



January 24, 2017





Welcome





Districtwide Public Opinion Survey

Lisa Grove Anzalone Liszt Grove Research





Addressing Health & Safety

Two ways bond addresses health & safety:

- •Modernization and repair of 3 high schools and one middle school
 - Comprehensively addresses <u>all</u> health & safety areas

•Additional targeted health & safety investments in areas we need to address now, before all schools are fully modernized





Modernizations

Continuing PPS' long-range plan to update all schools, either through modernizations and additions, or full rebuilds of the following schools:

- •Benson Polytechnic High School
- Lincoln High School
- •Madison High School
- •Kellogg Middle School



Benson Polytechnic High School



BENSON POLYTECHNIC BOARD OVERVIEW / JANUARY 24, 2017



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PROJECT OVERVIEW /



CONSTRUCTION BUDGET \$122 Million PROJECT BUDGET \$202 Million STUDENT DESIGN CAPACITY 1,700 PROPOSED BUILDING AREA +/- 368,000 SF

KEY PROJECT CHALLENGES

- + Historic landmark
- + Constrained urban site
- + Extensive health and safety upgrades required, incuding seismic upgrade of unreinforced masonry (URM) buildings and providing universal ADA access throughout campus
- + Phased construction with student occupancy



MASTER PLAN COMMITEE (MPC) PROCESS /

RECENT WORKSHOP ACTIVITIES

- + Guiding Principles
- + Preferred master plan schemes
- + CTE program studies
- + Building design studies (Schemes A-J)
- + Phasing overview

UPCOMING ACTIVITIES

- + Design refinement
- + Ed Spec development
- + Community partnerships

Innovative education delivery should help inform the vision for the modernization of Benson

AUTOMOTIVE & AVIATION

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MPC GUIDING PRINCIPLES /



- 1. <u>Honor the unique history and culture</u> of Benson Polytechnic High School.
- 2. Engage with the local business, government, and post-secondary partners to <u>create strong connections</u> between education and industry.
- 3. <u>Provide hands-on, project-based learning</u> opportunities that are imbued with rigor and relevancy.
- 4. <u>Provide agile, flexible, and adaptable facilities</u> that support changing educational needs.
- 5. Provide learning environments that inspire creativity and collaboration among students.
- 6. Support a <u>comprehensive educational experience</u> for students.
- 7. <u>Celebrate diversity</u> and provide a sense of inclusion and belonging among students and families.
- 8. Position Benson Polytechnic as a <u>national model for STEAM and Career</u> <u>Technical Education (CTE)</u>.





PRE-DESIGN DILIGENCE /





INFORMATION GATHERING

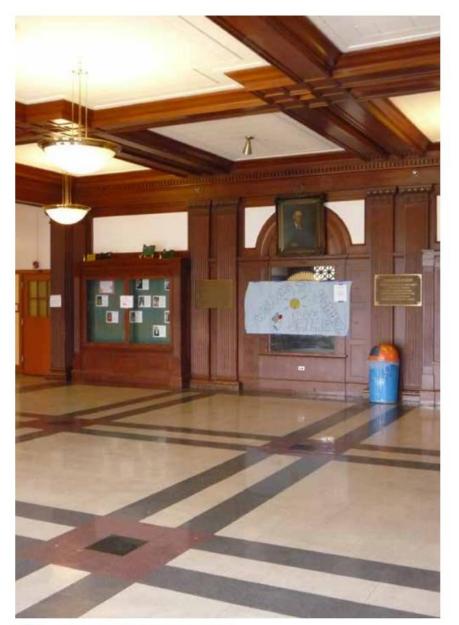
- + Review of as-built documents provided by PPS
- + Consultant site visits
- + Historic renovation assessment
- + Systems assessments (MEP, structural, acoustic, theatrical, etc.)
- + Sound engineer testing of CTE shops
- + Phase 1 Environmental Site Assessment
- + Detailed equipment survey
- + Interviews with over 20 departments, including all Career Technical Education (CTE) department heads, alumni, and administration.

ESTIMATE COORDINATION

- + Heavy Remodel
- + Medium Remodel
- + Light Remodel
- + Demolition
- + On-site and Off-site Improvements







CONTINUING EFFORTS

- + Development of Benson Polytechnic High School Focus Option Ed Spec
- + Design refinement
- + Building survey and photo documentation
- +BIM model
- + Geotechnical soils investigation
- + Phase 2 Environmental Site Report
- + Testing (structural, acoustic, etc.)
- + Ongoing student and staff engagement





HEALTH & SAFETY /



CATEGORIES

- 1. Water Quality: Modernization would include replacement of plumbing piping and fixtures.
- 2. Fire /Life Safety: Aged fire alarm and sprinkler systems will be upgraded for improved safety.
- 3. Asbestos: Abatement and removal.
- 4. Lead Paint: Abatement and removal.
- Building Envelope: Modernization would upgrade exterior walls, windows and roof to repair damage, improve energy efficiency and increase durability.
- ADA: Substantial upgrades to make all areas of the school universally accessible and compliant with current codes.
- Radon: Modernization would provide a new radon mitigation system below new foundations.





HEALTH & SAFETY /



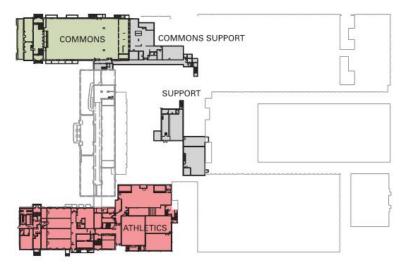
CATEGORIES (...continued)

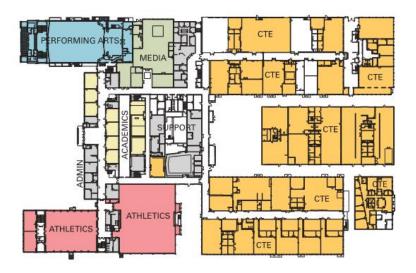
- 8. Seismic: URM buildings and other structures would receive a complete structural upgrade to meet current building codes.
- Security Systems/Fencing: Secure entry and video surveillance system upgrades to control access. Exterior service access and central plazas to be fenced and secured during school hours.
- Auditorium/Stage: Aging theatrical lighting and rigging systems to be updated for improved safety and maintainability.





EXISTING PROGRAM DIAGRAM /





LOWER LEVEL







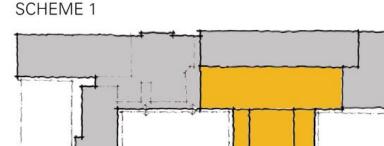


UPPER FLOOR

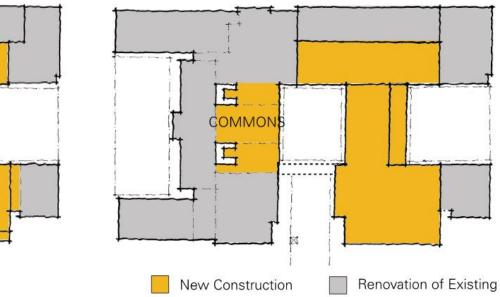
GROUND FLOOR



DESIGN APPROACH / EXISTING RENOVATION & NEW CONSTRUCTION



SCHEME 2



COMMON THEMES

+ New Commons at the heart of the school.

COMMONS

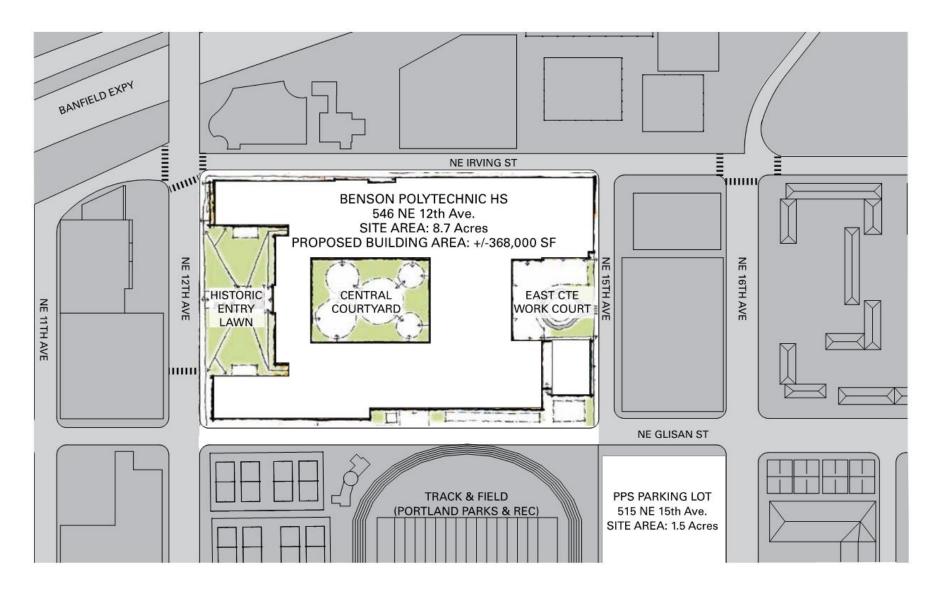
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- + Maintaining and modernizing historic buildings to the west and north.
- + Providing a protected courtyard at the center and a shared work courtyard to the east.
- + Addressing service and delivery access from the east and south.
- + Integrating academic classrooms and CTE shops within the school for better collaboration.
- + Enhancing daylighting, transparency, and natural ventilation.
- + Providing flexible and adaptable spaces that will meet the needs of Benson Tech now and in the future.
- + Balancing program, budget and phasing considerations.





