

PROJECT MINUTES

Project:	New Peebles Elementary School	Project No.:	15041
Prepared by:	Joel Seeley	Meeting Date:	4/27/2017
Re:	School Building Committee Meeting	Meeting No:	38
Location:	Veterans Memorial Community Center	Time:	6:30pm
Distribution:	School Building Committee Members, Attendees (MF)		

Attendees:

PRESENT	NAME	AFFILIATION	VOTING MEMBER
✓	James L. Potter	Chairman, School Building Committee	Voting Member
✓	Peter J. Meier	Board of Selectmen	Voting Member
✓	Christopher Hyldborg	Chairman, School Committee	Voting Member
✓	Natasha Scarpato	Member, School Committee	Voting Member
✓	Donna Buckley	Member at Large	Voting Member
✓	Richard A. Lavoie	Finance Committee	Voting Member
✓	William Meier	Building Trade Expert	Voting Member
		Member at Large	Voting Member
✓	Frederick H. Howe	Board of Health, Vice-Chairman School Building Committee	Voting Member
✓	Steven M. Lamarche	Superintendent of Schools, BPS	Voting Member
✓	Edward S. Donoghue	Director of Business Services, BPS	Non-Voting Member
	Thomas M. Guerino	Town Administrator	Non-Voting Member
	Paul O'Keefe	Local Official Responsible for Building Maintenance	Non-Voting Member
✓	Elizabeth A. Carpenito	Principal, BES	Non-Voting Member
✓	Kathy Anderson	Elementary/Special Education Secretary	Non-Voting Member
	Janey Norton	Principal, PES	
✓	Kent Kovacs	FAI, Architect	
	Mike Cimorelli	FAI, Architect	
	Bill Beatrice	FAI, Architect	
✓	Chris Garcia	GGD, MEP/FP Engineers	
✓	Louis Vieira	GGD, MEP/FP Engineers	
✓	David Pereira	GGD, MEP/FP Engineers	
✓	Joel Seeley	SMMA, OPM	

Item #	Action	Discussion
38.1	Record	Call to Order, 6:30 PM, meeting opened.
38.2	Record	A motion was made by P. Meier and seconded by F. Howe to approve the 4/13/2017 School Building Committee meeting minutes. No discussion, motion passed unanimous by those attending.
38.3	Record	The National Grid Commercial Gas Agreement has been signed by E. Donoghue and submitted to National Grid.
38.4	Record	J. Seeley indicated the District's Response to the MSBA Design Development submission review comments has been submitted to MSBA and the Committee.
38.5	Record	J. Seeley distributed and reviewed the updated 60% Construction Documents Phase Meetings Schedule and Agendas, attached.
38.6	J. Seeley	<p>J. Seeley distributed and reviewed the updated Project Schedule, incorporating the Site Permitting timeline for ZBA and Planning Board.</p> <p>Committee Discussion:</p> <ol style="list-style-type: none"> 1. P. Meier indicated the Appeal Period for the ZBA is 20 calendar days. <i>J. Seeley to correct the Appeal Period duration.</i> 2. P. Meier asked that a note be added on the schedule to indicate the durations are work days not calendar days. <i>J. Seeley will add note.</i>
38.7	K. Kovacs	<p>K. Kovacs distributed and reviewed the updated LVT Comparison Chart, attached.</p> <p>Committee Discussion:</p> <ol style="list-style-type: none"> 1. K. Kovacs explained Armstrong uses a different testing methodology to determine their Static Load and that Armstrong will provide a letter indicating their Static Load is equivalent to the 1,500 psi of the other manufacturers. 2. J. Potter asked what type of detergents will be required to be used on the LVT? <i>K. Kovacs will review and provide direction.</i>
38.8	Record	K. Kovacs indicated FAI recommends the plastic laminate clad wainscoat panels and has included in the 60% construction documents. Wolf Gordon and Acrovyn wainscoat may be reviewed if required for Value Engineering.
38.9	District	K. Kovacs indicated the 30" and 36" high locker mockups have been provided to the District for students to test out. The final decision will be made at an upcoming Educational Leadership Team meeting.

Item #	Action	Discussion
38.10	Record	K. Kovacs distributed and reviewed the Student Mural Wall, attached, which will provide the students opportunity to create painted mural panels. The Committee likes the mural concept.
38.11	J. Norton	J. Norton is developing a list of existing memorial items from the existing Peebles School and site that should be incorporated into the new school design.
38.12	K. Kovacs	K. Kovacs indicated the hardware consultant met with the Educational Leadership team to review the door hardware as well as the locking strategy for the connecting doors between classrooms. K. Kovacs to issue meeting minutes of the meeting.
38.13	Record	K. Kovacs distributed and reviewed the meeting minutes from the 4/6/2017 and 4/14/2017 Educational Leadership Meetings, attached.
38.14	K. Kovacs District	<p>K. Kovacs distributed and reviewed the updated Educational Meetings Action Items Log, dated 4/27/2017 and attached, tracking open issues from the Educational Leadership Meetings, as of the 3/30/2017 meeting. The items resolved since the last update are in blue. K. Kovacs and the District to resolve and record the open items.</p> <p>Committee Questions:</p> <ol style="list-style-type: none"> 1. J. Potter asked if any items since the last review will add cost to the project? <i>K. Kovacs indicated nothing since the last update has added cost.</i> 2. R. Lavoie asked if power and data are included in the base project to the manual vehicle gate at the playground? <i>K. Kovacs indicated no, they would need to be added if the gate is to be electrified. K. Kovacs to follow-up with the Fire Department on the final decision.</i>
38.15	K. Kovacs	K. Kovacs to locate the DAS display, which will show a continuous readout of the building's electric, gas and water usage.
38.16	Record	K. Kovacs presented the updated Site Plan, attached and reviewed in general the planting concept.
38.17	K. Kovacs	<p>K. Kovacs presented the updated Construction Phasing Diagrams, attached. K. Kovacs indicated that a location for the Topsoil Stockpile has been determined within the Phase 3 construction area. The approximate 12 parking space shortfall for teachers and staff during Phase 3 will be located in the adjacent high school parking lot operationally, not part of the construction work.</p> <p>Committee Discussion:</p> <ol style="list-style-type: none"> 1. K. Kovacs indicated the emergency and ADA access to the football field during construction will be from the Middle School. K. Kovacs will review with the Police and Fire Department.
38.18	K. Kovacs	K. Kovacs will study a darker aluminum finish for the window units in the Phenolic Wall Panel Areas for the next Committee meeting.

Item #	Action	Discussion
38.19	K. Kovacs	K. Kovacs to confirm with the roofing manufacturers what are the implications of being Solar PV Ready for the next Committee meeting.
38.20	K. Kovacs	K. Kovacs indicated the cost to increase the roofing membrane from 60 mil to 80 mil thickness and keeping the same 20 year warranty is approximately \$35,000. K. Kovacs to provide the cost increase to increase the 80 mil membrane to a 25 and 30 year warranty for next Committee meeting.
38.21	J. Seeley	J. Seeley indicated Cape Light Compact has provided an agreement for a Technical Assistance (TA) review to determine the incentive/rebate. E. Donoghue has signed the agreement and J. Seeley to return the signed agreement to Cape Light Compact.
38.22	K. Kovacs	K. Kovacs distributed and reviewed cut sheets of the Green Roof construction, attached. Committee Questions: 1. C. Hyldburg asked if the system affected the roofing warranty? <i>K. Kovacs indicated no.</i> 2. C. Hyldburg asked if the planting boxes and paver system met the wind and uplift issues found on the Cape? <i>K. Kovacs will review and provide direction to the Committee.</i> 3. C. Hyldburg asked what is the life expectancy of the sedum? <i>K. Kovacs will review and provide direction to the Committee.</i> 4. R. Lavoie asked if any of the plantings can be edible, such as vegetables? <i>K. Kovacs will review and provide direction to the Committee.</i> 5. J. Potter asked if there is a safety rail at the roof edge? <i>K. Kovacs indicated yes, a 46" high guardrail.</i> 6. R. Lavoie asked if the trays can be divided by the grades? <i>K. Kovacs indicated yes, and will provide a layout for Committee review.</i>
38.23	Record	K. Kovacs indicated the Polycarbonate panels cost approximately \$55/sf. Committee Questions: 1. P. Meier asked what is their expected lifespan? <i>K. Kovacs indicated 20 – 25 years.</i>
38.24	Record	K. Kovacs indicated the exposed 1x2 wood battens in the gymnasium has been changed to 1x2 PVC composite battens.
38.25	J. Potter K. Kovacs	J. Potter will provide a brief update to Town Meeting on 5/1/2017. FAI will provide a set of presentation boards for display in the lobby.

38.26 K. Kovacs
L. Vieira
D. Pereira

K. Kovacs introduced C. Garcia, L. Vieira and D. Pereira to provide a presentation on the MEP/FP systems, attached. Questions received from P. O'Keefe are answered in the presentation.

Committee Questions:

1. C. Hyldburg asked if there was a delay in changing from occupied mode to unoccupied mode and vice-versa?
L. Vieira indicated no, occupancy sensors work in conjunction with the CO2 sensors to provide timely changeover.
2. J. Potter asked if there will be a morning warm-up cycle?
L. Vieira indicated yes, warm-up and cool-down cycles will be programmed into the BMS system.
3. P. Meier asked if the VAV units have filters requiring maintenance?
L. Vieira indicated no, the only components that have filters are the RTU units.
4. W. Meier asked if the BMS system is on emergency power?
L. Vieira indicated the BMS is on emergency power and a UPS system.
5. C. Hyldburg asked if GGD can provide a maintenance protocol and rough order of magnitude cost for maintaining the HVAC system.
L. Vieira will provide for Committee review.
6. L. Vieira to include the sea coast coil coatings in the 60% construction documents cost estimate.
7. P. Meier asked how big is the fuel tank for the emergency generator?
D. Pereira indicated the tank is sized for a 48 hour run.
8. W. Meier asked if the 1,200 amp service is large enough?
D. Pereira indicted yes, the load is approximately 10watts/sf, the service is higher to accommodate starting and other simultaneous demand loads.
9. D. Pereira to include a line item for the power factor correction in the 60% construction documents cost estimate.
10. W. Meier indicated lightning has been a problem in other Town buildings with respect to false alarms for the fire alarm systems.
D. Pereira will check with the Fire Department for input.
11. J. Potter asked what is the life span for the UPS units?
D. Pereira indicated approximately 5 years.
12. P. Meier asked if tankless instantaneous water heaters were considered?
C. Garcia indicated no, there would be many, of differing sizes and more costly upfront and to maintain.
13. P. Meier asked if there are any emergency eye wash units for the students?
C. Garcia indicated no, emergency eye wash units are generally not provided in elementary schools.

Item #	Action	Discussion
38.27	Record	K. Kovacs presented the final exterior building materials, attached. The Committee agrees with the exterior building materials presented.
38.28	J. Potter J. Seeley P. Meier	Old or New Business: <ol style="list-style-type: none">1. J. Potter will contact the Town Moderator on the Member-at-Large vacancy.2. J. Seeley and J. Potter to coordinate on posting Committee meetings for the Interior Materials Review tours and the ZBA and Planning Board Hearings.3. P. Meier to coordinate car pooling for the Interior Materials Review tours of Freeman-Centennial School in Norfolk and the West Bridgewater Middle/High School.
38.29	Record	Next SBC Meeting: May 11, 2017 at 7:00 pm at the Bourne Veteran's Memorial Community Center to be reconvened to another room after the Hearing.
38.30	Record	A Motion was made by S. Lamarche and seconded by C. Hyldburg to adjourn the meeting. No discussion, voted unanimously.

Attachments: Agenda, updated 60% Construction Documents Phase Meetings Schedule and Agendas, updated Project Schedule, LVT Comparison Chart, Student Mural Wall , 4/6/2017 and 4/14/2017 Educational Leadership Meeting Minutes, Educational Meetings Action Items Log, updated Site Plan, Construction Phasing Diagrams, Green Roof construction cut sheets, MEP/FP Presentation, Building Exterior Design Update

The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes

PROJECT MEETING SIGN-IN SHEET

Project: Peebles Elementary School Feasibility Study Project No.: 15041
 Prepared by: Joel Seeley Meeting Date: 4/27/2017
 Re: School Building Committee Meeting Meeting No: 38
 Location: Bourne High School Library Media Center Time: 6:30pm

Distribution: Attendees, (MF)

SIGNATURE	ATTENDEES	EMAIL	AFFILIATION
	James L. Potter	onsetjp@juno.com	Chairman, School Building Committee
	Peter J. Meier	pmeier@townofbourne.com	Bourne Board of Selectmen
	Christopher Hyldborg	chris@alpha-1.com	Chairman, Bourne School Committee
	Natasha Scarpato	scarpato4@comcast.net	Bourne School Committee
	Donna Buckley	d.j.buckley23@gmail.com	Member-At-Large
	Richard A. Lavoie	RichL.Lavoie@gmail.com	Member, Bourne Finance Committee
	William Meier	Dusty22752@aol.com	Building Trade Expert
			Member-At-Large
	Frederick H. Howe	rickhowe9@gmail.com	Member-At-Large, Board of Health
	Steven M. Lamarche	slamarche@bourneps.org	Superintendent of Schools, BPS
	Edward S. Donoghue	EDonoghue@bourneps.org	Director of Business Services, BPS, MCPPO
	Thomas M. Guerino	tguerino@townofbourne.com	Town Administrator
	Paul O'Keefe	mmachief@gmail.com	Member, Facilities and Maintenance Expert
	Elizabeth A. Carpenito	ecarpenito@bourneps.org	Principal, BES
	Kathy Anderson	kanderson@bourneps.org	Elementary/Special Education Secretary
	Janey Norton	jnorton@bourneps.org	Principal, PES
	Kent Kovacs	kkovacs@flansburgh.com	Flansburgh Architects
	Betsy Farrell Garcia	bgarcia@flansburgh.com	Flansburgh Architects
	Bill Beatrice	bbeatrice@flansburgh.com	Flansburgh Architects
	Joel Seeley	jseeley@smma.com	SMMA
	Chris Garcia	chris_garcia@g-g-d.com	G&D
	Louis Vieira	Louis.Vieira@g-g-d.com	G&D
	David Pereira	david.pereira@g-g-d.com	G&D

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AGENDA

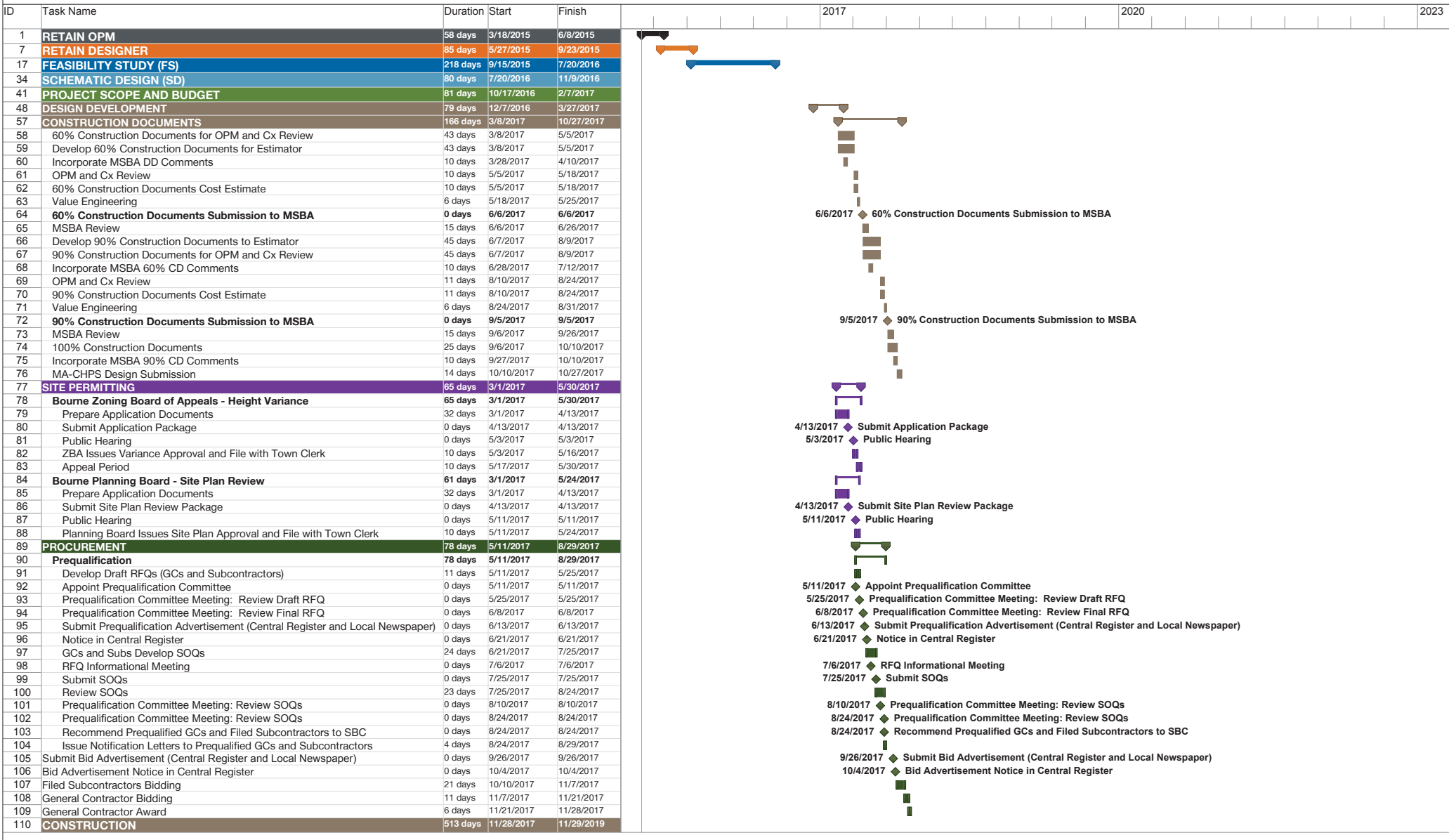
Project:	New Pebbles Elementary School	Project No.:	15041
Re:	School Building Committee Meeting	Meeting Date:	4/27/2017
Meeting Location:	Veterans Memorial Community Center	Meeting Time:	6:30 PM
Prepared by:	Joel Seeley	Meeting No.:	38
Distribution:	Committee Members (MF)		

