

Facilities and Operations Committee
Meeting
Wednesday, March 16, 2022 5:00 PM

Dr. Matthew Prophet Education Center -
Windows Cafeteria / Conference Room (Floor
2)
501 N. Dixon St.
Portland, OR 97227

Agenda

1. 5:00 pm - Introductions
2. 5:05 pm - Update: Jefferson High School Modernization
3. 5:20 pm - Update: Center for Black Student Excellence
4. 6:05 pm - Harriet Tubman Re-Siting
5. 6:50 pm - Public Comment - (5) two-minutes spots* **Topic of comment must be related to an agenda item.*
Email publiccomment@pps.net
or call 503-916-3741 to sign up.
6. 7:00 pm - Adjourn



Jefferson High School Modernization

Facilities & Operations Committee
March 16, 2022

BUILDING OUR FUTURE TOGETHER.

<https://www.pps.net/JeffersonBond> • JHSMod@pps.net • 503-916-2222

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Portland Public Schools
School Building Improvement Bond





2020 Bond: Jefferson HS Modernization

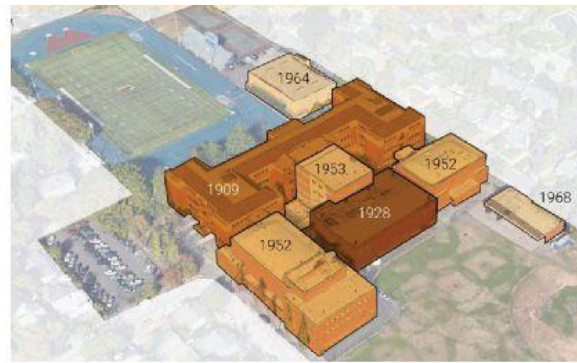
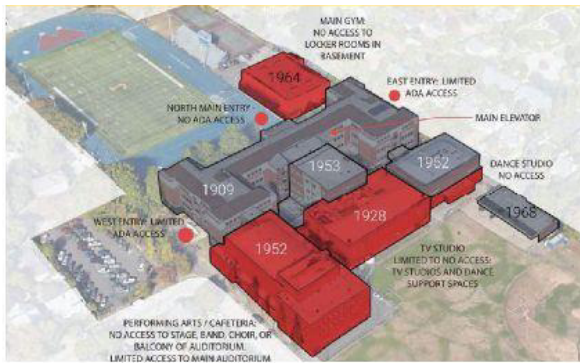
Jefferson is the only high school modernization project that will be constructed in this bond.





Background: JHS Conceptual Master Plan

- Completed in late 2019 in order to provide high level cost estimates for upcoming 2020 Bond Measure
- Looked at variables including: existing space and accessibility challenges, impact of structural upgrades, potential construction phasing
- Community-based engagement provided first look at community goals and values for a JHS Modernization project





Background: JHS Conceptual Master Plan

CMPC RECOMMENDED STRATEGIES

- Keep the 1909 'H' shaped building & remove all other additions
- All new buildings should be located south of existing building
- Revise existing main entry to be universally accessible
- Centrally locate a new Student Center near the main entrance
- Rebuild a new theater to hold 1,000 seats
- Establish a new south entry for gyms & theater accessible by the community
- Create as much outdoor space as possible



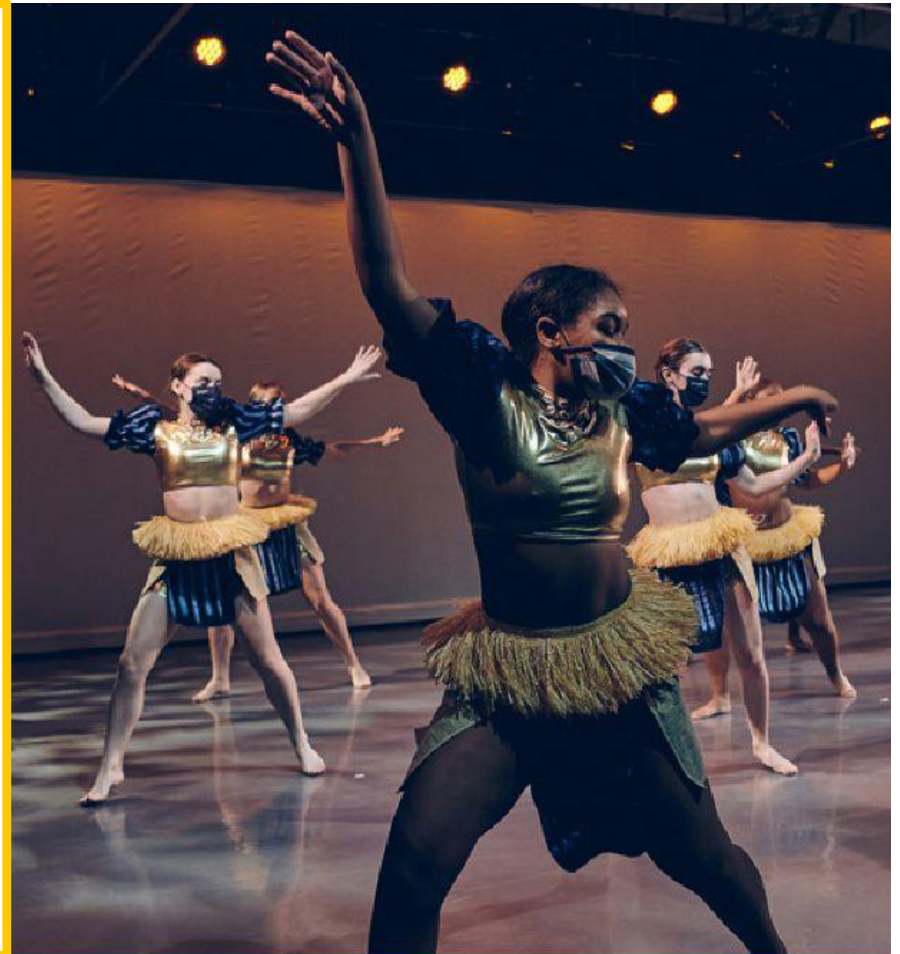
Jefferson HS Modernization Project: Site

Historic Jefferson High School, located in the North Portland Albina neighborhood, has long served as one of the anchors of the Black community in Portland. The 14-acre site includes the original 1909 school building, later additions, and a track and field.



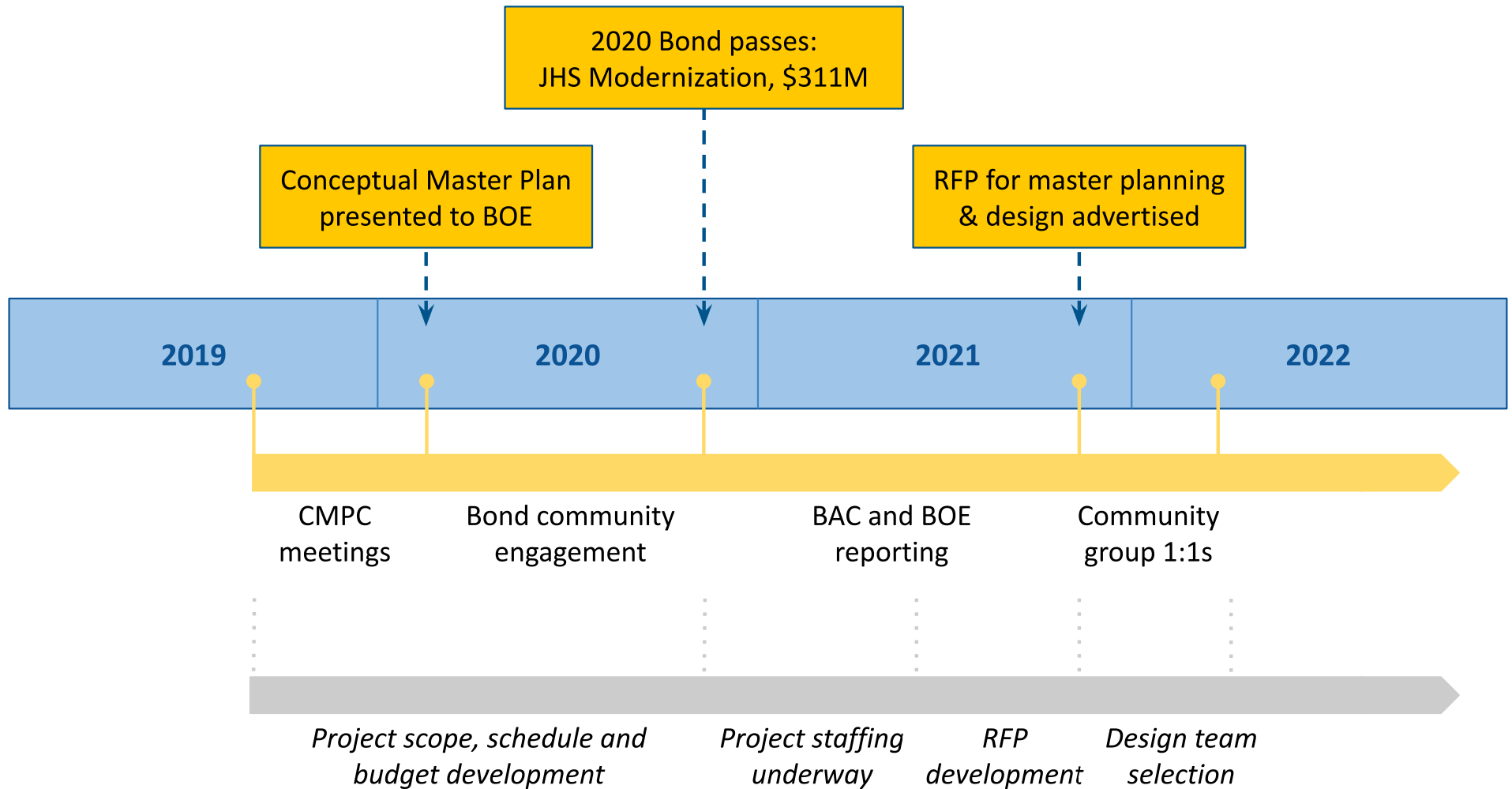
Jefferson HS Modernization Project: Program

- Innovative Middle College for Advanced Studies collaboration with Portland Community College
- Focus on health sciences and biotechnology education
- Strong performing and visual arts including the internationally renowned Jefferson Dancers / Modern Dance Lab
- Community partnerships with Self Enhancement Inc (SEI), Latino Network and others



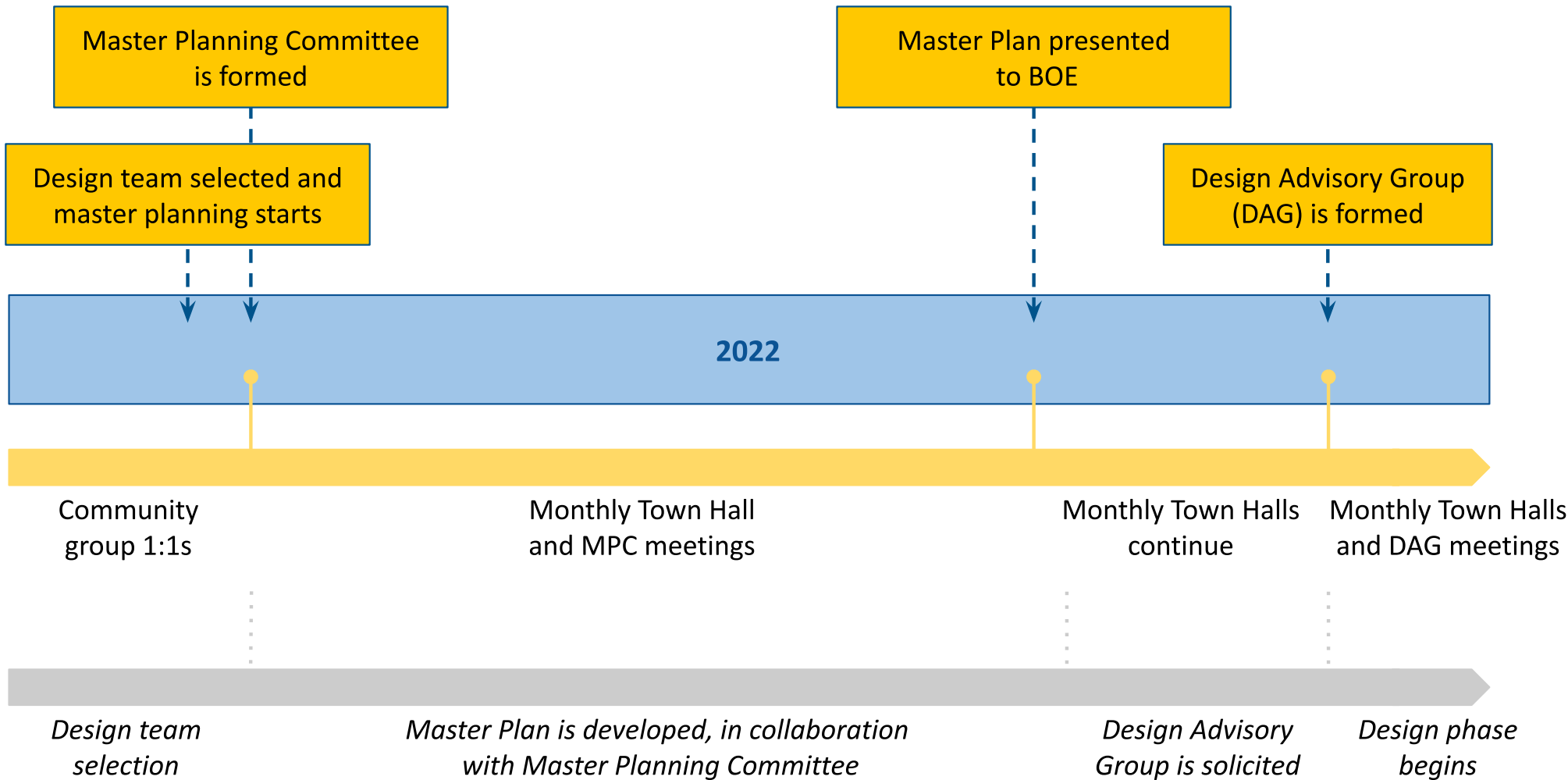


Jefferson HS Modernization Project: Work To Date





Jefferson HS Modernization Project: The Year Ahead





Jefferson HS Modernization Project: MPC



MASTER PLANNING COMMITTEE (MPC)

- Committee will be made up of students, parents, teachers, staff and community members
- Committee members will participate in design discussions and workshops to help guide development of the master plan
- Applications for the MPC will be released in the coming weeks
- After Master Plan approval, MPC members may be able to continue into the Design Phase as part of the Design Advisory Group



Community Engagement

COMMUNITY PARTNER MEETINGS

- Project team members are holding small group meetings with essential community partners
- Meetings are introducing team member contacts and providing project status updates

MONTHLY TOWN HALLS

- Project team will be holding monthly town hall meetings in coordination with MPC meetings
- Meetings will provide updates on master planning and other project information, as well as soliciting feedback and comment from community members during meetings

PUBLIC DESIGN WORKSHOPS

- Design workshops will be held for the public during the master planning process to solicit feedback from the broader community

MAILING LIST

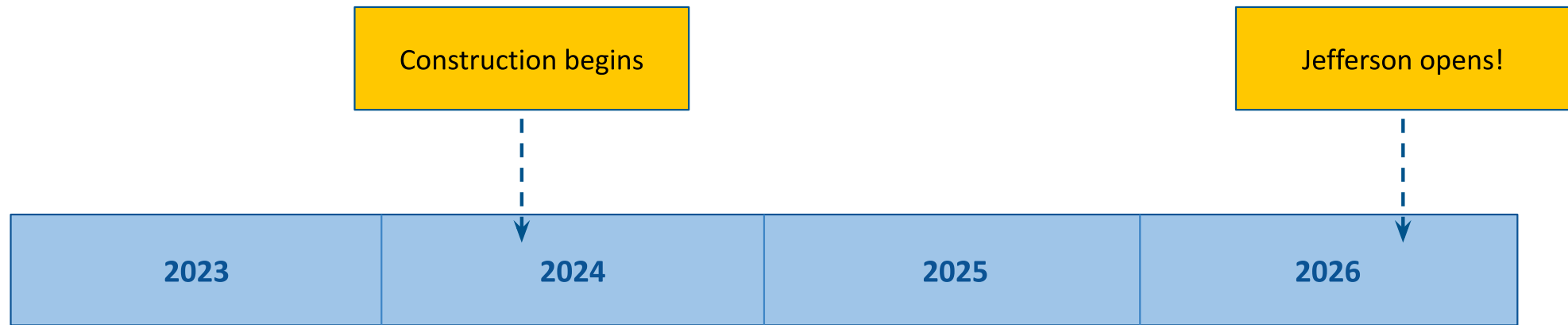
- Community members have signed up for a mailing list JHSBond@pps.net to receive regular project updates

WEBSITE

- Project information is available online at www.pps.net/JeffersonBond



Jefferson HS Modernization Project: Key Future Dates



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Portland Public Schools
School Building Improvement Bond





Center for Black Student Excellence Project Update



TOGETHER
WE WILL

PORTLAND PUBLIC SCHOOLS

CBSE: Vision

Building on the legacy of advocacy for Black children in Portland, and catalyzed by the social movement for Black Lives, Black Portland community leaders have put forth the concept of the Center for Black Student Excellence, a vision that endeavors to center the experience, promote opportunities, accelerate outcomes, and celebrate the achievements of Portland's Black children.



TOGETHER
WE WILL

PORTLAND PUBLIC SCHOOLS

2020 Bond

**\$60 million Approved
DRAFT BUDGET**

Amount	Line Item
\$2 million	Conceptual Design
\$14 million	Master Design Plan
\$2 million	Community Engagement and Project Management
\$42 million	Construction and Implementation (Phase I)
=\$60 million	Total Investment in Bond 2020 Renewal for Center for Black Student Excellence



**TOGETHER
WE WILL**

Alignment with our Strategic Plan: Forward Together

Theme: Racial Equity and Social Justice
Plan the Center for Black Student Excellence

Strategic Outcome

A comprehensive, co-constructed community plan for the center for Black Student Excellence

Description:

In partnership with Black community leaders, education and youth development experts and educators, our community launches a racial equity centered design and planning process that informs both the education programming and the physical design and implementation of the Center for Black Student Excellence in school and facilities in the heart of the historic Albina neighborhood around Jefferson High School. Drawing from local, national and international expertise as well as student, family and community engagement the collective sets the framework and design for implementation of the Center.



TOGETHER
WE WILL

Alignment with our Strategic Plan: Forward Together

- **Goal 1:**
A robust and detailed, community, student and stakeholder engagement plan developed in coordination with our Community Engagement team is reviewed, vetted and approved.
- **Goal 2:**
A community and student focused engagement process that produces a vision and mission and a comprehensive plan that outlines educational outcomes, partnerships need/development physical space needs, oversight and responsibility.
- **Goal 3:**
Create and implement a plan to hire, train and promote educators, and others who reflect the cultural and racial diversity of our student demographics.



CBSE Stakeholder Map



Through engagement, relationship building and innovation equity design, the following elements will be co-constructed amongst the stakeholders:

- Governance
- Educational strategies
- Services and supports plan
- Professional Development and Learning
- Facilities and Operations



Update

Internal Launch Planning Team:

Dani Ledezma, RESJ

Lidia Lopez Gamboa, Project Manager, RESJ

Terralyn Wiley, RESJ Partnerships Manager

**Shanice Clarke, Director of Community
Engagement**

Camille Idedevbo, Innovation Studio Manager

Deliverables to Date:

Collaboration with Albina Vision Trust

Job Description - CBSE

**Draft RFP - Concept Planning and Project
Management**

**Internal Engagement and stakeholder
mapping**



**TOGETHER
WE WILL**

PORTLAND PUBLIC SCHOOLS

Next Steps

Spring 2022

CBSE Director Recruitment, Hiring

RFP for Design

Relationship Building with CBE/AVT

Internal Engagement

Racial Equity Centered Pipeline Initiative
(Wallace)

Summer 2022

Launch Design Process

Student and Family Engagement

SUN and RESJ Partner Engagement

Racial Equity Centered Pipeline Initiative
(Wallace)



TOGETHER
WE WILL



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PORTLAND PUBLIC SCHOOLS



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DRAFT

PPS Harriet Tubman Site Selection Engagement Process

DRAFT 3.14.2022

Harriet Tubman Middle School Relocation

We will empower students, staff, and community members to collaborate with Portland Public Schools in shaping a healthier environment for future Harriet Tubman Middle School students. Stakeholders will co-create a recommendation on a future site for Harriet Tubman Middle School, and elevate essential needs that can be honored in future educational design planning impacting the Albina community.

The site relocation selection process will be the first stage of broader work around the Center for Black Student Excellence, which includes the modernization of Jefferson High School. All of which are part of the district's efforts and commitment to Racial Equity and Social Justice as outlined in our PPS strategic Plan - Forward Together.

The design of this engagement process endeavors to engage a diverse set of stakeholders who will make a relocation site selection recommendation to the PPS Executive Sponsors who will make the recommendation to the PPS School Board. Over the next six weeks, PPS staff will hold a series of engagement meetings with the identified stakeholders with the goal of building consensus around a potential future site for Harriet Tubman Middle School based on the input and thought partnership of those stakeholders. Through relationship building and grounding on the context and challenges, stakeholders will utilize a common site selection criteria

Harriet Tubman Relocation Process Description

Charge

Empathize - (Staff and Community Driven)

Begin input sessions, community conversations, and relationship-building with stakeholders in the Albina neighborhood. Early input sessions will focus on grounding stakeholders with detailed information about the Harriet Tubman Relocation as well as connections with the PPS Strategic Plan - Forward Together.

Thursday, March 10th

Thursday, March 17th

Thursday, March 31st

Define and Ideate (Community Driven)

Collective clarity continues to be built for the future of HTMS, and community members brainstorm possibilities for future HTMS sites and get grounding on the site selection criteria to be used for site selection. Community members will be encouraged to fill out a google form to record site selections that will be summarized and discussed in future meetings.

Thursday, March 31st to April 7 (Community Scoring Office Hours)

Prototype (Community Driven)

Community input is summarized, and PPS staff will facilitate community conversations to review summary of community scored site selection criteria form. In a world cafe style discussion community members will review and make recommendations to help narrow intended sites using the site selection criteria.

Thursday, April 7, 2022
Thursday, April 21, 2022

Test (Staff Recommendation)

Based on the summarized stakeholder input and the community discussion session, Executive Sponsors will finalize a recommendation based on the input of the community engagement process on future HTMS sites and present recommendations to the PPS School Board.

Week of April 25th, 2022

Stakeholder Groups to Be Engaged during Community Driven Process

PPS Students- Harriet Tubman and Feeder Schools

Affinity Groups
Directed Outreach

PPS Parents - Harriet Tubman and Feeder Schools

King PTA
Harriet Tubman PTA
Sabin PTA
Irvington PTA
Directed Outreach

PPS Staff - Harriet Tubman and Feeder Schools

Principals
Teachers
All staff
Retired staff

Black Community Leaders

Albina Vision Trust
Directed Outreach

RESJ Partnership Organizations - Black Led and with staff at Harriet Tubman and Feeder Schools

Self Enhancement Inc
Coalition of Black Men
Black Parent Initiative
REAP
Kairos
Maurice Lucas Foundation
Urban League

HARRIET TUBMAN MIDDLE SCHOOL (RE)SITING: DUE DILIGENCE V02



2022 MARCH 16

BACKGROUND

Over the course of decades, the Historic Albina neighborhood — the heart of Oregon’s historic Black community — has experienced harm caused by the construction and presence of the I-5 freeway. Since Black families had their homes and businesses demolished to make way for construction of the freeway and other “urban renewal” projects nearly fifty years ago, the air pollution and increased traffic associated with the freeway have negatively impacted the health of neighborhood residents and their quality of life. The resulting displacement and disinvestment in the Albina neighborhood is part of our community’s shared history.

The Federal-Aid Highway Act of 1956 originally provided funds to construct the interstate, in the process demolishing several hundred housing units and constructing the freeway immediately adjacent to what was then Eliot Elementary, which had opened in 1952. The creation of Harriet Tubman Middle School in the early 1980s at the former Eliot School site has historical significance, as it played a pivotal role in the struggle over school desegregation and racist busing policies in Portland during the 1960s-1980s.

Harriet Tubman has served PPS students in the Albina neighborhood since the early ‘80s, and then in 2018 reopened as a middle school as part of a district-wide Middle School Framework to provide students with a more comprehensive and equitable middle school experience and better preparation for high school. For this framework to be successful long-term, it is essential that students are educated in a building that is not negatively impacted by significant adjacent project construction and longer-term negative impacts from unhealthy ambient air quality, noise, and vibrations.

The location of the freeway directly adjacent to

the school has created enduring environmental impacts. Today the exterior area of Harriet Tubman is functionally unusable for school purposes. As currently designed, the proposed I-5 Rose Quarter Improvement Project would further cut into the Harriet Tubman Middle School site, threatening to worsen the environmental situation and negative health impacts, both during construction and over the long term.

The image below is of the existing Harriet Tubman Middle School site and demonstrates the current proximity of the interstate to the school. The interstate expansion will exacerbate existing environmental hardships and threaten the western edge of the site.



SCHEDULE

Due to the proximity to the site and location of construction access roads, work on the Eliot Viaduct will directly impact the safety and learning of students at Harriet Tubman Middle school. Recent construction schedules provided to the district from ODOT indicate this work will begin in June of 2027, suggesting the Harriet Tubman students must be relocated by August 2027.

Working backward from August 2027, the district can use our recently constructed Kellogg Middle School to infer the necessary duration to build a middle school. Kellogg Middle School opened in August of 2021 after four years of planning, design, and construction. The process began in May 2017 with procuring architectural and engineer services. Planning, design, and permitting took approximately two years; construction also took two years.

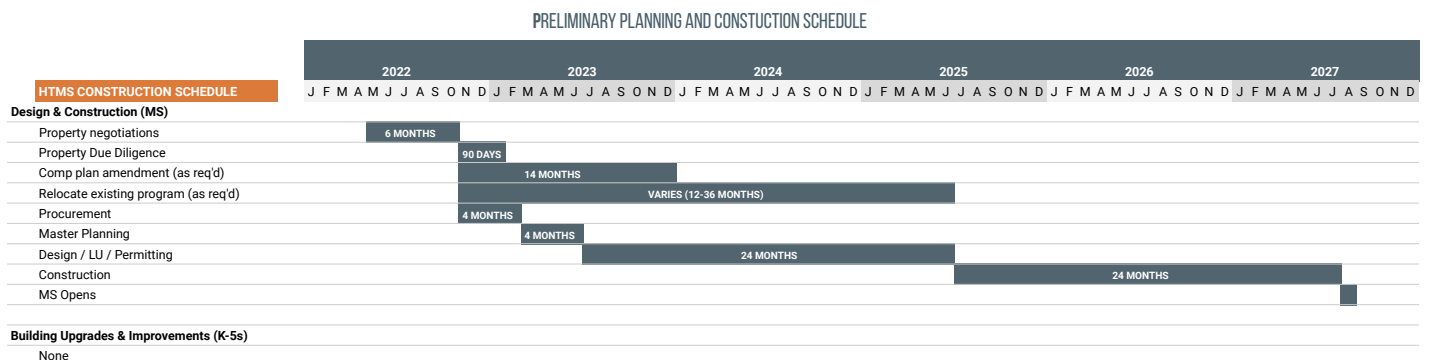
Comparing Kellogg with the development proposal described above, it's worth noting a number of asymmetries between the processes. First, the district already owned the parcel for Kellogg Middle School. Not all sites currently under consideration are within the district's control. In these cases, the district must negotiate with the current property owner for sale, lease, or trade for the land. If the current property owner is another government agency, there will likely be a public process around the property purchase. District staff estimate a minimum of six months would be required for property negotiations.