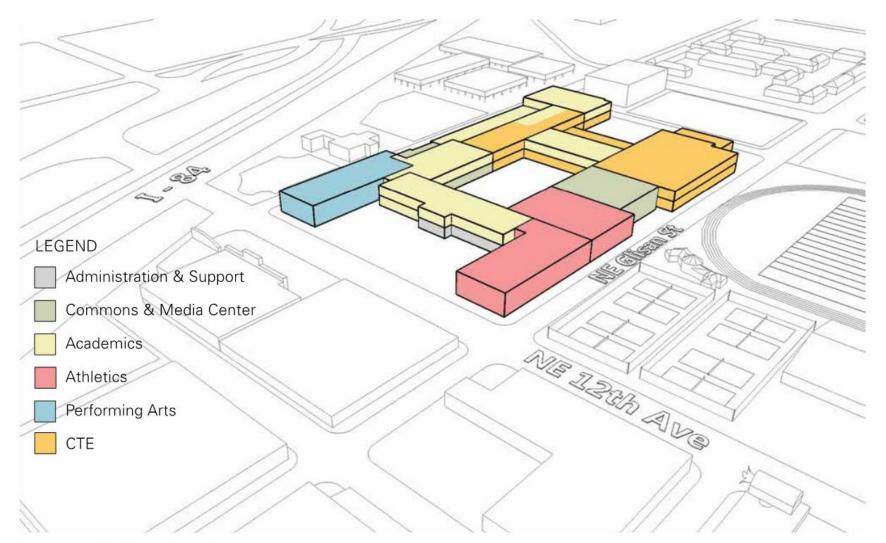
SCHEME 1 / SITE PLAN





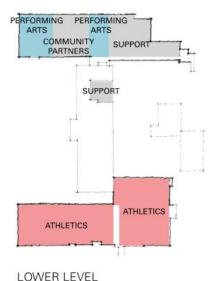


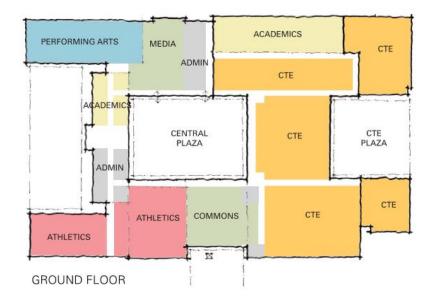
SCHEME 1 / MASSING DIAGRAM



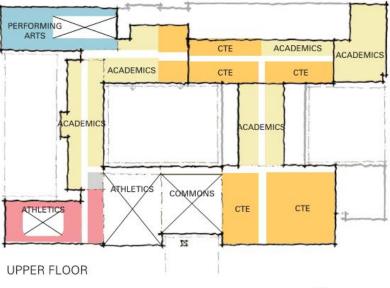


SCHEME 1 / PLAN DIAGRAM





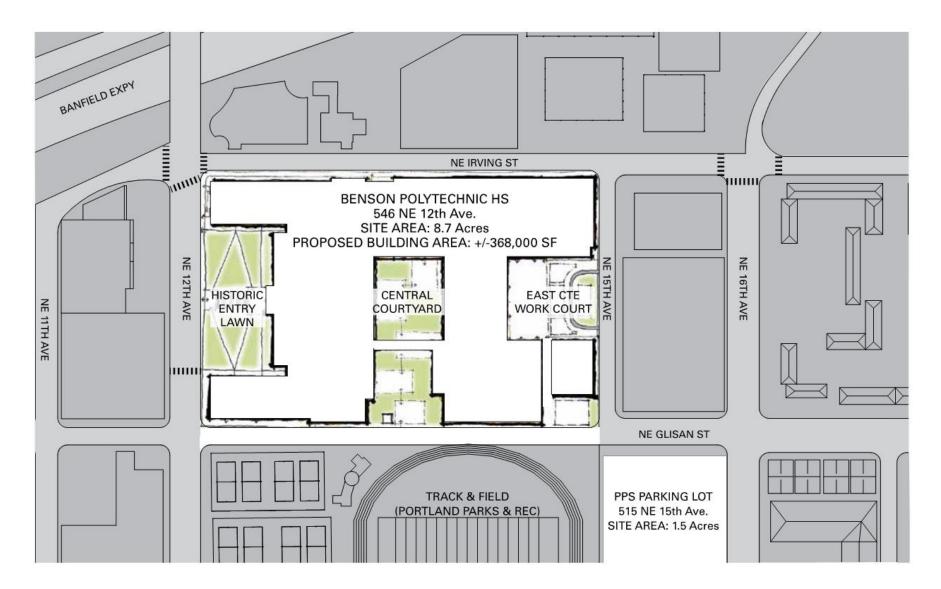








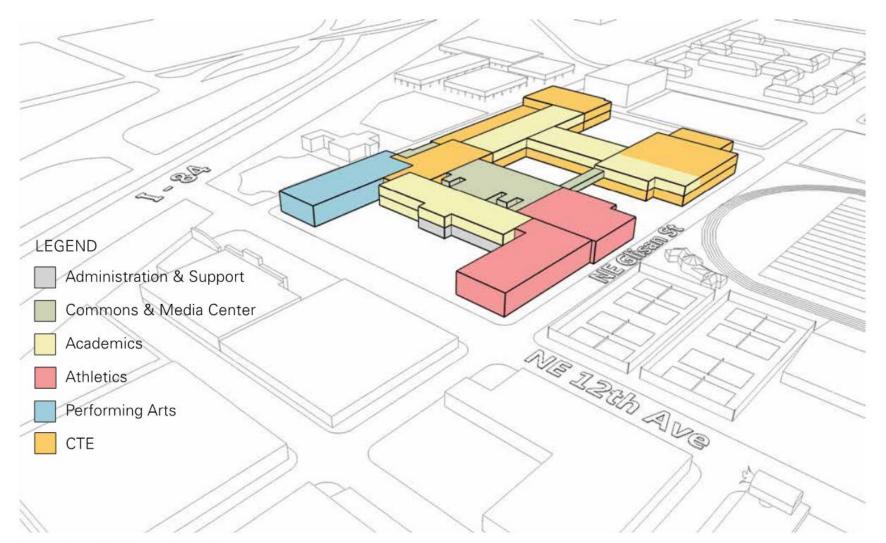
SCHEME 2 / SITE PLAN





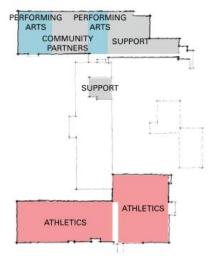


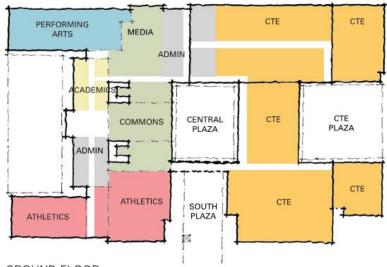
SCHEME 2 / MASSING DIAGRAM





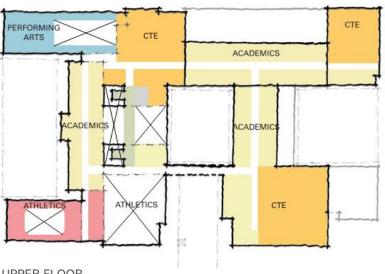
SCHEME 2 / PLAN DIAGRAM





LOWER LEVEL











UPPER FLOOR

PHASING / ASSUMPTIONS





INITIAL PHASING ASSUMPTIONS FOR BENSON POLYTECHNIC HS

- + All Benson Tech programs will remain on-site during construction.
- + If off-site options are presented or available before the start of construction, reductions in swing costs or durations may be achieved.
- + Maximize efficiency in programs to minimize swing space needs.
- + No increase to student capacity before and during construction.
- + Non-Benson programs will be relocated off-site before the start of construction.
- + Utilize adjacent PPS parking site for swing or contractor space, if possible.
- + Main gym and theater will each be unavailable for one school year.
- + Swing of Main Gym and Auxiliary Gym will allow P.E. programs to continue to operate on-site.







Lincoln High School



BORA

Portland Public Schools

Lincoln High School: Pre-Design / Due Diligence Study

PPS Board Meeting January 24, 2017



Lincoln High School Pre-Design/Diligence Study

Guiding Principles

- Health & Safety And Security Are Top Priorities
- Student-Centered Facilities As Outlined In The 2012 LRFP
- Quality And Quantity Of Space As Outlined In The Ed Specs (Including CTE)
- Minimize Disruptions Due To Construction Activities
- Maximize Long Term Operational Efficiency & Sustainability
- Achieve All Of These In The Most Cost Effective Manner Possible
- Invest Limited Resources Wisely





Lincoln High School Pre-Design/Diligence Study Process

- Health & Safety Analysis Of Existing Facilities
 - Safety And Security
 - Seismic / Structural
 - Accessibility
 - Hazardous Materials
 - Building Systems Assessment (Mechanical, Electrical, Data, Plumbing Fire Protection)
- Existing Space And Site Analysis
- Program Verification Per Ed Spec For Comprehensive High School for 1700 Students
- Land Use Planning + Code Compliance
- Site Survey And Geotechnical Analysis
- Develop Building + Site Design Concepts Including Building Systems
- Develop Construction Logistics And Phasing Scenarios
- Develop Cost Estimates for Each Option





Lincoln High School Key Challenges

- No Viable Off-Site Swing Option Requiring Temporary Swing School To Be Constructed on Track and Field
- Location Within The Central City 2035 Plan
- Constrained Site In Dense Urban Setting
- Utility Easements Running Through Site Creating "No Build Zones"
- Sloped Site Topography Requiring Extensive Grading For Accessibility
- Poor Soils Requiring Deep Foundation Systems

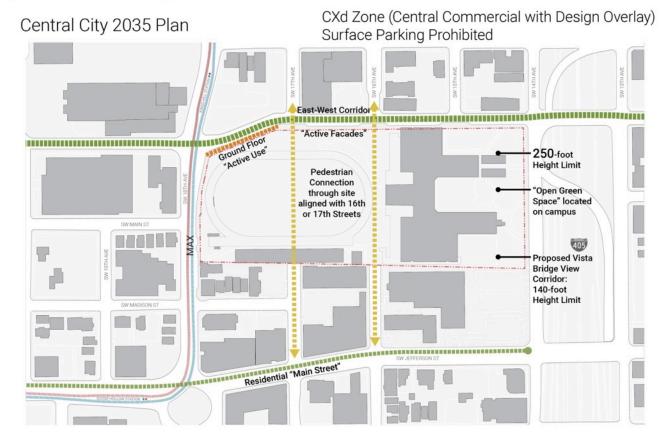


Existing Lincoln High School: 180,912 Sf Required 2017 Ed Spec: 281,370 Sf

- Existing Mechanical, Electrical , Plumbing, Data And Fire Protection Systems Are Outdated And Need To Be Replaced
- Existing Building Needs Full Seismic Upgrade







Lincoln High School Challenges

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Lincoln High School Challenges

Utility Easements at 16th and 17th Avenue

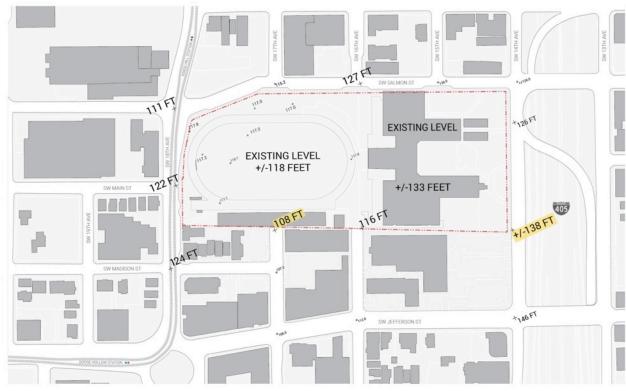


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Lincoln High School Challenges

Site Plan Existing Grades + Soils



Geotechnical Soil Report

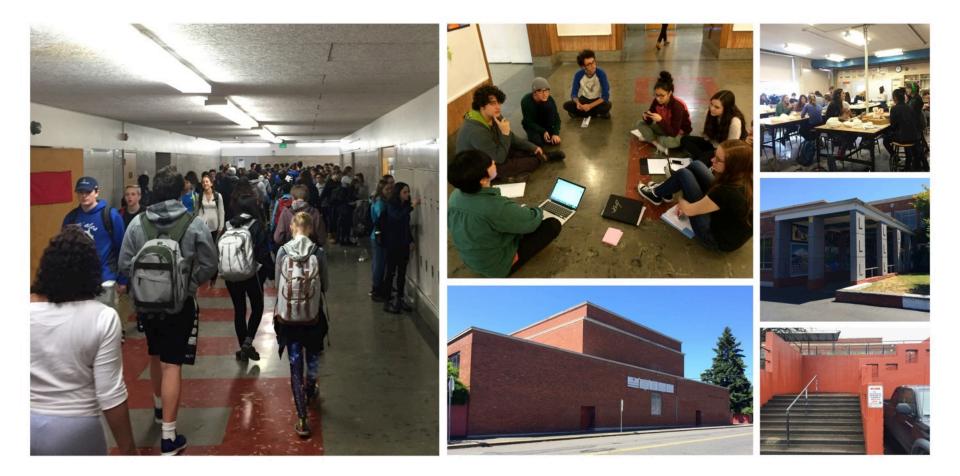
- 35 to 40 ft of variable fill soils (undocumented fill of Tanner Creek)
- Native layer of medium stiff to very stiff silt and medium dense to dense sand
- Gravel at 95ft
- Groundwater at depths
 of 70ft or more

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Lincoln High School Existing Building



