

TOWN OF BELMONT HIGH SCHOOL

MODULE 4: SCHEMATIC DESIGN REPORT

JULY 11, 2018





BELMONT HIGH SCHOOL
MARAUDERS

ACKNOWLEDGEMENTS /

We wish to thank the following individuals and organizations for their contributions and assistance to this Feasibility Study.

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Jess Deleconio, Senior Project Coordinator

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Patricia Bruschi – Chair, Permanent Building Committee (Vice Chair)

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Patrice Garvin – Town Administrator

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SUSTAINABILITY CONSULTANT

AKF Group / In Posse

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4.1.1 DESE SUBMITTAL

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4.1.1 - DESE SUBMITTAL

A. COVER LETTER



Daedalus Projects, Incorporated

1 Faneuil Hall Marketplace, South Market
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Suite 4195 | Boston, MA 02109-6117

(p): 617-451-2717 | www.daedalusprojects.com

July 11, 2018

Ms. Mary Pichetti
Director of Capital Planning
Massachusetts School Building Authority
40 Broad Street, Suite 500
Boston, Massachusetts 02109

Dear Ms. Pichetti:

The District is pursuing execution of a Project Scope and Budget Agreement for the MSBA approved preferred schematic for the Belmont High School, Belmont MA. The District's 2017-2018 enrollment is 4,596. The design enrollment for the proposed school project is 2,215. The existing Belmont High School currently serves grades 9-12 and is proposed to serve grades 7-12.

In accordance with G.L. c. 70 B, MSBA staff has assembled the documents required for the review of the special education program at Belmont High School. The following are attached per the 'Submittal Requirements':

1. A letter from Superintendent John Phelan of Belmont Public Schools describing its special education program.
2. Proposed space summary that includes the existing facility, proposed spaces, and MSBA guidelines based on the agreed upon design enrollment. The first page of this summary indicates a total of 24,310 square feet of space dedicated to the delivery of special education.
3. The floor plans for the proposed 445,100 square foot Belmont High School.
4. A completed Special Education Adjacency Table

I have reviewed the attached documents and confirm that the District's School Building Committee has officially approved the attached submittal on June 28th, 2018 and verify that the space summary match the floor plan and is complete and conform to the MSBA requirements as described in Module 4 – Schematic Design Guidelines.

Sincerely,

A handwritten signature in black ink, appearing to read 'Shane Nolan', with a long horizontal flourish extending to the right.

Shane Nolan
Senior Project Manager

cc: John Phelan, Superintendent of Schools, Belmont
Bill Lovallo, Chair, Belmont School Building Committee
Brooke Trivas, Perkins and Will Architects

B. SPECIAL EDUCATION DELIVERY METHODOLOGY

As mentioned in our BHSBC Educational Plan, our Special Education Program is primarily inclusion oriented. That means that IEP services provided to students are provided to them within the regular education environment and embedded in the regular education curriculum and/or classroom. By doing so, we allow our Special Education students to participate fully in our curriculum and extracurricular activities, and we ensure the education of our students within the least restrictive environment possible.

In Belmont, Special educators and service providers are active collaborators with classroom teachers in planning for and providing instruction and supports. All staff work in concert with each other to educate our Special Education students and allow for equal access, curriculum integrity, and instructional fidelity. Within a continuum of services and supports, our special education students participate fully in the academic program.

There are generally two models for inclusion, and our district utilizes both. The two modes are “Push-in” services and “Pull-out” services. With “Push-in” services, the special education teacher works in the regular education classroom in collaboration with the regular education teacher. This model is used more readily in grades 7-8, but relied on between grades 9-12 as needed to help support the challenges of students requiring more attention, direction, explanation, guidance, and cuing. Curriculum is typically developed by both teachers and relies heavily on the principals of differentiation and universal design in regards to structure, materials and instructional delivery methodology.

With “Pull-out” services, the special education teacher or related services provider works with one or more students in a separate environment. This may be a larger separate, structured and scheduled classroom environment, or simply a smaller less structured and as needed work space or breakout room. Either way, students are pulled into these environments to receive supports or services which augment the classroom instruction and allow students equal access to the curriculum.

Both these models of Inclusion are implemented by an array of regular and special education staff. Regular educators are generally seen as the curriculum experts regarding instructional mandates, standards and requirements, as well as primary curriculum design. Special Educators are seen as the support experts in regards to development of

curriculum modifications and classroom services which allow students with learning disabilities to access and effectively progress within the regular education curriculum.

Within the district, Special Educators consist of a wide range of specially educated and trained staff members including, Resource Room Teachers/Liaisons, Speech/Language Pathologists, School Psychologists, School Adjustment Counselors/Social Workers, AAC/AT Specialists, ABA/Behavior Specialists, OT’s and PT’s. This team of professionals provides consultation services, conducts assessments, and provides direct instruction and services to students. Examples of instructional supports and services include specially designed instructional materials and alternative or additional lessons within the regular education curriculum, as well as more targeted and individualized instruction in reading, mathematics, written language and/or organizational strategies. Examples of additional or adjunct services includes speech/language therapy to improve articulation and/or social pragmatics, occupational therapy to improve motor skills, physical therapy to improve strength, flexibility and mobility, socio-emotional counseling, adaptive physical education, and supportive and adaptive technology such as e-readers, vision magnifiers and FM hearing systems.

All of these supports and services are implemented within our regular education environment and help support the full inclusion of our Special Education students in the least restrictive environment. They are maintained in our district, and within our buildings. They achieve success through added layers of internal supports as opposed to our having to seek out and secure external supports or programs. While this model does not serve and support every Special Education student we have, it does serve the majority of those students successfully and effectively.

The Belmont Public Schools also supports students on IEPs through their membership of the LABBB Collaborative. The LABBB Collaborative is made up of five districts (Lexington, Arlington, Belmont, Burlington and Bedford) who partner to provide services to students and families that no one district could do alone. These programs are located in the schools of each of the member districts. This allows our “out of district” services to be provided in our LABBB community buildings that host and include students in the schools culture and regular education inclusion opportunities. Belmont provides space and programming for our LABBB programs at the elementary, middle and high school of our district.

C. SIGNED SPECIAL EDUCATION SUMMARY/ SEPARATE NARRATIVE

Version
10.30.2017

BELMONT HIGH SCHOOL

Version
10.30.2017

4.1.4

MSBA Guidelines
MSBA Educational Program & Space Standard Guidelines)

4.1.1

C. SIGNED SPECIAL EDUCATION SUMMARY/ SEPARATE NARRATIVE

9 Belmont High School - Module 4 - Schematic Design Report

GRADES 7-12/ 2,215 STUDENTS

BELMONT HIGH SCHOOL

Date: 7/11/2018 Schematic Design Submittal

MSBA Guidelines
(refer to MSBA Educational Program & Space Standard Guidelines)

ROOM TYPE	Existing Conditions		New		Total		Comments
	ROOM NFA ¹	# OF RMS	ROOM NFA ¹	# OF RMS	ROOM NFA ¹	# OF RMS	
Auditorium Workshop	375	1					
DINING & FOOD SERVICE							
Cafeteria / Student Lounge / Break-out	7,193	1	11,075	1	11,075	1	3 seating - 15SF per seat
Chair / Table Storage			704	1	704	1	
Scramble Seating Area	1,259	1	600	1	600	1	
Kitchen	2,495	1	3,515	1	3,515	1	1800 SF for food 300 + 1 SF/Student Adult
Staff Lunch Room	740	1	804	1	804	1	20 SF/ Occupant
MEDICAL							
Medical Suite Toilet	20	2	2,140	4	2,140	4	
Nurses' Office / Waiting Room	103	2	500	2	500	2	
Interview Room (1 room used for Migrate / Mothers Room)			100	5	500	5	
Examination Room / Resting (1 @ MS / 1 @ HS)	494	1	450	2	900	2	
ADMINISTRATION & GUIDANCE							
General Office / Waiting Room / Toilet (1 MS + 1 HS)	20	2	8,200	2	8,200	2	
Teachers' Mail and Time Room	103	2	200	2	200	2	
Duplicating Room			200	2	200	2	
Records Room	494	1	100	1	100	1	
Principal's Office w/ Conference Area	20	2	375	2	375	2	
Principal's Secretary / Waiting	103	2	250	3	250	3	
Assistant Principal's Office - AP1			200	3	600	3	
Assistant Principal's Office - AP2	494	1	200	2	200	2	
Supervisory / Spare Office			225	2	450	2	
Conference Room	103	2	75	2	150	2	
Guidance Office	494	1	100	2	200	2	
Guidance Waiting Room	20	2	704	0	704	0	
Guidance Storeroom			100	2	200	2	
Career Center (Place in SF in Learning Commons)	103	2	100	2	200	2	
Records Room	494	1	1,108	0	1,108	0	
Teachers' Work Room (Distribute SF to 7 teacher planning areas)			100	2	200	2	
AP Secretary/ MS			50	3	150	3	
AP Waiting Area/ HS			250	1	250	1	
Conference Room Guidance/ HS			100	1	100	1	
Guidance/ Copy area/ HS			200	7	1,400	7	
Director's office			250	0	250	0	
Accounting							
School Psychologist	133	2					
Assistant Principal's Office - AP3	139	1					
Visual Performing Arts Director	135	1					
Vault	113	1					
School Resource Office	117	1					
Director Secretary Office	118	1					
Storage	58	2					
MODULAR HIGH SCHOOL							
Break / Copy Room	190	1					
MIDDLE SCHOOL							
Guidance Office		2					
CUSTODIAL & MAINTENANCE							
Custodian's Office	695	1	150	1	150	1	
Custodian's Workshop	315	1	250	1	250	1	
Custodian's Storage	138	1	375	1	375	1	
Recycling Room / Trash			704	1	704	1	
Receiving and General Supply			1,208	1	1,208	1	
Network / Telecom Room	266	1	200	1	200	1	
Maintenance Equipment			150	1	150	1	
Janitor Closet	41	7					
Storage	262	3					
Custodial Office / Storage	289	1					

Version
10.30.2017

4.1.1 - DESE SUBMITTAL

C. SIGNED SPECIAL EDUCATION SUMMARY/ SEPARATE NARRATIVE

GRADES 7-12/ 2,215 STUDENTS		Date: 7/11/2018		Schematic Design Submittal	
BELMONT HIGH SCHOOL		MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	Existing Conditions		New		Comments
	ROOM NFA ¹	# OF RMS	area totals	# OF RMS	
OTHER			9,987	3,465	0
District Offices					
Technology Work Room	413	3			
Technology Offices					
Technology Director Office	303	1			
Technology Conf Room	235	1			
Technology Server Room	262	2			
AV Coordinator	215	1			
Equity Academic Center	298	1			
Metco Office	77	1			
BEA Office	133	2			
Lexington Chinese School	423	1			
Wood Shop / Office / Storage	2,015	1			
Food Service Director	152	1			
Accounting	113	1			
Nurse's Office Waiting (1 district off/nurse school off					
Community Service/Volunteer Office					
Community Service/Volunteer Meeting space					
Pool Pump Room	7,447	1			
Locker Room / Pool	810	2			
School Store	61	1			
Resource Officer	20	2			
Storage for Emergency Center					
MODULAR HIGH SCHOOL					
Town Maintenance Office / Storage	206	2			
Belmont Office / Storage	208	2			
Total Building Net Floor Area (NFA)			208,130		
Proposed Student Capacity / Enrollment					
NON-PROGRAMMED SPACES					
Other Occupied Rooms (list separately)					
AP Secretary (AD and Arts Director)					
HS Medical Waiting					
MS Medical Waiting					
Unoccupied MEP/H/P Spaces					
Unoccupied Closets, Supply Rooms & Storage Rooms					
Toilet Rooms					
Circulation (corridors, stairs, ramps & elevators)					
Remaining ³					
Total Modular High School Gross Floor Area (GFA)					
Total Building Gross Floor Area (GFA) ²					
Grossing factor (GFA/NFA)					

¹ Individual Room Net Floor Area (NFA)

² Total Building Gross Floor Area (GFA)

³ Remaining

Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

Includes the entire building gross square footage measured from the outside face of exterior walls

Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area. It is assumed to equal the difference between the Total Building Gross Floor Area and area not accounted for above.

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.

Name of Architect Firm: Perkins+Will

Name of Principal Architect: Robert Brown

Signature of Principal Architect:

Date: July 11, 2018

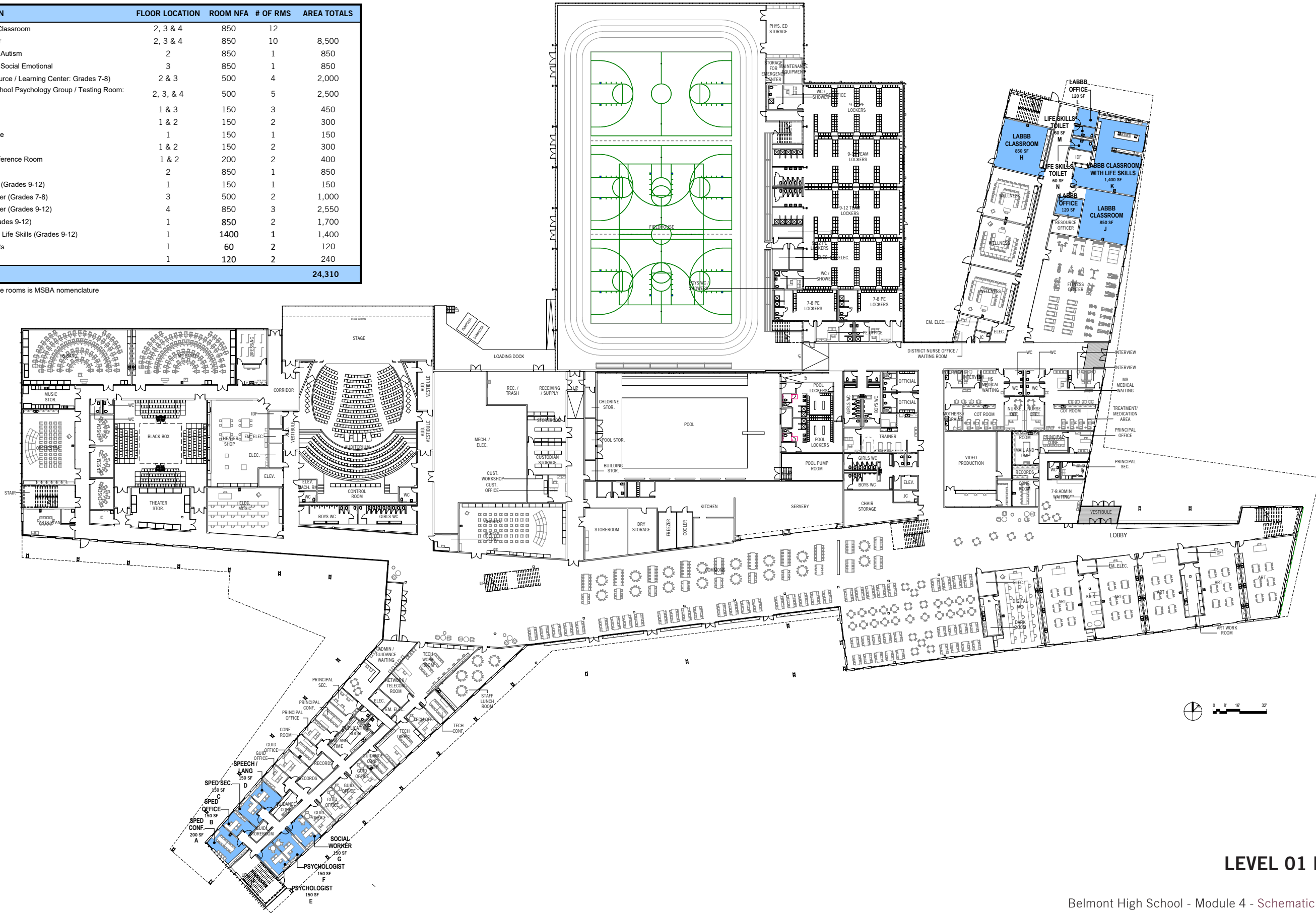
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4.1.1 DESE SUBMITTAL

D. FLOOR PLANS - LEVEL 01

SPECIAL EDUCATION	FLOOR LOCATION	ROOM NFA	# OF RMS	AREA TOTALS
Self-Contained SPED Classroom	2, 3 & 4	850	12	
Learning Center	2, 3 & 4	850	10	8,500
Key Classroom Autism	2	850	1	850
Key Classroom Social Emotional	3	850	1	850
Resource Room (Resource / Learning Center: Grades 7-8)	2 & 3	500	4	2,000
Small Group Room (School Psychology Group / Testing Room: Grades 9-12)	2, 3, & 4	500	5	2,500
Psychologist Office	1 & 3	150	3	450
Speech / Language	1 & 2	150	2	300
Special Education Office	1	150	1	150
Social Worker	1 & 2	150	2	300
Special Education Conference Room	1 & 2	200	2	400
OT/PT (Grades 7-8)	2	850	1	850
SPED Secretary Office (Grades 9-12)	1	150	1	150
Campus Learning Center (Grades 7-8)	3	500	2	1,000
Campus Learning Center (Grades 9-12)	4	850	3	2,550
LABBB Classroom (Grades 9-12)	1	850	2	1,700
LABBB Classroom with Life Skills (Grades 9-12)	1	1400	1	1,400
LABBB Life Skills Toilets	1	60	2	120
LABBB Office	1	120	2	240
TOTALS				24,310

