

At a Glance: Ellis, David A. Elementary

302 Walnut Ave Roxbury, MA 02119

DOE Code: 00350072

Website

BPS Code:

Building Educational (BEA)

Building Physical (FCA)

Building Operational

Community

Excellent Good Fair Poor Failing

School Data

Historic Bldg. Name:	Ellis Elementary
Current School Name:	Ellis, David A. Elementary
Year Founded:	1932
School Gross Floor Area:	51,123
Ratio of net/gross:	
Operation Hours:	9:30 AM-3:30 PM
Early Dismissal:	
School Type:	Traditional
Individual Class Size:	
Overall Size:	
Grade Span:	K1 - 5
Number of Strands:	
Number of Buildings Associated with One School:	

Schools Housed per Building or Buildings per School

School Name / Building Name	Population	Ed Plan
Ellis, David A. Elementary		
Total:		

Tax Values as of 2015

Tax Parcel ID:	1202985000
Tax P Type:	976
Tax Land Usage:	E
Tax Building Value:	\$3,482,000
Tax Land Value:	\$2,284,800
Tax Total Value:	\$5,766,800
Tax Gross Area:	0
Tax LV SF:	115473
Tax Living Area:	51123
Compliance Trigger:	

MSBA School Data

MSBA GSF:	51,123
MSBA SF/Student:	170
MSBA Space Utilization:	Average
MSBA Students/Classroom:	12
MSBA Enrollment:	315

Site and Building Data

Year Built:	1932
Renovations:	
Additions:	
Shelter:	
Resiliency:	
Energy Efficiency:	
Site Acreage:	
Site Expansion:	
Building Gross Floor Area:	51,123
Building Net Assignable Area:	
Parking:	
Ratio:	
Outdoor Learning Spaces:	
Flood Zone:	

Community Uses

Community Resource	School Programs Connection

Documentation

Plans	Site	Arch	Eng
Past Reports			
BeSafe Plans			
MSBA 2010 Needs Survey			

MSBA Building Data

Building Conditions:	2
Building Enrollment:	
Classrooms:	24
Floors:	3
Structural Class:	C

At a Glance: Ellis, David A. Elementary

BPS 2014 Vision Accommodations

Current Inclusion

PreK:

Inclusion:

STEM

Technology

21st Century:

FF&E

DOE Data

Student Data

FY 2015 Total Enrollment: 396

Enrollment by Grade

PreK:	48
K:	88
1st:	62
2nd:	75
3rd:	68
4th:	56

Gender

Male:	206
Female:	224

Demographic

African American:	33.5
Hispanic:	64.4
White:	1.2
Asian:	0.2
Other/Multi-racial:	0.7
Native American:	0

Low Income Students: 88.1

Out of School Suspension Rate:	4.5
In School Suspension Rate:	0.7
Graduation Rate:	0
Absentee Students:	14.8
Annual Dropout Rate:	0
2012 Graduates Attending Higher Ed:	0

SAT Scores:

Reading	0
Writing	0
Math	0
2013 Mass Core:	0

Instructor Data

Number of Teachers:	28.4
Student/Teacher Ratio:	14.0 to 1
Teachers Licensed in Teaching Assignment:	100
Number of Classes in Core Academic Areas:	164
Core Academic Classes Taught by Highly Qualified Teachers:	72

Building Physical Assessments

Summary

Existing Conditions

Summary

Evaluation of Existing Conditions: David A. Ellis Elementary School

The intention of this document is to provide a deeper understanding of the basis for the selection of the conditions in the Facility Criteria Matrix.

BPS and CPMD can use this information to provide a general comparison for the different eras and typologies of the facilities within the BPS inventory.

General Description

The following evaluations are based on building walkthroughs with school administration, custodial staff, Architectural and Engineering professionals and BPS facility staff between January 19 and 29, 2016.

The David A. Ellis Elementary School was built in 1932. The original building was constructed with the three stair towers extending to a future top floor which was later completed a few years (date unknown) after the original building opened.

The building is a 3-story structure without a basement and has a total of 51,123 GSF

Use Group: E-Education (with accessory occupancies A1-Auditorium; A2-Cafeteria; A3-Library/Media Center and A4-Gymnasium)

Architectural Building Description

Type of Construction

Summary

Existing Conditions

Building type: IA or IB - The main structural elements are noncombustible. Base materials would be masonry and concrete. The roof support is unprotected metal beams or bar joists.