Lincoln High School Existing Building Analysis

Existing SF vs. Ed Spec

Existing Lincoln High School: 180,912 SF Required 2017 Ed Spec: 281,370 SF

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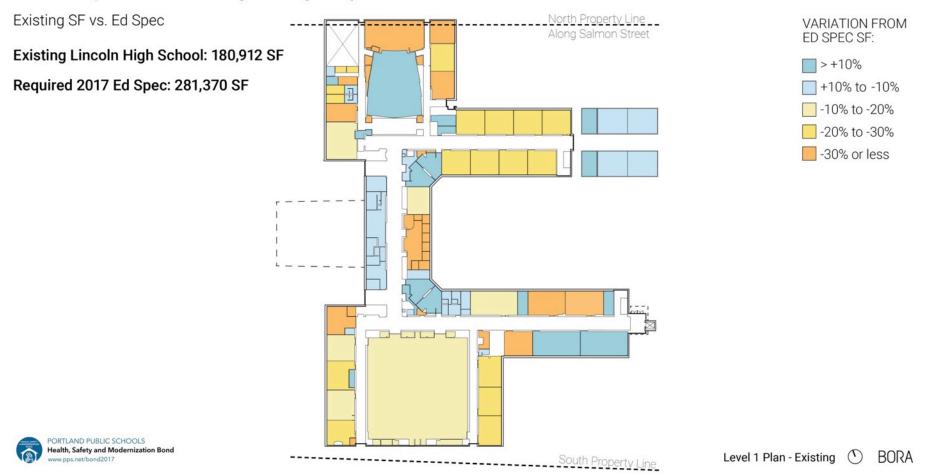
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Level 0 Plan - Existing 🕚 BORA



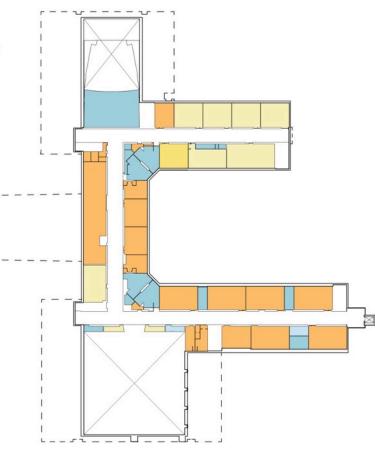
Lincoln High School Existing Building Analysis

Lincoln High School Existing Building Analysis

Existing SF vs. Ed Spec

Existing Lincoln High School: 180,912 SF

Required 2017 Ed Spec: 281,370 SF







Level 2 Plan - Existing 🕚 BORA

Lincoln High School Existing Systems Analysis

HVAC Systems

Plumbing Systems

Fire Protection Systems

Electrical Systems

IT/Telecom Systems

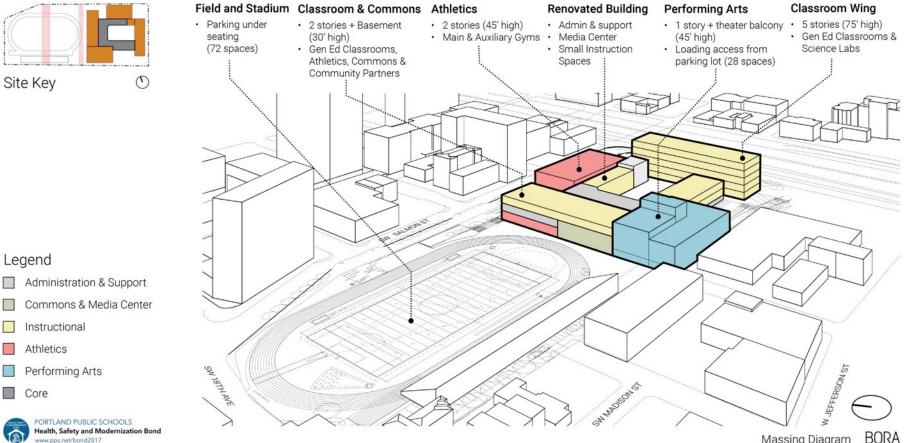
Seismic





Lincoln High School **Pre-Design Options**

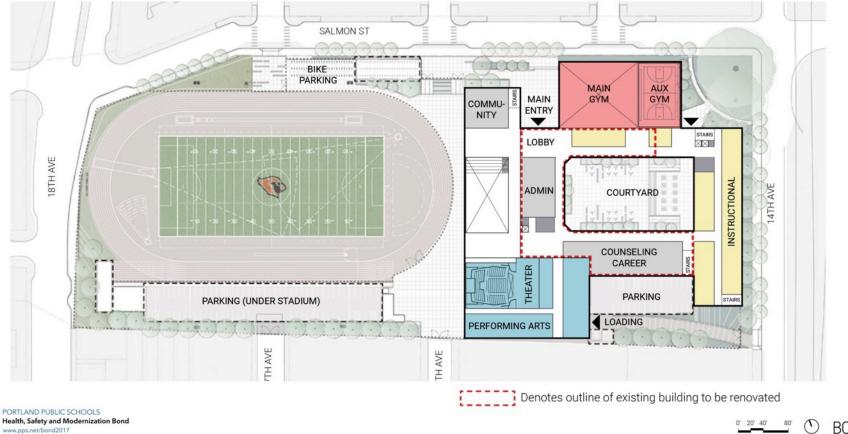
Renovation + Addition



BORA Massing Diagram

Lincoln High School Site Plan

Renovation + Addition



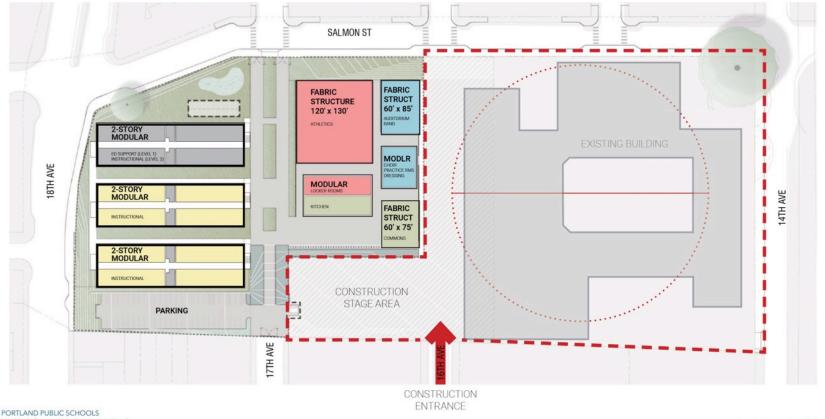
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Lincoln High School Site Plan

Renovation + Addition: Swing Site



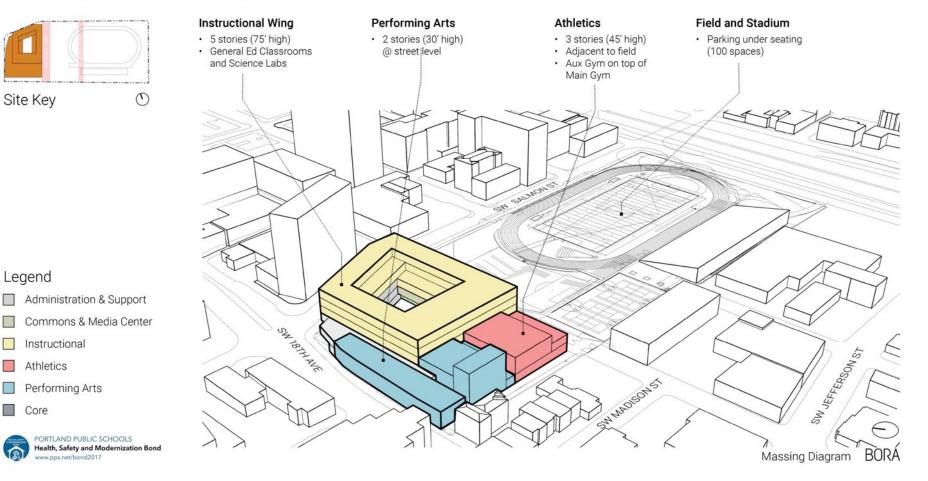
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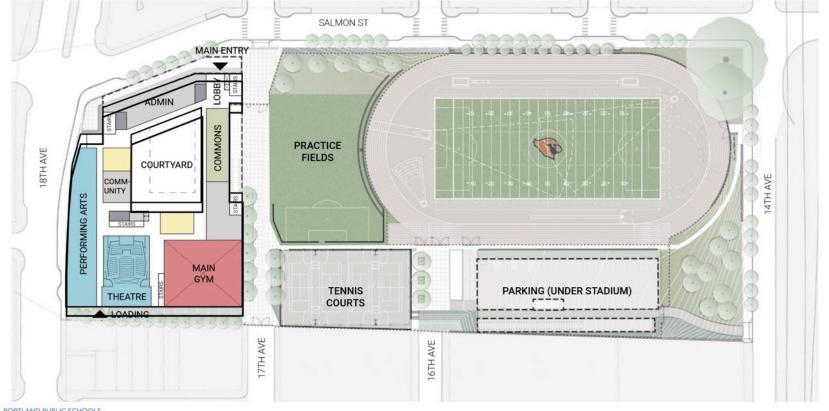
Lincoln High School Pre-Design Options

Full Replacement: Horizontal



Lincoln High School Site Plan

Full Replacement: Horizontal



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0' 20' 40' 80' O BORA

Lincoln High School **Pre-Design Options**

Site Key

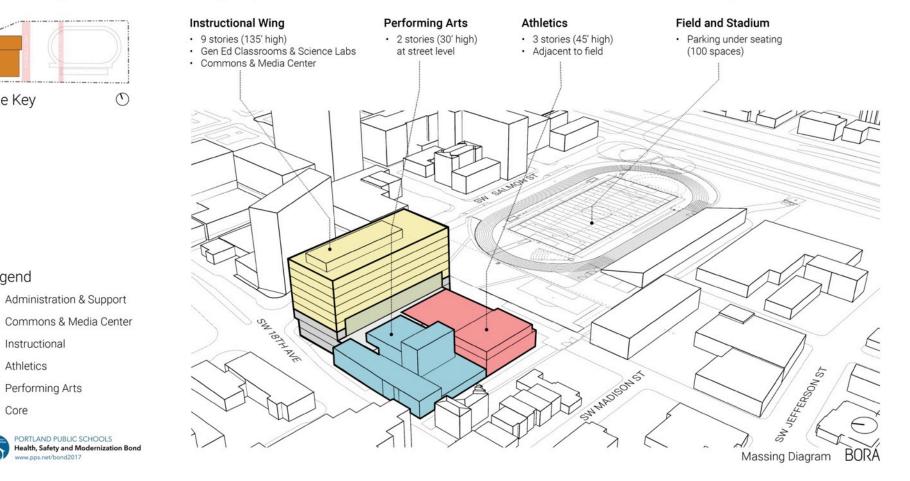
Legend

Athletics

Core

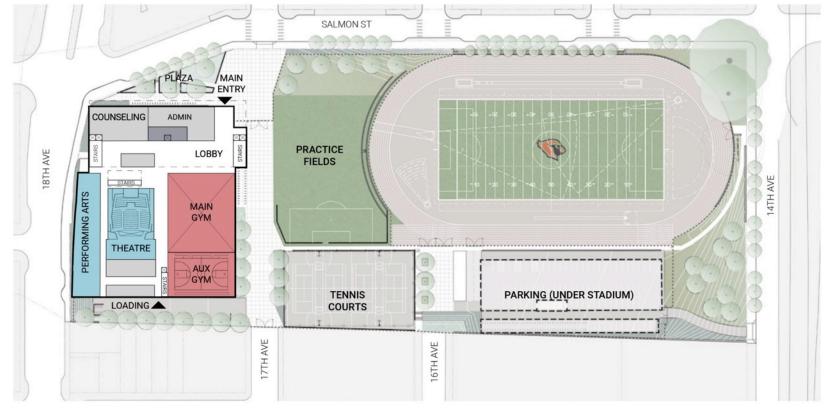
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Lincoln High School Site Plan