To further address potential differences between Kellogg and the current study, the existing zoning for Kellogg allowed school use through a conditional land use process — a familiar and predictable administrative process for granting land-use approval for schools. Some parcels currently under consideration do not allow school use. These parcels will require comprehensive plan amendments — a process that requires City Council approval. A comprehensive plan amendment is in no way guaranteed. If the district pursues a parcel that does not allow school use, it does so at risk.

Returning to the inferences we can make from the assumed I-5 construction schedule and the timeline from Kellogg Middle School, the district should identify and begin procurement for design services by August 2023. However, lessons learned from previous projects, including Kellogg, suggest additional time for procurement and planning are prudent, to say nothing of time for scheduling contingencies to address unexpected or unknown site conditions, supply-chain issues, or labor shortages.

Accounting for lessons learned and scheduling contingencies, work on any site currently within the district's control should proceed no later than November 2022 to relocate Harriet Tubman students successfully. In the case where the district does not own the selected parcel, an additional six months of property negotiations prior to any planning or design will be necessary. In this latter case, the district must identify a site by May 2022 to relocate Harriet Tubman students by August 2027.

The preliminary schedule is presented below.



I-5 IMPACT SUMMARY

This summary is based on the best information available. The I-5 Rose Quarter Improvement Project is in the design phase. Precise schedule details are not yet available and subject to change.

7/2023 - 4/2024

Construction of two walls along I-5 from Harriet Tubman on the south to

N. Russel St on the north. Construction access will be off of Commercial Ave. Construction operations are expected to take place Monday thru Friday during daytime hours. Construction activities included clearing, grubbing, excavation, embankment, ground drilling, and concrete placement. Equipment used include excavators, dump trucks, rollers/compactors, forklifts, cranes, concrete trucks, and concrete pump trucks.

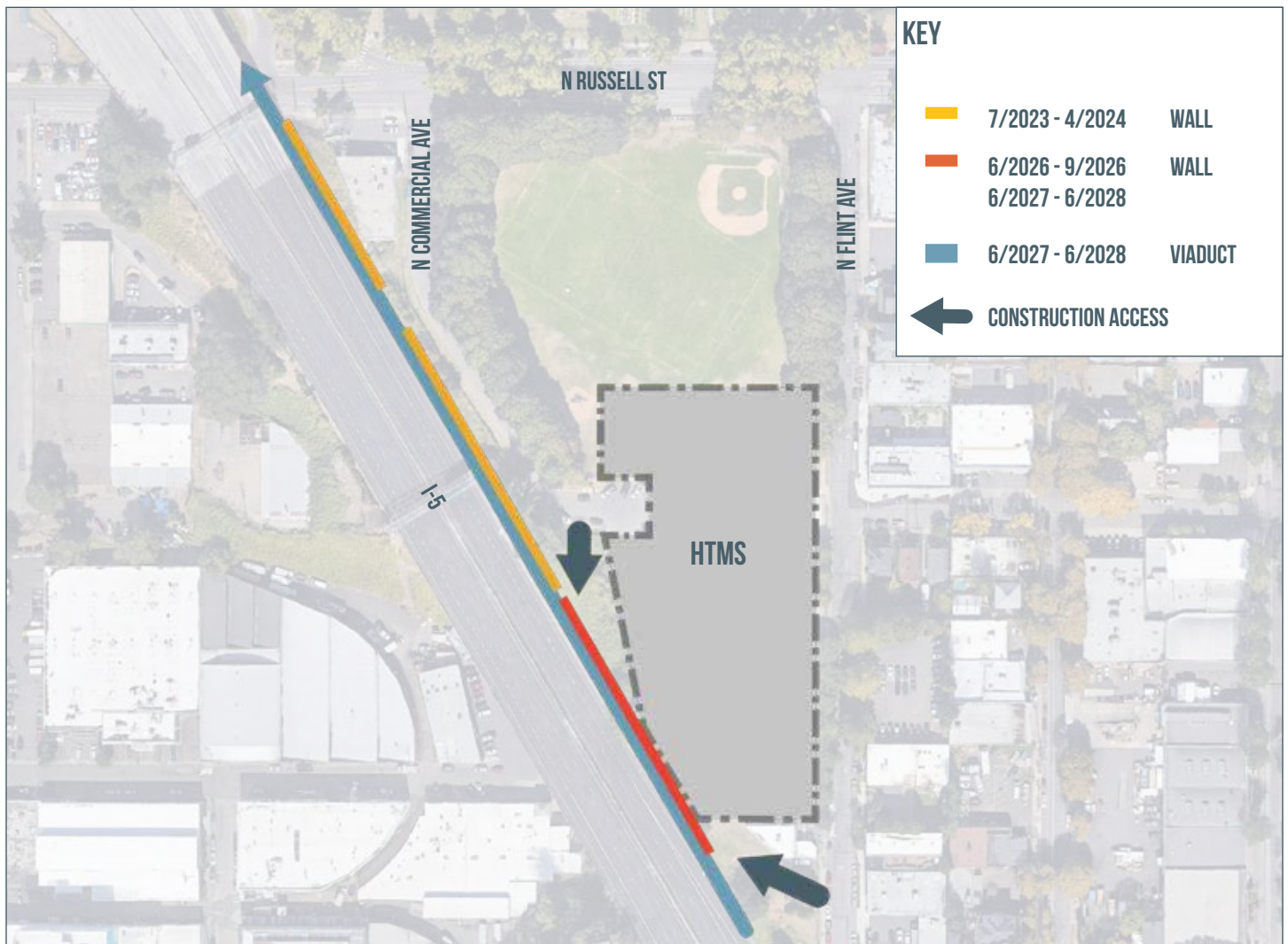
6/2026 - 9/2026

A retaining wall directly adjacent to the southwest property line of HTMS is planned when the school is not in regular session during the summer

months. To construct this wall in the short three month summer window, construction operations will take place 24hrs a day, seven days a week.

6/2027 - 9/2028

After the wall is complete, construction of the Eliot viaduct will begin and last into 2028. This work will take place utilizing access from Commercial Ave. Work will typically take place Monday through Friday during daytime hours. Equipment being operated during this time will include excavators, dump trucks, micropile machines, cranes, forklifts, concrete trucks, concrete pumps, and generators.



COMMUNITY ENGAGEMENT

The District has held six community engagement events since mid-December to update current and future Harriet Tubman Middle School (HTMS) students about the impacts the I-5 expansion project could have on the school and the unique legislative opportunity we have before us to begin to bring the Albina school communities into the conversation to collaborate about the best location to rebuild the school.

An engagement process will include sessions at targeted schools, and a site selection committee composed of teachers, parents, community members, and RESJ partners. The process will convene as follows to compile important input from feeder school communities on selection criteria to help narrow the list of potential sites:

3/10/2022 MLK COMMUNITY INPUT
3/10/2022 SABIN COMMUNITY INPUT
3/17/2022 BOISE-ELLIOT COMMUNITY INPUT
3/17/2022 IRVINGTON COMMUNITY INPUT
3/29/2022 COMMITTEE MEETING
4/5/2022 COMMITTEE MEETING

ENVIRONMENTAL REVIEW PROCESS

To date, only cursory outdoor air sampling for particulate matter has been conducted at the BESC and PBOT sites. The cursory sampling ruled out any elevated particulate matter at the time of the sampling only. Any site selected for further analysis would be subject to an EPA defined Phase I and Phase II Environmental Site Assessment.

A Phase I Environmental Site Assessment will research, catalog, and analyze:

- » Current and historical ownership and activities on the property
- » Existing environmental information related to the property, such as the past or current presence of underground storage tanks, utility lines, etc.
- » Influences from surrounding properties

A Phase II Environmental Site Assessment, when determined to be needed, will include:

- » Environmental sampling (air, soil, water)
- » Geotechnical surveys

FUNDING

The 2022 Legislative Session has funded \$120 million for the replacement of the Harriet Tubman Middle School.

The District will continue collaborating with the Governor's team and rounding up support from other stakeholders, including Multnomah County, the City of Portland, Metro and other key stakeholders.

If the funding provided by the State is insufficient to relocate HTMS the District will need to identify other capital funding sources to complete the relocation.

COST ESTIMATES

A cost estimate has been prepared for the purchase of property and construction of a new middle school. This information was shared with the Governor’s team for preliminary funding discussions. One important thing to note with this cost information is that because no particular site location has been determined yet, it carries with it some uncertainty.

- » **Land** - Purchase of new property estimates are based on current market conditions and will vary widely depending on zoning, location and current site conditions. Costs for land vary widely from a low of no cost if we can use currently owned real estate to a high of \$10M/AC for the Lloyd Center area
- » **Hard Costs** - Hard costs are defined as physical costs associated with construction of a project. The estimates are based on an assumed building area based on PPS’ education specification and a dollar per square foot cost range provided by professional construction cost estimators Rider Levett Bucknall (RLB). Low range is based on \$460/SF, High Range is \$540/SF.
- » **Soft Costs** - Soft costs include indirect project expenses including (but not limited to) architecture and engineering fees, land use and building, permitting, testing & inspection, surveying, and other consultants. The estimates are based on recent PPS capital projects.
- » **FF&E** - Includes costs for new furniture, fixtures, and equipment/technology to outfit a new middle school. The estimates are based on recent PPS capital projects.
- » **Site Development** - Cost includes estimates necessary to complete all on-site and off-site improvements including (but not limited to) clearing and grading, parking and circulation, field improvements, new utility infrastructure, and street and other ROW improvements that may

be required. Because no site has been selected, this cost category carries with it many significant unknowns. The estimates are based on recent PPS capital projects. The estimates are based on recent PPS capital projects.

- » **Swing Site** - No Cost. Assumes students of HTMS will remain on the existing site until the new site/ school is ready to be occupied.
- » **Administration** - Includes costs associated with management of the project including owner’s representation services, construction management services, insurance, and other related costs. The estimates are based on recent PPS capital projects.
- » **Contingency** - 15% contingency is held for unanticipated construction costs.
- » **Escalation** - The escalation cost information was obtained from Rider Levett Bucknall (RLB), and it varies year over year based upon projected inflation rates. The escalation rate(s) are projected to the approximate midpoint of construction.

PRELIMINARY COST ESTIMATE RANGE

	COST ESTIMATE RANGE		
	%	LOW	HIGH
LAND		\$15,000,000	\$30,000,000
HARD COSTS		\$54,791,520	\$64,320,480
SOFT COSTS	15%	\$8,218,728	\$9,648,072
FFE	10%	\$6,301,025	\$7,396,855
SITE DEVELOPMENT	12%	\$8,317,353	\$9,763,849
SWING SITE	0%	\$0	\$0
ADMINISTRATION	4%	\$3,105,145	\$3,645,170
CONTINGENCY	15%	\$12,110,066	\$14,216,164
ESCALATION	VARIES	\$19,936,190	\$23,403,353
TOTAL		\$127,780,026	\$162,393,944
ROUNDED TOTAL		\$128,000,000	\$162,000,000

PROGRAM REQUIREMENTS

MIDDLE SCHOOL EDUCATIONAL SPECIFICATIONS

Created in 2014, the Portland Public Schools Educational Specifications (Ed Spec) represent a foundation on which planning and design work can begin; it outlines desired building characteristics for all district schools. The intent of the Ed Spec is to provide spaces for 21st-century teaching to occur while providing flexibility to adapt to future changes. The Ed Spec area program identifies the quantity and size of spaces within a middle school needed to deliver the district's education program. This study interprets Ed Spec to meet site-specific constraints and program needs.

EXISTING MIDDLE SCHOOLS: BUILDING & SITE DATA

SITE	SITE AREA (ACRES)	BUILT AREA (GSF)	CLASSROOM COUNT
BEAUMONT	5.7	91,294	34
DA VINCI	10	88,659	25
GEORGE	7.3	76,142	31
GRAY	13.2	74,614	26
HARRISON PARK	5.4	110,775	39
HOSFORD	6.7	88,532	32
JACKSON	36.4	219,281	40
KELLOGG	5.8	108,110	33
LANE	9.1	94,753	39
MT. TABOR	7.4	79,477	31
OCKLEY GREEN	5.2	74,018	31
ROSEWAY HEIGHTS	8.5	103,610	39
SELLWOOD	4.8	87,364	30
TUBMAN	3.1	87,610	33
WEST SYLVAN	13.6	108,187	40

ENROLLMENT FORECASTS

Enrollment forecasts are used, in part, to determine whether the district will need to add or modify facility space to meet school program or configuration needs. Student enrollment forecasts, combined with building capacity and utilization, provide a framework for facility needs to serve Portland Public Schools' graduate portrait.

The enrollment forecasts presented below were prepared by the Portland State University Population Research Center for Portland Public Schools. These data are based on recent enrollment numbers (October 2020 and

October 2021) and forecast through 2037 for K-5 and Middle School configurations, and the overall district. These data are preliminary; final forecasts are expected for individual schools by March of this year and will forecast enrollment to 2032.

The preliminary 15-year enrollment forecast integrates district enrollment trends with local area population, enrollment, and housing trends. This information is intended to be used as a school planning tool and a basis for community discussions about future school facility needs.

ENROLLMENT CHANGE 2021-22 THROUGH 2036-37 SUMMARY

CONFIGURATION	2021-22 ENROLLMENT (ACTUAL)	2036-37 (PRELIMINARY FORECASTS)	CHANGE	
K-5	20,324	19,094	1230	-6%
6-8	10,345	8,603	1742	-17%
K-12	45,005	39,409	5596	-12%

PRELIMINARY ENROLLMENT FORECASTS PROVIDED BY PSU POPULATION RESEARCH CENTER, JANUARY 2022

NAME	PROGRAM	2019-20 (ACTUAL)		2020-21 (ACTUAL)		2021-22 (ACTUAL)		2022-23 (PRELIMINARY FORECAST)	
		ENROLLMENT	UTILIZATION	ENROLLMENT	UTILIZATION	ENROLLMENT	UTILIZATION	ENROLLMENT	UTILIZATION
BOISE-ELIOT	NEIGHBORHOOD	325	50%	327	50%	321	49%	317	49%
IRVINGTON	NEIGHBORHOOD	325	59%	320	58%	248	45%	242	44%
MLK JR	MANDARIN	166	-	181	-	169	-	164	-
	NEIGHBORHOOD	155	-	138	-	128	-	121	-
	TOTAL	321	51%	319	50%	297	47%	285	45%
SABIN	NEIGHBORHOOD	418	69%	360	59%	340	56%	340	56%
HARRIET TUBMAN	MANDARIN	13	-	26	-	35	-	34	-
	NEIGHBORHOOD	417	-	417	-	353	-	340	-
	TOTAL	430	59%	443	61%	388	53%	374	51%
JEFFERSON	NEIGHBORHOOD	641	35%	620	34%	588	32%	607	33%

The nature of forecasting requires some level of speculation, so questions around data integrity are warranted; however, previous forecasts offer a way to validate predictions because of the methodological consistency used by the Population Research Center. When measuring the deviation between forecasted and actual enrollment, estimates from 2010 through the end of 2019 (pre-pandemic) had an error rate of less than 2%, often below 1%.

Primary data sources used to prepare these forecasts include historic enrollments through 2021-22, U.S. Census Bureau 2000 and 2010 Decennial Censuses and 2015 to 2019 American Community Survey, birth data from the Oregon Center for Health Statistics, and housing development information from the City of Portland and Metro.

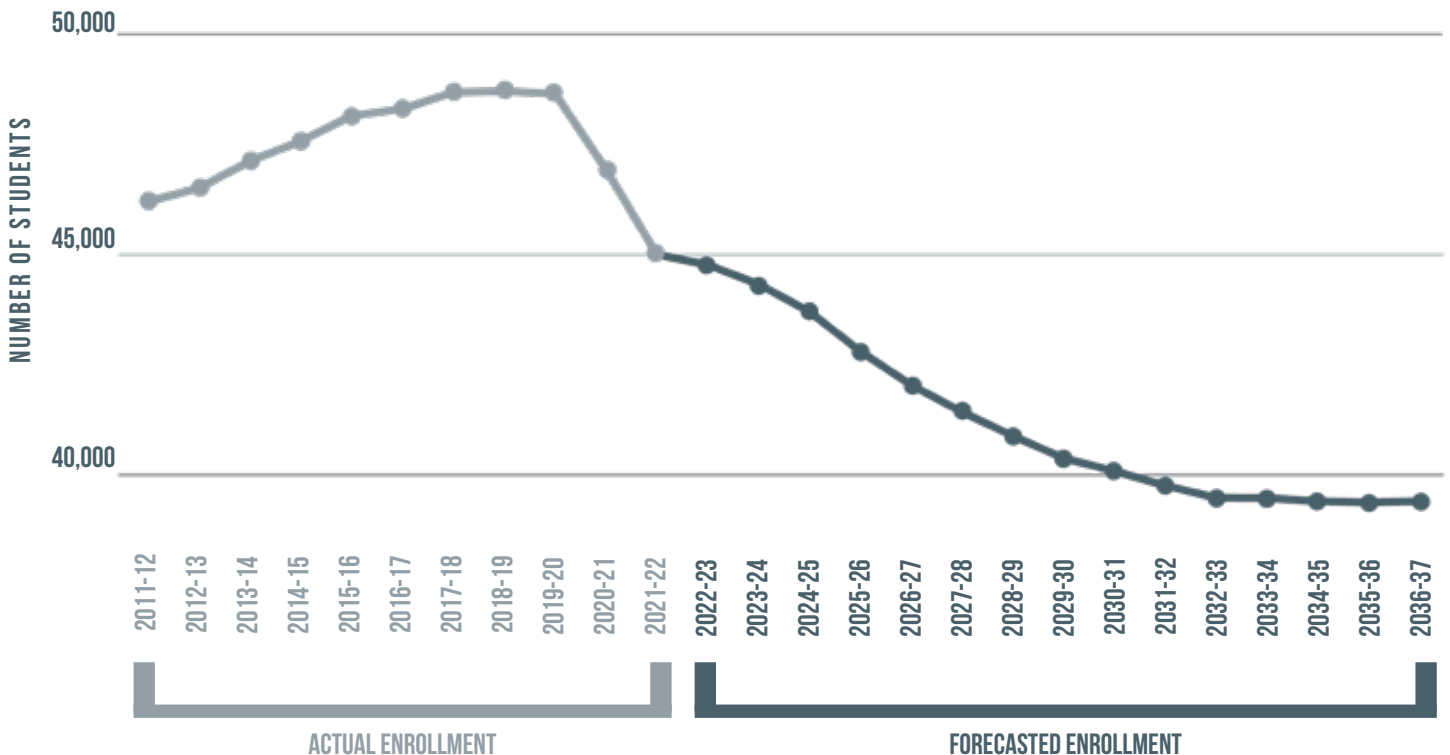
DISTRICT ENROLLMENT FORECAST

The COVID-19 pandemic significantly shifted enrollment for the 2020-2021 school year. The lasting impact of the pandemic on enrollment remains to be seen but the enrollment decrease for the 2021-2022 school year was commensurate with the decrease from the previous year, suggesting the pandemic will have a durable effect on enrollment.

In fall 2021, the district enrolled 45,005 students in grades K-12, a decrease of 1,932 students from fall 2020. For comparison, the pandemic-related enrollment decline seen in fall 2020 was 1,716.

The most significant decline in the past two years was seen in the lower grades. From 2019-2020 to 2020-2021 K-2 enrollment declined eight percent. From 2020-2021 to 2021-2022 the enrollment decline was similar at six percent. Demographers with the Portland State

PRELIMINARY DISTRICT ENROLLMENT FORECASTS



University Population Research Center anticipate that enrollment will continue to decline, albeit not as sharply, through the forecast range. In addition to the pandemic, declining birth rates and slower net migration to the Portland region play a significant part in the enrollment decline.

year forecast in 2036-37, projected enrollment is 39,409 – more than 9000 students below its pre-pandemic 2019-20 level.

Overall district enrollment is projected to fall throughout the forecast range. By the end of the 15-

PRELIMINARY CONFIGURATION ENROLLMENT FORECASTS



CO-LOCATED PROGRAMS

BACKGROUND

In 2016, the district launched a multi-year process to shift from a K-8 configuration to middle school and K-5 configurations. The shift intended to expand instructional programming options for students in grades 6-8. Eighteen of the twenty-nine total K-8s have been converted as of this writing — mostly to K-5s.

Three former K-8 schools were (or will soon be) converted to middle schools, including Harrison Park (planned, fall 2023), Ockley Green, and Roseway Heights. While the future status of the 11 remaining K-8 schools is yet to be determined, most will likely become elementary schools.

Older K-8 facilities are often poorly-suited for effective middle school instruction. They typically lack the specialized STEAM, performing arts, athletic, and elective spaces required to support the needs and interests of middle-grade students.

BOUTIQUE MODELS

Faubion is a counterpoint to older K-8 buildings. Conceived and designed as a K-8, the building successfully supports the full range of grade levels, including dedicated STEAM, performing arts, and elective spaces for middle school students.

If Harriet Tubman Middle School were to be co-located at a PPS site within the Tubman catchment area, state funding could support a modernization that includes specific and intentional spaces for middle school instruction.

Space challenges would remain, however. Co-locating

Harriet Tubman Middle School would be challenging, but not impossible if approached intentionally and with guidance from the community.

CRITERIA & OPPORTUNITY SITES

The purpose of this section is to facilitate dialogue around both the selection criteria and viability of each site as a potential new site for Harriet Tubman Middle School. The intent is to provide a common reference point for all stakeholders. As this study progresses, this document will be updated to reflect current considerations, including community input.

As a starting place, district staff have defined an initial set of criteria to help rank each study site. These criteria are not exhaustive. Instead, they serve as an initial filter to narrow the field of potential sites.

The purpose of these criteria is to:

- » Structure dialogue around priorities
- » Provide a shared reference point for stakeholders to express their values
- » Discover where interests converge
- » Provide transparency to the decision-making process
- » Balance variables across stakeholders

District staff will seek input from the community on the criteria in an ongoing basis. These criteria will evolve with input from stakeholders at this time. The district will collaborate with the community to apply these criteria until a narrow set of sites is identified.

The list of sites documented here is not exhaustive; some sites have been eliminated prior to the issuance of this draft. Six sites remain viable candidates for a new location for Harriet Tubman; our collective work is to narrow the field of potential sites to better focus district resources for more involved studies.

The criteria discussed for each site are outlined below. To be sure, these criteria are not exhaustive. Instead, they serve as an initial filter to narrow the field of

potential sites to better focus district resources for more involved studies.

RACIAL EQUITY AND SOCIAL JUSTICE

Student and neighborhood demographics: The ideal site will take into consideration both the current and historic racial demographics of students and surrounding neighborhood. Staff and community will evaluate the risk of a proposed site exacerbating neighborhood gentrification and displacement for communities of color. To evaluate this risk, staff and community will specifically review the demographic impact of each proposed site to ensure that current concentrations of students of color are not lost.

Neighborhood Accessibility: The ideal site will take into consideration the ability of families of color to access the neighborhood and school site proposed. Staff and community will evaluate housing affordability, neighborhood and community amenities to ensure that students and families of color will be able to access the proposed site.

COMMUNITY CONSIDERATIONS

Proximity to primary schools: The ideal site would allow PPS to maintain a middle school in the Albina community. Additional community input will be received in March and April.

LOCATION

The ideal site will be located within the existing HTMS catchment area to minimize the impact to students, the community and PPS operations. Sites located outside the HTMS catchment area will likely experience access issues and require middle school

and high school boundary change considerations (which in turn will likely add time to the overall project schedule). The further the site is outside the existing HTMS catchment area the larger the potential concern.

SITE SUITABILITY

The ideal site will be close to 9 acres in gross area to accommodate all desired site amenities including onsite parking, outdoor recreational space, athletics, bus and vehicle circulation, etc. The smaller the site the fewer site amenities and/or increased cost to design around site challenges. The ideal site will be located within an established residential neighborhood with easy walkability, accessibility, access to transit and consistent with the District Safe Routes to School (SRTS) goals. Sites that are along busy roads, within commercial or industrial business areas or are otherwise hard to get to are less preferred. Ideally the selected site will accommodate a three (s) story building while providing for appropriate outdoor space.

DEVELOPMENT AVAILABILITY (TIME)

The ideal site will have a high likelihood of being ready for development in time to meet the goal of relocating HTMS for the beginning of school in Fall 2027. Sites not currently under PPS control need to be identified by May, 2022 and able to be under PPS control by Fall 2022 with the ability to break ground by June 2023. Sites that have many development impediments, unique complexities or unknowns (complex multi-tiered development, unestablished partnerships, etc) are at higher risk to not be available for development in time.

OPERATIONAL SUSTAINABILITY

The District is committed to Sustainability and the ideal site will activate underutilized properties and have minimal impact on both the environmental and ongoing operational resources. Additionally, the significant decline in enrollment in the HTMS catchment area should inform the site selection such that robust and sustainable educational resources may flourish in the community. Very often the time of the most negative environmental impact of a building is

when it is demolished so a site that does not require significant demolition is preferable. Further, relocating HTMS to an underutilized District property will minimize ongoing operational costs.

COST CONSIDERATIONS

Cost estimate categories and assumptions are listed on page 8 of this document. The cost estimate is a range from low to high, and is general in nature because we have not selected a specific site yet. We have listed cost considerations for each of the “viable” sites that we believe are unique to the site, or are something to take note of. This information is intended to help provide some additional data to consider when comparing different sites.

HARRIET TUBMAN MIDDLE SCHOOL

ADDRESS

2231 N FLINT AVE

CONSTRUCTION DATE

1952 (PRIMARY)

CURRENT OWNER

PORTLAND PUBLIC SCHOOLS

LEVELS

2

BLDG AREA

87,610 SF

SITE AREA

3.05 ACRES

CLASSROOM COUNT

33

CAPACITY

732 STUDENTS

2021-22 ENROLLMENT

388 STUDENTS (TOTAL)

35 (MANDARIN)

353 (NEIGHBORHOOD)

ZONING

CM3 COMMERCIAL MIXED USE 3



KELLOGG MIDDLE SCHOOL

ADDRESS

3300 SE 69TH AVE

CONSTRUCTION DATE

2021

LEVELS

3

BLDG AREA

108,110 SF

SITE AREA

252,648 SF

5.8 ACRES

CLASSROOMS COUNT

33

FUNCTIONAL CAPACITY

803 STUDENTS

ZONING

R5 - RESIDENTIAL 5,000

RM1 - RESIDENTIAL MULTI-DWELLING 1

RM2 - RESIDENTIAL MULTI-DWELLING 2



BESC

ADDRESS

501 N. DIXON ST

CONSTRUCTION DATE

1979

CURRENT OWNER

PORTLAND PUBLIC SCHOOLS

SITE AREA

10.15 ACRES

ZONING

EX - CENTRAL EMPLOYMENT





FIGURE 01 HARRIET TUBMAN CATCHMENT



FIGURE 02 KELLOGG MS FOOTPRINT ON BESC SITE

RACIAL EQUITY AND SOCIAL JUSTICE

»

COMMUNITY CONSIDERATIONS

- » Additional community input will be received in March and April.

LOCATION

- » BESC is located in the southwest region of the Harriet Tubman Catchment area.

SITE SUITABILITY

- » With over 10 acres of land, BESC contains sufficient land area to support a middle school program.
- » The pedestrian infrastructure reflects the site’s industrial past and surrounding zoning. Few pedestrian connections link the site to its surroundings. Nearby sidewalks are narrow and fragmented by a network of high-traffic streets and roads, including I-5.
- » The nearest residential area is to the northeast

surrounding Irvington Elementary School.

