

# TRANSPORTATION TECHNICAL REPORT

for the

## Roosevelt High School Portables Project

Prepared for:  
Seattle Public Schools

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# 1. INTRODUCTION

This report presents parking analysis for the Seattle Public Schools' (SPS) continued placement of six portable classrooms at Roosevelt High School. The scope of analysis and approach were based on extensive past experience performing transportation impact analyses for SPS projects throughout Seattle. This analysis was prepared to support a request to extend the parking code departure approval granted in 2018 for the placement of portables at the site. This report updates the analysis performed in 2018<sup>1</sup> and documents the existing (2019) conditions in the site vicinity, presents estimates of project-related parking impacts, and recommended mitigation.

## 1.1. Project Description

Roosevelt High School is located at 1410 NE 66<sup>th</sup> Street in the Roosevelt neighborhood of Seattle. The project site and surrounding vicinity are shown on Figure 1.

SPS proposes to retain six portable classrooms that were originally placed in 2016 and 2017. The portable classrooms are planned to remain in place until Roosevelt's student enrollment level aligns with its building capacity. The current proposal reflects a reduction from the departure that was requested and approved in 2018, which sought placement of four portables in addition to the six currently in place; however, the four additional portables were not installed.

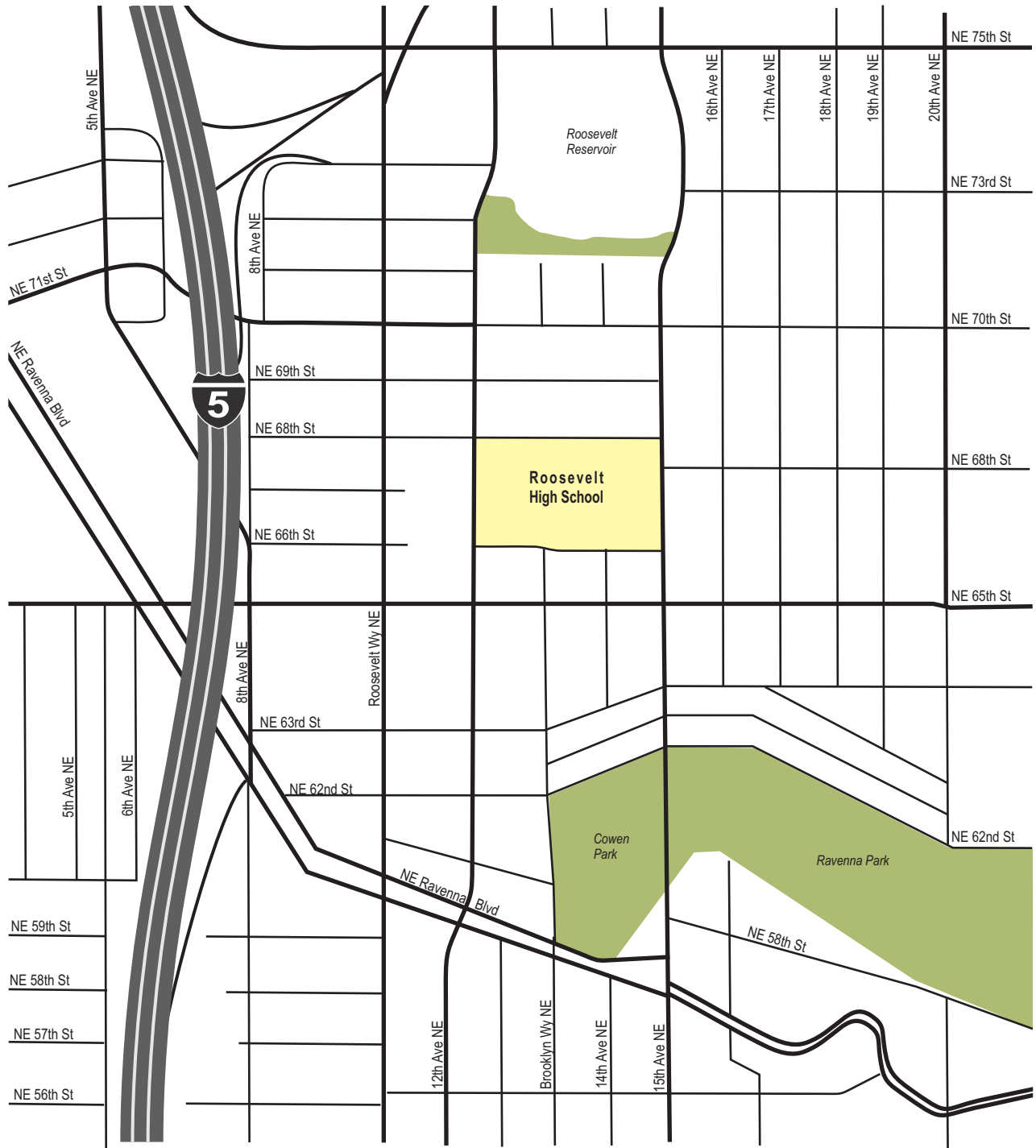
The school building occupies the northeastern portion of the site; the main surface parking lot is located on the northwestern portion of the site and is accessed from a driveway on 12<sup>th</sup> Avenue NE. The school's existing outdoor athletic facilities (which include a lighted football/soccer field with synthetic turf, a track that surrounds the field, and a small section of bleacher seating) are located on the southwestern portion of the site. Six portable classrooms are currently located in the surface parking lot and have reduced the school's on-site parking supply from 184 to 141 spaces. The six portable classrooms accommodate an additional enrollment capacity of about 180 students and six faculty members (with 30 students and one faculty member per classroom).<sup>2</sup>

The site plan with the locations of the portable classrooms is shown on Figure 2.

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<sup>1</sup> Heffron Transportation, Inc., *Transportation Technical Report – Roosevelt High School Portables*, May 18, 2018.

