

Safe Routes to School Technical Assistance Report Potlatch, Idaho

Statement of Need

The City of Potlatch has two primary residential areas north and the south of State Highway 6. High volumes of commercial, recreational and commuter traffic on the highway through downtown present significant obstacles to providing safe pedestrian and bicycle options for school students as all schools are on the highway. Elementary students must cross the highway from the north and traverse a hill from the south, secondary students must either travel along the highway or traverse a second hill to the north. This happens at the time that Hwy. 6 has higher traffic volumes. In addition a master plan is underway for 200 acres of mixed use development to the west of the City's boundaries. This development anticipates housing and new industrial and commercial sites. This future residential area may substantially increase the Potlatch School District's existing enrollment and it has no connectivity to the schools other than the Highway 6 corridor.

Project Description

In response to a request for technical assistance through the Idaho Transportation Departments' Safe Routes to School program the City of Potlatch identified the following objectives. 1) Improve the safety and connectivity of existing routes to school. 2) Create pedestrian and cyclist friendly features and increased connectivity between the City's existing and newly planned areas 3) utilize the master planning effort for the new development to educate the project committee and community members about Safe Routes to School, Complete Streets and healthy communities and 4) Develop information about appropriate Complete Streets policy elements. In response Idaho Smart Growth (ISG) agreed to:

1. Plan and conduct education for the River Ridge Redevelopment project Steering Committee and Potlatch community members on Safe Routes to Schools, Complete Streets and healthy communities.
2. Assess the River Ridge Redevelopment project and provide input for the master plan for increased connectivity and recommended pedestrian and cyclist friendly features in the newly planned area.
3. Assist with assessment of the Potlatch school sites and existing infrastructure to identify significant barriers and potential improvements to safe routes to school.
4. Report on findings of assessments of existing infrastructure and redevelopment site.

ISG reviewed the City of Potlatch's Comprehensive Plan, zoning code, and Transportation Plan and met with city and school district leadership to better understand the policies examined. A summary of that review is attached as Attachment A. ISG also researched and published a Safe Routes to School Policy – Handbook of Best Practices for Idaho (Handbook), Attachment C. The Handbook contains detailed information in support of the recommendations below. During visits to Potlatch in August and November an assessment of current sidewalk conditions was completed by Idaho Smart with the help of City Council member Dave Cada. This assessment mapped existing sidewalks and documented conditions for the entire city of Potlatch (see Attachment B). During these visits meetings were held with the Mayor, River Ridge Developers and committee members, and school personnel. City documents were reviewed to further understand the concerns in Potlatch.

Recommendations were developed based on the policy review, condition assessment and meetings. The first section, **Policy Recommendations**, of this document has findings of the policy review and is organized by policy area. The second section, **Recommended Walking and Biking Improvements** contains findings of the assessments and meetings with the city and school staff and makes recommendations for improvements at specific locations near schools. In addition there are recommendations for better integrating the new River Ridge Redevelopment Master Plan into the existing city transportation network.

Section 1: Policy Recommendations

Mixed Use Development

Although the city does not have a mixed use zone or policies calling for mixed use, the River Ridge Redevelopment Master Plan supports mixed use zoning. The city should observe how this mixed use area performs. It may be beneficial in the future to expand mixed use into the central business district to knit the new and old development together.

School Siting

1. Explore an agreement with the School District on analysis criteria for possible new school sites.

The city and school district should carefully monitor growth and be prepared to work together to site a new or renovated school if needed and to meet the city comprehensive plan goals to 1) Provide all students with a safe routes to school, 2) Coordinate growth and development in Potlatch with necessary expansion of school facilities, 3) Maintain close working relationship with Potlatch School District to ensure accommodation of growth, and 4) Inform and consult with School District on all proposed residential expansion. Information on how to develop this process and examples of standards that might be used to collaboratively site schools and other public facilities so they provide safer routes to access them is included in the Handbook.

Complete Streets

We reviewed the City's existing policies and practices for the pedestrian and bicycle network – especially as those relate to accessing schools safely. In response to Potlatch's expressed interest in exploring Complete Streets,¹ a national movement to ensure that streets are designed and operated to enable safe use and access for all users, we recommend that Potlatch utilize Complete Streets principles in updating standards and policies as follows:

1. Adopt street section standards that support pedestrians and bicyclists.

The local streets in Potlatch are typically narrow and relatively low speed. Highway 6 and Onaway Road have faster travel speeds. Connecting roadways, such as Onaway Road and Ponderosa, have no sidewalks or shoulders. We recommend that Potlatch develop plans for the highway and connecting roads that identify needed improvements and basic design. Standards that call for narrow pavement widths (as exist today) can reduce both construction and maintenance costs in the future. In addition the city should consider policy to support sidewalks and bike lanes and/or shoulders where appropriate on the streets that provide connections between destinations in Potlatch. Local streets should be maintained as is.

2. Update design requirements for sidewalks

Typically the new sidewalks in Potlatch are 5' -6' wide on arterials and the older sidewalks are 4' wide and are separated from the pavement with a landscaped buffer. Bennett's Addition has no sidewalks. In our sidewalk assessment we found numerous locations where existing sidewalks are poorly maintained. In addition many sidewalks have stairs leading to and from the curb making them impassable for bicycles or for disabled users. The sidewalks in the downtown core are generally wider, though these also have some stairs and some are in poor condition. Americans with Disabilities Act (ADA) requires 4.5' of clear sidewalk space and very specific standards on how to place curb cuts and tactile markers (i.e. truncated domes) at intersections as well as defining the maximum cross slope allowed. The sidewalks adjacent to the Highway meet most of these criteria.

Current best practice asks for a minimum sidewalk width of 5-6' on local streets or with buffers and 8-10' on busier streets with no buffers.² The Comprehensive Plan has numerous goals regarding support for pedestrian and bicycle access and connectivity. To meet those goals and serve pedestrians and bicyclists well, Potlatch should require 5' sidewalks in new development and sidewalk buffers between the street and sidewalk. The city should consider a policy of wider sidewalks and sidewalk amenities in the downtown core; see Section 2 for implementation recommendations.

3. Implement a program of sidewalk maintenance and upgrading

The Comprehensive Plan notes that maintenance of sidewalks is the property owner's responsibility and should be enforced. In addition to enforcement the city should consider providing incentives for property owners to maintain the sidewalks that exist. A scheduled spring and fall clean-up day with organized volunteers to help those in need and a beautification contest are strategies that have worked in other communities to increase voluntary maintenance. In addition some locales have a readily available flyer

¹ National Complete Streets Coalition www.completestreets.org

² Creating Safe Routes to Schools: Sidewalks, <http://guide.saferoutesinfo.org/engineering/sidewalks.cfm>

outlining the responsibilities and expectations for maintenance. The city should consider these strategies to make the sidewalks safer and more convenient to use.

4. Implement the pathway system outlined in Comprehensive Plan.

The Potlatch Comprehensive Plan has a goal to “Develop a walking or bicycle path route for ensured safety from one end of city to the other” and has identified on a map a bicycle/pedestrian pathway system that rings the city. This plan should be reviewed and policies developed to support implementation. Latest best practices support bicycles on street where there are destinations so that they can directly access those destinations without having to travel out of direction. We have identified and mapped recommendations that call for a route that is closer to the downtown core on the east and west sides of the city. We recommended that the city undertake a public process to identify the best route and strategies to get it completed. See recommendations in Section 2 for more detail and implementation possibilities.

5. Identify standards for bicycle facilities including bicycle parking.

Bicycle standards are changing quickly, plans to accommodate all bicycle travel on local streets and/or pathways no longer meet best practices. In addition to shared use off roadway paths the recommendations for the pathway route described above includes sections with on road bike lanes and shared use roadways. We recommend that Potlatch identify appropriate use and standards for bike lanes and shared use roadways (sometime referred to as bike boulevards) and shared use pathways,^{3 4} to complete the bicycle network as suggested on the map in Attachment C.

Bicyclist should be provided a place to park where they are encouraged. The Comprehensive Plan does encourage bicycle use. In addition to completing the pathway route Potlatch should consider requiring bicycle parking at likely destinations using accepted standards and adding bike racks at City Hall, the library, the park(s) and the swimming pool.⁵

6. Adopt design criteria for all school crossings.

Most crosswalks in the city are unmarked, the city has proactively painted conventional crosswalk markings and placed high visibility signs on some Highway 6 crossings especially near the schools. There are no crossings with flashers or signals, though the Comprehensive Plan calls for examining the need at 6th and Pine and at Hwy 6 and Onaway Rd. Developing clear standards for pedestrian crossings with a range of improvements based on location will help the city prioritize and budget for improvements.

The city should continue to use high visibility signs. There are additional crosswalk improvements that can increase safety such as; using continental or ladder style crosswalk pavement markings for added visibility, using advance stop lines at crosswalks to establish better sight distance, additional high visibility signs indicating crossing here with arrows or crossing ahead with distance to crossing, adding curb bulb-outs and keeping pavements widths narrow to shorten crossing distance and slow oncoming traffic, and shorter curb radius at corners to prevent sweeping high speed turns where pedestrians are present. We recommend the city consider adopting these into the city’s engineering guidelines. The city should develop policy supporting the use of these strategies that establishes when they are appropriate (i.e. near schools, on identified pedestrian and bicycle networks and at high use destinations). Such policy will help prioritize and support implementation of these strategies and requests for funding.^{6 7} If the need for flashers is examined we

³ Bicycle Boulevard Planning & Design Guidebook
<http://www.ibpi.usp.pdx.edu/media/BicycleBoulevardGuidebook.pdf> and National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide

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

⁴ Bike lanes <http://www.bicyclinginfo.org/engineering/facilities-bikelanes.cfm>

⁵ Bicycle Parking http://www.apbp.org/resource/resmgr/publications/bicycle_parking_guidelines.pdf

⁶ Walking Info. Org, When Crossing the Street is Dangerous
<http://www.walkinginfo.org/problems/problems-crossing.cfm>

⁷ Evaluating Pedestrian Countermeasures
<http://www.fhwa.dot.gov/publications/publicroads/11marapr/03.cfm>

recommend the city and school district consider Rectangular Rapid Flashing Beacons (RRFBs)⁸ which have improved affect on slowing oncoming traffic over traditional flashers. See Section 2 recommendations for improvements at specific intersections.

7. Identify vital connections needed for convenient pedestrian and bicycle access to services.

The policies of the city support encouraging walking and bike and other forms of alternative transportation. Connected streets provide for shorter more direct trips, usually on local roads (which may be safer.) We recommend the city identify vital connections and require those as development occurs in the future. Adopting a connectivity policy with an index⁹ and other measurements would allow the city to measure those connections as development occurs.

Section 2: Recommended Walking and Biking Improvements

Improvement Projects

1. Complete pedestrian counts at schools using volunteers.

When pedestrians and bicyclists are counted traffic engineers can respond with an understanding of how to serve them better. The methodology to conduct counts is available at the National Pedestrian Bicycle Documentation Project.^{Error! Reference source not found.} We recommend planning and conducting counts in both the spring and fall with the School District and city organizing volunteers and compiling the count data. We can provide the count sheets, instructions and a brief training via webinar if needed.

