



Deborah B. Goldberg
Chairman, State Treasurer

James A. MacDonald
Chief Executive Officer

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Executive Director / Deputy

April 26, 2019

Ms. Alicia Cannon
Northbridge Board of Selectmen
Northbridge Town Hall
7 Main Street
Whitinsville, MA 01588

Re: Town of Northbridge, W. Edward Balmer Elementary School

Dear Ms. Cannon:

The Town of Northbridge (the “Town”) provided the Massachusetts School Building Authority (the “MSBA”) with a Design Development submission for the W. Edward Balmer Elementary School Project (the “Project”) on April 5, 2019. In response, the MSBA is providing the Town with its review comments. It is the MSBA’s understanding that the Town has proceeded into the Design Development phase for the Project despite the MSBA and the Town not executing a Project Funding Agreement (a “PFA”). In doing so, please be advised that the Town is proceeding at its own risk; without a PFA, the MSBA will not be able to reimburse the Town for otherwise eligible costs that it may incur in the Design Development phase or any later phases.

Neither the MSBA’s receipt of the Design Development submission nor the MSBA’s transmittal of review comments to the Town shall be construed as an approval or endorsement of the Town’s decision to proceed into the Design Development phase without a PFA. The MSBA’s comments solely reflect the MSBA’s review of the Design Development documents submitted by the Town. The same shall apply to any additional documents submitted to the MSBA and to any comments provided by the MSBA without a PFA.

Responses to the attached comments shall be forwarded to Brian Lynch (Brian.Lynch@MassSchoolBuildings.org) through the Owner’s Project Manager. Please review and return responses within 14 days of receipt of this letter.


If you have any questions or comments, please do not hesitate to contact Kevin Sullivan (Kevin.Sullivan@MassSchoolBuildings.org).

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April 26, 2019

Northbridge Design Development Submission Review Comments

Sincerely,



Mary Pichetti
Mary Pichetti
Director of Capital Planning

Attachment: Design Development Submission Review Comments

Cc: Legislative Delegation

Adam Gaudette, Northbridge Town Manager

Michael LeBrasseur, Chair, Northbridge School Committee

Amy McKinstry, Interim Superintendent, Northbridge Public Schools

Melissa Walker, Director of Business and Finance, Northbridge Public Schools

Josepha Strazzula, Chair, Northbridge School Building Committee

Joel G. Seeley, Owner's Project Manager, Symmes Maini & McKee Associates, Inc.

Lee P. Dore, Designer, Dore & Whitter Architects, Inc.

File: 10.2 Letters (Region 2)

APPENDIX 6A

MODULE 6 – DESIGN DEVELOPMENT REVIEW COMMENTS

District: Town of Northbridge

School: W. Edward Balmer Elementary School

Owner's Project Manager: SMMA Project Management

Designer Firm: Dore & Whittier Architects, Inc.

Submittal Received Date: April 5, 2019

Review Date: April 24, 2019

Reviewed by: Gienapp Design, C. Forde, K. Sullivan, R. Hudson

MSBA REVIEW COMMENTS

The following comments¹ on the Design Development submittal are issued pursuant to a review of the project submittal document for the new construction of the proposed project and presented as a Design Development submission in accordance with the MSBA Module 6 Guidelines.

6A.1 Summary Comments:

- Basic Project Information:
 - *Enrollment: Grades K-5 with an enrollment of 1,030 students, plus Pre-K (90 students).*
 - *PFA GSF: 167,352*
 - *Project Type: New construction*
 - *Construction Delivery Method: Construction Manager at Risk (Fontaine Brothers, Inc.)*
- Comments here:
 - *The total project budget per the PFA is \$100,968,194, and the information provided confirms it is still on budget.*
 - *The construction cost estimates are \$81,754,942 (CMR's estimate by Fontaine Bros., Inc.) and \$77,467,908 (Designer's estimate by PM&C).*
 - *The construction budget per the PFA is \$79,492,663, and the information provided confirms that the reconciled construction cost of \$79,480,442 is still within budget.*

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.

6A.2 OPM Deliverables: *Unless specifically stated otherwise, the OPM deliverables are included in the submission with no response from MSBA required.*

6A.2.1 Submittal Review & Coordination:

- Review designer submissions; make recommendations to Owner. Address each of the following items individually, and describe how each was evaluated.
- Coordinate design; include written recommendations to the Owner.
 - Technical accuracy, coordination & clarity. *The OPM comments on the technical accuracy and somewhat on coordination,*
 - *but does not appear to comment on the clarity of the design. With the response to these comments, indicate if this has been coordinated.*

RESPONSE: The design documents at this Design Development phase contain the expected level of coordination and clarity.

- Efficiency & cost effectiveness.
- Operability.
- Constructability.
- Phasing.
- Bid-ability.
- Site access during construction.
- Coordinate the commissioning consultant's (Cx) review.
 - Include Cx review & District response. *The information provided includes the Cx review, however, the District's response is not provided. In response to these comments, provide the District's response to the Cx review.*

RESPONSE: The response to the Cx comments is attached.

- Incorporate Cx recommendations. *Please confirm the Cx recommendations will be incorporated in future submissions in response to these comments.*

RESPONSE: The Cx recommendations will be incorporated into the 60% Construction Documents submission.

- Coordinate the District response to MSBA comments of previous submittal.
 - Include MSBA review & District response.

6A.2.2 Project Schedule: All schedules should be presented in calendar days.

Update project schedule: As a minimum, the schedule update should provide the same level of detail as was included in Exhibit C of the Project Funding Agreement, expanded and updated to include milestones for Design Development, Bidding, Construction, and Closeout. The updated schedule should include proposed critical path and construction milestone information. In addition

to the construction milestones, the schedule must also include the following information as listed in MSBA Module 7, Schedule Activities:

- Punch list start and end dates.
- Date of Project Registration with the US Green Building Council (“USGBC”) or Collaboration for High Performance Schools (“CHPS”).
- Provisional/Design package submittal date to USGBC or CHPS.
- Submittal date of 50% DCAMM Notification and 100% DCAMM Notification.
- General Contractor/Construction Manager request for final payment
- Commissioning Consultant inspection (substantial completion plus approximately 10 months).
- Submittal date of Final Commissioning Report to MSBA.
- Submittal date of Final Construction package including but not limited to Final Commissioning Report to USGBC or CHPS.
- Anticipated issuance date of final Green School Program Certification letter from USGBC or CHPS.
- Submittal date to MSBA of Commissioning Certificate of Completion.
- Submittal date to MSBA of final reimbursement request.
- Indicate submission dates for the following approvals. In addition, provide dates for any other state or federal approval not listed below (the following list is not a comprehensive itemization of required state approvals; other requirements may apply, and some of the items listed below may not be applicable to this project). Indicate “Not Applicable” where appropriate:
 - DESE – Special Education approval by Department of Elementary and Secondary Education.
 - MHC – Project Notification Form and approvals by MA Historical Commission.
 - OIG – Construction Manager at Risk approval by the Office of Inspector General.
 - Executive Office of Energy and Environmental Affairs / EEA:
 - MEPA – MA Environmental Policy Act by Energy & Environmental Affairs:
 - ENF – Environmental Notification Form. *The information provided indicates an ENF is not applicable for this project. Please confirm in response to these review comments.*
RESPONSE: An ENF is not required.
 - EIR – Environmental Impact Report. *The information provided indicates an EIR is not*

applicable for this project. Please confirm in response to these review comments.

RESPONSE: An EIR is not required.

- Article 97 Land Disposition Policy approval by Energy & Environmental Affairs. *The information provided indicates an Article 97 Land Disposition Policy approval by Energy & Environmental Affairs is not applicable for this project. Please confirm in response to these review comments.*

RESPONSE: An Article 97 approval is not applicable to this project.

- MA DEP – Massachusetts Department of Environmental Protection. *The information provided indicates MA DEP approval is not applicable for this project. Please confirm in response to these review comments.*

RESPONSE: MA DEP is not required.

- MA DOT – Massachusetts Department of Transportation. *The information provided indicates MA DOT approval is not applicable for this project. Please confirm in response to these review comments.*

RESPONSE: MA DOT is not required.

- MA DPH – Massachusetts Department of Public Health. *The information provided indicates MA DPH approval is not applicable for this project. Please confirm in response to these review comments.*

RESPONSE: MA DOH is not required.

- EPA – NPDES National Pollutant Discharge Elimination System Notice of Intent approval by the US Environmental Protection Agency. *The information provided indicates EPA – NPDES approval will be performed at the commencement of construction. Please confirm in response to these review comments, and indicate the responsible party for obtaining this approval.*

RESPONSE: The Construction Manager will be responsible to obtain the NPDES approval.

- MAAB – Accessibility variances by MA Architectural Access Board. *The information provided indicates accessibility variances by MAAB are not applicable for this project. Please confirm in response to these review comments.*

RESPONSE: There are no MAAB variances required.

- Indicate all required state reviews or permits on the milestone schedule including actual or planned dates of approval which are required in order

to maintain the planned bidding and construction schedule and milestones indicated therein. For required state reviews or permits which have not been obtained on schedule, provide a separate (subnetwork) schedule depicting recovery actions to obtain required approvals in order to maintain the bidding and construction schedule.

- The schedule is to be updated and submitted to MSBA with each OPM monthly report and as often as is required to reflect any changes, including any changes to milestone dates, but must be submitted with each design submittal (DD, 60% CD, 90% CD). The schedule shall reflect any variances in the updated schedule relative to the baseline project schedule included with the Project Scope and Budget Agreement.
- Indicate the date for submission to MSBA of the Design Development, and proposed dates for submission of the 60% and 90% Construction Documents submittals. The schedule is to incorporate 21 calendar day required duration for MSBA review of each submission, and a minimum of 14 calendar days for project team incorporation of MSBA review comments as well as all others into the project documents prior to the due date of the next submission or finalizing project documents for bidding. 35 calendar days for each submission is the minimum acceptable duration; if the project team believes additional time is required for any or all of the submissions the durations for these activities are to be increased accordingly.

6A.2.3 Scope and Budget

- Develop project scope and budget:
 - Reconciled construction cost estimate including Designer/OPM comparison chart:
 - Prepare independent construction cost estimates pursuant to Section 8.1.2.2 of the Contract for Project Management Services, with escalation to the mid-point of construction, for comparison with the Designer's cost estimate, based upon design development progress documents. *An independent construction cost estimate by the CMR, Fontaine Bros., Inc., is included in the submission for comparison with the Designer's estimate.*
 - CMR (if applicable).
 - If Owner has not yet contracted with a Construction Manager (CM), the OPM must develop a construction cost estimate for comparison with the Designer's cost estimate.
 - If the Owner has given the CM a Notice to Proceed, the OPM must review cost estimates provided by the Designer and CM and provide a detailed line by line reconciliation of the Designer's and CM's construction cost estimates. *Also refer to*

other comments under 6A.1 above.

- Updated project budget in the total project budget format, based on the reconciled construction cost estimate. If the reconciled estimate is not used for the updated project budget, provide an explanation. *In future submissions, use the MSBA's Total Project Budget form and the reconciled construction estimate. Please acknowledge and confirm as part of the response to these review comments.*

RESPONSE: Acknowledged.

- Value Engineering recommendations.
 - For any Value Engineering recommendations which have been accepted, provide a copy of the Committee vote. *In response to these comments, include an updated list of Value Engineering items along with a copy of the Committee vote associated with any Value Engineering recommendations that have been accepted.*

RESPONSE: Updated Value Engineering List and Minutes of April 2, 2019 and April 24, 2019 School Building Committee Meetings are attached.

6A.3 Designer Deliverable: *Unless specifically stated otherwise, the Designer deliverables are included in the submission with no response from MSBA required.*

6A.3.1 General Requirements

- Submit updated work plan. *In response to these comments, please confirm that the work plan and overall project schedule have been coordinated.*

RESPONSE: D&W confirms that the work plan and overall project schedule have been coordinated.

- Basis of Design narrative description for all disciplines.
- Building code analysis.
 - Provide a list identifying all proposed proprietary items (if any) with an affidavit which shall indicate an elected body of the district (school committee, city or town council, or selectmen, - but not an ad-hoc building committee) has been presented with proposals for proprietary requirements approval action, has had an opportunity to investigate, or to require staff or consultant investigation upon each item so proposed, and has majority voted in an open public session that is in the public interest to do so. Provide MSBA with a certified copy of the vote of the elected body. *The information provided indicates that the proprietary items will be voted on in April 2019. Provide a certified copy of the vote in the next submission. Please acknowledge and confirm as part of the response to these review comments.*

RESPONSE: A copy of the certified vote for proprietary materials will be provided in the next submission.

- An interior color theory statement describing proposed paint and material selections and colors for typical and special spaces, why they have been

selected and how these selections relate to exterior materials and colors. Confirm that color and material selections have been presented to and approved by the District.

- Confirmation of project registration with CHPS or USGBC.
- Structural narrative including methods of lateral bracing and how requirements of earthquake code will be met.
- Structural calculations and required floor loads.
- Energy calculations.
- Life Cycle cost analysis for energy and water consuming devices.
- Heat gain and loss calculations for Heating, Ventilating and Air Conditioning systems.
- Calculations showing total electrical load.
- Security and visual access requirements:
 - Confirmation that the persons responsible for implementation of the District's emergency procedures, and responding emergency medical, fire protection, and police agency representatives have been consulted in the planning process and any associated requirements have been included in the project.
 - Identification of any other security related items particular to the District and/or the proposed project.
 - Verification that the following safety and security related issues have been reviewed and are in accordance with the District's procedures as noted above:
 - Main entrance design – describe District protocol for visitor entry and check-in related to the current design for visitors to remain in the vestibule versus a side sub-vestibule.
 - Classroom lockset hardware - confirm hardware functions are compatible with the District's protocols related to lockdown.
 - Classroom / Instructional spaces visibility - confirm that the inclusion of sidelights at entrance locations is compatible with the District's current standards related to visibility from corridors and whether any related vision control option measures are to be incorporated.
 - Alternative entry locations - confirm project includes site and building signage, as may be required by District's emergency procedures, to identify locations where first responders may more directly reach a person needing medical attention; Knox Boxes; and provisions for building plans to be delivered to local fire and response agencies.
- Quality Control documents demonstrating:
 - Ceiling clearances.

