DATE: Nov. 13, 2020

TO: Recipients of the State Environmental Policy Act Determination of Nonsignificance (SEPA DNS) for Kimball Elementary School Replacement Project

FROM: Fred Podesta, SEPA official

Seattle Public Schools (SPS) has determined that the final SEPA environmental checklist dated November 2020, meets our environmental review needs for the current proposal to replace Kimball Elementary School on the same site. The proposal is partially funded by the Building Excellence V (BEX V) capital levy. Project construction is scheduled to begin in June 2021 and be ready for occupancy in the fall 2023. Students and staff would relocate during construction to the Original Van Asselt Elementary School.

After conducting an independent review, SPS has determined that the project does not have significant adverse impacts on the environment as documented in the checklist and the enclosed DNS.

The final SEPA checklist discusses the potential environmental impacts that could result from the construction of the project. A draft of the checklist was released for public comment from July 13, 2020 to Aug. 12, 2020. Comments received informed revisions to the final SEPA checklist on which the DNS is based. The responses to written comments received are summarized in the SEPA Public Comments and Seattle Public Schools Responses, included as Attachment 1 to the SEPA checklist.

Thank you for your participation in the SPS SEPA process. Your involvement has helped to make the Kimball Elementary School Replacement proposal a much better project.



WAC 197-11-970 Determination of Nonsignificance (DNS)

STATE ENVIRONMENTAL POLICY ACT **DETERMINATION OF NONSIGNIFICANCE (DNS)** KIMBALL ELEMENTARY SCHOOL REPLACEMENT PROJECT

Date of issuance:	Nov. 20, 2020
Lead agency:	Seattle Public Schools
Location of proposal:	Kimball Elementary School, 3200 23rd Ave. S, Seattle, WA
	(Section 16, Township 24N, Range 4E)

Description of proposal – Seattle Public Schools (SPS) is proposing to demolish and replace the existing 42,000 square foot Kimball Elementary School. The new school would be approximately 93,000 square feet and up to three stories tall in areas. The new building will include childcare and preschool programs as well as the elementary school. The historical capacity of the school has been 536 students; the new capacity will increase to 650 students. The proposal includes two parking lots for a total of 40 spaces. The parent drop-off area would remain in its current location along 24th Avenue S. The bus load and unload area would remain on South Hind Street. An electronic message board is proposed.

The lead agency for this proposal has determined that it will not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request at the following location: John Stanford Center, 2445 3rd Ave. S, Seattle, WA 98124-1165 (Attn: Paul Wight, Phone: 206-252-0648) and online at: http://www.seattleschools.org/sepa

This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal prior to Dec. 7, 2020 (at least 15 days from the issuance date listed above). This DNS may be appealed by written notice setting forth specific factual objections received no later than Dec. 7, 2020 (at least 15 days), sent to:

Superintendent Seattle Public Schools P.O. Box 34165, MS 32-151 Seattle, WA 98124-1165

Name of agency making threshold determination: Seattle Public Schools Responsible Official: Fred Podesta, Chief Operations Officer, Seattle Public Schools **Phone:** 206-252-0102 Address: MS 22-183, P.O. Box 34165, Seattle, WA 98124-1165

Date: <u>11/13/2020</u> Signature: <u>Jud Poblesto</u>



Kimball Elementary School Replacement Project SEPA Checklist

Seattle Public Schools is committed to making its online information accessible and usable to all people, regardless of ability or technology. Meeting web accessibility guidelines and standards is an ongoing process that we are consistently working to improve.

While Seattle Public Schools endeavors to only post documents optimized for accessibility, due to the nature and complexity of some documents, an accessible version of the document may not be available. In these limited circumstances, the district will provide equally effective alternate access.

For questions and more information about this document, please contact the following:

Paul Wight Project Manager pdwight@seattleschools.org

While the Kimball Elementary School Replacement Project State Environmental Policy Act (SEPA) Checklist is accessible and ADA compliant, the attached figures and appendices which support the checklist contain complex material that are not accessible. The following is a description of what is contained in the figures and appendices:

• Figure 1, Kimball Elementary School Project Area and Vicinity, Seattle, Washington Figure 1 is an aerial photograph of the Kimball Elementary School site including its surrounding neighborhood to approximately 600 feet in the four compass directions. The school site is outlined in red. There is an inset map showing where the site is located within the city of Seattle.

• Figure 2, Site Plan

Figure 2 is a civil drawing of the new school building, courtyards, play areas, parking, and landscaping. The site is oriented in a similar manor to existing conditions with the building entrance to the west from 23rd Ave South, the larger play area to the south, and staff and visitor parking on the north site of the site. The middle north portion of the site includes an "Exploration Zone" in the existing forested area. The figure shows a variety of landscape improvements.

• Figure 3a,b, Tree Removal and Protection Plan

Figures 3a and 3b are civil landscape drawings of trees that would be removed and those that would be protected as part of the school replacement. Figure 3a shows the south half of the project and 3b shows the north half of the project.

• Figure 4a,b,c, Tree Planting Plan

Figure 4a and 4b are a civil landscape drawing of the tree and landscape design around the new school building. Approximately 91 trees are proposed to be planted. Figure 4a shows the south half of the project and 4b shows the north half of the project, Figure 4c provides landscaping details.

• Appendix A: Arborist Report

Appendix A consists of a report titled, "Arborist Report", prepared by Tree Solutions Inc. dated February 19, 2020, and updated October 2020. The report provides a Summary, Assignment & Scope, and Observations, Discussion, and Recommendations. The report documents all regulated trees on site, and makes recommendations for retention. Attached to the end of the report is Appendix A - Assumptions & Limiting Conditions, Appendix B – Tree Protection Specifications, and the Table of Trees and map showing the locations of trees inventoried.

• Appendix B: Transportation Technical Report

Appendix B consists of a report titled, "Transportation Technical Report for Kimball Elementary School Replacement" prepared by Heffron Transportation, Inc. dated May 21, 2020. The report provides a project description; background conditions related to the transportation network, traffic volumes, parking, traffic safety, transit facilities and non-motorized facilities. The report addresses impacts of the proposed school replacement and concludes with recommendations. Attached to the end of the report are Appendix A – Level of Service Definitions, and Appendix B

– Parking Utilization Study Data. There are figures and tables throughout this document, including in the appendices, which graphically depict and organizes data to support the findings in the report.

• Appendix C: Building Height and Views

Appendix C consists of six slides that show existing and proposed building heights and views. Two slides are of existing views, one slide shows a sketch of the proposed school from 23rd Avenue South, and three slides show profiles of the proposed school building.

• Appendix D: Landmarks Board Determination

Appendix D consists of the Landmarks Board Determination letter August 6, 2020. The Landmarks Board determined that the school does not meet any of the six criteria for designation as a Seattle Landmark.

Kimball Elementary School Replacement Project

SEPA Checklist

SPS

November 2020

PREPARED FOR:

SEATTLE PUBLIC SCHOOLS 2445 THIRD AVENUE SOUTH SEATTLE, WA 98134

PREPARED BY:

ESA 5309 Shilshole Avenue NW, Ste. 200 Seattle, WA 98107

PREFACE

The purpose of this Final Environmental Checklist is to identify and evaluate probable environmental impacts that could result for the *Kimball Elementary School Replacement Project* and to identify measures to mitigate those impacts. The *Kimball Elementary School Replacement Project* would demolish the existing school and build an approximately 93,000 square foot school, with a capacity of 650 students.

The State Environmental Policy Act (SEPA) (Chapter 43.21C of the Revised Code of Washington) requires that all governmental agencies consider the environmental impacts of a proposal before the proposal is decided upon. A Draft SEPA Environmental Checklist was prepared on July 13, 2020 and included a public comment period from July 13 to August 12, 2020. This Final SEPA Environmental Checklist has been prepared in compliance with the State Environmental Policy Act; the SEPA Rules, effective April 4, 1984, as amended (Chapter 197-11 of the Washington Administrative Code); Seattle Public Schools SEPA Policy No. 6890; and the Seattle City Code (25.05), which implements SEPA.

This document is intended to serve as SEPA review for the *Kimball Elementary School Replacement Project*. Analysis associated with the proposed project contained in this Environmental Checklist is based upon the design plans for the project, which are on-file with Seattle Public Schools. The design plans accurately represent the school building as well as outdoor spaces and are considered adequate for analysis and disclosure of environmental impacts.

This Environmental Checklist is organized into three major sections. *Section A* of the Checklist (starting on page 1) provides background information concerning the *Proposed Action* (e.g., purpose, proponent/contact person, project description, project location, etc.). *Section B* (beginning on page 4) contains the analysis of environmental impacts that could result from implementation of the proposed project, based upon review of major environmental parameters. This section also identifies possible mitigation measures. *Section C* (page 34) contains the signature of the proponent, confirming the completeness of this checklist.

Attached to this Environmental Checklist is the Draft SEPA Checklist Comments and Responses. Appendices to this Environmental Checklist include: *Arborist Report* (Tree Solutions Inc., October 2020), *Transportation Technical Report* (Heffron Transportation, Inc., September 2020) and Building Heights and Views, and Landmarks Board Determination. Copies the appendices are available from Seattle Public Schools upon request at <u>SEPAComments@seattleschools.org</u> or calling 206-252-0990.

TABLE OF CONTENTS

TABLI	E OF C	ONTENTSa	
ENVIRONMENTAL CHECKLIST			
A.	BACK	GROUND	
B.	ENVIF	RONMENTAL ELEMENTS	
	1.	Earth	
	2.	Air	
	3.	Water	
	4.	Plants	
	5.	Animals	
	6.	Energy and Natural Resources	
	7.	Environmental Health	
	8.	Land and Shoreline Use	
	9.	Housing19	
	10.	Aesthetics	
	11.	Light and Glare	
	12.	Recreation	
	13.	Historic and Cultural Preservation	
	14.	Transportation	
	15.	Public Services	
	16.	Utilities	
C.	SIGNA	34 TURE	
REFERENCES			
FIGUR	RES		
Figure 1. Pro		Project Area and Vicinity	
Figure 2.		Site Plan	
Figures 3a,b.		Tree Removal and Protection Plan	
Figures 4a,b,c.		Tree Planting Plan	

APPENDIX A:	ARBORIST REPORT
APPENDIX B:	TRANSPORTATION TECHNICAL REPORT

APPENDIX C:	BUILDING HEIGHT AND VIEWS
APPENDIX D:	LANDMARKS BOARD DETERMINATION

ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of the proposed project, if applicable:

Kimball Elementary School Replacement Project

2. Name of Applicant:

Seattle Public Schools (SPS)

3. Address and phone number of applicant and contact person:

Paul Wight Seattle Public Schools 2445 3rd Ave S Seattle, WA 98134 206.252.0648

4. Date checklist prepared:

November 2020

5. Agency requesting checklist:

Seattle Public Schools (SPS)

6. **Proposed timing or schedule (including phasing, if applicable):**

Construction would begin in the June of 2021 and would be completed by the fall of 2023. The school would not remain open during construction; students and staff would attend Original Van Asselt Elementary School, in the Beacon Hill neighborhood, as the interim site for the 2021-2022 and 2022-2023 school year.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

There are no future additions, expansions or further activities related to or connected to this proposal.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- Building Excellence Phase (BEX) V Program Final Programmatic Environmental Impact Statement, ESA, June 2018
- Arborist Report, Tree Solutions Inc., October 2020

- Cultural Resources Kimball Elementary School Project, Cultural Resources Assessment, ESA, June 2020
- Geotechnical Report, Kimball Elementary School Replacement Project, Shannon & Wilson, October 2019a
- DRAFT Environmental Report, Kimball Elementary School Replacement Project, Shannon & Wilson, November 2019b
- Final Transportation Technical Report for Kimball Elementary School Replacement, Heffron Transportation, Inc., September 2020
- Draft Limited Hazardous Materials Survey Report. Seattle Public Schools Kimball Elementary School Replacement Project. EHSI, February 2020.
- Building Height/View Evaluation. NAC Architecture. October 2020.
 - 9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

There are no other applications known to be pending for the subject property.

10. List any governmental approvals or permits that will be needed for your proposal, if known:

Permits and approvals that will be needed for the project include:

- Puget Sound Clean Air Agency (PSCAA) permit
- Seattle Department of Construction and Inspections (SDCI)
 - Grading/Shoring Permit
 - Demolition Permit
 - Tree Removal Authorization
 - o Building Permit
 - o Mechanical Permits
 - Electrical and Fire Alarm Permits
 - o Drainage and Side Sewer Permit
 - Comprehensive Drainage Control Plan Approval
 - o Drainage Control Plan with Construction Best Management Practices,
 - o Erosion and Sediment Control Approval
 - Land Use Code Departure Approval (departures for building height, parking quantity, bike storage, and electronic message board)

- Relief from Prohibition on Steep Slope Erosion Hazard Area Development (Relief)
- Seattle Department of Transportation (SDOT)
 - Street Use and Construction Use Permit
 - Street Use and Utility Permit
- 11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

Seattle Public Schools (SPS) is proposing to demolish and replace the existing 42,000 square foot Kimball Elementary School. The replacement is partially funded by the BEX V Capital Levy. The replacement is intended to address current and projected elementary enrollment growth in the area, as well as to upgrade the quality of student learning environments. The historical capacity of the school is 536 students.

The new Kimball Elementary School would be approximately 93,000 square feet, with a capacity of 650 students with a total of 95 employees. There would be childcare and preschool programs as well as the elementary school. The new building would be three stories, with 2 preschool, 6 kindergarten, 6 first grade, 6 second grade, 6 third grade, 4 fourth grade, and 4 fifth grade classrooms, as well as a music classroom, an art classroom, and 2 self-contained special education rooms.

The eight existing portables on-site would be demolished.

The current school has parking for up to approximately 27 vehicles, and the new school would have 40. The parent drop-off area would remain it its current location, along 24th Avenue South. The bus load and unload area would remain in its existing location on South Hind Street.

An electronic changing double sided changing image message board, approximately 7 feet 4 inches wide by 4 feet tall (30 square feet) is proposed on 23rd Avenue South near Hanford Street. The proposed message board would not be illuminated internally (i.e., backlit) and would not be lit from outside lighting such as a ground-level spotlight shining onto the sign. The message board would use LED lights to display changing (but not flashing) messages which could be seen in day or night time but would not provide measurable illumination to the surrounding area. The message board would not be illuminated past 9 p.m.

During construction, the Original Van Asselt Elementary School would be used as an interim site for Kimball Elementary School students.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The project site is located at 3200 23rd Avenue South 98144 in Seattle, Washington (Section 16, Township 24 North, Range 4 East) as shown on Figure 1. The project site is located north of Jefferson Golf Course in the Beacon Hill neighborhood. The site is located on King County Parcel 162404-9006.

Figure 1 shows the project vicinity. Figure 2 shows the project area. Figure 3 shows the site plan.

B. ENVIRONMENTAL ELEMENTS

1. Earth

A geotechnical investigation was performed at the project site by Shannon & Wilson in August and September, 2019 (Shannon & Wilson, 2019a). The work included reviewing existing geologic literature for the property, conducting 14 soil borings on the project site and performing geologic studies to assess subsurface sediments and potential for groundwater on the project site. Information from this report is summarized in this section and incorporated throughout the SEPA Checklist, as appropriate.

a. General description of the site (underline):

Flat, rolling, hilly, steep slopes, mountainous, other _____

The site topography consists of two north-south-oriented terraces created by grading during the original development of the property. The site is generally flat on top of the terraces but slopes steeply from the western to the eastern terrace and from the eastern terrace to 24th Avenue South (Shannon & Wilson, 2019a).

b. What is the steepest slope on the site (approximate percent slope)?

The steepest slopes (approximately 40 percent) are in the middle and eastern edged of the site. The site topography consists of two north-south-oriented terraces created by grading during the original development of the property. These slopes meet the definitions as steep slope erosion hazard areas (40% average) in accordance with Seattle Municipal Code (SMC) Section 25.09.012 (City of Seattle, 2020). c. What general types of soils are found on the site (for example clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Soil conditions in the site vicinity are characterized by 1.5-16 feet of fill (loose to medium dense, gray-brown, silty sand and sandy, silty clay with gravel), underlain primarily with unweathered glacial till (dense to very dense silty gravel with sand and cobbles and silty clay with sand and gravel). Ice-contact deposits and weathered glacial till were also found (Shannon & Wilson, 2019).

d. Are there any surface indications or a history of unstable soils in the immediate vicinity? If so, describe.

Yes, steep slopes (40% average) are mapped on the site as well in in the vicinity. A large area of potential slide area (approximately 1.3 miles long) is mapped a few blocks to the east of the site. To the west of the site is a peat settlement prone area (City of Seattle, 2020).

e. Describe the purpose, type, total area, and approximate quantities of total affected area of any filling or grading proposed. Indicate source of fill.

Approximately 3,500 cubic yards would be excavated and 2,500 cubic yards would be exported off-site. Approximately 2,000 cubic yards of clean fill would be imported from a source approved by the City of Seattle.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Construction activities could cause temporary erosion on the site. Erosion potential would be reduced through an erosion control plan consistent with City of Seattle standards (SMC 22.800) and implementation of best management practices (BMPs).

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Approximately 43 percent of the site is currently covered with impervious surfaces. Small amounts of landscaping would be replaced with new impervious surface, but in other areas existing impervious surface would be removed and replaced with landscaping. After completion of the project, impervious surface coverage of the site would decrease to approximately 35 percent.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Temporary erosion and sedimentation control BMPs and construction water quality treatment measures would be installed to minimize erosion and to treat stormwater runoff during construction. BMPs specific to the site and project would be specified by SPS in the construction contract documents that the construction contractor would be required to implement. BMPs may include installation of a rock construction entrance, catch basin filters, interceptor swales, hay bales, sediment traps, and other appropriate cover measures.

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

During construction, there would be a small increase in exhaust emissions from construction vehicles and equipment and a temporary increase in fugitive dust due to earthwork for the project. The most noticeable increase in emissions and fugitive dust would occur during demolition and earthwork. Construction employee and equipment traffic to and from the site would also generate minor increases in exhaust emissions.

Diesel fumes from idling buses are known to present a health hazard to students and nearby residents. Adopting anti-idling policies has been demonstrated to reduce those impacts. SPS has an anti-idling policy for buses.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no off-site sources of emissions or odors that would affect the proposed project.

c. Proposed measures to reduce or control emissions or other impacts to air, if any.

The contractor chosen for the proposed project would be required to comply with applicable Puget Sound Clean Air Agency (PSCAA) regulations. Regulations that apply to the proposed project include Regulation I, Section 9.11 prohibiting the emission of air contaminants that would or could be injurious to human health, plant or animal life, or property; and Regulation I, Section 9.15 prohibiting the emission of fugitive dust, unless reasonable precautions are employed to minimize the emissions. To reduce fugitive dust emissions from construction vehicles leaving the site, the contractor may be required to establish dust control measures as appropriate. Streets would be regularly swept to remove dust and debris from construction vehicles.

To reduce the impacts of idling buses, SPS will implement its anti-idling policy. Neighbors who notice buses idling on-site can contact SPS Transportation at 206-252-0900.

3. Water

a. Surface Water:

1. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

There are no surface water bodies on or in the immediate vicinity of the site. Lake Washington is approximately 1 mile to the east of Kimball Elementary. The proposed project would have no impact on the lake.

2. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

The project would not require any work over, in, or adjacent to any surface water bodies.

3. Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

The proposed project would not require any work in or near surface water, and it would not place any amount of fill or dredge material in surface waters or associated wetlands.

4. Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities, if known.

The proposed project would not require any surface water withdrawals or diversions.

5. Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

The proposal is not located within a 100-year floodplain.

6. Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

The project would not involve the discharge of waste materials to any surface waters. All waste materials from the project, including grading spoils and demolition debris, would be transported off-site to appropriate disposal facilities.

b. Ground Water:

1. Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

> No groundwater would be withdrawn as part of the project and no water would be discharged to groundwater. The geotechnical subsurface exploration did not encounter groundwater during subsurface exploration. Groundwater is unlikely to be encountered during construction (Shannon & Wilson, 2020).

2. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste material would be discharged into the ground. The project site would not utilize septic tanks.

- c. Water Runoff (including stormwater)
 - 1. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The existing site runoff is collected in an underground storm drain system and conveyed to the City's combined sewer overflow (CSO) system. The stormwater requirements for discharging to the combined sewer include flow control and on-site stormwater management. The project would include onsite stormwater management facilities such as bioretention and pervious pavement as well as underground stormwater detention facilities to provide flow control to the Peak Control Standard per City of Seattle requirements.

2. Could waste materials enter ground or surface waters? If so, generally describe.

During construction, contamination could reach surface waters after entering the CSO system. Generally, this is limited to sedimentation loading from surface erosion. Measures to control contamination entering surface waters are discussed below in Section 3.d.

3. Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe

The project would not alter or otherwise affect drainage patterns in the vicinity of the site.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

During construction, BMPs would be implemented to ensure that sediment originating from disturbed soils would be retained within the limits of disturbance. BMPs may include installation of a rock construction entrance, catch basin filters, interceptor swales, hay bales, sediment traps, and other appropriate cover measures. BMPs specific to the site and project would be specified by SPS in the construction contract documents that the construction contractor would be required to implement.

4. Plants

a. Check the types of vegetation found on the site:

<u>_X_deciduous tree: alder, maple</u>, aspen, <u>other</u>

<u>X_evergreen tree: fir, cedar, pine, other</u>

<u> X </u>shrubs

<u>X</u>grass

____pasture

____crop or grain

_____ orchards, vineyards or other permanent crops.

_____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

____water plants: water lily, eelgrass, milfoil, other

____other types of vegetation

Vegetation on the site is limited to trees and to grass and landscaping associated with the school and its field. Tree Solutions, Inc. has prepared an Arborist Report (Appendix A). The tree inventory and assessment found 120 trees (105 of regulated size) on the school property (Tree Solutions Inc., 2020). The site has a wide range of species represented, including several native and non-native, non-invasive species. Native species include bigleaf maple (*Acer macrophyllum*), western red cedar (*Thuja plicata*), Pacific silver fir (*Abies amabilis*), and Lodgepole/shore pine (*Pinus contorta var. contorta*). Non-native species include Austrian black pine (*Pinus nigra*), incense cedar (*Calocedrus decurrens*), and European white birch (*Betula pendula*) (Tree Solutions, 2020).

Thirty-nine trees on site meet the City of Seattle's definition of an Exceptional Tree based on species and size thresholds and/or grove criteria (Tree Solutions, 2020). Twenty-seven of these trees are located in two separate exceptional groves. According to the Department of Construction and Inspection Director's Rule 16-2008, an Exceptional Tree is a tree that "1) is designated as a heritage tree by the City of Seattle or 2) is rare or exceptional by virtue of its size, species, condition, cultural/historic importance, age, and/or contribution as part of a grove of trees." The City defines an exceptional grove as eight or more trees each with a diameter measuring 12 inches or greater with continuously overlapping canopies. Both exceptional groves are within a steep slope Environmentally Critical Area.

b. What kind and amount of vegetation will be removed or altered?

Existing lawn, landscaping plantings, consisting of some trees, shrubs and groundcovers around the existing building would be removed. Sixty-one trees on site and one tree within the right-of-way are proposed for removal due to location, weed species, or health (Figures 3a and 3b). These include:

• Six exceptional trees (*Acer circinatum*, Acer macrophyllum, *llex aquifolium*, *Juniperus virginiana*, *Populus nigra 'Italica'*, and *Thuja occidentalis*) would be removed due to location within the improvement area. One of those, *llex aquifolium*, is also considered a weed of

concern. Seventeen non-exceptional trees would also be removed due to location within the improvement area.

- Fourteen European white birch (*Betula pendula*) (2 are dead and 9 are in poor or fair health), all are recommended for removal because of high pressure from bronze birch borer,
- Five are to be removed because of declining health (2 are also a weed of concern or a noxious weed),
- Two would be removed as they are a weed of concern or a noxious weed, and
- Eighteen smaller than 6 inches' caliper (not regulated under SMC 25.11) are to be removed due to health, weed species, or location.

c. List threatened or endangered species known to be on or near the site.

No threatened or endangered plant species or critical habitat are known to be on or near the site (WDFW, 2020; WDNR, 2020).

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Existing trees on the site that would be retained would be protected to the extent possible using tree protection measures outlined in the Arborist Report (Appendix A), including, but not limited to, use of tree protection fences, application of mulch and temporary irrigation. The grove areas would be retained and enhanced. SPS proposes to plant 91 new trees on-site (Figures 4a 4b and 4c). Non-native and invasive understory species will be cleared from within the exceptional tree groves. Arborist wood chips will be placed under trees to manage weeds and protect tree roots.

Additional landscaping would include new plantings at selected locations, planting of new street trees, new landscaping around the building.

e. List all noxious weeds and invasive species known to be on or near the site.

The site has three tree species that are listed as weeds of concern and one that is listed as a Non-regulated Class C Noxious Weed. The King County Noxious Weed Control Board recommends the control of weeds of concern and Non-regulated Class C Noxious weeds when possible. The following are found on-site:

• One exceptional English holly (*Ilex aquifolium*) - weed of concern

- Three European mountain ash (Sorbus aucuparia) weed of concern
- A number of English laurel (*Prunus laurocerasus*) trees and shrubs all below regulated size weed of concern
- Six common hawthorn (*Crataegus monogyna*) trees Non-regulated Class C Noxious Weed

No other noxious weeds or invasive species are known to be on or near the site. The next closest known noxious weed is absinth wormwood (*Artemisia absinthium*) approximately 440 feet to the southwest, giant hogweed (*Heracleum mantegazzianum*), tansy ragwort (*Senecio jacobaea*) approximately 500 feet to the east, and a group of giant hogweed approximately 700 to the north of the site (King County, 2020). The project would not affect, or be affected by, this noxious weed.

5. Animals

a. <u>List</u> any birds and <u>other</u> animals which have been observed on or near the site or are known to be on or near the site. Examples include:

Animals observed on the site are restricted to typical urban animals and birds.
Fish: not applicable
Amphibians: none known
Reptiles: none known
Birds: species adapted to urban areas such as gulls, American crow, rock pigeon, chickadee, robin, Steller's jay.
Mammals: species adapted to urban areas such as Norway rat, raccoon, opossum.

b. List any threatened or endangered species known to be on near the site.

The Washington State Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) database lists all known occurrences of threatened or endangered species and critical habitat. The database shows there are no threatened or endangered species or critical habitat in the project area (WDFW, 2020).

The proposed project is approximately 500 feet from Cheasty Greenspace which is mapped as a biodiversity area and corridor. Animals that use the Cheasty Greenspace are adapted to urban areas and would be accustomed to human activities and vehicular traffic.

c. Is the site part of a migration route? If so, explain.

The project site is located within the Pacific Flyway, which is a flight corridor for migrating waterfowl and other avian fauna. The Pacific Flyway extends from Alaska south to Mexico and South America. No portion of the proposed project would interfere with or alter the Pacific Flyway.

d. Proposed measures to preserve or enhance wildlife, if any.

The project is not expected to have any negative impacts on animals within or near the project site; therefore, no mitigation is required. Some birds and animals may be disturbed during construction, but would likely return following construction because they are adapted to urban areas.

e. List any invasive animal species known to be on or near the site.

Invasive animal species likely to be in the area include rats and opossums, typical of an urban area. SPS would comply with its policy and hire a contractor to implement pest control measures prior to any demolition.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electricity and geothermal would be required to operate the new building.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The school building would not block the use of solar energy by adjacent properties. No other aspect of the project would interfere with solar energy use by others.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Energy conservation features would include those required to meet or exceed the requirements of the Washington Sustainable Schools Protocol, which is equivalent to LEED Silver or better, and the Seattle Energy Code. Energy conservation features would include a centralized water-to-water heat pump, dedicated outdoor air system (DOAS) ventilation, heat recovery on DOAS system, high efficiency direct drive electronically controlled motor (ECM) fans, displacement ventilation, decoupled low temperature finned tube convectors, ceiling fans (to eliminate mechanical cooling), daylighting, light emitting diode (LED) lighting and plug load controls.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Accidental spills of hazardous materials from equipment and vehicles could occur during construction. However, a spill prevention and control plan would be developed to prevent the accidental release of contaminants into the environment.

1. Describe any known or possible contamination at the site from present or past uses.

According to the Department of Ecology Facility/Site(s) database, no known contaminated sites are located on the Kimball Elementary site (Ecology, 2020a, 2020b, 2020c). There are at least (4) known above ground fuel tanks according to the survey on the site that would be remediated and removed as part of the project. During soil investigations heavy oil was found, however, it appears to be localized to the immediate vicinity of one soil boring and within fill on the property (Shannon & Wilson, 2019b).

2. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

Hazardous materials, such as asbestos-containing material, leadcontaining paint/components, PCB light ballasts, and mercurycontaining light tubes are present on-site (EHSI, 2020).

3. Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Chemicals stored and used during construction would be limited to gasoline and other petroleum-based products required for maintenance and operation of construction equipment and vehicles.

During operation of the elementary school, chemicals stored and used on site would be limited to cleaning supplies. These chemicals would be stored in secured locations.

4. Describe special emergency services that might be required.

No special emergency services would be required.

5. Proposed measures to reduce or control environmental health hazards, if any:

Site-specific pollution prevention plans and spill prevention and control plans would be developed to prevent or minimize impacts from hazardous materials. Additionally, contaminated soil will be removed and a soil management plan developed (Shannon & Wilson, 2019b).

Where hazardous materials, such as asbestos-containing materials, lead-containing paint/components, PCB light ballasts, and mercurycontaining light tubes, are present, construction demolition would comply with applicable regulations for removal and disposal and the recommendations provided in the Limited Hazardous Materials Survey Report (EHSI, 2020).

b. Noise

1. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

There are no existing sources of noise in the area that would adversely affect the proposal. Kimball Elementary is approximately 1000 feet from both Beacon Avenue South and Martin Luther King Jr Way South which are arterials that generate substantial traffic noise that may be heard at the school.

2. What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Vehicle and equipment operation during construction could cause noise impacts to nearby residents. Construction activities including, grading, building demolition, construction of the new building, and drilling for the geothermal wells would be the primary sources of construction noise. Residential land uses (particularly those that are immediately adjacent to the site) would be the most sensitive noise receptors and could experience occasional noise-related impacts during the construction process.

Construction hours and noise levels would comply with the City of Seattle noise standards.

Maximum permissible sound levels in residential communities are not to exceed 55 A-weighted decibels (dB(A)s). However, construction activities are permitted to exceed the established maximum level by 25 dB(A) by the Seattle Noise Control Ordinance (SMC 25.08.425). Maximum permissible sound levels established in SMC 25.08.425 may be exceeded by construction activities between 7:00 a.m. and 10:00 p.m. on weekdays, and between the hours of 9:00 a.m. and 10:00 p.m. on weekends.

Expanded capacity at Kimball Elementary would cause a minor increase in sound from human voices and from cars in the immediate vicinity during daytime hours. If more evening events are held at the school, they would generate some additional noise as people arrive and depart the building. This increased noise is expected to be minor and no events would be scheduled to end past 10:00 p.m. Increases in noise would be short-term are not likely to violate noise regulations.

3. Proposed measures to reduce or control noise impacts, if any:

Construction activities would be restricted to hours and levels designated by SMC 25.08.425. If construction activities exceed permitted noise levels, SPS would instruct the contractor to implement measures to reduce noise impacts to comply with the Noise Control Ordinance, which could include additional muffling of equipment. While construction noise is permitted during evenings and weekends, construction would generally occur between 7:00 a.m. and 5:00 p.m. on weekdays. No nighttime construction is anticipated for this project.

The installation of approximately 86 geothermal wells would likely be the loudest noise generated during construction. The duration of this work is estimated to be three months, depending on weather. The noise associated with the drilling of the wells would be within local and state regulations. After construction, the site would continue to serve as a school and no significant changes in noise levels are anticipated over existing conditions. No additional mitigation would be required.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The Kimball Elementary site was first used as a school in approximately 1918. The existing one-story school building was constructed in 1969 and 1970. The site currently holds the school building, a paved play area, two wood-chip play areas, eight portables (including two double classroom portables and one restroom portable), and a parking lot.

