

Seattle Department of Transportation

# SCHOOL BIKE PARKING INVENTORY ANALYSIS



January 2018



**Seattle**  
Department of  
Transportation

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# INTRODUCTION

The Seattle Department of Transportation (SDOT) Safe Routes to School program makes walking and biking to school safer and more comfortable for all students. Biking to school helps kids concentrate once they get to school, improves their cardiovascular health, and connects them to their community. Bike parking plays a vital role in encouraging students to bike to school by providing a place for students to leave their bikes during the school day.

Between 2015 and 2017, we inventoried the bike racks located on or near Seattle Public School sites, including elementary, K-8, middle, and high schools. The inventory included the number of bike racks and bike parking spaces, the type of rack, the location, and photos of the racks.

We compared current bike parking capacity to the number of spaces required by Seattle Municipal Code. This provides a baseline for the minimum amount of bike parking each school should have. The current code took effect in 2010; most school buildings were constructed or modernized before that date.

In collaboration with Seattle Public Schools, this inventory will be used to prioritize the installation of new bike racks at schools throughout the city. This prioritization will include current bike parking capacity compared to the number of spaces required by the Seattle Municipal Code, and we will use an equity factor to prioritize more bike parking in traditionally underserved communities.



# FINDINGS

## BIKE PARKING SPACES

There are currently more than 3,000 bike parking spaces available at Seattle Public School sites. Bike parking capacity would need to increase 50% to meet current code requirements (Figure 1) of more than 4,500 spaces.

Of the 97 public schools in Seattle during the 2016-2017 school year, two-thirds, or 65 schools, do not have the minimum required bike parking spaces (Figure 2). Three schools do not have any bike racks at all: Franklin High School, Van Asselt Elementary School, and Emerson Elementary School.

We looked at the relationship between bike parking spaces and school demographics and found that schools with higher percent of students of color were likely to have fewer bike racks provided at the school (Figure 3).

