FULLER MIDDLE SCHOOL FEASIBILITY STUDY

School Building Committee Meeting
April 24, 2018

Jonathan Levi Architects

Height Variance

On April 10, 2018 the Project received a formal height variance from the ZBA to build up to 55’ high (including mechanical penthouse). This means all options A, B, C, and D can conform to zoning.

Recommendations from Sandy Hook Advisory Commission Final Report

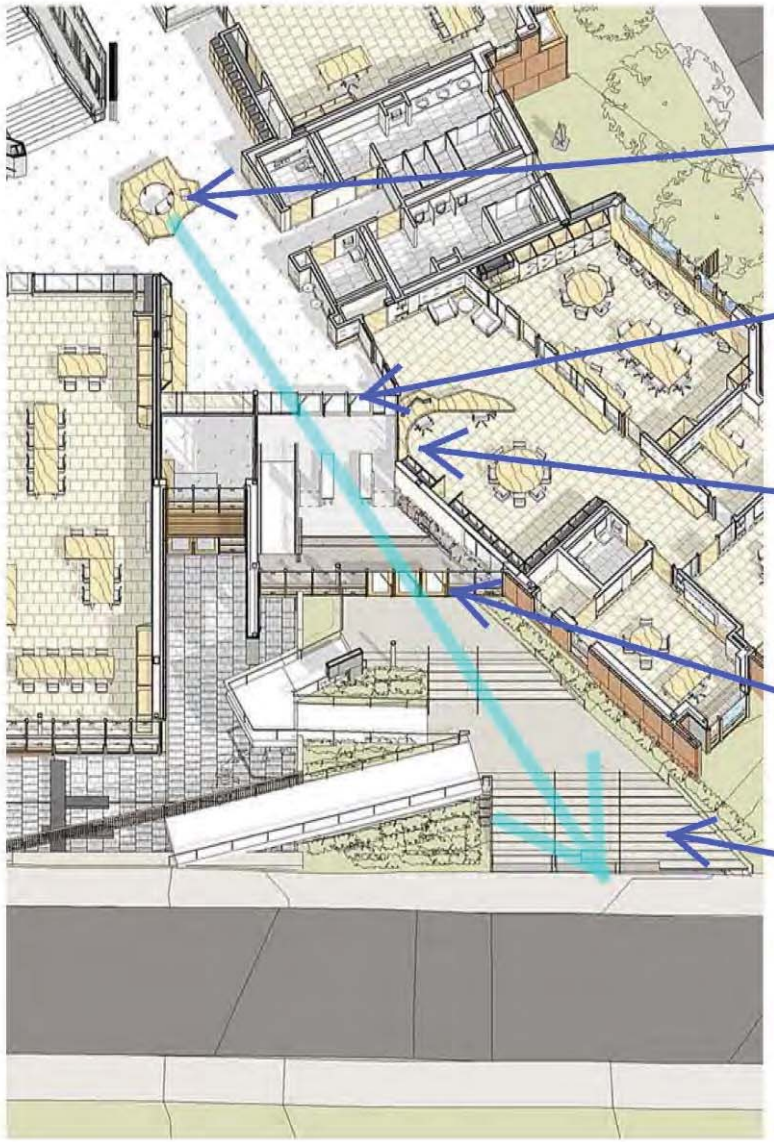
General:

The fundamental purpose of our schools is to educate our children and, therefore, that proposed security options must enhance, not diminish that educational experience. Schools should be great places to learn, not just because they are safe and the educational process is uninterrupted, but because the physical design of schools facilitates, excites and engenders interactions between students, teachers, and staff, the spaces they are in and the world around them.

Entrances

- Main entrances shall be well lit and unobstructed to allow for natural and/or electronic surveillance at all times.
- The design shall allow for visitors to be guided to a single control point for entry.
- Doors using laminated glass and/or polycarbonate to significantly improve forced entry delay time beyond standard glazing techniques.
- Main entrance doors shall be capable of being secured from a central location, such as the central administrative office and/or the school security office.
- Install a panic/duress alarm or call button at an administrative/security desk as a protective measure.