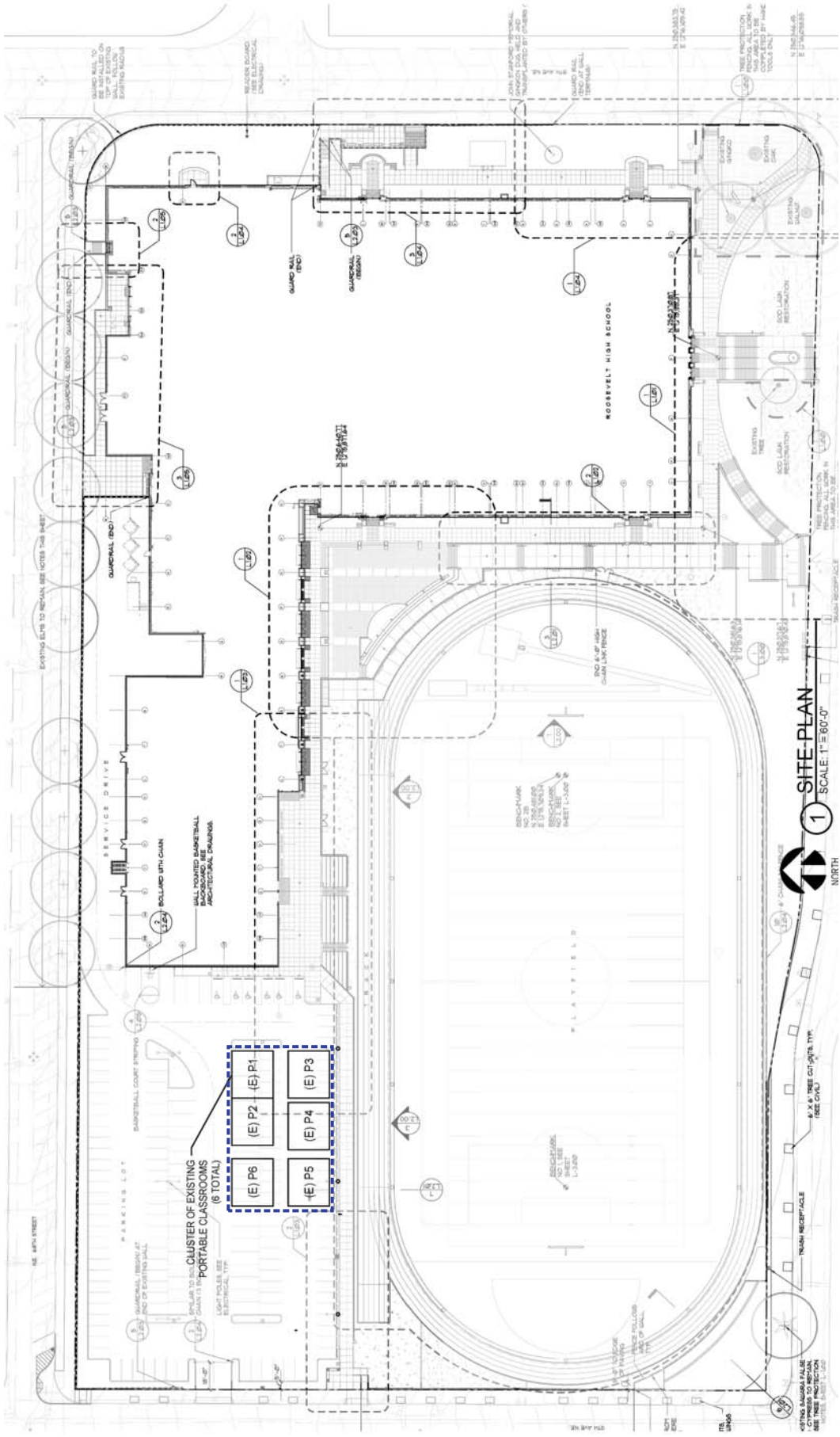
<sup>2</sup> Email communication, T. Wang, Seattle Public Schools, May 2018.



**ROOSEVELT HIGH SCHOOL**  
**Portable Classrooms**

Figure 1  
Site Location and Vicinity





Source: Rolluda Architects, 2018

# ROOSEVELT HIGH SCHOOL Portable Classrooms

Figure 2  
Site Plan



## 2. BACKGROUND CONDITIONS

This section presents the existing transportation conditions in the vicinity of Roosevelt High School, including the existing roadway network, transit facilities, non-motorized facilities, and parking.

### 2.1. Roadway Network

The Roosevelt High School site is bounded on the east by 15<sup>th</sup> Avenue NE, on the south by NE 66<sup>th</sup> Street, on the north by NE 68<sup>th</sup> Street, and on the west by 12<sup>th</sup> Avenue NE. Key roadways that serve the campus are described below. Roadway classifications were obtained from the City's *Street Classification Map*.<sup>3</sup> Speed limits are 25 miles per hour (mph) on arterials (unless otherwise marked) and 20 mph on local access streets.

**NE 65<sup>th</sup> Street** is an east-west Minor Arterial that connects between Sand Point Way NE to the east and E Green Lake Way N to the west. In the Roosevelt and Ravenna neighborhoods, it was recently reconfigured and now has one travel lane in each direction, with a center left-turn lane and bike lanes, sidewalks, curbs, and gutters on both sides. In the vicinity of the school there is no on-street parking.

**15<sup>th</sup> Avenue NE** is a north-south Minor Arterial that connects between NE Pacific Street to the south and Ballinger Way NE to the north. In the vicinity of the school, it has one travel lane in each direction with peak period parking prohibitions that provide an additional travel lane in the peak direction. Parking along the west curb (southbound) is prohibited from 7:00 to 9:00 A.M.; parking on the east curb (northbound) is prohibited from 4:00 to 6:00 P.M. Adjacent to Roosevelt High School, the southbound curb lane is limited to school bus load/unload only between 7:00 and 9:00 A.M. and 1:00 and 4:00 P.M. Near 15<sup>th</sup> Avenue NE, parking is prohibited at all times to provide additional lanes at that intersection. It has curb, gutter, and sidewalk on both sides.

**12<sup>th</sup> Avenue NE** is a one-way northbound Principal Arterial that connects between the University District to the south and Lake City Way NE to the north. In the vicinity of the school it has two travel lanes, a bike lane, and parallel parking on both sides of the street. It has curb, gutter, and sidewalk on both sides. However, the on-street parking and sidewalk on the west side, between NE 65<sup>th</sup> Street and NE 68<sup>th</sup> Street are currently unavailable due to construction of Sound Transit's Roosevelt Station for Link light rail.

**Roosevelt Way NE** is a one-way southbound Principal Arterial that connects between Lake City Way NE to the north and the University District to the south. North of NE 75<sup>th</sup> Street/Lake City Way NE it is a two-way Principal Arterial that connects between the Roosevelt and Northgate neighborhoods. In the vicinity of the school it has two southbound travel lanes and a bike lane, with parallel parking on both sides of the street. It has curb, gutter, and sidewalk on both sides of the street.

**NE 66<sup>th</sup> Street** is an east-west local access street that connects between 8<sup>th</sup> Avenue NE and 15<sup>th</sup> Avenue NE. Between 12<sup>th</sup> Avenue NE and 15<sup>th</sup> Avenue NE, it has one lane designated for one-way eastbound travel. This section has curb, gutter, and sidewalk on both sides. Along the segment between 12<sup>th</sup> Avenue NE and Brooklyn Avenue NE, there is on-street parallel parking permitted on the south side. Between Brooklyn Avenue NE and 15<sup>th</sup> Avenue NE, back-in-angle parking is permitted on the north side of the street. The segment between Roosevelt Way NE and 12<sup>th</sup> Avenue NE is currently closed due to construction of Roosevelt Station; it will re-open after construction is complete in 2021.

<sup>3</sup> Seattle Department of Transportation (SDOT), Street Classification Maps, accessed March 2019.

**Brooklyn Avenue NE** is a two-way north-south local access street that connects between NE 62<sup>nd</sup> Street and NE 66<sup>th</sup> Street. It has curb, gutter, and sidewalk on both sides. In the vicinity of the school, there is on-street parking permitted on both sides of the street. Due to its width, the travel way is effectively restricted to one lane for both directions of travel when on-street parking occurs on both sides.

**NE 68<sup>th</sup> Street** is an east-west local access street that connects between 8<sup>th</sup> Avenue NE and 15<sup>th</sup> Avenue NE. Adjacent to the school site between 12<sup>th</sup> Avenue NE and 15<sup>th</sup> Avenue NE, it has one lane designated for one-way westbound travel. This section has curb, gutter, and sidewalk on both sides. Back-in, angle parking is available on the south side of the street.

