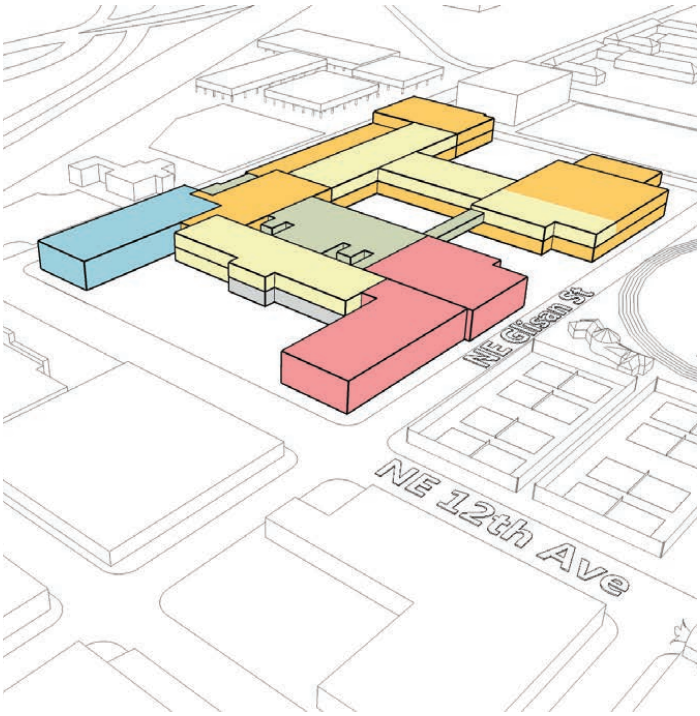
BENSON POLYTECHNIC HIGH SCHOOL / EXECUTIVE SUMMARY



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.

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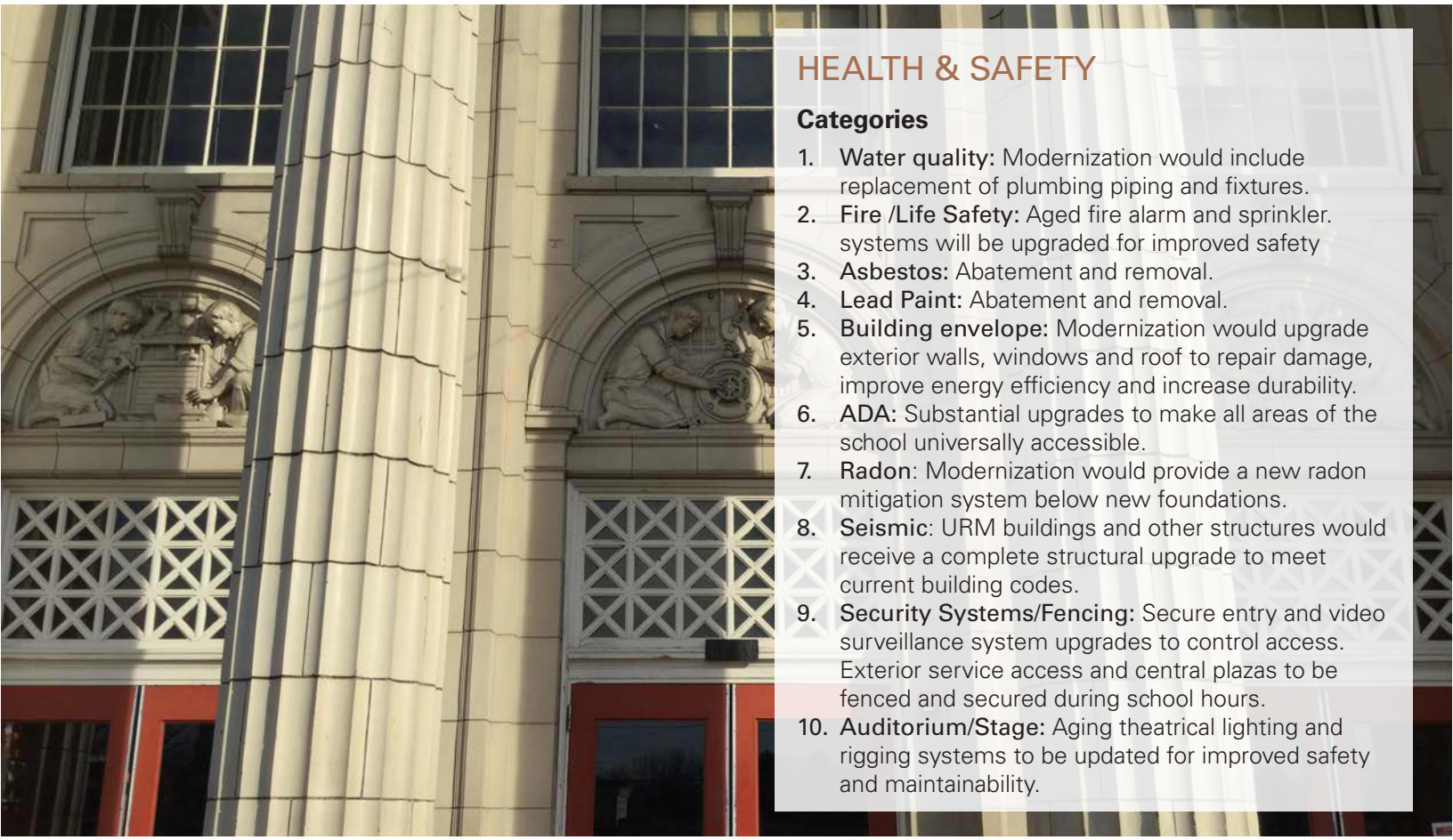

