

School Bicycle Parking Assessment



Report produced by Shane MacRhodes and Emma Newman



Table of Contents

Introduction	3
Purpose	3
Benefits of School Bicycle Parking Assessments	4
Assessing Bicycle Parking	6
Six Steps to Assessing School Bicycle Parking Facilities	6
School Bicycle Parking Assessment Tool	7
Improving Your Grade	18
Further Improvements	23
Six E's of Safe Routes to School Applied to Bicycle Parking Facilities	25
Eugene-Springfield Findings and Cost Estimates	28
Conclusion & Acknowledgements	36
Appendices	38
Appendix A: Bike Rack Installation Guide	38
Appendix B: Rack Vendors and Cost Estimates	39
Appendix C: Safe Routes to School Bicycle Facility Policies	40
Appendix D: Bicycle Locking Education Materials	41
Appendix E: School Site Design and Engineering Guidance	42
References	43

Introduction

This report presents a school bicycle parking facility assessment tool and describes how to use it. It also presents ideas about how to make improvements to your bicycle parking facilities and shares the results from the original Eugene-Springfield Safe Routes to School bicycle parking study.

Purpose

Infrastructure is a key element in determining active transportation mode choices. Along with other improvements such as multi-use paths, sidewalks, traffic calmed streets, and other active transportation infrastructure, bicycle parking can be a key element in encouraging students and families to bike to school more often. Many infrastructure improvements are in the city right-of-way, but bicycle parking facilities, and their connectors, are one of the main built environment areas that school districts can improve on their own.

This regional bicycle parking study analyzed the existing bicycle parking environment for the three school districts in our region: Eugene School District 4j, Bethel School District, and Springfield Public Schools. This study expanded upon an original effort initiated at 4j in 2013 to document the existing bicycle parking environment and create a plan to upgrade low scoring schools.

With the expansion of the regional Safe Routes to School program, the goal was to conduct the study throughout the region during the summer of 2014 and produce a regional plan for improvements that would serve as a model for other districts and regions. Our hope is that Safe Routes to School Coordinators, school district transportation and facilities departments, and other local transportation organizations and advocates will use this tool to analyze current bicycle parking and make biking to school more convenient and accessible for everyone.



Edgewood Elementary School Bicycle Parking. Photo by Shane MacRhodes.



Benefits of School Bicycle Parking Assessments

"As a third-grade pupil, if you exercise and bike to school, your ability to concentrate increases to the equivalent of someone half a year further in their studies."

- Niels Egelund of Aarhus University in Denmark

Schools that provide bicycle parking that is visible, convenient, functional, secure, and safe are showing families that they encourage active transportation as a real choice for getting to school. Schools that have out-of-date bike racks hidden in the back while providing an easy drop-off and pick-up area for parents driving their children to school create an environment that prioritizes personal vehicles over opportunities for students to travel to school actively. By placing solid functioning racks in visible and up front locations near watchful eyes, schools can show that they encourage students to be active and arrive to school ready to learn.¹

By completing a bicycle parking assessment, a school district will have a more complete understanding of existing conditions and a clear plan for making improvements for each school.



Bicycle Parking in Front of North Eugene High School. Photo by Shane MacRhodes.

Proven Benefits of Biking to School:

- Increase student academic achievement
- Help students and families establish healthy life habits
- Combat the nation's childhood obesity epidemic
- Reduce school traffic congestion
- Improve air quality around schools
- Increase student attendance rates²

Benefits of Quality Bicycle Parking Facilities:

- Shows school and district's encouragement of healthy transportation
- Supports Safe Routes to School
- Increases security to prevent bike theft
- Increases awareness of student safety

What is Quality Bicycle Parking?



Sportworks Tofino No Scratch Bike Rack.

sportworks®

General Criteria for Good Quality Bicycle Parking³

Any bicycle rack should conform to the following guidance:

- Allow locking of the frame and one or both wheels with a U-lock
- Anchored to the ground securely
- Resists cutting, rusting, bending, or deformation, both from natural causes and from human abuse
- Works well for a variety of bicycle frame types (e.g. should work for step-through frame as well as diamond frame, children's bicycles as well as adult bicycles)

Note: staple racks fulfill the above criteria very well and are generally recommended.

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Six Steps to Assessing School Bicycle Parking Facilities

In order to use the following assessment tool, you will first need to download it at bit.ly/BikeParkingTool and create a copy of your own. Then, follow the six steps below to complete an assessment of your bicycle parking facilities.

1. First, you will need to track down two key pieces of information: building capacity of each school and your city's parking capacity code for schools.
 - A. Building Capacity — the school district facilities department should be able to supply a list of schools and what each one's building capacity is. Use the building capacity numbers to fill in the Building Capacity column in the assessment tool (see below).
 - B. Bicycle Parking Code — your city government may or may not have a city code for school bicycle parking. The Eugene and Springfield codes for schools (public and private, elementary through high) are 1 space per 8 students with at least 25% of the parking being “long-term,” which means it needs to be well-lighted, in a secure location, sheltered from precipitation, and within a convenient distance of a main entrance.^{4, 5} Codes vary in detail so it is important to research your local code. If no code exists for your city, use 1 spot per 8 students and document the code you used in your assessment. Where applicable, make sure to include standards regarding covered parking.
2. Familiarize yourself with the types of racks and different metrics in the bicycle parking assessment tool below.
3. Go out to the schools you wish to analyze and fill in the Count, Capacity Calculation, and Parking Scoring sheets of the tool. Take photos of all of the racks for documentation and reference and take notes about how people can and are using the bicycle parking areas.
4. Use the tool to add the total score count of each school and then assign the school a grade based on the scoring metric.
5. Compare school grades across the district to identify particularly low scoring schools that are most in need of bicycle parking improvements.
6. Look at low scoring grades and focus on improving those scores through facility improvements. Celebrate improvements to build momentum for further improvements.

School Bicycle Parking Assessment Tool

Below are examples of the Count Sheet, Capacity Calculation Sheet and the Parking Scoring Sheet, which make up the different components of the Bicycle Parking Assessment tool. Visit the link to the right to download your own copies.

Visit

bit.ly/BikeParkingTool

to download a tool with the grading sheets to use for your school(s)

Count Sheet Use the first sheet, the Count Sheet, to take notes and count what you find at each individual school. You will use these notes to later fill in the Capacity and Parking Scoring Sheets. Print out one copy for each school you will assess and count the number of parking spaces for each type of rack either in the ‘covered’ or ‘uncovered’ section. Write down any notes about security, accessibility, location, or other information that stands out as important to note for that school.

Count Sheet

School name: _____

Address/Location: _____

Counted By: _____

	Number of Uncovered Spaces	Number of Covered Spaces
Quality Racks (Staple, inverted-U, etc.)		
Wave Racks		
Front Loader Racks (Toaster)		
Wheel Bender Racks		
Art/Other Racks		

Location Notes	
Quantity Notes	
Covered Notes	
Security Notes	
Accessibility Notes	

Capacity Calculation Sheet

Capacity Calculation Sheet

School	Uncovered Capacity	Secured Capacity	Covered Capacity	Covered & Secured Capacity	Skateboard Capacity	Existing Bike Parking Capacity	Code	Percent of Code Fulfilled	Covered Spaces Needed	Building Capacity	Capacity Notes
Jefferson Elem.		15	6			21	44	48%	11	350	3 covered staple racks, 3 wave in an uncovered enclosure on side of school.

The Capacity Calculation sheet is where you will fill in your individual school bicycle parking capacity numbers in order to calculate the Quantity value on the Parking Scoring sheet. Complete the Capacity Calculation sheet before the Parking Scoring sheet. This is where you will fill in the Building Capacity and Code requirements you collected earlier. Those numbers and your counts will then automatically calculate your percentage score, number of covered racks needed to meet code, and assist you in determining the number of new quality racks needed. See descriptions below to help you in completely filling out the Capacity Calculation sheet .

Uncovered Capacity

Number of bicycle parking spaces that are uncovered and not secured.

Secured Capacity

Number of bicycle parking spaces that are secured but not covered.

Covered Capacity

Number of bicycle parking spaces that are covered, but not secured.

Covered & Secured Capacity

Number of bicycle parking spaces that are covered *and* secured.



Covered Bicycle Parking at McCornack Elementary School. Photo by Shane MacRhodes.

Capacity Calculation Sheet *(continued)*

Existing Bicycle Parking Capacity

Total number of current bicycle parking spaces. The tool calculates this for you by adding up all of the above metrics.

Code

Number of bicycle parking spaces required to meet code requirements. In Eugene and Springfield, this is 1 space per 8 students. This is calculated by dividing the Building Capacity column by 8. State at the bottom of your calculation sheet what code or standard you are using and what it calls for.

Code Covered

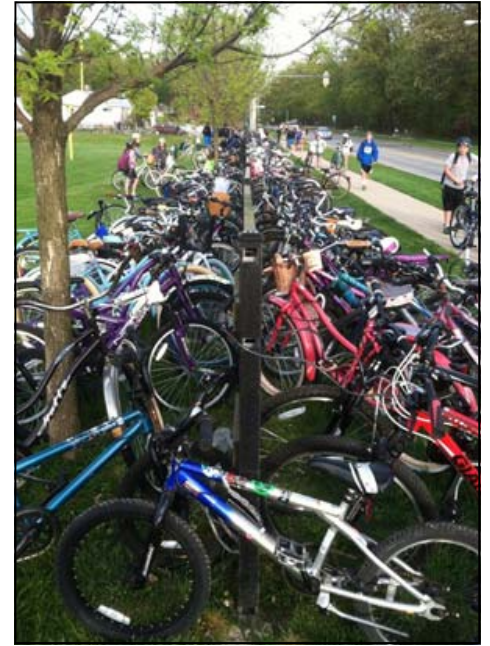
Number of covered bicycle parking spaces required to meet code requirements. In Eugene and Springfield, this is 25% of total required code capacity.