2. Review crossings on Highway 6 and incorporate Complete Streets elements.

Highway 6 is the biggest barrier to safely walking and biking in Potlatch. We recommend that the city consider striping each of the Highway 6 crossings with a Continental or Ladder style crosswalk markings.¹⁰ However, crosswalk markings alone will not make crossings safer.¹¹ There are additional measures the city should consider for safety as discussed in #6 of Section 1 including; high visibility signs, advance stop line, reducing crossing distance with curb extensions and other traffic calming techniques. These strategies should be considered in accordance with the Manual on Uniform Traffic Control Devices (MUTCD)¹² standards at the following intersections. We recognize that the sidewalks at the intersections on the highway were recently rebuilt with new curb ramps and truncated domes, however we still think it advisable to consider curb-bulbouts (which would require rebuilding these again) at limited locations. In addition we recognize that the Highway 6/6th Street corridor is an Idaho Transportation Department facility and any improvements done on this section will need to be done in collaboration with ITD.

- a. 6th St. (Hwy 6) and Elm: This intersection is the first of the school intersections that traffic encounters when coming from the east. We recommend a review to consider adding a high visibility Pedestrian Crossing Ahead sign to the east as an advance warning. Adding curb-bulbouts on the western side of this intersection would serve the majority of the students from the elementary school who travel north (this is an anecdotal observation, no counts were conducted) by shortening the crossing distance and further signaling drivers to slow down. It would also improve sight distance by preventing cars from parking too close to the intersection. We recommend new crosswalk markings. An advance stop bar should also be considered. If these measures are still not sufficient to slow traffic for this crossing the city and ITD should consider a flashing signal.
- b. 6th St. (Hwy 6) and Spruce: This intersection is at the street that may eventually connect to a pedestrian bicycle network. We recommend new crosswalk markings and high visibility signs.
- c. 6th St. (Hwy 6) and Pine: This is the first intersection in the downtown core that travelers encounter when traveling from the west. The curb ramp on the northeast corner has poor drainage and is often

⁸ Rectangular Rapid Flashing Beacons guidance

<http://safety.fhwa.dot.gov/intersection/resources/techsum/fhwas09009/>

⁹ Roadway Connectivity – TDM Library at VTPI <http://www.vtpi.org/tdm/tdm116.htm>

¹⁰ Crosswalk Marking Guidelines <http://www.t2.unr.edu/StreetwiseFall12008.pdf>

¹¹ Crosswalk Marking for Better or Worse?. <http://www.techtransfer.berkeley.edu/newsletter/03-2/crosswalk.php>

¹² Traffic Controls for School Areas <http://mutcd.fhwa.dot.gov/pdfs/2009/part7.pdf>

full of water, ice and mud. We recommend curb-bulbouts on the eastern side of the highway intersection (which should be designed to resolve the drainage problem) to shorten the crossing distance and increase visibility and new crosswalk pavements marking on the three sides of the intersection currently marked. As the River Ridge Redevelopment is implemented this intersection may benefit from even further treatment.

- d. Hwy 6 and Onaway Road: This intersection currently has no highway crossing. As the River Ridge Redevelopment is implemented the intersection will become an increasingly important access point to the secondary school and the ball fields on either side of the highway. It should connect to the residential portion of the new development via a pathway system and would connect to a proposed pathway leading to the secondary school. We recommend a fully developed crossing with high visibility crosswalk markings, signs and the consideration for curb bulb-outs, advance stop bars, crossing ahead signage from the west and potentially a flashing signal if necessary. Further to the west at Hwy 6 and the Baseball Field there is a crosswalk currently marked. This crossing should also be improved as necessary to support circulation between the secondary school, the ball fields and park and the new development.
- e. Onaway Road and 10th St: This intersection is an acute angle with difficult visibility where 10th St. comes off a hill. 10th is a likely route for students walking to the secondary school from the north hill. We recommend the city gather further information on car volumes, speed and crashes as well as pedestrian use to determine the best improvements. Possible improvements to consider include: 1) A three way stop with crossings on all legs, 2) An island or islands in the middle of the intersection to simplify the turn movements for drivers and provide refuge for pedestrians to cross, 3) One crossing on Onaway road to the north of the intersection. These improvements can be done in combination with and should be coordinated with planned improvements on Onaway Road and on 10th St with the end goal to get pedestrians and bicyclists safely to the library, ball fields and secondary school.
- f. Memorial Drive and Ponderosa/Spruce: This intersection is on the likely route for students walking or biking to the elementary school from the south hill. The school buses use Ponderosa to access the school and students currently don't have a marked path from Memorial Drive to the school. We recommend crosswalk markings and signs on the south and east side of the intersection with Ponderosa as it turns to go up the hill. A four way stop sign or traffic circle could be considered to slow traffic.

3. Develop a plan to improve sidewalks and or shoulders on specific roadways.

The connecting streets in Potlatch, Ponderosa St, Onaway Rd. and portions of 4th St. the city should determine the most appropriate improvements and develop a plan for improvements in collaboration with the county and with Onaway as necessary. Potential improvements, pending further study of car volume, speed and crashes, includes: 1) none, 2) Roadway shoulder improvements¹³ with a fog line to define the car travel space or 3) Sidewalks and bike lanes on both sides of the roadway.¹⁴ Sections of these roads may also be candidates for a separated pathway, however, separated pathways are discouraged where there are multiple crossings or driveways and building and maintaining a separate facility can sometimes be more costly. Improvements would define space outside the car travel lane, research shows this improves safety for car drivers as well as bicyclists and pedestrians. Rural roadway shoulders have other notable benefits. A plan would help the city prioritize projects and pursue funding for implementation. Completing improvements would help complete a network allowing pedestrians and bicyclists to safely reach destinations that are connected by these roads.

- a. 6th St east of the downtown core to Spruce St. has no sidewalk on the south side. A plan should be developed for widening the shoulder or adding sidewalk as funding allows.

4. Develop a plan for shared use roads

¹³ Rural Road Shoulders http://www.trailsandtours.com/upload/pdf/bike_rural_road_shoulders.pdf

¹⁴ AASHTO Guide to Developing Bicycle Facilities, 1999, http://safety.fhwa.dot.gov/ped_bike/docs/b_aashtobik.pdf

There are three locations where existing roadway connections can better serve pedestrians and bicyclists to complete the bicycle and pedestrian network without the expense of building a separate facility. In addition these roadways provide the most direct access to needed destinations, a pedestrian/bicycle facility that requires out of direction travel is less likely to be used. We have provided a map indentifying routes that meet those criteria. The routes identified suggest that pedestrians bicyclists and cars share low volume, low speed roadways in some form or another, the possibilities that should be considered for each are below.

- a. & b. 10th St and Memorial Drive: The section of 10th from the top of the hill to Onaway Road and Memorial Drive from the top of the hill to Ponderosa St. are both likely paths for pedestrians and bicyclists to access the secondary school or the elementary school from the residential areas they serve. Both roadways have poor visibility at the top of each hill on the curve and at the intersections at the bottom of each hill. The city should collect information on use and collisions and determine the best way to serve the likely pedestrian and bicycle users. Asking those users to go out of direction and use other routes is unlikely to succeed. Possible improvements to consider include; 1) None, 2) Designating these roadways shared use roads and implementing appropriate signage and roadway markings, 3) striping shoulders on one or both sides if the width is adequate, 4) widening the shoulder(s) and striping, 5) adding sidewalks to one or both sides. A shared roadways designation can be used in combination with striping and/or sidewalks.
- c. Spruce St from 10th to Ponderosa: The network of bicycle paths called for in the Comprehensive plans should connect all of primary destinations in Potlatch without asking pedestrians and bicyclists to travel out of direction. We suggest that the city consider designating Spruce Street as a shared use street. It has existing sidewalks for much of its length, it connects to downtown, the elementary school, the park and the swimming pool. It has low volume of car traffic and relatively low speeds.

5. Develop pathway connections to destinations

There are two locations where a shared use pathway or improved shoulder can provide the last connection to the schools. There is a pathway connection called for in the bike Path Route Plan and there is one informal footpath that could be improved to provide a network connection for pedestrians and bicyclists. We recommend the city plan for improvements in those locations.

- a. At the elementary school Ponderosa Dr is used by buses and yet is the route that students from the south hill must use to get to the school. There is no designated space for students to walk, especially if they are encouraged to use memorial Drive. Possible improvements to consider on this route include a widened shoulder with a fog line, a sidewalk, a separated shared use path. The right-of way needed is either currently in the right-of way or school district owned property.
- b. The likely access route to the secondary school by pedestrians or bicyclists is from the southeast. There is a formal path from the library and an informal path from the convenience store leading up to the school. To reach those paths students must walk or bike along Onaway Road or Highway 6 where there is no sidewalk, shoulder or other accommodations. The city and school district should consider a plan to get students safely through this area. Possibilities to consider include; 1) Adopting plans (as outlined above) for Onaway Road and 10 St., including the intersections of Onaway and Highway 6 and Onaway and 10th with some combination of shoulders, sidewalks and crossings that lead safely to the library entrance. From that point access would continue along the edge of the Library entrance and parking lot to the west side of the parking lot and pathway leading to the school. 2) The school district has a maintenance roadway around the ball fields that could be shared as a pathway for pedestrians and bicyclists. A connection would be needed between the maintenance road and the intersection of Onaway Road and Highway 6 and a connection to the library path. 3) The maintenance road along the ball fields could be extended to the north (as either a road or path) and connected with the library access and parking lot. Access would continue through the library parking lot and a connection would be needed to the intersection of Onaway and Highway 6.
- c. The Bike Path Route plan included in the Comprehensive plan calls for a bicycle/pathway connection south of Highway 6 between Pine St. and Ponderosa Dr. Plans for this pathway should be completed.
- d. There is an informal footpath that roughly follows the route suggested on the Bike Path Route plan in the Comprehensive Plan to connect Bennett's Addition the 10th St. This path could be formalized as

part of the pedestrian/bike route network. This connection would allow students from Bennett's Addition to reach the elementary school.

6. Connect the River Ridge Redevelopment with the existing town

The River Ridge Redevelopment Master Plan includes opportunities for Potlatch to improve existing conditions and connect the new development more closely with the existing town.

- a. The River Ridge Redevelopment Master Plan calls for street trees, sidewalks and other elements that make it an attractive commercial street on the extension of 6th St to the west. These elements should be extended to the east along 6th in the existing downtown to create a seamless streetscape.
- b. The Master Plan calls for an extensive pathway system along the river to provide recreational opportunities. There are no pathways connecting the residential development to the larger community transportation system. A direct pathway(s) should be required from the residential area of the master plan through the park (near the softball field) to a crossing of Highway 6, preferably at Onaway Road. As development occurs on the west side of Highway 6 north of 6th St, pedestrians and bicyclists should be accommodated on the roadway and sidewalk or on a safe pathway system. This should connect to the pathway planned between Pine St and Ponderosa Dr, either on the highway and on Pine St or as a separated pathway.
- c. Where backyards or the back of lots face a public use (such as at the parks and softball fields and the residential) require micro-path connections to the public use to accommodate direct pedestrian and bicycle travel between the uses.

Implementation

Our recommendation is that the city works with its citizens to confirm needed improvements and routes, using those suggested as a starting point. Implementation of some of the simple elements such as striping and signage could begin immediately. The sidewalks, shoulder improvements and more costly crossing improvements such as curb-bulbouts should be completed as funding allows or as parts of other projects.