**14<sup>th</sup> Avenue NE** is a two-way north-south local access street that connects between NE 63<sup>rd</sup> Street and NE 66<sup>th</sup> Street. It has curb, gutter, and sidewalk on both sides. In the vicinity of the school there is on-street parking permitted on both sides of the street. Due to its width, the travel way is effectively restricted to one lane for both directions of travel when on-street parking occurs on both sides.

## **2.2. Planned Improvements**

The Roosevelt Station, which will serve the Northgate Extension of Sound Transit’s Link light rail service, is currently under construction and is planned to be open in 2021. Existing conditions documented in this report reflect temporary street closures and parking restrictions around the station construction area. After Roosevelt Station is open, it is expected that these restrictions will be lifted. However, the Seattle Department of Transportation (SDOT) may implement restrictions (e.g. parking duration time limits) along the streets around the station area to discourage “hide-and-ride” activities by transit riders who may attempt to park in the area long-term and access light rail for their commute. As part of the Roosevelt Station project, planned to be complete in 2021, walkway and crosswalk improvements are planned along 12<sup>th</sup> Avenue NE.<sup>4</sup> A crosswalk and curb bulbs (to narrow the crossing distance) are planned on west leg of NE 66<sup>th</sup> Street at 12<sup>th</sup> Avenue NE. A new crosswalk on 12<sup>th</sup> Avenue is planned on the south side of NE 67<sup>th</sup> Street. This intersection is also planned to have curb bulbs to narrow the crossing distance across 12<sup>th</sup> Avenue NE.

The City of Seattle’s *2019-2024 Proposed Capital Improvement Program (CIP)*<sup>5</sup> was reviewed to identify any proposed projects that could affect parking in the next few years. The CIP includes the Roosevelt Multimodal Corridor project, which is planned to develop and implement a range of transit and street improvements in the corridor connecting the University District, Eastlake and South Lake Union neighborhoods between Downtown and the Roosevelt Station area. The corridor is identified as a priority in the *Transit Master Plan*<sup>6</sup> and the project will identify, prioritize, design, and construct the highest priority “speed and reliability” improvements to existing bus service. The project will also consider an improved right-of-way profile to best accommodate the corridor’s multimodal demands, along with the recommendations reflected in each of the City’s adopted modal transportation plans and the respective neighborhood plans. The CIP identifies funding for the Roosevelt Multimodal Corridor project each year through 2023. Although specific additional improvements have not been identified, it is possible that ongoing multimodal improvements could affect parking along the corridor.

The *Adopted Seattle Bicycle Master Plan (BMP)*,<sup>7</sup> recommends new protected bicycle lanes on Roosevelt Way NE, 12<sup>th</sup> Avenue NE, and NE 65<sup>th</sup> Street through the study area. The BMP also recommends

<sup>4</sup> Sound Transit. *North Link Final Supplemental Environmental Impact Statements. Transportation Technical Report.* April 2006.

<sup>5</sup> City of Seattle, September 24, 2018.

<sup>6</sup> City of Seattle, 2016.

<sup>7</sup> SDOT, April 2014.



an in-street local connector (a bicycle facility with minor separation) on 15<sup>th</sup> Avenue NE and local connector neighborhood greenways along NE 66<sup>th</sup> Street between Weedin Place NE and 15<sup>th</sup> Avenue NE as well as on Brooklyn Avenue NE from NE 66<sup>th</sup> Street south to NE Ravenna Boulevard.

The protected bicycle lane on Roosevelt Way NE between NE 65<sup>th</sup> Street and the University Bridge was completed in 2016, and protected bicycle lanes on NE 65<sup>th</sup> Street were installed as part of the City's *Vision Zero* program in 2018. The 2017-2021 *BMP Implementation Plan*<sup>8</sup> projects include installation of protected bicycle lanes along 11<sup>th</sup>/12<sup>th</sup> Avenues NE between the University Bridge and NE 75<sup>th</sup> Street, along 15<sup>th</sup> Avenue NE between NE 62<sup>nd</sup> Street and Lake City Way NE, along NE 70<sup>th</sup> Street between 8<sup>th</sup> Avenue NE and Roosevelt Way, and extension of the protected bike lanes on NE Roosevelt Way from NE 65<sup>th</sup> Street to NE 75<sup>th</sup> Street. Although these bicycle lane projects have been identified as high priority by the City, no design or schedule information is currently available. However, it is possible that some or all of these projects could be implemented prior to or during the next few school years and could potentially result in on-street parking reductions or modifications where they are constructed.

## **2.3. Parking Supply & Occupancy**

Both off-street and on-street parking at and around Roosevelt High School were surveyed to determine the existing parking supply and parking demand. This information was then used to estimate how parking utilization could be affected by parking demand generated by the portables (which is presented later in Section 3). The following sections describe the parking supply as well as the current parking demand and utilization rates.

### **2.3.1. On-Street Parking**

A detailed on-street parking study was performed and supply was documented according to the methodology outlined in the City of Seattle's Tip #117.<sup>9</sup> The City recommends use of this methodology to document the number and type of on-street parking spaces that may exist within a defined study area. This analysis was completed to document the existing supply and how it is currently utilized.

The study area for the on-street parking utilization analysis included all roadways within an 800-foot walking distance from the school site, which is the study area typically required by the City of Seattle for analyses of this type. The 800-foot walking distance results in a study area that extends just west of Roosevelt Way NE, north to NE 71<sup>st</sup> Street, south to NE 63<sup>rd</sup> Street, and east to 18<sup>th</sup> Avenue NE. The study area consists of both commercial and residential land uses. Commercial development is concentrated along sections of NE 65<sup>th</sup> Street and Roosevelt Way NE through the study area. It should be noted that only some of the residences within the study area have off-street parking capacity in driveways or garages. Many of the residents actively use on-street parking.

As previously discussed, ongoing construction activities around Roosevelt Station site have removed some on-street parking and disconnected both NE 66<sup>th</sup> Street and NE 67<sup>th</sup> Street between Roosevelt Way N and 12<sup>th</sup> Avenue NE. These streets will be reconnected when the construction ends, but any restored/new on-street parking spaces are likely to be restricted to short-term parking only. Details about parking supply and demand are provided in the following sections.

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<sup>8</sup> SDOT, April 2017.

<sup>9</sup> The City recommends using information in Tip #117 to assist with parking utilization studies. Although created for another purpose, Tip #117 contains guidance for measuring on-street supply; other details and analysis requirements, such as parking demand count periods, are typically based on the type of project being proposed and evaluated.