Building Capacity

As stated in the methodology section, track down a list of building capacity numbers for each school you wish to assess from the district facilities department. Enter the building capacity numbers for each school.

Capacity Notes

Transfer any Capacity related notes from your school Count Sheets to the Capacity sheet notes column.



Bay Middle School Students Park Bikes Along Front Fence. Photo Courtesy of People for Bikes.

Parking Scoring Sheet

Parking Scoring Sheet

School	Rack Type	Location	Quantity	Covered	Security	Accessibility	Total	Grade	Free & Reduced %	Notes
Jefferson Elem.	30	10	0	5	8	5	58	D	68.5%	All wave racks located in side enclosure that is accessible by neighborhood path, but students approaching from front of school do not have safe access.
			0				0			
			0				0			
			0				0			
			0				0			

School	Rack	Location	Quantity**	Covered	Security	Safety	Total	Grade	Free & Reduced %	Notes
Grading Points*	None-0 Wheel Bender-10 Front Load-15 Wave-25 Quality-40	No parking- 0 Out of site/inconvenient Side area-10 Front & Center-20	None- 0 Below Code-5 At Code-10 Above Code-15	No-0 Below Code-5 Meet Code-10 Above Code 15 All Covered-20	Unsecured-0 Secured-10	Inaccessible, difficult to reach-0 Very accessible, convenient to reach-10	0-115			Grades: 90-115:A 79-89:B 65-78:C 50-64:D 0-49:F
						District average:	5	D	68.50%	

Note: Add more rows above to template as needed.

When you are on-site calculating the number of bicycle parking spaces you will also be writing down information on the Count Sheet to help you fill out the Parking Scoring Sheet with information on the type of bike racks at the school, their location, the number that are covered, and the security and accessibility of the parking. The following descriptions will help you with the scoring process:



Covered Bicycle Parking at Madison Middle School. Photo by Shane MacRhodes

Parking Scoring Sheet *(continued)*

Rack Types *(40 points)*

The type of bike rack used is an important factor in both convenience and security. Older bike racks tend to simply hold the front wheel and date from a time of less bike theft concerns and different lock and wheel attachment designs. The ‘cable lock’ is the older and more frequent type of bike lock and can stretch down to reach older ‘wheel bender’ style racks. However, more modern and secure ‘u-locks’ are not as easy to cut, but require a solid locking surface to be located next to the bicycle’s frame. If a school has multiple styles of racks, choose a score that averages the styles and quantities present (i.e. a school with 10 quality parking spaces and 10 wheel bender spaces would be assigned 25 points for rack type score). The general rack types found at schools can be categorized as follows:



Wheel Bender Racks (10 points)

These racks consist of slots for placing one wheel of the bicycle into. This rack does not allow the frame of the bike to be locked, especially using a u-lock. It is the least secure and least stable of all the rack types.



Adams Elementary. Photo by Shane MacRhodes.

Front Load/Toaster Racks (15 points)

Front load racks consist of vertical bars that connect larger upper and lower metal tubing that accept bicycles on one or both sides of the rack. These are similar to the wheel bender, but have the potential of providing a closer locking point if using a cable lock. They still do not supply a locking point for the frame or two points of contact, which increases the rates of bicycles falling over and getting damaged.



Springfield High School. Photo by Emma Newman.

Parking Scoring Sheet *(continued)*

Rack Types *(continued)*

Wave Racks *(25 points)*

Wave racks can technically accommodate more bicycles in a smaller space than staple racks, but only support a bicycle frame at one point, resulting in a greater chance of a bicycle falling over when parked in the rack. In order for the full capacity to be used, two bicycles have to be positioned in the dip of the wave, which is often a very tight and inconvenient fit. Some schools with high demand and limited space or with a limited budget may choose a wave rack over a staple or other type of high quality rack. When possible, a rack with two points of contacts and better functionality should be used.



Agnes Stewart Middle School. Photo by Emma Newman.

Quality Racks *(40 points)*

Quality racks are those that meet the criteria laid out at the beginning of this report on page 5. They provide two points of contact, work well with a variety of frames and wheel sizes, and are made of quality materials. Staple/inverted-U racks are the most widely accepted quality rack, though you or your district may accept others. These racks consist of a thick metal bar or tube bent into the shape of a square arch or inverted “U”. The top part is approximately level with the top bar of many bicycle frames, and thus supports the bicycle and allows the frame to be easily secured.



Radius Pipeworks Hoop Rack.



Saris Bike Dock Rack.

Parking Scoring Sheet *(continued)*

Rack Types *(continued)*

Other Types of Racks *(points depend on style)*

Stakeboard/Scooter Racks

See Further Parking Facility Improvements section.

Decorative/Art Racks

These racks can provide a fun and inviting environment while still providing the recommended two points of contact and secure locking surface. If art racks meet the quality rack criteria, give the school an extra 5 points.

Double Decker

Generally used indoors for long-term parking, two-tier bike racks can be used to increase bicycle storage capacity in a fixed space. In order to easily maneuver a bicycle onto the top tier, some double decker bike racks incorporate hydraulic pistons to lift the bike into the rack after the user has locked it. These types of racks can be used for staff parking and/or bike fleet storage. See “Further Parking Facility Improvements” section.



Willagillespie Elementary. Photo by Shane MacRhodes.



Dero Decker Rack.

Parking Scoring Sheet *(continued)*

Location

Where bicycle parking is located is a key element to how attractive, accessible, and usable it is. Having bike racks that are located in the front of the building where they are visible not only make them easy to find, but also show that biking to school is an encouraged and important mode of transportation.

It is a common misconception that positioning parking in the back or in a less traveled area is more secure and therefore desired. However, having the parking near the front increases visibility for security purposes and highlights its importance to the school. A less travelled “hidden” area is often less secure and more prone to theft. With more schools consolidating their entrances to one more secure front entrance, rather than letting students enter from multiple locations, it can be even more important to locate racks near the main secured entrance.

For schools that still allow students to enter from multiple locations, it may be desirable to locate parking at various parking zones around the school. It will still be important to locate some racks near the front for visitors and staff. It is also a good idea to place some parking near the playground, fields, or other locations students and community members may use when school is not in session.

Points:

0 points for no bicycle parking at all, 5 points for parking that is out of sight or inconvenient to reach, 10 points for a side or less convenient location (maybe only one location at a school with multiple entrances), 20 points for front and center location and multiple parking areas around the school.



Old Front Load Racks at Hamlin Middle School Located in Fenced Enclosure Behind School. Photo by Emma Newman.



New Staple Racks at Hamlin Middle School by Front Office. Photo by Emma Newman.

Parking Scoring Sheet *(continued)*

Quantity

Points in this section depend on the relationship between code and total quantity of bicycle parking currently provided at the school. A formula has been created to calculate the existing bicycle parking quantity (including uncovered unsecured, uncovered secured, covered unsecured, and covered secured) divided by the school building capacity to see if it matches existing code. If no code exists, use a standard to work with, such as 1 bicycle parking space per 8-10 students or see the APBP Bicycle Parking Guidelines for other options.⁶ If bike racks are consistently being filled and the school already meets code, additional racks should be installed to meet demand.

Points:

0 for no parking, 5 for below code, 10 for at code, and 15 for above code. These points are derived in the Capacity Sheet by calculating the existing racks divided by the number of racks that would be required to meet code. The schools with less than 100% receive 5 points, at 100% receive 10 points, and above 100% receive 15 points.



Upgraded Covered Bicycle Parking at Roosevelt Middle School. Collaboration Project with University of Oregon

Covered

Covered bicycle parking not only provides a dry or shaded place to secure bikes, it also creates a visual commitment to good parking facilities. Placing your bicycle parking under a shelter not only keeps bikes dry while students are in class, but also provides a protected place to put on or take off rain gear, gather belongings, and chat with other students and parents. It allows students to leave helmets or other gear out, taking up less precious space inside the school or in lockers. Having a cover also allows students to leave a bike for a day or two if needed and know that is protected from the elements.

Points:

0 for no covered bicycle parking, 5 points for some covered parking but below code requirements (if no city code exists use recommended 25-50% depending on local conditions), 10 points for meeting covered parking city code requirements, 15 points for being above covered parking code requirements, 20 points for the total code parking capacity existing and being covered. It's important to note that a school cannot reach 10 points until the school meets the total number of covered bicycle parking spaces that would fulfill code (i.e. if code calls for 25% of racks covered, 25% of the total number of racks that would be needed to fulfill total code capacity would need to be covered, *not 25% of existing racks being covered*).

Parking Scoring Sheet *(continued)*

Security

This section deals with how secure the bicycle parking is. Some items to consider are: is it fenced-in, visible to staff, monitored with cameras, or generally in a location that encourages less theft? Also important to note is that having all the bicycle parking secured behind a locked gate is not always the best for student usage.

Some students may arrive late, leave early, or have a mid-day appointment that requires access to their bike. Requiring them to find a janitor or administrator to unlock the bike cage can be a barrier to riding. At least some bicycle parking should be located outside of a locked, gated area to provide for easier access. This is especially important at the high school level where students may have a more open campus and different schedules that require easier access to their bikes.

Insecure parking would be located out of sight from watchful eyes or in a location that is especially prime for theft or vandalism. Is the parking in a visible location that discourages bullying, vandalism, and theft?