Idaho Smart Growth acknowledges that implementing these recommendations will require the city and the school district to devote staff time and funding to organize committees, plan and conduct public outreach, complete plans and design work and implement projects. We believe that the resulting improvements will be well worth the time, money and effort in the extra safety they will provide. We're prepared to continue assisting Potlatch if resources can be found to support our assistance.

Attachment A: Review of City Policies

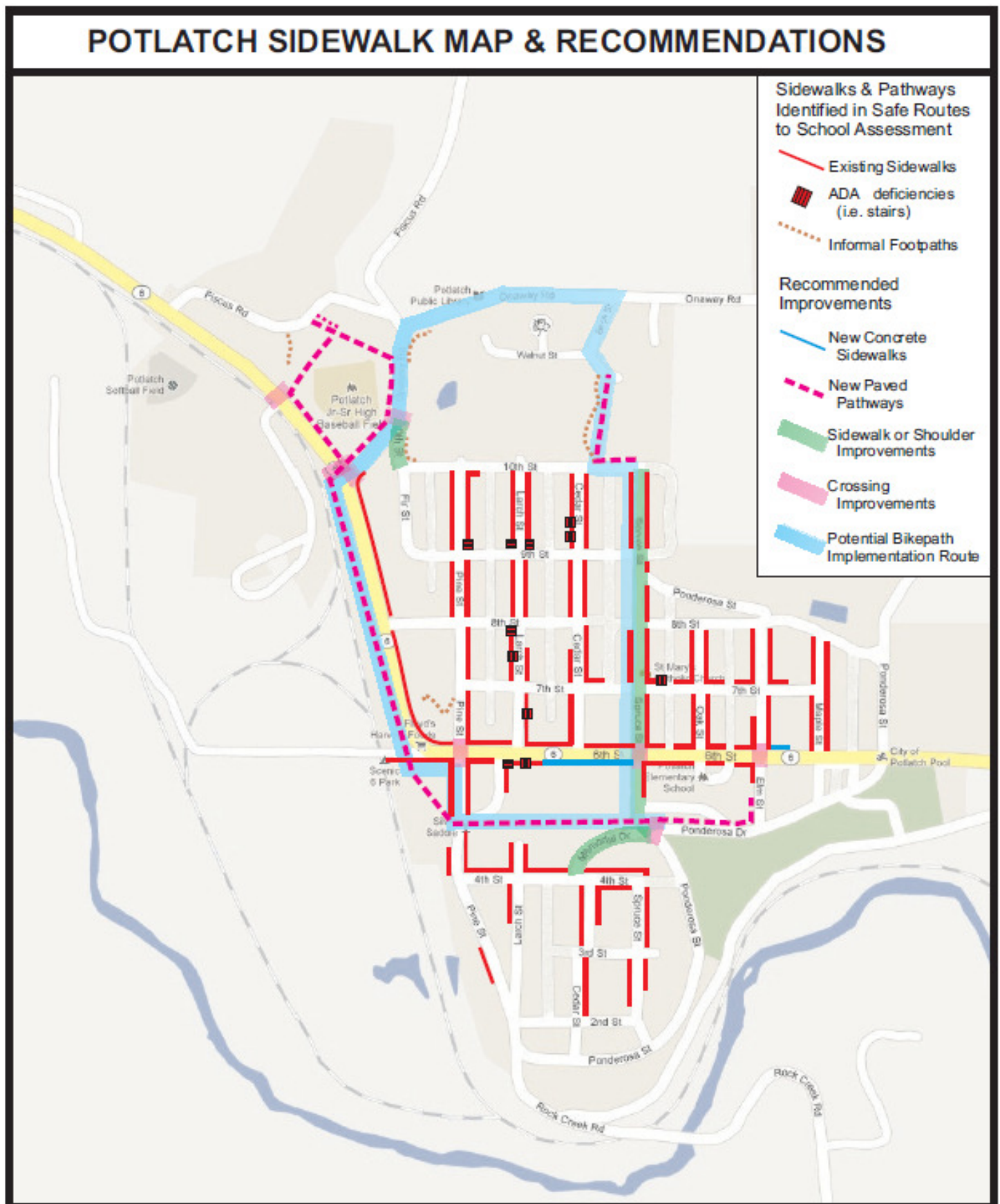
Potlatch (population 791)

Mixed Use		
	Policies	None, River Ridge Redevelopment mater Plan proposing Mixed Use under PUD
	Zoning	Planned Unit Development (PUD) or Conditional Use (CU)
School Siting		
	Policies	<ol style="list-style-type: none"> 1. Provide all students with a safe routes to school 2. Coordinate growth and development in Potlatch with necessary expansion of school facilities 3. Maintain close working relationship with Potlatch School District to ensure accommodation of growth 4. Inform and consult with School District on all proposed residential expansion
	Zoning	Accessory dwelling units allowed as CU with hardship and kinship in residential districts.
Sidewalks		
	Policies	<ol style="list-style-type: none"> 1. To provide a system of transportation...[to] make it possible for all people and modes of transportation to reach their destinations as safely as possible. 2. Encourage other forms of transportation 3. Encourage pedestrian oriented developments, including sidewalks or a bike path, connecting our schools, library, and the rest of town 4. It is the desire of the citizens...to provide all students with a safe route to school by foot, bicycle or bus
	Plans -Maps	Sidewalks documented in table
	Development Regulations	Required in new development
	Design requirements	4' width on local roads, 5' on arterials
Bicycle Facilities		
	Policies	<ol style="list-style-type: none"> 1. It is the desire of the citizens...to provide all students with a safe route to school by foot, bicycle or bus 2. Develop a walking or bicycle path route for ensured safety from one end of city to the other.
	Plans -Maps	A map of a ring pathway system
	Development Regulations	none
	Design requirements	none
Connectivity		
	Policies	<ol style="list-style-type: none"> 1. Encourage improved pedestrian access 2. Encourage pedestrian oriented developments, including sidewalks or a bike path, connecting our schools, library, and the rest of town
	Development Regulations	None
	Design requirements	None

Attachment A: Review of City Policies

Pedestrian Crossings		
	Policies	<ol style="list-style-type: none">1. Work to provide safety...through improved pedestrian access, signage on school routes and crossings.2. Work with School District and highway Dept. to keep students safe in highway crosswalks3. Work...to determine if flashing caution lights are warranted at 6th and Pine, and Hwy 6 and Onaway Rd.
	Design requirements	None
	Recommendations	<ol style="list-style-type: none">1. Explore an agreement with School District on analysis criteria for possible new school sites2. Update design requirements for sidewalks3. Implement a program of sidewalk maintenance and upgrading4. Implement Pathway system outlined in Comprehensive Plan.5. Adopt design criteria for all school crossings.6. Identify vital connections needed for convenient pedestrian and bicycle access to services.

Attachment B: Map



February 2012

Safe Routes to School – Handbook of Local Policy Best Practices for Idaho

This handbook was produced by Idaho Smart Growth with support from the Idaho Transportation Department, Safe Routes to School Program.

Graphics by John Neary

January 2011

Safe Routes to School – Handbook of Local Policy Best Practices for Idaho

Elaine Clegg

Attachment B: Handbook of Best Practices

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Attachment B: Handbook of Best Practices

Safe Routes to School Handbook of Best Practices

Summary

Introduction

In recent decades, in response to a variety of pressures, schools have increasingly been built in locations that are not walkable and many centrally located schools have been closed, as a result today two-thirds of schools are located far from where children live. At the same time, the number of children walking and bicycling to school has shrunk dramatically, fewer than half of all children now meet recommended levels of physical activity, and obesity rates in children and adolescents have more than tripled, with a third of children now overweight or obese.

The Safe Routes to School Program addresses the immediate consequences of this on routes to school and on schools grounds but little has been done to examine and respond to the policies that lead to decisions about how and where to locate schools in the first place and the infrastructure in place to serve them. This handbook begins that examination for local governments and school districts in Idaho. It offers an array of best practices in policy that can help reverse that trend and recommendations for how to use them.

Background

In 2010, Idaho Smart Growth conducted sixteen presentations on promoting policies that support safe routes to schools. The workshops were conducted across the state of Idaho and nearly 200 individuals attended. Each participant was asked to complete a survey about the level of policy support for safe routes to schools within their communities. Responses were received from individuals representing thirty-four cities and three counties. Later 2 more

cities were added. In the fall of 2010, the results of the survey findings were published by Idaho Smart Growth.

An independent review of adopted policies was initiated in late 2010 to verify the participating communities perceptions about safe route policies within their community and to review both policy and development regulation support for safe routes to schools.

Format of this Report

This report summarizes the policies, regulations and practices that support safe routes to schools, identifies best practices and reviews thirty-six Idaho communities' policies. The report is organized around basic principles of land use and pedestrian access that are imperative in creating safe routes to schools and yet are not generally part of school based safe routes programs. The principles are as follows:

Principle #1 – Mixed Uses. Mixed-use development is designed with a variety of land uses in close proximity. Residences are mixed in with schools, parks, community centers and perhaps retail and offices in a compact area through good design. Development of mixed uses near residential neighborhoods creates greater opportunities for those uses to be connected as destinations to the residential development nearby. This also allows schools to be located near both residences and other destinations. When students have nearby destinations and pedestrian networks that provide direct safe connections it increases the probability they will walk and bike. Policy direction for mixed uses should be provided in the community's comprehensive plan and implemented through mixed use zoning or other regulations that permit mixed use development.

Attachment B: Handbook of Best Practices

Principle – #2 School Siting. Children are better able to travel safely between home and school, and more likely to walk or bike, when schools are located within community centers and near their residence. Placing other public services, such as parks and libraries, near the residences of the citizens they serve allows all community members to walk and bike to those services. Communities that co-locate or share facilities are likely to find efficiencies that may save taxpayers dollars overall. Policy direction for school siting should be provided in the city's and school districts plans and implemented through zoning regulations. Joint processes for facility planning should be adopted between school districts, cities and affected agencies should analyze the impacts of school location and site size.

Principle #3 – Plans, design and regulations for Sidewalks Bikeways and Crosswalks (Complete Streets). Children that walk or bicycle to school need safe and well-designed facilities between their home and school. A child's journey to school on a bicycle or by foot will likely require crossing a street. Local plans, policies and maps should be developed to provide direction on where non-motorized facilities should be located and how they should be designed to support safe routes to schools. Many situations arise at street crossings that can impact the safety of the crossing for all pedestrians, these concerns should also be addressed within the local plans. Prioritizing the improvement plan for pedestrians and bicycles can be used to fix existing deficiencies, while requirements, design specifications and regulations included in zoning and subdivision ordinances will ensure the implementation of safe routes in new development.

Principle #4 – Connectivity. Connectivity refers to how many connections there are in pathway or roadway networks and the directness of links between connections. A well-connected roadway or pathway network has many short links, numerous intersections (nodes), and minimal dead-ends (cul-de-sacs). As

connectivity increases, travel distances decrease and route options increase, allowing shorter more direct travel between destinations. Connectivity influences the walking and biking routes that children use and highly connected neighborhoods encourage more walking and biking to school due to shorter distances and the ability to choose safer routes. Policy direction for connectivity should be provided in the community's comprehensive plan and implemented through zoning and subdivision regulations that may include minimum standards such as a connectivity index. Existing networks can be measured and missing connections or links identified for improvements.

