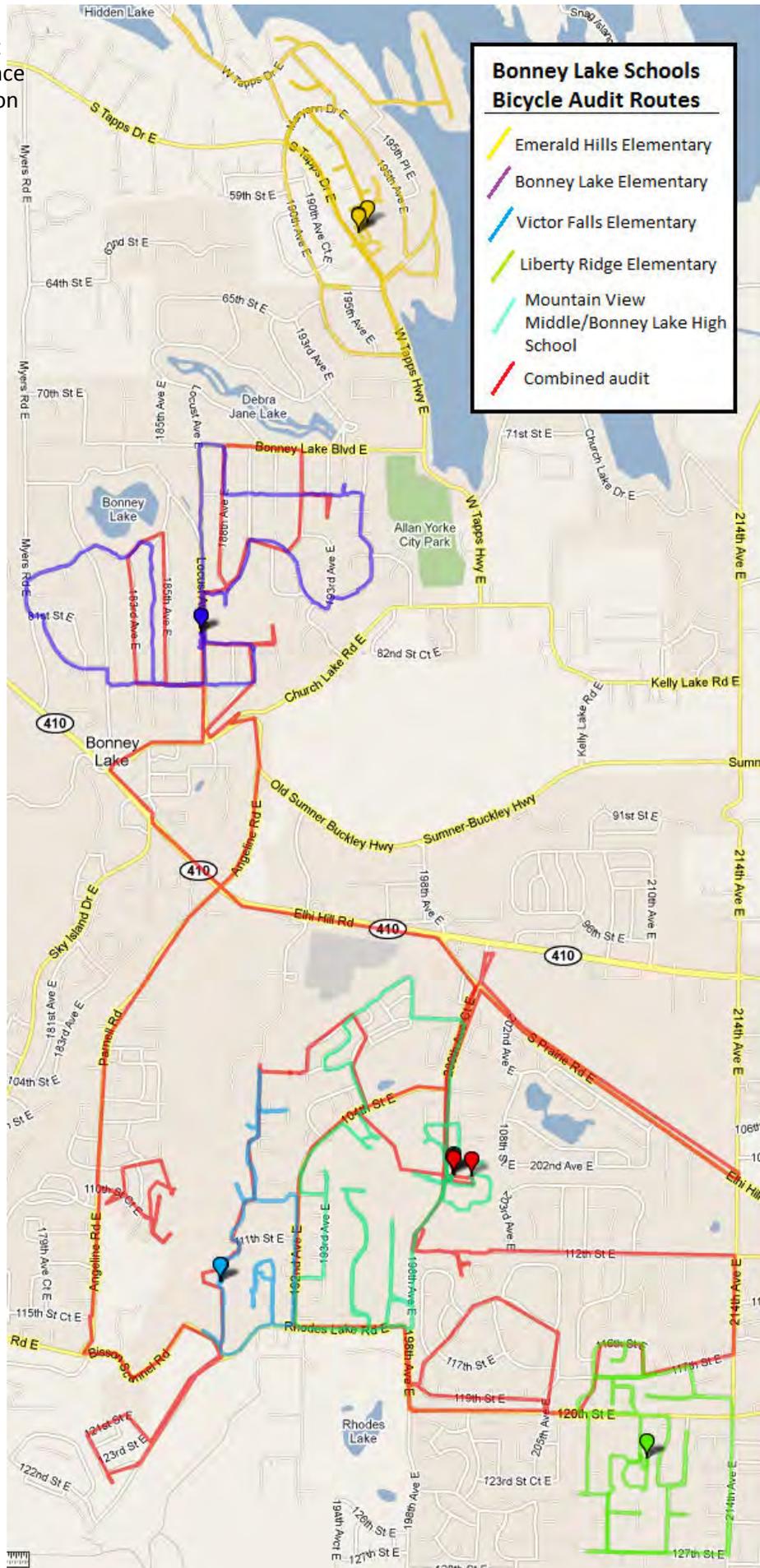
D – Steep hill and poor visibility act as physical obstacles that would hinder children biking to school along this road (BLE images 0061 and 0062).

E – Short hill immediately before school may hinder children riding bicycles to the school.