1. Call to Order
2. Approval of Minutes
3. Approval of Invoices and Commitments
4. Review Meeting Actions Log
5. Review Final Floor Plan, Site Plans and Elevations
6. Review MEP Systems
7. Review LEED Scorecard
8. Review Final Interior Finish Materials
9. Decide Final Exterior Materials
10. Construction Logistics Plan Update
11. Site Permitting Update
12. Old or New Business
13. Public Comments
14. Next Meeting: May 11, 2017
15. Adjourn

SCHOOL BUILDING COMMITTEE
PEEBLES ELEMENTARY SCHOOL
 All meetings held at
Veterans Memorial Community Center at 6:30 PM
 unless otherwise noted
MEETINGS SCHEDULE AND AGENDAS

February 22, 2017 **Updated April 27, 2017**

DATE	AGENDA
60% Construction Documents Phase	
March 16, 2017	BUILDING COMMITTEE MEETING @ HIGH SCHOOL LIBRARY MEDIA CENTER Review Overall Construction Document Phase Schedule Review 60% Construction Document Schedule Review Educational Leadership Meetings Schedule Review Updated Floor Plans and Site Plans Site Permitting Update
March 30, 2017	BUILDING COMMITTEE MEETING - CANCELLED Review Updated Floor Plans and Site Plans Review Updated Exterior Elevations Review MSBA Design Development Submission Comments Review Meeting Actions Log
April 13, 2017	BUILDING COMMITTEE MEETING Review Updated Interior Elevations and Materials Review Technology Systems
April 27, 2017	BUILDING COMMITTEE MEETING Review Interior Finish Materials Decide Final Exterior Materials Review Final Floor Plans, Site Plans and Elevations Review MEP Systems Review LEED Scorecard Construction Logistics Plan Site Permitting Update
May 3, 2017	ZONING BOARD OF APPEALS - HEIGHT VARIANCE @ 7:00 PM - TOWN HALL
May 4, 2017	INTERIOR FINISHES & MATERIALS REVIEW TOUR: FREEMAN-CENTENNIAL SCHOOL, NORFOLK @ 3:30 PM
May 9, 2017	INTERIOR FINISHES & MATERIALS REVIEW TOUR: WEST BRIDGEWATER MIDDLE/HIGH SCHOOL @ 3:00 PM
May 11, 2017	PLANNING BOARD - SITE PLAN REVIEW @ 7:00 PM - VETERANS MEMORIAL COMMUNITY CENTER
May 11, 2017	BUILDING COMMITTEE MEETING @ TBD Decide Prequalification Subcommittee Construction Logistics Plan Review Preliminary List of Value Engineering Items
May 25, 2017	PREQUALIFICATION SUBCOMMITTEE MEETING @ TBD
May 25, 2017	BUILDING COMMITTEE MEETING Review Prequalification Status Review Reconciled 60% Construction Documents Cost Estimate Decide Value Engineering Items Vote to Submit 60% Construction Documents Package to MSBA
June 6, 2017	SUBMIT 60% CONSTRUCTION DOCUMENTS PACKAGE TO MSBA
	ADDITIONAL MEETINGS TO BE SCHEDULED



Meeting Notes

DATE: April 06, 2017

PROJECT: Bourne Public Schools

PROJECT NO: Bourne Peebles School – 1514.00

PRESENT: Jane Norton – Principal Peebles Elementary Schools
Ed Donoghue – Director of Business Services
Michael Cimorelli – Flansburgh Architects
Kent Kovacs – Flansburgh Architects

DISTRIBUTION: Attendees

A series of discussions took place on Thursday, April 06th regarding the development of the site design for the new Peebles Elementary School.

Site Design: Playground Layout

- The group reviewed the layout of the playground and garden areas.
- It was discussed that the school would like a singular basketball hoop supported by a paved surface with a free throw line. The area best suited for the basketball area is between the exterior wall of the kitchen and the soft surface play equipment area to the west.
- To accommodate the basketball area, the soft surface play equipment area would require reshaping to maintain the SF requirements. The play area can be expanded to the south. This area to the south will be shaded with perimeter trees.
- A tree buffer will separate the garden area from the hard surface play area. The hard surface play area will be colored asphalt with various line painting for games/activities.
- The group looked through a series of playground equipment possibilities via a web-based search and printed catalog brochures to initiate ideas for the play structures. The district expressed that one large play structure was not desirable but rather multiple smaller structures with different functions is the preference.

Site Design: Entry Plaza

- A perspective drawing of the entry plaza was shown to the group. The district commented that the concrete bollards were not attractive and asked Flansburgh to

Flansburgh Architects

look into other options. The group studied other examples via a web-based search and expressed that wood bollards would a better fit with the school aesthetic.

- The district was favorable to an accent color applied to the media center soffit. Shades of the school color to be evaluated.

Meeting Notes

DATE: April 14, 2017

PROJECT: Bourne Public Schools

PROJECT NO: Bourne Peebles School – 1514.00

PRESENT: Steven Lamarche – Superintendent, Bourne Public Schools
Jane Norton – Principal Peebles Elementary Schools
Elizabeth Carpenito – Principal Bournedale Elementary Schools
Melissa Ryan – Principal, Bourne Middle School
Edward Donoghue – Director of Business Services
Julie Thompson – Elementary Curriculum Director
Kent Kovacs – Flansburgh Architects
Betsy Farrell Garcia – Flansburgh Architects

DISTRIBUTION: Attendees

A series of discussions took place on Friday, April 14th regarding the development of the new school building and site design for the new Peebles Elementary School.

Building Design:

- The interior design and materials update was presented to the group. The group was favorable to the warm gray wood tones of the floor, the “clean line” architectural aesthetic of the board & batten on selected walls, and the designated accent color walls.
- The group review the interior materials proposed for the project. It was discussed to change the proposed 1”x 2” wood batten in the gymnasium to 1” x 2” PVC composite batten for durability at the gym only.
- The mock-up 12” x 30” locker sample was discussed. The proposed 12” wide x 12” depth locker is acceptable by the district. Students will test the height of the double-tiered locker unit. District to provide findings.

Site Design:

- The group expressed a “timber” style bollard would be more appropriate than the proposed precast concrete bollard the bus drop off and parent drop-off locations. FAI to study options.

- FAI described the driveway to the north along the parent drop-off would have a timber guard rail like the timber guard rail at the new lot near School Road entrance.

Existing Field Access

- The group reviewed the phasing plans to understand the impact the proposed planning had on emergency vehicles and handicap access to the existing athletic field. There are two gated access points currently to support the emergency vehicle and handicap access, one located at the north-east corner connecting the Peebles School to the field and the other on the south-west corner connecting the Middle School to the field.
- The district determined that maintaining the Middle School connection only will be sufficient to support field activities during the construction of the new Peebles School. The Middle School area is supporting by parking, two handicap parking spaces adjacent to the concession stand and emergency vehicle drive with swing gate. Refer to attached site plan for detail.



Date	Meeting Comment	Party	Resolution
December 14, 2016 Educational Meeting			
1	12/14/2016 Nurse: The nurse requested a dedicated icemaker. This item will require a decision by the District.	District	A refrigerator / freezer with ice maker will be provided. A stand alone dedicated ice maker is not required per district's response at the March 13,2017 Educational Design Meeting
2	12/14/2016 Music: It was requested after further review to change one practice room into a music office. FAI stated this request would need to be confirmed at the January 5th Academic Leadership team meeting.	FAI	This item was discussed at the January 5, 2017 Educational meeting and approved. FAI to update plans and space template.
3	12/14/2016 Art: It was requested that a minimum of three sinks to be provided with plaster traps.	FAI	This item has been incorporated into the art room layout
4	12/14/2016 Art: A request was made to incorporate a singular peninsula configuration similar to the Bournedale art room for greater access to sinks. FAI to review.	FAI	This item has been incorporated into the art room layout
5	12/14/2016 Art: Student work display areas should be studied both inside the art room and hallway areas. FAI to review.	FAI	A display case has been provided a node between MC and Art studio. Tackboards have been provided inside the room for pin-up.
6	12/14/2016 Art: An office was requested beyond the already submitted MSBA space template. FAI explained the size of the art room and storage may reduce in size to accommodate this request would be discussed at the January 5th Academic Leadership team meeting.	FAI	This item was discussed at the January 5, 2017 Educational meeting and approved. FAI to update plans and space template.
7	12/14/2016 Library: A workroom and office should be incorporated into the overall layout. The workroom will require a sink. The main circulation desk does not need to be adjacent to the workroom and office.	FAI	The workroom with sink and office has been incorporated into the plan.
8	12/14/2016 Library: The main circulation desk should have high counter portion "check-out" with a lower section at standard desk height. A book return area should be incorporated into the desk. District to confirm if a book return slot is required between the hallway and the media center.	District	A book return slot is not required between the hallway and media center. This item was discussed and deemed unnecessary at the March 13,2017 Educational Design Meeting
9	12/14/2016 Library: Fixed bookcases along the perimeter walls with mobile bookcases in the open areas can optimize flexibility. The District should provide FAI with anticipated book volume count to assist in planning bookcases and any required media storage area.	District	

Date		Meeting Comment	Party	Resolution
10	12/14/2016	Grade 3: An exterior door was requested from the team room directly to the outdoor garden area. FAI stated this could be accommodated.	FAI	This item was discussed at the January 5, 2017 Educational meeting and approved. FAI to update plans.
11	12/14/2016	Grade 3: It was requested that connecting doors located between classrooms. FAI stated connecting doors were part of the project in the last phase and removed due to cost. This request will be discussed at the January 5th Academic Leadership team meeting.	FAI	This item was discussed at the January 5, 2017 Educational meeting and discussed and approved at the February 2, 2017 SBC. FAI to update plans.
12	12/14/2016	Grade 4: It was requested an additional teacher's toilets be located closer to the 4th grade. After review of the plan, one additional teacher's toilet can be incorporated on the second floor. This provides a total of 2 singular staff toilets on the first floor adjacent to the staff workroom, 2 singular staff toilets on the first floor within the administration suite, and 3 singular staff toilets on the second floor.	FAI	One singular staff toilet room has been provided within the 4th grade academic wing.
December 15, 2016 Educational Meeting				
1	12/15/2016	Physical Education: A water fountain was requested within the gym space. FAI stated this item will be incorporated.	FAI	The sink has been incorporated into the gymnasium layout.
2	12/15/2016	Physical Education: The gym instructor liked the idea of having moveable bleachers for flexibility. FAI to study further.	FAI	Bleachers will be fixed and justified to the southern wall only per district's response at the March 13, 2017 Educational Design Meeting
3	12/15/2016	Physical Education: An office was requested beyond the already submitted MSBA space template. FAI explained the size of storage area will be reduced in size to accommodate and this request will be discussed at the January 5th Academic Leadership team meeting.	FAI	This item was discussed at the January 5, 2017 Educational meeting and discussed and approved at the February 2, 2017 SBC. FAI to update plans.
4	12/15/2016	Physical Education: A request for a toilet and shower may be accommodated in the nearby custodial/kitchen area for shared use. FAI stated this request would need to be confirmed at the January 5th Academic Leadership team meeting.	FAI	This item was discussed and approved at the January 5, 2017 Educational meeting. FAI to update plans.

Date		Meeting Comment	Party	Resolution
5	12/15/2016	Physical Education: The gym instructor was concerned outdoor play area and lawn would be limited to the new construction of the school. FAI stated during construction, the area in front of the existing Peebles (grass area currently used for PE) would be utilized by the contractor. After the final site work phase, there will be lawn area adjacent to the new tennis court. The instructor asked if a stone dust walking/jogging path could be created. FAI to review.	FAI	Outdoor lawn area with a walking / jogging path around the perimeter has been incorporated into the project
6	12/15/2016	Administration: It was mentioned that an additional office would be required to support the administration team for a desired total of five offices. We discussed reducing the conference rooms to accommodate the request. FAI stated this request would need to be confirmed at the January 5th Academic Leadership team meeting.	FAI	This item was discussed and approved at the January 5, 2017 Educational meeting. FAI to update plans.
7	12/15/2016	Administration: Storage strategies were discussed with options for both storage rooms for records and general hallway closets to accommodate office material. FAI to review.	FAI	Hallway closets will not be provided. The storage rooms will have shelving and tall storage cabinets. Individual office storage will be FFE. General office storage is accommodated in the Mail/Copy area with base and wall cabinets
8	12/15/2016	Administration: The mail/copy area was discussed with opportunities for a kitchenette as well as a work surface area for assembling documents. FAI to study this area further.	FAI	The office suite Mail/Copy area has a kitchenette counter w/sink and refrigerator on the north side and a continuous working surface on the south side.
9	12/15/2016	Middle School (5th Grade): Connecting doors were requested. FAI stated this request would need to be confirmed at the January 5th Academic Leadership team meeting.	FAI	This item was discussed at the January 5, 2017 Educational meeting and discussed and approved at the February 2, 2017 SBC. FAI to update plans.
10	12/15/2016	Middle School (5th Grade): Teachers asked if fixed desktop computers are planned for each classroom. FAI stated they are not and student use within the classrooms would be laptop or tablet based. District to confirm hardwired fixed desktops computers are not required within the classroom for student use.	District	General classrooms will not have fixed desktop computers for student use per district's response at the March 13, 2017 Educational Design Meeting
11	12/15/2016	Middle School (5th Grade): It was noted that a dedicated space to accommodate two small buses supporting students with needs should be provided. FAI to study location.	FAI	This item was discussed at the January 5, 2017 and January 27, 2017 Educational meeting. The dedicated space will be located on the north-side of the building adjacent to the parent pick-up and drop-off.
12	12/15/2016	Computer: The floor plans were reviewed and designed computer areas discussed. There are limited fixed desktop machines in the iStudio (3-4 total) and in the Media Center (10-12 total). The classroom zone of the Media Center may be laptop or tablet based to accommodate 24 students. District to confirm hardwired fixed desktops computer locations.	District	The iStudio will have 6 desktop computer and the Media Center will have 12 desktop computers for student use per district's response at the March 13, 2017 Educational Design Meeting
13	12/15/2016	Innovation Studio: There was a request for an additional open shelving wall that could be concealed with sliding marker boards fixed to the front. FAI will review the request with the furniture consultant.	FAI	The istudio will have one storage and marker board assembly to maximize writing surfaces due to minimal wall surface.

Date		Meeting Comment	Party	Resolution
14	12/15/2016	Innovation Studio: The ceiling will remain open to provide the opportunity to hang objects/devices from structure above. The exposed deck and any ductwork will be painted a dark color. Color to be determined. FAI request the District decide if the adjoining art room shall have an exposed ceiling for consistency.	FAI	The Innovation Studio and Art room ceilings will be painted exposed deck and ductwork. This item was discussed at the February 16,2017 Educational meeting
15	12/15/2016	Innovation Studio: Anticipated equipment is as follows: 3D-printer, laser cutting, 3 to 4 fixed computer stations serving equipment. Computers required hard connection to equipment. FAI to review with Technology consultant. District to confirm list of equipment to assist in mechanical ventilation requirements of space.	District/FAI	
16	12/15/2016	Custodians & Cafeteria: Site Related Items - The existing Peebles does not have a dumpster or compactor. All trash is collected in 50 gallon barrels, stored then loaded into a pickup truck. There may be a garbage truck in the future with the capacity to empty a dumpster. The project will be designed with the loading dock. A dock lift was requested to bring barrels and other materials down to the driveway elevation. FAI stated this is costly and not in the budget. The custodians requested a walking path that would connect the loading dock with the driveway. A dock leveler was also requested that is not currently in to budget. the custodians stated a loading plate would satisfy this need in lieu of a dock leveler. The District should provide the desired dumpster or compactor specifications to assist in designing the loading dock and any power requirements for the compactor.	District	A compactor is not required as discussed at the March 30, 2017 Facilities meeting. A dumpster will be provided.
17	12/15/2016	Custodians & Cafeteria: Site Related Items - The custodians requested a stone dust drive connecting the middle school to the existing storage shed. FAI to evaluate if this connection is possible.	FAI	A crushed stone access road has been developed and incorporated into the project.
18	12/15/2016	Custodians & Cafeteria: Building-Related Items - It was requested that a 4'-0" chase with a full man-door be provided in between the gang toilets. FAI stated this is not a possibility due to space limitations. Access panels will be provided along the chase wall. FAI to follow up with GGD on location and size.	FAI	
19	12/15/2016	Custodians & Cafeteria: Building-Related Items - One larger continuous sink per gang toilet was requested in lieu of 2 individual sinks in each gang toilet. FAI to follow up with GGD on this item.	FAI	Confirmed. Current documents indicate this.
20	12/15/2016	Custodians & Cafeteria: Building-Related Items - It was requested light fixtures in the egress stairs shall be wall mounted sconces for ease of access in lieu of "hard to reach" ceiling fixtures. FAI to follow up with GGD.	FAI	

Date		Meeting Comment	Party	Resolution
21	12/15/2016	Custodians & Cafeteria: Building-Related Items - FAI asked if the Boston Food Bank space, currently in the existing Peebles, should be accommodated into the new layout. The District should confirm if this space is required.	District	Special space accommodations for the Food Bank are not required in the new kitchen design. The kitchen design, as documented in the Design Development Set, satisfies the kitchen requirements per district's response at the March 13, 2017 Educational Design Meeting
22	12/15/2016	Custodians & Cafeteria: Building-Related Items - A student tray and dish window was requested from the main cafeteria. The District should confirm if trays and dishware will continue to be used by students or if disposable type is planned for the future. A future meeting with the kitchen director is required.	District	These items are required per January 25, 2017 Food service meeting. The tray window and dishwasher has been accommodated in the new kitchen design.
23	12/15/2016	Custodians & Cafeteria: Building-Related Items - There was a request for a singular shower, toilets, and washer/dryer to be shared between custodial, kitchen and gym instructor. FAI stated this request would need to be confirmed at the January 5th Academic Leadership team meeting.	FAI	These items have been incorporated into the project
24	12/15/2016	Custodians & Cafeteria: Building-Related Items - A request for electric hand dryers in the gang toilets was requested. This would be total of 8 electric hand dryers. Paper towels can be used in the singular staff and SPED toilets. District to confirm this request.	District	Electric hand dryers are required at the community-use toilets adjacent to the gymnasium and cafeteria only. This is a total of 2 electric hand dryers. Paper towels will be used at singular staff, SPED toilets and gang toilets serving grades 3, 4 and 5 per district's response at the March 13, 2017 Educational Design Meeting
25	12/15/2016	Custodians & Cafeteria: Building-Related Items - There was a request to incorporate floor drains at all gang toilets. FAI to review the request.	FAI	Floor drains will be provided at gang toilets only
January 5, 2017 Educational Meeting				
1	1/5/2017	Gymnasium: The gym instructor like the idea of having moveable bleachers for flexibility. The District stated the target bleacher seat count should be 200. Students can be seated on the floor surface during an all student assembly. The group asked if the bleachers could be justified to one side only to maximize useable space on the opposing side. FAI to study bleacher configurations, both fixed and moveable.	FAI	Bleachers will be fixed and justified to the southern wall only per district's response at the March 13, 2017 Educational Design Meeting
2	1/5/2017	Cafeteria: A requested student tray and dish window from the 12/15/2016 meeting was discussed. The District should confirm if trays and dishware will continue to be used by students or if disposable type is planned for the future. A future meeting with the kitchen director is required.	District	These items are required per January 25, 2017 Food service meeting. The tray window and dishwasher has been accommodated in the new kitchen design.