- » I-5 is nearly contiguous to the northeast portion of the site, albeit in an area planned to be covered in the forthcoming freeway expansion.
- » Zoning: the BESC site is zoned Central Employment (EX); schools are allowed outright on the site. No conditional use review would be necessary.
- » The area to the north of the parcel is zoned for industrial use; to the south, the zoning is intended to support high-density commercial use.
- » Figure 02 overlays Kellogg Middle School on the BESC site. The solid orange is the Kellogg site and the lighter orange outline is the building. While not a true test-fit, the overlay illustrates the approximate suitability for the site to support a three-story middle school.

DEVELOPMENT AVAILABILITY (TIME)

- » Before building a middle school at the BESC site, the existing administrative functions would need to be relocated to another site. BESC currently supports nearly 600 district employees as well as County staff in the portion of the building leased to Multnomah County. District services supported in the building range from educational support staff (e.g., program directors, administrative

coaches, and the like) to instructional material storage in the warehouse.

- » To be sure, BESC is the district's largest building at 419,000 square feet. A suitable replacement site or, more likely, multiple replacement sites would need to be identified, funded, acquired (lease or purchase), and improved for the relocation of district staff before construction on a new middle school could begin.

OPERATIONAL SUSTAINABILITY

- » Locating Harriet Tubman middle school on the BESC site utilizes existing district assets, and so is efficient in this regard, however, relocating the various administrative functions introduces necessary downstream real estate requirements. The existing administrative and operational functions would need to be supported at another location, albeit with a potentially smaller footprint as remote work persists beyond the pandemic.

COST CONSIDERATIONS

- » Because the District already owns the property, there are some anticipated savings to be realized as opposed to having to purchase land. (- \$)
- » The existing building is in a state of dilapidation due to years of deferred maintenance, and extensive wear and tear. The building also contains hazardous materials such as asbestos, lead based paint, and possibly other materials that will need to be abated. (+ \$)
- » It's assumed a new building would be built as opposed to renovating the existing. The building is very large at 400,000 SF, and will require extensive demolition, abatement, and site restoration to get it to a suitable condition for building new. (+ \$)
- » Anticipate extensive public ROW work to make it suitable for a school that is located near an industrial area and major vehicle thoroughfares. (+\$)
- » Because this is the District's main administrative building that contains a large warehouse, loading docks, central kitchen, maintenance shops, and other specialty areas, a new site (or sites) would need to be located/procured and potentially

renovated to suit the District's needs. (+ \$)

- » There is potential for a portion of the site to be allocated for commercial leasing that could generate income which may off-set some of the costs. (- \$)
- » Locating, procuring and improving locations for the District's administrative and operational functions will require complex and lengthy real estate decisions with no prescribed timeline. If these decisions and actions cannot be completed timely, HTMS staff and students will have to relocate to a temporary facility until a new school can be constructed. (+ \$)
- » Considering this option adds the complexity of locating, procuring and improving one or more new properties not contemplated with the other options, we believe this option will likely exceed the high end of the cost range we have provided.

FURTHER CONSIDERATIONS

- » Albina Vision Trust (AVT) has a Right of First Offer (ROFO) in the event the district chooses to sell. Additionally, there is a 99-year lease with the County which is subservient to the AVT ROFO but should AVT pass on the opportunity, the County is next in line so there are timing and legal complexities.

REQUIRED NEXT STEPS

- » Staff is currently undertaking a relocation study with EcoNW to determine cost and schedule options of relocation.

KENTON

KENTON

ADDRESS

7528 N FENWICK AVE

CONSTRUCTION DATE

1913 (PRIMARY)

LEVELS

3

BLDG AREA

66,599 SF

SITE AREA

3.96 ACRES

CLASSROOM COUNT

18

ZONING

RM2 - RESIDENTIAL MULTI-DWELLING 2

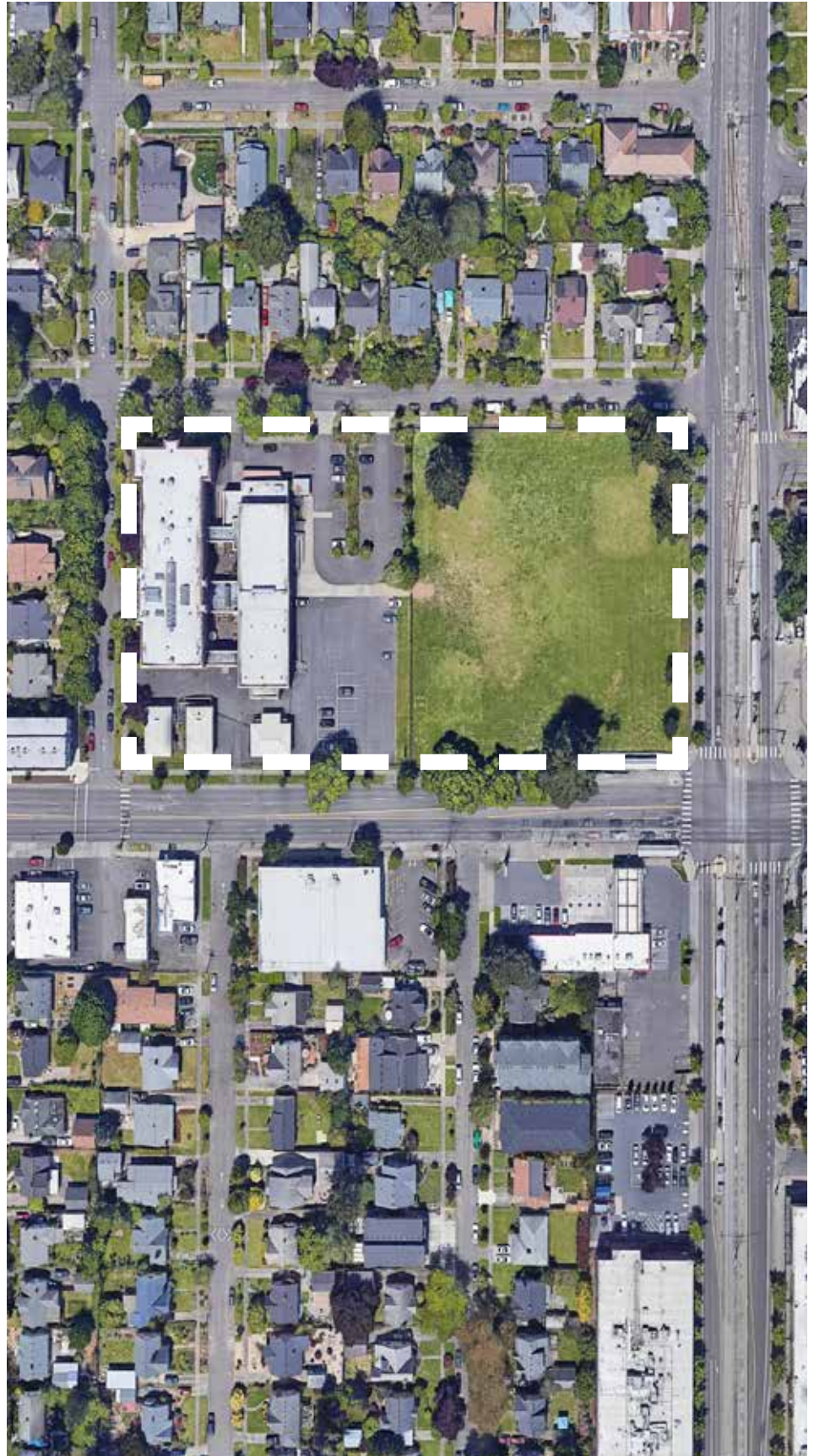




FIGURE 01 HARRIET TUBMAN CATCHMENT



FIGURE 02 KELLOGG MS FOOTPRINT ON KENTON SITE

RACIAL EQUITY AND SOCIAL JUSTICE

»

COMMUNITY CONSIDERATIONS

- » Additional community input will be received in March and April.

LOCATION

- » Kenton is located 1.6 miles north of the Harriet Tubman catchment area.

SITE SUITABILITY

- » At four acres, supporting middle school programming at Kenton would be challenging, especially for athletics.
- » The site is flanked to the south and east by high-traffic streets: N. Lombard and N. Interstate.
- » Zoning: The Kenton site is zoned RM2 - Residential Multi-Dwelling. Schools are not allowed by right on this site. A conditional use review would be necessary. Land area surrounding the site supports

a patchwork of uses, from residential to the north and south, and commercial to the east and west.

- » Figure 02 overlays Kellogg Middle School on the Kenton site. The solid orange shape is the Kellogg site and the lighter orange outline is the building. While not a true test-fit, the overlay illustrates the approximate suitability for the site to support a three-story middle school.

DEVELOPMENT AVAILABILITY (TIME)

- » The Alliance program currently uses the building. Once Alliance relocates to the Benson campus in 2024, Kenton will be available.

OPERATIONAL SUSTAINABILITY

- » Locating Harriet Tubman middle school on the Kenton site would realize some operational savings by utilizing an underutilized district asset. Kenton is undersized and would require additional square footage to house a middle school. The overall Facility Condition Index (FCI) - the ratio of a building's maintenance costs relative to the cost of replacing the building at current construction costs - is .28 (or colloquially "poor"), suggesting renovation with a new addition is the likely

construction option.

COST CONSIDERATIONS

- » Because the District already owns the property, there are some savings to be realized as opposed to having to purchase land. (- \$)
- » The existing building is in fairly good condition with exceptions like the mechanical, electrical, and plumbing systems. It has the potential to be well-suited to renovating and adding new on to the existing building. (- \$)
- » Alternative athletic venue(s) would need to be located and potentially leased due to the relatively small land area. (+ \$)
- » We believe this property to be in the low to middle of the cost range provided.

FURTHER CONSIDERATIONS

- » Kenton is twenty thousand square feet smaller than the existing Harriet Tubman building. Significant capital investment would be necessary to align the building with middle school space requirements.

REQUIRED NEXT STEPS

- » If considered viable by the Board, district staff will begin master planning efforts.

LLOYD CENTER

ADDRESS

2201 NE LLOYD CENTER

CURRENT OWNER

LLOYD CENTER LLC

SITE AREA

24.25 ACRES

ZONING

CX - CENTRAL COMMERCIAL

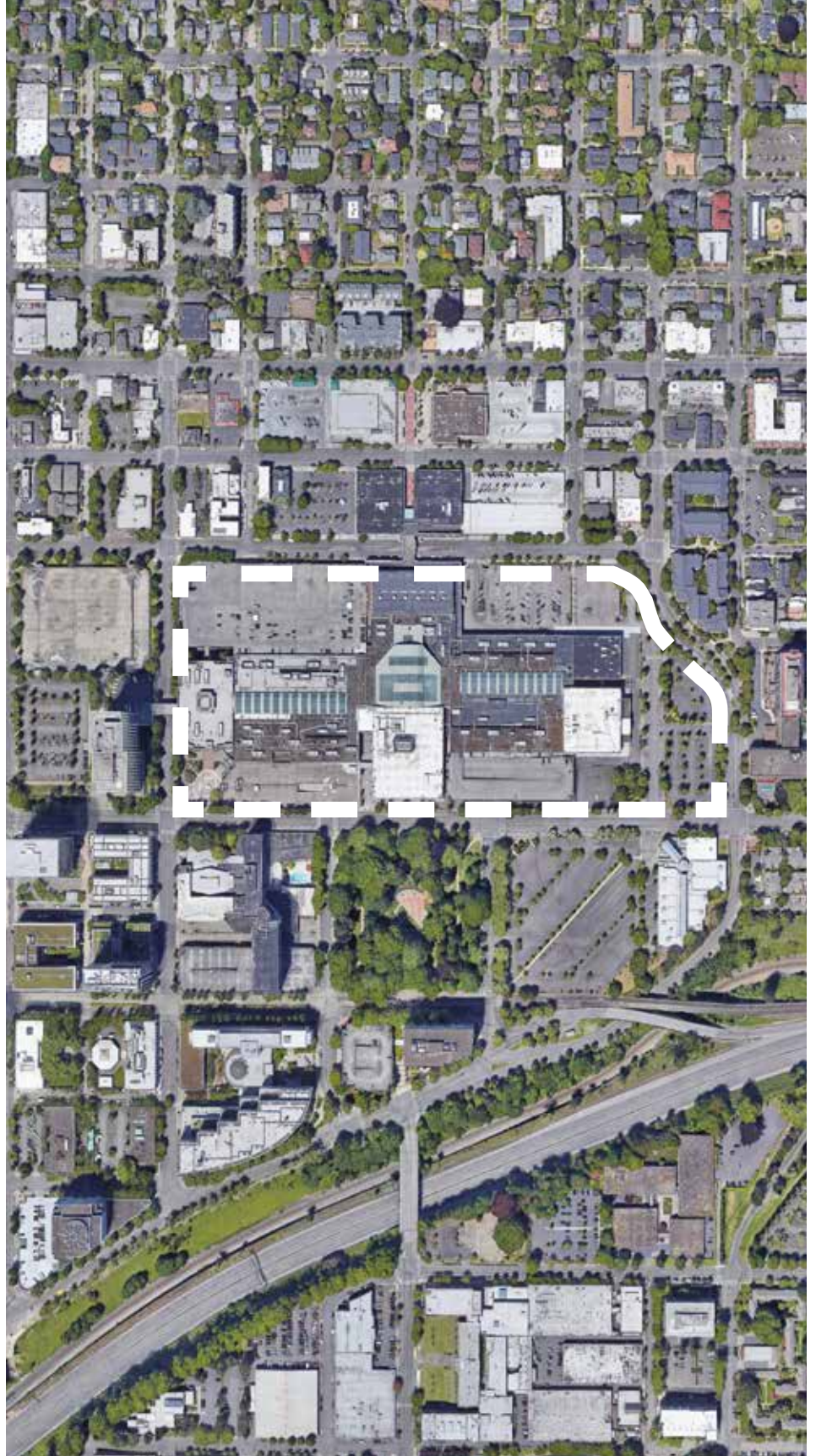




FIGURE 01 HARRIET TUBMAN CATCHMENT



FIGURE 02 KELLOGG MS FOOTPRINT ON LLOYD SITE

RACIAL EQUITY AND SOCIAL JUSTICE

»

COMMUNITY CONSIDERATIONS

- » Additional community input will be received in March and April.

LOCATION

- » The Lloyd Center sits two blocks south of the existing Harriet Tubman catchment boundary.

SITE SUITABILITY

- » Lloyd Center is approximately 20 acres. All or part of the Lloyd Center parcel would be sufficient to support middle school programming.
- » The site is embedded within a predominantly commercial zone, reflecting the heritage of the shopping center. The pedestrian network surrounding the site is typical for Portland’s urban core. The area to the south is severed by I-84. To the north, NE Weidler and SE Broadway offer

access to commercial activity but also interrupt access to the Irvington neighborhood.

- » Zoning: the Lloyd Center site is zoned Central Commercial (CX); schools are allowed outright on the site. No conditional use process would be necessary.
- » Figure 02 overlays Kellogg Middle School on the Lloyd Center site. The solid orange shape is the Kellogg site and the lighter orange outline is the building. While not a true test-fit, the overlay illustrates the approximate suitability for the site to support a three-story middle school.

DEVELOPMENT AVAILABILITY (TIME)

- » Lloyd Center is currently under new management and long term master planning has begun. The desire on the part of the owners is to maintain office and retail at this location.

OPERATIONAL SUSTAINABILITY

- » Locating HTMS at Lloyd Center would bring a new asset into the District’s portfolio and require either new construction and/or major renovation.

COST CONSIDERATIONS

- » The District would need to purchase/lease a portion or all of the property. The site is considered desirable commercial real estate with highest and best uses of dense commercial development. The cost to purchase this property likely exceeds the high end of the initial cost estimate range. (+ \$)
- » The existing site is very large at 20 acres and is composed of a shopping mall, acres of asphalt parking, and parking structures. Significant demolition and site preparation will need to occur to prepare the site for renovation/construction of a new middle school. (+ \$)
- » Portion(s) of the existing building and building systems could potentially be salvaged and incorporated into the new middle school which could result in some savings. (- \$)
- » We believe this property to be on the high end of the cost range provided.

FURTHER CONSIDERATIONS

- » Utilizing part of the Lloyd site for Harriet Tubman middle school would require complex property negotiations likely to take months or years. With a twenty year redevelopment plan, HTMS would be located in a significant construction area for many years. The site has very good public transportation however, it is not in a residential area and safety would be a concern. Initial conversations with developers indicate the land cost at approx \$10M/AC

REQUIRED NEXT STEPS

- » If considered viable by the Board, district staff will begin a dialogue with the owners regarding the site.

MEEK PROF TECH SCHOOL

ADDRESS

4039 NE ALBERTA CT

CONSTRUCTION DATE

1953 (PRIMARY)

LEVELS

1

BLDG AREA

35,945 SF

SITE AREA

5.38 ACRES

CLASSROOMS COUNT

16

CAPACITY

441 STUDENTS

ZONING

R5 RESIDENTIAL 5,000 CU





FIGURE 01 HARRIET TUBMAN CATCHMENT



FIGURE 02 KELLOGG MS FOOTPRINT ON MEEK SITE

RACIAL EQUITY AND SOCIAL JUSTICE

»

COMMUNITY CONSIDERATIONS

» Additional community input will be received in March and April.

LOCATION

» Meek is located less than a mile from the eastern edge of the existing Harriet Tubman catchment area.

SITE SUITABILITY

- » With over five acres, Meek could support middle school programming with careful site design and early consideration of athletics space requirements.
- » The site is embedded within a predominantly single-dwelling zone, with a commercial core one block to the east. The pedestrian network surrounding the site reflects its residential

character. Meek is well-connected to the surrounding neighborhood by existing sidewalks and low-traffic streets.

- » Zoning: the Meek site is zoned R5 Residential 5,000 CU. Single-family zones have development restrictions - including building size maximums, lot coverage maximums, building setbacks and overall height limits, to name a few - that restrict the size and shape of buildings in the zone. Schools are not allowed by right on this site. A conditional use review would be necessary.
- » Figure 02 overlays Kellogg Middle School on the Meek site. The solid orange shape is the Kellogg site and the lighter orange outline is the building. While not a true test-fit, the overlay illustrates the approximate suitability for the site to support a three-story middle school.

DEVELOPMENT AVAILABILITY (TIME)

» The Alliance program currently uses the building. Once Alliance relocates to the Benson campus in August 2024, Meek will be available.

OPERATIONAL SUSTAINABILITY

- » Locating Harriet Tubman middle school on the Meek campus would realize some operational savings by utilizing an underutilized district asset. Meek is undersized and would require additional square footage to house a middle school. The overall Facility Condition Index (FCI) - the ratio of a building's maintenance costs relative to the cost of replacing the building at current construction costs - is .09 (which is considered "fair" condition), suggesting renovation with a new addition is the likely construction option

COST CONSIDERATIONS

- » Because the District already owns the property, there are some anticipated savings to be realized as opposed to having to purchase land. (- \$)
- » Alternative athletic venue(s) would need to be located and potentially leased due to the relatively small land area. (+ \$)
- » We believe this property to be in the middle of the cost range provided.

FURTHER CONSIDERATIONS

- » The existing Meek building is roughly one-third the size required for a middle school. Construction of a significant addition would be required prior to relocating Harriet Tubman students to the site.

REQUIRED NEXT STEPS

- » If considered viable by the Board, district staff will begin master planning on the Meek site.

1380 NE MULTNOMAH

ADDRESS

1380 NE MULTNOMAH ST

CURRENT OWNERS

MULTIPLE

SITE AREA

6.51 ACRES

ZONING

CX - CENTRAL COMMERCIAL

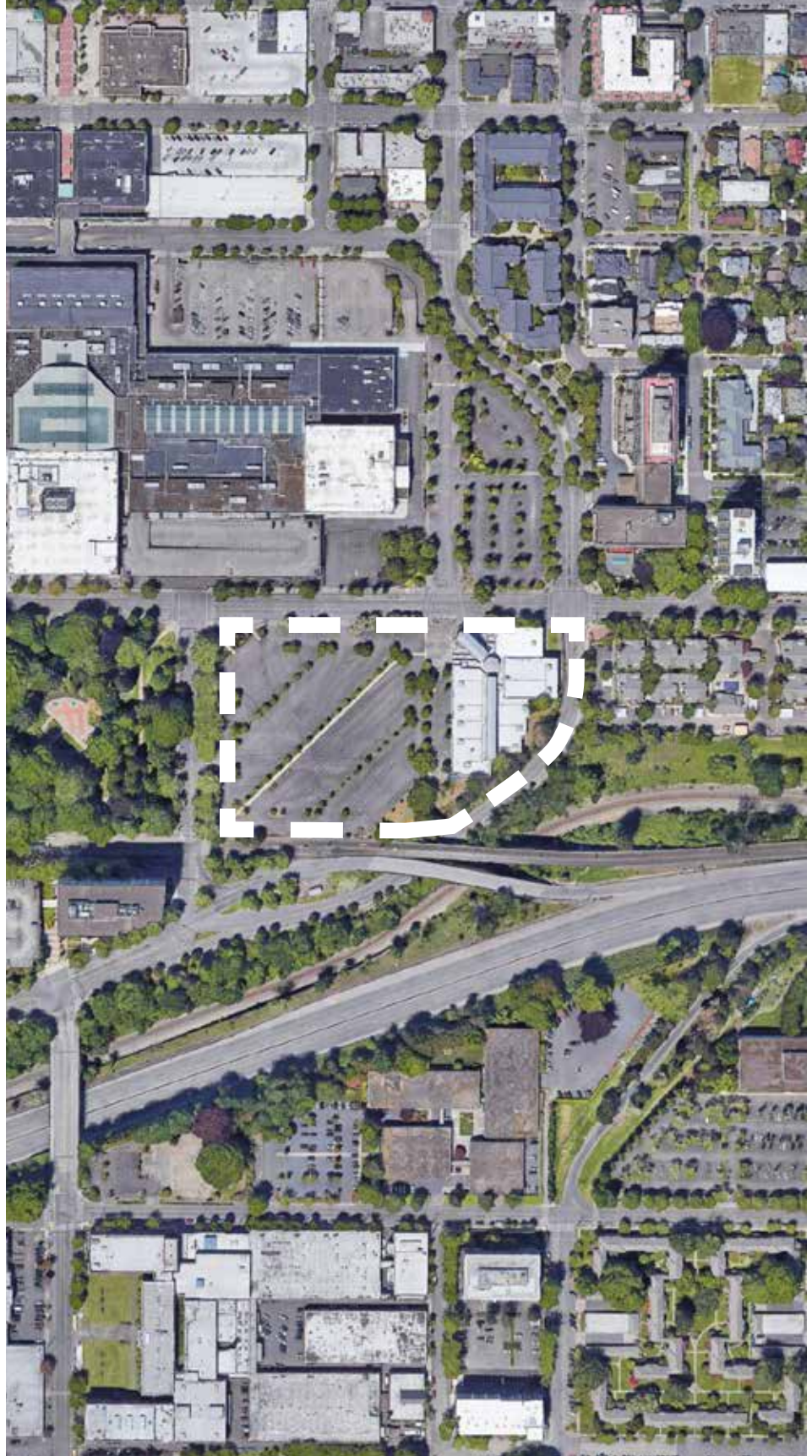




FIGURE 01 HARRIET TUBMAN CATCHMENT



FIGURE 02 KELLOGG MS FOOTPRINT ON 1380 NE MULTNOMAH SITE

RACIAL EQUITY AND SOCIAL JUSTICE

»

COMMUNITY CONSIDERATIONS

- » Additional community input will be received in March and April.

LOCATION

- » The NE Multnomah sits three blocks south of the existing Harriet Tubman catchment boundary.

SITE SUITABILITY

- » By combining two adjacent parcels, the site would be 6.51 acres which is sufficient to support middle school programming. Individually, each parcel is unsized to support a middle school.
- » The site is embedded within a predominantly commercial zone, reflecting the heritage of the shopping center.
- » The pedestrian network surrounding the site is typical for Portland’s urban core. The area to the

south is severed by I-84. To the north, NE Weidler and SE Broadway offer access to commercial activity but also interrupt access to the Irvington neighborhood.

- » Zoning: the NE Multnomah site is zoned Central Commercial (CX); schools are allowed outright on the site. No conditional use process would be necessary.
- » Figure 02 overlays Kellogg Middle School on the NE Multnomah site. The solid orange shape is the Kellogg site and the lighter orange outline is the building. While not a true test-fit, the overlay illustrates the approximate suitability for the site to support a three-story middle school.

DEVELOPMENT AVAILABILITY (TIME)

- » This study assumes two parcels would be purchased and consolidated. The western parcel is currently for sale and the developers of Lloyd Center have indicated they would be open to divesting of the adjacent movie theater parcel however, the location is zoned for high density and a number of development restrictions and agreements with Lloyd Center would need to be negotiated.

OPERATIONAL SUSTAINABILITY

- » Locating HTMS at NE Multnomah would bring a new asset into the District's portfolio and require a new middle school be constructed.

COST CONSIDERATIONS

- » 1. The District would need to purchase multiple parcels of land. The site is considered desirable commercial real estate with highest and best uses of dense commercial development. The cost to purchase this property likely exceeds the high end of the initial cost estimate range. (+ \$)
- » 2. The existing sites are a mix of asphalt parking lots, and the existing Regal Lloyd Theater bldg. Complex. Connecting the different areas to make a cohesive middle school campus seems to be a particular challenge and carries with it some cost risk. (+ \$)
- » We believe this property to be higher on the cost range provided.

FURTHER CONSIDERATIONS

- » The parcel currently for sale (the western site) is 4.5 acres. Supporting a middle school on this land area would be challenging and could likely happen only at the expense of athletics programming. The initial cost being discussed by developers for this site is \$40M.

REQUIRED NEXT STEPS

- » If considered viable by the Board, district staff will begin a dialogue with the owners regarding the site.

WHITAKER-ADAMS

ADDRESS

5700 NE CESAR E CHAVEZ BLVD

SITE AREA

10.05 ACRES

ZONING

CM2 COMMERCIAL MIXED USE 2
R5 RESIDENTIAL 5,000 CU





FIGURE 01 HARRIET TUBMAN CATCHMENT



FIGURE 02 KELLOGG MS FOOTPRINT ON WHITAKER-ADAMS SITE

RACIAL EQUITY AND SOCIAL JUSTICE

»

COMMUNITY CONSIDERATIONS

- » Additional community input will be received in March and April.

LOCATION

- » Whitaker-Adams is outside the Harriet Tubman catchment area to the east.

SITE SUITABILITY

- » With over 10 acres of land, Whitaker-Adams contains sufficient land area to support a middle school program. The site is bound to the south and east by high-traffic streets; the north and west edges of the site are contiguous with Fernhill Park and the Concordia neighborhood respectively.
- » Zoning: the bulk of the Whitaker-Adams site is zoned Residential 5,000 CU (R5). The eastern edge of the site that fronts NE 42nd Ave is zoned

Commercial Mixed Use2 (CM2). Schools are allowed outright in zone CM2. However, they are not allowed outright in R5. A conditional use review would be necessary.

- » Figure 02 overlays Kellogg Middle School on the Whitaker-Adams site. The solid orange shape is the Kellogg site and the lighter orange outline is the building. While not a true test-fit, the overlay illustrates the approximate suitability for the site to support a three-story middle school.

DEVELOPMENT AVAILABILITY (TIME)

- » The district owns Whitaker-Adams and is immediately available for redevelopment.

OPERATIONAL SUSTAINABILITY

- » Locating HTMS at the Whitaker-Adams site would require new construction of a school on vacant District property.

COST CONSIDERATIONS

- » Because the District already owns the property,

there are some savings to be realized as opposed to having to purchase land. (- \$)

- » The site has already been cleared of buildings and is basically an open field ready for construction. (- \$)
- » We believe this property to be in the low to middle of the cost range provided.