- Mechanical room and shaft sizes.
- Coordinate specifications and drawings.
- Filed sub-bid work.
- Scheduling.
- Equipment and power.
- Existing and new construction. *Not provided. Please include as part of the next submission.*

RESPONSE: *The project is all-new construction; therefore it was D&W's interpretation that no statement of coordination was required for new and existing construction. That said, D&W is closely coordinating with the CM Fontaine Bros on detailed aspects of the project phasing, sequencing, logistics, safety and security during construction, and constructability.*

- Phasing. *Not provided. Please include as part of the next submission.*

RESPONSE: *The overall project phasing diagrams were included in the DD drawing set. These drawings are currently under additional coordination and detailed review with the CM Fontaine Bros, the Owner's SBC Working Group, and the AHJs (Northbridge Building Inspector and Fire Chief) on detailed aspects of the project phasing, sequencing, logistics, safety and security during construction, and constructability. Updated and more detailed phasing diagrams will be included as part of the 60% CD submission.*

6A.3.2 Space Summary

- Updated space summary and signed certification that reflects the current design. *Based on the space summary provided, the MSBA notes the following:*

| Spaces | <u>PFA Space Summary</u> | <u>DD Space Summary</u> | <u>60% CD Space Summary</u> | <u>90% CD Space Summary</u> | <u>Difference to PFA</u> | <u>Comments</u> |
|-----------------------------|---------------------------------|--------------------------------|------------------------------------|------------------------------------|---------------------------------|--|
| Core Academic Spaces | 62,850 | 62,850 | | | - | This category has not changed since the PFA. |
| Special Education | 13,530 | 13,530 | | | - | This category has not changed since the PFA. |
| Art and Music | 5,150 | 5,150 | | | - | This category has not changed since the PFA. |
| Health & Physical Education | 6,298 | 6,298 | | | - | This category has not changed since the PFA. |
| Media Center | 5,305 | 5,305 | | | - | This category has not changed since the PFA. |

| | | | | | | |
|---|----------------|----------------|--|--|---------|---|
| Dining and Food Service | 11,955 | 11,955 | | | - | This category has not changed since the PFA. |
| Medical | 810 | 810 | | | - | This category has not changed since the PFA. |
| Administration & Guidance | 3,040 | 3,040 | | | - | This category has not changed since the PFA. |
| Custodial & Maintenance | 2,630 | 2,630 | | | - | This category has not changed since the PFA. |
| Total Building Net | 111,568 | 111,568 | | | - | This category has not changed since the PFA. |
| Non-Programmed Spaces | | | | | | |
| IT Office/Repair | 150 | 150 | | | - | This category has not changed since the PFA. |
| Unoccupied MEP/FP Spaces | 2,125 | 2,008 | | | (117) | This category has decreased by 117 nsf since the PFA. |
| Unoccupied Closets, Supply Rooms & Storage Rooms | 641 | 646 | | | 5 | This category has increased by 5 nsf since the PFA. |
| Toilet Rooms | 3,955 | 3,937 | | | (18) | This category has decreased by 18 nsf since the PFA. |
| Circulation (corridors, stairs, ramps, & elevators) | 29,396 | 31,893 | | | 2,497 | This category has increased by 2,497 nsf since the PFA. |
| Remaining | 19,517 | 17,150 | | | (2,367) | This category has decreased by 2,367 nsf since the PFA. |
| Total Building Gross | 167,352 | 167,352 | | | - | This category has not changed since the PFA. |
| Grossing Factor | 1.50 | 1.50 | | | - | This category has not changed since the PFA. |

- Comparison of the current design with the final educational program, and confirmation that there are no variations. If there are variations, the written summary must address the following:
 - Explanation of deviations within the space summary from the Project Funding Agreement.
 - *The submission does not note any deviation other than to the Non-Programmed spaces (see 6A.3.2 above). MSBA accepts this variation to the approved project*

with no further action required.

- The MSBA considers that deviations include changes in the size of a specific space, the total nsf of a program area (e.g. general classrooms, voc tech, dining etc.), the location of a space, the surrounding adjacencies of a space and or the intended purpose of the room.
- The submittal must clearly call out deviations to location and surrounding adjacencies through the use of redlines or “clouding.”
- The explanation should clearly identify the basis of the change identifying both architectural and/or programmatic reasons.
- If the basis of the change is programmatic, the submittal should include a red-lined version of the educational plan included in the Project Funding Agreement.
- Regarding DESE approved SPED spaces; *The submission indicates there are no variations in the Special Education areas.*
 - If the District wishes to submit a change to its DESE approved submittal, it must a) confirm that all changes to SPED spaces are final; b) provide a new submittal utilizing the format of the original submittal requirements and clearly noting any changes through use of clouded floor plans and red-lined narratives and tables; and c) indicate how the project schedule can accommodate a potential resubmittal and approval by DESE. Please provide a separate package for changes to DESE approved SPED spaces. *See comment above.*
 - If the District chooses not to change from the DESE approved submittal it should confirm that the spaces are the same or explain when and how the spaces will be returned to the approved size, configuration and location. *See comment above.*
- Regarding DESE approved Public Day Education spaces;
 - If the District wishes to submit a change to its DESE approved submittal, it must a) confirm that all changes to Public Day Education spaces are final; b) provide a new submittal utilizing the format of the original submittal requirements and clearly noting any changes through use of clouded floor plans and red-lined narratives and tables; and c) indicate how the project schedule can accommodate a potential resubmittal and approval by DESE. Please provide a separate package for changes to Public Day Education Spaces. *Not applicable.*
 - If the District chooses not to change from the DESE approved submittal it should confirm that the spaces are the same or explain when and how the spaces will be returned to the approved size, configuration and location. *Not applicable.*

- Regarding DESE pre-approved Chapter 74 Program spaces;
 - If the District wishes to submit a change to its DESE approved submittal, it must a) confirm that all changes to Chapter 74 Program spaces are final; b) provide a new submittal utilizing the format of the original submittal requirements and clearly noting any changes through use of clouded floor plans and red-lined narratives and tables; and c) indicate how the project schedule can accommodate a potential resubmittal and approval by DESE. Please provide a separate package for changes to the Chapter 74 Programming. *Not applicable.*
 - If the District chooses not to change from the DESE approved submittal it should confirm that the spaces are the same or explain when and how the spaces will be returned to the approved size, configuration and location. *Not applicable.*

6A.3.3 Project Approvals

- Describe the status of the following approvals. In addition, provide the status of any other state or federal approval not listed below (the following list is not a comprehensive itemization of required state approvals; other requirements may apply, and some of the items listed below may not be applicable to this project). Provide a copy of the appropriate application forms and/or approval letters where applicable. Indicate "Not Applicable" where appropriate. For each agency approval required for this project, indicate the date when approval was received. All required approvals should have an associated approval date indicated as part of the 90% CD submission and prior to advertising for bids.
 - DESE - Special Education approval by Department of Elementary and Secondary Education.
 - MHC – Project Notification Form and approvals by MA Historical Commission. *Approval letter from MHC received prior to Design Development submittal.*
 - OIG - Construction Manager at Risk approval by the Office of Inspector General.
 - Executive Office of Energy and Environmental Affairs / EEA:
 - MEPA - MA Environmental Policy Act by Energy & Environmental Affairs:
 - ENF - Environmental Notification Form. *The submission indicates this is not applicable. Please confirm as part of the response to these review comments.*

RESPONSE: The project does not exceed any thresholds for an ENF. Applicable thresholds were

reviewed: Increase in imperviousness: 3.1 Acres – below 5 acres; areas of land disturbance: 16 acres – below 25 acres; no filling of wetlands; no historical buildings; all utility demands/withdrawals well below thresholds. Confirmed N/A.

- EIR - Environmental Impact Report. *The submission indicates this is not applicable. Please confirm as part of the response to these review comments.*

RESPONSE: See above; the project does not exceed any of thresholds for ENF, therefore does not exceed threshold for EIR. Confirmed N/A.

- Article 97 Land Disposition Policy approval by Energy & Environmental Affairs. *The submission indicates this is not applicable. Please confirm as part of the response to these review comments.*

RESPONSE: confirmed N/A.

- MA DEP - Massachusetts Department of Environmental Protection. *The submission indicates this is not applicable. Please confirm as part of the response to these review comments.*

RESPONSE: The project is not subject to any site MassDEP Permits; confirmed N/A.

- MA DOT - Massachusetts Department of Transportation. *The submission indicates this is not applicable. Please confirm as part of the response to these review comments.*

RESPONSE: confirmed N/A.

- MA DPH - Massachusetts Department of Public Health. *The submission indicates this is not applicable. Please confirm as part of the response to these review comments.*

RESPONSE: confirmed N/A for any site-related components. The building (Kitchen) will be subject to a local Board of Health permit, application for which will soon be submitted.

- EPA –NPDES National Pollutant Discharge Elimination System Notice of Intent approval by the US Environmental Protection Agency.
- MAAB - Accessibility variances by MA Architectural Access Board. *The submission indicates this is not applicable. Please confirm as part of the response to these review comments.*

RESPONSE: confirmed N/A. This is a new building that will conform to the MAAB.

- Confirmation that the Project has undergone review and obtained all necessary approvals by any departments or agencies of the Commonwealth required by law to review the Project, including but not limited to the

approvals listed above. Attach such letter of documentation evidencing such reviews and approvals. In accordance with Section 4.12 of the Project Funding Agreement (the "PFA"), the District must obtain such reviews or approvals prior to the solicitation of construction bids.

- For any required state reviews or permits for which approval has not been obtained as of the Design Development submission date, provide a status update including actions taken to date and actions planned to obtain the required state reviews and permit approval(s) in order to comply with PFA Section 4.12 and maintain the projected schedule milestones listed in OPM Deliverables.
- List and target dates for all local zoning approvals, testing and permits.
- Provide a certification that all applicable utility officials have been contacted by the designer regarding each basic design, and utility connections. *The information provided indicates that gas and electric utilities have been contacted. In response to these review comments, please provide a narrative that indicates if and what other utilities have been contacted.*

RESPONSE: Whitinsville Water Company (WWC- water) and Northbridge DPW (sewer) have been contacted and have been active participants in several work session/ project review meetings. WWC comments on the DD submission were just received and will be incorporated in the next CD60 submission. Verizon (phone carrier) has been contacted and is in beginning stages of engineering to accommodate the project. The District will continue its relationship with Charter Communications through Addition Networks as its Internet Service Provider (ISP), which is in ongoing dialog with the District IT Director.

6A.3.4 Cost Estimates

- Construction cost estimate using the Uniformat II Classification to Level 3, Showing unit rates and quantities; projected to mid-point of construction AND:
- Construction cost estimate using the CSI MasterFormat 6-digit format to Level 3 and MGL c.149 s 44F (filed sub-bid) format. Showing unit rates and quantities; projected to mid-point of construction. *In response to these comments, please indicate if the Designer's cost estimate is escalated to the mid-point of construction. The information provided indicates the Designer's cost estimate is based on documents dated February 22, 2019. However, the documents included with this submission are dated April 5, 2019. Please indicate if there are any changes between the two sets in response to these comments. Also refer to other comments regarding the costs estimates under 6A.2.3 above.*

RESPONSE: Escalation to the mid-point of construction is included in the cost estimate within the rates. Escalation on the summary is to the start of the construction. This is consistent with all MSBA projects estimated by PM&C and will require no change to the cost estimates provided in the DD documents.

There are no differences of scope that would affect the estimates between the drawings upon which the estimates were prepared, dated February 22 2019, and the submission drawings dated April 5, 2019. The general quality of the drawings were improved graphically and coordinated, but there were no changes of scope.

6A.3.5 Drawings (developed to Design Development progress level)

- Cover sheet showing a list of all drawings, symbols, abbreviations, notes, locations map (the project title should be visible when the drawings are rolled). *In future submissions include a cover sheet showing a list of all drawings, symbols, abbreviations, notes, locations map. Please acknowledge and confirm as part of the response to these review comments.*

RESPONSE: The DD submittal package includes a cover sheet, listing all drawings and consultants, and providing a location map. Due to the quantity of other information specific to the each consultant's drawings (symbols, abbreviations, notes, etc), those are located within each consultant's set of drawings, such as drawings AG0.01, AG0.02 for architectural content. The cover sheet will be reformatted with a title block for the next submission, to include the project name oriented so that it is visible when the drawings are rolled.

- Site and utility drawings showing the following:
 - Existing and proposed contours and locations of the proposed building or addition(s). Show entry level elevations and key exterior grades at perimeter showing drainage away from the building. Indicate all retaining walls. Include benchmarks of site if survey is available. *No floor elevations are included. Please include them in the next submission.*

RESPONSE: Floor datum elevations will be included in Civil and Landscape drawings prior to the next submission.

- All utilities existing and proposed, indicating location, elevation, composition and size e.g., gas and electric utility providers.
 - Roads, laid out parking areas, walks, recreation areas, terraces and other site improvements.
 - Building locations fixed and referenced from main survey baseline, if available.
 - Plant materials with preliminary schedule.
- Architectural drawings showing the following:
 - Demolition drawings and temporary work required. *No architectural demolition drawings are included in the architectural drawings, and should be included in the next submission.*

RESPONSE: General Demolition drawings (available drawings of the existing school building from the original construction) will included in the drawing set prior to the Bid Set issue. Phasing plans to be included with the next submission will generally show temporary work to be done at the existing school site to accommodate the construction.

- Floor plans (minimum 1/8" = 1'0").
- Key plans / overall plans where required.
- Building perimeter with exterior wall thicknesses and overall dimensions.
- Structural grid.
- Plan requirements of mechanical and electrical systems.
- Building core; elevators, stairs, shafts, public toilets, with dimensions.
- Internal partitions; appropriate thicknesses and dimensions to fix basic organizations; indicate fire rated partitions and smoke partitions.
- Door swings.
- Finish floor elevations coordinated with exterior grade elevations at all interior exterior transitions. *No floor elevations are included in the architectural plans. Please include them in the next submission.*

RESPONSE: Finish floor elevations appear on the Horizontal Control Plans (A0.10 series drawings) that document the foundations and slabs for the building. The A0.10 drawing also includes a correlation to the civil grade elevation of the building, which is uniform across the entire building footprint (at all entries). D&W will confirm this is coordinated and shown in Civil drawings.

- Built-in furniture and equipment.
- Furniture layout concept drawings.
- Modular 4", 8", or 1' unit modular dimensions on Masonry.
- Large scale plans showing key areas e.g. lobby, special spaces. Indicate floor surface materials. (minimum scale 1/4" = 1'0").
- Roof plans showing the following:
 - Proposed systems type.
 - Pitch and drainage pattern.
 - Roof drain, gutters and scuppers.
 - Skylights, stair halls through roof, penthouses, major equipment, chimneys.
- Building sections - One transverse and one longitudinal section. Indicate floor to ceiling heights and floor-to-floor heights. Label all spaces.
- Building sections updated and coordinated with plans and elevations.
- Building elevations showing the following:
 - Full height elevations including roof structures, e.g., mechanical equipment, chimneys, and penthouses.
 - Floor elevations, floor-to-floor height, and overall height related to benchmarks on site plans.
 - Windows, storefront & curtain wall systems.

- All columns located on a centerline and coordinated with the structural drawings.
- Materials indicating major control and expansion joints, and divisions of materials where required. *Control and expansion joints are not shown on the elevations. Please include them in the next submission.*

RESPONSE: Control and expansion joints will be shown on the elevations included in the next submission.

- Louver locations coordinated between building elevations, floor plans, mechanical equipment, project manual etc. *There are no louvers on the outside wall of the boiler room. Please verify that air supply to the boiler room is addressed in the next submission.*

RESPONSE: The boilers will be specified as direct vent boilers, with piped flues and air intakes; large louvers for combustion makeup air will not be required. Flue / intake locations will be shown prior to the issue of bid set documents.