Points:

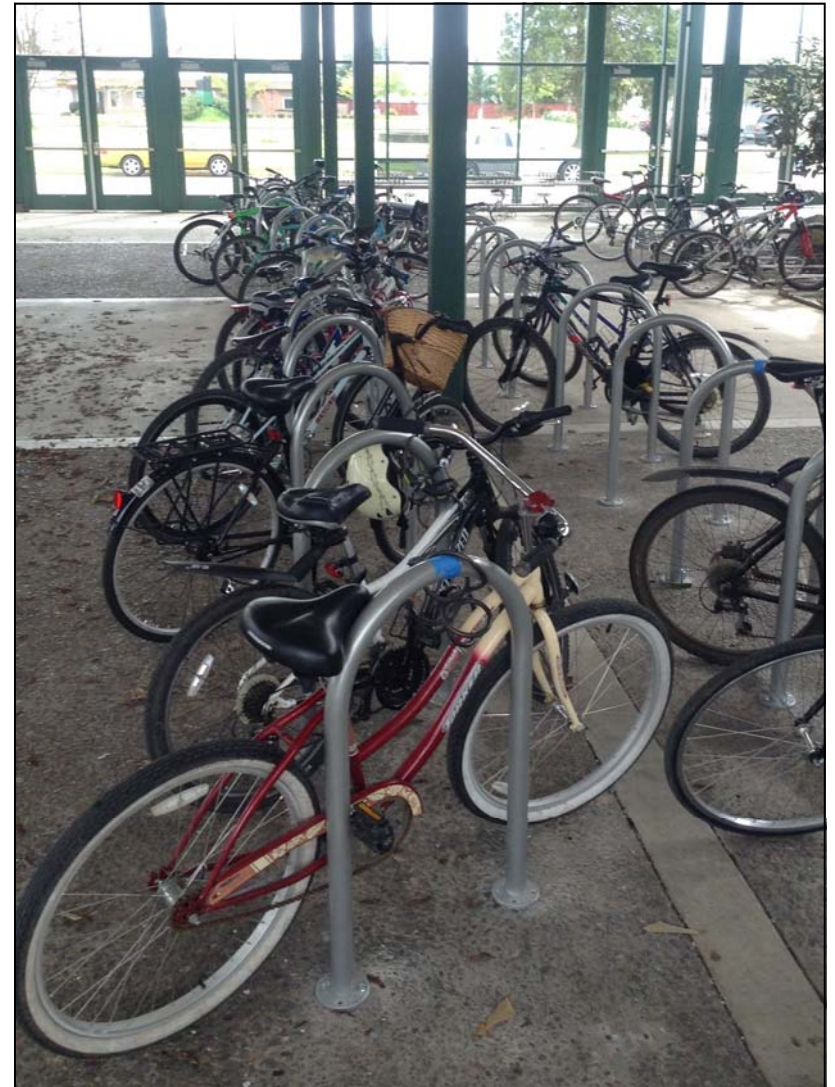
0 for unsecure parking, 10 points for very secure parking.

Accessibility

How accessible is the bicycle parking? Do the students have to cross multiple driveways, interact with the motor vehicle arrival and departure area, or conflict with a high pedestrian use area? Do the students have to ride through the parking lot to reach the bicycle parking area? Are there path connectors that provide a safe and comfortable connection to the bicycle parking area?

Points:

0 for inaccessible and difficult to reach, 10 points for accessible, convenient, and easy to reach parking from the bike routes leading to the school



New Sheldon High School Bicycle Parking Inside Front Doors. Crowd-funded by Student Led Fundraising Efforts. Photo by Shane MacRhodes.

Parking Scoring Sheet *(continued)*

Total Points

Each school that is being evaluated receives a total point score, which sums up the points that have been allocated to that school in the Parking Analysis Scoring sheet (rack type, location, quantity, covered, security, and safety). These points are then used to grade the schools.

Grade

A grade can be calculated for each school by comparing the total points received for a school to the grading chart below.

A	B	C	D	F
90-115	79-89	65-78	50-64	0-49

School	Rack Type	Location	Quantity	Covered	Security	Accessibility	Total	Grade	Free & Reduced %
Jefferson Elem.	30	10	0	5	8	5	58	D	68.5%

Free & Reduced Lunch

Equity is an important piece of a Safe Routes to School program. One way to measure the socio-economic level of a school is to use free and reduced lunch data throughout the school district. This data is usually available through district nutrition services departments and can be used to compare your parking grades with the socio-economic levels of the schools. Other data to consider for equity could include body mass index (BMI) data, historical investment in bicycle infrastructure at and near the school, and the context of where resources could best be used.

Notes

Use this section of the tool to document any additional information that is not captured by the standard metrics for each school. It is best to take note of first observations about the bicycle parking facilities while doing the assessment. Sometimes while visiting schools, stories about bicycle parking facilities will be shared by office staff or there will be obvious simple improvements that could be made to the facilities. Does the school have bikes being parked in the hallways? Are stories of bike theft shared by people at the school? Record these notes.

Photos

We highly recommend taking photos of the bicycle parking facilities to keep additional documentation. This provides visual references, photos to compare original facilities to improved facilities in later evaluation, and photos to help tell the story for funding purposes.

Improving Your Grade

New Racks

Installing new quality racks is clearly one of the more effective actions a school or district can take to improve their bicycle parking facilities. However, it costs money and a school that meets or exceeds all of the other matrices can still receive an A grade with wave racks. Contact [Sportworks](#) or other recommended vendors listed in Appendix B to inquire about purchasing new racks.

Funding

Potential funding sources for additional bicycle racks include education foundations, local bicycle riding clubs, city and county grants, facilities funds, bond measures, crowd funding, and in-kind donations from entities that have extra or under-utilized racks available or are able to manufacture racks.

Camas Ridge Elementary School Collaborated with Local Partners to Upgrade Bicycle Parking

Students from the University of Oregon Architecture School partnered with Camas Ridge Elementary School to design, fundraise for, and build a new covered bicycle parking area and community space for families. The goal was to create a space that was not only functional, but fun, educational, and inviting. Support was provided through parent and student volunteer hours and funding from Oregon Transportation Research Education Consortium (OTREC), Eugene Water and Electric Board (EWEB), and the Eugene 4J School District.

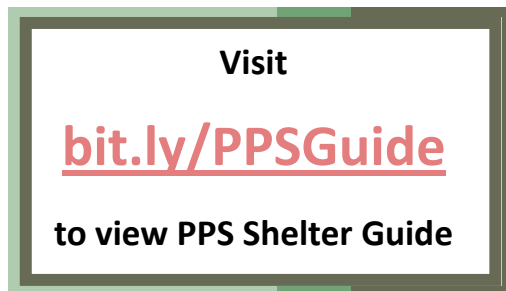
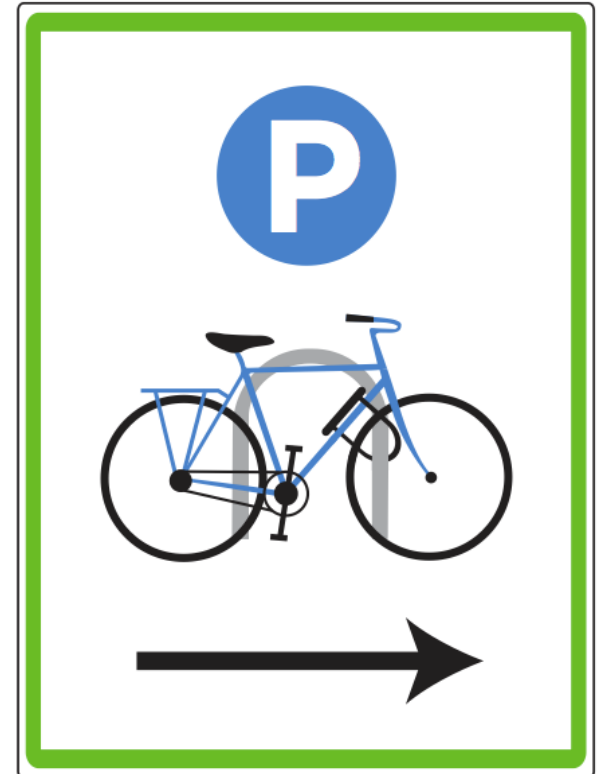


Camas Ridge Covered Bicycle Parking with Rainwater Catchment System. Photo by Shane MacRhodes.

Location

Changing the location of current racks at a school is one of the easiest and least expensive improvements that can be implemented quickly. Principals and/or SRTS School Teams should be consulted during the development of a new bicycle parking location plan. Then facilities departments can relocate the racks. It is important to make sure the facilities staff understand the appropriate spacing between racks and other objects in the area (fencing, buildings, poles, etc.) so that all of the racks can be fully utilized (see Appendix A). The best bicycle parking location is usually up front and center to show that riding bicycles is encouraged and so that there are more eyes on the bikes. However, sometimes a school should receive a high grade for Location if the logical space is by a back or side door that connects with a multi-use path or a facility that families generally would use to ride to school.

If challenges arise with changing location, signs directing people to the bicycle parking should be posted in visible places so that users can find existing facilities.⁷



Volunteers Construct Portland Public Schools Bike Shelter. Photo by Anne Laufe with the Oregonian.

Covering

Ratings can be improved if there are existing covered areas under which the existing bike racks can be moved to or by working with facilities departments to construct a new covered bicycle parking area. Some school districts have worked with cities to build new structures with local, state, and federal transportation dollars. Others have even created covered bicycle parking in partnership with volunteers, parents, and local contractors. Portland, Oregon's Safe Routes to School program developed a guide to developing covered bicycle parking projects with a volunteer based, do-it-yourself approach that can serve as a good model.⁸

Security

There are several different factors that contribute to bicycle parking security, which include visibility, enclosures, security cameras, and lights.

Gated, locked bicycle parking areas may or may not be preferred, depending on the use at a school.