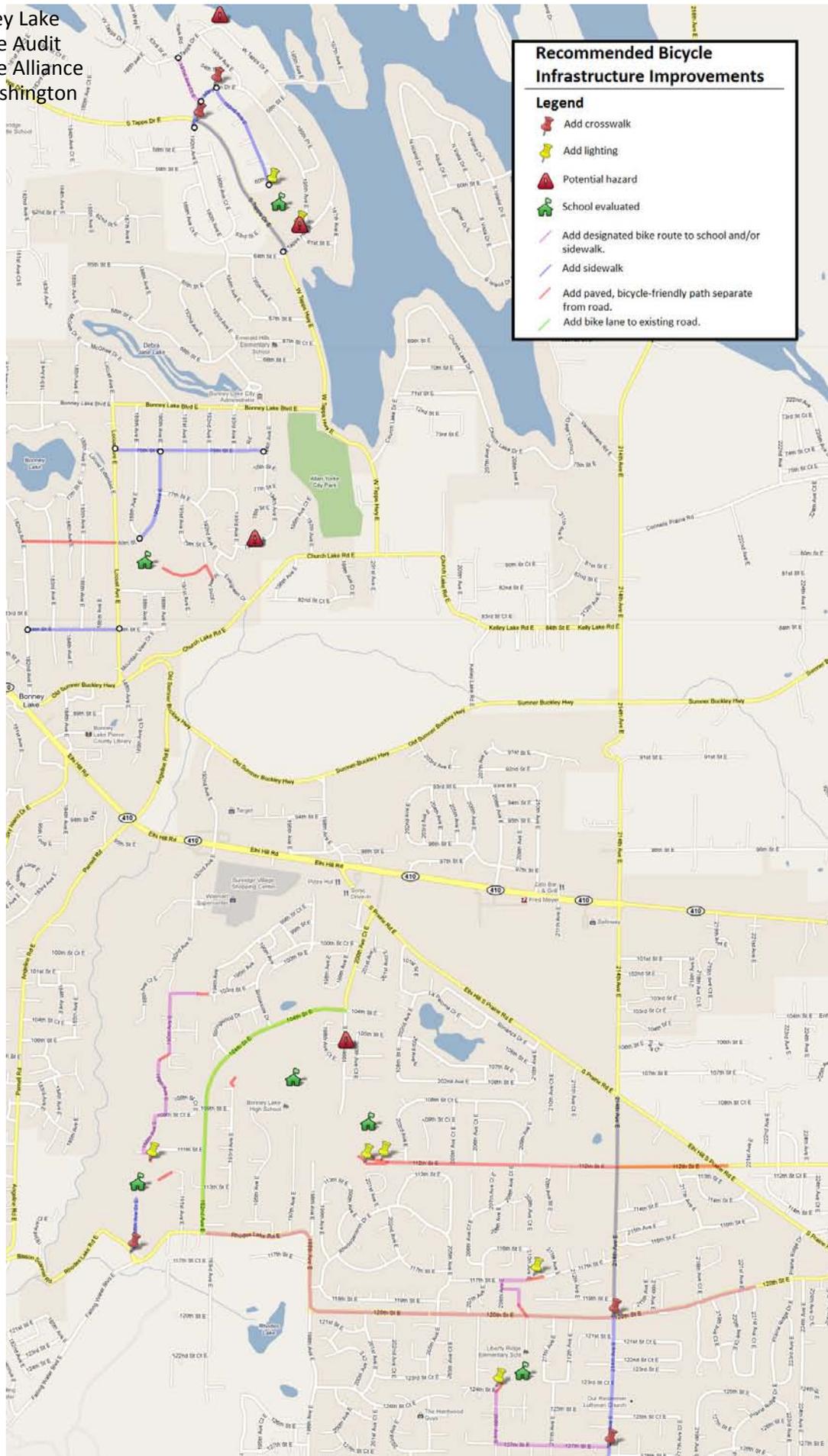
F – 77th St. E. (BLE images 0067 and 0068) is not safe for children. Although it does have a shoulder, but because visibility is low and it is a fairly hilly road, it is not a viable bicycle road for elementary students.

G – As discussed above, 84th Ave. E. has partial sidewalks (BLE image 0071) and a crosswalk across Locust Ave. E.