- Exterior grades and topographical features in context. *Exterior grades are not included in the elevations. Please include them in the next submission.*

RESPONSE: Except for one location at the northeast corner of the building, finish grade is level all around the building. The one exception to that condition (a recent development) will be shown on the elevations in the next submission and coordinated with the Civil and Landscape drawings.

- Full height wall sections for main elevations and at special conditions. Show foundation and perimeter treatment, wall construction including insulation and supporting structure, fenestration and mechanical penetrations, and floor construction.
- Interior elevations: Show at all spaces, e.g. library, lobby, and all typical spaces, e.g. classroom.
- Reflected ceiling plans: Show prototypical structural, fire protection, mechanical and electrical information for classrooms and major spaces, including lighting layouts with ceiling height and material changes.
- Schedules:
 - Finish schedule by room types.
 - Door schedule by room types.
 - Window schedule.
 - Equipment schedules; e.g., food service, instructional media.
- Structural Concepts:
 - Framing plans; typical floor framing, roof framing, special framing, show framing at major openings and sizes of members.
 - Foundation plan showing sizes and locations of typical components.

- All columns and beams are identified and listed in the column and beam schedule.
- Preliminary details including floor and roof deck.
- Details for special and/or incidental structural features; e.g. tunnels, connecting bridges and unique architectural features.
- Connection to existing buildings at foundation and at key points at existing structure if applicable.
- All construction joint and expansion joint locations coordinated with structural drawings. *No construction or expansion joints are included in the structural plans. Please include them in the next submission.*

RESPONSE: Construction and/or expansion joints will be included in the structural drawings in the next submission.

- Fire protection; floor plans indicating wet or dry type systems, hose racks, or cabinets and fire department tie-ins. Indicate a fire pump where required. Show typical sprinkler head layout.
- Plumbing and sanitary systems; floor plans indicating locations of all plumbing fixtures and special features, and approximate location and size of all piping systems and principal items of equipment.
- Heating, Ventilating and Air Conditioning Systems:
 - Show locations and approximate sizes of piping systems, air handling systems and principal items of equipment such as compressors or cooling towers.
 - Indicate space requirements of major equipment and their location in mechanical rooms and fan rooms. Indicate shaft requirements.
 - Adequate ceiling heights exist at worst-case duct intersection.
 - Ceiling diffusers/registers match mechanical drawings, including all soffit and vent locations.
- Electrical Systems:
 - All services including those for special purposes shall be located and indicated.
 - Light fixtures on electrical drawings match reflected ceiling plans.
 - Switchgear and emergency generator.
 - Electrical equipment locations are coordinated with site paving and grading. *The generator pad does not appear to be coordinated. Please include in the next submission.*

RESPONSE: The generator pad will be coordinated in the next submission.

- All motorized equipment is coordinated with electrical drawings.
- All power equipment has electrical connections.
- Fire alarm system drawings showing all initiation and signaling devices,

control panels, annunciator panels, etc.

- Security system drawings.
- Communications drawings showing chases, major equipment locations and any special distribution requirements.

6A.3.5.1 Project Coordination

- The structural, mechanical, or other disciplines, do not conflict with architectural plans or specifications.
- Structural dimensions match Architectural drawings.
- Column orientation matches Architectural drawings.
- Column grid lines match Architectural drawings.
- Column and bearing wall locations match Architectural drawings.
- Column locations coordinated with all other disciplines.
- Seismic detailing coordinates with Architectural drawings. *On sheet S4.01 Brace frame elevation BF-6 there is a conflict between the steel bracing and vertical ducts in a shaft. On sheet S4.02 Brace frame elevations BF-2, BF-3, and BF-7 there are missing doors that may conflict with the brace framing. On sheet S4.03 Brace frame elevations BF-7, BF-8, BF-9, and BF-10 are not coordinated with the architectural plans. There may be other steel coordination issues; please review all locations and address in the next submission.*

RESPONSE: These steel coordination issues will be addressed in the next submission.

- Beams and columns protruding horizontally and vertically into stairwells, and other interior spaces. *None found. Please continue to review all locations for conflicts and coordinate structural and architectural in the next submission.*

RESPONSE: Ongoing steel coordination continues to occur, and any issues brought to light will be addressed by the next submission.

- The finish grade elevations coordinated between all disciplines. *The finish grades are not coordinated with the other disciplines. The floor grades are not coordinated with the finish grades. Please coordinate them in the next submission.*

RESPONSE: Finish floor elevations appear on the Horizontal Control Plans (A0.10 series drawings) that document the foundations and slabs for the building. The A0.10 drawing also includes a correlation to the civil grade elevation of the building, which is uniform across the entire building footprint (at all entries). D&W will confirm this is coordinated and shown in Civil drawings.

- Mechanical equipment power requirements and physical locations, including special information as to who mounts, connects, tests, etc.
- Verification of potential spatial conflicts in mechanical equipment.

- Room wall/floor/ceiling construction coordinated with the finish schedule.
- Civil earthwork grading and excavation plans are coordinated with architectural and landscape plans. *There are no floor elevations in the architectural or the landscape plans. Please include them in the next submission.*

RESPONSE: Floor datum elevations will be included in Civil and Landscape drawings prior to the next submission.

- All room numbers are coordinated between all disciplines.
- Equipment plan coordinates with architectural plans.
- All kitchen equipment connected to utility systems. *The connections to water, sanitary and gas are not shown on the plumbing plans. Please include them in the next submission.*

RESPONSE: Utility connections to Kitchen Equipment will be shown on the Plumbing plans in the next submission.

6A.3.6 Project Manual (developed to Design Development progress level)

- Geotechnical report, including locations and dates of test boring holes and results of soil investigation, including water levels, allowable solid bearing pressure and bottom grades of footing and slabs.
- Outline Specifications in the current version of CSI Master spec divisions including: *The submitted specification is a 3-part CSI specification rather than an outline specification as required, refer to section 7.6.6 of the Designer agreement. Consequently, some of the comments below are related to the full specification, as presented, and may address a level of detail beyond what is normally considered design development topics. Consequently, the presentation of information does not correlate to the outline below.*
 - Site work: clearing, drives, walks, parking areas, fences, excavation, backfill, planting, footings on earth, rock, piles, caissons, proposed bearing pressures, boring logs.
 - Foundation walls; type of concrete, reinforcing, type and extent of waterproofing.
 - Footing drains; type, disposal of drainage.
 - Exterior walls: superstructure, type, materials, brick type, alternate cladding, back-up materials, damp proofing material and extent, special features. *Section 04 20 00 Unit Masonry, there are brick types or colors that are listed as "to be determined." This information should be updated for the next submission.*

RESPONSE: The brick size type was changed from Standard Modular to Utility size as a result of post-DD value engineering. At least three equivalent Utility sized brick products will be specified in the next submission.

- Roofs; type, vapor barrier, insulation, flashings, all materials.
- Flashings; general types, all materials, weights, where each type is to be

used.

- Sheet metal; gutters, leaders, others uses, except flashing.
- Windows; general types, materials, sub-frames, finish, glazing, screens. *It is not clear if all window types shown on the drawings are included in the specifications. For example, as drawn, type W6 looks like it is a double hung window, but no double hung window is included in the specification. Review and coordinate this information in future submissions. Please acknowledge and confirm as part of the response to these review comments.*

RESPONSE: The window type elevations will be coordinated with the specifications in the next submission.

- Rough openings for all doors and windows coordinated. *Rough openings for windows are not included in the project manual. Also, rough openings for doors are not included in the project manual and states "refer to door and frame schedule on the drawings"; however, the door schedule on the drawings does not specify rough openings. Consider including and coordinating this information in the next submission.*

RESPONSE: Rough opening dimensions will be indicated on the door and window type legends in the drawings, and widths will be indicated in floor plans. The specification will be revised to refer to the drawings for rough opening sizes rather than the door schedule. These revisions will be made before issuing documents for bid.

- Doors, exterior and interior; types and thicknesses and fire rating identified if applicable.
- Steps, exterior; including platforms and landings' materials.
- Stairs, interior; including platforms, landings, walls, materials and finishes.
- Framing; wood, concrete or metal systems in accordance with general design. *Metal stud gauge is not specified in the project manual, which states, "Utilized stud sizes indicated in Drawings whenever possible and adjust gage [sic] to meet loading requirements." However, the submission does not include information regarding gauge and loading requirement. Please include more information for clarity and to ensure sufficient gauges in the next submission.*

RESPONSE: Specification of gauge of light gauge metal framing (LGMF) is a delegated design responsibility of the Structural Engineer employed by the LGMF subcontractor under the requirements of the specifications.

- Partitions; materials, thicknesses, finishes. *Partition thicknesses are not specified in the project manual; however, it can be calculated based on the information on the drawings. Please include overall partition thickness for clarity in the next submission.*

RESPONSE: Partition thicknesses are shown on Drawing sheet AG0.02. Information is presented in a way that minimizes errors due to mis-coordination.

- Cabinet and casework; types and materials.
- Food Service Equipment; list of equipment to be provided.
- Furring; lathing, plastering, materials and locations.
- Insulation thermal; types, thicknesses, methods of application and locations.
- Acoustical treatments; types, thicknesses, methods of application and locations.
- Interior finishes; materials for floors, walls, bases, wainscots, trim, ceilings, ceiling heights.
- Fire protection; standpipe systems, sprinkler systems, fire pumps and accessories. *It is not clear if a fire pump is needed, and one is not included in Part 2 of the Plumbing Section of the Project Manual. However, one is listed both under "shop drawing checklist" and "coordination drawings list" of the Plumbing Section of the Project Manual, and there is a reference to a fire pump on the Electrical Site Details sheet (E0.05). This should be reviewed and corrected as appropriate in the next submission. In response to these comments, confirm if a fire pump is required as part of this project.*

RESPONSE: A fire hydrant flow test was completed as part of the Feasibility Phases, and it was determined that a fire pump is not required on the site. References to the fire pump requirements in the Plumbing specification and Electrical site details will be removed prior to the next submission.

- Water supply; source; location of main to which connection will be made; type of pipe for service main; load requirements; load factors and pressures.
- Sanitary sewers; sewage disposal system, pipe and other materials.
- Storm sewers; storm drainage disposal system (institution or local facility), pipe and other materials.
- Gas main; material, size, location. Interface with utility company.
- Plumbing; systems such as wastes, vents, hot water, cold water, gas, air, oxygen, vacuum, main source of supply, materials for each, water heaters, pumps, thermal insulation fixture quality, all special features.
- Heating, ventilating and air conditioning; type of heating and refrigeration plants, type and capacity of boilers and cooling equipment, fuel, type of burners, fuel storage, heaters, feed water pumps and heaters, thermal insulation, type of heating medium, supply and return piping, radiation, unit heaters, radiant heating, principal air conditioning equipment types, special features, supply, return and exhaust ductwork.
- Electric work; service connection, location, institution or public utility,

overhead or underground, transformers including type and location, types of conduit and wiring, types of fixtures, location of main switchboard, radio, fire alarm, telephone, public address, emergency lighting and wiring, emergency or other generators, special features, including Master TV, information retrieval and/or data processing system. *Electric service connection is indicated on drawings; however it is not included in the Project Manual. Please include in updated Project Manual in the next submission.*

RESPONSE: Required specification information for the Electrical Service connection will be included in the Project Manual prior to the next submission.

- Elevators, dumbwaiters and platform lifts; capacities, speed, travel in feet, landings, operation, controls, platform sizes, machine type and location, car and entrance finishes, signals.
- Other built-in equipment, types and materials.
- All "Work by others" specifications coordinated. *Not all "work by others" appears to be coordinated. For example, Section 04 20 00 Unit Masonry states that Section 05 50 00 will furnish the following – "elevator hoistway safety beam"; however, Section 05 50 00 does not comment on this. All "Work by others" throughout the project manual should be reviewed, coordinated, and included in the next submission. Please acknowledge.*

Response: The project manual specifications will be searched for statements related to work performed or furnished by other trades and coordinated for the next submission.

- The sub-contractor identified for the installation of all equipment supports and anchors for walls, floor and ceilings.
- Special features.



Subject: HVAC Design Review
 Project: MSBA - Northbridge - Balmer ES Cx
 Project Numbers: 170515.03
 Client: MSBA
 Architectural Firm: Dore & Whittier
 Engineering Firm: GGD
 F-T Review Engineer: Terence Boland, PE
 F-T Review Date: 3/13/2019

| Item #: (H####) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|-------------------------|---------------------------|---------------------------|--|---|---------|
| 100% DD Document Review | | | Review Date: 3/13/2019 | | |
| H001 | General | - | The project is reviewed as presented. Not all systems are complete as would be expected at DD. | GGD: Scope will be added and clarified as design progresses | |
| H002 | M1.11 / General Duct | - | Consider indicating smooth elbow fittings in lieu of mitered shown, to improve flow and reduce static. Mitered should be used only when needed, with vanes. | GGD: Agree, Will revise to show smooth elbows where they will fit. | |
| H003 | M1.11 / General Duct | - | Ductwork is not sized on drawings. Sizing cannot be evaluated. | GGD: Duct sizes will be included as the design progresses | |
| H004 | M1.11 / General Duct | - | Consider limiting VAV inlet size ductwork to 3 diameters upstream, then transitioning to ductwork sized per medium-velocity criteria. | GGD: Agree, Will Comply | |
| H005 | M1.11 / General Duct | - | VAV boxes are not scheduled. Selection cannot be evaluated. | GGD: Schedule data will be filled in as the design progresses | |
| H006 | M1.11 / General Classroom | - | Design air balance does not appear to take into account make-up air for exhaust via classroom toilet rooms. | GGD: A Neutral or slightly positive air balance will be maintained; this shall be clarified as the design progresses | |
| H007 | M1.11 / General Duct | - | Airflow is not consistently provided to common and corridor areas. It's unclear if these spaces are out of scope. | GGD: No areas within the building are outside of scope; common area design will be clarified as the design progresses | |
| H008 | M1.11 / General | - | Consider providing supply to the vestibule for pressurization purposes. Additionally, the corridor(s) have several exterior doors and should be provided with airflow for positive pressurization. | GGD: Agree, Corridors and Vestibules shall be positively pressurized as the design progresses | |
| H009 | M1.12 / General Duct | - | Exhaust ductwork is shown only for risers at core toilets. It's unclear if this system is intended to support all toilet / general building exhaust. | GGD: Exhaust scope shall be clarified as the design progresses | |