The school is located in a predominantly single-family residential neighborhood that is primarily comprised of low-rise housing. The project would not affect current land uses. The site has historically been used as a school and would continue to be used as a school.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

The site is not currently and has not been previously used for working farmlands or working forest lands. No agricultural or forest land would be converted to other uses.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No working farm or forest lands are located near the proposed project, so the project would not affect or be affected by farm or forest land operations.

c. Describe any structures on the site.

Structures on the project site include the single story, 42,000 square foot school building, eight portables, and play equipment. The site also includes a parking lot on the northeast side of the site.

d. Will any structures be demolished? If so, what?

The existing school building, portables, parking lot, and hard surface play area would be demolished on site.

e. What is the current zoning classification of the site?

The current zoning classification of the school site is Single Family Residential, 5,000 square-foot lots (SF 5000) (City of Seattle, 2020). Public schools are permitted uses in this zone.

f. What is the current comprehensive plan designation of the site?

The current comprehensive plan designation for the site is Single Family Residential (City of Seattle, 2016).

g. If applicable, what is the current shoreline master program designation of the site?

The project site is not within a shoreline jurisdiction; therefore, there is no applicable shoreline master plan designation.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

There are steep slopes the run north south along the project site. These slopes meet the definitions as steep slope erosion hazard areas (40% average) in accordance with SMC 25.09.012 (City of Seattle, 2020).

i. Approximately how many people would reside or work in the completed project?

No people would reside in the completed project. The completed school would house up to 650 students with a staff of 80 full time and 15-part time. This represents an increase of approximately 215 students and 26 staff over January 2020 numbers. In January, the school had 439 enrolled students in grades kindergarten through 5, with 69 employees (59 full-time and 10 part-time). The historic school capacity is approximately 536 students.

j. Approximately how many people would the completed project displace?

The completed project would not displace any people.

k. Proposed measures to avoid or reduce displacement impacts, if any:

No displacement would occur; therefore, no mitigation measures are needed.

I. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The proposal is located on the existing school site, where it has provided education since 1960.

The project is consistent with existing land use regulations and plans. The Seattle Municipal Code contains development standards for public schools in residential zones in SMC 23.51B.002. The Seattle Land Use Code (Chapter 23.79) includes a procedure by which departures from the required development standards of the code can be granted for public school structures. The departure process requires SPS to apply to the Director of the Department of Construction and Inspections (DCI) for departures. The project would require departures for building height, parking quantity, bike storage, bike access path, and message board.

The zoning code acknowledges that schools have different requirements than residential buildings and may be permitted through the departures process. The project will meet all requirements established through the departures process. Requesting a departure does not mean the project has an adverse impact; departures are a way of minimizing the impact of public schools in residential neighborhoods. The project would not violate city codes and is complying with the zoning code through the departures process.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

The project is not located near any agricultural or forest lands, so no measures to ensure compatibility are required.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

No housing units would be provided as part of the project.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

No housing units would be eliminated.

c. Describe proposed measures to reduce or control housing impacts, if any.

The project would not cause housing impacts; therefore, mitigation measures to control housing impacts would not be required.

10. Aesthetics

a. What is the tallest height of any of the proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The highest point of the existing school building is, the gymnasium which is approximately 21 feet tall. The highest point of the new construction would be a mechanical penthouse with an elevator overrun at 58 feet located on top of the

new three story classroom portion of the building. The top of the elevator overrun would be 23 feet above the maximum allowable building height. The mechanical penthouse and elevator overrun would be setback from the edge of the building and its height would be obscured by the classroom building from the street. The classroom building would be 8 feet 4 inches above the maximum allowable building height. The new commons and gymnasium would be two stories tall, and situated lower on the slope than the classroom portion of the building. See Appendix C, which includes profiles and design drawings of the new school site.

The existing building is constructed with masonry, cast stone ornamentation, concrete, and painted wood windows. The new building exterior would be primary composed of masonry with metal panel accents as well as storefront and curtain wall system.

b. What views in the immediate vicinity would be altered or obstructed?

The City of Seattle protects public views of significant natural and human-made features from specified viewpoints, parks, scenic routes, and view corridors. The school site has views of Mt Rainier, the Cascade Range, and Lake Washington, none of which are protected. Views from private residences are not protected under the City of Seattle's Public View Protection policy (SMC 25.05.675.P).

The new building would be designed to be compatible with landscape and to retain as many existing trees as possible. The building would comply with setback regulations for construction in residential zones. The new school would be visible from all adjacent streets; and the classroom portion would be taller than the existing building. Due to the slope of the site from west to east the height change would be visible primarily from 23rd Avenue South and views to the east from private residents on 23rd Avenue South would change. Private residences would see a taller and newer structure. The existing groves which are located to the east of the tall classroom portion of the building would remain. The exceptional ponderosa pine in front of the school on 23rd Avenue South would also be retained. These trees currently obscure and would continue to obscure views to the east. The design includes new landscaping with 91 new trees on-site (Figures 4a 4b and 4c). See also Appendix C, which includes profiles and design drawings of the new school site.

The proposed message board would be located on the west side of the school and would be visible from 23rd Avenue South and from residences on the west side of 23rd Avenue South.

c. Proposed measures to control or reduce aesthetic impacts, if any:

The project would not cause aesthetic impacts; therefore, mitigation measures to control aesthetic impacts would not be required. The new buildings would comply with zoning requirements for schools in residential zones.

11. The school building has been designed to fit with the landscape of the site, and to preserve the character of the area. The majority of trees will be retained on-site including two exceptional tree groves. The groves are a row of primarily Austrian black pine and a few ponderosa pine trees that run from north to south along the center of the property. A staircase on the slope splits the row into the two groves. The design will include aesthetically pleasing landscaping and 91 new trees. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

An electronic changing image, double sided message board, approximately 7 feet 4 inches wide by 4 feet tall (30 square feet) is proposed on 23rd Avenue South near Hanford Street. It would be mounted approximately 8 inches off the ground. The sign would display messages in one color and would not flash. The proposed message board would not be illuminated internally (i.e., backlit) and would not be lit from outside lighting such as a ground-level spotlight shining onto the sign. The message board would use LED lights to display messages which could be seen in day or night time but would not provide measurable illumination to the surrounding area. The message board would only display messages between 7:00 a.m. and 7:00 p.m. except during special school events that take place later in the evening. On these specific nights the message board would not be illuminated past 9:00 p.m. The display would not cast light onto the surrounding area and would not create light or glare impacts.

All other lighting on the site would be similar to present conditions. However, as the school is larger there would be an increase in light during school hours. However, this would occur predominately during daylight hours and would not be visible from surrounding buildings. Exterior lighting would be needed for personnel and building safety. Building-mounted lights would likely be utilized to illuminate the building entrances and parking areas. Pole-mounted luminaries would be utilized for walkway and parking areas. New exterior site lighting would consist of warm-colored LED lights on full cut-off fixtures and would be located away from the property line, so new lighting would not impact adjacent properties.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Exterior building and property lighting from the completed project would not be a safety hazard and would not be expected to interfere with views.

c. What existing off-site sources of light or glare may affect your proposal?

No off-site sources of light or glare would affect this proposal.

d. Proposed measures to reduce or control light and glare impacts, if any:

It is anticipated that both exterior and interior lighting would be scheduled by a Building Automation system so that the site would be mostly dark at night. Evening activities and events could cause increased light, but impacts to adjacent uses are anticipated to be minor.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

Recreational opportunities on the project site currently include a paved play area, two wood-chip play areas, and an indoor gymnasium. The play area south of the buildings is approximately 40,900 square feet and the play area north of the buildings is approximately 6,900 square feet. The forested steep slope area between the buildings also is used for informal recreation. The nearest City of Seattle park, Jefferson Park, is located approximately 1,300 feet (0.25 miles) southwest of Kimball Elementary School.

b. Would the proposed project displace any existing recreational uses? If so, describe.

Existing play areas and two structures would be removed and replaced. During construction the facilities would not be available for use, however students would not be onsite during construction.

The site and landscape has been designed to provide outdoor learning experiences and inspire exploration. The new school would have two play structures for varying age groups, paved play areas, courtyards, a forest exploration zone, and a gymnasium. The play area south of the buildings would be approximately 35,600 square feet, the play area next to Pre-K would be approximately 4,800 square feet, and the open area between the buildings would be approximately 6,100 square feet. This totals an overall area of at least 46,500 square feet of play area, which is 1,300 square feet less than what is provided today. A covered play structure and turf play surface are also being considered within the area discussed here. Overall there would be an increased variety of new, safe play areas for students. The amount of open space on the site would change slightly, but the improvements would provide more usable, accessible recreation facilities.

c. Proposed measures to reduce or control impacts on recreation, including recreational opportunities to be provided by the project or applicant, if any:

The project would include upgraded recreational facilities, including a covered play structure, paved play area, a grass play area, a forest exploration zone, and new gymnasium.

13. Historic and Cultural Preservation

A Cultural Resources Review for the Kimball Elementary project was developed by ESA (ESA, 2020). Cultural resources reports are exempt from public disclosure under RCW 42.56.300, but a redacted version can be acquired from the Washington State Department of Archaeology and Historic Preservation (DAHP). Information from the review is summarized in this section.

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.

The Captain George W. Kimball Elementary School includes a brick building designed by architects Durham, Anderson & Freed, with a 1998 addition designed by architect Kubota Kato. Construction finished and the building opened in 1971, making the building 49 years of age. There are eight portables, likely from the Beacon Hill Annex, which predate the brick building. The school has not been recorded on an historic property inventory (HPI) form. The playground was evaluated for National Register of Historic Places (NRHP) eligibility in 2008 and was determined Not Eligible for listing. The School District coordinated with the Seattle Landmarks Preservation Board regarding the potential eligibility of Kimball Elementary as a Seattle Landmark, which uses a 25-year age threshold for eligibility; the School District prepared a nomination form for review by the Landmarks Board (Johnson Partnership, 2020).

The Landmarks Preservation Board meetings resumed July 1, 2020 online or by calling in. Refer to the Landmarks website for updates: https://www.seattle.gov/neighborhoods/programs-and-services/historic-preservation/landmarks#landmarkspreservationboard. The Landmarks Board determined that the school does not meet any of the six criteria for designation as a Seattle Landmark (Appendix D).

There are 34 primarily single-family buildings on adjacent parcels which are over 25 years in age, and therefore meet the minimum age threshold for consideration of their potential eligibility as Seattle Landmarks. They have not been fully inventoried and evaluated for their potential eligibility. Currently, none are listed in or have been recommended or determined eligible for listing in a historic register. The buildings are primarily single-family dwellings constructed in the 1910s and 1920s, or 1950s, with the earliest constructed in 1907. One house, 3300 24th Ave South, adjacent to the east side of the Project Area and built in 1921, has been recorded on DAHP's HPI form, but no determination of eligibility for the NRHP was made. The project does not propose direct impacts to any of these buildings.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

ESA conducted a literature review of the project area (ESA, 2020). No recorded archaeological sites, cemeteries, or traditional cultural properties are located within or adjacent to the subject parcel. The subject parcel is classified in the DAHP Statewide Predictive Model as "Moderate to Low Risk" for containing intact precontact-era cultural resources (DAHP, 2020). No subsurface cultural resources assessments have been conducted within the subject parcel. Historicera archaeological resources may be present in association with an 1890s road at the southeast corner, as well as the houses and school which stood on the parcel in the early to mid-20th century; however, ESA considers the subject parcel to be low risk for both precontact and historic-era subsurface archaeological resources due to past development of the site, which has included vegetation clearing, grading, building construction, and building demolition.

The subject parcel is located within the traditional territory of the Southern Coast Salish people. No published Indigenous place names were identified in or near the subject parcel, however this area lies within a mile of the shore of Lake Washington and has the potential for precontact-era use as a resource gathering location. There are no known precontact-era named places within or next to the subject parcel.

Historical maps and aerial photographs indicate this location was undeveloped until the early 20th century. When surveyed in 1862, no roads, trails, or buildings were mapped (U.S. Surveyor General, 1862). The subject parcel is within the 1871 Edward and Abigail Hanford land patent claim. In 1877, the land passed to Luther and Diana Collins, and in 1889, to the State of Washington (U.S. BLM, 2020). By the mid-1890s, a road had been built either adjacent to or crossing the southeast corner of the subject parcel, and the Seattle Renton & Southern Railway had been built, passing 0.3-mile northeast of the subject parcel, along the present alignment of Rainier Avenue (USGS, 1894). By 1909, some development had occurred (USGS, 1909). By 1912, the southern half of the subject parcel was subdivided into Beacon View and contained several houses while the northern half, owned by J. P. Manzey or Marzey, was largely undeveloped and contained only two wood-frame structures (Baist Map Company, 1912).

Prior to construction of the current Kimball Elementary, a six-room wood-frame "Liberty Building" school, named for Robert Fulton, stood in the northeast part of the subject parcel. It was built in 1918 to relieve overcrowding at the nearby York School. The school closed in 1922 and was demolished 1932 (Thompson and Marr, 2002). A 1936 aerial photograph shows the Project Area divided into two lots, with residential housing on the southern lot, some of which aligns with the footprints of wooden structures shown on the 1912 Baist map; the northern lot was still largely undeveloped at this time (NETROnline, 1936). It is likely that development of the current school has destroyed any possible buried historic refuse dumps or foundations associated with these houses.

For several years after the closing of the Fulton school the Seattle Parks Department leased the land for a playfield. In 1960, the Beacon Hill Annex school, made up entirely of portable classrooms, opened at the subject parcel. The school was renamed for Captain George W. Kimball in 1964. The present one-story brick building began construction in 1969/1970, and opened in 1971, though some portable classrooms continued to be used. During this time, the southern portion of the subject parcel was transformed from residential to a playfield for the school. An addition to the school, housing four new classrooms, was built in 1998 (Thompson and Marr, 2002). No major changes to the school appear to have occurred since that time.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

ESA conducted a literature review of the project area (ESA, 2020). The literature review study area examined the subject parcel containing the school and those immediately adjacent. Information reviewed included any previous archaeological survey reports, published ethnographies, historical maps,
government landowner records, aerial photographs, regional histories, geological maps, soils surveys, and environmental reports.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

No impacts to historic or cultural resources are anticipated. SPS will develop an inadvertent discovery plan (IDP) for project construction. The IDP will set forth procedures and protocols to follow if cultural resources are discovered, including discovery of human remains. The IDP stipulates pre-construction briefings and on-call response if required. SPS would provide tribal representatives, including those of the Duwamish Tribe, with one-week advance notification of the project schedule and invite them to observe construction. Based on the results of the cultural resources literature review, no archaeological monitoring is recommended during project construction.

14. Transportation

A *Transportation Technical Report* for the project was developed by Heffron Transportation, Inc. (Heffron, 2020; Appendix B). Information from the technical report is summarized in this section.

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The school site is bounded by 23rd Avenue South to the west, 24th Avenue South to the east, South Hanford Street to the north, and South Hinds Street to the south. The existing school has one primary building located on the western portion of the site. There are eight small buildings located along the eastern portion of the site. An unstriped surface parking lot with capacity about 27 parking spaces is located on the northeast corner of the site with an access driveway on South Hanford Street. There is a hard-surface play area on the southern portion of the site. There are on-street load/unload zones on S Hinds Street (for school buses) and 24th Avenue South (for passenger vehicles). The project site location and vicinity are shown on Figure 1.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

King County Metro Transit (Metro) provides bus service in the site vicinity. The closest bus stops are located about 1,650 feet (0.3 mile) west of the site on Beacon Avenue South, with northbound and southbound stops located just north of S Hanford Street. These stops are served by Metro Route 36, which

provides all-day service seven days per week between Downtown Seattle, First Hill, and the Beacon Hill and Rainier Beach neighborhoods. On weekdays, the route operates from about 5:00 A.M. to 12:30 A.M. with headways (time between consecutive buses) of seven to 15 minutes. The route also provides service to two Link Light Rail stations, Othello and Mt Baker. The Mt Baker light rail station is located a half mile to the east of the site via South Hanford Street using a staircase, or just over a half mile using an accessible route via McClellan Street and 23rd Avenue South.

In January 2017, King County Metro adopted 'Metro Connects, the 25-year vision plan that will serve as the guiding policy framework for future improvements to the transit network. The plan identifies continued, frequent service on the same or a re-numbered route in the study area in 2025, with potential for a Rapid Ride route by 2040; no changes are expected to be in place by 2023 when the school replacement project would be complete.

School bus transportation is made available to Kimball Elementary School students who qualify for transportation. The existing school is served by two full-size school buses and two smaller Special Education (SPED) buses.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

The project would remove an existing unstriped surface parking lot with capacity for up to approximately 27 vehicles located on the northeast corner of the site with an access driveway on S Hanford Street. The project would construct a new 27-space surface parking lot on the northeast corner of the site with one access driveway at S Hanford Street at approximately the same location as the existing driveway; a second 13-space surface parking lot would be provided on the northwest corner with an access driveway at S Hanford Street.

The new parking lots would increase the number of parking spaces by approximately 13 spaces.

Based on parking demand estimates, the proposed school replacement project is estimated to increase peak parking demand by about 25 to 32 vehicles. Onstreet parking within the site vicinity averages 40% occupied during the school day, with about 330 unused spaces. The additional on-site capacity and available on-street capacity could easily accommodate the additional staff or volunteer parking demand that may be added due to the increased school size. Secure parking for 52 bicycles would be provided near the northwest corner of the building and within the building, and a total of 38 short-term bicycle spaces would be provided at the northwest and southeast corners of the site.

Kimball Elementary School would continue to host events periodically throughout the school year. The school currently holds 1 to 2 events per month with about 100 participants, and 3 to 4 evening meetings per month with 10 to 20 participants. The project is not expected to increase the frequency of these events, but with larger enrollment, these events could draw proportionately larger attendances. The on-street parking survey results indicated 250 to 350 available on-street parking spaces in the school vicinity (including on one evening when a school event was held). Additionally, parking for up to 16 vehicles could be accommodated on the play area surface. It is expected that the 56 on-site spaces (40 permanent spaces plus 16 event-only) combined with on-street capacity would accommodate typical evening events.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

The proposal would not require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities. Frontage improvements would be made along all four site frontages (along 23rd Avenue South, South Hanford Street, 24th Avenue South, and South Horton Street) consisting of sidewalk improvements, landscaping, and provision of ADA curb ramps at intersections. No additional changes to the surrounding roadway network are proposed.

The site design, including both pedestrian and vehicle access, is highly constrained by the topography of the site and the presence of mature trees. A 27-space surface parking lot is planned on the northeast corner of the site with one access driveway at South Hanford Street at approximately the same location as the existing driveway; a second 13-space surface parking lot would be provided on the northwest corner with an access driveway at South Hanford Street. The lots would not connect internally. The school-bus load/unload zone adjacent to the school on South Hinds Street and the passenger-car load/unload zone adjacent to the school on 24th Avenue South would remain. No increase in the number of school buses (currently consisting of two regular buses and two SPED buses) is expected with the project. The proposed lot on the northwest corner of the site, with access from South Hanford Street, would be used for the pick-up/drop-off of pre-K and daycare.

The additional traffic and pedestrian activity generated by the proposed increase in enrollment capacity is expected to add some delay (average 2

seconds per vehicle or less) to the study area intersections and turning movements during both the morning and afternoon peak hours. However, the study area intersections would continue to operate at the same overall levels of service as without-project conditions, with all movements operating at LOS C or better, which is an acceptable level of service. No improvements would be needed to accommodate the school replacement project.

The increased enrollment capacity is expected to generate some additional pedestrian trips within the site vicinity. It is anticipated that the largest increases in pedestrian activity would occur along S Hanford Street and 24th Avenue South adjacent to the school.

There may also be a small increase in bicycle trips within the site vicinity due to the proposed project, in proportion with the increased enrollment. Frontage improvements completed with the project would enhance the pedestrian and bicycle environment at the school site.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The project would not use or occur in the immediate vicinity of water, or air transportation. The Mount Baker light rail station is located a half mile to the east of the site via S Hanford Street using a staircase, or just over a half mile using an accessible route via McClellan Street and 23rd Avenue South.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

The traffic analysis conducted for this SEPA Checklist reflected conditions with the school replacement that would increase enrollment capacity up to 650 students, an increase of approximately 215 students compared to the existing school enrollment.

Based on the data collected in January 2020, the school currently generates an estimated 0.71 trips per student in the morning peak hour and 0.47 trips per student in the afternoon peak hour. These rates are similar to the average rates published for Elementary Schools (Land Use 520) in the Trip Generation Manual (0.67 trips per student in the morning peak hour and 0.34 trips per student in the afternoon peak hour) and are consistent with rates derived from counts at other Seattle elementary schools. Since these rates were derived specifically for the existing school, they are most appropriate for use in evaluating future conditions with the new school and its added enrollment capacity.

The derived rates were applied to the proposed new enrollment capacity at Kimball Elementary (650 students). These estimates include school bus trips, employee trips, and family-vehicle trips. No change to the number of school buses is anticipated as a result of the school replacement project. The school replacement project is expected to increase trip generation at the site by 150 trips (82 in, 68 out) in the morning peak hour and by 102 trips (48 in, 54 out) in the afternoon peak hour.

For more information about the anticipated school traffic generation, refer to Appendix B – Transportation Technical Report (Heffron Transportation, Inc., 2020).

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

There are no agricultural or forest product uses in the immediate site vicinity and the project would not interfere with, affect or be affected by the movement of agricultural or forest products.

h. Proposed measures to reduce or control transportation impacts, if any:

The construction effort would include demolition of the existing school, plus site work that would consist of excavation and fill for foundations and grading. Demolition of the building is expected to require that about 50 truckloads of material be hauled away from the site (50 trucks in and 50 trucks out). Demolition is expected to occur over a one- to two-week period. This equates to an average of about 20 truck trips per day (10 trips in, 10 trips out) and 2 to 3 trips per hour during building demolition. The project is estimated to require removal of about 2,500 cubic yards (cy) of material from the site and import of about 2,000 cy of structural fill for a total transport amount of about 4,500 cy. Assuming an average expansion factor of 25% and truck capacity of 20-cubic yards (truck/trailer combination), the excavation and fill would generate about 280 total truckloads (280 trucks in and 280 trucks out). The earthwork activities are expected to occur in June 2021. If earthwork activities occur over eight weeks, this would correspond to an average of about 14 truck trips per day (7 in, 7 out) and 1 to 2 truck trips per hour during the earthwork transport. These volumes of truck traffic may be noticeable to residents living adjacent to the site, but would not result in significant impacts to traffic operations in the site vicinity.

The construction of the project would also generate employee and equipment trips to and from the site. It is anticipated that construction workers would arrive at the construction site before the AM peak traffic period on local area streets and depart the site prior to the PM peak period; construction work shifts for schools are usually from 7:00 A.M. to 3:30 P.M., with workers arriving between 6:30 and 6:45 A.M., but work not starting until 7:00 A.M. The number of workers at the project site at any one time would vary depending upon the construction element being implemented. There would be no school-related vehicular trips or parking demand during construction as the students would be at an off-site location during construction. Temporary construction activities are not expected to result in significant impacts to study-area traffic or parking conditions.

The following construction and completed project measures will be implemented as part of the proposal to reduce the traffic and parking impacts associated with the project.

- A. Construction Transportation Management Plan (CTMP): SPS will require the selected contractor to develop a Construction Transportation Management Plan (CTMP) that addresses traffic and pedestrian control during construction. It would define truck routes, lane closures, walkway closures, and parking or load/unload area disruptions, as necessary. To the extent possible, the CTMP would direct trucks along the shortest route to arterials and away from residential streets to avoid unnecessary conflicts with resident and pedestrian activity. The CTMP may also include measures to keep adjacent streets clean on a daily basis at the truck exit points (such as street sweeping or on-site truck wheel cleaning) to reduce tracking dirt offsite.
- B. Transportation Management Plan (TMP): Prior to the school reopening, SPS and the school principal will establish a Transportation Management Plan (TMP) to educate families about the preferred access and circulation for the new school layout. The effort will encourage supervised walking (such as walking school buses), carpooling, and school bus ridership for those eligible. The plan will define clear procedures and travel routes and preferred load/unload locations.
- C. Engage Seattle School Safety Committee: The District will engage with the Seattle School Safety Committee (led by SDOT) to review walk routes and determine if any changes should be made to crosswalk locations, signage, pavement markings, school zone speed limits, or crossing guard locations.
- D. Develop Neighborhood Communication Plan for School Events. The District and school administration will develop a neighborhood communication plan to inform nearby neighbors of events each year. The plan will be updated annually (or as events are scheduled) and

provide information about the dates, times, and rough magnitude of attendance. The communication is intended to allow neighbors to plan for the occasional increase in on-street parking demand that would occur with large events.

E. **Update right-of-way and curb-side signage:** The District will work with SDOT to confirm the locations, extent, and signage of school-bus and passenger-vehicle load/unload zones adjacent to the school site.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

The proposed project would add attendance to the facility, but is not anticipated to require additional public services above those already needed for operation.

b. Proposed measures to reduce or control direct impacts on public services, if any.

An increased need for public services is not anticipated; therefore, mitigation to reduce impacts to public services is not proposed.

16. Utilities

a. Underline utilities currently available at the site:

<u>Electricity</u>, <u>natural gas</u>, <u>water</u>, <u>refuse service</u>, <u>telephone</u>, <u>sanitary sewer</u>, septic system, <u>other</u>

In addition to those utilities indicated above, cable and internet services are also available at the site.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Electricity, telephone, and water, sewer, cable, and internet would continue to be provided to the school. SPS would work with Seattle City Light, Puget Sound Energy, and its telephone provider to coordinate the extension of utilities to the additions, if needed.

The contractor would coordinate with utility purveyors to locate all existing utilities prior to proceeding with construction activity. Any active underground pipes encountered would be protected. Should undocumented piping or other utilities be encountered, the utility purveyor would be immediately contacted prior to resuming construction activity near the utility. Storm drains would be maintained and protected as catch basins.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:	Paul Wight
Name of signee:	Paul Wight
Position and Agency/Organization:	Seattle Public Schools Project Manager
Date Submitted:	11/20/2020

REFERENCES

- Baist Map Company. 1912. Surveys of Seattle. Baist Map Company, Seattle. On file, Seattle Public Library.
- City of Seattle. 2016. Seattle 2035 Comprehensive Plan: Managing Growth to Become an Equitable and Sustainable City (2015 2035). November 2016.
- City of Seattle. 2020. Seattle Department of Construction & Inspections GIS. Accessed March 2, 2020. Available at: <u>http://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=f822b2c6498c4163b0</u> cf908e2241e9c2.
- Department of Archaeology and Historic Preservation (DAHP). 2010. Statewide Predictive Model. Last updated 2010. Electronic document, http://www.dahp.wa.gov/, accessed March 3, 2020.
- Department of Archaeology and Historic Preservation (DAHP). 2020. Washington Information System for Architectural and Archaeological Records Data (WISAARD). Secure database, http://www.dahp.wa.gov/, accessed March 3, 2020.
- EHSI. 2020. DRAFT Limited Hazardous Materials Survey Report. Seattle Public Schools Kimball Elementary School Replacement Project. August, 2020. Prepared for Seattle Public Schools.
- Environmental Science Associates (ESA). 2020. Kimball Elementary School Project, Cultural Resources Assessment, Seattle, King County, Washington. June 23, 2020.
- Heffron Transportation, Inc. (Heffron). 2020. Transportation Technical Report for Kimball Elementary School. Prepared for Seattle Public Schools. September 2020.
- Johnson Partnership. 2020. Kimball Elementary School City of Seattle Landmark Nomination Report. Prepared for Seattle School District by The Johnson Partnership. On file, Seattle School District.
- King County. 2020. Review of the *King County iMap*, accessed March 2020, available at <u>http://gismaps.kingcounty.gov/iMap</u>.
- King County LiDAR. 2020. King County LiDAR Swipe. Electronic document, https://www5.kingcounty.gov/lidar/, accessed March 3, 2020.
- Kopper, Robert, Charles Hodges, Christian Miss, Johonna Shea, and Alecia Spooner. 2016. Archaeology of King County, Washington: A Context Statement for Native American Archaeological Resources. Prepared for King County Historic Preservation Program by SWCA Environmental Consultants, Seattle. On file, Washington State Department of Archaeology and Historic Preservation, Olympia.

- Natural Resources Conservation Service (NRCS). 2018. Alderwood Soil Series. Electronic document, https://soilseries.sc.egov.usda.gov/OSD_Docs/A/ALDERWOOD.html, accessed March 3, 2020.
- Natural Resources Conservation Service (NRCS). 2020. Web Soil Survey: Urban land- Alderwood Complex. Electronic document, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, accessed March 3, 2020.
- NETROnline. 1936. Aerial Coverage. Available at www.HistoricAerials.com, accessed March 3, 2020.
- Seattle Public Schools (SPS). 2018. Building Excellence (BEX) Phase V Capital Improvement Program Final Programmatic Environmental Impact Statement. June 2018. Prepared by ESA.
- Shannon & Wilson. 2019a. Geotechnical Report, Kimball Elementary School Replacement Project, Prepared for Seattle Public Schools, October 2019.
- Shannon & Wilson. 2019b. DRAFT Environmental Report, Kimball Elementary School Replacement Project, Prepared for Seattle Public Schools, November 2019.
- Thompson, Nile, and Carolyn J. Marr. 2002. *Building for Learning, Seattle Public School Histories, 1862-2000.* Seattle School District.

Tree Solutions, Inc. 2020. Arborist Report. September 2020. Prepared for Seattle Public Schools.

- Troost, Kathy Goetz, Derek B. Booth, Aaron P. Wisher, and Scott A. Shimel. 2005. *The Geologic Map of Seattle—A Progress Report*. Open-File Report 2005-1252. U.S. Department of the Interior, U.S. Geological Survey, Reston, Virginia.
- U.S. Bureau of Land Management (U.S. BLM). 2020. General Land Office (GLO) Records: Federal Land Patents. Electronic document, https://glorecords.blm.gov/, accessed March 3, 2020.
- U.S. Geological Survey (USGS). 1894. *Seattle, WA, 15' Series Quadrangle*. Electronic document, https://ngmdb.usgs.gov/ht-bin/tv_browse.pl?id=af72c9e20f12040cc13c792da17ea048, accessed March 3, 2020.
- U.S. Geological Survey (USGS). 1909. *Seattle, WA, 15' Series Quadrangle*. Electronic document, https://ngmdb.usgs.gov/ht-bin/tv_browse.pl?id=ef79d49f7e1821cb3a36f70666a2d9fc, accessed March 3, 2020.
- U.S. Surveyor General. 1862. Township 24 North, Range 4 East Survey Map. Electronic document, https://www.blm.gov/or/landrecords/survey/yPlatView1_2.php?path=PWA&name=t240n040e_ 001.jpg, accessed March 3, 2020.
- Washington State Department of Ecology (Ecology). 2020a. Facility/Site Search. Accessed March 2, 2020. Available at: <u>https://apps.ecology.wa.gov/facilitysite/MapData/MapSearch.aspx</u>.

- Washington State Department of Ecology (Ecology). 2020b. Welcome to Cleanup Site Search. Accessed August 12, 2020. Available at: <u>https://apps.ecology.wa.gov/gsp/sitesearchpage.aspx</u>.
- Washington State Department of Ecology (Ecology). 2020c. Dirt Alert (Tacoma Smelter Plume map search tool). Accessed August 12, 2020. Available at: <u>https://apps.ecology.wa.gov/dirtalert/</u>.
- Washington Department of Natural Resources. 2020. Washington Natural Heritage Program Element Occurrences – Current. Accessed March 2, 2020. Available at: <u>https://datawadnr.opendata.arcgis.com/datasets/washington-natural-heritage-program-elementoccurrences-current?geometry=-122.615%2C47.510%2C-121.803%2C47.672.</u>
- Washington Department of Fish and Wildlife (WDFW). 2020. *Priority Habitats and Species (PHS) on the Web*, March 2, 2020, at <u>http://wdfw.wa.gov/mapping/phs/</u>.

ATTACHMENT 1: DRAFT SEPA CHECKLIST COMMENTS AND RESPONSES

ATTACHMENT 1: DRAFT SEPA CHECKLIST COMMENTS AND RESPONSES

Kimball Elementary School Replacement Project

SEPA Public Comments and Seattle Public Schools Responses

SEPA regulations recommend that public comments on draft Checklists be considered and responded to but provides flexibility in how the comments are presented. The comment period on the Draft SEPA Checklist for the Kimball Elementary School Project was from July 13 – August 12, 2020. Seven (7) individual comment letters, emails, or postcards were received from the six (6) individuals listed below.