Date		Meeting Comment	Party	Resolution
3	1/5/2017	Cafeteria: The requested shower, toilets, and washer/dryer from the 12/15/2016 meeting were discussed. This was acceptable by the group. FAI to study arrangement.	FAI	These items have been incorporated into the project
4	1/5/2017	Academic Wings: The group discussed the connecting doors requested at 12/14/2016 and 12/15/2017 meetings. The leadership team decided the doors should be incorporated into the project. FAI stated this item to be discussed at the January 5th SBC meeting.	FAI	Connecting doors have been incorporated into the project
January 26, 2016 Site Design Meeting				
1	1/26/2017	Site Design: Vehicular circulation for both cars and buses remains largely unchanged from the SD submission. The 24' wide, one-way circulation has been maintained. A crushed stone vehicular access from the Middle School to the maintenance shed has been added for pricing purposes. Cost will determine if the access drive remains in the project.	FAI/WDA	The crushed stone access drive has been incorporated into the project and is within the project budget.
2	1/26/2017	Site Design: Pedestrian circulation from Trowbridge Road and around the perimeter of the building also remains largely unchanged. The width of the sidewalk from Trowbridge Road to the main entrance has been widened to 8' minimum to accommodate shared pedestrian and bike use to allow us to meet the criteria for the LEED Location and Transportation credit for Bicycle Facilities. Additional pedestrian paths to connect the new school to the larger campus have been introduced for pricing purposes. Cost will determine if the paths remain in the project.	FAI/WDA	A stone dust pathway connecting to the middle school has been incorporated into the project and is within the project budget.
3	1/26/2017	Playground Area: Program elements will include at least one play structure for age 5-12 children, the size of which will be determined based on the total square foot area of the designated structure area; a paved free play area with painted pavement striping for games (foursquare, hopscotch, etc.); a student garden area with raised timber planters; and four benches and two trash/recycling receptacles.	FAI/WDA	
January 27, 2017 Food Service Meeting				
1	1/27/2017	Change the 5 well hot wells to 4 well hot wells	FAI/TDA	This has been updated on latest plan.
2	1/27/2017	Change two of the hot cabinets to cold cabinets. A total of 2 hot and 2 cold cabinets to be provided.	FAI/TDA	This has been updated on latest plan.

Date		Meeting Comment	Party	Resolution
3	1/27/2017	Add a microwave oven	FAI/TDA	This has been updated on latest plan.
4	1/27/2017	Add a Robo coup, food processor	FAI/TDA	This has been updated on latest plan.
5	1/27/2017	Range to have storage base, not oven base	FAI/TDA	This has been updated on latest plan.
6	1/27/2017	Two flat top condiment carts to be added to the cafeteria space with enclosed base.	FAI/TDA	This has been updated on latest plan.
7	1/27/2017	Remove one section of storage shelving and add two can racks in place.	FAI/TDA	This has been updated on latest plan.
8	1/27/2017	Worktables to have casters	FAI/TDA	This has been updated on latest plan.
9	1/27/2017	Convection ovens to have casters and flexible gas connection.	FAI/TDA	This has been updated on latest plan.
10	1/27/2017	Steamer to be boiler less unit.	FAI/TDA	This has been updated on latest plan.
11	1/27/2017	Add kettles (two trunnion)	FAI/TDA	This has been updated on latest plan.
12	1/27/2017	Remove one double convection oven	FAI/TDA	This has been updated on latest plan.

Date		Meeting Comment	Party	Resolution
13	1/27/2017	Add pot rack over item FS-21	FAI/TDA	This has been updated on latest plan.
14	1/27/2017	Add over shelves to items FS-14, FS-15 and FS-20	FAI/TDA	FS-15 is a cold cabinet. FS-14 and FS-20 have overshelves per latest plan.
15	1/27/2017	Relocate door into office to kitchen side	FAI/TDA	This has been updated on latest plan.
16	1/27/2017	TDA to update layout and provide cut sheets.	FAI/TDA	This has been updated within the Design Development submission
February 15, 2017 MEP/FP Meeting				
1	2/15/2017	150kw natural gas generator originally proposed to back up life safety/basic systems. 250kw diesel generator carried in estimate set for inclusion of the kitchen load in "shelter" scenario. Natural gas generators 200kw and above triggers a significant increase in cost, therefore diesel was proposed for the 250kw. Generator calculation to be provided.	FAI/GGD	The 250 kw diesel generator has been incorporated into the cost of the project. This item was discussed at the March 30, 2017 School Facilities meeting. Generator load calculations and a list of items supported by the generator are included.
2	2/15/2017	Addressable fire alarm system to be provided. Fire alarm control panel to be located in the Main Electrical Room and the annunciator panel located in the Main Vestibule. System requirements to be confirmed with fire department.	FAI/GGD	Meeting with Fire Department took place 3/2/17 where system requirements were confirmed.
3	2/15/2017	Fire Department Connection was pointed out. This location and other Fire Department related questions will be confirmed at the meeting with Fire Department, scheduled for 2/13/2017.	FAI/GGD	Locations of fire department connections have been coordination with Bourne FD. Two connections will be provided for the building.
4	2/15/2017	A plumbing fixture cut package will be provided at 60%CD for review.	FAI/GGD	

Date	Meeting Comment	Party	Resolution
March 2, 2017 Bourne Police and Fire Department Meetings			
1	3/2/2017 Fire Department connection is 4" Storz type. Provide two connections on building. One connection to be located on north side of building near Classroom wing. Second connection to be located on south side of building adjacent to receiving area. Signage to be provided on the building above each fire department connection.	FAI Veri/Waterman/ GGD	
2	3/2/2017 BDA to be used to amplify Fire Department radio only.	FAI Veri/Waterman/ GGD	
3	3/2/2017 Automatic sprinkler system will be wet type. Three sprinkler zones to be provided - 1) First Floor Classroom Wing, 2) First Floor Assembly areas and 3) Second Floor Classroom wing. All sprinkler zones will have dedicated supervised shutoff valve and flow switch.	FAI Veri/Waterman /GGD	Confirmed. Current documents indicate this.
4	3/2/2017 New addressable fire alarm system will be provided. Alarm transmission is through central station.	FAI Veri/Waterman / GGD	Confirmed with fire department on 3/2/17
5	3/2/2017 Main Electric Room and Main Emergency Electric Room will not be protected with automatic sprinklers. Room will be 2-hour rated. These rooms will have smoke detectors.	FAI Veri/Waterman/ GGD	Confirmed. Current documents indicate this
6	3/2/2017 CO detectors provided in kitchen at cooking island. CO to be provided outside of rooms where natural gas heating equipment is provided. CO detection shall put building into alarm.	FAI Veri/Waterman /GGD	Confirmed with fire department on 3/2/17
7	3/2/2017 Standpipe connects to be provided in Classroom wing. Standpipe to be provided in each stair with a third located near elevator.	FAI Veri/Waterman/ GGD	Confirmed. Current documents indicate this.

Date		Meeting Comment	Party	Resolution
8	3/2/2017	Reviewed site entry points, parking, bus queues and parent drop-off routes. Nine (9) buses are typically used - in (2) shifts, buses will not be "doubled up." No additional changes were requested. FAI to follow up with District on "Event" parking.	FAI Veri/Waterman	There is a total of 130 new parking spaces: 100 @ main lot, 21 @ tennis court, and 9 @ service area. Additional event parking will be supported by the existing High School and Middle School lots
9	3/2/2017	Width of entry has been increased to 20'-0" as previously requested.	FAI Veri/Waterman	The 20'-0" entry drive width has been incorporated.
10	3/2/2017	Precast curbs will be used at the straight runs, granite curbs for the curved sections. Mountable granite curb has been provided for firetrucks to access the rear play area (west elevation.)	FAI Veri/Waterman	This item has been incorporated
11	3/2/2017	BFD requested gate providing access for firetrucks at rear play area be electrified and tied into the fire alarms system. District to evaluate this request.	District	
12	3/2/2017	Lettering on building shall be 12" tall (building number/school name). All exterior doors shall be numbered (6" tall) located above doors. Pairs of doors are considered one number.	FAI Veri/Waterman	These item has been incorporated
13	3/2/2017	BFD has requested an 18" border of crushed stone around the base of the building. Veri/Waterman to review and include in base design.	FAI Veri/Waterman	This item has been incorporated
March 13, 2017 Technology and Security Meeting				
1	3/13/2017	District Fiber will need to be extended/relocated to the new school. The fiber is owned by the District. The Owner's vendor is Comm-tract. Contact is Bryan Hopkins. D. Faria recommended that the Owner continue with Comm-tract for this work and suggested that they be contacted sooner rather than later for a quote for budgeting purposes.	District	

Date		Meeting Comment	Party	Resolution
2	3/13/2017	Existing Smartboards will be re-purposed where possible and practical. One will be located in the library, near the entrance. District to evaluate, select, and store existing Smartboards for re-use.	District	
3	3/13/2017	A fixed computer station is required in adjacent to Lobby 101 and the Administration suite. Flansburgh to coordinate location.	FAI	This item has been incorporated
4	3/13/2017	Surveillance camera will be added in the iStudio.	FAI	This item has been incorporated into the project for security and safety purposes
5	3/13/2017	Surveillance camera will be added at the Loading Dock/Emergency Access Area.	FAI	This item has been incorporated into the project for security and safety purposes
6	3/13/2017	Ai Phone will be added outside the library stairs exterior, Office 153, and Office 107	FAI	This item has been incorporated into the project for security and safety purposes
7	3/13/2017	Surveillance camera will be added to Corridor 135.	FAI	This item has been incorporated into the project for security and safety purposes
8	3/13/2017	Surveillance camera will be added in the corridor adjoining the 2nd floor bathrooms	FAI	This item has been incorporated into the project for security and safety purposes
9	3/13/2017	Surveillance camera will be added to cover the tennis courts.	FAI	This item has been incorporated into the project for security and safety purposes

Date		Meeting Comment	Party	Resolution
March 30, 2017 Site Design and Planning Meeting				
1	3/30/2017	Site: It was discussed that main parking area will have no islands as suggested in the previous meeting by the facilities group. FAI noted that light posts with concrete bases are within the open parking area and should use caution when plowing. FAI to provide a detail on the concrete light pole base.	FAI	
2	3/30/2017	Site: The district discussed relocating the existing portable trailer from the gravel lot to the south of the annex to the south side of the maintenance building. A second storage structure in the gravel area will be relocated by the district - new located TBD. The district to confirm final location and moving date with the Architect. FAI noted both structures must be removed from the gravel lot area by September 2017.	FAI District	
3	3/30/2017	Site: The facilities group asked if the stone dust path, located north to south, along the western edge of the softball field be asphalt in lieu of stone dust for snow maintenance purposes. The circular jogging path adjacent to this walk to remain stone dust. FAI will review potential cost increase and discuss with SBC.	FAI	
April 6, 2017 Site Design and Planning Meeting				
1	4/6/2017	Playground Layout: It was discussed that the school would like a singular basketball hoop supported by a paved surface with a free throw line. The area best suited for the basketball area is between the exterior wall of the kitchen and the soft surface play equipment area to the west.		
2	4/6/2017	Site Design - Entry Plaza: A perspective drawing of the entry plaza was shown to the group. The District commented that the concrete bollards were not attractive and asked Flansburgh to look into other options. The group studied other examples via a web-based search and expressed that wood bollards would be a better fit with the school aesthetic.		
3	4/6/2017	Site Design - Entry Plaza: The District was favorable to an accent color applied to the media center soffit. Shades of the school color to be evaluated.		
April 14, 2017 Site Design and Planning Meeting				
1	4/14/2017	Building Design: The group review the interior materials proposed for the project. It was discussed to change the proposed 1" x 2" wood batten in the gymnasium to 1" x 2" PVC composite batten for durability at the gym only.		
2	4/14/2017	Building Design: The mock-up 12" x 30" locker sample was discussed. The proposed 12" wide x 12" depth locker is acceptable by the District. Students will test the height of the double-tiered locker unit. District to provide findings.		
3	4/14/2017	Site Design: The group expressed a "timber" style bollard would be more appropriate than the proposed precast concrete bollard the bus drop off and parent drop-off locations. FAI to study options.		

School Building Committee
April 27, 2017

Peebles Elementary School Design Update



PROJECT MANAGEMENT **SMMA**
Massachusetts School Building Authority

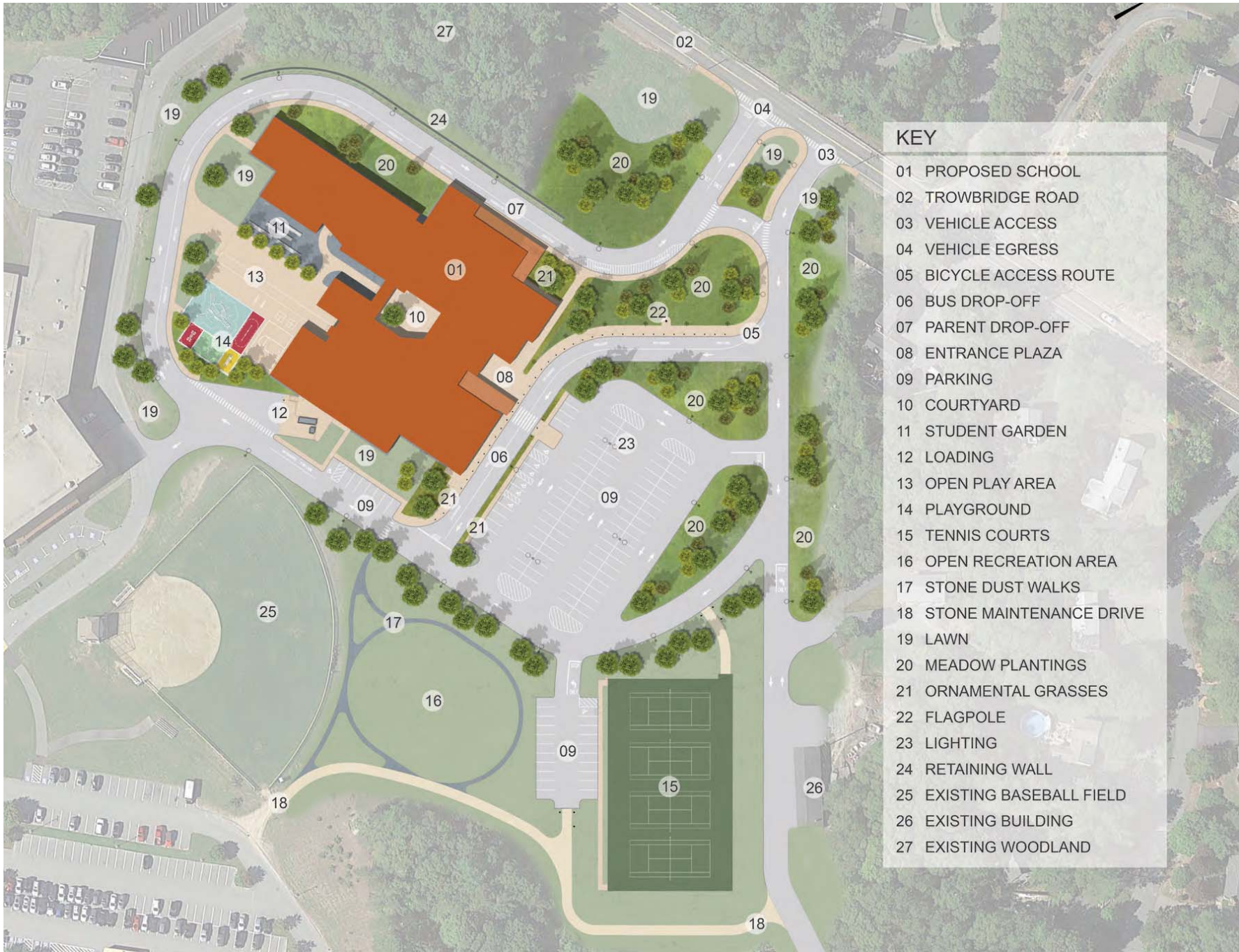
Flansburgh Architects

Site Plan Update

PROJECT MANAGEMENT **SMMA**
Massachusetts School Building Authority

Flansburgh Architects





KEY	
01	PROPOSED SCHOOL
02	TROWBRIDGE ROAD
03	VEHICLE ACCESS
04	VEHICLE EGRESS
05	BICYCLE ACCESS ROUTE
06	BUS DROP-OFF
07	PARENT DROP-OFF
08	ENTRANCE PLAZA
09	PARKING
10	COURTYARD
11	STUDENT GARDEN
12	LOADING
13	OPEN PLAY AREA
14	PLAYGROUND
15	TENNIS COURTS
16	OPEN RECREATION AREA
17	STONE DUST WALKS
18	STONE MAINTENANCE DRIVE
19	LAWN
20	MEADOW PLANTINGS
21	ORNAMENTAL GRASSES
22	FLAGPOLE
23	LIGHTING
24	RETAINING WALL
25	EXISTING BASEBALL FIELD
26	EXISTING BUILDING
27	EXISTING WOODLAND



Quercus bicolor
Swamp White Oak



Juniperus virginiana
Eastern Red Cedar



Quercus alba
White Oak



Ilex glabra
Winterberry



Roller Table



Oodle Swing



Power Lifter Triple Bay



We Saw



Quercus palustris
Pin Oak



Pinus rigida
Pitch Pine



Cercis canadensis
Eastern Redbud



Calamagrostis x acutiflora
Feather Reed Grass



Schizachyrium scoparium
Little Blue Stem



Acer rubrum 'Red Sunset'
October Glory Red Maple



Cornus florida
Flowering Dogwood



Clethra alnifolia
Summersweet



Evos



Ammelanchier canadensis
Serviceberry



Nyssa sylvatica
Black Tupelo



Cornus sericea Farrow
Arctic Fire Redtwig Dogwood



Ilex glabra
Inkberry



Meadow Grass - A selection of native grasses and wildflowers that will mature into a colorful and vibrant native meadow.

