

Fisher, Kenneth

From: Kevin Spellman <ks@kspellman.com>
Sent: Monday, July 03, 2017 12:09 PM
To: Dan Jung; Kenneth F. Fisher; Tenzin Kalsang Choephel; Willy Paul; Tom Peterson; Cheryl Twete
Cc: Jerry Vincent; Louis Fontenot; Charlie Johnson
Subject: Summary of BAC Meeting re: 2017 Bond schedules & priorities

I wanted to briefly summarize last week's meeting so that issues do not get lost as well as letting those who couldn't make the meeting aware of our current thoughts.

Thanks, Dan and Ken, for bringing us up to date on OSM's process and conclusions to date. We agreed that you are certainly considering the correct criteria and giving reasonable weightings to the various imperatives and constraints. Thank you for the updated schedules as well as the Heery memorandum concerning construction durations.

Following are some items that were discussed (others should feel free to add or edit as they see fit):

- * We agreed that, instead of waiting for the new Board to convene and organize itself in terms of the 2017 Bond program, you should proceed as you are on Kellogg and Madison. Time is of the essence, and it does not make sense to lose precious weeks at this stage. We agreed that, absent some new information, your process that has established those two schools as the first out of the gate has been thoughtful and the conclusion is reasonable.
- * You should continue your analysis of Lincoln and Benson in terms of anticipated durations and other assumptions. The final schedules do not need to be set in stone now and it would be prudent, if possible, to maintain some flexibility to take advantage of unexpected changes (e.g. bid climate, etc.) in the future.
- * Consider starting (or continuing) LHS and BHS designs earlier, even if they are put on the shelf for a while before construction. Easier said than done, of course, and there are arguments against this (changing regulations, how do we get a CM/GC on board?, etc.) but there are advantages as well so continued consideration is appropriate.
- * Do not dismiss the possibility of mid-year transitions, particularly at LHS and BHS where the students/staff are remaining on site. Perhaps phases of the work could be occupied as completed mid-year?
- * We will need to get a full understanding of how escalation has been included in the project budgets. Perhaps the early schools' budgets will need to be pared back and transferred to the later schools?
- * Continue to work on communication strategies around these issues. Consider how you will involve or communicate to the communities aligned with each of the high schools in particular.

* On the Health & Safety work, we will look for a better understanding of how the "Stakeholder Advisory Groups" will work, both in terms of composition and scope. We also agreed with OSM that the management of this work requires an entirely different structure from the major school projects, and look forward to hearing how OSM will organize for this.

Thanks again for the discussion. Please let me know if there are any concerns over these observations.

Best,
Kevin

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Portland Public Schools - Construction Duration Narrative

David M. Waggoner, AIA, ALEP, LEED AP BD&C, Heery National K-12 Market Leader

There are many factors to consider when determining durations to be used for construction in developing a capital improvement program's master schedule. Some of them include:

- Size and complexity of project (Are the projects new schools on new sites or complex modernizations?)
- Severity of need for seats (Where are the highest needs for capacity?)
- Swing space requirements and availability (How available is swing space, and where is it?)
- Building permit availability (Are partial permits or early site permits allowed?)
- Construction start dates (Is there a need to stagger dates to not overload construction market?)
- Completion and occupancy dates (Is there a need to stagger dates to ease move-in activities?)
- Cash flow requirements (Is it best to have an even cash flow or to spend quickly?)
- Construction delivery contract type (Are projects to be constructed with design-bid-build, CM at-Risk, design-build or other delivery type? Each can have various schedule implications.)
- Climatic conditions (Is the area prone to rain/snow, temperature extremes, daylight durations, etc.?)
- School operations (Will the existing school stay in operation or will students be re-located?)

In our experience throughout the country, there can be standard durations for new school buildings based on the grade-level of school (as rules of thumb):

- New Elementary School – 14-16 months
- New Middle School – 22-24 months
- New High School – 30-32 months

Typically, there are site factors on projects that can greatly affect the construction durations:

- Extensiveness of site-work (athletic fields, topography, soil conditions/rock, offsite improvements)
- Complexities/ease of site access (tight urban site, or open, greenfield site)
- Availability of site storage/material lay-down areas

For Addition/Renovation or Modernization projects, it may be useful to categorize these for discussion purposes according to the level of construction intensity. Each comes with different durations:

- Light Construction – new finishes (walls, flooring, ceiling, etc.), minor work on building systems
- Moderate Construction – new finishes, minor space re-configurations, moderate repairs on building systems
- Heavy Construction – complete removal of all interior walls down to structural system, new substrates and finishes, replacement of building systems

It is important to understand that unforeseen issues can occur. Whether a new ordinance is created and causes delays or the construction market gets busy and labor shortages occur, there is benefit of building in schedule contingencies into the program schedule. Having projects complete in February can be a benefit. FF&E deliveries and move-in activities can occur at a much easier pace.

Using the above information as background for making decisions, schedules can be developed and coordinated for the program. It is important that the "Assumptions and Criteria" be documented and agreed upon, so all stakeholders can understand the explanations behind the decisions. Based on our analysis and national experience, the activity durations and schedules for the three high schools and one middle school for the proposed Portland Public Schools new program are well within the typical ranges for projects/programs with similar market conditions throughout other parts of the country.

Executive Summary

Jan. 24, 2017

Project Overview

	Construction Cost	Project Cost
Renovation and Addition:	\$38,387,393	\$56,243,651*
Full Replacement:	\$32,000,000	\$44,611,241*

The costs provided have been supplied by PPS.

*Project cost based on recommended construction schedule. Final project cost will be based on Board of Education-approved construction schedule.

Student Design Capacity
675

Building Area
105,112 SF

Project Intent

The purpose of this report is to document the building and site development options for middle school (grade 6-8) operations at the Kellogg School site on SE Powell Blvd. Oh planning+design, architecture (OHP+D) has collaborated with Portland Public Schools (PPS) and a team of professional consultants to develop two pre-design options [Renovation and Addition & Full Replacement] for budgetary and scheduling components as identified by PPS. Both pre-design options will meet the District's priorities to address Health and Safety (H&S) issues at these existing building facilities and improve the learning environment for this new middle school.

Kellogg Middle School has not been used as a school facility by PPS since 2007. During this time, the District has performed limited maintenance on the grounds which were maintained for neighborhood use. In 2015, OHP+D was responsible for assessing the site and documenting deficiencies to determine the condition and requirements for rehabilitating the existing site back to a basic functioning condition.

Key Challenges

The major deficiencies of the existing school site and building as discovered in the 2015 Kellogg Middle School - Assessment Report (July 31, 2015) and this due diligence phase include:

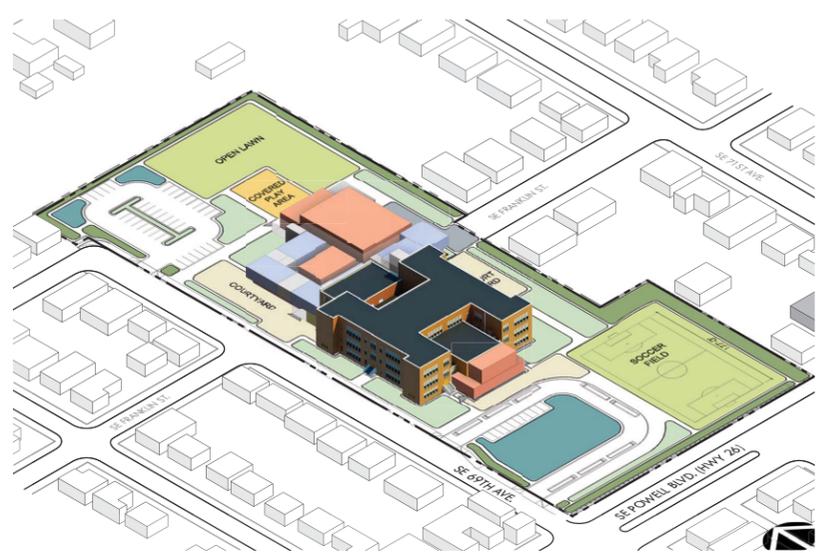
- Extensive seismic strengthening required for existing main building deficiencies: unreinforced masonry walls, hollow clay tile walls, roof-wall diaphragm connections, and unbraced parapets
- Extensive Health and Safety upgrades to existing mechanical, plumbing, and fire suppression systems and interior finish deficiencies: water quality, air quality, asbestos containing materials, lead-based paint, mold and moisture damage, fire/life safety alarms and sprinklers, ADA accessibility, building envelope insulation (thermal comfort)
- Size of classrooms, gymnasium, media center, cafeteria, and kitchen do not meet current Educational Specifications
- Educational Specifications adjacency requirements are not met for the cafeteria and extended learning spaces
- Site constraints: 6.18 acre site with rigid edges must meet bus, vehicle, and pedestrian access requirements, requires a more vertical design solution where possible, playfields are below typical PPS standards

Process

The Kellogg Middle School team met with PPS representatives from the Office of School Modernization and the Office of Teaching and Learning to establish project goals. During this due diligence process, progress meetings were held every other week to coordinate the final deliverable with other PPS due diligence projects that are developing concurrently. As the pre-design options were developed, information was provided to PPS's cost consultant to determine budgetary impacts. This process has resulted in a report which documents a path forward for two feasible developments on the site for a PPS middle school.

Due Diligence

The 2015 Assessment Report document was utilized as a basis of understanding the overall condition of the existing building and systems. After review of this document, site visits were conducted on November 22, 2016 and followed-up by consultant site investigations. Although the school boundaries are currently pending by the PPS District wide Boundary Review Advisory Committee (DEBRAC) which will define which Elementary Schools will feed into the new middle school, the design team received existing building documentation, district design standards, and Middle School Educational Specifications from PPS. Meetings were conducted with PPS project management, Office of Teaching & Learning (OTL), and Office of School Modernization (OSM).



Architectural Design/Geotechnical Engineering/Civil/ Landscape Architecture/Structural Summary

Architectural Design

The goal for both the Renovation and Addition and the Full Replacement options is to meet all current building codes, provide water tightness, ensure health and life safety, confirm accessibility to all users under the Americans with Disabilities Act, and respect, consider, and promote the local neighborhood, its residents, and the existing context in SE Portland. Both options will meet PPS's design and educational specifications standards within a functional, safe, and sustainable middle school and grounds.

Renovation and Addition

The Renovation and Addition option includes 61% renovation and 39% new construction to facilitate the District's health, safety and design standards while incorporating the programmatic and educational goals for new middle schools in the District. The existing 1917 school will be rehabilitated to a minimum LEED (Leadership in Energy and Environmental Design) Silver level of certification, receive seismic strengthening to meet current building code, and meet the programmatic and education goals of the District. The existing 1987 addition and 1952 annex will be demolished. A new addition will be designed to a minimum LEED Silver level of certification and mitigate building programming deficiencies.

Full Replacement

The Full Replacement option (100% new construction) includes the removal of all the existing buildings and construction of a new school facility. This middle school will be designed to minimum LEED Gold level of certification, the programmatic and educational goals of the District, and current building code and seismic requirements.

Geotechnical Engineering

A geotechnical report has been provided as a separate document to PPS. Information relevant to this report has been summarized where necessary.

Civil

In both options, all site work, stormwater and sewer systems, parking configurations, and landscaping must be improved to meet current City of Portland development standards. A preliminary analysis of the existing site development and utility systems has been evaluated for elements such as the asphalt paving, water supply, sanitary sewer, and storm drainage. Conceptual design assumptions have been tabulated for new development of each of these systems. In both options, the design assumptions for the civil site work are the same regardless of whether the Renovation and Addition or Full Replacement options are selected.

Landscape Architecture

In both options all stormwater, parking, and landscape must be improved to meet current City of Portland development standards.

The parking lot and bus loop are separated for both options which will aid in the safety of the students. Wayfinding for both the Renovation and Addition and Full Replacement options is safe and efficient. Various outdoor uses are well connected and the wayfinding between parking lots and bus loops to the entryways is direct and safe for both options.

The sports fields and communal outdoor courtyards in the current Renovation and Addition site layout are more segmented with a non-regulation size soccer field to the south requiring a fence along SE Powell Blvd. For this site configuration, there is not adequate room for a regulation softball field.

The current Full Replacement site layout has larger sports fields including a regulation soccer and softball field. For both options the covered play area is intended to have basketball and volleyball amenities.

Planting areas for both options is very similar. High vegetative screens are provided along the property lines while low vegetative screens are provided between streets and parking lots. As many trees as possible will be saved for both options. However the replacement option will cause more trees to be removed than the Renovation and Addition option.

Ample area is designated for on-site stormwater treatment in areas directly adjacent to the parking lot and bus loop for both options. Stormwater planters will be planted per the City of Portland's requirements.

Structural

The renovation and addition option will be based on retaining and retrofitting the original 1917 portion of the building while replacing the 1987 addition and annex with new building components. The buildings will be seismically separated with the retrofitted section of the building being designed to the ASCE 41-13 Basic Building Performance Objective for Risk Category III structures and the new addition being designed to an Immediate Occupancy performance level by designing it for risk category IV forces in ASCE 7-10.

The Full Replacement option will be designed to current code (OSSC 2014/IBC 2012/ASCE 7-10) for risk category III buildings. To service the community as an emergency refuge the gym portion of the building will be seismically separated and designed for a target of Immediate Occupancy Performance by designing to a risk category IV force level which means it will have additional capacity in the lateral system. This will limit the damage in larger earthquakes and improving the chance that the building is operational after smaller events. The Full Replacement building is expected to be a structural steel brace frame building with a typical non-bearing stud wall exterior facade. The foundations will be typical spread and strip footings. To achieve the higher performance for the gym the lateral system and associated foundations will be 20-30% larger than the rest of the building.

Mechanical/Plumbing/ Electrical Summary

Jan. 24, 2017

Mechanical

All existing mechanical ventilation systems must be replaced for the Renovation and Addition and the Full Replacement option. Various mechanical systems have been investigated for use in both building schemes. Descriptions and diagrams for each of these may be found in Chapter 6 [Appendix], but for the purpose of pricing and further development during the pre-design phase this document will focus on Displacement Ventilation with Perimeter Finned Tube as the basis of design.

The mechanical scope for both options will include all new systems. Both conceptual designs are intended to provide a facility that meets current District standards, as well as the latest adopted editions of applicable codes, including but not limited to:

- Oregon Mechanical Specialty Code
- Oregon Energy Efficiency Specialty Code
- Oregon Elevator Specialty Code

Plumbing/Fire Suppression

Due to the age and condition of the existing plumbing fixtures and associated piping, all of the existing plumbing must be replaced for both options. This recommendation of replacing the existing plumbing includes the underground building and site piping.

Due to the age, size, and type of material of the combined 3" domestic/fire suppression service to the building, the 3" water service should be divided into two separate water services

Because the building is only provided with sporadic sprinkler protection and fire hose cabinets, the building fire suppression system will be replaced with a fully automatic sprinkler system in accordance with NFPA 13. When the automatic sprinkler system is installed the fire hose cabinets will no longer be required.

The plumbing scope work for both options will include all new systems. Both conceptual designs are intended to provide a facility that meets current District standards, as well as the latest adopted editions of applicable codes, including but not limited to:

- Oregon Plumbing Specialty Code
- Oregon Energy Efficiency Specialty Code
- Oregon Elevator Specialty Code
- NFPA Codes

Electrical

The existing electrical distribution system, which was last replaced in 1979, is nearing the end of its useful life and must be replaced. The existing building lighting, consisting of luminaires using outdated (fluorescent) lamping and missing or damaged lensing, must be replaced. The telecommunications distribution in the building is outdated and must be replaced.

The electrical work for both options will include all new systems. Both conceptual designs are intended to provide a facility that meets current District standards, as well as the latest adopted



Existing Main Building Parapet Coping and Windows



Existing Roof and Rooftop Mechanical System



Existing Skylight and Building Systems

Fire Alarm/Hazardous Materials/LEED/ Food Services/Cost Consultant Summary

editions of applicable codes, including but not limited to:

- Oregon Electrical Specialty Code
- Oregon Energy Efficiency Specialty Code
- Oregon Elevator Specialty Code

Fire Alarm

The existing fire alarm system condition was surveyed and was found to be obsolete. The fire alarm must be replaced in both options. The new system would be installed to meet District standards, as well as the relevant section of the latest adopted editions of applicable codes. The system would consist of a fire alarm control unit connected to addressable alarm initiating devices located throughout the school in all areas except classrooms and single person offices. Fire alarm speakers would be provided throughout for voice alarm communication and fire alarm strobes would be installed in common use and public areas per ADA requirements for visual alarm notification.

Hazardous Materials

An environmental inspection of the existing 1917 building has been performed to document the following existing conditions:

- **Asbestos:** All asbestos containing materials must be removed if impacted by renovation or prior to demolition of the structures. Asbestos has been identified in vinyl floor tile and mastic, linoleum flooring, pipe insulation, science countertop, fire doors, window caulking and duct seam tape. Suspect materials include roofing and kitchen cooler insulation. The majority of the asbestos containing materials were in good condition with the exception of various areas of floor tile that had sustained water damage.
- **Lead based paint:** All paint should be considered lead containing. Extensive water damage has been sustained causing peeling paint in various locations. Dust wipe analysis results showed lead dust levels exceeding the EPA Renovation Repair and Painting regulatory limit of 40 micrograms per square foot. This testing was a screening and additional testing is recommended should renovation occur. Depending on the future use of the facility, cleaning to the EPA regulatory level may not be required (ie. no children under 6 present).
- **Mold and Moisture:** Extensive moisture incursion has been experienced and should renovation occur would require removal of walls and floors that have sustained major damage. The water infiltration has affected many interior and exterior walls, vents and floors. Visible signs of water damage and mold growth is evident. Results of airborne mold testing showed elevated levels within the building and species that would indicate a continual water infiltration.

It could not be determined at this time the extent of mold contamination that may exist in the HVAC system of the building. Further testing is recommended to completely identify the extent of contamination, remediation process and reuse of existing equipment.
- **Radon:** Testing is underway and results are pending.

- **Polychlorinated Biphenyls (PCBs) & Mercury Light Tubes:** Mercury vapor tubes were identified in various locations of the buildings and ballasts that contain polychlorinated biphenyls (PCBs). Fluorescent tubes located in each fixture may contain low levels of mercury. These tubes must be carefully removed to reduce the risk of breakage and packaged for proper disposal and the ballasts incinerated or disposed of appropriately.

LEED/Sustainable Design

Portland Public Schools is recognized nationally and internationally for its commitment to sustainability, both within the classroom and operations. The Kellogg Middle School project offers an excellent opportunity to showcase this commitment in a prominent location along SE Powell Boulevard. The choice between Renovation and Addition or Full Replacement offers in and of itself an interesting sustainability quandary. On the one hand, the Renovation and Addition could tell the story of reuse and take advantage of the embodied energy in the existing construction while meeting new technologies. On the other hand, the Full Replacement option provides a clean slate; allowing for emphasis on orientation, massing and building envelope with efficient technologies.

Regardless of which path is selected, the team is placing the utmost importance on a healthy, durable learning space that utilizes resources efficiently including energy and water.

The team aspires to earn the following LEED certifications per PPS design standards:

- Renovation and Addition: LEED SILVER
- Full Replacement: LEED GOLD

Food Services

The Kitchen will be a complete replacement for either the Renovation and Addition or the Full Replacement option. The new kitchen will support a breakfast and lunch program (served in three lunch periods) for the Kellogg Middle School maximum population of 675 students. The Kitchen will function as a self-supporting operation and have storage for all deliveries to support the production schedule.

The kitchen location in the Renovation and Addition option results in challenges to the renovation of the existing building and installation of equipment and associated mechanical systems. Also, the site layout for deliveries and waste management does not allow for direct access to kitchen service spaces.

The Full Replacement option allows for maximum design flexibility for kitchen, servery and cafeteria location and the installation of equipment and mechanical system within a new building. Accommodations can also be made for more efficient energy operation and site delivery and waste management configuration.