Appendix A. Audit Area Map



Appendix B. Recommended Bicycle Improvements Map

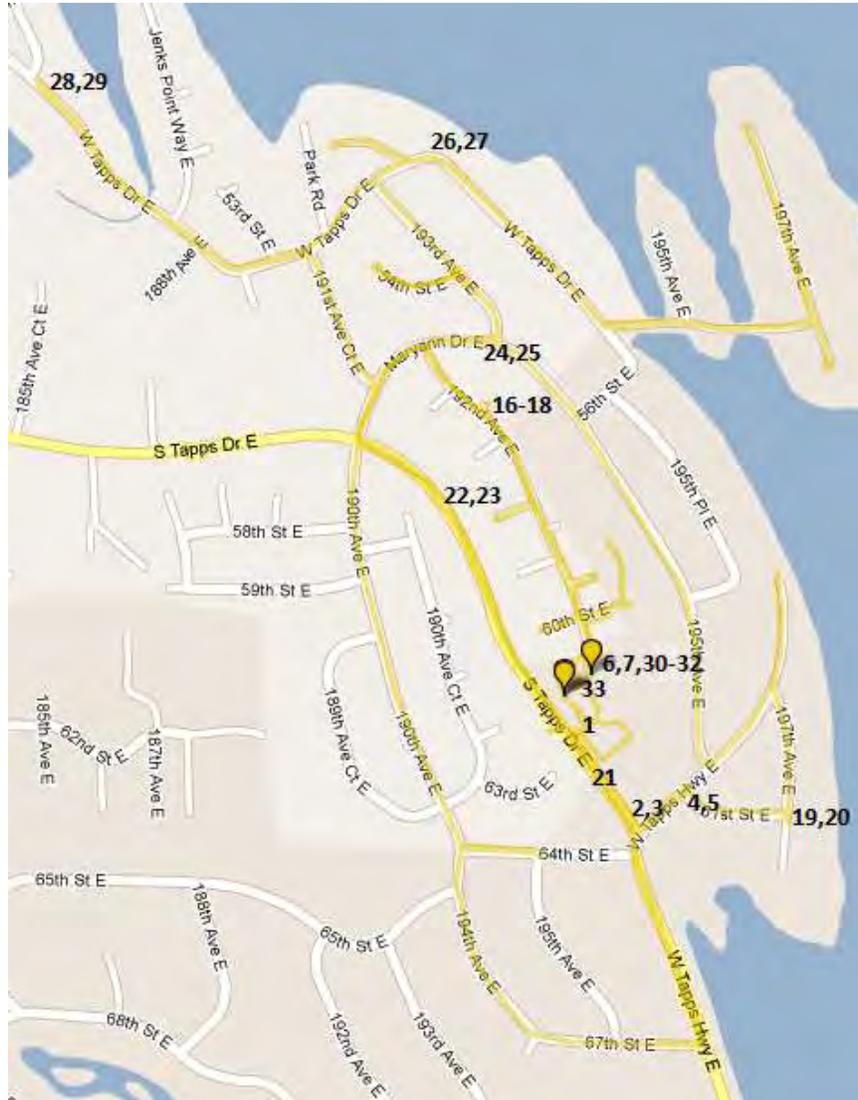


Appendix C. Audit Images

A map marking where each picture was taken precedes the images for each school. Images are named XXX_000##. In the maps, only the final two numerical digits are displayed. Example: EHE_00001 is listed as 1 on the Emerald Hills Elementary School Image Key map.

Emerald Hills Elementary School Audit Images

Image Key



Numbers on the map indicate image number. Images are named XXX_000##. Only the final two numerical digits are displayed above. Example: EHE_00001 is listed as 1.

The balloons indicate starting/ending point in the route, usually the school.