Existing Conditions Report

Roof

The roof was replaced in 2002 with a tapered insulated, 4Ply polymer hot applied built-up roofing system and topped with an aggregate ballast. The drains are internal to the building appear to be in their original location.

Façade

The building's façade is mainly a Flemish bond red brick. A decorative red brick triple basket weave adorns the bottom of the windows and between supports. The walls are thermally inefficient due to the lack of insulation but are constructed of materials with good thermal mass and moisture resistance. There were no control joints nor expansion joints in the exterior masonry walls. All sills and lintels are in good condition.

Exterior Windows

The windows were replaced in 1989. These units are aluminum double hung with an operable lower sash. Most of the operable units are misaligned in their frame and will not stay open due to failing support mechanisms. The glazing in the windows have become opaque and can no longer be seen through.

Boilers

The boiler room is provided with two 450 Mills H.B. Smith cast iron sectional Boilers retrofitted with natural gas burners generating low pressure steam. One of the boilers is relatively new and the other boiler is also in very good condition. The hot water pumps, boilers, boiler breeching, boiler feed water tank and its piping, etc. are all in very poor condition and they need replacement as soon as possible except the air compressors. The boilers are provided with induced draft fans. There is a surface and interior contamination on these fans. The fans insulation is damaged. At the time of the visit boiler room ventilation/combustion air systems were not operational.

Heating Distribution System

The low pressure steam is distributed throughout the building via steam cast iron radiators and or fin tube radiators with steam traps. The existing automatic temperature controls are pneumatic. Located within the boiler room is an air compressor. It appears some of the controls in the building were replaced over the years either by the similar pneumatic type, or by the digital type. All building controls are conducted remotely by Boston School District Energy Department.

Classrooms are provided with both horizontal steam fin-tube radiator and cast iron radiator systems with steam traps. There is no air-conditioning available in the school building in any area. As there are no air handing units nor unit ventilators in the class rooms, there are indoor air quality issues in all building areas.

Portions of steam heating distribution piping is not insulated. Seals/sleeves around pipes are missing at wall penetrations throughout the building. Majority of the radiators with the steam traps are rusted and need replacement as most of them do not appear to be working properly.

Electrical Service

Electrical Power Distribution System

The 600 amp 120/208 V 3 phase 4 wire utility service needs to be upgraded with new electrical panels. All distribution panels seem to be very old (including the one in the boiler room) and these need to be replaced.

Utility service meter is located in the main electric room.

There is no emergency generator in the building

Existing Photovoltaics

There are no photovoltaics at this school.

Life Safety

Means of Egress

There is no emergency generator and therefore egress lighting fixtures have battery packs.

The configuration of the corridor egress system and capacity of the egress doors appears to meet egress requirements. There are several existing corridor partitions constructed with combustible materials and large glazing panels that served as smoke partition. Some of the egress doors open onto stepped landings with no ramps or area of refuge provided. The doors themselves have no fire rating label making these doors non-rated for fire or smoke separation. The egress signs are not illuminated.

Fire Protection System

There is no fire protection system in the building. There is no fire pump in the building.

Fire Alarm System

The existing fire alarm manufactured by Simplex and the model of the Fire Control Panel is 4100U. The fire alarm remote annunciator is also located at the main entrance. The building has smoke detectors in the corridors, class rooms and all other areas. There is no elevator in the building.

Security

The main entry sequence is through three doors leading into a vestibule then into the lobby. There is no permanent interior line of sight from an office or similar room. The sight lines from the street to the main entry are clear. Corridors are generally wide and long with straight views. Classroom doors are keyed.

Lighting Quantity/Control

All lighting fixtures in administration area and offices, corridors, classrooms and science labs, computer rooms, cafeteria and kitchen appear to be in good working condition with energy-efficient T8 lamps and electronic ballasts. Lighting in educational spaces such as classrooms and labs consist of two or three continuous rows of direct/indirect 2-lamp per cross section linear fixtures. The lighting control in these spaces may not comply with the latest Energy Code as the sensor and manual switches turn on or turn off the lighting 100% i.e. there is no 50% control.

Toilets & Fixtures

Plumbing fixtures in the facility have been replaced and appear to be ADA compliant. No plumbing fixtures were observed to be modern water-saving fixtures.