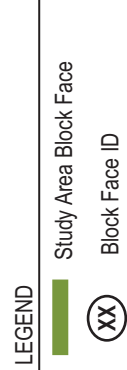
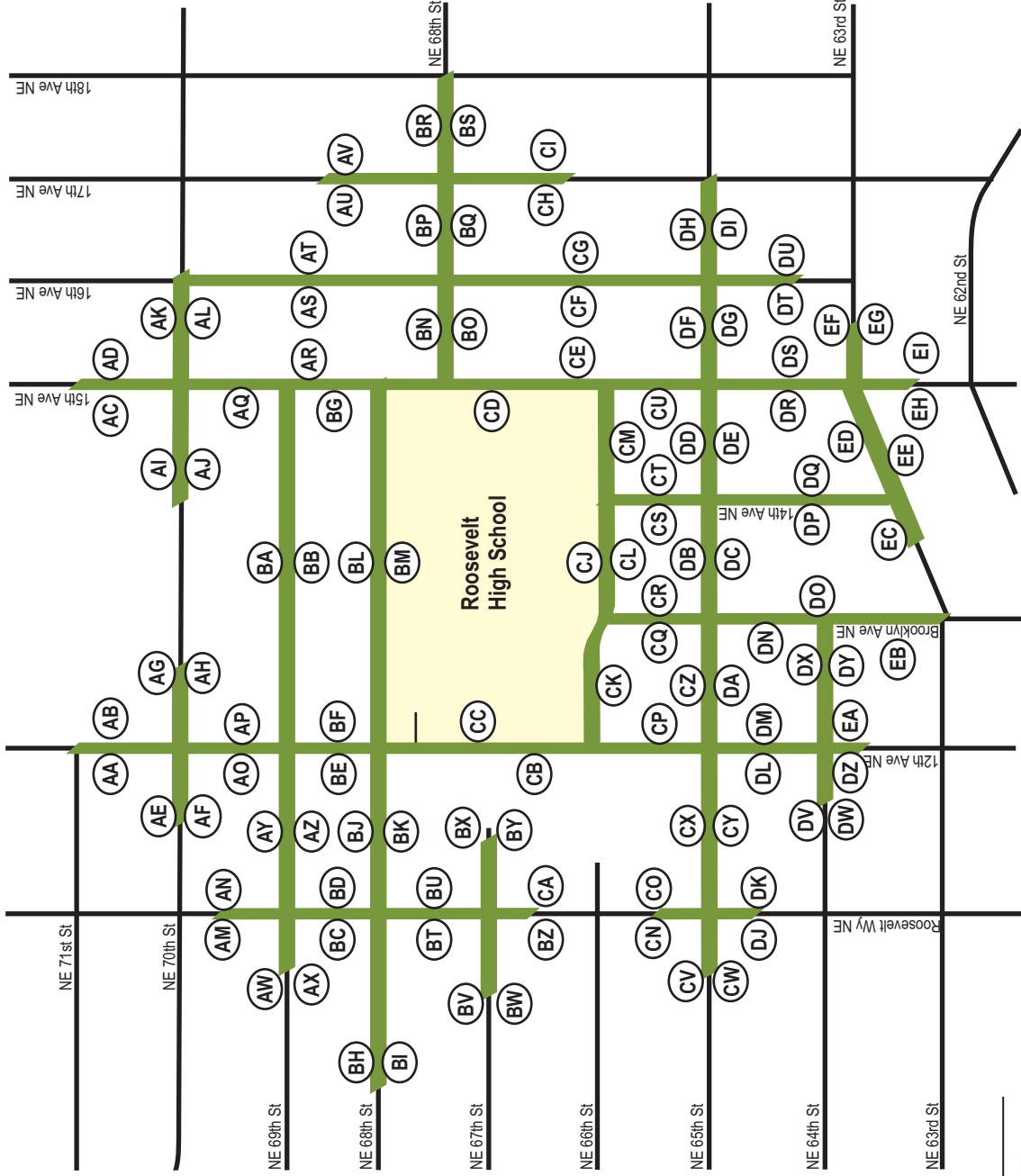
## On-Street Parking Supply

In the study area, most of the local access residential streets are at least 25 feet wide and parking is generally permitted on both sides of the street (except where angle parking occurs on one side). The study area was separated into individual block faces. A block face consists of one side of a street between two cross-streets. For example, the east side of 12<sup>th</sup> Avenue NE between NE 66<sup>th</sup> Street and NE 68<sup>th</sup> Street is one block face (identified as block face ‘CC’). The study area and block face designations are shown on Figure 3.

Each block face was measured and analyzed to determine the number of on-street parking spaces. First, common street features—such as driveways, fire hydrants, and special parking zones—were noted and certain distances adjacent to the street features were noted. No on-street parking capacity was assumed within 30 feet of a signalized or marked intersection, within 20 feet of an uncontrolled intersection, within 15 feet on either side of a fire hydrant, within 20 feet on either side of a crosswalk, or within 5 feet on either side of a driveway or alley. The remaining unobstructed lengths of street between street features were converted to legal on-street parking spaces using values in the City’s Tip #117. It should be noted that the curb-face values in Tip #117 reflect space lengths that range from about 18.5 feet to 26.5 feet per space. Based on extensive experience of Heffron Transportation preparing on-street parking utilization studies, a trend has been observed that the increased popularity of smaller cars (such as Smart cars) and the tendency for drivers to park closer together in areas with higher utilization can result in more available supply than would be suggested by the Tip #117 guidance.

The total number of on-street parking spaces within the study area varies throughout the day. Restrictions limit maximum parking durations ranging between one and four hours (some with paid parking stations and some without), and peak direction restrictions during the morning or evening commute periods. The parking supply was inventoried for four representative weekday periods when Roosevelt High School typically generates parking demand: mid-morning (around 10:00 A.M.), mid-afternoon (around 1:45 P.M.), and two evening periods. Peak period restriction prohibits parking between 4:00 and 6:00 P.M. on 15<sup>th</sup> Avenue NE and 12<sup>th</sup> Avenue NE, resulting in different evening parking supply during and after this period. Evening parking counts were conducted during the early evening (around 5:00 P.M.) when the restriction was in place, and later evening (around 7:30 P.M.) after it had expired.

The parking supply survey determined that there are currently 659 on-street parking spaces within the defined study area; all of these spaces can be used during the mid-morning and later evening periods, 646 spaces can be used during the mid-afternoon period, and 605 spaces can be used during the early evening period. These totals do not include 49 on-street spaces that are currently unavailable due to adjacent construction projects; 41 of the spaces are adjacent to mixed use projects currently under construction directly south of the school, and eight of the spaces are adjacent to the Roosevelt Station construction (four on each side of Roosevelt Way NE). The parking supply totals by block face are provided in Appendix A.



# ROOSEVELT HIGH SCHOOL

## Portable Classrooms

Figure 3  
Parking Study Area



## Existing On-Street Parking Occupancy

Existing parking occupancy counts within the study area were performed between February 20 and March 7, 2019. Weekday occupancy counts were performed during four periods when school was in session. Mid-morning (between 10:00 and 10:45 A.M.) and mid-afternoon (1:45 to 2:30 P.M.) counts were conducted to reflect typical school day conditions. Early evening (5:00 to 5:45 P.M.) and later evening (7:30 to 8:15 P.M.) counts were conducted to reflect conditions when after-school scholastic and athletic activities take place. The highest level of after-school activities occurred on Tuesday, February 26, including athletic practices during the early evening period and a meeting for parents/guardians during the later evening period. Athletic practices and other activities were observed at the field on both days during the early evening period. Mid-afternoon counts were also conducted during the week of Roosevelt High School's mid-winter break, in order to compare conditions with and without school in session.

