

OPM SUBMITTAL REVIEW & COORDINATION

MSBA 60% CONSTRUCTION DOCUMENT REVIEW

6C.2.1 - 04

6C.2.1 – 04a

**60% CD REVIEW
W/ DESIGNER
COMMENTS**

MSBA 60% CD Review

APPENDIX 6B

MODULE 6 – 60% CONSTRUCTION DOCUMENTS REVIEW COMMENTS

District: *Northeast Metropolitan Regional Vocational School District*

School: *Northeast Metropolitan Regional Vocational High School*

Owner's Project Manager: *PMA Consultants*

Designer Firm: *DRA Architects*

Submittal Received Date: *January 20, 2023*

Review Date: *January 23, 2023 – February 2, 2023*

Reviewed by: *Gienapp Architects, K. Brown, Lee Deveau*

Received: February 3, 2023

Response: February 15, 2023

MSBA REVIEW COMMENTS

The following comments¹ on the 60% construction documents submittal are issued pursuant to a project submittal review document for the proposed project and presented as a 60% construction documents submission in accordance with the MSBA Module 6 Guidelines.

The items listed below are to be included in each project submittal by the design team (OPM and Designer) to the extent that each item applies to the project, or the design team should include an explanation why an item doesn't apply. The project submittal may be rejected by MSBA if all items below are not fully addressed by the project team. Unless specifically stated otherwise in the review comments below, the OPM and Designer deliverables are included in the submission with no further comment from MSBA required.

6B.1 Summary Comments

	Comments
• Basic Project Information	
○ Enrollment (describe grade configuration, design enrollment and number of PK students if applicable)	<i>1,600 students grades 9-12 with no Pre-K</i>
○ GSF area (describe approved GSF in the Project Funding Agreement and as currently proposed)	<p><i>It appears there is a discrepancy regarding the GSF area. The project summary and space summary both indicate 386,630 GSF, which matches the PFA. However, the Cost Estimate Comparison Form indicates 382,610 GSF, a difference of 4,020 GSF. Please clarify with the response to these comments.</i></p> <p>Design Team Response: The cost estimate summary does not include the add alternate for the Satellite Locker Building. Within the Space Summary, under Health & Physical Education, this is under line-item Satellite Locker Rooms.</p>
○ Project Type (all new, add/reno, reno)	<i>New construction</i>
○ Delivery method (DBB, CMR). If CMR, describe contract status	<i>CMR, Gilbane</i>

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.

<ul style="list-style-type: none"> o For projects with Chapter 74 CVTE programs, OPM and Designer review and acknowledge requirements described here (Chapter 74 Meeting with MSBA and DESE following the 60% CD submission). 	<i>Included</i>
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- Project Budget Compliance:

- o *The Project Funding Agreement ("PFA") has a Total Project Budget of \$317,422,620. The submittal notes that the current total project budget is \$324,922,542, and exceeds the PFA budget by \$7,499,922.*
 - *The submission indicates that the District has increased the budget to account for this overage.*
- o *The PFA has an estimated construction cost of \$243,591,092. The submittal notes that the OPM's current reconciled estimated construction cost is \$249,224,736 and exceeds the PFA budget by \$5,633,644.*
- o *The (OPM/CMR)'s current construction cost estimate is \$249,314,640 by (Gilbane). The Designer's current construction cost estimate is \$249,224,736 by (Rider Levitt Bucknall).*

- General Comments:

- o *Work included in early bid packages issued either before this submission or within 35 days of this submission is not included in this review. Consequently, items included in the Early Bid Package are not reviewed here. It is clear an early site work package has already been issued to bid. It is not clear if the foundations and steel package has either already been or will soon be issued to bid. Consequently, site work, foundations, and steel are not included in this review. Please clarify in the response to this review.*

OPM Response: The foundations and steel packages have not yet been issued for bidding.

- o *The Code Analysis does not mention if the building can be classified as "high-rise", and there are parts of the building that appear to be over the threshold for "high-rise". Please confirm that this was reviewed by the District, and describe in the response to this review.*

Design Team Response: The building is not classified as a high-rise building.

The International Building Code defines a high-rise building as a building with an occupied floor located more than 75-feet above the lowest level of the fire department vehicle access. The distance from the Lower Level to the Fourth Floor, at the proposed NE Metro building, is 68-feet.

- o *Workforce participation goals for minorities and women, and processes and procedures to include compliance are not included in the Project Manual. Please include this information in the next submission.*

OPM Response: Acknowledged.

6B.2 OPM Deliverables:

6B.2.1 OPM Submittal Review & Coordination		Comments
<ul style="list-style-type: none"> • OPM's written Designer submission review, with recommendations to the Owner for one of the following (choose one): <ul style="list-style-type: none"> <input checked="" type="checkbox"/> OPM approves the submission <input type="checkbox"/> OPM approves the submission partially; reject remainder <input type="checkbox"/> OPM rejects the submission <input type="checkbox"/> OPM requires additional supporting information 		
<ul style="list-style-type: none"> • Coordinate design; include written recommendations to the Owner. Address each of the following items individually, and describe how the OPM evaluated each item. <ul style="list-style-type: none"> o Technical accuracy, coordination, & clarity 		
		<i>Not addressed. Please address this in the next submission.</i> OPM Response: This was addressed, please refer to cover letter and the OPM/CM/Cx review comments.

	o Efficiency & cost effectiveness	<i>Not addressed. Please address this in the next submission.</i> OPM Response: This was addressed, please refer to cover letter and the OPM/CM/Cx review comments.
	o Operability	<i>Not addressed. Please address this in the next submission.</i> OPM Response: This was addressed, please refer to cover letter and the OPM/CM/Cx review comments.
	o Constructability	<i>Not addressed. Please address this in the next submission.</i> OPM Response: This was addressed, please refer to cover letter and the OPM/CM/Cx review comments.
	o Phasing	<i>Not addressed. Please address this in the next submission.</i> OPM Response: This was addressed, please refer to cover letter and the OPM/CM/Cx review comments.
	o Bid ability	<i>Not addressed. Please address this in the next submission.</i> OPM Response: This was addressed, please refer to cover letter and the OPM/CM/Cx review comments.
	o Site access during construction	<i>Not addressed. Please address this in the next submission.</i> OPM Response: This was addressed, please refer to cover letter and the OPM/CM/Cx review comments.
•	Coordinate Commissioning consultant's review	
	o Describe the commissioning consultant's review status.	
	o Include a copy of the commissioning consultant's review & project team's response to each item.	
•	o Describe the consideration and incorporation of commissioning consultant's recommendations into the current submittal.	
	Coordinate the District response to the MSBA comments of previous submittals.	
	o Include a copy of the previous MSBA review & District response, including any supplemental submittals and reviews.	
•	o Provide documentation of comments addressed and comments resolution outstanding.	