Note: Boxed text outside rooms is MSBA nomenclature



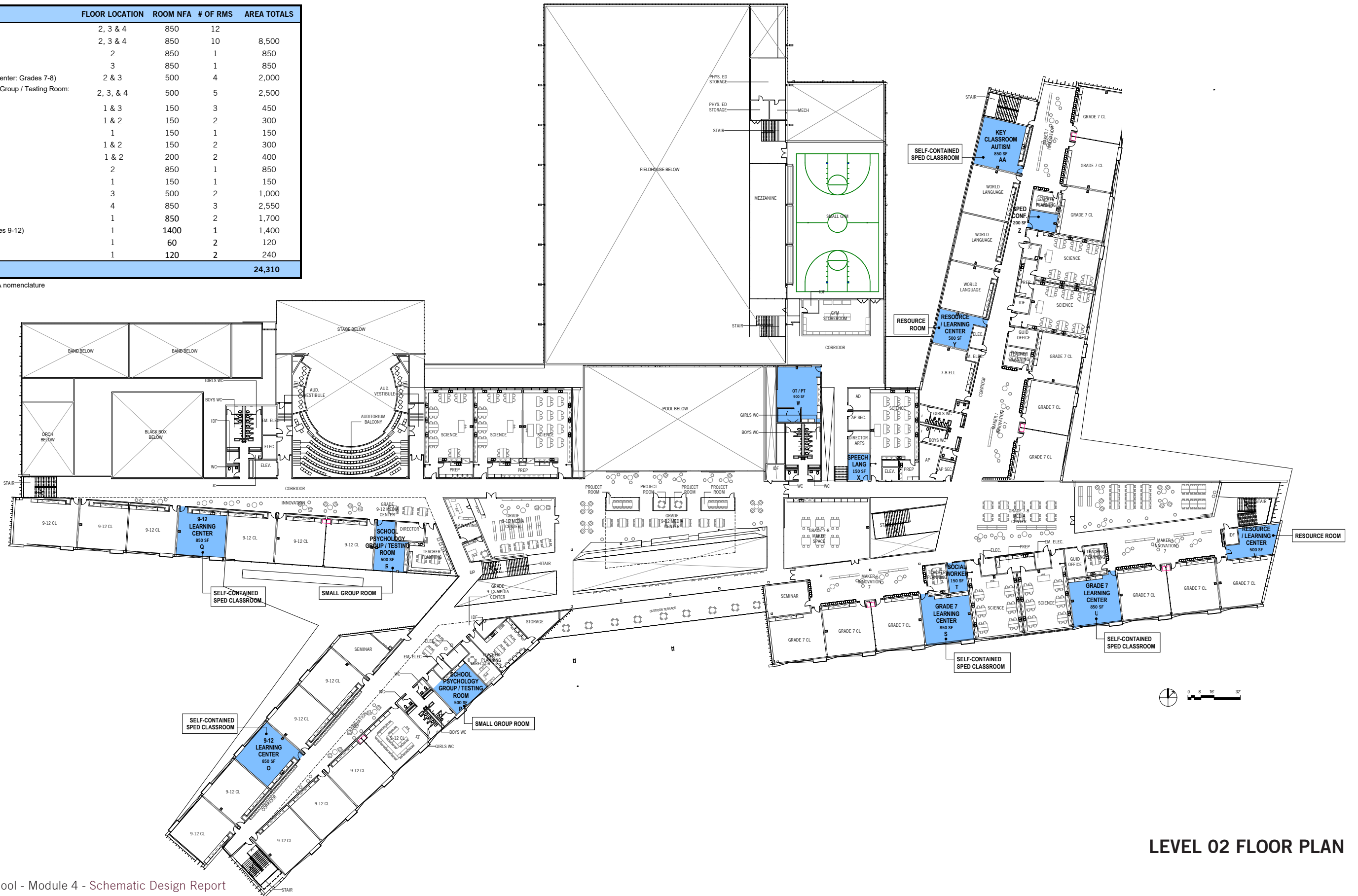
LEVEL 01 FLOOR PLAN

4.1.1 DESE SUBMITTAL

D. FLOOR PLANS - LEVEL 02

SPECIAL EDUCATION	FLOOR LOCATION	ROOM NFA	# OF RMS	AREA TOTALS
Self-Contained SPED Classroom	2, 3 & 4	850	12	
Learning Center	2, 3 & 4	850	10	8,500
Key Classroom Autism	2	850	1	850
Key Classroom Social Emotional	3	850	1	850
Resource Room (Resource / Learning Center: Grades 7-8)	2 & 3	500	4	2,000
Small Group Room (School Psychology Group / Testing Room: Grades 9-12)	2, 3, & 4	500	5	2,500
Psychologist Office	1 & 3	150	3	450
Speech / Language	1 & 2	150	2	300
Special Education Office	1	150	1	150
Social Worker	1 & 2	150	2	300
Special Education Conference Room	1 & 2	200	2	400
OT/P/T (Grades 7-8)	2	850	1	850
SPED Secretary Office (Grades 9-12)	1	150	1	150
Campus Learning Center (Grades 7-8)	3	500	2	1,000
Campus Learning Center (Grades 9-12)	4	850	3	2,550
LABBB Classroom (Grades 9-12)	1	850	2	1,700
LABBB Classroom with Life Skills (Grades 9-12)	1	1400	1	1,400
LABBB Life Skills Toilets	1	60	2	120
LABBB Office	1	120	2	240
TOTALS				24,310

Note: Boxed text outside rooms is MSBA nomenclature



LEVEL 02 FLOOR PLAN

4.1.1 DESE SUBMITTAL

D. FLOOR PLANS - LEVEL 03

SPECIAL EDUCATION	FLOOR LOCATION	ROOM NFA	# OF RMS	AREA TOTALS
Self-Contained SPED Classroom	2, 3 & 4	850	12	
Learning Center	2, 3 & 4	850	10	8,500
Key Classroom Autism	2	850	1	850
Key Classroom Social Emotional	3	850	1	850
Resource Room (Resource / Learning Center: Grades 7-8)	2 & 3	500	4	2,000
Small Group Room (School Psychology Group / Testing Room: Grades 9-12)	2, 3, & 4	500	5	2,500
Psychologist Office	1 & 3	150	3	450
Speech / Language	1 & 2	150	2	300
Special Education Office	1	150	1	150
Social Worker	1 & 2	150	2	300
Special Education Conference Room	1 & 2	200	2	400
OT/PT (Grades 7-8)	2	850	1	850
SPED Secretary Office (Grades 9-12)	1	150	1	150
Campus Learning Center (Grades 7-8)	3	500	2	1,000
Campus Learning Center (Grades 9-12)	4	850	3	2,550
LABBB Classroom (Grades 9-12)	1	850	2	1,700
LABBB Classroom with Life Skills (Grades 9-12)	1	1400	1	1,400
LABBB Life Skills Toilets	1	60	2	120
LABBB Office	1	120	2	240
TOTALS				24,310

Note: Boxed text outside rooms is MSBA nomenclature



LEVEL 03 FLOOR PLAN

4.1.1 DESE SUBMITTAL

D. FLOOR PLANS - LEVEL 04

SPECIAL EDUCATION	FLOOR LOCATION	ROOM NFA	# OF RMS	AREA TOTALS
Self-Contained SPED Classroom	2, 3 & 4	850	12	
Learning Center	2, 3 & 4	850	10	8,500
Key Classroom Autism	2	850	1	850
Key Classroom Social Emotional	3	850	1	850
Resource Room (Resource / Learning Center: Grades 7-8)	2 & 3	500	4	2,000
Small Group Room (School Psychology Group / Testing Room: Grades 9-12)	2, 3, & 4	500	5	2,500
Psychologist Office	1 & 3	150	3	450
Speech / Language	1 & 2	150	2	300
Special Education Office	1	150	1	150
Social Worker	1 & 2	150	2	300
Special Education Conference Room	1 & 2	200	2	400
OT/PT (Grades 7-8)	2	850	1	850
SPED Secretary Office (Grades 9-12)	1	150	1	150
Campus Learning Center (Grades 7-8)	3	500	2	1,000
Campus Learning Center (Grades 9-12)	4	850	3	2,550
LABBB Classroom (Grades 9-12)	1	850	2	1,700
LABBB Classroom with Life Skills (Grades 9-12)	1	1400	1	1,400
LABBB Life Skills Toilets	1	60	2	120
LABBB Office	1	120	2	240
TOTALS				24,310

Note: Boxed text outside rooms is MSBA nomenclature



LEVEL 04 FLOOR PLAN

4.1.1 - DESE SUBMITTAL

D. SPECIAL EDUCATION ADJACENCY TABLE

Belmont High School

7/11/2018

MSBA Guidelines Space	MSBA Guidelines SF	Proposed Room Name	Floor Plan Designation (A-Z)	Proposed SF	Proposed Space Description and Reasoning for Adjacencies
Floor 01					
*Unique to District		Special Education Conference Room	A	200	This office is in the main administration area for team meetings of 8-12 people.
*Unique to District		Special Education Office	B	150	This office is in the main administration area near guidance office, and it will be used for counseling and small group meetings
*Unique to District		Special Education Secretary	C	150	This office is in the main administration area
*Unique to District		Speech / Language	D	150	This office is in the main administration area and will meet with 1-5 students and often a paraprofessional or LC teacher
*Unique to District		Psychologist	E	150	This office is in the main administration area
*Unique to District		Psychologist	F	150	This office is in the main administration area
*Unique to District		Social Worker	G	150	This office is in the main administration area
*Unique to District		LABBB Classroom	H	850	This classroom accommodates 14 or less students and is located on the first floor near the gym entrance and nurse's office. This is to aid students with medical / ambulator issues
*Unique to District		LABBB Office	I	120	This office is located near the LABBB classrooms and Life Skills
*Unique to District		LABBB Classroom	J	850	This classroom accommodates 14 or less students and is located on the first floor near the gym entrance and nurse's office. This is to aid students with medical / ambulator issues
*Unique to District		LABBB Classroom with Life Skills	K	1400	This classroom accommodates 14 or less students and is located on the first floor near the gym entrance and nurse's office. This is to aid students with medical / ambulator issues
*Unique to District		LABBB Office	L	120	This office is located near the LABBB classrooms and Life Skills
*Unique to District		Life Skills Toilet	M	60	This toilet is located adjacent to the LABBB classrooms and Life Skills and shared within the LABBB program
*Unique to District		Life Skills Toilet	N	60	This toilet is located adjacent to the LABBB classrooms and Life Skills and shared within the LABBB program
Floor 02					
Self-Contained Sped	950	9-12 Learning Center	O	850	This classroom accommodates 12 or less students and is adjacent to the grade 9-12 classrooms
Small Group Room/ Reading	500	School Psychology Group / Testing Room	P	500	This classroom accommodates 12 or less students and is distributed throughout academic neighborhoods in the building.
Self-Contained Sped	950	9-12 Learning Center	Q	850	This classroom accommodates 12 or less students and is adjacent to the grade 9-12 classrooms
Small Group Room/ Reading	500	School Psychology Group / Testing Room	R	500	This room is located near special education and general classrooms on level 02
Self-Contained Sped	950	Grade 7 Learning Center	S	850	This classroom accommodates 15 or less students and is adjacent to the grade 7 academic teams
*Unique to District		Social Worker	T	150	This office is located on level 02 adjacent to the grades 7-8 academic teams
Self-Contained Sped	950	Grade 7 Learning Center	U	850	This classroom accommodates 15 or less students and is adjacent to the grade 7 academic teams
Resource Room	500	Resource / Learning Center	V	500	This resource room is located adjacent to the grade 7 academic teams
*Unique to District		OT / PT	W	850	This occupational and physical therapy room is located on level 02 near the small gym primarily used by grades 7-8.
*Unique to District		Speech / Language	X	150	This office is located on level 02 adjacent to the grade 7 academic teams
Resource Room	500	Resource / Learning Center	Y	500	This resource room is located adjacent to the grade 7 academic teams
*Unique to District		Special Education Conference Room	Z	200	This conference room is located adjacent to the grade 7 academic teams for group meetings of 12-16 people.
Self-Contained Sped	950	Key Classroom Autism	AA	850	This classroom accommodates 8 students on average and is adjacent to the grade 7 academic teams
Floor 03					

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E. SPECIAL EDUCATION ADJACENCY TABLE

Self-Contained Sped	950	9-12 Learning Center	BB	850	This classroom accommodates 12 or less students and is adjacent to the grade 9-12 classrooms
Small Group Room/ Reading	500	School Psychology Group / Testing Room	CC	500	This room is located near special education and general classrooms on level 03
Self-Contained Sped	950	9-12 Learning Center	DD	850	This classroom accommodates 12 or less students and is adjacent to the grade 9-12 classrooms
Small Group Room/ Reading	500	School Psychology Group / Testing Room	EE	500	This room is located near special education and general classrooms on level 03
Self-Contained Sped	950	Grade 8 Learning Center	FF	850	This classroom accommodates 15 or less students and is adjacent to the grade 8 academic teams
*Unique to District		Psychologist	GG	150	This room is located near special education and general classrooms on level 03
Self-Contained Sped	950	Grade 8 Learning Center	HH	850	This classroom accommodates 15 or less students and is adjacent to the grade 8 academic teams
Resource Room	500	Resource / Learning Center	II	500	This resource room is located adjacent to the grade 8 academic teams
*Unique to District		7-8 Campus Learning Center	JJ	500	This classroom is located adjacent to the grades 7-8 academic teams on level 03, and will accommodate 3-8 students per section
*Unique to District		7-8 Campus Learning Center	KK	500	This classroom is located adjacent to the grades 7-8 academic teams on level 03, and will accommodate 3-8 students per section
Resource Room	500	Resource / Learning Center	LL	500	This resource room is located adjacent to the grade 8 academic teams
Self-Contained Sped	950	Key Classroom Social Emotional	MM	850	This classroom accommodates 8 students on average and is adjacent to the grade 8 academic teams
Floor 04					
Self-Contained Sped	950	9-12 Learning Center	NN	850	This classroom accommodates 12 or less students and is adjacent to the grade 9-12 classrooms
Small Group Room/ Reading	500	School Psychology Group / Testing Room	OO	500	This room is located near special education and general classrooms on level 04
Self-Contained Sped	950	9-12 Learning Center	PP	850	This classroom accommodates 12 or less students and is adjacent to the grade 9-12 classrooms
*Unique to District		9-12 Campus Learning Center	QQ	850	This classroom is located adjacent to the grades 9-12 classrooms on level 04, and will accommodate 3-8 students per section
*Unique to District		9-12 Campus Learning Center	RR	850	This classroom is located adjacent to the grades 9-12 classrooms on level 04, and will accommodate 3-8 students per section
*Unique to District		9-12 Campus Learning Center	SS	850	This classroom is located adjacent to the grades 9-12 classrooms on level 04, and will accommodate 3-8 students per section
			Total	24,310	
Square Footage Summary: The proposed overall gross square footage of the new building is 445,100; Average square feet of General Classrooms is 850 SF MSBA guidelines include 22,150 net square feet of dedicated special education space. The proposed program is 2,160 nsf more than the guidelines. *Indicates that space is unique to District's program and does not appear in MSBA space guidelines.					

4.1.2 SCHEMATIC DESIGN BINDER

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4.1.2 SCHEMATIC DESIGN BINDER

A. INTRODUCTION / Preferred solution summary

The goal of the Schematic Design phase was to work with the Massachusetts School Building Authority, Belmont High School Building Committee, The Town of Belmont, Daedalus, Skanska and Perkins + Will to ensure that the development of the Schematic Design reflects the most cost effective, efficiently designed and educationally appropriate solution reflecting the educational vision of the Belmont Community. It was critical to maintain or reduce the gross square footage submitted at the PSR stage, ensure that we do not exceed a 1.5 Net to Gross Ratio, and maintain the cost of the project while meeting its goals.

SITE PLAN ORGANIZATION

The Schematic Design solution consists of a renovated gymnasium and athletics wing and a major addition of new construction on the existing Belmont High School site. The site organization envisions an east-west pedestrian promenade that wraps the existing Clay Pit Pond and functions to connect the civic campus entry on Concord Avenue and athletic functions deeper into the site. This pedestrian and bicycle path unites the site by organizing access to the school's separate upper and lower entries while providing emergency access to the south side of the school. The Belmont Building Committee determined that there should be exterior common space for gathering, outdoor classrooms, art, community gatherings along the pond edge and that vehicular parking and drop off access would be organized along the MBTA commuter rail tracks that border the site's northern edge. The educational heart of the facility would be highlighted through an exterior commons that makes a strong connection to the pond and pedestrian spine.

It was determined that the new construction would allow for the 9-12 grades to be accommodated in the first phase of new construction prior to demolition of the existing facility minimizing interruption and the cost of temporary facilities. This was requested by the Belmont committee; the 7-8 grades would then be constructed to create a fully integrated school in a continuous construction sequence.

The pedestrian promenade begins at Concord Avenue, where it coincides with the entry point for the high school drop off, and transitions to a plaza that becomes the west entrance of the school and the parent/bus drop off. This axis continues internal to the building connecting the spaces that serve the broader community including the auditorium, dining commons, black-box theater and athletics spaces.

The exterior promenade provides accessible access to all functions along its full length, negotiating the drop in topography that defines the pond edge by using 1:20 ramps that won't require handrails or landings. This solution considers the projected flood stage of the pond projected out 50 years.

The building footprint has been developed to work with the site and solar orientation. The academic wings are oriented east-west in a pair of "Y" shaped configurations that overlap at the center of the site. This orientation reduces the perceived mass of the building as seen from Concord Ave. and allow the building to take advantage of the controllable south light for the classroom spaces.

The classroom and grade grouping at Belmont High School allows the building to transition from four stories on the Concord Ave. side which faces the residential neighborhood and has a substantial setback to three stories on the eastern practice field side, so that upon entering the 7-8 grade entry the building has an appropriate scale.

Parking and Access

School bus and car access is provided by a loop road that encircles the site from Concord Avenue to Hittinger Street providing sufficient length for queuing. This peripheral ring road is also the access road for the loading dock, located on the northwest side of the school. A fire road providing a means for security personnel to access the grounds from the south and doubles as a pedestrian and bicycle promenade.