- 1. Chris Jackins (mail and fax)
- 2. Mona Kogita
- 3. Sophie Ramsey
- 4. Saskia Schmidt
- 5. Kristina Veirs
- 6. Lynda Wong

For efficiency, the comments have been summarized and similar comments have been grouped together and responded to below. Following each comment, the numbers in brackets refer to the commenter number (above) who submitted a similar comment. Any person interested in reading the individual comments may contact SPS for access to them. 1. <u>Determination of Significance (DS)/EIS Preparation.</u> Project has significant adverse environmental impacts. Further detailed environmental review should be provided through an Environmental Impact Statement (EIS). [Commenters Jackins, Kogita, Ramsey, Schmidt, Veirs, Wong]

The SPS SEPA Responsible Official is reviewing the revised SEPA Checklist and taking all comments received on the Draft SEPA Checklist into consideration in making a determination of the significance of impacts from the Kimball Elementary School project.

2. <u>Future notification.</u> I want to be added to the list for future notification related to the project. [Commenters Kogita, Ramsey, Schmidt]

SPS will provide future notifications to all parties who live within a two-block radius of the project, and to those who have requested to be included on future notifications.

3. <u>Inadequate Comment period and Public Notice.</u> Comment period was too short and should be extended until COVID restrictions are lifted. The community was not provided adequate notice regarding the SEPA Checklist. [Commenter Jackins]

As is standard practice, SPS mailed postcards to all residences within a two-block radius of the school. The cards were mailed on July 2, 2020 and Kimball Elementary School was identified on the top of the notice. In addition, notice of the Draft SEPA Checklist was published in the Daily Journal of Commerce (DJC) on July 13 and August 5, 2020. This is the District's standard protocol for project and document release notification. The comment period was July 13 - August 12, 2020. SPS conducts a 30-day comment period on draft SEPA Checklists and incorporates comments into a Final Checklist and Determination. The issuance of a Draft Checklist for public comment is not a SEPA requirement and is conducted by SPS in good faith to solicit public input. COVID-related closures and distancing requirements are not believed to have impacted the review and commenting process. All documents are available online or mailed from SPS upon request.

4. <u>No Public Meeting.</u> SPS has held public meetings for other similar projects. Why was no public meeting held? [Commenter Jackins]

Public meetings are not a requirement for SEPA environmental review under WAC 197-11. The public will be given another opportunity to comment as part of the City Master Use Permit process for this project. Post cards will be sent to residences within a two block radius.

5. <u>Reproduce Public Comments.</u> The Final Checklist should include copies of public comments received. [Commenter Jackins]

Publication of comments received are not a requirement under SEPA procedures for a Determination of Non-significance (WAC 197-11-340). As stated above, SPS has summarized the comments for efficiency and included a list of commenters. Comments are identified by commenter name herein, in each summarized comment and response. Access to the individual public comments can be obtained by contacting SPS at SEPAComments@seattleschools.org or calling 206-252-0990.

6. <u>Air.</u> Diesel fumes from idling busses would be a health hazard to students and nearby residents. [Commenter Jackins]

Diesel fumes from idling buses are known to present a health hazard to students and nearby residents. Adopting anti-idling policies has been demonstrated to reduce those impacts. SPS has an anti-idling policy for buses, which will apply to this project.

7. <u>Plants</u>. Important trees and plants are at risk from the project. Will more trees be planted to replaced trees that would be removed? [Commenters Jackins, Wong]

The school was designed to avoid impacts to exceptional trees and groves to the extent practicable. Sixty-two trees (including one off-site), are proposed for removal due to health, weed status, or location including 18 smaller than 6 inches' caliper that are not regulated under SMC 25.11. Six of the trees proposed for removal are exceptional trees. These trees will be replaced in accordance with SMC 25.11.090. The grove areas would be retained and enhanced. SPS proposes to plant 91 new trees on-site. Non-native and invasive understory species will be cleared from within the exceptional tree groves.

8. <u>Noise</u>. Noise is a probable significant impact, as construction noise would exceed maximum noise levels. [Commenters Jackins, Wong]

Construction hours and noise levels would comply with the City of Seattle Noise Control Ordinance (SMC 25.08.425). Construction activities are permitted to exceed the established maximum level by 25 dB(A) between 7:00 a.m. and 10:00 p.m. on weekdays, and between the hours of 9:00 a.m. and 10:00 p.m. on weekends.

9. <u>Land Use</u>. The proposed project would not meet City zoning codes, including building height. [Commenter Jackins]

Zoning and departures are discussed in Section B.8 of the SEPA Checklist.

The City of Seattle does not have a zoning designation for public facilities such as schools. Therefore, most schools in Seattle are in residential-zoned areas. However, the zoning code acknowledges that schools have different requirements than residential buildings and may be permitted through the departures process. The project will meet all requirements established through the departures process. Requesting a departure does not mean the project has an adverse impact; departures are a way of minimizing the impact of public schools in residential neighborhoods. The project would not violate city codes and is complying with the zoning code through the departures process.

10. <u>Land Use</u>. The increase capacity of the school and increased size of the building including increased height would create a "mega-school impact." [Commenter Jackins]

The Board of Directors for Seattle Public Schools, in conjunction with the Superintendent, makes decisions about issues such as school capacity based on projected enrollment. The Board's decisions regarding school capacity are not a SEPA issue. A departure will be required for building height. Departures are a way of minimizing the impact of public schools in residential neighborhoods and are granted in accordance with the prescribed zoning code process (see also response to Comment 9).

11. <u>Aesthetics/views</u>. Blocked views would be a probable significant impact. [Commenter Jackins]

Under SMC 25.05.675P, public views of Mount Rainer, the Olympic and Cascade Mountains, the downtown skyline, Puget Sound, Lake Washington, Lake Union and the Ship Canal are protected from specific public viewpoints, parks, scenic routes and view corridors. Views of these features from the school site or other locations, such as private residences, are not protected under SEPA. Changes to a person's view from his or her home would not be a significant impact under SEPA.

The new school would be visible from all adjacent streets; and the classroom portion would be taller than the existing building. Due to the slope of the site from west to east the height change would be visible primarily from 23rd Avenue South and views to the east from private residents on 23rd Avenue South would change. Private residences would see a taller and newer structure. The existing groves which are located to the east of the tall classroom portion of the building would remain. The majority of trees will be retained on-site including two exceptional tree groves. The groves are a row of primarily Austrian black pine and a few ponderosa pine trees that runs from north to south along the center of the property. A staircase on the slope splits the row into the two groves. The exceptional ponderosa pine in front of the school on 23rd Avenue South would also be retained. These trees currently obscure and would continue to obscure views to the east.

The school building has been designed with an aesthetic design, to fit with the landscape of the site, and to preserve the character of the area. The design includes new landscaping with 91 new trees on-site (Figures 4a 4b and 4c). See also Appendix D, which includes profiles and design drawings of the new school site.

12. <u>Aesthetics</u>. The proposed electronic message board would result in light pollution and would be a significant impact. Please provide more information regarding the sign. [Commenters Jackins, Veirs, Wong]

The proposed electronic changing image, double sided message board is proposed to be placed at 23rd Avenue South near Hanford Street. The reader board sign would be designed to complement the overall school design. It would be approximately 7 feet 4 inches wide by 4 feet tall (30 square feet) mounted approximately 8 inches off the ground. The sign would display messaged in one color and would not flash. It would not be illuminated internally (i.e., backlit) and would not be lit from outside lighting, such as a ground-level spotlight shining onto the sign. The message board would use LED lights to display messages which could be seen in day or night time but would not provide measurable illumination to the surrounding area. The message board would only display messages between 7:00 a.m. and 7:00 p.m. except during special school events that take place later in the evening. On these specific nights the message board would not be illuminated past 9:00 p.m. The display would not cast light onto the surrounding area and would not create significant light or glare impacts.

The project will require a departure for signage. Requesting a departure does not mean the project has an adverse impact; departures are a way of minimizing the impact of public schools in residential neighborhoods (see also response to Comment 9). The sign would not result in significant impacts.

13. <u>Recreation.</u> Clarify if there is a loss of playground and open space. The amount of existing playground and open space is provided but the future areas are not. [Commenter Jackins]

The size of the recreation areas under existing conditions have been corrected and proposed conditions added to the Checklist. The area of existing recreation is approximately 47,800 square feet, including the informal play area on the forested steep slope. The size of the recreation spaces for the proposed project is approximately 46,500 square feet. The amount of area available for recreation would be approximately 1,300 square feet less than what is currently provided. A covered play structure and turf play surface are also being considered within the area discussed here. Overall there would be an increased variety of new, safe play areas for students. The amount of open space on the site would change slightly, but the improvements would provide more usable, accessible recreation facilities.

14. <u>Recreation.</u> Will the playground still be available to the public after construction? [Commenter Wong]

Yes, the playground will continue to be open to the public after construction.

15. <u>Archaeological Resources</u>. The Checklist does not fully disclose potential historic and cultural impacts. Families will have connections to the school and this history is important to preserve. A redacted version of the cultural resources assessment should be included as an appendix to the Checklist. With the landmarks board meetings on hold there is no opportunity for the public to provide input. [Commenter Jackins]

The school is 49 years old and has not been recorded on an historic property inventory (HPI) form. The Seattle Landmarks Preservation Board uses a 25-year age threshold for eligibility as a Seattle Landmark. SPS prepared a nomination form and presented it to the Landmarks Board on August 5, 2020 and the nomination was denied (Appendix C).

The Landmarks Preservation Board meetings resumed July 1, 2020 online or by calling in. Refer to the Landmarks website for updates: <u>https://www.seattle.gov/neighborhoods/programs-and-services/historic-</u> preservation/landmarks#landmarkspreservationboard.

Cultural resources assessment reports for SPS projects are uploaded to the Department of Archaeology and Historic Preservation's (DAHP's) Washington Information System for Architectural and Archaeological Database (WISAARD), the state's on-line repository for architectural and archaeological data. Tribal Historic Preservation Offices, Tribal Cultural Resources Specialists, and other WISAARD users authorized by DAHP are able to access and download these records at no cost.

16. <u>Transportation - Vehicle Parking.</u> The parking proposed does not meet City code requirements and would result in parking impacts, particularly nearest the school. [Commenters Jackins, Veirs, Wong]

SPS seeks a departure from City code parking requirements, as noted in Section A.10 of the SEPA Checklist. See also response to comment 9. As described in Section 3.c, with the replacement school at its planned enrollment capacity of 650 students (212 more than current) and up to 26 added employees, the project is expected to generate 25 to

32 additional parked vehicles during the school day. The project would increase on-site parking supply by 13 spaces, for a total of 40 spaces. It is acknowledged that school-generated parked vehicles may be more concentrated in the areas nearest the school. However, on-street parking surveys completed for the project found that on-street parking within an 800-foot walking distance of the site averages 40% occupied, with about 330 unused spaces. The City of Seattle considers on-street parking as a public resource available to all users. The additional on-site capacity and available on-street capacity could easily accommodate the additional staff or volunteer parking that may be added due to the increased school size.

As discussed in Section 3.4, of the *Transportation Technical Report*, (Appendix B in the Checklist) the proposed project would not increase the frequency of events, but with a larger enrollment, events could draw proportionally larger attendance. The report also notes that the on-street parking surveys indicated 250 to 350 unused parking spaces in the vicinity of the school during the evening, including an evening when a school event was held. Additionally, parking for up to 16 vehicles could be accommodated on the hard-surface play area. It is expected that 56 on-site spaces (40 permanent spaces plus 16 event-only spaces) combined with the available on-street capacity would accommodate typical evening events. See also B.14.h in the SEPA Checklist.

17. <u>Transportation - Bicycle Parking.</u> The project would not meet City codes for bicycle parking, and bicycle access. Accommodations for bicycles should be a higher priority. [Commenters Jackins, Veirs, Wong]

SPS seeks a departure from City code bike storage requirements, as noted in Section A.10 of the SEPA Checklist. See also response to comment 9. However, the project would provide 52 covered, secure on-site bicycle parking spaces, and bike racks with capacity for 38 bicycles. As described in Section 2.2.1 of the *Transportation Technical Report*, (Appendix B of the Checklist) peak bicycle usage at the existing school is 3 to 6 staff members; little to no regular bicycle usage by elementary school students has been observed. As described in Section 3.7, with the larger school the peak bicycle usage is expected to increase to 5 to 10 staff members. The proposed bicycle parking supply is expected to accommodate the estimated peak bicycle parking demand, with capacity available to accommodate additional occasional bike riders.

18. <u>Transportation - Construction Traffic.</u> Commenters had concerned about traffic impact during construction. Can neighbors have more input into how traffic is managed during construction? [Commenters Jackins, Wong]

As discussed in Section 3.8.1 of the *Transportation Technical Report*, constructiongenerated traffic is expected to average 2 to 3 trips per hour during building demolition, and 1 to 2 trips per hour during earthwork transport. As noted in the report, while this volume of truck traffic may be noticeable to nearby residents, it would not result in significant impacts to traffic. It is not expected that project construction would cause traffic to be rerouted from 23rd Avenue S. Mitigation includes development of a Construction Transportation Management Plan (CTMP) to address traffic and pedestrian control during construction of the new facility, described in Section 4.3 of the *Transportation Technical Report*. It would define truck routes, lane closures, walkway closures, and parking or load/unload area disruptions, as necessary. To the extent possible, the CTMP would direct trucks along the shortest route to arterials and away from residential streets to avoid unnecessary conflicts with resident and pedestrian activity. SPS would continue to communicate with and be available to the public to discuss areas of concern, including regarding construction transportation. During construction there would be no students onsite, so all trips and parking associated with the school would be diverted to an off-site location.

19. <u>Transportation - Pedestrian Traffic.</u> Pedestrians will be impacted by traffic on 23rd Avenue South. [Commenters Wong]

As discussed in Section 2.7 of the *Transportation Technical Report*, most roadways in the study area, including 23rd Avenue South, have sidewalks on both sides; the South Hanford Street / 23rd Avenue South intersection has crosswalks with pedestrian signals on all four legs. Before and after school, there are crossing guards at the South Hanford Street / 23rd Avenue South intersection. The sidewalk system in the vicinity of the school is adequate to accommodate pedestrians, with or without the project. One of the recommendations in the *Transportation Technical Report*, and mitigation measures provided in the SEPA checklist (B.14.h) is that SPS will engage with the Seattle School Safety Committee (led by SDOT) to review walk routes and determine if any changes should be made to crosswalk locations, signage, pavement markings, school zone speed limits, or crossing guard locations.

20. <u>Transportation - Operational Traffic.</u> The larger school enrollment would increase delay at nearby intersections. How would traffic on 24th Avenue South, a "cut-through" street be managed? Can neighbors have input on how traffic would be managed? [Commenters Jackins, Veirs, Wong]

As described in Section 3.3.1 of the *Transportation Technical Report*, although additional traffic generated by the school operating at its proposed enrollment capacity is expected add delay to intersections near the school during the morning arrival and afternoon dismissal periods, the increases would be very small (2 seconds per vehicle or less). All surrounding study-area intersections are forecast continue operating at level of service (LOS) C or better with the project, which is an acceptable level of operation in the City of Seattle. The added school traffic generation would not cause significant traffic impacts.

As discussed in Section 3.2.2 of the *Transportation Technical Report*, the project would not change the locations for student load/unload activities compared to the existing school. School-bus load/unload would continue to occur on South Hinds Street and passenger-vehicle load/unload would continue to occur on 24th Avenue South. It is acknowledged that with passenger vehicle load/unload occurring on 24th Avenue South, vehicle volumes are higher on this street during the school's morning arrival and afternoon dismissal periods. As noted in the report, the topographic constraints of the site, combined with the prohibition of parking or stopping along the site frontages on South Hanford Street and 23rd Avenue South and designation of South Hinds Street for bus loading, discourage passenger vehicle loading from occurring on streets other than 24th Avenue South. The traffic analysis completed for the project, and described above, reflects the expected increases in traffic on 24th Avenue South.

One of the recommendations in the *Transportation Technical Report* and mitigation measures provided in the SEPA checklist (B.14.h), is that SPS and school principal establish a Transportation Management Plan (TMP) to educate parents and students about the preferred access and circulation. The effort should encourage supervised walking (such as walking school buses), carpooling, and school bus ridership for those eligible. The plan should define clear procedures and travel routes and preferred load/unload locations. At some schools, the Principal has invited surrounding neighbors to participate in the TMP process by soliciting suggestions related to school-traffic management. SPS would continue to communicate with and be available to the public to discuss areas of concern, including regarding traffic management.

21. <u>Transportation - Student Loading.</u> The project would not meet City zoning codes bus loading. Is 23rd Avenue South the best location for bus loading, there already is traffic issues twice daily due to congestion. There is no plan for student drop-off and pick-up. [Commenters Jackins, Veirs, Wong]

As discussed in Section 3.2.2 of the *Transportation Technical Report*, the project would not change school bus loading from existing conditions, and will continue to occur on South Hinds Street. No school-bus load/unload is proposed for 23rd Avenue South. Per Seattle Municipal Code 23.51B.002.I.4, because the proposal would replace the school at the same site, the site would not be expanded, the location of the existing on-street school-bus load/unload zone would remain the same, and the student capacity would not be expanded by more than 25% (historical enrollment was at least 524 students), a departure from the City code is not required.

The project would not change passenger vehicle loading for the school, which would continue to occur on 24th Avenue South. The lot on the northwest corner with access from South Hanford Street would be used for the pick-up/drop-off of pre-K and daycare. As noted in the report, the topographic constraints of the site, combined with the prohibition of parking or stopping along the site frontages on South Hanford Street and 23rd Avenue South, and designation of South Hinds Street for bus loading, discourage passenger vehicle loading from occurring on any street other than 24th Avenue South. The traffic analysis completed for the project, which found that project-generated traffic would not change the overall levels of service at study area intersections, reflects the expected increases in trips related to student drop-off and pick-up.

One of the recommendations in the *Transportation Technical Report* and mitigation measures provided in the SEPA checklist (B.14.h), is that SPS and school principal establish a Transportation Management Plan (TMP) to educate parents and students about the preferred access and circulation. The effort should encourage supervised walking (such as walking school buses), carpooling, and school bus ridership for those eligible. The plan should define clear procedures and travel routes and preferred load/unload locations.

22. <u>Corrections and omissions</u>. A few corrections were made to the text of the SEPA Checklist to correct inaccuracies and omissions.

Section B.4.a. the word "exceptional" was added to before grove.

Section B.7.a.1 and the reference section has been modified to include additional references for potential site contamination.

Section B.12.a & b. the size of areas provided for existing recreation space were those for the proposed project. The size of areas for existing recreation has been corrected and the size of recreation in the proposed project has been added.

FIGURES



SOURCE: ESA 2020

Figure 1 Project Area and Vicinity of the Kimball Elementary School Project







EXISTING TREE TO REMAIN AND TO RECEIVE

TREE PROTECTION NOTES

- 1. SEE ARBORIST REPORT FOR TREE LABELS. INVENTORY AND ASSESSMENT OF EXISTING
- TREES. DESIGNATED TREES FOR REMOVAL HAVE BEEN EVALUATED BY THE ARBORIST. 2.
- PROVIDE PROTECTION OF EXISTING TREES TO REMAIN INCLUDING, BUT NOT LIMITED TO, ARBORIST OVERSIGHT, PROTECTION FENCING AT OUTER CRITICAL ROOT ZONE, ARBORIST 3. CHIP MULCH OVER ALL ROOT ZONES, AND SPECIAL PROTECTION MEASURES WITHIN ROOT ZONES THROUGHOUT PROJECT.
- PROVIDE PROTECTION OF EXISTING TREES TO REMAIN IN THE RIGHT-OF-WAY PER CITY OF SEATTLE REQUIREMENTS.

TREE NUMBER LEGEND

949-E-L

EXISTING TREE NUMBER AS TAGGED BY ARBORIST -

EXCEPTIONAL TREE AS DEFINED BY THE CITY OF SEATTLE

REMOVAL CODE ________ BEPE = EUROPEAN WHITE BIRCH D = TREE IS DEAD H = HEALTH AND/OR STRUCTURAL CONDITION L = LOCATION NR = NOT REGULATED W = CLASSIFIED AS WEED



REVISIONS

Figure 3a. Tree Removal Plan - South



TREE PROTECTION NOTES

- SEE ARBORIST REPORT FOR TREE LABELS, 1. INVENTORY AND ASSESSMENT OF EXISTING
- 2.
- INVENTORY AND ASSESSMENT OF EXISTING TREES.
 DESIGNATED TREES FOR REMOVAL HAVE BEEN EVALUATED BY THE ARBORIST.
 PROVIDE PROTECTION OF EXISTING TREES TO REMAIN INCLUDING, BUT NOT LIMITED TO, ARBORIST OVERSIGHT, PROTECTION FENCING AT OUTER CRITICAL ROOT ZONE, ARBORIST CHIP MULCH OVER ALL ROOT ZONES, AND SPECIAL PROTECTION MEASURES WITHIN ROOT ZONES THROUGHOUT PROJECT.
 PROVIDE PROTECTION OF EXISTING TREES TO REMAIN IN THE RIGHT-OF-WAY PER CITY OF SEATLE REQUIREMENTS. 3.
- 4 SEATTLE REQUIREMENTS.

TREE NUMBER LEGEND

949-E-L EXISTING TREE NUMBER AS TAGGED BY ARBORIST

EXCEPTIONAL TREE AS DEFINED BY THE CITY OF SEATTLE

REMOVAL CODE BEPE = EUROPEAN WHITE BIRCH D = TREE IS DEAD H = HEALTH AND/OR STRUCTURAL CONDITION L = LOCATION NR = NOT REGULATED W = CLASSIFIED AS WEED





REVISIONS

Figure 3b. Tree Removal Plan - North



HINDS

1

TOT

0





PLANTING PLAN LEGEND





PINE GROVE RESTORATION AREA, SEE SOILS PLAN

ARBORIST CHIP MULCH

PLANTING PLAN NOTES

- 1. SEE L4.02 FOR GENERAL PLANTING NOTES.
- PROVIDE 6' DIAMETER MULCH RING AT ALL TREES PLANTED IN LAWN.
- 3. EROSION CONTROL MEASURES MAY BE REQUIRED FOR ALL SLOPES GREATER THAN 3:1.

BUILDING PERMIT

OSBORN CONSULTING

SEATTLE PUBLIC SCHOOLS KIMBALL ELEMENTARY SCHOOL 2002280 We S South, M. 19914

NIC NO 121-19024 DOMAN LB DAGOD KK KK 10-12-2020

PLANTING PLAN -NORTH

L4.01

190.00



ΝΛΟ ARCHITECTUR 2025 PRST AMENAU | SUITE 3 SEATTLE WAS 06121 P.205.441.4522

NIC NO 121-19024 DOWN LB, CT eces KK NI 10-12-2020

PLANTING DETAILS, NOTES AND SCHEDULE

L4.02

INTERNET AND REPLACED FORST, THEN SHRUBS AND THEN GROUNDCOURSE, TREES SHALL BE STACED OR QUYED PER DETAILS WITHIN 24 HOURS OF INSTALLTON. THEE TRUNS SHALL BE LOCATED NO CLOSER THAN 15 FROM BUILDING WALLS, SHRUBS SHALL BE LOCATED SO THAN 1 AT MATURITY THERE WALL BE A MINIMUM STELENAT OS DUMONG WALL.

BUILDING PERMIT

OSBORN CONSULTING
APPENDIX A: ARBORIST REPORT



Project No. TS - 6962

Arborist Report

TO:	Seattle Public Schools c/o Paul Wight
SITE:	Kimball Elementary, 3200 23 rd Ave S. Seattle, WA 98144
RE:	Kimball Elementary School Redevelopment
DATE:	November 8, 2019; Amended October 14, 2020
PROJECT TEAM:	Sean Dugan, ISA Certified Arborist #PN-5459B Registered Consulting Arborist 457 ISA Qualified Tree Risk Assessor
	Andrea Starbird, Environmental Scientist
	Katherine Taylor, ISA Certified Arborist #PN-8022A ISA Qualified Tree Risk Assessor
ATTACHED:	Table of Trees, Annotated Survey with Tree Numbers
REFERENCED:	Kimball Elementary School, 100% Design Development, NAC Architecture 8/14/2020 & Kimball Elementary School, 50% Permit Drawings, NAC Architecture 8/12/2020

Summary

Tree Solutions inventoried and assessed 120 trees on the Kimball Elementary School site as required for development projects by the city of Seattle.¹ Of the trees assessed, 39 meet the exceptional tree criteria outlined in the Seattle Director's Rule 16-2008.² Twenty-seven of these trees are located in two separate exceptional groves. The City defines an exceptional grove as eight or more trees each with a diameter at standard height (DSH) measuring 12-inches or greater with continuously overlapping canopies.

Fifteen trees inventoried are below regulated size but were assessed in order to make recommendations about tree protection and retention across the site.

Assignment & Scope of Report

This report outlines the site inspections by Sean Dugan and Andrea Starbird, of Tree Solutions Inc, on October 9, 2019, and February 12, 2020. Included are observations and data collected at the site located at 3200 23rd Ave S. Seattle, WA 98144.

We were asked to document and evaluate all regulated trees on the site and identify any exceptional trees, as defined by Seattle Director's Rule 16-2008, as well as collect data for several smaller non-regulated trees in order to make recommendations about their retention. We were asked to produce an

¹ SMC 25.11

² Sugimura, D.W. "DPD Director's Rule 16-2008". Seattle, WA, 2009

Arborist Report outlining our findings. Paul Wight of Seattle Public Schools requested these services to acquire information for project planning.

On-site trees were assigned a numerical identifier and were physically tagged. The numbers shown on the annotated survey correspond with the physical tags on-site. The off-site tree was assigned an alphabetical identifier for the purpose of this report but was not tagged.

Observations, Discussion, and Recommendations

<u>Site</u>

These 208,276 square foot site fronts 23rd Ave South in Seattle. Elementary school buildings and play areas currently exist on-site. According to the Seattle Department of Construction and Inspections (SDCI) GIS map, portions of this site are listed as steep slope environmentally critical areas (ECAs)(Figure 1).

During our site inspection on February 12, 2020, we observed heavily saturated soils along the eastern slope, and pooling water on the sidewalk adjacent to 24th Ave S.

<u>Trees</u>

Specific details about each on-site tree, including size and health condition, are listed in the attached tree table.

On-site trees

Of the trees tagged, 105 were of regulated size and 15 trees were below regulated size. There are an additional seven trees noted on the survey, all of which are below regulated size; these trees were not included in our inventory. Most of the trees on-site were in good health and structural condition.

Thirty-nine of the 105 regulated trees met the exceptional tree criteria as outlined in the Seattle Director's Rule 16-2008.³ Twelve of these trees were exceptional by size, 22 of these trees were exceptional due to their location in an exceptional grove, and five of these trees were exceptional both due to their size and location within a grove. Five exceptional trees were in fair health and structural condition (909, 956, 970, 979, & 989), and the remaining 34 exceptional trees were in good health and structural condition.

Trees 933 and 939 are exceptional lodgepole pine (*Pinus contorta* var. *latifolia*) trees, with DSH of 14.2 and 13 inches, respectively. Both trees are in good health and structural condition.

Trees 942 and 956 are both exceptional native willow (*Salix* spp.) trees, with DSH of 23.1 and 12 inches, respectively. Tree 942 is in good health and structural condition, whereas tree 956 is in fair health and structural condition.

We identified two exceptional groves on-site. A row of primarily Austrian black pine (*Pinus nigra*) and a few ponderosa pine (*Pinus ponderosa*) trees runs from north to south along the center of this property along a slope. A staircase on the slope splits the row into two sections. The northern section consists of trees 970 through 984 and 362 which makes up the first exceptional tree grove. The southern section of the row contains trees 986 through 997 and makes up the second exceptional tree grove.

³ Sugimura, D.W. "DPD Director's Rule 16-2008". Seattle, WA, 2009

According to the SDCI GIS map, the exceptional groves fall within a steep slope ECA. We observed dense invasive understory plants and vines growing in this area, including invasive Himalayan blackberry (*Rubus bifrons*), English holly (*Ilex aquifolium*), and ivy (*Hedera spp.*).

Tree 917 is a white fir (*Abies concolor*) in poor health and fair structural condition. This tree is not a good candidate for retention due to condition and should be removed and replaced.

White Birch Trees

There are 14 European white birch (*Betula pendula*) trees on-site. Only three of these trees (911, 925, and 948) are in good health and structural condition. Of the remaining 11, two are dead, five are in fair health and poor to good structural condition, and four are in poor health and structural condition. We observed symptoms and signs of bronze birch borer (*Agrilus anxius*) insect activity in the trees that are declining in health. The insect density and pressure on the remaining birch trees is high.

Tree Solutions recommends removing all European white birch trees on-site during redevelopment due to high pressure from the bronze birch borer. Many of the birch trees are already in decline or dead. Healthier trees are proposed for removal due to the high likelihood of being infected if trees become stressed from environmental or changes in site conditions. It is more probable than not that the trees will succumb to the insect.

Seattle Department of Transportation (SDOT) has removed all European white birch – the species onsite – from the approved street tree list due to the presence of bronze birch borer in the region. There are treatments available, but they are expensive, must be applied every one to two years depending on the pesticide, have significant off-target impacts, and are not guaranteed to be effective.

Invasive Tree Species

The site has several tree species that are listed as weeds of concern and one that is listed as a Nonregulated Class C Noxious Weed. The King County Noxious Weed Control Board recommends the control of invasive tree species listed as weeds of concern and Non-regulated Class B and C Noxious weeds when possible, but control is not required. These species out-compete native plants and create monocultures across the landscape. Periods of redevelopment provide an ideal time to control these species, therefore, we recommend removing and replacing them with native species across the site.

English laurel (*Prunus laurocerasus*) trees and shrubs, a weed of concern, should be removed and replaced. These are noted on our attached annotated survey but were not included in our inventory as they are below regulated size.

Tree 915 is an exceptional English holly (*Ilex aquifolium*), a weed of concern, with a diameter of 19.7 inches DSH in good health and structural condition. Despite the condition and exceptional status of this tree, Tree Solutions recommends removal and replacement with a tree species better suited to the site. As this is an exceptional tree, SMC requires replacement that will replace the lost canopy.⁴ In our opinion, a large native conifer species such as Douglas-fir (*Pseudotsuga menziesii*) or incense cedar (*Calocedrus decurrens*) would be a suitable replacement.

⁴ Seattle Municipal Code 25.11.090 Tree replacement and site restoration

There is one other English holly tree on-site that should be removed and replaced. This holly is noted on our attached annotated survey but was not included in our inventory as it was below regulated size.

Three European mountain ash (*Sorbus aucuparia*) trees, a weed of concern, should be removed and replaced. Trees 941 and 373 are of regulated size and tree 372 is below regulated size.

Six common hawthorn (*Crataegus monogyna*) trees, a Non-regulated Class C Noxious Weed, should be removed and replaced. Two of these trees, 950 and 363 are of regulated size, and the remaining four are below regulated size.

Maple Trees on Site Perimeter

We were asked to assess three bigleaf maple (*Acer macrophyllum*) trees on the perimeter of the northeast corner of the site and provide management recommendations. These trees are numbered 957, 958, and 959. Likely current and future targets below the trees are people in walkways and parked cars.

Trees 957 and 958 were in good health and structural condition. They may require a low-level of reduction pruning to the west to allow for clearance for the proposed parking area. These trees contribute to slope stability.

Tree 959 is in fair health and structural condition. In our opinion, this tree has a short, safe, and useful life expectancy and will ultimately be removed. If retained, it will require structural pruning and management to improve its condition. Tree Solutions can provide a detailed pruning and management specification upon request. These specifications will account for any continued declining areas in the tree over the next several years.

We recommend pruning dead parts over 2-inches in diameter and damaged parts with a high likelihood of failure that could hit a potential target. All pruning should conform to current ANSI standards. Tree Solutions can provide a detailed tree pruning specification upon request.

Disturbance within the root zone of these trees should be limited and no roots greater than 1-inch diameter should be cut during planting or development activities. Any roots greater than 1-inch diameter that needs to be removed should be done in the presence of the project arborist. Any additional plantings installed should be small plant stock and selected for ability to retain soil on the slope.