HEALTH & SAFETY

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.)

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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.

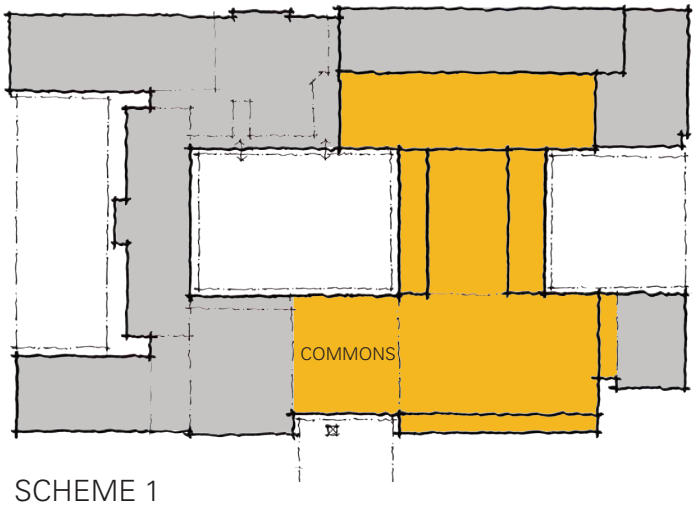
The key difference between the two schemes is the location of the commons. Scheme 1 locates the commons to the south and Scheme 2 locates it at the center of the existing buildings. Both schemes will be developed further and a decision will be made with input from the MPC on the preferred option.

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.