Figure 1: Existing and Required Bike Parking Spaces for Seattle Public Schools

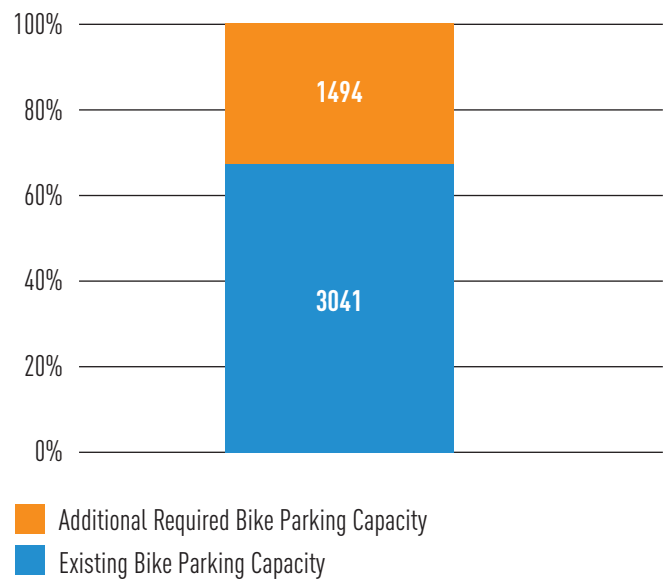


Figure 2: Bike Parking Status of Seattle Public Schools Sites

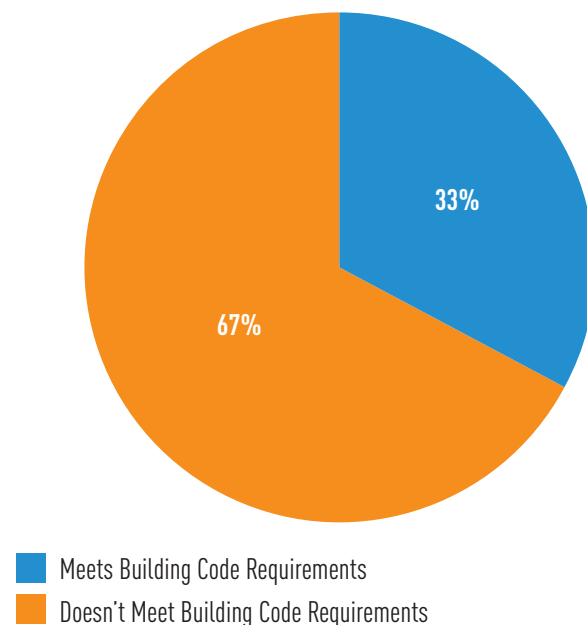
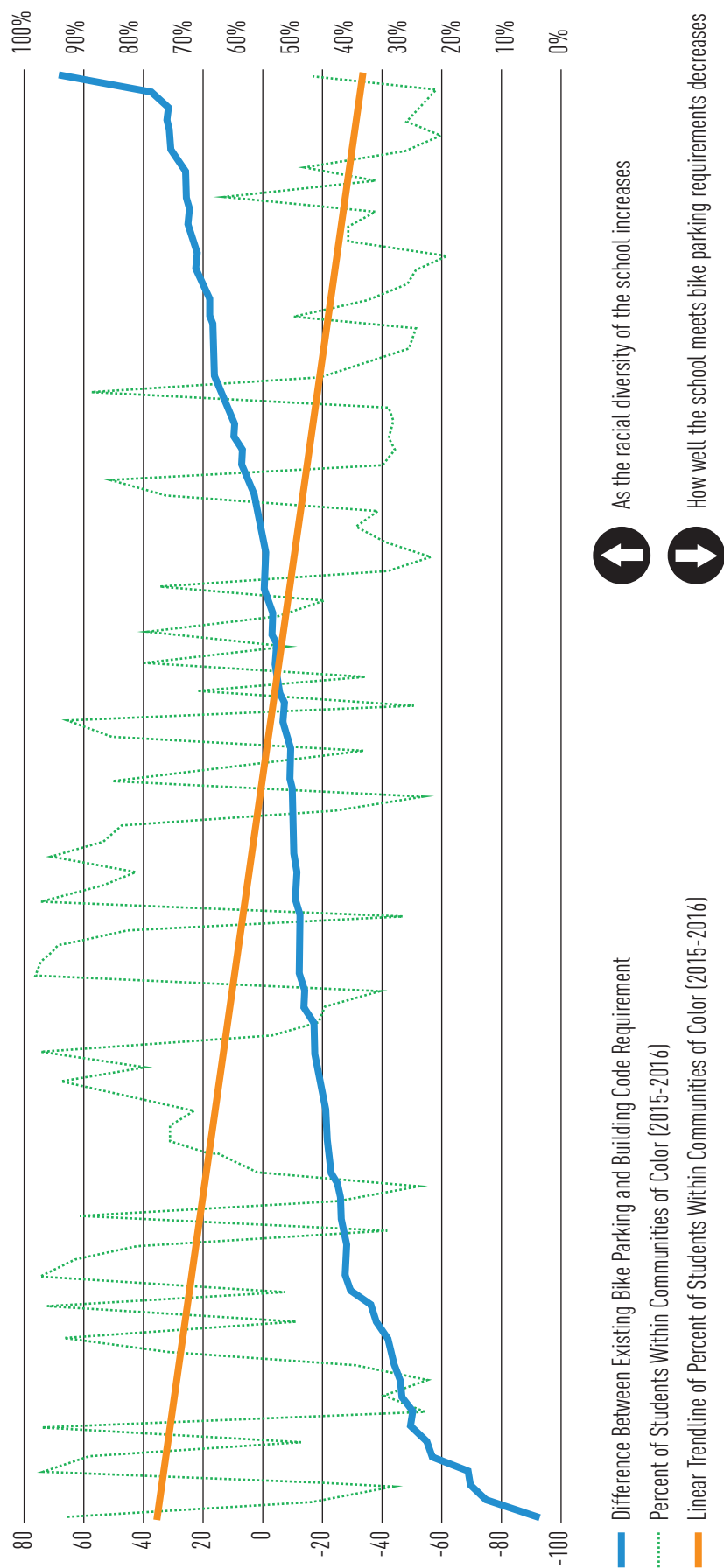