Due to the location and size of these trees, we recommend they be monitored regularly throughout the construction project and assessed at least every two years after completion of the project.

Tree Replacement

Tree Solutions recommends a replacement rate of 1:1 for trees below regulated size outside of ECAs. Trees that are removed within an ECA are subject to replacement requirements as outlined in SMC 25.09.070.⁵ Replacement of exceptional trees and trees greater than 24-inches DSH are subject to requirements as outlined in SMC 25.11.090.⁶

Off-site trees

We inventoried one off-site tree, tree A, which is a bigleaf maple in good health and structural condition. This tree overhangs the fence on the west side of the site. Off-site trees require protection at their dripline during both demolition and construction activities.

Development Impacts

Based on 100% Design Development Plans (08/14/2020) and 50% Permit Plans (08/12/2020) provided by Bingram Lai of NAC Architecture, construction of a new school building, play field, parking lots, and play areas are planned.

According to the drawings, majority of the trees on-site are planned for retention, including the two exceptional tree groves.

43 trees of regulated size are proposed for removal, including 5 trees that are exceptional by size and 1 tree that is exceptional tree due to its location in an exceptional grove. Eleven trees inventoried by Tree Solutions and seven additional trees not included in this inventory, all below regulated size, are proposed for removal.

Twenty-two of the 43 trees of regulated size proposed for removal are in conflict with proposed development. The remaining 21 trees that are proposed for removal across the site are due to their species or because of declining health and structural condition. Species recommended for removal are either those listed as noxious weeds or weeds of concern by the King County Noxious Weed Control Board or are birch trees susceptible to bronze birch borer. All removed trees on-site are proposed for replacement.

Tree 993, a 22-inch DSH Lombardy poplar (*Populus nigra* 'Italica') in good health and structural condition is part of the second exceptional tree grove on-site. This tree is in conflict with the proposed school building and is proposed for removal. The stump of this tree should be left or ground in place, rather than pulled, as to avoid impacting the root systems of adjacent grove trees. Consider treating the stump after tree removal to help prevent sucker growth from the remaining roots. It is our opinion that removal of this tree will not negatively impact the grove.

Work within the dripline of retained trees should be carefully planned with the project arborist. Areas where alternative construction methods are planned should be called out on the plan set.

According to SMC 25.11.50⁷, work within the dripline of exceptional trees can only impact one-third of the outer one-half of the dripline area. In some cases, depending on the tree species, tree health, and existing conditions this level of impact may be too great. All work within the dripline of exceptional trees

⁵ Seattle Municipal Code 25.09.070 Standards for Trees and Vegetation in Critical Areas

⁶ Seattle Municipal Code 25.11.090 Tree replacement and site restoration

⁷ Seattle Municipal Code 25.11.050. General Provisions for Exceptional Trees

must be planned with the project arborist. An assessment of impacts within the dripline area of retained exceptional trees should be produced.

All retained trees should be protected following the tree protection specifications outlined in Appendix B. Tree protection specifications should be included in the project manual and on the plan set. Tree protection specifications include but are not limited to the following:

- Install chain-link fencing at the dripline of the tree or at the combined dripline of groves unless otherwise specified.
- Move fencing only when work specified within the tree protection area is planned to occur under the observation of the project arborist. This will prevent damage to trees from the use of unplanned construction methods within the tree protection area.
- Apply 6-inches of coarse woodchip mulch within the tree protection area to protect soils. We recommend applying woodchip mulch as soon as possible prior to construction to improve the health condition of the trees.
- Install temporary irrigation to water trees during construction.
- Use alternative excavation methods such as pneumatic air excavation or hand digging within the dripline of trees.
- Have the project arborist monitor all soil disturbance activities including demolition and grading within the tree protection area.

Exceptional tree 907 is located at the edge of a retaining wall that is cracked. It is possible that the wall is providing support to the tree and it is likely that there are roots below the wall extending into the planting area to the east. We recommend retaining the wall or abandoning it in place if the grade in this area is raised. Any other infrastructure near tree 907 should be designed to minimize the impact to this tree. Due to the existing infrastructure, some work may be required within the inner half of the dripline, this would have to be carefully planned with the project arborist.

Tree 910 is sharing a root zone with tree 911, a European white birch proposed for removal due to condition. Tree 911 is proposed for removal, when removed it should be cut at the base and the stump should be left in place or ground with a stump grinder.

Trees 964 to 967 may need to have their canopies reduced and raised for proper vehicle clearance depending on the final grades and location of the proposed parking area.

Tree 997 is located near the proposed school building. Branches on the south side of the tree may need to be tied back or pruned if there is a need for access to work on the facade of the structure.

Overall Recommendations

- Site planning around exceptional trees must follow the guidelines outlined in SMC 25.11.050.⁸
- Site planning around trees in critical areas must follow the guidelines outlined in SMC 25.09.070.⁹
- All pruning should be conducted by an ISA certified arborist and following current ANSI A300 specifications.¹⁰
- Utilize a common tree layer across the plan set that shows tree numbers, identifiers, accurate driplines, exceptional status, and limits of disturbance. This is critical on civil drawings and any drawings that show excavation near trees. Coordinate with Tree Solutions to plan excavation methods to be used within the driplines of retained trees. Call out alternative construction methods within tree protection areas on plan sets.
- Produce an assessment of impacts within the dripline of all exceptional trees.
- Utilize small plant stock (maximum 1 to 2-gallon size) for installation within the tree protection area of retained trees. Install plants within driplines of retained trees by hand.
- Avoid trenching for irrigation within the dripline of retained trees.
- Implement temporary irrigation for all retained trees on-site throughout the dry season: May through September.
- Include tree protection specification language provided in Appendix B in all plan sets. Incorporate all provisions in the provided specifications into the formal tree protection specifications.
- Plan for arborist monitoring of demolition, excavation activities, and any other soil disturbance within the tree protection area of any protected tree.

Respectfully submitted, Andrea Starbird, Environmental Scientist Katherine Taylor, Senior Arborist Sean Dugan, RCA 457

⁸ Seattle Municipal Code 25.11.050. General Provisions for Exceptional Trees

⁹ Seattle Municipal Code 25.09.070 Standards for Trees and Vegetation in Critical Areas

¹⁰ ANSI A300 (Part 1) – 2017 American National Standards Institute. <u>American National Standard for Tree Care Operations:</u> <u>Tree, Shrub, and Other Woody Plant Maintenance: Standard Practices (Pruning)</u>. New York: Tree Care Industry Association, 2017.

Environmentally Critical Areas



Figure 1. An aerial view of the site. The red lines indicate the approximate boundaries of the property. The blue diagonal lines indicate Steep Slope Environmentally Critical Areas (Source: Seattle Department of Construction and Inspections GIS)

Appendix A - Assumptions & Limiting Conditions

- 1. Consultant assumes that the Site and its use do not violate, and is following all applicable codes, ordinances, statutes or regulations.
- 2. The Consultant may provide report or recommendation based on published municipal regulations. The Consultant assumes that the municipal regulations published on the date of the report are current municipal regulations and assumes no obligation related to unpublished city regulation information.
- 3. Any report by Consultant and any values expressed therein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event, or upon any finding to be reported.
- 4. All photographs included in our reports were taken by Tree Solutions, Inc. during the documented Site visit, unless otherwise noted. Sketches, drawings and photographs in any report by Consultant, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by Consultant as to the sufficiency or accuracy of the information.
- 5. Unless otherwise agreed, (1) information contained in any report by Consultant covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, climbing, or coring.
- 6. These findings are based on the observations and opinions of the authoring arborist, and does not provide guarantees regarding the future performance, health, vigor, structural stability or safety of the plants described assessed.
- 7. Measurements are subject to typical margins of error, considering the oval or asymmetrical crosssection of most trunks and canopies.
- 8. Tree Solutions did not review any reports or perform any tests related to the soil located on the subject property unless outlined in the scope of services. Tree Solutions staff are not and do not claim to be soils experts. An independent inventory and evaluation of the site's soil should be obtained by a qualified professional if an additional understanding of the site's characteristics is needed to make an informed decision.
- 9. Our assessments are made in conformity with acceptable evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.



Appendix B – Tree Protection Specifications

- 1. **Project Arborist:** The project arborists shall at minimum have an International Society of Arboriculture (ISA) Certification and ISA Tree Risk Assessment Qualification.
- 2. **Tree Protection Area (TPA):** The city of Seattle requires a tree protection area (TPA) of the dripline of the tree. In some cases, the TPA may extend outside tree protection fencing. Work within the TPA must be approved and monitored by the project arborist.
- 3. **Tree Protection Fencing:** Tree protection shall consist of 6-foot chain-link fencing installed at the TPA or at the limits of disturbance as approved by the project arborist. Fence posts shall be anchored into the ground or bolted to existing hardscape surfaces. Where trees are being retained as a group the fencing shall encompass the entire area including all landscape beds or lawn areas associated with the grove that are not needed for construction access or staging. Where chain link fencing is installed at the limits of disturbance to accommodate future project work, high visibility fencing will be placed at the TPA with signage indicating that work in the TPA shall be monitored by the project arborist and permission from the site manager is required for entry. Where trees are protected at the edge of the project boundary, construction limits fencing shall be incorporated as the boundary of tree protection fencing. Where tree protection will be placed at the top of a rockery, high visibility fencing shall be used.
- 4. Access Beyond Tree Protection Fencing: In areas where work such as installation of utilities is required within the TPA, a locking gate will be installed in the fencing to facilitate access. The project manager or project arborist shall be present when tree protection areas are accessed.
- Tree Protection Signage: Tree protection signage shall be affixed to fencing every 20 feet. Signage shall be fluorescent, at least 2' x 2' in size, with 3" tall text. Signage will note: "Tree Protection Area Do Not Enter: Entry into the tree protection area is prohibited unless authorized by the project manager." Signage shall include the contact information for the project manager and instructions for gaining access to the area.
- 6. **Filter Fencing:** Filter fencing within the TPA of retained trees shall be installed in a manner that does not sever roots. Do not trench to insert fabric into the ground. Install so that filter fabric sits on the ground and is weighed in place by sandbags or gravel.
- 7. **Monitoring:** The project arborist shall monitor all ground disturbance at the edge of or within the TPA, including where the TPA extends beyond the tree protection fencing.
- 8. **Soil Protection:** No parking, foot traffic, materials storage, or dumping (including excavated soils) are allowed within the TPA. Heavy machinery shall remain outside of the TPA. Access to the tree protection area will be granted under the supervision of the project arborist. If project arborist allows, heavy machinery can enter the area if soils are protected from the load. Acceptable methods of soil protection include applying 3/4-inch plywood over 4 to 6 inches of wood chip mulch or use of Alturna mats (or equivalent product approved by the project arborist). Retain existing paved surfaces within or at the edge of the TPA for as long as possible.
- 9. **Soil Remediation:** Soil compacted within the TPA of retained trees shall be remediated using pneumatic air excavation according to a specification produced by the project arborist.
- 10. **Canopy Protection**: Where fencing is installed at the limits of disturbance within the TPA, canopy management (pruning or tying back) shall be conducted to ensure that vehicular traffic does not damage canopy parts. Exhaust from machinery shall be located five feet outside the dripline of retained trees. No exhaust shall encounter foliage for prolonged periods of time.

- 11. **Duff/Mulch:** Apply 4 to 6 inches of arborist wood chip mulch or hog fuel over bare soil within the TPA to prevent compaction and evaporation. Keep mulch 1 foot away from the base of trees and 6 inches from retained understory vegetation. Retain and protect as much of the existing duff and understory vegetation as possible.
- 12. **Excavation:** Excavation done at the edge of or within the TPA shall use alternative methods such as pneumatic air excavation or hand digging. If heavy machinery is used, use flat front buckets with the project arborist spotting for roots. When roots are encountered, stop excavation and cleanly sever roots. The project arborist shall monitor all excavation done within the TPA.
- 13. Fill: Limit fill to 1 foot of uncompacted well-draining soil, within the TPA of retained trees. In areas where additional fill is required, consult with the project arborist. Fill must be kept at least 1 foot from the trunks of trees.
- 14. **Root Pruning:** Limit root pruning to the extent possible. All roots shall be pruned with a sharp saw making clean cuts. Do not fracture or break roots with excavation equipment.
- 15. **Root Moisture:** Root cuts and exposed roots shall be immediately covered with soil, mulch, or clear visqueen and kept moist. Water to maintain moist condition until the area is back filled. Do not allow exposed roots to dry out before replacing permanent back fill.
- 16. **Hardscape Removal:** Retain hardscape surfaces for as long as practical. Remove hardscape in a manner that does not require machinery to traverse newly exposed soil within the TPA. Where equipment must traverse the newly exposed soil, apply soil protection as described in section 8. Replace fencing at edge of TPA if soil exposed by hardscape removal will remain for any period of time.
- 17. **Tree Removal:** All trees to be removed that are located within the TPA of retained trees shall not be ripped, pulled, or pushed over. The tree should be cut to the base and the stump either left or ground out. A flat front bucket can also be used to sever roots around all sides of the stump, or the roots can be exposed using hydro or air excavation and then cut before removing the stump.
- 18. **Irrigation:** Retained trees with soil disturbance within the TPA will require supplemental water from June through September. Acceptable methods of irrigation include drip, sprinkler, or watering truck. Trees shall be watered three times per month during this time.
- 19. **Pruning:** Pruning required for construction and safety clearance shall be done with a pruning specification provided by the project arborist in accordance with American National Standards Institute ANSI-A300 2017 Standard Practices for Pruning. Pruning shall be conducted or monitored by an arborist with an ISA Certification.
- 20. **Plan Updates:** All plan updates or field modification that result in impacts within the TPA or change the retained status of trees shall be reviewed by the senior project manager and project arborist prior to conducting the work.
- 21. **Materials:** Contractor shall have the following materials onsite and available for use during work in the TPA:
 - Sharp and clean bypass hand pruners
 - Sharp and clean bypass loppers
 - Sharp hand-held root saw
 - Reciprocating saw with new blades
 - Shovels
 - Trowels
 - Clear visqueen
 - Burlap
 - Water



Table of Trees3200 23rd Ave S, Seattle, WA 98144

DSH (Diameter at Standard Height) is measured 4.5 feet above grade.

Multi-stem trees are noted, and a single stem equivalent is calculated using the method defined in the <u>Director's Rule 16-2008</u>. Letters are used to identify trees on neighboring property with overhanging canopies.

Dripline is measured from the center of the tree to the outermost extent of the canopy.

							0	ripline	e Radi	us							
Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	N	E	s	w	Exceptional	Exceptional Status	Exceptional by Size	Exceptional Grove	Proposed Action	Regulated	Notes
	1	1				1				-	Regul	ated on-site tree	s	-	1		
901	Pinus sylvestris	Scots pine	10.7		Good	Good	12	12	12	12	24.0	-	-	-	Remove	Yes	Flicker activity, some needle dieback, diploidia.
																	Too close to be retained.
902	Cedrus atlantica	Atlas cedar	7.7		Good	Good	7	7	7	7	30.0	-	-	-	Remove	Yes	Weeping cultivar. Conflicts with plans.
903	Juniperus virginiana	Eastern redcedar	14.0	9.4,10.4	Good	Good	9	9	9	9	12.5	Exceptional	Size	-	Remove	Yes	Too close to be retained.
																	Remove and replace.
904	Liquidambar styraciflua	American sweetgum	13.0		Good	Good	12	12	12	12	27.0	-	-	-	Remove	Yes	Conflicts with plans.
905	Liquidambar styraciflua	American sweetgum	11.2		Good	Good	13	13	13	13	27.0	-	-	-	Retain	Yes	
906	Liquidambar styraciflua	American sweetgum	13.2		Good	Good	12	12	12	12	27.0	-	-	-	Retain	Yes	Surface roots, with sprouts.
907	Pinus ponderosa	Ponderosa pine	32.1		Good	Good	21	21	21	21	30.0	Exceptional	Size	-	Retain/	Yes	Growing above retaining wall, the weight from the tree appears to be impacting the
															Prune		wall below; likely shifted in the past, corrected lean.
																	Reduction pruning recommended: tree protection will be required for wall
																	removal/repair - wall may be abandoned in place.
908	Robinia pseudoacacia	Black locust	13.9		Fair/Poor	Fair	12	12	12	12	30.0	-	-	-	Remove /	Yes	Previously topped/ hat racked.
															Salvage		Salvage for play area.
909	Acer circinatum	Vine maple	10.1	4.25.3.3.6.4	Fair	Fair	10	10	10	10	8.0	Exceptional	Size	-	Retain/	Yes	Not on survey.
				5 3 25											Prune		Prune to renovate cut back to resprout
910	Pseudotsuaa menziesii	Douglas-fir	13.2	.5,5.25	Good	Good	12	12	12	12	30.0	-	-	-	Retain	Yes	Surface roots sharing rootzone at the base with tree 911 old rockery at base
911	Retula nendula	European white hirch	15.9		Good	Good	14	14	14	14	24.0				Remove	Vec	Surface roots, sharing rootsone at the base with tree 910
511	Detaid pendala	Laropean white birth	15.5		0000	0000	14	14	1-7	14	24.0				Remove	103	Bomovo Jozvo stump in place
012	Tilia cordata	Littleleaf linden	21.6		Cood	Cood	17	17	17	17	20.0			-	Potain	Voc	Some surface roots included bark
912	Thia cordata	Littlelear Illuen	21.0		0000	GUUU	11/	11/	11/	1/	50.0	-	⁻	-	Retain	res	Deduce western line health larger lateral
012	Tilia cordata	Littleleaf linden	17.0		Cood	Cood	16	16	16	16	20.0				Potain	Voc	Reduce western limb back to larger lateral.
913	Tilla cordata	Littleleaf linden	10.0		Good	Good	10	10	10	21	30.0	-	-	-	Retain	Yes	
914			18.0	0.40	Good	Good	21	21	21	21	30.0	-	-	-	Retain	res	some surface roots
915	liex aquifolium	English holly	19.7	8,18	Good	Good	15	15	15	15	18.8	Exceptional	Size	-	Remove	res	ivy at base. Listed as a weed of concern by King County.
									-	-	000						Recommend removal and replacement.
916	Calocedrus decurrens	Incense cedar	15.0		Good	Good	9	9	9	9	30.0	-	-	-	Remove	Yes	100 close to be retained.
917	Abies concolor	White fir	9.0		Poor	Fair	7	7	7	7	25.6	-	-	-	Remove	Yes	Remove due to condition.
918	Chamaecyparis	Lawson cypress	13.2		Fair	Fair	5	5	5	5	30.0	-	-	-	Retain	Yes	lvy at base.
	lawsoniana																Remove invasive ivy growing nearby, add wood chip mulch, improve soil conditions.
									<u> </u>		<u> </u>						Monitor for phytophthora.
919	Chamaecyparis	Lawson cypress	13.5		Fair	Fair	5	5	5	5	30.0	-	-	-	Retain	Yes	Ivy at base.
	lawsoniana																Remove invasive ivy growing nearby, add wood chip mulch, improve soil conditions.
																	Monitor for phytophthora.
920	Thuja plicata	Western redcedar	13.8	9.8,9.7	Fair	Poor	10	10	10	10	30.0	-	-	-	Remove	Yes	Codominant at base, minor basal cavity, in decline, top dying, likely root issues.
																	Remove due to condition.
921	Abies concolor	White fir	12.2		Good	Good	9	9	9	9	25.6	-	-	-	Retain	Yes	Add wood chip mulch, improve soil conditions. Monitor for phytophthora.
922	Calocedrus decurrens	Incense cedar	16.4		Good	Good	8	8	8	8	30.0	-	-	-	Retain	Yes	Some girdling roots, surface roots.
																	Add wood chip mulch, improve soil conditions. Monitor for phytophthora.
923	Betula pendula	European white birch	13.5		Fair	Fair	16	16	16	16	24.0	-	-	-	Remove	Yes	Bronze birch borer, dead top.
																	Remove due to condition, species.
924	Abies concolor	White fir	11.5		Good	Good	12	12	12	12	25.6	-	-	-	Retain	Yes	Add wood chip mulch, improve soil conditions. Monitor for phytophthora.
925	Betula pendula	European white birch	15.0		Good	Good	15	15	15	15	24.0	-	-	-	Remove	Yes	Remove due to condition, species.
926	Chamaecyparis obtusa	Hinoki cypress	6.4		Good	Good	7	7	7	7	16.4	-	-	-	Retain	Yes	Add wood chip mulch, improve soil conditions. Monitor for phytophthora.
927	Calocedrus decurrens	Incense cedar	21.0		Good	Good	15	15	15	15	30.0	-	-	-	Retain	Yes	Planted in a small tree box.
																	Add wood chip mulch, improve soil conditions, Monitor for phytophthora.
928	Abies arandis	Grand fir	10.3		Good	Good	10	10	10	10	24.0	-	-	-	Retain/	Yes	Planted in a small tree box, codominant at 40 feet.
									[`	L.					Prune		Subordinate one of the leaders.
																	Add wood chip mulch, improve sail conditions. Monitor for phytophthora
929/	Acer macrophyllum	Bigleaf maple	14.0	8.5.6.5.5.4	Good	Good	12	12	12	12	30.0	-	-	-	Retain	Yes	Original tag missing, retagged 359
359				25 6 25			- -	- -	1	1	0.0			1			Add wood chin mulch, improve soil conditions. Monitor for phytophthera
930	Pinus strohus	Fastern white nine	19.5	23,0.23	Good	Good	17	17	17	17	30.0		-	-	Retain	Vec	Add wood chip mulch, improve soil conditions. Monitor for phytophthola.
931	Purus communis	European near	11.9	7493	Good	Good	11	11	11	11	27.2	-	-	-	Retain	Vec	Codominant at 3.5 feet, sansucker activity
551		- an openin peni		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0000	0000		**	11	11	22						Add wood chin mulch improve soil conditions. Monitor for phytophthora



Table of Trees3200 23rd Ave S, Seattle, WA 98144

Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	N	E	s	w	Exceptional Threshold	Exceptional Status	Exceptional by Size	Exceptional Grove	Proposed Action	Regulated	Notes
932	Malus spp	Flowering apple	9.7		Poor to Fair	Fair	11	11	11	11	12.0	-	-	-	Remove	Yes	Missing bark from more than 50% of main stem.
933	Pinus contorta var. Iatifolia	Lodgepole pine	14.2		Good	Good	14	14	14	14	6.0	Exceptional	Size	-	Retain	Yes	Surface roots. Add wood chip mulch, improve soil conditions. Monitor for phytophthora.
934	Malus spp	Flowering apple	9.4		Good	Good	12	12	12	12	12.0	-	-	-	Remove	Yes	Conflicts with plans.
935	Thuja plicata	Western redcedar	20.2		Good	Good	14	14	14	14	30.0	-	-	-	Remove	Yes	Conflicts with plans.
936	Acer macrophyllum	Bigleaf maple	19.1	12.4,7.5,12. 5	Good	Good	18	18	18	18	30.0	-	-	-	Remove	Yes	Some decay at base, Kretzschmaria deusta . Conflicts with plans.
937	Betula pendula	European white birch	13.2		Fair	Good/Fair	14	14	14	14	24.0	-	-	-	Remove	Yes	Top decline, bronze birch borer. Remove due to condition, species.
938	Betula pendula	European white birch	8.8		Fair	Fair	13	13	13	13	24.0	-	-	-	Remove	Yes	Bronze birch borer. Remove due to condition, species.
939	Pinus contorta var. Iatifolia	Lodgepole pine	13.0		Good	Good	12	12	12	12	6.0	Exceptional	Size	-	Retain	Yes	
940	Betula pendula	European white birch	14.5	9.4,11.1	Poor	Poor	17	17	17	17	24.0	-	-	-	Remove	Yes	Codominant at base, smaller stem dead, top dieback on larger stem. Remove due to condition, species.
941	Sorbus aucuparia	European mountain ash	7.0		Fair	Fair	9	9	9	9	29.0	-	-	-	Remove	Yes	Sparse canopy. Listed as a weed of concern by King County. Recommend removal and replacement with a native species.
942	Salix scouleriana	Scouler's willow	23.1	12,10,9,8,5, 11	Good	Good	17	17	17	17	8.0	Exceptional	Size	-	Retain	Yes	Phytophthora canker, or canker present.
943	Betula pendula	European white birch	19.0		Poor	Poor	-	-	-	-	24.0	-	-	-	Remove	Yes	Measured at narrowest point below union, codominant at 4 feet, major dieback. Remove due to condition, species.
944	Betula pendula	European white birch	11.5		Poor	Poor	-	-	-	-	24.0	-	-	-	Remove	Yes	Bronze birch borer, dead top. Remove due to condition, species.
945	Betula pendula	European white birch	20.6	15,10,10	Poor	Poor	-	-	-	-	24.0	-	-	-	Remove	Yes	Tridominant at base, dieback/dead tops, bronze birch borer present. Remove due to condition, soecies.
946	Pinus sylvestris	Scots pine	7.2		Fair	Fair	9	9	9	9	24.0	-	-	-	Remove	Yes	Conflicts with plans.
947	Populus × canescens	Grey poplar	26.9		Good	Good	19	19	19	19	30.0	-	-	-	Remove	Yes	Conflicts with plans.
948	Betula pendula	European white birch	21.9	15,16	Good	Good	17	17	17	17	24.0	-	-	-	Remove	Yes	Some dieback, bronze birch borer present, could be treated Remove due to species, borer.
949	Acer circinatum	Vine maple	8.6	3.5,3.25,4,4 ,3,3.25	Good	Good	9	9	9	9	8.0	Exceptional	Size	-	Remove	Yes	Conflicts with plans.
950	Crataegus monogyna	Common hawthorn	8.5		Good	Good	9	9	9	9	16.2	-	-	-	Remove	Yes	Listed as Class C Noxious Weed in King County, replace with a native species. Remove due to species.
951	Acer macrophyllum	Bigleaf maple	24.1	17.6,16.5	Good	Good	25	25	25	25	30.0	-	-	-	Remove	Yes	Conflicts with proposed storm and utilities.
952	Acer macrophyllum	Bigleaf maple	16.3	11,12	Good	Good	11	17	13	4	30.0	-	-	-	Remove	Yes	Conflicts with proposed storm and utilities.
953	Acer macrophyllum	Bigleaf maple	33.6	17,18,15,17	Good	Good	26	26	26	26	30.0	Exceptional	Size	-	Remove	Yes	Conflicts with proposed storm and utilities.
954	Malus spp	Flowering apple	6.0		Good	fair	9	9	9	9	12.0	-	-	-	Retain	Yes	
955	Malus spp	Flowering apple	10.8	5.5,5,5,4,4. 5	Good	Fair	14	14	14	14	12.0	-	-	-	Retain	Yes	Lots of small trunks from the apple, beaked hazelnut interspersed
956	Salix scouleriana	Scouler's willow	12.0	9,8	Fair	Fair	15	15	15	15	8.0	Exceptional	Size	-	Retain	Yes	Previously failed, corrected
957	Acer macrophyllum	Bigleaf maple	22.8	16,8,8,6,10	Good	Good	26	26	26	26	30.0	-	-	-	Retain/ Prune	Yes	May require a low level of reduction pruning to the west to allow for clearance from the parking area.
958	Acer macrophyllum	Bigleaf maple	25.7	10,10,8,9,6, 6,12,10	Good	Good	25	25	25	25	30.0	-	-	-	Retain/ Prune	Yes	May require a low level of reduction pruning to the west to allow for clearance from the parking area.
959	Acer macrophyllum	Bigleaf maple	27.7	14,14,19,4	Fair	Fair	20	20	20	20	30.0	-	-	-	Retain/ Prune	Yes	Dieback in central canopy; pruned for power lines; ivy at base, 19 inch stem is mostly dead. Prune to remove all huit easternmost stem: manage regrowth
960	Ginkgo biloba	Gingko biloba	9.7		Good	Good	12	12	12	12	24.0	-	-	-	Remove	Yes	Too close to retain.
961	Thuja occidentalis	Arborvitae	15.9		Good	Good	11	11	11	11	11.8	Exceptional	Size	-	Remove	Yes	Remove, replace. Too close to retain.
962	Pyrus communis	European pear	16.8	10,9,10	Good	Good	12	12	12	12	27.2	-	-	-	Remove	Yes	Not on survey. Conflicts with plans.
963	Cedrus deodara	Deodar cedar	16.2		Good	Good	14	14	14	14	30.0	-	-	-	Remove / Salvage	Yes	Remove, in conflict with driveway.
964	Pinus nigra	Austrian black pine	21.3		Good	Good	20	20	23	20	24.0	-	-	-	Retain	Yes	May require clearance pruning.
965	Pinus nigra	Austrian black pine	19.0		Good	Good	19	19	19	19	24.0	-	-	-	Retain	Yes	May require clearance pruning.
966	Pinus nigra	Austrian black pine	17.0		Good	Good	16	16	16	16	24.0	-	-	-	Retain	Yes	May require clearance pruning.
967	Pinus nigra	Austrian black pine	27.5		Good	Good	21	21	27	21	24.0	Exceptional	Size	-	Retain/ Prune	Yes	Large reiteration; may require clearance pruning. Prune to reduce limb on the southern side