Cost Consultant (Owner's Consultant)

The cost provided have been supplied by PPS. Please see the separate document for additional details.



Existing Conditions Summary

Jan. 24, 2017

EXISTING Kellogg Middle School SF = 96,973 SF

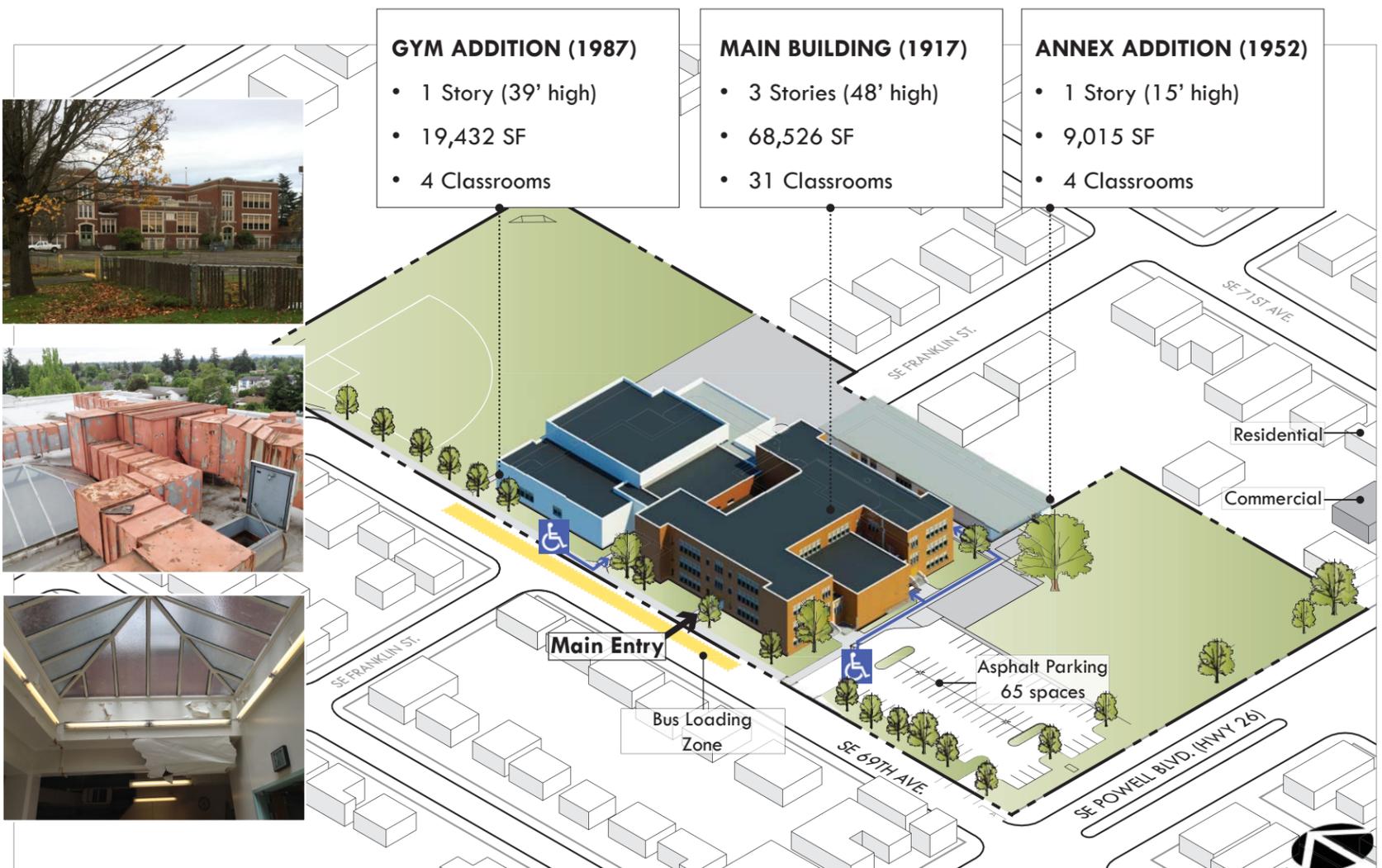
REQUIRED SF per 2015 PPS Middle School ED SPEC = 105,112 SF*

*105,112 includes educational specifications preferred programming increases but does not include educational specifications required 4,000 SF of site covered play



- 2nd and 3rd Floors are not ADA Accessible
- Existing Health and Safety Issues [Asbestos, Lead Based Paint, Mold & Moisture, PCB's and Mercury Light Tubes]
- Requires Extensive Roof and HVAC & Plumbing Systems Replacement and Seismic Strengthening

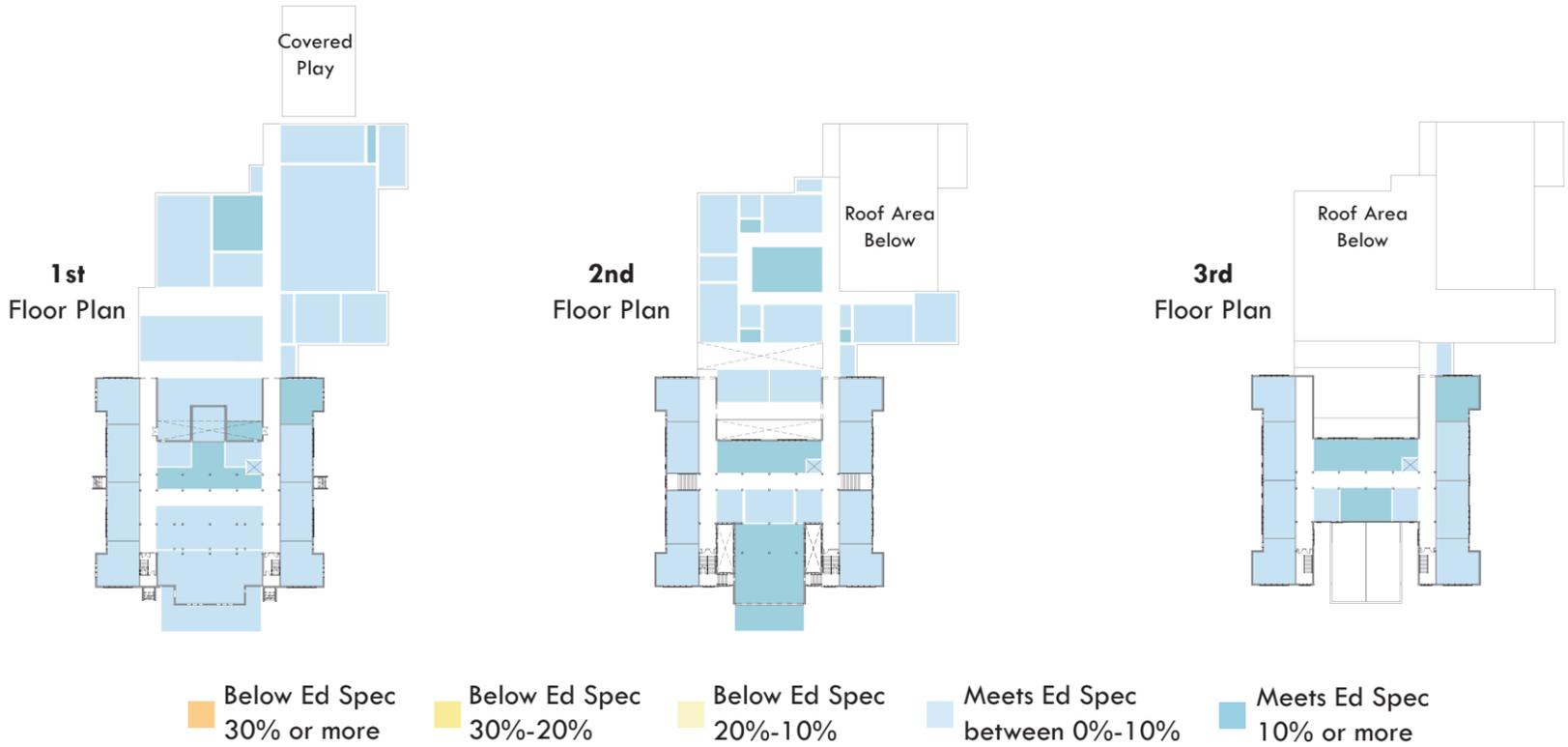
- 26 of 39 Classrooms Do Not Meet Current PPS Ed Spec
- Gymnasium and Cafeteria Do Not Meet Current PPS Ed Spec
- See 2015 Assessment Report for Further Information



Renovation and Addition Summary

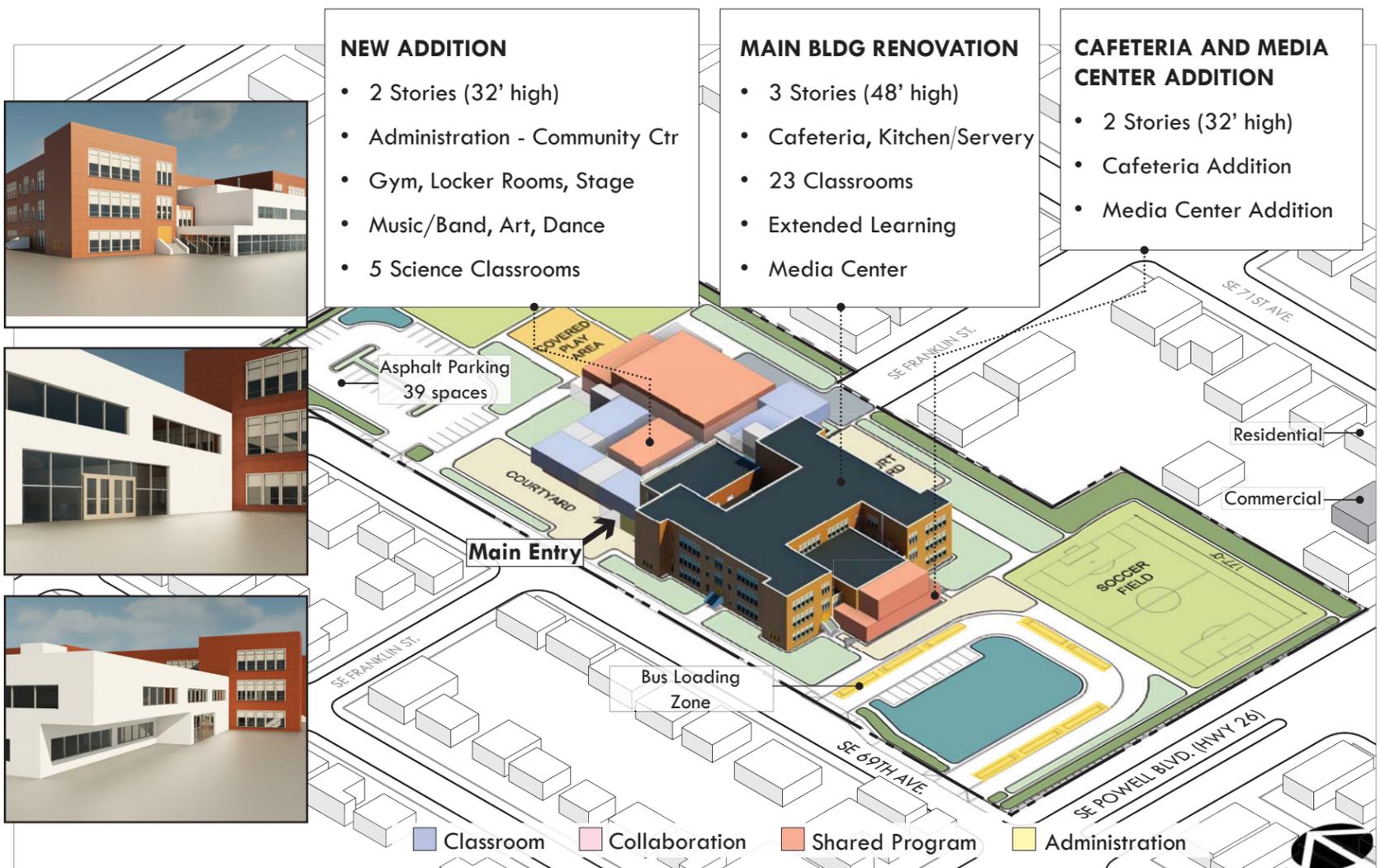
RENOVATION and ADDITION Middle School SF = 105,112 SF*
REQUIRED SF per 2015 PPS Middle School ED SPEC = 105,112 SF*

*105,112 includes educational specifications preferred programming increases but does not include educational specifications required 4,000 SF of site covered play



- 61% Renovation
- 39% New Construction (Addition)
- Building Design Remediate PPS Health and Safety Issues
- All Floors ADA Accessible

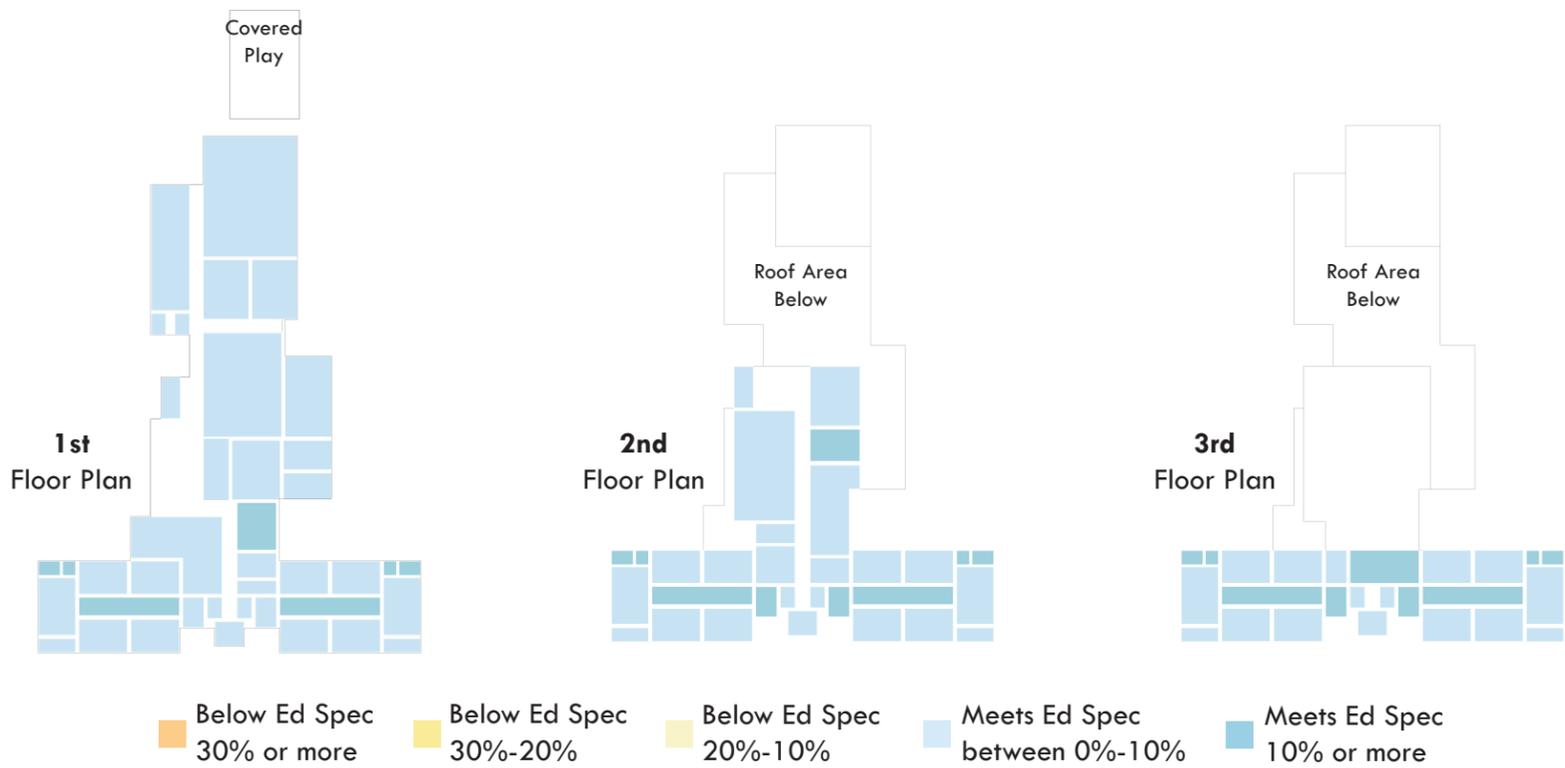
- New Roof, HVAC & Plumbing Systems, Seismic Strengthening
- All Program Meets Current PPS Ed Spec
- Secure Access to All Zones
- Separation of Bus Drop-off and Parking



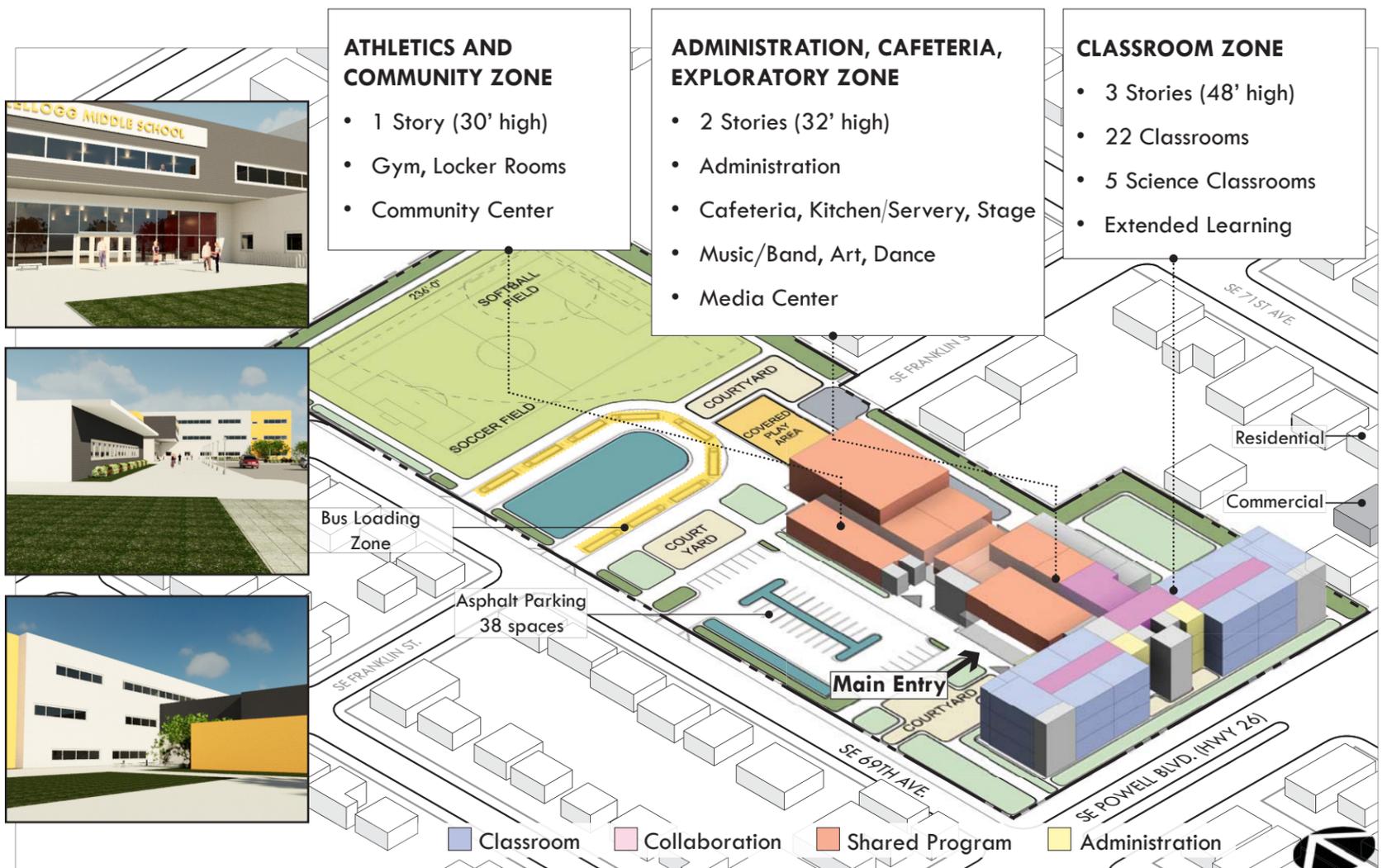
Full Replacement Summary

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

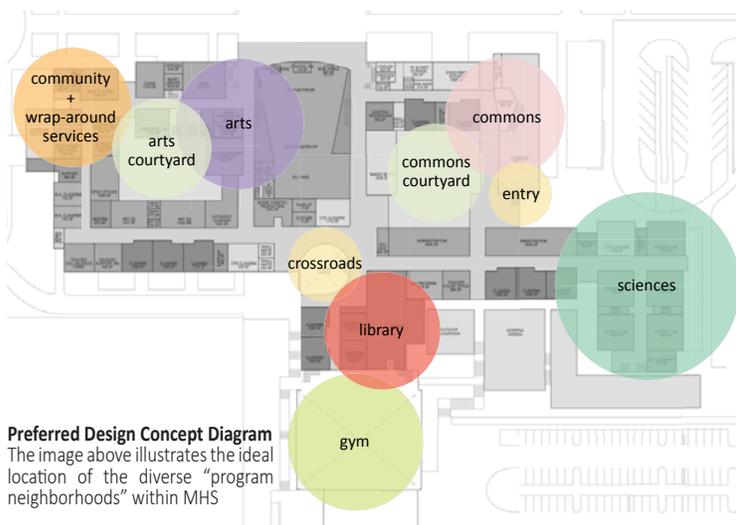
*105,112 includes educational specifications preferred programming increases but does not include educational specifications required 4,000 SF of site covered play



- 100% New Construction
- Building and Systems are Designed to Meet PPS Health and Safety Priorities
- All Floors and Entries ADA Accessible
- All Program Meets Current PPS Ed Spec
- Program Zones per PPS Ed Spec
- Secure Access to All Zones
- 25 ft Building Setback Required from SE Powell Blvd.
- Separation of Bus Drop-off and Parking



MADISON HIGH SCHOOL // Executive Summary



Preferred Design Concept Diagram
The image above illustrates the ideal location of the diverse “program neighborhoods” within MHS

PROJECT INTENT

Based on recommendations from the Bond Development Committee, the Board of Education voted to master plan Benson, Lincoln, and Madison High Schools for possible inclusion in future capital bond work. Master planning of these three schools began in late 2015 and concluded in June 2016. Madison HS was chosen because it had the highest facility condition index, serves the largest portion of East and NE Portland, and the largest percentage of historically under-served students.