SCHEME 1

SCHEME 2

New Construction Renovation of Existing

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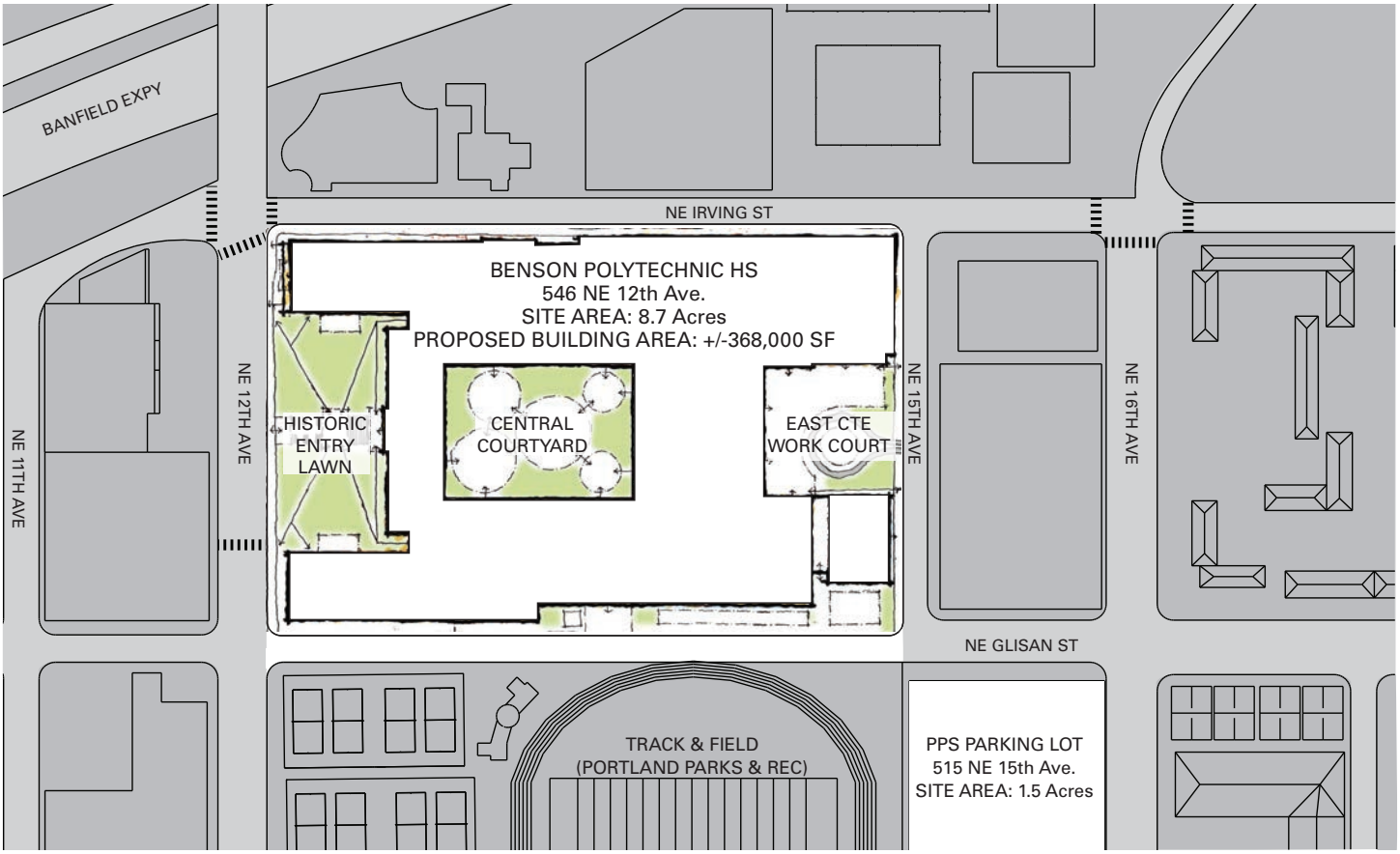