Table of Trees3200 23rd Ave S, Seattle, WA 98144

											-		_	_			
											ona		ona	ona			
Tree			DSH	DSH	Health	Structural					epti	Exceptional	epti Size	epti ve	Proposed		
ID	Scientific Name	Common Name	(inches)	Multistem	Condition	Condition	N	E	s	w	Å E	Status	pA is	B B	Action	Regulated	Notes
968	Prunus lusitanica	Portuguese cherry	10.6	4.5,4.5,5,4,	Good	Good	10	10	10	10	24.7	-	-	-	Retain	Yes	
		laurel		5.5													
969	Prunus lusitanica	Portuguese cherry	10.0	4,5.5,3.5,3,	Good	Good	10	10	10	10	24.7	-	-	-	Retain	Yes	
070	0	laurel	22.0	3.5,3.5,3	E. S.	F . 1 .	10	4.0	4.0	10	24.0	E P I		C	Dataita	N	Provide the state of the second
970	Pinus nigra	Austrian black pine	23.0		Fair	Fair	10	10	10	10	24.0	exceptional	-	Grove	Retain	res	some surface roots, girdling roots.
971	Pinus niara	Austrian black pine	21.8		Good	Good	15	15	15	15	24.0	Exceptional	-	Grove	Retain	Yes	
972	Pinus niara	Austrian black pine	22.0		Good	Good	18	18	18	18	24.0	Exceptional	-	Grove	Retain	Yes	
973	Pinus nigra	Austrian black pine	22.0		Good	Good	15	15	15	15	24.0	Exceptional	-	Grove	Retain	Yes	
974	Prunus cerasifera	Cherry plum	6.7	5.4,3.9	Good	Good	7	7	7	7	21.0	-	-	-	Retain	Yes	Suppressed
975	Pinus nigra	Austrian black pine	18.0		Good	Good	15	15	15	15	24.0	Exceptional	-	Grove	Retain	Yes	Not on survey
976	Pinus nigra	Austrian black pine	32.0		Good	Good	17	17	17	17	24.0	Exceptional	Size	Grove	Retain	Yes	One stem has a broken top, codominant at 15 feet with included bark
977	Pinus ponderosa	Ponderosa pine	20.0		Good	Good	15	15	15	15	30.0	Exceptional	-	Grove	Retain	Yes	
978	Pinus nigra	Austrian black pine	27.0		Good	Good	18	18	18	18	24.0	Exceptional	Size	Grove	Retain	Yes	Denviewels last ten sutility any singly another an analyze
979	Pinus nigra	Austrian black pine	18.0		Fair	Fair	10	10	10	10	24.0	exceptional	-	Grove	Retain/	res	Previously lost top, utility pruning; overnangs parking.
980	Pinus niara	Austrian black nine	25.0		Good	Good	18	18	18	18	24.0	Exceptional	Size	Grove	Retain	Vec	Codominant at 4 feet with included bark, trunks senarate at 9 feet
981	Pinus nigra	Austrian black pine	24.0		Good	Good	14	14	14	14	24.0	Exceptional	Size	Grove	Retain	Yes	Codominant trunks, compression fork, in a sheltered area, unlikely to fail
982	Pinus nigra	Austrian black pine	14.0		Good	Good	14	14	14	14	24.0	Exceptional	-	Grove	Retain	Yes	
983	Pinus nigra	Austrian black pine	22.0		Good	Good	16	16	16	16	24.0	Exceptional	-	Grove	Retain	Yes	Phototropic lean to the east, corrected
984	Pinus ponderosa	Ponderosa pine	29.0		Good	Good	22	22	22	22	30.0	Exceptional	-	Grove	Retain	Yes	
362	Pinus nigra	Austrian black pine	21.5		Good	Good	19	19	19	19	24.0	Exceptional	-	Grove	Retain	Yes	Tagged on 2.12.2020, codominant at 60 feet.
																	Prune to subordinate one leader.
985	Salix scouleriana	Scouler's willow	7.7	4,5,3.5,2.5	Good	Good	10	10	10	10	8.0	-	-	-	Retain	Yes	
986	Pinus jeffreyi	Jeffrey pine	28.0	076	Good	Good	16	16	16	16	30.0	Exceptional	-	Grove	Retain	Yes	Measured at standard height from top of grade
987	Prunus cerasifera	Cherry plum	12.2	8,7,6	Good	Good	9	9	9	9	21.0	Exceptional	-	Grove	Retain	Yes	
988	Pinus nigra	Austrian black pine	18.0		Fair	Fair	18	14	14	18	24.0	Exceptional	-	Grove	Retain/	Ves	Previously lost top, codominant at 6 feet with two feet of included bark at union
361	r mus myru	Austrian black pille	10.0				10	10	10	10	24.0	Exceptional	-	GIOVE	Prune	105	swooned base: tagged on 2/12/2020
501															Tranc		Prune to subordinate codominant leader
990	Pinus nigra	Austrian black pine	16.0		Good	Good	16	16	16	16	24.0	Exceptional	-	Grove	Retain	Yes	
991	Prunus cerasifera	Cherry plum	16.0		Good	Good	14	14	14	14	21.0	Exceptional	-	Grove	Retain	Yes	
992	Pinus nigra	Austrian black pine	25.0		Good	Good	17	17	17	17	24.0	Exceptional	Size	Grove	Retain	Yes	
993	Populus nigra 'Italica'	Lombardy poplar	22.0		Good	Good	12	12	12	12	30.0	Exceptional	-	Grove	Remove	Yes	Remove, do not pull stump. In conflict with school building
994	Pinus nigra	Austrian black pine	18.2		Good	Good	16	16	16	16	24.0	Exceptional	-	Grove	Retain	Yes	Codominant at 20 feet
995	Pinus nigra	Austrian black pine	22.1		Good	Good	15	15	15	15	24.0	Exceptional	-	Grove	Retain	Yes	Corrected lean, codominant at 20 feet, union looks good
996	Pinus nigra	Austrian black pine	20.0		Good	Good	16	16	10	10	24.0	Exceptional	-	Grove	Retain	Yes	Corrected trunk lean, unbealed stub cuts on southwest side
997	Acer circinatum	Vine manle	7.4	43453	Good	Good	10	10	10	10	24.0	-	-	Giove	Remove /	Ves	Potential for transplant
550	Activitation	vine maple	/·	-,3,3,5	0000	0000	10	10	10	10	0.0				Transplant	i co	
															linanopiane		
999	Betula pendula	European white birch	12.6		Fair	Fair	14	14	14	14	24.0	-	-	-	Remove	Yes	Dead top, evidence of bronze birch borer.
																	Remove due to condition, species.
356	Picea abies	Norway spruce	5.0		Fair	Fair	6	6	6	6	30.0	-	-	-	Retain	No	Flagging, pitching, top reiterated, low retention value
357	Metasequoia	Dawn redwood	5.6		Good	Good	10	10	10	10	30.0	-	-	-	Retain	No	
250	glyptostroboides	r	0.2		E. L.	D	10	10	10	10	24.0				0	N	Record of the second state
358	Betula penaula	European white birch	8.2		Fair	Poor	10	10	10	10	24.0	-	-	-	Remove	Yes	Remove due to species, condition.
260	Picea pupaens	Colorado spruce	4.6		Eair	Epir	2	2	2	2	22.1	-	-	-	Pernove	No	Wound on trunk with recoonse growth, asymmetrical canony, phototronic to the
300	Ficeu puligens	colorado sprace	4.0				5	5	5	3	23.1	-	-	Ē	Kennove	NO	south young enough to recover. Conflicts with plans
361	see 989													-			South, young chough to recover. connects with plans.
363	Crataegus monogyna	Common hawthorn	6.8	3.9,4.7,3	Good	Fair	10	10	10	10	16.2	-	-	-	Remove	Yes	Multistemmed at base, listed as Class C Noxious Weed in King County, replace with a
																	native species
364	Crataegus monogyna	Common hawthorn	4.5		Good	Good	10	10	10	10	16.2	-	-	-	Remove	No	Listed as Class C Noxious Weed in King County, replace with a native species
365	Crataegus monogyna	Common hawthorn	5.0	3,3.5,2	Good	Good	8	8	8	8	16.2	-	-	-	Remove	No	Listed as Class C Noxious Weed in King County, replace with a native species
366	Crataegus monogyna	Common hawthorn	5.7	5,2,2	Good	Good	5	5	5	5	16.2	-	-	-	Remove	No	Listed as Class C Noxious Weed in King County, replace with a native species
367	Pinus sylvestris	Scots pine	4.7		Good	Good	4	4	13	3	24.0	-	-	-	Remove	No	Recumbent trunk structure. Conflicts with plans.
368	Gleditsia triacanthos	Honeylocust	3.9		Good	Good	5	5	5	5	20.0	-	-	-	Remove	No	Conflicts with plans.
309	ALEL DOIMOLUM	LIAUAUESE MADIE	1.3.0	1	1000	10000	10	10	10	10	112.0	1.5	1.5	1-	I REIDOVE	LINC)	CONTROLS WITH DIGHS.

Tree Solutions, Inc.



Table of Trees 3200 23rd Ave S, Seattle, WA 98144

											bold	5	otional ce	otional			
Tree	Scientific Name	Common Name	DSH (inches)	DSH Multistom	Health	Structural	N	-			xcep	Exceptional	y Siz	xcep	Proposed	Regulated	Notos
270	Acer nalmatum	lananese manle	2.2	withtisterin	Good	Good	6	6	6	6	12.0	. Status	<u> </u>		Rotain	No	INDIES
371	Crataegus monogyna	Common hawthorn	4.1	3,2,2	Good	Good	7	7	7	7	16.2	-	-	-	Remove	No	Pruning with stub cuts, listed as Class C Noxious Weed in King County, replace with a
372	Sorbus aucuparia	European mountain	3.7		Fair	Fair	4	4	4	4	29.0	-	-	-	Remove	No	Suppressed. Listed as a weed of concern by King County. Recommend removal and replacement with a native species
373	Sorbus aucuparia	European mountain ash	6.5		Fair	Fair	10	10	10	10	29.0	-	-	-	Remove	Yes	Fungal bodies observed on stem. Listed as a weed of concern by King County. Recommend removal and replacement with a native species.
374	Betula papyrifera	Paper birch	5.0		Good	Fair	6	15	6	0	20.0	-	-	-	Remove	No	Phototropic lean; no signs of bronze birch borer.
375	Acer palmatum	Japanese maple	5.4	4.5,3	Good	Fair	7	7	7	7	12.0	-	-	-	Retain/ Prune	No	Main trunk has bark sloughing, resprouting at base. Recommend removing the primary stem and managing regrowth.
376	Acer macrophyllum	Bigleaf maple	3.6	3,2	Good	Good	10	10	10	10	30.0	-	-	-	Remove	No	Old stump sprout, condition good at inspection but as tree gets larger form will be fair, heavily pruned, pavement lifting, irrigation at base. Likely a volunteer, recommend removing and replacing.
377	Betula pendula	European white birch	-		Dead	-	-	-	-	-	24.0	-	-	-	Remove	Yes	Dead
378	Betula pendula	European white birch	-		Dead	-	-	-	-	-	24.0	-	-	-	Remove	Yes	Dead
			1						Tota	l Excep	tional	Trees	39				
									Exce	ptiona	l due t	o size only	12				
									Exce	ptiona	l due t	o grove only	22				
									Exce	ptiona	l due t	o grove and size	5				
								0	ff-site	regula	ated tr	ees with overha	nging can	opies			
Α	Acer macrophyllum	Bigleaf maple	10.0		Good	Good		20			30.0						Powdery mildew, heavy ivy; overhangs fence

Acer macrophyllum	Bigleaf maple	10.0	Good	Good	20	30.0		Powdery mildew, heavy ivy; overhangs fence









4" 9/20/2019 U:\C3D\2019\2019140\SURVEYINC\DWG\XS-SUR-00.

APPENDIX B: TRANSPORTATION TECHNICAL REPORT

TRANSPORTATION TECHNICAL REPORT

Kimball Elementary School Replacement

PREPARED FOR: Seattle Public Schools

PREPARED BY: **heffron** 6544 NE 61st Street, Seattle, WA 98115 ph: (206) 523-3939 • fx: (206) 523-4949

November 2, 2020



TABLE OF CONTENTS

1. IN	TRODUCTION	1
1.1.	Existing School Site	1
1.2.	Proposed Project	3
2. BA	ACKGROUND CONDITIONS	5
2.1.	Roadway Network	5
2.2.	Traffic Volumes	7
2.3.	Traffic Operations	10
2.4.	Parking Supply and Occupancy	12
2.5.	Traffic Safety	15
2.6.	Transit Facilities and Service	16
2.7.	Non-Motorized Transportation Facilities	16
3. PR	OJECT IMPACTS	18
3.1.	Roadway Network	18
3.2.	Traffic Volumes	18
3.3.	Traffic Operations	22
3.4.	Parking Demand and Supply	23
3.5.	Traffic Safety	24
3.6.	Transit	24
3.7.	Non-Motorized Transportation Facilities	25
3.8.	Short-term Impacts from Construction	25
4. FIN	NDINGS AND RECOMMENDATIONS	27
4.1.	Short-Term Conditions – Construction	27
4.2.	Long-Term Conditions	27
4.3.	Recommendations	28

APPENDIX A – LEVEL OF SERVICE DEFINITIONS APPENDIX B – PARKING UTILIZATION STUDY DATA

LIST OF FIGURES

Figure 1. Site Location and Vicinity	2
Figure 2. Site Plan	4
Figure 3. Existing (2020) Traffic Volumes – Morning and Afternoon Peak Hours	8
Figure 4. 2023 Without-Project Traffic Volumes – Morning and Afternoon Peak Hours	9
Figure 5. Study Area for On-Street Parking Utilization Surveys	. 13
Figure 6. Bicycle Master Plan Recommended Network	. 17
Figure 7. Project Trip Distribution and Assignment – Morning and Afternoon Peak Hours	. 20
Figure 8. 2023 With-Project Traffic Volumes – Morning and Afternoon Peak Hours	. 21

LIST OF TABLES

Table 1. Level of Service Summary – Existing and 2023-Without-Project Conditions	11
Table 2. Parking Occupancy Survey Results.	14
Table 3. Collision Summary	15
Table 4. Kimball Elementary School Project – Trip Generation Estimates	19
Table 5. Level of Service Summary – 2023 Conditions Without- and With-Project	23





1. INTRODUCTION

Seattle Public Schools (SPS) is proposing to replace Kimball Elementary School, located at 3200-23rd Avenue S in the North Beacon Hill neighborhood of Seattle. A new three-story school plus commons and a gymnasium, serving pre-kindergarten through grade 5 (pre-K-5), would be constructed on the existing site.

This report presents the transportation impact analyses for the proposed replacement project. The scope of analysis and approach were based on extensive past experience performing transportation impact analyses for projects throughout Seattle, including numerous analyses prepared for SPS projects. This report documents the existing conditions in the site vicinity, presents estimates of project-related traffic, and evaluates the anticipated impacts to the surrounding transportation system including transit, parking, safety, and non-motorized facilities. These analyses were prepared to support the SEPA Checklist for this project. The following sections describe the existing school site and the proposed project.

1.1. Existing School Site

The school site is bounded by 23rd Avenue S to the west, 24th Avenue S to the east, S Hanford Street to the north, and S Hinds Street to the south. The existing school has one primary building located on the western portion of the site. There are eight small buildings located along the eastern portion of the site. A surface parking lot is located on the northeast corner of the site with an access driveway on S Hanford Street; it does not have striped spaces but field observation indicates it has capacity for about 27 vehicles. There is a hard-surface play area on the southern portion of the site. The existing permanent building is 43,219 square feet (sf) in size.¹ There are on-street load/unload zones on S Hinds Street (for school buses) and 24th Avenue S (for passenger vehicles). The project site location and vicinity are shown on Figure 1.

According to information published in *Building for Learning, Seattle Public Schools Histories, 1862-2000*,² the Robert Fulton School opened on the site in October 1918 to relieve overcrowding. The school operated in various configurations until it was closed in June 1922. Starting in 1960, the site became home to Beacon Hill Annex; an all portable school. By 1963, 300 students attended the Beacon Hill Annex and it was determined to be large enough to be an independent school. In 1964 it was named after Captain George W. Kimball (who headed the Junior Safety Patrol in Seattle from 1928 to 1961), and construction of a permanent school building was completed in 1971. An addition to the school building was completed in 1998, which included additional classrooms and an art/science and kiln room.

In January 2020, at the time traffic data were collected for this analysis, enrollment was 438 students in grades kindergarten through 5, with 69 employees (59 full-time and 10 part-time).³

¹ Existing building areas from NAC Architecture, Building Summary, January 17, 2020.

² Nile Thompson and Carolyn J. Marr; *Building for Learning, Seattle Public Schools Histories, 1862-2000; 2002.*

³ Seattle Public Schools, January 2020.





1.2. Proposed Project

The proposed project would construct a new facility serving grades pre-K through 5, about 93,000 sf in size. It would include a three-story classroom wing, one-story commons (with stage), one-story gymna-sium, and a courtyard/pre-school play area. The new Kimball Elementary School is expected to have an enrollment capacity of up to 650 students, and up to 26 additional employees for a total of 95. The proposed site plan is shown in Figure 2.

The site design, including both pedestrian and vehicle access, is highly constrained by the topography of the site and the presence of mature trees. A 27-space surface parking lot is planned on the northeast corner of the site with one access driveway at S Hanford Street at approximately the same location as the existing driveway; a second 13-space surface parking lot would be provided on the northwest corner with an access driveway at S Hanford Street. The lots would not connect internally. The school-bus load/unload zone adjacent to the school on S Hinds Street and the passenger-car load/unload zone adjacent to the school on S Hinds Street and the passenger-car load/unload zone adjacent to the school buses (currently consisting of two regular buses and two SPED buses) is expected with the project. The project would provide 52 covered, secure on-site bicycle parking spaces, and bike racks to accommodate parking for 38 bicycles.

Construction is planned to begin in June 2021 with occupancy of the new school by Fall 2023. During construction, the students would be housed at the Original Van Asselt Elementary School. Future analyses (without and with the project) presented in this report reflect year 2023 conditions.





2. BACKGROUND CONDITIONS

This section presents the existing and future conditions without the proposed project. The impacts of the proposed project were evaluated against these base conditions. For comparison, and to provide an analysis of potential new traffic and parking impacts, year 2023 without-project conditions assume the existing Kimball Elementary School would continue to operate in the existing facilities at its current enrollment level. The following sections describe the existing roadway network, traffic volumes, traffic operations (in terms of levels of service), traffic safety, transit facilities, non-motorized facilities, and parking.

In addition to the two proposed site driveway intersections, the following study area intersections were identified for analysis for both the morning and afternoon peak hours.

Signalized Intersection

• S Hanford Street / 23rd Avenue S

Unsignalized Intersections

- S Hanford Street / 21st Avenue S
- S Hanford Street / 24th Avenue S
- S Horton Street / 23rd Avenue S
- S Hinds Street / 21st Avenue S
- S Hinds Street / 23rd Avenue S
- S Hinds Street / 24th Avenue S

2.1. Roadway Network

The following describes key roadways in the site vicinity. Roadway classifications are based on the City's Street Classification Map.⁴

S Hanford Street is an east-west local access street that connects between 15th Avenue S to the west and 25th Avenue S to the east. Near the site, it is 25-feet wide with one travel lane in each direction and curbs, gutters, and sidewalks on both sides. Parallel parking is permitted on both sides near the site, except between 23rd Avenue S and Harris Place S (adjacent to the school site), where no stopping or parking is allowed on the south side of the street between 7:00 A.M. and 4:00 P.M. Its intersection with 23rd Avenue S is signalized, and traffic circles are present at its intersections with 21st Avenue S and 22nd Avenue S. There is a school zone speed limit of 20 mph in the vicinity of the school that is in effect when children are present.

S Horton Street is an east-west local access street that connects 20th Avenue S to 23rd Avenue to the west of the site and provides local neighborhood access between 24th Avenue S and S Hinds Street to the east. The existing school site separates these east and west segments. West of the site, it is approximately 20-feet wide with one lane in each direction, but no curbs, gutters, or sidewalks. East of the site, between 24th Avenue S and 25th Avenue S, it is 25-feet wide with one travel lane in each direction and curbs, gutters, and sidewalks on both sides. Parallel parking is permitted on both sides of the street. West of the site, eastbound traffic is stop-controlled at its intersection with 23rd Avenue S. East of the site, its intersection with 24th Avenue S is uncontrolled. There is a school zone speed limit of 20 mph adjacent to the site that is in effect when children are present.

S Hinds Street is an east-west local access street that connects between 20th Avenue S and 24th Avenue S. Between 21st Avenue S and 24th Avenue S, it is 25-feet wide with one travel lane in each direction and curbs, gutters, and sidewalks on both sides. Between 23rd Avenue S and 24th Avenue S, parking on the

⁴ Seattle Department of Transportation (SDOT), Street Classification Maps, accessed March 2020.



north side of the street along the school frontage is restricted for school bus only (7 A.M. to 10 A.M., and 1 P.M. to 4 P.M.). Its intersection with 23rd Avenue S is stop-controlled in the eastbound and westbound directions, and there is a traffic circle at its intersection with 24th Avenue S. There is a school zone speed limit of 20 mph adjacent to the site that is in effect when children are present.

21st Avenue S is a north-south local access street that connects between Rainier Avenue S and S Spokane Street. Near the site, it is 25-feet wide with one travel lane in each direction and curbs, gutters, and side-walks on both sides. Parallel parking is permitted on both sides near the site.

23rd Avenue S is a north-south Minor Arterial that connects between Capitol Hill to the north and Beacon Hill to the south. Near the site, it is 25-feet wide with one travel lane in each direction, and curbs, gutters, and sidewalks on both sides. It has a painted bike lane in the southbound direction and marked sharrows (indicating the travel lane should be shared by bicycles and vehicles) in the northbound direction. The posted speed limit is 30 mph, and there is a 20-mph school zone adjacent to the site that is in effect when beacons flash.

24th Avenue S is a north-south local access street that connects S Hanford Street to S Spokane Street before turning into 24th Place S. It is 25-feet wide with one travel lane in each direction and curbs, gutters, and sidewalks on both sides Parking is allowed on both sides of the street, except between S Horton Street and S Hinds Street, where the west side of the street is signed for school load only from 7:00 A.M. to 5:00 P.M. There is a school zone speed limit of 20 mph adjacent to the site that is in effect when children are present.

The following documents were reviewed to determine if any planned transportation improvements could affect the roadways and intersections near Kimball Elementary School by 2023 when the school replacement would be completed.

*City of Seattle's Proposed 2020-2025 Proposed Capital Improvement Program (CIP)*⁵ – No improvements to the transportation network were identified in the site vicinity.

*Adopted Seattle Bicycle Master Plan (BMP)*⁶ – No improvements to the bicycle network are identified in the site vicinity in the *Seattle Bicycle Master Plan* – 2019 to 2024 Implementation Plan.⁷

*Neighborhood Greenway Work Plan*⁸ – This plan, covering the years from 2019 to 2024, does not identify any additional greenways planned in the site vicinity.

*Levy to Move Seattle – Workplan Report*⁹ – This document outlines the Seattle Department of Transportation's (SDOT's) workplan to deliver citywide transportation projects and services funded in part or in full by the *Levy to Move Seattle* (approved by voters in 2015). The nine-year workplan (2016-2024) documents achievements and challenges and sets the agency's plan for future years. There are no projects defined in the site vicinity.

None of the planning documents included any transportation improvements that would be expected to affect the roadway network operations or intersection capacity within the study area by 2023. Therefore, the

⁵ City of Seattle, Updated Sep. 2019.

⁶. City of Seattle, March 2015.

⁷ SDOT, June 2019.

⁸ SDOT, June 2019.

⁹ SDOT, November 2018.



existing roadway and intersection configurations were assumed to remain unchanged for the 2023 analysis presented in this report.

2.2. Traffic Volumes

2.2.1. Existing Conditions

The school day at Kimball Elementary School starts at 7:55 A.M. and ends at 2:25 P.M. To capture the existing traffic conditions during the current arrival and dismissal peak periods, traffic counts were performed at the study area intersections from 7:00 to 9:00 A.M. and from 1:30 to 3:30 P.M. on Thursday, January 23, 2020. The counts indicated that the morning and afternoon peak hours for school traffic occurred from 7:15 to 8:15 A.M. and from 2:00 to 3:00 P.M., respectively; the existing traffic volumes for the school peak hours are shown on Figure 3.

The count data indicated a high level of pedestrian activity between the school site and the area to the west, with more than 200 pedestrian crossings recorded at the signalized S Hanford Street/23rd Avenue S intersection. The count data indicated low bicycle volume, with zero or one bike recorded through each study area intersection. It is noted that the counts were conducted in January when bicycle usage may be lower than average; however, weather on the count day was sunny and a high level of pedestrian volumes were recorded. Peak bicycle usage at the school site has been observed to range between 3 and 6 staff members, depending on weather; little to no regular bicycle usage by the elementary school students has been observed.

2.2.2. Future Without-Project Conditions

To estimate year 2023 background traffic for the study area intersections, a compound annual growth rate was selected and applied to the existing (2020) traffic volumes.

The growth rate was determined after review of available recent historical traffic count data collected by SDOT on 23rd Avenue S at S Horton Street,¹⁰ adjacent to the site. Review of AM peak hour data from 2007 and 2017 indicated a decreasing trend compared to the 2020 count conducted for this analysis. Based on that review, a 1% compound annual growth rate was determined to reflect a conservatively high growth assumption, and was applied to the existing non-school-related traffic volumes to estimate 2023 background traffic volumes without the project. This growth rate was applied to account for potential new development growth that may occur in the area and is consistent with the range typically applied for traffic analyses of other developments throughout Seattle.

The 2023-without-project morning and afternoon peak hour traffic volumes are shown on Figure 4.

¹⁰ Seattle Department of Transportation, 24-hour machine counts, 2007 through 2017.







2.3. Traffic Operations

2.3.1. Off-Site Study Area Intersections

Traffic operations are evaluated based on level-of-service (LOS), which is a qualitative measure used to characterize intersection operating conditions. Six letter designations, "A" through "F," are used to define level of service. LOS A is the best and represents good traffic operations with little or no delay to motorists. LOS F is the worst and indicates poor traffic operations with long delays. The City of Seattle does not have adopted intersection level of service standards; however, project-related intersection delay that causes a signalized intersection to operate at LOS E or F, or increases delay at a signalized intersection that is projected to operate at LOS E or F without the project, may be considered a significant adverse impact, if increases are greater than 5 seconds. The City may tolerate LOS E/F conditions at unsignalized locations where traffic control measures (such as conversion to all-way-stop-control or signalization) are not applicable or desirable.

Levels of service for the study area intersections were determined using methodologies established in the *Highway Capacity Manual (HCM)*, 6th Edition.¹¹ Appendix A summarizes level of service thresholds and definitions for signalized and unsignalized intersections. All level-of-service calculations were performed using the *Synchro 10.3 (Build 122)* traffic operations analysis software. The geometries at the study area intersections and key roadways were all field-verified. The models reflect existing intersection geometries and channelization; these characteristics were assumed to remain unchanged for future 2023 conditions.

Table 1 summarizes existing and forecast 2023 levels of service without the proposed project for both the morning and afternoon peak hour conditions. As shown, all study-area intersections operate at LOS A overall or better and all stop-controlled movements currently operate at LOS C or better during the morning and afternoon peak hours. The projected increases in background traffic would add a small amount of delay (less than one second per vehicle) to the study-area intersections by 2023, and are not expected to change the overall levels of service.

¹¹ Transportation Research Board 2016.



Table 1. Level of Service Summary - Existing and 2023-Without-Project Conditions

		Morning F	Peak Hou	ır	Afternoon Peak Hour				
Intersection	Exis	sting	2023 w	/o Project	Exis	sting	2023 w/c	Project	
Signalized	LOS 1	Delay ²	LOS	Delay	LOS	Delay	LOS	Delay	
S Hanford Street / 23rd Avenue S	А	8.7	А	8.8	А	8.7	А	8.8	
Traffic Circle-Controlled	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	
S Hanford Street / 21st Avenue S	А	3.2	А	3.2	А	3.1	А	3.1	
S Hinds Street / 24th Avenue S	А	3.8	А	3.8	А	3.6	А	3.6	
One- or Two-Way Stop-Controlled	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	
S Hanford Street / 24th Avenue S 3 (overall)	А	3.6	Α	3.6	Α	5.5	Α	5.5	
Eastbound Left Turns	А	7.4	А	7.4	А	0.0	А	0.0	
Westbound Left Turns	А	7.5	А	7.5	А	7.4	А	7.4	
Northbound Movements	В	10.0	В	10.0	А	9.6	А	9.7	
Southbound Movements	А	9.9	А	9.9	А	8.8	А	8.8	
S Horton Street / 23rd Avenue S (overall)	Α	0.2	A	0.2	Α	0.3	Α	0.3	
Eastbound movement	В	12.4	В	12.6	В	14.9	С	15.2	
Northbound Left Turns	А	8.1	А	8.2	А	8.2	А	8.3	
S Hinds Street / 21st Avenue S ⁴ (overall)	А	2.4	Α	2.4	Α	8.7	А	8.8	
Eastbound Movements	А	9.0	А	9.0	А	9.0	А	9.0	
Westbound Movements	А	8.8	А	8.9	В	11.9	В	12.1	
Northbound Left Turns	А	0.0	А	0.0	А	7.4	А	7.4	
Southbound Left Turns	А	7.4	А	7.4	А	7.3	А	7.3	
S Hinds Street / 23rd Avenue S (overall)	А	1.9	Α	1.9	Α	1.1	А	1.1	
Eastbound Movements	С	19.6	С	20.2	С	19.1	С	19.8	
Westbound Movements	С	20.4	С	21.1	В	13.1	В	13.3	
Northbound Left Turns	А	8.1	А	8.2	А	8.3	А	8.3	
Southbound Left Turns	А	8.6	А	8.6	А	8.2	А	8.2	

Source: Heffron Transportation, Inc., May 2020.

1. LOS = Level of service

2. Delay = Average seconds of delay per vehicle

3. S Hanford Street / 24th Avenue S is an uncontrolled intersection; it was analyzed as a northbound/southbound stop-controlled intersection because field observation found that it effectively operates that way.

4. S Hinds Street / 21st Avenue S is an uncontrolled intersection; it was analyzed as an eastbound/westbound stop-controlled intersection because field observation found that it effectively operates that way.

2.3.2. Site Access

Access to the school's on-site parking lot is located on S Hanford Street at its intersection with Harris Place S, between 23rd Avenue S and 24th Avenue S. This lot does not have striped spaces but field observation indicates it has capacity for about 27 vehicles. Operational analyses of the site access driveway indicate that all movements operated at LOS A during both the morning and afternoon peak hours. The projected increases in background traffic are expected to add a small amount of delay to the driveway by 2023, but all movements would continue to operate at the same levels of service.



2.4. Parking Supply and Occupancy

On-street parking at and around the Kimball Elementary School site was surveyed to determine the existing parking supply and parking occupancy. This information was then used to estimate how parking utilization could be affected by new parking demand generated by the larger school (which is presented later in Section 3.4). The following sections describe the on-street parking supply as well as the current parking occupancy and utilization rates.

2.4.1. Methodology and Study Area

A detailed on-street parking study was performed and supply was documented according to the methodology outlined in the City of Seattle's Tip #117.¹² Although Tip #117 was created for another purpose, it outlines the City's preferred methodology to determine the number and type of on-street parking spaces that may exist within a defined study area, and how much of that supply is currently utilized at different times of the day.

The study area for the on-street parking analysis included all roadways within an 800-foot *walking* distance from the school site, as is typically required by the City of Seattle for evaluations of new development for SEPA review. The 800-foot walking distance results in a study area that extends just west of 20th Avenue S, just north of S Stevens Street, just south of S Spokane Street, and just east of 25th Avenue S. Details about parking supply and occupancy are provided in the following sections. The study area consists primarily of single-family residences. Many of the residential garages and driveways in the vicinity are accessed via alleys; area residents also use on-street parking.

Existing On-Street Parking Supply

Within the study area, the majority of local access roads are 25-feet wide with curb and gutter on both sides. Along these streets, parking supply was considered to exist on both sides unless otherwise signed. There are several streets in the study area that do not have curbs. Available on-street parking capacity for these streets were evaluated based on the street and shoulder width. 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 23rd Avenue S, between S Horton Street and S Hanford Street is one block face (identified as 'CF' for this study). The study area and block face designations are shown on Figure 5.

Each block face was measured and analyzed to determine the number of legal on-street parking spaces. First, common street features—such as driveways, fire hydrants, and special parking zones—and their buffer requirements were identified. 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, or within 5 feet on either side of a driveway or alley. The remaining unobstructed lengths between street features were converted to legal on-street parking spaces using values in the City's Tip #117.

¹² Seattle Department of Planning and Development, Tip 117, *Parking Waivers for Accessory Dwelling Units*, Updated May 12, 2011.




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 past experience of Heffron Transportation preparing onstreet parking studies, it has been observed that increased use of smaller cars and the tendency for drivers to park closer together in areas with higher utilization can result in more parking supply than would be suggested by the Tip #117 guidance. Detailed parking supply by block face is provided in Appendix B.

The parking supply survey determined that there are 580 on-street parking spaces within the study area, the majority of which (501 spaces) have no signed parking restrictions. After accounting for school-bus and time-dependent no parking zones along the school frontage (totaling 39 spaces), the total supply is 541 spaces during the early morning, 552 spaces during mid-morning, and 580 spaces during evenings.

Existing On-Street Parking Occupancy

Parking occupancy counts within the study area were performed in February 2020. School-day occupancy counts were performed during times when the future occupancy of the school could have peak parking conditions. Counts were performed early morning (between 7:00 and 7:45 A.M.) to reflect conditions when some staff may be arriving at the school and using on-street supply and mid-morning (between 10:30 and 11:15 A.M.) to reflect conditions when school-day parking is typically highest. Evening counts were performed (between 7:30 and 8:15 P.M.) to assess parking during school events. One evening count was performed on a non-event night, and the other was performed during the school's Lunar New Year Potluck event. The results of the parking occupancy surveys are summarized in Table 2. Detailed summaries of the on-street parking occupancy by block face for all counts are provided in Appendix B.

Time Period Surveyed	Parking Supply	Total Vehicles Parked	% Utilization
Weekday Early Morning (7:00 to 7:45 A.M.) ^a			
Tuesday 2/11/2020	541	256	47%
Thursday 2/13/2020	541	252	47%
Average	541	254	47%
Weekdays Mid-Morning (10:30 to 11:15 A.M.) b			
Tuesday 2/11/2020	552	218	39%
Thursday 2/13/2020	552	220	40%
Average	552	219	40%
Weekday Evenings (7:00 to 7:45 P.M.)			
Tuesday 2/11/2020 – No Event	580	230	40%
Thursday 2/13/2020 – With Event c	580	320	55%

Table 2. Parking Occupancy Survey Results

Source: Heffron Transportation, Inc., February 2020.

a. No Stops (7 A.M. - 4 P.M.), School-bus only (7-10 A.M. & 1-4 P.M.) and 5 min School Load Only (7-10 A.M. & 1-4 P.M.) along frontage excluded from total supply this period.

b. No Stops (7 A.M. - 4 P.M.), and School-bus only (7-10 A.M. & 1-4 P.M.) along frontage excluded from total supply this period.

c. Event - Lunar New Year Potluck

On-street parking utilization was calculated using the methodology described in Tip #117 and is 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 2. For the purpose 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. As shown, on-street parking occupancy in the study area is below that threshold during all time periods counted, including during the evening school event. Within the study area, there were an average of 287 unused parking spaces during the early



morning peak hour, which increased to 333 unused spaces midday. During the evening event, there were 260 unused spaces.