The primary parking areas are organized along the loop road where green storm water collection can occur as part of the field edge and drop-off loops. Accessible parking is provided directly adjacent to each major entry along the drop-off areas.

Athletic Fields

The existing stadium is a major element of the site, has been invested in recently and remains outside the scope of the project, pedestrian access to it has been carefully considered to minimize conflicts with traffic. A new practice field sits between the stadium and the existing gymnasium providing convenient access from physical education spaces. The remainder of the Athletic fields are organized in a large, flexible east-west green that overlooks the Clay Pit Pond.

CONSTRUCTION IMPACT

The construction schedule for the new Belmont High School is

A. INTRODUCTION / Preferred solution summary

anticipated to be a multi-phased endeavor, it anticipated minimal displacement of students and staff. The existing high school can remain operational until the completion of the first phase of the new school building; Strategies have been discussed to keep the students safe and isolated from construction activities which though apart will be in close proximity.

FLOOR PLANS

The Design Team recognized through meetings with Belmont's involved constituent's, visioning and working sessions that the school should serve as an interdisciplinary center with easy access to the shared larger common spaces and the academic clusters, this influenced the organization of the school into a clear set of priorities that focused on the thoughtful integration and careful separation of the school's 7-12 grade configuration. The proposed project is organized around an east-west axis that serves as the school's civic main street. The academic communities form the edges of this street in a series of sensitively scaled multi-story common spaces around which the large school is unified.

The school has two main entrances; one from the west side addressing the civic image of the school from Concord Avenue intended primarily for grades 9-12. A second entry addresses the 7-8th grade drop-off on the east end of the building. Between these two entries, internal to the building is the central dining commons which is positioned to allow it to serve as a pre function space for both theater and athletic events. Adjacent to each of these main entries are the administrative offices for each grade grouping. Locating the administrative offices in these locations next to the vestibules creates a level of security for the facility by controlling entry and visitors. The multi-story dinning commons affording views to the pond beyond and is flanked by staircases for access to the upper levels. An outdoor dining space and stepped plaza is located directly outside the dining commons serving both the school and the community during warmer weather.

A separate entry on the east end of the building provides community access to athletic spaces and allows the school to be efficiently compartmentalized during extended hours of use. Located along the civic street at the ground level is the main auditorium, black box theater, music classrooms as well as the art classrooms (which have direct access to the outdoor plaza). The renovated gymnasium, as well as locker rooms and supporting athletic spaces.

The academic street on the upper level parallels the pedestrian street described earlier and organizes the library /media spaces as well as the school's engineering, physics and maker spaces. Each wing of the school has direct adjacency to the media and maker spaces for both convenience and academic synergy. The classroom configuration changes from the east side of the building to the west allowing the 7-8th grades to be team focused. All wings have access to break-out spaces that serve project based learning in small groups. Modularity and flexibility is a major driver influencing seismic bracing locations, office sizes and teacher planning locations.

The plan is designed to be highly flexible in that the academic clusters could support multiple styles of learning and grade configurations.

4.1.2 SCHEMATIC DESIGN BINDER

A. INTRODUCTION / Community Process Overview

The Town of Belmont through the Belmont High School Building Committee has focused on public relations and getting word out to the community as the project has moved through the design process. The SBC has facilitated and attended several public meetings to keep the community informed of the design progress and key decisions being made.

The High School building and site design incorporates comments, considerations and concerns identified by the School Building Committee, MSBA, School Committee, Board of Selectmen, Regulatory (Police, Fire, Building Departments), Belmont Planning Department, Conservation Commission, Recreation Commission, School Department Directors, Teachers, Staff and the general public.

The following is a list of meeting at which the new High School project was discussed:

02/27/18	Belmont Office of Community Development
02/27/18	High School Steering Group
03/06/18	Pre MSBA Facilities Assessment Committee (conference call)
03/06/18	Belmont High School Building Committee #40
03/08/18	Traffic Advisory Committee
03/13/18	High School Steering Group
03/20/18	Belmont HS & MS Directors meeting #1
03/20/18	High School Steering Group
03/21/18	MSBA Facilities Assessment Committee #1
03/21/17	Belmont Grade 7-12 Teachers Steering Group #1
03/22/18	Belmont High School Building Committee #41
03/27/18	Constriction Manager at Risk Selection Committee #1
03/27/18	High School Security Meeting #1
03/28/18	Belmont High School Building Committee #42
03/28/17	Belmont Grade 7-12 Teachers Steering Group #2
04/03/18	Belmont Emergency Management meeting
04/04/17	Belmont Grade 7-12 Teachers Steering Group #3
04/10/18	Goden Street Traffic Meeting
04/11/18	Constriction Manager at Risk Selection Committee #2
04/11/18	Belmont High School Building Committee #43
04/10/18	Hittenger Street Traffic Meeting
04/12/18	Traffic Advisory Committee
04/17/18	High School Steering Group

A. INTRODUCTION / Community Process Overview

04/17/18	Belmont Planning Department
04/23/18	Building Systems & Operations Sub Committee
04/24/18	Belmont HS & MS Directors meeting #2
04/24/18	High School Steering Group
04/24/18	Belmont Planning Board Meeting #1
04/25/17	Belmont Grade 7-12 Teachers Steering Group #4
04/25/18	Belmont Warrant Committee
04/26/18	Belmont High School Building Committee #44
04/30/18	Constriction Manager at Risk Selection Committee #3
05/01/18	High School Steering Group
05/01/18	Belmont Office of Community Development
05/07/18	Constriction Manager at Risk Selection Committee #4
05/08/18R	egulatory Meeting
05/08/18	High School Security Meeting #2
05/08/18	High School Steering Group
05/08/18	Belmont High School Building Committee #45
	(Joint meeting with School Committee & Board of Selectmen)
05/09/18	MSBA Facilities Assessment Committee #2
05/10/18	Traffic Advisory Committee
05/15/18	Belmont Disabled Access Commission
05/15/18	High School Steering Group
05/15/18	Belmont Conservation Commission
05/15/18	Belmont Recreation Commission
05/16/18	Belmont High School Building Committee #46
05/22/18	High School Steering Group
05/22/18	Brendan Grant Foundation
05/24/18	Belmont High School Building Committee #47
05/29/18	High School Steering Group
05/29/18	Belmont Planning Department
05/29/18	Belmont Historical Commission

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4.1.2 SCHEMATIC DESIGN BINDER

A. INTRODUCTION / Community Process Overview

05/30/17	Belmont Grade 7-12 Teachers Steering Group #5
06/04/17	Belmont Town Meeting
06/05/18	High School Steering Group
06/05/18	Belmont Planning Board Meeting #2
06/07/18	Belmont High School Building Committee #48
06/12/18	High School Steering Group
06/18/18	Belmont Board of Selectmen
06/19/18	High School Steering Group
06/19/18	Belmont High School Building Committee #49 (Joint meeting with School Committee & Board of Selectmen)
06/26/18	High School Steering Group
06/27/18	MSBA Board of Directors
06/28/18	Belmont High School Building Committee #50 (Joint meeting with School Committee & Board of Selectmen)

Public meetings are listed in bold font. Meeting Minutes can be found in session S. Local Actions and Approvals. In addition to these meetings the School Building Committee established a Communications Sub Committee to share project information with the community through a building project website (www.belmont-ma.gov/belmont-high-school-building-project), online surveys, distribution of flyers, public outreach and attending community events.

A. INTRODUCTION / District's Total Project Budget

The Town of Belmont's total project budget is Two Hundred and Ninety-Five Million Dollars, One Hundred Fifty Nine Thousand One Hundred Eighty Nine Dollars (\$295,159,189). Please refer to MSBA Form 3011 in 2.1.4 O for details of the total project budget.

STEPS TO SECURE LOCAL FUNDING

The Town of Belmont intends to issue General Obligation Bonds to fund the Town's share of the total project cost for the new school. The process for authorization to fund the project is as follows:

- 1.Approval of the Schematic Design and Project Budget by the Board of Selectmen, School Committee and School, Building Committee at a joint meeting on June 28th, 2018.
- 2.Obtain Project Scope and Budget Agreement at the MSBA Board meeting on August 29th, 2018
- 3.Approval of the project including the borrowing authorization through a debt exclusion ballot vote on November 6th, 2018. The ballot requires a simple majority vote for approval.

4.1.2 SCHEMATIC DESIGN BINDER

A. INTRODUCTION / Project Description

Grade / Size of site / GSF

The Belmont High School will serve **grades 7-12** with a **population of 2215 students**. The existing High School site was constructed on the present **33 acre site** and opened in 1970 with a field house and ice rink as a stand-alone building.

The gross square feet of the design is 445,100 sf. The net to gross was maintained at a 1.5 ratio within the MSBA allowable standards. The Town of Belmont's **total project budget** is Two Hundred and Ninety-Five Million Dollars, One Hundred Fifty Nine Thousand One Hundred Eighty Nine Dollars (\$295,159,189).

The building mass is placed away from the existing rail bed with most of the academic teaching spaces overlooking the pond with optimal orientation for day lighting. It proposes two separate entries and exit points to the site helping to disperse traffic congestion during the drop-off and pick-up periods. It also provides separate building entry points allowing for a sensitivity to scale for lower and upper grades and security.

The design creates an elongated building footprint (in the East-West direction) that organizes the program around a daylight multi-story internal 'street'. In the first phase, a substantial new addition would be constructed at the southwest side of the existing high school building that stretches along the Clay Pit Pond edge. The addition would include the entirety of the upper school configuration including the media commons and cafeteria. The upper school students would occupy this new addition and a second phase of construction would take place to demolish the existing high school building. A portion of the existing building structure including caissons, foundations, concrete floor and roof slabs would be demolished in a phased manner allowing for the lower school spaces, including a new entry, administration and wellness space to be constructed east of the existing fieldhouse. The fieldhouse, pool, and associated athletic spaces would be renovated including the existing small gymnasium. Upon completion all school classrooms and science labs could be integrated on opposite sides of each floor allowing lab spaces to be centrally located. Common amenity spaces would be organized at the base of the pond's edge to allow for a public expression of spaces that are highly used by the larger community.

Construction delivery methodology

At the School Building Committee on March 6th, 2018 Daedalus Projects lead a discussion on the CM at Risk (Ch. 149A) and Design-Bid-Build (Ch. 149) methods of construction procurement.

The presentation included an overview and history of both options including distinct differences between the two. Examples of where each method has been utilized on other school building projects were discussed as well as the OPM's and Designers experience with each method.

Daedalus Projects also presented the advantages and disadvantages of each option specific to the Belmont High School Project. Following thorough SBC discussion, the SBC voted to proceed immediately with the CM at Risk method of procurement.

Following the SBC vote a CM-R Selection Committee was established. The following is a summary of the CM selection process:

- An application was submitted to the Office of the Inspector General and permission was obtained to use the CMR procurement method
- Request for Qualifications were issued to interested firms following public advertisement
- CM-R qualifications were received and evaluated by the CM-R Selection Committee
- Request for Proposals were issued to 3 prequalified CM-R firms
- CMR interviews were held and proposals were evaluated by the CM-R Selection Committee
- CM-R Selection Committee ranked the CM-R firms and made a recommendation to SBC

At the May 8th School Building Committee meeting the Committee voted to approve the recommendation of the CM-R Selection Committee. The Town is now moving ahead with Skanska Building USA as the CM at Risk for the new Belmont High School project.

The construction cost estimates, proposed project schedule, estimated reimbursement rate and Total Project Budget spreadsheet reflect the CM at Risk procurement method.

At this stage there are no alternatives for the design.



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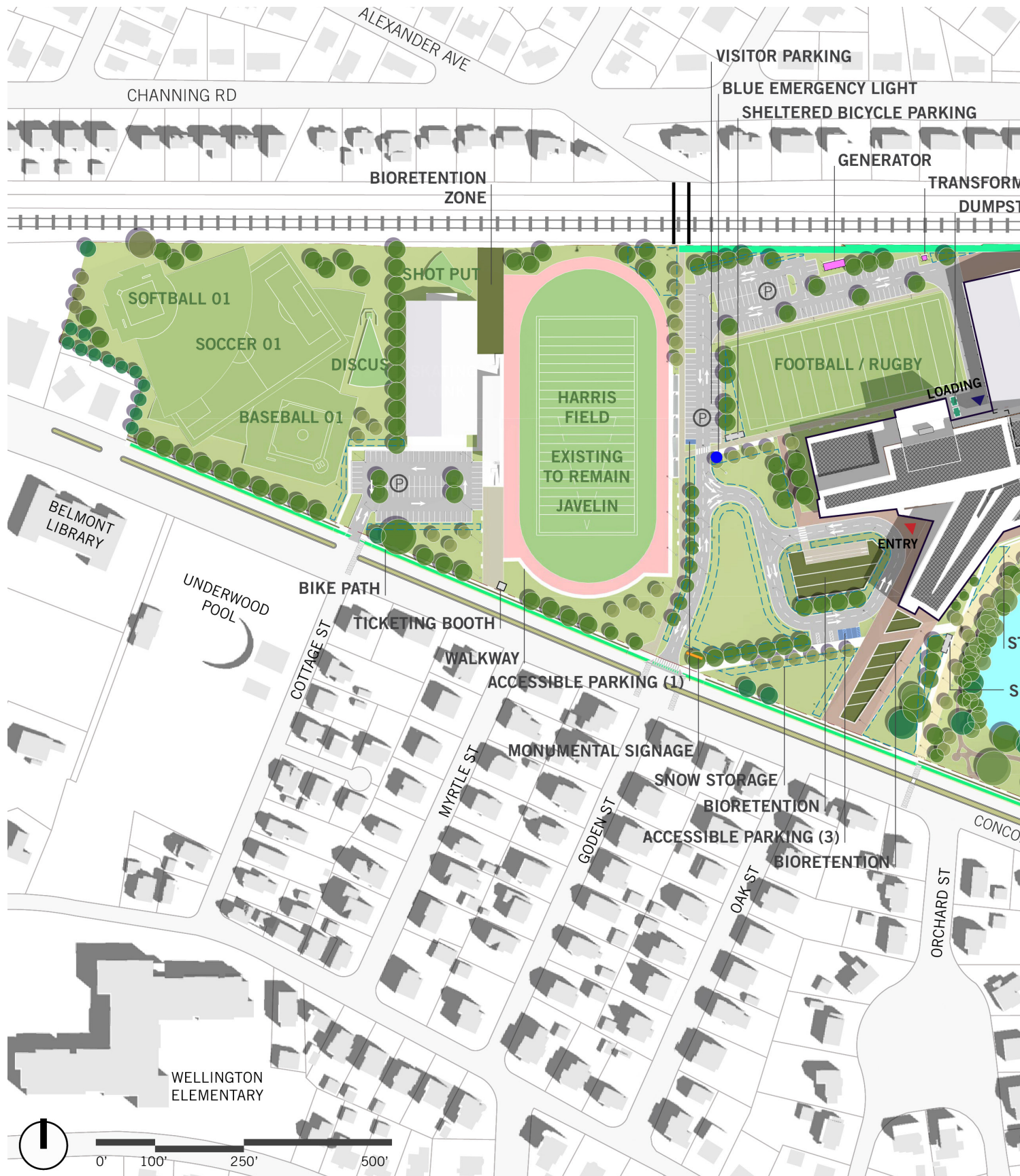
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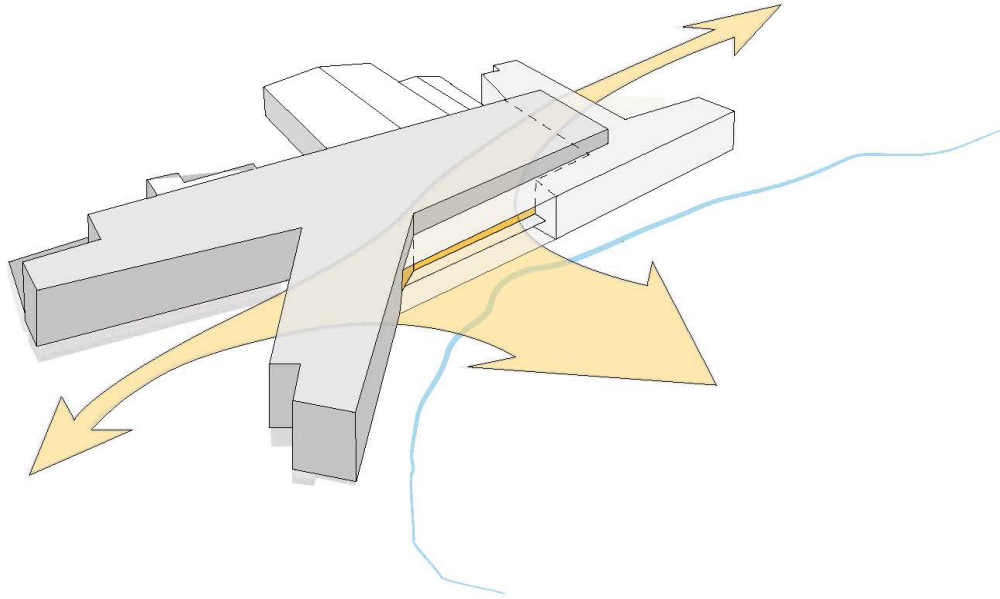
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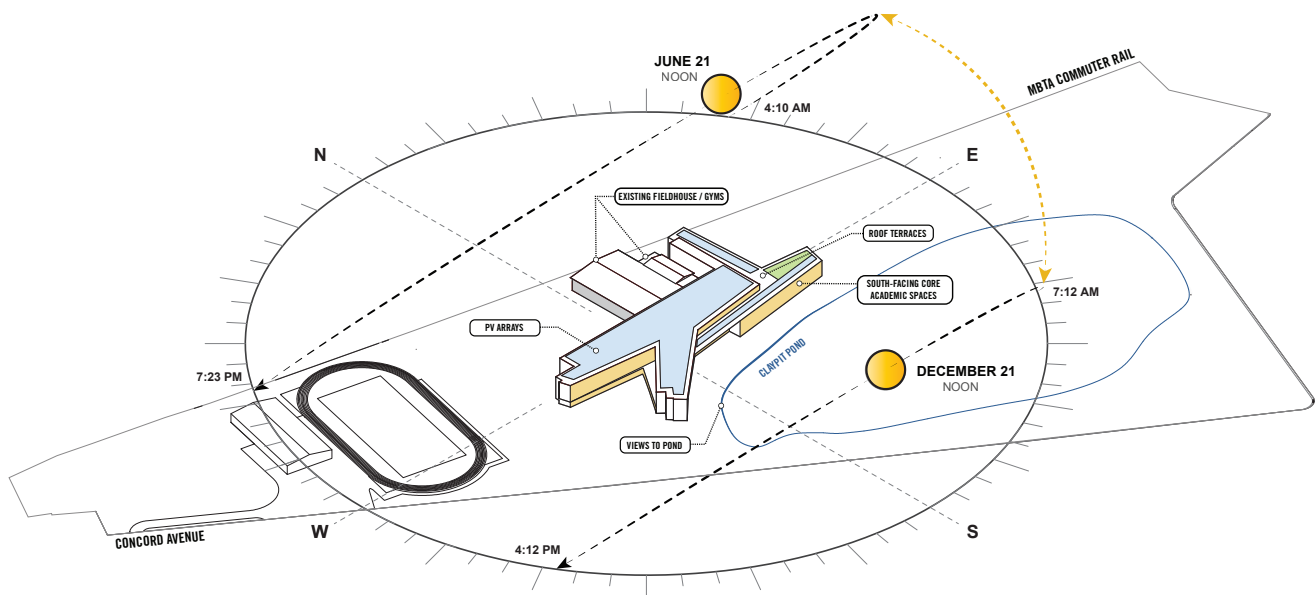
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PARTI DIAGRAM