Sample Fortified School Entry – Dearborn School



REMOTE ELECTRONIC SURVEILLANCE AT FRONT AND COMMUNITY ENTRANCES

SECURITY DESK WITH CLEAR LINE OF SIGHT TO SIDEWALK

INNER VESTIBULE DOORS WITH BALLISTIC GLASS AND ELEC LOCKS

SERVICE DESK / STAFF FACING VESTIBULE UNLOCKS INNER VESTIBULE DOORS. BANK TELLER TYPE WINDOW

OUTER VESTIBULE DOORS WITH BALLISTIC GLASS, ELEC LOCKS, SECURITY CAMERAS, AND INTERCOM

LONG, WELL ILLUMINATED APPROACH TO MAIN ENTRY

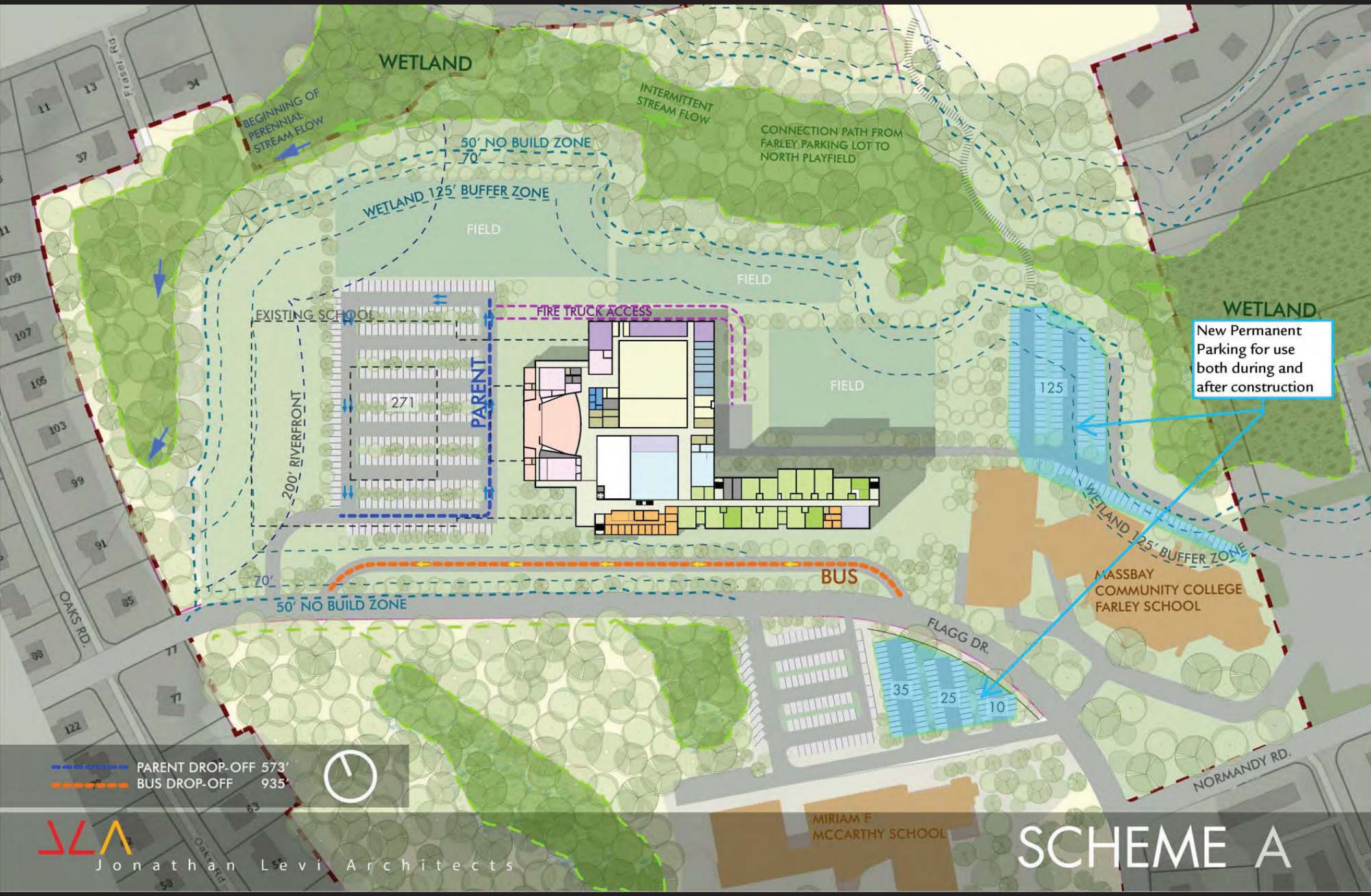
SECURITY CAMERAS AND 2-WAY INTERCOM COMMUNICATION THROUGHOUT SCHOOL

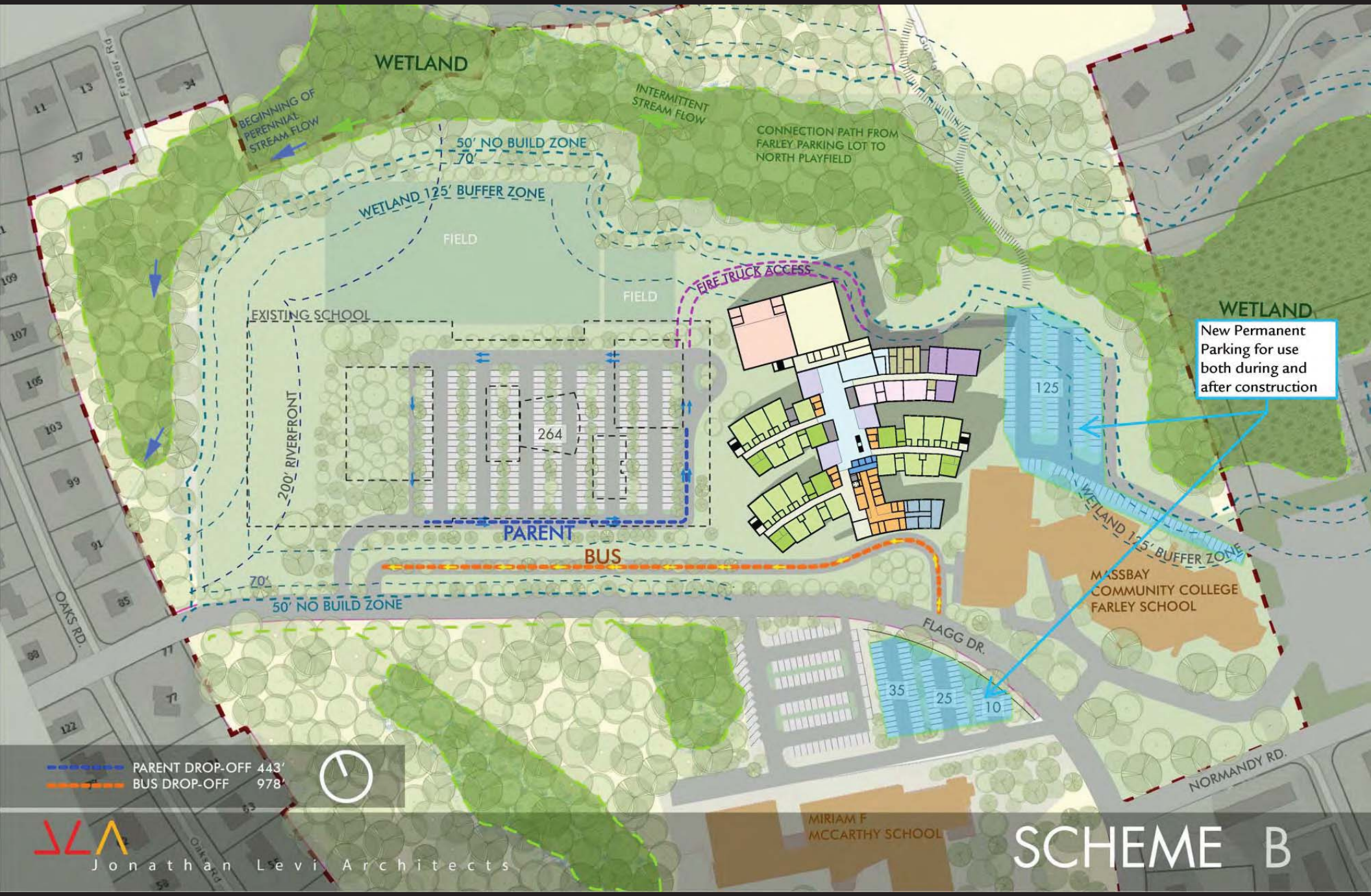
Classrooms

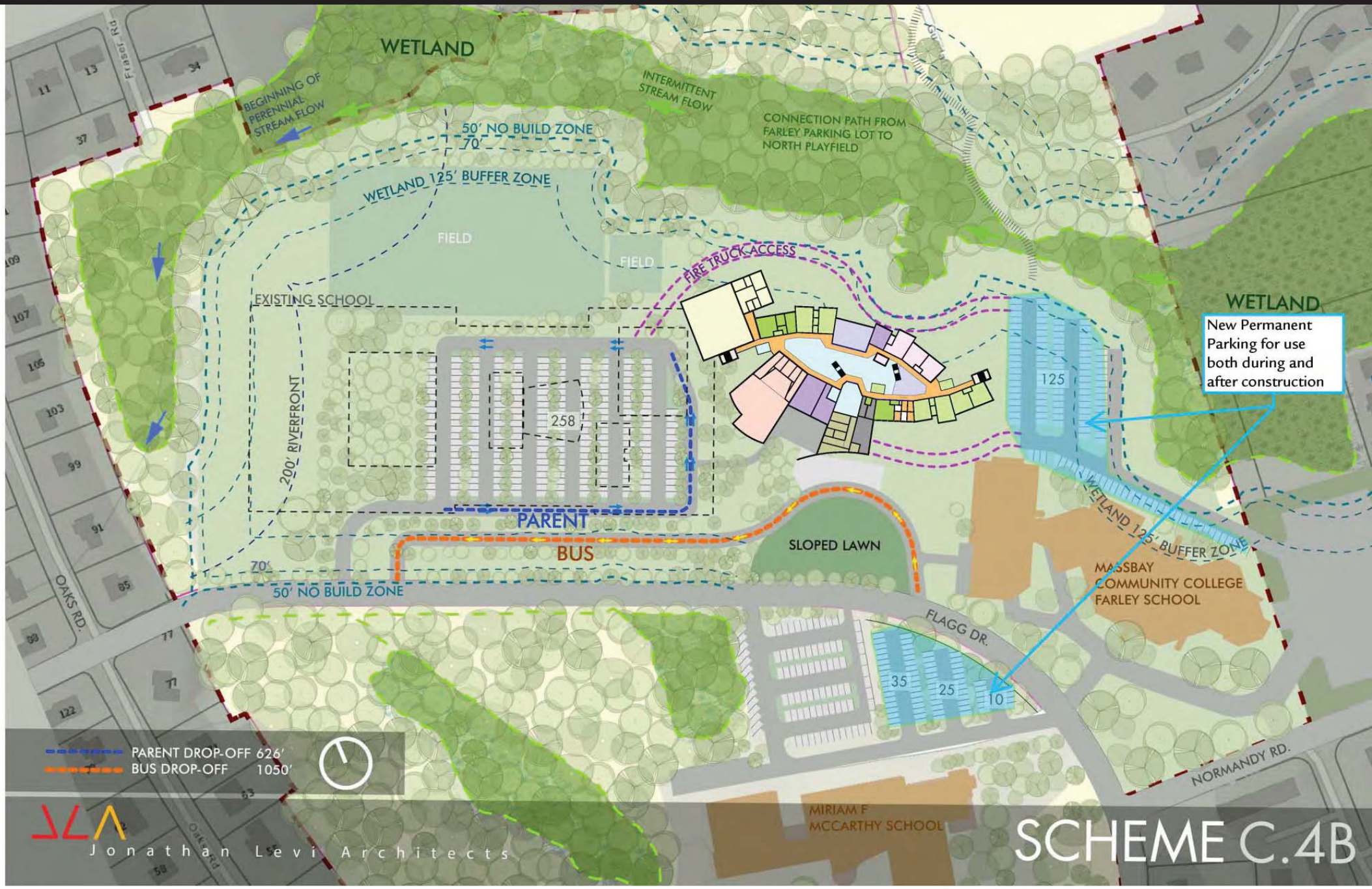
- All classrooms shall have two-way communications with the administrative office
- Classroom doors shall be easily lockable and unlocked from the inside
- Provide means to conceal window views during lockdown

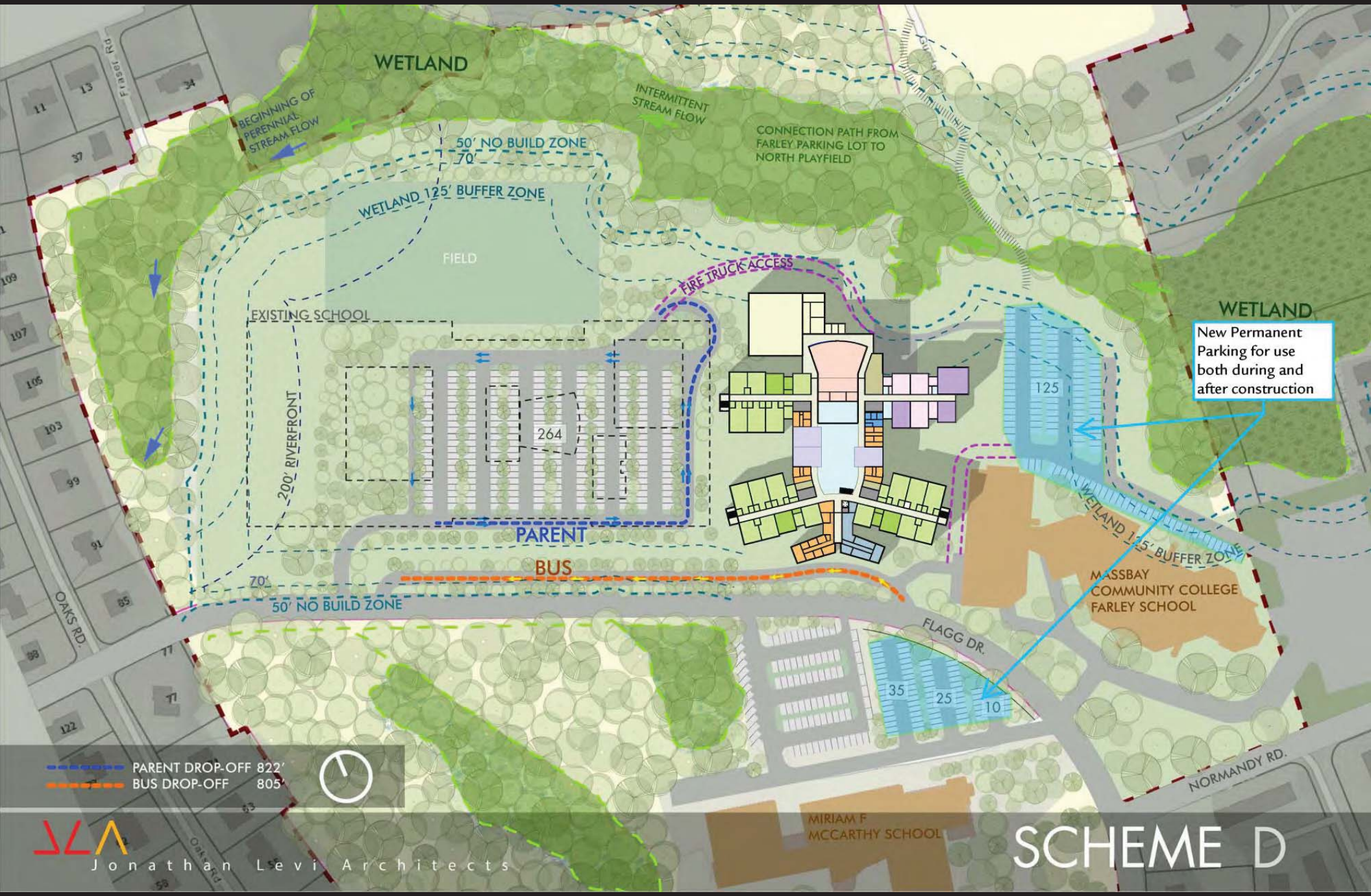
Training:

- Provide safety and security training for faculty, staff, and students


WETLAND
BEGINNING OF PERENNIAL STREAM FLOW
INTERMITTENT STREAM FLOW
CONNECTION PATH FROM FARLEY PARKING LOT TO NORTH PLAYFIELD
50' NO BUILD ZONE
70'
WETLAND 125' BUFFER ZONE
FIELD
FIELD
EXISTING SCHOOL
FIRE TRUCK ACCESS
PARENT
271
200' RIVERFRONT
FIELD
125
WETLAND
New Permanent Parking for use both during and after construction
WETLAND 125' BUFFER ZONE
BUS
70'
50' NO BUILD ZONE
MASSBAY COMMUNITY COLLEGE FARLEY SCHOOL
FLAGG DR.
35
25
10
NORMANDY RD.
OAKS RD.
MIRIAM F MCCARTHY SCHOOL
PARENT DROP-OFF 573'
BUS DROP-OFF 935'
Jonathan Levi Architects
SCHEME A


WETLAND
BEGINNING OF PERENNIAL STREAM FLOW
INTERMITTENT STREAM FLOW
CONNECTION PATH FROM FARLEY PARKING LOT TO NORTH PLAYFIELD
50' NO BUILD ZONE
70'
WETLAND 125' BUFFER ZONE
FIELD
FIELD
FIRE TRUCK ACCESS
EXISTING SCHOOL
200' RIVERFRONT
264
PARENT
BUS
70'
50' NO BUILD ZONE
WETLAND
New Permanent Parking for use both during and after construction
125
WETLAND 125' BUFFER ZONE
MASSBAY COMMUNITY COLLEGE FARLEY SCHOOL
FLAGG DR.
35
25
10
NORMANDY RD.
OAKS RD.
MIRIAM F MCCARTHY SCHOOL
PARENT DROP-OFF 443'
BUS DROP-OFF 978'
Jonathan Levi Architects
SCHEME B


WETLAND
BEGINNING OF PERENNIAL STREAM FLOW
INTERMITTENT STREAM FLOW
CONNECTION PATH FROM FARLEY PARKING LOT TO NORTH PLAYFIELD
50' NO BUILD ZONE
70'
WETLAND 125' BUFFER ZONE
FIELD
FIELD
FIRE TRUCK ACCESS
EXISTING SCHOOL
200' RIVERFRONT
258
125
WETLAND
New Permanent Parking for use both during and after construction
PARENT
BUS
SLOPED LAWN
70'
50' NO BUILD ZONE
WETLAND 125' BUFFER ZONE
MASSBAY COMMUNITY COLLEGE FARLEY SCHOOL
FLAGG DR.
35
25
10
OAKS RD.
NORMANDY RD.
MIRIAM F MCCARTHY SCHOOL
PARENT DROP-OFF 626'
BUS DROP-OFF 1050'
Jonathan Levi Architects
SCHEME C.4B


WETLAND
BEGINNING OF PERENNIAL STREAM FLOW
INTERMITTENT STREAM FLOW
CONNECTION PATH FROM FARLEY PARKING LOT TO NORTH PLAYFIELD
50' NO BUILD ZONE
70'
WETLAND 125' BUFFER ZONE
FIELD
FIRE TRUCK ACCESS
EXISTING SCHOOL
200' RIVERFRONT
264
PARENT
BUS
70'
50' NO BUILD ZONE
OAKS RD.
Fraser Rd
WETLAND
New Permanent Parking for use both during and after construction
125
WETLAND 125' BUFFER ZONE
MASSBAY COMMUNITY COLLEGE FARLEY SCHOOL
FLAGG DR.
35
25
10
NORMANDY RD.
MIRIAM F MCCARTHY SCHOOL
PARENT DROP-OFF 822'
BUS DROP-OFF 805'
Jonathan Levi Architects
SCHEME D

Preliminary Cost Analysis (PDP Phase)

	REPAIR TO CODE BASELINE	ADD/RENO	NEW CONSTRUCTION		
	Option 0.0	Option A	Option B.2 Tree Branch	Option C.2 Folded Hands	Option D Butterfly
$Million		With Auditorium	With Auditorium	No Auditorium	No Auditorium
Swing Space Cost	$6	$6	$0	$0	$0
Order of Magnitude Project Cost	$125	$114	$95	$89	$89
MSBA Share	$0	$49	$40	$41	$41
Framingham Share	$131	$71	$55	$48	$48

Preliminary Cost Analysis (Progress PSR Phase)

	REPAIR TO CODE BASELINE	ADD/RENO	NEW CONSTRUCTION					
	Option 0.0	Option A	Option B Tree Branch		Option C Folded Hands		Option D Butterfly	
$Million		With Auditorium	With Auditorium	With Auditorium & Larger Gym	With Auditorium	With Auditorium & Larger Gym	With Auditorium	With Auditorium & Larger Gym
Swing Space Cost	$6	$2	$0	$0	$0	$0	$0	$0
Order of Magnitude Project Cost	$131	$119	$111	$112	$111	$112	$112	$113
MSBA Share	$0	$47	$45	$44	$45	$44	$45	$45
Framingham Share	$131	$72	$66	$68	$66	$68	$67	$68

Changes from PDP to Progress PSR

	Option B	Option C	Option D
Auditorium	$3M	$10M	$10M
Site Work	$7M	$7M	$7M
Building Demolition	$1M	$1M	$1M
Building Cost	$5M	$4M	$5M
TOTAL	$16M	$22M	$23M

Changes from PDP to Progress PSR

	Option B	Option C	Option D
Space Categorization Correction	$2M	$2M	$2M
Auditorium	$1M	$7M	$7M
Site Work	$6M	$6M	$6M
Building Cost	$2M	$3M	$4M
TOTAL	$11M	$18M	$19M