Phasing Update



PROJECT MANAGEMENT **SMMA**
Massachusetts School Building Authority

Flansburgh Architects

PHASE 1

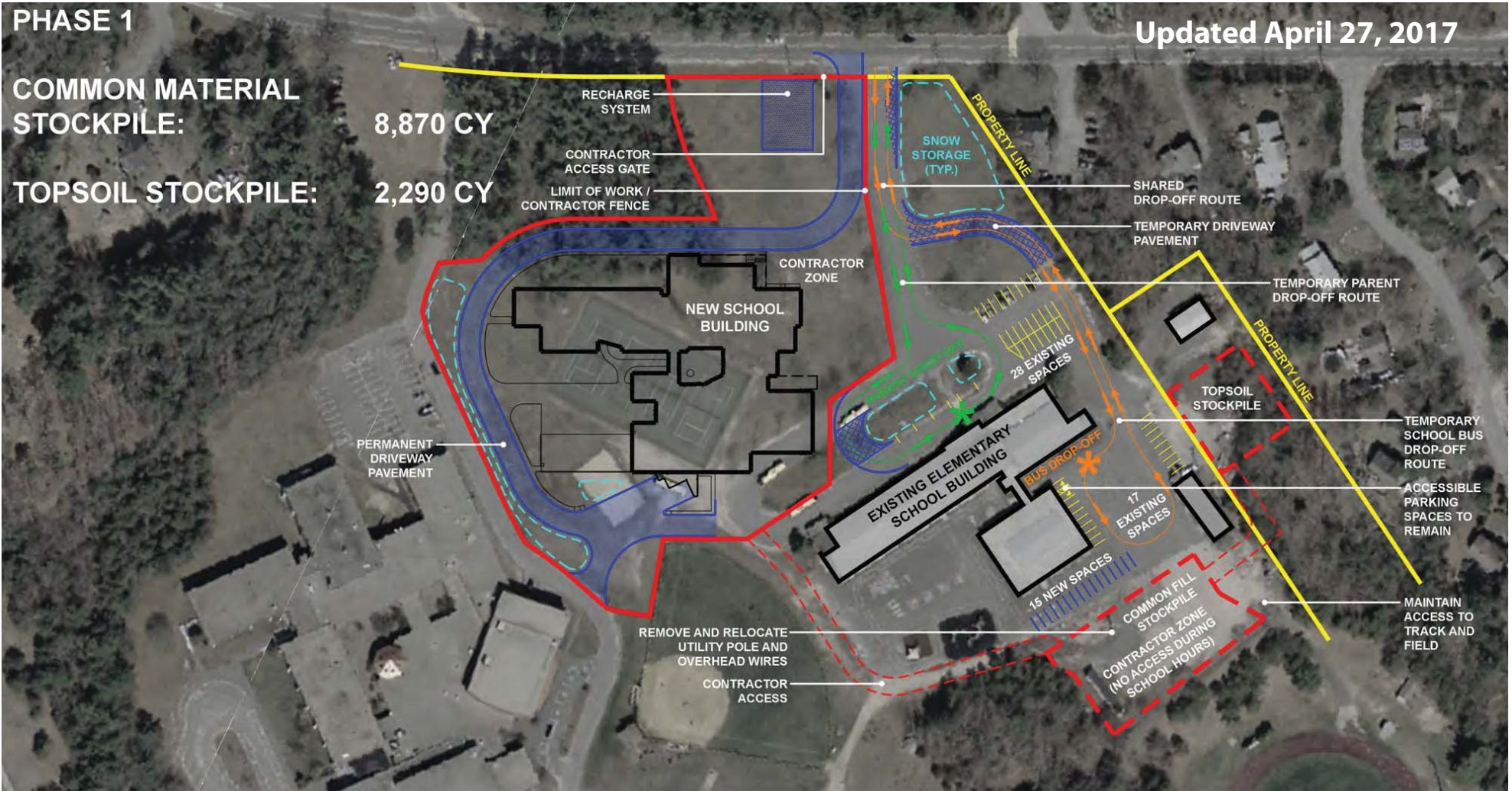
Updated April 27, 2017

COMMON MATERIAL STOCKPILE:

8,870 CY

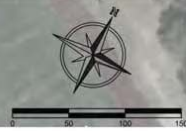
TOPSOIL STOCKPILE:

2,290 CY



PHASE 1

December 2017 through June 2019



PHASE 2

Updated April 27, 2017

COMMON MATERIAL STOCKPILE: 2,420 CY

TOPSOIL STOCKPILE: 570 CY

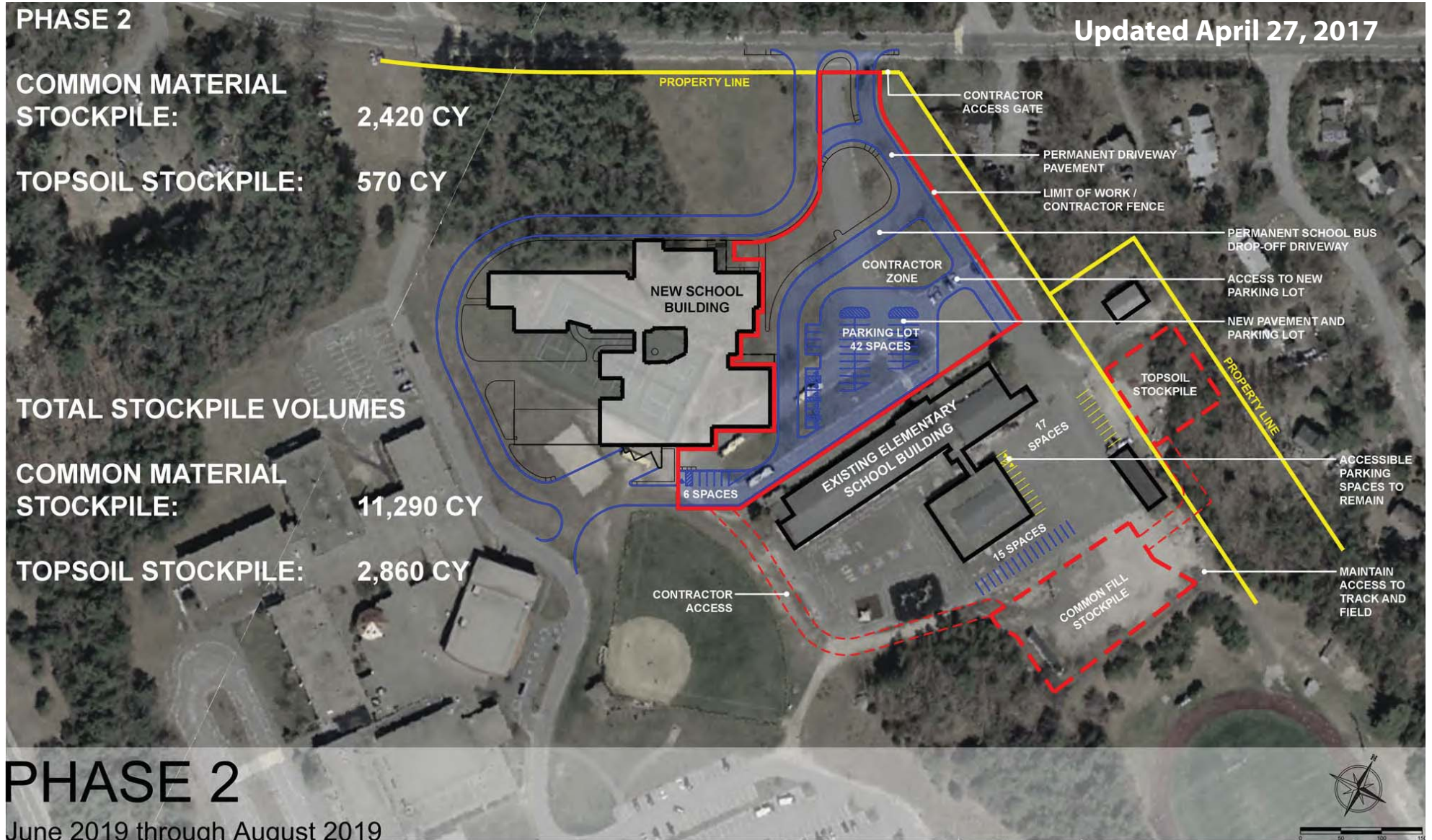
TOTAL STOCKPILE VOLUMES

COMMON MATERIAL STOCKPILE: 11,290 CY

TOPSOIL STOCKPILE: 2,860 CY

PHASE 2

June 2019 through August 2019



PHASE 3

Updated April 27, 2017

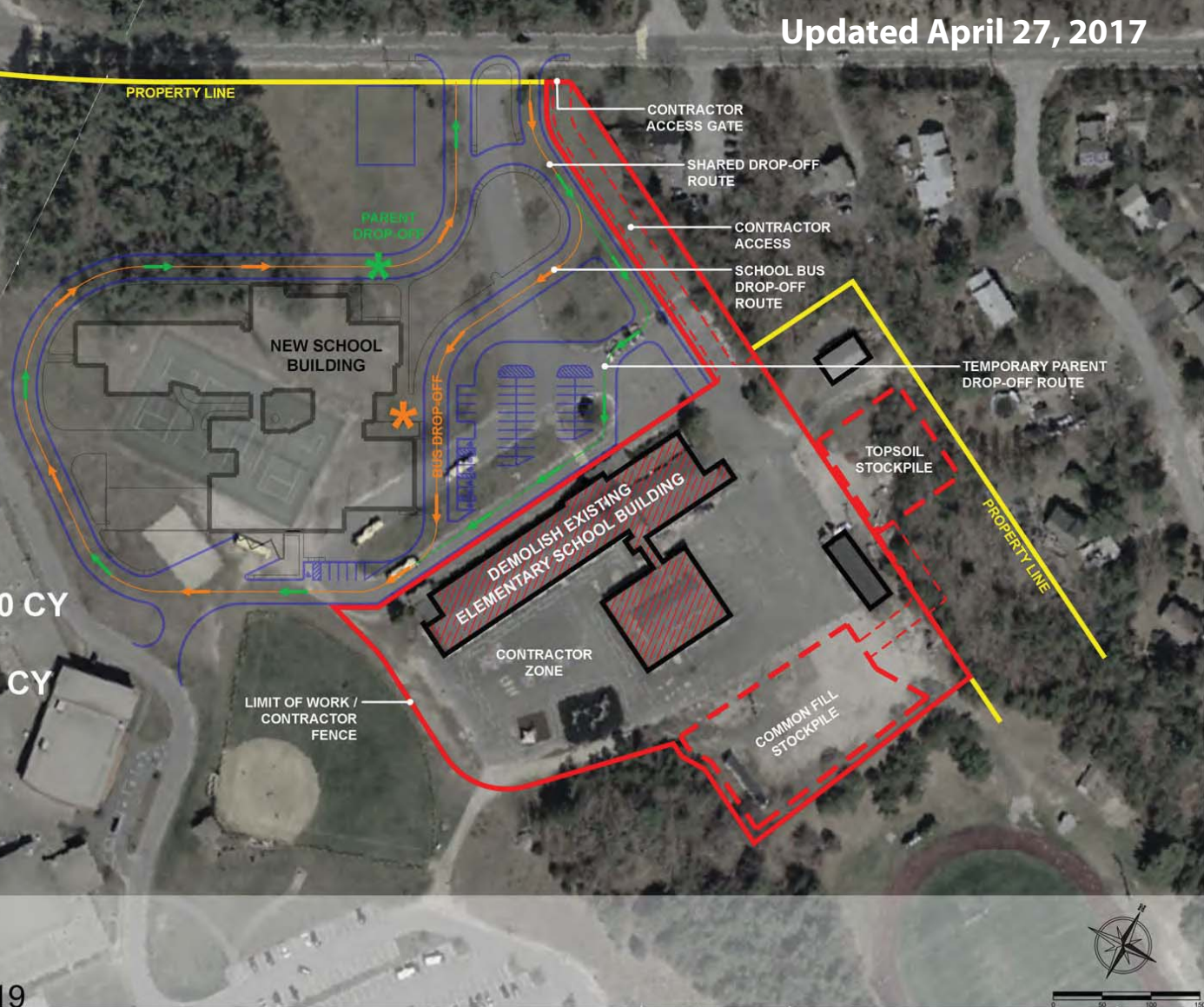
COMMON MATERIAL STOCKPILE: 0 CY

TOPSOIL STOCKPILE: 0 CY

TOTAL STOCKPILE VOLUMES

COMMON MATERIAL STOCKPILE: 11,290 CY

TOPSOIL STOCKPILE: 2,860 CY



PHASE 3

August 2019 through November 2019

PROJECT COMPLETION

Updated April 27, 2017

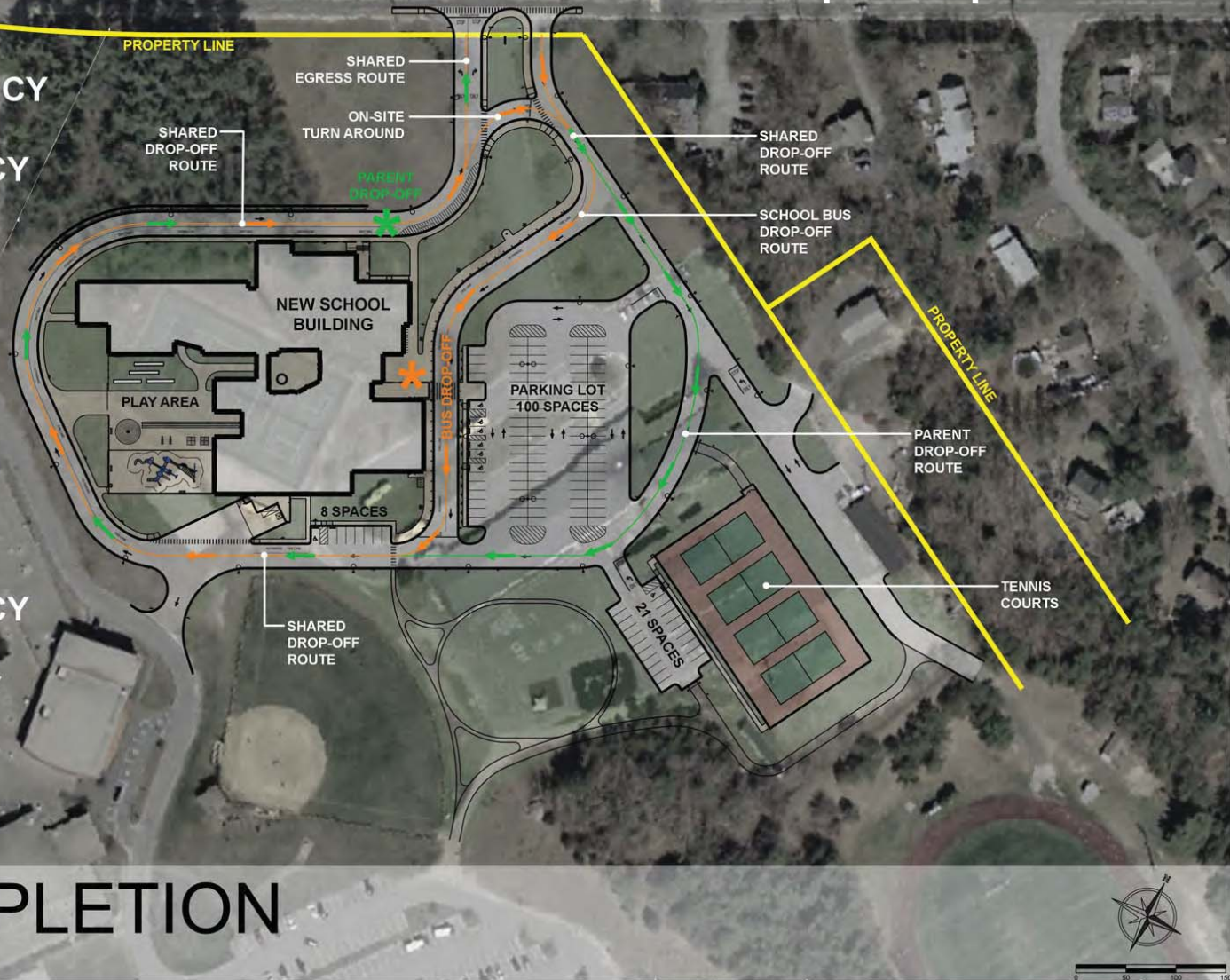
COMMON MATERIAL INFILL: 18,970 CY

TOPSOIL INFILL: 2,020 CY

TOTAL STOCKPILE DEFICIT | SURPLUS VOLUMES

COMMON MATERIAL DEFICIT: 7,680 CY

TOPSOIL SURPLUS: 840 CY



PROJECT COMPLETION

Illustrative Site Plan

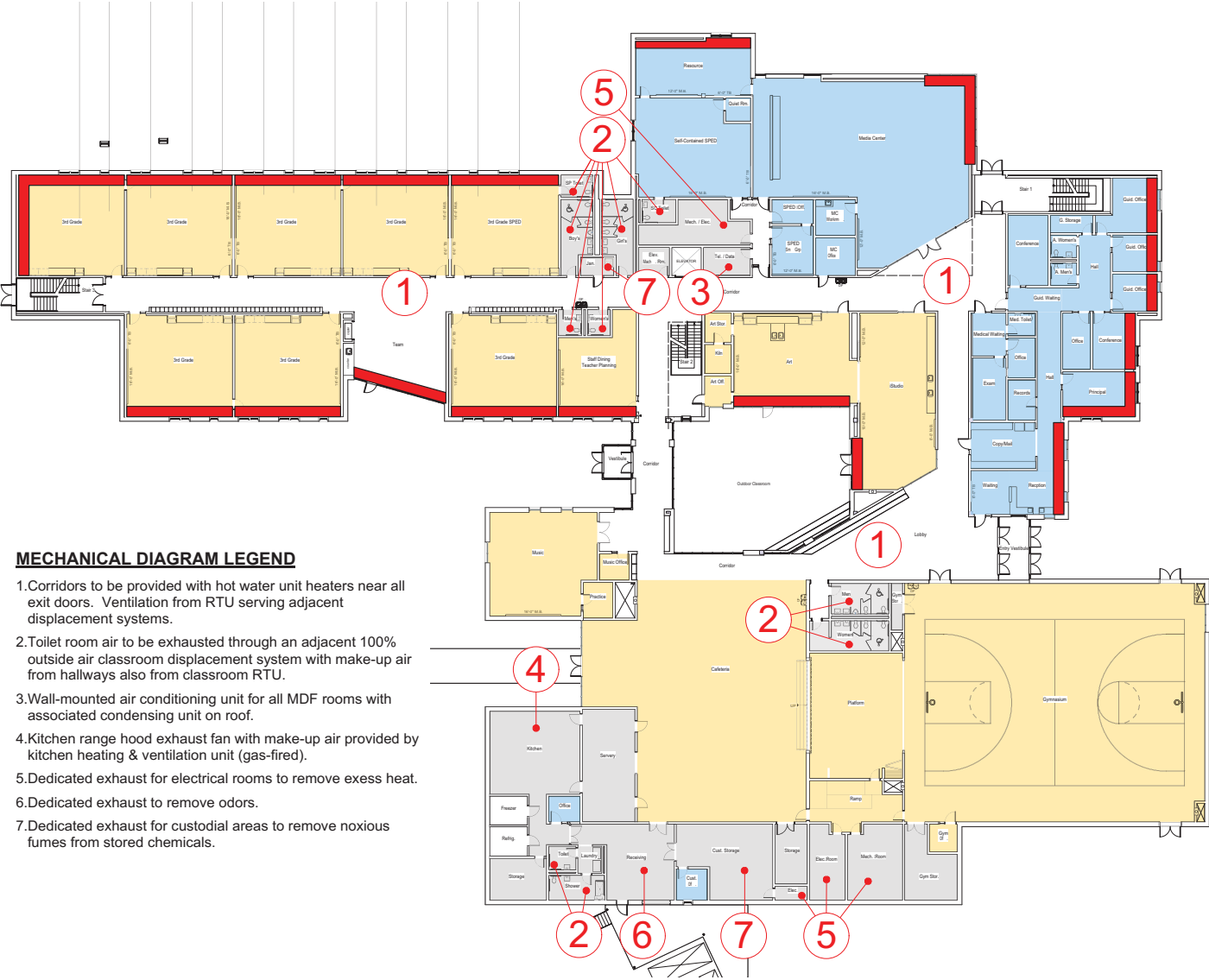
Mechanical

PROJECT MANAGEMENT **SMMA**
Massachusetts School Building Authority

Flansburgh Architects



Mechanical Diagram First Floor



MECHANICAL DIAGRAM LEGEND

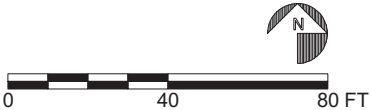
1. Corridors to be provided with hot water unit heaters near all exit doors. Ventilation from RTU serving adjacent displacement systems.
2. Toilet room air to be exhausted through an adjacent 100% outside air classroom displacement system with make-up air from hallways also from classroom RTU.
3. Wall-mounted air conditioning unit for all MDF rooms with associated condensing unit on roof.
4. Kitchen range hood exhaust fan with make-up air provided by kitchen heating & ventilation unit (gas-fired).
5. Dedicated exhaust for electrical rooms to remove excess heat.
6. Dedicated exhaust to remove odors.
7. Dedicated exhaust for custodial areas to remove noxious fumes from stored chemicals.

MECHANICAL DIAGRAM KEY

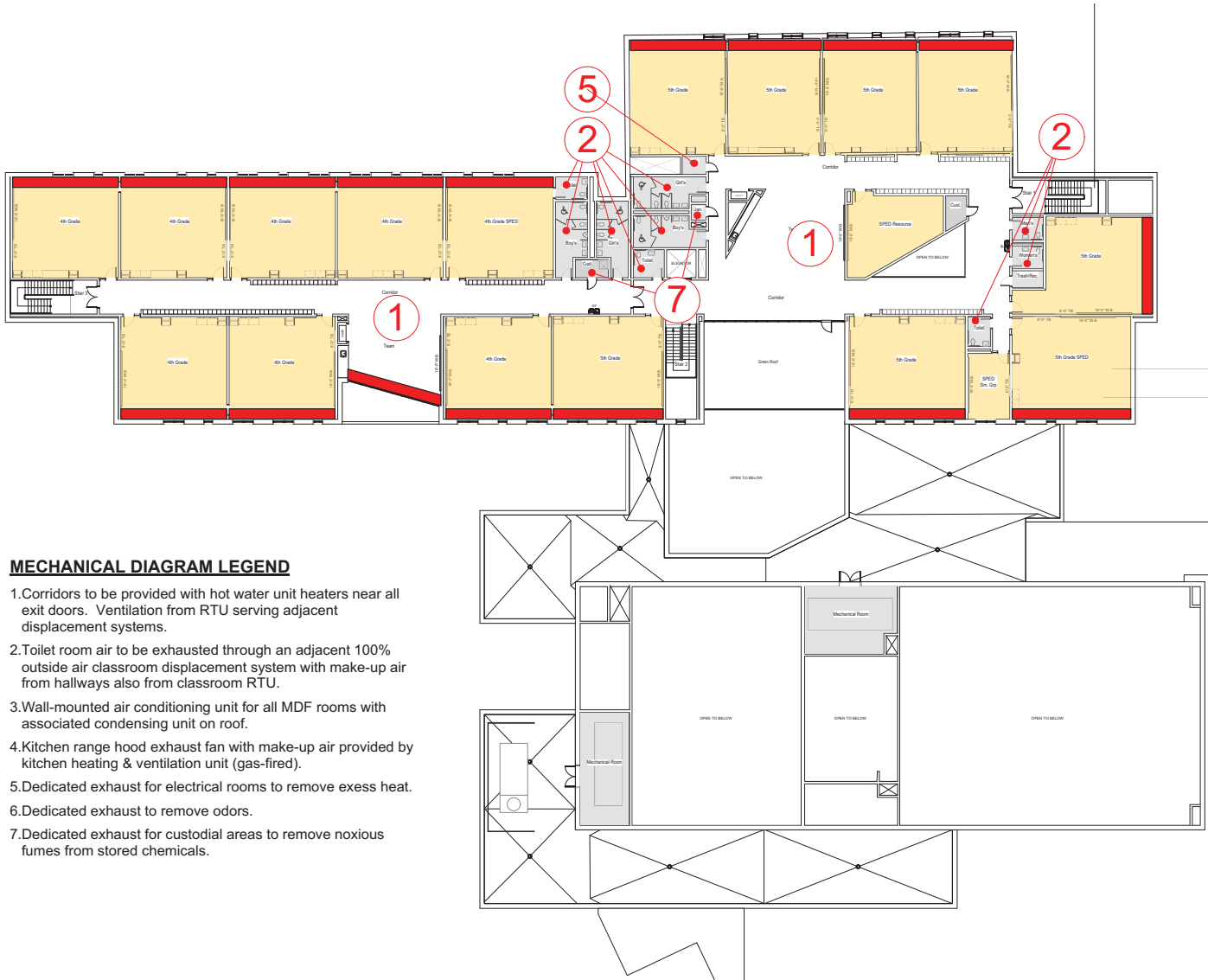
- FULL AIR CONDITIONING
Ceiling-mounted induction units with hot & chilled water coils for heating & cooling, ducted to the RTU for ventilation.
- DISPLACEMENT AIR
Floor/wall mounted displacement diffusers deliver low-velocity air at 63°F-68°F (depending on outdoor air temp.) for dehumidification & ventilation.
- VENTILATION & HEAT
- RADIANT PANEL



IMAGE OF PERIMETER RADIANT PANEL



Mechanical Diagram Second Floor



MECHANICAL DIAGRAM LEGEND

1. Corridors to be provided with hot water unit heaters near all exit doors. Ventilation from RTU serving adjacent displacement systems.
2. Toilet room air to be exhausted through an adjacent 100% outside air classroom displacement system with make-up air from hallways also from classroom RTU.
3. Wall-mounted air conditioning unit for all MDF rooms with associated condensing unit on roof.
4. Kitchen range hood exhaust fan with make-up air provided by kitchen heating & ventilation unit (gas-fired).
5. Dedicated exhaust for electrical rooms to remove excess heat.
6. Dedicated exhaust to remove odors.
7. Dedicated exhaust for custodial areas to remove noxious fumes from stored chemicals.

MECHANICAL DIAGRAM KEY





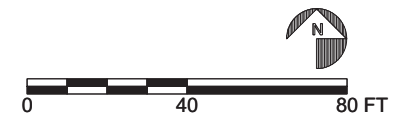
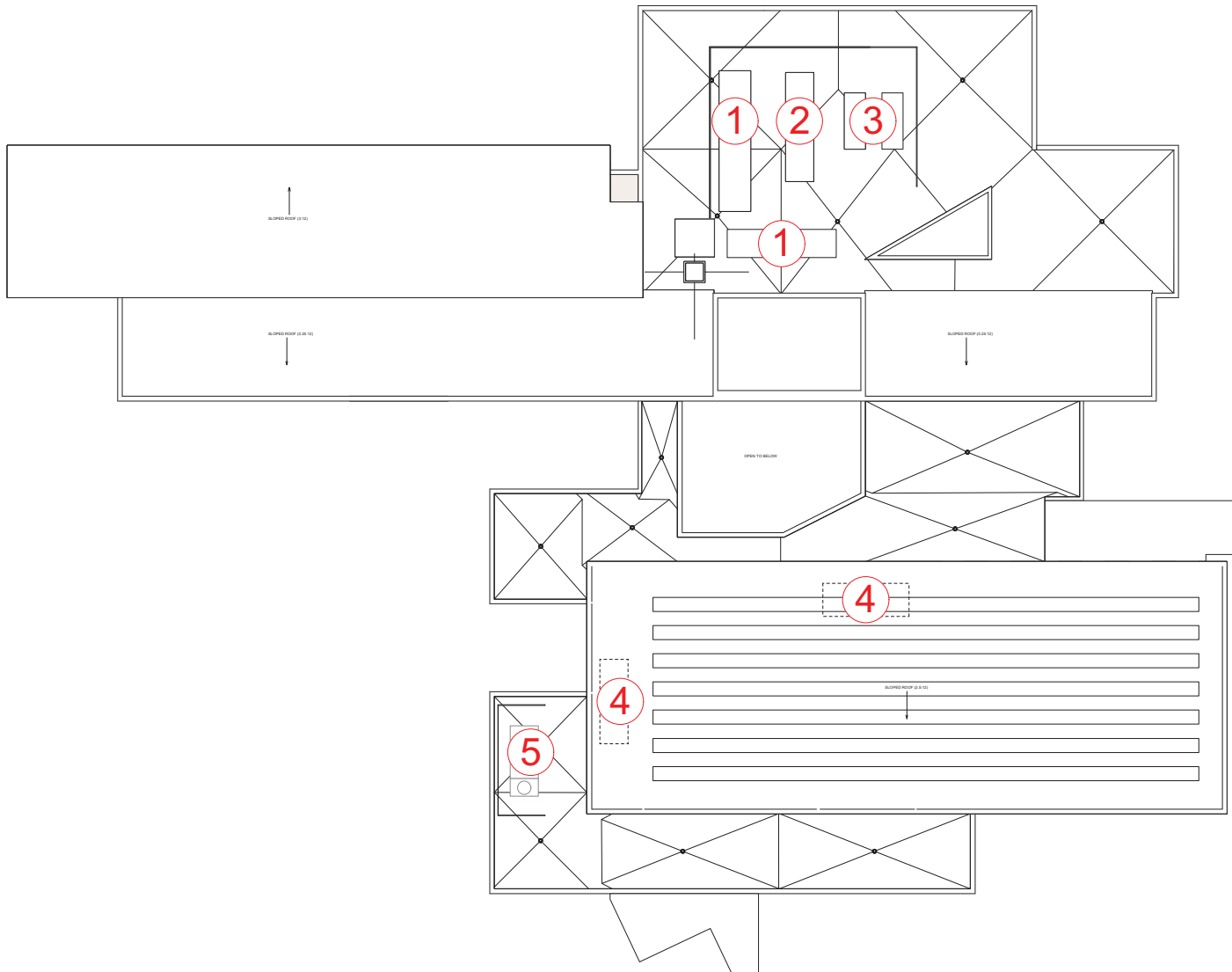
-  FULL AIR CONDITIONING
Ceiling-mounted induction units with hot & chilled water coils for heating & cooling, ducted to the RTU for ventilation.
-  DISPLACEMENT AIR
Floor/wall mounted displacement diffusers deliver low-velocity air at 63°F-68°F (depending on outdoor air temp.) for dehumidification & ventilation.
-  VENTILATION & HEAT
-  RADIANT PANEL



IMAGE OF PERIMETER RADIANT PANEL

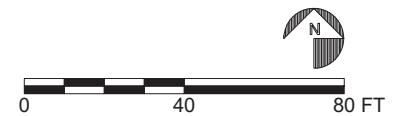


Mechanical Diagram Roof

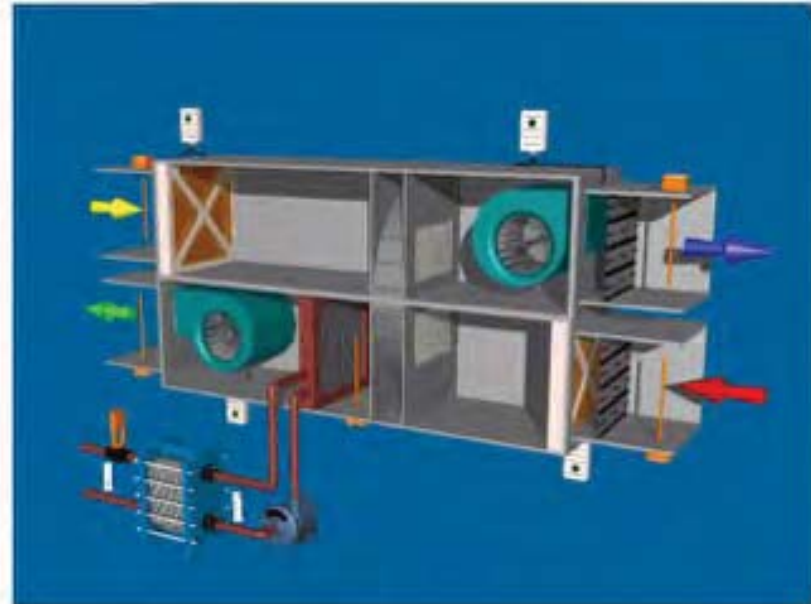


MECHANICAL ROOF DIAGRAM LEGEND

1. 100% outdoor air roof top unit & gas-fired-furnace with direct expansion refrigerant-based cooling. (General Classrooms)
2. 100% outdoor air roof top unit & gas-fired-furnace with direct expansion refrigerant-based cooling. (Administration, Media Center, SPED classrooms, & iStudio)
3. High-efficiency outdoor air-cooled chiller.
4. Re-circulating indoor air-handling unit with hot & chilled water coils.(suspended below roof)
5. Kitchen range hood exhaust fan with make-up air provided by kitchen heating & ventilation unit (gas-fired).



100% Outside Air Central Ventilation Rooftop Unit Enclosures with Energy Recovery for Displacement and Induction Unit Systems



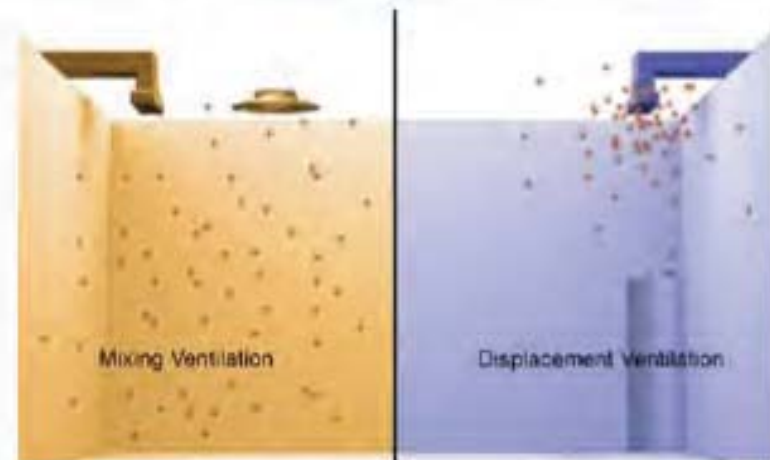
- Ventilation air is provided from Rooftop or Indoor Air Handling Units
- Packaged Gas-Fired Heating/DX Electric Cooling
- Hot water Heating and Chilled water Cooling



Garcia, Galuska, DeSousa, Inc.
370 Faunce Corner Road Dartmouth,
Massachusetts 02747-1217

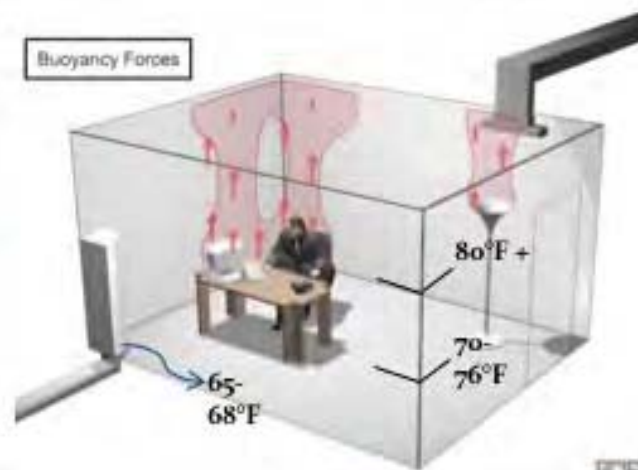
Displacement System

- Ventilation air is provided from high efficiency hot water coil heating/chilled water coil cooling RTU w/ ERV
- Air is delivered at low velocity and at low levels within the space
- The system uses naturally occurring buoyant forces within the space to create a vertical rise of the air throughout the space.
- 2-4° F differential supply air to space
- Supply air rises when heat source is contacted
- Displaces room air upward
- Air rises with pollutants to ceiling
- Air returns at ceiling back to air handling unit



Mixed Systems
 $E_c = 0.8$

DV Systems
 $E_c = 1.2 - 1.4$



GARCIA • GALUSKA • DESOUSA
Consulting Engineers Inc.