SUN ORIENTATION

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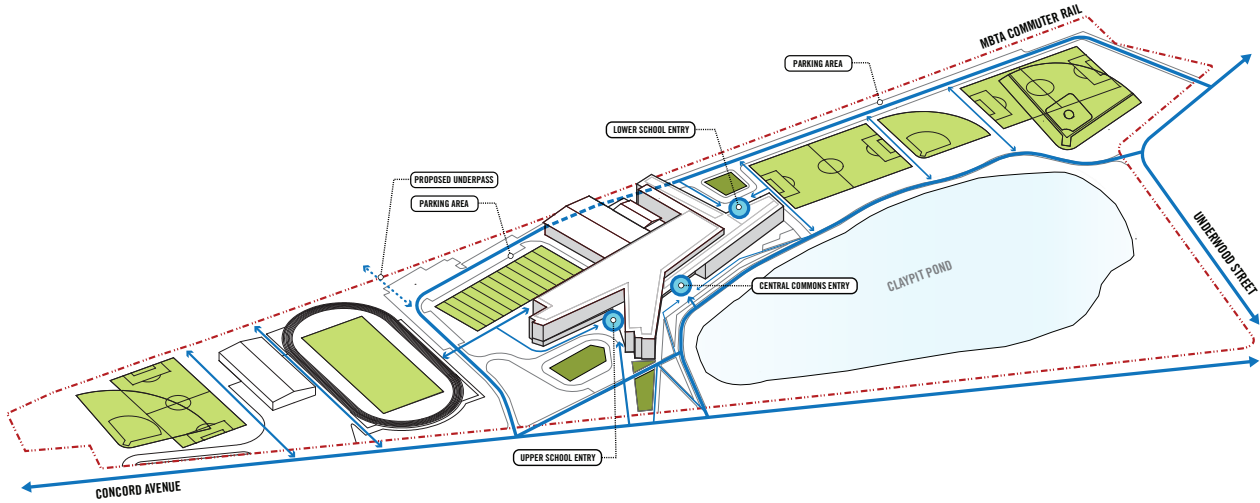


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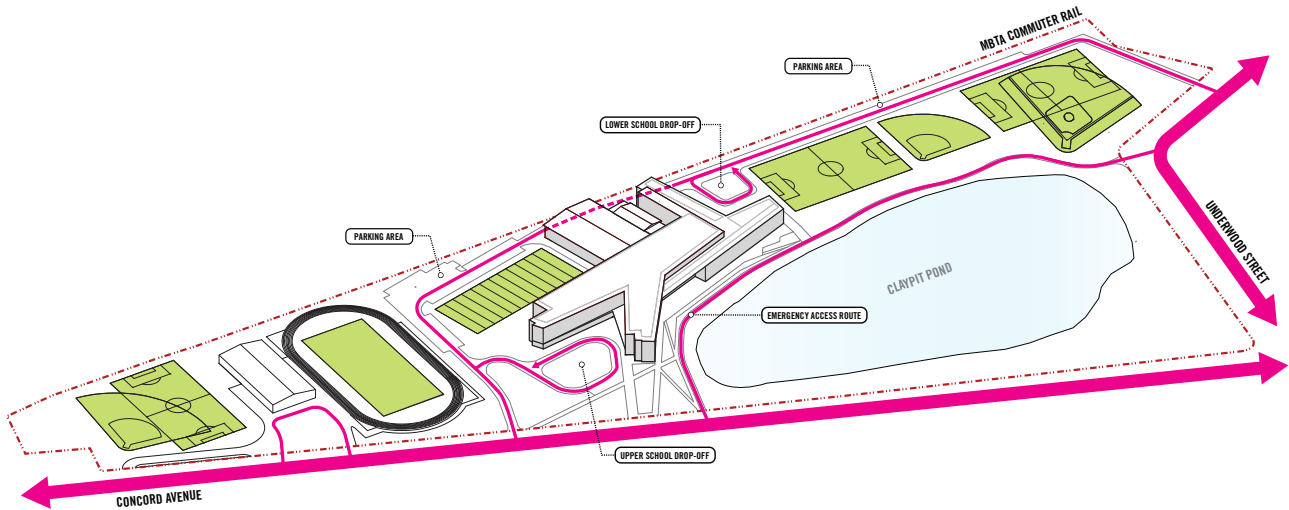
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PEDESTRIAN / BIKE SITE CIRCULATION



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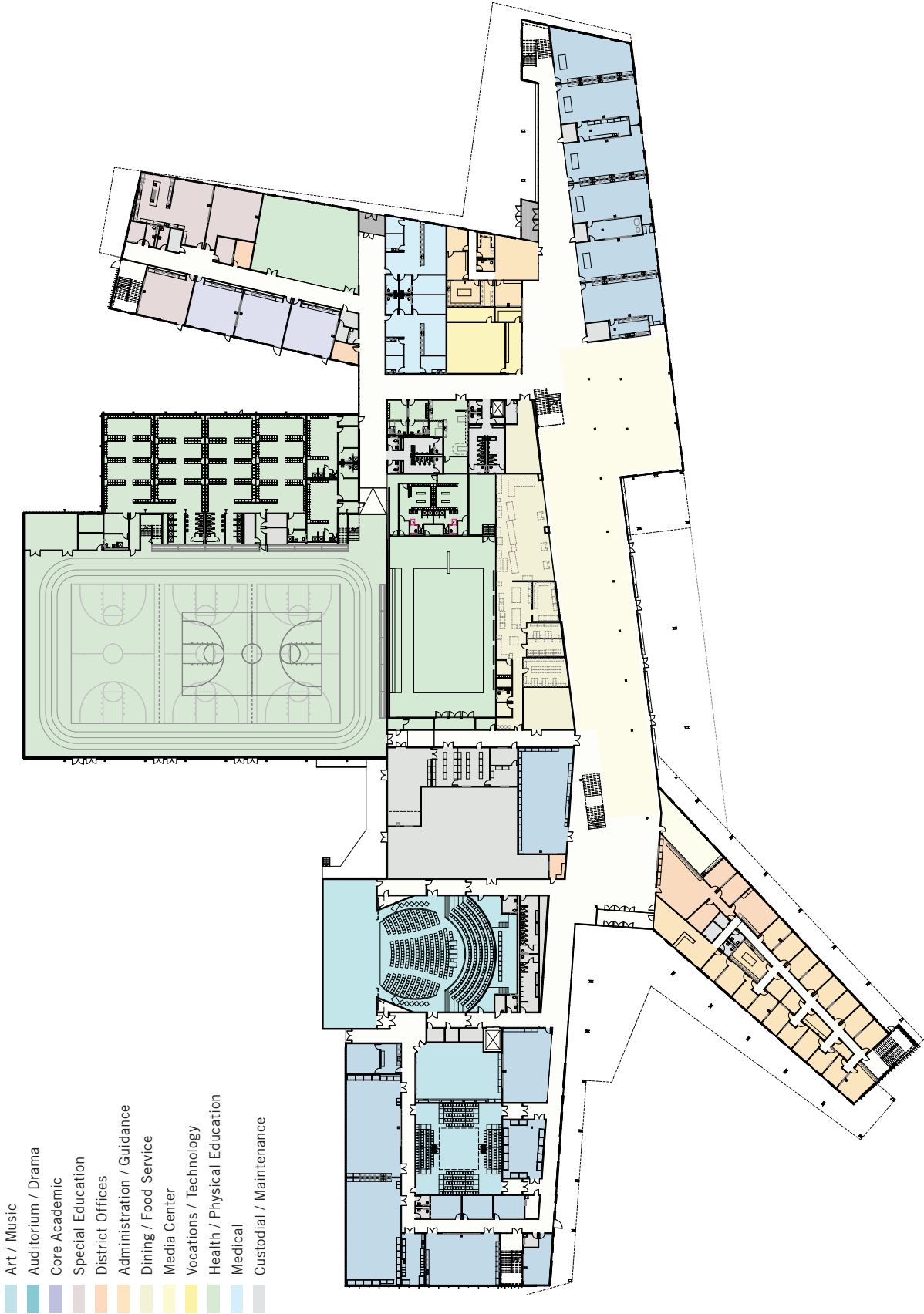
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VEHICLE / BUS SITE CIRCULATION

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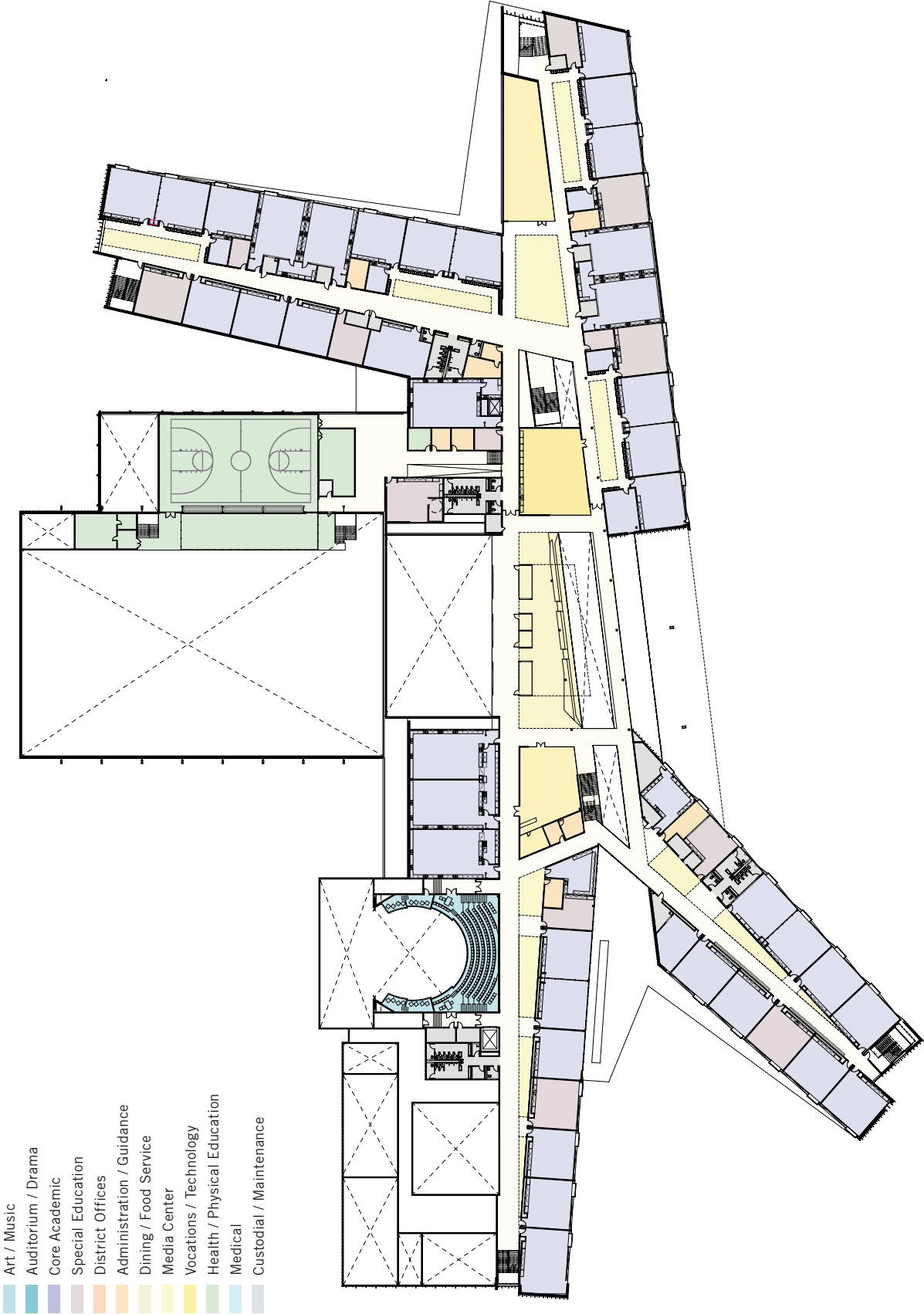
A. INTRODUCTION / Visual Aids

LEVEL 01 FLOOR PLAN



A. INTRODUCTION / Visual Aids

LEVEL 02 FLOOR PLAN



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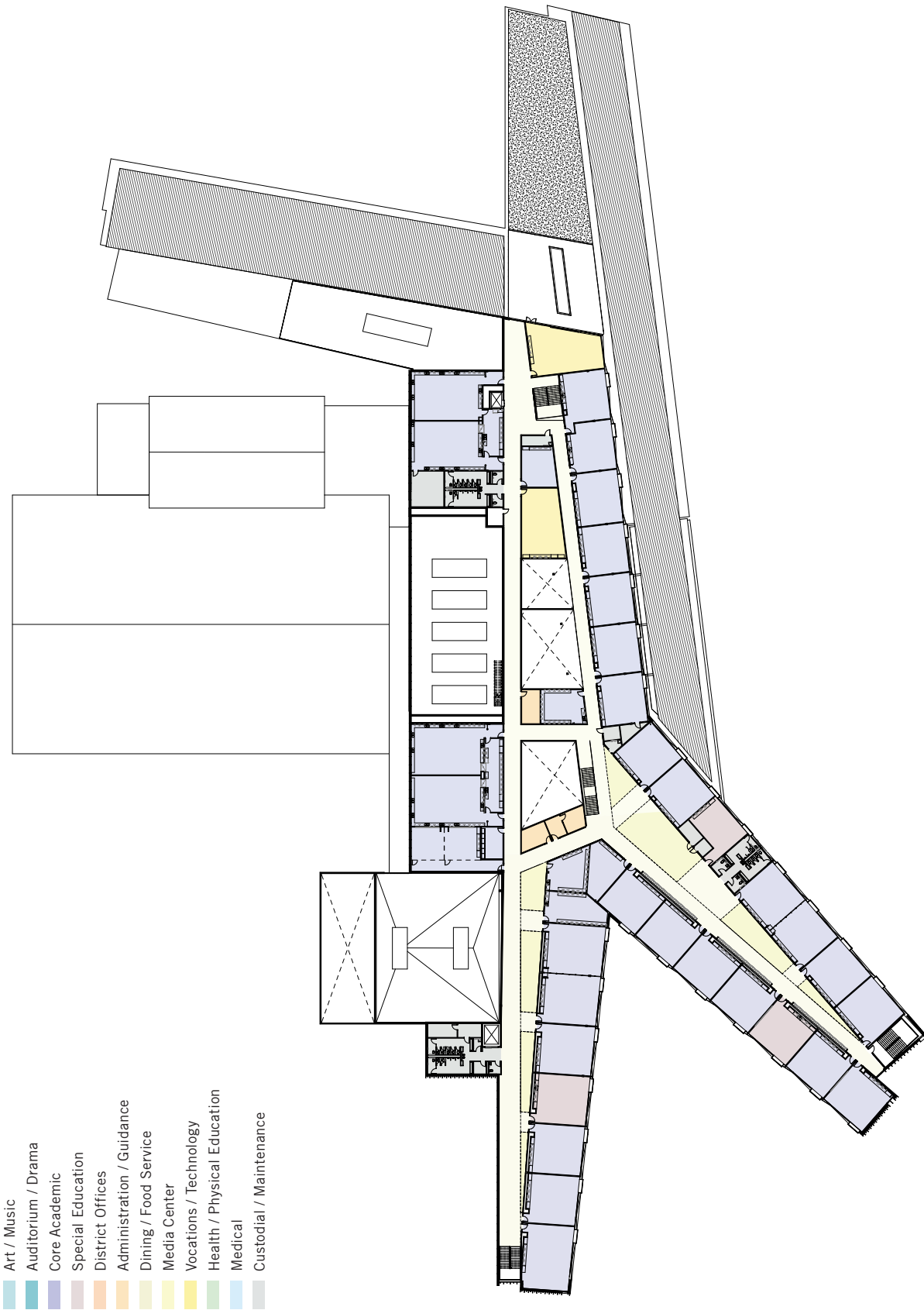
A. INTRODUCTION / Visual Aids