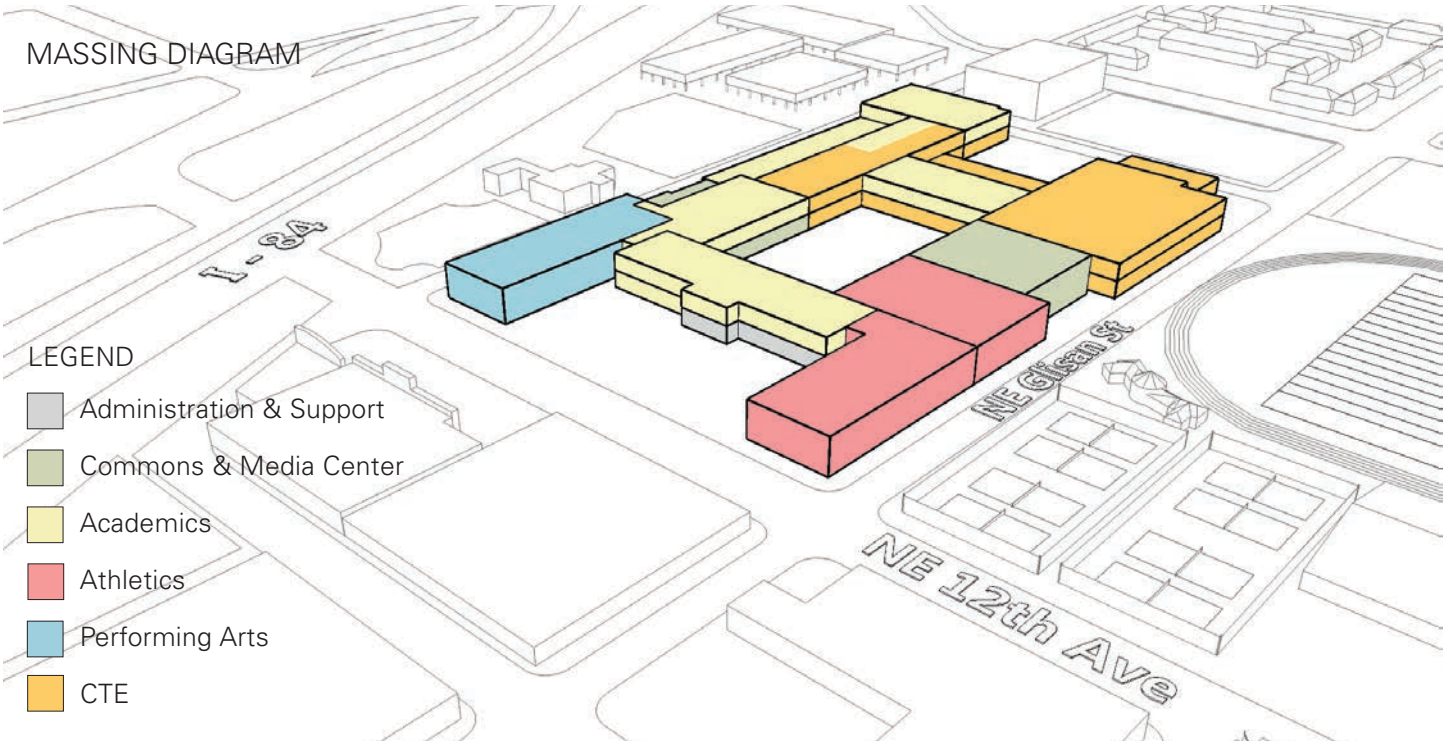

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