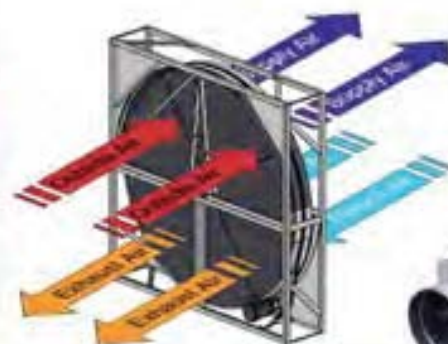
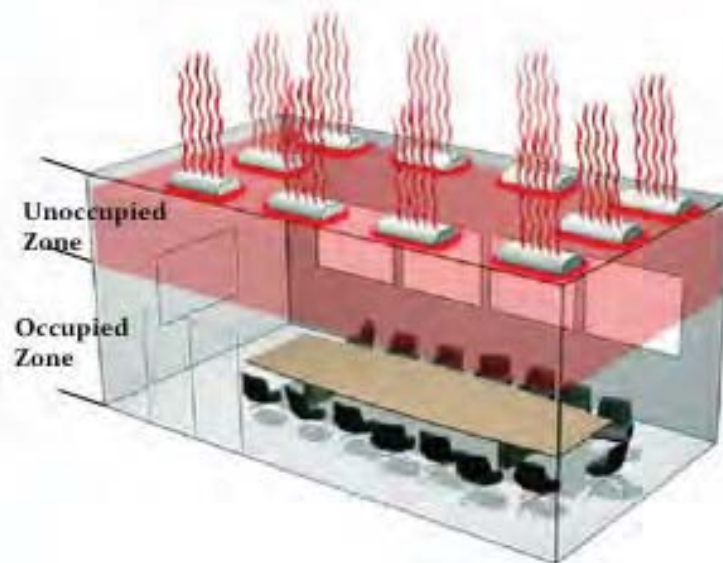
Displacement System – Energy Conservation

Load Calculation Reductions

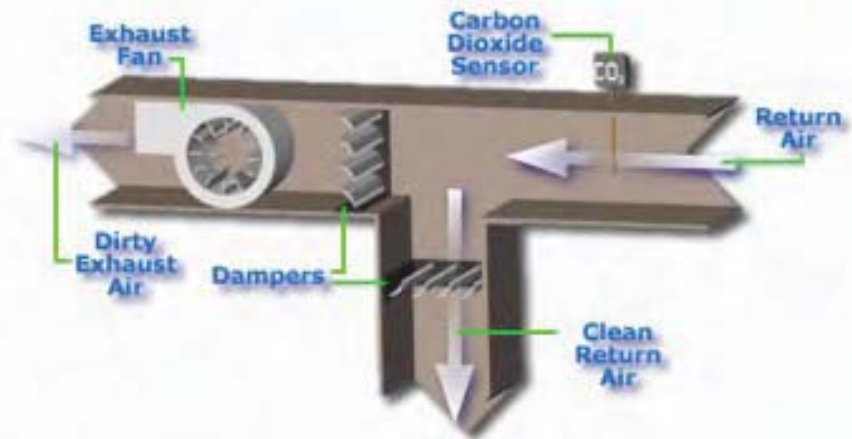
- Conventional System: All heat generated in room is included in air flow calculation since all airflow is mixed.
- Displacement System: Only loads which occur in the Occupied Zone are factored
- Results in: Smaller equipment & systems and lower installed and operating costs for Displacement Systems

Additional Energy Efficiency Measures

- Energy Recovery: Transfers energy from the return air stream to the supply air stream to pre-heat or pre-cool the outside air.
- Variable Air Volume w/ Aircurity CO2 Demand Control Ventilation: Modulates the airflow to large single zone areas in accordance to space mounted thermostat and CO2 sensors reducing energy consumption due to reduced air changes.
- Supplemental Radiant Cooling Panels: Provide additional cooling without increasing airflow requirements reducing energy consumption due to smaller equipment and fan run time.



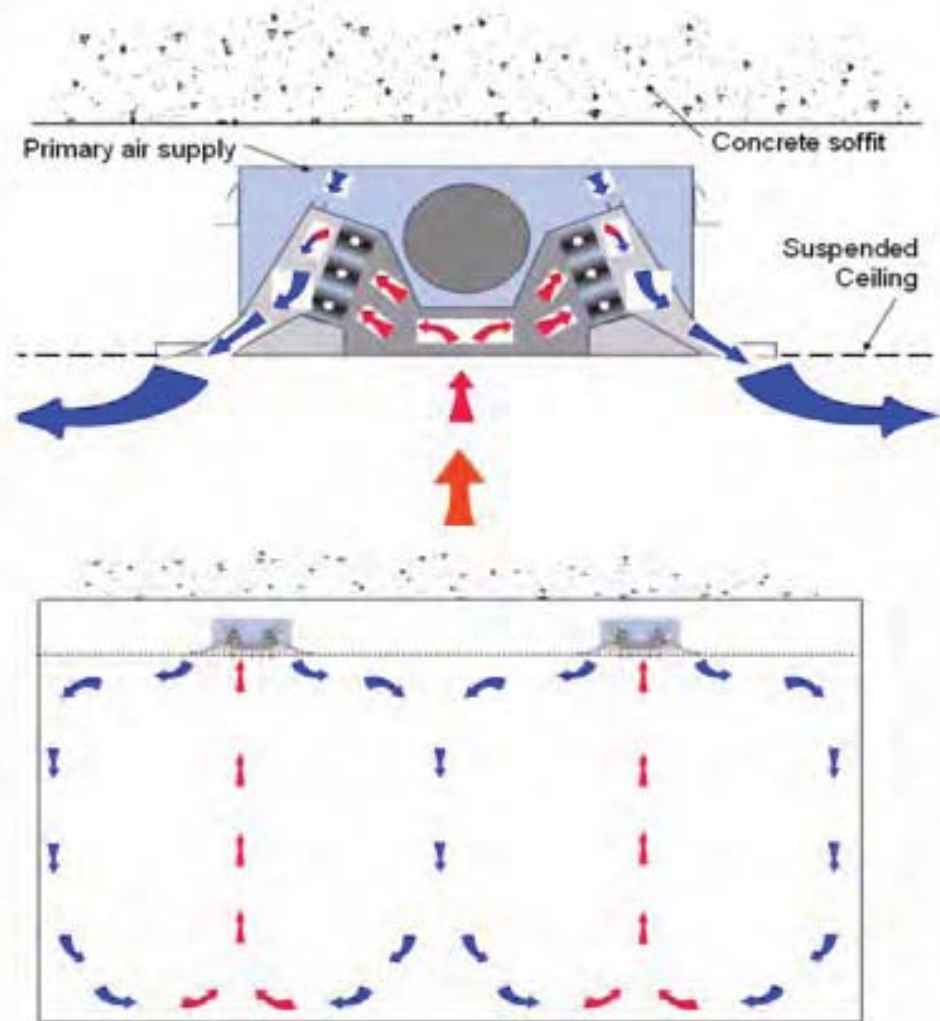
CO₂ Demand Ventilation for Rooftop Heating and Ventilating Rooftop Units & Terminal VAV Boxes



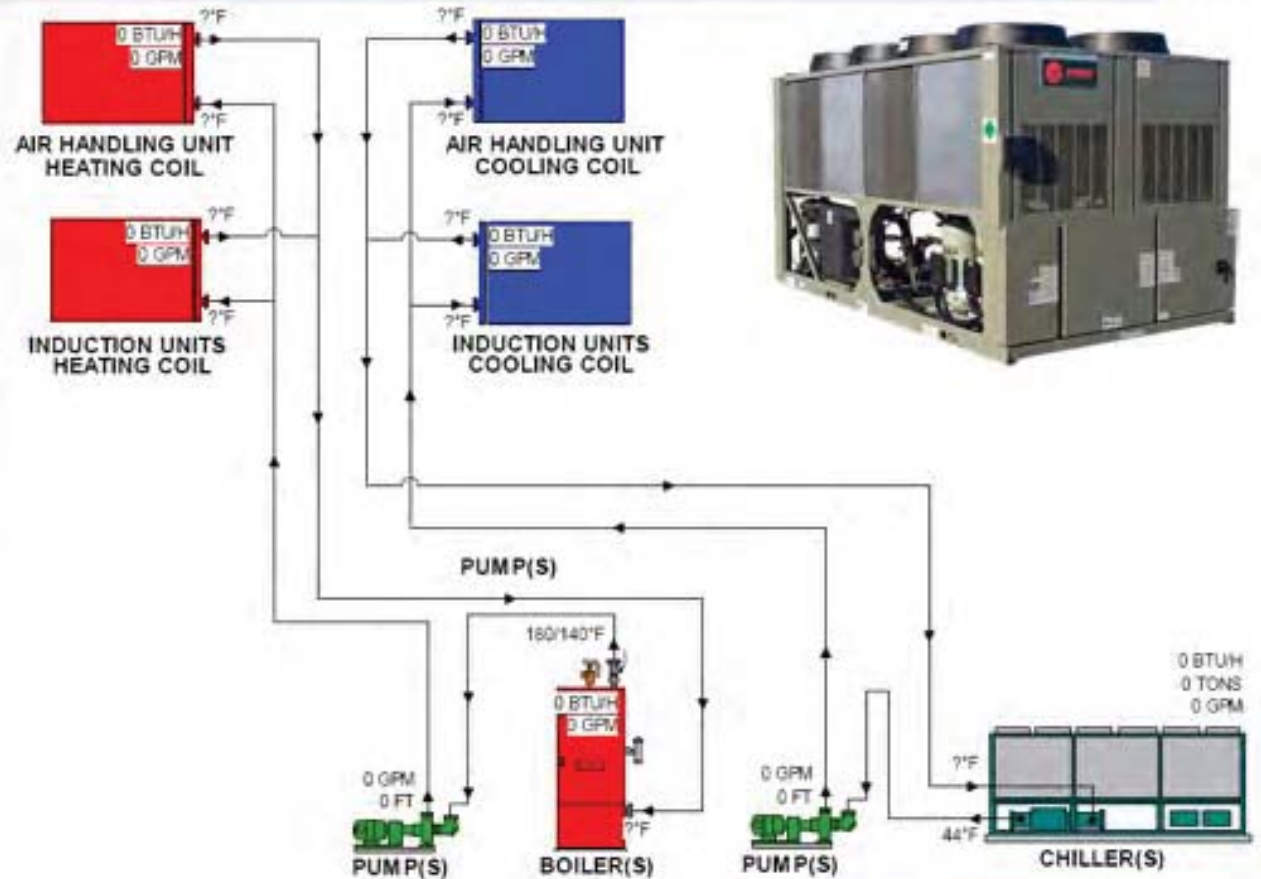
Garcia, Galuska, DeSousa, Inc.
370 Faunce Corner Road Dartmouth,
Massachusetts 02747-1217

Induction (Active Chilled Beam) Units

- Ventilation air is provided from high efficiency hot water coil heating/chilled water coil cooling RTU w/ ERV
- Primary (Ventilation) air is supplied to plenum and discharges through nozzles
- Room air is induced through the heating/cooling coils
- Mixture of Primary and Room air is delivered to room through diffuser slots.
- Condensate drain pans and piping system for condensate removal



High-Efficiency Gas-Fired Condensing Boiler and Electric Chiller Systems



Garcia, Galuska DeSousa, Inc.
370 Faunce Corner Road Dartmouth,
Massachusetts 02747-1217

Electrical

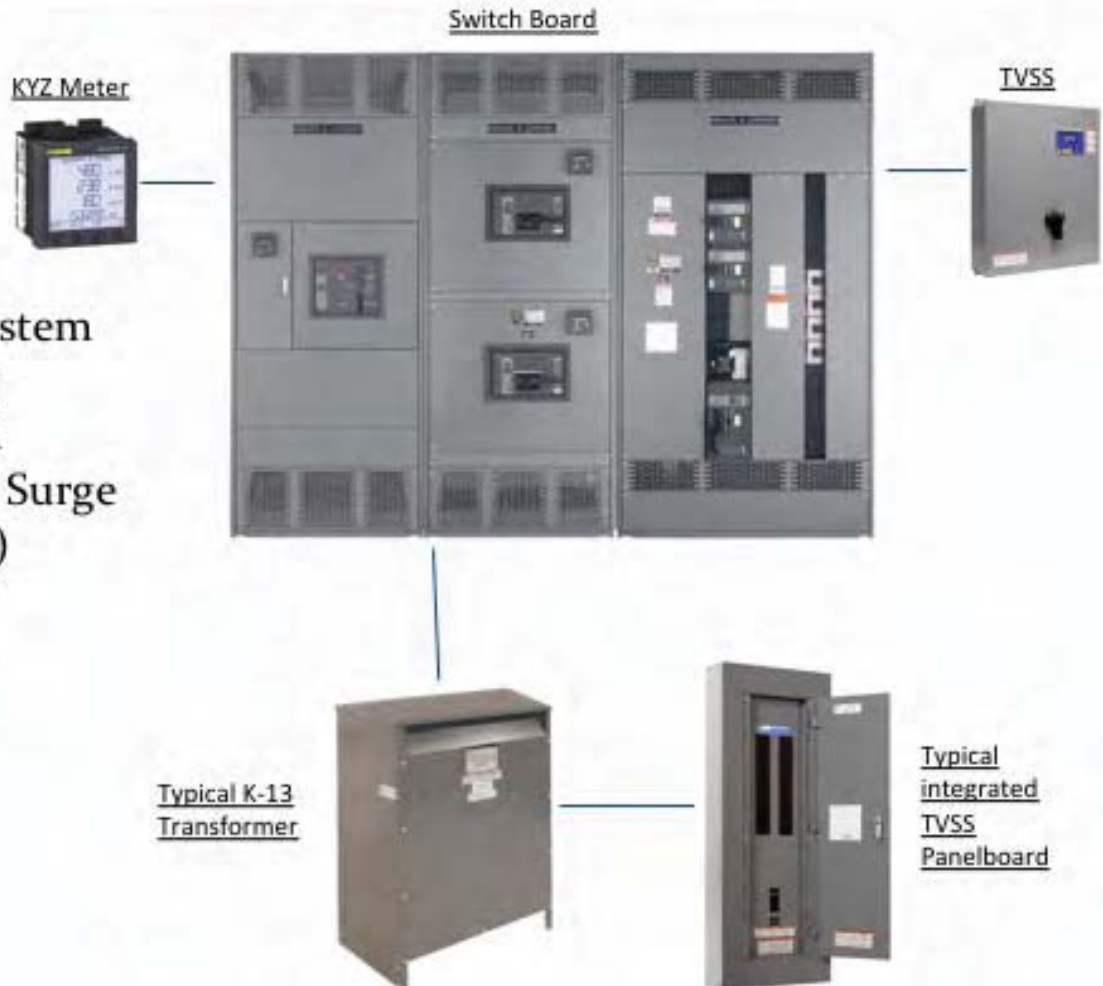
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Power Distribution System

1. Power Distribution System
 - Power Switchgear
 - Power Panelboard
 - Transient Voltage Surge Suppressor (TVSS)
 - K-13 Transformer
 - KYZ Meter



250 kW Diesel Generator

Load Breakdown for Life Safety Equipment:

•All Exit Signs and Emergency Lighting in the areas listed below are fed by Life Safety Emergency Power:

1. Corridors
2. Electrical/Mechanical Rooms
3. Gymnasium & Locker Rooms
4. Cafeteria/Commons
5. Media Center
6. Lobbies
7. Administration area
8. Health Suite/Nurses office
9. Toilets
10. Platform
11. Data rooms "Head End Room & IDF Closets"
12. Kitchen & Servery
13. Exterior Building mounted lights over doors required for egress lighting
14. Where required by code (egress areas)
15. Fire Alarm System



Load Breakdown for Optional Standby Equipment:

A. Equipment listed below is fed by Optional Standby Power. Cooling will be locked out when on emergency power through the BMS controls.

1. Boilers
2. Water Pumps
3. Ventilation Unit Serving Cafeteria and Kitchen/Servery
4. Kitchen Make-up Air Unit
5. Ventilation Unit serving Administration areas
6. MDF and IDF Cooling units
7. Elevator
8. Refrigeration
9. Building Management System controls
10. Kitchen equipment required for cooking
11. Strategically placed receptacles in the kitchen, administrative area, gymnasium, and cafeteria.