Key Challenges

- » A diverse community with an antiquated school building that creates a barrier to connecting across cultures
- » Existing building is an opaque space that is not inviting or welcoming, discouraging future students from considering attending MHS
- » The building systems are well beyond their life-cycle and are in need of replacement to increase efficiency, reduce operating costs, and improve occupant comfort
- » A lack of “maker space” that enhances innovative learning programs, including urban agriculture, Career Technical Education (CTE), computer science, sustainability, and textiles
- » Disjointed places of learning that make it difficult to integrate the site and building, thereby hindering community connections and safety
- » Building does not meet current seismic, ADA, or safety codes
- » A significant lack of athletic facilities for students who are not on formal MHS teams
- » Insufficient facilities for the students and community, as well as inadequate wrap-around services

Construction Cost

\$95,000,000

Student Design Capacity

1,700

Project Cost

\$145,909,717*

Proposed Building Area

325,706 SF

* Project cost based on recommended construction schedule. Final project cost will be based on Board of Education-approved construction schedule.

Master Plan Committee (MPC) Process

The Madison High School master planning committee comprised of over 30 Madison feeder school parents, community leaders and parents began work in January 2016. The master planning team also met with staff during two staff meetings and held several one on one interviews with staff and student clubs. The master planning process identified a number of challenges that the modernization of Madison High School will need to meet. The preferred design concept plan (pg.7-9) addressed these issues with a mix of renovation (65%) and new construction (35%). The primary elements of the concept plan included: moving the student commons to the front (east) side of the campus; locating support and wrap around services to the west side, creating a STEM wing as a “beacon” to 82nd Ave.; upgrading building heating, electrical, plumbing systems; bringing building and site to current seismic, accessibility, fire life safety standards.

Due Diligence

Using the master plan as a starting place, the current Pre-Design Due Diligence Phase begins to reach beyond the master planning and into early schematic design. This phase is taking a more in depth look at the building systems that need to be updated to address environmental health and safety requirements as well as the school’s academic program requirements to ensure current and future program requirements are met. In order to have a more accurate construction cost estimate, the building system analysis performed a Phase 1 environmental assessment, geotechnical analysis, structural analysis (including destructive testing in certain areas), mechanical and electrical systems analysis, asbestos location verification and a campus security analysis. The design team has identified 10 options for reducing project scope and cost. The master planning committee is evaluating these options and voting to rank the priority of these options.

ARCHITECTURAL DESIGN

The preferred design for Madison combines areas of demolition and new construction, as well as heavy, medium and light renovation. Modernization aims to bring the facility up to 21st century health, safety, teaching and learning standards. A major design feature is the addition of a science wing as a beacon for the community and an improvement to the visual transparency of the building to the surrounding neighborhood. The addition of a welcoming commons and cafeteria greets students, staff and visitors at the entrance from 82nd.

MADISON HIGH SCHOOL // Existing Conditions

EXISTING FACILITY

Building Size

At 284,400 square feet, the existing Madison High School appears to match the suggested total area. However, a deeper review of the current building to the Ed Spec reveals a number of areas in the building that are significantly larger in area than recommended, while other areas are smaller or non-existent. For instance, the large, 1,200 seat auditorium and supporting spaces are approximately 14,000 square feet larger than the 600 seat theater of the Ed Spec. The MPC considered reducing the size of the theater to be closer to the Ed Spec, however this was determined to be more costly than renovating the existing, larger space providing little benefit to the school.

On the other hand, many CTE, science, and other technical spaces are undersized according to contemporary standards. For example, the existing science labs require a larger area and prep spaces with extensive infrastructure. As a result, these spaces are best built from the ground up, as new construction. Lastly, most of the lowest level of school below the locker rooms is currently a leased space for School House Supplies. This space is not an Ed Spec program space therefore, it is disconnected from the main academic portions of the building and is not ideal for uses other than expanded athletics space or to remain as a rental or storage space. The resulting Preferred Design program accommodates very closely the Ed Spec program, however due to the larger size of some of the existing spaces noted above, results in a total area of approximately 325,706 square feet.

HEALTH & SAFETY

Categories

1. Water Quality: Replacement of existing plumbing, piping and mechanical systems to meet current standards for efficiency
2. Fire/Life Safety: Upgrade and additions to sprinkler and fire alarm systems
3. Asbestos: Abatement and removal in floors, ceilings and walls is a priority throughout the building
4. Building envelope: Improve energy efficiency and durability through increased insulation and the replacement of outdated single pane windows
5. ADA: Improvements in access throughout the building, especially connections to the south east site entrance and athletic fields
6. Radon: Modernization would provide radon mitigation in foundation areas of new construction
7. Seismic: A whole building overhaul to bring structures up to current building codes
8. Security Systems: Improved visibility, access controls and monitoring equipment is necessary due to Madison's location in an elevated risk neighborhood
9. Auditorium/Stage: Replacement of outdated theatrical lighting and rigging systems to improve safety and ease of maintenance

School Stats

- » Opened 1957
- » 35 Gen Ed Classrooms
- » 7 Science Labs
- » 1 Gym
- » 3 Computer Labs

Existing Area

284,000 SF

Required Area*

282,000 SF

27 of 35 Gen Ed classrooms, and 5 out of 7 science labs do not meet current PPS Ed Specs for size.*

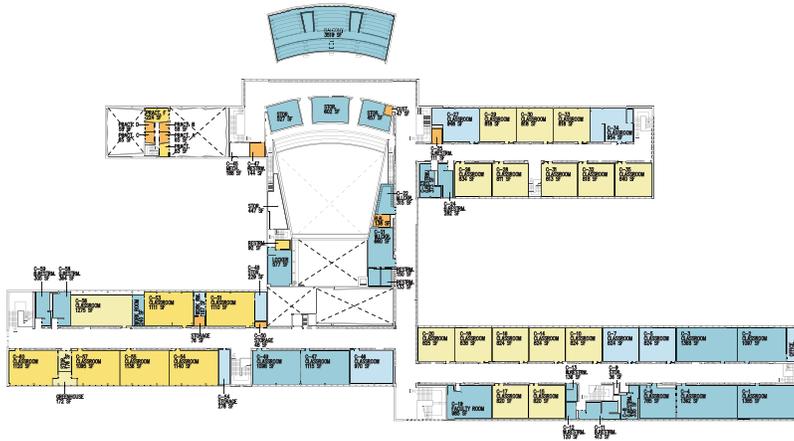
*According to 2016 PPS Ed. Spec. Requirements



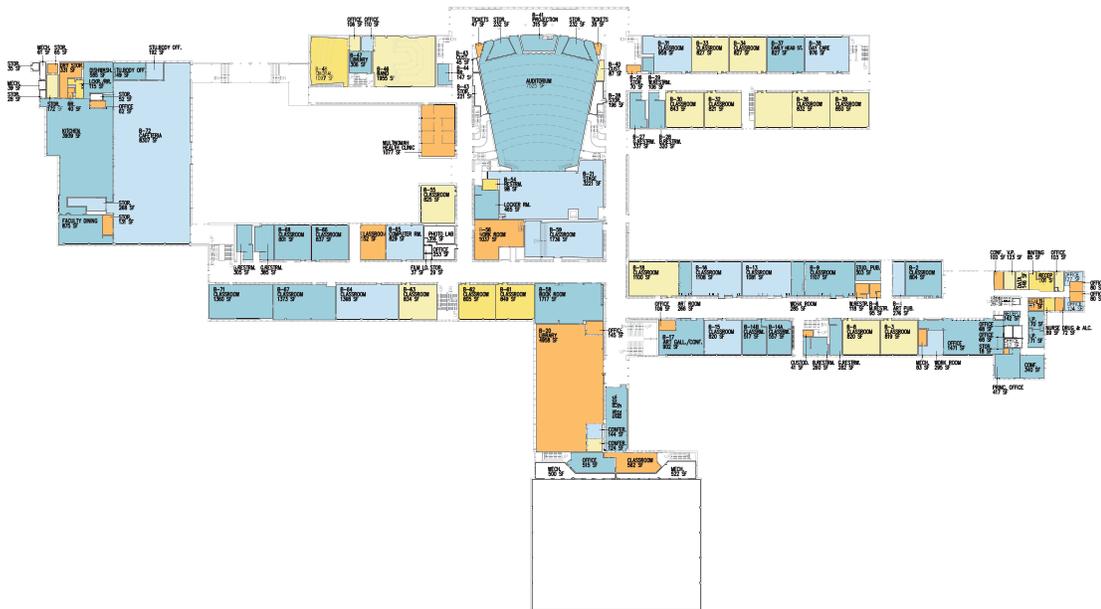
MADISON HIGH SCHOOL // Existing Conditions- Ed Spec Comparison

- Exceeds Ed Spec (> +10%)
- Meets Ed Spec (+10% to -10%)
- Below Ed Spec (-10% to -20%)
- Below Ed Spec (-20% to -30%)
- Below Ed Spec (-30% or More)

UPPER FLOOR



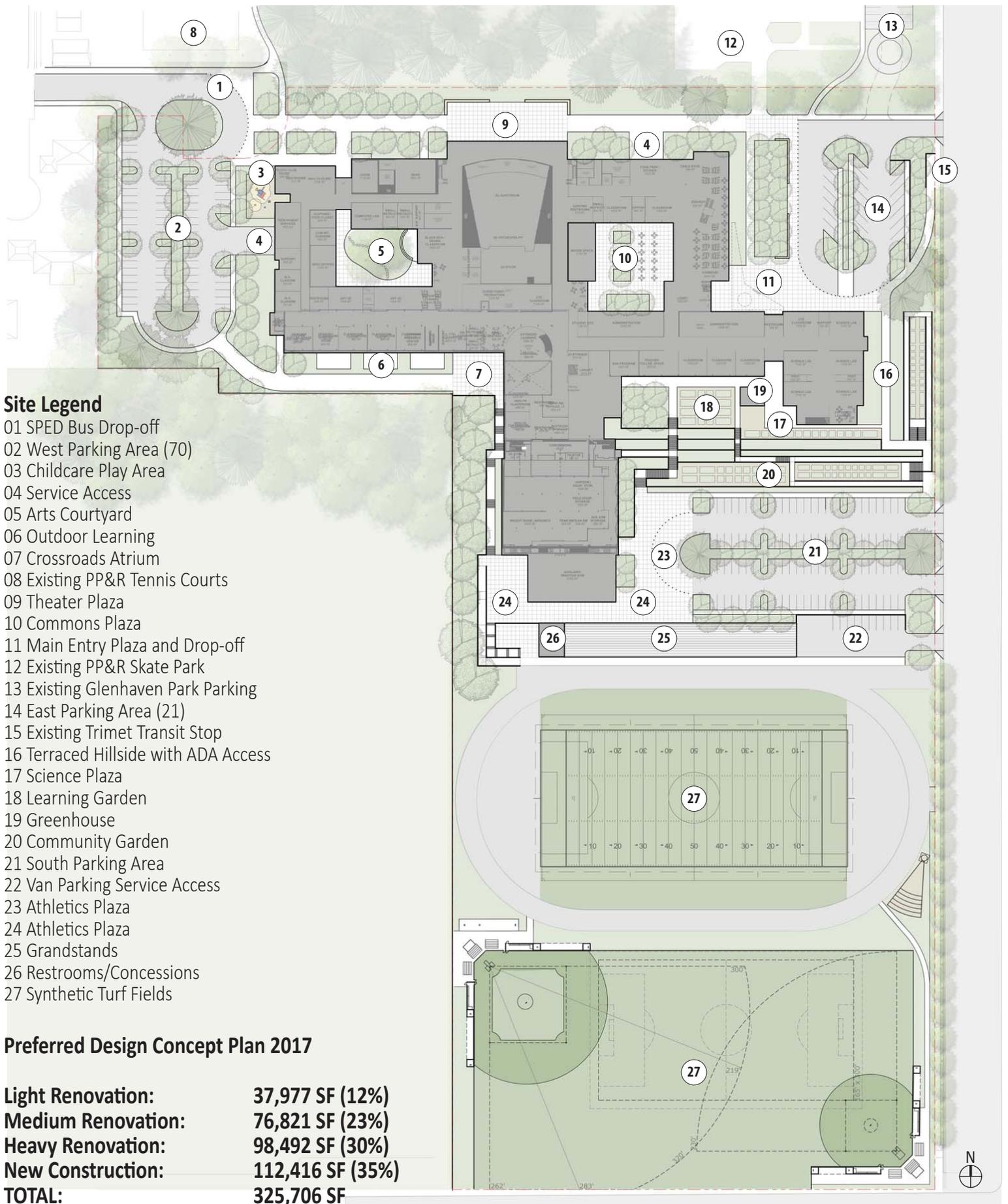
MAIN FLOOR



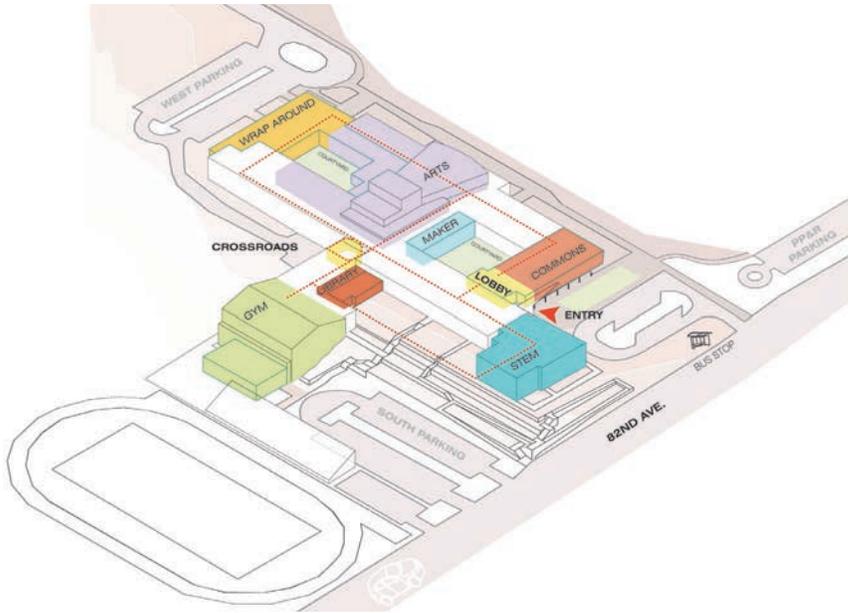
GROUND FLOOR & BASEMENTS



MADISON HIGH SCHOOL // Proposed Scheme

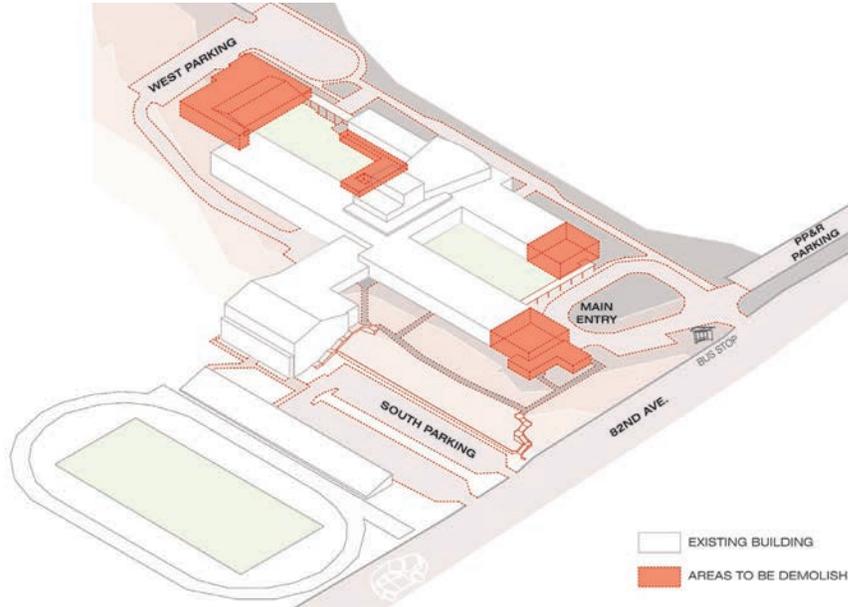


MADISON HIGH SCHOOL // Proposed Scheme



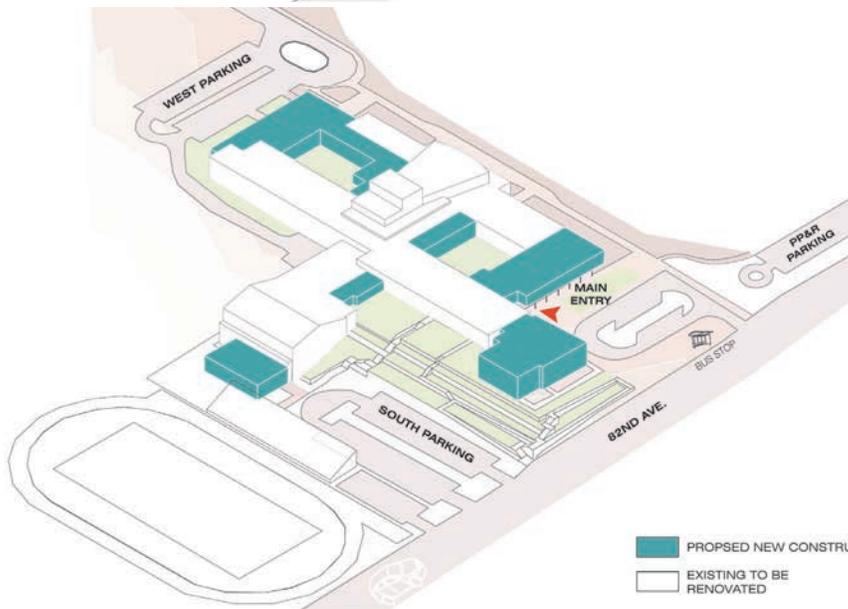
Program Neighborhoods

Program districts anchor each wing of the building and surround the outdoor learning courtyards and southern terraced gardens.