Advantages of Locked Enclosures

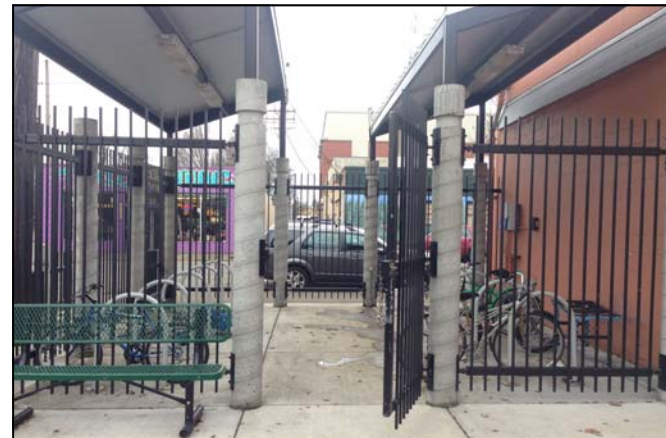
- Students do not have to own a lock in order to ride to school
- Bicycle thieves have an additional obstacle to overcome in order to steal bicycles
- Higher perceived level of security among people considering to ride
- Bicycle riders feel more comfortable leaving accessories on their bicycles in an enclosure

Disadvantages of Locked Enclosures

- Students do not build the habit of locking their bicycles up themselves to prevent theft
- Inconvenient for students arriving and leaving during the school day
- Staff time that is assigned to unlocking and locking the enclosure (although, the staff role could be reduced by having a code lock that is activated by student ID cards)
- May exclude visitors and staff from accessing bicycle parking during the school day if all of the racks are enclosed
- Fencing, locks, and gates can be additional expenses



Riverbend Elementary School. Photo by Emma Newman.



Academy of Arts & Academics. Photo by Emma Newman.

Security *(continued)*

Security cameras can be used to make potential thieves aware that the area is being monitored and to let riders know that there are efforts being taken to keep their bicycles safe. Security cameras also have the potential to identify bicycle thieves at a school if a bicycle theft problem arises.

Well-lit bicycle parking areas can make riding a bicycle to school much more attractive, especially during the darker winter months. Lighting can also be helpful in conjunction with security cameras to let potential thieves know that they are visible and the quality of video on the cameras can be increased in better lit areas.

Art not only provides a more pleasant and interesting environment that invites and encourages people to engage more with the space, but fun educational pieces can be tied into the bicycle parking space through creative signage, murals, or other artwork.



Secured Bicycle Parking at Edison Elementary School with Lighting, Locked Enclosure, and Benches for Gathering. Photo by Shane MacRhodes.

TIP - Do the Shuffle

As new racks are installed at schools, it is a good idea to shuffle the original racks to other schools across the district that could benefit from them in order to make broader improvements to bicycle parking facilities across the district. New bicycle parking is often included when schools are re-built and the original racks can shift to older schools that were built before current code requirements were established.

Accessibility

Changing the location of bicycle parking facilities can greatly improve accessibility and often does not require funds to obtain new racks. For instance, at Briggs Middle School (shown below), the original bicycle parking was installed in the middle of the parking lot. Students who are approaching the school from the multi-use path located towards the back of the school have to cross the bus loop lane twice in order to park their bicycles and enter the school at the main entrance (see red arrows). With the proposed new location for the new bike racks (see blue line), students will be able to ride to school on the multi-use path, enter the school property, use the wide sidewalk in front of the school to access the bicycle parking, and enter the school without ever having to cross motor vehicle traffic (see green arrows). Additionally, the new bicycle parking location is directly in front of the Principal's office, which will also increase security.



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Further Parking Facility Improvements

We encourage schools and districts who would like to lead the movement for better bicycle parking facilities at schools to consider the following areas of additional work. See Appendix E for overall school site improvement resources.

Policies

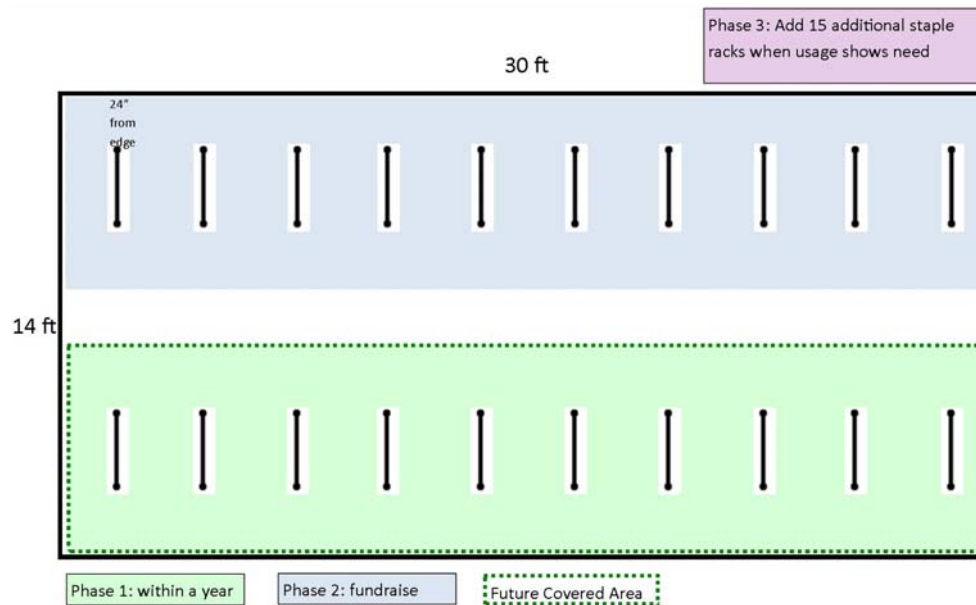
Establishing district-wide bicycle parking policies can be one of the most effective long-term tools. The policies and/or procedures would typically be established by working with the facilities department. For examples and a tool to help you develop your own policy, see the ChangeLab Solutions Safe Routes to School Policy Workbook (See Appendix C).

Collect Current Use Data (conduct study during school day)

An additional metric could be added to the evaluation tool to account for the current number of bicycles observed parking in the existing facilities to assess the number of people already riding their bicycles to school. When you do current rack usage counts and find bike racks that are consistently being filled, even though the school meets the code or standard, additional racks should be installed to meet demand. Make sure to account for types of weather in data.

As you upgrade the school bicycle parking that is below standards, you can prioritize your efforts on schools that have higher existing usage by phasing projects to install a portion of code requirements first and then complete with full quantity and covered standards over time as the needs arise.

See example of phasing plan to the right.



Potential Future Guy Lee Bike Parking Design

Above shows a potential design for 20 racks. Phase 1 accommodates observed max bike rack use count of 17 bicycles. Front 10 racks could be covered in future.

Further Parking Facility Improvements *(continued)*

Incentive Programs

There are new technologies that allow easy counting of students and incentive award programs for encouraging active transportation to school. These technologies (Active4me, Dero ZAP, & Boltage are some of the current models) use RFID tags and allow users and coordinators to interact online with the data. Other programs using punch-cards or other tracking methods can work well too but require more volunteer or staff time.

Lockers/Gear Storage Room

Lockers or a secured room could be provided to students and/or staff to store their riding gear (helmet, rain gear, etc.) during the school day.

Staff Parking

Some city codes require long-term bicycle parking. Long-term parking is generally for staff, who often appreciate having secured space inside of the school provided for their bicycles, which could be located in their classrooms or special storage areas. Having these storage areas located near showers can be especially helpful for those with longer commutes. It is beneficial to have staff modeling the behavior of riding to and from school for students who are looking to them as role models.



Covered, Lit, Secure Staff Bicycle Parking at Roosevelt Middle School. Photo by Shane

Further Parking Facility Improvements *(continued)*

Skateboard/Scooter Parking

Several skateboard parking models exist, some of which enable users to lock their skateboard or scooter and others which are racks that hold the skateboards and can be overseen by staff in the front office of a school.

Key Cards for Secured Enclosures

Some bicycle parking facilities, such as several provided by TriMet, Portland’s transit district, have keycard activated locking mechanisms to access bicycles within an enclosed area.⁹ Locked enclosures with keycard access may become more popular for schools across the country in the coming years.



Bike FixIt Station. Photo by Conserve School Blog.

FixIt Stations

FixIt Stations provide bicycle riders with basic tools, bicycle stand, and pump to do maintenance. These stations can help students and staff maintain their bicycles and give students an opportunity to practice the mechanic skills that they may receive in a bicycle safety education program.

Fleet Storage

School districts or schools running a comprehensive Safe Routes to School program may have a fleet of bicycles for teaching bicycle safety education classes that need to be stored in a secure location. Bicycle fleets are typically stored either in a locked, portable trailer or in a storage room that is built into a school, district building, or outside, secured, covered area. In some schools, bicycle storage can be built in conjunction with a basic bicycle mechanic repair shop and even a Safe Routes to School Coordinator’s office.



Skateboard Parking. Photo by ChrisL of bicyclevault.com.



Springfield Bike Safety Education Storage Trailer. Photo by Emma Newman.

Six E's of Safe Routes to School Applied to Bicycle Parking Facilities

The six E's of Safe Routes to School¹⁰ are an important component of successful SRTS programs. In this section we will look at ways to utilize those six E's to create a robust bicycle parking facility beyond the engineering improvements called out in the assessment tool.

Education

- Teach children how to lock bicycles properly using signs, stickers, flyers, or integrating it into school tours, classes, or events. See Appendix D for Safe Locking Stickers that can be applied to bike racks and Portland Bureau of Transportation education cards.

Encouragement

- Encourage students to bike to school by placing the parking in a visible and safe location.
- Make the bicycle parking area inviting with benches, artwork, coverings, and other amenities that show that riding to school is encouraged.
- Use the bicycle parking area during International Walk+Bike to School Day events.¹¹



City of Eugene Police Register Bicycles at Eugene Sunday Streets Event. Photo by Chris Henry, City of Eugene.

Enforcement

- Work with the city to enforce and update bicycle parking codes throughout the district.
- It is important to enforce the use of locks to discourage repeat thefts at a school, which can discourage people from riding.
- Enforce and reward helmet use at bicycle parking location.
- Provide bike registration to deter theft (partner with local police department or other organizations that offer a registration service).

Six E's of Safe Routes to School Applied to Bicycle Parking Facilities

(continued)

Engineering

- Improve bicycle parking facilities by buying new racks, covering existing racks, etc. See improvements section above.