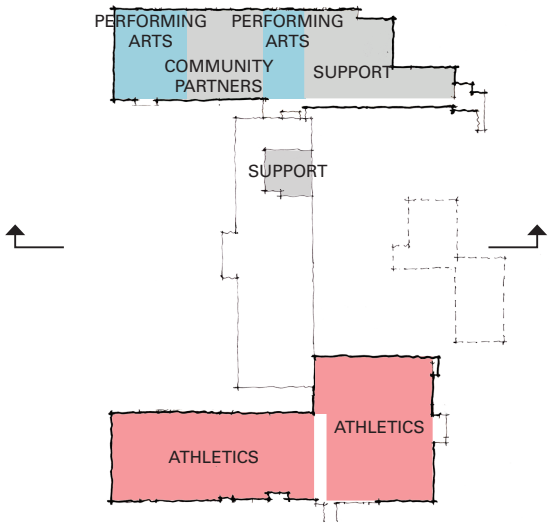
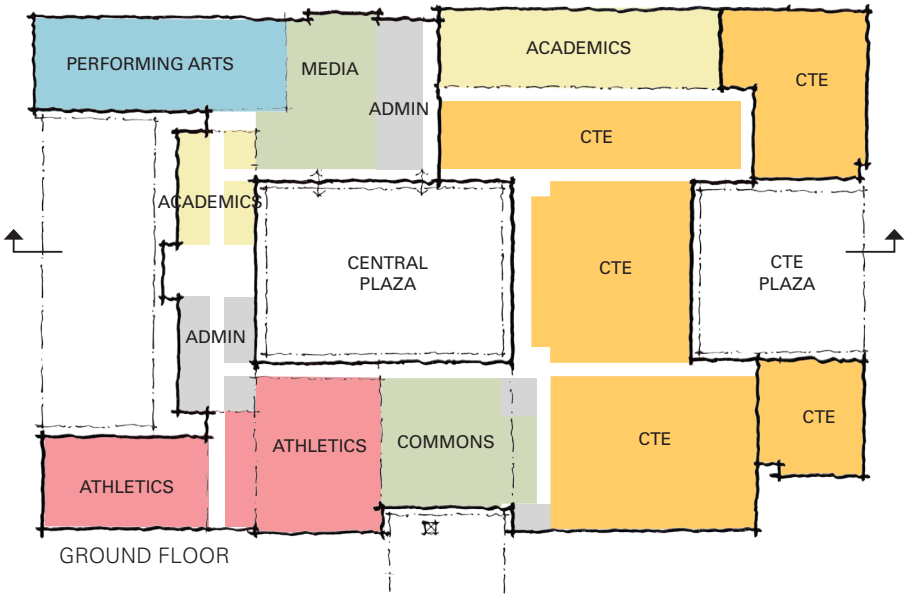
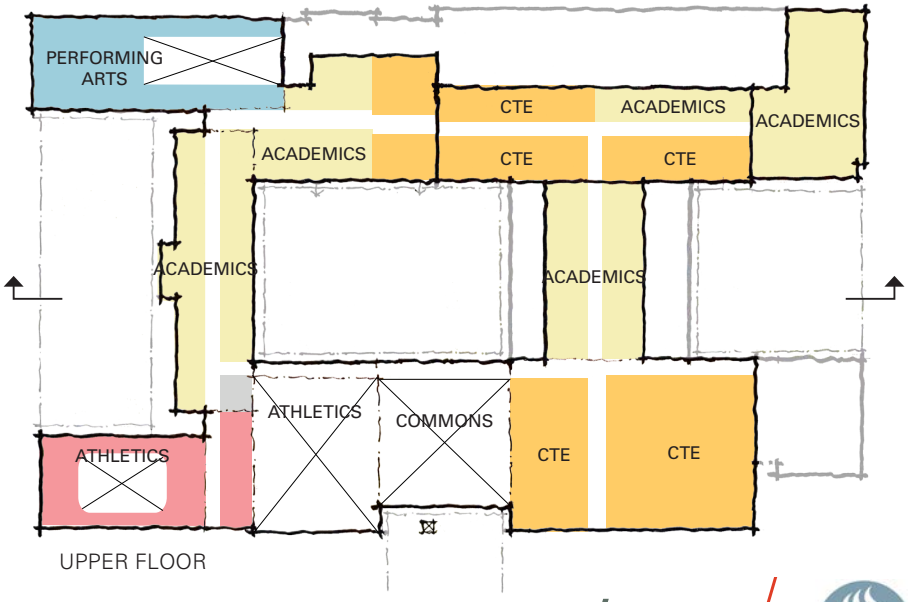