Water closets are both wall-mounted and floor-mounted units with manual flush valves, generally in fair condition.

Urinals are wall mounted with manual flush valves, generally in fair condition.

Lavatories are wall hung with self-closing push-down faucets or lever handles, generally in good condition.

Plumbing Distribution Systems

Plumbing System

Domestic Cold Water

The city water piping with the valves is all rusted and needs replacement as soon as possible. As this would affect boiler, domestic hot water, kitchen and rest rooms, replacement of city water entrance piping with valves shall be given a top priority.

Domestic Hot Water

Domestic water heaters were replaced over the years and appear to be in good operating condition.

Natural Gas

The existing natural gas system enters the original building through the front of the building into the boiler room, located in the basement, via a 4-inch gas main which branches out to serve the two boilers and the domestic hot water heater. The piping seems to be in good operating condition.

Sanitary Waste and Vent

The sanitary waste system consists of cast iron pipe and appears to be in good operating condition.

Accessibility

The main entrance is not accessible. The only accessible entrances is at the rear of the building. There are no ramps, lifts or elevators. Many of the classroom doors are without the necessary side maneuvering clearances required to meet accessibility code. There are a number of projections in rooms and corridors along the accessible path that do not meet code.

Structural Systems

The original building was constructed with the three stair towers extending to a second floor, which were later infilled. Very little of the structure was visible during the visit. The existing floor structure likely consists of concrete slabs supported by concrete or concrete encased steel beams. It is possible that the roof framing is similar to the floor, although it could not be observed. The floor and roof structure are likely supported by concrete or concrete encased steel columns. There are unreinforced masonry walls that are potentially load bearing. The foundation is likely cast in place concrete. The existing lateral system is likely unreinforced masonry shear walls.

Overall, the building is in fair condition. Not all structural framing could be directly observed due to the finishes, so there could be more damage that is hidden from view. There are exterior concrete foundation walls that have spalled, revealing rusting horizontal rebar. There are glazed bricks with cracks, particularly on the second floor. In addition, there is noticeable cracking of the terrazzo on the second floor.

Site

Located in the Roxbury neighborhood between Walnut Avenue and Crawford Street. The main entrance is on Walnut Avenue with a secondary entrance at the rear accessed by a driveway from Crawford Street. The school property is bounded by Crawford Street Playground to the south, and the Museum of the National Center of Afro-American Arts (NCAAA) to the north.

The school, fronting on Walnut Avenue, has ample room to expand east towards Crawford Street, which currently includes a large undulating grass slope and a school playground (maintained by Boston Parks & Recreation Department). The NCAAA plans to move to a more central location, and their adjacent parcel may be up for sale soon. The site is in FEMA Zone X, area of minimum flood hazard, outside the influence of the 500-year flood zone.

Parking

Parking is located at the rear of, but not adjacent to, the building with a driveway off of Crawford Street. Faculty & staff double & triple park. The parking lot is in a failing condition and is mostly unpaved. The driveway from Crawford Street is in poor condition.

Neighborhood Streets

Roadways and sidewalks in good condition. Walnut Avenue is much busier with faster traffic.

Drop-Off/Pick-Up

Busses drop-off 1/2 of the students on Walnut Avenue; private vehicles use the driveway from Crawford Street to drop-off the remaining students at the rear of the building.

Walkways/Stairs

Walkways and stairs in fair condition. Pavement behind the play space at the rear of the building is failing.

MAAB/ADA Accessibility

There is no accessible route to either street, and only one rear door to the gym is at grade.

Site Lighting

No site lighting.

Fences/Gates

Cast iron fence around building was recently repainting. All fencing in fair condition.

Drainage

Site drains well. No water quality infrastructure observed.

Play Areas/Landscaping

Hard surface play area at the rear of the building in poor condition, which includes landscaping that is permanently trampled. Students primarily use the playground on Crawford Street, which is maintained by Boston Parks and Recreation and is in good condition. The adjacent ball fields in Crawford Street Playground are in fair condition.

Walls/Slopes

Granite walls along Walnut Avenue in poor condition. Concrete walls in the rear in good condition.

Transit/Pedestrian/Bicycle Access

The school is 0.7 miles from the Jackson Station on the Orange Line and no busses stop nearby. The school is not convenient to public transportation. The surrounding residential neighborhood and generous sidewalks provide for a fair bicycling and walking environment for elementary students..