FURTHER CONSIDERATIONS

- » The district's Long-Range Facility Plan identifies Whitaker-Adams as one of three athletics hubs across the district. Together the three hubs support middle and high school athletics in regionally distinct, programmatically specific ways.
- » Additional consideration should be given to the proximity of this location to Ockley Green MS which is located in between the current Harriet Tubman site and Whitaker-Adams

REQUIRED NEXT STEPS

- » If considered viable by the Board, district staff will begin master planning efforts.

APPENDIX A

The following locations have been removed from consideration as they do not meet the basic criteria for a new building location

ALBERTA PARK

ADDRESS

1905 NE KILLINGSWORTH ST

CURRENT OWNER

CITY OF PORTLAND

SITE AREA

16.70 ACRES

ZONING

OS - OPEN SPACE





HARRIET TUBMAN CATCHMENT

LOCATION

- » Alberta Park is outside the existing Harriet Tubman catchment area. It sits northeast of the catchment boundary by approximately a mile.

SITE SUITABILITY

- » With more than sixteen acres, Alberta Park contains more than sufficient land area to support a middle school. The park is directly north of Vernon K-8 and is flanked by residential neighborhoods to the east and west and commercial strips to the north and south.
- » The park is currently owned by the City of Portland, if negotiations proceed, athletic resources shared by the City and the district should be considered.
- » The site is not considered viable as the District does not support displacement of amenities supporting the historically Black neighborhoods nor does the site have sufficient land for a school.

DEVELOPMENT AVAILABILITY (TIME)

- » Alberta Park is currently owned by the City of Portland. It is not available for purchase or development. It is documented here for discussion purposes only.

CONCORDIA

ADDRESS

2811 NE HOLMAN ST

CURRENT OWNER

CONCORDIA UNIVERSITY

SITE AREA

18.88 ACRES

ZONING

CI1 - CAMPUS INSTITUTIONAL 1





HARRIET TUBMAN CATCHMENT

LOCATION

- » Concordia is outside the Harriet Tubman catchment area. The site is nearly two miles northeast of the Harriet Tubman catchment boundary.

SITE SUITABILITY

- » At almost nineteen acres, Concordia contains more than sufficient land area to support a middle school program.
- » The site does not meet criteria as it lacks transit, is fully built out, far larger than needed, would require zone change and comp plan amendment rendering the development availability impossible.

DEVELOPMENT AVAILABILITY (TIME)

- » This parcel is not available for purchase. It is documented here for discussion purposes only.

DAWSON PARK

ADDRESS
1 N STANTON

CURRENT OWNER
CITY OF PORTLAND

SITE AREA
2.05 ACRES

ZONING
OS - OPEN SPACE





HARRIET TUBMAN CATCHMENT

LOCATION

- » Dawson Park is located several blocks north of the existing Harriet Tubman Middle School building.

of amenities supporting the historically Black neighborhood.

SITE SUITABILITY

- » At two acres, Dawson Park has insufficient land area to support middle school programming.
- » The site is flanked to the east and west by two high-traffic streets: N Vancouver Ave and N Williams Ave. On the other side of N. Vancouver to the west, is the Legacy Medical Center; to the east is a patchwork of commercial and residential zones.
- » All pedestrian access is challenged by the two neighborhood collectors, N Vancouver Ave and N Williams Ave, on either side of the site. Connection to the neighborhood to the east is limited for this reason.
- » The existing Harriet Tubman middle school site is the smallest (in terms of land area) in the district with only three acres and benefits from its adjacency to Lillis Albina Park. No such adjacency exists at Dawson Park.
- » The site lacks sufficient acreage for development and the District does not support displacement

DEVELOPMENT AVAILABILITY (TIME)

- » Dawson Park is currently owned by the City of Portland. It is not available for purchase or development. It is documented here for discussion purposes only.

EMANUEL

ADDRESS
122 N GRAHAM ST

CURRENT OWNER
LEGACY HEALTH SYSTEM

SITE AREA
4.43 ACRES

ZONING
CM3 - COMMERCIAL MIXED USE 2





HARRIET TUBMAN CATCHMENT

LOCATION

- » The Emanuel site is located several blocks north of the existing Harriet Tubman Middle School building.

SITE SUITABILITY

- » At four acres, supporting middle school programming at Emanuel would be challenging, especially for athletics.
- » Site variables and east-west bounding streets complicate athletics space requirements. The site is generally too narrow for a multi-use field with sufficient safety buffer on either side of the field. The site is flanked to the east and west by two high-traffic streets: N Vancouver Ave and N Williams Ave. On the other side of N. Vancouver to the west, is the Legacy Medical Center; to the east is a patchwork of commercial and residential zones.
- » All pedestrian access is challenged by the two neighborhood collectors, N Vancouver Ave and N Williams Ave, on either side of the site.

DEVELOPMENT AVAILABILITY (TIME)

- » This parcel has been donated and is not available. It is documented here for discussion purposes only.

IRVING PARK

ADDRESS

7TH & NE FREMONT ST

CURRENT OWNER

CITY OF PORTLAND

SITE AREA

16 ACRES

ZONING

OS - OPEN SPACE





HARRIET TUBMAN CATCHMENT

LOCATION

- » Irving Park is located near the center of the Harriet Tubman catchment area where the boundaries for Boise-Eliot, MLK Jr, and Irvington elementary schools meet.

DEVELOPMENT AVAILABILITY (TIME)

- » Irving Park is currently owned by the City of Portland. It is not available for purchase or development. It is documented here for discussion purposes only.

LAND AREA

- » With more than sixteen acres, Irving Park contains more than sufficient land area to support a middle school.
- » The park is contiguous on two sides by residential zones. The west and north sides of the park are bound by two streets — NE 7th Ave to the west and NE Fremont to the north. NE Fremont is classified as Neighborhood Collector by the Portland Bureau of Transportation.
- » The park is currently owned by the City of Portland, if negotiations proceed, athletic resources shared by the City and the district should be considered.
- » The site is not considered viable as the District does not support the reduction or elimination of community amenities in historically Black neighborhoods.

JEFFERSON HIGH SCHOOL

ADDRESS

5210 N KERBY AVE

CONSTRUCTION DATE

1909 (PRIMARY)

CURRENT OWNER

PORTLAND PUBLIC SCHOOLS

LEVELS

4

BLDG AREA

318,790 SF

SITE AREA

14.02 ACRES

CLASSROOMS COUNT

74

FUNCTIONAL CAPACITY

1,817 STUDENTS

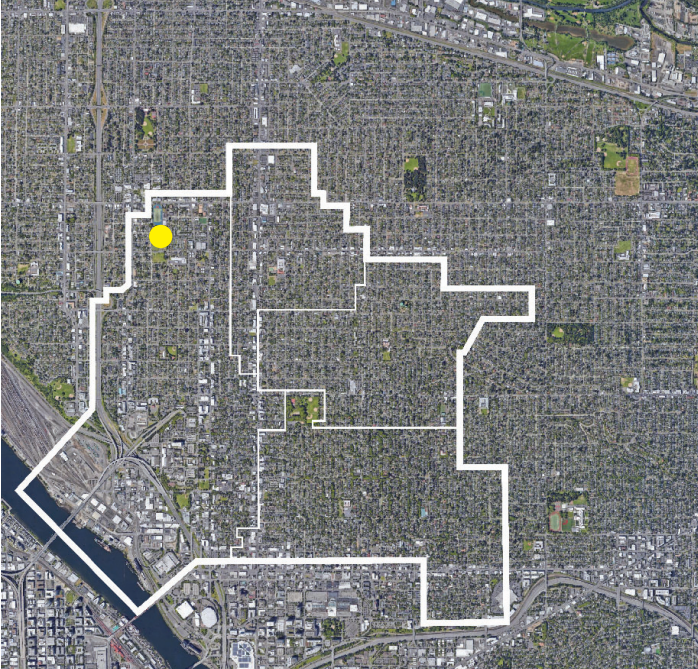
2021-22 ENROLLMENT

588

ZONING

IR INSTITUTIONAL RESIDENTIAL LCU





HARRIET TUBMAN CATCHMENT

LOCATION

- » Jefferson High School is located in the northwest quadrant of the Harriet Tubman catchment area.

SITE SUITABILITY

- » With fourteen acres, Jefferson has near the median land area across district high schools, albeit without an adjacent park to support athletics programming. The long narrow shape of the property (bifurcated by a public street) creates many challenges to site amenities including athletic fields. Adding a middle school to the site would introduce scheduling challenges for amenities shared between the high and middle school, and could limit availability of on site athletics programming.
- » The portion of Jefferson’s site to the south of NE Alberta is approximately two acres. This is insufficient land area to support middle school programming. Additionally this parcel will be utilized as swing space to temporarily house Jefferson students during construction and will be unavailable for development from, approximately, 2024 to 2027 unless there are other swing space options available.

- » The site consists of three parcels. The largest section, bound by NE Killingsworth on the north and NE Alberta on the south, contains the existing high school. A small parcel to the west is used for parking and a parcel to the south of Alberta is vacant. The vacant parcel is just over two acres.
- » Jefferson is flanked to the east, west, and south by single and multi-residential dwellings. The area to the north is zoned to support commercial use. Portland Community College is located to the north of Jefferson and is an important programmatic partner to the school.

DEVELOPMENT AVAILABILITY (TIME)

- » Master planning for the Jefferson modernization is commencing shortly. The addition of a middle school would require a reset of the work completed to date. Schedule impacts to both Jefferson and Harriet Tubman would be inevitable. A conversation with the community about tradeoffs would need to occur.

N. STANTON

ADDRESS
625 N STANTON ST

CURRENT OWNER
CITY OF PORTLAND

SITE AREA
5.27 ACRES

ZONING
IG1 - GENERAL INDUSTRIAL 1





HARRIET TUBMAN CATCHMENT

LOCATION

- » N. Stanton is located within the Harriet Tubman catchment area immediately east of Legacy Medical Center.

- » The district has not started a dialogue with the City around relocating Harriet Tubman Middle School at this site.
- » At this time it is unknown whether the City would consider sale or shared use of the site.

SITE SUITABILITY

- » While the parcel is over five acres, the parcel geometry would challenge successful athletics programming on the site.
- » The site sits within a patchwork of commercial and industrial areas with no meaningful access to the residential areas. To the west, the site is bracketed by I-5 and I-405; to the east, the medical center interrupts any potential pedestrian access to the Eliot neighborhood.
- » The site is not considered viable. Since it is adjacent to both I-5 and I-405, the risk of repeating the environmental harm at the existing Harriet Tubman site is high.

DEVELOPMENT AVAILABILITY (TIME)

- » N Stanton is currently owned by the City of Portland.

432 NE KILLINGSWORTH ST

ADDRESS

432 NE KILLINGSWORTH ST

CURRENT OWNERS

CITY OF PORTLAND & BOYS AND GIRLS CLUB

SITE AREA

4.26 ACRES

ZONING

CM3 - COMMERCIAL MIXED USE 3

CM2 - COMMERCIAL MIXED USE 2





HARRIET TUBMAN CATCHMENT

LOCATION

- » Located at the corner of NE Killingsworth and NE MLK Jr, this site is located in the north-central area of the Harriet Tubman catchment area.

SITE SUITABILITY

- » At less than five acres, supporting middle school programming at the corner of NE MLK Jr Blvd and NE Killingsworth st would be challenging, especially athletics. The parcel sits immediately to the east of a major city traffic street: NE MLK Jr and another high-traffic street to the north — NE Killingsworth St. These two streets limit safe access to the Humboldt neighborhood to the west. To the east, the immediate vicinity is predominately commercial with few direct connections to the Vernon neighborhood.
- » The site is flanked on the north and west by high-traffic streets which further complicating safe athletics programming on this site.
- » The site is not considered viable as it would displace historically Black businesses, have significant safety issues given the surrounding streets and would limit access and be a long and uncertain path to property acquisition.

DEVELOPMENT AVAILABILITY (TIME)

- » For the purposes of this study, two parcels were combined. Negotiations would need to be successful with both owners.
- » The district has not started a dialogue with either owner around relocating Harriet Tubman Middle School to the sites.
- » At this time it is unknown whether the current owners would consider sale or shared use of the site.

PBOT

ADDRESS

3150 N MISSISSIPPI AVE

CURRENT OWNER

CITY OF PORTLAND

SITE AREA

5.51 ACRES

ZONING

IG1 - GENERAL INDUSTRIAL 1





HARRIET TUBMAN CATCHMENT

LOCATION

- » PBOT is located within the Harriet Tubman catchment area Northeast of where Fremont Bridge and the I-5 meet.

of relocating important City services.

DEVELOPMENT AVAILABILITY (TIME)

- » PBOT is currently owned by the City of Portland.

SITE SUITABILITY

- » With over five acres, PBOT could support middle school programming with careful site design and early consideration of athletics space requirements.
- » The site currently serves various functions for the Portland Bureau of Transportation (hence the moniker, "PBOT"). The parcel sits immediately north of the I-5 and I-405 exchange. Access to areas south of the site is impossible because of the freeways. To the north, the site is bound by a commercial zone and, to the northeast, a residential area, and Boise-Eliot Elementary School.
- » Pedestrian access to and throughout the site is poor. Sidewalks are limited. Connections to the neighborhood to the northeast are indirect and circuitous.
- » This site is not considered viable due to its proximity to two freeways, the lack of neighborhood connections and the complication

THUNDERBIRD WAY

ADDRESS

4013 NE 18TH AVE

CURRENT OWNERS

PORTLAND TRAIL BLAZERS & STATE OF OREGON

SITE AREA

3.71 ACRES

ZONING

CX - CENTRAL COMMERCIAL





HARRIET TUBMAN CATCHMENT

LOCATION

- » The Thunderbird Way site is outside the Harriet Tubman catchment area, south of the Broadway bridge and near BESC and the Moda Center.

- » The district has not started a dialogue with the owners around relocating Harriet Tubman Middle School at this site.
- » At this time it is unknown whether the current owners would consider sale or shared use of the site.

SITE SUITABILITY

- » At less than four acres, Thunderbird Way does not contain sufficient land area to support middle school programming, especially athletics.
- » The site geometry would also challenge any development; it is too narrow for most school functions.
- » The site is bound by a set of train tracks, the Willamette River, and N. Interstate Ave. The surrounding context is predominantly commercial, connections into and out of the site are poor, and the pedestrian network is fragmented.
- » This location is not considered viable due to size, location and air quality concerns.

DEVELOPMENT AVAILABILITY (TIME)

- » The site is privately owned.

APPENDIX B

SUPPORTING DOCUMENTS

- » PPS Letter to Oregon Transportation Commission
- » Oregon Transportation Commission Letter to PPS
- » Environmental Safety & Health Considerations
- » Indoor and Outdoor Air Quality Health Risk Assessment
- » PPS Resolution 5856 - March 19, 2019
- » PPS Resolution 6008 - December 3, 2019
- » PPS Resolution 6354 - July 27, 2021



PORTLAND PUBLIC SCHOOLS

501 North Dixon Street / Portland, OR 97227

Telephone: (503) 916-2000

Mailing Address: P. O. Box 3107 / 97208-3107

June 6, 2019

Tammy Baney, Chair
Alando Simpson
Oregon Transportation Commission
355 Capitol Street NE
Salem, OR 97301-3871

Dear Chair Baney and Commissioner Simpson,

On behalf of Portland Public Schools (“PPS”), please submit this correspondence into the public record of the I-5 Rose Quarter project file in response to your letter of May 31, 2019. In the May 31st letter you provide an update on your efforts to convene an executive advisory committee to offer “advice only” on important project changes to, and related impacts from, the I-5 Rose Quarter project that are intended to respond to stakeholder comments. Attached to your May 31, 2019 letter is a copy of your April 29, 2019 Key Outcomes summary based on the “I-5 Rose Quarter Project Conversation.”

In the Key Outcomes document, you plainly agree, “ODOT needs to conduct further analysis on the Rose Quarter project. In particular, more needs to be known about the implications to Harriet Tubman Middle School and more conversations about highway covers, their alignment and structural capacity, all informed by additional engineering expertise, need to occur.” (Emphasis added). The May 31st letter repeats this admission that further study and analysis is needed to understand the real and significant impacts on Harriet Tubman Middle School.

While we appreciate outreach efforts to impacted parties, this outreach and future analysis has come too late in the process and does not alter our legal assessment that the project requires a full Environmental Impact Statement (“EIS”).

As we previously stated during the public comment period, although the proposed project is immediately adjacent to PPS properties, in particular the Harriet Tubman Middle School, neither ODOT nor the City meaningfully engaged with PPS during the planning process to assess the potential impacts, either short-term or long-term, on the health of students and staff from environmental hazards or on the structural integrity of PPS facilities from incursions on PPS property during construction.

We have raised substantial questions about potential impacts on PPS properties, including risks to soil stability under the Harriet Tubman Middle School site during the construction process, increased air pollution, increased noise pollution, and shifts to traffic patterns in the vicinity of both Tubman and District headquarters.

{00900400;1}

Harriet Tubman Middle School recently invested in a state-of-the-art air quality system to protect students in that school from substandard air quality based on adjacency to the existing highway corridor. The PPS investment of over \$17 million cannot protect these students from the already poor outdoor air quality, and this project will further challenge that outdoor air quality in closer proximity to the school.

The May 31st letter and accompanying Key Outcomes document now seem to recognize the nature and significance of these impacts. This impact analysis is not the proper subject matter for an after-the fact, advisory-only committee. Instead, this is the kind of analysis that ODOT has a duty to evaluate in the initial project assessment to determine whether an EIS is justified. ODOT's refusal to adequately address these significant environmental issues and unique populations in the environmental assessment process was in error, and to now ask us to engage in that analysis outside of the EA/EIS process is not acceptable.

Due to the potential significant negative short-term and long-term impacts of the proposed project to PPS property, students, staff, and stakeholders, Portland Public Schools believes that neither ODOT nor the FHWA can legitimately issue a Finding of No Significant Impact (FONSI). As ODOT now seems to agree, additional study and analysis is necessary to understand the full extent of the impacts on PPS property and whether based on those impacts, our PPS property remains a viable and environmentally safe location for our staff, teachers and students.

We appreciated the invitation to meet with you and other stakeholders of ODOT's I-5/Rose Quarter transportation construction project on April 29th. However, we object to ODOT's plans to proceed with the request for proposal (RFP) contracting process associated with this project. Until our request for further environmental analysis and assessment and the concerns expressed on behalf of the Harriet Tubman Middle School and lower Albina community have been addressed, we cannot support this project moving forward.

Therefore, PPS will continue to advocate that the project be subject to an EIS so that we fully understand the short and long-term scope and impacts to this community's health, safety and well-being.

Sincerely,

Scott Bailey
Board of Education, Portland Public Schools

Julia Brim-Edwards
Board of Education, Portland Public Schools

Stephanie Soden
Chief of Staff, Portland Public Schools



Oregon

Kate Brown, Governor

Oregon Transportation Commission

Office of the Director, MS 11

355 Capitol St NE

Salem, OR 97301-3871

July 10, 2019

Portland Public School Board of Education
501 N. Dixon Street
Portland, OR 97227

Dear Ms. Soden:

This is a follow up response to your June 6th letter and the July 3rd response from the Oregon Transportation Commission (OTC) Chair Baney and Commissioner Simpson.

We understand that Portland Public Schools (PPS) is asking for additional analysis of the I-5 Rose Quarter Improvement Project (Project), or at a minimum a better understanding of the analysis that has already been conducted, as it relates to the short- and long-term health of Harriet Tubman Middle School students and staff from environmental hazards such as air pollution and noise and the structural integrity of the PPS facilities. Ensuring the safety of students and staff is a core value that we share, and one that is guiding our approach to this Project. We remain committed to continued collaboration between our agencies to ensure the Project affords positive outcomes for the community and future generations. We have many more opportunities to engage in the future and are committed to working with you and your staff at the school as we move forward.

As we presented to the Portland Public School Board on March 19, 2019, the Project's Environmental Assessment (EA) is based on preliminary design and the physical footprint for the design concept. The preliminary project design evaluated in the EA reflects the recommended design concept from the ODOT and City of Portland 2012 I-5 Broadway Weidler Facility Plan and N/NE Quadrant Plan. The EA follows federal practices for evaluating project effects, including an understanding the impacts at the Harriet Tubman Middle School site.

As project design progresses, we will better understand the specific effects to areas surrounding the project to appropriately plan, design, or mitigate for them. We will also pay special attention to the concerns you have shared with us – environmental, health, and structural integrity – to ensure the mitigation measures described in the EA to reduce potential impacts are carried forward through design and construction. This work will be done in close coordination with interested stakeholders, including PPS.

We too want to ensure students, staff and the surrounding community have safe air to breathe. To best understand air pollutant and GHG emissions, the EA used the most current modeling approaches and traffic data from the regionally-adopted Metro Regional Transportation Plan. The analysis found that, when the project moves forward, future pollutant and GHG emissions will be slightly less when compared to projected levels without the project. The reduction in emissions will be due to improved traffic flow and less idling traffic on I-5 with the project.

We are committed to the reduction of noise pollution. The project, as evaluated in the EA, proposes the construction of a sound wall between I-5 and Harriet Tubman Middle School. The proposed sound wall would reduce the noise level below what it is today, improving the noise environment for students and staff. We will work with PPS during the proposed sound wall design.

The structural integrity of the school also is of utmost importance. The project includes a retaining wall between I-5 and Harriet Tubman Middle School to provide enhanced slope stability and retain the soils in proximity to the school. This is an area where specific PPS collaboration and input will be critical, including collaboration on the soils analysis, retaining wall design type and construction method. In the near term, we plan to perform geotechnical work and collect soil samples to better understand the soil conditions in the vicinity of the school, provide additional data to PPS regarding the slope stability, and inform the retaining wall and sound wall designs. This work will include targeted boring locations on ODOT and PPS property west of the school. Our team will be connecting with you to coordinate this work and request access to the proposed study area, with the intent of completing this work between mid-July and early August to avoid any overlap with the school year.

While we do expect short-term impacts from construction activities such as dust, construction noise levels and traffic delays, the EA identified mitigation strategies for reducing these impacts, such as scheduling construction activities proximate to the school during the summer months, implementing dust control measures and maintaining traffic control to provide accessible, safe and comfortable alternative travel routes for pedestrians and bicyclists, including in the vicinity of the school. Refining and coordinating these mitigation measures will again require significant collaboration between ODOT and PPS.

Moving forward, we are actively working with the Federal Highway Administration (FHWA) to review and respond to the public comments received during the 45-day public review period. These public comments, along with the technical analysis provided in the EA, will inform FHWA's National Environmental Policy Act (NEPA) decision document. We understand that additional coordination with PPS is needed as the Project moves forward and look forward to future conversations to produce positive outcomes for our community, students, staff, and the traveling public. Should you have any questions, please do not hesitate to contact me at megan.channell@odot.state.or.us or 503-731-3087.

Sincerely,



Megan Channell, AICP
Rose Quarter Project Director
ODOT, Region 1



September 3, 2021

Joe Crelier, ARM
Director of Risk Management
Portland Public Schools
501 N Dixon Street
Portland, Oregon 97227

Via email: jcrelier@pps.net

Regarding: Environmental Report – Freeway Widening Project
Harriet Tubman Middle School
2231 N Flint Avenue
Portland, Oregon 97227
PBS Project 25000.203

Dear Mr. Crelier:

PBS Engineering and Environmental Inc. (PBS) has prepared this letter summarizing various environmental safety and health considerations related to the widening of the Interstate 5 (I-5) freeway alongside Harriet Tubman Middle School (HTMS) located at 2231 N Flint Avenue in Portland, Oregon (site).

PROJECT UNDERSTANDING

PBS understands that Oregon Department of Transportation (ODOT) plans to widen the I-5 freeway alongside HTMS, which would include converting a portion of land along the western edge of the school to transportation land use. Current plans include construction of approximately 400 linear feet of new retaining wall along I-5, within approximately 20 feet of the school. Design of the wall is currently ongoing but will reportedly be a 5-foot-diameter secant or tangent pile wall with maximum exposed height of up to 20 feet. ODOT has submitted information related to the proposed design of the widening plan as well as projections relating to potential impacts to the environment surrounding the project.

BACKGROUND

HTMS was built in 1952, originally as Eliot Elementary School. It is situated in the Eliot neighborhood in the Albina area of Portland, just east of I-5. After World War II, Portland residents approved a measure to modernize and construct Portland Public School buildings to address the increase in families to the area as a result of wartime industry. During the war, and particularly after the 1948 Vanport flood, an influx of African Americans moved to Albina. In 1962, I-5 construction cut a wide swath through the Eliot neighborhood, demolishing homes and displacing many citizens, subsequently resulting in a population decrease in the area from the disconnection of the street grid and large increase in commuter cars going through the area.

This acquiring of properties in predominantly African American neighborhoods was all too common whether it be for construction of freeways or for commercial development. While the proposed widening of the freeway corridor does not represent seizing school property per se, it does appear to ignore the historical damage the freeway has caused this neighborhood and ignores the opportunity to make whole some of the damage that was caused.

With respect to future health and safety impacts to HTMS, the ODOT submittal focuses primarily on long-term projections relating to ambient air quality adjacent to the freeway corridor and freeway corridors in general. It is clear that over the last 20 years air quality adjacent to freeways has improved largely due to improvements in tailpipe emission standards and fuel formulations. This trend is compelling and will likely hold true in the long term. These projections, however, do not address likely short-term adverse impacts that could result from an increase in freeway capacity during morning and afternoon commutes when there would likely be more cars idling during periods of heavy traffic. The projections also do not account for possible regressions in both tailpipe emission standards and in fuel formulations. Nor do the progressions consider possible impacts related to climate change. When asked to clarify these specific concerns the ODOT response was incomplete.

One final glaring omission in the ODOT submittal is any recognition of the Environmental Protection Agency (EPA) document "School Siting Guidelines." This document unequivocally shows that freeways and schools do not mix. Freeways present a significant and measurable negative impact to the environment and the locating, or in this case the widening, of freeways in the vicinity of a school building will result in an environment that can harm students.

GEOTECHNICAL CONDITIONS AND POTENTIAL IMPACTS

The site is roughly rectangular except for the southwestern corner, which has been truncated by an adjacent slope along I-5. The slope is approximately 3H:1V (horizontal to vertical), with a maximum elevation of approximately 138 feet above mean sea level on the school property, sloping downward to a retaining wall with a maximum height of approximately 14 feet that supports the slope. The approximately 20-foot-wide area between the school and adjacent slope is paved. Our current understanding is that the school building is supported on pile foundations.

Based on information presented by ODOT during the coordination meeting with Portland Public Schools (PPS) on May 4, 2021,¹ the school rests on approximately 30 feet of fill overlying fine-grained Missoula flood deposits ranging in thickness from approximately 10 to 30 feet, all underlain by alluvial sand deposits.

Under contract with PPS, Rhino One Geotechnical installed three inclinometers and two vibrating wire piezometers at the site and presented the results in an instrumentation monitoring report dated August 2019.² Inclinometer measurements indicated no measurable lateral or vertical movements around the time of installation. The groundwater monitoring indicated an increase in groundwater level in September 2018, from a depth of 40 feet to 35 feet below the ground surface, followed by relatively consistent groundwater levels over the remainder of the monitoring period.

ODOT's preliminary analyses suggest supporting the I-5 freeway widening with a tangent pile wall consisting of one row of 5-foot-diameter drilled shafts. At the time this information was presented to PPS, no tiebacks were deemed necessary to stabilize the wall.

A tangent pile wall consists of a series of vertical, drilled shafts that touch the adjacent piles. The drilled shafts are constructed of concrete and typically reinforced with steel rebar. The shaft is drilled to the target depth, removing

¹ Oregon Department of Transportation (ODOT). (May 4, 2021). PPS Technical Coordination for I-5 Rose Quarter Improvement Project.