Demolition Diagram

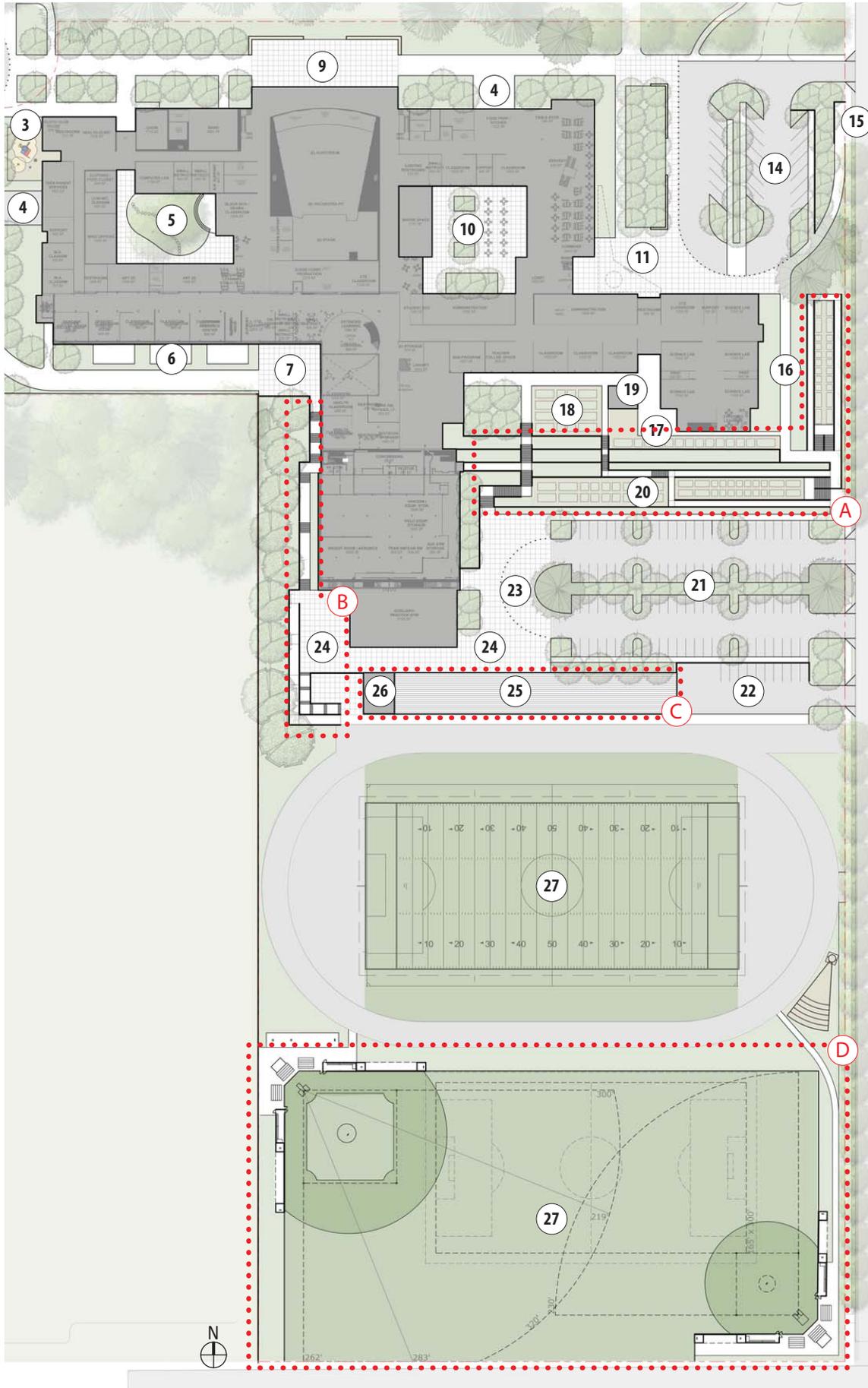
Areas of demolition occur in perimeter zones, to be addressed with modernized new construction areas.



Areas of Proposed New Construction

The areas of proposed new construction are located to efficiently address as many modernization goals as possible.

MADISON HIGH SCHOOL // Proposed Scheme



Pre-Design Due Diligence Process Winter 2016-2017:

Further examined concept plan developed in Spring 2016:

- » Program delivery- area of instructional spaces sufficient to deliver program for 1,700 students
- » Cost of concept plan modernization based on deeper analysis of the following categories:

Must do improvements:

Entire Campus

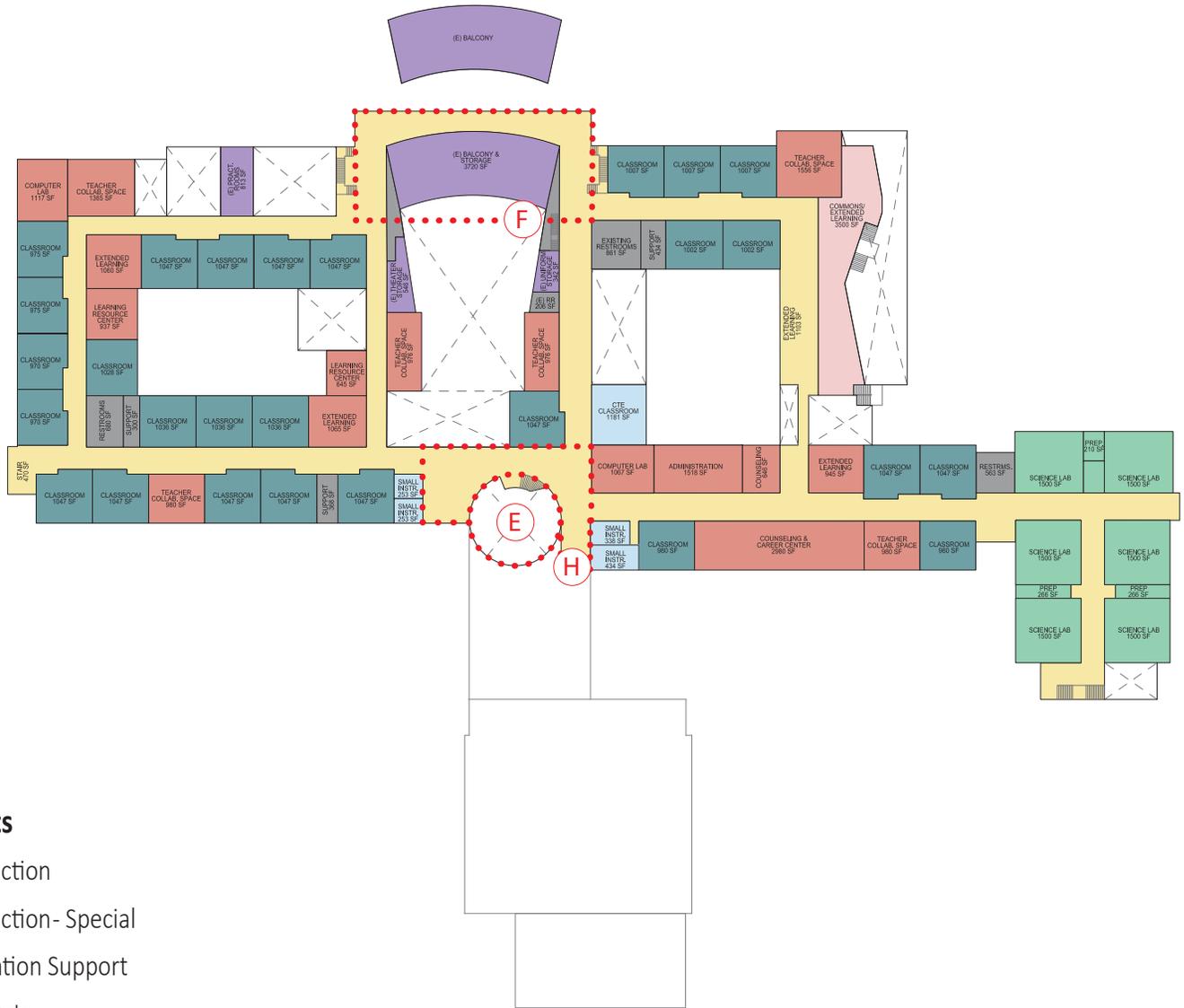
- » Safety and security
- » Hazardous materials mitigation
- » Seismic
- » Code compliance
- » Energy conservation
- » Learning environment upgrades
- » Infrastructure upgrades
- » Wrap around/community services provisions

Optional Priorities

Site:

- A. South slope stairs
- B. South yard improvements
- C. Stadium upgrade
- D. Field upgrade

MADISON HIGH SCHOOL // Proposed Scheme



UPPER FLOOR

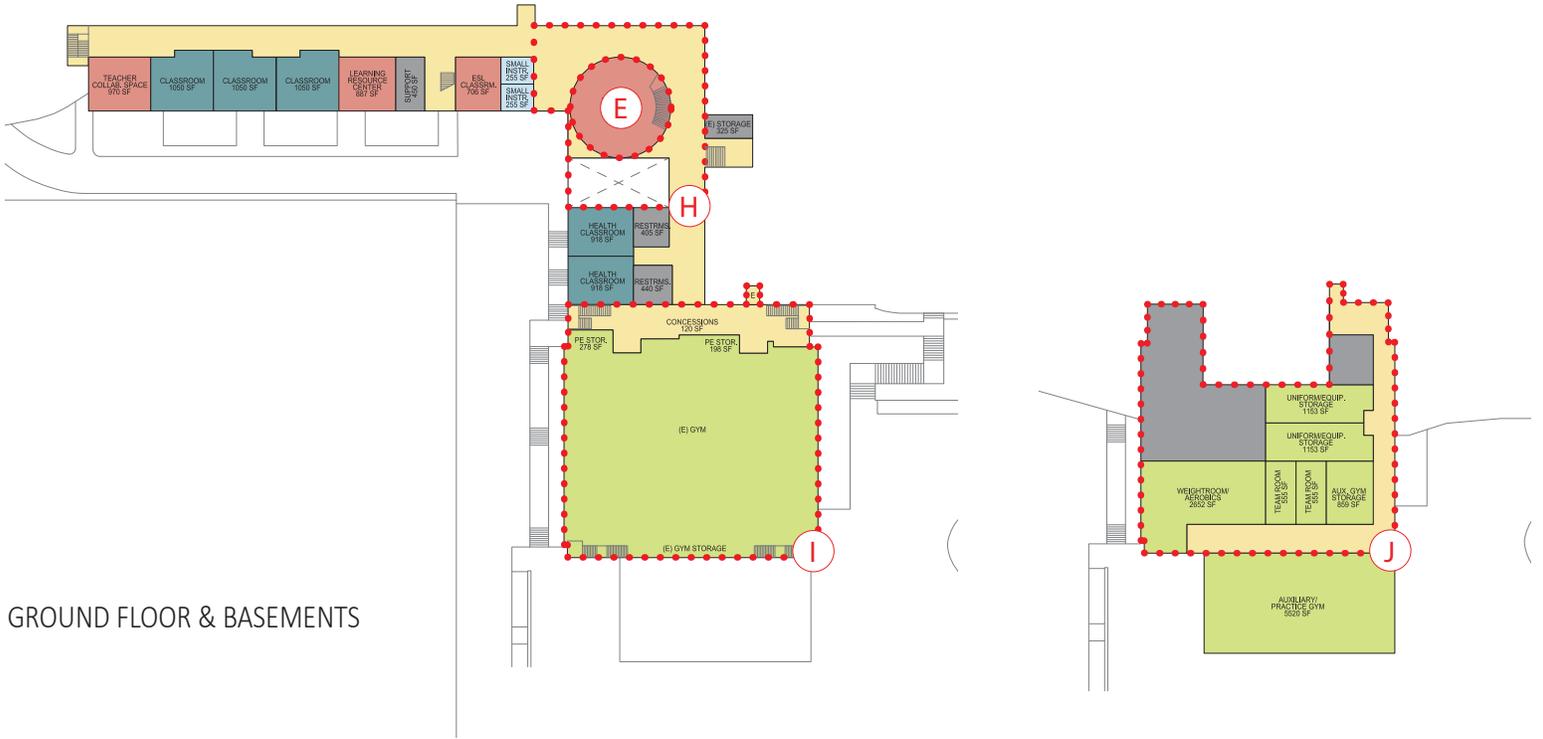
Departments

- Instruction
- Instruction- Special
- Education Support
- Fine Arts
- CTE
- Student Center
- PE/Athletics
- Library/Media Center
- Community Wrap-Around
- Support
- Circulation
- Outdoor Areas

Optional Priorities Building:

- E. Add atrium at 'Crossroads'
- F. Auditorium size reduction (re-purpose for instruction)
- G. Modify scope of 'Beacon' (renovation & new)
- H. Improve net/gross efficiency by 5%

MADISON HIGH SCHOOL // Proposed Scheme



GROUND FLOOR & BASEMENTS

Departments

- Instruction
- Instruction- Special
- Education Support
- Fine Arts
- CTE
- Student Center
- PE/Athletics
- Library/Media Center
- Community Wrap-Around
- Support
- Circulation
- Outdoor Areas

Optional Priorities Building:

- E. Add atrium at 'Crossroads'
- H. Improve net/gross efficiency by 5%
- I. Reduce scope of gymnasium
- J. Reduce scope of basement lease space



PROJECT OVERVIEW

Student Design Capacity

1,700

Building Area

+/- 281,370 SF

Area is the design target based on the PPS Education Specifications

Construction Cost

Renovation + Addition	Full Replacement
\$160,794,952	\$124,503,000

Project Cost*

Renovation + Addition	Full Replacement
\$251,397,302	\$186,829,722

* Project cost based on recommended construction schedule.

Final project cost will be based on Board of Education-approved construction schedule.

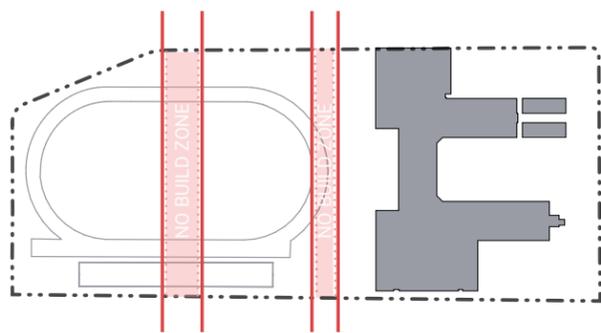
PROJECT INTENT

Lincoln High School (LHS) is being reviewed along with Madison and Benson High Schools and Kellogg Middle School as part of an overall bond program to modernize and improve district facilities. LHS serves about 1,700 students in the Central City and Northwest Portland. The existing building contains approximately 180,000 SF (100,000 SF short of the Educational Specifications) making it the smallest high school facility in the District with the most students. Located in the Goose Hollow neighborhood, the 11-acre site is bordered by I-405 to the east, Salmon Street to the north, the 18th street Max corridor to the west and existing commercial development to the south.

Key Challenges

The LHS site faces distinct challenges, among them:

- There is no viable off-site swing option, requiring a temporary swing school to be built on the existing track and field. This is one of the biggest challenges to renovating and expanding the existing school.
- Location within the Central City 2035 plan requires compliance with numerous design criteria enforced by the Design Commission, including pedestrian access through the site, no surface parking, and placing new construction along the property line to define an active street edge.
- LHS is situated in a constrained site in a dense urban setting.
- Two major utility easements run through the site creating “no build zones” in the old 16th and 17th Avenue right-of-ways. These easements contain major storm water infrastructure that cannot be built upon or relocated.



- Sloped site topography requires extensive grading for accessibility and potential retaining walls.
- Poor soils conditions require deep foundations regardless of the location on the site.
- Very few of the spaces in the existing school are in compliance with the Educational Specifications.

- The school is 100,000 SF below required area for a comprehensive PPS high school:
Existing Lincoln High School: 180,912 SF
2017 Required Ed Spec: 281,370 SF
- Existing mechanical, electrical, plumbing, data and fire protection systems are outdated and require full replacement.
- Portions of the existing structural system can be retained, but will require full seismic upgrade.

Due to these significant challenges, the Due Diligence team studied and analyzed two Full Replacement options in addition to a Renovation + Addition option under this effort. Building a new school on the west side of the site would allow students to stay in the existing school during construction and eliminate the need and cost for a temporary swing school.

MPC Process

The goal of the Pre-Design Diligence Study was to reach beyond the initial master planning study (completed in July 2016) into early design diligence with more detailed investigations of the three development options: Renovation + Addition, Full Replacement: Horizontal, and Full Replacement: Vertical. The design team received input on the development options from the Steering and Master Planning Committees at regular meetings throughout the three month study.

Due Diligence

The design team’s scope included the following due diligence analysis under this effort:

- Health and safety analysis of existing facilities
- Existing space and site analysis
- Program verification per Ed Spec for comprehensive high school for 1,700 students
- Land use planning and code compliance
- Site survey and geotechnical analysis
- Assessment of existing building systems (mechanical, electrical, data, plumbing fire protection)
- Develop building concepts and site design options
- Provide civil, landscape structural, mechanical, and electrical systems narratives for each design concept
- Develop construction logistics and phasing scenarios
- Develop cost estimates for each option.

ARCHITECTURAL DESIGN

The goals for each of the three development options were to address concerns for health and safety as well as school security, to provide student-centered facilities, to meet the Ed Specs in quality and quantity, to minimize disruptions during construction, to promote long-term operational efficiency, and to meet these goals cost-effectively.

Renovation + Addition: Wrapper

The Renovation + Addition option is comprised of 27% renovated space and 73% new addition. The existing C-shaped classroom wings of the school are preserved, while the existing gym and auditorium are demolished, as they cannot be expanded to meet the Ed Spec. The scheme includes “wrapping” the renovated portion with new construction, including a new classroom wing to the east, the new gym to the north, the new auditorium to the south, and new commons and education support spaces to the west. The design team also investigated requirements for a swing site on the west side of the site to provide temporary facilities during construction.