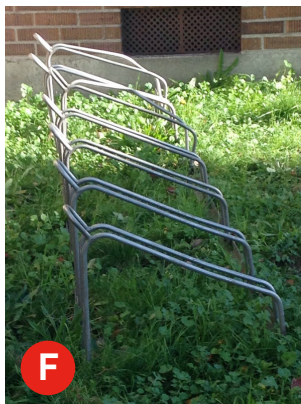
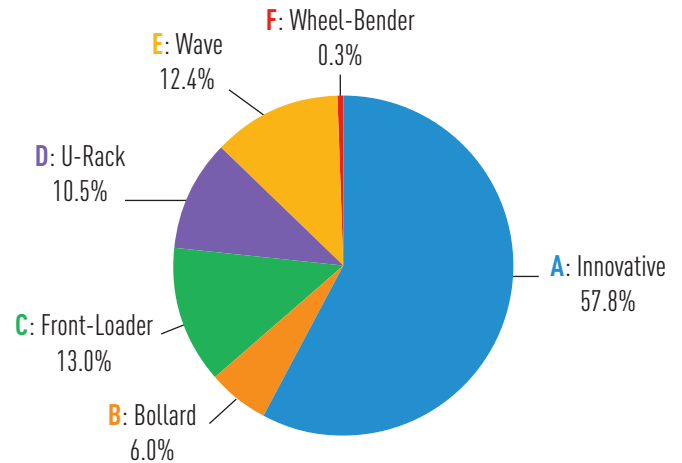
Figure 3: School Demographics in Relation to Bike Parking



## BIKE PARKING TYPES

Several different types of bike racks have been installed at schools. The most common type is the “innovative” bike rack with square or triangle locking points structure. Other types are not as common, as illustrated in Figure 4.

Figure 4: Bike Rack Types Installed at Seattle Public Schools



# METHODOLOGY

Between 2015 and 2017, we inventoried bike parking available on school property or within 150' of the school, on the same side of the street as the school. We compared the bike parking spaces to Seattle Municipal Code requirements in Section 23.54.015 (Required Parking) Table D, Parking for Bicycles.

**Figure 5: Seattle Municipal Code 23.54.015 Table D, Parking for Bicycles**

Land Use		Long-term Bike Parking Requirement	Short-term Bike Parking Requirement
B.9.	Schools, elementary	1 per classroom	None
B.10.	Schools, secondary (middle and high)	2 per classroom	None

K-8 schools are not included in Table D. We assume that K-8 schools will follow the secondary school requirements for bicycle parking.

This table has one caveat, stating:

“After the first 50 spaces for bicycles are provided, additional spaces are required at ½ the ratio shown in Table D for [23.54.015](#), except for rail transit facilities; passenger terminals; and park and ride lots.”

These policies were used to determine the number of bike capacity spaces needed to fulfill the building code.

We used race and ethnicity data available from the Office of the Superintendent of Public Instruction for all schools. Percent students within communities of color includes any students who are non-White or who are Hispanic. Seattle Public Schools provided data on the number of classrooms at each school.

# IMPLEMENTATION PLAN

The full bike parking inventory is presented in two tables below. Figure 6 sorts the schools by the percent of students that are within communities of color. Figure 7 sorts the schools alphabetically, so that any particular school can be found easily.

We will use Figure 6 to prioritize our work with Seattle Public Schools to address the lack of bike parking at so many schools across the city. This will involve installing bike parking on school sites as well as in the public right-of-way.

## SHORT TERM ACTIONS

Within the next school year, we will work to install bike racks at the three schools without any bike parking: Franklin High School, Van Asselt Elementary School, and Emerson Elementary School.

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We will work on a framework for installing new bike racks that does not rely on school staff or parents to contact the city to request more bike parking. Rather we will adopt of policy of proactively installing racks at school based on need and equity.

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# SCHOOL BIKE PARKING INVENTORY

Figure 6: Existing Bike Parking Spaces Compared to Building Code – Sorted by % Students within of Communities of Color:

School	Number of Bike Parking Spaces Required to Fulfill Building Code	Current Bike Parking Spaces	Difference between Current Bike Parking Spaces and Building Code Requirement	% Students within Communities of Color (2015-2016)
Martin Luther King Jr.	26	14	-12	98%
Dunlap	29	18	-11	98%
Seattle World School	48	18	-30	97%
South Lake	24	7	-17	97%
Aki Kurose Academy	68	8	-60	97%
Wing Luke	25	14	-11	97%
Rainier Beach	78	10	-68	97%
Van Asselt	36	0	-36	96%
Rainier View	20	10	-10	95%
Bailey Gatzert	28	16	-12	94%
Cleveland - STEM	70	28	-42	93%
South Shore	72	53	-19	93%
Franklin	92	0	-92	92%
Dearborn Park	23	16	-7	92%
Emerson	28	0	-28	91%
West Seattle Elementary	34	8	-26	90%
Asa Mercer	86	30	-56	88%
Concord International School	25	40	15	88%
Maple	24	13	-11	87%
Beacon Hill International School	24	14	-10	85%
John Muir	25	16	-9	84%
Highland Park	26	18	-8	84%
Roxhill	25	30	5	84%
Interagency at Columbia	12	2	-10	82%