SCHOOL NAME: David Ellis ElementaryID#: 350072HISTORICAL BUILDING NAME: Ellis ElementarySCHOOL ENROLLMENT: 396BUILDING ENROLLMENT: 396SITE VISIT DATE: 1/21/2016

1 | Facility Evaluation Criteria

Physical Analysis:

Major investments in the last 20 years? (> \$5 Mil)

Rating Category

☒ Excellent
 ☒ Good
 ☐ Fair
 ☐ Poor
 ☐ Failing

☐ YES
 ☒ NO
 COMMENT: _____

Roof:

- Membrane
- Space on roof for solar

 NEEDS ☐ Minor ☒ Moderate ☐ Major ☐ Replace ☐ N/A
☒ YES ☐ NO COMMENT: _____

Façade

 NEEDS ☐ Minor ☒ Moderate ☐ Major ☐ Replace ☐ N/A

Windows

 NEEDS ☐ Minor ☐ Moderate ☐ Major ☒ Replace ☐ N/A

Boilers

 NEEDS ☐ Minor ☐ Moderate ☒ Major ☐ Replace ☐ N/A

Heating Distribution Systems

 NEEDS ☐ Minor ☐ Moderate ☐ Major ☒ Replace ☐ N/A

Ventilation Distribution Systems

 NEEDS ☐ Minor ☐ Moderate ☐ Major ☐ Replace ☒ N/A

Electrical Service

 NEEDS ☐ Minor ☐ Moderate ☐ Major ☒ Replace ☐ N/A

Existing Photovoltaics

☐ YES
 ☒ NO
 COMMENT: _____

Life Safety:

- Means of Egress
- Fire Protection (sprinklers)
- Fire Alarm

 NEEDS ☐ Minor ☐ Moderate ☒ Major ☐ Replace ☐ N/A
 NEEDS ☐ Minor ☐ Moderate ☐ Major ☐ Replace ☒ N/A
 NEEDS ☒ Minor ☐ Moderate ☐ Major ☐ Replace ☐ N/A

Security:

- Entry Sequence

 NEEDS ☐ Minor ☒ Moderate ☐ Major ☐ Replace ☐ N/A

Lighting Quantity/Control

 NEEDS ☐ Minor ☒ Moderate ☐ Major ☐ Replace ☐ N/A

Toilets & Fixtures

 NEEDS ☒ Minor ☐ Moderate ☐ Major ☐ Replace ☐ N/A

Plumbing Distribution Systems

 NEEDS ☐ Minor ☒ Moderate ☐ Major ☐ Replace ☐ N/A

Accessibility

 NEEDS ☐ Minor ☐ Moderate ☐ Major ☒ Replace ☐ N/A

Structural System:

Signs of Deterioration:

- Roof
- Floor
- Walls/Columns
- Foundations
- Façade

☐ YES ☒ Not Observed COMMENT: _____
☒ YES ☐ Not Observed COMMENT: Cracks in terrazo
☒ YES ☐ Not Observed COMMENT: Cracks in glazed block
☐ YES ☒ Not Observed COMMENT: _____
☒ YES ☐ Not Observed COMMENT: Spalling exterior concrete walls
☐ YES ☒ Not Observed COMMENT: _____

Is the lateral system identifiable?

Overall Building Condition

☐ Excellent
 ☐ Good
 ☐ Fair
 ☒ Poor
 ☐ Failing

Community:

Mass Historical Commission Status:

- Inventory of Historic Assets
- State Register of Historic Places

☒ Listed ☐ Not Listed COMMENT: _____
☐ Listed ☒ Not Listed

Emergency Shelter

☐ YES ☒ NO COMMENT: _____

Community Use Spaces

☐ YES ☒ NO COMMENT: _____

Community Building Rating

☐ Excellent
 ☐ Good
 ☐ Fair
 ☒ Poor
 ☐ Failing

Building suitability for school use?