The results of the parking occupancy surveys are summarized in Table 1. Detailed summaries of the on-street parking occupancy for each block face for all counts are provided in Appendix A. On-street parking utilization was calculated as the number of vehicles parked on street divided by the number of legal on-street parking spaces within the study area or on a specific block face. The study area utilization totals are also summarized in Table 1. As shown, utilization of on-street parking (with school in session) in the study area ranged from 71% to 79% during the daytime periods and 57% to 62% during the evening periods. Field observation found that the larger difference between the two observation days for the mid-afternoon counts appeared to be primarily due to a varying number of construction-generated vehicles present within the study area.

The mid-afternoon counts performed during the mid-winter break were used to estimate the general level of parking demand generated by the school during the day, and also to help identify the areas where parking demand generated by construction employees working in the area is highest. Based upon the differences between counts on afternoons with and without school in session, about 140 vehicles parked on street during the day are estimated to be generated by the school.

The field survey also found five block faces within the study area that appeared to be predominantly used by construction-related vehicles (in addition to eight block faces adjacent to construction projects where parking is currently prohibited). These include both sides of 12<sup>th</sup> Avenue NE between NE 68<sup>th</sup> Street and NE 69<sup>th</sup> Street (block faces BE and BF), the south side of NE 67<sup>th</sup> Street east of Roosevelt Way NE (block face BY), the NE 66<sup>th</sup> Street angle parking adjacent to the school between Brooklyn Avenue NE and 14<sup>th</sup> Avenue NE (block face CJ), and the west half of the angle parking on the south side of NE 68<sup>th</sup> Street (block face BM). The construction-related demand directly south of the school is likely generated by mixed-use developments that are currently under construction. Construction-employee parking could move on site once the projects' parking garages are complete. However, it is expected that as new development continues to occur around the Roosevelt Station area, construction employee parking could occur at other locations; therefore, it is assumed that construction-related parking demand in the near future is likely to be similar to existing conditions.

Table 1. On-Street Parking Occupancy Survey Results

Study Period	Parking Supply <sup>a</sup>	Vehicles Parked	% Utilization	Unused Spaces
<b>SCHOOL IN SESSION</b>				
<b>Mid-Morning (10:00 to 10:45 A.M.)</b>				
Tuesday, February 26, 2019	659	517	78%	142
Tuesday, March 5, 2019	659	519	79%	140
<i>Average</i>	<i>659</i>	<i>518</i>	<i>79%</i>	<i>141</i>
<b>Mid-Afternoon (1:45 to 2:30 P.M.)</b>				
Tuesday, March 5, 2019	646	512	79%	134
Thursday, March 7, 2019	646	458	71%	188
<i>Average</i>	<i>646</i>	<i>485</i>	<i>75%</i>	<i>161</i>
<b>Early Evening (5:00 to 5:45 P.M.)</b>				
Tuesday, February 26, 2019	605	347	57%	258
Tuesday, March 5, 2019	605	357	59%	248
<i>Average</i>	<i>605</i>	<i>352</i>	<i>58%</i>	<i>253</i>
<b>Later Evening (7:30 to 8:15 P.M.)</b>				
Tuesday, February 26, 2019	659	401	61%	258
Tuesday, March 5, 2019	659	410	62%	249
<i>Average</i>	<i>659</i>	<i>406</i>	<i>62%</i>	<i>253</i>
<b>SCHOOL NOT IN SESSION (MID-WINTER BREAK)</b>				
<b>Mid-Afternoon (1:45 to 2:30 P.M.)</b>				
Wednesday, February 20, 2019	646	344	53%	302
Thursday, February 21, 2019	646	352	54%	294
<i>Average</i>	<i>646</i>	<i>348</i>	<i>54%</i>	<i>298</i>

Source: Heffron Transportation, Inc., April 2019.

a. These totals do not include 49 on-street spaces that are currently unavailable due to adjacent construction projects: 41 of the spaces are adjacent to mixed use projects currently under construction directly south of the school, and 8 of the spaces are adjacent to the Roosevelt Station construction. Parking supply totals include one space in a 3-minute loading zone.

### 2.3.2. On-Site Parking

Roosevelt’s parking lot is located in the northwest corner of campus. Currently, the lot provides 141 total spaces including 27 spaces with restrictions (disabled permits, specific school staff, etc.). This total excludes 43 spaces that are currently occupied by the six portable classrooms. Existing parking occupancy counts within the lot were performed during the same study periods described for the on-street parking. Table 2 presents the results of the on-site parking occupancy counts. As shown, with school in session, there were between 113 and 126 vehicles parking in the lot during the day, and between 19 and 40 parked during the evening. On average, 17 to 24 on-site parking spaces were unused during the day and 105 to 120 spaces were unused during the evening. During the week when school was not in session, 10 to 11 vehicles were parked on site during mid-afternoon.

Table 2. On-Site Parking Occupancy Survey Results

Study Period	Parking Supply	Vehicles Parked	Unused Spaces
<b>SCHOOL IN SESSION</b>			
<b>Mid-Morning (10:00 to 10:45 A.M.)</b>			
Tuesday, February 26, 2019	141	121	20
Tuesday, March 5, 2019	141	113	28
<i>Average</i>		<i>117</i>	<i>24</i>
<b>Mid-Afternoon (1:45 to 2:30 P.M.)</b>			
Tuesday, March 5, 2019	141	122	19
Thursday, March 7, 2019	141	126	15
<i>Average</i>		<i>124</i>	<i>17</i>
<b>Early Evening (5:00 to 5:45 P.M.)</b>			
Tuesday, February 26, 2019	141	40	101
Tuesday, March 5, 2019	141	32	109
<i>Average</i>		<i>36</i>	<i>105</i>
<b>Later Evening (7:30 to 8:15 P.M.)</b>			
Tuesday, February 26, 2019	141	22	119
Tuesday, March 5, 2019	141	19	122
<i>Average</i>		<i>21</i>	<i>120</i>
<b>SCHOOL NOT IN SESSION (MID-WINTER BREAK)</b>			
<b>Mid-Afternoon (1:45 to 2:30 P.M.)</b>			
Wednesday, February 20, 2019	141	11	130
Thursday, February 21, 2019	141	10	131
<i>Average</i>		<i>11</i>	<i>130</i>

Source: Heffron Transportation, Inc., April 2019.

## 2.4. Transit Facilities & Service

King County Metro Transit (Metro) currently provides bus service to the site with stops located on Roosevelt Way NE, 12<sup>th</sup> Avenue NE, 15<sup>th</sup> Avenue NE, and NE 65<sup>th</sup> Street within one-quarter mile of the school. These stops are served by Metro Routes 45, 62, 64, 67, 71, 73, 76, and 373.<sup>10</sup>

Two park &-ride lots are located about one-half mile to the west of the site. Green Lake Park & Ride, located at NE 65<sup>th</sup> Street and 8<sup>th</sup> Avenue NE, has 411 parking spaces and 22 bicycle lockers.<sup>11</sup> Calvary Christian Assembly Church, located at NE 68<sup>th</sup> Street and Roosevelt Way NE, also has some spaces available for paid public parking during weekdays.