**Figure 6: Existing Bike Parking Spaces Compared to Building Code – Sorted by % Students within of Communities of Color (cont.):**

School	Number of Bike Parking Spaces Required to Fulfill Building Code	Current Bike Parking Spaces	Difference between Current Bike Parking Spaces and Building Code Requirement	% Students within Communities of Color (2015-2016)
Northgate	20	8	-12	81%
Graham Hill	30	30	0	80%
Denny International	76	55	-21	79%
Sanislo	17	13	-4	78%
Chief Sealth International	92	74	-18	77%
Kimball	19	16	-3	77%
Olympic Hills @ Cedar Park	19	18	-1	75%
Madrona	52	9	-43	73%
Lowell	34	13	-21	73%
Hawthorne	26	29	3	73%
Broadview - Thomson	67	46	-21	68%
Leschi	22	16	-6	68%
Washington	78	56	-22	63%
Sand Point	27	18	-9	63%
Garfield	97	51	-46	59%
Thurgood Marshall	31	8	-23	57%
Viewlands	26	9	-17	54%
John Rogers	21	18	-3	53%
TOPS at Seward	51	22	-29	51%
Olympic View	29	25	-4	51%
John Stanford International School	24	42	18	50%
Orca	52	14	-38	49%
K-5 STEM at Boren	69	14	-55	48%
Stevens	23	50	27	48%
West Seattle High School	83	20	-63	47%
Nathan Hale	86	154	68	46%
Ingraham	86	68	-18	45%
Wedgwood	28	14	-14	44%
John Hay	28	26	-2	44%
Jane Addams Middle	73	46	-27	44%

**Figure 6: Existing Bike Parking Spaces Compared to Building Code – Sorted by % Students within of Communities of Color (cont.):**

School	Number of Bike Parking Spaces Required to Fulfill Building Code	Current Bike Parking Spaces	Difference between Current Bike Parking Spaces and Building Code Requirement	% Students within Communities of Color (2015-2016)
Sacajawea	18	8	-10	43%
Whitman	78	52	-26	42%
Arbor Heights	32	55	23	40%
B.F. Day	27	52	25	40%
Madison	71	27	-44	39%
View Ridge	33	34	1	38%
Gatewood	29	20	-9	36%
Fairmount Park	27	21	-6	36%
McDonald	25	42	17	35%
McGilvra	15	17	2	34%
Laurelhurst	25	50	25	34%
Lafayette	30	56	26	34%
Pathfinder	53	7	-46	33%
Montlake	14	14	0	33%
Greenwood	21	39	18	33%
McClure	56	29	-27	32%
Hazel Wolf	57	56	-1	32%
Daniel Bagley	26	36	10	32%
Lawton	23	36	13	32%
Roosevelt	105	36	-69	31%
NOVA	46	53	7	31%
Eckstein	72	82	10	31%
Alki	20	8	-12	29%
Green Lake	22	42	20	29%
Queen Anne	17	48	31	29%
Center School	24	56	32	29%
Adams	29	46	17	28%
Thornton Creek	32	25	-7	27%
North Beach	20	42	22	27%
Catharine Blaine	59	34	-25	26%
Frantz Coe	25	42	17	26%
Bryant	30	62	32	26%
Ballard	99	49	-50	25%

**Figure 6: Existing Bike Parking Spaces Compared to Building Code – Sorted by % Students within of Communities of Color (cont.):**

School	Number of Bike Parking Spaces Required to Fulfill Building Code	Current Bike Parking Spaces	Difference between Current Bike Parking Spaces and Building Code Requirement	% Students within Communities of Color (2015-2016)
Hamilton International	70	20	-50	25%
West Woodland	34	24	-10	25%
Salmon Bay	59	58	-1	24%
Schmitz Park (Genesee Hill)	32	70	38	23%
Whittier	25	47	22	21%