Community Review and Best Practices

The following sections summarize what was found in the review of the thirty-six communities' Comprehensive Plans and development regulations (zoning and subdivision codes). It is organized under the principles. Best practices are identified and are highlighted where they are found in the cities' plans and regulations. **Appendix B**, is a summary survey of each community reviewed. If not included in your printed copy find it on the Idaho Smart Growth website at: http://www.idahosmartgrowth.org/index.php/resources/resource/best_practices/

How to Use the Best Practices: This document is intended to introduce relevant issues, policies and regulations affecting safe routes to school and describe best practices to address them. The best practices are intended to guide cities and school districts who want to locate schools and other public facilities where there are opportunities to walk and bike safely, to improve walking and biking conditions in their city, to provide for overall community health and to work toward fiscal responsibility. The variation among cities and school districts across Idaho in size, procedures, municipal code, and overall challenges and context is great, and there is no one-size-fits-all solution. Utilize the practices that make sense for your situation in your locale.

Attachment B: Handbook of Best Practices

1. Mixed Uses

Existing Policy

Most communities identify a mix of uses as a goal for improving the development patterns within their community. Many communities have analyzed existing and new development areas where mixed use is desirable. (Boise, Chubbuck, Coeur d'Alene, Driggs, Garden City, Hailey, Idaho Falls, Lewiston, McCall, Meridian, Moscow, Pocatello, Sandpoint, Twin Falls) Some have mapped these areas including mixed use designations on the Land Use Map. Some communities' policies, such as Caldwell and Salmon, support mixed use in planned unit developments (PUD's), rather than through specific land use designation. Garden City and Victor identify mixed use through an overlay zoning district. Driggs specifies the types of mixed uses with specific zoning requirements in each.

Mixed use policies can provide improved pedestrian connections within and to mixed use locations, however few of the communities reviewed have adopted policies that recognize the potential benefit of locating schools within mixed use activity areas. Pocatello's Comprehensive Plan provides the best example identifying schools as an integral component of a mixed use area. Boise's new plan also references schools as a component of mixed uses activity centers.

Existing Zoning

Although there is much policy support for mixed use, there is often an additional layer of approval such as a planned unit development (PUD) process or conditional use (CU) application to build mixed use in locations where the policy indicates they are desired. This may result in fewer mixed use projects. For instance, every city reviewed, with the exception of Dalton Garden, has provisions to allow planned unit development, yet only a handful have zones where mixed use is an allowed use as part of a simple subdivision proposal. Cities that have specific mixed use zones adopted into their codes are: Boise, Driggs, Garden City, Lewiston, Meridian,

Middleton, Nampa, Pocatello, and Twin Falls. Several other communities including Boise, Caldwell, Lewiston, and McCall, list

A pedestrian friendly mixed use neighborhood center



mixed use as an allowed use within certain commercial zoning districts, primarily downtown zones.

A peculiar general provision appears in the zoning codes for several cities, such as Rigby and Sandpoint, designating on the zoning map that a school site shall only be used for a school or for single family residential units. The intent appears to protect those sites for their intended purpose, but may hinder to the use of a school facility as a community or recreation center or any other type of joint use that is desirable in a mixed use area.

Best Practices

Encouraging mixed-uses requires policies that identify and support locations geographically where mixed use is desired. These policies

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should be supported in turn by zoning that allows the use as a permitted uses in those places. Specific practices should include:

1. Identify mixed use areas in Comprehensive Plans with policy describing why mixed use is supported in those locations.
 - a. In larger cities identify sub-areas within your city and plan for a mix of uses in each of those sub-areas.
2. Analyze existing school sites in relation to identified mixed use areas and provide for connections between them, analyze potential school sites for inclusion in identified mixed use areas.
3. Update zoning codes to allow mixed use in identified area(s) as a permitted use rather than via a special permit process (i.e. with a PUD or CU).
4. Ensure compatibility with existing development and encourage pedestrian orientation of new development by using design based zoning and setbacks, often called form-based codes.
5. Identify walking sheds (¼ to ½ mile walking distance) and services within those for each residential neighborhood.
6. Adopt tools that make it easier to build or retrofit mixed uses, such as a Specific Area Plan Ordinance.
7. Allow closed/obsolete institutional, warehouse and similar buildings to be adapted for reuse as mixed use.

How to Use the Best Practices: There is support for mixed use in many Comprehensive Plans, however it may be difficult and more expensive to build mix use when it is administered through conditional use permits or planned unit developments. Identifying specifically where your community wants mixed uses and adopting specific zones with standards on design and form that can be administered through a subdivision process may make it more likely that mixed uses will be achieved.

Recommendation: Identify locations for mixed uses and establish zones and standards that permit those uses at the sites identified.

Community Examples of Best Practices

City of **Boise**: Comprehensive Plan direction that neighborhoods are served by a hierarchy of mixed use activity centers including schools. Activity centers for mixed use identified and mapped, in zoning mixed use allowed in downtown and in pedestrian commercial zone, accessory dwelling units are allowed in all residential zones;

City of **Driggs**: Comprehensive Plan supports mixed use. Accessory dwelling units are allowed in all residential zones, there are several variants of mixed use zone with concentrations on commercial, residential, trade, etc., some have administrative approvals after initial approval;

City of **Garden City**: Designations on land use map for mixed use areas and several associated zones including Work-live-create (WLC), Neighborhood commercial node (NCN), and Transit oriented development (TOD) Overlay Districts;

City of **Greenleaf**: accessory dwelling units are allowed in all residential zones;

City of **Idaho Falls**: Comprehensive Plan identifies several zones for mixed use including downtown and along the Snake River greenbelt, have developed an associated zone;

City of **Lewiston**: Comprehensive Plan identifies appropriate mix of uses by neighborhood and corridors; Special zones developed by neighborhood to match policy, in addition mixed use allowed in the downtown;

City of **Pocatello**: Comprehensive Plan includes concept of “New Neighborhoods” that should include a variety of housing types and prices, a mix of residential, commercial and office uses, and convenient access to public facilities such as parks and schools.

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2. School Siting

Existing Policy

The Idaho Local Land Use Planning Act (LLUPA) section; School Facilities and Transportation (Idaho Statutes §67-6508c) requires comprehensive plans to include “An analysis of public school capacity and transportation considerations associated with future development.” Most communities’ plans include a general discussion about school enrollment and capacity of schools to meet future needs, and the comprehensive plan goals on locating schools are relatively strong. However the transportation considerations are often absent. The meaning of the phrase “transportation considerations” is ambiguous, and probably the reason this provision is generally ignored. However this allows (perhaps requires) that a full range of transportation options for access to school facilities should be considered. The communities that provide a comprehensive policy direction for both school location and transportation are: Boise, Chubbuck, Driggs, Kimberly, Meridian, Nampa, and Pocatello.

One of the purposes of LLUPA (§67-6502I) is “To allow local school districts to participate in the community planning and development process so as to address public school needs and impacts on an ongoing basis.” Many communities call for an examination of school siting such as coordinating the planning of future schools sites, making schools community focal points and more. We found little evidence that those goals are being carried out with formal agreements between cities and school districts, through a permitting process or with zoning requirements. Communities that map existing and/or future schools include: Ammon, Boise, Caldwell, Lewiston, Meridian, Moscow, Nampa, Salmon and Twin Falls.

In the absence of collaboration unilateral local decisions determine;

- ◆ Whether older schools or other public buildings are well-maintained and/or renovated,

- ◆ Where new schools or other public services are built,
- ◆ The size of school sites, park sites and other public facilities,
- ◆ School enrollment size or public facility service area,
- ◆ Whether a community co-locates public facilities with schools,
- ◆ Whether the residences of the students and other citizens being served are nearby the site selected,
- ◆ The walking and biking conditions to the site,
- ◆ Whether the site design and layout are convenient for pedestrians and bicyclists.

All of these factors have a significant impact on whether students and community members can walk or bike to a site and on overall tax payer costs to serve a site yet there is often little discussion about community wide impacts and costs. We found no broad school or public facility cost benefit analyses requirements.

Existing Zoning

Of the zoning codes reviewed, schools are either permitted in some but not all zoning districts, subject to a special (conditional) use, or not addressed in the zoning code at all. Kimberly has a special zoning sub-district for schools.

Few communities have any specific standards in their review of a school and none of the codes reviewed contain provisions that establish criteria for review of school location in relation to safe routes to schools. The few specific standards for schools commonly require a site plan review with general criteria. Specific standards for schools have been adopted in the cities of Ammon, Caldwell, Garden City, Hayden, Idaho Falls, Lewiston, Meridian and Nampa. Ammon, Idaho Falls and Nampa have a site plan review requirement with general criteria.

Several cities have location criteria related to the traffic volumes or the functional class of the adjacent streets: Meridian encourages elementary schools to be located in the middle of neighborhoods with access from local streets and middle and high schools should take access of a designated arterial or collector streets. Hayden

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permits schools that are located on an arterial or collector street, but requires a special use permit at other locations. Caldwell requires schools to be located on collectors.

Some communities, including Ammon, Boise, Chubbuck, Hailey require pedestrian and bicycle connections to the school from the surrounding area but there is little regulation of pedestrian and bicycle access to the building once on the site.

Best Practices

The Idaho code sections cited above offer ample opportunities within City Comprehensive Plans to implement best practices on siting schools. The location of future schools and an analysis of school capacity should be examined. Minimum practices should include a map of existing and future school sites, and identification of location criteria for future schools including safe pedestrian access and connections. A census of existing students and forecast of future students in close coordination with the school district's forecasting would augment the analysis and allow a more rigorous examination of proposed school sites and school and community needs related to those sites. A full range of transportation options for access to school facilities should be examined.

To further this analysis and meet these best practices in codes and regulation cities and school districts should work collaboratively to establish a special use permit (or similar process) for schools. Specify conditions to be reviewed, such as those listed below, and criteria for decisions as appropriate in each community. Encourage citizen comment. Administer through a conditional use permit or other accepted special use process. Require **a comparative analysis of all available alternative sites on these criteria:**

1. Analyze community needs, educational needs and opportunities to share facilities. Determine the site size on that analysis, not on arbitrary acreage standards. **Encourage smaller compact campuses.** Include renovating or adding on to existing facilities.

2. Identify current or funded sidewalks and bikeways or bike and pedestrian pathways serving the site(s).
3. Identify current or funded connections to the surrounding neighborhood and resulting choices of safe pedestrian and bicycle routes serving the site(s).
4. Map access points serving the site(s), encourage site access from multiple street frontages.
5. Analyze the streets adjacent to the site(s) for traffic speed and volume and functional class.
6. Identify conflicts between motorists, bicyclists and pedestrians in accessing the site.
7. Map the location of the site(s) in geographical relationship to the students residing in their service area. Determine the percentage of children attending the site(s) that will be able to walk or bike safely to the site, encourage site(s) that provide walking and biking access to the highest percentage of students within the proposed boundary.
8. Determine the capacity of existing infrastructure to serve the site, such as roadways, sewer, water, broadband, and more, ensure that it is sufficient.
9. Identify opportunities to share facilities, such as parks and libraries.
10. Determine the health impacts of the site(s) location.
11. Consider equity in providing high quality facilities to students of all backgrounds proportionately.
12. Communities that have Safe Routes to School Program should incorporate the data and lessons learned from those programs into the criteria for review of future school sites.