EHE_0001



EHE_0002



EHE_0003



EHE_0004



EHE_0005



EHE_0006



EHE_0007



EHE_0016



EHE_0017



EHE_0018



EHE_0019



EHE_0020



EHE_0021



EHE_0022



EHE_0023



EHE_0024



EHE_0025



EHE_0026



EHE_0027



EHE_0028



EHE_0029



EHE_0030



EHE_0031



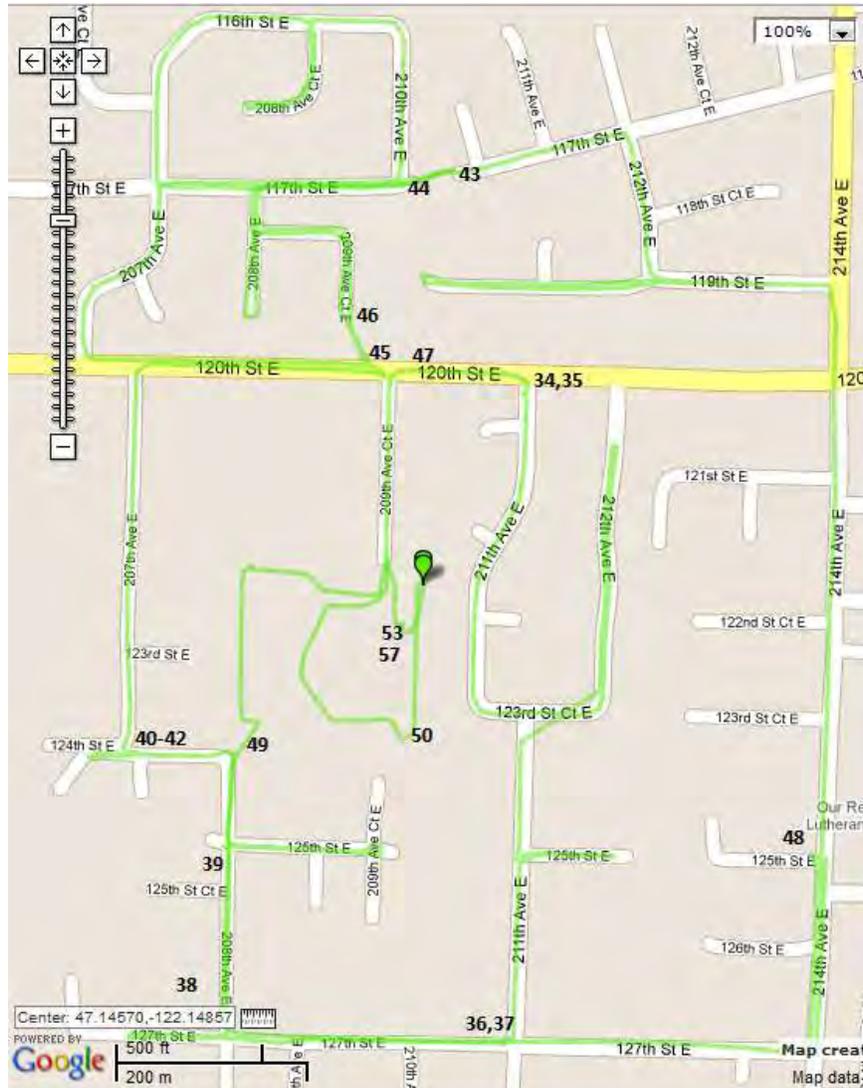
EHE_0032



EHE_0033

Liberty Ridge Elementary School Audit Images

Image Key



Numbers on the map indicate image number. Images are named XXX_000##. Only the final two numerical digits are displayed above. Example: LRE_00050 is listed as 50.

The balloons indicate starting/ending point in the route, usually the school.