6B.2.2 Project Schedule		Comments
•	The OPM is responsible to submit a project schedule that conforms to the following requirements, whether the schedule is produced by the OPM or the CMR (if applicable). <i>A schedule that is limited to construction tasks is not acceptable and will be rejected.</i> All schedules should be presented in calendar days.	
•	Update project schedule: At a minimum, the schedule update should provide the same level of detail as was included in the Project Funding Agreement Exhibit C, expanded and updated to include milestones for Design Development, Bidding, Construction, and	

<p>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:</p>	
<ul style="list-style-type: none"> ○ Punch list start and end dates 	
<ul style="list-style-type: none"> ○ Project Registration date with the US Green Building Council ("USGBC") or Collaboration for High Performance Schools ("CHPS") 	
<ul style="list-style-type: none"> ○ Provisional/Design package submittal date to USGBC or CHPS 	
<ul style="list-style-type: none"> ○ MSBA 50% DCAMM Notification submittal date and MSBA 100% DCAMM Standard Contractor Evaluation Form notification date 	
<ul style="list-style-type: none"> ○ General Contractor/Construction Manager request for final payment 	
<ul style="list-style-type: none"> ○ Commissioning Consultant inspection (substantial completion plus approximately 10 months) 	
<ul style="list-style-type: none"> ○ Final Commissioning report to MSBA submittal date 	
<ul style="list-style-type: none"> ○ Final Construction package to USGBC/CHPS including the Final Commissioning Report submittal date 	
<ul style="list-style-type: none"> ○ Anticipated final Green School Program Certification letter from USGBC/CHPS issuance date 	
<ul style="list-style-type: none"> ○ Commissioning Certificate of Completion submittal date to MSBA 	
<ul style="list-style-type: none"> ○ Final reimbursement request submittal date to MSBA 	
<ul style="list-style-type: none"> • Include application submission and approval dates in the project schedule for the following approvals, coordinated with the Designer's submittal information. 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 items listed below might not be applicable to this project) Indicate "Non-Applicable" on the project schedule where appropriate. 	
<ul style="list-style-type: none"> ○ DESE - Special Education approval by Department of Elementary and Secondary Education 	
<ul style="list-style-type: none"> ○ MHC – Project Notification Form and approvals by MA Historical Commission 	
<ul style="list-style-type: none"> ○ OIG - Construction Manager at Risk approval by the Office of Inspector General 	
<ul style="list-style-type: none"> ○ Executive Office of Energy and Environmental Affairs/EEA: 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ▪ MEPA - MA Environmental Policy Act by Energy & Environmental Affairs: 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> • ENF - Environmental Notification Form 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> • EIR - Environmental Impact Report 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ▪ Article 97 Land Disposition Policy approval by Energy & Environmental Affairs 	

	<ul style="list-style-type: none"> ○ MA DEP - Massachusetts Department of Environmental Protection ○ MA DOT - Massachusetts Department of Transportation ○ MA DPH - Massachusetts Department of Public Health ○ 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 	
<ul style="list-style-type: none"> • 	<p>Indicate all required state reviews or permits on the milestone schedule including actual or planned approval dates which are required in order to maintain the planned bidding and construction schedule and milestones indicated therein. For required state reviews or permit approvals which have not been obtained on schedule, provide a separate (sub network) schedule depicting recovery actions to obtain required approvals in order to maintain the bidding and construction schedule.</p>	
<ul style="list-style-type: none"> • 	<p>A letter on District letterhead confirming that the Project has undergone review and obtained all necessary state reviews and approvals by any departments or Commonwealth agencies required by law to review the Project, including but not limited to the approvals listed above. Attach such documentation letter evidencing such state reviews and approvals:</p>	<p><i>Not included. Please include this in the next submission.</i> Project Team Response: Acknowledged.</p>
	<ul style="list-style-type: none"> ○ Identify any state reviews or permits for which approval has not been obtained as of the 60% Construction Documents submission date, and include in the District letter a status update including actions taken to date and actions planned to obtain the required approval(s) in order to comply with Project Funding Agreement (the "PFA") Section 4.12. and maintain the projected schedule milestones listed in OPM Deliverables. 	
	<ul style="list-style-type: none"> ○ PFA Section 4.12, executed between the District and the MSBA, requires that each project successfully undergo review and obtain all necessary approvals "prior to the solicitation of construction bids, by any departments or agencies of the Commonwealth required by law to review such projects..." In response to these 60% CD submission review comments, MSBA requires documentation that the District complies with this PFA requirement. 	
<ul style="list-style-type: none"> • 	<p>The schedule is to be updated and submitted to MSBA 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).</p>	

<ul style="list-style-type: none"> Indicate the date for the 60% Construction Documents and proposed 90% Construction Documents submission dates. The schedule is to incorporate 21 calendar day required duration for each MSBA submission review, and a minimum 14 calendar days for project team incorporation of MSBA review comments as well as all others into the project documents prior to the next submission due date or finalizing project documents to make available to bidders. 35 calendar days between each MSBA design submission (DD, 60%, 90%) is the minimum acceptable duration; if the project team believes additional time is required for any or all the submissions the durations for these activities are to be increased accordingly. 	
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6B.2.3 Project Scope and Budget		Comments
<ul style="list-style-type: none"> Develop project scope and budget, cost estimates and reconciliation: <ul style="list-style-type: none"> OPM construction cost estimate using CSI MasterFormat 6-digit format to Level 3 and MGL c.149 s 44F (filed sub-bid) format showing unit rates and quantities; with escalation projected to the mid-point of construction. OPM reconciliation of the OPM/CMR and Designer construction cost estimates including a description of the method to derive this reconciliation. Refer to this link for an example of the Cost Estimate Reconciliation Form. Updated Cost Estimate Comparison Form. Refer to this link for an example of the Cost Estimate Comparison Form. 		<p><i>The included Cost Estimate Comparison Form only includes the cost estimate for the 60% CD phase and the blank template for the 90% CD phase. Earlier phases, such as PS&B, PFA, and DD are not shown. Please include the full cost estimate comparison form showing all relevant phases in the next submission.</i></p> <p>OPM Response: The CSI Cost Comparison template begins with 60% CD Phase. Omission of the Uniformat Cost Comparison spreadsheet was a clerical error and is included with this response.</p>
<ul style="list-style-type: none"> CMR (if applicable) <ul style="list-style-type: none"> If the Owner has not yet contracted with a Construction Manager (CM), the OPM must develop a construction cost estimate as described above 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 Designer's and CM's construction cost estimates reconciliation as described above. 		