B. Equipment within the Head End and IDF rooms include (served by the UPS):

1. Paging/Intercom System (MDF)
2. Security System (IDF/MDF)
3. Telephone System (MDF)
4. Network electronics (IDF/MDF)
5. Servers (MDF)
6. Clock System (MDF)
7. Building Management System (MDF)

High Efficiency Indirect/Direct LED Classroom Lighting With Occupancy Sensor & Daylight Harvesting



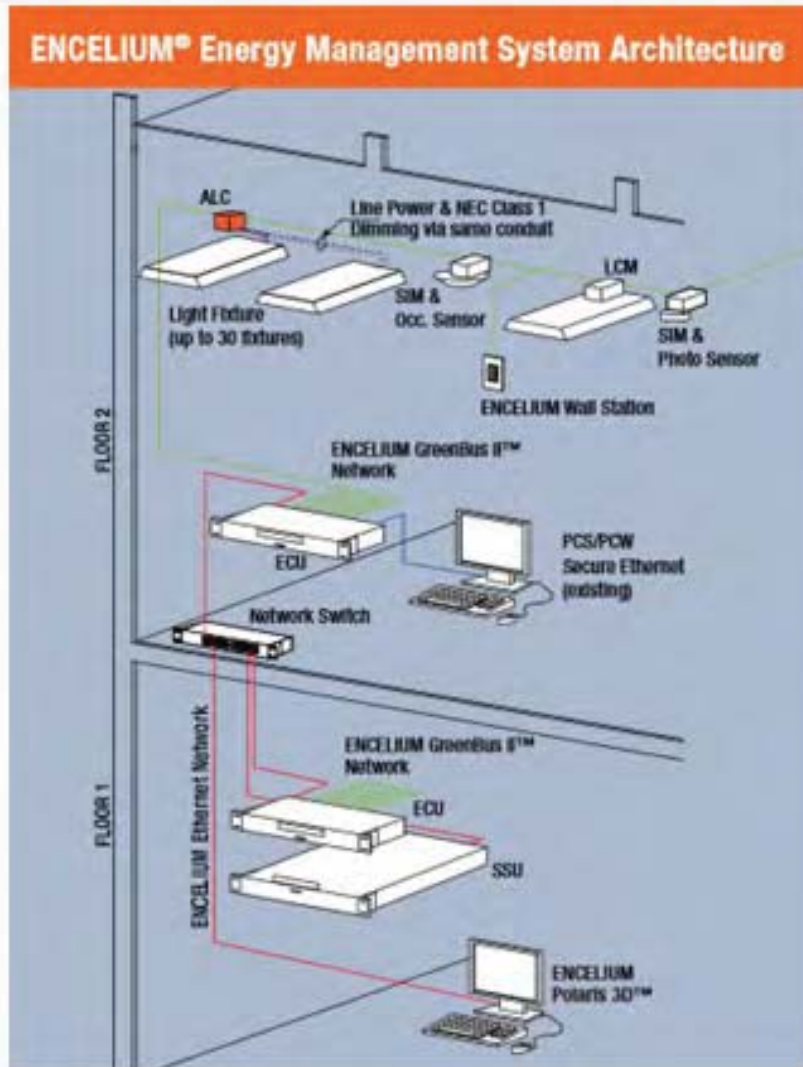
- Dual Technology Occupancy Sensor & Daylight Photosensor



- Lighting Control Station

Addressable Lighting Control System

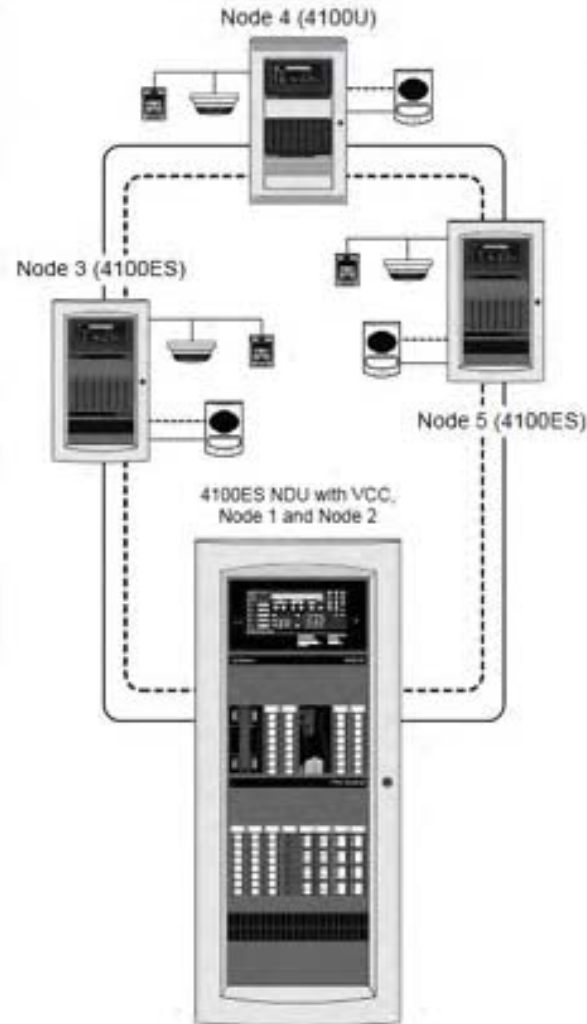
1. Lighting Control System
 - Occupancy Sensor
 - Daylight Sensor
 - BMS Integration
 - Addressable groups



Addressable Fire Alarm System

1. Fire Alarm System

- Fire Alarm Control Panel
- Fire alarm Annunciator
- Pull Station
- Smoke Detector
- Speaker Strobe/Visual
“ADA” Compliant Signal



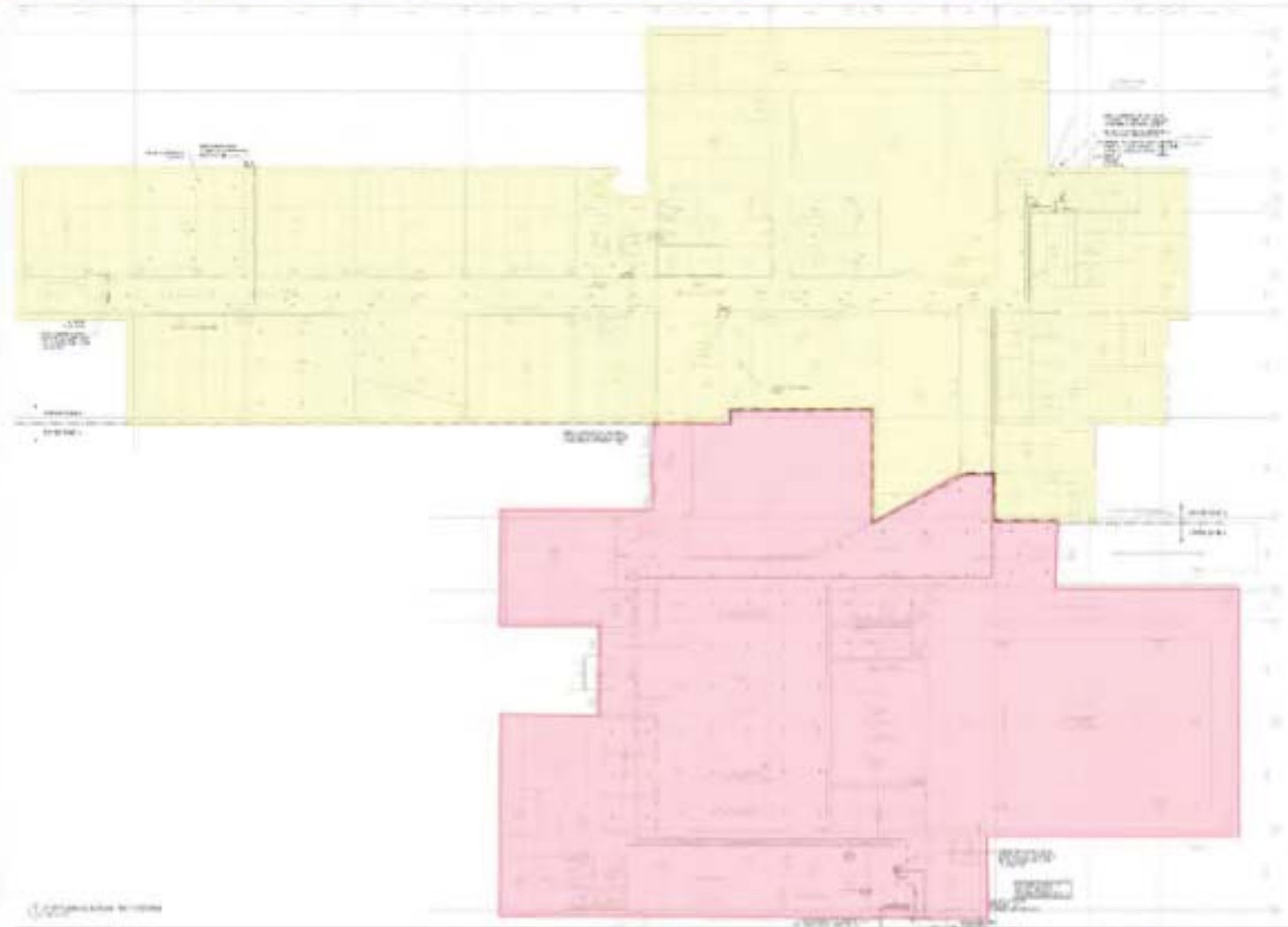
Plumbing



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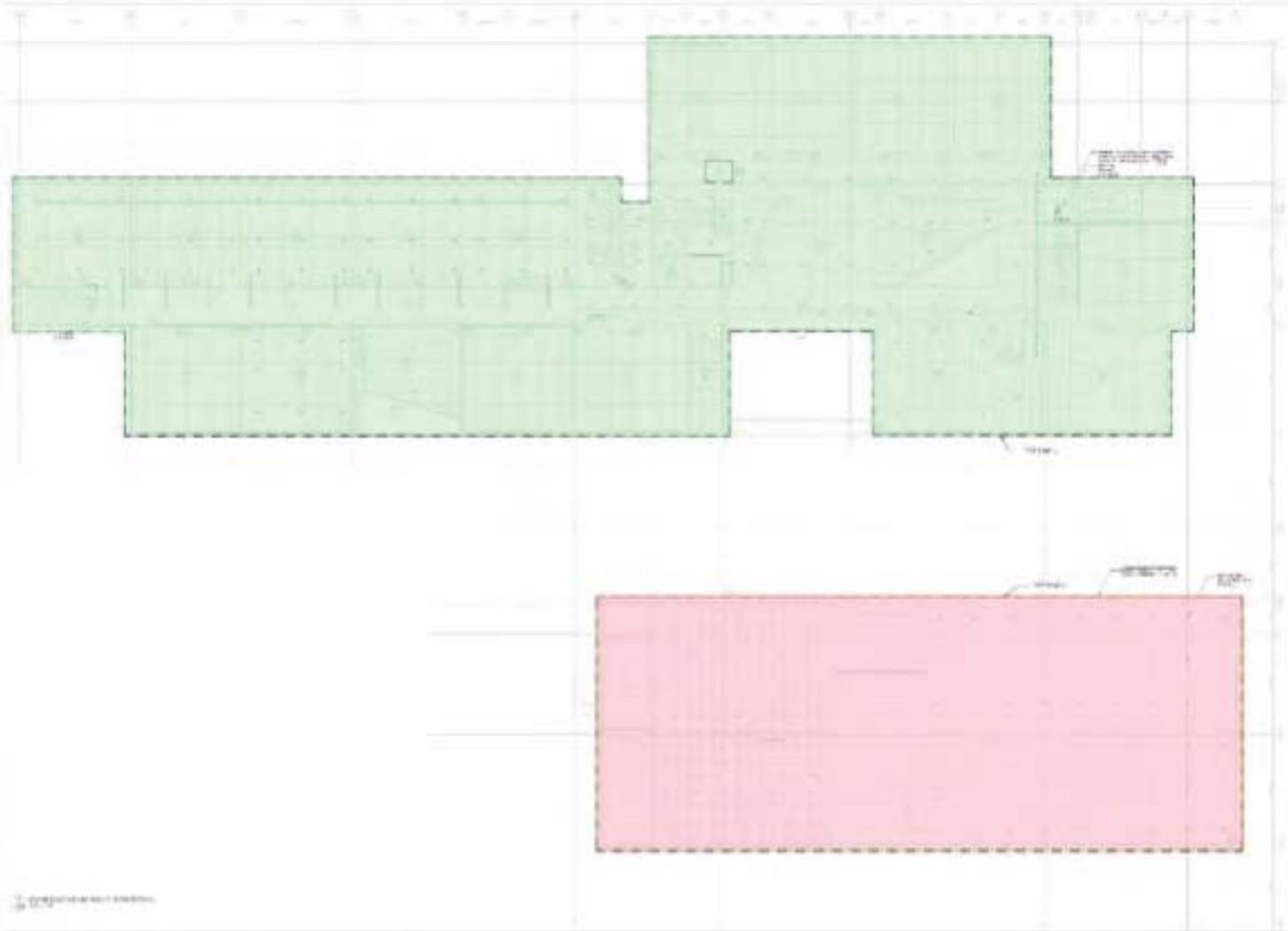
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First Floor Fire Protection



Gericke, Galvicko, DeBenedictis, Inc.
375 Francis Center Road Dartmouth,
Massachusetts 01947-1237

Second Floor Fire Protection



Sergio Dal'Acqua DeRose, Inc.
375 Francis Center Road Dartmouth,
Massachusetts 01947-1237

Plumbing System

- The Building will be serviced by Municipal water and an on-site septic system.
- Soil, Waste, and Vent piping system is provided to connect to all plumbing fixtures and equipment.
- A separate Grease Waste System starting with connection to an exterior concrete grease interceptor running thru the kitchen and servery area fixtures and terminating with a vent terminal through the roof.
- Storm Drainage system is provided to drain all roofs with roof drains piped through the building to a point 10 feet outside the building.
- Natural gas service will be provided for the building and will serve the boilers, domestic water heaters, kitchen cooking equipment, and roof top equipment.
- New 4-inch domestic water service from the municipal water system will be provided. A meter and backflow preventer will be provided.
- Domestic hot water heating will be provided with two water heaters. A gas fired, high efficiency, condensing water heater with separate storage tank provided for kitchen area. A gas fired, high efficiency, condensing tank type water heater provided for two story classroom wing. Hot water will be re-circulated.
- Plumbing Fixtures – high efficiency water conserving fixtures to achieve 30% water use reduction from code require fixtures.



Water Conserving Plumbing



Battery Sensor Flush Valves
1.28 gpf Water Closet/0.125 gpf Urinal



Washfountain Battery
Sensor Faucet
0.35 GPM outlet



Option:
Manual Flush Valve
1.28 gpf Water Closet



Option:
Manual Flush Valve
0.125 gpf Urinal



Water Conserving Plumbing



Drinking fountain
w/bottle filler



Accessible shower
w/1.5 GPM shower head



Staff/Classroom Sinks
w/manual 0.5 GPM faucet



Committee Recommendations



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1. Strongly recommend that sea coast coil coatings should be used on all coils subject to outside air. Coils last many years longer with the coating.

GGD: Special Sea Cost Coil Coatings will be provided for all RTU coils and air cooled condenser coils associated with the chiller and DCU's. This coating will add additional cost to the equipment but considering the environment in which they will reside we agree with the recommendation.

2. Recommend that air handler/rtu intakes do not face north. This is especially an issue with pleated filters.

GGD: Every effort will be made to orientate the outdoor air intakes away from the North direction.

3. Can we evaluate installing power factor correction on main electric distribution for savings of demand charges?

GGD: This will be considered. With the majority of the loads that are solid state and the VFD's which have a high power factor the design team expects the design to be in the range of .95pf.

4. In the Kitchen MAU-1 system, the plans for the control sequence indicate that the MAU and KEF will return to the normal mode of operation. I am not sure if the fire dept. allows that. Seems that an automatic restart would be allowed by the sequence without determining the cause of high CO with this wording. CO should probably be a manual reset.

GGD: Within the Electrical scope of work the CO detectors are provided and are activated when levels within the Kitchen exceed the recommended limit, once this threshold is achieved the kitchen gas valve will close and a supervisory alarm will be generated. The Kitchen exhaust fan remains on to remove any residual CO. The Make Up Air unit is shut down during this activation. Currently we have the Make Up Air unit restarting automatically once CO levels reduce below the threshold with an alarm being activated at the BMS indicating high CO levels. We will modify the sequence to have the MAU provided with a manual restart and we will confirm with the local Fire Department to ensure this sequence is acceptable.

5. Are the heating and chilled water systems protected for freeze or burst protection?

GGD: Yes both systems will be provided with 35% by weight Propylene Glycol solution. The system will also be provided with automatic glycol feeders.

6. Are the ATC/BMS systems on a separate vLAN so that they can be accessed via internet and not compromise any firewalls in the LAN? Hackers have invaded networks via HVAC networks that are connected to the LAN. With this in mind, it is still very important to be able to access the BMS from off-site.

GGD: VLAN's will be utilized for the Building Management System.

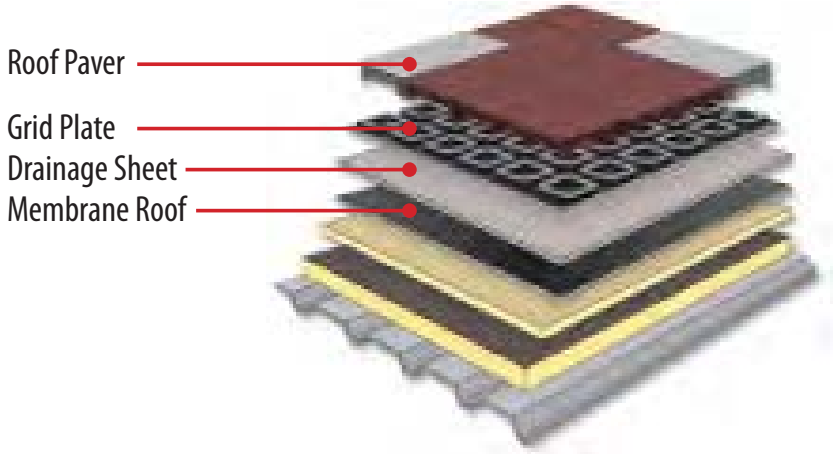
7. My experience has been that the BMS server being provided with emergency power is also best served with an Uninterruptible Power Supply to avoid the loss of power experienced between loss of normal power and connection of the emergency power which can take approximately 10 seconds. Although not critical it can avoid issues with the BMS.

GGD: All controls will be powered from emergency circuits therefore power failures will not affect the system. Also field controllers will be provided with non-volatile memory and battery back-up will be provided on the main head end controller.

8. Adequate electrical surge protection is also essential as it is an issue in Bourne. Buildings in the area have experienced multiple electronic board failures as a result of occasional surges or disconnects from the local utility at the MMA.

GGD: There will be a SPD protecting the main, and TVSS installed in each branch circuit panel as well as K-13 rated transformers and 200% neutrals on power panels that feed computer grade equipment. The Communications closets will be fed with a centralized UPS with power conditioning as well.