Further criteria should be examined regarding the design of the site itself during the permitting process:

1. Require direct, safe and convenient pedestrian and bicyclist access from all frontages. Where multiple street frontages are not possible require multiple pedestrian and bike pathway

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connections to the site to shorten distance on walking and biking routes.

2. Require a safe gathering place for those on foot once you are on the site.
3. Require a site design that separates car and bus drop off areas away from pedestrians and bicyclists.

A school integrated into the neighborhood with a safe gathering place



Future Acquisitions Map: An under-utilized provision in state statutes that could be used to support coordinating land use with school siting is the ability to adopt a future acquisitions map. (Idaho Statutes §67-6517) This is an optional provision, but the map can include school sites. If such a plan is adopted, it suspends the time of review on any permit for sites identified on the map. Mapping of sites that meet the criteria above could provide incentive to utilize the criteria above to coordinate land use, infrastructure improvements (pathways and sidewalks) and school sites.

Examine transportation conditions: Cities may expand the analysis of “transportation considerations” related to schools as required by LLUPA within Comprehensive Plans with the following:

1. Incorporate school district transportation plans into the Comprehensive Plan. Include a map of safety bus routes required for students within 1½-mile whose route is unsafe.
2. Analyze the quality of the walking and biking facilities within a 1½-mile walking distance to each school and conditions near school bus stops and other facilities used by students.
3. Develop strategies to improve and create safe routes to schools with specific action steps (i.e. include in school district or city Capital Improvement Plan) to rectify unsafe conditions found.
4. Prioritize actions that eliminate safety bus routes.
5. Develop strategies and action steps to prevent unsafe conditions in future new development and new school siting.

Idaho Code §33-1501 provides for bussing of children who live further than 1½-miles from their school. “Safety bus routes” are to be provided for those who would experience unsafe walking conditions within the 1½-mile area. In addition to the criteria above cities and school districts could consider analyzing the cost of establishing and maintaining safe walking and biking routes within 1½-miles of an existing or proposed school site compared to an analysis of bussing costs over time where conditions are unsafe. This would allow decision makers to appropriate funds for infrastructure improvements when it makes fiscal sense to minimize the need for and the cost of “safety bus routes.”

With the exception of the safety bussing analysis all of these criteria can also be used to compare site(s) for other public facilities such as parks, libraries and community centers.

How to Use the Best Practices: It has not been common practice for cities and school districts to engage in long-term coordinated planning regarding schools and other public facilities. There are a variety of ways and levels of commitment for cities and school districts to collaborate. Many local governments and school districts have found it useful to develop written agreements detailing roles and responsibilities in coordinated planning. Coordinated planning

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can occur at various points along a continuum, from occasional consultation, to regular meetings and memoranda of understanding, to institutionalized intergovernmental collaboration. City Councils or School Boards may wish to adopt the best practices as policies or as a resolution. Alternatively, they can be adopted as administrative regulations or as internal policies. They can also serve as a jumping off point for more specific policies and procedures that set out further implementation details such as in zoning codes.

Recommendation: To increase collaboration at a minimum each both the city and school district(s) serving it should adopt a **Resolution** outlining goals and develop a collaborative joint **Memorandum of Understanding (MOU)** detailing actions to implement those goals. Internally each entity should examine the most effective way to institutionalize their participation and to document and monitor achievements toward goal outcomes.

Community Examples of Best Practices

*There are many examples of good Comprehensive Plan policy direction on siting schools. **There are few examples of zoning, regulation, data analysis or cooperative agreements as outlined in the best practices above to implement those policies.** In order for these Comprehensive Plan policies to be effective there will need to be better implementation of their direction.*

City of **Ammon**: Map existing and proposed school sites;

City of **Boise**: Comprehensive Plan direction to monitor the use of alternative transportation by school students and goals that schools should be centrally located within neighborhoods to allow for bike and pedestrian access and co-located with parks where feasible;

City of **Chubbuck**: Chapter 13 of Comprehensive Plan devoted to school siting and transportation emphasizing neighborhood schools, and safe walking and biking infrastructure;

City of **Coeur d'Alene**: Comprehensive Plan objective for schools to be located within 5-10 minute walk to the children it serves;

City of **Greenleaf**: Comprehensive Plan calls for coordination on siting schools and sharing facilities, Council liaison to schools;

City of **Hailey**: Comprehensive Plan action step to define a percentage of population within a walking distance of school;

City of **Meridian**: Draft Comprehensive Plan action item to work with district and transportation agencies to map safe routes to schools. Location criteria in code for elementary schools to be located within the center of neighborhoods with access encouraged from local streets;

City of **Moscow**: Comprehensive Plan analyzes existing walking and biking conditions related to school locations and identifies improvements; (This is a strong example for all communities.)

City of **Nampa**: Comprehensive Plan calls for schools that are well located as focal point of neighborhood, with safe access from existing and new residential areas and to identify future school sites prior to development;

City of **Pocatello**: Comprehensive Plan envisions new neighborhoods to include needed services (schools), calls for safe access to schools with minimal busing and to analyze pedestrian and bicycle access to schools;

City of **Salmon**: Comprehensive Plan to analyze routes to school and develop a Safe Routes to School Plan;

City of **Sandpoint**: Comprehensive Plan policy to partner with school district to use schools as community centers;

City of **Twin Falls**: Comprehensive Plan has map of school sites;

City of **Victor**: Comprehensive Plan calls for sharing facilities between school district and city and for support of education by offering assistance in planning for educational facilities.

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Complete Streets

Many streets and roads built over the last 50 years are only safe and comfortable for travel by motor vehicle. They have wide travel lanes that encourage higher speeds, few sidewalks, bike lanes and connections and poorly marked and dangerous pedestrian crossings. The maintenance and rebuilding of these roads provides an opportunity to design and implement “complete streets” which serve the needs of all transportation users including pedestrians, bicyclists, people with disabilities, transit riders, automobile users, freight haulers and citizens of all ages. Such a street system would provide a seamless network of driving, on-street walking, transit and bicycling facilities, and trails connecting schools, homes, shopping, employment centers, recreation areas and other destinations. Complete Streets include good sidewalks, bike facilities, connectivity and pedestrian crossings as described in the sections below.

3. Sidewalks

Existing Policy

The majority of locales reviewed have sidewalk policies and requirements. Many use some but not all best practices. Policies for sidewalks in the communities reviewed ranged from nothing to specific direction for sidewalk safety and access to schools. Most communities identify the need to generally improve their sidewalk environment, and to require sidewalks in new developments. Fewer communities provide guidance on the need for safe and accessible sidewalks to schools. Examples of communities that do provide guidance include: Boise, Idaho Falls, Kimberly, McCall, Meridian, Moscow, Nampa, and Salmon.

Very few places look at sidewalks as a network, analyze the quality and completeness of the network related to the ability to reach destinations on foot, or collect data such as counting users. Only two, Boise/Meridian (through ACHD) and Moscow, prioritize improvements based on a network analysis. The cities of Moscow, Salmon, and Twin Falls have policies that set a priority on sidewalk improvements to schools over other sidewalk needs.

Existing Zoning/Regulation

Sidewalks are regulated for most locales reviewed in two areas.

Development Requirements: Nearly all of the codes reviewed require sidewalks as an improvement for subdivision and/or new development. Few of the cities have special provisions for sidewalks or pedestrian pathways near schools, only Sandpoint requires sidewalks when there is improvement to a single parcel or lot.

Design requirements: The design requirements focus on the width of the sidewalk and on accessibility standards based on the strict federal requirements in the Americans with Disabilities Act (ADA). There are variations in width for sidewalks that are attached or detached from the curb. The most common width requirement was five feet for attached and four feet for detached sidewalks. In some zoning codes, the design of the sidewalk is left to the discretion of the city engineer.

Only a few places specify sidewalk standards near schools. Ammon has explicit reference to special design requirements for sidewalks that directly serve schools. The city requires a five foot minimum width, but “may be required to be wider near schools.” Caldwell requires five foot wide asphalt paved pathways connecting the residential areas to school bus pick up locations, but this requirement only applies within planned unit developments (PUDs). Hailey’s proposed Complete Streets ordinance requires a range of sidewalk widths depending on the functional classification of street, but with a minimum five foot walking space on school routes.

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Best Practices

Note: The standards for pedestrian and bicycle facilities are evolving quickly. The references cited here are the latest available, but may change more quickly than other transportation guidance.

Sidewalks form the backbone of the pedestrian transportation network. Sidewalk installation and the linking of pedestrian routes to destinations and major corridors should always be a priority. The decision to install sidewalks should not be optional. "Sidewalks should be built and maintained in all urban areas, along (non-Interstate) public highway rights-of-way, in commercial areas where the public is invited, and between all commercial transportation stops and public areas" (Institute of Transportation Engineers, Technical Council Committee 5A-5, 1998).

Policy Development Best Practices:

1. Adopt a Complete Streets policy or comparable standards.
2. Require sidewalks in all new and renovated development.
3. Develop and implement a pedestrian master plan. Streets that do not have sidewalks, particularly on routes to schools, should be identified and assessed for improvements. Incorporate the Safe Routes to Schools program principles, focus on inventories of existing sidewalks within 1½ miles of schools and prioritize sidewalk improvements in those areas.
4. Develop a traffic management (traffic calming) plan to slow traffic and enhance pedestrian safety, especially near schools.
5. Conduct counts of pedestrians and use in decision-making.

Design/Maintenance Best Practices:

1. Adopt pedestrian friendly design standards listed below:
 - a. Sidewalks should have a level, hard surface and be separated from motor vehicle traffic by a vertical curb with a buffer. Concrete is the preferred sidewalk material in urban areas, other construction materials and curb treatment may be acceptable, especially in rural areas.

- b. Require a minimum sidewalk width of 5' - 6' where there is a buffer between the sidewalk and road, or 8' - 10' wide on busier roadways in areas without a buffer.

Well-protected Pedestrian zone



- Consider enhanced requirements where a high number of users are expected – i.e. near schools. **Note:** The sidewalk is for pedestrians and should be clear of all obstructions such as mail boxes, utility poles, etc.
- c. Landscaping and trees are preferred in the buffer area as they provide shade/temperature control. Street furniture, or on-street buffers of parked cars and/or bike lanes are acceptable in the buffer area.
 - d. Curb ramps should be required and should meet latest ADA design standards.
 - e. Require a level sidewalk surface with minimal cross slope where sidewalks cross driveways.
 - f. Require short radii curbs at intersections to shorten crossing distances for pedestrians and slow turning vehicles. See more on this topic in pedestrian crossing section, page 19.
2. Sidewalk conditions should be monitored and needed repairs made by the appropriate agency or owner of property.
 3. Sidewalks should be required to be cleared of snow, debris and intrusions of plant material.

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How to Use the Best Practices: Sidewalks are required in new development in most places, however adopted standards may be out of date. There is little data gathered to help prioritize improvements. Retrofitting or improving sidewalks in the existing developed areas is a challenge to budgets.