² Rhino One Geotechnical. (August 14, 2019). Instrumentation Monitoring Report: August 2019. Portland, Oregon. Prepared for Portland Public Schools. Rhino One Project PPS-2017-010.

soil cuttings in the process. The rebar is typically inserted into the open hole before it is filled with concrete. A secant pile wall is similar to a tangent pile wall, except that in a secant pile wall, piles overlap several inches. In addition, only every other pile may be reinforced with steel rebar.

Tangent pile walls are often used when limiting deformation of the wall is critical, such as when the wall is supporting a structure. In addition, the construction of tangent pile walls involves drilled shafts, as opposed to driven piles, and typically produce lower levels of vibration during construction, which could help limit disturbance or structural damage to the school. In our opinion, given the school is on deep foundations, small magnitudes of deformation of the wall would be less likely to result in structural damage.

Based on information presented by ODOT during the coordination meeting with PPS on May 4, 2021, the existing wall and slope between I-5 and the school is seismically unstable. The new wall system proposed by ODOT would meet the current standard for seismic loading, resulting in an increase in seismic stability of the adjacent slope. Improved seismic stability decreases the risk of failure of the slope during a seismic event, which in turn reduces the risk of structural damage to the school. PBS recommends that the seismic design consider the impact from a 2,500-year earthquake, consistent with the current Oregon Structural Specialty Code, rather than the 1,000-year event, which is typically considered for transportation projects.

For a 400-foot-long, 5-foot-diameter tangent pile wall, with an average exposed wall height of 10 feet and 20 feet of embedment, approximately 2,100 cubic yards of soil would need to be exported. The volume of exported soil would require more than 200 dump truck trips. This assumes a swell factor of 20% and dump trucks with a 10-cubic-yard capacity.

While the ODOT submittal supports the installation of the tangent wall in order to provide increased seismic stability of HTMS, it does not discuss how the original placement of the freeway corridor has compromised the seismic stability of the school and adjacent hillside. It is PBS' opinion that ODOT has an obligation to provide seismic reinforcement of the school building whether or not the freeway is widened.

ENVIRONMENTAL HEALTH AND SAFETY IMPACTS AND PLANNED/POSSIBLE MITIGATION

Construction Period Operations Impacts (Noise, Environmental, Access/Egress)

The installation of retaining wall piles along the border between HTMS and the subsequent widening of the I-5 freeway will be a significant undertaking that will have detrimental short-term impacts on the fundamental utility of HTMS and to the surrounding neighborhood. Use of semi-permanent cranes, the flow of dump trucks and cement trucks through the property, and the mobilization of countless construction workers and their vehicles will at times bring all neighborhood traffic to a standstill. The development of a comprehensive traffic control plan can help attenuate some of these impacts but there will be significant impacts nonetheless.

While some of the project traffic surfacing will be paved, the moving of large quantities of soil will result in the deposition of construction soil on both the school property and the neighboring roadways. Dirt and debris that is tracked off from construction sites is a safety concern and can present an environmental hazard. Use of vehicle tire/wheel washes can reduce soil deposition to the surrounding neighborhood. Chemical analysis of soils on the project have indicated the presence of a variety of contaminants that could be made airborne without the implementation of aggressive dust controls. Any wastewater generated from dust mitigation measures should be captured in order to perform an appropriate characterization of possible environmental contamination.

During the project there will be temporary and semi-permanent impacts to neighborhood traffic depending on the final traffic control plan that is developed and implemented for the project. These will hinder access to the property for students, staff, and parents. These effects will evolve over the course of the project as various phases of the construction are completed. Emergency access and egress to the property for emergency services providers may be hindered as well.

Post-Construction Period Impacts (Noise, Environmental, Access/Egress)

Based upon review of the ODOT submittal, the widening of the freeway will have a minimal effect on the long-term noise levels in and around HTMS. The ODOT submittal goes further and presents noise barrier wall scenarios that will reduce long-term overall noise levels at HTMS. The ODOT submittal does not address the deleterious effects of the current noise levels at HTMS that are the direct result of the existing freeway traffic. Nor does the ODOT submittal address increases in short-term transient noise levels that would be presented during periods of heavier (due to the wider freeway) traffic congestion that will coincide with morning and afternoon commutes. It is unfortunate that these periods of increased traffic congestion will occur at the very times students are outdoors preparing to start their school days and outdoors getting ready to go home.

The installation of sound attenuation barriers along freeways is ubiquitous. They are most often seen in areas where freeways pass through residential neighborhoods. Almost without exception they are masonry panel structures that rise to an elevation of up to 10 feet or more. These systems are effective at deflecting noise generated by freeway traffic. Noise levels aside, these barriers rarely improve the livability of the area being protected. What was once a view of the horizon will become a gray masonry surface that is subject to vandalization, physical damage, long-term maintenance costs, and ultimately end of life replacement. Also, noise barriers work both ways; all noise generated in the vicinity of HTMS will now be reflected directly back to the school building. These noises could include vehicle operations, equipment operations, various warning signals (trucks backing up, fire alarms, car alarms, etc.), children playing, and conversation. The ODOT submittal makes no mention of potential increases in noise levels from noises generated at HTMS.

EXISTING ENVIRONMENTAL CONDITIONS AND POTENTIAL SOIL AND GROUNDWATER IMPACTS

Soil studies on the project have documented chemical contamination of the soil. These levels are generally low. Potential exposures to these chemical contaminants would likely be limited to the duration of construction period operations (see above). Upon completion of the construction project, there would be no significant exposure to existing contaminated soil. All surfaces exposed during the project would be either covered with paving or covered with clean soil that would then be seeded.

ODOT to date has not analyzed groundwater on the site for chemical contamination. Considering the depth to groundwater in the vicinity of the project, it is not likely that the construction operations would create an unacceptable conduit for the mobilization of these soil contaminants into the existing groundwater. As a precaution, before and after construction groundwater samples could be analyzed for those contaminants of concern that have been identified in the soils on the HTMS project.

SHORT-TERM AND LONG-TERM IMPACTS TO AIR QUALITY

Over the past decade, the freeway's effect on air quality in the HTMS vicinity has been extensively studied and shows that there are measurable adverse impacts to the air quality at HTMS. The negative impacts are consistent with the "School Siting Guidelines" document. The ODOT submittal relies on both national projections of air quality parameters around freeways and the findings of an air pollution modeling tool—MOVES. The modeling tool utilizes a variety of parameters to predict air quality trends related to freeway traffic. Parameters entered into

this modeling software include miles driven over the roadway, a profile of vehicles in use, the aging out of older vehicles, fuel types, and quality and weather dynamics including temperature, prevailing wind directions, humidity, and precipitation. To better understand the MOVES air quality predictions, ODOT was presented with the following questions:

ODOT was asked if there was a resolution to the predictions that would allow a person to determine short-term impacts on an hour-by-hour basis because the greatest exposure concerns to students would likely occur during morning and early afternoon hours which coincide with periods of heaviest congestion on the freeway. The ODOT response was that the predictions are more geared toward long-term, average conditions (24-hour averages).

ODOT was asked if the long-term air quality impact predictions were made considering a possible climate change scenario where ambient temperatures were higher. ODOT's response was that speculative parameters were not used but that "Temperature is a very sensitive parameter across all pollutants and vehicle types."

ODOT was asked if the predictions could be separated into narrower time bands; the predictions as presented were for 2045. The ODOT response was that the predictions are more geared toward long-term, average conditions (24-hour averages).

Considering this latest information from ODOT, it is PBS' opinion that the model predictions relating to air quality impacts associated with the I-5 freeway do not provide sufficient resolution to determine if air quality conditions will be better or worse in the short-term or during the times when students would be at greatest risk of environmental exposures associated with the freeway.

CONCLUSIONS AND RECOMMENDATIONS

At this time, it is PBS' opinion that the I-5 freeway presents an unacceptable air quality and noise risk to the safe and healthful operation of HTMS and that the widening of the freeway will not change this.

Based upon review of the ODOT submittal, it is clear that any increase in noise to HTMS associated with the widening project will be minor and easily mitigated. It should be understood, however, that current freeway noise near HTMS is significant and that these impacts will continue despite installation of the proposed noise barriers.

PBS sees no compelling information to indicate that there would not be short-duration adverse air quality impacts to HTMS resulting from the widening of the freeway. It is possible that air quality conditions at 8:00 am and at 3:00 pm during school days will be worse at HTMS because of this project.

ODOT has recognized that the current shoring system between HTMS and the freeway is unstable. This condition is the result of the original establishment of the freeway and should be corrected whether the freeway is widened or not.

If you have any questions regarding this information, please call me at your convenience. I can be reached at 503.417.7597 or douglas@pbsusa.com with any questions or comments.

Sincerely,

Douglas Hancock, CIH, CSP
Senior Project Manager

DH:mo



Harriet Tubman Middle School
Indoor and Outdoor Air Quality Health Risk Assessment

Prepared by
William Lambert, PhD
August 19, 2019

1.0 Executive Summary

The design and installation of the HVAC system for Harriet Tubman Middle School was developed out of concern for the health of students and staff. Portland Public Schools recognized that the outdoor air at the school was impacted by traffic-related air pollution from I-5, and potentially by area industry. Preliminary air monitoring conducted in March and April of 2018 confirmed the need for an HVAC system with filtration for particles and gases to prevent sustained daily exposure. Renovation of the school building and installation of the HVAC system was completed in August. To evaluate the performance of the particle filters and the charcoal sorption bed, a new round of monitoring was conducted in September and October, with measurements made at the air intake and within the air handling units of the HVAC system. These measurements confirmed that the HVAC system achieved protective levels of indoor air quality at the time of occupancy. A third round of monitoring was conducted at the end of the school year, in April and May of 2019. Measurements at this time confirmed the HVAC system continued to provide a high level of removal of particles and gases.

This report provides an analysis of the adequacy of the HVAC system to minimize the health risks posed by air pollution at Harriet Tubman Middle School. The measurements of the various components of traffic-related air pollution are evaluated against available federal and state air quality standards, and published governmental and scientific literature. The report also evaluates the potential health risks from exposure to outdoor air pollution during physical education and lunch periods.

The five key conclusions from the health analysis are:

1. Indoor levels of air pollution are very low. For each of the pollutants monitored, the filtered air delivered to the classrooms and interior spaces of the school is clean, safe and supportive of health for students and staff.
2. Particle and gas removal by the HVAC system and its filtration systems remained consistently high across the school year.
3. Outdoor levels of particulate matter (PM₁₀, and PM_{2.5}) and the gases carbon monoxide (CO) and nitrogen dioxide (NO₂) are below federal air quality standards, and therefore pose no concern for health during physical activities.
4. Certain pollutants associated with diesel exhaust (ultrafine particles and black carbon) were observed at elevated levels typical of locations near heavily travelled highways. The HVAC system provides a high level of protection against exposure in the classrooms and interior of the building.
5. The health risks of short-term exposures to diesel pollution are not known, and regulatory limits have not been established. However, sufficient toxicological and epidemiological evidence exists to recommend that outdoor physical education activities be scheduled in the later morning and afternoon when traffic pollution is much lower. This recommendation is made with an abundance of caution, recognizing that some students, such as those with asthma, may be more susceptible to adverse effects of traffic-related air pollution.

2.0 Introduction

Increasing public health attention to traffic-related air pollution (TRAP) compelled Portland Public Schools (PPS) to design and install a heating, ventilation, and air conditioning (HVAC) system with filtration for particles and gases during the modernization of Harriet Tubman Middle School. The predominant concern was the reduction of day-to-day exposures to TRAP that have been associated with reduced lung growth in children, and increased risk for the development (onset) of asthma and exacerbation (triggering) of asthma attacks. The commitment to install the HVAC system by PPS also acknowledged emerging health research concerns for individual components of TRAP, specifically diesel particulate matter. Extensive air monitoring studies were conducted by scientists from Portland State University to characterize the outdoor air quality and confirm the adequacy of the performance of the HVAC filtration system to provide clean air to classrooms and indoor spaces at the school. Air quality measurements were first made in the April 2018, and were conducted again in the September and October following installation of the HVAC system and building occupancy. Another cycle of measurements was made in April and May of 2019 to evaluate outdoor-indoor conditions after 7 months of air handling system operation.

The PSU team conducted a monitoring on a comprehensive set of individual pollutants that comprise TRAP. The set of pollutants include the “criteria pollutants” carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5}) whose health effects are widely recognized and for which federal regulatory standards exist (NAAQS Table). Ultrafine particles (UFP), black carbon (BC), and volatile organic compounds (VOCs) are constituents of diesel exhaust and these forms of PM were also monitored. Specific air quality standards do not exist for these diesel pollutants, however, evidence from animal toxicology research and ongoing epidemiologic studies support concern for children as particularly susceptible to the adverse respiratory effects of long-term exposure to diesel particulate pollution (HEI 2010; HEI 2013; Guarnieri and Balmes 2014).

This report provides an opinion on the health risks posed to students and staff at Harriet Tubman Middle School using the measured exposures in outdoor and indoor air. This analysis follows a weight-of-evidence approach that applies federal health-based standards when available, and applies information from published studies for pollutants which lack regulatory guidelines.

3.0 Carbon Monoxide

3.1 Relevant Background

Carbon monoxide (CO) is a toxic asphyxiant gas that is hazardous because of its specific ability to bind to hemoglobin and to reduce the ability of the blood to deliver oxygen to tissues. As a component of motor vehicle emissions, CO penetrates to indoor spaces with high efficiency because this gas has very low chemical reactivity. These same physical and chemical properties limit engineering abilities to economically remove CO gas when present in the intake air of building ventilation systems. To protect public health, regulatory emphasis has been placed on reducing CO emissions from motor vehicles through the cleaner formulations of gasoline fuels, motor/vehicle inspection maintenance programs, and reducing emissions from wood stoves, fireplaces, open burning, and industrial sources. CO trends

for Oregon and Portland have steadily declined over the past 5 decades and currently the second highest 8-hour average occurring in a year is less than 2 ppm (<https://www.oregon.gov/deq/FilterDocs/2017aqannualreport.pdf>). Although CO from motor vehicle emissions disperses quickly under most conditions, poor traffic flow and congestion can lead to elevated exposures for motor vehicle occupants and persons in close proximity to highways. CO concentrations measured at microscale sites have declined in the same proportions as concentrations recorded at monitors representing larger urban regions. Ambient monitoring at near-road locations indicate that the federal standards are not exceeded, and this protection is attributed to greatly improved control of motor vehicle emissions (e.g., clean burning fuels, improved light-duty engine design, and catalytic convertors). Measurements of ambient CO at the Oregon DEQ I-5 Tualatin near-roadway air monitoring station have not recorded exceedances of federal standards during 2015 to 2017 (maximum 8-hour averages = 1.4 ppm).

The health risks of CO have been long recognized and CO is one of the original six “criteria” air pollutants defined in the Clean Air Act of 1970. The current National Ambient Air Quality Standard (NAAQS) for carbon monoxide is 35 ppm over a 1-hour averaging time and 9 ppm over an 8-hour averaging time (<https://www.epa.gov/criteria-air-pollutants/naaqs-table>). These levels are based on an extensive evidence base from epidemiologic studies and controlled exposure studies on human subjects (<https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=218686&CFID=78776911&CFTOKEN=81884369>). The two averaging times prevent blood carboxyhemoglobin levels from reaching 2%, the level at which chest pain (angina pectoris) is triggered in exercising adults with coronary artery disease, and to protect pregnant women and the developing fetus from hypoxic stress and low birth weight outcomes. As a point of reference, carboxyhemoglobin concentrations in cigarette smokers range from 3-8% and symptoms of intoxication and acute poisoning generally appear above 20%, although symptoms and clinical states of acute CO poisoning correlate poorly with level of carboxyhemoglobin (Raub 2000).

3.1.2 HTMS Outdoor and Indoor Levels

The distribution of school-day average CO concentrations during Portland State University’s Phase II (September-October) and Phase III (April-June) monitoring periods is presented in Figure 1. During the Fall, outdoor carbon monoxide levels averaged 0.4 ppm (432 ppb) over the 9 AM to 4 PM school day. The maximum school-day average was 1.4 ppm (1434 ppb). 95 percent of the outdoor air school-day averages in the Fall were below 0.6 ppm (639 ppb).

In the Fall, measurements of CO levels at the supply air point of the HVAC system, representing air that has been filtered of particles and passed through the charcoal bed, contained substantially lower concentrations of CO relative to the outdoor air. Approximately 44% removal was observed. However, measurements of the return air were essentially equal to the concentrations measured in outdoor air, suggesting CO infiltration through the building envelope.

In the Spring, the outdoor average level was 0.09 ppm (90.8 ppb), considerably lower than the Fall average. 95% of the school-day averages were below 0.2 ppb (236 ppb). Concentrations in the supply air were identical with the outdoor air. Although CO has not been removed from the air supplied to the

interior space of the school, these levels are below the NAAQS of 9 ppm averaged over 8 hours. Measurements of CO in the return air, representing the mixed air of the entire interior of the school, averaged 0.07 (73.9 ppb). This small difference in the air concentration is not appreciable, and is supportive of improved balancing of air delivery and minimization of infiltration in the Spring.

3.1.3 Implications for Health

Although the levels of CO in outdoor air were higher in the Fall than in the Spring, these school-day average levels of 0.4 ppm and 0.2 ppm are well below the NAAQS 9 ppm 8-hour average. Even the highest school-day average of 2.2 ppm is only one-fourth the level of the NAAQS. Thus, exposures of students and staff to CO at Harriet Tubman Middle School do not differ from those expected to be received at their residences or during commuting.

Measurements of ambient CO in the Portland area by the Oregon DEQ at Portland monitoring stations and do not exceed the NAAQS. For example, during 2008-2017, maximum 8-hour averages measured by the DEQ at the SE Lafayette neighborhood site ranged from 1.3 to 3.1 ppm, and for the near-roadway site at Tualatin I-5 during 2015-17 maximum 8-hour averages range from 1.3 to 1.4 ppm (Oregon Air Quality Annual Report 2017).

In summary, the monitoring data from Fall 2018 and Spring 2019 at HTMS confirm that concentrations of CO are consistently low and do not present a health risk to students and staff.

3.2 Nitrogen Dioxide

3.2.1 Relevant Background

Nitrogen dioxide (NO₂) is an irritant gas that combines with water on respiratory tract tissues to form nitric (HNO₃) and nitrous (HNO₂) acids. When inhaled in high concentrations, NO₂ results in edema and bronchopneumonia. At lower concentrations, short term (acute) exposures to NO₂ are associated with exacerbation of asthma caused by the constriction of the smooth muscle of the conducting airways and increased mucous production. Longer term exposures at low levels are associated with the development of asthma in children. The health effects of NO₂ are well documented in experimental studies in animals, and in controlled human exposure and epidemiologic studies (<https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=310879>). As a chemical class, nitrogen oxides are principal components of motor vehicle emissions, and NO₂ is specifically regulated as a criteria pollutant under the Clean Air Act. In recognition of the need to protect against both acute and chronic exposures, the current NAAQS for NO₂ are 100 ppb averaged over 1 hour and 53 ppb averaged over 1 year (<https://www.epa.gov/criteria-air-pollutants/naaqs-table>).

Over the past decade, Oregon DEQ monitoring data at the Portland neighborhood site, highest hourly averages of NO₂ have been near 40 ppb (<https://www.oregon.gov/deq/FilterDocs/2017aqannualreport.pdf>). Over 2015 to 2017, the daily maximum concentrations from the I-5 near-roadway station in Tualatin has also tracked in the 35-40 ppb range. Thus, the maximum concentrations measured at urban locations in Portland are well below

the federal standard of 100 ppb. Similarly the annual NO₂ average for the neighborhood and near-roadway monitoring sites has consistently tracked near 10 ppb and 13 ppb, respectively; also well below the federal standard of 53 ppb.

3.2.2 HTMS Outdoor and Indoor Levels

The distribution of school-day average NO₂ concentrations during the Fall and Spring monitoring periods is presented in Figure 2. In the Fall, outdoor NO₂ levels averaged 13.0 ppb over the 9 AM to 4 PM school day. The highest school-day average was 67.6 ppb. 95 percent of the daily averages were below 30 ppb, and 75 percent were below 20 ppb. The mean supply air average was 0.89 ppb, indicating a high level of removal by the air handling system. The mean NO₂ levels in return air was 6.92 ppb. Despite the apparent infiltration of outdoor NO₂ through the building envelope, indoor NO₂ levels are approximately one-half of the levels observed in outdoor air.

In the Spring monitoring period, the school-day average of 7.3 ppb was substantially lower than concentrations observed in the Fall. Supply air concentration averaged 2.8 ppb, again indicating substantial removal by the HVAC system. Return air NO₂ concentrations averaged 0.9 ppb, substantially lower than the supply air and possibly indicating reaction of NO₂ with indoor surfaces and occupants.

Outdoor NO₂ levels measured by passive samplers placed on the school grounds, the adjacent city park, and neighborhood streets provided one-week average measurements that were comparable to the levels measured in outdoor air at the HVAC intake unit, and demonstrated reductions in levels with increasing distance from the I-5 highway.

3.2.3 Implications for Health

NO₂ is not simply an indicator of other traffic-related pollutants, and this oxidant gas has independent effects on the respiratory system. High short-term exposures are associated with asthma attacks, and with bronchoconstriction and airway inflammation. These health effects are observed independent of other traffic-related pollutants, such as PM_{2.5} and black carbon. Further, repeated and persistent exposure to NO₂ across years results in the development of allergic responses and structural changes to the airways of the child, damaging lung growth. Because the respiratory effects of NO₂ appear to occur across both short- and long-term time scales, the U.S. EPA developed standards for both 1-hour and annual averaging times to provide protection against triggering asthma attacks, and against asthma development.

Indoor concentrations of NO₂ in the school, as represented by the levels measured in return air to the HVAC system in the Fall and Spring, averaged 6.9 and 0.88 ppb, respectively. These school levels are very low relative to the 1-hour standard of 100 ppb and the annual standard of 53 ppb, and are likely lower than levels of exposure experienced by students and staff in their homes and neighborhoods.

Outdoor concentrations averaged 13 ppb across the 9 AM to 4 PM school day in the Fall and 7 ppb in the Spring. These levels are higher than neighborhood background and reflect the influence of traffic

emissions from I-5, but they are well below the federal standards of 100 ppb 1-hour average and 53 ppb annual average.

The maximum school-day average concentration was 67.6 ppb in the Fall of 2018, and 75% of school-day averages during this monitoring period were less than 20 ppb. These levels are substantially lower than the concentrations known to trigger changes in lung function and symptoms in panel studies of asthmatic children (U.S. EPA *Integrated Science Assessment for Nitrogen Oxides*, 2016). The concentrations associated with increased airway responsiveness range from 200 to 300 ppb for 30 min, and 100 ppb for 1 hour. The concentrations associated with allergic inflammation are 581 ppb for 15 min and 260 ppb for 30 min. Therefore, the observed levels of NO₂ in outdoor air surrounding the school buildings and the park are below levels of concern for this susceptible group of children.

3.3 Particulate Matter

3.3.1 Relevant Background

As type of air pollution, particulate matter (PM) includes finely divided solid and liquid materials that are suspended and move in the air. The size distribution of particles can vary greatly, and the mixtures of depend on the types of sources. The smaller size classes of particles are of greater health concern because they have the capability to bypass the normal defenses of the upper respiratory tract and can be inhaled deeply into the lungs where they can be deposited and cause harm.

Two principal classes of particle sizes are used in federal air pollution standards: “PM₁₀” which are particles smaller than 10 microns in diameter and able to be inhaled through the nose. Soil dust, pollen, and mold particles are in this size range. “PM_{2.5}” is comprised of particles that are 2.5 microns and smaller, and includes the class of particles that are called “fine” (diameters of 0.1 to 2.5 μm) and “ultrafine” (0.01 to 0.1 μm). Combustion processes generate this size fraction, and some of the fine and ultrafine particles of PM_{2.5} may contain liquid acid condensates, organic compounds, and heavy metals, increasing their toxic potential. The health effects of particulate matter include respiratory system irritation, lung damage, the development of chronic obstructive pulmonary disease (COPD), and heart attacks (U.S. EPA. *Integrated Science Assessment for Particulate Matter (External Review Draft)*, 2018).

Particulate matter air pollution is measured as weight (mass) per cubic meter of air, and the federal standards are defined using these units. The NAAQS for PM₁₀ is 150 micrograms per cubic meter (μg/m³) averaged over a 24-hour period. The NAAQS for PM_{2.5} is 35 μg/m³ averaged over a 24-hour period and 12 μg/m³ averaged over one year.

3.3.2 HTMS Outdoor and Indoor Levels

The school-day average levels of outdoor PM₁₀ were relatively low during the Fall monitoring period (Figure 3). At this time, PM₁₀ averaged 2.58 μg/m³ with an interquartile range of 1.40 to 3.30 μg/m³. PM₁₀ concentration in the supply air averaged 0.14 μg/m³ indicating high removal capacity by the HVAC filtration system. A small increase of PM₁₀ was observed in the return air, which averaged 1.20 μg/m³, and can be attributed to re-suspended interior dust and infiltration. Outdoor PM₁₀ levels were higher in

the Spring, with average levels at 7.39 $\mu\text{g}/\text{m}^3$ and an interquartile range of 5.28 to 9.33 $\mu\text{g}/\text{m}^3$. High removal efficiency was observed again; supply air concentrations of PM_{10} averaged 3.08 $\mu\text{g}/\text{m}^3$ and the return air average concentration were essentially the same at 3.11 $\mu\text{g}/\text{m}^3$. In summary, the outdoor levels of PM_{10} are considerably lower than the 150 $\mu\text{g}/\text{m}^3$ per 24-hour average NAAQS, and the school's HVAC system effectively filters PM_{10} to very low indoor levels.

Outdoor air concentrations of $\text{PM}_{2.5}$ were also consistently low in both the Fall and Spring (Figure 4). In the Fall, $\text{PM}_{2.5}$ averaged 2.13 $\mu\text{g}/\text{m}^3$ with an interquartile range of 1.06 to 2.86 $\mu\text{g}/\text{m}^3$. Thus, outdoor levels are below the NAAQS of 35 $\mu\text{g}/\text{m}^3$ 24-hour average and 12 $\mu\text{g}/\text{m}^3$ annual average. In the Spring, $\text{PM}_{2.5}$ averaged 2.69 $\mu\text{g}/\text{m}^3$ with an interquartile range of 1.25 to 3.85 $\mu\text{g}/\text{m}^3$. Effective removal capacity of $\text{PM}_{2.5}$ by the HVAC system was observed in both seasons. Return air concentrations averaged 0.72 $\mu\text{g}/\text{m}^3$ in the Fall and 0.71 in the Spring, demonstrating very low $\text{PM}_{2.5}$ exposures to building occupants.

3.3.3 Implications for Health

Both PM_{10} and $\text{PM}_{2.5}$ in outdoor air were measured at concentrations below the federal standards in both the Fall and Spring seasons, supporting the conclusion that particulate matter pollution from I-5 does not present a health hazard for students and staff. The HVAC system was specifically designed to remove particles in this inhalable and respirable size range, and large removal efficiencies were observed in both monitoring seasons, providing evidence of air handling system stability across the entire school year. Because students are in the filtered indoor environment during the majority of the school day, their total exposure to particulate matter is likely reduced relative to the exposures they would have received at their residences full-time.