<ul style="list-style-type: none"> 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. 	<p><i>The submission's Total Project Budget uses an Estimated Construction Cost of \$244,991,092 instead of the reconciled estimate of \$249,224,736. It is not clear why another value is used or where the value came from. Please clarify and provide an updated Total Project Budget that uses the reconciled cost estimate with the response to these comments.</i></p> <p>OPM Response: Please refer to the OPM Cover Letter which clarifies the recent grant received by the District and associated impact to the Total Project Budget. Also please note, the grant funds are reflected in the submitted Total Project Budget as ineligible third party funding on the final page.</p>
<ul style="list-style-type: none"> Describe any early-bid packages anticipated scope and schedule. Include any early-bid packages in the submittal (if applicable) to show a complete project. Provide bid tables for any completed sub-bid packages. 	
<ul style="list-style-type: none"> Value Engineering recommendations (if any) <ul style="list-style-type: none"> Provide the list of potential and accepted Value Engineering recommendations, and associated costs of each item. For any Value Engineering recommendations which have been accepted, provide a copy of the Committee vote. 	<p><i>Not included. Include this in the next submission.</i></p> <p>OPM Response: Value Engineering efforts have been coordinated directly with District leadership.</p>

6B.3 Designer Deliverables:

6B.3.1 General Requirements	Comments
<ul style="list-style-type: none"> Submit an updated work plan. 	
<ul style="list-style-type: none"> Updated and expanded Basis of Design narrative description for each following discipline: <ul style="list-style-type: none"> Architecture Structural: narrative must include lateral bracing methods and how earthquake code requirements will be met Civil MEP + FP Data/Comms./Security 	

<ul style="list-style-type: none"> Updated building code analysis 	<p><i>The Code Analysis does not mention if the building can be classified as "high-rise", and there are parts of the building that appear to be over the threshold for "high-rise". Please confirm that this was reviewed by the District and describe in the response to these review comments.</i></p> <p>Design Team Response: The building is <u>not</u> classified as a high-rise building.</p> <p>The International Building Code defines a high-rise building as a building with an occupied floor located more than 75-feet above the lowest level of the fire department vehicle access. The distance from the Lower Level to the Fourth Floor, at the proposed NE Metro building, is 68-feet.</p>
<ul style="list-style-type: none"> Provide an updated list of proprietary items under consideration. 	
<ul style="list-style-type: none"> Updated 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. 	<p><i>The submission does not confirm if color and material selections have been presented to or approved by the District. Please address this in the next submission.</i></p> <p>Design Team Response: The Interior Color Theory Statement, submitted with the 60% CD Binder Material, provides a sampling of the color selections that were reviewed during at the October 25, 2022, meeting with the District. The Design Team will be meeting with the District again prior to going out to bid.</p>
<ul style="list-style-type: none"> Updated structural calculations and required floor loads 	
<ul style="list-style-type: none"> Evidence that an independent structural design review is initiated or being arranged (an MSBA requirement for all projects with new construction over 10,000 sf). MSBA requires a structural engineering peer review submission as part of the Final (100%) Construction Documents submission, to include documentation of any issues identified by the Peer Reviewer and resolution. Actions are to be advanced well prior to the 90% CD submission to engage the peer reviewer, and that scheduling be arranged to allow final structural design drawings and calculations to be submitted to the peer reviewer at the completion of the 90% Construction Documents submittal, or earlier as may be required for early (structural) bid packages, in order to incorporate comments and response action reporting in the final construction documents and avoid delays. Confirm this process has been initiated. 	
<ul style="list-style-type: none"> Updated energy model calculations 	
<ul style="list-style-type: none"> Updated Life Cycle cost analysis for energy and water consuming devices 	
<ul style="list-style-type: none"> Updated heat gain and loss calculations for Heating, Ventilating and Air Conditioning systems 	
<ul style="list-style-type: none"> Updated calculations showing total electrical load 	
<ul style="list-style-type: none"> Updated security and visual access requirements: 	

	<ul style="list-style-type: none"> o Confirmation that the persons responsible for the District's emergency procedures implementation, 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. 	<p><i>The submission does not confirm if emergency medical personnel have been consulted. Please address this in the next submission.</i></p> <p>Design Team Response: The project has been reviewed by first responders. It is expected that additional meetings will be held in the next phase to review and finalize hardware.</p>
	<ul style="list-style-type: none"> o Identify other security related items particular to the District and/or the proposed project. 	
	<ul style="list-style-type: none"> o Verification that the following safety and security related issues have been reviewed and are in accordance with the District's procedures as noted above: 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> ▪ 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. 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> ▪ Classroom lockset hardware - confirm hardware functions are compatible with the District's protocols related to lockdown. 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> ▪ 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. 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> ▪ Alternative entry/exit 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; Fire Alarm Control Panels, and provisions for building plans to be delivered to local fire and response agencies. 	
	<ul style="list-style-type: none"> • Facility and Maintenance requirements: 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> o Confirmation that the district personnel responsible for maintenance have been consulted in the planning process and any associated requirements have been considered for this project. Describe maintenance related items particular to the District and/or the proposed project. 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> o Confirmation that the district personnel responsible for budgeting and maintenance have participated in discussions regarding the selection and long-term operational and maintenance costs of the mechanical systems and building maintenance system controls. 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> o Confirmation that the district personnel responsible for the maintenance have participated in discussions regarding the proposed training program and that these discussions have determined that the hours and the schedule for training included in the contract are sufficient to train the facility operational and maintenance personnel to operate the building management system, as designed. Confirmation that 	

	adequate hours have been scheduled both before the opening of the school and after the turnover of the building.	
	o Verification that at a minimum the following issues have been reviewed:	
	▪ Training hours and scheduling	
	▪ HVAC systems	
	▪ Building Management Systems	
	▪ Lighting fixtures and controls	<i>Not included. Include this in the next submission.</i> Design Team Response: Will be included in the next submission.
	▪ Cleaning procedures and materials	<i>Not included. Include this in the next submission.</i> Design Team Response: Interior finish materials have been reviewed with the District's Maintenance Personnel regarding durability and cleaning procedures.
	▪ Roof access	
	▪ Mechanical room access	
•	Updated Quality Control narratives, supporting plans and documents demonstrating:	
	o Ceiling clearances	
	o Mechanical room and shaft sizes	
	o Coordinate specifications and drawings	
	o Filed sub-bid work	
	o Scheduling	
	o Equipment and power	
	o Existing and new construction	
	o Phasing	