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| Item #: (H###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|-------------------|-------------------------|---------------------------|---|---|---------|
| H010 | M1.41 / General Roof | - | Consider indicating make-up air intake locations and clear zones around exhaust discharge locations. | GGD: All Outdoor air intakes will be de-marked by a dashed radius indicating clearance required | |
| H011 | M2.11 / General Pipe | - | Piping is not sized on drawings. Sizing cannot be evaluated. | GGD: Pipe sizing to be clarified as the design progresses | |
| H012 | M2.11 | - | Consider indicating a cabinet unit heater in the main vestibule. | GGD: Agree, Cabinet Unit Heaters to be included in the vestibule. | |
| H013 | M2.11 / General Pipe | - | Consider indicating expansion compensation locations in hot water piping mains. | GGD: Agree, Expansion loops and/or fittings will be indicated where needed as the design progresses | |
| H014 | M2.11 / General Pipe | - | Split system outdoor units are not shown on grade or roof. | GGD: Split system outdoor units shall be indicated on the roof | |
| H015 | M2.12 | - | It's assumed the ATC Panel is located near the interior boiler room door. | GGD: Agree, will show. | |
| H016 | M2.12 | - | HW piping risers are shown on boiler plan but labeled on main plan. | GGD: Will clarify | |
| H017 | M2.13 | - | Consider indicating intended refrigerant piping routing and branch controller locations. | GGD: Will comply | |
| H018 | M2.13 | - | Consider indicating condensate piping locations to be coordinated with plumbing. | GGD: Will comply | |
| H019 | M2.13 | - | Heating is not indicated at main toilet rooms near cafeteria. | GGD: This area will be heated, scope to be clarified as the design progresses | |
| H020 | M3.01 | - | The RTU schedule cooling section appears to be set up for chilled water and not DX cooling. | GGD: Will revise to be DX | |
| H021 | M3.01 | - | Consider an occupancy setback for the gym unit, which is indicated to be constant volume (although VAV capable). Consider clarifying. | GGD: Gym, Caf, and Media Center will all be VAV to vary with the Occupant and cooling loads. | |
| H022 | M3.01 | - | Confirm boiler hot water temperature available at 96.1% efficiency as scheduled. Equipment is scheduled at 160F inlet temperature. | GGD: Efficiency is at AHRI conditions; Boiler Reset schedule will modulate the HHW setpoint from 160 to 110 based on building demand | |



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| Item #: (H####) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|--------------------|--------------------------|---------------------------|---|---|---------|
| H023 | M3.02 | - | Consider adding a second elbow to the transfer duct detail to provide a z-duct for additional sound insulation. | GGD: Will consider and review with the Arch. | |
| H024 | M3.03 | - | Consider indicating shut-off valves and a hose for the make-up water fill at the expansion tank. | GGD: Make-up water provided by Div. 220000 | |
| H025 | M3.06 | - | System airflows are not indicated. Consider requirements for life safety dampers to separate floors on multi-level units, based on total flow. | GGD: Will comply | |
| H026 | M3.06 | - | The chemical feed appears to be piped backwards. | GGD: Will review & correct | |
| H027 | M3.06 | - | Chilled water is not indicated in scope. | GGD: No Chilled Water in scope; Detail to be removed | |
| H028 | M4.01 / General Controls | - | Heating setpoints are 72F but should match scheduled design of 70F (winter). | GGD: All setpoints shall be adjustable through the BMS; however, will modify all published setpoints to comply | |
| H029 | M4.01 | - | Consider indicating the radiant valves for on/off operation (low-flow). | GGD: Per the specifications, all Control valves under 1 GPM shall be 2-position | |
| H030 | M4.02 | - | Boiler plant control is shown as inline with pumps rather than primary / secondary as detailed. | GGD: Detail is incorrect; shall be updated to indicated variable primary flow | |
| H031 | M4.03 | - | The RTU sequence includes information to equalize exhaust fan flow with outside air requirement. This does not appear to take into account any building pressurization or the exhaust flow from dedicated toilet exhaust. | GGD: Building pressurization will be factored in by setting a minimum O.A. setpoint | |
| H032 | M4.05 | - | The 100% OA RTU system is shown with a recirculation duct. Clarify. | GGD: Recirculation duct shall be utilized for warm-up, Cool-down, and CO2 demand control ventilation. | |
| H033 | - | General | All commodity sections should be reduced to include only the applicable items. | GGD: This has been updated for MSBA DD submission | |



Commissioning Design Review

300 UNICORN PARK DRIVE, 5TH FLOOR

WOBURN, MA 01801

(P) 781.481.0210 (F) 781.481.0203 (W) www.f-t.com

Subject: HVAC Design Review
Project: MSBA - Northbridge - Balmer ES Cx
Project Numbers: 170515.03
Client: MSBA
Architectural Firm: Dore & Whittier
Engineering Firm: GGD
F-T Review Engineer: Terence Boland, PE
F-T Review Date: 3/13/2019

| Item #: (H###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|-------------------|------------|---------------------------|---|---|---------|
| H034 | - | 23 00 10 1.02 | Include split system condensate piping. | GGD: Will comply | |
| H035 | - | 23 00 10 2.16 | Grease exhaust kitchen ductwork is not specified. | GGD: Will add grease ductwork spec sections | |
| H036 | - | 23 00 10 2.28- U.16 | Chilled water is not indicated in scope. | GGD: All chilled water references have been removed for MSBA DD submission | |



Subject: Electrical Design Review
 Project: MSBA - Northbridge - Balmer ES Cx
 Project Numbers: 170515.03
 Client: MSBA
 Architectural Firm: Dore & Whittier
 Engineering Firm: Fitzmeyer & Tocci Inc
 F-T Review Engineer: Cameron Bellao, PE, LEED AP
 F-T Review Date: 3/13/2019

| Item #: (E###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|-------------------------|---------------|------------------------|---|---|---------|
| 100% DD Document Review | | | Review Date: 3/13/2019 | | |
| E001 | E0.02 | N/A | Lumen and wattage information is missing from lighting fixture schedule. | GGD: This will be added as the project progresses. | |
| E002 | E0.02 | N/A | There is a mix of 120 Volt and 277 Volt lighting, confirm the intent. It is recommended to have all lighting voltage throughout the facility match. | GGD: Theater performance lighting is designed to be 120V. All other buliding lighting is 277V. | |
| E003 | E0.03 | N/A | Label utility pole with number per utility company requirements. | GGD: This will be coordinated with Utility Company. | |
| E004 | E0.03 | N/A | Include ductbank sections to call out conduit and ductbank sizing requirements. | GGD: Ductbank sections shall be called out in next submission. | |
| E005 | E0.03 & E0.04 | N/A | Provide underground conduit requirements for site lighting. | GGD: Conduit for lighting will be called out in next submission. | |
| E006 | E0.03 | N/A | Confirm overall primary electrical service routing and transformer location has been coordinated with the utility. | GGD: Utility is reviewing and will be coordinated going forward. | |
| E007 | E0.03 | N/A | There appears to be an violation of the utility company right of way and the light lighting pole. | GGD: This will be addressed in next submission. | |
| E008 | E0.03 & E0.04 | N/A | It is suggested to include handholes at each light pole (typical). | GGD: We shall provide a pulll box at each pole as suggested. | |
| E009 | E0.05 | N/A | Ductbank sections are not shown on the site plans. | GGD: Ductbank sections are shown on E0.04. | |
| GGD | E0.05 | N/A | Provide ground rod at each lighting pole. | GGD: Not required by code. | |
| E011 | E0.05 | N/A | Include connection to generator enclosure to the generator ground grid. | GGD: Generator to be grounded per code. | |
| E012 | E0.06 | N/A | Confirm the transformer pad meets utility company requirements and has oil containment, the detail doesn't appear to include oil containment. | GGD: This will be coordinated with Utility Company. | |



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 F-T Review Engineer: Cameron Bellao, PE, LEED AP
 F-T Review Date: 3/13/2019

| Item #: (E###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|----------------|--|------------------------|--|---|---------|
| E013 | E1.11 | N/A | Corridor doesn't appear to have emergency lighting. Provide emergency lighting within hallway. | GGD: Emergency lighting will be shown as lighting design progresses. | |
| E014 | E1.11 | N/A | Lighting in electrical rooms should be emergency lighting. | GGD: All lighting in Electric rooms shall be emergency. | |
| E015 | E1.12, E1.13, E1.21, E1.22, E1.23, E1.31, E1.32, E1.33 | N/A | Provide emergency lighting within the room. | GGD: This will be provided as project progresses | |
| E016 | E1.11 | N/A | Confirm if lighting scope is required in the area. | GGD: This will be provided as project progresses | |
| E017 | General Lighting Note | N/A | There are double OS's and PC's on all lighting plans. | GGD: Architectural devices shall be turned off for next submission. | |
| E018 | E1.13 | N/A | It appears lighting scope is missing from the area. | GGD: Area in Kitchen with no lights is location of cooler & freezer, no lights required. | |
| E019 | E1.12, E1.13, E1.21, E1.22, E1.23, E1.31, E1.32, E1.33 | N/A | Floor plan appears to be missing exit signage. | GGD: Exit signage shall be coordinated for next submission. | |
| E020 | General Power Note | N/A | Confirm receptacles are tamper proof as required per 2017 NEC. | GGD: Tamperproof note is shown on symbol list. Note shall be duplicated for General Power Notes. | |
| E021 | E2.12, E2.13, E2.21, E2.22, E2.23, E2.31, E2.32, E2.33 | N/A | Where are receptacles to be mounted along the glass? | GGD: This shall be coordinated as project progresses. | |
| E022 | E2.34 | N/A | Provide receptacless for maintenance of rooftop HVAC equipment in accordance with mechanical code. | GGD: Receptacles for roof top equipment is shown on Mechanical Schedule of Equipment on E3.06. | |



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 F-T Review Engineer: Cameron Bellao, PE, LEED AP
 F-T Review Date: 3/13/2019

| Item #: (E###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|----------------|------------|------------------------|--|--|---------|
| E023 | E3.00 | N/A | Provide grounding bar in electrical and tel / data rooms. | GGD: This shall be provided in next submission. | |
| E024 | E3.00 | N/A | There appears to be potential working space clearance issues in the electrical room given the minimum spacing shown for equipment. | GGD: Currently clearances appear to be acceptable. | |
| E025 | E3.00 | N/A | The electrical room appears to be cut off and the panelboards appear to be located within a wall. | GGD: This will be corrected for next submission. | |
| E026 | E3.01 | N/A | Provide circuit breaker ratings. | GGD: AIC ratings are shown on E3.02. | |
| E027 | E3.03 | N/A | Mounting and location of 2nd exit signage in electrical rooms for rooms with equipment rated 800Amps and above? | GGD: High/Low exit signage is covered under fixture schedule and notes. | |
| E028 | E3.06 | N/A | Include information for electrical load requirements of equipment. | GGD: This shall be coordinated as project progresses. | |
| E029 | E4.00 | N/A | Connection to elevator shutdown and recall? | GGD: No shutdown of elevator required. Elevator hoistway and machine room is not sprinklered. | |
| E030 | E4.00 | N/A | Provide connection for security, paging, and BMS. | GGD: This will be coordinated. | |
| E031 | E4.13 | N/A | Consider providing electric alarm bell above location of fire department connection. | GGD: This will be coordinated going forward. | |
| E032 | E4.23 | N/A | Consider removing heat detector in storage room. | GGD: This shall be addressed in next submission. | |
| E033 | E4.13 | N/A | Consider providing heat detection in the gym. | GGD: Not required by code, Building is fully sprinklered. | |
| E034 | Typical | N/A | Consider defining this symbol on the legend. | GGD: This will be coordinated for next submission. | |
| E035 | Typical | N/A | Consider providing remote indicator light outside of electrical rooms. | GGD: Not required by code. Will be coordinated with AHJ. | |
| E036 | Typical | N/A | Consider decreasing the candela rating of strobes in hallways of 20 ft or less in width to 15cd. | GGD: Will be coordinated with AHJ. | |



Subject: Electrical Design Review
 Project: MSBA - Northbridge - Balmer ES Cx
 Project Numbers: 170515.03
 Client: MSBA
 Architectural Firm: Dore & Whittier
 Engineering Firm: Fitzmeyer & Tocci Inc
 F-T Review Engineer: Cameron Bellao, PE, LEED AP
 F-T Review Date: 3/13/2019

| Item #: (E###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|----------------|------------|------------------------|---|---|---------|
| E037 | Typical | N/A | Consider providing magnetic door holds at smoke doors. Utilizing smoke detection in accordance with NFPA 72 17.7.5.6. | GGD: Will be coordinated with AHJ.. | |
| E038 | General | N/A | Consider providing area of refuge two way communication in accordance with the IBC at 2nd and 3rd floor elevator lobbies. | GGD: This will be coordinated for next submission. | |
| E039 | General | N/A | Consider increasing smoke detector spacing in hallways following NFPA 72 Figure A.17.6.3.1.1(f) | GGD: This shall be reviewed as the project progresses. | |
| E040 | E4.13 | N/A | Consider providing CO detection in boiler room if gas fired equipment is present. | GGD: CO detection shall be provided at all locations of fossil fuel burning equipment. | |
| E041 | E4.13 | N/A | Consider providing smoke detection within 6 feet of FACP. | GGD: FACP location and smoke detector shall be coordinated with AHJ. | |
| E042 | E4.22 | N/A | Consider removing flow switches. | GGD: Flow switch connections shall be coordinated with Fire Protection Engineer. | |
| E043 | General | N/A | Consider providing tamper switches at all standpipe isolation valves. | GGD: Flow switch connections shall be coordinated with Fire Protection Engineer. | |
| E044 | E4.12 | N/A | Consider providing smoke detection in emer. Electrical room 1128. | GGD: This shall be coordinated for next submission. | |
| E045 | E4.13 | N/A | Consider providing smoke detection in electrical rooms. | GGD: This shall be coordinated for next submission. | |



Subject: Plumbing Design Review
 Project: MSBA - Northbridge - Balmer ES Cx
 Project Numbers: 170515.03
 Client: MSBA
 Architectural Firm: Dore & Whittier
 Engineering Firm: Fitzmeyer & Tocci Inc
 F-T Review Engineer: Keith Wanser
 F-T Review Date: 3/13/2019

| Item #: (P###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|-------------------------|--|------------------------|--|---|---------|
| 100% DD Document Review | | | Review Date: 3/13/2019 | | |
| P001 | P0.10 | | Consider finalizing service areas. | VAV: This work is in progress. | |
| P002 | P0.10 | | Consider adding remarks for trap primer connection. | VAV: This work is in progress. | |
| P003 | P0.10 | | Consider finalizing kitchen schedule. | VAV: Kitchen Equipment schedule will be updated in next submission. | |
| P004 | P1.01 | | Consider providing invert elevations at end of sanitary and storm runs. | VAV: Invert elevations have been added to the drawings. | |
| P005 | P1.01, P1.02, P1.03 | | Consider providing invert elevations at point of exit for coordination with Civil. | VAV: Exit point elevations have changed and are continually being coordinated with Civil. | |
| P006 | P1.01, P1.02, P1.03 | | Consider showing storm overflow pipe runs. If connecting in vertical, confirm with codes and AHJ allowance of such methods. Pipe should be sized at double the rainfall rate if designed that way. | VAV: A separate overflow drainage system is now indicated on the drawings. | |
| P007 | P1.01 | | Consider extending sanitary main to farthest fixtures for coordination. | VAV: This work is in progress. | |
| P008 | P1.02, P1.03 | | Consider providing additional cleanouts along sanitary and storm main runs. | VAV: This work is in progress. | |
| P009 | P1.02, P1.22 | | Consider moving FD closer to urinals for convenience. | VAV/DWA: This will be considered and addressed in next submission. | |
| P010 | P0.10 | | Consider providing drinking fountain with bottle filler | VAV: This will be incorporated in next submission. | |
| P011 | P1.03, P1.13, P1.21 | | Consider routing piping around electrical room. | VAV: The piping has been re-routed out of the electrical room. | |
| P012 | P1.02, P1.03, P1.21, P1.22, P1.23, P1.31 | | Consider tagging plumbing fixtures. | VAV: Plumbing fixtures have been tagged. | |
| P013 | P1.03 | | Consider tagging plumbing equipment. | VAV: This work is in progress. | |