The potential health risks associated with short-term particulate matter exposure during outdoor activities must be considered. The U.S. EPA's *Integrated Science Assessment for Particulate Matter (2018)* combines the evidence from controlled animal studies employing short-term exposures on markers of lung injury and oxidative stress. These toxicological studies provide insight into the potential mechanisms of respiratory health effects (biological plausibility) and assist with the interpretation of epidemiologic evidence. While multiple studies of long-term $\text{PM}_{2.5}$ exposure provide coherent evidence to support a causal role in the development of asthma in children, the evidence to support short-term effects on asthma attacks is much more limited. Collectively, the available epidemiologic studies on children with asthma in U.S. cities provide weak support for aggravation of asthma symptoms at 24-hour average concentrations typically experienced in urban areas. The shared limitations of these studies include reliance on self-reported symptoms, incomplete adjustment for co-occurring pollutants, use of modelled personal exposure from central monitoring sites, and the potential for the constituents of $\text{PM}_{2.5}$ (elemental carbon, ultrafine particles), rather than $\text{PM}_{2.5}$ mass itself, to explain the observed outcomes. Further, the ambient concentrations in these studies are substantially higher than levels observed outdoors at the school where average school-day $\text{PM}_{2.5}$ levels in the Fall of 2018 were 2.13 $\mu\text{g}/\text{m}^3$. Mean 24-hour $\text{PM}_{2.5}$ concentrations are greater than 15 $\mu\text{g}/\text{m}^3$ in studies of emergency department visits and hospital admissions for asthma (Sarnat et al. 2015; Ostro et al. 2016), and those studies considering respiratory symptoms and asthma medication (Rabinovitch et al. 2006; Mann et al. 2010; Spira-Cohen et al. 2011).

In summary, the outdoor concentrations of PM₁₀ and PM_{2.5} at HTMS are below federal standards, and are safe for students and staff, including those with asthma. The school's HVAC system further reduces these concentrations to create an indoor environment which has very low levels of PM₁₀ and PM_{2.5} pollution.

3.4 Black Carbon

3.4.1 Relevant Background

Black carbon (BC) is an important component of particulate matter, and is emitted during the combustion of biomass and fossil fuels. In particular, BC in the ultrafine particle fraction is used as a marker of diesel exhaust and is argued to be a useful alternative measure to particle mass (PM₁₀ and PM_{2.5}) because health risks may be qualitatively and quantitatively different due to unique physical and chemical properties of BC (Jannsen et al. 2011). Diesel exhaust is a complex mixture of gases and ultrafine particles of a diameter less than 0.1 µm. No single chemical constituent of diesel exhaust can serve as a unique marker of exposure (Grahame, Klemm, and Schlesinger 2014), but taken together, fine particles (PM_{2.5}), BC, ultrafine particle counts provide a reasonably complete characterization of diesel exhaust levels.

The available epidemiologic evidence on the health effects of diesel exhaust goes back to the 1990s but the studies are challenging to interpret because exposures are not precisely quantified. Further, the studies were conducted in occupational settings and on healthy adult male workers, therefore the levels of exposure are above the range observed in the community setting and must be extrapolated with some uncertainty to women, children, and the elderly. Although no federal air quality standard for BC or diesel particulate matter exists, the health hazard is recognized (Health Effects Institute, 2015). The health endpoint of regulatory concern has been lung cancer and risk assessments are based on lifetime exposure scenarios. However, the U.S. EPA and the World Health Organization have withdrawn their previously published unit risk estimates, ostensibly because the most appropriate metric to represent diesel exhaust exposure remains unknown. PM_{2.5} elemental carbon (EC) has been used as a surrogate to date, but it is not expected that EC itself is the toxicologically active agent. In 2010 and again in 2016, the Oregon Air Toxics Science Advisory Committee (ATSAC) reviewed the available literature on diesel particulate matter and recommended an Ambient Benchmark Concentration (ABC) of 0.1 µg/m³ (equivalent to 100 ng/m³) which is very close to these previous risk estimates of the EPA and WHO, and assumes 70-year exposure duration and risk of 1 excess cancer in 1 million persons. This ABC was adopted by the Oregon Environmental Council in 2017, and provides a point of reference for evaluating potential health risk.

The possible effects of exposure to BC on neurodevelopment and cognition in school children have also been the subject of recent research efforts in Europe and the U.S (Basagana et al. 2016; Harris et al. 2016; Forns et al. 2017). These studies are motivated by the observation of translocation of ultrafine and fine particles from the lungs to the central nervous system in animal toxicology studies (Elder et al. 2006). The BREATHE Program in Barcelona, Spain followed 2,687 children in 265 classrooms in 39 schools, assessing attention with a computer-administered neurobehavioral test. Classrooms in these

schools are naturally ventilated and the penetration of outdoor PM_{2.5} and NO₂ to the schools' indoor areas is high (Amato et al. 2014), and means that school children are exposed to elevated levels throughout the school day, indoors and outdoors. In the Barcelona classrooms, the mean NO₂ level was 15.8 ppb (11.9-18.9 ppb interquartile range) and the mean PM_{2.5} elemental carbon was 1270 ng/m³ (980-1240 ng/m³ interquartile range). EC is measured using a thermal-optical transmittance, and BC is measured by optical reflectance - aethelometer. The BC:EC correlation is approximately 3:1 and varies with the source of soot emissions (Jeong et al. 2004). Converting the Barcelona EC values to BC yields 3810 ng/m³ (2940-3720 ng/m³ interquartile range). In another BREATHE publication, Sunyer et al. (2017) reported lower performance on attention tests for school children in the top exposure quartile of daily classroom EC and NO₂ relative to those in the bottom exposure quartile over a 12-month period. Basagana et al. (2016) reported reductions in cognitive growth in working memory and attentiveness across quartiles of classroom PM_{2.5}, but these effects were not observed for EC or other measures of particulate matter. The most recent Barcelona publication by Forns et al. (2017) demonstrated that deficits in working memory and inattentiveness persisted over 3.5 years of follow-up and were associated with outdoor NO₂ and indoor (classroom) ultrafine particle counts, but not EC.

The Project Viva Cohort Study in eastern Massachusetts followed children from pre-birth to 8 years of age (Harris et al. 2016). Residence location was used to model exposure to outdoor BC and PM_{2.5}. Children with higher mid-childhood exposure to BC and increased near-residence traffic density had greater problems with behavioral regulation as assessed by teachers, but no relationship was observed using parent report measures. The methods used in this report are similar to those of a 2008 analysis of Boston children (Fraco Suglia 2008). BC exposures were retrospectively estimated with a land-use regression model for 218 children in a cohort study for which neurocognitive assessments were available. BC was associated with decreased cognitive function across measurements of verbal and nonverbal intelligence, and memory.

In summary, the body of evidence for the independent effect of BC on cognitive development and function in children provides mixed evidence to support a causal hypothesis. The most reliable evidence comes from the Barcelona BREATHE Program which utilizes direct measurements of EC at schools, which is superior to the reliance on estimated exposure from land-use models used in other studies. The associations with cognitive deficits reported in the set of BREATHE papers suggests that traffic-related pollution as a whole is responsible for the observed neurodevelopmental effects. It is important to recognize that the schools and classrooms in the Barcelona studies rely on natural ventilation and indoor levels of pollutants are similar to those outdoors. In contrast, the HVAC system at Harriett Tubman Middle School effectively removes the fine particles and BC from traffic emissions and eliminates the hazard posed by sustained exposure to traffic air pollution throughout the school day.

3.4.2 HTMS Outdoor and Indoor Levels

The distributions of BC concentrations in outdoor air, and the supply and return air locations in the HVAC system are presented in Figure 5. Levels of BC in outdoor air were appreciably higher in the Fall 2018 monitoring period than during the Spring of 2019, with mean school-day concentration averaging 1399 ng/m³ and an interquartile range of 757 to 1925 ng/m³. In the Spring, mean school-day average BC

was 829 ng/m³, with an interquartile range of 290 to 1127 ng/m³. Thus, outdoor levels in both seasons exceeded the Oregon ABC. In both monitoring seasons, the HVAC system demonstrated large removal efficiencies for BC; approximately 95% in the Fall and 86% in the Spring. Very tight distributions of values were observed in the Spring for supply and return air, evidence of very good HVAC system performance.

In the Spring monitoring, BC was measured with a handheld aethelometer in the park and other outdoor areas surrounding the school, during lunchtime and afternoon hours. Median levels were comparable to those measured at the HVAC intake, ranging from 457 to 725 ng/m³. The median neighborhood background level, measured several blocks to the east of the school, was 333 ng/m³.

3.4.5 Implications for Health

The outdoor concentrations of BC at HTMS are within expected ranges, and resemble distributions of BC measured in recent years at Oregon DEQ monitoring sites in Portland (Figure 6). The distribution of one-hour BC concentrations at the Portland North Roselawn neighborhood site measured during 2010 to 2016 had a mean of 718 ng/m³. At the Portland SE Lafayette over 10 months in 2010, a very similar distribution and mean of 745 ng/m³ was observed. BC monitoring at the Tualatin I-5 near-roadway site over 2014 to 2016 averaged 1293 ng/m³. In comparison, the Fall season outdoor average at HTMS was 1623 ng/m³ and in the Spring was 829 ng/m³. This comparison shows that outdoor levels of BC at HTMS are higher than residential neighborhood background levels in Portland, and are very similar to those measured at the DEQ near-roadway monitoring station, even though this DEQ site is a relatively long distance away in Tualatin.

Indoor BC exposure levels, as represented by return air concentrations, are very low, indicating a high level of protection for students and staff, with average school-day concentrations of 233 and 158 ng/m³ in the Fall and Spring, respectively. While these indoor levels are higher than the 100 ng/m³ ABC, they are within the uncertainty bounds of the risk estimate used to set this guideline, and the protection achieved by the HVAC system is very high. During the indoor time of the school day, students and staff experience lower exposures than they would likely receive in their homes or during commuting.

3.5 Ultrafine Particles

3.5.1 Relevant Background

As described earlier in Section 3.3, particulate matter (PM) is regulated in two size ranges, PM₁₀ and PM_{2.5}. PM₁₀ is the total mass of particles less than 10 micrometers (microns or μm) in aerodynamic diameter. Similarly, PM_{2.5} is the mass of particles less than 2.5 μm in diameter. PM_{2.5} is also called *fine* particle mass. PM₁₀ minus PM_{2.5} gives the *coarse* particle mass. Ultrafine particles (UFP) represent that size fraction of particulate matter less than 0.1 μm in diameter. Because the individual particles in UFP have very little mass, other measures such as particle count and surface area have been used for toxicity testing in animal experiments.

Ultrafine particles are poorly soluble and when they deposit by diffusion they readily pass into epithelial tissues because of their tiny dimensions. If deposited in the nasal passages, these particles can translocate through the olfactory nerve into the brain. When deposited in the respiratory tract, UFP can pass via blood or lymph, where they can distribute to other organs of the body, such as the heart.

The physical and chemical properties of PM vary greatly, and toxicity of the mixture of particulate matter is determined by size, chemical composition, and solubility. This is a major source of variability in the effects for particulate matter, where mass is used as the metric of exposure. For example, the PM_{2.5} mass contains the mass of the UFP fraction, but this mass is relatively small compared to the weight of particles in the PM_{2.5} – PM_{0.1} fraction, and PM_{2.5} mass does not accurately represent the presence of UFP. Thus, the use of particle counts to represent UFP exposure and dose has gained favor. Certainly, the application of a single set of federal air quality standards has practical advantages for monitoring and regulation, but the PM₁₀ and PM_{2.5} standards are acknowledged to have limitations for public health protection. Epidemiologic studies of the effects of UFP have only recently been conducted, and the evidence for independent health effects of UFP is limited (HEI Panel on the Health Effects of Traffic-Related Air Pollution, 2010; HEI Review Panel on Ultrafine Particulates, 2013; Weichenthal et al. 2017).

3.5.2 HTMS Outdoor and Indoor Levels

Figure 7 presents the distribution of ultrafine particle counts for outdoor air, and supply and return air points in the HVAC system. Mean UFP counts are averaged over the 9 AM to 4 PM school day. In the Fall, UFP counts averaged 24908 particles/cm³, with an interquartile range of 17949 to 27170 particles/cm³. The HVAC system removed these particles very efficiently; the average count in supply air was 1484 particles/cm³ and the return air was 1067. A walking transect conducted inside the school yielded a mean count of 461 particles/cm³ and an interquartile range of 264 to 498 particles/cm³. Much lower counts were measured in outdoor air during the Spring monitoring period. The mean was 829 particles/cm³, with an interquartile range of 290 to 1127 particles/cm³. Particle filtration by the HVAC system continued to perform efficiently in the Spring, with mean supply air counts of 117 particles/cm³ (interquartile range 62-151 particles/cm³) and mean return air counts of 158 (interquartile range 107 to 156 ng/cm³).

The PSU air monitoring team conducted walking transects in Lillis Albina Park and outdoor areas surrounding the school on two days in the Fall monitoring period and two days in the Spring. Particle counts were higher in the Fall than the Spring. A summary of the relative concentration magnitudes for Fall is presented below:

Location	Time	Ultrafine Particle Counts (median, particles/cm ³)	
		Wed Oct-10	Wed Oct-15
Park	Morning 8-9 AM	13,000	39,000
Park	Morning 9-10 AM	26,000	43,000
Lunch 1	Noon hour 11:15-12 PM	10,000	15,000
Lunch 2	Noon hour 12-12:45 PM	8,000	16,000
Park	Afternoon 1-2 PM	13,000	14,000

Dismissal on Flint Ave	Afternoon 3:30-4:15 PM	6,800	6,600
Neighborhood	Afternoon 4:15 & later	---	5,400

Two patterns are evident in this table. First, substantial day-to-day variation is observed. Second, UFP counts are highest in the morning hours on both days, and drop substantially by the first lunch period. This hourly profile may be attributed to reduced traffic emissions on I-5 as the morning rush hour ends, and because of warming atmospheric temperatures and increasing wind speed (Zhu et al. 2006). This outdoor pattern is evident in Figure 8 which presents the median UFP counts for the Spring monitoring period by outdoor location and time of day.

3.5.3 Implications for Health

Although air quality regulations currently do not address UFP, this class of submicron-sized particles may exert greater toxic effects compared with larger particle because of their greater surface area/mass ratio, chemical composition, deeper lung penetration, and ability to translocate to the systemic circulation and other organs. A recent workshop concluded that the current evidence base does not differentiate the effects of UFP from other particle size fractions and gaseous pollutants (Baldauf et al. 2016). The limited available epidemiologic literature focuses on adult respiratory and cardiac outcomes, and mortality. Studies considering children are beginning to be reported. For example, prenatal UFP exposure was associated with asthma onset by age 6 years in a recently published study from Ontario, Canada (Lavigne et al. 2019).

The lack of epidemiologic evidence and regulatory standards for UFP precludes a quantitative assessment of the health risks in the outdoor air surrounding the school. However, avoidance of sustained exposures to UFP counts exceeding 25,000/cm³ seems advisable based on acute physiologic changes in blood pressure and micro-vascular function observed in exercising women exposed to high levels of traffic-related air pollution for short periods (Weichenthal, Hatzopoulou, and Goldberg 2014). While these physiologic changes are of uncertain health significance at this time, they do suggest the body is showing an oxidative stress response, and this would be expected to also occur in children.

UFP levels in the range of 25,000 particles/cm³ were observed in outdoor areas surrounding Harriet Tubman Middle School during the morning hours of the Fall monitoring period. While the health risks of short-term exposures UFP are not known, and regulatory limits have not been established, sufficient toxicological and epidemiological evidence exists to recommend that outdoor physical education activities be scheduled in the later morning and afternoon when traffic pollution is much lower. This provides a margin of safety for students and staff who may be more sensitive to the adverse effects of traffic pollution (i.e., asthmatics).

3.6 Volatile Organic Compounds

3.6.1 Relevant Background

Volatile organic compounds are emitted as gases during combustion of gasoline and diesel fuels, and they are also emitted from indoor sources, including building materials and furnishings, office

equipment, and cleaning products. In fact, the concentrations of many VOCs are higher in indoor residential settings and public buildings, than outdoors (U.S. EPA Team Study, 1985). The health effects associated with exposure to VOCs include eye and upper airway irritation, asthma and allergic respiratory symptoms, headaches, dizziness, and nausea, memory impairment, damage to the liver, kidney and central nervous system, and for certain VOCs, cancer (Indoor Air Quality Scientific Findings Resource Bank, <https://iaqscience.lbl.gov/voc-sensory>). The charcoal bed filter bank in the HVAC system at HTMS is designed to remove broad classes of VOCs from outdoor air. There are hundreds of organic compounds, therefore a reduced set of VOCs with relevance to TRAP or high toxic potential were selected for monitoring by the PSU team, and were monitored in the outdoor air, and the supply and return air streams of the HVAC system.

Currently, no federal standards have been set for VOCs, although guidelines and recommendations have been set by various professional organizations (ACGIH, <https://www.acgih.org/tlv-bei-guidelines/tlv-chemical-substances-introduction>). The evidence for toxicity for VOCs that are commonly present in TRAP has been reviewed by the Air Toxics Science Advisory Committee (ATSAC) of the Oregon DEQ, and this advisory body has recommended Ambient Benchmark Concentrations (ABCs) for specific chemical compounds that were adopted by the Environmental Quality Commission of the State of Oregon in 2017 (<https://www.oregon.gov/deq/aaq/air-toxics/Pages/default.aspx>). The ABCs are reviewed every 5 years and are based on the best available scientific evidence to derive an excess health effects risk (cancer, birth defect, organ damage) of 1-in-1 million from continuous inhalation exposure across a lifetime. This is the additional or extra risk of developing cancer due to exposure over the 70-year life of an individual. The ABCs include uncertainty factors to protect sensitive subgroups. Thus, the ABCs are health-based and provide a useful point of reference for evaluating population health risks, but it is incorrect to apply the ABCs to estimate the probability that an individual will experience an adverse health effect.

3.6.2 HTMS Outdoor and Indoor Levels

Levels of VOCs in the Spring monitoring period represent the typical occupancy conditions of the school without the influence of construction activities and off-gassing of new building materials. Outdoor air measurements of these VOCs at HTMS were less than concentrations reported by DEQ for Portland neighborhood monitoring stations (Figures 9-11). Using measurements of VOCs in the return air to represent the indoor exposure of students in classrooms, each of these VOCs were well below Ambient Benchmark Concentrations.

Chemical	Portland Background µg/m ³	Oregon DEQ ABC µg/m ³	Outdoor Air µg/m ³	Return Air µg/m ³
Benzene	0.59	0.13	0.10	0.00
Toluene	1.12	5000	0.41	0.18
m-, p-Xylene	1.28*	200*	0.31	0.10
o-Xylene	1.28*	200*	0.11	0.04
Ethyl-benzene	0.3	0.4	0.08	0.01

*mixed xylenes

3.6.3 Implications for Health

Indoor concentrations of VOCs were below the Oregon DEQ Ambient Benchmark Concentrations, indicating substantial protection while students and staff are indoors. Because students and staff are in this filtered air environment for the majority of their school day hours, their total daily exposure to VOCs is likely reduced relative to the total exposures they would receive when spending their day at their residence.

The potential for outdoor exposure to benzene during lunch and physical education activities exists. However, short-term exposures to benzene are not known to be associated with adverse health effects. Oregon DEQ monitoring indicates that outdoor levels of benzene are elevated across the Portland metro area and generally exceed the ABC. Human activities that emit benzene are common include evaporation from gasoline fuels at service stations and from vehicles, vehicle exhaust, and industrial processes. Control of benzene from these anthropogenic sources has been a focus of the Portland Air Toxics Solutions program (PATS). Additionally, natural sources of benzene in outdoor air include wildfires, which have impacted Portland urban air quality in recent years. The principal health concern for benzene is damage to the bone marrow and blood-forming tissues, and acute myeloid leukemia, resulting from long-term (lifetime) exposure.

4. Conclusions

- For each of the pollutants monitored, the filtered air delivered to the classrooms and interior spaces of the school is clean, safe and supportive of health for students and staff.
- Particle and gas removal by the HVAC system and its filtration systems remained consistently high across the school year.
- Outdoor levels of CO, NO₂, PM₁₀, and PM_{2.5} were below federal air quality standards.
- Outdoor levels of pollutants associated with diesel exhaust (black carbon and ultrafine particles) were observed at elevated levels typical of locations near heavily travelled highways.
- Outdoor levels of traffic-related air pollutants are consistently elevated in the early morning hours, but drop substantially by the first lunch period at 11:15 AM.

5. Recommendations

- To provide a margin of safety for students and staff who may have asthma, or be sensitive to traffic-related air pollution, outdoor physical education activities should be scheduled in the later morning and afternoon hours to avoid the highest daily outdoor levels.
- To ensure the continued high and effective performance of the HVAC system, continued monitoring of outdoor, supply and return air should continue at 3-month intervals until the operating characteristics of this unique system is confidently understood. In addition to providing assurance of health protection, this data will allow definition of a schedule of filter replacement that minimizes cost and waste.

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Figure 1. Plots of the median concentrations of carbon monoxide across the 9 AM – 4 PM school day. The height of the solid bars represents the median concentration. The ends of the whiskers represent the 25th and 75th percentiles. Concentration is expressed in parts per billion (ppb). The NAAQS is 9000 ppb averaged for 8 hours.

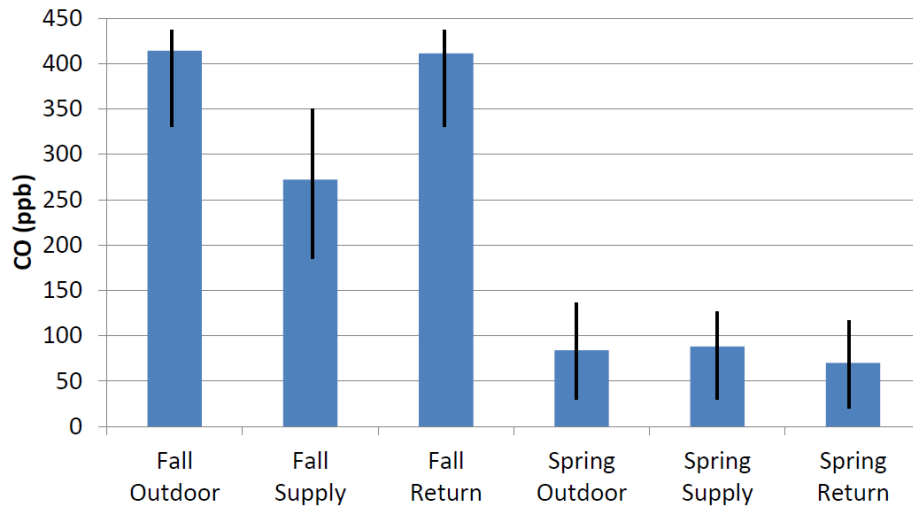


Figure 2. Plots of the median concentrations of nitrogen dioxide across the 9 AM – 4 PM school day. The height of the solid bars represents the median concentration. The ends of the whiskers represent the 25th and 75th percentiles. Concentration is expressed in parts per billion (ppb). The NAAQS is 100 ppb averaged for 1 hour.

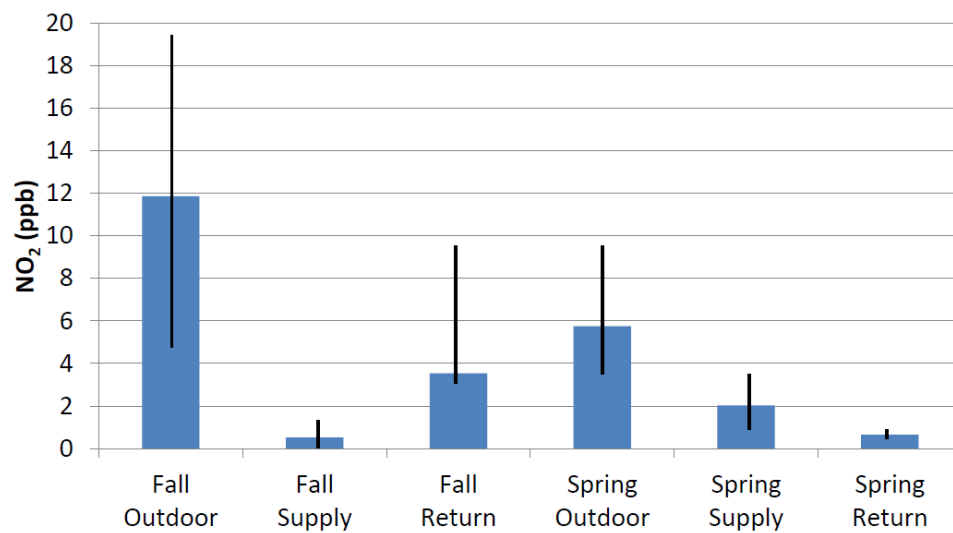


Figure 3. Plots of the median concentrations of PM₁₀ across the 9 AM – 4 PM school day. The height of the solid bars represents the median concentration. The ends of the whiskers represent the 25th and 75th percentiles. Concentration is expressed in micrograms per cubic meter (µg/m³). The NAAQS is 150 µg/m³ averaged over 24 hours.

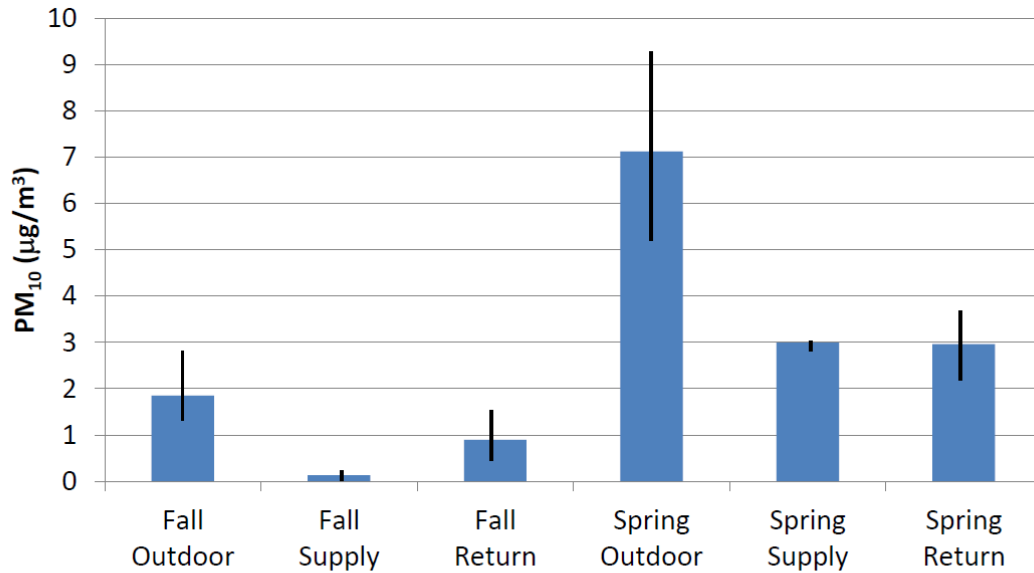


Figure 4. Plots of the median concentrations of PM_{2.5} across the 9 AM – 4 PM school day. The height of the solid bars represents the median concentration. The ends of the whiskers represent the 25th and 75th percentiles. Concentration is expressed in micrograms per cubic meter (µg/m³). The NAAQS for PM_{2.5} are 35 µg/m³ 24-hour average and 12 µg/m³ annual average.