Full Replacement: Horizontal

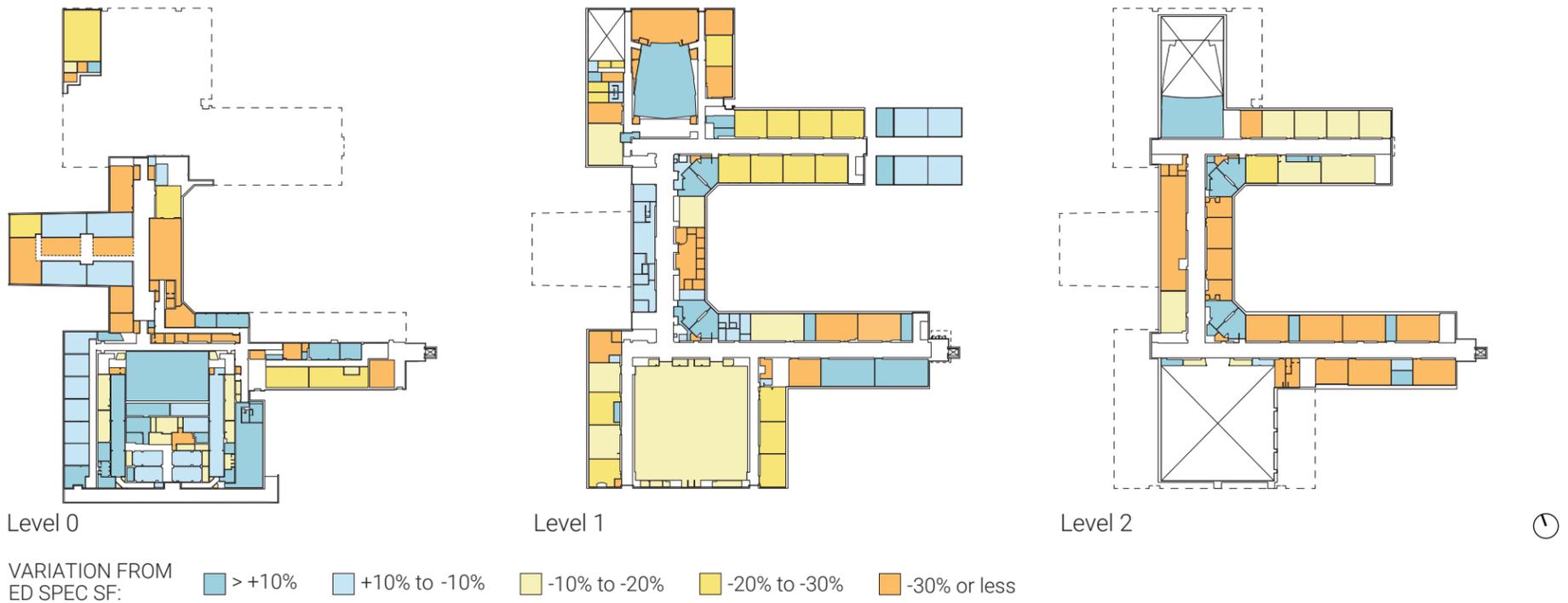
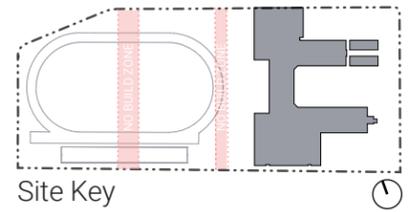
This option entails the construction of a new 5-story facility on the west side of the site, allowing students to remain in the existing facility during construction. The horizontal scheme provides a “loop” of instructional spaces on the north half of the facility. Performing arts is located to the west edge of the site along SW 18th Ave., with the auditorium to the southwest of the site to provide loading access. The gym and athletics facilities are located to the southeast of the facility to provide connectivity with the track and fields.

Full Replacement: Vertical

This option includes construction of a 9-story wing that consolidates instructional spaces to the northwest portion of the site along Salmon St. with education support spaces on the lower floors. Like in the Horizontal scheme, performing arts are located to the southwest (providing loading access for the auditorium) and athletics spaces are located in the southeast corner of the facility to promote access to the track and fields. Students can remain in the existing facility on the east side of the site while the new facility is constructed on the west side.

LINCOLN HIGH SCHOOL / EXISTING CONDITIONS

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



Existing Facility

- Requires extensive HVAC & plumbing replacements and seismic strengthening.
- Many instructional spaces do not have access to natural light, including 11 Classrooms, the Gym and Weight Room.
- 34 of 44 Gen-Ed Classrooms are $\geq 10\%$ below PPS Ed Spec. Proposed program requires 10 additional Gen-Ed Classrooms.
- All 10 existing Science Labs are $\geq 10\%$ below PPS Ed Spec. Proposed program requires 3 additional Science Labs
- ADA Accessibility is challenging and inconvenient. Single elevator is remotely located. Not all lower level spaces are ADA accessible, including Weight Room, Band Room, Practice Rooms, and Stage.
- Theater Stage, Gym, Media Center, and Cafeteria do not meet current PPS Ed Spec.
- Several Ed Spec required program areas do not exist in the current building, including an Auxiliary Gym, Teacher Offices, Technology Access labs, Extended Learning Areas, Partner & Community Uses, and Wrap-Around Service Providers.

Health & Safety Findings

- Existing structural system does not meet code and requires strengthening to meet current seismic requirements
- Hollow tile interior walls have the potential for collapse during a seismic event
- Poor ADA accessibility
- No fire sprinkler system. Existing fire protection system does not meet NFPA 2013 standards
- Existing water piping system contains lead and copper in excess of acceptable levels and needs to be replaced
- Most HVAC equipment is past its useful life and needs to be replaced for improved air quality
- Data, telecommunications, and security systems are outdated and need to be replaced
- Emergency power system is corroded and does not meet code, creating a potential safety hazard
- Numerous locations of hazardous materials/asbestos that require removal

Other Findings

- Soft fill soils, require deep foundations for all options
- Virtually none of the current space configuration is in compliance with the educational specifications
- Interior walls, finishes and systems need to be replaced in their entirety
- The gymnasium and performing arts portions of the building cannot be renovated and need to be fully replaced
- Electrical system is outdated, undersized, and needs to be replaced

Main Building (1952)

- 2 stories + Basement (25' above grade)
- 176,412 SF
- 60 Classrooms

Modular Expansion (2016)

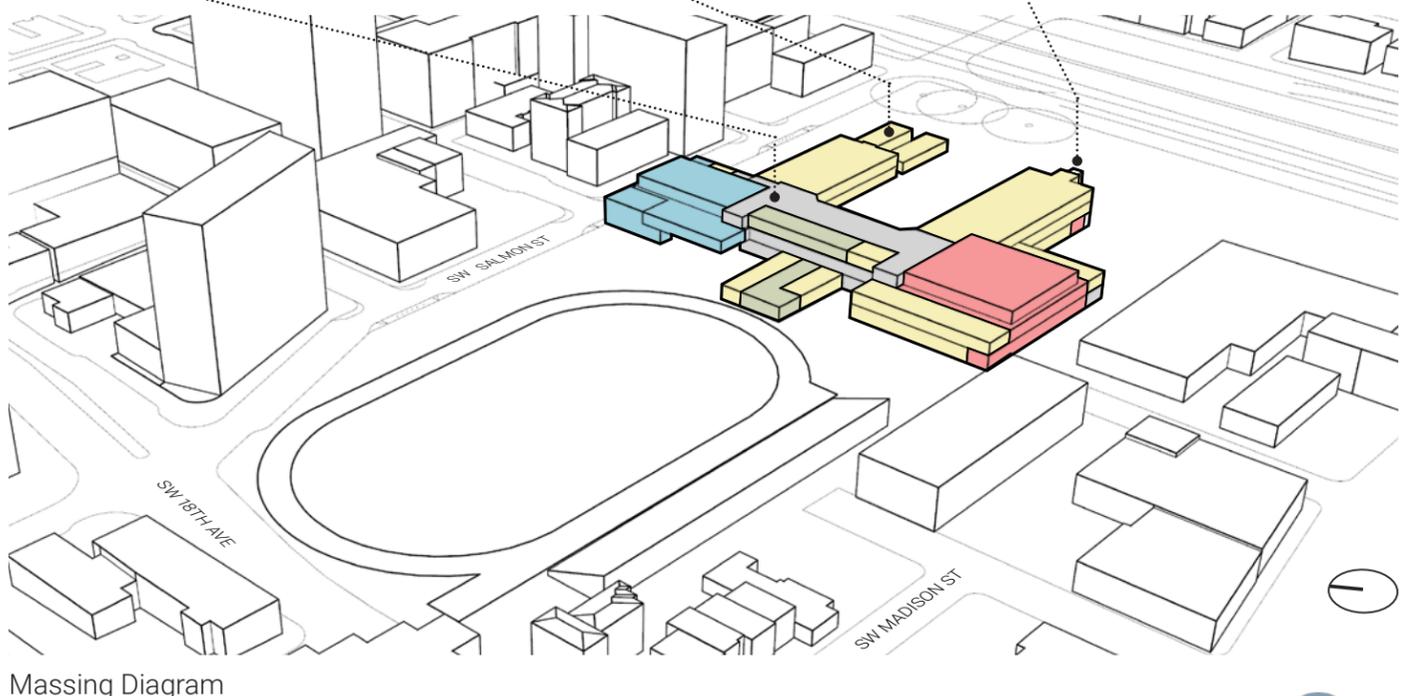
- 1 story (15' high)
- 4,500 SF
- 4 Classrooms

Elevator Addition (1998)

- 2 stories + basement (25' above grade)

Legend

- Administration & Support
- Commons & Media Center
- Instructional
- Athletics
- Performing Arts
- Core

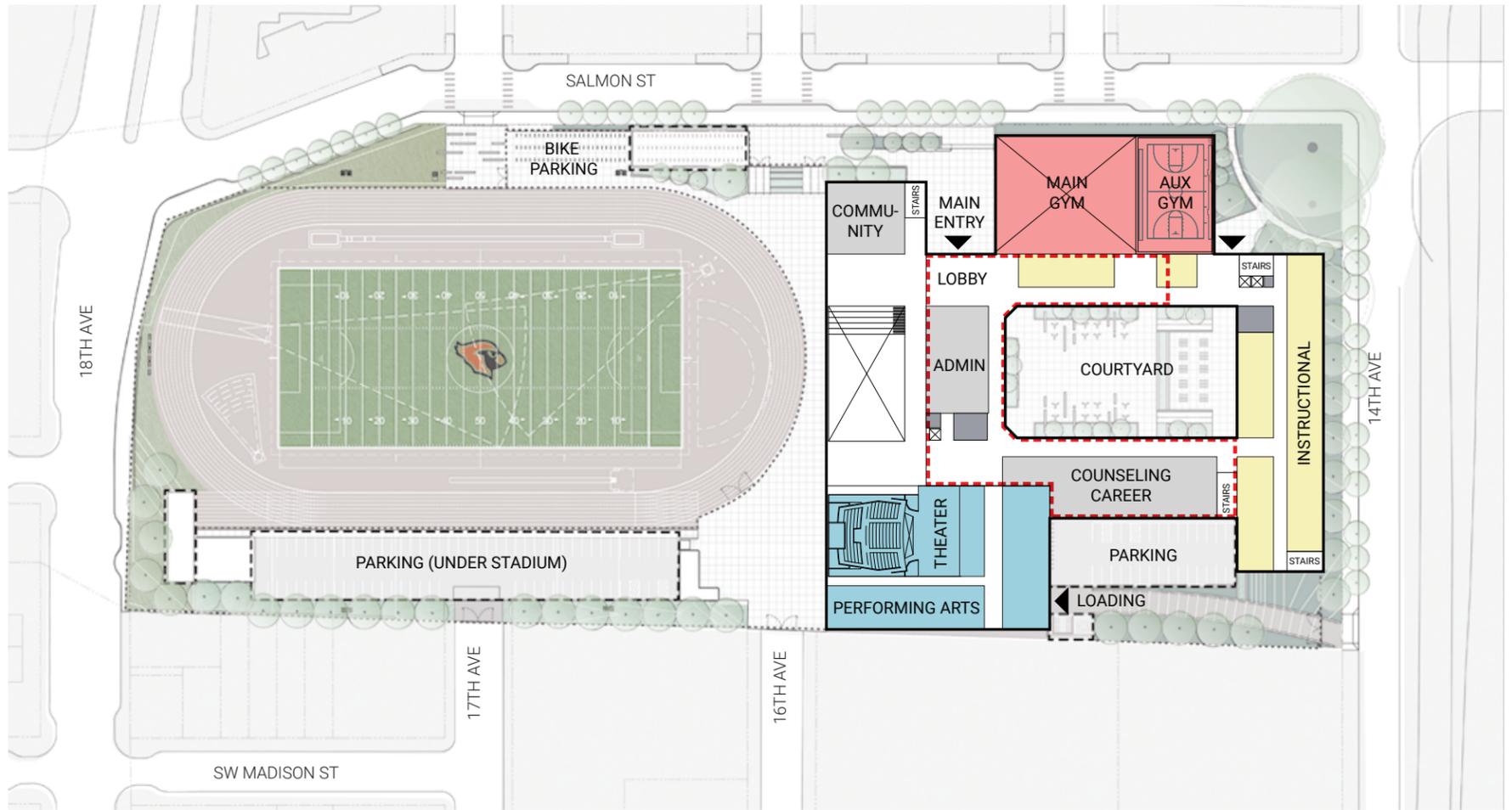
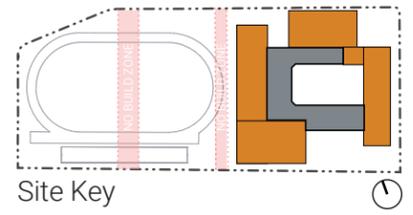


LINCOLN HIGH SCHOOL / RENOVATION + ADDITION

Construction Cost: **\$160,794,952**

Project Cost*: **\$251,397,302**

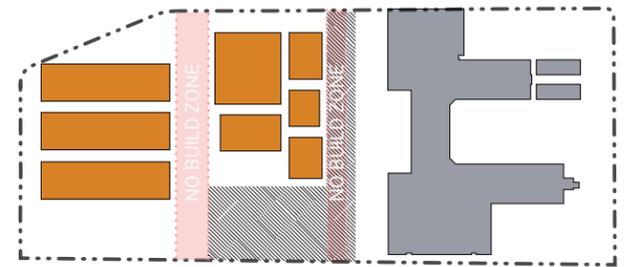
* Project cost based on recommended construction schedule. Final project cost will be based on Board of Education-approved construction schedule.



Site Plan + Ground Floor Level

Renovation & Addition: Wrapper

- The option is composed of 27% renovated space and 73% new addition.
- The renovated space is equal to 49% of the existing school (51% is demolished).
- Existing Gym and Performing Arts demolished due to structural and site constraints.
- Renovated portion requires extensive roof & HVAC systems replacement and seismic upgrades.
- Renovated area requires full gut and replacement of interior walls to meet Ed Spec standards.
- Program meets current PPS Ed Spec
- All Floors ADA Accessible
- Requires temporary high school swing facility to be constructed on-site during construction.



Swing Site Plan

Field and Stadium

- Parking under seating (72 spaces)

Classroom & Commons

- 2 stories + Basement (30' high)
- Gen Ed Classrooms, Athletics, Commons & Community Partners

Athletics

- 2 stories (45' high)
- Main & Auxiliary Gyms

Renovated Building

- Admin & support
- Media Center
- Small Instruction Spaces

Performing Arts Wing

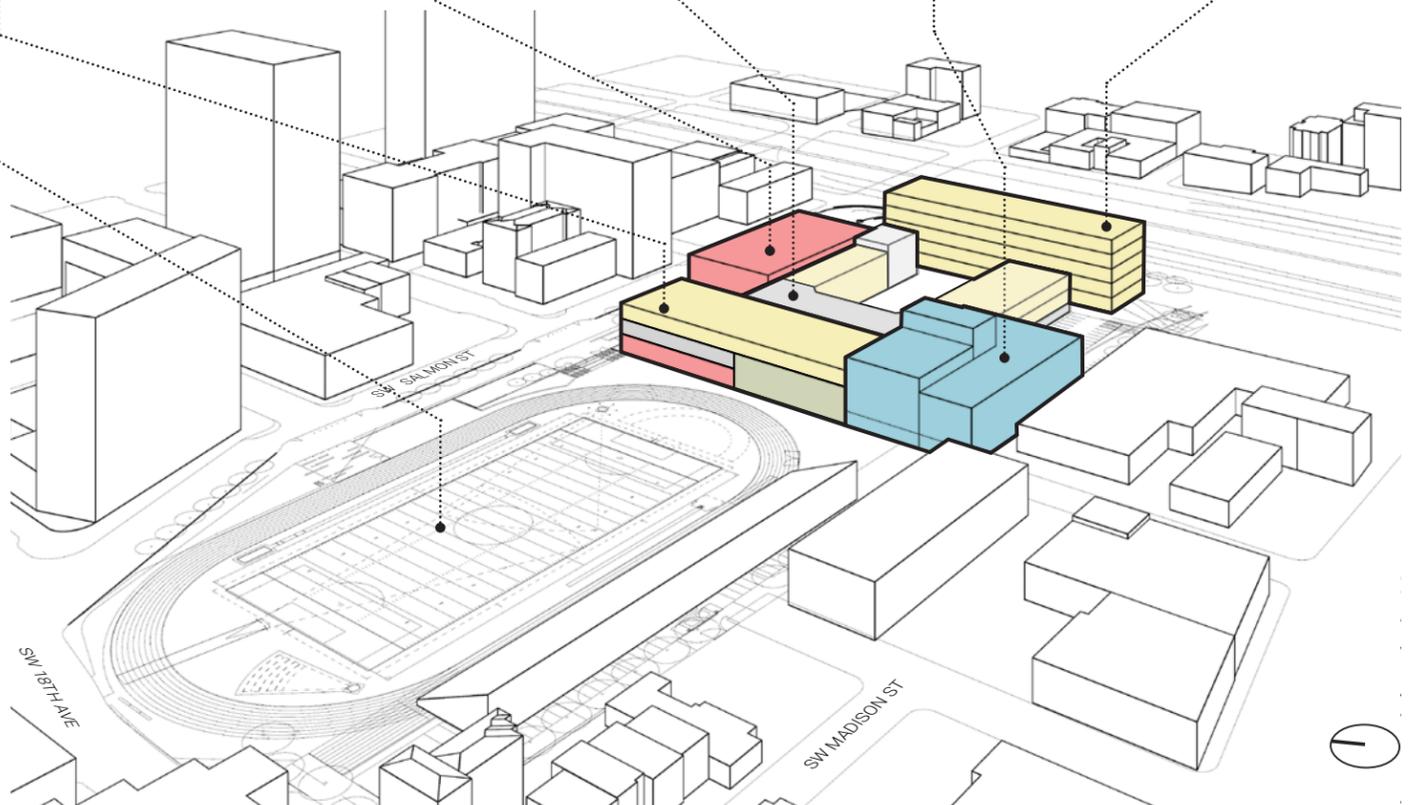
- 1 story + theater balcony (45' high)
- Loading access from parking lot (28 spaces)

Classroom Wing

- 5 stories (75' high)
- Gen Ed Classrooms & Science Labs

Legend

- Administration & Support
- Commons & Media Center
- Instructional
- Athletics
- Performing Arts
- Core
- Renovated Area



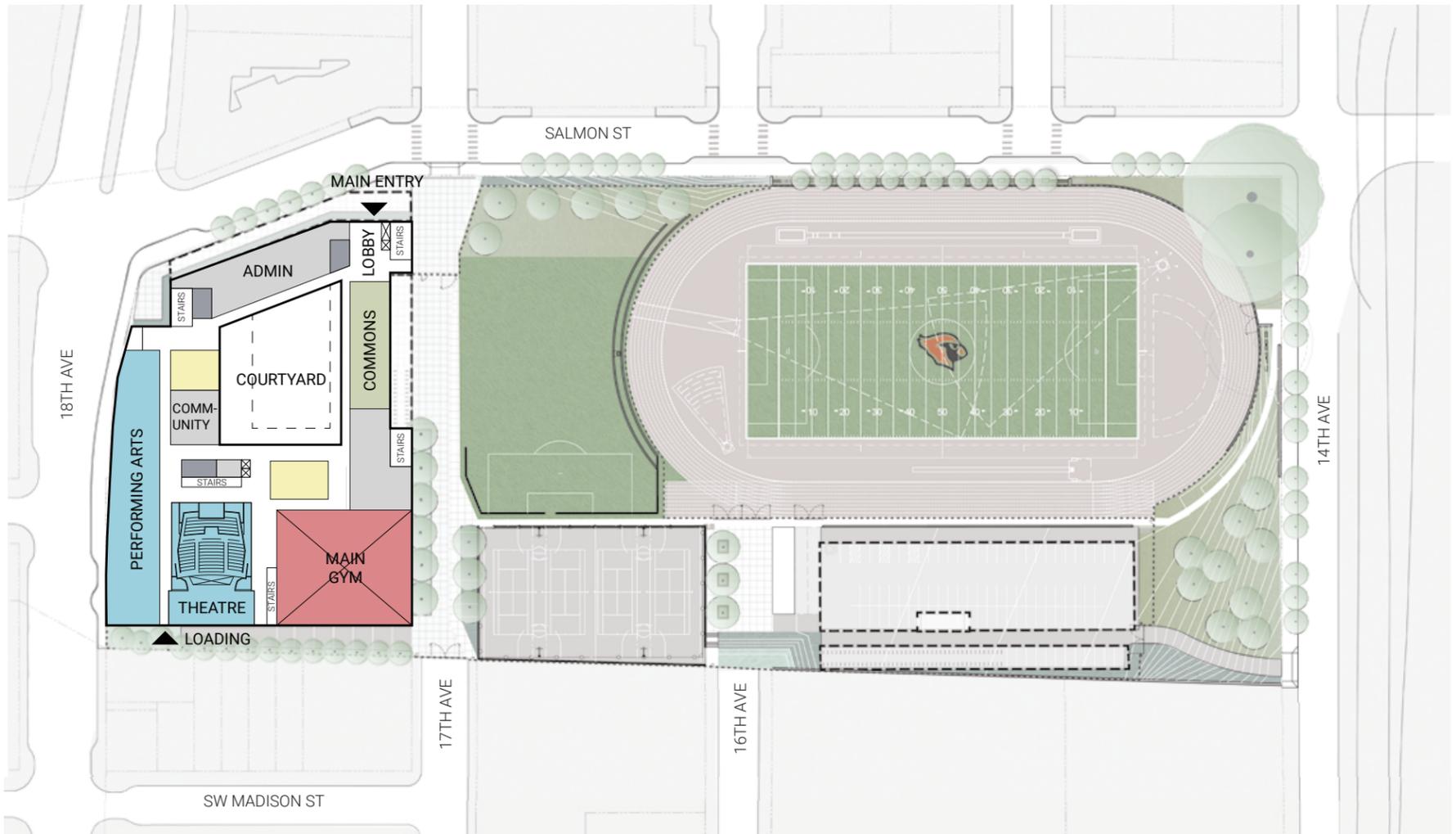
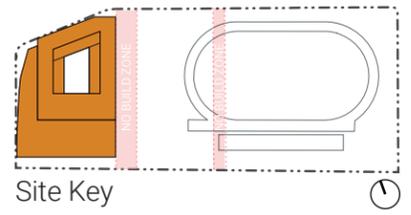
Massing Diagram

LINCOLN HIGH SCHOOL / FULL REPLACEMENT: HORIZONTAL

Construction Cost: **\$124,503,000**

Project Cost*: **\$186,829,722**

* Project cost based on recommended construction schedule. Final project cost will be based on Board of Education-approved construction schedule.