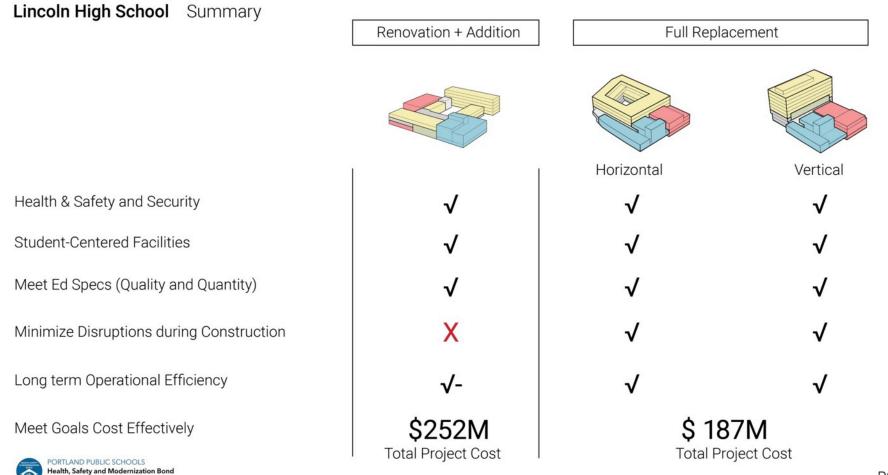
Full Replacement: Vertical



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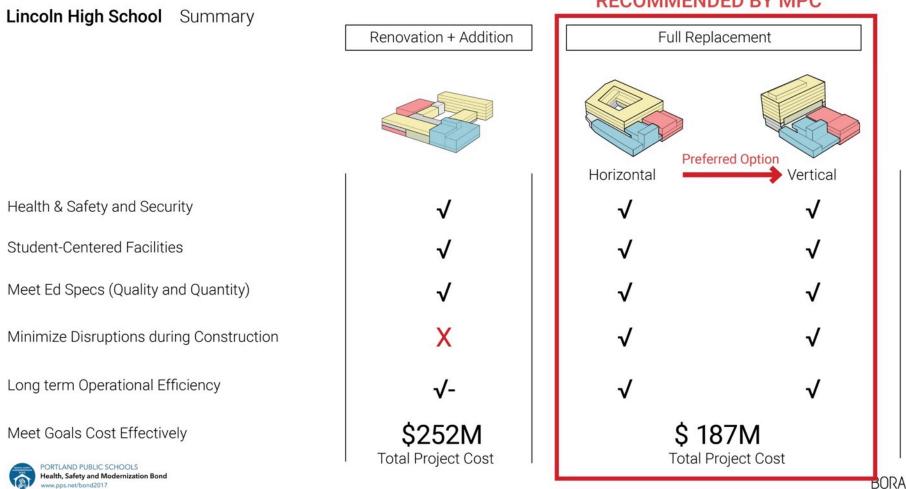
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RECOMMENDED BY MPC



PORTLAND PUBLIC SCHOOLS Health, Safety & Modernization Bond

Madison High School



Madison High School Revitalization Master Planning and Due Diligence



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BLRB architects

Madison High School Challenges

- The Madison HS Story
 - The outdated school does not encourage the community to connect across cultural barriers
 - The uninviting and unwelcoming building exterior do not encourage students to attend their neighborhood high school
 - The building and site do not integrate with the neighborhood or adjacent park thereby discouraging community connection and a sense of being safe
 - The school structure and building systems limit expansion of existing programs, development of new, or the agility to adapt in the future.





Pre-Design Due Diligence

- More in-depth look at building & site
 - Safety and Security analysis
 - Phase 1 Environmental Assessment
 - Arborist review of white oaks
 - Geotechnical analysis
 - Structural destructive testing
 - Mechanical, electrical, and plumbing
 - Asbestos location verification
- School program analysis
 - Comparison with PPS Comprehensive HS Educational Specification
 - Determine with staff if program needs now and in the future are sufficient
 - Identifying optional priorities with MPC





Madison High School Health & Safety

- Water Quality: Replace plumbing piping, fixtures and mechanical system to meet current standards
- Fire/Life Safety: Upgrade fire alarm and sprinkler system
- Asbestos: Abate and removal floors, ceilings and walls
- Building Envelope: improve energy efficiency and durability
- ADA: Improve access at entry and from south east athletic fields
- Radon: Mitigation measures in new construction
- Seismic: Whole building reinforcement to meet current code
- Auditorium/Stage: Replace outdated lighting and rigging to improve safety



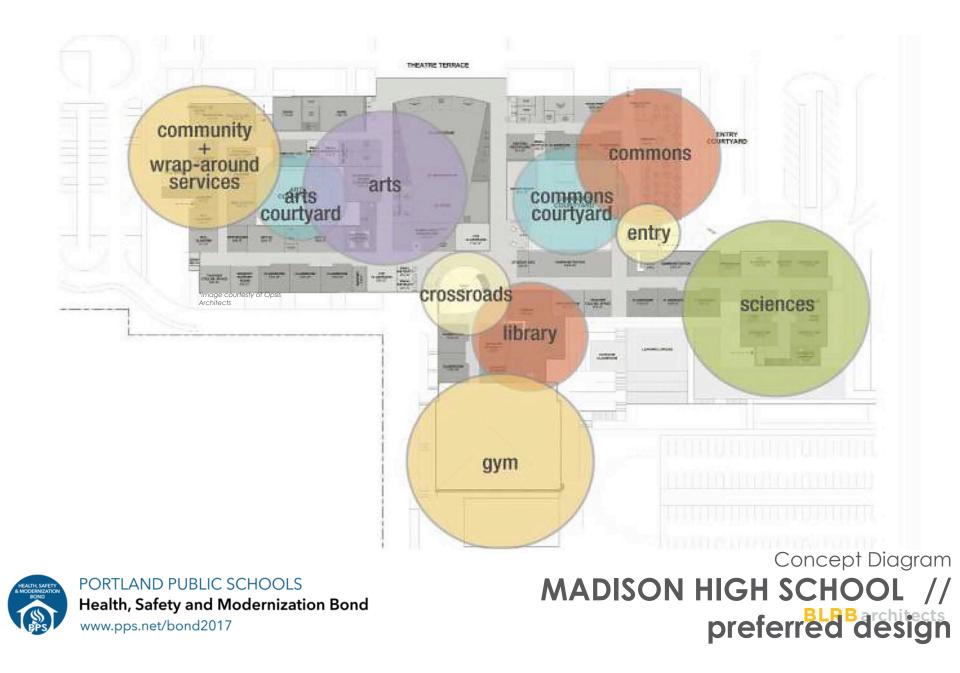


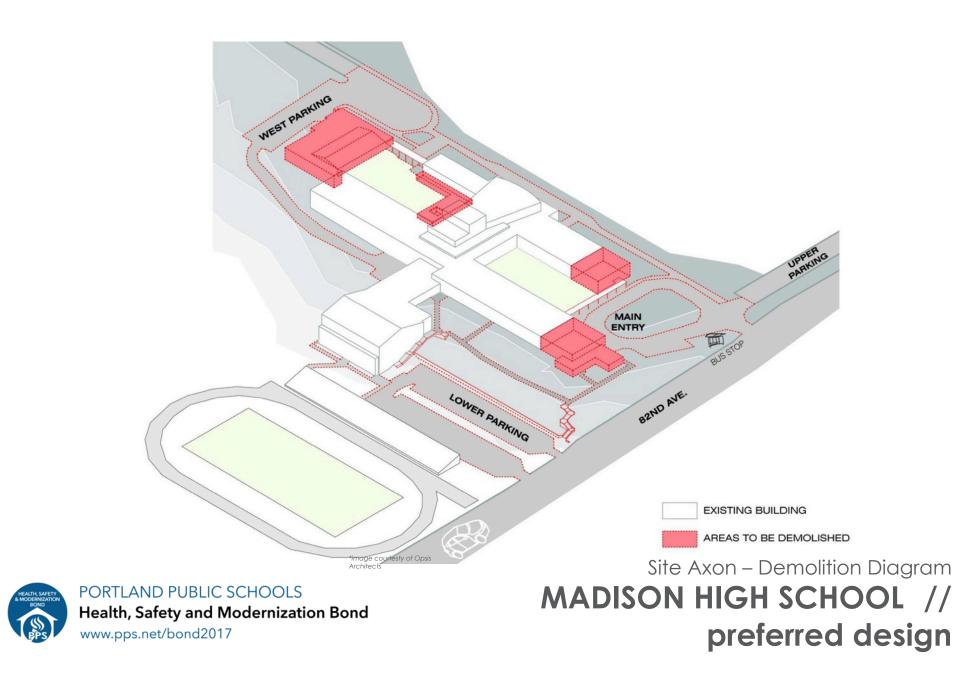
MPS Guiding Principles

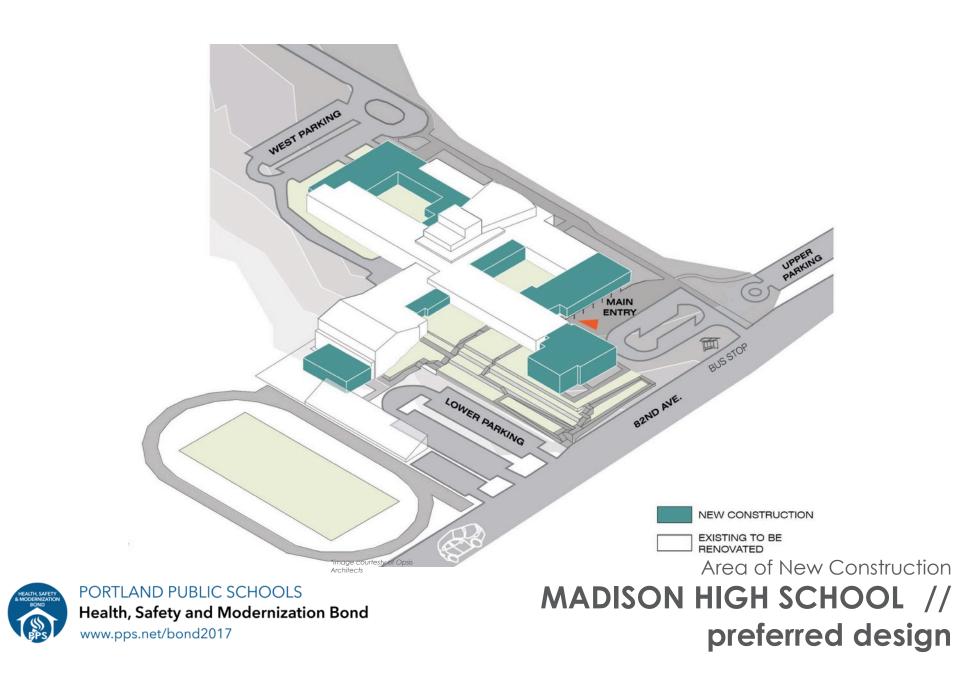
- Create State-of-Art 21st Century Learning Environment
- Community Connections Make Madison HS the heart of the neighborhood
- Connect social and academic activities in a diverse community
- Connect the indoor spaces with outdoor courtyards and gardens
- Advocate and practice sustainability of systems
- Create a fully accessible building and site
- Optimize the site topography
- Modernize the school building systems