☒ YES ☐ NO COMMENT: _____

SCHOOL NAME: David Ellis ElementaryID#: 350072HISTORICAL SCHOOL NAME: Ellis ElementarySITE VISIT DATE: 1/21/2016

2 | Site Evaluation Criteria

Rating Category

☒ Excellent
 ☒ Good
 ☐ Fair
 ☐ Poor
 ☐ Failing

Physical Analysis:

Is the site susceptible to climate change?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	BY 2100	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
Major investments in the last 10 years? (> \$5 Mil)	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	COMMENT:		
Is the building expandable on current site?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	COMMENT:	Large open space towards Crawford St.	
Is the site expandable?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	COMMENT:	NCAAA land may be sold	
Parking Quality	NEEDS <input type="checkbox"/> Minor	<input type="checkbox"/> Moderate	<input type="checkbox"/> Major	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> N/A
Neighborhood Streets	NEEDS <input checked="" type="checkbox"/> Minor	<input type="checkbox"/> Moderate	<input type="checkbox"/> Major	<input type="checkbox"/> Replace	<input type="checkbox"/> N/A
Drop Off/Pick Up Routes	NEEDS <input type="checkbox"/> Minor	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Major	<input type="checkbox"/> Replace	<input type="checkbox"/> N/A
Walkways/Curbs/Sidewalks	NEEDS <input type="checkbox"/> Minor	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Major	<input type="checkbox"/> Replace	<input type="checkbox"/> N/A
MAAB/ADA Accessibility	NEEDS <input type="checkbox"/> Minor	<input type="checkbox"/> Moderate	<input type="checkbox"/> Major	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> N/A
Site Lighting	NEEDS <input type="checkbox"/> Minor	<input type="checkbox"/> Moderate	<input type="checkbox"/> Major	<input checked="" type="checkbox"/> Replace	<input type="checkbox"/> N/A
Fencing	NEEDS <input type="checkbox"/> Minor	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Major	<input type="checkbox"/> Replace	<input type="checkbox"/> N/A
Drainage	NEEDS <input type="checkbox"/> Minor	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Major	<input type="checkbox"/> Replace	<input type="checkbox"/> N/A
Play areas	NEEDS <input type="checkbox"/> Minor	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Major	<input type="checkbox"/> Replace	<input type="checkbox"/> N/A
Walls/Slopes	NEEDS <input type="checkbox"/> Minor	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Major	<input type="checkbox"/> Replace	<input type="checkbox"/> N/A
Overall Site Condition	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor	<input type="checkbox"/> Failing

Community:

Mass Historical Commission Status

- Inventory of Archeological Assets (Site Review)

☐ Researched
 ☒ Not Researched

COMMENT: _____

0.7 mi to Jackson station. No buses.

Accessible to Mass Transit?

☐ YES ☒ NO COMMENT: _____

Bikable?

☒ YES ☐ NO COMMENT: Well connected neighborhood with wide sidewalks

Walkable?

☒ YES ☐ NO COMMENT: Well connected neighborhood with wide sidewalks

Community Site Rating

☐ Excellent
 ☐ Good
 ☒ Fair
 ☐ Poor
 ☐ Failing

Site suitability for school use?

☒ YES ☐ NO COMMENT: _____

Educational Assessment

Summary

Educational Analysis

Evaluation of Existing Conditions: David A. Ellis Elementary School

General Description

David A. Ellis Elementary School serves neighborhood students in grades K0-5 in a multi-story building that lacks an elevator. The school is located adjacent to a privately-operated museum and a park/play area that is variously described as belonging to the city or the school district.

The students at this school include some English Language Learners who are taught in Sheltered English (SEI) classrooms and some who are qualified for special education. Specials at the school include music, PE, science, and technology. Science is delivered in two rooms, both of which lack water and one of which is shared with the music space.

The basement of the building includes a large space used both as the auditorium/stage and the PE space. There are large structural posts in the middle of the room.

Educational Building Analysis

Ventilation

No mechanical ventilation in classrooms or other learning environments; windows are double-hung, but the mechanisms have failed and the windows will not stay open.

Natural Daylighting

Nearly all classrooms have a wall of windows with clear glass throughout, but the glazing is opaque; no light blocking window shades in classrooms

Lighting Quality

There is no way to dim the lighting in the classrooms.

Acoustical

There are hard ceilings and walls, no acoustical ceilings or treatments,

Technology

- Power – Most classroom walls have little or no power, some new power mostly near classroom entrances, not well distributed
- Wireless – There is wireless in the corridors, but not classrooms throughout the building and it is not dependable. There are five laptop carts.
- Interactive – Some classrooms have LCD projectors available, but they are on carts, and some rooms have a document camera.