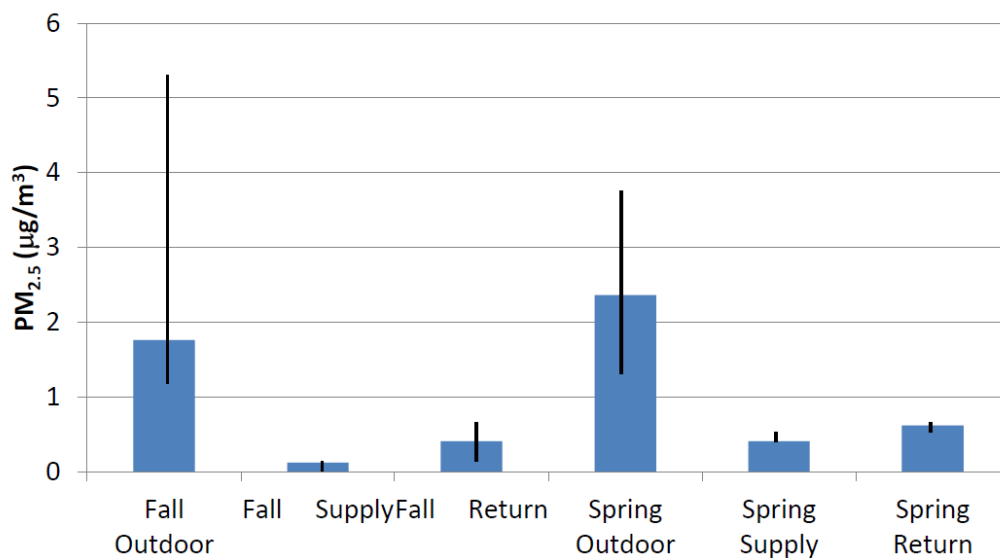


Figure 5. Plots of the median concentrations of Black Carbon across the 9 AM – 4 PM school day. The height of the solid bars represents the median concentration. The ends of the whiskers represent the 25th and 75th percentiles. Concentration is expressed in nanograms per cubic meter (ng/m^3). There is no federal standard for BC.

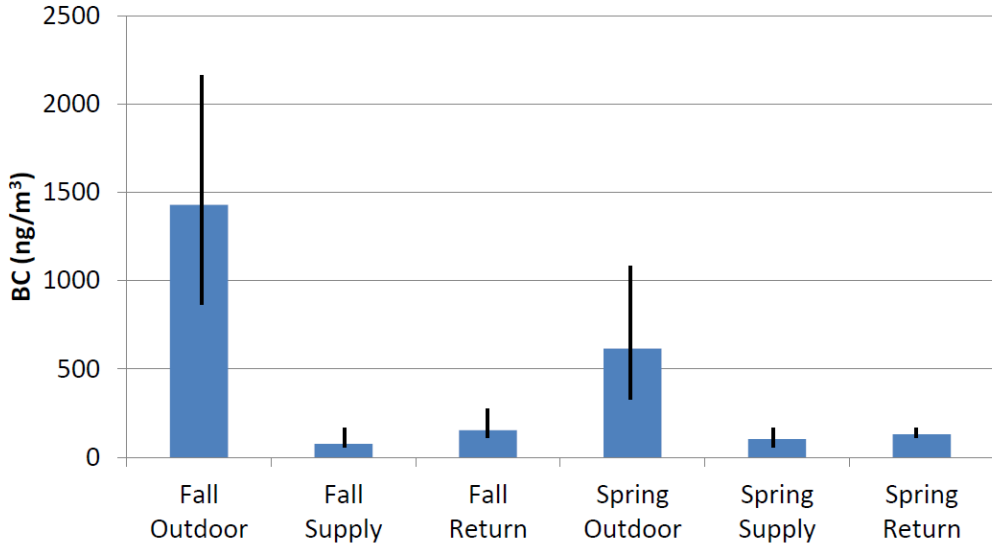


Figure 6. Plots of the distribution of one-hour average concentrations of Black Carbon measured at three Oregon DEQ monitoring sites (Portland N Roseland 2010-16, Portland SELafayette 2010, and Tualatin I-5 Bradbury Court 2014-16). The height of the solid bars represents the median concentration. The ends of the whiskers represent the 25th and 75th percentiles. Concentration is expressed in nanograms per cubic meter (ng/m^3).

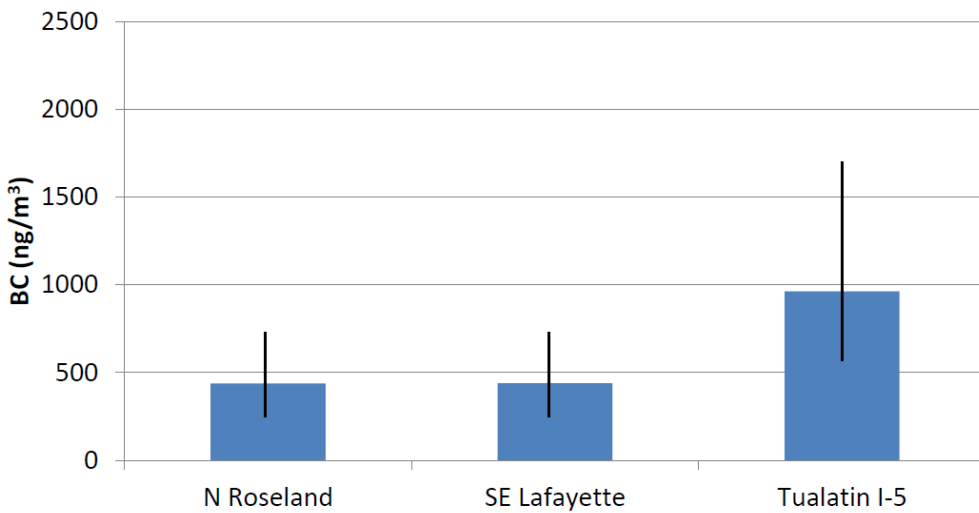


Figure 7. Plots of the median concentrations of Ultrafine Particles across the 9 AM – 4 PM school day. The height of the solid bars represents the median concentration. The ends of the whiskers represent the 25th and 75th percentiles. Concentration is expressed in counts per cubic centimeter (particles/cm³).

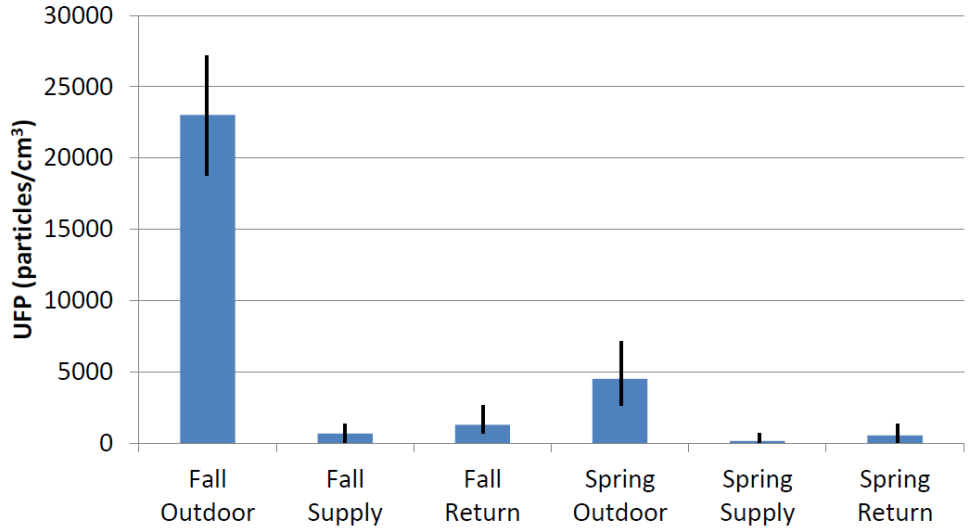


Figure 8. Plots of the median concentrations of Ultrafine Particles in outdoor areas surrounding HTMS in Spring 2019. The height of the solid bars represents the median concentration. The ends of the whiskers represent the 25th and 75th percentiles. Concentration is expressed in counts per cubic centimeter (particles/cm³).

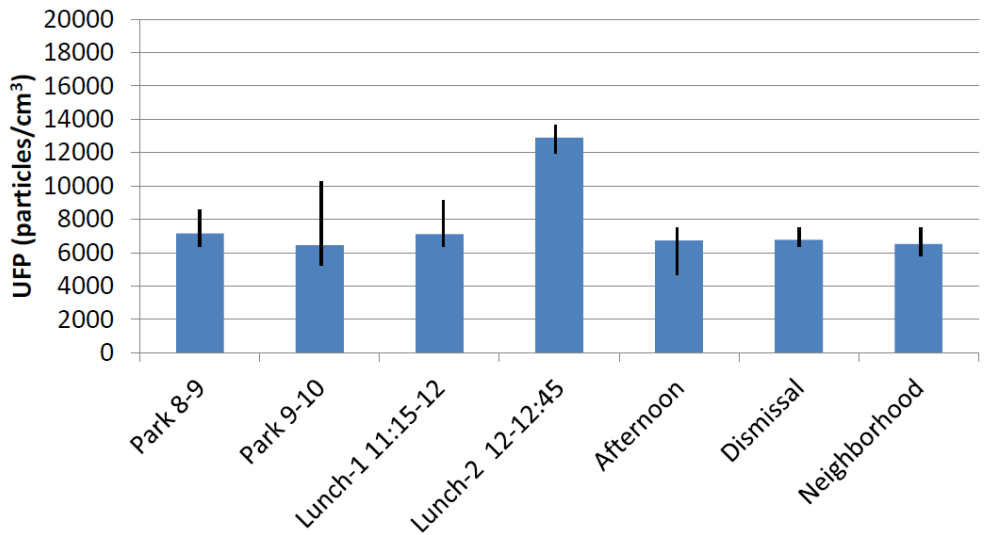


Figure 9. Plots of the median concentrations of the VOCs benzene and toluene in outdoor, supply, and return air locations of the HVAC system during Spring 2019. The height of the solid bars represents the median concentration. The ends of the whiskers represent the 25th and 75th percentiles. Concentration is expressed in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

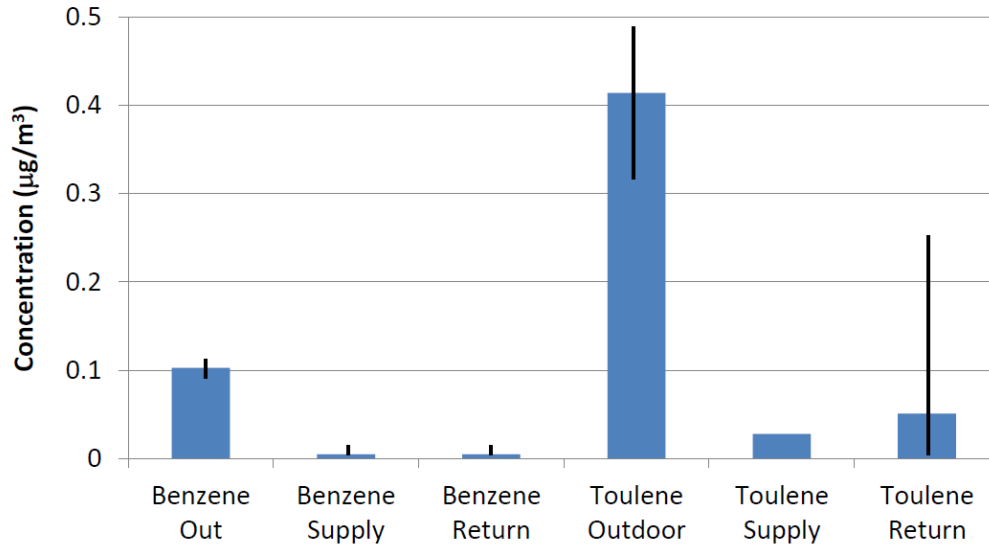


Figure 10. Plots of the median concentrations of the VOCs m-, p-Xylene and o-Xylene in outdoor, supply, and return air locations of the HVAC system during Spring 2019. The height of the solid bars represents the median concentration. The ends of the whiskers represent the 25th and 75th percentiles. Concentration is expressed in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

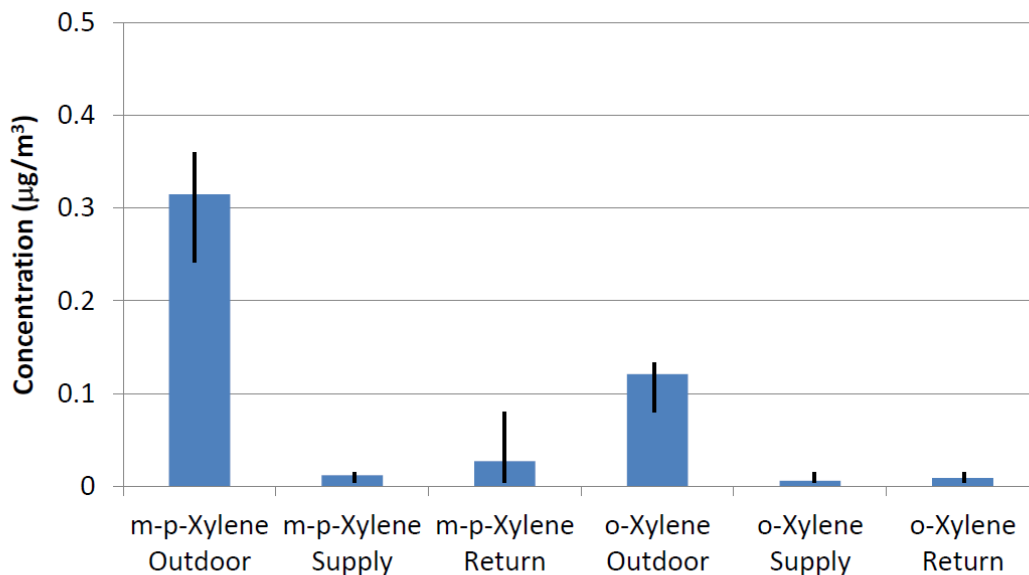
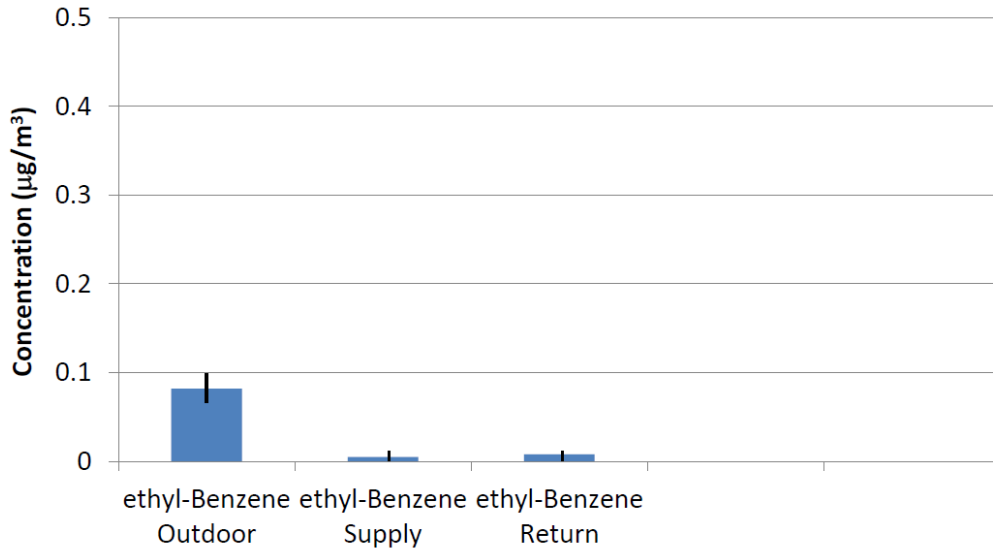


Figure 11. Plots of the median concentrations of the VOC ethylbenzene in outdoor, supply, and return air locations of the HVAC system during Spring 2019. The height of the solid bars represents the median concentration. The ends of the whiskers represent the 25th and 75th percentiles. Concentration is expressed in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).



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Other Matters Requiring Board Approval

Resolution Numbers 5856 through 5861

During the Committee of the Whole, Director Kohnstamm moved and Director Anthony seconded the motion to adopt amended Resolution 5856. The motion was put to a voice vote and passed unanimously (6-yes, 0-no), with Director Kohnstamm absent and Student Representative Paesler voting yes, unofficial.

Director Anthony moved and Director Bailey seconded the motion to amend Resolution 5856 by adding the following language to Recital G: "...lack of school bus egress from Harriet Tubman Middle School with the removal of the Flint Street overpass,". The motion was put to a voice vote and passed unanimously (7-yes, 0-no), with Student Representative Paesler voting yes, unofficial.

Director Kohnstamm moved and Director Anthony seconded the motion to amend Resolution 5856 by revising the language of Recital 3 as follows: "The Board agrees to busmit comments to ODOT during the Environmental Assessment public comment period."

During the Committee of the Whole, Director Anthony moved and Director Brim-Edwards seconded the motion to adopt Resolution 5857. The motion was put to a voice vote and passed unanimously (6-yes, 0-no), with Director Kohnstamm absent and Student Representative Paesler voting yes, unofficial.

Director Anthony moved and Director Bailey seconded the motion to amend Policy 6.50.010-P by replacing the word "avoid" with "mitigate" in the first sentence of paragraph I.5. The motion was put to a voice vote and failed (1-yes [Anthony], 5-no), with Director Kohnstamm absent and Student Representative Paesler voting no, unofficial.

Director Brim-Edwards moved and Director Anthony seconded the motion to amend Policy 6.50.010-P by adding the word "race" in the first sentence of paragraph I.5. The motion was put to a voice vote and passed unanimously (6-yes, 0-no), with Student Representative Paesler voting yes, unofficial.

Director Bailey moved and Director Brim-Edwards seconded the motion to amend Policy 6.50.010-P, paragraph I.3, to read as follows:

- 3) Schools and staff to submit field trip requests for review, and approval or denial, prior to any planned activities.
 - a. Principals shall have the authority to approve regular off-campus field trips, subject to Risk Management approval, occurring during the course of one school day.
 - b. All off-campus trips comprising more than one school day will be reviewed by Risk Management and approved by the supervising Area Assistant Superintendent.
 - c. Specific timelines, procedures, and requirements of this field trip approval process will be outlined in a related Administrative Directive.

During the Committee of the Whole, Director Kohnstamm moved and Director Anthony seconded the motion to adopt Resolutions 5859 through 5861 (Resolution 5858 withdrawn). The motion was put to a voice vote and passed unanimously (6-yes, 0-no), with Director Kohnstamm absent and Student Representative Paesler voting yes, unofficial.

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RESOLUTION No. 5856

PPS Comments on the Environmental Assessment of the I-5 Broadway-Weidler Facility Plan

RECITALS

- A. In 2012, the Oregon Department of Transportation (ODOT) and the City of Portland Bureau of Planning and Sustainability and the Bureau of Transportation developed the I-5 Broadway-Weidler Facility Plan in conjunction with the City's N/NE Quadrant Plan. The N/NE Quadrant Plan set goals and actions for the land use and development in north and northeast Portland, while the Broadway-Weidler Facility Plan was intended to improve safety and operations on I-5 in the vicinity of the Broadway/Weidler interchange. Key elements of the facility plan include:
1. Adding auxiliary lanes and full-width shoulders (within existing right-of-way).
 2. Rebuilding structures at Broadway, Weidler, Vancouver and Williams and adding a lid over the freeway.
 3. Moving the I-5 southbound on-ramp to Weidler.
 4. Adding new connections over the freeway for pedestrian and bicycle travel in the interchange area.
- B. In 2012, the Portland City Council and the Oregon Transportation Commission approved the Broadway-Weidler Facility Plan. The proposed plan includes substantial widening of I-5 immediately adjacent to Harriet Tubman Middle School, including extending travel lanes closer to the school and constructing new retaining walls.
- C. In 2016, ODOT concluded the Broadway-Weidler Facility Plan improvements were technically feasible, and proceeded with development of an Environmental Assessment (EA). The EA is intended to evaluate the benefits and impacts within the Project Area of two alternatives: one in which the project would move forward as planned (Build Alternative), and one in which the project would not be built (No-Build Alternative).
- D. The National Environmental Policy Act (NEPA) requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions. Based on the EA, the following actions can occur:
- a. If the agency determines that the action will not have significant environmental impacts, the agency will issue a Finding of No Significant Impact (FONSI). A FONSI is a document that presents the reasons why the agency has concluded that there are no significant environmental impacts projected to occur upon implementation of the action.
 - b. If the EA determines that the environmental impacts of a proposed action will be significant, an Environmental Impact Statement is prepared.
- E. ODOT's EA was published on February 15, 2019. The public comment period closes April 1, 2019. ODOT is required to take into consideration public health impacts in its analysis, and to use an equity lens in its planning processes. The historical legacy from ODOT ignoring health and equity concerns voiced decades ago about building a freeway to close to a school has cost PPS millions of dollars that were used to make the air inside Tubman safe for students.
- F. Although the proposed changes are immediately adjacent to PPS properties, in particular the Harriet Tubman Middle School, neither ODOT nor the City meaningfully engaged with PPS during the planning process to assess the potential impacts, either short-term or long-term, on the health

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of students and staff from environmental hazards or on the structural integrity of PPS facilities from incursions on PPS property during construction.

- G. An initial review of the EA by PPS staff has raised substantial questions about potential impacts on PPS properties, including risks to soil stability under the Harriet Tubman Middle School site during the construction process, increased air pollution, increased noise pollution, lack of school bus egress from Harriet Tubman Middle School with the removal of the Flint Street overpass, and shifts to traffic patterns in the vicinity of both Tubman and District headquarters.
- H. The materials that have been made publicly available to date, including the environmental assessments published only six weeks ago, provide insufficient evidence that the full scope of potential impacts from these projects has been adequately assessed.

RESOLUTION

1. Due to the potential significant negative short-term and long-term impacts of the proposed project to PPS property, students, staff, and stakeholders, the Board of Education (Board) believes that ODOT cannot legitimately issue a Finding of No Significant Impact (FONSI). Additional study and input is necessary to understand the extent of the impacts and develop mitigation strategies.
2. Therefore, the Board finds that a full Environmental Impact Statement for the proposed project is warranted and necessary to determine the potential impacts of the proposed I-5 construction on PPS properties, PPS students and staff, and the larger community.
3. The Board agrees to submit comments to ODOT during the Environmental Assessment public comment period.

December 03, 2019

Consent Agenda

Resolution 6006 was tabled prior to the start of the meeting.

Resolution 6007 was tabled and will be brought back to the next meeting.

As a committee of the whole, Director Scott moved and Director Lowery seconded a motion to amend Resolution 6008 to replace the word “privately” under section K to “indicated that”. The motion was put to a voice vote and passed unanimously (7-yes, 0-no), with Student Representative Latterell voting yes.

As a committee of the whole, Director Scott moved and Director Brim-Edwards seconded a motion to adopt Resolution 6008. The motion was put to a voice vote and passed unanimously (7-yes, 0-no), with Student Representative Latterell voting yes.

Director Lowery moved and Director Scott seconded a motion to amend the final sentence of the second paragraph in Resolution 6009, under the Structure section, to read “One or two student members will be appointed to a one-year term through a process defined by the District Student Counsel.” The motion was put to a voice vote and passed unanimously (7-yes, 0-no), with Student Representative Latterell absent.

Director Lowery moved and Director Bailey seconded a motion to amend Resolution 6009 to add “Members are expected to attend committee meetings. Persistent lack of participation may result in the termination of a member’s Board appointment.” The motion was put to a voice vote and passed unanimously (7-yes, 0-no), with Student Representative Latterell absent.

Director DePass moved and Director Scott seconded a motion to adopt Resolution 6009. The motion was put to a voice vote and passed unanimously (7-yes, 0-no), with Student Representative Latterell absent.

December 03, 2019

RESOLUTION No. 6008

PPS Comments on Status of Oregon Department of Transportation's "I-5 Rose Quarter Improvement Project"

RECITALS

- A. In 2012, the Oregon Department of Transportation (ODOT) and the City of Portland Bureau of Planning and Sustainability and the Bureau of Transportation developed the I-5 Broadway-Weidler Facility Plan in conjunction with the City's N/NE Quadrant Plan. The N/NE Quadrant Plan set goals and actions for the land use and development in north and northeast Portland, while the Broadway-Weidler Facility Plan was intended to improve safety and operations on I-5 in the vicinity of the Broadway/Weidler interchange. Key elements of the facility plan include:
 - a. Adding auxiliary lanes and full-width shoulders (within existing right-of-way).
 - b. Rebuilding structures at Broadway, Weidler, Vancouver and Williams and adding a lid over the freeway.
 - 3. Moving the I-5 southbound on-ramp to Weidler.
 - 4. Adding new connections over the freeway for pedestrian and bicycle travel in the interchange area.

- B. In 2012, the Portland City Council and the Oregon Transportation Commission approved the Broadway-Weidler Facility Plan. The proposed plan includes substantial widening of I-5 immediately adjacent to Harriet Tubman Middle School, including extending travel lanes closer to the school and constructing new retaining walls.

- C. In 2016, ODOT concluded the Broadway-Weidler Facility Plan improvements were technically feasible, and proceeded with development of an Environmental Assessment (EA). The EA is intended to evaluate the benefits and impacts within the Project Area of two alternatives: one in which the project would move forward as planned (Build Alternative), and one in which the project would not be built (No-Build Alternative).

- D. The National Environmental Policy Act (NEPA) requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions. Based on the EA, the following actions can occur:
 - a. If the agency determines that the action will not have significant environmental impacts, the agency will issue a Finding of No Significant Impact (FONSI). A FONSI is a document that presents the reasons why the agency has concluded that there are no significant environmental impacts projected to occur upon implementation of the action.
 - b. If the EA determines that the environmental impacts of a proposed action will be significant, an Environmental Impact Statement is prepared.

- E. ODOT's EA was published on February 15, 2019. The public comment period closed April 1, 2019. ODOT is required to take into consideration public health impacts in its analysis, and to use an equity lens in its planning processes. The historical legacy from ODOT ignoring health and equity concerns voiced decades ago about building a freeway too close to a school has cost PPS millions of dollars that were used to make the air inside Tubman safe for students and had health and environment consequences for our students and the surrounding community..

December 03, 2019

- F. Although the proposed project is immediately adjacent to PPS properties, in particular Harriet Tubman Middle School, neither ODOT nor the City meaningfully engaged with PPS during the planning process to assess the potential impacts, either short- or long-term, on the health of students and staff from environmental hazards of the freeway and the expansion or on the structural integrity of PPS facilities from incursions on PPS property during construction.
- G. An initial review of the EA by PPS staff raised substantial questions about potential impacts on PPS properties, including risks to soil stability under the Harriet Tubman Middle School site during the construction process, increased air pollution, increased noise pollution, lack of school bus egress from Harriet Tubman Middle School with the removal of the Flint Street overpass, and shifts to traffic patterns in the vicinity of both Tubman and District headquarters.
- H. In March 2019, the PPS Board of Education passed a resolution urging ODOT to move forward with a full Environment Impact Statement (EIS) to fully resolve questions around the potential impacts of the I-5 freeway and the proposed expansion on our students.
- I. In June 2019, ODOT convened a group of elected leaders and staff as well as community stakeholders to discuss the I-5 Rose Quarter Improvement Project in the Albina neighborhood.
- J. To date, this group has met five times and made no substantial progress to substantially address issues raised by Portland Public Schools and the Albina Vision or offer alternatives to the current project plan.
- K. At this time, the OTC has indicated that it plans to unilaterally take action at its December 17 public meeting without addressing any of the troubling and significant impacts that the widening will have on students and community health.
- L. Per Board Resolution 5272, the Board is committed to addressing issues of climate justice that affect our students.

RESOLUTION

- The Board of Education for Portland Public Schools opposes ODOT's efforts to move ahead with the Interstate 5 North of the Rose Quarter expansion in Albina without conducting a full Environmental Impact Statement (EIS) and addressing the long term health and environmental issues at Harriet Tubman Middle School caused by the I-5 freeway.
- The Board of Education for Portland Public Schools will work in partnership with Albina Vision Trust to understand the environmental and health impacts of the freeway for students in the Albina neighborhood and develop initiatives that mitigate the freeway's impact on students and their families in this neighborhood.
- The Board will work with the community to share information about the impacts of this freeway and the expansion with the legislature's Joint Committee on Transportation and other legislative leaders so that they understand the potential impacts of this project to Portland Public Schools' students and the wider Albina community.