Sound Transit's Northgate Link project is a 4.3-mile extension of the light rail system, with new stations planned for the University District, Roosevelt, and Northgate areas. Sound Transit is currently

<sup>10</sup> King County Metro, Route and Schedule Information, <https://kingcounty.gov/depts/transportation/metro/schedules-maps.aspx>, Accessed April 2019.

<sup>11</sup> King County Metro, Park & Ride and Transit Center Information, <https://kingcounty.gov/depts/transportation/metro/travel-options/parking.aspx>, Access April 2019.

constructing the Roosevelt Station along the west side of 12<sup>th</sup> Avenue NE between NE 65<sup>th</sup> and NE 67<sup>th</sup> Streets, directly west of Roosevelt High School. The underground station is planned to have two entrances: one at the intersection of NE 65<sup>th</sup> Street and 12<sup>th</sup> Avenue NE, and one at the intersection of NE 67<sup>th</sup> Street and 12<sup>th</sup> Avenue NE. Elevators, escalators and stairs will lead from the entrances to the platform, approximately 80 to 90 feet below ground level. The above-ground station buildings include ventilation shafts, bike storage, and emergency stairs. Northgate Link is planned to begin operation in 2021.<sup>12</sup>

SPS provides yellow bus, door-to-door, Metro, and cab service. Eligibility for District-provided transportation depends on several factors including grade level and proximity to assigned schools. High school students who reside within the boundaries of the Seattle School District and who live more than 2.0 miles from their assigned school are eligible for an ORCA card. Exceptions are allowed for students who require specialized transportation services or who require medical transportation as approved by District Health Services.<sup>13</sup>

## **2.5. Non-Motorized Facilities**

Sidewalks exist along all streets in the site vicinity. Crosswalks and pedestrian crossing signals are present at all signalized intersections, and several unsignalized crosswalks are present on 15<sup>th</sup> Avenue NE, 12<sup>th</sup> Avenue NE, and Roosevelt Way NE. Due to ongoing construction of the Roosevelt Station, there are no pedestrian facilities currently available on the west side of 12<sup>th</sup> Avenue NE at the NE 66<sup>th</sup> Street intersection.

# **3. PARKING IMPACTS**

This section describes the estimated parking impacts resulting from continued on-site parking displacement by portable classrooms at Roosevelt High School. The six portable classrooms were placed in 2016 and 2017; SPS is planning for them to remain until Roosevelt's student enrollment aligns with its building capacity.

## **3.1. Typical School Days**

The portable classrooms on the Roosevelt High School site affects parking on a typical school day in two different ways:

1. On-site parking demand (generally staff and employees) is displaced due to the reduced number of spaces available and may spill over to on-street parking during periods when on-site parking demand exceeds the available capacity; and
2. The additional student enrollment accommodated by the portables may generate additional parking demand in the vicinity.

The potential impacts from each of these elements are discussed in the following sections.

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<sup>12</sup> Sound Transit, Roosevelt Station project information, <https://www.soundtransit.org/system-expansion/roosevelt-station>, Accessed April 2019.

<sup>13</sup> Seattle Public Schools, *Transportation Service Standards 2018-2019*, Effective September 1, 2018.



### **3.1.1. Potential Overspill from On-Site Parking Supply Reduction**

As discussed previously, the six portable classrooms currently occupy 43 spaces in the school's parking lot. This reduction in supply and its effect on nearby on-street parking is reflected in the existing parking surveys summarized previously in Table 1. There are 141 total parking spaces currently in the lot. Without the portables in place, the total would be 184.

The on-site parking survey results summarized previously in Table 2 show the highest on-site demand occurring in the afternoon, when an average of 124 parked vehicles were counted. The mid-morning demand was slightly lower at 117 parked vehicles. There were unused parking spaces available during both periods—24 in the morning and 17 in the afternoon. Since there are unused on-site parking spaces with the portables in place, it is unlikely that all of the parking spaces currently displaced would be fully utilized if they were available; however, it is expected that some vehicles currently parked on-street would shift to the parking lot if the portables were not in place. Assuming a similar on-site utilization as existing, it is estimated that about 36 to 39 school-generated vehicles that currently are parked on street would park on site during the school day without the portables in place. The summary in Table 2 shows over 100 unused parking spaces on typical evenings without special events; therefore, no on-street overspill is attributed to the portables on a typical evening. Evenings with larger events are addressed separately in Section 3.4.

### **3.1.2. Parking Demand from Increased Student Enrollment**

The additional student enrollment capacity that can be accommodated at Roosevelt High School with the installation of the portable classrooms may also generate additional parking demand. Comparison of demand counts conducted with and without school in session indicates a peak of 266 parked vehicles generated by the school (approximately 140 on street and 126 on site). At the time of the counts, student enrollment at Roosevelt High School was 1,913 students; this equates to a peak parking rate of 0.14 vehicles per student (this accounts for all parked vehicles, including those generated by students, faculty, staff and visitors). This reflects a reduction in the parking rate derived from a study conducted at the school in 2016 to support analysis conducted for the Lincoln High School Modernization Project,<sup>14</sup> which found a school-day parking demand rate of about 0.23 vehicles per student at that time.

To estimate parking demand rates for a typical (non-event evening), time-of-day distribution data published in the Institute of Transportation Engineers' (ITE) *Parking Generation Manual*<sup>15</sup> for High Schools (ITE Land Use Code 530) was applied to the school-day rate that was derived for Roosevelt High School. The ITE data indicate that the early evening parking rate (around 5:00 P.M.) is about 49% of the peak rate, or 0.07 vehicles per student. In the later evening (around 7:00 P.M.), the ITE data indicate that the parking rate is about 8% of the peak rate, or 0.01 vehicles per student.

These rates were applied to the added student enrollment capacity that can be accommodated by the portable classrooms. Table 3 summarizes the estimated parking demand generated by the students that can be accommodated by the portable classrooms at the site. The table shows that parking demand generated by the six portables currently located on the site (and thus reflected in the existing parking counts) is estimated to be 25 vehicles during the day, 13 vehicles during early evening, and 2 vehicles during later evening. Since the on-site parking counts (summarized in Table 2) indicate ample available space in the school parking lot during typical evenings, it is expected that the evening parking demand generated by the added student enrollment capacity primarily occurs on site.

<sup>14</sup> Heffron Transportation, August 22, 2016.

<sup>15</sup> ITE, 5<sup>th</sup> Edition, January 2019.

Table 3. Parking Demand from Additional Student Enrollment Capacity

Study Period	Parking Demand Rate (vehicles/student)	Parking Demand (vehicles) <sup>a</sup>
Mid-Morning (9:30 to 10:30 A.M.)	0.14	25
Mid-Afternoon (1:15 to 2:15 P.M.)	0.14	25
Early Evening (4:30 to 5:30 P.M.)	0.07	13
Later Evening (7:00 to 8:00 P.M.)	0.01	2

Source: Heffron Transportation, Inc., April 2019.

a. Estimated by applying the parking demand rate to the 180-student enrollment capacity that can be accommodated by the six portable classrooms.