LRE_0034



LRE_0035



LRE_0036



LRE_0037



LRE_0038



LRE_0039



LRE_0040



LRE_0041



LRE_0042



LRE_0043



LRE_0044



LRE_0045



LRE_0046



LRE_0047



LRE_0048



LRE_0049



LRE_0050



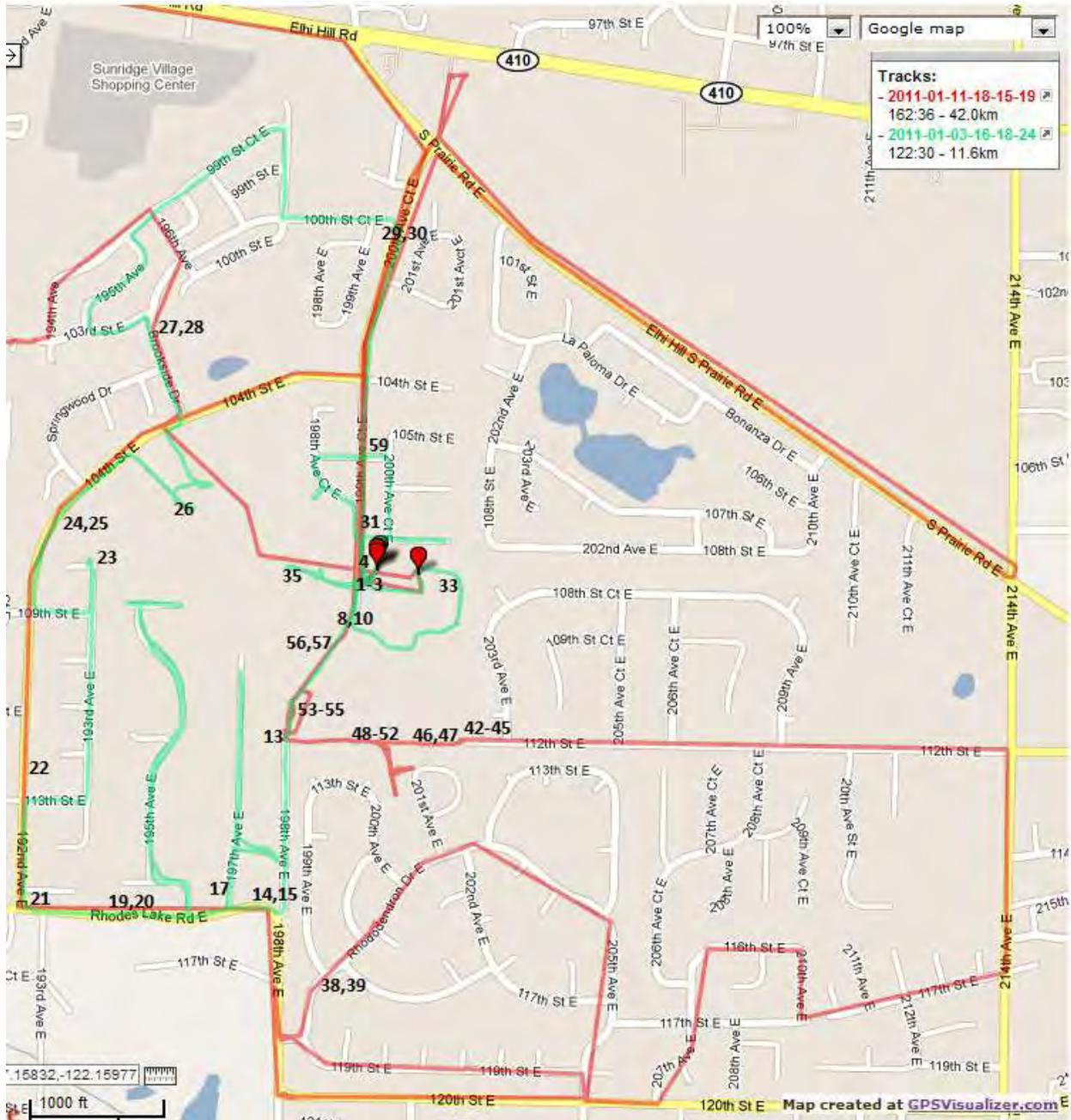
LRE_0053



LRE_0057

Mountain View Middle School/Bonney Lake High School Audit Images

Image Key





MVMS 0001



MVMS_0002



MVMS_0003



MVMS_0004



MVMS_0008



MVMS_0010



MVMS_0013



MVMS_0014



MVMS_0015



MVMS_0017



MVMS_0019



MVMS_0020



MVMS_0021



MVMS_0022



MVMS_0023



MVMS_0024



MVMS_0025



MVMS_0026



MVMS_0027



MVMS_0028



MVMS_0029



MVMS_0030



MVMS_0031



MVMS_0033



MVMS_0035



MVMS_0038



MVMS_0039



MVMS_0042



MVMS_0043



MVMS_0044



MVMS_0045



MVMS_0046



MVMS_0047



MVMS_0048



MVMS_0049



MVMS_0050



MVMS_0051



MVMS_0052



MVMS_0053



MVMS_0054



MVMS_0055



MVMS_0056



MVMS_0057



MVMS_0059

Victor Falls Elementary School Audit Images

Image Key



Numbers on the map indicate image number. Images are named XXX_000##. Only the final two numerical digits are displayed above. Example: VFE_00039 is listed as 39.

The balloons indicate starting/ending point in the route, usually the school.