RESOLUTION No. 6354

Protecting PPS Students, Staff, and Communities in Oregon Department of Transportation's I-5 Rose Quarter Project

RECITALS

- A. In 2012, the Oregon Department of Transportation (ODOT) and the City of Portland Bureau of Planning and Sustainability and the Bureau of Transportation developed the I-5 Broadway-Weidler Facility Plan in conjunction with the City's N/NE Quadrant Plan. The N/NE Quadrant Plan set goals and actions for the land use and development in north and northeast Portland, while the Broadway-Weidler Facility Plan was intended to improve safety and operations on I-5 in the vicinity of the Broadway/Weidler interchange. Key elements of the facility plan include:
 - a. Adding auxiliary lanes and full-width shoulders (within existing right-of-way).
 - b. Rebuilding structures at Broadway, Weidler, Vancouver and Williams and adding a lid over the freeway.
 - c. Moving the I-5 southbound on-ramp to Weidler.
 - d. Adding new connections over the freeway for pedestrian and bicycle travel in the interchange area.
- B. In 2012, the Portland City Council and the Oregon Transportation Commission approved the Broadway-Weidler Facility Plan. The proposed plan includes substantial widening of I-5 immediately adjacent to Harriet Tubman Middle School, including extending travel lanes closer to the school and constructing new retaining walls.
- C. In 2016, ODOT concluded the Broadway-Weidler Facility Plan improvements were technically feasible and proceeded with development of an Environmental Assessment (EA). The EA is intended to evaluate the benefits and impacts within the project area of two alternatives: one in which the project would move forward as planned (Build Alternative), and one in which the project would not be built (No-Build Alternative).
- D. The National Environmental Policy Act (NEPA) requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions. Based on the EA, the following actions can occur:
 - a. If the agency determines that the action will not have significant environmental impacts, the agency will issue a Finding of No Significant Impact (FONSI). A FONSI is a document that presents the reasons why the agency has concluded that there are no significant environmental impacts projected to occur upon implementation of the action.
 - b. If the EA determines that the environmental impacts of a proposed action will be significant, an Environmental Impact Statement is prepared.
- E. ODOT's EA was published on February 15, 2019. The public comment period closed April 1, 2019. ODOT is required to take into consideration public health impacts in its analysis and to use an equity lens in its planning processes. The historical legacy from ODOT ignoring health and equity concerns voiced decades ago about building a freeway too close to a school has had health and environment consequences for our students and the surrounding community and required PPS to spend millions in limited capital funds to make the air inside Tubman safe for students.
- F. Although the proposed project is immediately adjacent to PPS properties, in particular Harriet Tubman Middle School, neither ODOT nor the City meaningfully engaged with PPS or our families during the planning process to assess the potential impacts, either short- or long-term, on the health of students and staff from environmental hazards of the freeway and the expansion or

on the structural integrity of PPS facilities from incursions on PPS property during construction.

- G. I-5 is already built hazardously close to Harriet Tubman Middle School (HTMS) and has negative impacts on the air quality for students and staff. PPS spent more than \$10M to install air filtration systems when the school reopened in 2018 to mitigate the impacts of traffic on I-5.
- H. An initial review of the EA by PPS staff raised substantial questions about potential impacts on PPS properties, including risks to soil stability under the Harriet Tubman Middle School site during the construction process, increased air pollution, increased noise pollution, lack of school bus egress from Harriet Tubman Middle School with the removal of the Flint Street overpass, and shifts to traffic patterns in the vicinity of both Tubman and District headquarters.
- I. In March 2019 and again in December 2019, the PPS Board of Education passed resolutions 5856 and 6008 urging ODOT to move forward with a full Environmental Impact Statement (EIS) to fully resolve questions around the potential impacts of the I-5 freeway and the proposed expansion on our students.
- J. Representatives of Portland Public Schools and the Board of Education have continued raising concerns about potential air-quality impacts to Harriet Tubman Middle School students and the surrounding neighborhood and to support economic empowerment in the Albina neighborhood by investing in highway covers to enable redevelopment and reinvestment and improve neighborhood connectivity.
- K. To date, none of the concerns raised by Portland Public Schools has been addressed by ODOT; and in fact, at an Executive Steering Committee meeting in fall 2020, ODOT representatives opposed language that would require the project to result in air quality at Harriet Tubman Middle School that is safe for youth.
- L. In late spring 2021, Portland Public Schools conducted community outreach to Harriet Tubman Middle School families, as well as its feeder schools: Boise-Eliot, Irvington, Sabin and Dr. Martin Luther King Jr.
- M. An online survey was open from June 3-June 21, 2021, and the District also conducted a focus group. In general, the feedback from the community can be summarized under three themes: air quality for students, broader engagement, and relocation of HTMS. Given COVID-19 gathering restrictions and summer schedules, community engagement will be ongoing.
- N. The feedback regarding air quality included requests for improved indoor ventilation systems, identification of long-term impacts on students, and installation of highway covers.
- O. State and regional leaders have shared their concern for the negative impact the original freeway placement has had and that the freeway expansion will have on HTMS students and the community.
- P. On June 11, 2020, the PPS Board of Education unanimously approved Resolution 6130. In this resolution, the Board declared that the lives of Black students and our Black community matter and committed to working with the Superintendent and the Portland community to create the conditions for every student, especially our Black and Native students who experience the greatest challenges, to realize the vision of the Graduate Portrait.
- Q. The work of the Albina Vision Trust and the Black community in Portland to reclaim the Albina community is similar to the push for equitable access to public education, especially for our Black students and their families. This push has long been a key component of the civil rights movement and fight for racial justice and builds on the legacy of advocacy for Black children in Portland, and catalyzed by the social movements for Black Lives. Government Institutions like ODOT and PPS, have a moment, an opportunity to lead, not with race-neutral plans, but with an

anti-racist agenda that amplifies an intergenerational healing process among students, their families, and our community.

- R. Portland Public Schools appreciates that the State and other partners are working with PPS to find a solution to address the ongoing concerns about the air quality and construction disruption at Harriet Tubman Middle School.

RESOLUTION

- A. The Board of Education for Portland Public Schools will work in partnership with Albina Vision Trust, state and community leaders to understand the environmental and health impacts of the freeway for students in the Albina neighborhood and advocate for initiatives that mitigate the freeway's impact on students and their families in this neighborhood.
- B. The Board of Education for Portland Public Schools supports and urges federal investments to reconnect, revitalize and transform the Albina community to address the many harms caused by the original construction of the Interstate freeway and ensure a seamless, aligned project that addresses displacement, economic, and environmental racism, while supporting educational innovation and new economic opportunities for the community.
- C. If ODOT and the State proceed with the project that will compound the original negative health and environmental impacts on the students and neighboring community, the Board of Education and Superintendent for Portland Public Schools calls on state leaders and the project team to accept the responsibility for the harm they have caused and to mitigate the past and potential future harm to the health of students and staff at Harriet Tubman Middle School.
- D. Further, Portland Public Schools leadership demands that if the State moves ahead with the project that it commits to create a transformative infrastructure project for Historic Albina and to secure the funds to rebuild Harriet Tubman Middle School in a safe, healthy location in Historic Albina.



Harriet Tubman Middle School

Relocation: Overview

March 16, 2022





AGENDA

- ❑ Funding Update
- ❑ Community Engagement
- ❑ Review V.02 Due Diligence
- ❑ Discuss Co-Location Option
- ❑ Next Steps



Funding Update

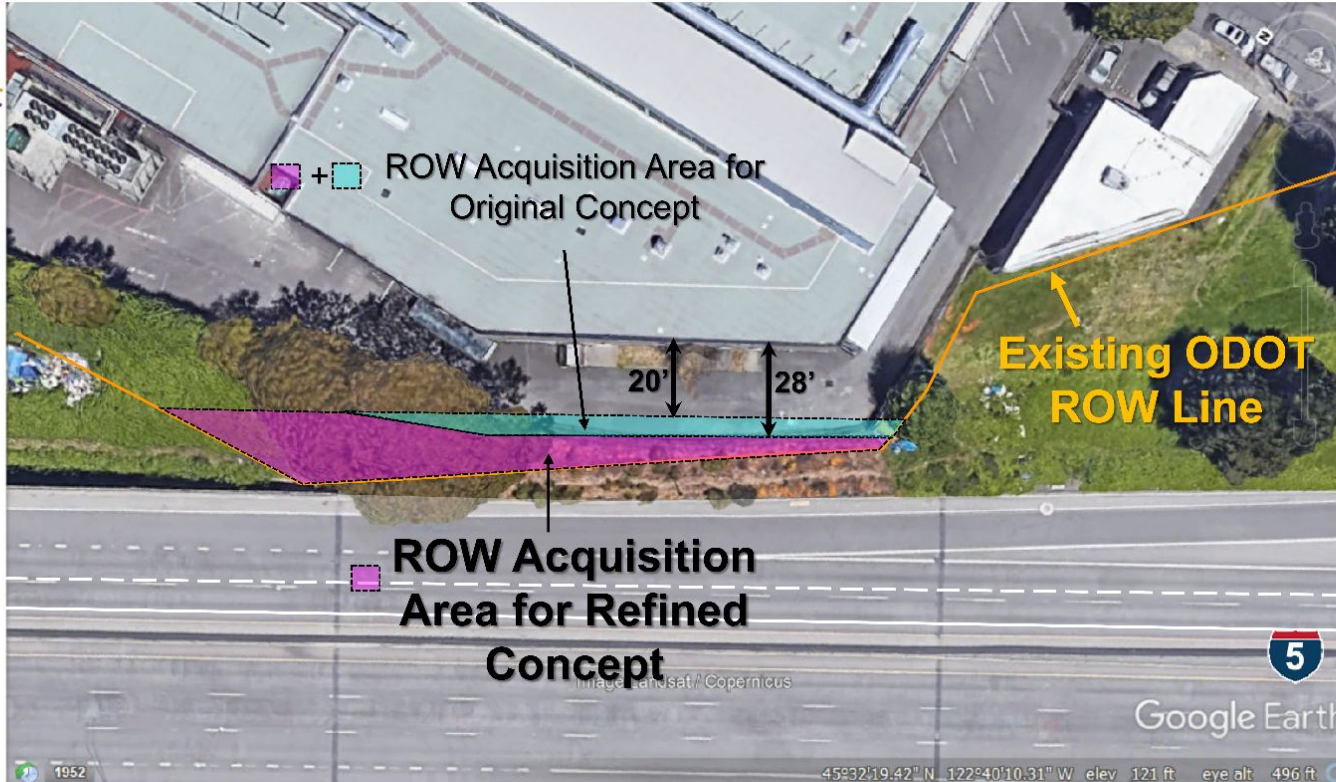
- Just two weeks ago, the Oregon Legislature approved a one-time general fund investment of **\$120 million** to relocate and rebuild Harriet Tubman Middle School (HTMS).
- Our commitment not to replace any existing elementary school as part of the relocation process was reiterated in meetings with legislative leadership throughout the development and approval of this funding request.



Community Engagement

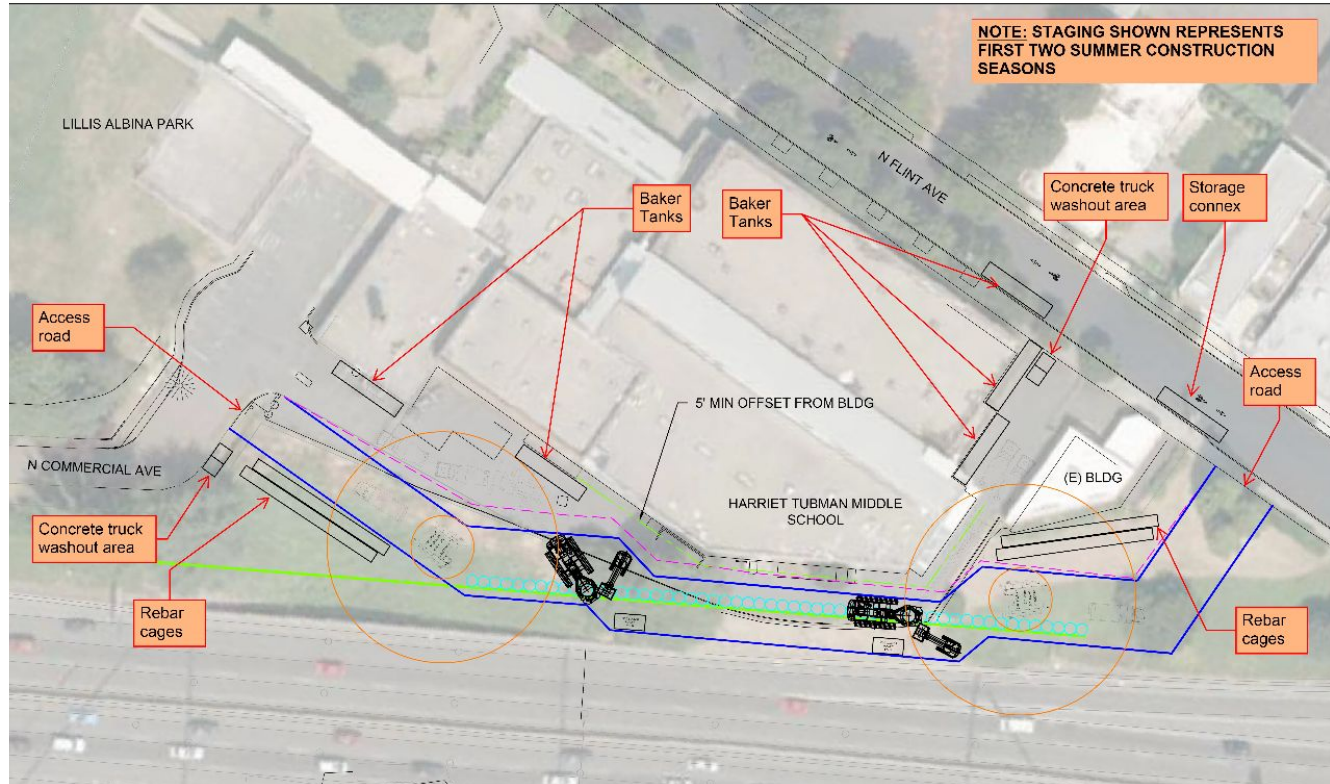


ODOT Right of Way Impacts at Harriet Tubman MS



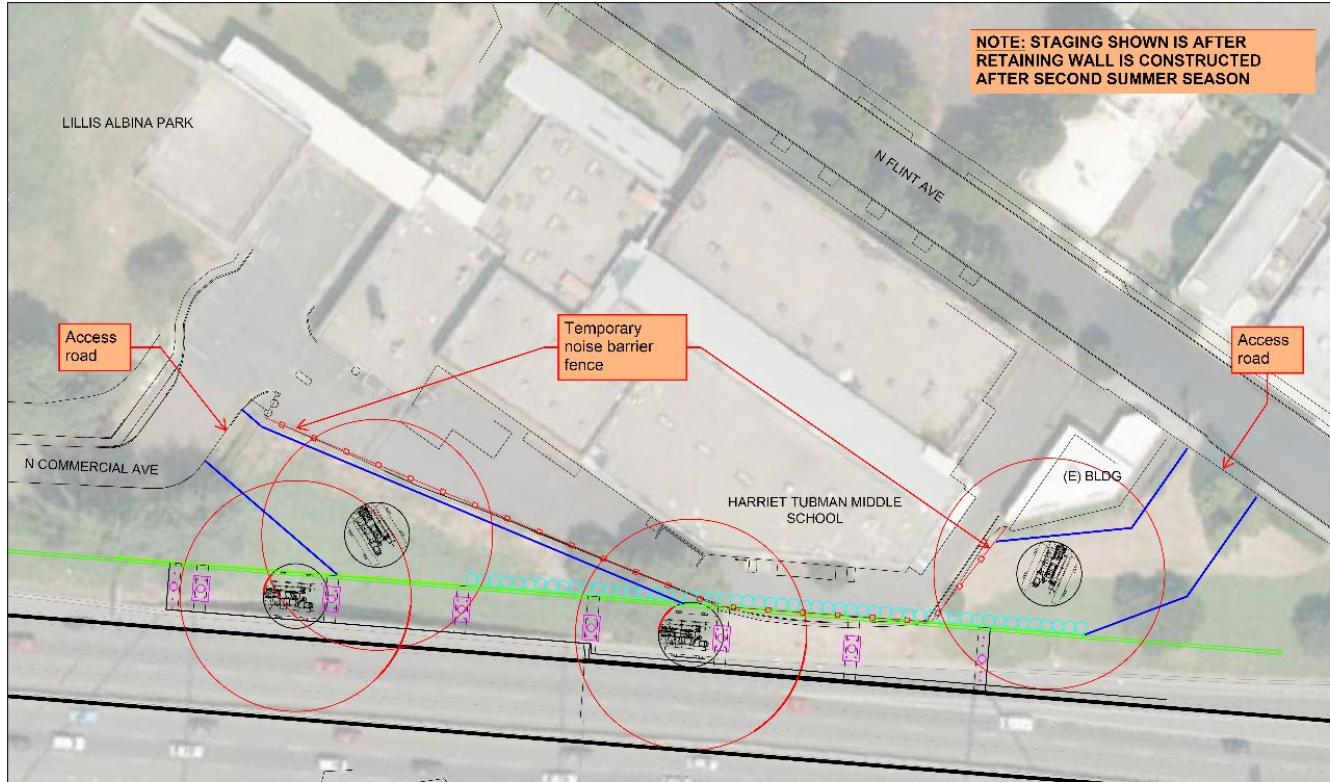


ODOT Access & Staging





ODOT Viaduct Access & Staging





ODOT Anticipated Impacts

- ❑ Due to the ODOT accelerated schedule, HTMS may not be viable for school occupancy during Eliot Viaduct construction due to noise, vibration, dust;
- ❑ The air handling system may require additional filter changes (cost: approx \$100,000 each change) due to the dust and debris created from the construction and increased truck and equipment traffic near the building;
- ❑ A swing site may be required (students would move twice) which has not been identified or accounted for in the draft budget;
- ❑ Because of the accelerated schedule by ODOT, costs are likely to be higher to expedite the design and construction schedules for a new site/building.
- ❑ The timeframe to make important decisions by the District will now become even more compressed, and the likelihood of incomplete information, and/or evaluating it incorrectly increases.
- ❑ The construction schedule of the retaining and sound walls during the summer months seems unrealistic to be completed without impacting the start of school in the Fall.

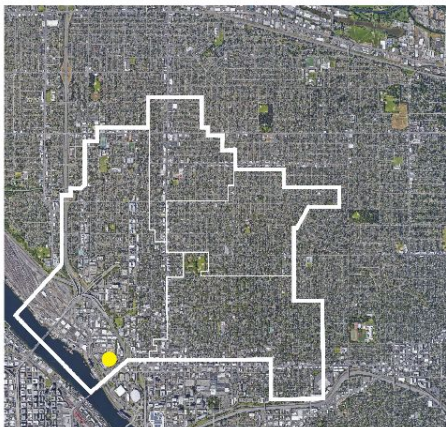


FIGURE 01 HARRIET TUBMAN CATCHMENT

BESC

- ❑ Located in the Southwestern area of the HTMS Catchment
- ❑ 10 acres supports a middle school program
- ❑ EX Zoning allows a school use
- ❑ Site & surroundings lack pedestrian-friendly infrastructure
- ❑ Residential areas are not immediately adjacent
- ❑ Availability: Ablina Vision Trust & County lease
- ❑ Staff is conducting a relocation study



FIGURE 02 KELLOGG MS FOOTPRINT ON BESC SITE

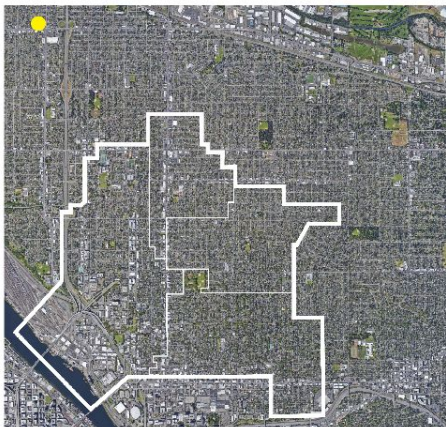


FIGURE 01 HARRIET TUBMAN CATCHMENT

KENTON

- ❑ Located 1.6 miles north of the HTMS catchment boundary
- ❑ 4 acres would make a middle school program challenging
- ❑ RM2 Zoning requires a conditional use review for a school use
- ❑ Site is located at a busy intersection: N. Lombard & N. Interstate
- ❑ Residential areas are immediately adjacent
- ❑ Available in 2024. Currently used by the Alliance program
- ❑ District owns the property

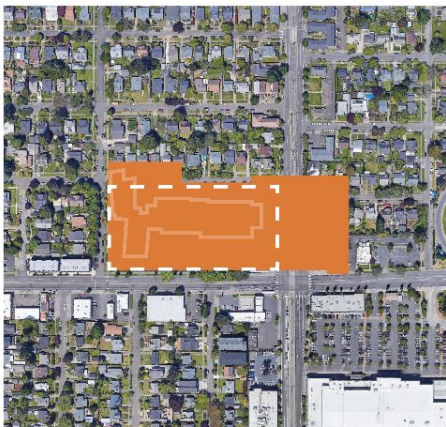


FIGURE 02 KELLOGG MS FOOTPRINT ON KENTON SITE

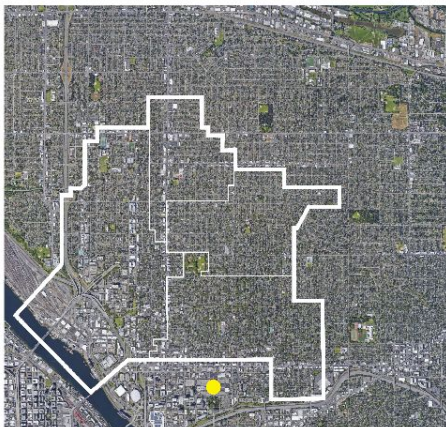


FIGURE 01 HARRIET TUBMAN CATCHMENT



FIGURE 02 KELLOGG MS FOOTPRINT ON LLOYD SITE

LLOYD CENTER

- ❑ Located 2 blocks south of the HTMS catchment boundary
- ❑ 20 acres supports a middle school program
- ❑ CX Zoning allows a school use
- ❑ Site is located in a current busy commercial zone
- ❑ Residential areas are not immediately adjacent
- ❑ Significant demolition & site preparation needed
- ❑ Likely to require complex property negotiations

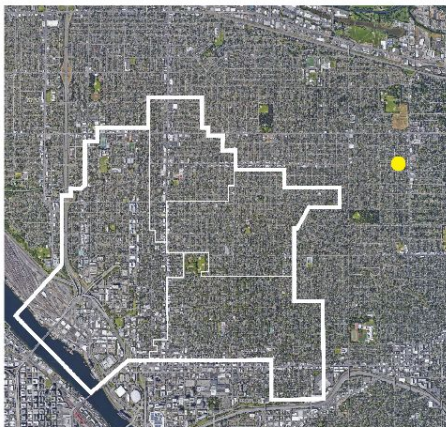


FIGURE 01 HARRIET TUBMAN CATCHMENT

MEEK

- ❑ Located < 1 mile from Northeastern HTMS catchment boundary
- ❑ 5 acres supports a well-planned middle school program
- ❑ R5 Zoning requires a conditional use review for a school use
- ❑ Low traffic streets & well connected to the neighborhood
- ❑ Residential areas are immediately adjacent
- ❑ Available in 2024. Currently used by the Alliance program
- ❑ District owns the property

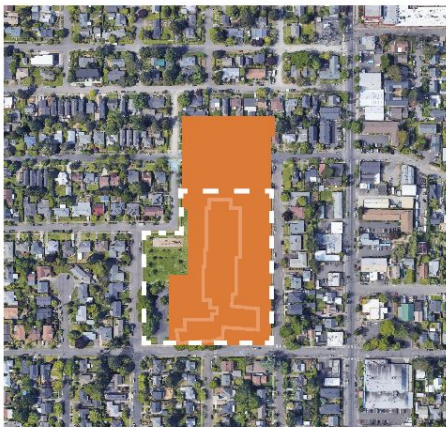


FIGURE 02 KELLOGG MS FOOTPRINT ON MEEK SITE

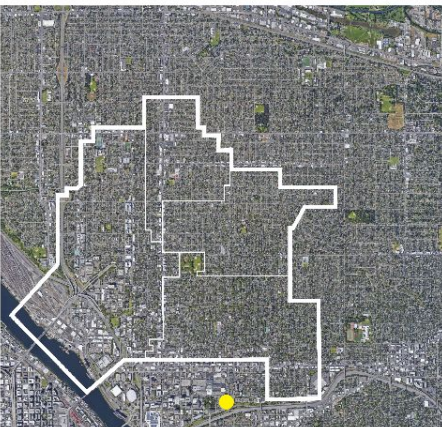


FIGURE 01 HARRIET TUBMAN CATCHMENT



FIGURE 02 KELLOGG MS FOOTPRINT ON 1380 NE MULTNOMAH SITE

1380 MULTNOMAH

- ❑ Located 3 blocks south of the HTMS catchment boundary
- ❑ 6.51 acres (combined) supports a middle school program
- ❑ Western 4.5 acre parcel is for sale
 - Size of site could have an impact to athletics program
- ❑ CX Zoning allows a school use
- ❑ Site is located in a current busy commercial zone
- ❑ Residential areas are not immediately adjacent
- ❑ Pedestrian access and site safety is a concern

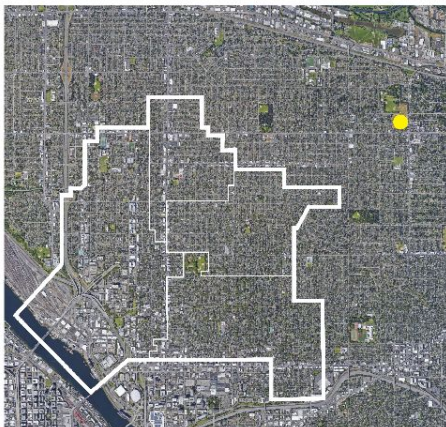


FIGURE 01 HARRIET TUBMAN CATCHMENT

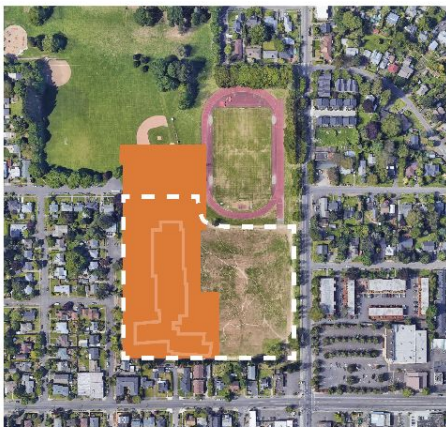


FIGURE 02 KELLOGG MS FOOTPRINT ON WHITAKER-ADAMS SITE

WHITAKER-ADAMS

- ❑ Located < 1 mile from Northeastern HTMS catchment boundary
- ❑ 10 acres supports a middle school program
- ❑ Site is Zoned both CM2 and R5
 - CM2: allows a school use, R5: conditional use review
- ❑ Site is located at a busy intersection
- ❑ Residential areas are immediately adjacent
- ❑ Site is cleared
- ❑ District owns the property



Feedback/Next Steps



Workplan & Decision Milestones



February 1	Staff Due Diligence Document v01
Mid February	Narrow Down Sites for Further Review
March 1	Due Diligence v02
Mid March	Narrow Down Site Options to Viable
By April 1	Due Diligence v03
May	Final Site Selection Decision