2.4.2. On-Site Parking

There is an unstriped parking lot located on the northeast corner of the school property with capacity for about 27 vehicles. Parking occupancy counts of this lot were also performed in February 2020 on the same days and time periods as the on-street parking occupancy counts. Parking occupancy in the lot ranged from 7 to 12 vehicles in early morning, 26 to 27 vehicles during the school day, and 8 vehicles during the school's evening Lunar New Year Potluck event.

2.5. Traffic Safety

Collision data for the study area intersections and roadway segments were obtained from SDOT's Open Data Portal for the period between January 1, 2016 and the most recent records available as of February 17, 2020 (4.1 years). The data were examined to determine if there are any unusual traffic safety conditions that could impact or be impacted by the proposed project. Table 3 summarizes the collision data.

Historically, unsignalized intersections with five or more collisions per year and signalized intersections with 10 or more collision per year have been considered high collision locations (HCLs) by the City. Intersections are also considered high collision locations if there are five or more pedestrian or cyclist collisions in the preceding three years. Mid-block roadway segments are considered high collision locations if there are 10 or more collisions in the previous year. SDOT staff conducts an annual analysis of high collision locations. The *2019 Candidate Locations for HCL Reviews*,¹³ which lists locations based on the previous three years (2016 through 2018) of recorded collisions, was reviewed for this analysis.

As shown, all of the study area intersections averaged fewer than one collision per year. None meet the criteria for an HCL and do not appear in the list. None of the reported collisions involved pedestrians or bicyclists, and none of the reported collisions resulted in fatalities. Overall, these data do not indicate any unusual traffic safety conditions.

	Rear- End	Side- Swipe	Right Turn	Left Turn	Right Angle	Ped / Cycle	Other	Total for 4.1 Years	Average Per Year
Signalized Intersection									
S Hanford Street / 23rd Ave S	0	0	0	0	3	0	0	3	0.7
Unsignalized Intersections									
S Hanford Street / 21st Avenue S	0	0	0	0	0	0	0	0	0.0
S Hanford Street / 24th Avenue S	0	0	0	0	0	0	0	0	0.0
S Horton Street / 23rd Avenue S	0	0	0	0	0	0	0	0	0.0
S Hinds Street / 21st Avenue S	0	0	0	0	2	0	0	2	0.5
S Hinds Street / 23rd Avenue S	0	0	0	0	0	0	0	0	0.0
S Hinds Street / 24th Avenue S	0	0	0	0	0	0	0	0	0.0

Table 3. Collision Summary

Source: City of Seattle Department of Transportation, <u>https://data-seattlecitygis.opendata.arcgis.com/datasets/collisions</u>, Data for the period starting January 1, 2016, through February 17, 2020.

¹³ SDOT, received April 2019.



2.6. Transit Facilities and Service

King County Metro Transit (Metro) provides bus service in the site vicinity. The closest bus stops are located about 1,650 feet (0.3 mile) west of the site on Beacon Avenue S, with northbound and southbound stops located just north of S Hanford Street. These stops are served by Metro Route 36, which provides all-day service seven days per week between Downtown Seattle, First Hill, and the Beacon Hill and Rainier Beach neighborhoods. On weekdays, the route operates from about 5:00 A.M. to 12:30 A.M. with headways (time between consecutive buses) of seven to 15 minutes. The route also provides service to two Link Light Rail stations, Othello and Beacon Hill. The Mount Baker light rail station is located about a half mile to the east of the site via S Hanford Street using a staircase, or just over a half mile using an accessible route via McClellan Street and 23rd Avenue S.

In January 2017, King County Metro adopted 'Metro Connects,'¹⁴ the 25-year vision plan that will serve as the guiding policy framework for future improvements to the transit network. The plan identifies continued, frequent service on the same or a re-numbered route in the study area in 2025, with potential for a Rapid Ride route by 2040; no changes are expected to be in place by 2023 when the school replacement project would be complete.

School bus transportation is made available to Kimball Elementary School students who qualify for transportation. The existing school is served by two full-size school buses and two smaller SPED buses.

2.7. Non-Motorized Transportation Facilities

As described in the *Roadway Network* section, most roadways in the study area have sidewalks on both sides; the signalized S Hanford Street / 23rd Avenue S intersection has crosswalks on all four legs, and there is a crosswalk on 24th Avenue S at S Horton Street.

The City's currently adopted *CIP* and the *Seattle Pedestrian Master Plan – 2019 to 2024 Implementation Plan and Progress Report*¹⁵ were reviewed to determine if any pedestrian facility improvements are planned in the area. The proposed *2019-2024 CIP* includes funding over the next five years to advance the *Pedestrian Master Plan*¹⁶ recommendations. The roadways and intersections around Kimball Elementary are identified as part of the Priority Investment Network (PIN) and there are a few segments noted with missing sidewalks (22nd Avenue S, S Horton Street, Harris Place S). However, no specific planned non-motorized facility improvements are listed for the study area roadways or intersections in the *CIP* or the *Seattle Pedestrian Master Plan 2019-2024 Implementation Plan and Progress Report.*¹⁷

The *Seattle Bicycle Master Plan (BMP)*¹⁸ identifies planned bicycle infrastructure improvements that would connect to the citywide bicycle network. The *BMP* recommended network in the vicinity of the school site is shown on Figure 6; nearest the school planned improvements include provision of neighborhood greenways (low volume, low speed streets, designed to be shared by pedestrians, bicyclists, and motorists) on 21st Avenue S, 24th Avenue S, and S Hanford Street. None of the recommended improvements in the vicinity are included in the City's 2019-2024 BMP Implementation Plan.¹⁹

¹⁴ King County Metro, adopted January 2017.

¹⁵ Seattle Department of Transportation, May 2019.

¹⁶ SDOT, June 2017.

¹⁷ SDOT, October 2017.

¹⁸ SDOT, 2014.

¹⁹ SDOT, June 2019.



School Replacement

Figure 6 Existing and Planned Bicycle Facilities





3. PROJECT IMPACTS

This section describes the conditions that would exist with the new Kimball Elementary School, and its enrollment capacity of up to 650 students, which reflects an increase of 212 students compared to the enrollment of 438 students at the time of the counts. Vehicle trip estimates associated with the increased enrollment capacity were added to the 2023-without-project traffic volume forecasts. Level of service analyses were performed to determine the proposed project's impact on traffic operations in the study area. Parking demand and the potential change to on-street parking utilization was also estimated.

3.1. Roadway Network

The project would replace two existing curb cuts on S Hanford Street (one accessing the existing surface lot and one accessing a loading dock area) with two new curb cuts, each accessing one of two new surface parking lots that would be constructed. With the project, the loading dock would be accessed from the northeast surface lot and would not require an additional curb cut. Frontage improvements would be made along all four site frontages (along 23rd Avenue S, S Hanford Street, 24th Avenue S, and S Horton Street) consisting of sidewalk improvements, landscaping, and provision of ADA curb ramps at intersections. No additional changes to the surrounding roadway network are proposed.

3.2. Traffic Volumes

The proposed project could generate new vehicular, pedestrian, and bicycle activity on the surrounding transportation network. The new Kimball Elementary School is expected to have an enrollment capacity of up to 650 students. The school is expected to generate an increase in daily and peak hour traffic compared to existing conditions. The following describes the method used to estimate project-generated traffic.

3.2.1. School Trip Generation

Trip generation estimates for school projects can be developed using one of two methods. For new schools, rates published in the Institute of Transportation Engineers' *Trip Generation Manual*²⁰ are typically applied. For modernizations and/or expansions of existing schools, it is preferred to use counts of traffic at the existing school. This method works best for schools located in areas where school-related traffic can easily be isolated and identified, and traffic counts can be used to develop rates specifically for that school. There is a designated area for passenger-vehicle load/unload adjacent to the school site on 24th Avenue S, between S Horton Street and S Hinds Street. The school bus load/unload zone is located along the school frontage on S Hinds Street, just west of 24th Avenue S. Trip generation estimates were derived from video traffic counts performed at surrounding intersections, and along the roadways adjacent to the school. The resulting estimates were compared to published trip generation rates.

Based on the data collected, the school currently generates an estimated 0.71 trips per student in the morning peak hour and 0.47 trips per student in the afternoon peak hour. These rates are similar to the average rates published for Elementary Schools (Land Use 520) in the *Trip Generation Manual* (0.67 trips per student in the morning peak hour and 0.34 trips per student in the afternoon peak hour) and are consistent with rates derived from counts at other Seattle elementary schools. Since these rates were derived specifically for the existing school, they are most appropriate for use in evaluating future conditions with the new school and its added enrollment capacity.

²⁰ ITE, 10th Edition, September 2017.



The derived rates were applied to the proposed new enrollment capacity at Kimball Elementary (650 students). Table 4 presents the resulting trip estimates for the expanded Kimball Elementary School. These estimates include school bus trips, employee trips, and family-vehicle trips. No change to the number of school buses is anticipated as a result of the school replacement project.²¹ As shown, the school replacement project is expected to increase trip generation at the site by 150 trips (82 in, 68 out) in the morning peak hour and by 102 trips (48 in, 54 out) in the afternoon peak hour.

		Mor	ning Peak	Hour	After	noon Peak	Hour
Site Condition	Enrollment	In	Out	Total	In	Out	Total
Proposed Kimball Elementary	650 students ^a	249	213	462	147	159	306
Existing Kimball Elementary	438 students ^b	167	145	312	99	105	204
Net Change	212 students	82	68	150	48	54	102

Table 4. Kimball Elementary School Project – Trip Generation Estimates

Source: Heffron Transportation, Inc., May 2020.

a. Proposed future capacity of the new school building.

b. Enrollment of the existing school at the time of site traffic counts (January 2020).

3.2.2. Trip Distribution and Assignment

The expanded Kimball Elementary School is expected to accommodate growth largely within the existing enrollment area for the school. Trip distribution patterns for the new elementary school trips were developed based on observed existing patterns surrounding the school. These distribution patterns reflect the location of parking supply, student drop-off/pick-up area, bus loading area, and the access driveways. Most of the morning and afternoon peak hour trips are expected to consist of student drop off and pick up, with some trips generated by teachers and staff.

The load/unload zone for buses is planned to remain on S Hinds Street. Passenger-vehicle load/unload for most students is expected to continue to occur on 24th Avenue S. (It is noted that the topographic constraints of the site, combined with the prohibition of parking or stopping along the site frontages on S Hanford Street and 23rd Avenue S and designation of S Hinds Street for bus loading, discourage passenger vehicle loading from occurring on any street other than 24th Avenue S.) Trip distribution at the site also reflects some trips associated with pre-K drop-off and pick-up (for which parents and caregivers would park and walk their child into and out of the school) generated at the northwest lot.

Figure 7 shows the projected traffic distribution patterns and assignments of new trips for the morning and afternoon peak hours. The net new peak hour school trips were added to the forecast 2023 without-project traffic volumes to reflect future conditions with the proposed school facility. The forecast 2023 with-project traffic volumes for the morning and afternoon peak hours are shown on Figure 8.

²¹ P. Wight – Construction Project Manager, Seattle Public Schools, March 2020.







3.3. Traffic Operations

Intersection levels of service for future with-project conditions were evaluated using the same methodology described previously. The additional enrollment capacity could result in increased pedestrian trips and could increase the number of pedestrian crossings at the nearby study intersections. The operational analyses accounted for potential increases in pedestrian crossing activity and the peaking characteristics of school traffic (school drop-off and pick-up primarily occurs during about 20 minutes in the peak hour) projected to result from the project.

3.3.1. Off-Site Study Area Intersections

Levels of service for the off-site study area intersections were calculated using the 2023-with-project traffic volumes. Table 5 shows the results of the analysis; levels of service for the 2023-without-project conditions are provided for comparison. As shown, the additional traffic and pedestrian activity generated by the proposed increase in enrollment capacity is expected to add some delay (average 2 seconds per vehicle or less) to the study area intersections and turning movements during both the morning and afternoon peak hours. However, the study area intersections would continue to operate at the same overall levels of service as without-project conditions, with all movements operating at LOS C or better, which is an acceptable level of service. No improvements would be needed to accommodate the school replacement project.



Table 5. Level of Service Summary - 2023 Conditions Without- and With-Project

	N	Norning Pe	ak Hou	r	A	fternoon	Peak Hou	ır
Intersection	2023 w/c	Project	2023 v	v/ Project	2023 w/o	o Project	2023 w/	Project
Signalized	LOS ¹	Delay ²	LOS	Delay	LOS	Delay	LOS	Delay
S Hanford Street / 23rd Avenue S	А	8.8	А	9.8	А	8.8	А	9.2
Traffic Circle-Controlled	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
S Hanford Street / 21st Avenue S	А	3.2	А	3.3	А	3.1	А	3.2
S Hinds Street / 24th Avenue S	А	3.8	А	4.2	А	3.6	А	3.8
One- or Two-Way Stop-Controlled	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
S Hanford Street / 24th Avenue S 3 (overall)	А	3.6	А	4.2	А	5.5	A	5.2
Eastbound Left Turns	А	7.4	А	7.4	А	0.0	А	0.0
Westbound Left Turns	A	7.5	А	7.6	А	7.4	А	7.5
Northbound Movements	В	10.0	В	10.6	А	9.7	В	10.1
Southbound Movements	A	9.9	В	10.3	А	8.8	А	8.9
S Horton Street / 23rd Avenue S (overall)	А	0.2	Α	0.2	А	0.3	А	0.3
Eastbound movement	В	12.6	В	12.7	С	15.2	С	15.6
Northbound Left Turns	А	8.2	А	8.2	А	8.3	А	8.3
S Hinds Street / 21st Avenue S ⁴ (overall)	А	2.4	Α	2.9	А	8.8	Α	8.9
Eastbound Movements	А	9.0	А	9.2	А	9.0	А	9.0
Westbound Movements	А	8.9	А	9.0	В	12.1	В	12.2
Northbound Left Turns	А	0.0	А	0.0	А	7.4	А	7.4
Southbound Left Turns	А	7.4	А	7.4	А	7.3	А	7.3
S Hinds Street / 23rd Avenue S (overall)	А	1.9	Α	2.4	А	1.1	Α	1.6
Eastbound Movements	С	20.2	С	20.9	С	19.8	С	21.7
Westbound Movements	С	21.1	С	22.3	В	13.3	В	14.1
Northbound Left Turns	А	8.2	А	8.2	А	8.3	А	8.3
Southbound Left Turns	А	8.6	А	8.7	А	8.2	А	8.3

Source: Heffron Transportation, Inc., May 2020.

5. LOS = Level of service

6. Delay = Average seconds of delay per vehicle

7. S Hanford Street / 24th Avenue S is an uncontrolled intersection; it was analyzed as a northbound/southbound stop-controlled intersection because field observation found that it effectively operates that way.

8. S Hinds Street / 21st Avenue S is an uncontrolled intersection; it was analyzed as an eastbound/westbound stop-controlled intersection because field observation found that it effectively operates that way.

Site Access

Analysis of the site access driveways indicate that both would operate at LOS A overall, with all movements operating at LOS B or better.

3.4. Parking Demand and Supply

The project would provide two on-site parking lots that have a total of 40 spaces, increasing the on-site supply by about 13 spaces.



3.4.1. School Day Parking

School-day parking at elementary schools is primarily driven by staffing levels and family-volunteer activity. With the new facility and the school operating at its planned capacity of 650 students, the school could have an additional 26 employees. Future parking demand estimates were developed based on studies at similar elementary schools in the area and rates published by ITE. Observations performed by Heffron Transportation at numerous Seattle elementary schools indicate school-day peak parking demand rates ranging from 1.06 to 1.23 vehicles parked per employee. ITE's *Parking Generation*²² includes rates of 0.13-vehicles-per-student and 0.95-vehicles-per-employee for elementary schools. These rates account for parking demand generated by all users, including employees and visitors. Based on the range of rates available, the proposed school replacement project is estimated to increase peak parking demand by about 25 to 32 vehicles.

The District would seek a departure from City code parking requirements, but the project would increase on-site parking supply by 13 spaces (from about 27 to 40 spaces). As discussed previously, on-street parking within the site vicinity averages 40% occupied during the school day, with about 330 unused spaces. The additional on-site capacity and available on-street capacity could easily accommodate the additional staff or volunteer parking demand that may be added due to the increased school size.

3.4.2. Evening Event Parking

Kimball Elementary School would continue to host events periodically throughout the school year. The school currently holds 1 to 2 events per month with about 100 participants, and 3 to 4 evening meetings per month with 10 to 20 participants. The project is not expected to increase the frequency of these events, but with larger enrollment, these events could draw proportionately larger attendances. The on-street parking survey results indicated 250 to 350 available on-street parking spaces in the school vicinity (including on one evening when a school event was held). Additionally, parking for up to 16 vehicles could be accommodated on the play area surface. It is expected that the 56 on-site spaces (40 permanent spaces plus 16 event-only) combined with on-street capacity would accommodate typical evening events.

3.5. Traffic Safety

The collision data provided for the study area did not indicate any unusual collision patterns that would impact or be impacted by the proposed project. The school expansion is expected to increase traffic and pedestrian traffic activity around the school site. The existing measures implemented around the school, including school-zone speed limits and crossing guards, are expected to continue. These measures enhance safety during peak arrival and dismissal periods, and the project is not expected to result in any adverse safety impacts.

3.6. Transit

A small number of transit trips may be generated by the teachers or staff at the site; however, the traffic estimates do not rely on reductions in auto trips to account for any staff transit usage. The closest bus stops are about 0.3 mile from the school site. The project is not expected to result in adverse impacts to transit facilities or service. School bus transportation for students would continue.

²² ITE, 5th Edition, January 2019.



3.7. Non-Motorized Transportation Facilities

Kimball Elementary School, with increased enrollment capacity, is expected to generate some additional pedestrian trips within the site vicinity. It is anticipated that the largest increases in pedestrian activity would occur along S Hanford Street and 24th Avenue S adjacent to the school. There may also be a small increase in bicycle trips within the site vicinity due to the proposed project, in proportion with the increased enrollment.

The District would seek a departure from City code on-site bike storage requirements, but would provide 52 covered, secure on-site bicycle parking spaces and bike racks to accommodate parking for 38 bicycles; the proposed bike parking supply is consistent with the Seattle Department of Neighborhoods and Development Standard Advisory Committee recommendations on the departure request.²³ Assuming increase in bike usage proportional to the expected increase in staff, bicycle commuting by 5 to 10 employees is estimated. The proposed bicycle parking supply is expected to accommodate the estimated peak bicycle parking demand, with capacity available to accommodate additional bike riders.

Frontage improvements completed with the project would enhance the pedestrian and bicycle environment at the school site. No significant adverse impacts to non-motorized access or facilities is expected, and no further improvements to non-motorized facilities would be needed for the project.

3.8. Short-term Impacts from Construction

Construction is planned to begin in June 2021 with occupancy of the new school by Fall 2023. During construction, the students would be housed at the Original Van Asselt Elementary School.

3.8.1. Construction Period Demolition, Earthwork, and Employee Activity

The construction effort would include demolition of the existing school, plus site work that would consist of excavation and fill for foundations and grading. Demolition of the building is expected to require that about 50 truckloads of material be hauled away from the site (50 trucks in and 50 trucks out). Demolition is expected to occur over a one- to two-week period. This equates to an average of about 20 truck trips per day (10 trips in, 10 trips out) and 2 to 3 trips per hour during building demolition. The project is estimated to require removal of about 2,500 cubic yards (cy) of material from the site and import of about 2,000 cy of structural fill for a total transport amount of about 4,500 cy. Assuming an average expansion factor of 25% and truck capacity of 20-cubic yards (truck/trailer combination), the excavation and fill would generate about 280 truckloads (280 trucks in and 280 trucks out). The earthwork activities are expected to occur in May and June 2021. If earthwork activities occur over eight weeks, this would correspond to an average of about 14 truck trips per day (7 in, 7 out) and 1 to 2 truck trips per hour during the earthwork transport. This volume of truck traffic may be noticeable to residents living adjacent to the site, but would not result in significant impacts to traffic operations in the site vicinity.

The construction of the project would also generate employee and equipment trips to and from the site. It is anticipated that construction workers would arrive at the construction site before the AM peak traffic period on local area streets and depart the site prior to the PM peak period; construction work shifts for schools are usually from 7:00 A.M. to 3:30 P.M., with workers arriving between 6:30 and 6:45 A.M., but work not starting until 7:00 A.M. The number of workers at the project site at any one time would vary depending upon the construction element being implemented.

²³ Seattle Department of Neighborhoods, Public School Development Standard Advisory Committee, Kimball Elementary School Design Departure Recommendations, Project #3035786-SD, July 30, 2020.



3.8.2. Construction-Period Parking Conditions

Construction staging is expected to occur primarily on site. Some construction employee parking may also occur on street Although parking demand generated by construction workers would likely be noticeable to local residents, the parking occupancy on the surrounding roadways was found to be about 40% utilized during weekdays with more than 300 unused spaces. It is noted that there would be no school-related parking during construction. Therefore, the unused supply is expected to accommodate the temporary added demand during the two-year construction period and it is not expected to result in significant adverse impacts to study-area parking conditions.



4. FINDINGS AND RECOMMENDATIONS

The following sections summarize the findings and recommendations of the analysis.

4.1. Short-Term Conditions – Construction

- Construction is planned to begin in June 2021 with occupancy of the new school by Fall 2023. During construction, the students would be housed at the Original Van Asselt Elementary School.
- Demolition of the building is expected to require an average of about 20 truck trips per day (10 trips in, 10 trips out) and 2 to 3 trips per hour. Excavation and fill are estimated to require an average of 14 truck trips per day (7 in, 7 out) and 1 to 2 truck trips per hour. These volumes may be noticeable to residents living adjacent to the site, but would not result in significant impacts to traffic operations.
- Construction staging is expected to occur primarily on site. Some construction employee parking may also occur on street Although parking demand generated by construction workers would likely be noticeable to local residents, the parking occupancy on the surrounding roadways was found to be about 40% utilized during weekdays with more than 300 unused spaces. Therefore, the unused supply is expected to accommodate the temporary added demand during the two-year construction period and it is not expected to result in significant adverse impacts to study-area parking conditions.

It is recommended that the contractor and SPS develop a Construction Transportation Management Plan. Details to be included in this plan are described in Section 4.3.

4.2. Long-Term Conditions

- The Kimball Elementary School replacement project is expected to increase student capacity to 650 (up from its enrollment of 438 at the time of the traffic counts), and could have an additional 26 employees (an increase from 69 to about 95).
- At the proposed capacity and compared to the site's current enrollment, the expanded school is projected to generate a net increase of 150 trips during the morning peak hour (from 7:15 to 8:15 A.M.) and 102 trips during the afternoon peak hour (from 2:00 to 3:00 P.M.).
- Additional traffic and pedestrian activity generated by the proposed school replacement project is expected to add small amounts of delay to the study area intersections and turning movements during morning and afternoon peak hours. However, all study area intersections would continue to operate at LOS C or better with the project, which is an acceptable level of service in the City of Seattle.
- At the proposed enrollment capacity of 650 students, school-day parking demand may increase by about 25 to 32 vehicles. The project would increase on-site parking capacity by 13 spaces (from about 27 to 40 spaces) and there is adequate on-street supply to accommodate the added demand.
- Expected peak bicycle demand could be accommodated by the proposed 52 covered, secure bicycle parking spaces that would be provided with the project. The project would also provide bike racks to accommodate short-term parking for 38 bicycles. The project is not expected to result in adverse impact to transit or non-motorized facilities.



• Kimball Elementary currently holds 1 to 2 events per month with about 100 participants, and 3 to 4 evening meetings per month with 10 to 20 participants. The project is not expected to increase the frequency of these events, but with larger enrollment, these events could draw proportionately larger attendance. The on-street parking survey results indicated 250 to 350 available on-street parking spaces in the school vicinity (including on one evening when a school event was held). Additionally, parking for up to 16 vehicles could be accommodated on the play area surface. It is expected that the 56 on-site spaces (40 permanent spaces plus 16 event-only) combined with on-street capacity would accommodate typical evening events.

Based the above findings, the proposed school replacement project would not result in significant adverse impacts to traffic operations or parking. However, because the site would be reconfigured to accommodate a larger enrollment capacity, several measures are recommended to minimize traffic and parking-effects on the surrounding neighborhood, described in the following section.

4.3. Recommendations

Even though the proposed Kimball Elementary School replacement project would not adversely affect the transportation system in the site vicinity, the following measures are recommended to reduce the traffic and parking impacts with the project.

- A. **Construction Transportation Management Plan (CTMP):** The District should require the selected contractor to develop a Construction Transportation Management Plan (CTMP) that addresses traffic and pedestrian control during construction of the new facility. It would define truck routes, lane closures, walkway closures, and parking or load/unload area disruptions, as necessary. To the extent possible, the CTMP would direct trucks along the shortest route to arterials and away from residential streets to avoid unnecessary conflicts with resident and pedestrian activity. The CTMP may also include measures to keep adjacent streets clean on a daily basis at the truck exit points (such as street sweeping or on-site truck wheel cleaning) to reduce tracking dirt offsite.
- B. **Transportation Management Plan (TMP):** Prior to the school opening, the District and school principal should establish a Transportation Management Plan (TMP) to educate parents and students about the preferred access and circulation. The effort should encourage supervised walking (such as walking school buses), carpooling, and school bus ridership for those eligible. The plan should define clear procedures and travel routes and preferred load/unload locations.
- C. **Engage Seattle School Safety Committee:** The District should engage with the Seattle School Safety Committee (led by SDOT) to review walk routes and determine if any changes should be made to crosswalk locations, signage, pavement markings, school zone speed limits, or crossing guard locations.
- D. **Develop Neighborhood Communication Plan for School Events:** The District and school administration should develop a neighborhood communication plan to inform nearby neighbors of events each year. The plan should be updated annually (or as events are scheduled) and should provide information about the dates, times, and rough magnitude of attendance. The communication would be intended to allow neighbors to plan for the occasional increase in on-street parking demand that would occur with large events.
- E. Update right-of-way and curb-side signage: The District should work with SDOT to confirm the locations, extent, and signage of school-bus and passenger-vehicle load/unload zones adjacent to the school site.

APPENDIX A Level of Service Definitions



Levels of service (LOS) are qualitative descriptions of traffic operating conditions. These levels of service are designated with letters ranging from LOS A, which is indicative of good operating conditions with little or no delay, to LOS F, which is indicative of stop-and-go conditions with frequent and lengthy delays. Levels of service for this analysis were developed using procedures presented in the *Highway Capacity Manual, Sixth Edition* (Transportation Research Board, 2016).

Signalized Intersections

Level of service for signalized intersections is defined in terms of average delay for all vehicles that travel through the intersection. Delay can be a cause of driver discomfort, frustration, inefficient fuel consumption, and lost travel time. Specifically, level-of-service criteria are stated in terms of the average delay per vehicle in seconds. Delay is a complex measure and is dependent on a number of variables including: number and type of vehicles by movement, intersection lane geometry, signal phasing, the amount of green time allocated to each phase, transit stops and parking maneuvers. Table A-1 shows the level of service criteria for signalized intersections from the *Highway Capacity Manual, Sixth Edition*.

Level of Service	Average Control Delay Per Vehicle
А	\leq 10 seconds
В	> 10 – 20 seconds
С	> 20 – 35 seconds
D	> 35 – 55 seconds
E	> 55 – 80 seconds
F	> 80 seconds

Table A-1. Level of Service for Signalized Intersections

Source: Transportation Research Board, Highway Capacity Manual, Exhibit 19.8, 2016.

Unsignalized Intersections

For unsignalized intersections, level of service is based on the average delay per vehicle for each turning movement. The level of service for all-way stop or roundabout-controlled intersections is based upon the average delay for all vehicles that travel through the intersection. The level of service for a one- or two-way, stop-controlled intersection, delay is related to the availability of gaps in the main street's traffic flow, and the ability of a driver to enter or pass through those gaps. Table A-2 shows the level of service criteria for unsignalized intersections from the *Highway Capacity Manual, Sixth Edition*.

Table A-2. Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay per Vehicle
А	0 – 10 seconds
В	> 10 – 15 seconds
С	> 15 – 25 seconds
D	> 25 – 35 seconds
E	> 35 – 50 seconds
F	> 50 seconds

Source: Transportation Research Board, Highway Capacity Manual, Exhibit 20.2, 2016.