Furniture

Traditional hard plastic student desks and chairs in serviceable condition. Some classrooms have tables.

Finishes

In most cases, original surfaces exist, including wood wainscoting and plaster walls in a wide range of physical conditions.

Environment

Acoustically very poor; old and tired spaces are not improved by the presence of old lighting; lack of storage results in a cluttered appearance. There is no elevator. There are no student rest rooms on the first floor. The boys' and girls' rest rooms in the basement (cafeteria level) are at opposite ends of the building, making supervision difficult. There is no drinking fountain on the upper floor.

Adjacencies of Learning Environments

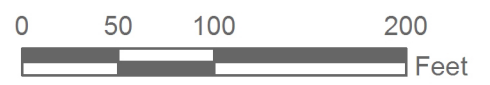
There are two rooms for science. One is accessed through the cafeteria and shares space with the music program with inadequate acoustic separation. Both science rooms lack water.

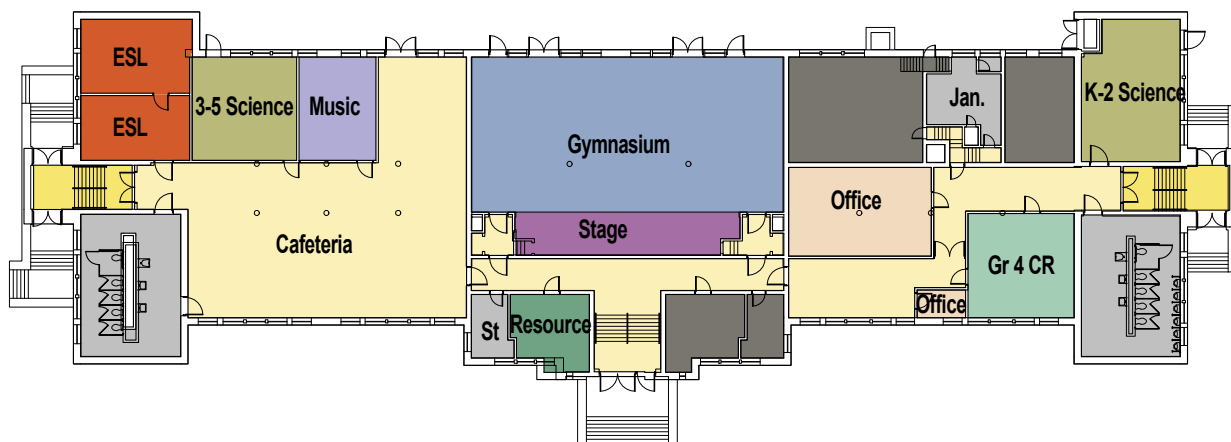
Outdoor Classrooms

There is a well-developed outdoor classroom area. The school is adjacent to a museum program that is undergoing renovation.













Adequacy of Rooms:

- PreK (K0-K1) – none in this school
- Kindergarten (K2) – all are undersized; poor environments, little storage, too hot / too cold
- Classrooms – most are undersized; poor environments, little storage, too hot / too cold
- Special Education – little if any pull out spaces, rooms are awkward shapes or poorly located in the basement, most are undersized
- Art Classroom – none
- Music Classroom – shared with science
- Gymnasium – Undersized playroom in basement. Contains two large posts in the middle of the space. This is a shared performing arts space.
- Media Center – undersized and shared with technology
- Cafeteria – significantly undersized with no separate area for cooking or clean up. There is no handwashing sink for the kitchen staff. There is limited storage and work space.
- Stage – undersized stage that is not ADA-accessible. No storage.
- Medical – undersized and lacking ADA-accessible rest room.
- Administration – no sightlines to building entry, old and poorly arranged.
- Custodial – adequate
- Network Room – located in existing storage spaces that are not air-conditioned, can lead to premature failure of equipment





PROGRAM PLAN LEGEND

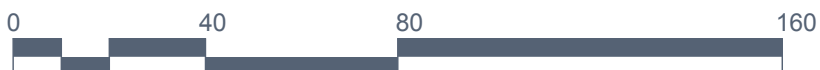
 ADMINISTRATION / GUIDANCE / STUDENT SERVICES / NURSE	 CLASSROOM & GENERAL EDUCATION SUPPORT	 VERT
 ART & MUSIC	 CUSTODIAL / MAINTENANCE / STORAGE	
 AUDITORIUM / PERFORMING ARTS & DRAMA	 ELL / SEI	
 BUILDING EQUIPMENT	 PHYSICAL EDUCATION & SPORT SUPPORT	
 CAFETERIA & CIRCULATION	 SCIENCE CLASSROOM & SUPPORT	
	 SPECIAL EDUCATION	