LOWER LEVEL



GROUND FLOOR



UPPER FLOOR

LEGEND

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

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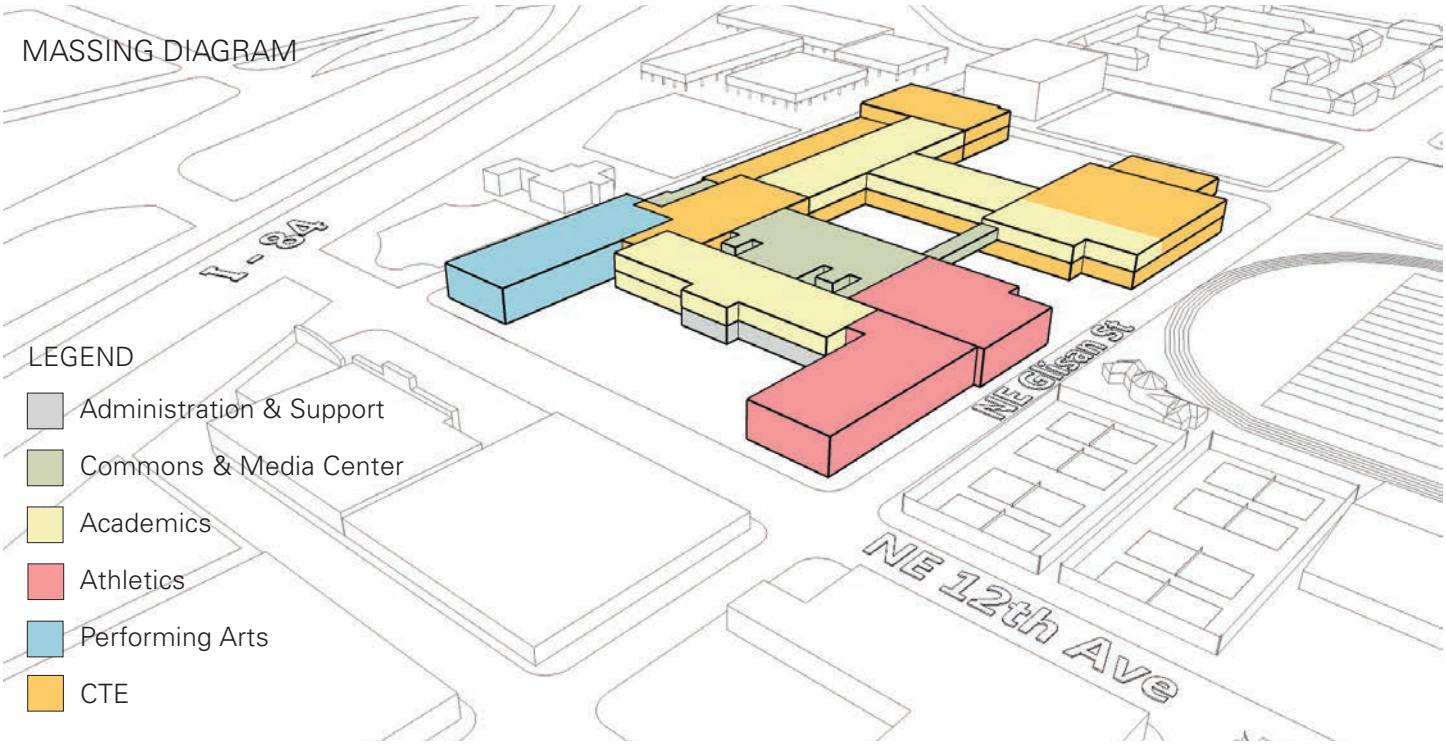
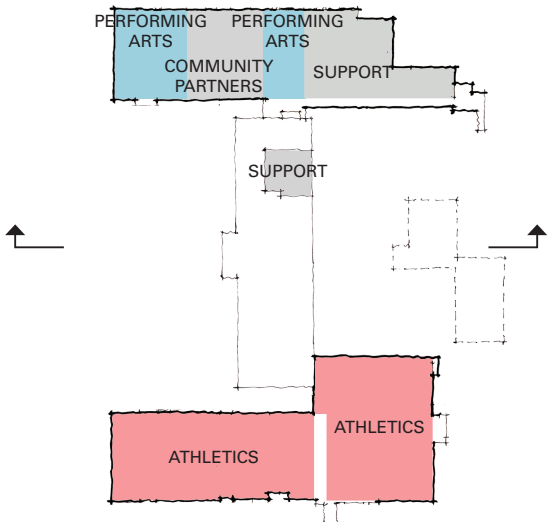
PPS