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 Architectural Firm: Dore & Whittier
 Engineering Firm: Fitzmeyer & Tocci Inc
 F-T Review Engineer: Keith Wanser
 F-T Review Date: 3/13/2019

| Item #: (P###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|----------------|--|------------------------|---|--|---------|
| P014 | P1.03 | | Consider providing a gas load summary and pressure requirements on plan. | VAV: This work is in progress. | |
| P015 | P1.11, P1.12, P1.23, P1.31, P1.32, P1.33 | | Consider providing pipe callouts. | VAV: This work is in progress. | |
| P016 | P1.01, P1.02, P1.03, P1.11, P1.12 | | Consider providing matchlines and drawing callouts for continuation of piping. | VAV: This work is in progress. | |
| P017 | P1.02, P1.12, P1.21, P1.22, P1.32 | | Consider moving the hose bibb away from the ADA lavatory. | VAV: This will be incorporated in next submission. | |
| P018 | P1.03, P1.13, P1.32 | | Consider providing a hose bibb at lavatories. | VAV: This work is in progress. | |
| P019 | P1.13 | | Consider providing grease trap location on plan. | VAV: This will be incorporated in next submission, in coordination with KEQ consultant. | |
| P020 | P1.13 | | Consider serving kitchen with required 140deg HW and 140deg HWC. If HW is only run at 140deg, consider providing every lavatory and handwashing sink with local thermostatic mixing valve | VAV: The most cost-effective and code-compliant way to achieve the comment will be considered and addressed in next submission. | |
| P021 | P1.13 | | Consider routing gas main through corridor and not exposed in Gymnasium. | VAV: The horizontal gas main will be re-routed out of the Gymnasium. | |
| P022 | P1.13 | | Consider showing all plumbing equipment for HW System. | VAV: This work is in progress. | |
| P023 | P1.21 | | Consider routing storm risers in chase, coordinate piping with architect. | VAV/DWA: Riser locations currently being coordinated and will be addressed in next submission. | |
| P024 | P1.22 | | Consider removing floor drain from electric room. | VAV: The floor drain in the electric room will be removed. | |
| P025 | P1.22 | | Consider adding floor drain to group bathroom. | VAV: This will be incorporated in next submission. | |



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 F-T Review Date: 3/13/2019

| Item #: (P###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|----------------|-----------------------------------|------------------------|---|--|---------|
| P026 | P1.21, P1.22, P1.23, P1.31, P1.32 | | Consider removing HVAC equip if no plumbing connections are required. Including, but not limited to VAVs, fintube, etc. | VAV: The HVAC equipment has been removed. | |
| P027 | P0.10 | | Confirm mounting heights of toilets for children. Provide additional water closet for staff bathroom if required. | VAV/DWA: Sink mounting heights currently being coordinated and will be addressed in next submission. | |
| P028 | P1.33 | | Consider providing mains or callouts for piping to plumbing fixtures. Second floor appeared to be fed from below, but how is piping reaching third floor? At DD level, all mains should be run to serve fixtures. | VAV: This will be incorporated in next submission. | |
| P029 | P1.41, P1.42, P1.43 | | Consider showing vent through roof (VTR) locations. | VAV: This will be incorporated in next submission. | |
| P030 | P1.41, P1.42, P1.43 | | Consider showing gas piping to RTUs, if required. | VAV: Gas piping has been added to the drawings. | |
| P031 | P1.43 | | Consider hiding all notes not related to scope. | VAV: The non-relevant notes have been removed. | |
| P032 | P2.10 | | Consider providing additional details; plumbing fixture connections, gas connections to equipment, pipe hanger details, floor drain, etc | VAV: These details will be incorporated in next submissions, but at minimum will be on drawings for bidding. | |
| P033 | P2.10 | | Consider providing one (1) expansion tank on the CW main serving both water heaters, prior to HWC connection. | VAV: This will be considered and addressed in next submission. | |
| P034 | P2.10 | | Consider providing a 140deg HW main to serve the kitchen. | VAV: The most cost-effective and code-compliant way to achieve the comment will be considered and addressed in next submission. | |
| P035 | P2.10 | | Consider providing the temperature of each HW main serving the building from the hot water system. | VAV: This will be considered and addressed in next submission. | |



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 F-T Review Engineer: Keith Wanser
 F-T Review Date: 3/13/2019

| Item #: (P###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|----------------|--------------|------------------------|---|--|---------|
| P036 | P1.13, P2.10 | | Consider verifying pipe sizes match on plan and detail. Showing 3"HW main from hhot Water system, plan has a 4"HW main. | VAV: This work is in progress. | |
| P037 | P2.10 | | Consider updating Town on Domestic Service detail. | VAV: Town water utility (WWC) just released its comments which include references to standard details, and will be incorporated in next submission. | |
| P038 | P2.10 | | Consider updating drain note to include nearest floor drain, not sure there's a janitors sink near every backflow. | VAV: This will be considered and addressed in next submission. | |
| P039 | P1.03, P1.13 | | Consider showing interior grease trap and kitchen waste & vent mains. Kitchen vent main should have its own kitchen vent through roof (KVTR). | VAV: This work is in progress. | |
| P040 | | 22 00 10 - 7 | Consider adding a line item for local isolation valves to groups or areas of fixtures. | VAV: This will be considered and addressed in next submission. | |
| P041 | | 22 00 10 - 9 | Consider adding information regarding minimum depth of bury to be below frost line; 4' or 5' depending on location typically. | VAV: This will be incorporated in next submission. | |
| P042 | | 22 00 10 - 10 | Consider adding line item in regards to maximum velocity of domestic piping. | VAV: This will be considered and addressed in next submission. | |
| P043 | | 22 00 10 - 12 | Consider adding line item in regards to ADA trap and valve wraps. | VAV: This will be incorporated in next submission. | |
| P044 | | 22 00 10 - 13-15 | Confirm information located within matches fixture schedule on plans. | VAV: This will be coordinated in next submission. | |
| P045 | | 22 00 10 - 16 | Consider updating spec section to match water heaters specified on drawings. | VAV: This will be coordinated in next submission. | |
| P046 | | 22 00 10 - 16 | Consider adding line item for emergency gas shut-off button serving the kitchen. | VAV: This will be addressed in next submission. | |



Commissioning Design Review

300 Unicorn Park Drive, 5th Floor

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Subject: Plumbing Design Review
Project: MSBA - Northbridge - Balmer ES Cx
Project Numbers: 170515.03
Client: MSBA
Architectural Firm: Dore & Whittier
Engineering Firm: Fitzmeyer & Tocci Inc
F-T Review Engineer: Keith Wanser
F-T Review Date: 3/13/2019

| Item #: (P###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|----------------|------------|------------------------|--|---|---------|
| P047 | | 22 00 10 - 18-19 | Consider adding a line item in regards to balancing the HW system. | VAV: This will be incorporated in next submission. | |



Subject: Fire Protection Design Review
 Project: MSBA - Northbridge - Balmer ES Cx
 Project Numbers: 170515.03
 Client: MSBA
 Architectural Firm: Dore & Whittier
 Engineering Firm: Fitzmeyer & Tocci Inc
 F-T Review Engineer: Andrew Ciccariello
 F-T Review Date: 3/13/2019

| Item #: (F###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|-------------------------|------------|------------------------|---|---|---------|
| 100% DD Document Review | | | Review Date: 3/13/2019 | | |
| F001 | FP0.10 | | Consider changing 4" DCVA to 6" in order to match pipe size shown serving the wet system | VAV: This will be considered and addressed in next submission. | |
| F003 | FP1.13 | | Sprinkler layout for the kitchen area is not coordinated with the background. Consider revising. | VAV: This will be coordinated in next submission. | |
| F004 | FP1.13 | | Sprinkler layout for the storeroom area is not coordinated with the background. Consider revising. | VAV: This will be coordinated in next submission. | |
| F005 | FP1.11 | | Consider re-naming the 6" control valve to isolation valve. The purpose is to avoid confusion from the detail on sheet FP0.10 named "control valve" which depicts a floor control valve assembly. | VAV: This will be considered and addressed in next submission. | |
| F006 | FP1.11 | | Consider moving standpipe into stair 5. | VAV/DWA: Stair 5 is considered a more ornamental stair (even though it is an egress stair). Design team is trying to avoid cluttered appearance. The comment will be considered and addressed in next submission. | |
| F007 | FP1.11 | | Consider showing 6" main serving the standpipe in stair 3. | VAV: This will be considered and addressed in next submission. | |
| F008 | FP1.11 | | Sprinkler layout for the pre kindergarten area is not coordinated with the background. Consider revising. | VAV: This will be coordinated in next submission. | |
| F009 | FP1.21 | | Consider connecting 4" main to standpipe. | VAV: This will be considered and addressed in next submission. | |
| F010 | FP1.21 | | Is the placement of the standpipe intended to be concealed in the stair 5 shaft? If so consider providing recessed fire department valve cabinet in stair 5. | VAV/DWA: Stair 5 is considered a more ornamental stair (even though it is an egress stair). Design team is trying to avoid cluttered appearance. The comment will be considered and addressed in next submission. | |



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 F-T Review Engineer: Andrew Ciccariello
 F-T Review Date: 3/13/2019

| Item #: (F###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|----------------|------------|------------------------|--|--|---------|
| F011 | FP1.21 | | Consider locating 4" floor control valve in stairway for ease of accessibility. Typical for stair 5 and 2 on all floors. | VAV: This will be considered and addressed in next submission. | |
| F012 | FP1.23 | | Consider classifying gymnasium as OH2. Light Hazard may not be appropriate if the gymnasium is used for fairs, foam mats, etc. | VAV: This will be considered and addressed in next submission. | |
| F013 | FP1.33 | | Sprinkler layout for the classroom area is not coordinated with the background. Consider revising. | VAV: This will be coordinated in next submission. | |
| F014 | FP1.11 | | Consider showing drain riser in stair 5 and stair 2. | VAV/DWA: Stair 5 is considered a more ornamental stair (even though it is an egress stair). Design team is trying to avoid cluttered appearance. The comment will be considered and addressed in next submission. Stair 2 is acceptable for riser location. | |
| F015 | FP1.32 | | Sprinkler layout for the classroom area is not coordinated with the background. Consider revising. | VAV: This will be coordinated in next submission. | |
| F016 | FP1.13 | | Consider removing one of the noted fire department connections. Coordinate with local Fire Department on which location they would prefer. | VAV: FDC's were specified by Northbridge Fire Chief - two locations desired. | |
| F017 | FP1.13 | | Confirm overhang is made of non combustible material. | VAV/DWA: The overhang is constructed of noncombustible materials. | |
| F018 | FP1.13 | | Sprinkler layout for the typical office & conference room area is not coordinated with the background. Consider revising. | VAV: This will be coordinated in next submission. | |
| F019 | FP1.13 | | Consider removing the indicated pipe. It isn't connected to anything. | VAV: This will be considered and addressed in next submission. | |



Commissioning Design Review

300 Unicorn Park Drive, 5th Floor

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Subject: Fire Protection Design Review
Project: MSBA - Northbridge - Balmer ES Cx
Project Numbers: 170515.03
Client: MSBA
Architectural Firm: Dore & Whittier
Engineering Firm: Fitzmeyer & Tocci Inc
F-T Review Engineer: Andrew Ciccariello
F-T Review Date: 3/13/2019

| Item #: (F###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|----------------|------------|------------------------|--|---|---------|
| F020 | FP1.12 | | Consider relocating all standpipe isolation valves in the stairway. | VAV: This will be considered and addressed in next submission. | |
| F021 | FP1.11 | | Consider removing the noted fire department connection. Coordinate with local Fire Department on which location they would prefer. | VAV: FDC's were specified by Northbridge Fire Chief - two locations desired. | |
| F022 | - | 2.04 | Consider removing wet pipe alarm valve spec section. | VAV: This will be considered and addressed in next submission. | |
| F023 | - | 2.05 | Consider removing dry pipe alarm valve spec section. | VAV: This will be considered and addressed in next submission. | |



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| DD PRICING SET REVIEW | | | Review Date: 3/12/2019 | | |
|-----------------------|------------|------------------------|--|---|---------|
| Item #: (BECX-###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
| BECX-001 | 1/AG0.02 | | See detail. | DWA: THERE WAS NO COMMENT INCLUDED ON THE DRAWING. | |
| BECX-002 | 4/AG0.02 | | Can installers access these areas to insulate? | DWA: INSULATION WILL BE INSTALLED PRIOR TO INSTALLING GWB. | |
| BECX-003 | N12/A1.50 | | Call out / show transition detail -- hard angle / gap / variable condition up column require flexible support. | DWA: TRANSITION DETAIL WILL BE REFINED AND SHOWED IN NEXT SUBMISSION. | |
| BECX-004 | A9/A3.50 | | See detail. | DWA: THERE WAS NO COMMENT INCLUDED ON THE DRAWING, BUT WE BELIEVE THE RED-MARKS RELATE TO INCLUSION OF AVB WITHIN THE HOISTWAY VENT. DWA WILL EVALUATE NECESSITY AND INCLUDE IF INDICATED. | |
| BECX-005 | A15/A3.50 | | Suggest use of transition membrane glazed into curtainwall pocket. Tremco ProGlaze ETA, for example. | DWA: COMMENT HERE DOES NOT REALATE TO COMMENT ON THE DRAWING? WE BELIEVE THE RED-MARKS RELATE TO INCLUSION OF AVB WITHIN THE ROOF HATCH CURB. DWA WILL EVALUATE NECESSITY AND INCLUDE IF INDICATED. | |
| BECX-006 | F10/A3.50 | | Theoretical AVB. | DWA: SUGGESTION TO INCLUDE AVB WITHIN DUCT WORK CURB. DWA WILL EVALUATE NECESSITY AND INCLUDE IF INDICATED. | |
| BECX-007 | L11/A3.50 | | Note that AVB should have continuous connection to roof drain flange. | DWA: SUGGESTION TO CONNECT AVB TO ROOF DRAIN FLANGE. DWA WILL INCLUDE IF POSSIBLE IN PRACTICE. | |
| BECX-008 | L15/A3.50 | | Movement / Alignment joint consideration | DWA WILL CONSIDER THE INCLUSION OF A MOVEMENT JOINT AT THE DETAILED CONDITION(S). | |
| BECX-009 | L26/A3.50 | | SHOW AVB DESIGN INTENT | DWA WILL INCLUDE AVB IN NEXT EDITION OF DETAIL. | |
| BECX-010 | R12/A3.50 | | Consider both expansion as well as voids of SPF. Solid mortar in front of rigid insul. is also option. | DWA WILL CONSIDER CAVITY FILL OPTIONS ON THIS DETAIL AND INCORPORATE IN NEXT EDITION OF DETAIL. | |
| BECX-011 | R17/A3.50 | | Connection not clear. | DWA WILL CLARIFY ATTACHMENT OF TWO-PIECE FLASHING IN NEXT EDITION OF DETAIL. | |
| BECX-012 | R22/A3.50 | | Show design intent of cont. AVB. | DWA: SUGGESTION TO INCLUDE AVB WITHIN SKYLIGHT CURB. DWA WILL EVALUATE NECESSITY AND INCLUDE IF INDICATED. | |