### 3.1.3. Potential Parking Demand Generated by Pipeline Development

The project’s estimated spillover parking demand was analyzed cumulatively with projected spillover parking from other proposed development projects with overlapping parking influence areas (800-foot walking distance from each of the development sites). Twenty pipeline development projects were identified, summarized in Appendix B. They are estimated to generate parking demand within the Roosevelt High School parking study area of 54 vehicles during the day, and 86 vehicles in the evening. It is possible that not all of these projects will be completed and fully occupied during the period in which the portables are in place. In that case, the estimate of their cumulative impacts with the Roosevelt High School Portables project would be conservatively high.

### 3.1.4. Cumulative Parking Impacts

Table 4 summarizes the projected cumulative on-street parking utilization, with and without the portable classrooms at Roosevelt High School. For the purposes of evaluating the potential on-street parking impacts associated with new development, the City considers utilization rates of 85% or higher to be effectively full. During the daytime, the portables (including the additional student enrollment capacity that they accommodate) are estimated to contribute about 9% to on-street parking utilization, resulting in cumulative parking demand in the study area that is near capacity but does not exceed it. These current forecasts indicate utilization should remain below levels reflected in the parking analysis prepared for the code departure process undertaken in 2018 for the portables. In the evening, additional parking demand generated by the portables is not expected to typically contribute to on-street parking demand. However, if all evening vehicles generated by the additional student enrollment capacity were to park on street instead of on site, the estimated 13 vehicles during early evening and 2 vehicles during later evening would contribute 2% or less to on-street parking utilization during their respective time periods, and cumulative parking demand would remain below the 85% utilization level.

Table 4. Cumulative On-Street Parking Utilization – Without & With Portables

Study Period	On-Street Supply <sup>1</sup>	Without Portables		With Portables		
		Total Demand <sup>2</sup>	% Utilization	Added Demand <sup>3</sup>	Total Demand	% Utilization
Mid-Morning (9:30 to 10:30 A.M.)	700	511	73%	61	572	82%
Mid-Afternoon (1:15 to 2:15 P.M.)	687	475	69%	64	539	78%
Early Evening (4:30 to 5:30 P.M.)	646	438	68%	0	438	68%
Later Evening (7:00 to 8:00 P.M.)	700	492	70%	0	492	70%

Source: Heffron Transportation, Inc., April 2019.

1. Assumes 41 spaces that are currently unavailable due to construction of pipeline development projects are restored.
2. Baseline on-street parking demand was adjusted to include parking generated by pipeline development projects, as summarized in Appendix B, and excludes estimated parking demand generated by the six portables that are currently located in the school lot. Construction-generated on-street parking demand was assumed to continue at current levels.
3. Parking demand from the portables includes additional demand estimated to result from associated student enrollment increases, and overspill to the street resulting from reduced parking lot capacity.

It should be noted that the estimates presented in this report are likely conservatively high and intended to evaluate a ‘worst case’ cumulative parking scenario with the portable classrooms in place. As discussed previously, the analysis assumes completion and occupancy of numerous pipeline development projects with the portables also in place. It is possible that not all pipeline development projects will be completed and/or fully occupied while the portables are in use. Also, the parking demand estimated to be generated by the portables is based upon the additional student capacity that they can accommodate; if actual enrollment is less than the capacity, parking demand increases may be lower than the estimates provided in this analysis. It is also noted that the portables accommodate additional student enrollment demand that will occur with or without them. Nevertheless, the cumulative parking utilization estimates indicate that increased parking demand from new development, as well as the portables project, is expected to approach available on-street capacity in the area during the day.

### 3.2. Event Parking

It is acknowledged that on occasional evenings when there are multiple events or very large events (such as concerts, theater events, or curriculum night) occurring at Roosevelt High School, utilization of the on-site lot and surrounding roadways can be much higher than a typical non-event evening. SPS will not allow non-scholastic or recreational use (scheduled through Seattle Parks and Recreation) of the lighted athletic field until the portables are removed. After the portables are removed, SPS would not permit scheduling the lighted athletic field for non-scholastic uses on evenings with a large school event or combination of events that are expected to draw more than 730 attendees.<sup>16</sup>

<sup>16</sup> Condition defined as part of the SEPA and Master Use Permit process, SDCI Project No. 3029271-LU.

## 4. SUMMARY AND MANAGEMENT MEASURES

SPS proposes to retain six portable classrooms that were originally placed in 2016 and 2017. The portable classrooms are planned to remain in place until Roosevelt’s student enrollment level aligns with its building capacity.

For the purposes of evaluating the potential on-street parking impacts associated with new development, the City typically considers parking utilization over 85% to be effectively full. During the daytime, the portables (including the additional student enrollment capacity that they accommodate) are estimated to contribute about 9% to daytime on-street parking utilization, resulting in cumulative parking demand in the study area of 82%. No on-street overspill is attributed to the portables on a typical evening. However, if all evening vehicles generated by the additional student enrollment capacity were to park on street instead of on site, it would contribute up to 2% to on-street parking utilization on typical (non-event) evenings, and cumulative parking demand would remain below the 85% utilization level.

Compared to 2018 conditions, existing on-street supply reduced by up to 17% (depending on the time of day), due primarily to the NE 65<sup>th</sup> Street re-channelization project but also due to some additional parking lane closures adjacent to construction projects. However, overall parking occupancy also decreased by 6% to 17%, depending on the time of day. Overall, utilization is slightly higher compared to 2018—up to 4% during the day and up to 6% during the evening—but still below the City-defined capacity of 85%. Based upon the parking counts conducted in March 2019, school’s peak parking rate has decreased to 0.14 parked vehicles per student, compared to 0.23 parked vehicles per student calculated in 2016.

The analysis presented in this report is intended to provide a conservative “worst case” scenario, the cumulative parking utilization estimates indicate that the City’s recent on-street parking reductions (associated with the NE 65<sup>th</sup> Street bike lane improvements) combined with increased demand from new development, as well as that attributable to the portables, is expected to cause daytime utilization to approach available on-street parking capacity in the area. Continuation of the following measure identified to support the 2018 departure process is recommended.

- **Transportation Communication & Operation Plan** – Implement a school-wide information program that acknowledges the challenges of driving and parking, and encourages faculty, students, and staff to travel to and from school by walking, biking, carpooling, or taking transit. The *Transportation Communication & Operation Plan* prepared as a condition of the prior departure approval in 2018, including a graphic that illustrates parking restrictions in the Roosevelt area, is provided in Appendix C. This plan (or similar) and accompanying graphic should be updated at least annually, distributed to students, faculty and staff, and made available on the school’s web site. The count results in this report suggest that demand rates are down and may be a result of the effort associated with the 2018 departures approval and this plan.

In addition, as a condition of the Roosevelt High School field lighting project, SPS will not allow non-scholastic and recreational use of the lighted athletic field until the portables are removed.