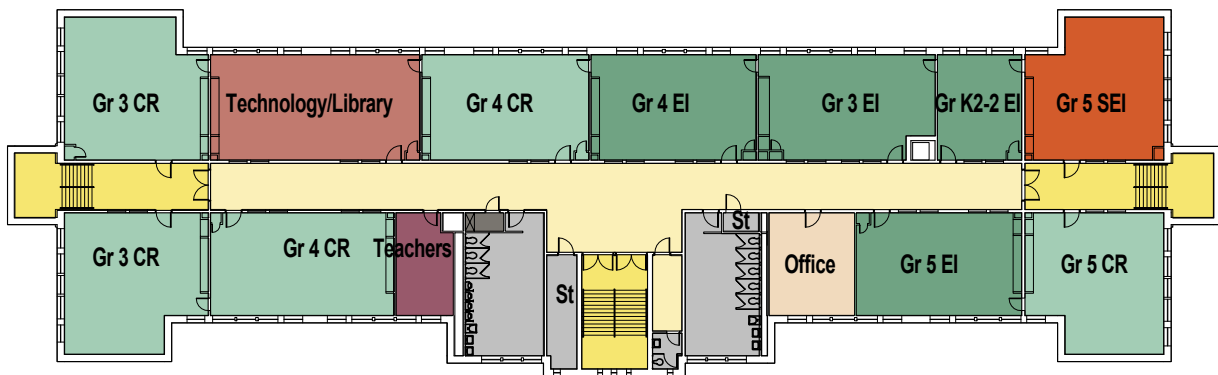














PROGRAM PLAN LEGEND

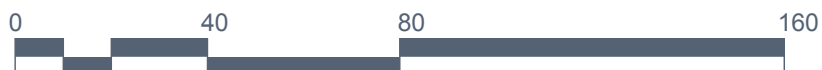
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 CAFETERIA & CIRCULATION	 ELL / SEI
 CLASSROOM & GENERAL EDUCATION SUPPORT	 SPECIAL EDUCATION
	 VERTICAL CIRCULATION

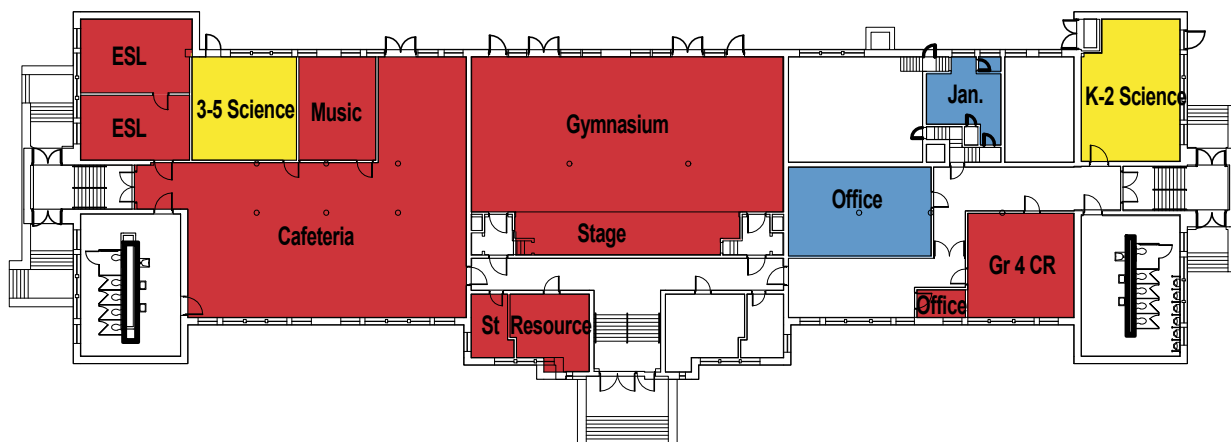




PROGRAM PLAN LEGEND

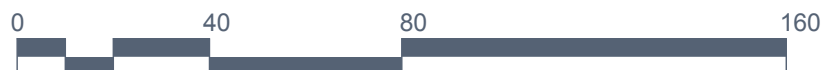
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	BUILDING EQUIPMENT		MEDIA CENTER
	CAFETERIA & CIRCULATION		SPECIAL EDUCATION
	CLASSROOM & GENERAL EDUCATION SUPPORT		TEACHER PLANNING & SUPPORT
	CUSTODIAL / MAINTENANCE / STORAGE		VERTICAL CIRCULATION