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| Item #: (BECX-###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|--------------------|-------------------------|------------------------|--|--|---------|
| BECX-013 | R27/A3.50 | | Cold bridge | DWA WILL ATTEMPT TO ALLEVIATE COLD BRIDGE AND INCORPORATE IN NEXT EDITION OF DETAIL. | |
| BECX-014 | G11/A6.50 | | Call out / show intended connection. Tape? TYP. | DWA WILL BETTER DEFINE CONNECTION OF UNDERSLAB VB IN NEXT EDITION OF DETAIL. | |
| BECX-015 | M6/A6.50 | | Blow up lap of lap joint. Where / how does underslab barrier tie to opaque wall? Show TYP. | DWA WILL BETTER DEFINE CONNECTION OF UNDERSLAB VB TO OPAQUE WALL AVB IN NEXT EDITION OF DETAIL USING BLOWUP OF CONDITION. | |
| BECX-016 | M12/6.50 and M17/6.50 | | How / Where is dampproofing continued below grade? Shown differently at different conditions. | DWA WILL BETTER DEFINE DAMPPROOFING SCOPE IN NEXT EDITION OF DETAIL AT VARIOUS CONDITIONS. | |
| BECX-017 | M22/A6.50 | | Consider glazing flashing to CW. Show / Tie - in AVB. | DWA WILL BETTER DEFINE CONNECTION OF UNDERSLAB VB TO OPAQUE WALL AVB AT WINDOW SILL CONDITION IN NEXT EDITION OF DETAIL. | |
| BECX-018 | A6 /A6.60 | | See detail. | DWA WILL SHOW AVB IN NEXT EDITION OF DETAIL. | |
| BECX-019 | A8/A6.70 | | Field conditions unlikely to have perfect alignment. Consider joint that allows for misalignment between decking and tube. | DWA WILL CONTINUE STUDY OF THIS DETAIL AND ALLOW FOR FIELD TOLERANCES IN NEXT EDITION OF DETAIL. | |
| BECX-020 | A16/A6.70 | | Consider reducing cap to brick dimension, run insulation up, flash over to achieve drainage. | DWA WILL CONTINUE STUDY OF THIS DETAIL AND ALLEVIATE COLD BRIDGE, IN CONCERT WITH POSITIVE DRAINAGE, IN NEXT EDITION OF DETAIL. | |
| BECX-021 | A16/A6.70 | | COLD BRIDGE | DWA WILL CONTINUE STUDY OF THIS DETAIL AND ALLEVIATE COLD BRIDGE IN NEXT EDITION OF DETAIL. | |
| BECX-022 | A8.21 | | GEN NOTE: CONSIDER CURTAINWALL PROFILES FOR EXTERIOR GLAZING CONDITIONS WHERE POSSIBLE. IF STOREFRONT IS NECESSARY, CALL OUT INTERIOR PERFORMANCE SEAL TO EXTEND LIFE OF SYSTEM. EXTERIOR FACE SEALS EXPOSED TO UV AND ELEMENTS CAN FAIL SOON BEFORE BALANCE OF SYSTEM. CURTAINWALL CONNECTIONS CAN BE MADE IN MORE DURABLE CONFIGURATION AND ARE MORE ENERGY EFFICIENT BY DESIGN. | DWA NOTES THE REVEIWER'S SENTIMENT; HOWEVER CURTAINWALL DOES NOT FIT THE BUDGET MODEL FOR THE BUILDING. DWA WILL CONSIDER REVEIWER'S NOTATIONS REGARDING GASKETS IN NEXT EDITION OF DETAIL AND SPECIFICATIONS. | |
| BECX-023 | A14/A8.50 and A19/A8.50 | | Face sealant exposed to UV and elements fails relatively quickly. Consider making seal sacrificial with secondary behind it. Additionally establish AVB continuity at back of system. | DWA WILL CONSIDER ADDING SECOND, SACRIFICIAL SEALANT JOINT, CONSULTING WITH TECHNICAL REPS AS TO SOUNDNESS OF THIS PRACTICE FOR LONG TERM JOINT PERFORMANCE. | |
| BECX-024 | A14/A8.50 | | Theoretical AVB. | DWA WILL SHOW A CLEAR CONNECTION OF AVB TO DOOR FRAME IN NEXT EDITION OF DETAIL. REDLINED PROFILE MAY NOT BE ACHIEVABLE IN PRACTICE. | |



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| Item #: (BECX-###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|--------------------|------------|------------------------|-------------------|---|---------|
| BECX-025 | E14/A8.50 | | See detail. | DWA WILL SHOW A CLEAR CONNECTION OF AVB TO DOOR FRAME IN NEXT EDITION OF DETAIL. REDLINED PROFILE MAY NOT BE ACHIEVABLE IN PRACTICE. | |
| BECX-026 | E19/A8.50 | | See detail. | DWA WILL SHOW A CLEAR CONNECTION OF AVB TO DOOR FRAME IN NEXT EDITION OF DETAIL. REDLINED PROFILE MAY NOT BE ACHIEVABLE IN PRACTICE. | |
| BECX-027 | E25/A8.50 | | See detail. | DWA WILL SHOW A CLEAR CONNECTION OF AVB TO DOOR FRAME IN NEXT EDITION OF DETAIL. REDLINED PROFILE MAY NOT BE ACHIEVABLE IN PRACTICE. | |
| BECX-028 | A27/A.9.60 | | See detail. | DWA WILL DIMENSION TACK STRIPS IN NEXT EDITION OF DETAIL, OR BETTER DEFINE THEM IN THE SPECIFICATION. | |
| BECX-029 | G12/A.9.60 | | See detail. | DWA WILL NOT DIMENSION TACK BOARDS IN THE INTERIOR ELEVATIONS - DIMENSIONS DEFINED IN SPECIFICATIONS. | |
| BECX-030 | A27/A9.64 | | See detail. | DWA WILL DIMENSION TACK STRIPS IN NEXT EDITION OF DETAIL, OR BETTER DEFINE THEM IN THE SPECIFICATION. | |
| BECX-031 | D27/A9.64 | | See detail. | DWA WILL DIMENSION TACK STRIPS IN NEXT EDITION OF DETAIL, OR BETTER DEFINE THEM IN THE SPECIFICATION. | |
| BECX-032 | A20/A9.65 | | See detail. | DWA WILL DIMENSION TACK STRIPS AND/OR PICTURE RAILS IN NEXT EDITION OF DETAIL, OR BETTER DEFINE THEM IN THE SPECIFICATION. | |
| BECX-033 | E20/AQ1.50 | | See detail. | DWA WILL GIVE CRITICAL HORIZONTAL DIMENSIONS OF PLAN ELEMENTS IN BLOW-UP PLANS, NOT ON INTERIOR ELEVATIONS AS SUGGESTED. THIS TYPE OF DETAIL WILL BE AVAILABLE ON BID DRAWINGS. | |
| BECX-034 | K14/AQ1.50 | | See detail. | DWA WILL DIMENSION TACK STRIPS AND/OR PICTURE RAILS IN NEXT EDITION OF DETAIL, OR BETTER DEFINE THEM IN THE SPECIFICATION. MARKER BOARD DIMENSIONS ARE DEFINED IN THE SPECIFICATIONS. | |
| BECX-035 | P20/AQ1.52 | | See detail. | DWA WILL NOT DIMENSION MARKER BOARDS IN THE INTERIOR ELEVATIONS - DIMENSIONS DEFINED IN SPECIFICATIONS. | |



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| Item #: (BECX-###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|--------------------|------------|------------------------|---|--|---------|
| BECX-036 | | Div 1C48:C53 | Add where appropriate / Temporary Protection: Protect materials and assemblies in progress from incidental damage including exposure to cold; solar radiation; dust and debris; wetting and other destructive environmental variables from the time materials arrive on site until they are installed in a complete assembly. Protect exterior materials from wetting, UV damage, and the like to maintain "as new" performance, functional assembly, and manufacturer's warranties throughout. | DWA WILL INCOPORATE SUGGESTED NOTES IN SPECIFICATIONS. | |
| BECX-037 | | Div 1 | 01 30 3.06; 01 31 3.03: NOTE: EXTERIOR COORDINATION DRAWINGS REQUIRED. SEE BECX SECTION. | DWA WILL INCOPORATE SUGGESTED NOTES IN SPECIFICATIONS. | |
| BECX-038 | | Div 1 | 01 31 3.06 NOTE CUTTING AND PATCHING: QUALITY, APPEARANCE, AND FUNCTIONAL PERFORMANCE. QUALIFIED TRADES TO PERFORM CUTTING AND PATCHING WORK. | DWA WILL INCOPORATE SUGGESTED NOTES IN SPECIFICATIONS. | |
| BECX-039 | | Div 4 | Add requirement for division 4 trades to attend BECx pre-installation meeting where page turn of relevant details will occur. | DWA WILL INCOPORATE SUGGESTED NOTES IN SPECIFICATIONS. | |
| BECX-040 | | Div 5 | Confirm appropriate division has clear instructions on the preparation of steel where same will serve as substrate for exterior enclosure assemblies including peel and stick membrane. We suggest work is performed by water proofer to extent possible. | DWA WILL EVALUATE COMMENT AND INCOPORATE SUGGESTED NOTES IN SPECIFICATIONS IF INDICATED. | |
| BECX-041 | | Div 5 | Cold Metal Framing: Specify low profile fasteners with minimum interference / projection with respect to bridging, straps, other potential intersecting areas with metal panel. Metal panels are deleteriously affected by projecting fasteners as is makes seals more difficult; esp where strapping is affixed to steel studs on exterior side w/ pan head screws. | DWA WILL INCOPORATE SUGGESTED NOTES IN SPECIFICATIONS. | |
| BECX-042 | | Div 6 | Confirm Specified manufacturers of AVB materials accept Specified treated wood substrates for adjoining use. | DWA WILL RESEARCH AND PROVIDE CORRECTION IF WARRANTED IN NEXT EDITION OF SPECIFICATIONS. | |



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| Item #: (BECX-###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|--------------------|------------|------------------------|--|---|---------|
| BECX-043 | | Div 7 | Add requirement for all division 7 trades whose work involves the exterior to attend BECx pre-installation meeting where page turn of relevant details will occur. | DWA WILL INCOPORATE SUGGESTED NOTES IN SPECIFICATIONS. | |
| BECX-044 | | Div 7 | Add where appropriate: A suitable and robust transition membrane is intended to span all dissimilar exterior assemblies. Same include window and curtainwall to wall; roof; adjoining window; or self where shear or differential movement potential exists; expansion joints; louvers; mechanical penetrations and assemblies; hatchways; panel systems and the like. Examples of such transition material includes ProGlaze ETA by Tremco, Dow 123 tape. | DWA WILL INCOPORATE SUGGESTED NOTES AT AN APPROPRIATE LOCATION IN THE SPECIFICATIONS. | |
| BECX-045 | | 070002 / 2.03 | Consider replacing loose laid vapor retarder will self-adhered membrane: AVB joints with loose laid material are difficult. Self-Adhered material has additional benefit of functioning as temporary roof during construction. | DWA WILL CONSIDER THE SUGGESTED PRODUCT IN VIEW OF CONSTRUCTION PRACTICES, COST, AND TECHNICAL FEASIBILITY ISSUES, AND MAKE AN APPROPRIATE RESPONSE IN THE SPECIFICATIONS. | |
| BECX-046 | | Div. 8 | Add requirement for all division 8 trades with exterior work attend BECx pre-installation meeting where page turn of relevant details will occur. | DWA WILL INCOPORATE SUGGESTED NOTES IN SPECIFICATIONS. | |
| BECX-047 | | Div. 8 | Add note in appropriate location(s) all window systems must have AVB tie-in at performance plane of unit. Contractor to verify both location of functional performance plane per glazing and louver assembly and work with Manufacturer to verify intended AVB tie-in has material compatibility and is approved by Manufacturers of all adjacent materials and assemblies. | DWA WILL INCOPORATE SUGGESTED NOTES AT AN APPROPRIATE LOCATION IN THE SPECIFICATIONS, AND WILL COORDINATE WITH DETAILS IN THE DRAWINGS. | |
| BECX-048 | | Div. 9 | Add requirement for all division 9 trades with exterior work to attend BECx pre-installation meeting where page turn of relevant details will occur. | DWA WILL INCOPORATE SUGGESTED NOTES IN SPECIFICATIONS. | |
| BECX-049 | | Div. 9 | Add requirement for all division 9 trades with exterior work to attend BECx pre-installation meeting where page turn of relevant details will occur. | DWA WILL INCOPORATE SUGGESTED NOTES IN SPECIFICATIONS. | |



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| Item #: (BECX-###) | Drawing #: | Specification Section: | Item Description: | Architect/Engineer Response: | Status: |
|--------------------|------------|------------------------|--|--|---------|
| BECX-050 | | 72600 | Add Note: Where vapor retarder also serves as air barrier, e.g., at grade conditions, all terminations to tie to adjacent air barrier in code compliant manner. | DWA WILL INCOPORATE SUGGESTED NOTES IN THE SPECIFICATIONS, AND WILL COORDINATE WITH DETAILS IN THE DRAWINGS. | |
| BECX-051 | | 81110 | Add Note: Where HM doors are part of the exterior assembly, same must be tied in to AVB assembly and insulated such that insulation is located on exterior side of AVB plane. Doors and frames are subject to field testing for air and water infiltration. | DWA WILL INCOPORATE SUGGESTED NOTES IN THE SPECIFICATIONS, AND WILL COORDINATE WITH DETAILS IN THE DRAWINGS, SUBJECT TO REALITIES OF BUILDING SEQUENCE. | |
| BECX-052 | | 83310 | Add Note: Where Coiling doors are part of the exterior assembly, same must be tied in to AVB assembly and insulated such that insulation is located on exterior side of AVB plane. Doors and frames are subject to field testing for air and water infiltration. | DWA: THERE ARE NO COILING DOORS THAT ARE PART OF THE EXTRIOR ASSEMBLY. THE SINGLE OVERHEAD DOOR ON THE BUILDING IS A SECTIONAL PANEL, INSULATED OVERHEAD DOOR. DWA WILL ENSURE AVB TIE-IN TO BEST POSSIBLE EFFECT IN DETAILS. | |
| BECX-053 | | 89000 | Add Note: Where Louvers are part of the exterior assembly, same must be tied in to AVB assembly and insulated such that insulation is located on exterior side of AVB plane. Louver frames are subject to field testing for air and water infiltration. | DWA WILL INCOPORATE SUGGESTED NOTES IN THE SPECIFICATIONS, AND WILL COORDINATE WITH DETAILS IN THE DRAWINGS. | |