Site Plan + Ground Floor Level



Full Replacement: Horizontal

- Program meets current PPS Ed Spec
- All Floors ADA Accessible
- On West parcel of site
- Separation of Bus Drop-off and Parking
- Main entry on SW Salmon Street
- Performing Arts and Athletics share loading on south edge of property
- Central courtyard

Instructional Wing

- 5 stories (75' high)
- Gen Ed Classrooms & Science Labs

Performing Arts

- 2 stories (30' high) at street level

Athletics

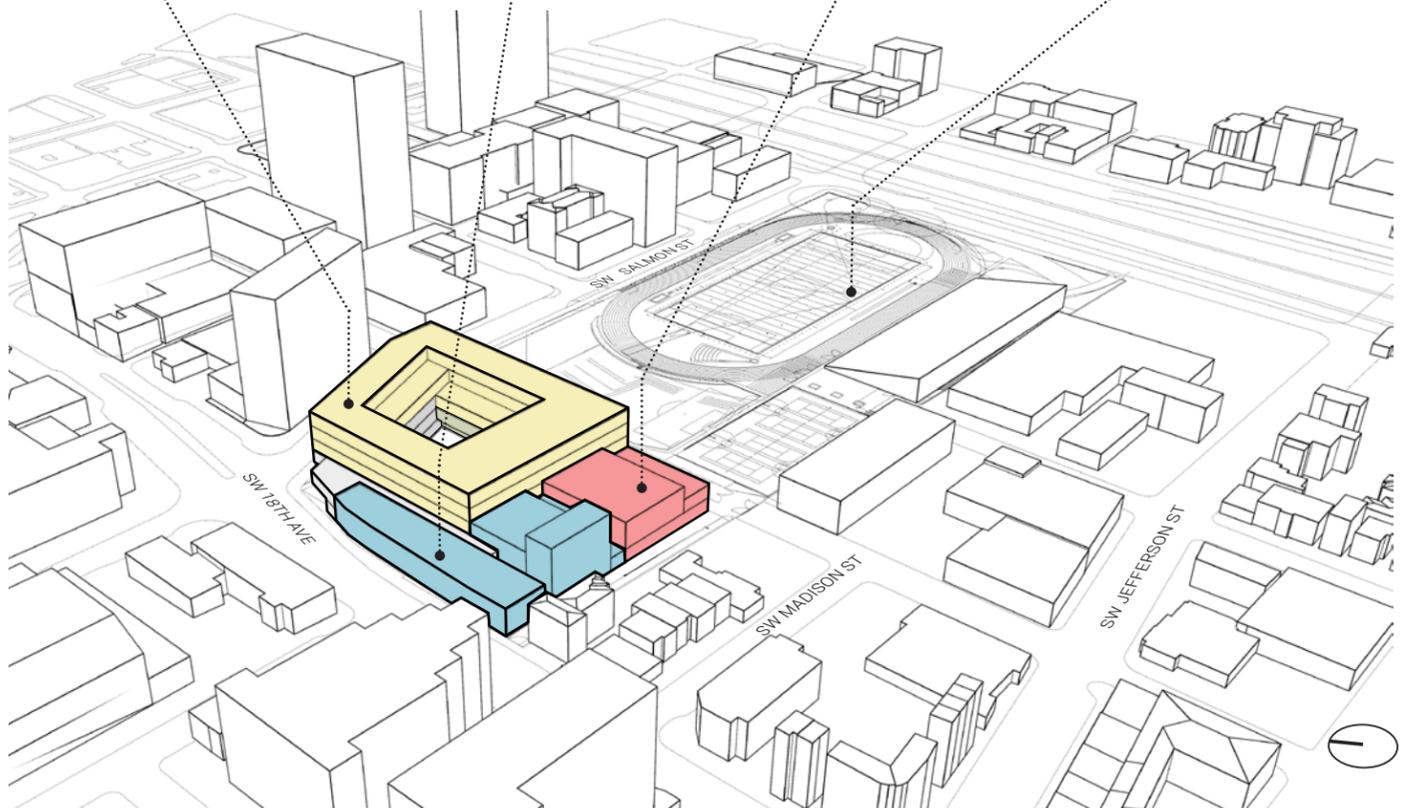
- 3 stories (45' high)
- Adjacent to field
- Aux Gym on top of Main Gym

Field and Stadium

- Parking under seating (100 spaces)

Legend

- Administration & Support
- Commons & Media Center
- Instructional
- Athletics
- Performing Arts
- Core



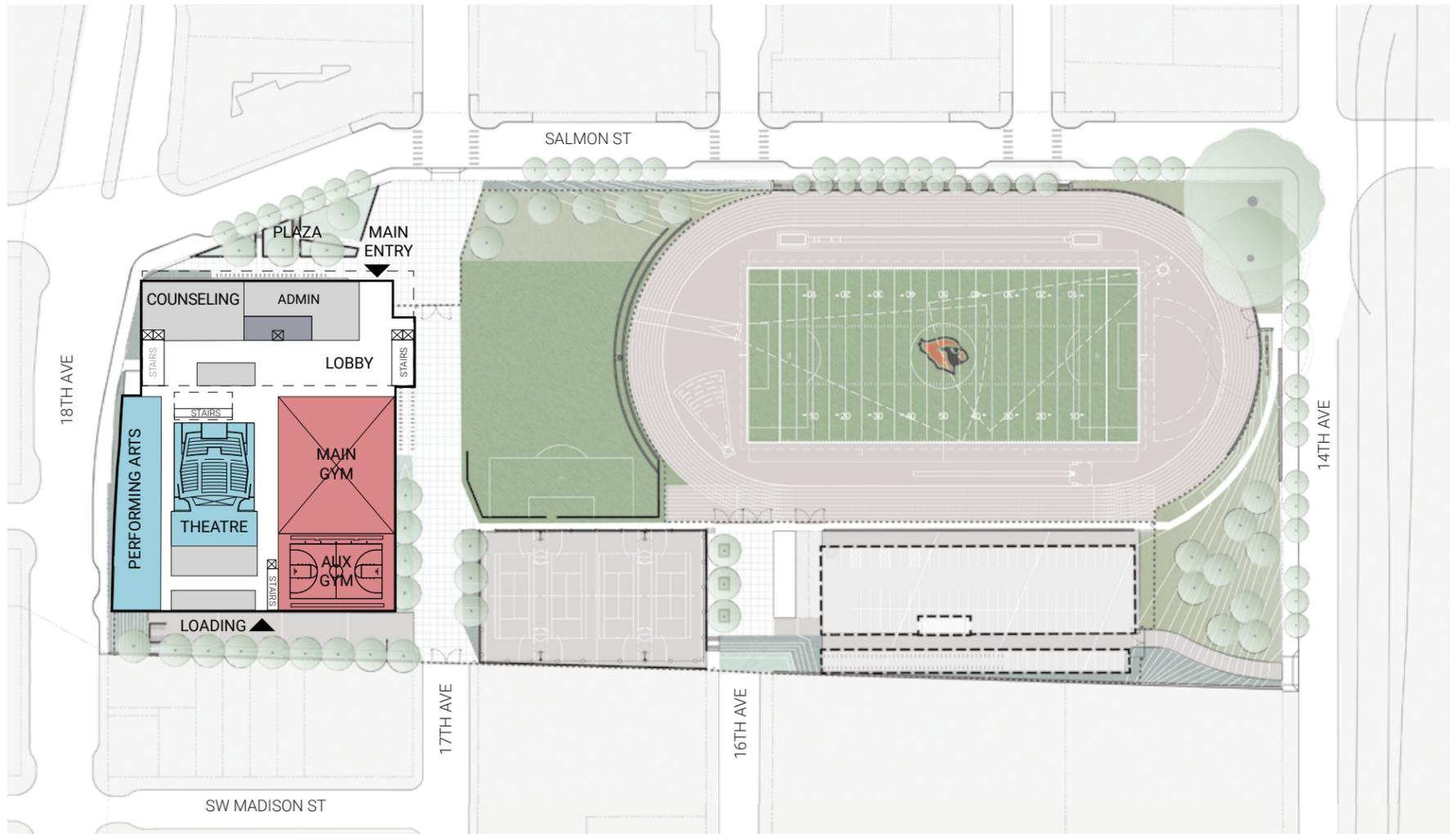
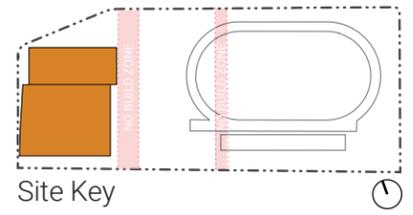
Massing Diagram

LINCOLN HIGH SCHOOL / FULL REPLACEMENT: VERTICAL

Construction Cost: **\$124,503,000**

Project Cost*: **\$186,829,722**

* Project cost based on recommended construction schedule. Final project cost will be based on Board of Education-approved construction schedule.



Site Plan + Ground Floor Level



Full Replacement: Vertical

- Program meets current PPS Ed Spec
- All Floors ADA Accessible
- On west parcel of site
- Separation of Bus Drop-off and Parking
- Main entry on SW Salmon Street
- Performing Arts and Athletics share loading on South edge of property
- Large Plaza on SW Salmon Street

Instructional Wing

- 9 stories (135' high)
- Gen Ed Classrooms & Science Labs
- Commons & Media Center

Performing Arts

- 2 stories (30' high) at street level

Athletics

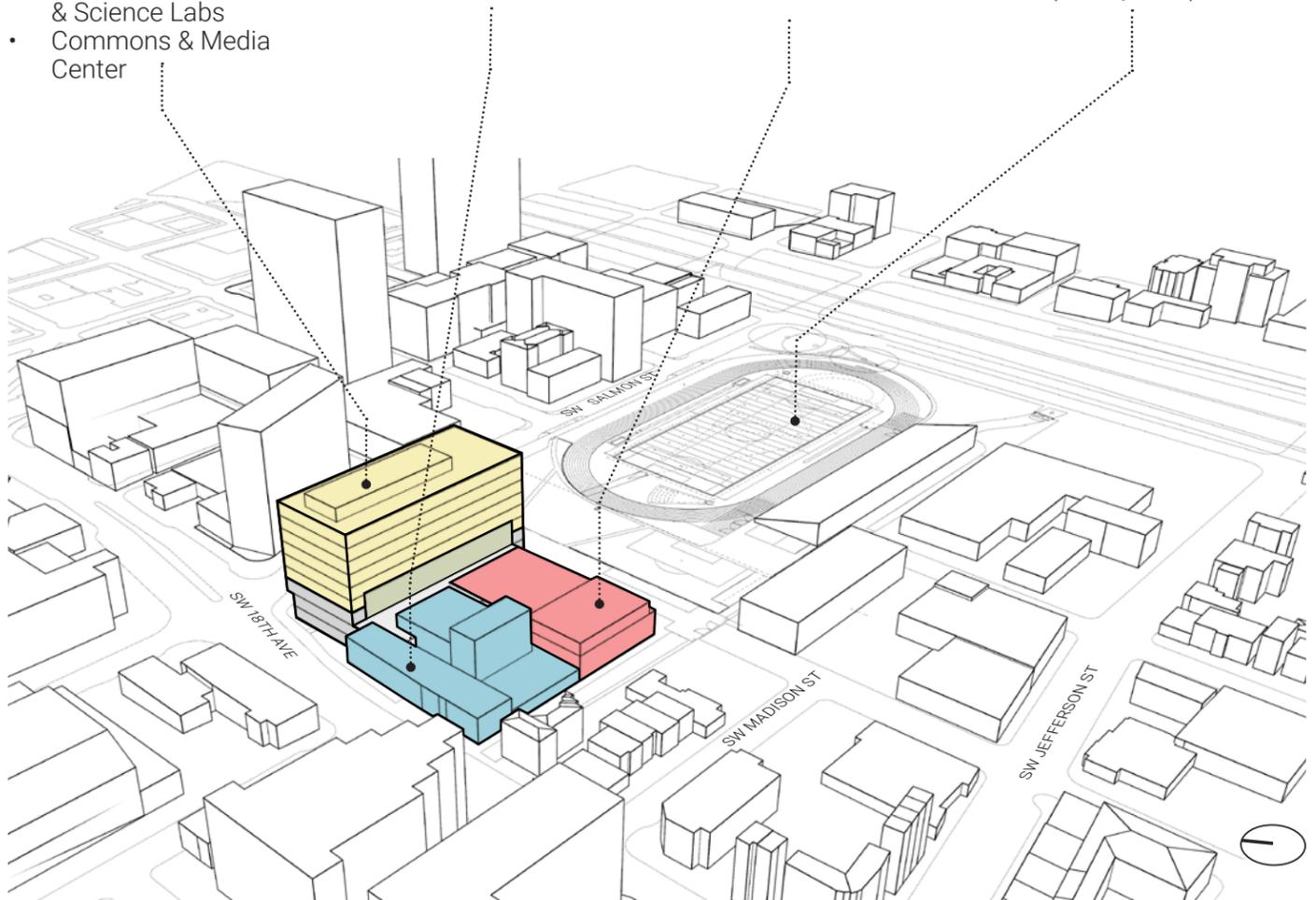
- 3 stories (45' high)
- Adjacent to field

Field and Stadium

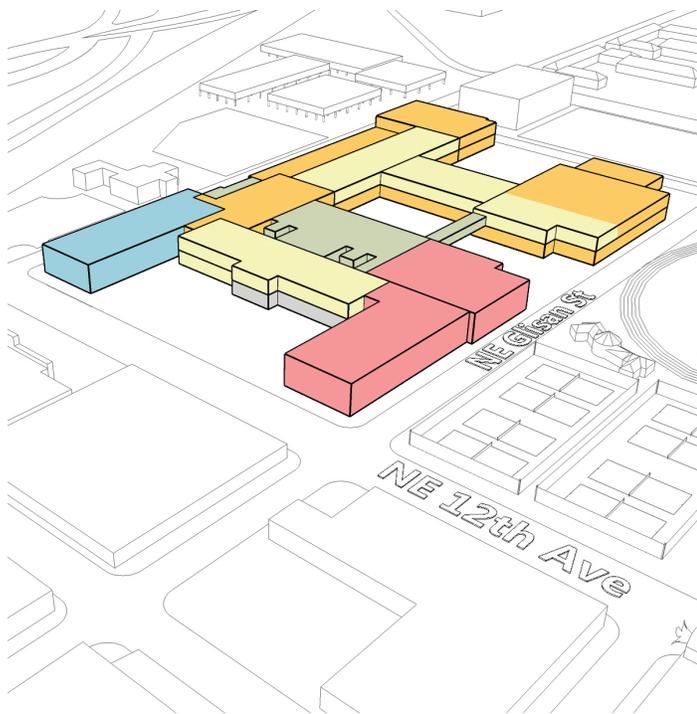
- Parking under seating (100 spaces)

Legend

- Administration & Support
- Commons & Media Center
- Instructional
- Athletics
- Performing Arts
- Core



Massing Diagram



Construction Budget

\$122,000,000

Project Budget

\$201,654,716

Project cost based on recommended construction schedule. Final project cost will be based on Board of Education-approved construction schedule.

Student Design Capacity

1,700

Proposed Building Area

+/- 368,000 SF

Area shown is the design target based on preliminary Benson Tech Focus Option Ed Spec program information. Final area to be determined with finalization of the Ed Spec from information being gathered from Benson Tech staff, administration, community, alumni, and equipment surveys through May 2017.

PROJECT INTENT

The main focus of the Benson Polytechnic pre-design diligence effort has been to build upon the work done in the Master Planning phase and develop greater detail about program needs, budget considerations, as well as exploring phasing scenarios of the developing schemes.

Key Project Challenges

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

Master Plan Committee (MPC) Process

The Benson Tech MPC has met nine times thus far, and will continue to meet through August 2017 as a part of the master planning effort. MPC input on design iterations, site design, programming and Ed Spec development will be crucial for finalization of the masterplan.

Due Diligence

During the pre-design diligence phase, the design team has reviewed the findings in the Master Plan report, conducted numerous site visits and reviewed existing documentation. For program development, the team has gathered input from staff of over 20 departments, including all Career Technical Education (CTE) department heads, alumni, and administration.

ARCHITECTURAL DESIGN

The modernization of Benson Polytechnic will restore the historic 1916 Main Classroom building, the 1927 Old Gymnasium and the 1930 Auditorium Building. Additionally, current schemes are also looking to restore the North Wing Shops and Foundry Building, both constructed in 1916. The South Wing Shops Building may or may not be restored depending on function and cost.

The masterplan approach places the Commons at the new heart of the school, serving multiple uses such as cafeteria, student and community gatherings, foyer for athletic events, informal studies and access to various exterior spaces.

Three exterior spaces are also being introduced and enhanced in the masterplan:

- + The existing historic west entry lawn
- + A new central social courtyard
- + A new east CTE work courtyard

Internal layouts of academic classrooms and CTE programs within the school restoration will provide an integration of academic, SPED, and CTE programs. The design also looks to maximize opportunities for natural daylighting into all learning spaces, and a flexibility in building systems that will allow for accommodation of evolving educational programs. The design approach seeks to integrate all of these considerations in a manner that will propel Benson Polytechnic High School into the 21st Century as a national model for career learning educational institutions.



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.
5. **Building envelope:** Modernization would upgrade exterior walls, windows and roof to repair damage, improve energy efficiency and increase durability.
6. **ADA:** Substantial upgrades to make all areas of the school universally accessible.
7. **Radon:** Modernization would provide a new radon mitigation system below new foundations.
8. **Seismic:** URM buildings and other structures would receive a complete structural upgrade to meet current building codes.
9. **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.
10. **Auditorium/Stage:** Aging theatrical lighting and rigging systems to be updated for improved safety and maintainability.