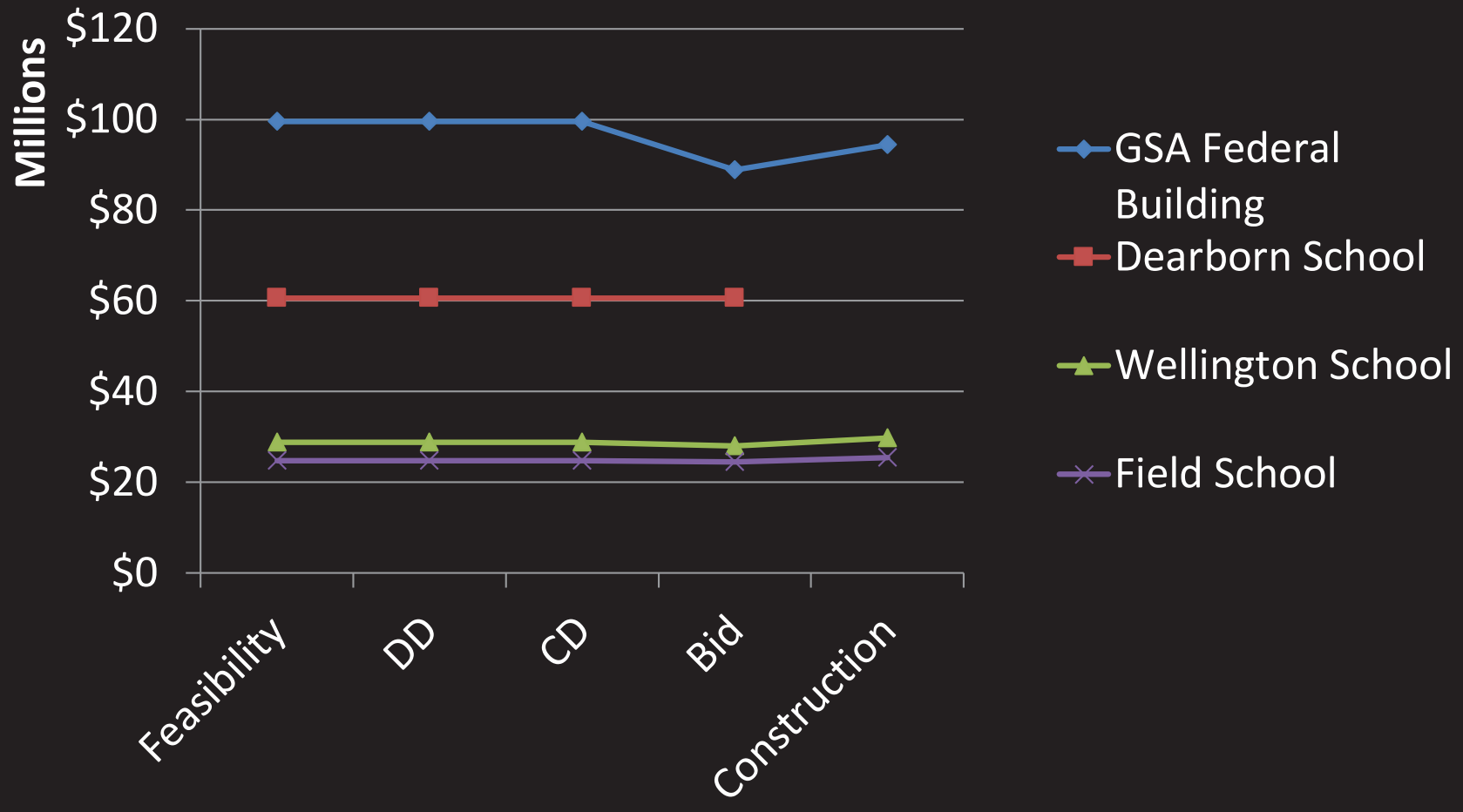
MSBA Middle School Construction Cost Comparisons

Costs shown from MSBA website

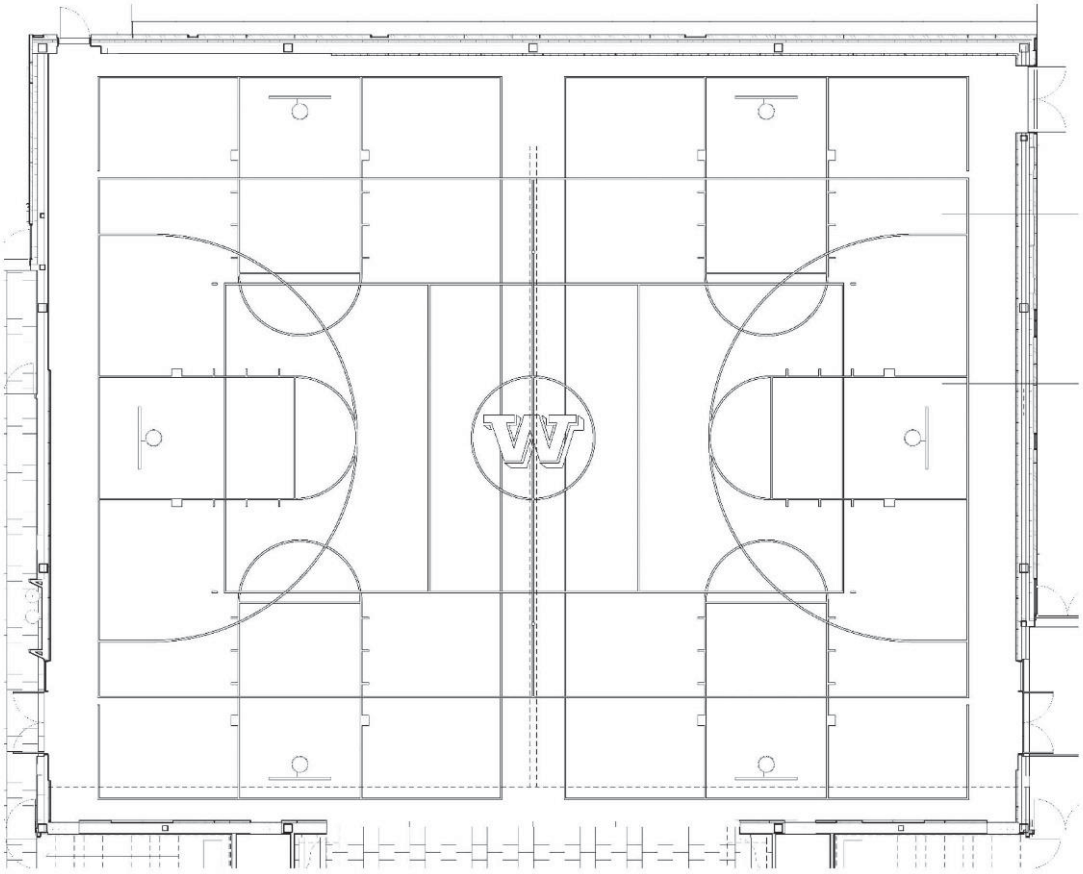
Town	GSF	Year Start Constr	Escalation Years to 2020	Approximate Escalation @ 3.5%/Year	Escalated Total Construction Cost	Escalated Building Construction Cost/ SF	Escalated Total Construction Cost/ SF
Auburn	100,395	2014	6	21%	$42,924,750	**372**	428
Scituate	164,803	2015	5	18%	$72,826,500	**391**	442
Beverly	231,509	2015	5	18%	$105,901,575	**403**	457
Chelsea	115,235	2015	5	18%	$54,104,050	**407**	470
Lynn	181,847	2014	6	21%	$81,947,250	**422**	451
Natick	182,195	2019	1	3%	$90,624,486	**428**	497
Fuller	**157,010**	**2020**	**0**	**0%**	**$87,050,542**	**433**	**554**
West Lynn MS	185,444	2018	2	7%	$89,335,370	**453**	482
Quincy	95,732	2017	3	11%	$51,438,855	**454**	537
Lynn Pickering MS	131,295	2018	2	7%	$71,362,580	**474**	544
Boston	115,236	2015	5	18%	$70,789,050	**534**	614