Recommendation: Make sure that your sidewalk standards, especially width and buffers, are up to date. Gather data, for instance by doing counts of pedestrians and bicyclists, and assessing the condition and design of the infrastructure. Use that information to prioritize improvement plans.

Community Examples of Best Practices

Collaboration between the **Ada County Highway District (ACHD)** and the **school districts** it serves: To prioritize improvements for safe routes projects that eliminate the need for safety bussing; *

City of **Boise:** Zoning code provisions that require paths to connect to schools where needed for connectivity;

City of **Caldwell:** Has a Pathways and Bike Routes Master Plan, puts a priority on sidewalk and pathway connections to important community facilities including schools;

City of **Chubbuck:** Requires sidewalk connections with schools;

City of **Hailey:** 6' minimum width, required in all new construction along entire length of property, to provide pedestrian connections to any existing sidewalks adjacent to the site, and to facilitate future pedestrian connections;

City of **Kimberly:** The Comprehensive Plan Schools component has a very succinct and powerful statement of intent for pedestrian access to schools, that facilities are safe and have good access, particularly pedestrian access; and that schools be the hub for the bike/walk path;

City of **Lewiston:** Policy that pedestrian ways may be required for circulation, or access to schools, playgrounds, shopping centers, transportation, and other community facilities;

City of **McCall:** Comprehensive plan vision of “Green Networks” implemented through a bicycle Pedestrian Master Plan with trails, sidewalks, pathways, schools, civic spaces and parks located;

City of **Meridian:** An action item in the proposed, but not yet adopted, comprehensive plan to work with the school district and transportation agencies to map safe routes to schools. The Meridian Pathway Master Plan contains many exemplary planning and design features including network connectivity, design alternatives for varying conditions and detailed safe crossing standards.;

City of **Moscow:** Comprehensive Plan goal that all transportation systems enable safe access and promote alternative mode use for all modes of mobility, including pedestrians, bicyclists, motorists and public transit users of all ages and abilities. Have set a priority for sidewalk installation/improvement on key routes to schools;

City of **Nampa:** Comprehensive Plan general objective to promote walking as the mode of choice for short trips by giving priority to completion of the pedestrian network that serves special areas, neighborhoods, shopping, schools, and parks;

City of **Pocatello:** Comprehensive Plan goal to expand pedestrian, bicycle and transit facilities to provide transportation alternatives and promote an environment that is inviting for pedestrians, bicyclists and transit riders;

City of **Salmon:** Sidewalk deficiencies and construction schedule for sidewalk improvements outlined with priority for access to schools in the 2004 Transportation Plan;

City of **Twin Falls:** Comprehensive Plan implementation measure to complete a sidewalk assessment that identifies areas where sidewalks are incomplete. Sidewalk development and repair in residential areas, and complete safe routes to schools, recreation areas, and city destinations are given priority.

**The Ada County Highway District serves as the streets department for the reviewed cities of Boise and Meridian*

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Narrower Lane Widths?

*Competition for space in the roadway right-of-way is fierce. One way to find space for bicycles and pedestrians is to narrow vehicle lanes. The common accepted standard for lanes is 12 feet, often this is presented as an American Association of State Highway and Transportation Officials (AASHTO) standard. In fact the AASHTO Green Book is a guide and states that for rural and urban **arterials** lane widths may vary from 10 to 12 feet (Lanes on collector and local roads can be as narrow as 9 feet). It goes on to say that 12-foot lanes should be used where practical on higher speed, free flowing, principal arterials. However, “under interrupted-flow conditions (**roads with signals**) operating at low speeds (**45 mph or less**) **narrower lane widths** are normally quite adequate and **have some advantages**” (emphasis added). Further investigation shows that in general safety and capacity are not adversely impacted by reducing lanes widths to 10 feet and can be improved in some conditions for instance by slowing traffic near pedestrians. In addition narrower lane widths reduce costs with smaller rights-of-way, reduced construction costs and reduced maintenance costs; a critical issue in times of shrinking budgets.*

4. Bicycle Facilities

Existing Policy

Almost universally, bicycle facilities are identified as an important community asset. Most plans identify a need to better plan or improve existing systems and facilities. Yet bicycle facilities are primarily planned for as a recreational pursuit and not as a means of transportation. There are a few notable examples, such as in Boise/Meridian (ACHD), of planning for bicycles for transportation. Donnelly plans to integrate bicycle facilities into their roadway system. Sandpoint has a policy to improve bicycle use as a viable form of transportation. Some communities’ plans link paths with

important community facilities, including schools. Examples of this include Caldwell, Coeur d’Alene, Hailey, Idaho Falls, McCall, Meridian, Ponderay, and Victor.

Many communities have existing bikeway plans. Examples include: Caldwell, Hailey, McCall, Boise/Meridian – ACHD, Donnelly, and Lewiston. However, even where there are adopted bicycle plans based on transportation needs they are generally recognized as a separate plan and rarely incorporated directly into the transportation plan or comprehensive plan, and implementation steps are not clear. There are some exceptions. Hayden has included bicycle planning and classifications of facilities in their Transportation Strategic Plan, and Boise/Meridian, Lewiston, Moscow, Nampa and Sandpoint have policies to reference bicycle plans in the larger plan.

Existing Development Regulations

Requirements for serving bicyclists at the time of development are generally lacking. Boise requires shared use paths to connect to schools. Caldwell leaves the requirements up to the discretion of the Police Chief based on their Bike Route Master Plan. Lewiston also has a discretionary provision based on the City Engineer’s recommendation, but specifically tied to school access. Meridian requires bike lanes on all collector streets, and encourages bikeways in all subdivision. Codes for the cities of Chubbuck and Dalton Garden require a path on both sides of the street. Nearly half of the cities reviewed require bike parking with commercial development.

Existing Design Requirements

Few communities have specific design standards for bike lanes or other bicycle facilities included in their development codes. Exceptions include Donnelly which calls for five-foot bike lanes’ and 10’ separated pathways. McCall requires 15’ of right of way and 10’ of paved surface for bike lanes. McCall and Hailey’s plans integrate bicycle facilities with important community destinations.

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Most rely on other published standards or ones suggested in their master plan. For example, Boise and Meridian rely on ACHD standards and national publications such as the AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities.

Existing Maps

Many communities have policy intent to map sidewalks and bicycle routes integrated with other pedestrian systems. Ammon, Boise, Caldwell, Idaho Falls, McCall, Meridian, Moscow, Salmon and Twin Falls all have a map included in their comprehensive plans. Most maps are integrated with trails and pathways. Ammon and Idaho Falls have incorporated a map of the regional bicycle and pedestrian system, Boise and Meridian reference the county-wide bike plan map produced by ACHD. Ketchum has a map of sidewalk deficiencies, but only in the community core.

Best Practices

Note: *The standards for pedestrian and bicycle facilities are evolving quickly. The references cited here are the latest available, but may change more quickly than other transportation guidance.*

A safe and successful bike network has a clear commitment to bicycles as a mode of transportation. This should be reflected in your vision statement, in all transportation plans and policies and acted upon with implementation strategies. While recreation is an important need, accommodations for recreational bicyclists are not adequate to serve the needs of transportation users.

Policy Development Best Practices: Complete Streets Policies are an accepted best approach to incorporate bicyclists and pedestrians safely into your transportation system. A policy should require facilities for bicyclists and pedestrians on all roadways and only allow exceptions that meet defined criteria. Absent a Complete Streets policy, bicyclists should be recognized as valid transportation users and accommodated on all transportation

facilities. Utilize Safe Routes to School principles to prioritize improvements on routes to schools and bike parking at schools. Conduct counts of bicyclists and use in decision-making.

Plan and Mapping Best Practices:

1. Bicycle and pedestrian plans should be developed as part of a comprehensive, multi-modal transportation plan.
2. Plan to provide the highest level of connectivity for bikes with the lowest level of risk.
3. Identify where you prefer cyclists to ride.
4. Identify how you will provide an efficient safe bike network of corridors that serve probable destinations including all schools.
5. Document and map a design strategy on each corridor identified; creating certainty in the expectations of planners, engineers and users as projects arise.
6. Identify how bikes will cross significant barriers, i.e. waterways, arterials, freeways, railroads. (If ignored they will be forced to join regular traffic without accommodations.)

Design Best Practices: Identify the type of corridor and match appropriate bike facilities with that type in context with cars and pedestrians. There are four basic corridor types for bicycles:

- ◆ **Bike Lane** – on street
- ◆ **Bike Boulevard** – on street
- ◆ **Bike Route** – on street
- ◆ **Shared Pathway** – off street (shared with pedestrians)

Bike Lanes: Dedicated lanes striped on the roadway right-of-way; should be 5' wide, wider on higher speed corridors and where there is on-street parking. Can be separated from car travel lanes with curbs, landscaping, medians, etc., where safety is a concern. Bike lanes are the most common approach for creating a bike network.

Application: Applied more often on busier streets such as arterials and collectors where traffic volumes are higher and providing bicyclist with their own lane is key for safety.

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Intersections: Design should address how bike lanes will continue through the intersection and make various turn movements, i.e. bike lanes should move to the left of right turn only vehicle lanes, space should be provided for bicyclists to move safely left where left turns are likely.

Tools:

1. Striping
2. Curbs/landscaping/medians;
3. Signs; remind motorists to watch for cyclists, indicate who has right-of-way.

Newer practices for bicyclists include:

1. Bicycle boxes' painted on the street ahead vehicles, for bicyclists to move through the intersection first;
2. Bicycle signals provide a green light for bikes seconds before cars to allow bikes to clear the intersection;
3. Contra-flow bike lanes provide bike connectivity on one-way streets, separate with curb where possible.

Bike Boulevards: Cyclists are emphasized over cars on these shared roads – cars share the road with bikes – this is the most effective way to provide a large, well-connected network for cyclists.

Application: On less busy roads with lower speeds and volume, mostly local streets but sometimes collectors.

Tools:

1. Stop cross traffic, usually with stop signs;
2. A slow design speed, 20–25 mph use narrow travel lanes, speed bumps, tables, median islands or other engineered features that slow traffic;
3. Mark the roadway with sharrows or other markings;
4. Use signs to indicate it is a shared roadway.

Bike lane marking



Use Sharrows to mark shared roadways

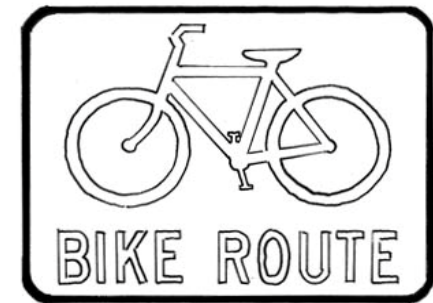
Bike Routes: Routes designated for bicyclists, identified with signs or on-street markings. Marking routes with maps is not adequate.

Application: A mix of roadway types and paths. Identify the safest most direct route for cyclists designed to avoid higher volume roadways where possible.

Tools:

1. Signs identify the bicycle route especially at intersections.
2. Sharrows are markings on the pavement to indicate to motorists that they are on a bike route and remind them they are sharing the road with cyclists.