6B.3.2 Space Summary					Comments		
<u>Spaces</u>	<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	51,990	52,020	51,980		(10)	<p>General classrooms reduced 85 sf; Teacher Planning/ Workrooms added 15 sf; Science Classrooms/Labs added 85 sf; Prep Room added 5 sf; Health CR/Team Meeting Room reduced 10 sf; Language Lab/Distance Learning reduced 20 sf. In the response to these review comments, please confirm that no classroom sizes are below the minimum size stated in MSBA's guidelines.</p> <p>Design Team Response: All the General Classrooms comply within MSBA's square footage guidelines (825 SF minimum and maximum of 950 SF).</p> <p>All the science classrooms meet MSBA minimum size requirement of 1440 square feet.</p> <p>Special Education spaces meet the square footage and location requirements as approved by DESE and included in the MSBA Schematic Design Submission.</p>	
Special Education	7,070	7,070	7,070		-	No proposed changes	
Art and Music	-	-			-		

	Vocations & Technology	127,755	127,510	127,165	(590)	<p>Tech./Engineering Rooms reduced 5 sf; Automotive Collision Rpr reduced 80 sf; Automotive Technology reduced 115 sf; Business Office Tech. increased 25 sf; Carpentry reduced 150 sf; Culinary Arts increased 5 sf; Dental Assisting reduced 50 sf; Design & Visual Communications reduced 25 sf; Drafting & Design reduced 5 sf; Early Childhood Ed. increased 20 sf; Electrical Tech. reduced 110 sf; Health Assisting reduced 40 sf; HVAC Tech. reduced 35 sf; Plumbing & Pipefitting reduced 35 sf; Robotics & Automation reduced 5 sf; Biotech. reduced 30 sf; Marketing increased 25 sf; Medical Assisting increased 20 sf. In the response to these review comments, please confirm DESE includes the revisions in this submission.</p> <p>Design Team Response: The latest revisions are consistent with the previous DESE approval. Spaces that are being presented at the current DESE Chapter 74 review meetings reflect plans that were submitted as a part of the MSBA 60% CD Submission.</p>
	Health and Physical Education	25,750	25,535	25,750	-	<p>Gym reduced 165 sf; PE Alternatives increased 160 sf; Gym Storeroom reduced 20 sf; Locker Rooms w/Toilets reduced 900 sf; Satellite Locker Rooms reduced 15 sf; Phys Ed Storage & Closets increased 25 sf; Athletic Director's Office increased 15 sf; Officials/Trans Locker Room w/Shower & Toilet increased 10 sf; PE Instructor & Coach Office w/Shower & toilet reduced 65 sf; Trainer increased 25 sf; Auxiliary PE increased 930 sf. Space Summary indicates Aux. PE space to be 835 NFA and 930 total area. In the response to these review comments, please resubmit the Space</p>

							Summary and confirm area of Aux. PE. Design Team Response: Auxiliary PE is intended to be 930 SF and not 835 SF. The Space Summary has been corrected.
	Media Center	5,455	5,460	5,450	(5)		Media Center/Reading Room reduced 45 sf; Workroom increased 35 sf; Small Group Room reduced 5 sf; Project Room/TV Studio/Storage increased 10 sf.
	Auditorium / Drama	10,505	10,540	10,935	430		Auditorium increased 1,890 sf; Stage reduced 1,610 sf; Make-up/Dressing/Green Room increased 10 sf; Controls/Lighting/Projection increased 140 sf.
	Dining and Food Service	13,180	13,180	13,175	(5)		Cafeteria/Student Lounge/Break-out increased 10 sf; Chair/Table Storage reduced 50 sf; Scramble Serving Area increased 65 sf; Kitchen reduced 20 sf; Staff Lunch Room reduced 10 sf.
	Medical	1,340	1,325	1,340	-		Medical Suite Toilet reduced 10 sf; Nurses' Office increased 5 sf; Interview/Exam Room reduced 5 sf; Resting increased 10 sf.

	Administration and Guidance	8,655	8,630	8,682		27	Gen Off./Waiting Rm/Toilet increased 15 sf; Teacher's Mail/Time Rm increased 2 sf; Duplicating Rm increased 25 sf; Records Rm increased 76 sf; Principal's Off. reduced 8 sf; Principal's Secretary/Waiting reduced 6 sf; Asst Principal's Off. increased 2 sf; Asst Principal's Off.- Voc Deans, Academic Program Coord, Co-Op reduced 3 sf; Supervisory & Paraprofessional Off. reduced 2 sf; Dept Head Off. reduced 4 sf; Safety Resource Officer increased 3 sf; In-House Suspension increased 2 sf; Conf. Rm reduced 77 sf; Guidance/Adj. Diversity Off. increased 22 sf; Guidance Storeroom reduced 1 sf; Career Center/Classroom reduced 8 sf; Records Rm increased 2 sf; Teacher Work Rm reduced 13 sf.
	Custodial and Maintenance	4,150	4,175	4,335		185	Custodian Storage increased 90 sf; Recycling Room/Trash increased 5 sf; Receiving & General Supply increased 90 sf. Space Summary includes Network/Telecom Room & Offices as both 200 sf and 255 sf. In the response to these review comments, please resubmit the Space Summary to clarify. Design Team Response: Network / Telecom Room is intended to be 255 SF. This square footage matches the space summary area from Schematic Design. The Space Summary has been corrected.
	Other	1,900	1,870	1,880		(20)	Adult Ed Offices & Storage reduced 40 sf; Superintendent's Office increased 5 sf; Business Office Suite, HR increased 15 sf.
	Total Building Net	257,750	257,315	257,762	-	12	
	Non Programmed						
	Vocational Offices	2,560	2,936	3,195		635	
	Custodial Closets	-		690		690	