W.E. BALMER ELEMENTARY SCHOOL
DESIGN DEVELOPMENT VALUE ENGINEERING WORKSHEET

UPDATED 4/30/2019

"ILO" = In Lieu Of

| No. | ITEM | Fontaine Bros Value (\$) | SBC-ACCEPTED VE Items 4/2/19 & 4/24/19 | SBC-DIRECTED ACTION - 4/2/19 & 4/24/19 |
|------|--|--------------------------|--|--|
| | Alternates (not yet in order of preference) | | | |
| 1 | Add - SecureShades on all relevant exterior windows and interior borrowed lites (NET Value) | \$764,160 | | |
| 2 | Add - SecureShades on all relevant 1st Level exterior windows and all interior borrowed lites (NET Value) | \$534,160 | | |
| | Site / Civil | | | |
| C01 | Delete west edge gravel wetlands, mono-pitch west entry drive to swale, change catch basin type | (\$285,450) | (\$285,450) | ACCEPTED |
| L#33 | At north side of north access loop change Cape Cod Berm to sloped granite (+ADD) | \$36,006 | \$36,006 | ACCEPTED |
| | Landscape | | | |
| L01 | Provide 4" sloped granite curbing ILO 5" vertical granite at non-sidewalk locations - 5,056 LF | (\$39,009) | (\$39,009) | ACCEPTED |
| L02 | Provide Bituminous side walks ILO concrete at areas not within inner curb line - Vail Field walks | (\$56,736) | (\$56,736) | ACCEPTED |
| L03 | Delete northwest corner segment of fence and retain (repair as needed) existing 8ft fence along west property line | (\$40,463) | (\$40,463) | ACCEPTED |
| | Structural - no items at this time | | | |
| | Architectural, Exterior Items: | | | |
| A01 | Provide Utility sized brick ILO standard Modular sized brick on entire building. | (\$90,585) | (\$90,585) | ACCEPTED |
| A02 | Optimize mechanical screen sizes - reduce LF by 20% (9,520 sf, 1,190 lf to 7,616 sf = 1,904 sf) | (\$104,720) | (\$104,720) | ACCEPTED |
| A03 | South Elevation A-B Wings: Change cladding from HPL Panel to Brick - 1,123 SF \$29.84 SF | (\$33,507) | (\$33,507) | ACCEPTED |
| A04 | North Elevation A-B Wings: Change CW glazing to HPL Panel system - 168 SF \$30.25 SF | (\$5,082) | (\$5,082) | ACCEPTED |
| A05 | East & West Elevations A-B Wings: Change SF glazing to Brick cladding - 103 SF \$28.25 SF | (\$2,910) | (\$2,910) | ACCEPTED |
| A06 | Provide Split Face CMU in lieu of Cast Stone Base, all elevations. | (\$76,500) | | REJECTED |
| A07 | ADD - Provide small, portable Roof Hoist at roof hatch curb | | | CONSIDER IN FUTURE FF&E BUDGET |
| A08 | Delete specified exterior mock-ups and go with in-place ILO | (\$41,000) | | REJECTED |
| | Architectural, Interior Items: | | | |
| A09 | Provide swinging full-height fire doors [(2) pairs @ 4' w x 9' tall] ILO "Won-Door" sliding fire door (3 levels) | (\$66,932) | | DW TO PROVIDE MAINTENANCE INFO |
| A11 | Delete blackout shades from exterior windows - provide light-filtering fabric shades only | (\$22,100) | | REJECTED |
| A12 | ADD - Provide Hard Divider partition ILO fabric/mesh curtain as specified.sensor edge, STC 49 | \$60,844 | | REJECTED |
| A13 | Stair 5 - Reduce amount of fire-rated glazing/ economize design. | (\$56,635) | | REJECTED |
| | Kitchen - no items at this time | | | |
| | Plumbing | | | |
| P01 | Delete drinking fountains in PK ELA #1203A, Kinder ELA #1223A | (\$7,020) | (\$7,020) | ACCEPTED |
| | Mechanical - no items at this time | | | |
| | Electrical | | | |
| | Technology - no items at this time | | | |
| | Totals | (\$899,576) | (\$629,476) | |

PROJECT MINUTES

| | | | |
|---------------|---|---------------|--------|
| Project: | New W. Edward Balmer Elementary School | Project No.: | 17020 |
| Prepared by: | Joel Seeley | Meeting Date: | 4/2/19 |
| Re: | School Building Committee Meeting | Meeting No: | 41 |
| Location: | High School Media Center | Time: | 6:30pm |
| Distribution: | School Building Committee Members, Attendees (MF) | | |

Attendees:

| PRESENT | NAME | AFFILIATION | VOTING MEMBER |
|---------|--------------------|--|-------------------|
| | Joseph Strazzulla | Chairman, School Building Committee | Voting Member |
| ✓ | Melissa Walker | School Business Manager | Voting Member |
| | Alicia Cannon | Representative of the Board of Selectmen | Voting Member |
| ✓ | Michael LeBrasseur | Chairman, School Committee | Voting Member |
| ✓ | Paul Bedigian | Representative of the Building, Planning, Construction Committee | Voting Member |
| | Steven Gogolinski | Representative of the Finance Committee | Voting Member |
| | Jeffrey Tubbs | Community Member with building design and/or construction experience | Voting Member |
| ✓ | Peter L'Hommedieu | Community Member with building design and/or construction experience | Voting Member |
| ✓ | Jeff Lundquist | Community Member with building design and/or construction experience | Voting Member |
| ✓ | Andrew Chagnon | Community Member with building design and/or construction experience | Voting Member |
| | Spencer Pollock | Parent Representative | Voting Member |
| | Adam Gaudette | Town Manager | Non-Voting Member |
| ✓ | Amy McKinstry | Interim Superintendent of Schools | Non-Voting Member |
| ✓ | Richard Maglione | Director of Facilities | Non-Voting Member |
| ✓ | Karlene Ross | Principal, W. Edward Balmer Elementary School | Non-Voting Member |
| ✓ | Jill Healy | Principal, Northbridge Elementary School | Non-Voting Member |
| ✓ | Gregory Rosenthal | Director of Pupil Personnel Services | Non-Voting Member |
| ✓ | Lee Dore | D & W, Architect | |
| ✓ | Thomas Hengelsberg | D & W, Architect | |
| | David Fontaine | Fontaine Bros, CM | |
| | David Fontaine, Jr | Fontaine Bros, CM | |
| ✓ | David Barksdale | Fontaine Bros, CM | |
| ✓ | Jim Mauer | Fontaine Bros, CM | |
| ✓ | Joel Kent | Fontaine Bros, CM | |
| ✓ | Joel Seeley | SMMA, OPM | |
| | | | |

| Item # | Action | Discussion |
|--------|----------------|---|
| 41.1 | Record | Call to Order, 6:37 PM, meeting opened. |
| 41.2 | Record | A. Chagnon announced the meeting will be video and audio recorded with live broadcast and future re-broadcast. |
| 41.3 | Record | A. Chagnon introduced A. McKinstry as the interim Superintendent of Schools and SBC member. |
| 41.4 | Record | Warrant No. 24 was reviewed. A motion was made by M. LeBrasseur and seconded by P. Bedigian to approve Warrant No. 24. No discussion, motion passed unanimous. |
| 41.5 | Record | J. Kent distributed and reviewed the Price Proposal for Preconstruction Survey of surrounding abutter properties to be performed prior to construction commencement in the amount of \$5,200, attached. Committee Discussion: 1. A. Chagnon asked if the certified notifications would be addressed separately? <i>J. Seeley indicated yes, if needed.</i> A motion was made by P. Bedigian and seconded by J. Lundquist to authorize FBI to proceed with the Preconstruction Survey. No discussion, motion passed unanimous. |
| 41.6 | Record | J. Seeley distributed and reviewed the updated draft 60% Construction Documents Meetings and Agenda Schedule, attached. M. LeBrasseur indicated the School Committee has set aside May 6, 7 and 8 for superintendent interviews, which may conflict with the May 8 SBC meeting, he will keep the Committee informed as the date gets closer. |
| 41.7 | M. DiSalvo | M. DiSalvo to work with the school department to define, in the specifications, sufficient training requirements for the school department's maintenance staff, including video-taping. |
| 41.8 | T. Hengelsberg | T. Hengelsberg to confirm that the turning radii for all parking lot exits are sufficient to not force the turning car into the oncoming lane of traffic. |
| 41.9 | T. Hengelsberg | T. Hengelsberg to provide detailed cut and fill analysis, by material, with the Design Development Pricing Set for Committee review. |
| 41.10 | T. Hengelsberg | T. Hengelsberg to provide existing top soil characterization for gradient and nutrient enhancements for Committee review. |
| 41.11 | T. Hengelsberg | T. Hengelsberg to refine the sidewalk layouts for a future Committee meeting. |
| 41.12 | T. Hengelsberg | T. Hengelsberg to provide options to the routing of the 36 inch storm line for review, such as reducing the depth of the line, installing a temporary line until Phase 2, routing around the building, use of concrete piping. |
| 41.13 | T. Hengelsberg | T. Hengelsberg to provide options to the Cape Cod Berm. |
| 41.14 | T. Hengelsberg | T. Hengelsberg to review if the 2-Hour Fire Wall and Horizontal Sliding Fire Door can be eliminated if fire-proofing was added to the Wing A-B and Wing C structure, in addition to the areas around the Egress Stairs. |
| 41.15 | T. Hengelsberg | T. Hengelsberg to provide the STC for the Stage Operable Wall with a comparison against a CMU wall. |

| Item # | Action | Discussion |
|--------|----------------|--|
| 41.16 | T. Hengelsberg | T. Hengelsberg to provide a written code interpretation for their Code Consultant that the three-story shaft is not an Atrium. |
| 41.17 | J. Seeley | J. Seeley to coordinate with K. Ross, T. Hengelsberg and J. Mauer to schedule meetings with New Incoming Parents, Teachers, and the Surrounding Neighborhood, to review the traffic and site conditions during construction. |
| 41.18 | R. Maglione | <p>T. Hengelsberg distributed and reviewed a Listing of Proprietary Specifications, attached, for Committee vote to approve and recommend approval by the School Committee, whose vote to approve is required to be submitted to the MSBA.</p> <p>Committee Discussion:</p> <ol style="list-style-type: none"> 1. M. LeBrasseur asked why is the School Committee required to approve Proprietary Specifications? <i>J. Seeley indicated that the MSBA requires a vote be taken by an elected body of the District, such as the Selectmen or School Committee, for proprietary specifications that are included in the project.</i> 2. M. LeBrasseur asked if the listed proprietary specifications are what is typically found in other school projects? <i>L. Dore indicated yes and that this list is smaller compared to other recent D&W school projects.</i> 3. J. Lundquist asked if some of the proprietary specifications, such as Building Energy Management System, can be listed as a bid alternate to control the bid cost? <i>L. Dore indicated no, as the District will have taken a public vote that the proprietary specification was required, making it an alternate would go against that vote.</i> 4. M. LeBrasseur asked if the MSBA would disapprove any of the proprietary specifications? <i>J. Seeley indicated no, submission of the vote to MSBA is required to ensure that local communities have decided to include proprietary specifications in an open public process.</i> 5. Section 230010 Building Energy Management System and Section 281000 Integrated Electronic Security System are under review by the District to determine if they are to be proprietary and R. Maglione will provide direction at the next Committee meeting. <p>The Committee will defer the vote until Section 230010 Building Energy Management System and Section 281000 Integrated Electronic Security System are resolved.</p> |
| 41.19 | T. Hengelsberg | <p>T. Hengelsberg distributed and reviewed the Response to Owner's Comments to the Design Development documents, attached. The Value Engineering related comments were reviewed under the Value Engineering discussion.</p> <p>Committee Discussion:</p> <ol style="list-style-type: none"> 1. T. Hengelsberg distributed the requested Site Lighting Catalog Cut Sheets, attached. |

| Item # | Action | Discussion |
|--------|---------------------------------|--|
| | | <ol style="list-style-type: none"> T. Hengelsberg to review options to provide a divider between the bathroom sinks in the upper grades to separate the boys and girls and present to the Committee. T. Hengelsberg to review options to reduce the extent or type of glazing in Stair 5 and present to the Committee. |
| 41.20 | L. Dore | <p>T. Hengelsberg distributed and reviewed a Listing of Value Engineering Items, attached.</p> <p>Committee Discussion:</p> <ol style="list-style-type: none"> L. Dore to confirm if the VE cost for the “SecureShade” is the net add, after factoring in the deletion of the manual shade at each location. L. Dore to confirm the status of the “SecureShade” sample installation. L. Dore to confirm if a Digital Site Sign is allowed by Zoning Bylaw. L. Dore to develop options to incrementally reduce the extent of chain link fencing. L. Dore to develop options for a smaller capacity roof davit. L. Dore to obtain feedback from other D&W school projects regarding their experience with the “Won-Door” horizontal sliding fire door. L. Dore to develop large scale exterior images to convey the effect of Utility Brick versus Standard Modular Brick and Split Face CMU versus Cast Stone Base. <p>A motion was made by J. Lundquist and seconded by M. LeBrasseur to incorporate any accepted Value Engineering items into the 60% Construction Documents and submit the Design Development documents as-is to the MSBA. No discussion, motion passed unanimous.</p> <p>A motion was made by J. Lundquist and seconded by M. LeBrasseur to approve Value Engineering items C01, L01, L02, A02, 38 and P01. No discussion, motion passed unanimous.</p> <p>A motion was made by J. Lundquist and seconded by P. L’Hommedieu to approve Value Engineering items A03, A04 and A05. No discussion, motion passed unanimous.</p> <p>D&W requested that the Committee decide Value Engineering items A01 and 17 at the next Committee meeting in order to maintain document progress.</p> |
| 41.21 | Record | <p>A Motion was made by J. Lundquist and seconded by M. LeBrasseur to approve the Design Development Submittal and authorize submission to the MSBA. No discussion, motion passed unanimous.</p> |
| 41.22 | Record | <p>J. Seeley provided an overview of the process and timing for Trade Prequalification, GMP Amendment Approvals for the Early Site Package and the Early Concrete and Steel Package, and GMP Approval for the whole project.</p> <p>The Trade Prequalification Committee to be appointed at the next Committee meeting.</p> |
| 41.23 | T. Hengelsberg J. Strazzulla | <p>Site Permitting</p> <ol style="list-style-type: none"> J. Seeley distributed the updated Project Schedule, attached. |

| Item # | Action | Discussion |
|--------|--------|---|
| | | <p>Conservation Commission</p> <ol style="list-style-type: none"> 1. The NOI application to be submitted on 4/3/19. 2. The Approved ORAD, recorded at the Registry of Deeds is attached. <p>Planning Board</p> <ol style="list-style-type: none"> 1. The Site Plan Approval application to be submitted on 4/9/19. 2. CDM, the town's consultant, is performing the sewage capacity analysis study. 3. T. Hengelsberg to review the staff counts relative to the amount of staff members for each grade in SPED and paraprofessionals with K. Ross and J. Healy. 4. J. Strazzulla to review the parking requirements for weekend soccer with Youth Soccer. 5. The Zoning Analysis is under review for determination on a waiver or variance process, the Zoning Bylaw Summary letter, dated 3/27/19 is attached. |
| 41.24 | Record | Committee Questions - none |
| 41.25 | Record | <p>Old or New Business</p> <ol style="list-style-type: none"> 1. M. LeBrasseur indicated the School Committee will be voting on the new School Name at their 4/23/19 meeting. |
| 41.26 | Record | Next SBC Meeting: 4/24/19 at 6:30 pm at the High School Media Center. The anticipated agenda items are reviewing the 60% Construction Document schedule and deliverables, design refinements and site permitting update. |
| 41.27 | Record | A Motion was made by M. LeBrasseur and seconded by P. Bedigian to adjourn the meeting. No discussion, motion passed unanimous. |