Use signs to mark bike routes



Shared Pathways:

Physically separated from the roadway and shared with pedestrians. The minimum paved width is 10 ft; wider is desirable where high use is expected. Should connect to other facilities and not just end leaving users stranded. Sidewalks should never be designated as pathways.

Application: Where right of way exists that provides a more direct or safer route for pedestrians and bicyclists. Should:

1. Be physically separated from motor vehicle traffic;
2. Have well-defined origin and destination.

Tools:

1. Way finding signs at both ends and at intersections;
2. Middle stripe if two directional;
3. Appropriate crossing treatments at intersections with roadways.

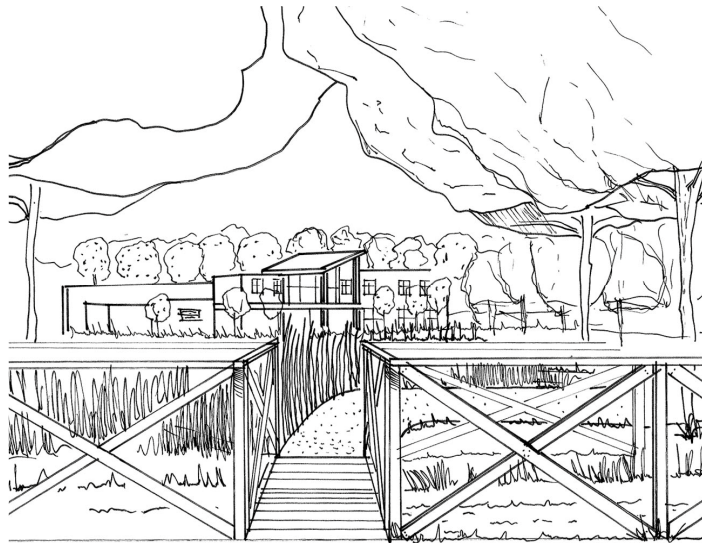
Safety Considerations: Should not be located immediately adjacent to a roadway because of conflicts at intersections, with driveways and with other roads resulting in bicycle/motor vehicle collisions. Studies show that such parallel pathways are approximately twice as dangerous for bicyclists as riding in traffic with motor vehicles.

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More Best Practices:

1. **Signs and Roadway Markings:** Clear signage and roadway markings are critical, especially on networks off main roads and at intersections. Signage should provide directional information and details such as distance in miles or time. Road marking include lanes through intersections sharrows and bike symbols.

Safe pathway connection between a neighborhood and its school



2. **Bike Parking:** Bicyclists need a place to park at their destinations. Parking should be visible and easily accessible, use best current designs, and parking should be covered at residences and where climate or precipitation dictates. Bicycle parking needs should be considered with land use applications including at schools, parks commercial areas and in multi-family residential.
3. **Maintenance:** Bike facilities should be regularly maintained including sweeping to keep roads, lanes and paths clear of debris and snow. Re-stripe and resurface as needed.

4. **Lighting:** Roadway lighting should allow drivers to be able to see cyclists. Lighting is needed on shared use paths for safety and to avoid user conflicts.
5. **Bicycle lights:** Cyclists should be required to have headlights and taillights after dusk.
6. **Education:** Motorists and bicyclists should be educated about safely sharing roadways. This can be done utilizing Safe Routes to School programs and driver education courses.
7. **Enforcement:** Laws promoting safe behavior should be enacted and enforced for both motorists and bicyclists. Law enforcement can use warning signs to help educate both motorists and cyclists when new facilities are developed.

How to Use the Best Practices: Bicycle standards are quickly evolving, planning for bicycles is often separated from the transportation plan. Priorities and expectations can be unclear.

Recommendation: Keep up to date with latest bicycle standards. Integrate bicycle planning with the adopted transportation plan, and any capital improvement plans or work plan and budget. Create clear expectations of how bicycle planning will be implemented.

Community Examples of Best Practices

City of **Boise:** Paths required to connect to schools where other good bicycle connections are absent;

City of **Caldwell:** Pathways and Bike Route Master Plan, principles include safety, accessibility, continuity and destinations and identifies schools as a popular destination. The plan establishes design standards, corridors that should be completed to create a network and implementation steps;

City of **Coeur d'Alene:** Adopted Complete Streets Policy to serve all users within the overall street network to be implemented through new construction and reconstruction with strong process to discourage exceptions;

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City of **Donnelly**: Policy to develop pedestrian, bicycle and transit needs in transportation plan;

City of **Hailey**: Bicycle transportation included in Transportation Master Plan, City has draft Complete Streets policy and adopted Bike Rack standards;

City of **Idaho Falls**: Comprehensive Plan policy, bikeways should tie residential neighborhoods to schools, shopping, and employment;

City of **Lewiston**: Comprehensive Plan policy to encourage pathway linkages to schools, parks, shopping and between neighborhoods;

City of **McCall**: Comprehensive plan vision of “Green Networks” implemented through a bicycle Pedestrian Master Plan with trails, sidewalks, pathways, schools, civic spaces and parks located;

City of **Meridian**: The Meridian Pathway Master Plan only applies to the pathway network but contains many exemplary planning and design features including network connectivity, design alternatives for varying conditions and detailed safe crossing standards;

City of **Moscow**: Comprehensive Plan goal that all transportation systems enable safe access and promote alternative mode use for all modes of mobility, including pedestrians, bicyclists, motorists and public transit users of all ages and abilities. Implementation action to identify and fill the gaps in the City’s existing bicycle lane system and identify future bike lane needs;

City of **Sandpoint**: Comprehensive Plan Policy to prioritize schools, parks, downtown, libraries and other civic destinations as non motorized routes for the transportation network.

maximum distance between connections, and none have adopted an index or other measurements to assess existing or planned connections. Many communities have goals for improved networks of all transportation modes and to better connect their community by expanding pedestrian access and mode choices. Examples include Boise, Coeur d’Alene, Garden City, Hayden, McCall, Nampa, and Pocatello. The City of Driggs has mapped future connections to the collector streets in their city. Caldwell and Pocatello have policies to prioritize connecting important community facilities, like schools and Chubbuck and Meridian both have overlays and policies calling for better connections in new development.

Existing Design and Development Requirements

Regulations on connectivity are provided in the development subdivision code for those communities that address the issue. Only one city, Kimberly, specifically relates connectivity to school location stating “Right of way for pedestrian walkways in the middle of long blocks may be required for pedestrian circulation to schools, parks or shopping areas.” Donnelly and Chubbuck have mid-block or block length limitations that promote connectivity, but do not specifically address schools. Meridian requires pathway connections through long blocks that fail to meet minimum criteria, again with no mention of schools. Idaho Falls and Sandpoint require developers to provide connections identified in pathway plans. More general standards that promote connectivity with adjacent properties or within a development are in the subdivision codes for Boise, Greenfield, Ketchum, McCall and Nampa.

Best Practices

Connectivity refers to the quantity or density of connections in path or road networks and the directness of links between connections. A well-connected road or path network has many short links, numerous intersections (nodes), and minimal dead-ends (cul-de-sacs). As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations

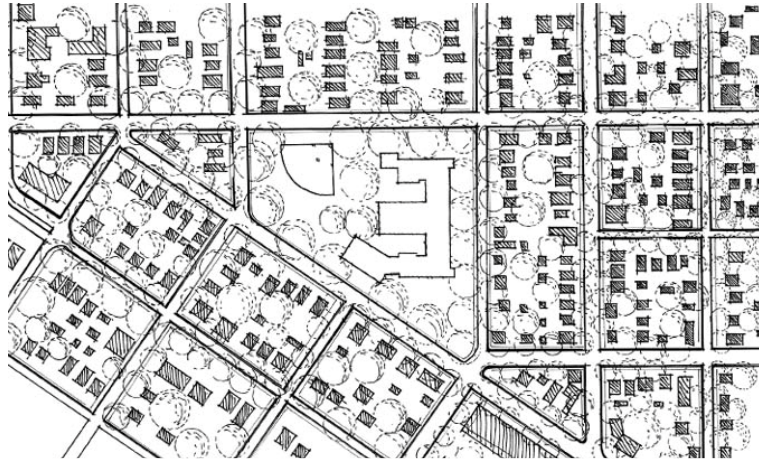
5. Connectivity

Existing Policy

Connectivity is the least addressed and least well-developed policy issue for most communities studied. Few communities specify the

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A school that is well connected to its surrounding neighborhood



and creating a more accessible and resilient system. Relative connectivity is an important predictor of the choice to walk. Pedestrian trips are 18% higher in areas where paths are relatively more direct to nearby destinations on foot than by car.

To increase connectivity a community must overcome a preference for residential cul-de-sacs, popular because they limit traffic volumes and speeds and contribute to a sense of security. However, connected residential streets can have these same attributes if designed appropriately with short blocks, “T” intersections, narrower widths and other traffic calming features. Another objection is that a connected street network requires more land for road right-of-way. This can be offset by reducing street widths, still providing emergency access because of the choice of routes.

Connectivity can be increased during roadway and pathway planning when subdivisions are designed; by adopting street connectivity standards or goals, by requiring alleyways and mid-block pedestrian shortcuts, by constructing new roads and paths to connect destinations, by using shorter street segments and smaller blocks, and by applying traffic calming.

Common street connectivity standards or goals are listed below. Standards should be flexible.

1. Adopt an average intersection spacing of 300-400 feet for local streets and maximum spacing for pedestrian/bicycle connections of 350 feet. These may be mid-block if needed.
2. Limit maximum intersection spacing to ± 600 feet for local streets, $\pm 1,000$ feet on arterials. Limit maximum block size to 5 acres in residential and 12 acres in commercial areas.
3. Reduce street pavement widths.
4. Limit or discourage cul-de-sacs. Limit the maximum cul-de-sac length to 400 feet.
5. Limit or discourage gated communities and other restricted access roads.
6. Require multiple access connections between a development and surrounding arterial streets.
7. Require a minimum connectivity index, or reward developments with high connectivity through incentives.
8. Plan streets to connect in the future as development continues onto adjacent property, clearly sign the “stubs” as future connections.
9. Create Pedways, which are walking networks in major commercial areas connecting buildings and transportation hubs.

How to Use the Best Practices: Connectivity is one of the most effective ways to increase the pedestrian and bicycle travel by shortening distances. Few locales have clear connectivity standards.

Recommendation: Determine a method to measure connectivity, adopt an index as a guide. Make connectivity a part of your application review process.

Community Examples of Best Practices

City of **Boise**: Comprehensive Plan goal to provide a continuous network of sidewalks, bicycle, and pedestrian paths, and roadways

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to connect different areas of neighborhoods. Require future connection stubs in subdivisions where there is a reasonable expectation of adjacent parcel development utilizing the connections for local circulation;

City of **Dalton Gardens**: In blocks over six hundred feet (600') long, crosswalks may be required. (Subdivision Code);

City of **Driggs**: Has a future connections map that identifies future connections to the collector streets in their city;

City of **Hailey**: Has established a benchmark in Comprehensive Plan for a percentage of neighborhoods that should be connected to “destination” areas, including schools and prioritizing improvements within ½ mile of schools;

City of **Moscow**: Comprehensive Plan objective that likely current or future pedestrian destinations (such as parks, schools, and nearby shopping and dining establishments) should be examined and pedestrian pathways should be required in mid block or cul-de-sac locations to provide more direct and efficient pedestrian route opportunities;

City of **Pocatello**: Strong Comprehensive Plan language to provide for a connected network of pedestrian-friendly streets and paths policies to provide safe mid-block pedestrian pathways on local roads with long blocks, promote sidewalks that connect buildings to the public right-of-way for new commercial, institutional and residential development, promote pedestrian and vehicular connections between adjoining developments for new commercial, industrial and institutional development and use streets, pedestrian ways and connectivity development standards to promote streets and pedestrian ways that are well connected and provide a safe environment for pedestrians. Requirement for connections in commercial developments;

City of **Twin Falls**: Implementation Measure in Comprehensive Plan to ensure that all new developments include a unified and fully-

connected system of sidewalks, street trees, trails and open space and to retrofit existing neighborhoods with same.