LEVEL 03 FLOOR PLAN



A. INTRODUCTION / Visual Aids

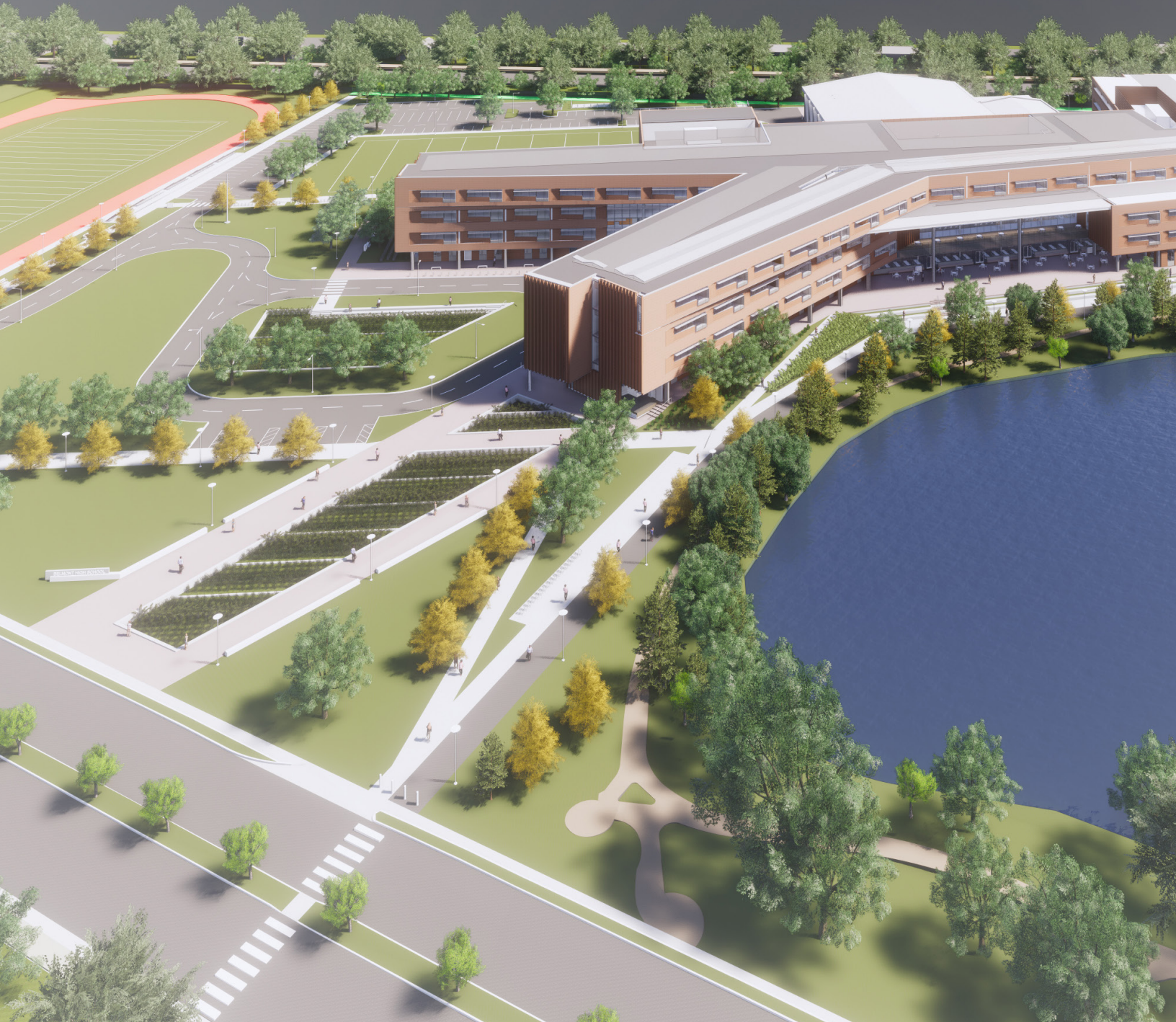
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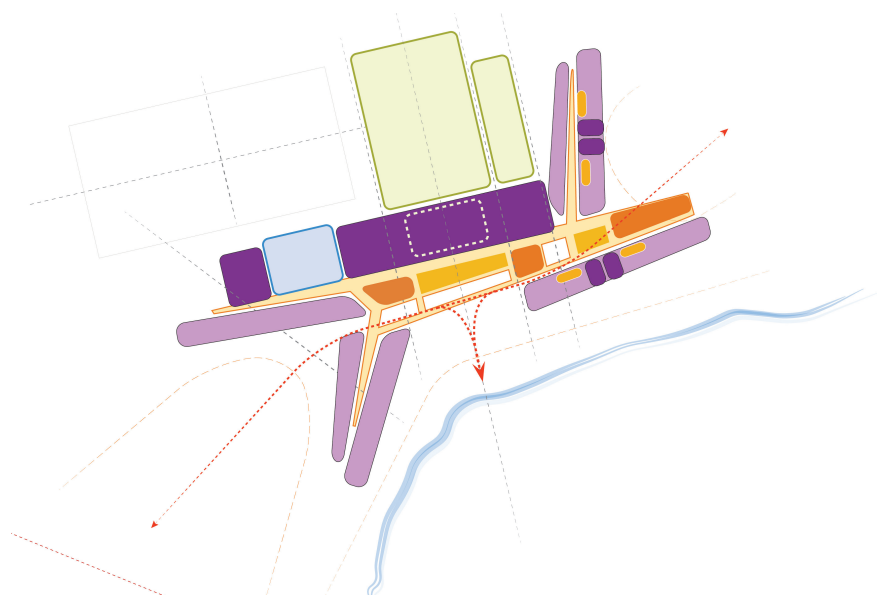
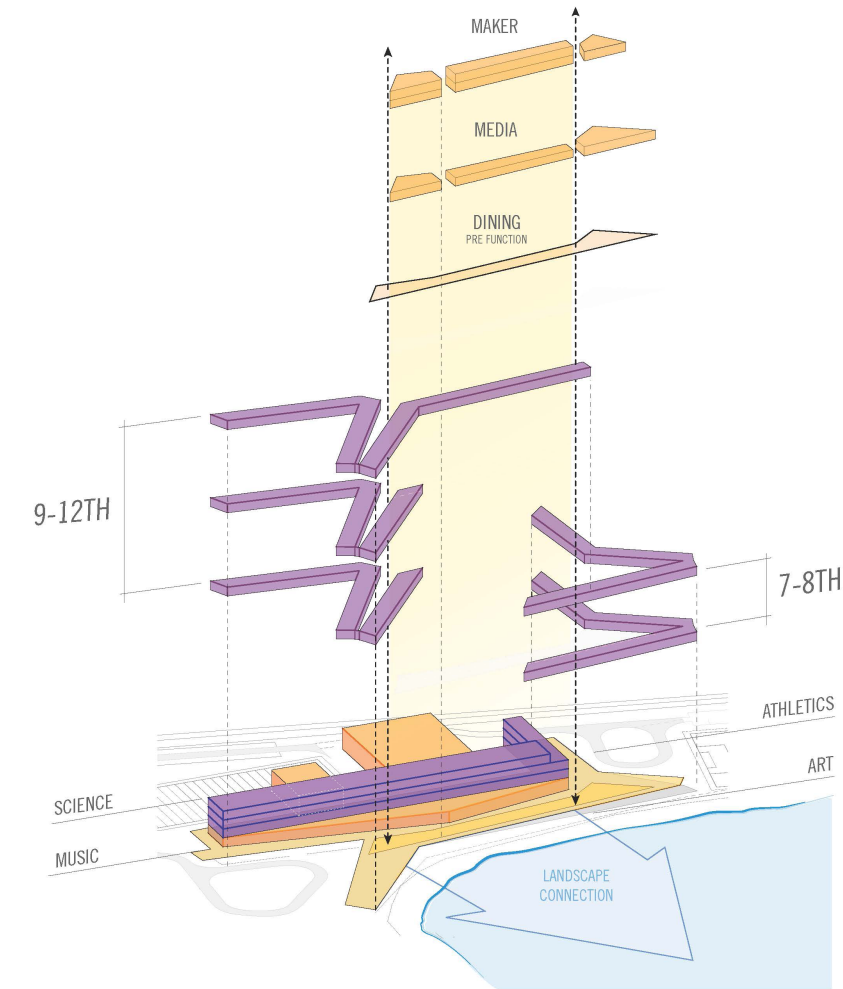
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VIEW OF SITE ENTRY FROM CONCORD AVENUE

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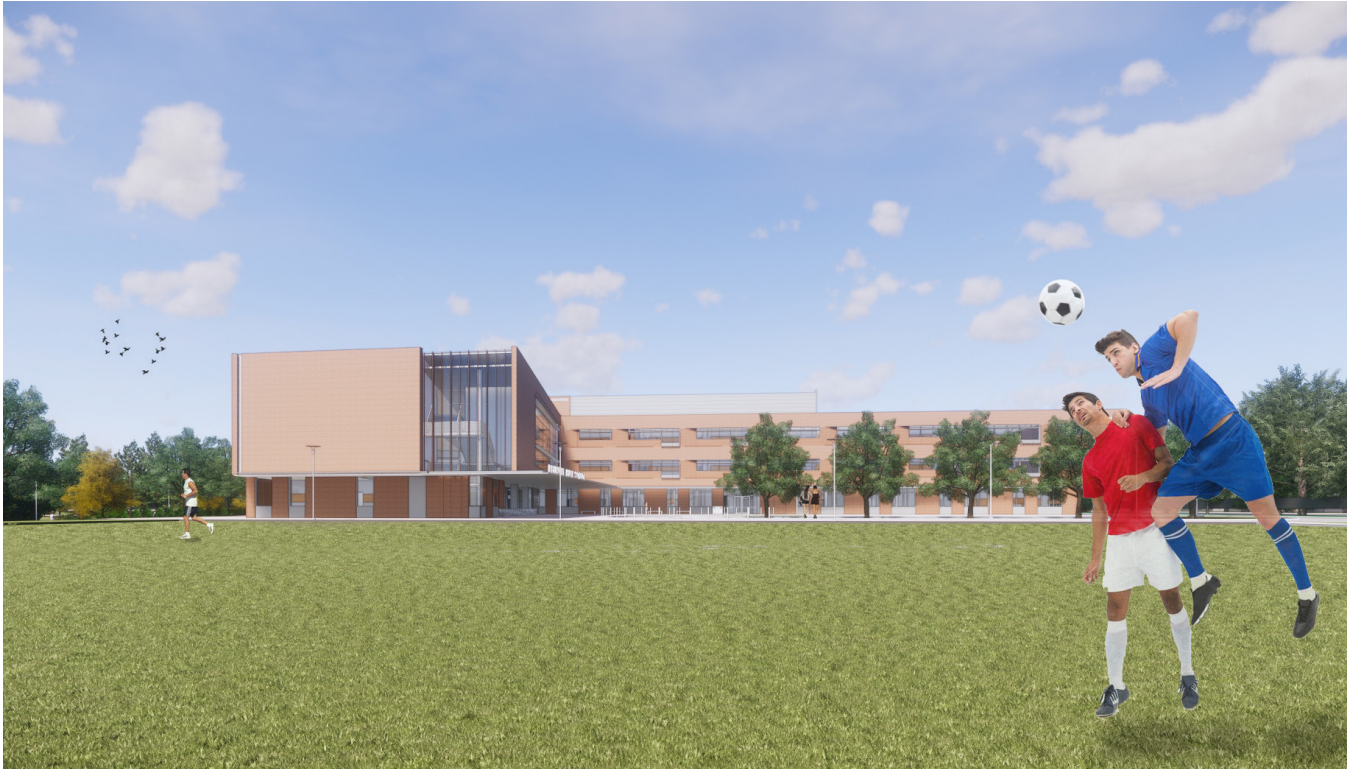


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VIEW OF LOWER SCHOOL ENTRANCE / DROP-OFF



VIEW OF NORTH ELEVATION (FROM WEST)

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AERIAL OF SITE FROM SOUTHWEST



AERIAL OF SITE FROM NORTH

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VIEW OF EXISTING POOL FROM MEDIA CENTER CORRIDOR (LEVEL 02)



VIEW OF LOWER SCHOOL MEDIA CENTER / NEIGHBORHOODS (LEVEL 02)

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VIEW OF UPPER SCHOOL ACADEMIC CORRIDOR (LEVEL 03)



VIEW OF LOWER SCHOOL LOBBY / ATHLETIC CORRIDOR (LEVEL 01)

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VIEW OF SITE ENTRY FROM CONCORD AVENUE



VIEW OF UPPER SCHOOL ENTRANCE / DROP-OFF



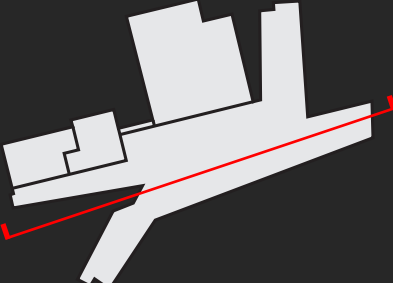
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SECTION THROUGH EAST-WEST AXIS OF BUILDING



A. INTRODUCTION / Visual Aids



VIEW OF UPPER SCHOOL LOBBY (LEVEL 01)



VIEW OF DINING COMMONS (LEVEL 01)

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VIEW OF DINING COMMONS & MEDIA CENTER (LEVEL 02)



AXON OF CENTRAL COMMON SPACES

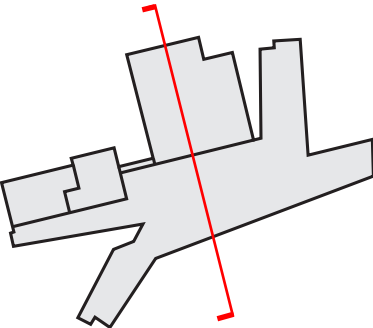
A. INTRODUCTION / Visual Aids



SECTION THROUGH CENTRAL COMMONS / MEDIA CENTER

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OUTDOOR TERRACE



CLASSROOM



MAKER SPACE



MEDIA CENTER



PHOTOVOLTAIC
ARRAY



EXISTING ATHLETIC
SPACES



SECTION THROUGH CENTRAL COMMONS / OUTDOOR TERRACE / ATHLETIC SPACES

A. INTRODUCTION / Visual Aids



VIEW OF PEDESTRIAN WALKWAY ALONG POND TOWARD OUTDOOR TERRACES



VIEW OF OUTDOOR TERRACE (LEVEL 02)

4.1.2 SCHEMATIC DESIGN BINDER

A. INTRODUCTION / MSBA PSR Report Response Part A



Daedalus Projects, Incorporated

1 Concord Hall Marketplace, South Market Building
Suite 4195, Boston, MA 02109-0117
t: 617-451-2717 | www.daedalusprojects.com

June 22nd, 2018

Ms. Jess Deleconio
Massachusetts Schools Building Authority
40 Broad Street
Boston, MA 02109

RE: Belmont High School, Belmont, MA – Preferred Schematic Report Revision 2

Dear Ms. Deleconio:

Thank you for your review and comments on the Preferred Schematic Report (Revision 2) received on June 8th. We hereby certify that we have reviewed and coordinated the materials contained in this response, and that the response is complete.

Please do not hesitate to contact me if you have any questions or need any further information.

Yours Sincerely

A handwritten signature in black ink, appearing to read 'Shane Nolan', with a long horizontal line extending to the right.

Shane Nolan
Senior Project Manager

cc: John Phelan, Superintendent of Schools, Belmont
Bill Lovallo, Chair, Belmont School Building Committee
Brooke Trivas, Perkins and Will Architects

A. INTRODUCTION / MSBA PSR Report Response Part A

ATTACHMENT A MODULE 3 – PREFERRED SCHEMATIC REPORT REVIEW COMMENTS

District: *Town of Belmont*
School: *Belmont High School*
Owner's Project Manager: *Daedalus Projects, Inc.*
Designer Firm: *Perkins+Will*
Submittal Due Date: *May 9, 2018*
Submittal Received Date: *May 9, 2018*
Review Date: *May 9-June 5, 2018*
Reviewed by: *A. Waldron, K. Brown, J. Jumpe*

MSBA REVIEW COMMENTS

The following comments¹ on the Preferred Schematic Report (“PSR”) submittal are issued pursuant to a review of the project submittal document for the proposed project presented as a part of the Feasibility Study submission in accordance with the MSBA Module 3 Guidelines.

3.3 PREFERRED SCHEMATIC REPORT

Overview of Preferred Schematic Submittal	Complete	Provided; <i>Refer to comments following each section</i>	Not Provided; <i>Refer to comments following each section</i>	Receipt of District's Response; <i>To be filled out by MSBA Staff</i>
OPM Certification of Completeness and Conformity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Table of Contents	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3.1 Introduction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3.2 Evaluation of Existing Conditions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3.3 Final Evaluation of Alternatives	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3.4 Preferred Solution	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3.5 Local Actions and Approval Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

¹ The written comments provided by the MSBA are solely for purposes of determining whether the submittal documents, analysis process, proposed planning concept and any other design documents submitted for MSBA review appear consistent with the MSBA's guidelines and requirements, and are not for the purpose of determining whether the proposed design and its process may meet any legal requirements imposed by federal, state or local law, including, but not limited to, zoning ordinances and by-laws, environmental regulations, building codes, sanitary codes, safety codes and public procurement laws or for the purpose of determining whether the proposed design and process meet any applicable professional standard of care or any other standard of care. Project designers are obligated to implement detailed planning and technical review procedures to effect coordination of design criteria, buildability, and technical adequacy of project concepts. Each city, town and regional school district shall be solely responsible for ensuring that its project development concepts comply with all applicable provisions of federal, state, and local law. The MSBA recommends that each city, town and regional school district have its legal counsel review its development process and subsequent bid documents to ensure that it is in compliance with all provisions of federal, state and local law, prior to bidding. The MSBA shall not be responsible for any legal fees or costs of any kind that may be incurred by a city, town or regional school district in relation to MSBA requirements or the preparation and review of the project's planning process or plans and specifications.