Evaluation

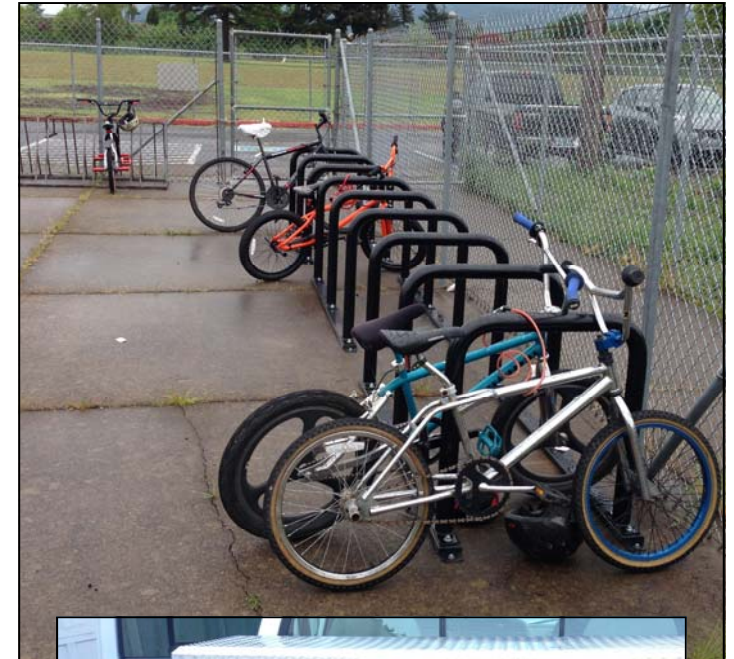
- Conduct this Bicycle Parking Assessment and then update it as the conditions change over time.
- Track use of racks over time, especially documenting before and after engineering improvements are made.
- Collect quotations from students and staff using the parking to document qualitative data

“The new bike racks are awesome and they make it so much easier to lock up my bike”

- Hamlin Middle School student commenting on newly installed bike racks shown in picture to the right

Equity

- Make sure good parking is provided equitably throughout the district. Look at free and reduced lunch rates, percentages of students that are within communities of color, and other factors comparing facilities provided and student populations served.
- Other obstacles to riding a bike to school for lower income families can sometimes consist of lack of access to bikes, U-locks, and helmets. In addition to good parking structures, efforts should be made to address additional barriers to biking.



New Staple Racks at Hamlin Middle School. Photos by Emma Newman.

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Bicycle Parking Assessment Tool in Action

Throughout the 2013-2014 school year, Safe Routes to School Coordinators in the Springfield, 4j, and Bethel school districts visited all of the public schools in the Eugene-Springfield region and assessed their bicycle parking facilities. We will first present the findings and grading sheets for each district and then perform cost estimates for future improvements needed to raise the facilities up to better grade levels.

The assessment was conducted to provide quantitative information to be able to compare schools and districts across the Eugene-Springfield region, as well as identify needs for improvements. As the regional Safe Routes to School team starts conducting more equity assessments, it is useful to be able to see what bicycle parking facilities exist at different schools.

Visit bit.ly/BikeParkingTool to
download assessment tool



11,000 students
12 elementary schools
4 middle schools
2 comprehensive high schools
1 learning community high school
3 public charter schools
Average free & reduced: 62%



16,000 students
18 elementary schools
1 K-8 school
8 middle schools
4 high schools
1 alternative high school
4 public charter schools
Average free & reduced: 46%



6,000 students
5 elementary schools
2 K-8 schools
2 middle schools
1 high school
1 alternative high school
Average free & reduced: 57%

Springfield Schools - Capacity Calculation Sheet

School	Uncovered Capacity	Covered Capacity	Secured Capacity	Secured & Covered Capacity	Skateboard Capacity	Bike Parking	Code*	Percent	Code Covered	Staples Needed	Cover Spaces Needed?	Building Capacity	Capacity Note
Centennial	0	0	29	0	0	29	69	42%	18	34	18	550	
Douglas Gardens	0	0	26	0	0	26	59	44%	15	30	15	475	The 26 are "secured" in that they are within the school gates
Guy Lee	47	0	0	0	0	47	69	68%	18	35	18	550	
Maple	12	20	12	0	0	44	50	88%	13	3	Above code	400	6 uncovered racks are in back parking lot off of Dubens Ln
Mt. Vernon	8	0	36	0	0	44	63	70%	16	9	16	500	
Page	59	0	0	0	0	59	59	99%	15	30	15	475	
Ridgeview	0	0	75	0	0	75	67	113%	17	33	17	532	
Riverbend	8	0	72	0	0	80	63	128%	16	0	16	500	Extra wave racks could be transferred to another school?
Thurston Elementary	40	28	0	0	0	68	63	109%	16	0	Above code	500	
Two Rivers-Dos Rios	18	0	0	0	0	18	65	28%	17	23	17	516	
Walterville	0	0	0	0	0	0	38	0%	10	19	10	300	No need to have the code required racks at a school that has no student bike access since it is located on a highway.
Yolanda	24	0	0	0	0	24	56	43%	14	16	14	450	
Agnes Stewart Middle	21	14	0	0	0	35	94	37%	24	29	10	750	Moved 2 wave racks under awning to left of front doors. The covered space to the right of front doors can be used for additional bike parking when obtained.
Briggs Middle	84	0	0	0	0	84	73	116%	19	36	19	580	
Hamlin Middle	0	6	72	0	0	78	93	84%	24	34	18	740	
Thurston Middle	0	0	119	0	0	119	70	171%	18	35	18	556	
Gateways High	6	6	0	0	0	12	16	74%	4	0	Above code	129	City of Springfield installed 2 staple racks on Main St in July 2014
Springfield High	36	3	0	0	5	39	197	20%	50	98	47	1575	
Thurston High	0	16	0	0	0	16	206	8%	53	103	37	1650	
Academy of Arts and Academics	10	0	0	20	0	30	61	49%	16	15	Above code	487	Covered and secured for 20 bikes in back, 2 staple racks out front on Main St that are uncovered and 3 staple racks in front of Arts and Sciences building on Main St that the City installed in summer 2014.
Total Needed:										584	304		

*Code = 1 spot per 8 students (12.5% mode share). Bold school= 80% or below parking capacity to code

Cover: >25% covered = above code for assessment purposes

For the Springfield assessment, staples needed calculation included upgrading any racks that ranked below wave or staple.

Springfield Schools - Parking Scoring Sheet

School	Rack	Location	Quantity**	Covered	Security	Accessibility	Total	Grade	Free & Reduced %	Notes
Centennial	13	8	5	0	10	6	42	F		All racks on side of school in unpaved enclosure. Looks run down. Staff and some students park bikes inside the school hallways and classrooms.
Douglas Gardens	15	5	5	0	8	7	40	F		Very little quantity and slightly difficult to find since it is inside the school's fenced in area.
Guy Lee	15	10	5	0	0	7	37	F		School has quite a few students riding, especially with SRTS encouragement.
Maple	40	15	5	15	8	10	93	A		New school, very nice parking facility. No racks outside of enclosure for visitors coming to the school in the middle of the day.
Mt. Vernon	25	15	5	0	8	8	61	D		Wave racks in an enclosure off to the side of the school.
Page	15	10	10	0	0	9	44	F		School painted old racks various colors to make them look a bit better. Located close to back door where students who bike to school enter.
Ridgeview	15	10	15	0	8	9	57	D		Wave racks on the side of the school building.
Riverbend	25	10	15	0	10	7	67	C		Theft issue with racks located out front according to office staff. Enclosed parking is off to the side of the building.
Thurston Elementary	40	20	15	10	0	9	94	A		New school, SRTS funded bike parking facilities.
Two Rivers-Dos Ríos	25	20	5	0	0	8	58	D		Wave racks up front and center, but need to increase capacity and improve infrastructure leading to bike parking.
Walterville	0	0	0	0	0	0	0	0/F		Nothing. Out in rural area, Hwy 126 is the only connector road to school. Does not make sense to add bike racks.
Yolanda	25	20	5	0	0	4	54	D		Need to assess improvements to routes that lead to parking facility during SRTS planning process. No ramp, requires people riding to pull in where the buses are.
Agnes Stewart Middle	25	18	5	5	3	9	65	C		2 of the wave racks were moved under the front awning in Nov 2014 to provide some covered parking.
Briggs Middle	10	20	15	0	2	6	53	D		Wire loops rise up from the median strip between the car loop and bus loop. Students have to cross bus loop lane from bike path entrance to reach racks, then cross bus loop lane again to enter front of school.
Hamlin Middle	30	10	5	5	8	7	65	C		Installed 12 new staple racks on May 6, 2014 (3 covered by front office). Provided by ODOT, secured through SRTS school Action Plan justification and documentation.
Thurston Middle	10	15	15	0	8	8	56	D		Students have to cross car/bus lane to get to front doors from bike parking enclosure area.
Gateways High	40	20	5	15	3	7	90	A		A few racks in front of doors and around side of building on Main St. Worked to install two more racks on Main St by collaborating with the City of Springfield in summer 2014.
Springfield High	15	20	5	5	8	10	63	D		Mostly front loader racks that are difficult to lock bikes to (mostly cable locks). Bike theft issue... several student bikes have been stolen. "No parking on fence" signs showing there has been bike locking to fence and lack of capacity issues.
Thurston High	15	5	5	5	7	7	44	F		Located within school gates, but in a dark area next to the vending machine. Need to increase capacity and improve rack type and location.
Academy of Arts and Academics Main Building	40	15	5	20	9	6	95	A		City of Springfield installed 2 staple racks in July 2014.
A3 Arts and Science Campus Building	40	20	5	0	4	7	76	C		City of Springfield installed 3 staple racks in July 2014.
School	Rack	Location	Quantity**	Covered	Security	Safety	Total	Grade		
Grading Points*	None-0 Wheel Bender-10 Front Load-15 Wave-25 Quality-40	No parking- 0 Out of site/inconvenient-5 Side area-10 Front & Center-20	None- 0 Below Code-5 At Code-10 Above Code-15	No-0 Below Code-5 Meet Code-10 Above Code-15 All Covered-20	Unsecured-0 Secured-10	Inaccessible, difficult to reach-0 Very accessible, convenient to reach-10	0-115	Grades:		90-115:A 79-89:B 65-78:C 50-64:D 0-49:F
						District average:	60	D	62.1%	