Cost Control

Track Record – Feasibility through Construction Completion



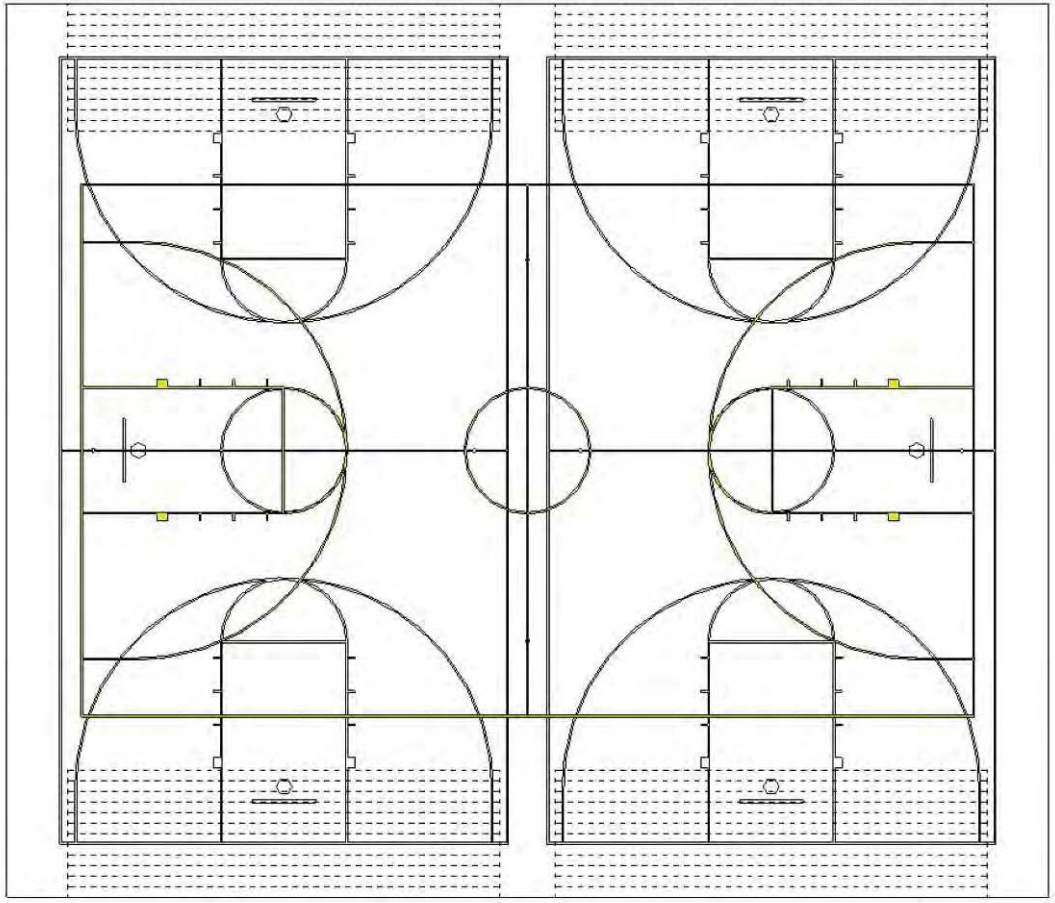
Gym Size



6,500 sf Gym

- 1 Center High School basketball court (84' x 50')
- 2 side by side undersized basketball courts (70' x 39' vs 74' x 42')
- 300 bleacher seats

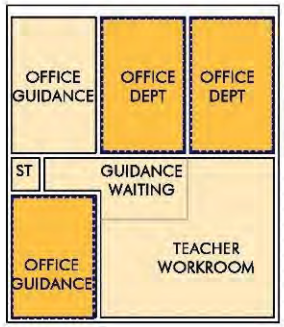
Gym Size



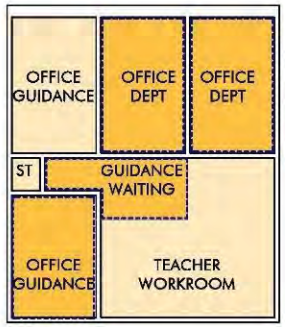
Large Gym 8,300 sf

- 1 Center High School basketball court (84' x 50')
- 2 Side by Side Middle School basketball courts (74' x 42')
- 640 bleacher seats