APPROACH

The design team has done a thorough investigation of the existing conditions based on the following:

- + Review of as-built documents provided by PPS
- + Conducted an initial site visit on November 4, 2016 with all consultants
- + Follow-up site visits to review specific items such as exterior envelope, mechanical systems, acoustical treatment, theater, equipment surveys, etc.
- + Review of draft Phase 1 Environmental Site Assessment

The information gathered from these investigations was incorporated into the cost analysis overview that was provided to the district's cost estimator, RLB, to define the construction budget for the project. Areas were identified for renovation based on existing conditions in the following categories:

- + **Heavy Remodel** – Hazmat abatement, extensive interior demolition, seismic and structural upgrades, envelope upgrades, interiors reconfiguration, new finishes, new technology, new mechanical, electrical, plumbing and fire/life safety systems.

- + **Medium Remodel** – Hazmat abatement, modest interior demolition, seismic and structural upgrades, minimal envelope repairs, interiors upgraded with some layout remaining, new finishes, new technology, modifications to mechanical, electrical, plumbing and fire/life safety systems.
- + **Light Remodel** – Hazmat abatement, minimal demolition, minimal interior renovations, new finishes, new technology, integration of mechanical, electrical, plumbing and fire/life safety with new systems
- + **Demolition** – full abatement and removal of buildings to be removed based on the final masterplan.

The majority of the building is in the Heavy and Medium categories, or new construction.

Investigation of existing conditions will continue throughout the design process to aid with fully understanding the building parameters for construction. Further analysis will include work such as:

- + Building survey and photo documentation
- + Creating a BIM model of existing conditions
- + Geotechnical soils investigation
- + Phase 2 Environmental Site Report
- + Testing (structural, acoustic, etc.)

SCHEME DEVELOPMENT

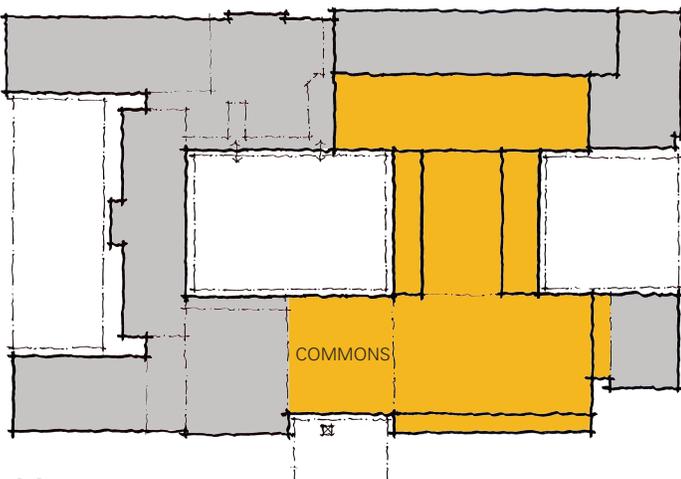
Currently, there are two schemes being developed for review with the MPC, originally noted as Scheme I and Scheme J to the MPC, but changed to Scheme 1 and Scheme 2, respectively, for the purposes of this report.

Both schemes incorporate input received from the MPC based on review of Schemes A-D in the Master Plan Report and a more recent iteration of the design in Schemes E-H, reviewed with the MPC in early January.

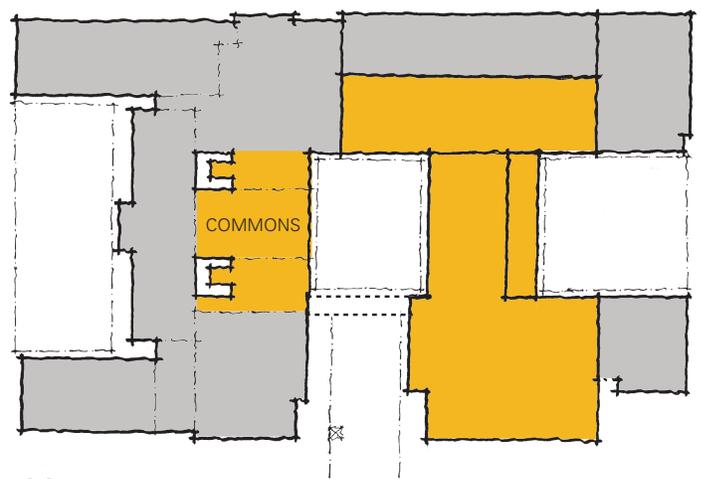
Key themes incorporated into both schemes include:

- + Maintaining and modernizing historic buildings to the west and north and the KBPS building (located in the southeast corner of the site).
- + 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.

The key difference between the two schemes is the location of the commons. Scheme 1 locates the commons to the south and Scheme 2 locates it at the center of the existing buildings. Both schemes will be developed further and a decision will be made with input from the MPC on the preferred option.



SCHEME 1



SCHEME 2

 New Construction  Renovation of Existing

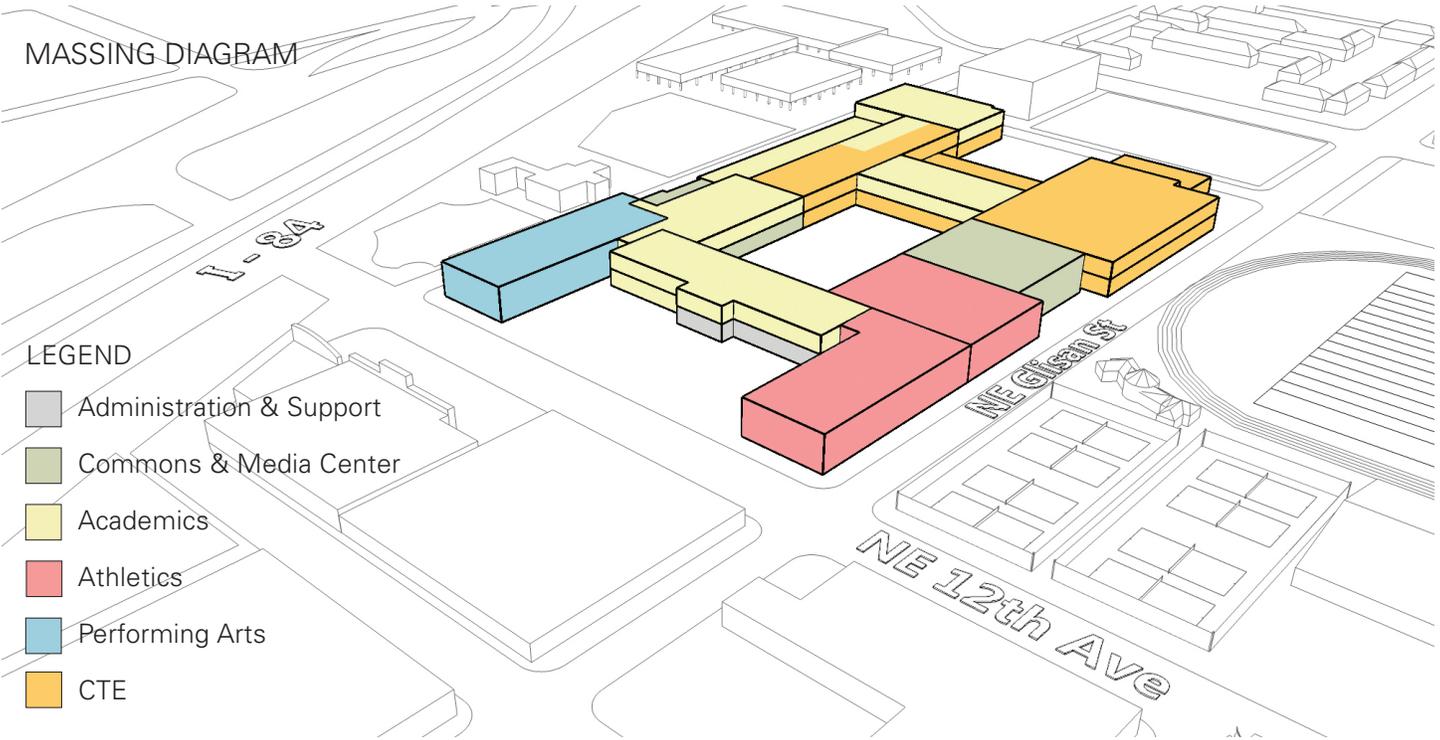
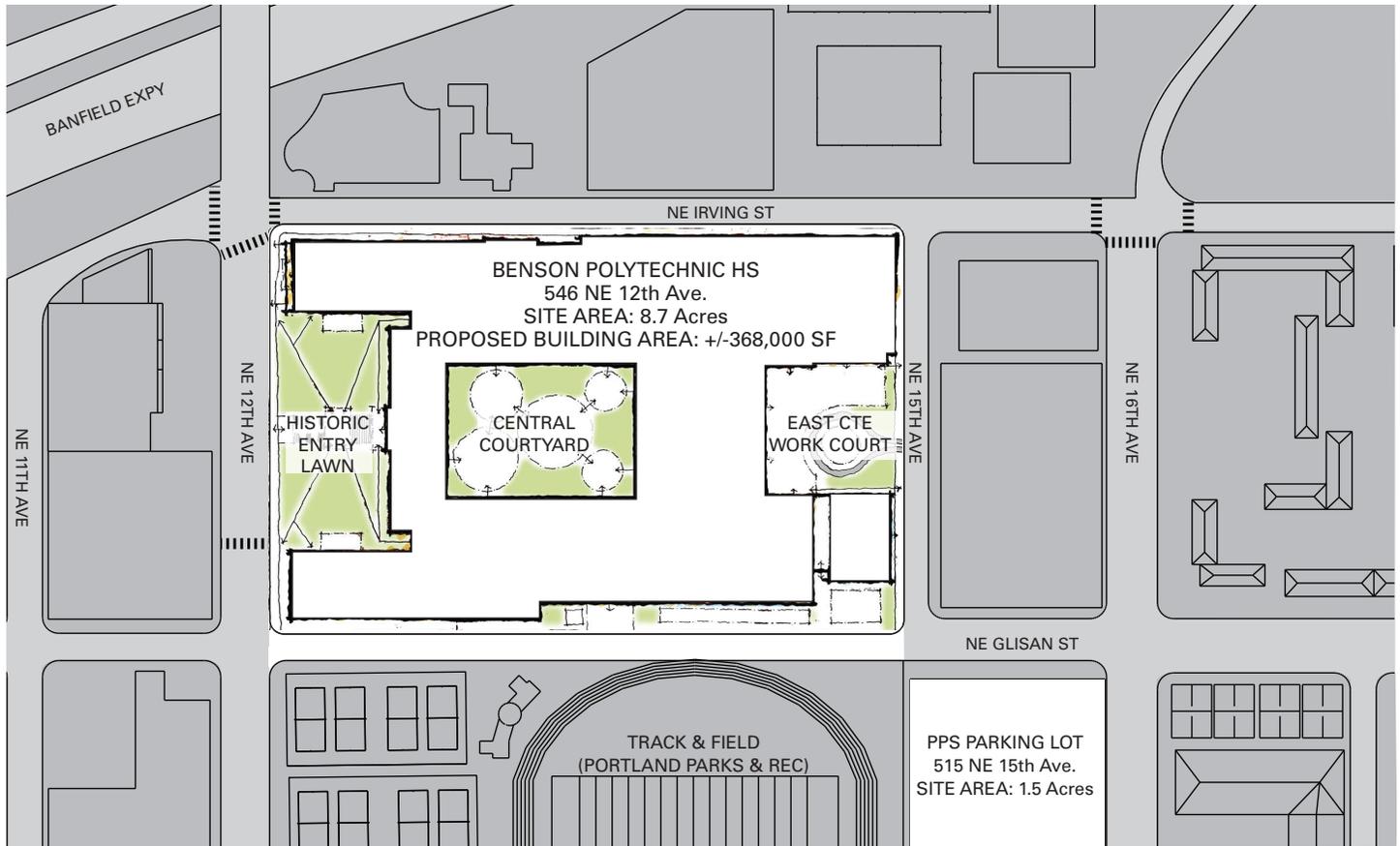
PHASING ASSUMPTIONS

Due to the fact that Benson Tech is a focus option school and attracts students district-wide, finding viable off-site swing site(s) for Benson Tech programs would prove extremely difficult. Initial phasing studies are being tested on both design schemes to understand variables that should be taken into consideration for on-site phasing with students occupying the campus throughout construction.

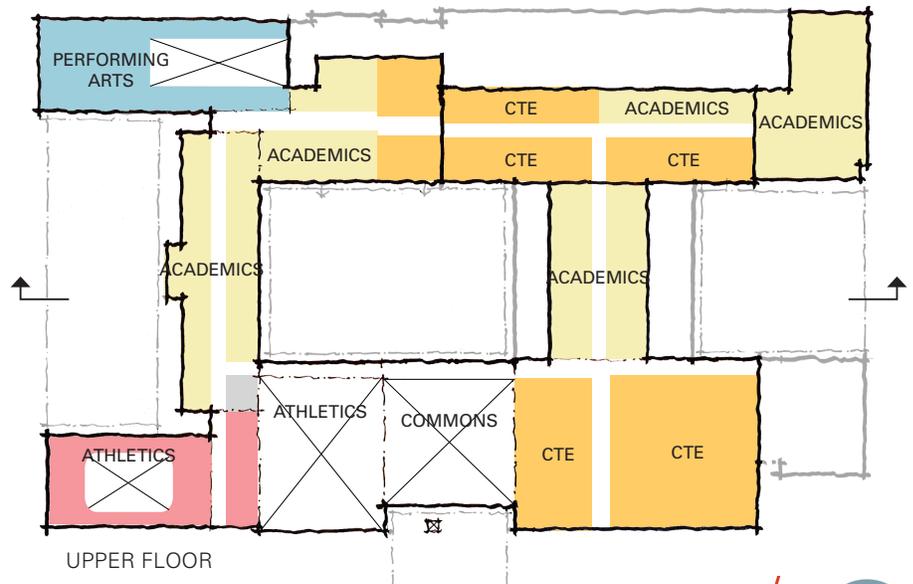
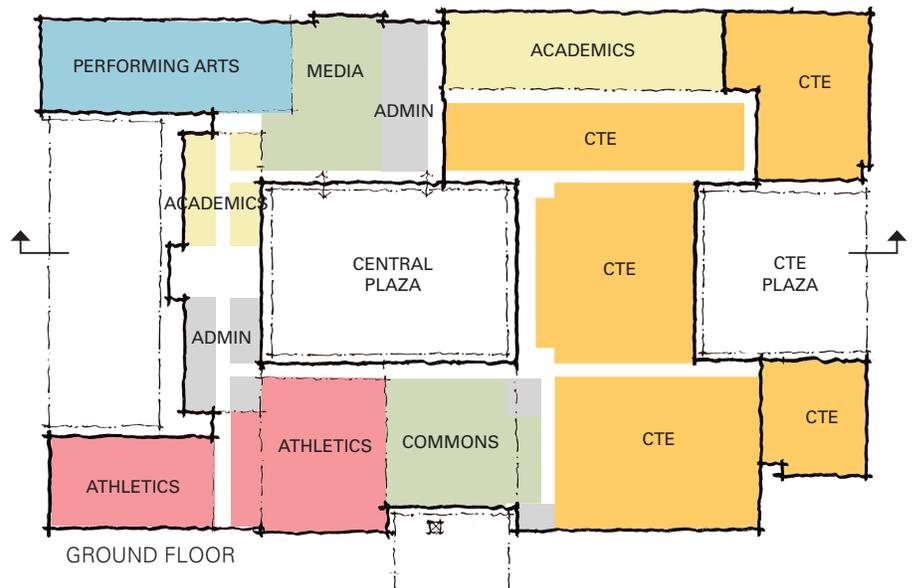
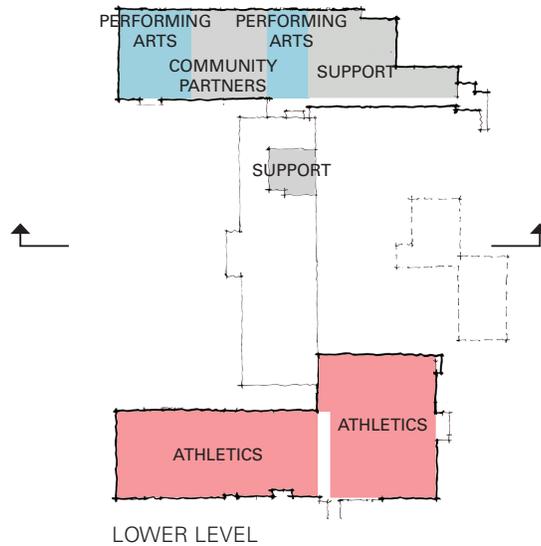
The following is a starting list of phasing assumptions:

- + Assume 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.
- + No increase to student capacity prior to or 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.
- + Maximize efficiency in programs to minimize swing space needs.
- + 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.

BENSON POLYTECHNIC HIGH SCHOOL / SCHEME 1 SITE PLAN



BENSON POLYTECHNIC HIGH SCHOOL / SCHEME 1 PLAN DIAGRAMS



LEGEND

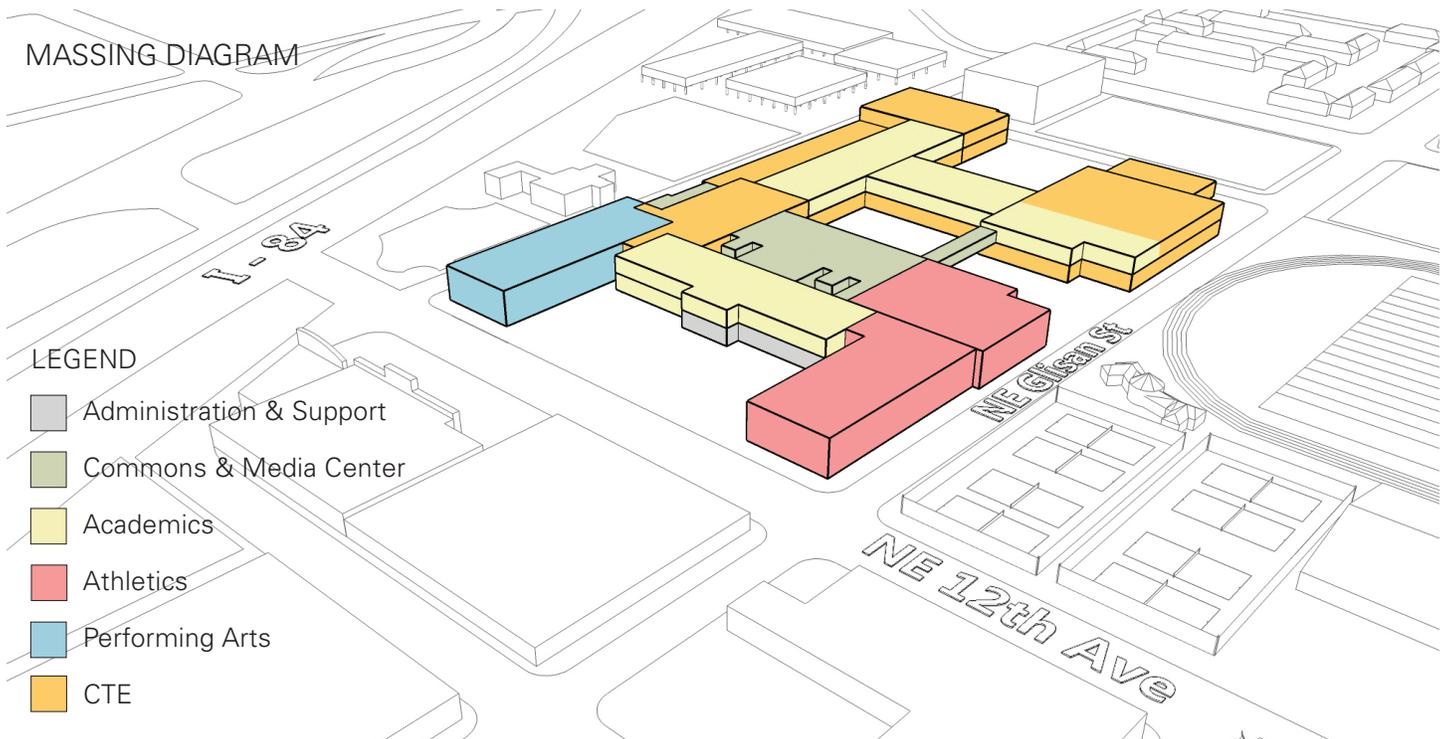
- Administration & Support
- Commons & Media Center
- Academics
- Athletics
- Performing Arts
- CTE