	Technology	-		1,060		1,060	
	Unoccupied MEP/FP	10,280	10,562	8,150		(2,130)	
	Unoccupied Closets, Supply Rooms & Storage	725	774	680		(45)	
	Toilet Rooms	4,375	4,359	4,480		105	
	Circulation	77,430	69,739	67,850		(9,580)	
	Remaining	33,510	40,945	42,763		9,253	
	Total Gross	386,630	386,630	386,630		-	
	Grossing Factor	1.50	1.50	1.50	#DIV/0!	(0)	
<ul style="list-style-type: none"> Updated space summary and signed certification that reflects the current design 							
<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Explain deviations within the space summary from the Project Funding Agreement. The MSBA will either: <ul style="list-style-type: none"> MSBA accepts this variation to the approved project with no further action required. Prior to MSBA accepting this variation to the project, the Designer must describe in detail the reason for the change. 				<p><i>The MSBA will continue to monitor areas in excess of/ or below the agreed upon GSF at PFA and may consider deviations over or under guidelines as either Ineligible at PFA Bid Amendment and/or requiring a decrease to the approved grant.</i></p> <p>Design Team Response: Acknowledged</p>			
<ul style="list-style-type: none"> <ul style="list-style-type: none"> The MSBA considers that deviations include size changes of a specific space, the total program area nsf (e.g. general classrooms, voc tech, dining etc.), space location, surrounding space adjacencies and/or the intended room purpose. <ul style="list-style-type: none"> The submittal must clearly call out deviations to location and surrounding adjacencies using 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. 							
<ul style="list-style-type: none"> Regarding DESE approved SPED Spaces: <ul style="list-style-type: none"> Include a copy of the most recent letter from DESE approving the current proposed SPED spaces. Confirm that the DESE approved SPED spaces have not deviated, using the definition above; or, <ul style="list-style-type: none"> If the District wishes to submit a change to its DESE approved submittal, it must a) confirm 							

	<p>that all changes to SPED spaces are final; b) provide a new SPED submittal in the original submittal format (described in Module 4 Schematic Design Section 4.1.1 and Mod 4 Appendix 4B) noting any changes with clouded floor plans and red-lined narratives and tables; and c) indicate how the project schedule can accommodate a potential DESE resubmittal and approval. Please provide a separate package for changes to DESE approved SPED spaces.</p> <ul style="list-style-type: none"> ▪ If the District chooses not to change from the DESE approved submittal it should explain when and how the spaces will be returned to the approved size, configuration and location. 	
•	Regarding DESE Approved Public Day Education Spaces:	
	<ul style="list-style-type: none"> ○ Indicate "Not Applicable" if the project does not include DESE approved Public Day Education spaces 	
	<ul style="list-style-type: none"> ○ If applicable, confirm that the DESE approved Public Day Education spaces have not deviated, using the definition above; or, <ul style="list-style-type: none"> ▪ 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 in the original submittal format, noting any changes with clouded floor plans and red-lined narratives and tables; and c) indicate how the project schedule can accommodate a potential DESE resubmittal and approval. Please provide a separate package for changes to Public Day Education Spaces. ▪ 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. 	
•	Regarding DESE approved Chapter 74 Program Spaces:	
	<ul style="list-style-type: none"> ○ Indicate "Not Applicable" if the project does not include DESE approved Chapter 74 Spaces. 	
	<ul style="list-style-type: none"> ○ If applicable, confirm that the proposed Chapter 74 spaces conform to the current DESE Chapter 74 manual for Vocational Technical Education Programs. 	

<ul style="list-style-type: none"> ○ Include a copy of the most recent letter from DESE approving the current proposed Chapter 74 Program spaces. 	<p><i>A letter from July 2021 is included in the submission that anticipates approval in August 2021. Please provide an update with the response to these comments.</i></p> <p>Design Team Response: The July 2021 letter from DESE, which was included in the 60% CD submission, states that DESE has reviewed the proposed career tech programs and they are viable and the number of students per program is reasonable. The August 2021 date referenced in this letter is referring to the anticipated date of MSBA's grant approval (which occurred at the 8/25/21 MSBA Board of Directors meeting) and not a DESE milestone. Please let us know if additional clarification is needed.</p>
<ul style="list-style-type: none"> ○ Confirm that a <u>Chapter 74 Meeting</u> has been scheduled with the MSBA and DESE following submittal of the 60% construction documents. 	
<ul style="list-style-type: none"> ○ If applicable, confirm that the DESE approved Chapter 74 Program spaces have not deviated, using the definition above, or; <ul style="list-style-type: none"> ▪ 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 original submittal format, noting any changes with clouded floor plans and red-lined narratives and tables; and c) indicate how the project schedule can accommodate a potential DESE resubmittal and approval. Please provide a separate package for changes to the Chapter 74 Programming. ▪ If the District chooses not to change from the DESE approved submittal it should explain when and how the spaces will be returned to the approved size, configuration and location. 	<p><i>Changes to Chapter 74 Program spaces were noted in the Space Summary review. In the response to these review comments, please confirm that DESE approval of Chapter 74 Program includes the most recent revisions included in this submission.</i></p> <p>Design Team Response: The latest revisions are consistent with the previous DESE approval. Space that are being presented at the DESE Chapter 74 review meetings reflect plans that were submitted as a part of the MSBA 60% CD Submission.</p>

6B.3.3 Project Approvals	Comments
<ul style="list-style-type: none"> • 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 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 and describe why each item is not applicable. 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. Confirm that the required approvals are coordinated with the OPM's project schedule. 	

	<ul style="list-style-type: none"> ○ DESE - Special Education approval by Department of Elementary and Secondary Education 	
	<ul style="list-style-type: none"> ○ MHC – Project Notification Form and approvals by MA Historical Commission 	
	<ul style="list-style-type: none"> ○ OIG - Construction Manager at Risk approval by the Office of Inspector General 	
	<ul style="list-style-type: none"> ○ Executive Office of Energy and Environmental Affairs / EEA: 	
	<ul style="list-style-type: none"> ▪ MEPA - MA Environmental Policy Act by Energy & Environmental Affairs: 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> • ENF - Environmental Notification Form 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> • EIR - Environmental Impact Report 	
	<ul style="list-style-type: none"> ▪ Article 97 Land Disposition Policy approval by Energy & Environmental Affairs 	
	<ul style="list-style-type: none"> ○ MA DEP - Massachusetts Department of Environmental Protection 	
	<ul style="list-style-type: none"> ○ MA DOT - Massachusetts Department of Transportation 	
	<ul style="list-style-type: none"> ○ MA DPH - Massachusetts Department of Public Health 	
	<ul style="list-style-type: none"> ○ EPA –NPDES National Pollutant Discharge Elimination System Notice of Intent approval by the US Environmental Protection Agency (or indicate as “by GC/CMR”) 	
	<ul style="list-style-type: none"> ○ MAAB - Accessibility variances by MA Architectural Access Board 	
•	Confirmation that the Project has undergone review and obtained all necessary approvals by any departments or Commonwealth agencies required by law to review the Project, including but not limited to the approvals listed above. Attach such documentation letters evidencing such reviews and approvals. In accordance with the Project Funding Agreement (the “PFA”) Section 4.12, the District must obtain such reviews or approvals prior to the construction bids solicitation.	
•	For any required state reviews or permits for which approval has not been obtained as of the 60% Construction Documents 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 all 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 utility connection.	