4.1.2 SCHEMATIC DESIGN BINDER

A. INTRODUCTION / MSBA PSR Report Response Part A

3.3.1 INTRODUCTION

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response; To be filled out by MSBA Staff
1	Overview of the process undertaken since submittal of the Preliminary Design Program that concludes with submittal of the Preferred Schematic Report, including any new information and changes to previously submitted information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Summary of updated project schedule, including				
	a) Projected MSBA Board of Directors Meeting for approval of Project Scope and Budget Agreement	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) Projected Town/City vote for Project Scope and Budget Agreement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) Anticipated start of construction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d) Target move in date	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Summary of the final evaluation of existing conditions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Summary of final evaluation of alternatives	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Summary of District's preferred solution	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	A copy of the MSBA Preliminary Design Program project review and corresponding District response	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MSBA Review Comments:

2a) The MSBA notes that the schedule still reflects an approval of the Preferred Solution on the April 10, 2018 Board of Directors meeting and an approved Schematic Design on the August 29, 2018 Board of Directors meeting. Please confirm all dates in this schedule and provide an updated schedule in the District's response to this review.

Corrected dates are as follows:

Submit Preferred Schematic Design Revision 2 to MSBA

May 09, 2018

Projected MSBA Board of Directors Approval to proceed to Schematic Design

June 27, 2018

See revised project schedule in section 3.3.4

The summary indicates that the District intends to use the Construction Manager at Risk delivery method. Refer to the "Additional Comments" section below for reimbursement information.

A. INTRODUCTION / MSBA PSR Report Response Part A

3) The submittal provides an update of local concerns regarding increased traffic on public streets surrounding the high school site (most notably Concord Avenue), and design strategies developed by the District and design team to mitigate these concerns. The proposed site design is reported to resolve these issues. Provide any updates in the District's response to this review.

The town of Belmont's Traffic Advisory Committee (TAC) hired BSC group to conduct a peer review for the traffic analysis and recommendation originally conducted by the design team's consultant Nelson Nygaard (See Appendix 1). BSC group supported the recommendation by the design team and asked some additional questions noted below.

BSC comment 1:

- Additional traffic volume counts may be required for Traffic Signal Warrant Analysis and for the PM commuter peak (4-6 PM). The intersection of Goden Street and School Street would be directly impacted by the high school traffic and needs to be evaluated. With the proposed changes to the high school parking, traffic impacts during the major game days should be evaluated

Response to comment 1:

- The purpose of our data collection was to understand how the travel patterns related to the High School and how this impact the rest of the traffic. We collected TMC counts from 1.30 pm to 3.30 pm, and within this period the peak was from 2.30 pm to 3.30 pm. A continuous 24 hr count we collected on Concord Ave W of Underwood showed an overall peak from 3 pm to 4 pm, and that includes all traffic in addition to the one related to the HS. Overall traffic at 6 pm is 8% lower than 4 pm. By direction, for WB traffic, the peak hour was at 4 pm (57% higher than that at 6 pm) and EB traffic peaked at 6 pm, 17% more than 4 pm.
- Signal Warrant Analysis: we analyzed the impact on traffic of adding a signal at the Goden/Concord intersection if the new design of the High School had an entry/exit aligned with Goden. Results showed that a signal at this location would improve the traffic operations during the pick-up and drop-off periods. We agree that the installation of a new signal would require a Traffic Signal Warrant Analysis, and additional data collection might be required.
- Game days: games normally take place on Fridays at 6-6.30 pm or on Saturdays and don't overlap with the overall peak of a weekday (Tue-Thu). We believe that our data collection and analysis captures peak periods for both traffic related and unrelated to the High School. In addition to that, the proposed design will improve the current traffic and parking demand distribution as it provides parking close to the sports fields to reduce spill over parking on the adjacent streets.

BSC comment 2:

BSC would like to review the details behind the proposed trip distribution.

Response to comment 2:

- Our initial assumptions were based in the following data:
- Turning movements in the current scenario
- Travel patterns by user (drop-off, drive and park, teachers and staff) based on the survey from the HS (mode share, routes to get to school)

4.1.2 SCHEMATIC DESIGN BINDER

A. INTRODUCTION / MSBA PSR Report Response Part A

- 80% of projected staff, teachers and students enter during the peak hour
- 7-8 graders mode share assumptions were adjusted based on current 9-12 graders mode shares, with higher drop-off and school bus, and 0% drive and park.
- 7-8 graders drop-off and park follow the same route to enter/leave as current 9-12 that park and drop-off
- Additional teachers and Staff follow the same routes to enter/leave as current teachers and staff.

Adjustments on the initial assumptions:

- A second step was to adjust the percentages of trips per route assuming that more vehicles will want to avoid the Blanchard/Concord intersection and instead of using the Hittinger entrance will go to Concord and Underwood filtering through local streets, or go to Goden, and enter the HS through that entrance.

BSC comment 3:

- BSC recommends that Nelson Nygaard reevaluate the 4% of the project trips assigned to Goden Street northbound.

Response to comment 3:

- Data collected showed that there are currently vehicles filtering through local streets west of Bright Rd to access Concord where the median is open. We don't have data to quantify the vehicles that would be captured with a new signal on Goden/Concord, but if we assume that the 6% that filters through residential streets to Concord will use the Goden entrance, it would result in 10% of all AM entering vehicles moving NB through the Goden Street intersection. We would represent this by shifting 6% of entering vehicles from Concord WB to Goden NB. 10% equates to about 90 vehicles entering via Goden. The signalized intersection would operate at LOS D during the AM peak with this change.

4) The District's final evaluation of alternatives is unchanged since the original PSR submittal with the exception that a revised version of Option C.2.4 (titled Option C.2.4R1) is added, based on reduced area and lower cost per square feet, as compared to the District's previous Preferred Option C.2.4.

6) The District provided a response to both the PDP review comments, and the original PSR review comments. MSBA notes the following from the PSR review comments response:

- Please confirm that all costs associated with the demolition of the 1910/1932 White Memorial field house and costs associated with constructing a parking area and amenities adjacent to the existing skating rink will be itemized in the cost estimates as ineligible for MSBA reimbursement and in the following Schematic Design submittal.

Cost estimate will separately note these expenses.

No further review comments for this section.

3.3.2 EVALUATION OF EXISTING CONDITIONS

A. INTRODUCTION / MSBA PSR Report Response Part A

Provide the following Items		Complete; <i>No response required</i>	Provided; <i>District's response required</i>	Not Provided; <i>District's response required</i>	Receipt of District's Response; <i>To be filled out by MSBA Staff</i>
1	A narrative of any changes resulting from new information that informs the conclusions of the evaluation of the existing conditions and its impact on the final evaluation of alternatives	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	If changes are substantive, provide an updated Evaluation of Existing Conditions and identify as final. Identify additional testing that is recommended during future phases of the proposed project and indicate when the investigations and analysis will be completed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MSBA Review Comments:

No review comments for this section.

3.3.3 FINAL EVALUATION OF ALTERNATIVES

Include at least three potential alternatives, with at least one renovation and/or addition option. Include the following for each alternative where appropriate:

Provide the following Items		Complete; <i>No response required</i>	Provided; <i>District's response required</i>	Not Provided; <i>District's response required</i>	Receipt of District's Response; <i>To be filled out by MSBA Staff</i>
1	An analysis of each prospective site including:				
	a) Natural site limitations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) Building footprint(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) Athletic fields	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d) Parking areas and drives	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	e) Bus and parent drop-off areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	f) Site access and surrounding site features.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Evaluation of the potential impact that construction of each option will have on students and measures recommended to mitigate impact	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Conceptual architectural and site drawings that satisfy the requirements of the education program	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	An outline of the major building structural systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	The source, capacities, and method of obtaining all utilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.1.2 SCHEMATIC DESIGN BINDER

A. INTRODUCTION / MSBA PSR Report Response Part A

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response; To be filled out by MSBA Staff
6	A narrative of the major building systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	A proposed total project budget and a construction cost estimate using the Uniformat II Elemental Classification format (to as much detail as the drawings and descriptions permit, but no less than Level 2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Permitting requirements and associated approval schedule	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Proposed project design and construction schedule including consideration of phasing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Completed Table 1 – MSBA Summary of Preliminary Design Pricing spreadsheet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MSBA Review Comments:

3) As noted in the previous version of the PSR submittal, the District narrowed the scope of the study to the 7-12 grade configuration options (designated in the submittal as grade configuration “C”) based on the district-wide capacity analysis of the various schools in the district. The updated feasibility study includes a base repair option with a project cost of \$111.5m, four addition/renovation options ranging in project costs of \$295.8m- \$307.3m, and a new building option with a project cost of \$293.8m (no response required).

The updated submittal includes the following in the final evaluation of options:

- Option C.1 (base repair) is 257,120 total sf; no new construction
- Option C.2.1 (add/reno) is 451,800 total sf; 47.0% new construction, 53.0% renovation
- Option C.2.3 (add/reno) is 451,800 total sf; 85.6% new construction, 14.4% renovation
- Option C.2.4 (add/reno) is 451,800 total sf - 86.2% new construction, 13.8% renovation
- Option C.2.4R1 (add/reno) is 445,100 total sf - 85.5% new construction, 14.5% renovation
- Option C.3.1 (new construction) is 422,925 total sf; all new

7) The District and design team confirmed that the construction cost estimates provided in the submittal include the costs associated with the targeted Net Zero level of energy efficiency, most notably (but not limited to) the geothermal system and PV array, as well as all the proposed sustainable systems. In the following Project Scope and budget submittal, provide itemized costs associated with the geothermal and photovoltaic array systems.

Estimate will Break out these costs.

No further review comments for this section.

A. INTRODUCTION / MSBA PSR Report Response Part A

3.3.4 PREFERRED SOLUTION

Provide the following Items		Complete; <i>No response required</i>	Provided; <i>District's response required</i>	Not Provided; <i>District's response required</i>	Receipt of District's Response; <i>To be filled out by MSBA Staff</i>
1	Educational Program				
	a) Summary of key components and how the preferred solution fulfills the educational program	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) Design responses including desired features and/or layout considerations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) Proposed variances to, and benefits of, any changes to the current grade configuration (if any) and a related transition plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Preferred Solution Space Summary				
	a) Updated MSBA Space Summary spreadsheet	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) Itemization and explanation of variations from the initial space summary (and MSBA review) included in the Preliminary Design Program	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Preliminary NE-CHPS or LEED-S scorecard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Conceptual floor plans of the preferred solution, in color that are clearly labeled to identify educational spaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Clearly labeled site plans of the preferred solution including, but not limited to:				
	a) Structures and boundaries	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) Site access and circulation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) Parking and paving	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d) Zoning setbacks and limitations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	e) Easements and environmental buffers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	f) Emergency vehicle access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	g) Safety and security features	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	h) Utilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	i) Athletic fields and outdoor educational spaces (existing and proposed)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	j) Site orientation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	An overview of the Total Project Budget and local funding including the following:				

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4.1.1

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4.1.2

SCHEMATIC DESIGN
MODULE 4

4.1.3

SCHEMATIC DESIGN
PROJECT MANUAL

4.1.4

SCHEMATIC DESIGN
DRAWING

4.1.2 SCHEMATIC DESIGN BINDER

A. INTRODUCTION / MSBA PSR Report Response Part A

Provide the following Items		Complete; <i>No response required</i>	Provided; <i>District's response required</i>	Not Provided; <i>District's response required</i>	Receipt of District's Response; <i>To be filled out by MSBA Staff</i>
	a) Estimated total construction cost	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) Estimated total project cost	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) Estimated funding capacity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d) List of other municipal projects currently planned or in progress	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	e) District's not-to-exceed Total Project Budget	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	f) Brief description of the local process for authorization and funding of the proposed project	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	g) Estimated impact to local property tax, if applicable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	h) Completed MSBA Budget Statement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Updated Project Schedule including the following projected dates:				
	a) Massachusetts Historical Commission Project Notification Form	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) MSBA Board of Directors meeting for approval to proceed into Schematic Design	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) MSBA Board of Directors meeting for approval of project scope and budget agreement and project funding agreement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d) Town/City vote for project scope and budget agreement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	e) Design Development submittal date	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	f) MSBA Design Development Submittal Review (include required 21-day duration)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	g) 60% Construction Documents submittal date	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	h) MSBA 60% Construction Documents Submittal Review (include required 21-day duration)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	i) 90% Construction Documents submittal date	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	j) MSBA 90% Construction Documents Submittal Review (include required 21-day duration)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	k) Anticipated bid date/GMP execution date	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	l) Construction start	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	m) Move-in date	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response; To be filled out by MSBA Staff
n)	Substantial completion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MSBA Review Comments:

2a) Refer to Attachment B for MSBA space summary review comments.

3) The District has indicated intent to achieve the 2% additional reimbursement through the MSBA Green School Program. The submittal indicates a total goal of 52 points using USGBC LEED-V4, including 11 points in Energy & Atmosphere "Optimize Energy Performance" category (no response required).

5b) As noted in the previous PSR review, the MSBA understands that the site circulation configuration at preferred schematic phase is still under development; however, note the following issues for further consideration in the schematic design phase:

- The proposed site plan does not indicate accessible parking locations and a continuous accessible route to the building entrances, and the nearest parking areas appear to be remote to both entrances.
Refer to Appendix 1. Site plan for accessible spaces and continuous accessible routes.
- Confirm that the loading area will be provided with adequate delivery truck and refuse truck space and turn-around areas, refuse & recycling dumpster locations, raised loading areas, adequate equipment and material access routes from the loading area to the kitchen and custodial storage areas, support staff and kitchen staff parking, etc. Food deliveries appear to require passage through public/student corridors to the kitchen.

The exterior service area accommodates 2 dumpsters and 2 trucks at the loading dock simultaneously. Adequate vehicle turning movements have been verified in the current design. Truck turning will occur at the northwest corner of the field house and trucks will either back in or out of the service drive. Designer to show this information on site and floor plans

5c&d) In response to the MSBA review of the original PSR submittal, the District noted that the design team will continue to meet with the Belmont regulatory officials including the Zoning Enforcement Office and Planning Board Director regarding parking, zoning setbacks and building limitations. Provide any updates in the following Project Scope and Budget submittal.

The Building Committee and the Design Team will continue to meet with the regulatory officials of the Town of Belmont throughout the entire design process.

7a) The PDP submittal includes a letter from the Belmont Historic District Commission (dated November 21, 2017) in which the town describes the landscaped area including the Clay Pit Pond and the 1910/1932 White Memorial Field House two-story brick structure (currently used as team locker rooms and DPW Park maintenance equipment) as historic. In response to the MSBA review, the District noted that the design team will submit a Project Notification Form to the Massachusetts Historic Commission for approval during the following Project Scope and Budget phase of the study. Provide any updates in the District's response to this review. Note that all MHC approvals must be received for this project prior to the project construction bid date (please acknowledge). *Project Notification Form was submitted to Massachusetts Historic Commission (MHC) on June 21st, 2018.*

4.1.2 SCHEMATIC DESIGN BINDER

A. INTRODUCTION / MSBA PSR Report Response Part A

See Appendix 2 for copy of PNF. A response is expected back from the MHC on or before July 26th, 2018.

*7b) The schedule notes the MSBA Board Meeting to proceed into Schematic Design as occurring on June 6, 2018. Please note that the correct date for this meeting is June 27, 2018. Provide a revised project schedule in the District's response to this review. **Correct date for MSBA Board Meeting to proceed into Schematic Design noted. Please see revised project schedule in Appendix 3.***

No further review comments for this section.

3.3.5 LOCAL ACTIONS AND APPROVALS

Provide the following Items		Complete; No response required	Provided; District's response required	Not Provided; District's response required	Receipt of District's Response; To be filled out by MSBA Staff
1	Certified copies of the School Building Committee meeting notes showing specific submittal approval vote language and voting results, and a list of associated School Building Committee meeting dates, agenda, attendees and description of the presentation materials.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Signed Local Actions and Approvals Certification(s):				
	a) Submittal approval certificate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) Grade reconfiguration and/or redistricting approval certificate (if applicable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Provide the following to document approval and public notification of school configuration changes associated with the proposed project:				
	a) A description of the local process required to authorize a change to the existing grade configuration or redistricting in the district	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) A list of associated public meeting dates, agenda, attendees and description of the presentation materials	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) Certified copies of the governing body (e.g. School Building Committee) meeting notes showing specific grade reconfiguration and/or redistricting, vote language, and voting results if required locally	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	d) A certification from the Superintendent stating the District's intent to implement a grade configuration or consolidate schools, as applicable. The certification must be signed by the Chief Executive Officer, Superintendent of Schools, and Chair of the School Committee.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A. INTRODUCTION / MSBA PSR Report Response Part A

MSBA Review Comments:

1) Provide an original certified copy of the May 8, 2018 School Building Committee meeting minutes, and an updated School Building Committee form to the MSBA for review and approval, reflecting the change in Board of Selectmen Chair. *An original certified copy of the May 8th, 2018 School Building Committee meeting minutes was delivered to MSBA on June 4th, 2018.*

An updated School Building Committee form will be forthcoming.

2b&3) Grade reconfiguration and/or redistricting approval certificate were provided in the previous submittal (no response required).

No further review comments for this section.