Green Roof & Paver Products



	Warranty	Overall Thickness	Wear Layer Thickness	Wear Layer in mils	Wear Layer Composition	Emissions	Phthalate-Free	Where Made	Static Load Limit (ASTM 970)
Armstrong Natural Creations with Diamond 10	20 years	3.2mm	.5mm	20 mils	Cultured diamond-infused UV cured polyurethane coating	FloorScore Certified	Yes	USA	250 psi
Adore Decoria	25 years	3mm	.55mm	22 mils	Micro-ceramic	FloorScore Certified	Yes	Asia	1500 psi
Mannington Spacia	10 years	2.5mm	.55mm	20 mils	Urethane + aluminum oxide	FloorScore	Yes	USA	1000 psi
Amtico Signature Series	20 years	2.5mm	1mm	40 mils	Urethane + aluminum oxide	FloorScore; A+ by a European standard	Yes	USA	1000 psi
Tandus Centiva Venue Series	10 years	3mm	.5mm	20 mils	Clear vinyl	FloorScore	Yes	USA	Passes ASTM 970
Tandus Centiva Contour Series	20 years	3mm	.8mm	32 mils	Clear vinyl	FloorScore	Yes	USA	1500 psi
Altro Lavencia Plus	20 years	3mm	.55mm	22 mils	Ceramic bead UV-cured polyurethane	FloorScore Certified	Yes	Europe	1500 psi
Roppe Northern Timbers	10 years	3mm	.70mm	28 mils	Ceramic bead UV-cured polyurethane	FloorScore; CHPS	Yes	USA	2000 psi
Tarkett ID Inspiration	10 years	2.5mm	.70mm	28 mils	Reinforced polyurethane	FloorScore Certified	Yes	USA	Passes ASTM 970
Milliken Wood	12 years	2.5mm	.70mm	28 mils	UV-cured polyurethane	FloorScore Certified; REACH compliant	Yes		Passes ASTM 970
Gerfloor Creation	12 years	2.5mm	.70mm	28 mils	Reinforced polyurethane	FloorScore Certified; REACH compliant		France	850 psi
Karndean DaVinci	20 years	3mm	.70mm	28 mils	UV-cured polyurethane	FloorScore	Yes	Asia	1000 psi
Flexco Natural Elements Wood	10 years	3mm	.70mm	28 mils	Ceramic bead UV-cured polyurethane	FloorScore; CHPS		USA	2000 psi

STUDENT MURAL WALL

@ West Bridgewater Middle/Senior High School



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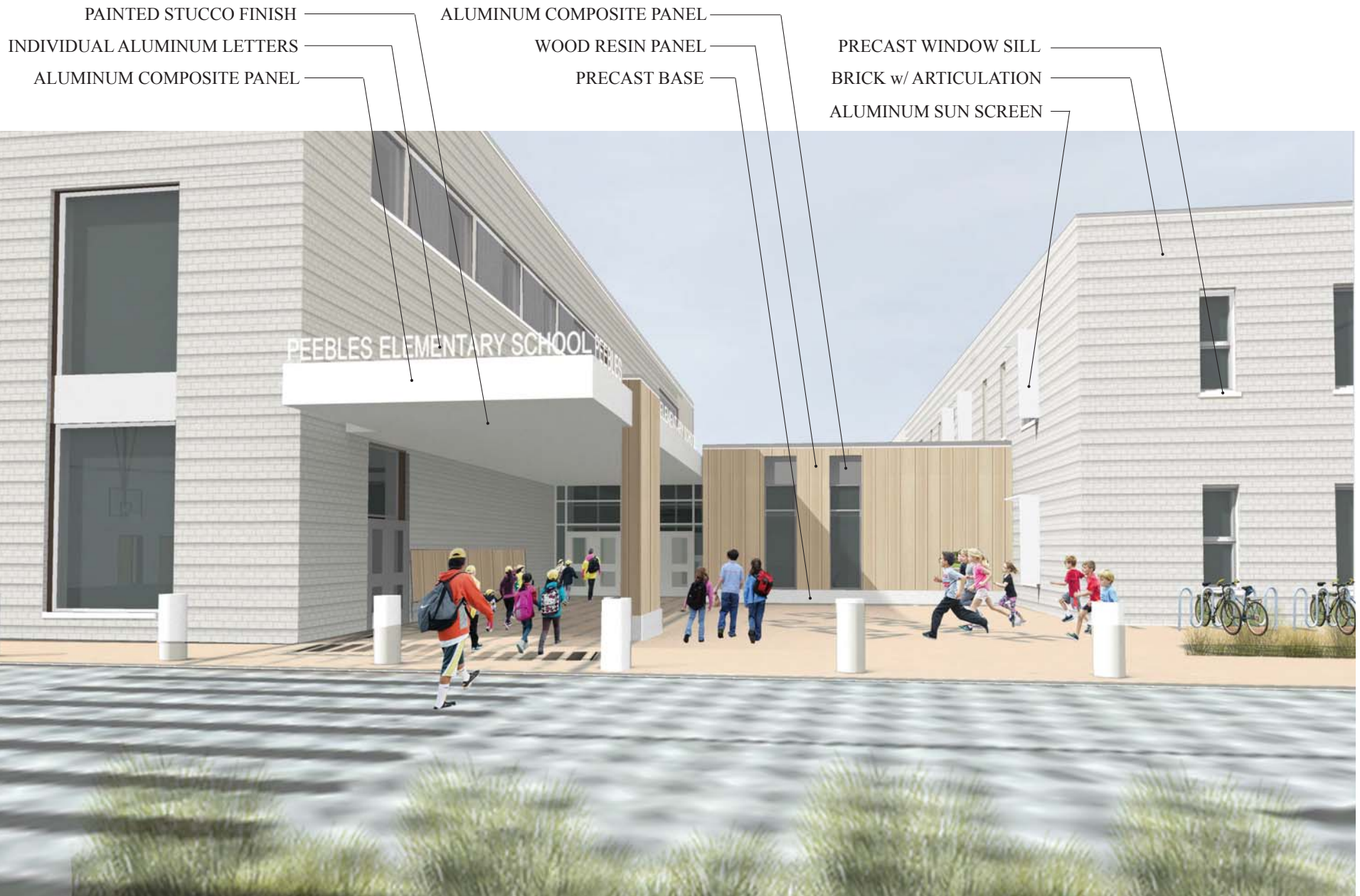
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School Building Committee
April 27, 2017

Peebles Elementary School

Final Exterior Design





BRICK w/ ARTICULATION

ALUMINUM SUN SCREEN

PRECAST WINDOW SILL

BRICK w/ ARTICULATION

ALUMINUM COMPOSITE PANEL

WOOD RESIN PANEL

PRECAST BASE

BRICK w/out ARTICULATION



WOOD RESIN PANEL
PRECAST BASE

PRECAST WINDOW SILL
BRICK w/ ARTICULATION

ALUMINUM COMPOSITE PANEL
WOOD RESIN PANEL
PRECAST BASE





BRICK: SMOOTH



PVC ROOF MEMBRANE
 (RIB @ SLOPED ROOF ONLY)



ALUMINUM COMPOSITE PANEL
 (@ BRICK LOCATIONS)



ALUMINUM COMPOSITE PANEL
 (@ WOOD RESIN LOCATIONS)



POLYCARBONATE PANEL
 (@ CLERESTORY)



BRICK: WIRECUT



PRECAST CONCRETE
 (@ WOOD RESIN BASE & WINDOW SILL)



WOOD RESIN PANEL



CORRUGATED ALUMINUM PANEL
 (@ BRICK LOCATIONS)

School Building Committee
April 27, 2017

Peebles Elementary School

Interior Design Update

ALUMINUM
STOREFRONT

WOOD BATTEN

WOOD VENEER

HUNG ACOUSTIC
CLOUDS

PLASTIC LAMINATE
WIANSBOTING

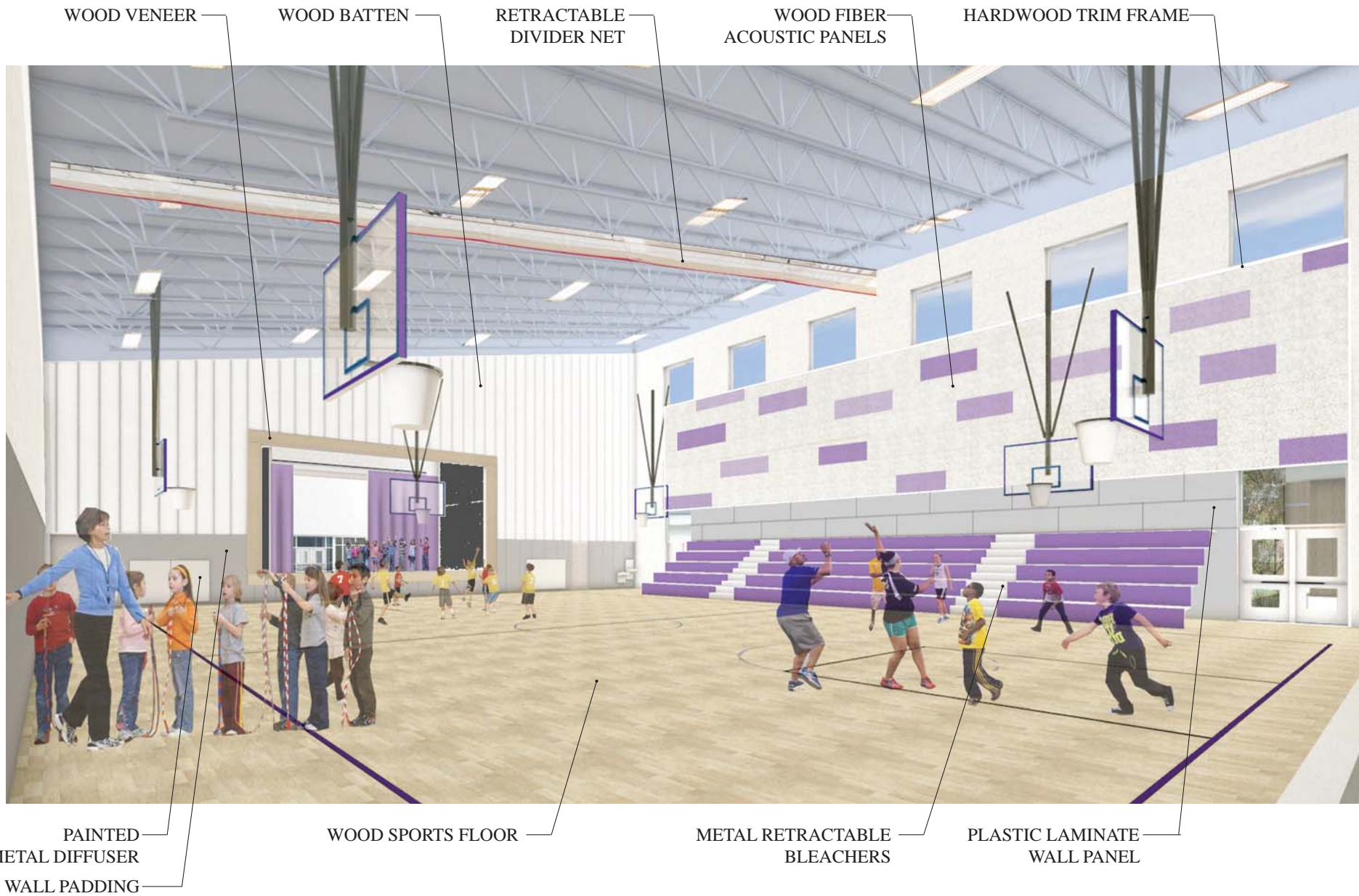


LUXURY VINYL TILE FLOORING

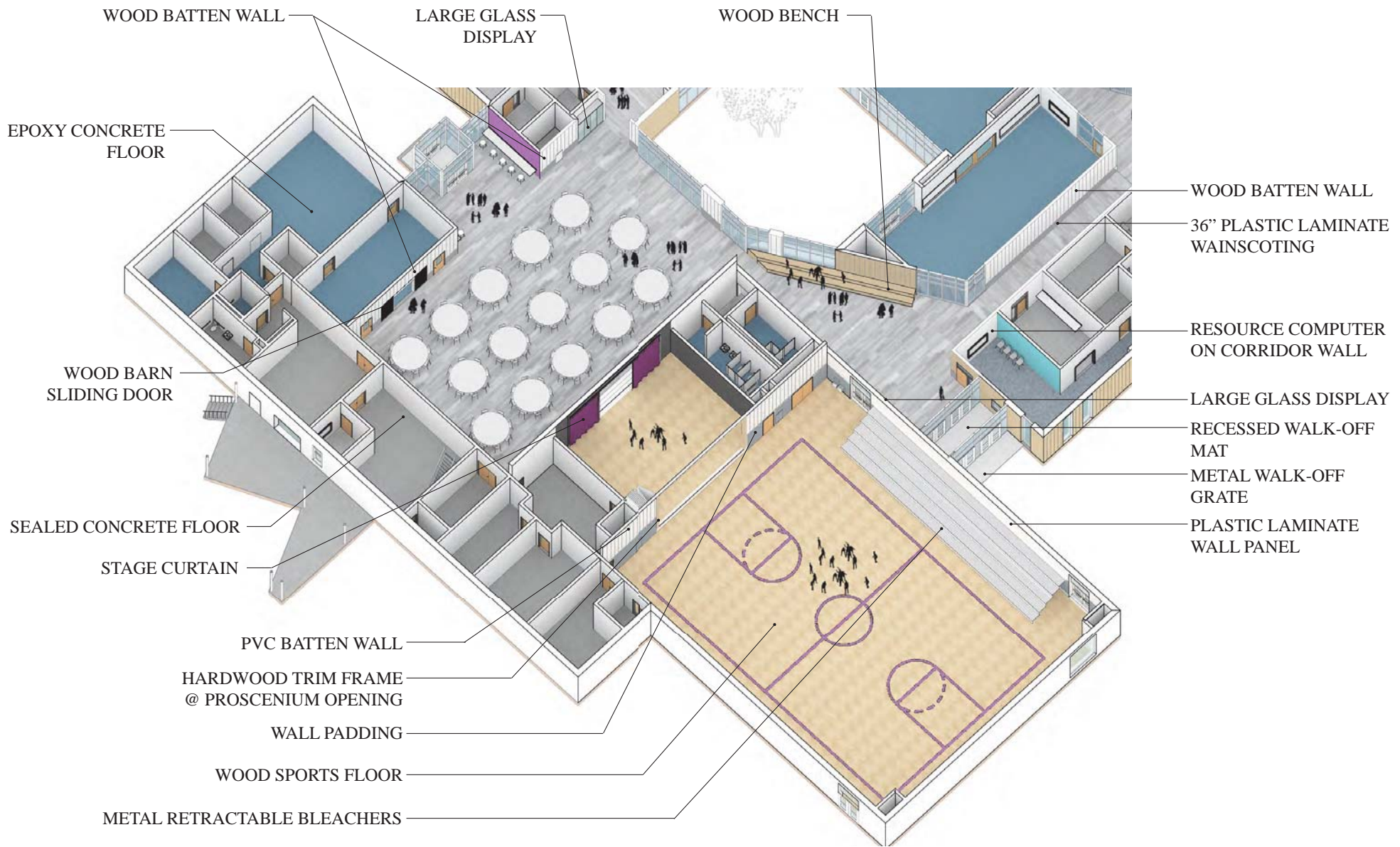
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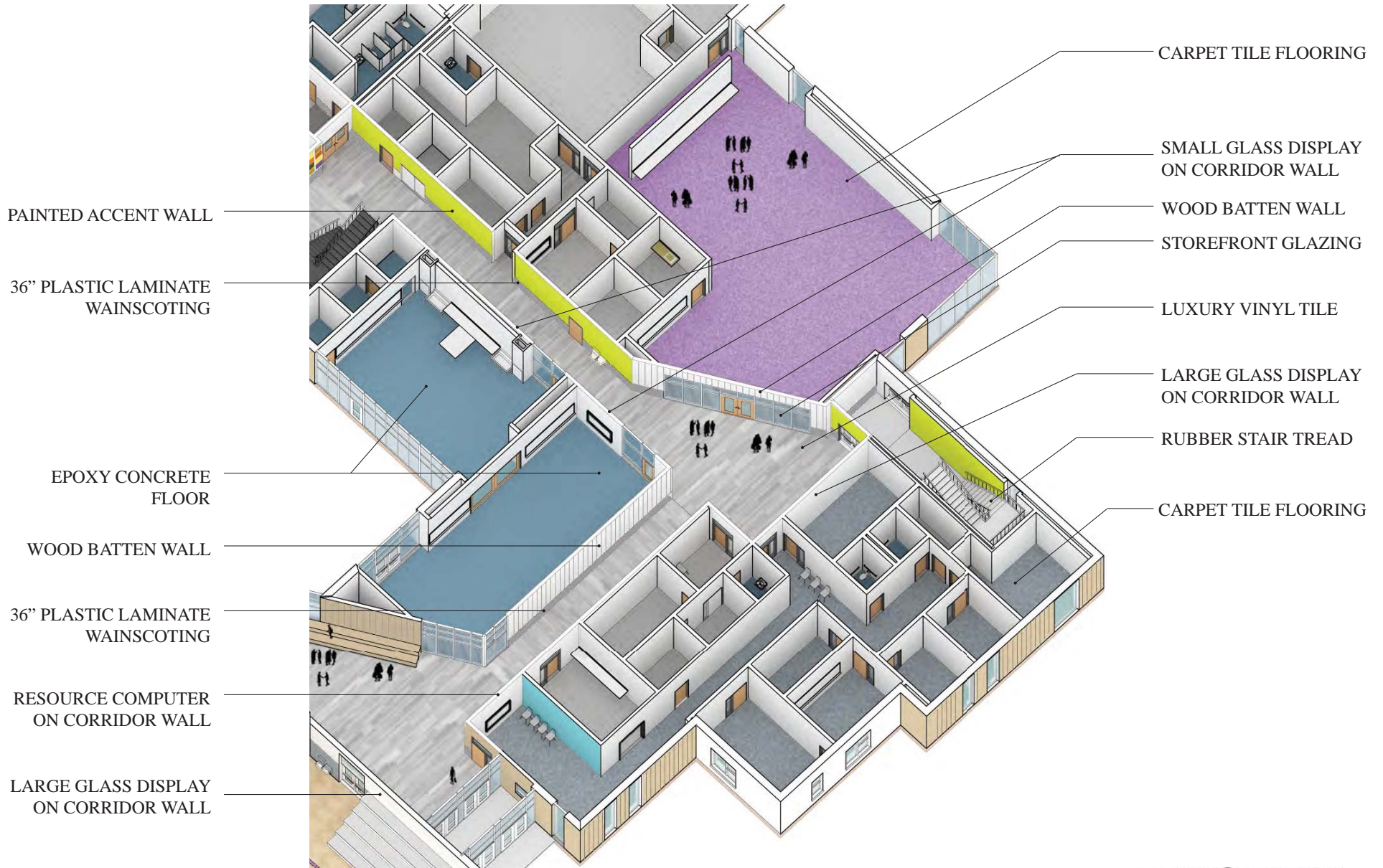
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CAFE/GYMNASIUM/ENTRY LOBBY



ADMIN. OFFICES/MEDIA CENTER/I-STUDIO



ACADEMIC WING