6B.3.4 Cost Estimate		Comments
•	Provide a Designer's construction cost estimate based on the 60% Construction Documents, including cost estimates for general conditions, overhead and profit, insurance, bonds, and all other items; allowances expressed as percentage rates for construction contingencies, and other mutually agreed upon contingencies. Prepare the construction cost estimate using CSI MasterFormat 6-digit format to Level 3 and MGL c.149 s 44F (filed sub-bid) format showing unit rates and quantities; with escalation projected to the mid-point of construction.	
•	The estimate date should be no earlier than the 60% Construction Documents date.	
•	Provide summary sheets including the following:	
	○ Date that the estimate was prepared (value date)	
	○ Anticipated bid date	<i>Not included. Please include in the next submission.</i> Design Team Response: Acknowledged.
	○ Project and contract number	<i>Not included. Please include in the next submission.</i> Design Team Response: Acknowledged.
	○ Project title and location	
	○ Designer name	
	○ Estimator name	
	○ Site cost (including all utilities)	
	○ Building cost (including fixed equipment)	
	○ Estimated construction cost of each work phase, totaled	<i>Not included. Please include in the next submission.</i> Design Team Response: Acknowledged.
	○ Items 1 and 2 work costs, as distinguished in the General Contractor's bid forms, individually totaled	<i>Not included. Please include in the next submission.</i> Design Team Response: Acknowledged.

6B.3.5 Drawings (developed to 60% CD progress level)		Comments
•	Half-size drawings only. Confirm that text, symbols, shading and all drawings content are legible.	<i>Due to the current COVID-19 situation, hard copies were not provided. MSBA may request hard copies at a later date for record.</i> Design Team Response: Acknowledged
•	If applicable, include early bid package contract documents in the submittal to show a complete project.	<i>Early bid packages are included. However, they are not reviewed as part of this submission since they are or will soon be issued to bid.</i> Design Team Response: Acknowledged
•	Cover sheet showing a drawings list and a locations map (the project title should be visible when the drawings are rolled)	
•	Sheet(s) containing all symbols, abbreviations and notes applicable to each discipline	

•	Site and Utility drawings should show the following:	<i>This is part of an early bid package. Consequently, it is not reviewed as part of this submission.</i> Design Team Response: Acknowledged
	○ Proposed work layout and location with details	<i>See comment above.</i>
	○ Existing and proposed contours	<i>See comment above.</i>
	○ Building locations fixed and referenced from main survey baseline	<i>See comment above.</i>
	○ Floor elevations at each entrance/exit and key exterior grades at perimeter showing drainage away from the building	<i>See comment above.</i>
	○ Site Benchmarks	<i>See comment above.</i>
	○ Boring locations	<i>See comment above.</i>
	○ Retaining walls	<i>See comment above.</i>
	○ All utility service lines, systems and structures for electricity, gas, oil, water, steam, telephone, CATV, fire alarm, sanitary and storm drainage	<i>See comment above.</i>
	○ Contract limit line and storage area for construction materials	<i>See comment above.</i>
	○ Site survey which includes, but is not limited to, all existing foundations, obstructions and other site characteristics	<i>See comment above.</i>
•	Mobilization and enabling works	<i>This is part of an early bid package. Consequently, it is not reviewed as part of this submission.</i> Design Team Response: Acknowledged
•	Architectural drawings showing the following:	
	○ Demolition drawings	<i>This is part of an early bid package. Consequently, it is not reviewed as part of this submission.</i> Design Team Response: Acknowledged
	○ Floor plans of each floor, with dimensions, column locations, floor elevations, door designations, partition types & fire-rated partitions and smoke partitions, built in furniture and equipment, keyed to other architectural drawings and coordinated with exterior grade elevations at all interior to exterior transitions	<i>Top of curb elevations are not shown on the Edge of Slab drawings. Suggest including this information for clarity.</i> Design Team Response: Trying to understand your request. We do not have any concrete “curbs” at the slab edge. <i>Interior partitions and doors are not dimensioned on the drawings. Suggest including this information for clarity.</i> Design Team Response: Prior to going out to bid, interior partitions and doors will be dimensioned. At the 60% CD phase, we provided dimensions to all column grid lines. <i>Sheets A1-1-3C, 4C, and D include remnant MEP symbols and elements. This should be reviewed and cleaned up in the next submission.</i> Design Team Response: We will review and clean up the graphics.
	○ Key plans / overall plans where required	
	○ Large scale plans showing key areas e.g. lobby, special spaces. Indicate floor surface materials (minimum 1/4" = 1'-0" before reduction)	<i>Specialized areas are shown on the general floor plans and are not shown on large-scale plans. Suggest including large scale plans of these areas for clarity.</i> Design Team Response: Large scale plans will be added, as needed, for areas requiring additional detailing.