APPENDIX B Parking Utilization Study Data

	Total Available Parking Spaces After 4p	0	0	7	5	4	0	9	7	0	0	5	4	9	4	5	4	0	0	6	S	8	4	0
	gni≯as¶ əldslisvA IstoT q1-s01 nəəwtəB zəɔsq2	0	0	7	5	4	0	9	7	0	0	5	4	9	4	5	4	0	0	6	5	8	4	0
	priyns¶ əldslisvA lstoT s8-s7 nəəwi∋8 zəวsq2	0	0	7	5	4	0	6	7	0	0	5	4	6	4	5	4	0	0	6	5	8	4	0
yly	School Bus Only 7-10a, 1- School Bus Only 7-10a, 1- IoH∖nu2\ts2 5at/Sun/Hol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
rking Supp	g2-s7 vinO bsoJ lood2 loH/nu2\ts2 cx9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pa	q4-67 sqot2 oN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Zhr 7a-6p, Mon-Fri, Zone 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DidaziQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	~	0	~	0	0
	Unrestricted Parallel Parking	0	0	7	5	4	0	9	7	0	0	5	4	9	4	5	4	0	0	8	5	7	4	0
	Side of Street	M	ш	z	S	z	S	Ν	ш	Ν	ш	z	S	z	S	z	S	Ν	ш	Ν	ш	Ν	ш	8
	Street Segment	800' BOUNDARY AND S STEVENS ST	800' BOUNDARY AND S STEVENS ST	22ND AVE S AND 23RD AVE S	22ND AVE S AND 23RD AVE S	23RD AVE S AND DEAD END 3	23RD AVE S AND DEAD END 3	S STEVENS ST AND S WINTHROP ST	21ST AVE S AND 22ND AVE S	21ST AVE S AND 22ND AVE S	22ND AVE S AND 23RD AVE S	22ND AVE S AND 23RD AVE S	23RD AVE S AND HARRIS PL S	23RD AVE S AND HARRIS PL S	800' BOUNDARY AND S HANFORD ST	800' BOUNDARY AND S HANFORD ST	S WINTHROP ST AND S HANFORD ST							
	Street Name	23RD AVE S	23RD AVE S	S STEVENS ST	S STEVENS ST	S STEVENS ST	S STEVENS ST	22ND AVE S	22ND AVE S	23RD AVE S	23RD AVE S	S WINTHROP ST	S WINTHROP ST	20TH AVE S	20TH AVE S	21ST AVE S	21ST AVE S	22ND AVE S	22ND AVE S	23RD AVE S				
	Block Face ID	AA	AB	AC	AD	AE	AF	AG	АН	A	Γ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	АТ	AU	AV	AW

	Total Available Parking Spaces After 4p	0	5	4	10	7	5	19	0	0	5	4	8	4	4	9	7	10	5	4	2	7	9	4
	gri¥ns¶ əldsilsvA IstoT q1-s01 nəəwtəB ≥ə⊃sqS	0	5	4	10	7	5	19	0	0	5	4	8	4	4	9	7	0	5	4	2	2	9	4
	gni¥ns¶ əldslisvA IstoT s8-s∑ nəəwtəB zəssq2	0	5	4	10	7	5	19	0	0	5	4	8	4	4	9	7	0	5	4	2	2	9	4
ply	-1 ,501-7 yinO su8 looh3 loH/nu2\st Sat/SunHol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
irking Supl	q∂-s⊽ γlnO bsoJ lood>S loH\nuS\tsS ox9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pa	q≁-s7 zqoi2 oN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0
	.2hr 7a-6p, Mon-Fri, Zone 16	0	0	0	0	0	5	19	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9	4
	DəldsziQ	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0
	Unrestricted Parallel Parking	0	5	4	10	7	0	0	0	0	5	4	8	с	4	9	7	0	5	4	7	0	0	0
	Side of Street	Ш	Ν	ш	Μ	ш	Μ	ш	z	S	z	S	z	S	z	S	z	S	z	S	z	S	z	ა
	Street Segment	S WINTHROP ST AND S HANFORD ST	S WINTHROP ST AND S HANFORD ST	S WINTHROP ST AND S HANFORD ST	DEAD END 3 AND S HANFORD ST	DEAD END 3 AND S HANFORD ST	800' BOUNDARY AND S HANFORD ST	800' BOUNDARY AND S HANFORD ST	800' BOUNDARY AND 20TH AVE S	800' BOUNDARY AND 20TH AVE S	20TH AVE S AND 21ST AVE S	20TH AVE S AND 21ST AVE S	21ST AVE S AND 22ND AVE S	21ST AVE S AND 22ND AVE S	22ND AVE S AND 23RD AVE S	22ND AVE S AND 23RD AVE S	23RD AVE S AND HARRIS PL S	23RD AVE S AND HARRIS PL S	HARRIS PL S AND 24TH W AVE S	HARRIS PL S AND 24TH W AVE S	24TH W AVE S AND 24TH E AVE S	24TH W AVE S AND 24TH E AVE S	24TH E AVE S AND 25TH W AVE S	24TH E AVE S AND 25TH W AVE S
	Street Name	23RD AVE S	HARRIS PL S	HARRIS PL S	24TH AVE S	24TH AVE S	25TH AVE S	25TH AVE S	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST	S HANFORD ST
	Block Face ID	ΧA	АҮ	AZ	BA	BB	BC	BD	BE	BF	BG	ВН	В	BJ	BK	BL	BM	BN	BO	ВР	BQ	BR	BS	ВТ

				_	_		_	_		_	_	_		_	_	_	_		_	_			_	_
	gniyable Parking Spaces After 4p	0	0	٢	0	7	0	10	11	12	6	0	0	16	13	6	10	4	9	4	2	8	0	9
	grist Patisita Patking qr-s0r nəəwtə8 səssq8	0	0	٢	0	7	0	10	11	12	6	0	0	16	13	6	10	4	9	4	2	8	0	9
	priste Parking 88-s7 nə∋wt∋8 zə⊃sq2	0	0	٢	0	7	0	10	11	12	6	0	0	16	13	6	10	4	9	4	2	8	0	9
ylc	-Γ, ε0Γ-7 γInO su8 loon3 IoH/nu2\εχοΣ9, q4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
rking Sup	q∂-s⊽ VinO bool Load Only loH\nu2\ts2 cx9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pa	q4-67 sqot2 oN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Zhr 7a-6p, Mon-Fri, Zone 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	bəldsziQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unrestricted Parallel Parking	0	0	-	0	7	0	10	11	12	6	0	0	16	13	6	10	4	9	4	2	8	0	9
	Side of Street	z	S	×	ш	×	ш	×	ш	×	ш	Ν	ш	×	ш	×	ш	z	S	z	ა	z	ა	z
	Street Segment	25TH W AVE S AND 25TH E AVE S	25TH W AVE S AND 25TH E AVE S	S HANFORD ST AND 800' BOUNDARY	S HANFORD ST AND 800' BOUNDARY	800' BOUNDARY AND S HORTON ST	800' BOUNDARY AND S HORTON ST	S HANFORD ST AND S HORTON ST	S HANFORD W ST AND S HORTON ST	S HANFORD W ST AND S HORTON ST	S HANFORD W ST AND S HORTON ST	S HANFORD W ST AND S HORTON ST	20TH AVE S AND 21ST AVE S	20TH AVE S AND 21ST AVE S	21ST AVE S AND 22ND AVE S	21ST AVE S AND 22ND AVE S	22ND AVE S AND 23RD AVE S	22ND AVE S AND 23RD AVE S	24TH AVE S AND 25TH AVE S					
	Street Name	S HANFORD ST	S HANFORD ST	20TH AVE S	20TH AVE S	20TH AVE S	20TH AVE S	21ST AVE S	21ST AVE S	22ND AVE S	22ND AVE S	23RD AVE S	23RD AVE S	24TH AVE S	24TH AVE S	25TH AVE S	25TH AVE S	S HORTON ST						
	Block Face ID	BU	ΒV	BW	BX	BΥ	ΒZ	CA	CB	ပ္ပ ပ	CD	CE	СF	g	Ы	ū	2	СK	СГ	CM	CN	8	СР	g

	gniyası Patking Qasces After 4p	8	0	2	14	0	9	12	0	0	18	12	11	12	9	0	9	7	16	12	0	2	5	9
	grisher eldslisva lstot gr-s0t n99w198 s95sq8	8	0	2	14	0	9	12	0	0	0	12	11	12	9	0	9	7	16	12	0	2	5	9
	pniste Parking ธ8-ธ⊺ ก∋อพวอย รอวธq2	8	0	2	14	0	9	12	0	0	0	12	11	12	6	0	9	7	5	12	0	2	5	6
oly	-1, s01-7 γInO su8 loon3 PoH∖nu2\fs2 3x9, q4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0
Irking Sup	q∂-s7 yInO bsoJ lood2 loH\nu2\ts2 cx9	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0
Pa	q4-67 2qot2 oN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	,ih1-noM ,q∂-&7 Zone 16 Zone 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	bəldssiQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unrestricted Parallel Parking	8	0	2	14	0	9	12	0	0	0	12	11	12	9	0	9	7	5	12	0	2	5	9
	Side of Street	S	z	S	N	ш	N	ш	N	ш	N	ш	N	ш	z	S	z	S	z	S	z	S	z	ა
	Street Segment	24TH AVE S AND 25TH AVE S	25TH AVE S AND DEAD END 4	25TH AVE S AND DEAD END 4	S HORTON ST AND S HINDS ST	20TH AVE S AND 21ST AVE S	20TH AVE S AND 21ST AVE S	21ST AVE S AND 23RD AVE S	21ST AVE S AND 23RD AVE S	23RD AVE S AND 24TH AVE S	23RD AVE S AND 24TH AVE S	DEAD END 4 AND 25TH AVE S	DEAD END 4 AND 25TH AVE S	25TH AVE S AND 800' BOUNDARY	25TH AVE S AND 800' BOUNDARY									
	Street Name	S HORTON ST	S HORTON ST	S HORTON ST	20TH AVE S	20TH AVE S	21ST AVE S	21ST AVE S	23RD AVE S	23RD AVE S	24TH AVE S	24TH AVE S	25TH AVE S	25TH AVE S	S HINDS ST	S HINDS ST								
	Block Face ID	CR	CS	СТ	CU	CV	CW	cx	С	CZ	DA	DB	В	DD	DE	DF	DG	Н	D	Ŋ	DK	DL	DM	ND

	gniaple Parking Spaces After 4p	2	0	7	13	0	0	11	6	3	8	0	0	6	0	16	12	580
	prixing eldslisvA IstoT q1-s01 neewteB zeosq8	5	0	7	13	0	0	11	6	3	8	0	0	6	0	16	12	552
	priste Parking s9-s7 nə∋wi∋8 səssq2	5	0	7	13	0	0	11	6	3	8	0	0	6	0	16	12	541
oly	-Γ, ο01-7 γinO su8 loon3 loH/nu2\st Sat/SunHon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
ırking Supl	q∂-s⊽ γlnO bsoJ lood>S loH\nuS\tsS ox9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Pa	q4-s7 sqot2 oN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	Zhr 7a-6p, Mon-Fri, Zone 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
	Disabled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	4
	Unrestricted Parallel Parking	5	0	7	13	0	0	1	6	ю	8	0	0	6	0	16	1	501
	Side of Street	Μ	ш	M	ш	Μ	ш	Ν	ш	Ν	ш	z	S	z	S	Ν	ш	TOTAL
	Street Segment	S HINDS ST AND 800' BOUNDARY	S HINDS ST AND S SPOKANE ST	S HINDS ST AND 800' BOUNDARY	S HINDS ST AND 800' BOUNDARY	21ST AVE S AND 23RD AVE S	21ST AVE S AND 23RD AVE S	23RD AVE S AND 24TH AVE S	23RD AVE S AND 24TH AVE S	S SPOKANE ST AND 800' BOUNDARY	S SPOKANE ST AND 800' BOUNDARY							
	Street Name	20TH AVE S	20TH AVE S	21ST AVE S	21ST AVE S	23RD AVE S	23RD AVE S	24TH AVE S	24TH AVE S	25TH AVE S	25TH AVE S	S SPOKANE ST	S SPOKANE ST	S SPOKANE ST	S SPOKANE ST	24TH AVE S	24TH AVE S	
	Block Face ID	DO	DP	ğ	DR	DS	DT	DD	DV	DW	DX	Ъ	DZ	EA	EB	С Ш	ED	

Average 0 C N ო 0 0 ß ო 0 0 ß ശ ო c ო 0 0 ശ ശ 0 0 4 \sim Thursday 2/13/2020 7:00PM Evening 0 0 ~ N 0 0 0 0 ŝ ശ 4 c ო 0 0 ŝ 4 ω ω 0 0 ശ Tuesday 2/11/2020 7:00PM 0 C c 0 C C 0 ŝ ശ N N c C 0 ŝ က 0 Average 0 0 C 2 0 0 0 0 ശ N 0 ဖ S 4 С 0 0 Parking Occupancy Thursday 2/13/2020 10:30AM Midday 0 0 0 ŝ ŝ 0 0 ŝ N 0 0 ŝ ო N 0 0 0 4 _ 4 0 Tuesday 2/11/2020 10:30AM 0 0 N N 0 0 \sim 4 0 0 ø 4 0 N 0 0 ശ ဖ 4 c 0 0 ŝ Average 0 0 N 0 0 ó 0 ŝ ó N N 0 0 ശ ó ١O 0 4 4 0 4 0 Thursday 2/13/2020 7:00AM Morning 0 0 ŝ ~ 0 0 ŝ ١O 0 0 <u>_</u> ŝ ١O \sim N 0 0 ŝ LO ١O ŝ 0 0 ŝ Tuesday 2/11/2020 7:00AM 0 0 4 c 0 0 ŝ N 0 0 0 N N 0 0 ശ ဖ ŝ 0 \sim 4 0 q4 1911A Parking Spaces 0 0 ŝ C 0 ŝ 0 0 ດ ŝ œ eldslisvA lstoT Supply df-s0f neewte8 Parking Spaces 0 0 c 0 ŝ 0 0 ດ 0 0 ŝ ŝ œ Parking **9IdslisvA IstoT** 68-67 n99w198 Parking Spaces eldslisvA lstoT ę Side of Street ≥ ш z S z S ≥ ш ≥ ш zυ z S z S ≥ ш ≥ ш ≥ ш ≥ ш ≥ S WINTHROP ST AND S HANFORD ST S WINTHROP ST AND S HANFORD ST S WINTHROP ST AND S HANFORD ST ß S S T ŝ ĥ S WINTHROP ST AND S HANFORD ST ۲ ۲ S WINTHROP ST AND S HANFORD ST 5 5 5 800' BOUNDARY AND S HANFORD ST BOUNDARY AND S STEVENS : S STEVENS ST AND S WINTHROP S STEVENS ST AND S WINTHROP S S 800' BOUNDARY AND S HANFORD S WINTHROP ST AND S HANFORD S WINTHROP ST AND S HANFORD BOUNDARY AND S STEVENS S STEVENS ST AND S WINTHROP S STEVENS ST AND S WINTHROP 23RD AVE S AND DEAD END 3 23RD AVE S AND DEAD END 3 S S S S 21ST AVE S AND 22ND AVE S 21ST AVE S AND 22ND AVE S 22ND AVE S AND 23RD AVE 22ND AVE S AND 23RD AVE 22ND AVE S AND 23RD AVE 23RD AVE S AND HARRIS PL 23RD AVE S AND HARRIS PL 22ND AVE S AND 23RD AVE Street Segmen 800 800 WINTHROP ST WINTHROP ST WINTHROP ST ST ST WINTHROP ST S STEVENS ST S STEVENS ST S STEVENS ST STEVENS ST AVE S S S 22ND AVE S 22ND AVE S 23RD AVE S S S 23RD AVE S 23RD AVE S S S 22ND AVE S 23RD AVE S 23RD AVE S WINTHROP WINTHROP Street Name HARRIS PL 23RD AVE 21ST AVE 20TH AVE 20TH AVE 21ST AVE 22ND ഗ Block Face ID AB AC AD ÅĒ gAG AM AN AO AР Å AR AS ₹ ¥ ¥ ÅΕ AH Ā Å ΑT AU Ş ¥ A A

		Average	4	7	0	7	0	0	0	4	с	9	S	4	ю	7	~	N	2	~	0	~	0	0	0	~	0
	Evening	Thursday 2/13/2020 7:00PM	4	2	2	2	0	0	0	5	з	9	5	4	5	6	0	ю	4	۲-	0	0	0	0	0	0	0
		Tuesday 2/11/2020 7:00PM	4	2	2	2	0	0	0	с	2	5	4	e	. 	5	. 	0	0	-	0	2	0	0	0	2	0
ancy		Average	3	2	2	3	9	0	0	З	2	4	5	З	З	7	0	-	2	٢	0	٢	0	0	0	٢	0
cing Occup	Midday	Thursday 2/13/2020 10:30AM	3	2	2	4	5	0	0	4	-	ю	9	з	4	9	0	۲	۲	٢	0	0	0	0	0	-	0
Park		Tuesday 2/11/2020 10:30AM	2	2	~	7	9	0	0	2	7	5	4	ю	2	7	0	-	7	0	0	~	0	0	0	-	0
		Average	4	ю	2	ю	4	0	0	5	e	5	4	ю	5	7	-	-	0	ю	0	~	0	0	0	7	0
	Morning	Thursday 2/13/2020 7:00AM	ε	2	2	З	З	0	0	4	٢	5	4	4	5	7	1	٦	0	2	0	٢	0	0	0	٢	0
		Tuesday 2/11/2020 7:00AM	5	ю	~	ю	5	0	0	5	4	5	4	2	4	7	0	0	0	ю	0	0	0	0	0	7	0
	səo	Parking Space Parking Space After 4p	4	10	7	5	19	0	0	5	4	ø	4	4	9	7	10	5	4	7	2	9	4	0	0	-	0
Ą	əld	IclickA letoT																									
arking Supply	əld qr- səc əld	IslisvA IstoT psqS priking S01 n99wt98 BritevA IstoT	4	10	7	5	19	0	0	5	4	8	4	4	9	7	0	5	4	7	2	9	4	0	0	-	0
Parking Supply	ອງຊ d ເ səວ ອງຊ ຮອວ ອງຊ	IslisvA IstoT Psq2 griyarg Setween 7a- Between 10 Saga griyarg 10 Saga griyarg Saga griy Saga griyarg Saga gr	4 4	10 10	7 7	5 5	19 19	0	0	5 5	4 4	8	4 4	4 4	9	7 7	0	5	4 4	2	2	9	4 4	0	0	-	0
Parking Supply	əld səc əld səc əld	S S S S S S S S S S S S S S S S S S S	E 4 4	W 10 10	E 7 7	× 5 5	E 19 19	0 0 2	0 0 0	Z 25	S 4 4	80 80 2	S 4 4	Z 4 4	و ر	N 7 7	0 0 0	Z S	S 4	2 7	ა 7	9 9 2	S 4 4	0 0 z	0 0 0	۷ ۲	0 9
Parking Supply	ald alt-i sacial second	Street Segment Street Segment Street Segment Street Segment Bletween 10a Between 10a	S WINTHROP ST AND S HANFORD ST E 4 4 4	DEAD END 3 AND S HANFORD ST W 10 10	DEAD END 3 AND S HANFORD ST E 7 7	800' BOUNDARY AND S HANFORD ST W 5 5	800' BOUNDARY AND S HANFORD ST E 19 19	800' BOUNDARY AND 20TH AVE S N 0 0	800' BOUNDARY AND 20TH AVE S S 0 0	20TH AVE S AND 21ST AVE S N 5	20TH AVE S AND 21ST AVE S S 4 4	21ST AVE S AND 22ND AVE S N 8 8	21ST AVE S AND 22ND AVE S S 4 4	22ND AVE S AND 23RD AVE S N 4	22ND AVE S AND 23RD AVE S S 6 6	23RD AVE S AND HARRIS PL S N 7 7	23RD AVE S AND HARRIS PL S S 0 0	HARRIS PL S AND 24TH W AVE S N 5 5	HARRIS PL S AND 24TH W AVE S S 4 4	24TH W AVE S AND 24TH E AVE S N 2 2	24TH W AVE S AND 24TH E AVE S S 2 2 2	24TH E AVE S AND 25TH W AVE S N 6 6	24TH E AVE S AND 25TH W AVE S 8 4 4 4	25TH W AVE S AND 25TH E AVE S N 0 0	25TH W AVE S AND 25TH E AVE S 8 0 0	S HANFORD ST AND 800' BOUNDARY W 1 1	S HANFORD ST AND 800' BOUNDARY E 0 0
Parking Supply	ald Sec ald E88 Sec ald	Street Name Street Name Street Name Street Segment Street Segment Street Segment Street Segment Street Name Street	HARRIS PL S WINTHROP ST AND S HANFORD ST E 4 4 4	24TH AVE S DEAD END 3 AND S HANFORD ST W 10 10	24TH AVE S DEAD END 3 AND S HANFORD ST E 7 7	25TH AVE S 800' BOUNDARY AND S HANFORD ST W 5 5	25TH AVE S 800' BOUNDARY AND S HANFORD ST E 19 19	S HANFORD ST 800' BOUNDARY AND 20TH AVE S N 0 0	S HANFORD ST 800' BOUNDARY AND 20TH AVE S S 0 0	S HANFORD ST 20TH AVE S AND 21ST AVE S N 5 5	S HANFORD ST 20TH AVE S AND 21ST AVE S S 4 4	S HANFORD ST 21ST AVE S AND 22ND AVE S N 8 8	S HANFORD ST 21ST AVE S AND 22ND AVE S S 4 4	S HANFORD ST 22ND AVE S AND 23RD AVE S N 4 4	S HANFORD ST 22ND AVE S AND 23RD AVE S S 6 6	S HANFORD ST 23RD AVE S AND HARRIS PL S N 7 7	S HANFORD ST 23RD AVE S AND HARRIS PL S S 0 0	S HANFORD ST HARRIS PL S AND 24TH W AVE S N 5 5	S HANFORD ST HARRIS PL S AND 24TH W AVE S S 4 4	S HANFORD ST 24TH W AVE S AND 24TH E AVE S N 2 2	S HANFORD ST 24TH W AVE S AND 24TH E AVE S S 2 2 2	S HANFORD ST 24TH E AVE S AND 25TH W AVE S N 6 6	S HANFORD ST 24TH E AVE S AND 25TH W AVE S S 4 4 4	S HANFORD ST 25TH W AVE S AND 25TH E AVE S N 0 0	S HANFORD ST 25TH W AVE S AND 25TH E AVE S S 0 0	20TH AVE S S HANFORD ST AND 800' BOUNDARY W 1 1	20TH AVE S S HANFORD ST AND 800' BOUNDARY E 0 0

		Average	7	0	S	4	Ð	ი	0	0	7	80	2	ъ	0	ю	0	~	ю	0	0	ю	0	-	14	0	9
	Evening	Thursday 2/13/2020 7:00PM	7	0	5	с	8	6	0	0	11	10	2	4	2	З	0	0	З	0	0	З	0	~	14	0	7
		Tuesday 2/11/2020 7:00PM	9	0	5	5	2	8	0	0	2	5	2	5	2	2	0	-	ю	0	0	з	0	-	14	0	4
ancy		Average	9	0	4	4	с	9	0	0	9	9	9	9	~	2	0	0	2	0	0	2	0	~	10	0	2
king Occup	Midday	Thursday 2/13/2020 10:30AM	9	0	3	3	3	9	0	0	9	9	5	7	~	~	0	0	2	0	0	2	0	~	8	0	3
Park		Tuesday 2/11/2020 10:30AM	5	0	4	4	2	9	0	0	5	5	9	5	~	2	0	0	2	0	0	2	0	0	11	0	~
		Average	9	0	7	4	с	6	0	0	ę	9	9	9	2	2	0	~	ю	0	0	e	0	~	14	0	4
	Morning	Thursday 2/13/2020 7:00AM	9	0	9	З	з	6	0	0	2	7	5	7	2	~	0	0	2	0	0	З	0	-	13	0	4
		Tuesday 2/11/2020 7:00AM	9	0	7	5	2	8	0	0	З	5	7	5	2	3	0	-	Э	0	0	2	0	-	15	0	3
	səc	Parking Spac After 4p	7	0	10	11	12	6	0	0	16	13	6	10	4	9	4	2	8	0	9	8	0	2	14	0	9
ام م	əld	JelisvA letoT																									
arking Supply	əlc səc əlc	JaliavA IstoT Parking Spac 103- 101- 101- 101- 101- 101- 101- 101-	7	0	10	11	12	6	0	0	16	13	6	10	4	9	4	2	8	0	9	8	0	2	14	0	9
Parking Supply	900 883 893 900	IslisvA IstoT psq2 griytsq Between 7a- 151 Standard Soco Soco Soco Soco Soco Soco Soco Soc	2 <u>2</u>	0	10 10	11 11	12 12	6	0	0	16 16	13 13	6 6	10 10	4 4	9	4 4	2	8	0	9	8	0	2	14 14	0 0	9
Parking Supply	9 0 d - 530 9 0 88 530 9 0	<u>کر دو</u> <u>دو</u> <u>دو</u> <u>۲</u> <u>۲</u> <u>۲</u> <u>۲</u> <u>۲</u> <u>۲</u> <u>۲</u> <u>۲</u>	W 7 7 W	0 0	W 10 10	E 11 11	W 12 12	е в	0 0	0 9	W 16 16	E 13 13	6 6	E 10 10	2 4	و و	2 4	S 2	80 80 2	0 0 0	9 9 2	8 80	0 0 2	S 2 2	W 14 14	0 0 1	0 6
Parking Supply	9 0 d - 9 0 88 890 9 0	Street Segment Street Segment Street Segment Street Segment Street Segment Street Segment Street Segment Street Segment Street Segment	800' BOUNDARY AND S HORTON ST W 7	800' BOUNDARY AND S HORTON ST E 0 0	S HANFORD ST AND S HORTON ST W 10 10	S HANFORD ST AND S HORTON ST E 11 11	S HANFORD ST AND S HORTON ST W 12 12	S HANFORD ST AND S HORTON ST E 9 9	S HANFORD ST AND S HORTON ST W 0 0	S HANFORD ST AND S HORTON ST E 0 0	S HANFORD W ST AND S HORTON ST W 16 16	S HANFORD W ST AND S HORTON ST E 13 13	S HANFORD W ST AND S HORTON ST W 9 9	S HANFORD W ST AND S HORTON ST E 10 10	20TH AVE S AND 21ST AVE S N 4 4	20TH AVE S AND 21ST AVE S S 6 6	21ST AVE S AND 22ND AVE S N 4 4	21ST AVE S AND 22ND AVE S S 2 2 2	22ND AVE S AND 23RD AVE S N 8 8	22ND AVE S AND 23RD AVE S S 0 0	24TH AVE S AND 25TH AVE S N 6 6	24TH AVE S AND 25TH AVE S S 8 8	25TH AVE S AND DEAD END 4 N 0 0	25TH AVE S AND DEAD END 4 S 2 2	S HORTON ST AND S HINDS ST W 14 14	S HORTON ST AND S HINDS ST E 0 0	S HORTON ST AND S HINDS ST W 6 6
Parking Supply	9 0 d - 9 0 88 9 0	Street Name Street Name Street Segment Street Segment Street Total Availat Street Segment Street Segment Street Segment	20TH AVE S 800' BOUNDARY AND S HORTON ST W 7 7	20TH AVE S 800' BOUNDARY AND S HORTON ST E 0 0	21ST AVE S SHANFORD ST AND S HORTON ST W 10 10	21ST AVE S SHANFORD ST AND S HORTON ST E 11 11	22ND AVE S SHANFORD ST AND S HORTON ST W 12 12	22ND AVE S SHANFORD ST AND S HORTON ST E 9 9	23RD AVE S SHANFORD ST AND S HORTON ST W 0 0	23RD AVE S SHANFORD ST AND S HORTON ST E 0 0	24TH AVE S SHANFORD W ST AND S HORTON ST W 16 16	24TH AVE S SHANFORD W ST AND S HORTON ST E 13 13	25TH AVE S SHANFORD W ST AND S HORTON ST W 9 9	25TH AVE S SHANFORD W ST AND S HORTON ST E 10 10	S HORTON ST 20TH AVE S AND 21ST AVE S N 4 4	S HORTON ST 20TH AVE S AND 21ST AVE S S 6 6	S HORTON ST 21ST AVE S AND 22ND AVE S N 4 4 4	S HORTON ST 21ST AVE S AND 22ND AVE S S 2 2	S HORTON ST 22ND AVE S AND 23RD AVE S N 8 8	S HORTON ST 22ND AVE S AND 23RD AVE S S 0 0	S HORTON ST 24TH AVE S AND 25TH AVE S N 6 6	S HORTON ST 24TH AVE S AND 25TH AVE S S 8 8 8	S HORTON ST 25TH AVE S AND DEAD END 4 N 0 0	S HORTON ST 25TH AVE S AND DEAD END 4 S 2 2 2	20TH AVE S SHORTON ST AND SHINDS ST W 14 14	20TH AVE S SHORTON ST AND SHINDS ST E 0 0	21ST AVE S SHORTON ST AND SHINDS ST W 6 6

Project	Kimball ES - S	chool Replacement													
				å	arking Sup	ylo				Park	ing Occupa	ancy			
				s93 S93	d ⊧- səc əld	səc əld		Morning			Midday			Evening	
Block Face ID	Street Name	Street Segment	Side of Street	RisvA IstoT Parking Space Between Ta-	Total Availal Parking Space Between 10a	Total Availal Racking Space 44 1911A	Tuesday 2/11/2020 7:00AM	Thursday 2/13/2020 7:00AM	Average	Tuesday 2/11/2020 10:30AM	Thursday 2/13/2020 10:30AM	Average	Tuesday 2/11/2020 7:00PM	Thursday 2/13/2020 7:00PM	Average
СX	21ST AVE S	S HORTON ST AND S HINDS ST	Ш	12	12	12	9	7	7	1	6	4	9	6	8
С	23RD AVE S	S HORTON ST AND S HINDS ST	Μ	0	0	0	0	0	0	0	0	0	0	0	0
CZ	23RD AVE S	S HORTON ST AND S HINDS ST	ш	0	0	0	0	0	0	0	0	0	0	0	0
DA	24TH AVE S	S HORTON ST AND S HINDS ST	Μ	0	0	18	0	0	0	0	~	~	0	8	4
DB	24TH AVE S	S HORTON ST AND S HINDS ST	ш	12	12	12	5	5	5	5	З	4	5	6	7
DC	25TH AVE S	S HORTON ST AND S HINDS ST	Μ	1	11	;	ю	ю	З	2	З	З	~	4	С
DD	25TH AVE S	S HORTON ST AND S HINDS ST	ш	12	12	12	4	5	5	3	2	з	4	7	9
DE	S HINDS ST	20TH AVE S AND 21ST AVE S	z	9	9	9	7	2	2	3	2	З	2	3	С
DF	S HINDS ST	20TH AVE S AND 21ST AVE S	S	0	0	0	0	0	0	0	0	0	0	0	0
DG	S HINDS ST	21ST AVE S AND 23RD AVE S	z	9	9	9	ю	9	5	5	5	5	4	6	5
НО	S HINDS ST	21ST AVE S AND 23RD AVE S	S	7	7	7	5	5	5	4	9	5	4	5	5
۵	S HINDS ST	23RD AVE S AND 24TH AVE S	z	5	16	16	0	0	0	0	0	0	~	6	5
2	S HINDS ST	23RD AVE S AND 24TH AVE S	S	12	12	12	7	-	2	З	5	4	2	11	7
DK	S HINDS ST	DEAD END 4 AND 25TH AVE S	z	0	0	0	0	0	0	0	0	0	0	0	0
Ы	S HINDS ST	DEAD END 4 AND 25TH AVE S	S	2	7	М	7	2	2	2	2	2	2	2	7
DM	S HINDS ST	25TH AVE S AND 800' BOUNDARY	z	5	5	5	0	0	0	0	0	0	0	0	0
ND	S HINDS ST	25TH AVE S AND 800' BOUNDARY	S	9	9	9	0	0	0	1	0	-	0	0	0
Q	20TH AVE S	S HINDS ST AND 800' BOUNDARY	N	5	5	5	۲	e	2	3	~	2	0	2	~
PD	20TH AVE S	S HINDS ST AND 800' BOUNDARY	ш	0	0	0	0	0	0	0	0	0	0	0	0
ğ	21ST AVE S	S HINDS ST AND 800' BOUNDARY	Ν	7	7	7	9	5	9	9	5	9	4	5	5
DR	21ST AVE S	S HINDS ST AND 800' BOUNDARY	ш	13	13	13	4	5	5	3	2	3	9	5	9
DS	23RD AVE S	S HINDS ST AND S SPOKANE ST	Ν	0	0	0	0	0	0	0	0	0	0	0	0
DT	23RD AVE S	S HINDS ST AND S SPOKANE ST	ш	0	0	0	0	0	0	0	0	0	0	0	0
DU	24TH AVE S	S HINDS ST AND S SPOKANE ST	Ν	1	11	1	8	7	8	9	5	9	9	8	7
D	24TH AVE S	S HINDS ST AND S SPOKANE ST	ш	6	6	6	ო	5	4	5	e	4	4	з	4

		Average	5	5	0	0	2	0	0	3	275
	Evening	Thursday 2/13/2020 7:00PM	4	5	0	0	2	0	0	2	320
		Tuesday 2/11/2020 7:00PM	2	5	0	0	-	0	0	ю	230
ancy		Average	4	5	0	0	2	0	0	4	219
king Occup	Midday	Thursday 2/13/2020 10:30AM	4	4	0	0	2	0	0	4	220
Park		Tuesday 2/11/2020 10:30AM	3	5	0	0	7	0	0	4	218
		Average	4	4	0	0	1	0	0	4	254
	Morning	Thursday 2/13/2020 7:00AM	4	4	0	0	-	0	0	4	252
		Tuesday 2/11/2020 7:00AM	4	4	0	0	٢	0	0	4	256
۱y	sə: əlo	Total Availal Paq2 Brixing Patter 4p	с	8	0	0	6	0	16	12	580
l Supp	dı	Parking Space Between 10a	3	8	0	0	6	0	16	12	552
rkinç	əld	IslisvA IstoT									
Parking	9lc 293 68 9lc	IslisvA IstoT psq2 griiynsq -s7 neewtea IslisvA IstoT	3	8	0	0	6	0	16	12	541
Parking	9lc 293 88	S S S S S S S S S S S S S S S S S S S	W 3	8	o z	0 ഗ	6 Z	0 ഗ	W 16	E 12	TOTAL 541
Parking	910 88 910	Street St	S HINDS ST AND 800' BOUNDARY W 3	S HINDS ST AND 800' BOUNDARY E	21ST AVE S AND 23RD AVE S N 0	21ST AVE S AND 23RD AVE S 8	23RD AVE S AND 24TH AVE S N 9	23RD AVE S AND 24TH AVE S S 0	S SPOKANE ST AND 800' BOUNDARY W 16	S SPOKANE ST AND 800' BOUNDARY E 12	TOTAL 541
Parking	9ld	Street Name Street Name Street Negment Street Segment Street Segment Street Segment Street Segment	25TH AVE S SHINDS ST AND 800' BOUNDARY W 3	25TH AVE S SHINDS ST AND 800' BOUNDARY E 8	S SPOKANE ST 21ST AVE S AND 23RD AVE S N 0	S SPOKANE ST 21ST AVE S AND 23RD AVE S SPOKANE ST 21ST AVE S AND 23RD AVE S 0	S SPOKANE ST 23RD AVE S AND 24TH AVE S N 9	S SPOKANE ST 23RD AVE S AND 24TH AVE S SPOKANE ST 23RD AVE S AND 24TH AVE S S	24TH AVE S SPOKANE ST AND 800' BOUNDARY W 16	24TH AVE S SPOKANE ST AND 800' BOUNDARY E 12	TOTAL 541