Examples of Street Connectivity Standards		
Measure	Standard	Notes
# of Links/Nodes	>1.5 Minimum	Ratio links/nodes, Excludes links on perimeter arterials
Intersections/Square Mile	250 Minimum	Includes perimeter intersections
Block Perimeter	1,400 ft. Maximum	Measured at street centerline
Block Length	400 ft. Maximum	
Emergency Access	10% Maximum	% of lots rendered inaccessible if one street is blocked
Proximity	65% Minimum	% of units within 1/4 mile walking of village nodes

6. Pedestrian Crossings

Existing Policy

Most communities reviewed do not have specific policy requirements for pedestrian crossings, Rigby leaves the decision about where crosswalks should be located to the Police Chief and Caldwell gives the Transportation Commission authority to locate and design crossings.

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Existing Design and Development Requirements

An array of design and development requirements for crosswalks are used by the few communities that have adopted them. Caldwell and Rigby take a case-by-case approach using the Traffic Commission and Police Chief, respectively, to determine the crosswalk locations and designs. Dalton Gardens defers to the latest edition of the “Manual of Uniform Traffic Control Devices” (MUTCD) for their design requirements. Hailey has standards included in their draft complete streets ordinance, and Meridian applies the standards in their Pathway Master Plan to pathway intersections. Subdivision requirements in two communities, Coeur d’Alene and Dalton Gardens call for crosswalks to be located in blocks exceeding a certain length: 1,000’ in Coeur d’Alene and 600’ for Dalton Gardens. Many seem to rely on the MUTCD without detailing how they will determine which MUTCD compliant design they will use.

Best Practices

A child walking or biking to school will likely cross one or more

Crossing with ADA compliant curb ramp and ladder style crosswalk markings



streets. Good, safe design should keep the street crossing simple and should be guided by these simple principles;

1. **Identify good crossing locations:** Where are the likely pedestrian destinations (i.e. schools, parks, shops)? Develop the shortest safe routes for crossing – do not ask pedestrians to travel out of direction to cross, provide crossings that are in line with the sidewalk so that pedestrians with visual impairments can easily negotiate them; and establish good sight distances for both drivers and pedestrians.
2. **Slow motor vehicle speeds:** Consider traffic calming devices such as narrower lane widths and vertical elements in medians or along the roadway edge buffer – these strategies signal motorists to travel more slowly. Pedestrians are much safer when motorists are traveling less than 25 mph.
3. **Reduce curb radius:** Shorter curb radius at corners benefits pedestrians by shortening the intersection crossing distance, slowing the turning vehicles, and allowing a straighter path through the intersection for pedestrians. In places where there is on-street parking and/or bike lanes the width provided by the parking or bike lane increases the actual turn radius used by motorists.
4. **Reduce crossing distances:** Use curb extensions (curb bulb-outs) and median islands to reduce the crossing distance and length of time pedestrians are exposed to traffic. Median islands also simplify the crossing by breaking it into two pieces with safe refuge in between. Curb bulb-outs prevent cars from parking too close to the crossing and blocking sight distance at the crossing and they reduce curb radius slowing vehicle turns.
5. **Use appropriate signage:** As recommended in the MUTCD signs can improve the rate and distance at which drivers yield. These include pedestrian warning signs, stop/yield here signs, cross here arrows, in-roadway stop/yield signs and more. Follow MUTCD guidance for appropriate installation.
6. **Use appropriate pavement markings and traffic controls:** Use accepted pavement markings, warning signs, flashers and

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traffic signals, when warranted, by following the MUTCD. Marked crosswalks and high visibility crosswalks indicate preferred pedestrian crossing sites, warning signs or flashers tell motorists to expect pedestrians, and advance stop bars provide better sight distance. These tools do not slow motorists or increase safety by themselves and should be used in combination with traffic calming or other strategies to slow speeds. (Further guidance can be found in the resources listed in Appendix A.)

Crossings can be made safer on nearly any type of roadway including arterials using the principles above. However busier high traffic roads may require even more robust treatments especially near schools. These may be used in combination with the strategies above following MUTCD guidance:

- **Traffic signals** that serve both cars and pedestrians when warranted and properly designed can enhance pedestrian safety. Walk signals should change automatically when the traffic signal changes. Pedestrian heads with a countdown feature let pedestrians and drivers know how much time is left in the signal cycle and improve safety.
- Rectangular Rapid Flashing Beacons (**RRFB**) can increase yield rates on busier roads. The paired rectangular yellow beacons employ a stutter flash similar to emergency vehicles and are activated by the pedestrian.
- **HAWK (High-Intensity Activated crossWalk)** beacons are a two red over one yellow signal that is dark until activated by the pedestrian. It then flashes yellow, then solid yellow, then a brief solid red then wig wag red that allows motorists to proceed once the pedestrian has cleared the crossing.

- **Crossing Guards** to assist students and ensure that traffic stops or yields can increase safety in all conditions.

How to Use the Best Practices: Pedestrian crossings can be made safer and more visible. There is no one approach each crossing needs to be analyzed and treated appropriately.

Recommendation: Assess the pedestrian crossings that you would like to improve and determine the best treatment for each location utilizing the most appropriate tools listed above.

Community Examples of Best Practices

City of **Coeur d'Alene**: Crosswalk required through any block exceeding one thousand feet (1,000') in length or in any block of lesser length where crosswalk is to provide circulation or access to schools;

City of **Hailey**: Crossing locations near schools are a basis for introducing traffic calming to slow traffic;

City of **Kimberly**: Pedestrian walkways in the middle of long blocks required when warranted for pedestrian circulation to schools, parks or shopping areas;

City of **McCall**: requires that pedestrian and bicycle crosswalks be not less than ten feet (10') wide, and that they provide access to schools, playgrounds, shopping centers, transportation and other community facilities;

City of **Sandpoint**: A design directive to encourage diversity in transportation modes to make the city more walkable by making sidewalks and crossings safer and changing the land use pattern to support.

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Appendix A

Resources

General

Active Living, learn about
<http://www.activeliving.org/>

Form Based Codes Institute
<http://www.formbasedcodes.org/>

FHWA Pedestrian and Bicycle Safety
http://safety.fhwa.dot.gov/ped_bike/

Idaho Transportation Department Bicycle Pedestrian Program
http://www.itd.idaho.gov/bike_ped/

Idaho Transportation Department Safe Routes to School Program
<http://itd.idaho.gov/sr2s/home.htm>

National Complete Streets Coalition
www.completestreets.org

National Center for Safe Routes to School Guide
<http://guide.saferoutesinfo.org/>

Pedestrian and Bicycle Information Center
<http://www.pedbikeinfo.org/>

Project for Public Spaces (PPS)
<http://www.pps.org/transportation/>

Smart Code Central
<http://smartcodecentral.org/>

Victoria Transport Policy Institute (VTPI)
<http://www.vtpi.org/>

Walking, learn about
<http://americawalks.org/>

Guides and Manuals

Bicycle Boulevard Planning & Design Guidebook
<http://www.ibpi.usp.pdx.edu/media/BicycleBoulevardGuidebook.pdf>

Creating Safe Routes to Schools: Sidewalks,
<http://guide.saferoutesinfo.org/engineering/sidewalks.cfm>

Designing Walkable Urban Thoroughfares; A Context Sensitive Approach:
<http://www.ite.org/emodules/scriptcontent/Orders/ProductDetail.cfm?pc=RP-036A-E>

DRAFT AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities
<http://design.transportation.org/Documents/DraftBikeGuideFeb2010.pdf>

How to Develop a Pedestrian Safety Action Plan – FHWA
<http://www.itd.idaho.gov/SR2S/program/PedestrianSafetyActionPlanFHWA0512.pdf>

Manual of Uniform traffic Control Devices (MUTCD)
http://mutcd.fhwa.dot.gov/pdfs/2009/pdf_index.htm

National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide
<http://nacto.org/cities-for-cycling/design-guide/>

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Technical Issue Specifics

Bicycle Parking

http://www.apbp.org/resource/resmgr/publications/bicycle_parking_guidelines.pdf

Curb Radius: Better Walking Through Geometry

<http://www.missionped.org/archive/curbrad.html>

Curb Radius Reduction

<http://www.walkinginfo.org/engineering/crossings-curb.cfm>

Developing Curb Ramp Designs Based on Curb Radius

<http://www.ite.org/safety/ITEjournal-curbs.htm>

FHWA Chapter 8: Pedestrian Crossings

<http://www.fhwa.dot.gov/environment/sidewalk2/sidewalks208.htm>

FHWA Chapter 7: Curb Ramps

<http://www.fhwa.dot.gov/environment/sidewalk2/sidewalks207.htm>

Guidelines for Street Corners

<http://www.portlandonline.com/shared/cfm/image.cfm?id=61750>

High Intensity Activated Crosswalk (HAWK) signal information,
video:http://www.youtube.com/watch?v=7x_4Wu8EnQ&feature=endscreen&NR=1

flyer:<http://www.achdidaho.org/Community/Docs/HAWK%20Information%20Sheet.pdf>

Idaho State Department of Education Best Practices Maintenance Plan

<http://www.sde.idaho.gov/site/facilities/>

ITE Technical Committee paper on School Site Planning, Design and Transportation

<http://itd.idaho.gov/SR2S/documents/School%20Site%20Planning.pdf>

Literature Review on Vehicle Travel Speeds and Pedestrian Injuries

<http://www.nhtsa.gov/people/injury/research/pub/hs809012.html>

North Carolina DOT Guide to Multi-use Pathways

http://www.campo-nc.us/BPSG/docs/NCDOT_on_Multi_Use_Pathways.pdf

Pedestrian and Bicycle Information Center – Narrower Lane Widths

<http://www.walkinginfo.org/library/details.cfm?id=4348>

Rectangular Rapid Flashing Beacon (RRFB)

<http://safety.fhwa.dot.gov/intersection/resources/techsum/fhwasa09009/>

Road Diets; Fixing the Big Roads

<http://www.walkable.org/assets/downloads/roaddiets.pdf>

Roadway Connectivity – TDM Library at VTPI

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

Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations; Executive Summary

http://safety.fhwa.dot.gov/ped_bike/docs/cros.pdf

Curb Radius: Better Walking Through Geometry

Walking Info. Org, When Crossing the Street is Dangerous

<http://www.walkinginfo.org/problems/problems-crossing.cfm>

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Appendix B

Community Reviews – 36 Individual City Surveys and Recommendations

find on Idaho Smart Growth website at:
<http://www.idahosmartgrowth.org>