<ul style="list-style-type: none"> o Roof plans showing the following: <ul style="list-style-type: none"> ▪ Proposed systems type ▪ Pitch and drainage pattern ▪ Roof drains, gutters and scuppers ▪ Skylights, penthouses, major equipment, chimneys ▪ Roof access and ladders ▪ Walk pads ▪ Rooftop Solar Readiness area, PV support and interconnection pathways o Building Sections updated and coordinated with plans and elevations o Building elevations showing the following: <ul style="list-style-type: none"> ▪ 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, and 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 ▪ Exterior grades and topographical features in context 	<p><i>The floor elevations on the architectural building elevations and wall sections show the finish floor at 100'-0", but the civil drawings (which do not indicate the finish floor level) show typically underground utility connections being around 130' or 140'. This should be reviewed. Suggest providing more information to make the relationship between the civil elevations and architectural elevations clearer.</i></p> <p>Design Team Response: Landscape drawings indicate top of first floor slab, as it relates to sea level, as 163.5 feet. Refer to drawings L402 & L403. Architectural drawings indicate the top of slab at the first floor as 100'-0." Reasoning behind this is to avoid mathematical errors for tradesmen who are measuring from finished floor slab. The Architectural floor plans have a general note that states:</p> <p>T.O. SLAB @ FIRST FLOOR DATUM ELEVATION OF 100'-0" CORRESPONDS TO 163.50' MEAN SEA LEVEL, AS SHOWN ON SITE AND CIVIL DRAWINGS. ALL OTHER ELEVATION DATUM SHOWN IN THE ARCHITECTURAL SET IS RELATIVE TO 100'-0"</p> <p><i>Control and expansion joints and lintel relief are not shown. This should be reviewed and, if needed, added in the next submission.</i></p> <p>Design Team Response: Expansion joint detailing can be found on plan detail 1/A5-1-3 and sections 2 & 3/A3-2-15. Additional details will be added as the drawings are developed.</p>
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<ul style="list-style-type: none"> o Wall sections indicating dimensions, flashing, anchorage, reinforcing, masonry coursing, cladding, and all other conditions at wall, roof, foundation, interior floors; coordinated with exterior grade elevations 	<p><i>Tags for wall sections are not shown on the elevations. Suggest including these for clarity.</i></p> <p>Design Team Response: On this project, section detailing occurs not only at the exterior of the building, but at interior locations as well. To show information in a consistent location, our office standard is to show wall section tags on the floor plans and <u>not</u> on exterior elevations.</p> <p><i>Interior courtyard details and wall construction are not shown. Suggest including these for clarity.</i></p> <p>Design Team Response: Detailing of the courtyard walls can be found on wall sections 1, 2, 3, 4 and 5 on drawing sheet A3-2-3.</p> <p><i>The roof drain appears to be shown in an incorrect location on Section 8 on Sheet A5-3-2. This should be reviewed and, if needed, revised in the next submission.</i></p> <p>Design Team Response: Graphics will be revised.</p>
<ul style="list-style-type: none"> o Details demonstrating continuous thermal insulation and thermal breaks between conditioned interior spaces and unconditioned exterior spaces (parking garages, loading zones and other open areas) 	<p><i>See note above regarding interior courtyard details.</i></p> <p>Design Team Response: Detailing of the courtyard walls can be found on wall sections 1, 2, 3, 4 and 5 on drawing sheet A3-2-3.</p>
<ul style="list-style-type: none"> o Exterior details, for roofing, flashing and other details showing all major conditions 	
<ul style="list-style-type: none"> o Door, window, entrance, curtain wall and storefront, schedules, and details 	
<ul style="list-style-type: none"> o Vertical circulation plans, sections and details including ramps, stairs, lifts and elevators 	
<ul style="list-style-type: none"> o Guardrails and handrails including details 	<p><i>The center handrails are missing or shown inconsistently such as on the stair plans on Sheet A7-1-1 & 3. This should be reviewed and, if needed, revised in the next submission.</i></p> <p>Design Team Response:</p> <p>Graphics for Stair 1 on sheet A7-1-1 will be cleaned up.</p> <p>Stair 2 on sheet A7-1-3 does not require a center handrail. The width of the stair allows a 30" reach to the handrail per the International Building Code requirements.</p>
<ul style="list-style-type: none"> o Interior elevations of all significant and typical spaces 	
<ul style="list-style-type: none"> o Interior details including casework, paneling surfacing and acoustical treatment 	<p><i>Casework details are not shown. This should be reviewed and, if needed, revised in the next submission.</i></p> <p>Design Team Response: Casework is shown on the Equipment Drawings. Refer to the sequence of drawings with the prefix EQ.</p> <p><i>Interior finishes on some interior elevations are not clear. Suggest adding more interior elevations for clarity.</i></p> <p>Design Team Response: We will review and add additional interior elevations as needed.</p>
<ul style="list-style-type: none"> o Reflected ceiling plans coordinated with fire protection, mechanical and electrical drawings 	

<ul style="list-style-type: none"> ○ Ceiling details ○ Schedules <ul style="list-style-type: none"> ▪ Finishes ▪ Doors ▪ Windows ▪ Equipment schedules; e.g., food service, instructional media ▪ Partitions 		<p><i>Ceiling details are in-progress and need further development. Suggest comprehensive ceiling details for clarity.</i></p> <p>Design Team Response: We will review and add additional ceiling details as needed.</p>
		<p><i>Suggest including floor patterning, layouts, and transition details at floor material drawings for next submission.</i></p> <p>Design Team Response: Floor pattern layouts will be further developed in the next submission. For floor transition details, refer to drawings AF1-3-1 and AF1-3-2.</p> <p><i>Suggest including game layout for Gymnasium.</i></p> <p>Design Team Response: Game lines are shown on drawing AF1-1-2D for reference. Specification Section 096460, Wood Athletic Flooring, calls out game line and school logo scope of work.</p>
		<p><i>Door details are not keyed and require further development. This should be reviewed and, if needed, revised in the next submission.</i></p> <p>Design Team Response: This will be further developed in the next submission.</p>
		<p><i>Window details are not keyed and require further development. This should be reviewed and, if needed, revised in the next submission.</i></p> <p>Design Team Response: Additional detail tags will be added to window elevations.</p> <p><i>The air and vapor barrier terminations are not shown consistently at storefront and curtain wall transitions. One example is Detail 13 on Sheet A5-1-2. This should be reviewed and, if needed, revised in the next submission.</i></p> <p>Design Team Response: Acknowledged.</p>
<ul style="list-style-type: none"> • Structural drawings showing the following: <ul style="list-style-type: none"> ○ Structural drawings legend and/or graphical symbols ○ Foundation plans with bottom grades showing all footing layouts, walls, slabs on grade including reinforcing, grade beams, and columns; include design soil bearing pressures and live loads for each area ○ Structural floor and roof plans including framing, finished floor elevations and depressed slab areas, with locations and dimensions for all openings and depressions, coordinated with the architectural drawings ○ Floor and roof framing design loads 		<p><i>This appears to be part of an early bid package. Consequently, it is not reviewed as part of this submission.</i></p> <p>Design Team Response: Acknowledged</p>
		<p><i>See comment above.</i></p>
		<p><i>See comment above.</i></p>
		<p><i>See comment above.</i></p>
		<p><i>See comment above.</i></p>