Attachments: Agenda, Warrant No. 24, Price Proposal for Preconstruction Survey, updated draft 60% Construction Documents Meetings and Agenda Schedule, Listing of Proprietary Specifications, Response to Owner's Comments to the Design Development documents, Site Lighting Catalog Cut Sheets, Listing of Value Engineering Items, Project Schedule, Approved ORAD, Zoning Bylaw Summary letter, dated 3/27/19, Powerpoint

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 MINUTES

| | | | |
|---------------|---|---------------|---------|
| Project: | New W. Edward Balmer Elementary School | Project No.: | 17020 |
| Prepared by: | Joel Seeley | Meeting Date: | 4/24/19 |
| Re: | School Building Committee Meeting | Meeting No: | 42 |
| Location: | High School Media Center | Time: | 6:30pm |
| Distribution: | School Building Committee Members, Attendees (MF) | | |

Attendees:

| PRESENT | NAME | AFFILIATION | VOTING MEMBER |
|---------|--------------------|--|-------------------|
| ✓ | Joseph Strazzulla | Chairman, School Building Committee | Voting Member |
| ✓ | Melissa Walker | School Business Manager | Voting Member |
| ✓ | Alicia Cannon | Representative of the Board of Selectmen | Voting Member |
| ✓ | Michael LeBrasseur | Chairman, School Committee | Voting Member |
| ✓ | Paul Bedigian | Representative of the Building, Planning, Construction Committee | Voting Member |
| ✓ | Steven Gogolinski | Representative of the Finance Committee | Voting Member |
| ✓ | Jeffrey Tubbs | Community Member with building design and/or construction experience | Voting Member |
| ✓ | Peter L'Hommedieu | Community Member with building design and/or construction experience | Voting Member |
| ✓ | Jeff Lundquist | Community Member with building design and/or construction experience | Voting Member |
| | Andrew Chagnon | Community Member with building design and/or construction experience | Voting Member |
| ✓ | Spencer Pollock | Parent Representative | Voting Member |
| | Adam Gaudette | Town Manager | Non-Voting Member |
| ✓ | Amy McKinstry | Interim Superintendent of Schools | Non-Voting Member |
| ✓ | Richard Maglione | Director of Facilities | Non-Voting Member |
| ✓ | Karlene Ross | Principal, W. Edward Balmer Elementary School | Non-Voting Member |
| | Jill Healy | Principal, Northbridge Elementary School | Non-Voting Member |
| ✓ | Gregory Rosenthal | Director of Pupil Personnel Services | Non-Voting Member |
| ✓ | Lee Dore | D & W, Architect | |
| | Thomas Hengelsberg | D & W, Architect | |
| | David Fontaine | Fontaine Bros, CM | |
| ✓ | David Fontaine, Jr | Fontaine Bros, CM | |
| ✓ | David Barksdale | Fontaine Bros, CM | |
| ✓ | Jim Mauer | Fontaine Bros, CM | |
| | Joel Kent | Fontaine Bros, CM | |
| ✓ | Joel Seeley | SMMA, OPM | |
| | | | |

| Item # | Action | Discussion |
|--------|----------------|--|
| 42.1 | Record | Call to Order, 6:30 PM, meeting opened. |
| 42.2 | Record | J. Strazzulla announced the meeting will be video and audio recorded with live broadcast and future re-broadcast. |
| 42.3 | Record | A motion was made by P. Bedigian and seconded by M. LeBrasseur to approve the 4/2/19 School Building Committee meeting minutes. Motion passed unanimous by those attending, one abstention. |
| 42.4 | Record | <p>J. Seeley distributed and reviewed the Engineering Services Agreement with Mass Save, attached, in the amount of \$6,250 for the Town's cost share of the MassSave engineering services to be funded out of Utility Company Fees Budget ProPay Code 0601-0000, which has a balance of \$200,000.</p> <p>A motion was made by A. Cannon and seconded by P. Bedigian to approve the Engineering Services Agreement and recommend signature by A. Cannon. No discussion, motion passed unanimous.</p> |
| 42.5 | Record | <p>J. Seeley distributed and reviewed the Engineering Design Deposit Agreement with Verizon, attached, in the amount of \$1,000 for Verizon's engineering services to be funded out of Utility Company Fees Budget ProPay Code 0601-0000, which has a balance of \$193,750.</p> <p>A motion was made by M. LeBrasseur and seconded by A. Cannon to approve the Engineering Design Deposit Agreement and recommend signature by A. Cannon. No discussion, motion passed unanimous.</p> |
| 42.6 | J. Seeley | <p>J. Seeley distributed and reviewed the updated 60% Construction Documents Meetings and Agenda Schedule and the updated Project Schedule, both attached.</p> <p>Committee Discussion:</p> <ol style="list-style-type: none"> 1. M. LeBrasseur asked what type of construction would be commencing in June 2019? <i>D. Fontaine described the construction work, awarded as part of the Early Site Package, that would commence in June, namely installation of the construction fence and enabling work to allow for the operation of the existing school.</i> 2. J. Strazzulla asked that the draft 90% Construction Documents Meetings and Agenda Schedule be developed for the next Committee meeting. <i>J. Seeley will develop the draft schedule for the next Committee meeting.</i> |
| 42.7 | Record | L. Dore distributed and reviewed the specification describing the training requirements for the school department's maintenance staff, including video-taping, attached. |
| 42.8 | Record | L. Dore distributed and reviewed the turning radii for all parking lot exits being sufficient to not force the turning car into the oncoming lane of traffic, attached. |
| 42.9 | Record | L. Dore distributed and reviewed the Detailed Cut and Fill Analysis by material, attached. |
| 42.10 | T. Hengelsberg | T. Hengelsberg to provide existing top soil characterization for gradient and nutrient enhancements for Committee review. |
| 42.11 | Record | L. Dore presented the sidewalk layouts across the site, attached. |
| 42.12 | Record | L. Dore presented the design and cost options for routing the 36 inch storm line, attached. |

| Item # | Action | Discussion |
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| | | <p>Committee Discussion:</p> <ol style="list-style-type: none"> 1. M. LeBrasseur asked how durable is the pipe material under the building? <i>L. Dore indicated the material is ductile iron and very durable.</i> 2. P. Bedigian asked should the pipe under the building be concrete encased? <i>L. Dore indicated the civil engineer does not recommend, the pipe is not under any load and is 13 feet below the building slab.</i> |
| 42.13 | Record | L. Dore presented the cost analysis, a \$259,000 add, to eliminate the 2-Hour Fire Wall and Horizontal Sliding Fire Door and replace with full fire-proofing of the structure, attached. The Committee provided direction that this option will not be pursued. |
| 42.14 | Record | L. Dore indicated the STC for the Stage Operable Wall is 50 and a CMU wall is STC is 52. |
| 42.15 | Record | L. Dore distributed and reviewed the code interpretation for their Code Consultant that the three-story shaft is not an Atrium. |
| 42.16 | J. Seeley | J. Seeley to coordinate with K. Ross, T. Hengelsberg and J. Mauer to schedule meetings with New Incoming Parents, Teachers, and the Surrounding Neighborhood, to review the traffic and site conditions during construction once the site permitting is completed. |
| 42.17 | R. Maglione | L. Dore provided an update on the Proprietary Specifications, attached. Section 230010 Building Energy Management System will not be proprietary. Sections 272000 Data Communication and Section 281000 Integrated Electronic Security System are under review by the District to determine if they are to be proprietary and R. Maglione will provide direction. |
| 42.18 | Record | L. Dore reviewed an option to provide a divider between the bathroom sinks in the upper grades to separate the boys and girls in follow-up to the Response to Owner's Comments to the Design Development documents, attached. The Committee provided direction that this option will not be pursued. |
| 42.19 | L. Dore | L. Dore to review fence or netting options for the left field line of the baseball field parallel to Crescent Street. |
| 42.20 | L. Dore | <p>L. Dore reviewed the follow-up items to the Listing of Value Engineering Items, attached.</p> <p>Committee Discussion:</p> <ol style="list-style-type: none"> 1. L. Dore to confirm if the VE Item 1 and 2, cost for the "SecureShade" is the net add, after factoring in the deletion of the manual shade at each location and confirm the status of the "SecureShade" sample installation. 2. L. Dore confirmed VE Item 3 Digital Site Sign is allowed by Zoning Bylaw. No action taken. 3. L. Dore presented VE Item L4.3 Fencing options. A motion was made by J. Lundquist and seconded by S. Pollock to accept VE Item L4.3 to "repair-only" the existing fence behind the Overlook Street properties. After discussion, motion passed unanimous. 4. L. Dore presented VE Item A01 Utility Brick in lieu of Standard Modular Brick. A motion was made by J. Lundquist and seconded by P. L'Hommedieu to accept VE Item A01 Utility Brick in lieu of Standard Modular Brick. After discussion, motion passed 6 in favor and 4 against. |

| Item # | Action | Discussion |
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| | | <p>5. L. Dore presented VE Item 17 Split Face CMU in lieu of Cast Stone Base. A motion was made by J. Lundquist and seconded by P. L'Hommedieu to accept VE Item 17 Split Face CMU in lieu of Cast Stone Base. After discussion, motion did not pass with 5 in favor and 5 against.</p> <p>6. L. Dore reviewed VE Item 28 in-place mock-up in lieu of stand-alone mock-up. A motion was made by J. Lundquist and seconded by S. Gogolinski to accept VE Item 28 in-place mock-up in lieu of stand-alone mock-up. After discussion, motion did not pass with 2 in favor and 8 against.</p> <p>7. L. Dore reviewed VE Item 27 reduce glazing in Stair 5. A motion was made by J. Lundquist and seconded by P. L'Hommedieu to accept VE Item 27 reduce glazing in Stair 5. After discussion, motion did not pass with 5 in favor and 5 against.</p> <p>8. L. Dore reviewed VE Item E01 lightning preventor in lieu of lightning protection system. No action taken.</p> <p>9. L. Dore reviewed VE Item 18 roof davit. Roof davit to be FFE item, if needed.</p> <p>10. L. Dore reviewed VE Item 33 sloped granite in lieu of Cape Cod berm curbing. A motion was made by A. Cannon and seconded by P. L'Hommedieu to accept VE Item 33 sloped granite in lieu of Cape Cod berm curbing. After discussion, motion passed unanimously.</p> <p>11. L. Dore asked for reconsideration of prior approval of VE Item A12 operable partition in lieu of roll-down gymnasium curtain. A motion was made by A. Cannon and seconded by S. Gogolinski to rescind prior approval of VE Item A12 operable partition in lieu of roll-down gymnasium curtain. After discussion, motion passed 7 in favor and 3 against.</p> <p>12. L. Dore to obtain feedback from other D&W school projects regarding their experience with the "Won-Door" horizontal sliding fire door, expected service life, and approximate annual maintenance and testing costs.</p> <p>J. Seeley indicated that the approved VE Items will be incorporated into the 60% construction documents. At the time of estimating the 60% construction documents, additional VE will be undertaken if needed to maintain budget. If the project is on or under budget and additional VE are requested, they would be incorporated as an additional service. J. Lundquist indicated additional VE should be reviewed at the 60% construction documents estimate and there may be value to incorporate even with the additional cost.</p> |
| 42.21 | J. Seeley | <p>D. Fontaine provided the Construction Cost Control Budget Breakdown for the Early Site Package, Early Concrete and Steel Package, and GMP Approval for the whole project and the Proposed list of Non-Trade Contractors for the Early Site Package.</p> <p>Committee Discussion:</p> <p>1. P. L'Hommedieu indicated there is some risk in projects with early release packages with follow-on packages being over budget after award and construction commencement of the initial packages, so developing as much contingency buffer thru the VE process is a good step.</p> |

| Item # | Action | Discussion |
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| | | <p>2. J. Strazzulla asked can the Committee negotiate with the bidders if a package is over budget? <i>P. L'Hommedieu indicated there is no negotiating with the Trade Contractors unless less than three bids are received and they are over-budget. The CM can negotiate with Non-Trade Contractors.</i></p> <p>3. A motion was made by J. Tubbs and seconded by A. Cannon to appoint P. L'Hommedieu, J. Lundquist and A. Chagnon to the Non-Trade Contractor Review Committee. After discussion, motion passed unanimous</p> <p>J. Seeley to schedule a meeting with the D&W, FBI, SMMA and the Non-Trade Contractor Review Committee to review the proposed list of Non-Trade Contractors for the Early Site Package.</p> |
| 42.22 | Committee | <p>J. Seeley provided an overview of the Trade Contractor Prequalification process for the Early Concrete and Steel Package and Final Package.</p> <p>The Trade Prequalification Committee to be appointed at the next Committee meeting.</p> |
| 42.23 | Record | <p>Site Permitting - J. Seeley provided an overview of the site permitting as follows:</p> <p>Conservation Commission</p> <p>1. NOI Hearing held 4/17/19, continued to 5/1/19. The Town's peer engineering firm is reviewing the submittal and depending upon when the comments are received, the hearing may be continued to 5/15/19.</p> <p>Planning Board</p> <p>1. Site Plan Approval Hearing held 4/23/19, continued to 5/14/19. Comments on storm drainage, planting and fencing along the east property line were discussed.</p> <p>2. CDM, the town's consultant, is performing the sewage capacity analysis study.</p> <p>3. The Zoning Analysis is under review for determination on a waiver or variance process.</p> |
| 42.24 | Record | Committee Questions - none |
| 42.25 | Record | <p>Old or New Business</p> <p>1. M. LeBrasseur indicated the School Committee voted the name for the new school – Northbridge Elementary School.</p> |
| 42.26 | Record | Next SBC Meeting: 5/8/19 at 6:30 pm at the High School Media Center. The anticipated agenda items are reviewing design refinements, MSBA comments on the 60% Construction Document submission, construction logistics and site permitting update. |
| 42.27 | Record | A Motion was made by A. Cannon and seconded by P. Bedigian to adjourn the meeting. No discussion, motion passed unanimous. |

Attachments: Agenda, Engineering Services Agreement, Engineering Design Deposit Agreement, updated 60% Construction Documents Meetings and Agenda Schedule, updated Project Schedule, Detailed Cut and Fill Analysis, Proposed list of Non-Trade Contractors for the Early Site Package, Powerpoint

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