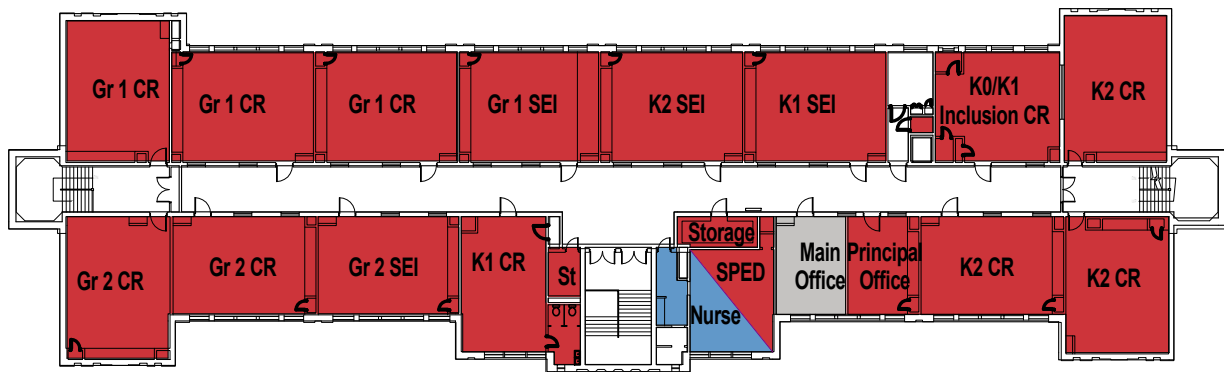




MSBA DEFICIENCY PLAN

- NOT INCLUDED IN A TYPICAL MSBA PROJECT
- NSF 10% GREATER THAN MSBA GUIDELINES
- NSF AT LEAST 20% LESS THAN MSBA GUIDELINES

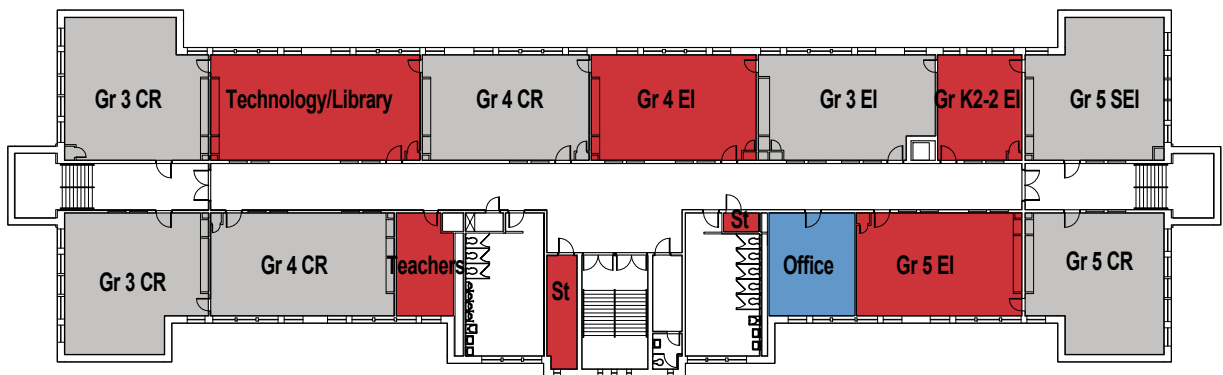




MSBA DEFICIENCY PLAN

- NSF 10% GREATER THAN MSBA GUIDELINES
- NSF AT LEAST 20% LESS THAN MSBA GUIDELINES
- NSF MEETS MSBA GUIDELINES (-20% TO +10%)





MSBA DEFICIENCY PLAN

- NSF 10% GREATER THAN MSBA GUIDELINES
- NSF AT LEAST 20% LESS THAN MSBA GUIDELINES
- NSF MEETS MSBA GUIDELINES (-20% TO +10%)