4j Schools - Capacity Calculation Sheet

School	Uncovered Capacity	Secured Capacity	Covered Capacity	Covered & Secured Capacity	Skateboard Quantity	Bike Parking	Code*	Percent	Code Covered	Staples Needed	Covered Spaces Needed	Building Capacity	Capacity Note
ATA/Family	60	0	0	0	0	60	51	118%	13	26	13	408	2013 Bond. Currently 5 wave racks w/12 bike capacity each.
Adams	48	0	6	0	0	54	50	108%	13	0	7	400	Updated 2013 School year with SRTS racks
Awbrey Park	36	0	0	0	0	36	69	52%	18	34	18	550	All wheel bender racks. Could use ATA/Family School waves maybe?
Bertha Holt	40	0	18	20	0	78	63	125%	16	0	Above Code	500	
Buena Vista	12	0	12	0	0	24	63	38%	16	19	4	500	Enrollment 335. Principal turned down 6 staples. Needs more for code- on sides or other locations
Cal Young Middle	48	10	16	10	12	84	77	110%	20	0	Above Code	612	Secured is teacher only (also covered). Large (original) bike storage in back is used for track/PE storage
Camas Ridge	18	0	46	0	0	64	44	146%	11	0	Above Code	350	
César Chávez	40	0	12	10	0	62	66	94%	17	0	Above Code	525	Secured space (10 racks) is currently used for storage
Churchill High School	22	0	26	0	0	48	150	32%	38		12	1200	
Corridor	16	0	0	0	0	16	34	48%	9	9	9	269	
Edgewood	6					6	56	11%	14	26	14	450	
Edison	8		0	42	0	50	38	133%	10	0	Above Code	300	*9 rear, 6 front (visitor) **Covered parking is secured too
Ellis Parker					0	0	25	0%	6	0	6	200	Unsure on student count
Fox Hollow	5	0	0	0	0	5	31	16%	8	15	8	250	
Gilham	90	0	24	0	0	114	66	174%	17	33	Above Code	525	Lots of wave racks, covered area is not good location.
Howard	40	0	0	0	0	40	50	80%	13	25	13	400	2013 Bond
Kelly Middle	0	41	0	18	0	59	93	64%	24	45	6	740	*4 front (visitor) **48 wave racks covered & uncovered in back are secured. All Wave need to be updated.
Kennedy Middle	30	0	2	0	0	32	83	39%	21	40	19	663	*No parking at hidden front rack. Students park on back fence (no rack). Need concrete pad in back- place 3/4 of racks there (30 staples) rest up front (10).
McCornack	8	0	34	0	0	42	50	84%	13	4	Above Code	400	New racks in playground area.
Madison Middle	36	0	16	14	0	66	70	94%	18	0	Above Code	561	
Monroe Middle	0	60	0	0	16	60	80	75%	20	6	20	638	**All covered is secured. Need 6 staples up front for visitor short-term
North Eugene High	64	0	0	0	0	64	150	43%	38		38	1200	
Ridgeline						0	25	0%	6	6	6	200	
River Road	36	0	0	0	0	36	53	68%	14	26	14	425	2013 Bond
Roosevelt Middle	60	8	62		0	130	108	120%	28	0	Above Code	867	2013 Bond *Secured parking is staff visitor in front (not often secured)
Sheldon High School	14	0	84	0	0	98	188	52%	48		Above Code	1500	
South Eugene High	85	0	52	76	0	213	173	123%	44	85	Above Code	1387	Many locations are poorly utilized because of limited availability to access bikes in secured area. Locking is happening in random locations. Theft near path a major problem
Spencer Butte Middle	33	0	17	0	0	50	83	60%	21	34	4	663	Have 6 old staple racks from VRC coming.
Spring Creek	0	0	36	0	0	36	50	72%	13	25	Above Code	400	12 capacity wave, 24 capacity wheel benders. Could use one ATA wave.
Village School	6	0	20	0	0	26	27	97%	7	10	Above Code	215	
Willagillespie	46	0	24	0	0	70	75	93%	19	0	Above Code	600	*18 front, 26 rear. 18 side (side not used in capacity)
Yujin Gakuen	6	0	0	0	0	6	34	18%	9	16	9	268	
Total Needed:										484	221		

*Code = 1 spot per 8 students (12.5% mode share). Bold school= 80% or below parking capacity to code
 Staples needed- Bold=replace wheel bender Underline=replace wave Plain=Bond or Not needed

4j Schools - Parking Scoring Sheet

School/Building	Rack	Location	Quantity**	Covered	Security	Accessibility	Total	Grade	Free & Reduced %	Notes
ATA/Family	40	10	10	0	5	3	68	C		Parking area is in a dangerous area. Needs to move to front area and have covered area. Grant money coming in 2014 for parking. Possible reconstruction as part of bond?
Adams	40	14	10	2	5	7	78	C+		Needs covered area and better path access to racks in rear of school
Awbrey Park	25	18	6	0	8	8	65	C		Descent location, poor racks and no cover. Some of ATA/Family school racks placed near office? Covered.
Bertha Holt	40	15	10	10	7	7	89	A-		Front area not covered but side covered parking area and secured area.
Buena Vista	40	18	5	10	7	7	87	B+		Could use some near playground.
Cal Young Middle	40	18	10	10	4	7	89	A-		Newer with staples and covered but could use more covered and security.
Camas Ridge	40	15	15	15	5	8	98	A		Great new DesignBridge bike parking area. Not front & center but awesome.
César Chávez	40	12	10	10	7	7	86	B		Front area not covered but side covered parking area (with some originally installed racks removed). Secured area is used for chair storage so not functioning now.
Churchill High	25	12	5	5	5	7	59	D		Need to upgrade racks, improve amount covered, spread around building
Corridor	40	18	5	0	3	8	74	C		Good staple racks in good location. Needs better covering.
Edgewood	10	5	5	0	8	7	35	F		Poor location, wheel benders, uncovered
Edison	40	15	15	15	10	10	105	A		Great new DesignBridge bike parking area. Not front & center but creates gathering spot
Ellis Parker	30	12	10	5	5	7	69	C		Some good racks, some bad, not great location, mostly not covered.
Fox Hollow	10	10	5	0	5	5	35	F		Poor location, wheel benders, uncovered
Gilham	25	15	15	10	7	7	79	B-		Lots of wave racks, covered area is not good location. Possible with 2013 Bond?
Howard	15	25	8	0	8	8	64	C-		Poor racks, not covered, great location. Possible improvement with 2013 Bond?
Kelly Middle	25	15	8	8	10	10	76	C+		Wave racks, some covered, in back. Front area blocked and uncovered.
Kennedy Middle	30	15	7	1	5	6	64	D		Hidden wheel benders uncovered. Kids using back area entrance gate to lock...look at building covered parking there with path connection
McCormack	40	20	8	15	8	6	97	A		Nice new SRTS funded covered parking.
Madison Middle	40	18	10	10	7	7	92	A		Good staple racks. Could be more covered. Sign pointing to racks.
Monroe Middle	40	15	10	20	9	9	103	A		No parking for visitors. Need 3 staples up front plus 1 or 2 outside bike cage.
North High	20	15	5	0	5	7	52	D		
Ridgeline	25	12	5	5	5	7	59	D		Mix of racks, mostly not covered and not great locations
River Road	10	6	5	0	7	6	34	F		Wheel bender racks in back uncovered. Possible improvement with 2013 Bond?
Roosevelt Middle	40	15	15	15	8	7	100	A		Good covered stapled racks. Good guest parking. Possibly cover more with 2013 Bond rebuild?
Sheldon High	39	18	8	18	8	8	99	A		Sheldon Green Team did a Citizinvestor project to update their bike parking from wheel benders to staple racks. A great success story. Still need a bit more capacity around building. A couple waves still exist here too.
South Eugene High	25	18	15	10	6	8	82	B-		All wave. Poor use of secured area because of limited opening hours. Theft an issue near path- so facilities moved some covered racks to near the front of the building. Need overhaul of bike parking layout system.
Spencer Butte Middle	25	20	7	8	7	7	74	C+		Some covered wheel bender racks in a good visible location
Spring Creek	25	18	7	15	7	7	79	B		Uncovered wheel benders and some semi-covered wheel benders. Descent location.
Twin Oaks										
Village School	30	15	8	10	6	7	76	C		Wave racks and some staple. Small quantity and high ridership. Good amount covered.
Willagillespie	40	10	10	11	6	7	84	B		Lots of great covered parking but hidden in back. Front racks are great (useful and artistic) but uncovered.
Yujin Gakuen	10	5	5	0	5	5	30	F		No parking up front. Other poor racks hidden
Grading Points*	None-0 Wheel Bender-10 Front Load-15 Wave-25 Quality-40	No parking-0 Out of site/inconvenient-5 Side area-10 Front & Center-20	None-0 Below Code-5 At Code-10 Above Code-15	No-0 Below Code-5 Meet Code-10 Above Code 15 All Covered-20	Unsecured-0 Secured-10	Inaccessible, difficult to reach-0 Very accessible, convenient to reach-10	0-115			90-115:A 79-89:B 65-78:C 50-64:D 0-49:F
							District average:	74	C	46.00%