		Average	NS	SN	29%	60%	%0	SN	83%	36%	SN	NS	20%	125%	100%	75%	50%	75%	SN	SN	67%	80%	81%	138%	SN	SN	100%	100%	20%
	Evening	Thursday 2/13/2020 7:00PM	NS	NS	14%	40%	%0	NS	67%	57%	NS	NS	20%	125%	100%	100%	60%	75%	NS	NS	56%	80%	100%	200%	NS	NS	120%	100%	20%
		Tuesday 2/11/2020 7:00PM	SN	SN	43%	80%	%0	SN	100%	14%	SN	SN	20%	125%	100%	50%	40%	75%	SN	NS	78%	80%	63%	75%	NS	NS	80%	100%	20%
tion		Average	SN	NS	14%	30%	%0	NS	67%	50%	NS	NS	20%	150%	67%	13%	40%	25%	NS	NS	61%	%06	50%	63%	NS	NS	110%	63%	20%
ting Utiliza	Midday	Thursday 2/13/2020 10:30AM	NS	NS	%0	20%	%0	NS	100%	43%	NS	NS	20%	150%	67%	25%	40%	25%	NS	NS	56%	%09	50%	50%	NS	NS	120%	75%	20%
Park		Tuesday 2/11/2020 10:30AM	SN	SN	29%	40%	%0	SN	33%	57%	SN	SN	20%	150%	67%	%0	40%	25%	SN	SN	67%	120%	50%	75%	SN	SN	100%	50%	20%
		Average	SN	NS	50%	40%	%0	NS	92%	50%	NS	NS	20%	113%	100%	13%	40%	50%	NS	NS	61%	110%	63%	88%	NS	NS	130%	100%	25%
	Morning	Thursday 2/13/2020 7:00AM	SN	NS	43%	20%	%0	SN	100%	71%	NS	SN	20%	125%	83%	25%	40%	50%	NS	SN	56%	100%	63%	75%	NS	NS	120%	75%	20%
		Tuesday 2/11/2020 7:00AM	SN	NS	57%	%09	%0	NS	83%	29%	NS	NS	20%	100%	117%	%0	40%	50%	NS	NS	67%	120%	63%	100%	NS	NS	140%	125%	30%
	səc əld	Total Availal Parking Spac After 4p	0	0	7	5	4	0	9	7	0	0	5	4	9	4	5	4	0	0	6	5	œ	4	0	0	5	4	10
-																													
ting Supp	dg- səc əld	Total Availal Parking Space Between 10a	0	0	7	5	4	0	9	7	0	0	5	4	9	4	5	4	0	0	6	5	80	4	0	0	5	4	10
Parking Supp	dc- səc əld 88 səc səc	IslisvA IstoT Parking Space Between 7a- Total Availal Parking Space Parking Space Park	0 0	0	7 7	5 5	4 4	0	9	7 7	0	0	5 5	4 4	9	4 4	5 5	4 4	0	0	6	5 5	8	4 4	0	0	5 5	4 4	10 10
Parking Supp	d٤- səc 89 89 89 91q	Side of Side of Parking Space Between 7a- Between 10a Barking Space Parking Space Parking Space	0 0 M	0 0 3	N 7 7	2 2 0	A 4	0 0 %	% 6	E 7 7	0 0	0 0	2 2	S 4 4	9 9 2	S 4 4	2 2	0 4	0 0	0 0 3	6 6 ∧	E 5 5	⊗ 8	E 4 4	0 0 ×	0 E	× 5 5	E 4 4	w 10 10
Parking Supp	d£ səc səc səc səc	Street Segment Street Segment Street Segment Street Total Availat Between 10a	800' BOUNDARY AND S STEVENS ST W 0	800' BOUNDARY AND S STEVENS ST E 0 0	22ND AVE S AND 23RD AVE S N 7 7	22ND AVE S AND 23RD AVE S S 5 5	23RD AVE S AND DEAD END 3 N 4 4	23RD AVE S AND DEAD END 3 S 0 0	S STEVENS ST AND S WINTHROP ST W 6 6	S STEVENS ST AND S WINTHROP ST E 7 7	S STEVENS ST AND S WINTHROP ST W 0 0	S STEVENS ST AND S WINTHROP ST E 0 0	21ST AVE S AND 22ND AVE S N 5 5	21ST AVE S AND 22ND AVE S S 4 4	22ND AVE S AND 23RD AVE S N 6 6	22ND AVE S AND 23RD AVE S S 4 4	23RD AVE S AND HARRIS PL S N 5 5	23RD AVE S AND HARRIS PL S S 4 4	800' BOUNDARY AND S HANFORD ST W 0	800' BOUNDARY AND S HANFORD ST E 0 0	S WINTHROP ST AND S HANFORD ST W 9	S WINTHROP ST AND S HANFORD ST E 5 5	S WINTHROP ST AND S HANFORD ST W 8	S WINTHROP ST AND S HANFORD ST E 4 4	S WINTHROP ST AND S HANFORD ST W 0 0	S WINTHROP ST AND S HANFORD ST E 0 0	S WINTHROP ST AND S HANFORD ST W 5 5	S WINTHROP ST AND S HANFORD ST E 4 4	DEAD END 3 AND S HANFORD ST W 10 10
Parking Supp	d£ səcə əld səcə əld	Street Segment Street Segment Street Segment Street Segment Street Segment	23RD AVE S 800' BOUNDARY AND S STEVENS ST W 0 0	23RD AVE S 800' BOUNDARY AND S STEVENS ST E 0 0 0	S STEVENS ST 22ND AVE S AND 23RD AVE S N 7	S STEVENS ST 22ND AVE S AND 23RD AVE S STEVENS ST	S STEVENS ST 23RD AVE S AND DEAD END 3 N 4 4	S STEVENS ST 23RD AVE S AND DEAD END 3 S 0 0	22ND AVE S STEVENS ST AND S WINTHROP ST W 6 6	22ND AVE S STEVENS ST AND S WINTHROP ST E 7 7	23RD AVE S STEVENS ST AND S WINTHROP ST W 0 0	23RD AVE S STEVENS ST AND S WINTHROP ST E 0 0	\$ WINTHROP ST 21ST AVE S AND 22ND AVE S N 5 5	\$ WINTHROP ST 21ST AVE S AND 22ND AVE S 8 4 4	\$ WINTHROP ST 22ND AVE S AND 23RD AVE S N 6 6	\$ WINTHROP ST 22ND AVE S AND 23RD AVE S 8 4 4	3 WINTHROP ST 23RD AVE S AND HARRIS PL S N 5 5	3 WINTHROP ST 23RD AVE S AND HARRIS PL S S 4 4 4	20TH AVE S 800' BOUNDARY AND S HANFORD ST W 0	20TH AVE S 800' BOUNDARY AND S HANFORD ST E 0 0	21ST AVE S WINTHROP ST AND S HANFORD ST W 9 9	21ST AVE S WINTHROP ST AND S HANFORD ST E 5 5	22ND AVE S WINTHROP ST AND S HANFORD ST W 8 8	22ND AVE S WINTHROP ST AND S HANFORD ST E 4 4	23RD AVE S WINTHROP ST AND S HANFORD ST W 0 0	23RD AVE S WINTHROP ST AND S HANFORD ST E 0 0	HARRIS PL S WINTHROP ST AND S HANFORD ST W 5 5	HARRIS PL S WINTHROP ST AND S HANFORD ST E 4 4	24TH AVE S DEAD END 3 AND S HANFORD ST W 10 10

		Average	29%	40%	%0	SN	SN	80%	63%	69%	113%	88%	50%	100%	5%	30%	50%	50%	%0	17%	%0	SN	SN	100%	SN	63%	SN	50%	36%
	Evening	Thursday 2/13/2020 7:00PM	29%	40%	%0	NS	SN	100%	75%	75%	125%	100%	83%	129%	%0	%09	100%	50%	%0	%0	%0	NS	NS	%0	SN	100%	SN	50%	27%
		T uesday 2/11/2020 7:00PM	29%	40%	%0	NS	NS	%09	20%	63%	100%	75%	17%	71%	10%	%0	%0	50%	%0	33%	%0	SN	NS	200%	NS	86%	NS	50%	45%
tion		Average	21%	%09	29%	NS	NS	%09	38%	50%	125%	75%	50%	93%	NS	20%	38%	25%	%0	8%	%0	NS	NS	100%	NS	79%	NS	35%	32%
cing Utiliza	Midday	Thursday 2/13/2020 10:30AM	29%	80%	26%	NS	NS	80%	25%	38%	150%	75%	67%	86%	NS	20%	25%	50%	%0	%0	%0	NS	NS	100%	NS	86%	NS	30%	27%
Park		Tuesday 2/11/2020 10:30AM	14%	40%	32%	NS	SN	40%	50%	63%	100%	75%	33%	100%	NS	20%	50%	%0	%0	17%	%0	NS	NS	100%	SN	71%	SN	40%	36%
		Average	21%	%09	21%	NS	SN	%06	63%	63%	100%	75%	75%	100%	NS	10%	%0	125%	%0	8%	%0	NS	NS	150%	NS	86%	NS	65%	36%
	Morning	Thursday 2/13/2020 7:00AM	29%	%09	16%	NS	NS	80%	25%	63%	100%	100%	83%	100%	NS	20%	%0	100%	%0	17%	%0	NS	NS	100%	NS	86%	NS	%09	27%
		Tuesday 2/11/2020 7:00AM	14%	%09	26%	NS	NS	100%	100%	63%	100%	50%	67%	100%	NS	%0	%0	150%	%0	%0	%0	SN	SN	200%	SN	86%	NS	%02	45%
y	səc əld	Total Kvailal Parking Spac After 4p	7	5	19	0	0	5	4	8	4	4	6	7	10	5	4	2	2	9	4	0	0	-	0	7	0	10	11
bpl																													
king Su	-3p səc əld	Total Availal Parking Space 10a	7	2	19	•	•	5	4	œ	4	4	9	7	0	Ω.	4	7	7	9	4	0	•	-	0	7	0	10	5
Parking Su	-3p sec ble sec sec ble	IslisvA IstoT Parking Spac Between 7a- IslisvA IstoT Parking Spac Parking Spac	7 7	5 5	19 19	0	0	5 5	4 4	8	4 4	4 4	9	7 7	0	5	4 4	2	2	9	4 4	0	0	-	0	7 7	0	10 10	11 11
Parking Su	d£- səc əld səc səc	S S S S S S S S S S S S S S S S S S S	E 7 7	√ 5 5	E 19 19	0 0 z	0 0 %	N 5 5	0 4	8 8 2	S 4 4	2 4	е 8	N 7 7	0 0 0	2 2 Z	S 4 4	N N Z	ა ა	9 9 z	S 4 4	0 0 z	0 0 %	۷ ۲	0 E	w 7 7	0 0 3	W 10	E 11 11
Parking Su	d£ səb əld səb əld	Street Segment Street Segment Street Segment Street Segment Street Segment Street Segment Street Segment Street Segment	DEAD END 3 AND S HANFORD ST E 7 7	800' BOUNDARY AND S HANFORD ST W 5 5	800' BOUNDARY AND S HANFORD ST E 19 19	800' BOUNDARY AND 20TH AVE S N 0 0	800' BOUNDARY AND 20TH AVE S S 0 0	20TH AVE S AND 21ST AVE S N 5 5	20TH AVE S AND 21ST AVE S 8 4 4 4	21ST AVE S AND 22ND AVE S N 8	21ST AVE S AND 22ND AVE S 8 4 4	22ND AVE S AND 23RD AVE S N 4 4 4	22ND AVE S AND 23RD AVE S 6 6	23RD AVE S AND HARRIS PL S N 7 7	23RD AVE S AND HARRIS PL S S 0 0	HARRIS PL S AND 24TH W AVE S N 5 5 5	HARRIS PL S AND 24TH W AVE S S 4 4	24TH W AVE S AND 24TH E AVE S N 2 2 2	24TH W AVE S AND 24TH E AVE S S 2 2	24TH E AVE S AND 25TH W AVE S N 6 6 6	24TH E AVE S AND 25TH W AVE S S 4 4	25TH W AVE S AND 25TH E AVE S N 0 0	25TH W AVE S AND 25TH E AVE S S 0 0	S HANFORD ST AND 800' BOUNDARY W 1	S HANFORD ST AND 800' BOUNDARY E 0 0	800' BOUNDARY AND S HORTON ST W 7 7	800' BOUNDARY AND S HORTON ST E 0 0	S HANFORD ST AND S HORTON ST W 10 10	S HANFORD ST AND S HORTON ST E 11 11
Parking Su	d£-i səcə səcə səcə əld	Street Name Street Name Street Segment Street Segment Street Segment Street Segment	24TH AVE S DEAD END 3 AND S HANFORD ST E 7 7	25TH AVE S 800' BOUNDARY AND S HANFORD ST W 5 5	25TH AVE S 800' BOUNDARY AND S HANFORD ST E 19 19	S HANFORD ST 800' BOUNDARY AND 20TH AVE S N 0 0	S HANFORD ST 800' BOUNDARY AND 20TH AVE S 8 0 0	S HANFORD ST 20TH AVE S AND 21ST AVE S N	S HANFORD ST 20TH AVE S AND 21ST AVE S 8 4 4	S HANFORD ST 21ST AVE S AND 22ND AVE S N 8	S HANFORD ST 21ST AVE S AND 22ND AVE S 8 4 4	S HANFORD ST 22ND AVE S AND 23RD AVE S N 4 4 4	S HANFORD ST 22ND AVE S AND 23RD AVE S S 6 6	S HANFORD ST 23RD AVE S AND HARRIS PL S N 7 7	S HANFORD ST 23RD AVE S AND HARRIS PL S S 0 0	S HANFORD ST HARRIS PL S AND 24TH W AVE S N 5 5	S HANFORD ST HARRIS PL S AND 24TH W AVE S S 4 4 4	S HANFORD ST 24TH W AVE S AND 24TH E AVE S N 22 2	S HANFORD ST 24TH W AVE S AND 24TH E AVE S S 2 <th2< th=""> 2 <th2< th=""> <th2< th=""></th2<></th2<></th2<>	S HANFORD ST 24TH E AVE S AND 25TH W AVE S N 6 6	S HANFORD ST 24TH E AVE S AND 25TH W AVE S 8 4 4	S HANFORD ST 25TH W AVE S AND 25TH E AVE S N 0	S HANFORD ST 25TH W AVE S AND 25TH E AVE S 8 0 0	20TH AVE S SHANFORD ST AND 800' BOUNDARY W 1 1	20TH AVE S SHANFORD ST AND 800' BOUNDARY E 0 0	20TH AVE S 800' BOUNDARY AND S HORTON ST W 7 7	20TH AVE S 800' BOUNDARY AND S HORTON ST E 0 0	21ST AVE S S HANFORD ST AND S HORTON ST W 10 10<	21ST AVE S ANNFORD ST AND S HORTON ST E 11 11

		Average	42%	94%	NS	NS	41%	58%	22%	45%	50%	42%	%0	25%	38%	NS	%0	38%	NS	50%	100%	NS	92%	63%	NS	NS	22%	58%	,000
	Evening	Thursday 2/13/2020 7:00PM	67%	100%	NS	NS	69%	77%	22%	40%	50%	50%	%0	%0	38%	NS	%0	38%	NS	50%	100%	NS	117%	75%	NS	NS	44%	75%	,000
		Tuesday 2/11/2020 7:00PM	17%	89%	NS	NS	13%	38%	22%	50%	50%	33%	%0	50%	38%	NS	%0	38%	NS	50%	100%	NS	67%	50%	NS	NS	%0	42%	700
tion		Average	21%	67%	NS	NS	34%	42%	61%	%09	25%	25%	%0	%0	25%	NS	%0	25%	NS	25%	68%	NS	33%	29%	NS	NS	NS	33%	73%
cing Utiliza	Midday	Thursday 2/13/2020 10:30AM	25%	67%	NS	NS	38%	46%	56%	70%	25%	17%	%0	%0	25%	NS	%0	25%	NS	50%	57%	NS	50%	50%	NS	NS	NS	25%	27%
Parl		Tuesday 2/11/2020 10:30AM	17%	67%	NS	NS	31%	38%	67%	50%	25%	33%	%0	%0	25%	NS	%0	25%	NS	%0	79%	NS	17%	8%	NS	NS	NS	42%	18%
		Average	21%	94%	NS	NS	16%	46%	67%	60%	50%	33%	%0	25%	31%	NS	%0	31%	NS	50%	100%	NS	58%	54%	NS	NS	NS	42%	27%
	Morning	Thursday 2/13/2020 7:00AM	25%	100%	NS	NS	13%	54%	56%	%02	50%	17%	%0	%0	25%	NS	%0	38%	NS	50%	93%	NS	67%	58%	NS	NS	NS	42%	27%
		Tuesday 2/11/2020 7:00AM	17%	89%	SN	NS	19%	38%	78%	50%	50%	50%	%0	50%	38%	NS	%0	25%	SN	50%	107%	NS	50%	20%	NS	SN	NS	42%	27%
	səc əld	Total kvailal Parking Spac Parking Apac	12	6	0	0	16	13	6	10	4	9	4	2	œ	0	9	œ	0	2	14	0	9	12	0	0	18	12	11
d	_																												
king Sul	dg- səc əld	Total Availab Parking Spac Between 10a	12	6	0	0	16	13	6	10	4	9	4	7	œ	0	9	œ	0	7	14	0	9	12	0	0	0	12	1
Parking Su	dg- səc piq səc səc səc	IslisvA IstoT Parking Spac Between 7a- IslisvA IstoT Parking Spac Parking 10a	12 12	6	0	0	16 16	13 13	6	10 10	4 4	9	4 4	2	8	0	9	8	0	2	14 14	0	9	12 12	0	0	0	12 12	11 11
Parking Su	d£- sə: əlq sə: əlq	S Side treet of Forther Strain Setting Space Setting Space Between 7a- Batking Space	W 12 12	6 Э	0 ∧	0 0 3	W 16 16	E 13 13	6 ∧	E 10 10	2 4	9 9 8	2 4	s 2	8 8 z	0 0 8	9 9 2	8 8 0	0 0 z	s 2	W 14 14	0 0 3	9 9 ×	E 12 12	0 0 ∧	0 0 3	0 0 ∧	E 12 12	۷ 11
Parking Su	d£- səc əld səc əld	Street Segment Street Segment Street Segment Street Segment Between 10a.	S HANFORD ST AND S HORTON ST W 12 12	S HANFORD ST AND S HORTON ST E 9 9	S HANFORD ST AND S HORTON ST W 0	S HANFORD ST AND S HORTON ST E 0 0	S HANFORD W ST AND S HORTON ST W 16 16	S HANFORD W ST AND S HORTON ST E 13 13	S HANFORD W ST AND S HORTON ST W 9	S HANFORD W ST AND S HORTON ST E 10 10	20TH AVE S AND 21ST AVE S N 4 4	20TH AVE S AND 21ST AVE S S 6 6	21ST AVE S AND 22ND AVE S N 4 4	21ST AVE S AND 22ND AVE S S 2 2 2	22ND AVE S AND 23RD AVE S N 8 8	22ND AVE S AND 23RD AVE S S 0	24TH AVE S AND 25TH AVE S N 6 6	24TH AVE S AND 25TH AVE S 8 8 8	25TH AVE S AND DEAD END 4 N 0 0	25TH AVE S AND DEAD END 4 S 2 2	S HORTON ST AND S HINDS ST W 14 14	S HORTON ST AND S HINDS ST E 0 0	S HORTON ST AND S HINDS ST W 6 6	S HORTON ST AND S HINDS ST E 12 12	S HORTON ST AND S HINDS ST W 0	S HORTON ST AND S HINDS ST E 0 0	S HORTON ST AND S HINDS ST W 0	S HORTON ST AND S HINDS ST E 12 12	S HORTON ST AND S HINDS ST W 11 11 11
Parking Su	d£- səc əld səc əld	Street Name Street Segment Street Segment Street Segment Street Segment	22ND AVE S HANFORD ST AND S HORTON ST W 12 12	22ND AVE S ANFORD ST AND S HORTON ST E 9 9	23RD AVE S SHANFORD ST AND S HORTON ST W 0	23RD AVE S ANFORD ST AND S HORTON ST E 0 0	24TH AVE S HANFORD W ST AND S HORTON ST W 16 16	24TH AVE S HANFORD W ST AND S HORTON ST E 13 13	25TH AVE S HANFORD W ST AND S HORTON ST W 9 9	25TH AVE S HANFORD W ST AND S HORTON ST E 10 10	S HORTON ST 20TH AVE S AND 21ST AVE S N 4 4	S HORTON ST 20TH AVE S AND 21ST AVE S S 6 6	SHORTON ST 21ST AVE S AND 22ND AVE S N 4 4	S HORTON ST 21ST AVE S AND 22ND AVE S S 2 <th2< th=""> <th2< th=""> 2</th2<></th2<>	S HORTON ST 22ND AVE S AND 23RD AVE S N 8 8	S HORTON ST 22ND AVE S AND 23RD AVE S 0 0	S HORTON ST 24TH AVE S AND 25TH AVE S N 6 6	S HORTON ST 24TH AVE S AND 25TH AVE S 8 8 8	S HORTON ST 25TH AVE S AND DEAD END 4 N 0	S HORTON ST 25TH AVE S AND DEAD END 4 S 2 2 2	20TH AVE S HORTON ST AND S HINDS ST W 14 14	20TH AVE S HORTON ST AND S HINDS ST E 0 0	21ST AVE S HORTON ST AND S HINDS ST W 6 6	21ST AVE S S HORTON ST AND S HINDS ST E 12 12	23RD AVE S SHORTON ST AND S HINDS ST W 0 0	23RD AVE S SHORTON ST AND S HINDS ST E 0 0	24TH AVE S HORTON ST AND S HINDS ST W 0 0	24TH AVE S HORTON ST AND S HINDS ST E 12 12	25TH AVE S SHORTON ST AND S HINDS ST W 11 11

		Average	46%	42%	NS	83%	64%	31%	54%	SN	100%	%0	%0	20%	NS	64%	42%	NS	NS	64%	39%	150%	63%	SN	SN	17%	SN	%0	21%
	Evening	Thursday 2/13/2020 7:00PM	58%	50%	NS	100%	71%	56%	92%	NS	100%	%0	%0	40%	NS	71%	38%	NS	NS	73%	33%	133%	63%	NS	NS	22%	NS	%0	17%
		Tuesday 2/11/2020 7:00PM	33%	33%	NS	67%	57%	%9	17%	NS	100%	%0	%0	%0	NS	57%	46%	NS	NS	55%	44%	167%	63%	SN	SN	11%	NS	%0	25%
tion		Average	21%	42%	NS	83%	71%	%0	33%	NS	100%	%0	8%	40%	NS	79%	19%	NS	NS	50%	44%	117%	56%	NS	NS	22%	NS	%0	33%
cing Utiliza	Midday	Thursday 2/13/2020 10:30AM	17%	33%	NS	83%	86%	%0	42%	NS	100%	%0	%0	20%	NS	71%	15%	NS	NS	45%	33%	133%	50%	NS	NS	22%	NS	%0	33%
Park		Tuesday 2/11/2020 10:30AM	25%	50%	NS	83%	57%	%0	25%	SN	100%	%0	17%	%09	NS	86%	23%	SN	NS	55%	56%	100%	63%	NS	SN	22%	SN	%0	33%
		Average	38%	33%	NS	75%	71%	%0	13%	NS	100%	%0	%0	40%	NS	%62	35%	NS	NS	68%	44%	133%	50%	NS	NS	11%	NS	%0	33%
	Morning	Thursday 2/13/2020 7:00AM	42%	33%	NS	100%	71%	%0	8%	SN	100%	%0	%0	60%	NS	71%	38%	NS	NS	64%	56%	133%	50%	NS	SN	11%	NS	%0	33%
		Tuesday 2/11/2020 7:00AM	33%	33%	NS	50%	71%	%0	17%	NS	100%	%0	%0	20%	NS	86%	31%	NS	NS	73%	33%	133%	50%	NS	NS	11%	NS	%0	33%
_	səc əlq	Total kvailal Parking Spac After 4p	12	9	0	9	7	16	12	0	7	5	9	5	0	7	13	0	0	5	6	с	œ	0	0	6	0	16	12
6																													
king Supl	-3b səc əld	IslisvA IstoT Parking Spac 80↑ n99w198	12	9	0	9	7	16	12	0	7	5	9	5	0	7	13	0	0	1	6	с	œ	0	0	6	0	16	12
Parking Supl	-3p ses ses ses ses	IslisvA kotal Parking Space Between 7a- Total kotal Betking Space Betking Space Between 10a	12 12	9	0	9	7 7	5 16	12 12	0	2 2	5 5	9	5 5	0	7 7	13 13	0	0	11 11	6	3	8	0	0	6	0	16 16	12 12
Parking Sup	dg- səc əld səc səc	Side freet of Betking Space Between 7a- Between 10a Between 10a	E 12 12	9 9 z	0 0 8	9 9 2	s 7 7	N 5 16	S 12 12	0 0 2	s 2 2	2 2 2	9 9 8	× 5 5	0 E	w 7 7 W	E 13 13	0 0 M	е 0	W 11 11	е Э	w 3 3	В 8	0 0 z	0 0 8	6 6 2	0 0 0	W 16 16	E 12 12
Parking Sup	d£- səc əld \$88 \$90 9ld	Street Segment Street Segment Street Segment Street Total Availat Street 103 Street 103	S HORTON ST AND S HINDS ST E 12 12	20TH AVE S AND 21ST AVE S N 6 6	20TH AVE S AND 21ST AVE S S 0 0	21ST AVE S AND 23RD AVE S N 6 6	21ST AVE S AND 23RD AVE S S 7 7	23RD AVE S AND 24TH AVE S N 5 16	23RD AVE S AND 24TH AVE S S 12 12	DEAD END 4 AND 25TH AVE S N 0 0	DEAD END 4 AND 25TH AVE S S 2 2 2	25TH AVE S AND 800' BOUNDARY N 5 5	25TH AVE S AND 800' BOUNDARY S 6 6	S HINDS ST AND 800' BOUNDARY W 5	S HINDS ST AND 800' BOUNDARY E 0 0	S HINDS ST AND 800' BOUNDARY W 7	S HINDS ST AND 800' BOUNDARY E 13 13	S HINDS ST AND S SPOKANE ST W 0	S HINDS ST AND S SPOKANE ST E 0 0	S HINDS ST AND S SPOKANE ST W 11 11	S HINDS ST AND S SPOKANE ST E 9 9	S HINDS ST AND 800' BOUNDARY W 3 3	S HINDS ST AND 800' BOUNDARY E 8 8	21ST AVE S AND 23RD AVE S N 0 0	21ST AVE S AND 23RD AVE S 8 0 0	23RD AVE S AND 24TH AVE S N 9 9	23RD AVE S AND 24TH AVE S S 0 0	S SPOKANE ST AND 800' BOUNDARY W 16 16	S SPOKANE ST AND 800' BOUNDARY E 12 12
Parking Sup	d£- səcə əld səcə əld	Street Name Street Segment Street Segment Street Segment	25TH AVE S HORTON ST AND S HINDS ST E 12 12	S HINDS ST 20TH AVE S AND 21ST AVE S N 6 6 6 6 7 <th7< th=""> <th7< th=""> 7 <</th7<></th7<>	S HINDS ST 20TH AVE S AND 21ST AVE S S 0	S HINDS ST 21ST AVE S AND 23RD AVE S N 6 6	S HINDS ST 21ST AVE S AND 23RD AVE S S 7 7	S HINDS ST 23RD AVE S AND 24TH AVE S N 5 16	S HINDS ST 23RD AVE S AND 24TH AVE S S 12 12	S HINDS ST DEAD END 4 AND 25TH AVE S N 0	S HINDS ST DEAD END 4 AND 25TH AVE S S 2 <th2< th=""> <th2< th=""> 2 <</th2<></th2<>	S HINDS ST 25TH AVE S AND 800' BOUNDARY N 5 5	S HINDS ST 25TH AVE S AND 800' BOUNDARY S 6 6	20TH AVE S HINDS ST AND 800' BOUNDARY W 5 5	20TH AVE S HINDS ST AND 800' BOUNDARY E 0 0	21ST AVE S HINDS ST AND 800' BOUNDARY W 7 7	21ST AVE S HINDS ST AND 800' BOUNDARY E 13 13	23RD AVE S HINDS ST AND S SPOKANE ST W 0 0	23RD AVE S HINDS ST AND S SPOKANE ST E 0 0	24TH AVE S HINDS ST AND S SPOKANE ST W 11 11	24TH AVE S HINDS ST AND S SPOKANE ST E 9 9	25TH AVE S HINDS ST AND 800' BOUNDARY W 3 3	25TH AVE S HINDS ST AND 800' BOUNDARY E 8 8	S SPOKANE ST 21ST AVE S AND 23RD AVE S N 0	S SPOKANE ST 21ST AVE S AND 23RD AVE S SPOKANE ST S 0 0	S SPOKANE ST 23RD AVE S AND 24TH AVE S N 9 9	S SPOKANE ST 23RD AVE S AND 24TH AVE S 0	24TH AVE S SPOKANE ST AND 800' BOUNDARY W 16 16	24TH AVE S SPOKANE ST AND 800' BOUNDARY E 12 12

				Pai	king Supp	, v				Parki	ing Utilizat	ion			
				910 262 583	dg- səc əld	səc əlq		Morning			Midday			Evening	
Block Face ID Si	treet Name	S Street Segment	ide of Street	lotat Notal Parking Space -a7 n99w198	IslisvA IstoT Parking Space Between 10a	Total Availal Parking gaa 4fter 4p	Tuesday 2/11/2020 7:00AM	Thursday 2/13/2020 7:00AM	Average	Tuesday 2/11/2020 10:30AM	Thursday 2/13/2020 10:30AM	Average	Tuesday 2/11/2020 7:00PM	Thursday 2/13/2020 7:00PM	Average
		TT	OTAL	541	552	580	47%	47%	47%	39%	40%	40%	40%	55%	47%

APPENDIX C: BUILDING HEIGHT AND VIEWS
Existing Building



Along 23rd Ave S

Exterior View from across 23rd Ave S



Existing Views

> Building is between 5 and 13 feet below street level







Proposed Building Height Profiles

DEPARTURE #1: BUILDING HEIGHT



Building Elevation at 23rd Ave S



Building Elevation at S Hinds St.

Building Height Studies - across 23rd Avenue South



Building Height Studies



Building Section (Across 23rd Ave South)

Building Height Studies



Building Section (Across 23rd Ave South)

APPENDIX D: LANDMARKS BOARD DETERMINATION



The City of Seattle

Landmarks Preservation Board

Mailing Address: PO Box 94649, Seattle WA 98124-4649 Street Address: 600 4th Avenue, 4th Floor

LPB 292/20

Ms. Rebecca Acensio Seattle Public Schools Mail Stop: 22-336 P.O. Box 34165 Seattle, WA 98124-1165

Re: Denial of Nomination of Kimball Elementary School – 3200 23rd Avenue S

Dear Ms. Acensio:

At the August 5, 2020, meeting of the City's Landmarks Preservation Board, a motion was made to deny the nomination of Kimball Elementary School at 3200 23rd Avenue S in Seattle. The vote to deny was 7 in favor and 1 opposed. Therefore, the nomination was denied.

Termination of Proceedings

SMC 25.12.850A states:

"In any case where a site, improvement or object is nominated for designation as a landmark site or landmark and thereafter the Board fails to approve such nomination or to adopt a report approving designation of such site, improvement or object, such proceeding shall terminate and no new proceeding under this ordinance may be commenced with respect to such site, improvement or object within five (5) years from the date of such termination without the written agreement of the owner, except that when the site or improvement nominated is Seattle School District property and is in use as a public school facility, no new proceeding may be commenced within ten (10) years from the date of such termination."

This provision is applicable to these nomination proceedings.

Issued: August 6, 2020

Ein Note

Erin Doherty Landmarks Preservation Board Coordinator

Administered by The Historic Preservation Program The Seattle Department of Neighborhoods "Printed on Recycled Paper" cc: Tingyu Wang, Seattle Public Schools Ellen Mirro, Studio TJP Nathan Torgelson, SDCI Katrina Nygaard, SDCI Jordan Kiel, Chair, LPB