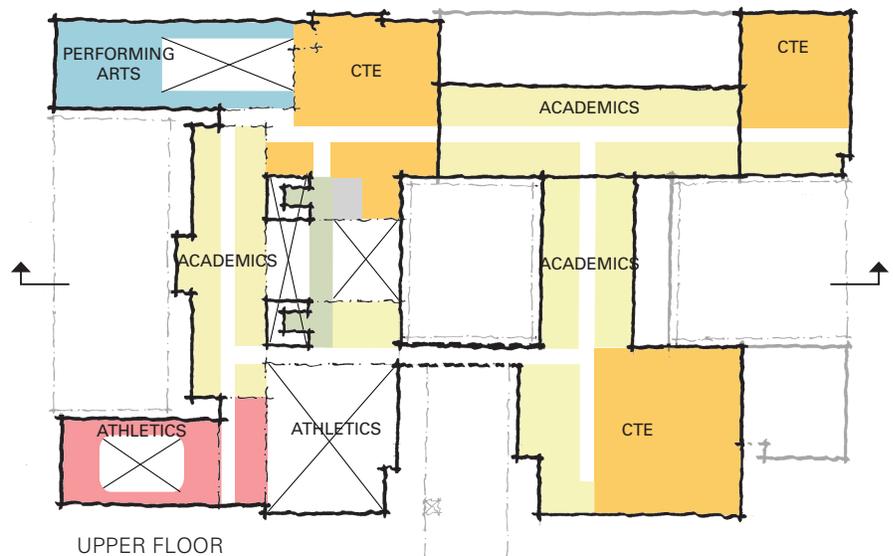
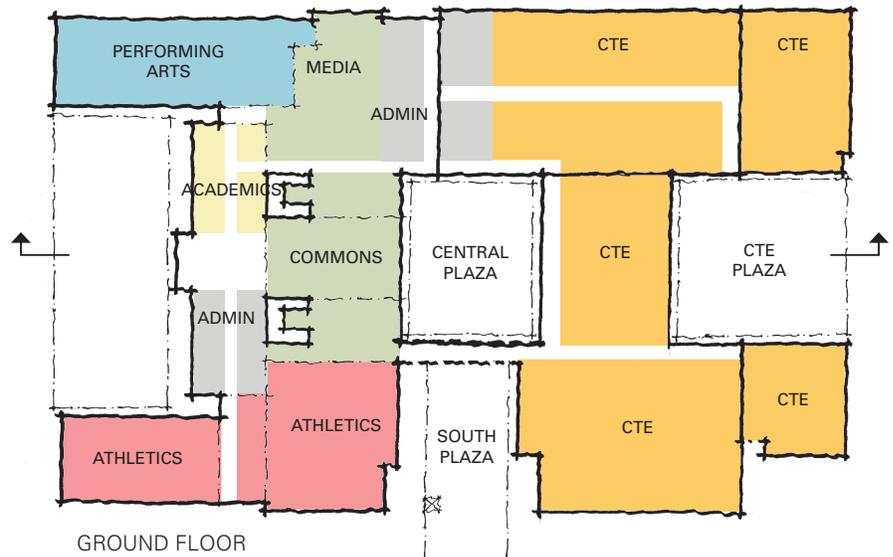
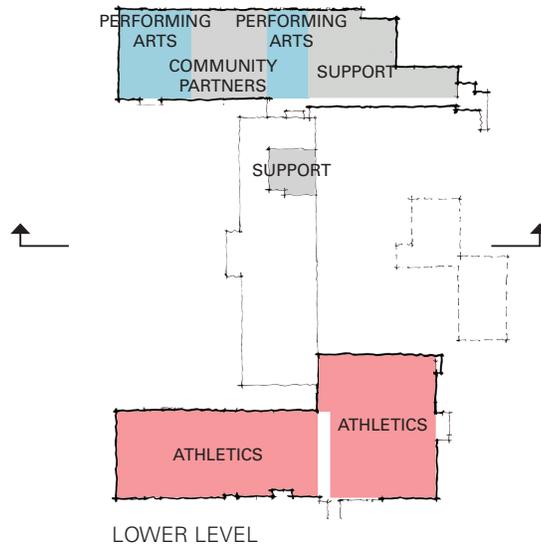
BENSON POLYTECHNIC HIGH SCHOOL / SCHEME 2 SITE PLAN



MASSING DIAGRAM



BENSON POLYTECHNIC HIGH SCHOOL / SCHEME 2 PLAN DIAGRAMS



LEGEND

- Administration & Support
- Commons & Media Center
- Academics
- Athletics
- Performing Arts
- CTE





PORTLAND PUBLIC SCHOOLS

Office of School Modernization

2017 Bond Modernization/Replacement
Projects

Executive Summary Overview & Project
Sequencing

July 11, 2017





OSM will complete the identified scope of work:

- As quickly and safely as possible
- In conformance with PPS standards
- Within all applicable codes and requirements

The work will be sequenced to maximize efficiency, reduce impacts to budgets, project schedules, quality, and internal/external resources.





KELLOGG MIDDLE SCHOOL Replacement Concept

Design Firm: Oh Planning & Design

Size: 105,112 square feet

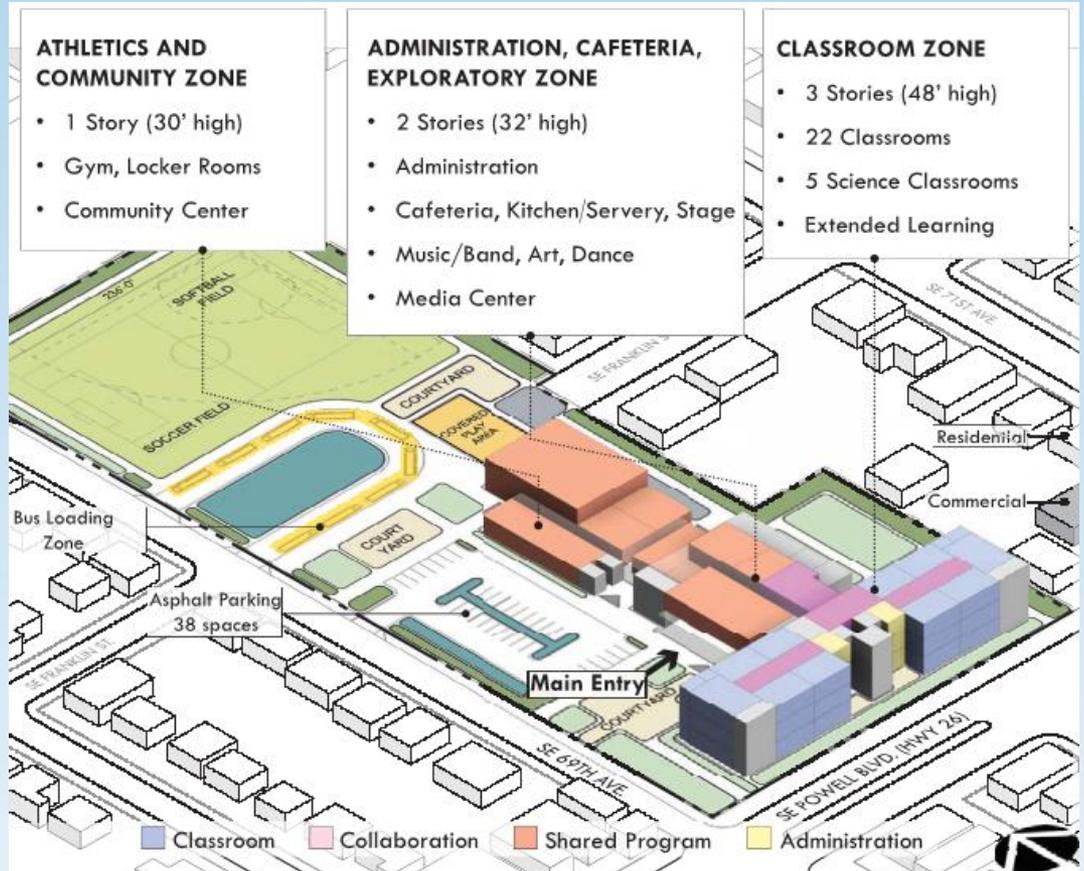
Design Capacity: 675

Project Budget: \$45m

Timeline:

- Planning:** 3.0 months
- Design & Permit:** 1.5 - 2.0 years
- Construction:** 1.5 - 2.0 years

Project Delivery: CM/GC or
Design – Bid - Build





MADISON HIGH SCHOOL Modernization/Additions Concept

Design Firm: To Be Determined

Size: 325,706 square feet

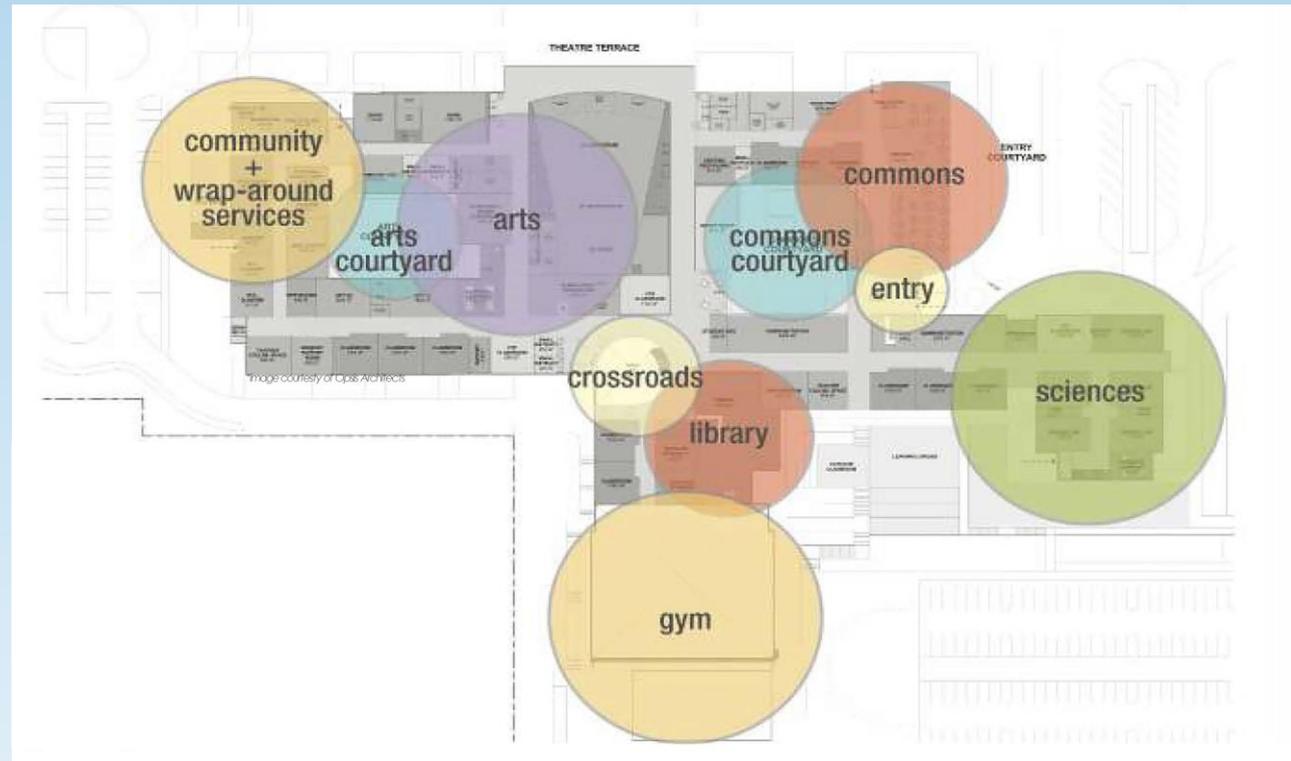
Design Capacity: 1,700

Project Budget: \$146m

Timeline:

- Planning:** 3.0 months
- Design & Permit:** 2.0 years
- Construction:** 2.0 - 3.0 years

Project Delivery: CM/GC





LINCOLN HIGH SCHOOL Replacement Concept

Design Firm: BORA

Size: 281,370 square feet

Design Capacity: 1,700

Project Budget: \$187m

Timeline:

- Planning: 1.0 year
- Design & Permit: 2.0 years
- Construction: 2.0 - 3.0 years

Project Delivery: CM/GC





BENSON POLYTECHNIC HIGH SCHOOL Modernization/Additions Concept

Design Firm:
Bassetti Architects

Size: 368,000 square feet

Design Capacity: 1,700

Project Budget: \$202m

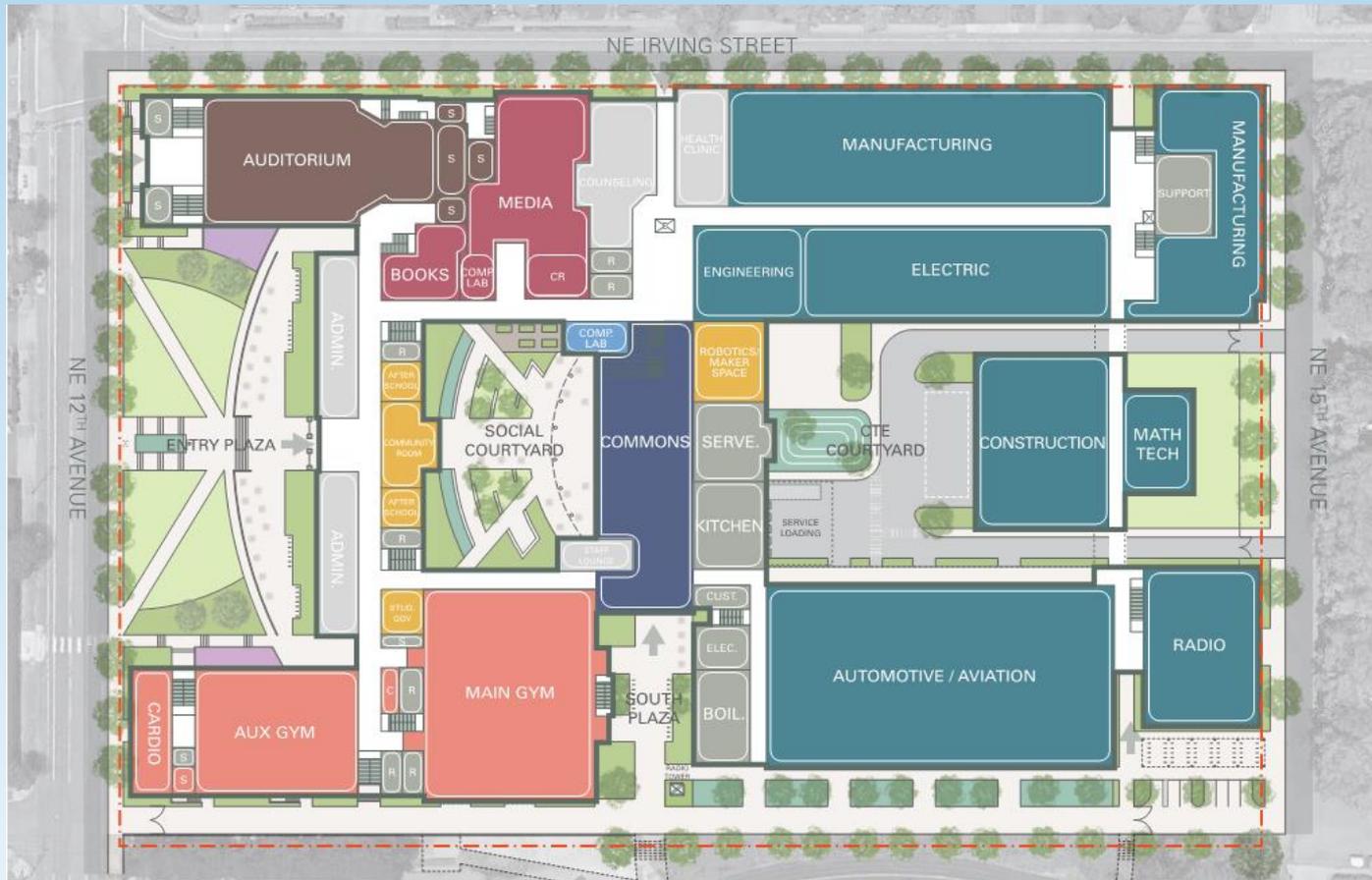
Timeline:

Planning: 2.0 years

Design & Permit: 2.0 years

Construction: 3.0 years

Project Delivery: CM/GC





Sequence Project Kickoff (stagger start)

To the extent possible, sequence project kick-off

- Limit bid / buyout competition in market
- Maximize the District's certified business aspirational goals
- Level program resources
- Reduce impact on permit review
- Allow for “rolling” lessons learned
- Provide sequenced school openings





Sequencing Considerations

- Operational needs
- Enrollment
- Escalation
- Design & Construction Complexity
- Partnership Opportunities
- Enrollment Balancing
- Program Relocation/Integration
- Permitting
- Bidding
- Overcrowding
- Programming
- Staffing
- Design Team Availability
- Equity
- Seismic Condition
- Timing of Opening
- Swing Space Availability
- Building Condition
- Land Use Requirements
- Construction Start Timing
- Design Time
- Accessibility Condition





Project Roll-out

Kellogg is the least complicated project

- High historically underserved community
- Smallest by budget, size and complexity
- Can start quickly (not occupied)
- Has an identified operational need: DBRAC

Madison is the least complicated High School

- High historically underserved community
- Clearest land use review process
- Has clearest path through design and permits
- Allows Marshall to be reprogrammed when complete





Project Roll-out

Lincoln – Higher degree of complexity

- Most urban and dense site
- Requires formal Design Review process (2-step)
- Occupied site (not building)
- Unpredictable site conditions
- Construction will be completed in a series of phases
- Unidentified partnership opportunities

Benson - Most complex of all high schools

- Requires Historic Review process
- Most seismically challenged school
- Occupied building
- Construction will be completed in a series of phases
- Requires lots of swing spaces
- TBD programming items
- Unidentified partnership opportunities





Sequencing and Duration Concurrence

Bond Accountability Committee

- “We agreed that you are certainly considering the correct criteria and giving reasonable weightings to the various imperatives and constraints”.
- “We agreed that, absent some new information, your process that has established those two schools (Kellogg & Madison) as the first out of the gate has been thoughtful and the conclusion is reasonable”.

Heery International

- Rules of Thumb from K-12 National Leader Construction Duration:
 - New Elementary School – 14-16 months
 - New Middle School – 22-24 months
 - New High School – 30-32 months
- Based on our analysis and national experience, the activity durations and schedules for the three high schools and one middle school for the proposed Portland Public Schools new program are well within the typical ranges for projects/programs with similar market conditions throughout other parts of the country.





Moving Forward

	year 1	year 2	year 3	year 4	year 5	year 6	year 7	year 8
	2017	2018	2019	2020	2021	2022	2023	2024
Major 2017 Bond Project								
Benson*					p		x	x
Lincoln**				p				x
Madison			p				x	
Kellogg			p			x		
	planning				2020 vote			
	design			Marshall available				
	construction							
	potential							

p = permit + bid
 x = school opens

* Benson will be a multi-phased project

** Lincoln will be a 3-phased project:

Phase 1: New School Construction

Phase 2: Abatement & Demolition of Existing School

Phase 3: Build out of field improvements on old existing school