Additional Comments:

- The MSBA issues project advisories from time to time, as informational updates for Districts, Owner's Project Managers ("OPM"), and Designers in an effort to facilitate the efficient and effective administration of proposed projects currently pending review by the MSBA. The advisories can be found on the MSBA's website. In response to these review comments, please confirm that the District's consultants have reviewed all project advisories and they have been incorporated into the proposed project as applicable. *Acknowledged*
- The MSBA offers the following information to assist the District and its Owner's Project Manager in completing the total project budget template that is required as part of its Schematic Design Submittal.
 - The District must include negotiated costs for OPM and Designer fees for the remainder of the project as part of their Total Project Budget. The fees must be listed separately in the line items that are included in the MSBA's Total Project Budget template. In response to these review comments, please confirm that the District and its consultants will negotiate fees for the remainder of the project that are to be included in the District's Schematic Design documents to the MSBA. *Acknowledged*
 - The PSR indicates the District is targeting MSBA approval of its proposed project scope and budget at the August, 2018 board meeting. The District's reimbursement rate before incentives for calendar year 2018 is 35.42%. Please note that the MSBA updates district reimbursement rates annually and applies the reimbursement in effect at the time the MSBA Board of Directors approves a district's proposed project scope and budget. The reimbursement rate is established based on statutory requirements and information provided by the Departments of Revenue and Elementary and Secondary Education. *Acknowledged*
 - **Maintenance** (0-2) - 2.00. This value is based on MSBA review of district provided materials regarding routine and capital maintenance programs during Eligibility Period at which time the value is finalized. *Acknowledged*
 - **CM@Risk** (0 or 1) – 1.00. Because the District was invited to the MSBA Capital Pipeline before January 2, 2017 it would be eligible to conditionally receive one incentive point subject to the approval of the Office of the Inspector General for the District's use of the Construction Manager at Risk construction delivery method for the Proposed Project and that the District actually uses that construction delivery method for the Proposed Project. *Acknowledged*

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- **Newly Formed Regional School District (0-6)** – The District is not a newly formed or expanded regional school district as a result of working with the MSBA, therefore these incentive points do not apply. *Acknowledged*
- **Major Reconstruction or Reno/Reuse (0-5)** – The District's preferred solution of an addition/renovation project proposes 20,930 nsf of eligible renovated space in a proposed 445,100 gsf facility, or approximately 4.70% of the total area. This eligible renovated area consists of 12,000 nsf gym area, 8,430 nsf locker rooms, and 500 nsf PE Storage. Ineligible renovated spaces that are not included in that calculation include 18,183 nsf gym area, 400 PE Storage, 7,447 nsf Pool & Pump Room, and 1,620 nsf Pool Locker area. Renovated gross floor area (if any) that may be associated with these renovated spaces is included in the net areas. Therefore the estimated value of incentive points for the preferred solution is 0.24.

Acknowledged and agreed

- **Overlay Zoning 40R & 40S (0 or 1)** – Refer to Module 4, appendix 4E to review documentation requirements and to determine if this incentive point may be applicable. Please note that required authorizations must be documented prior to MSBA approval of the District's proposed project scope and budget to be eligible to receive this incentive point.

Information on overlay zoning 40R was submitted to MSBA on 06/06/2018 for review.

- **Overlay Zoning 100 units or 50% of units for 1, 2 or 3 family structures (0 or 0.5)** – Refer to Module 4, appendix 4E to review documentation requirements and to determine if this incentive point may be applicable. Please note that required authorizations must be documented prior to MSBA approval of the District's proposed project scope and budget to be eligible to receive this incentive point.

Please find attached information on overlay zoning 40S for consideration of additional incentive point. See Appendix 4

- **Energy Efficiency** – “Green Schools” (0 or 2) – The PSR indicates the District's intent to achieve the 2% additional reimbursement through the MSBA Green School Program. Please note, subject to the District's intention to meet certain energy efficiency sustainability requirements for the Proposed Project, the MSBA will provisionally include two (2) incentive points, however if the District does not ultimately qualify for some or all of these incentive points the MSBA will adjust the District's reimbursement rate, accordingly. *Acknowledged*
- Additional observations regarding the District's Preferred Solution were discussed in the May 9, 2018 Facilities Assessment Subcommittee meeting, including the following comments for the District (please provide a brief update or response to each item):
 - Increased school population and potential increased traffic on Concord Avenue, improved site circulation to mitigate;
 - *See traffic reports and design recommendation that supports improved site circulation for pedestrians, bicyclist and vehicles.*
 - Aesthetic features of the building in response to the building location in Belmont;

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Site position and Landscaping-

The building is positioned as deep into the site as possible allowing for a park-like setting to buffer the building from its neighbors. Landscaped paths reach out from the building to the natural crossing points on Concord Avenue allowing for both safe and welcoming approach to the school.

Massing-

The design takes great care to sensitively mitigate the buildings overall size. The building takes the shape of two interlocking “Y”s. In doing so it masks its overall length reducing the perceived size of the building, responds to the triangular geometry of the site and reinforces the curve of Clay Pit Pond. The building further masks its size by stepping down to a three-story expression over its east-west axis.

Materiality-

The town of Belmont has a consistency to both its main street as well as its civic buildings, all are a blend of red brick. The unique history of the site itself as a manufacturing location of red bricks gives further meaning to the choice of the building’s primary material. The Clay Pit Pond, a defining site feature, gets its name from the excavation that gave it its form. Many of the town’s civic buildings are articulated with a darker terra cotta paneling as an accent. The design team has been developing a contemporary but highly contextual material palette that is grounded with the same red brick that gives the town its consistency. Areas of focus at the ends of the building’s wings, its base and its windows will be articulated with a pre-cast concrete in a deeper, sympathetic tone that is similar to that of traditional terracotta.

Fenestration-

The design is further articulated by the typical classroom fenestration. The grouping of windows allow daylight to be thoughtfully brought into the learning environment while “bay” like projections relate to the residential scale of neighboring buildings. All these attributes in concert create a language that look to the town’s future and are reflective of the building’s time yet respectfully relate to the town’s rich history.

- Location of and public access to the community path;
The Belmont High School site plan leaves a 12-foot wide strip of land along the north property line for construction of the future Community Path as a separate project. Access points to the Community Path are anticipated at a future passageway under the railroad between Alexander Avenue and the school site and at points along the parking planned for the school project. School safety concerns will need to be addressed in determining the number and location of access points as part of the Community Path project.
- View of the building from the street and upon approach; *Appendix 5a*
- Use and views of the pond; *Appendix 5b*
- Acoustics in the building, most notably in the open cafeteria area;
The Design will be enclosing the cafeteria at minimum with glazing, as well as enclosing other open areas that may be impacted by the cafeteria. Other acoustical concerns are addressed in Appendix 6.
- Flexibility of spaces;
It was the expressed goal of the design team and Belmont to ensure that the building overall and the individual educational spaces (which also includes circulation spaces) have ultimate flexibility. Very few programmed spaces should be so distinct in its configuration, and fixed casework that it can serve multiple purposes for teaching, learning, creating and socializing. The principles of easy reconfiguration should

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always be considered. For example, the dining commons could support cheerleading practice, a robotics event, pre-function activities for the gymnasium and auditorium, and also MSBA and AP testing. This thinking ensures that spaces have the greatest utilization and can flex and adapt as programs change.

- *Number of lockers; and
It was determined after discussion and student surveys that lockers will be provided for 50% of the students in grades 9-12 and lockers will be provided for every student in grades 7 and 8.*
- *Appreciation for the District and their consultant's efforts to advance the design and reduce cost. Thank you.*

End

A. INTRODUCTION / MSBA PSR Report Response Part B

ATTACHMENT B MODULE 3 – PREFERRED SCHEMATIC SPACE SUMMARY REVIEW

District: *Town of Belmont*

School: *Belmont High School*

Owner's Project Manager: *Daedalus Projects, Inc.*

Designer Firm: *Perkins+Will*

Submittal Due Date: *May 9, 2018*

Submittal Received Date: *May 9, 2018*

Review Date: *May 9-XX, 2018*

Reviewed by: *A. Waldron, C. Clement, K. Brown, J. Jumpe*

The Massachusetts School Building Authority (the “MSBA”) has completed its review of the proposed space summary of the preferred alternative as produced by Perkins + Will and its consultants. This review involved evaluating the extent to which the Belmont High School’s proposed space summary conforms to the MSBA guidelines and regulations.

The MSBA considers it critical that the Districts and their Designers aggressively pursue design strategies to achieve compliance with the MSBA guidelines for all proposed projects in the new program and strive to meet the gross square footage allowed per student and the core classroom space standards, as outlined in the guidelines. The MSBA also considers its stance on core classroom space critical to its mission of supporting the construction of successful school projects throughout the Commonwealth that meet current and future educational demands. The MSBA does not want to see this critical component of education suffer at the expense of larger or grander spaces that are not directly involved in the education of students.

MSBA recognizes the benefits and the challenges associated with saving or renovating existing spaces, and may consider variations in the guidelines for renovation projects beyond those included below. Please note that any spaces in new construction or substantially renovated spaces must be compliant with MSBA space standards for both allotted area and room quantity unless otherwise approved in writing by the MSBA.

The following review is based on the submitted addition and/or renovation construction project option with an agreed upon design enrollment of 2,215 students in grades 7-12.

MSBA notes that spaces in the existing building that will remain in the proposed building as renovated space are limited to the Health and Physical Education space category below (Gymnasium, Lockers, PE Storage and Small Gym) and the “Other” category (Pool/Pump room, Locker room). All other spaces in the building are new construction.

The MSBA review comments are as follows:

- **Core Academic** – The District is proposing a total of 111,280 net square feet (“nsf”) which exceeds the MSBA guidelines by 6,170 nsf. *The proposed area in this category has decreased by 1,470 nsf since the original Preferred Schematic*

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*Report (“PSR”) submittal. MSBA notes that the proposed program includes eight classrooms, one extra science lab and prep room, and two 1,000 nsf ELL rooms over guidelines (in addition, the “Other” category includes an 850 nsf METCO classroom). Based on a utilization rate of 81% inclusive of capacity generating Art, Vocations Technology classrooms and a METCO classroom, the MSBA accepts this variation to guidelines. No further comments. **Acknowledged***

- **Special Education** – The District is proposing a total of 24,310 nsf which exceeds the MSBA guidelines by 2,160 nsf. *The proposed area in this category has decreased by 2,200 nsf since the original PSR submittal (MSBA notes that 3,460 nsf of space in this category is dedicated to the LABBB program). Please note that the Special Education program is subject to approval by the Department of Elementary and Secondary Education (DESE). The District should provide this information for this submittal with the Schematic Design Submittal. Formal approval of the District’s proposed Special Education program by the DESE is a prerequisite for executing a Project Funding Agreement with the MSBA. **Acknowledged***
- **Art and Music/ Voc-Tech** – The District is proposing a combined total of 35,550 nsf which exceeds the MSBA guidelines by 25 nsf. *The proposed area in this category has increased by 1,840 nsf since the original PSR submittal, due to the addition of a second Engineering/ Maker Tech Shop space. Areas in excess of MSBA guidelines in Art and Music are balanced by areas under MSBA guidelines in the Vocations and Technology category. The MSBA does not object to this area in the proposed project, however, area beyond guidelines will be deemed ineligible for reimbursement. **Acknowledged***
- **Health and Physical Education** – The District is proposing a total of 54,642 nsf which exceeds the MSBA guidelines by 26,038 nsf. *The majority of the excessive area in this category is due to the existing 30,183 nsf Field House and existing 5,704 Small Gym. The proposed area in this category has decreased by 300 nsf since the original PSR submittal, due to the elimination of two 150 nsf Health Instructor Offices. Based on the student design enrollment and class schedule, the MSBA accepts one additional 3,000 nsf PE station for an adjusted allowable area of 31,604 nsf in the Health and Physical Education category. As a result, the proposed area for this category is 23,038 nsf above the adjusted MSBA guidelines. As noted in the MSBA review of the previous PSR submittal, the MSBA does not object to including this area in the proposed project as existing space. However, 23,038 nsf of area beyond the adjusted MSBA guidelines will be considered ineligible for MSBA reimbursement. Refer to the MSBA policy memorandum regarding auditorium and gym spaces beyond those included in the guidelines. **Acknowledged***
- **Media Center** – The District is proposing a total of 13,744 nsf which meets the MSBA guidelines. *The proposed area in this category has not changed since the original PSR submittal. No further action required. **Acknowledged***

A. INTRODUCTION / MSBA PSR Report Response Part B

- **Auditorium/ Drama** - The District is proposing a total of 14,200 nsf which exceeds the MSBA guidelines by 3,800 nsf. *The proposed area in this category has not changed since original PSR submittal. This overage is due to the addition of a 3,000 nsf black box theater and a stage that is 800 nsf larger than guidelines. As noted in the previous review comments, the MSBA does not object to the District including this additional 3,800 nsf to the proposed project, however, this area will be deemed ineligible for reimbursement (refer to the attached Memorandum which presents MSBA policy regarding auditorium and gym spaces beyond those included in the guidelines, and how ineligible area and the resulting grant is calculated). No further comments. **Acknowledged***
- **Dining and Food Service** – The District is proposing a total of 16,698 nsf which meets the MSBA guidelines. *The proposed area in this category has not changed since the original PSR submittal. No further action required. **Acknowledged***
- **Medical** – The District is proposing a total of 2,140 nsf which exceeds the MSBA guidelines by 430 nsf. *The proposed area in this category has not changed since the original PSR submittal. As noted in the previous review comments, the MSBA does not object to the District including this additional 430 nsf to the proposed project, however, this area will be deemed ineligible for reimbursement. **Acknowledged***
- **Administration and Guidance** – The District is proposing a total of 8,200 nsf which exceeds the MSBA guidelines by 659 nsf. *The proposed area in this category has decreased by 1,862 nsf since the original PSR submittal. As noted in the previous review comments, the MSBA does not object to the District including this additional 659 nsf to the proposed project, however, this area will be deemed ineligible for reimbursement. **Acknowledged***
- **Custodial and Maintenance** – The District is proposing a total of 3,465 nsf which exceeds the MSBA guidelines by 151 nsf. *The proposed area in this category has increased by 28 nsf since the original PSR submittal. As noted in the previous review comments, the MSBA does not object to the District including this additional 151 nsf to the proposed project, however, this area will be deemed ineligible for reimbursement. **Acknowledged***
- **Other** - The District is proposing a total of 12,532 nsf which exceeds the MSBA guidelines by 12,532 nsf. *The proposed area in this category has increased by 120 nsf since the original PSR submittal, due to the addition of storage for emergency shelter space. The MSBA notes the following:*
 - *District technology spaces (1,650 nsf), District Food Service Director and District Nurse administrative offices (300 nsf). These District spaces will be considered ineligible for MSBA reimbursement. **Acknowledged***
 - *150 nsf BEA (“Belmont Education Association”); this office will be considered ineligible for MSBA reimbursement. **Acknowledged***
 - *125 nsf School Store; this space will be considered ineligible for MSBA reimbursement unless the Designer is able to accommodate this space as*

4.1.2 SCHEMATIC DESIGN BINDER

A. INTRODUCTION / MSBA PSR Report Response Part B

- an “Other Occupied Room” within the Non-Programmed Category of spaces while maintaining a grossing factor of 1.5 or less. Acknowledged. 125 nsf School store will remain in the NSF.*
- 150 nsf METCO Office; this space will be considered eligible for MSBA reimbursement. *Acknowledged*
 - 850 nsf “Equity Academic Center” (METCO Classroom). Given the intent of the METCO program and the overall utilization of the proposed capacity generating classroom spaces, this additional classroom will be considered ineligible for MSBA reimbursement. *Acknowledged, 850 NSF Equity Academic Center will remain in the NSF.*
 - 120 nsf Resource Officer; this space will be considered eligible for MSBA reimbursement. *Acknowledged*
 - 120 nsf Emergency Center Storage; this space should be indicated as gross area in the “Unoccupied Closets, Supply Rooms & Storage Rooms” category within the Non-Programmed Category of spaces (while maintaining a grossing factor of no more than 1.5). *Acknowledged. 120 nsf Emergency Center storage will remain in the NSF.*
 - Existing pool and associated locker rooms (renovated); 9,067 nsf. As previously noted, all costs associated with the pool and support spaces and systems must be itemized in each cost estimate moving forward in the MSBA process and will be considered ineligible for reimbursement. *To be itemized in cost estimates*
- **Total Building Net Floor Area** – The District is proposing a total of 296,733 nsf which exceeds the MSBA guidelines by 51,966 nsf. *The proposed area has decreased by 3,872 nsf since the original PSR submittal. Refer to the comments in each space category above. MSBA will continue to evaluate eligibility of area in the subsequent Project Scope and Budget submittal. Acknowledged*
 - **Total Building Gross Floor Area** – The District is proposing a total of 445,100 gsf which exceeds the MSBA guidelines by 77,949 gsf. *The proposed area has decreased by 5,808 gsf since the original PSR submittal. Eligibility of gross square feet will be determined by the eligible net square feet determined in the Project Scope and Budget phase multiplied by a grossing factor of up to 1.5 (in no case shall the grossing factor for new construction exceed a grossing factor of 1.5). Acknowledged. Grossing factor does not exceed 1.5. This will be clarified in the SD submission documents and space summary.*

Please note that upon moving forward into subsequent phases of the proposed project, the Designer will be required to provide, with each submission, a signed, updated space summary that reflects the design and demonstrates that the design remains, except as agreed to in writing by the MSBA, in accordance with the guidelines, rules, regulations and policies of the MSBA. Should the updated space summary demonstrate changes to the previous space summary include a narrative description of the change(s) and the reason for the proposed changes to the project. *Acknowledged*

A. INTRODUCTION / MSBA PSR Report Response Appendix 1

APPENDIX 1



MEMORANDUM

803 SUMMER STREET, BOSTON, MA 02127 - www.bscgroup.com

TEL 617-896-4300 - 800-288-8123

To:	Mr. Glenn Clancy, P.E., Director of Community Development, Town of Belmont	Date:	June 8, 2018
From:	Sam Offei-Addo, P.E., PTOE	Proj. No.	28374.00
Re:	Belmont High School – Peer Review of Driveway Location		

BSC Group has been requested by the Town of Belmont to perform a peer review of the Belmont High School Building Committee's proposal to locate the new high school entrance/exit across from Goden Street. BSC has reviewed the traffic study report, site layout plans and site access analysis prepared by Nelson / Nygaard on behalf of the Building Committee. BSC also attended meetings where the Building Committee presented their findings and residents provided their input.