VFE_0037



VFE_0038



VFE_0039



VFE_0040



VFE_0041



VFE_0042



VFE_0043



VFE_0044



VFE_0045



VFE_0046



VFE_0047



VFE_0048



VFE_0049



VFE_0050



VFE_0052



VFE_0054



VFE_0055



VFE_0056



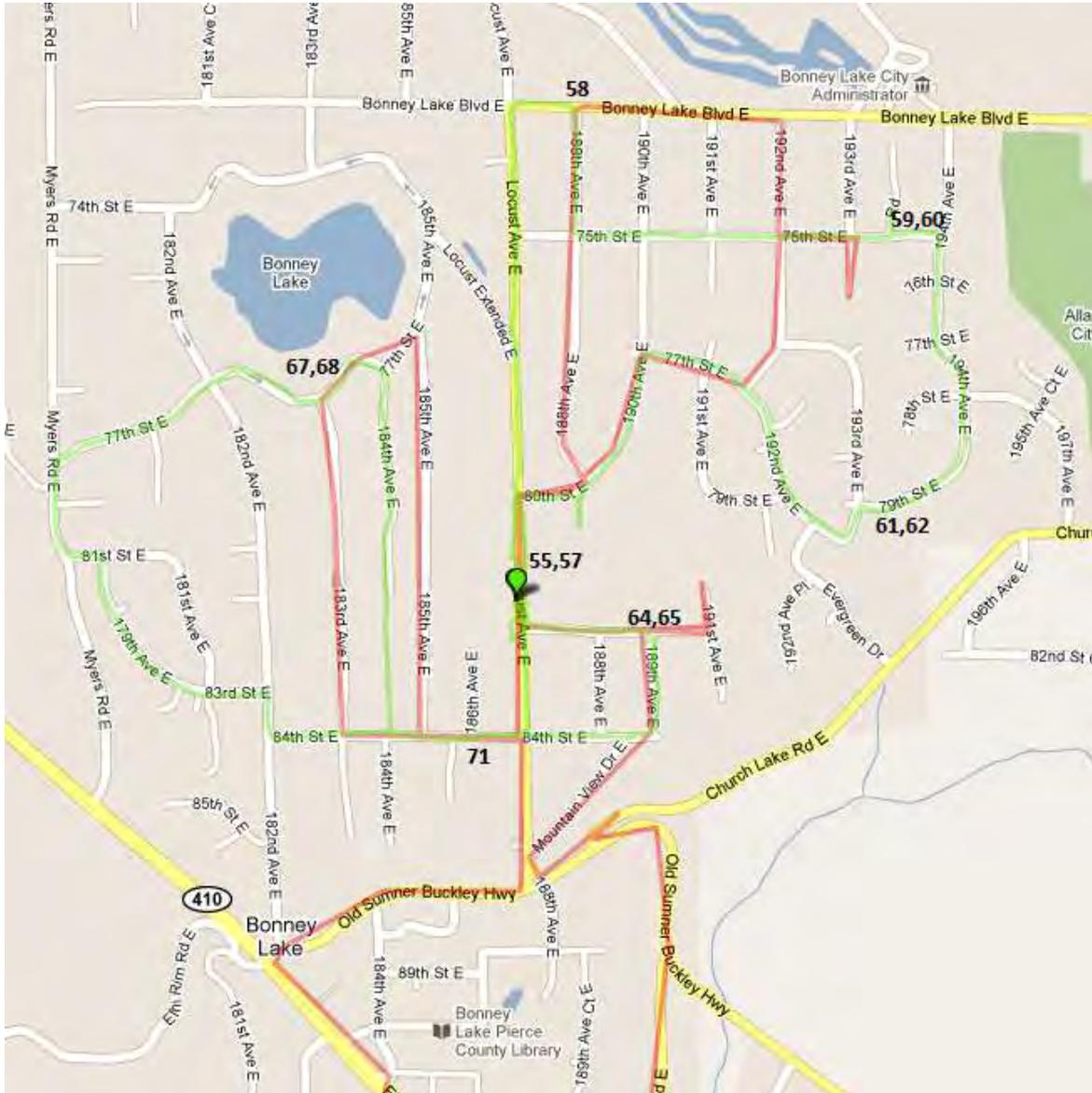
VFE_0058



VFE_0059

Bonney Lake Elementary School Audit Images

Image Key



Numbers on the map indicate image number. Images are named XXX_000##. Only the final two numerical digits are displayed above. Example: BLE_00055 is listed as 55.

The balloons indicate starting/ending point in the route, usually the school.



BLE_0055



BLE_0057



BLE_0058



BLE_0059



BLE_0060



BLE_0061



BLE_0062



BLE_0064



BLE_0065



BLE_0067



BLE_0068



BLE_0071