*See scoring tab for more information
 **See capacity tab for more information

Bethel Schools - Capacity Calculation Sheets

School	Uncovered Unsecured Capacity	Secured Unsecured Capacity	Covered Unsecured Capacity	Covered Secured Capacity	Skateboard Capacity	Existing Bike Parking Capacity	Code	Percent of Code Fulfilled	Code Covered	Staples Needed	Cover Spaces Needed	Building Capacity	Capacity Notes
Clear Lake El.	12	12	0	24	0	48	37	128%	9	19	Above Code	299	
Danebo El.	36		8	12	0	56	42	132%	11	14	Above Code	339	
Fairfield El.	16		10	18		44	53	83%	13	53	Above Code	425	
Irving El.			48			48	47	102%	12	15	Above Code	375	32 staples are being built Dec. 2014, have existing wave & wheel benders as well
Malabon El.			42			42	53	79%	13	42	Above Code	425	School being re-built - will have 64 covered staples unsecured
Prairie Mt. K-8	36	0	64	0	12	100	113	89%	28	7	Above Code	900	
Meadowview K-8	40	0	44	0	0	84	113	75%	28	113	Above Code	900	
Shasta MS.	0	40	0	0	0	40	59	67%	15	59	15	475	Only student capacity
Cascade MS		61				61	44	139%	11	44	11	350	
Willamette HS	76					76	188	41%	47	76	47	1500	
Kalapuya HS	30	0	0	0	0	30	25	120%	6	25	6	200	
Total Staple Racks Needed:										223			

Add more rows above to template as needed
 See Scoring & Notes tab for further explanation
 Code is 1/8 of building capacity
 Covered code is 1/4 of overall code
 1 Staple = capacity of 2 bikes

Bethel Schools - Parking Scoring Sheet

School	Rack Type	Location	Quantity	Covered	Security	Accessibility	Total	Grade	Free & Reduced %	Notes
Prairie Mt. K-8	40	20	5	20	0	10	95	A		Nice rack system, just lacking a secured place
Kalapuya HS	25	20	15	0	0	10	70	C		Racks in front; need covered/secure place
Meadview K-8	25	20	5	15	0	10	75	C		Nice rack system covered with large capacity - no staples, or secured space
Shasta MS	20	10	5	0	10	10	55	D		No racks in front, no covered, no staples
Clearlake El	35	20	15	15	10	10	105	A		Nice covered racks in the middle of school courtyard
Danebo El.	35	15	15	15	5	10	95	A		Good combo of racks in back of school
Fairfield El.	25	10	5	15	10	10	75	C		School beign re-built
Malabon El.	10	15	5	20	5	10	65	D		School being re-built - will have 64 covered staples unsecured; Grade will improve to an A
Cascade MS	10	10	15	0	10	10	55	D		uncovered wheel benders in back of school
Willamette HS	40	20	5	0	0	10	75	C		needs covered/secured space; no staples
Irving El.	35	20	15	15	0	10	95	A		32 staples are being built Dec. 2014, have existing wave & whell benders as well
School	Rack	Location	Quantity**	Covered	Security	Safety	Total	Grade	Free & Reduced %	
Grading Points*	None-0 Wheel Bender-10 Front Load-15 Wave-25 Quality-40	No parking- 0 Out of site/inconvenient -5 Side area-10 Front & Center-20	None- 0 Below Code-5 At Code-10 Above Code-15	No-0 Below Code-5 Meet Code-10 Above Code 15 All Covered-20	Unsecured-0 Secured-10	Inaccessible, difficult to reach-0 Very accessible, convenient to reach-10	0-115			Grades: 90-115:A 79-89:B 65-78:C 50-64:D 0-49:F
							District average: 77	C	57.4%	

Add more rows above to template as needed.
 *See Scoring & Notes tab for more information

Eugene-Springfield Bicycle Parking Improvement Cost Estimates

District	Staples Needed to Meet Code	Cost Estimate of Staples Needed (\$150/rack)	Number of Covered Staples Needed	Number of Schools Needing Covered Parking	Number of Covered Parking Units Needed (8 bikes/unit)	Cost Estimate of Covered Parking Units Needed (\$5,000/unit)
Springfield	584	\$87,900	304	16	43	\$215,000
4j	484	\$72,600	221	18	24	\$120,000
Bethel	107	\$16,050	79	3	11	\$55,000
Eugene-Springfield Totals	1,175	\$176,250	604	37	78	\$390,000

GRAND TOTAL: \$566,250

The above calculations show the cost estimates of materials needed to achieve code requirements for all three school districts. If funded at the levels indicated, all public schools across the Eugene-Springfield region would receive “A’s” for total grades in the Parking Scoring sheet, assuming that location, security, and safety are also taken into account during design and installation and that those metrics receive decent grades.

The comparison between school districts highlights the Safe Routes to School work that has been done in 4j and Bethel school districts previously. Springfield was the most recent district to hire a Safe Routes to School Coordinator in November 2013. 4j is the largest school district in the region, but needs fewer bicycle parking improvements because the 4j program has been working on improving bicycle parking facilities for the longest time period in the region. Bethel has the highest percentage of new schools in the district, which received better bicycle parking facilities during construction due to more recent code requirements. Bethel is also the smallest district in the region. School district bond measures have enabled and will continue to enable more schools across the region to update their bicycle parking to meet current code requirements.

Conclusion

This project started out as a way to analyze one school district's existing bicycle parking and its future needs. Through the development of the assessment tool we saw how useful it could be for other schools and districts to have a standardized tool to assess and improve their parking as well. A few communities in Oregon have already used and tested this tool and helped us to refine it for broader use. We hope that you find this resource helpful in improving your school's bicycle parking and increasing the number of students who use healthy, active transportation to get to school. We also look forward to feedback you have on ways to improve the tool for any later editions.

Thanks to our beta testers!



Please email info@eugenespringfieldsrts.org with questions or feedback about the assessment tool.



Eugene Students Appreciate City Infrastructure Improvements. Photo by Shane MacRhodes.

Acknowledgements

This report was developed in collaboration with the following partners:

SafeRoutes

Eugene Springfield Safe Routes to School



Student at Cal Young Middle School Uses Bicycle Parking Facility. Photo by Shane MacRhodes.

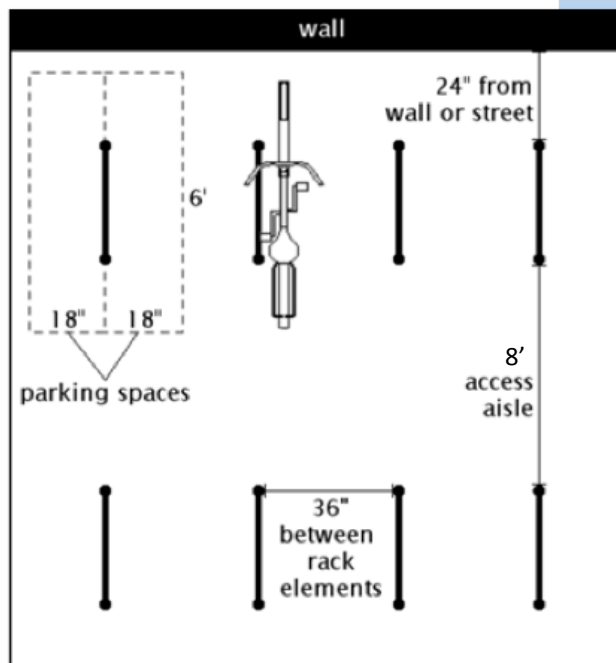
Appendix A: Bike Rack Installation Guidelines

General Criteria for Good Quality Bicycle Parking³

Any bicycle rack should conform to the following guidance:

- Allow locking of the frame and one or both wheels with a U-lock
- Be anchored to the ground securely
- Resists cutting, rusting, bending, or deformation, both from natural causes and from human abuse
- Works well for a variety of bicycle frame types (e.g. should work for step-through frame as well as diamond frame, children's bicycles as well as adult bicycles)

Note: staple racks fulfill the above criteria very well and are generally recommended.



Rack Placement and Spacing¹²

- Each bicycle parking space should be **at least 6 feet long and at least 18 inches wide.**
- There should be **at least 36 inches between rack elements.**
- There should be **at least 24 inches between the rack element and the wall and at least 24 inches between the rack element and the street.**
- The access aisle between rows of rack elements should be **at least 5 feet wide.** 8 feet is recommended.
- There must be **at least 7 feet of clearance overhead.**

Appendix B: Rack Vendors and Cost Estimates

We encourage schools to explore options for bicycle rack vendors to get a good price. Sometimes vendors will give better prices for large orders of racks. Local welders such as body shops, muffler shops, or metalsmiths may also be interested in manufacturing bicycle racks for a school at an affordable price. Make sure to use a vendor who is experienced and produces a good quality product.

Here are some vendors we recommend:

The logo for Sportworks, with "sport" in yellow and "works" in grey, followed by a registered trademark symbol.

Website: www.sportworks.com

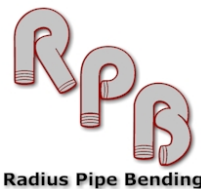
Order Now: 1-888-661-0555



Sportworks Tofino No Scratch Racks.



www.dero.com



www.radiuspipe.com



SIMPLY DESIGNED TO LAST. GUARANTEED.

www.sarisparking.com

Appendix C: Safe Routes to School Bike Facility Policies

ChangeLab Solutions, a law and policy innovation group, partnered with the Safe Routes to School National Partnership to develop model policies that can be adopted by schools and/or school districts related to Safe Routes to School. Their policy tool text is shown below. For additional resources, visit <http://changelabsolutions.org/safe-routes/5031>.¹³

Option 1: District shall ensure that each school provides sufficient storage facilities for bicycles, scooters, skateboards, or similar human-powered devices to encourage active transportation to and from school. District shall seek the input of active transportation advocates to ensure that the quality of such facilities is satisfactory. Further, District shall ensure that the quantity of storage facilities increases in proportion to demand. Individual schools may not unreasonably restrict storage of active transportation devices in designated areas during school hours.

Option 2: District shall ensure that each school provides sufficient storage facilities for bicycles, scooters, skateboards, or similar human-powered devices to encourage active transportation to and from school. District shall seek the input of active transportation advocates to ensure that the quality of such facilities is satisfactory. Further, District shall ensure that the quantity of storage facilities increases in proportion to demand. Individual schools may not unreasonably restrict storage of active transportation devices in designated areas during school hours.

To ensure convenience and protection from theft or vandalism, storage facilities shall be located in visible areas, near school entrances, and when deemed appropriate by school officials, in locked facilities.