## APPENDIX A

### PARKING SURVEY DATA











## APPENDIX B

# PIPELINE DEVELOPMENT - PARKING DEMAND

Project: Roosevelt HS Portables: Cumulative Parking Analysis

Project Location	MUP Number	Source	Development Program		Proposed Parking Supply	% Overspill in Roosevelt HS Influence Area <sup>a</sup>	Estimated Mid-day Parking Overspill			Estimated Overnight Parking Demand			
			residential dwelling units	non-residential uses			Demand	Overspill	Overspill to area	Demand	Overspill	Overspill to area	
6516 12th Avenue NE <sup>b</sup>	3022283	Heffron Transportation, Report dated May 25, 2016	201	du	1,600 sf retail	138	90%	90	8	7	101	12	11
6516 12th Avenue NE <sup>b</sup>	3026788	Heffron Transportation, Report Dated May 26, 2017	77	du	0	38	90%	17	0	0	26	0	0
6516 12th Avenue NE <sup>b</sup>	3021393	Gibson Traffic Consultants, report dated January 15, 2016	55	sedu	912 sf retail	0	85%	11	11	9	15	15	13
6516 12th Avenue NE <sup>b</sup>	3024696	Heffron Transportation, Report Dated May 26, 2017	165	du	5,855 sf retail	126	80%	54	0	0	73	0	0
6516 12th Avenue NE <sup>b</sup>	3013244	Heffron Transportation, Report Dated January 7, 2013	220	du	8,000 sf retail	267	80%	72	0	0	97	0	0
6516 12th Avenue NE <sup>b</sup>	3024695	Heffron Transportation, Report Dated May 26, 2017	131	du	4,294 sf retail	80	75%	38	0	0	50	0	0
6516 12th Avenue NE <sup>b</sup>	3025141	Heffron Transportation, Report Dated May 25, 2017	35	du	1,790 sf retail	7	65%	12	7	5	15	10	6
6516 12th Avenue NE <sup>b</sup>	3025139	Heffron Transportation, Report Dated May 25, 2017	52	sedu	1,060 sf retail	0	65%	9	9	6	14	14	9
6516 12th Avenue NE <sup>b</sup>	3022651	Transpo Group, Memorandum Dated August 16, 2016	105	du	3,091 sf retail	36	60%	29	2	2	44	17	11
6516 12th Avenue NE <sup>b</sup>	3028645	No report available. Heffron estimate based on SDCI project permit data	126	du	14,025 sf retail	61	40%	67	6	2	68	7	3
6516 12th Avenue NE <sup>b</sup>	3033337	No report available. Heffron estimate based on SDCI project permit data	94	du	0	39	35%	21	0	0	32	0	0
6516 12th Avenue NE <sup>b</sup>	3027716	B9 Architects, memorandum dated March 6, 2018	20	du	957 sf retail	0	30%	6	6	2	8	8	2
6516 12th Avenue NE <sup>b</sup>	6380722	No report available. Heffron estimate based on SDCI project permit data	178	sedu	0	0	25%	39	39	10	61	61	15
6516 12th Avenue NE <sup>b</sup>	3029012	William Popp Associates, report dated March 30, 2017	54	du	400 sf retail	1	25%	11	11	3	17	17	5
6516 12th Avenue NE <sup>b</sup>	3020120	Gibson Traffic Consultants, report dated August, 2017	28	sedu	0	0	20%	5	5	1	9	9	2
6516 12th Avenue NE <sup>b</sup>	3016208	Transportation Engineering Northwest, memorandum dated January 31, 2017	53	du	0	0	15%	11	11	2	14	14	2
6516 12th Avenue NE <sup>b</sup>	3023077	William Popp Associates, report dated June 6, 2016	78	du	0	0	15%	11	11	2	14	14	2
6516 12th Avenue NE <sup>b</sup>	3030467	Transpo Group, report dated June, 2016	79	du	0	0	15%	20	20	3	30	30	5
6516 12th Avenue NE <sup>b</sup>	0	Transpo Group, report dated September 20, 2016	289	du	0	238	10%	77	0	0	121	0	0
<b>6516 12th Avenue NE <sup>b</sup></b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>1031</b>	<b>0</b>	<b>600</b>	<b>146</b>	<b>54</b>	<b>809</b>	<b>228</b>	<b>86</b>

du = dwelling units, sedu = small efficiency dwelling units, sf = square feet

For data obtained from reports published prior to 2018, residential parking demand was reduced by 25% to reflect updates to the King County Right Size Parking Model released in 2018 using new data collected in 2017, which lowered residential parking rates within the study area compared to the previous version of the model.

a. Influence area measured 800 feet from project site.

## APPENDIX C

# TRANSPORTATION COMMUNICATION & OPERATION PLAN



## ROOSEVELT HIGH SCHOOL TRANSPORTATION COMMUNICATION AND OPERATION PLAN

Parking in the Roosevelt neighborhood is becoming increasingly constrained, as new development and transportation projects are adding parking demand and reducing on-street parking supply. The intent of this plan is to raise awareness of Roosevelt High School's challenges related to driving personal vehicles, encourage other means of traveling to and from school, and mitigate traffic and parking congestion by directing vehicular traffic in an orderly and organized manner.

### **PLEASE KEEP YOURSELF AND OTHERS SAFE!**

#### ***Follow these rules when you travel to and from school:***

**DO** ride the bus, walk, or bike to and from school whenever possible. Most students who live 2 miles or farther from school qualify for an Orca public transit pass. Please use private vehicles only as a last resort.

**DO** cross streets only at crosswalks and corners.

**DO** choose your bike routes along designated bicycle facilities and local residential streets to the greatest extent possible.

**DO** lock your bike when it is parked at school. Bike parking is provided at the west entrance to the commons and the southeast school entrance.

If you use a bike from a bike share program, **DO** park it in an area authorized by the City and the bike share program. **DO NOT** block sidewalks, curb ramps, fire hydrants, bus stops, bike lanes, or vehicle lanes.

#### ***If driving to school is absolutely necessary, then:***

**DO** carpool with other families or students whenever possible.

**DO** adhere to speed limits: 25 mph on arterial streets and 20 mph on local residential streets.

**DO** park only in legal public parking spaces.

**DO** maintain parking clearances required by City and State law:

- 5 feet from driveways
- 15 feet from fire hydrants
- 20 feet from crosswalks and intersections

**DO NOT** park in time-restricted parking spaces (see FIGURE 1) for a period longer than the posted time limit. All-day parking is prohibited in these spaces; it is illegal to move your vehicle from one time-restricted space to another in the same block.

**DO** consider dropping off or picking up students a block or more away from the school site during periods with higher traffic congestion near the school.

**DO** stay with your car at all times if you are waiting curbside for passengers outside of legal parking spaces.

**DO NOT** block travel lanes or driveways when waiting to pick up passengers. If there is no space available, **DO** circle around the block and pull into a space when it becomes available.

**DO NOT** use our neighbors' driveways to park or turn around.

**DO NOT** park or stop in the school bus loading zones during the posted restricted times (see FIGURE 1).

**DO NOT** drive the wrong way on the one-way streets (see FIGURE 1), even for a short distance.

If you violate parking laws, **DO NOT** be surprised if your vehicle is ticketed and possibly towed.

Please contact [NAME], [TITLE], with transportation questions or concerns by phone at [PHONE#] or by email at [EMAIL ADDRESS]

**FIGURE 1. ON-STREET PARKING AND TRAVEL LANE RESTRICTIONS**



**\*\*PARKING RESTRICTIONS REFLECT CONDITIONS AS OF MARCH 2019 BUT ARE SUBJECT TO CHANGE. ALWAYS CHECK POSTED SIGNAGE TO CONFIRM ON-STREET PARKING RESTRICTIONS.**