**Figure 7: Existing Bike Parking Spaces Compared to Building Code Requirement – Sorted by School:**

School	Number of Bike Parking Spaces Required to Fulfill Building Code	Current Bike Parking Spaces	Difference between Current Bike Parking Spaces and Building Code Requirement	% Students within Communities of Color (2015-2016)
Adams	29	46	17	28%
Aki Kurose Academy	68	40	-28	97%
Alki	20	8	-12	29%
Arbor Heights	32	55	23	40%
Asa Mercer	86	30	-56	88%
B.F. Day	27	52	25	40%
Bailey Gatzert	28	16	-12	94%
Ballard	99	49	-50	25%
Beacon Hill International School	24	14	-10	85%
Broadview - Thomson	67	46	-21	68%
Bryant	30	62	32	26%
Catharine Blaine	59	34	-25	26%
Center School	24	56	32	29%
Chief Sealth International	92	74	-18	77%
Cleveland - STEM	70	28	-42	93%
Concord International School	25	40	15	88%
Daniel Bagley	26	36	10	32%
Dearborn Park	23	16	-7	92%
Denny International	76	55	-21	79%
Dunlap	29	18	-11	98%
Eckstein	72	82	10	31%
Emerson	28	0	-28	91%
Fairmount Park	27	21	-6	36%
Franklin	92	0	-92	92%
Frantz Coe	25	42	17	26%
Garfield	97	51	-46	59%
Gatewood	29	20	-9	36%
Graham Hill	30	2	-28	80%
Green Lake	22	42	20	29%
Greenwood	21	39	18	33%
Hamilton International	70	20	-50	25%
Hawthorne	26	29	3	73%

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Highland Park	26	18	-8	84%
Ingraham	86	68	-18	45%
Interagency at Columbia	12	2	-10	82%
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John Muir	25	16	-9	84%
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K-5 STEM at Boren	69	14	-55	48%
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Laurelhurst	25	50	25	34%
Lawton	23	36	13	32%
Leschi	22	16	-6	68%
Lowell	34	13	-21	73%
Madison	71	27	-44	39%
Madrona	52	9	-43	73%
Maple	24	13	-11	87%
Martin Luther King Jr.	26	14	-12	98%
McClure	56	29	-27	32%
McDonald	25	42	17	35%
McGilvra	15	17	2	34%
Montlake	14	14	0	33%
Nathan Hale	86	154	68	46%
North Beach	20	42	22	27%
Northgate	20	8	-12	81%
NOVA	46	53	7	31%
Olympic Hills @ Cedar Park	19	18	-1	75%
Olympic View	29	25	-4	51%
Orca	52	14	-38	49%
Pathfinder	53	7	-46	33%

**Figure 7: Existing Bike Parking Spaces Compared to Building Code Requirement – Sorted by School (cont.):**

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Queen Anne	17	48	31	29%
Rainier Beach	78	10	-68	97%
Rainier View	20	10	-10	95%
Roosevelt	105	36	-69	31%
Roxhill	25	30	5	84%
Sacajawea	18	8	-10	43%
Salmon Bay	59	58	-1	24%
Sand Point	27	18	-9	63%
Sanislo	17	13	-4	78%
Schmitz Park (Genesee Hill)	32	70	38	23%
Seattle World School	48	18	-30	97%
South Lake	24	7	-17	97%
South Shore	72	53	-19	93%
Stevens	23	50	27	48%
Thornton Creek	32	25	-7	27%
Thurgood Marshall	31	8	-23	57%
TOPS at Seward	51	22	-29	51%
Van Asselt	36	0	-36	96%
View Ridge	33	34	1	38%
Viewlands	26	9	-17	54%
Washington	78	56	-22	63%
Wedgwood	28	14	-14	44%
West Seattle Elementary	34	8	-26	90%
West Seattle High School	83	8	-75	47%
West Woodland	34	24	-10	25%
Whitman	78	52	-26	42%
Whittier	25	47	22	21%
Wing Luke	25	14	-11	97%

# SOURCES

Office of Superintendent of Public Instruction.  
Washington State Report Card - Demographic  
Information by School. 2016. Raw data.  
Seattle. [http://reportcard.ospi.k12.wa.us/  
DataDownload.aspx](http://reportcard.ospi.k12.wa.us/DataDownload.aspx)

23 SMC Sec. 54. 2011. Web.





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