BSC was asked to evaluate the following:

- Is the traffic data used in the study adequate?
- Is the proposed location of the High School drive opposite Goden Street the best location?
- What if the entrance/exit was opposite Oak Street and traffic was required to turn right only from the site and then allowed to proceed to Goden Street as it does today, with Goden Street signalized or unsignalized?
- Is it better to have two separate entrance/exit points along Concord Avenue? If yes, where should they be located?
- How does one-way operation on Goden Street impact traffic flow to and from the high school?

Completeness of Data Collection:

Nelson/Nygaard obtained intersection turning movement counts (TMCs) collected in September 2017 during the weekday morning (6:30-8:30 AM) and afternoon (1:30-3:30PM). These times are consistent with the peak drop-off and pick-up times at the high school. TMC locations included Concord Avenue intersections with Common Street, Goden Street, HS Driveway/Orchard Street, and Underwood Street; as well as Brighton Street at Hittinger Street. In addition to vehicles, the number of pedestrians and bicyclists were also recorded.

Continuous 48-Hour automatic traffic counts were obtained on Concord Avenue and Brighton Street.

BSC has reviewed the traffic data and concurs that they generally meet standard traffic engineering practice, and general traffic volume data requirements contained in the Transportation Impact Assessment (TIA) Guidelines by MassDOT. The National Cooperative Highway Research Program (NCHRP) Report 457 notes that the objective is to obtain traffic volumes for the "average day"; data that represents traffic conditions occurring normally and repeatedly at the study location. For most development projects, the AM and PM peak commuter periods are needed. In the case of a school, the afternoon dismissal period also needs to be evaluated.

As part of the Town wide Traffic Study, BSC obtained twelve-hour TMCs at Concord Avenue at Common Street, Concord Avenue at Goden Street, and Concord Avenue at Brighton Street in April 2018. BSC's data at these locations are consistent with data collected by Nelson Nygaard.

Additional traffic volume counts may be required for Traffic Signal Warrant Analysis and for the PM commuter peak (4-6 PM). The intersection of Goden Street and School Street would be directly impacted by the high school traffic and needs to be evaluated.

With the proposed changes to the high school parking, traffic impacts during the major game days should be evaluated.

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MEMORANDUM

Existing Driveway – Location and Operation

The existing high school driveway on Concord Avenue is offset to the west of Orchard Street without a vehicular access across the median. Only right-turning movements are allowed onto Concord Avenue from the driveway. There is a break in the median for a signalized pedestrian crossing. BSC reviewed the current traffic operations, congestion, delays, queueing, and vehicle/pedestrian conflicts documented in the traffic report by Nelson Nygaard and concurs with their findings.

Future Conditions

Nelson Nygaard evaluated future conditions with the proposed 7/8th grade and the high school in place. Projected trips shown in the report indicate that during the AM peak student drop-off, a total of 889 vehicle trips would enter the high school campus and 615 vehicle trips would exit. This is an 80% increase over the existing trips of 486 entering and 328 exiting vehicle trips.

According to the traffic report, trip distribution assumptions were based on existing traffic data, field observation, and travel surveys prepared by the school with input from parents and teachers. The proposed arrival patterns to the campus for the combined 7/8th Grade and high school trips are different from the existing high school patterns; for example, 36% of school traffic currently turn left onto Underwood Street from the west and south of the school. Under future conditions, a total of 56% is anticipated to come from the same direction. Does the proposed trip distribution account for students who are currently dropped off on the south side of Concord Street, or on neighboring streets such as Orchard Street, that would be driven onto the campus due the change in circulation? BSC would like to review the details behind the proposed trip distribution.

Under existing conditions, turning movement counts for Goden Street at Concord Avenue show that there is a low number of right turns from Goden Street northbound onto Concord Avenue during the AM peak hour. This means that currently, fewer vehicles use Goden Street to get to the high school in the morning. It is however anticipated that with the proposed traffic signal, more high school related trips would use Goden Street. BSC recommends that Nelson Nygaard reevaluate the 4% of the project trips assigned to Goden Street northbound.

Site Circulation

As noted above, the proposed combined 7/8th grade and high school campus is expected to generate nearly twice as many vehicle trips compared to the existing high school. Access to the campus and on-site circulation should reflect this projected increase in traffic.

BSC concurs with Nelson Nygaard that retaining the existing one-way circulation would only exacerbate the poor traffic operations during the peak school drop off and pick-up times. Two-way circulation would allow dispersion of trips, reduce delays, improve emergency access and check speeds compared to one-way circulation.

Proposed Driveway Location

The proposed driveway configuration and location must address pedestrian and bicycle safety, increased traffic volumes, vehicular conflicts, congestion, and emergency vehicle access issues.

Option: HS Driveway at Goden Street - Signalized

The primary access to the high school as currently proposed, is across from Goden Street on Concord Avenue. This four-legged intersection will be signalized and allow all movements at the driveway, as opposed to the existing driveway, which permits only right-turns out onto Concord Avenue. A secondary access to the campus is proposed at Hittinger Street and Trowbridge Street.



MEMORANDUM

- Provision of a left-turn bay on Concord Avenue for left turns in the school driveway will improve operations and safety. Eastbound through vehicles would not have to swerve into the bicycle lane to bypass a stopped left-turning vehicle.
- Elimination of on-street parking in the vicinity of the intersection is required.
- U-turns by high school related traffic will be eliminated at Goden Street.
- Design of traffic signals should consider timing strategies to minimize additional cut-through traffic on Goden Street.

Option: A right-in, right-out driveway with no median break opposite Oak Street. Median break remains at Goden Street.

- Intersection operations are impacted by the “functional areas” outside the physical intersection, where queuing, braking/maneuvering, and perception/reaction to stopped vehicles take place. For a 25-mph roadway, perception reaction plus braking distance is 175 feet. In addition, there should be provision for queued vehicles at 25 feet per stopped vehicle.
- The distance between the existing high school driveway and Goden Street is approximately 420 feet. Locating the proposed driveway across from Oak Street would result in an offset of 220 feet from Goden Street, a decrease in the functional area of the intersection.
- This option would result in back-ups on Concord Avenue westbound from vehicles exiting the high school and turning left onto Goden Street, increasing the likelihood for rear-end and angle collisions.
- Installing a signal at Goden Street under this option would still require vehicles exiting the high school driveway to execute a right then a left turn over a short distance. In some cases, drivers leaving the high school driveway would be tempted to speed and take advantage of a green signal at Goden Street, thereby impacting the safety of other users of the intersection.
- Operations at the proposed high school driveway would be impacted especially during the morning peak hour.

Option: Separate Entrance/Exit on Concord Avenue

- Due to the presence of Clay Pit Pond, any driveway location on Concord Avenue would be on the western section of the campus. The location of the football field is also a limiting factor.
- Entrance: A right-in entrance across from Orchard Street (at the current location of high school exit) with no break in the median. Breaking the median and allowing left turns into the high school driveway could impact operations west of the intersection, as vehicles could back up on Concord Avenue to and beyond Goden Street. To avoid the back-ups, a signalized intersection with a dedicated left turn lane would be required.
- BSC concurs with Nelson Nygaard, that more eastbound vehicles on Concord Avenue would make U-turns to get to the site drive instead of going to Underwood Street. U-turns are inherently difficult and less safe, and there is an increased risk of conflict with pedestrians.
- Exit: Across from Goden Street. Allow left, through and right turns out of the high school. Due to the high volume of traffic on Concord Avenue, a traffic signal may be required to safely exit the school’s driveway.
- Another consideration would be an exit across from Myrtle Street. This would impact the high school football field and would also push the driveway activities towards the more congested western sections of Concord Avenue. Opening the median at this location would result in weaving problems associated with closely spaced intersections.

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MEMORANDUM

Option: HS Driveway at Goden Street with One-way operation on Goden Street

Data from Nelson Nygaard traffic report indicates that the highest use of Goden Street by high school related traffic is during the morning drop-off peak, between 7:15 and 8:00 AM as vehicles travel south after exiting the high school. There is also another peak during school dismissal. This pattern is corroborated by traffic counts obtained by BSC. During that period, about 50% of vehicles exiting the high school turn left onto Goden Street and head southbound. Outside these periods, the majority of traffic on Goden Street is not related to the high school. Any changes to Goden Street's circulation should consider effects of the non-high school traffic.

- Restricting Goden Street to the northbound direction would mean that vehicles exiting the high school would turn left at Goden Street or make a U-turn at Cottage Street to go east or south.
- U-turns at Cottage Street would create direct conflict with vehicles exiting Cottage Street, and other existing eastbound U-turns at this pedestrian signal.
- Restricting Goden Street to the southbound direction would redistribute entering school trips onto other neighborhood streets and result in more U-turns on Concord Avenue.

Conclusion:

Based on our review of the data presented by Nelson Nygaard on behalf of the Building Committee and BSC's traffic data, we believe the proposed location of the HS Driveway on Concord Avenue at Goden Street is the best option. The intersection would operate most efficiently, if Goden Street is two-way. In evaluating future conditions, Nelson Nygaard should consider diverted traffic, especially during the morning and evening peak periods, that would use Goden Street because of the traffic signal. Details of the projected trip distribution should be provided for review. Also, traffic operations during games should be evaluated in light of the proposed on-site parking supply.

cc:

A. INTRODUCTION / MSBA PSR Report Response Appendix 2

APPENDIX 2 SITE PLAN



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APPENDIX 3

PROJECT NOTIFICATION FORM

Daedalus Projects, Incorporated

1 Faneuil Hall Marketplace, South Market Building

Suite 4195 | Boston, MA 02109-6117

(p): 617-451-2717 | www.daedalusprojects.com

June 20th, 2018

Massachusetts Historical Commission
220 Morrissey Boulevard
Boston
MA 02125

RE: Belmont High School, Belmont, MA

Dear Sirs:

Enclosed for your review please find a Project Notification Form for the proposal new Belmont High Project. Belmont MA. The project is currently at the Schematic Design phase. If you have any questions please do not hesitate to contact me at snolan@dpi-boston.com or 617 921 2830.

Yours Sincerely,



Shane Nolan
Senior Project Manager
Daedalus Projects, Inc.

cc: Bill Lovallo, Chair, Belmont School Building Committee
Brooke Trivas, Perkins and Will Architects

A. INTRODUCTION / MSBA PSR Report Response Appendix 3

APPENDIX A
MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

PROJECT NOTIFICATION FORM

Project Name: Belmont High School

Location / Address: 221 Concord Avenue

City / Town: Belmont MA 02478

Project Proponent

Name: Shane Nolan - Daedalus Projects Inc.

Address: 1 Faneuil Hall Marketplace, South Market Building,

City/Town/Zip/Telephone: Boston MA 02111 (617) 451 2717

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name

Type of License or funding (specify)

Town of Belmont

MSBA

Project Description (narrative):

The project consists of the construction of a new Belmont High School in Belmont MA. The new building will be a steel framed, masonry veneered building, with a single ply membrane roof. The work consists of:

New Construction 381,000SF

Renovation 65,000SF

Total 446,000SF

The work also includes landscaping, athletic fields, sidewalks and parking.

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

The project includes the phased demolition of large portions at the existing Belmont High School, 221 Concord Avenue, Belmont MA. The existing building is approx. 267,000SF. The area to be demolished is approx. 201,000SF.

The project also includes the entire demolition of the White Memorial Field House at 291 Concord Avenue, Belmont MA.

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.

The project includes the renovation of the interior and exterior at the existing Belmont High School field house and swimming pool. The areas to be renovated are approx. 65,000SF on the north side of the HS.

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

The project includes the construction of a new building approximate 381,000SF to house grades 7-12.

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APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

There are no known historic or archeological properties known to exist within the projects area of impact.

What is the total acreage of the project area?

Woodland	<u>0</u>	acres	Productive Resources:		
Wetland	<u>13.0</u>	acres	Agriculture	<u>0</u>	acres
Floodplain	<u>14.4</u>	acres	Forestry	<u>0</u>	acres
Open space	<u>27.7</u>	acres	Mining/Extraction	<u>0</u>	acres
Developed	<u>43.0</u>	acres	Total Project Acreage	<u>56</u>	acres

What is the acreage of the proposed new construction? 38.3 acres

What is the present land use of the project area?

The present use is the Belmont High School campus

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of Person submitting this form:



Date: June 21, 2018

Name: Shane Nolan

Address: 1 Faneuil Hall Marketplace, South Market Building,

City/Town/Zip: Boston MA

Telephone: (617) 921 2830

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

A. INTRODUCTION / MSBA PSR Report Response Appendix 3



OFFICE OF COMMUNITY DEVELOPMENT TOWN OF BELMONT

19 Moore Street
Homer Municipal Building
Belmont, Massachusetts 02478-0900

Historic District Commission

November 21, 2017

Belmont High School Building Committee
Homer Municipal Building
19 Moore Street
Belmont, MA 02478

RE: Historic Status, Belmont High School

Dear Committee Members,

The Historic District Commission (HDC) has discussed the Belmont High School with respect to potential significance and determined it is not historic. Therefore, the HDC has no concerns regarding the renovation or demolition of the building.

The HDC does consider the extant portion of the park at Clay Pit Pond to be a historic landscape. Designed in 1928 by landscape architect Loring Underwood, it is an important part of the Concord Avenue corridor. We therefore ask that the general characteristics of the park be respected during the design process. This does not mean that improvements cannot be made to the park, just that the HDC considers the park to be historic and that rehabilitation work should take that into account.

If demolition or alteration is considered for the Colonial Revival Field House, constructed c.1910, the HDC recommends that it be evaluated in greater detail to determine if it is indeed significant. The HDC has discussed this building in the past, but has not considered it as high a priority as other civic buildings in Belmont. It is included in the Massachusetts Historical Commission's inventory form for the Clay Pit Pond area. Should the Field House become part of the project, the HDC kindly requests that it be consulted.

Should you have any further questions regarding the historic status or considerations related to the high school, please do not hesitate to ask.

Sincerely,

Lauren Meier, Co-Chair

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Town of Belmont **Belmont High School Building Committee**

William Lovallo, Chair
John Phelan
Daniel Richards
Lisa Fiore
Chris Messer, Secretary

Phyllis Marshall, Treasurer
Patricia Brusch, Vice Chair
Thomas Caputo
Jamie Shea
Joseph DeStefano

Emma Thurston
Diane Miller
Joel Mooney
Robert McLaughlin
Michael McAllister

May 29, 2018

Lauren Meier and Lisa Harrington, Co-Chairs
Belmont Historic District Commission
Homer Municipal Building
19 Moore Street
Belmont, Massachusetts 02478

Dear Members of Belmont Historic District Commission,

The Belmont High School Building Committee is requesting approval for demolition of the White Field House. This building has been evaluated to determine if it can be utilized as part of the new Belmont High School Project which is proceeding in design under the Massachusetts School Building Authority grant program. The programed spaces in the current White Field House will be incorporated into the new Belmont High School thus eliminating the School Department's need for that building.

The White Field House, once vacated for High School program, will require significant and costly improvements to allow that asset to be utilized for other Town programs and without such funding, will make it unavailable to be programed for future use. The location of the White Field House will be used for athletic field and/or parking use depending on the final configuration of the assets west of Harris Field.

The Belmont High School Building Committee is looking to the Belmont Historic District Commission for a determination regarding this request.

Bill Lovallo
Chair, Belmont High School Building Committee

19 MOORE STREET (PO BOX 56), BELMONT, MA 02478
TELEPHONE (617) 993-2640 * FACSIMILE (617) 993-2641

A. INTRODUCTION / MSBA PSR Report Response Appendix 3



OFFICE OF COMMUNITY DEVELOPMENT TOWN OF BELMONT

19 Moore Street
Homer Municipal Building
Belmont, Massachusetts 02478-0900

Historic District Commission

June 11, 2018

William Lovallo, Chair
Belmont High School Building Committee
19 Moore Street
Belmont, Massachusetts 02478

Dear Mr. Lovallo,

At the request of the Belmont High School Building Committee, the Historic District Commission considered the possibility of demolishing the existing White Field House on Concord Avenue. The Historic District Commission serves also as the Town's Historical Commission and is charged with advising the Town of Belmont on issues related to its historic resources including evaluating historic properties. This building is of interest to the Commission because of its age (1910), architectural style (Colonial Revival), and the fact that it is included in the Massachusetts Historical Commission's Inventory of Historic and Archeological Assets of the Commonwealth, on the inventory form for Clay Pit Pond Park (BLM AB: Clay Pit Pond Area). However, the Inventory Form provides very little information regarding the existing or potential significance of the building.


It is the general view of the Commission that the existing White Field House is not a distinguished example of its architectural style and sits in an isolated location without historical or geographic context. For these reasons, the HDC does not view the building to be historically significant in the Town of Belmont, nor is it a candidate for addition to an existing (local) historic district. Furthermore, the HDC concurs with the Committee's view that it would not be feasible to rehabilitate the building to meet the requirements of the new high school. Therefore, on May 29, the Commission voted unanimously to support the Committee's desire to demolish the White Field House. Please be advised that if you would like a formal opinion from the Massachusetts Historical Commission, you should complete a Project Notification Form (PNF).

On behalf of the Commission, we would like to thank you for keeping the HDC informed of the High School Building Project. Please do not hesitate to reach out if you have any further questions regarding historic resources.

Kind regards,



Lauren Meier, Co-chair



Lisa Harrington, Co-chair

CC: Patrice Garvin, Town Administrator

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