BANFIELD EXPY
NE IRVING ST
BENSON POLYTECHNIC HS
546 NE 12th Ave.
SITE AREA: 8.7 Acres
PROPOSED BUILDING AREA: +/-368,000 SF
NE 11TH AVE
NE 12TH AVE
NE 15TH AVE
NE 16TH AVE
HISTORIC ENTRY LAWN
CENTRAL COURTYARD
EAST CTE WORK COURT
NE GLISAN ST
TRACK & FIELD (PORTLAND PARKS & REC)
PPS PARKING LOT
515 NE 15th Ave.
SITE AREA: 1.5 Acres


MASSING DIAGRAM
I-84
NE Glisan St
NE 12th Ave
LEGEND
Administration & Support
Commons & Media Center
Academics
Athletics
Performing Arts
CTE



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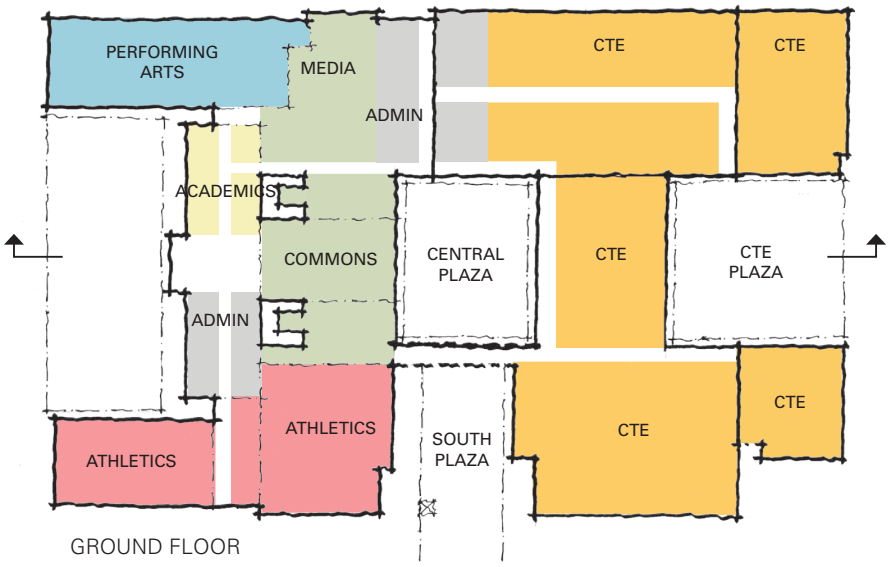

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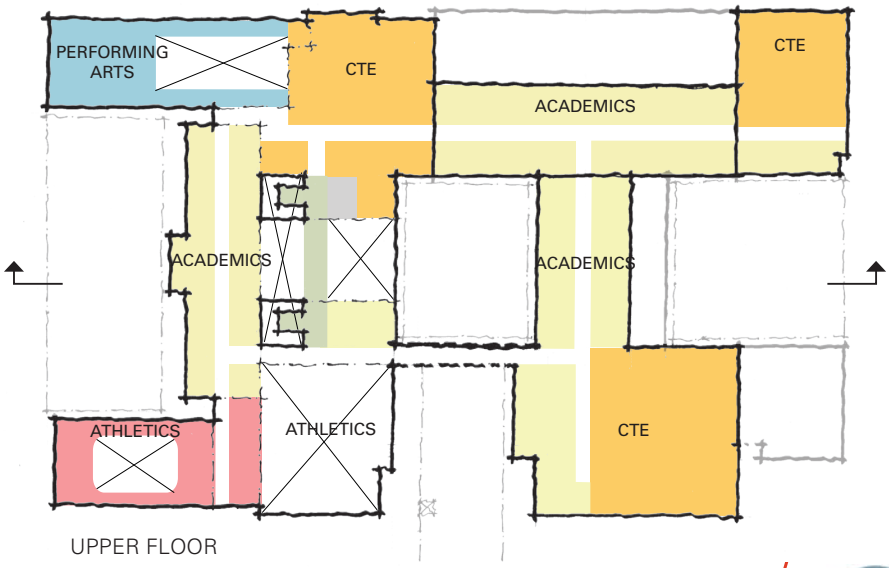

UPPER FLOOR

LEGEND

- Administration & Support
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