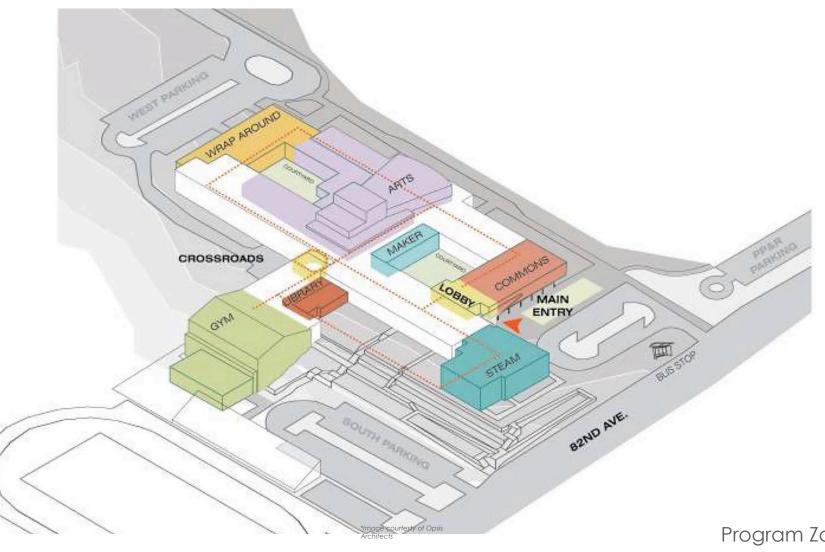






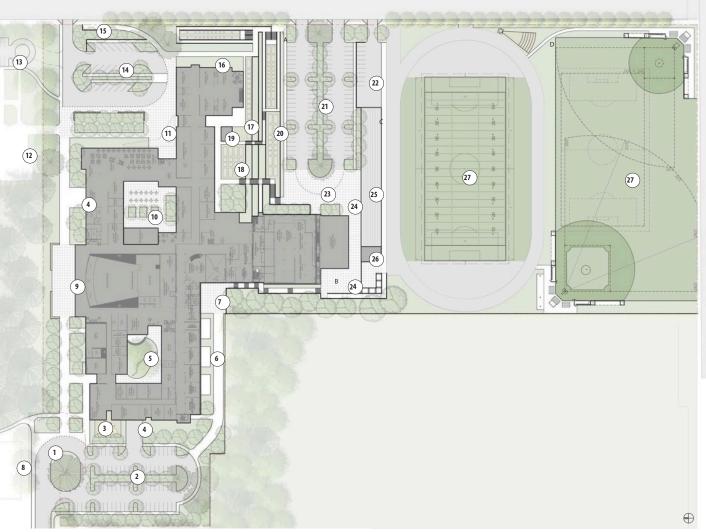








PORTLAND PUBLIC SCHOOLS Health, Safety and Modernization Bond www.pps.net/bond2017 Program Zones MADISON HIGH SCHOOL // preferred design



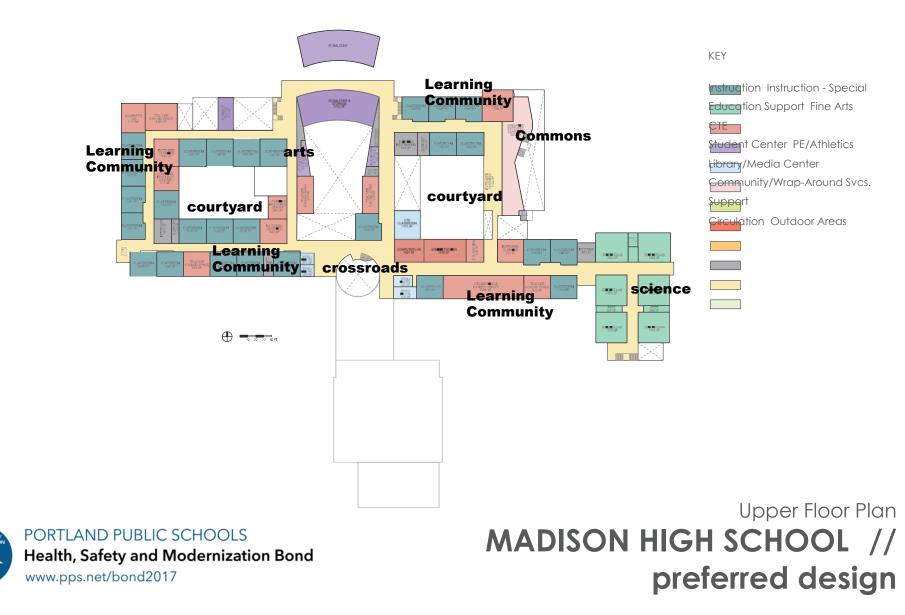
Y 1. SPED Bus Drop-Off 2. West Parking Area 3. Childcare Play Area 4. Service Access 5. Arts Courtyard 6. Outdoor Learning 7. Crossroads Plaza 8. Existing Tennis Courts 9. Theater Plaza 10.Commons Plaza 11.Main Entry Plaza & Drop Off 12.Existing Skate Park 13.Existing Parking Area 14.East Parking Area 15.Transit Stop 16.ADA Access from NE 82nd 17.Science Plaza 18.Learning Garden 19.Greenhouse 20.Community Gardens 21.South Parking Area 22.Van Parking & Service Access 23.Athletics Bus Drop-Off 24.Athletics Plaza 25.Grandstands 26.Restroom & Concessions Bldg. 27.Synthetic Turf Fields

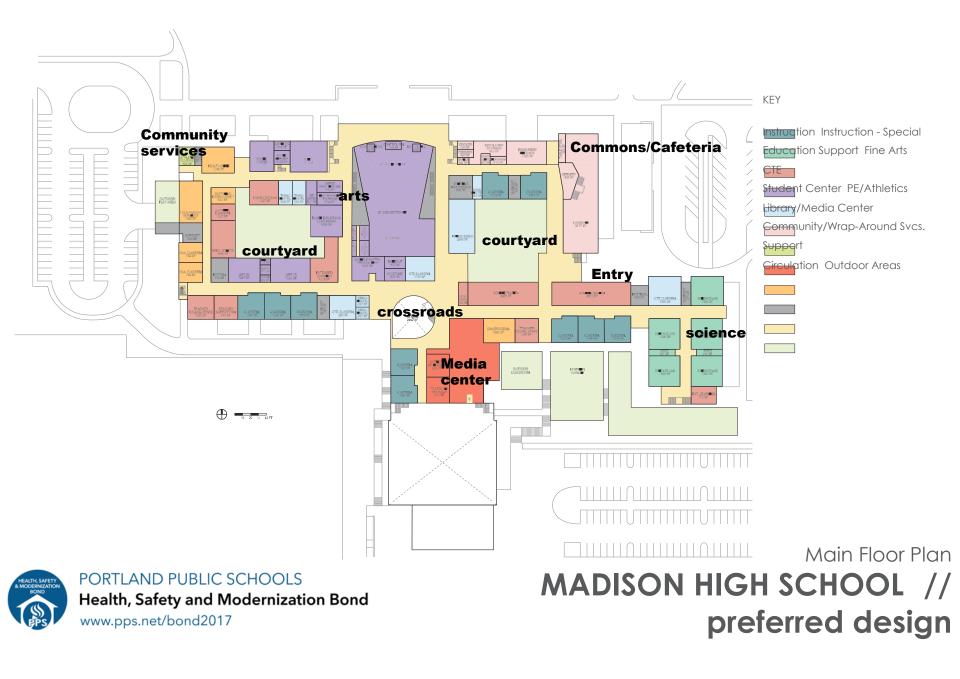
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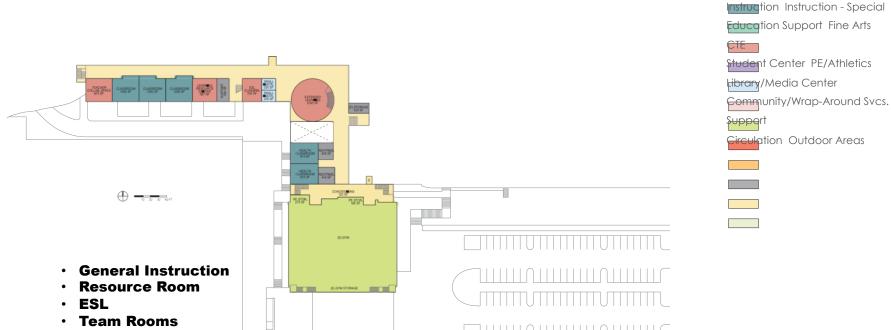


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Site Plan Site Plan preferred design







• Main Gymnasium

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KEY





PORTLAND PUBLIC SCHOOLS Health, Safety and Modernization Bond www.pps.net/bond2017 Basement Floor Plan MADISON HIGH SCHOOL // preferred design

KEY

Instruction - Special

Scope of Work Summary

- Light Renovation: 37,977 SF (12%)
- Medium Renovation: 76,821 SF (24%)
- Heavy Renovation: 98,492 SF (30%)
- New Construction: 112,416 SF (34%)
- Total area: 325,706 GSF
- Construction Cost Estimate: \$95,000,000
- Project Cost Estimate: \$146,000,000

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PORTLAND PUBLIC SCHOOLS Health, Safety & Modernization Bond

Kellogg Middle School



Kellogg Middle School







Project Overview

Renovation And Addition Construction Cost \$ 38.3 Million Project Cost \$ 56.3 Million

Full Replacement

\$32 Million

\$45 Million

Student Design Capacity: 675

Building Area: 105,112 SF





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Kellogg Middle School Oh



Health & Safety

- -Water damage mold
- -Asbestos
- -Lead in pipes
- -Required seismic improvements
- -Unreinforced masonry walls
- -Hollow clay tile walls
- -Poor building envelope insulation lower thermal comfort & energy waste
- -Non ADA accessible compliant
- -Damaged finishes throughout

Learning Spaces – Educational Standards

- -Does not meet PPS ED specs for middle school
- -Classrooms are too small
- -Inadequate science labs
- -Inadequate CTE space
- -Gymnasium is too small
- -Kitchen is too small







Guiding Principles:

- 1. Compare Renovation/Addition with Replacement
- 2. Address Health and Safety & Learning needs
- 3. Meet PPS Educational Specification for Middle School
- 4. Achieve PPS energy efficiency & LEED standard







Process – Kellogg has been out of use since 2007

- 1. Meetings with Office of School Modernization
- 2. Meetings with Facilities & Asset Management
- 3. Meetings with Office of Teaching & Learning
- 4. Meetings with the City of Portland
- 5. Geotechnical Investigation
- 6.Site Survey
- 7. Environmental Site Assessment
- 8. Architectural-Engineering Investigation