Administration Areas



ADMIN A



ADMIN B

ADMIN C

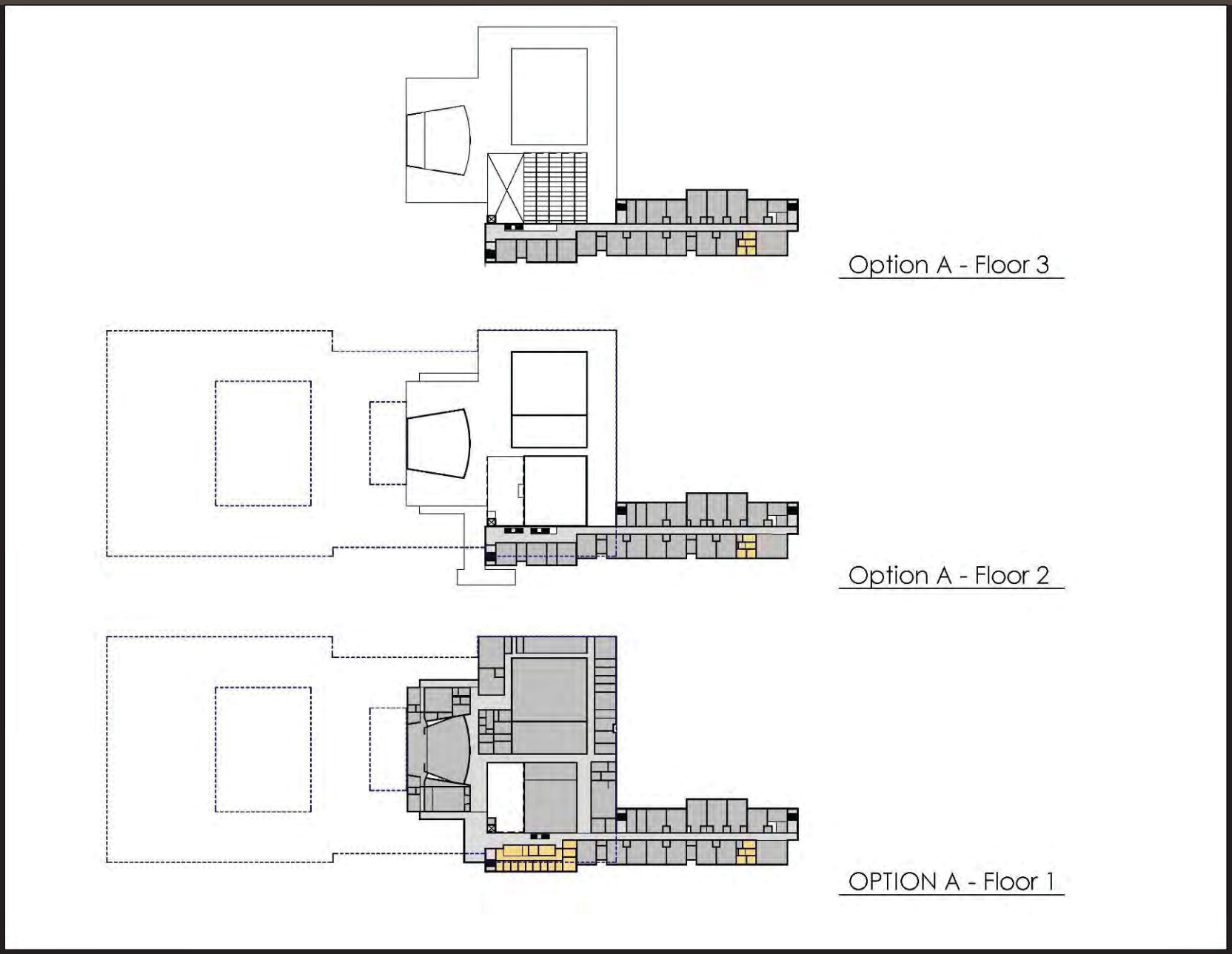
SATELLITE ADMIN AREAS

LEGEND

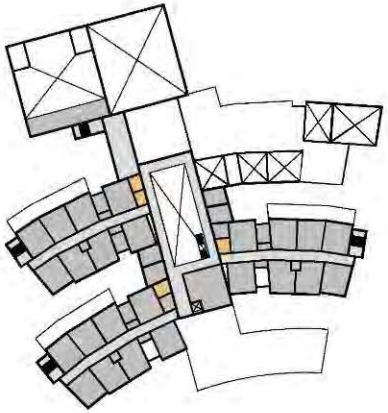
Included in MSBA Guidelines

Additional STEM program areas

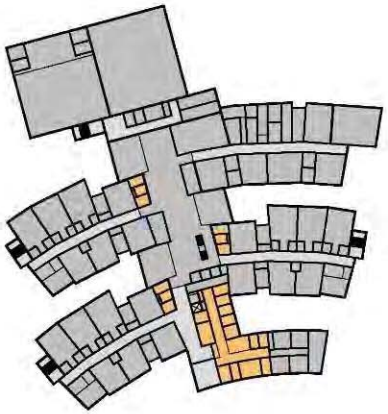
Administration Areas



Administration Areas

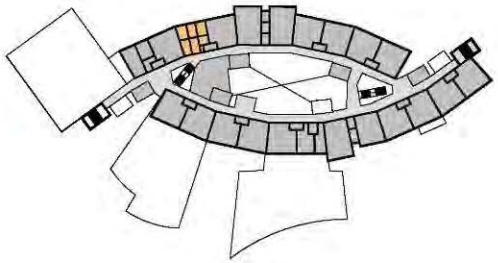


OPTION B - Floor 2

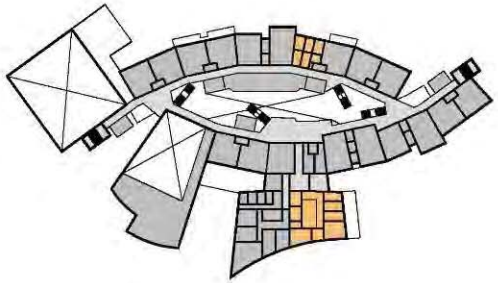


OPTION B - Floor 1

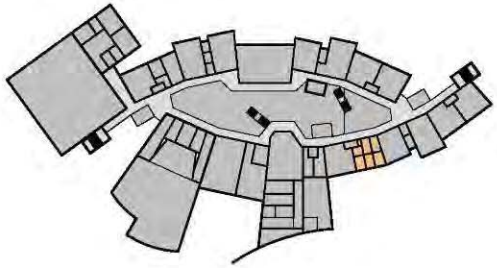
Administration Areas



OPTION C - Floor 3

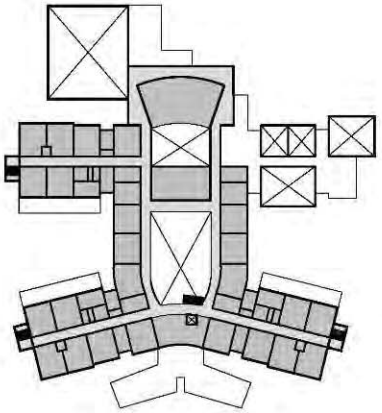


OPTION C - Floor 2

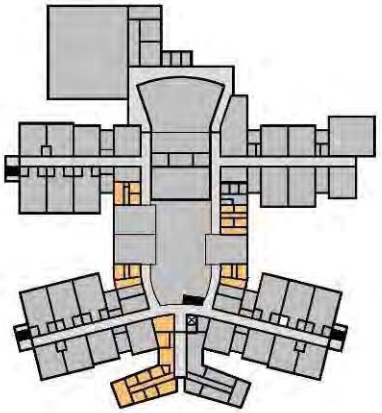


OPTION C - Floor 1

Administration Areas

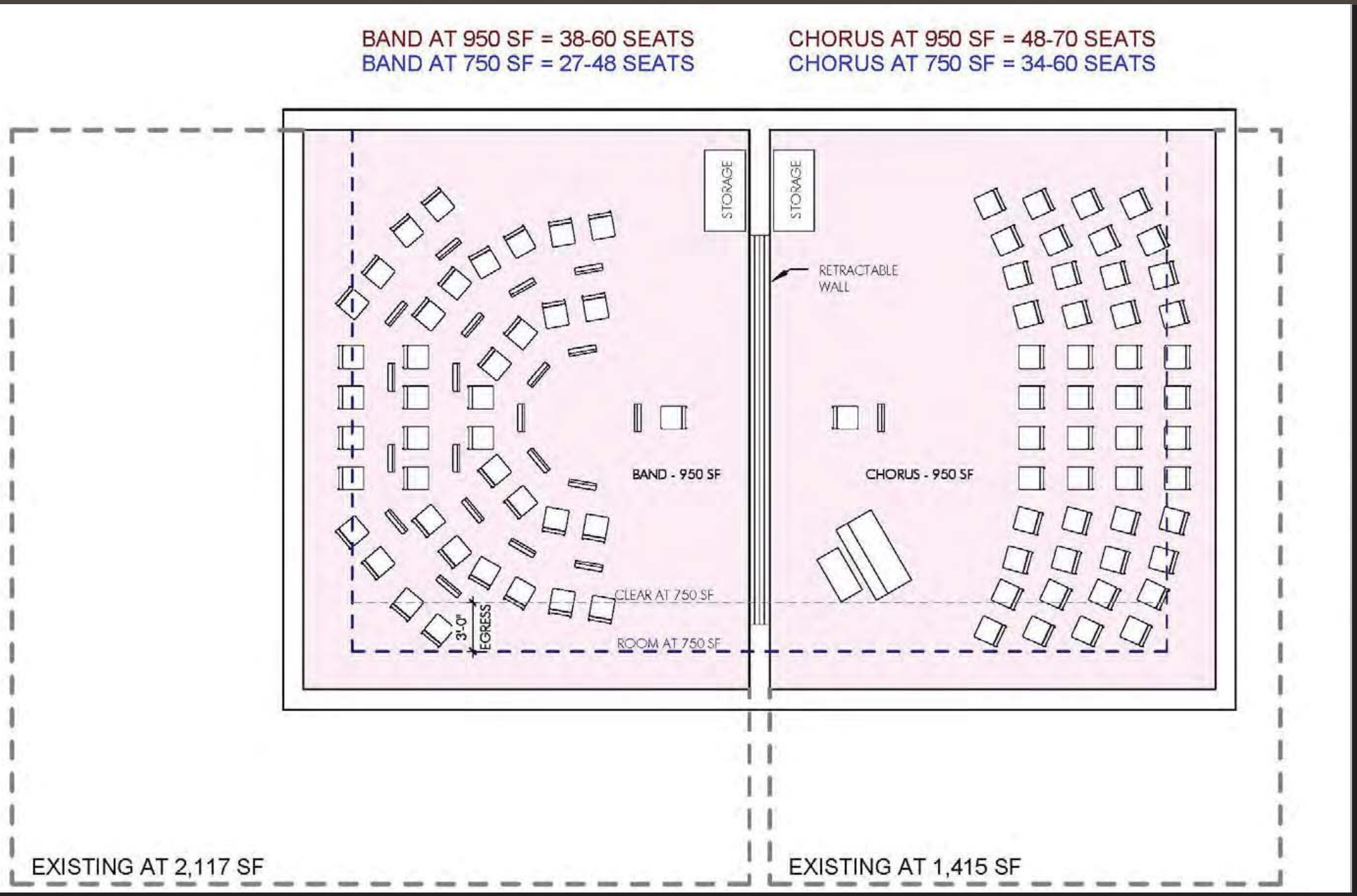


OPTION D - Floor 2



OPTION D - Floor 1

Music Areas


BAND AT 950 SF = 38-60 SEATS