Option 3: District shall ensure that each school provides sufficient storage facilities for bicycles, scooters, skateboards, or similar human-powered devices to encourage active transportation to and from school. District shall seek the input of active transportation advocates to ensure that the quality of such facilities is satisfactory. Further, District shall ensure that the quantity of storage facilities increases in proportion to demand. Individual schools may not unreasonably restrict storage of active transportation devices in designated areas during school hours.

To ensure convenience and protection from theft or vandalism, storage facilities shall be located in visible areas, near school entrances, and when deemed appropriate by school officials, in locked facilities. All storage facilities shall provide protection from the elements. District shall also encourage individual schools to provide repair tools such as air pumps and other common tools to help students repair minor equipment failures.

Appendix D: Bicycle Locking Educational Materials

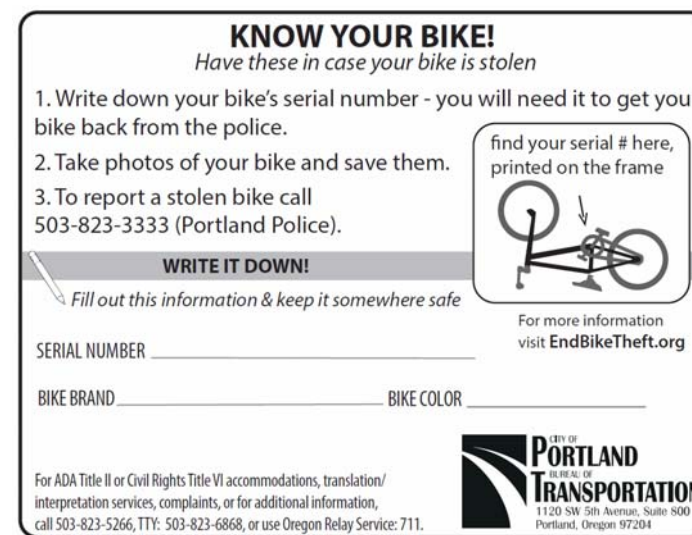
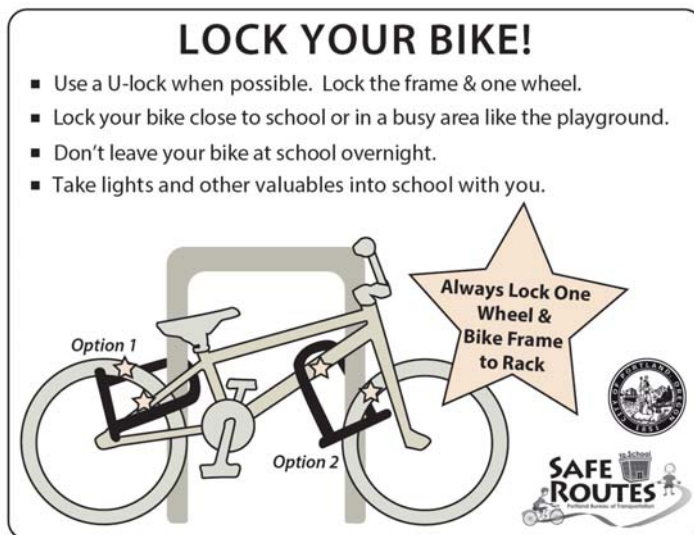
Point2point Solutions, the Lane county transportation options program, assessed county bicycle parking and developed a template for stickers that can be applied to the top of staple bike racks to educate users about how to properly secure their bicycles to the racks. Below is the template sticker they provide. For further information and resources on the bicycle parking study, visit <http://www.point2pointsolutions.org/node/45>.⁴



Eugene-Springfield Safe Routes to School customized the template to meet our needs:



Portland Bureau of Transportation uses the following two-sided cards to attach to students' bicycles to educate them about proper locking:



Appendix E: Site Design and Engineering Guidance

In addition to encouraging students and families to ride bicycles to and from school through improved bicycle parking facilities, we also encourage schools to take a further look at other engineering improvements. Below are two initial resources to explore regarding further site design and school engineering guidance.

Safe Routes to School Briefing Sheet:

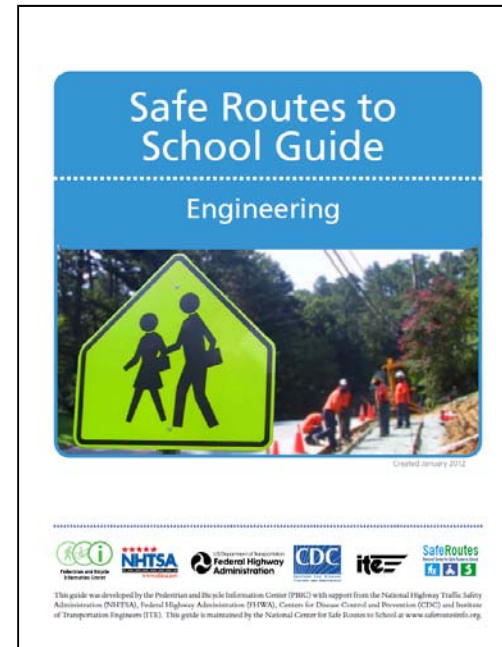
School On-Site Design¹⁴

Visit http://www.saferoutespartnership.org/sites/default/files/pdf/Lib_of_Res/SRTS_Program_SchoolOnSiteStorage_ITS_2012.pdf to download a copy of the School On-Site Design Briefing Sheet. The sheet covers the following topics:

- Separation of Pedestrians, Bicycles, Parent Vehicles, and Buses
- Bicycle Access and Storage
- Location of School Entrances
- Bus-Related Design and Operations
- Design and Operation of Drop-off and Pick-Up Zone
- Driveways and Internal Roadway Network
- Parking
- Supplemental Devices to Minimize Pedestrian/Vehicle Conflicts
- Traffic Control Devices

Safe Routes to School Guide: Engineering¹⁵

Visit http://guide.saferoutesinfo.org/pdf/SRTS-Guide_Engineering.pdf to download a copy of the Safe Routes to School Engineering Guide for further guidance.



References

1. Goodyear, Sarah. "The Link Between Kids Who Walk or Bike to School and Concentration." *CityLab*. The Atlantic, 5 Feb. 2013. Web. 25 Aug. 2014. <<http://www.citylab.com/commute/2013/02/kids-who-walk-or-bike-school-concentrate-better-study-shows/4585/>>.
2. "What Are the Health Benefits for Children Who Walk or Bicycle to School?" *National Center for Safe Routes to School*. Web. 10 Mar. 2015. <<http://www.saferoutesinfo.org/program-tools/what-are-health-benefits-children-who-walk-or-bicycle-school>>.
3. "The Regional Bike Parking Study Report." *Point2point Solutions - The Regional Bike Parking Study*. Page 37. Alta Planning and Design, 1 Oct. 2013. Web. 25 Aug. 2014. <[http://www.point2pointsolutions.org/sites/default/files/Regional Bike Parking Study 10-8-2013.pdf](http://www.point2pointsolutions.org/sites/default/files/Regional%20Bike%20Parking%20Study%2010-8-2013.pdf)>.
4. "Springfield Development Code." *Chapter 4 Development Standards: 4.6-155 Bicycle Parking - Number of Spaces Required*. City of Springfield. Web. 25 Aug. 2014. <http://qcode.us/codes/springfield-development/view.php?topic=4-4_6_100-4_6_155&frames=on>.
5. "Eugene Building & Permit Services." *Eugene City Code*. Page 355. City of Eugene, 15 Apr. 2014. Web. 25 Aug. 2014.
6. "Bicycle Parking Guidelines." *Association of Pedestrian and Bicycle Professionals*. Web. 10 Mar. 2015. <<http://www.saferoutesinfo.org/program-tools/what-are-health-benefits-children-who-walk-or-bicycle-school>>.
7. "Bike Parking Sign Template." *Point2point Solutions - The Regional Bike Parking Study*. Lane Transit District, 1 Oct. 2013. Web. 25 Aug. 2014. <<http://www.point2pointsolutions.org/node/45>>.
8. "Bike Shelter: Project Development Guide." *Portland Bureau of Transportation*. Portland Public Schools, 1 Jan. 2012. Web. 25 Aug. 2014. <<http://www.portlandoregon.gov/transportation/article/412113>>.
9. "Secure, Enclosed Bike Parking with Keycard Access." *TriMet Bike & Ride*. TriMet, 1 Jan. 2014. Web. 25 Aug. 2014. <<http://trimet.org/howtoride/bikes/bikeandride.htm>>.
10. "The "Five E's" of Safe Routes to School." Safe Routes to School National Partnership. Web. 25 Aug. 2014. <<http://saferoutespartnership.org/local/getting-started-locally/5es>>.
11. "Walk Bike to School Day." National Center for Safe Routes to School. Web. 25 Aug. 2014. <<http://www.walkbiketoschool.org/>>.
12. "Rack Elements and Spacing." *Best Practices for Bicycle Parking*. City of Eugene Public Works and Engineering, 1 Jan. 2013. Web. 25 Aug. 2014.
13. "Bicycle Parking and Related Storage Facilities." *Safe Routes to School Policy Workbook*. ChangeLab Solutions, 1 Jan. 2014. Web. 25 Aug. 2014. <<http://changelabsolutions.org/safe-routes/5031>>.
14. "Safe Routes to School Briefing Sheets: School On-Site Design." *Safe Routes to School National Partnership Library of Resources*. National Center for Safe Routes to School. Web. 10 Mar. 2015. <http://www.saferoutespartnership.org/sites/default/files/pdf/Lib_of_Res/SRTS_Program_SchoolOnSiteStorage_ITS_2012.pdf>.
15. "Safe Routes to School Guide: Engineering." *National Center for Safe Routes to School*. PBIC, NHTSA, FHWA, CDC, ITE, and National Center for SRTS, 1 Jan. 2012. Web. 10 Mar. 2015. <http://guide.saferoutesinfo.org/pdf/SRTS-Guide_Engineering.pdf>.

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