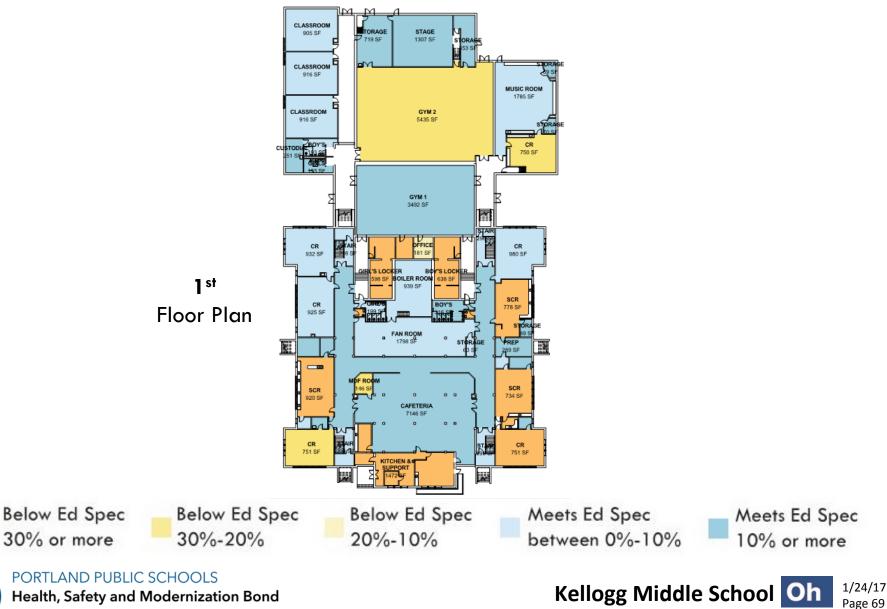




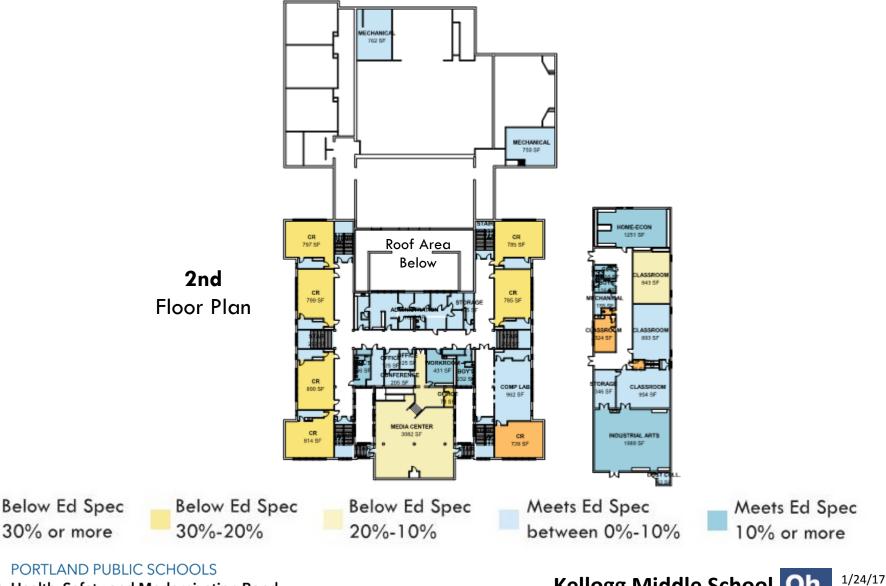
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Kellogg Middle School Oh



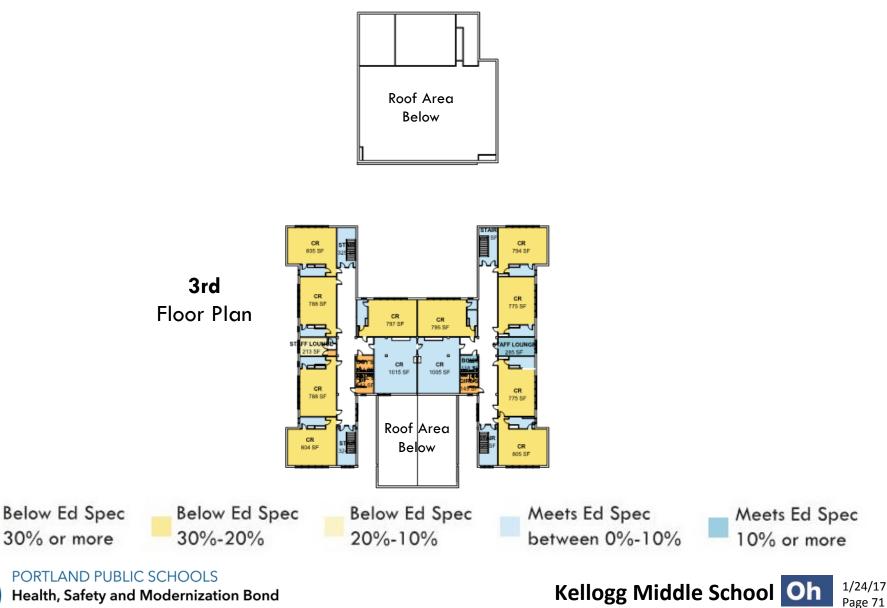


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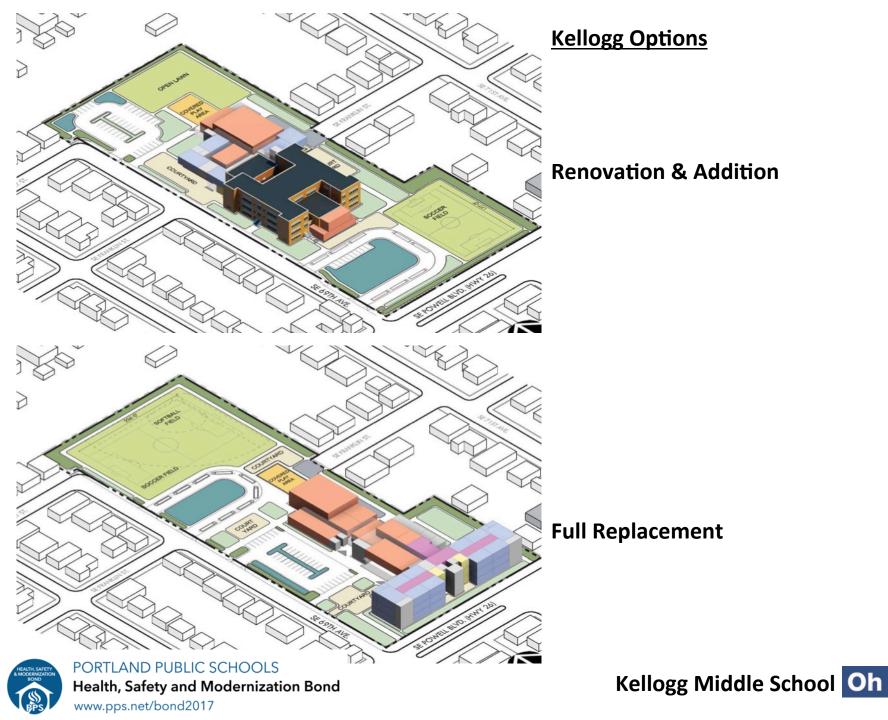


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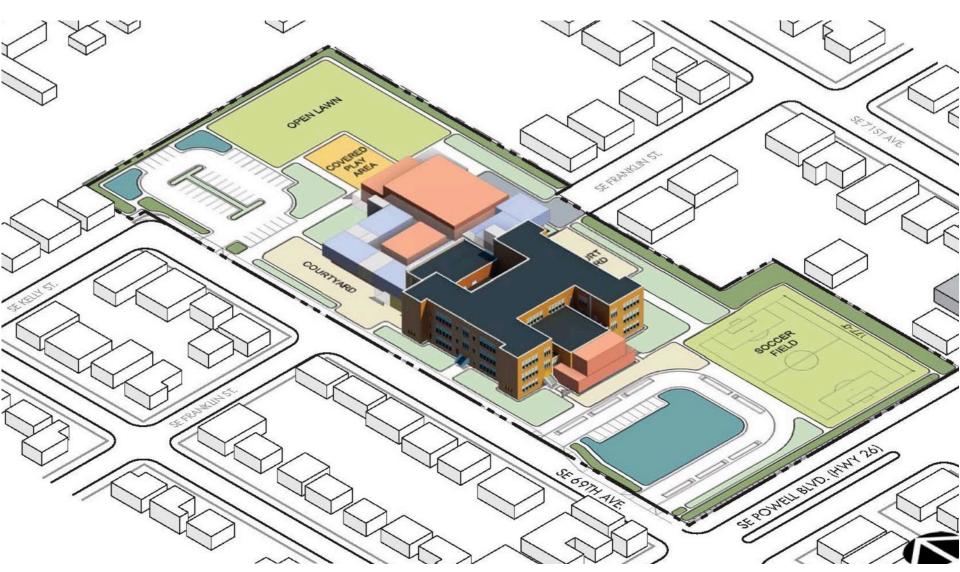
Kellogg Middle School Oh 1/24/17 Page 70



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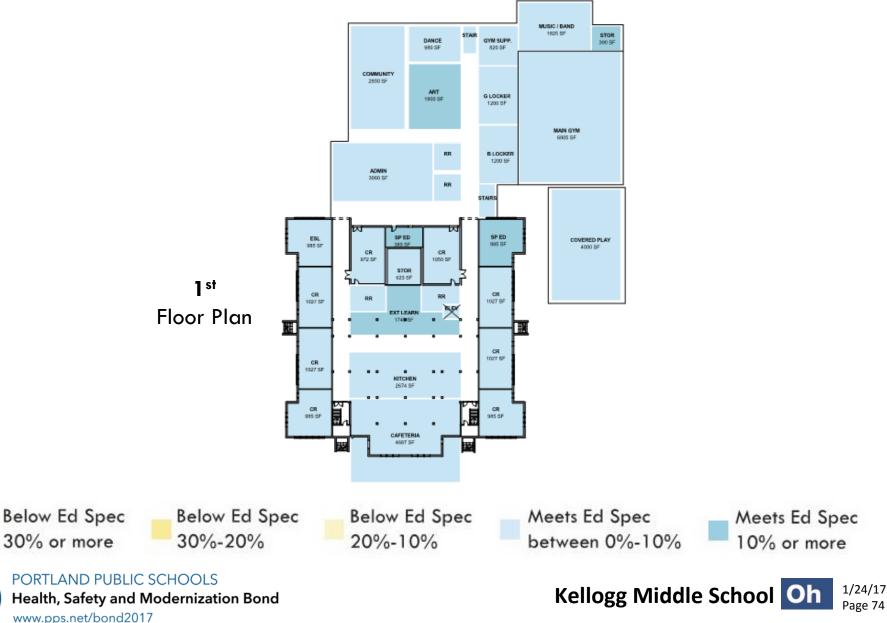