BAND AT 750 SF = 27-48 SEATS
CHORUS AT 950 SF = 48-70 SEATS
CHORUS AT 750 SF = 34-60 SEATS
STORAGE
STORAGE
RETRACTABLE WALL
BAND - 950 SF
CHORUS - 950 SF
CLEAR AT 750 SF
ROOM AT 750 SF
3'-0"
EGRESS
EXISTING AT 2,117 SF
EXISTING AT 1,415 SF

Air Conditioning vs Dehumidification

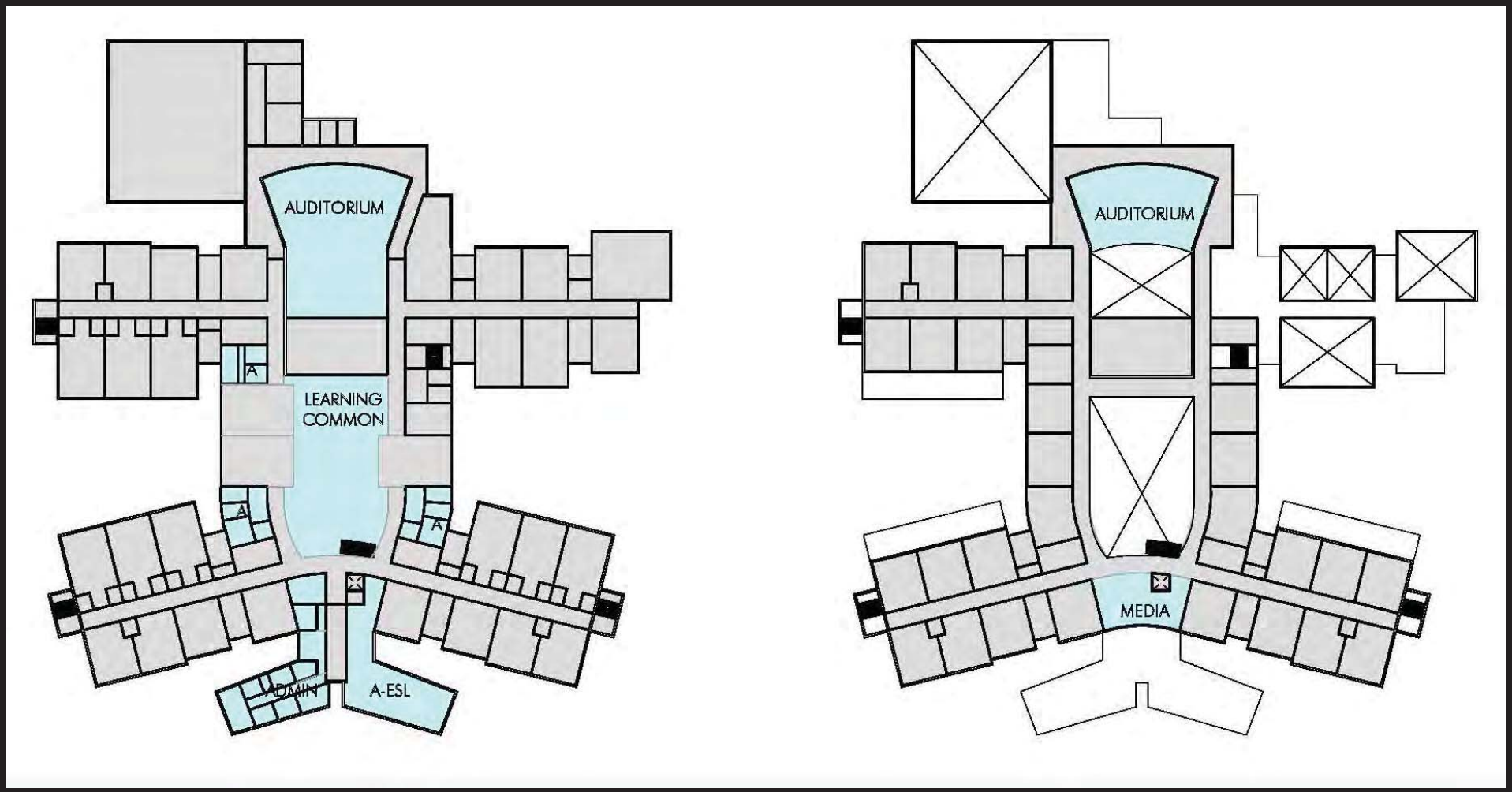
Air Conditioned Spaces:

- Maintains inside temperature at 75°F, 50% humidity;
- Comfortable all year;
- Typically used at a minimum in Auditorium, Cafeteria, Administrative Spaces, and Media Center.

Dehumidified Spaces:

- Reduced Construction Costs;
- For rooms not typically used in the summer;
- Temperature floats within comfort zone; typically maximum 80°F;
- Starts to become uncomfortably warm when outdoor temperature goes above 88°F.

Air Conditioned Areas - Base



Base, 45,000 gsf