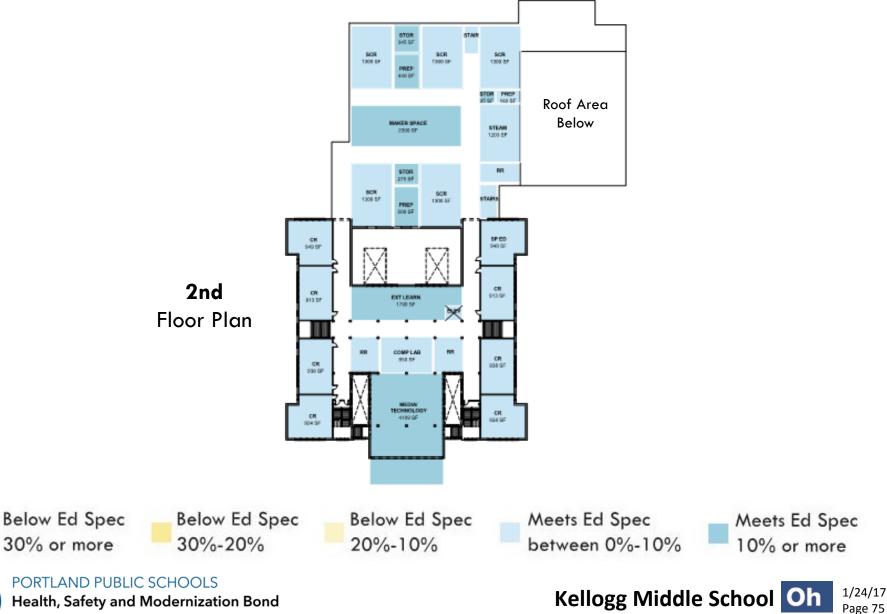


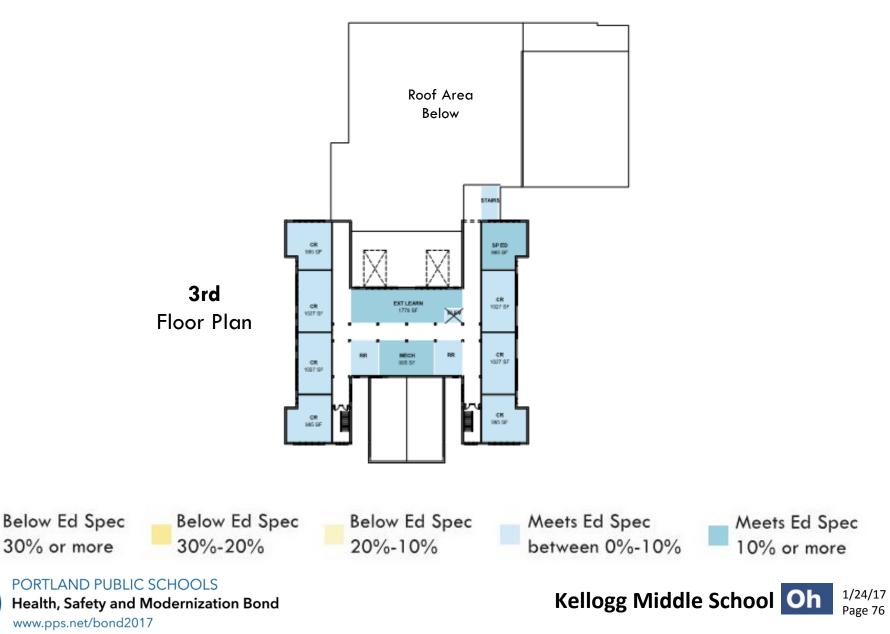
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Kellogg Middle School Oh

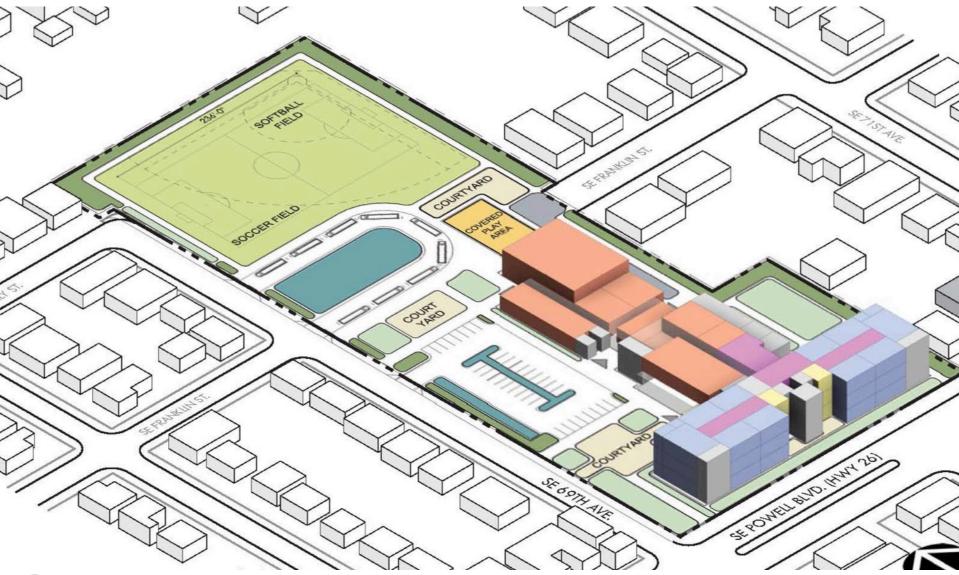








FULL REPLACEMENT Middle School SF: 105,112 SF REQUIRED per PPS 2015 Middle School ED SPEC: 105,112 SF



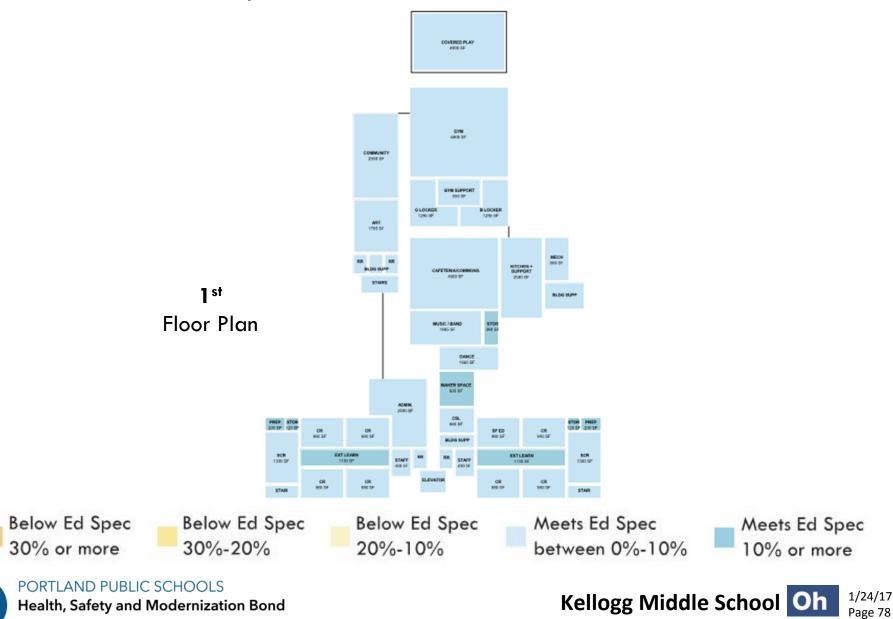


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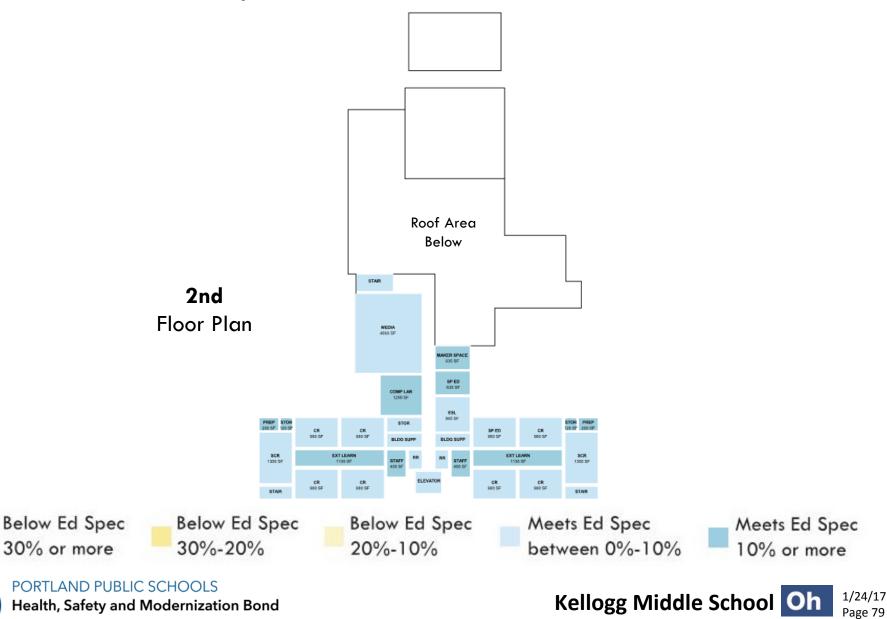
Kellogg Middle School Oh



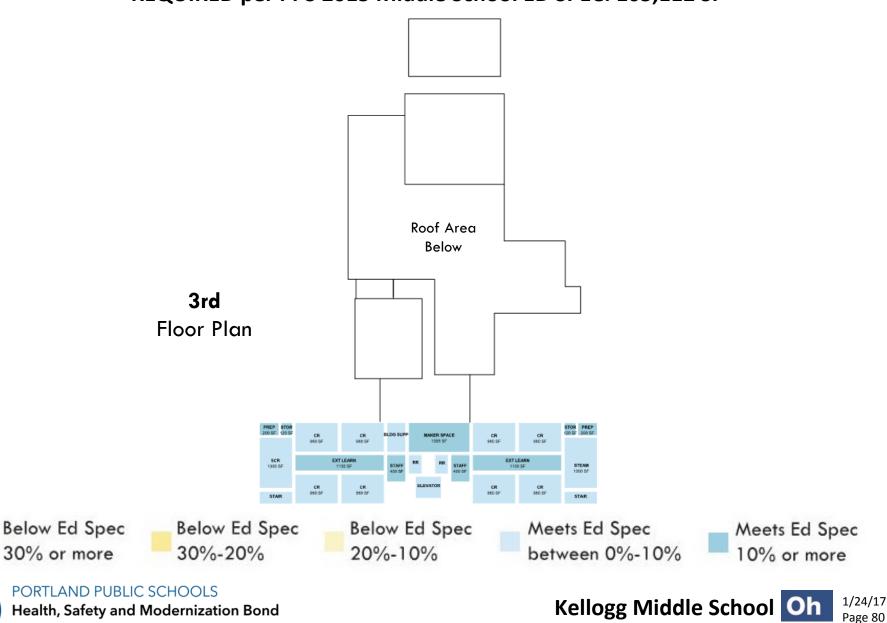
FULL REPLACEMENT Middle School SF: 105,112 SF REQUIRED per PPS 2015 Middle School ED SPEC: 105,112 SF







FULL REPLACEMENT Middle School SF: 105,112 SF REQUIRED per PPS 2015 Middle School ED SPEC: 105,112 SF





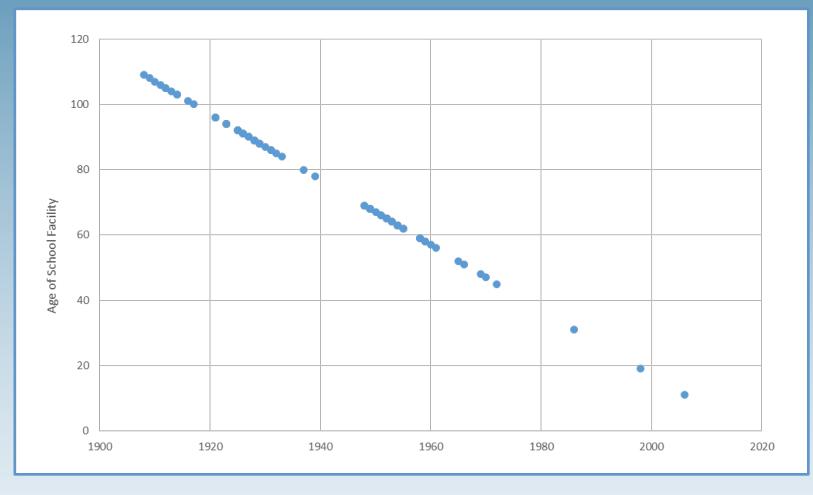


Additional Health & Safety Projects



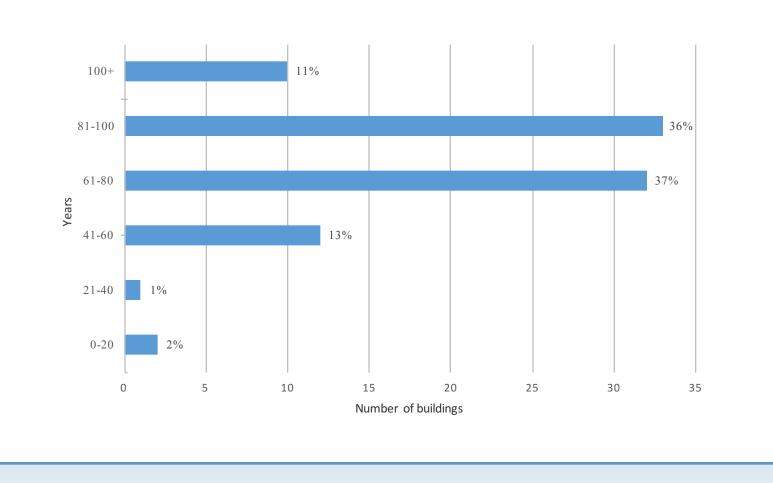


PPS School Construction





Age of PPS School Facilities



Average Age: 76 years



Health & Safety Projects

Evaluating the following areas:



Water quality



Fire/Life safety alarms & sprinklers



Asbestos

Lead-based paint



Roofs/Building envelopes/ Foundations (Air quality)



Rn Radon



Seismic



Security systems/Fencing



Playgrounds



Auditorium stage safety

EHS Capital Planning Program Cost Analysis

Summary of Program Costs 2017-2023

| | Possible Number of Schools Funded* |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1,126,125 | 30 |
| 6,177,133 | 37 |
| 16,623,936 | 88 |
| 21,297,466 | 88 |
| 28,492,000 | 90 |
| 37,243,490 | 73 |
| 100,680,717 | 90 |
| 131,459,611 | 84 |
| 54,254,027 | 90 |
| 311,485,127 | 90 |
| 934,959,273 | 90 |
| 1,643,798,906 | |
| | - 1,126,125 6,177,133 16,623,936 21,297,466 28,492,000 37,243,490 100,680,717 131,459,611 54,254,027 311,485,127 934,959,273 |

*Number of sites based on identified need.



Possible Prioritization Methods

- Across the Board
- Catastrophic Risk
- Public Awareness
- Operational Savings
- Economy of Scale / Cluster of Risks
- Readily Achievable



Additional Health & Safety Projects

Staff recommendations for additional health & safety projects at 3 cost levels

| | \$100 MILLION | | \$150 MILLION | | \$200 MILLION | |
|------------------|---------------|----------------|---------------|----------------|---------------|----------------|
| | Dollar amount | Schools funded | Dollar amount | Schools funded | Dollar amount | Schools funded |
| | \$28,492,000 | Up to 90 | \$28,492,000 | Up to 90 | \$28,492,000 | Up to 90 |
| % | \$19,757,939 | Up to 13 | \$25,849,990 | Up to 16 | \$31,757,939 | Up to 20 |
| | \$9,000,000 | Up to 37 | \$12,000,000 | Up to 48 | \$14,000,000 | Up to 58 |
| T | \$16,623,936 | Up to 88 | \$16,623,936 | Up to 88 | \$16,623,936 | Up to 88 |
| ~ | \$20,000,000 | Up to 5 | \$50,907,949 | Up to 14 | \$80,000,000 | Up to 23 |
| Ś | \$5,000,000 | Up to 4 | \$10,000,000 | Up to 9 | \$15,000,000 | Up to 13 |
| Rn | \$1,126,125 | Up to 90 | \$1,126,125 | Up to 90 | \$1,126,125 | Up to 90 |
| £ | | | \$5,000,000 | Up to 11 | \$8,000,000 | Up to 13 |
| | | | | | \$5,000,000 | Up to 2 |
| \vee^{\bullet} | | | | | | |
| | | | | | | |





Proposed Bond Options





Health, Safety and Modernization Bond Options

APPROXIMATELY 30% OF MODERNIZATION & REBUILD BUDGETS TARGETED TO HEALTH & SAFETY PROJECTS IN ALL APPLICABLE CATEGORIES

Option 1: \$790 Million \$324M FOR HEALTH & SAFETY

| Additional health | |
|--------------------|--------|
| & safety projects. | \$150M |

• Full rebuild

- Lincoln......**\$187M** Kellogg.....**\$45M**
- Management, Contingency
 & Miscellaneous \$60M

Option 2: \$867 Million

\$347.1M FOR HEALTH & SAFETY

| Additional health & safety projects | .\$150M |
|----------------------------------------------------------------|---------|
| Benson | |
| Lincoln | |
| Management, Contingency & Miscellaneous | |





Health, Safety and Modernization Bond Options

APPROXIMATELY 30% OF MODERNIZATION & REBUILD BUDGETS TARGETED TO HEALTH & SAFETY PROJECTS IN ALL APPLICABLE CATEGORIES

Option 3: \$745 Million \$310.5M FOR HEALTH & SAFETY

- Additional health & safety projects\$150M
- Full rebuild Lincoln.....\$187M
- Management, Contingency
 & Miscellaneous \$60M

Option 4: \$810 Million

\$330M FOR HEALTH & SAFETY

| Additional health & safety projects | .\$150M |
|---------------------------------------------------------------------|---------|
| Modernization & additions | - |
| Benson | \$202M |
| Madison | .\$146M |
| Lincoln | \$252M |
| Management, Contingency | |

& Miscellaneous \$60M

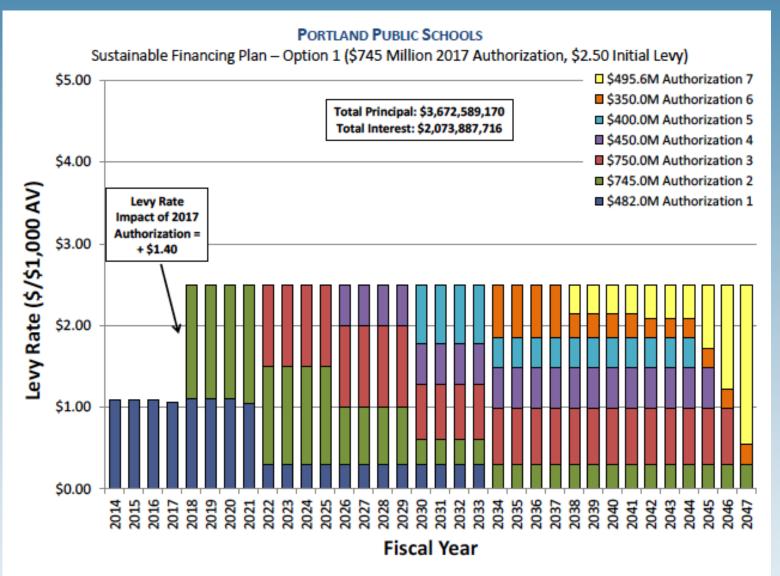
Similar to Options 1 & 2, but do not include Kellogg, for purposes of discussion.



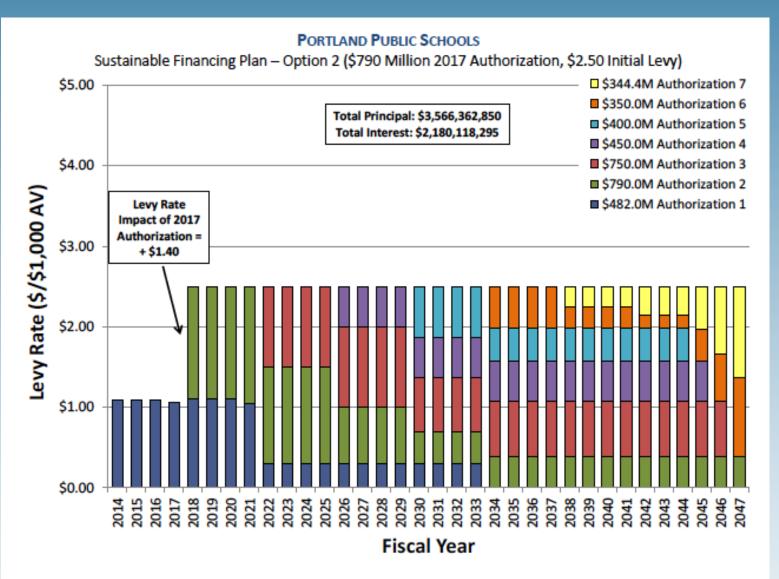
Rate Update





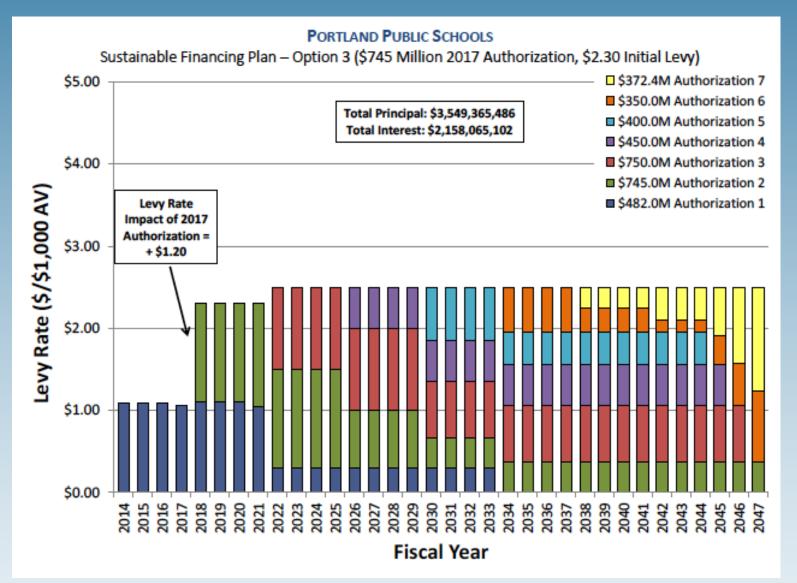




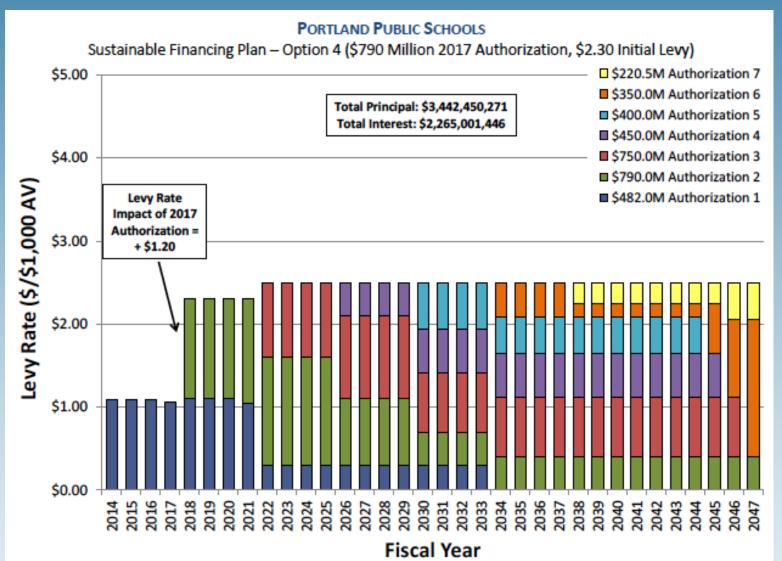


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Bond Options Next Steps

Jan 24: Board Work Session – Presentation of bond options & districtwide public opinion research

Jan 25 - Feb 9: Online survey re bond options

Jan 25 & Feb 1: Bond Stakeholder Advisory Group meetings

Feb 2, 7, 8, 9: Bond Town Hall meetings (see pps.net/bond2017)

Feb 6: Public Hearing at Board

Feb 13: Board Work Session – Discuss public input and bond options, potentially narrow to final option

Late Feb: Board vote on referral



Questions & Discussion