	o Complete foundation wall elevation and typical sections, with reinforcing indicating location, dimensions and grades for all footings, steps and wall openings	<i>See comment above.</i>
	o All lintels, beams, joists, and columns are identified (with typical sizes shown) on schedules or on drawings	<i>See comment above.</i>
	o All Structural supports required for mechanical equipment	<i>See comment above.</i>
	o General notes including the following information: class and 28 day concrete strength for each portion, structural steel and concrete reinforcing design stresses for each structural member type, concrete cover for each structural member type, shrinkage and temperature steel requirements, reinforcing laps for main reinforcing and temperature steel; bend point, cutoff, and hook locations for all members, minimum beam and lintel bearing.	<i>See comment above.</i>
•	Fire protection drawings showing the following:	
	o Fire protection drawings legend and/or graphical symbols	
	o Standpipe systems, sprinkler systems, suppression systems, fire pump where required, accessories, and piping	
	o All piping, equipment, fixtures, valves and devices	<i>Sprinklers are not shown under the Gym bleachers. This should be reviewed and, if needed, revised in the next submission.</i> Design Team Response: Will be reviewed prior to next submission.
	o Design criteria shall be provided on the drawings in accordance with NFPA requirements.	
•	Plumbing drawings showing the following:	
	o Plumbing drawings legend and/or graphical symbols	
	o All work done by the Plumbing Subcontractor, which includes all water, gas, air, vacuum, sanitary and storm wastes, and accessories	<i>It is not clear where the division is between the plumbing filed sub-bid and the civil work for plumbing outside of the building. This is part of an early bid package. Consequently, it is not reviewed as part of this submission.</i> Design Team Response: Limit of work for plumbing piping is 10'-0" outside the building, as noted on the underslab plumbing drawings.
	o Plumbing fixtures trapping and venting including floor drains	<i>It appears there is radon piping through the Gymnasium, and it is not clear if this is a coordination issue. This should be reviewed and, if needed, revised in the next submission.</i> Design Team Response: This will be reviewed prior to the next submission.
	o Dimensioned floor drain locations in coordination with the structural plan	<i>Floor drains are not located on the architectural Edge of Slab drawings. Suggest including them for clarity.</i> Design Team Response: They will be indicated in large scale plans.

○ Confirm any hazard or noxious contaminants such as chimneys, plumbing vents or cooling towers are located a minimum 25 feet from outside air intakes or such openings are a minimum two feet below the contaminant source and ten feet horizontally from the nearest edge of the air intake to the nearest edge of the contaminant source (refer to 780 CMR Massachusetts State Building Code in effect at the time of project approval). Consider adding filters to the contaminant source if necessary.	
○ Water and gas supply sources, storm and sanitary discharge mains	
○ All piping sizes shall be indicated on drawings and riser diagrams, including flow and pitch directions	
○ All accessories, valves, fixtures including all drinking fountains and grease traps for kitchen waste	
○ Verify eyewash stations are provided in all areas where chemicals are stored or used.	
○ All piping and connections required for other trades (e.g., kitchen equipment, HVAC make-up water, etc.)	
○ Acid waste (where required), vents and neutralization systems for laboratories	
○ Plumbing riser diagrams	
○ Domestic water booster pumps, boiler feed water, meter locations, hose bibs	
○ Domestic hot water: Storage tanks, piping material, hanger details	
○ Backflow preventers, and cleanouts	
● Heating, Ventilating and Air Conditioning Drawings showing the following:	
○ Mechanical drawings legend and/or graphical symbols	
○ Large scale plans of all mechanical & electrical spaces showing equipment to scale	
○ All piping and ductwork systems located and sized. All ductwork is shown double line and drawn to scale	
○ All piping and duct systems sized at all reductions and riser diagrams	
○ All flow directions and pitch on piping, and duct systems indicate flow and volumes direction	
○ All equipment shall have enough servicing and/or replacement space indicated on drawings	<i>Service areas on Mechanical mezzanines not shown. Suggest including in the next submission to confirm layout requirements.</i>
○ All equipment, accessories, valves and dampers identified as to type and size	Design Team Response: Service clearances will be indicated for all equipment in the next submission.
○ Cooling system pumps, chillers, cooling towers, air handling units, ductwork system and dampers, fan details, temperature control system, air and hydronic	

	balancing equipment, and schedules shall be indicated.	
	<ul style="list-style-type: none"> Confirm outside air intake openings are a minimum 25 feet from any hazard or noxious contaminants such as chimneys, plumbing vents, cooling towers, streets, alleys, parking lots and loading docks. When locating an air intake within 25 feet of a contaminant source is unavoidable, such opening shall be a minimum two feet below the contaminant source and ten feet horizontally from the air intake nearest edge to the contaminant source nearest edge. All intakes shall be six feet above landscaped grade including soil, lawn, shrubs, or any plant life within 1.5 feet horizontally. 	
	<ul style="list-style-type: none"> Cooling tower (where required) shall be indicated on the drawings showing site location, elevations and equipment layout floor plan and typical flow diagram as related to the total HVAC system. 	
	<ul style="list-style-type: none"> Fire and smoke dampers 	<p><i>Suggest reviewing the requirements for Fire Dampers at all vertical chases prior to next submission.</i></p> <p>Design Team Response: Will be reviewed prior to the next submission.</p>
	<ul style="list-style-type: none"> Mechanical room designs: 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Vent pipes for safety valves, relief valves, back pressure valves and tanks shall be extended above flat roofs in accordance with all governing authorities. 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> In all designs for boiler and refrigeration plants, include a complete floor plan indicating all major mechanical equipment location and service space. 	
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> In new and/or replacement boiler and refrigeration plants designs, provide a flow diagram detailing steam or hot water distribution systems, return systems, including all existing equipment and their function, as well as any proposed expansions with all necessary instrumentation and controls. 	
•	Electrical Drawings showing the following:	
	<ul style="list-style-type: none"> Electrical drawings legend and/or graphical symbols 	
	<ul style="list-style-type: none"> General arrangement: Outline each floor layout 	
	<ul style="list-style-type: none"> Indicate interface with other systems. Identify any work by general contractor or other trades. 	
	<ul style="list-style-type: none"> Interior lighting system: Light fixture schedules, circuiting location and fixture mounting heights, receptacle and switch outlets, lamp sizes and types, conduits, all other accessories and riser diagrams shall be indicated on drawings. Designer shall specify that all electrical lighting fixtures be supported from the building structure, and shall be independent of ducts, pipes, ceilings and their supporting members. Comply with seismic design criteria. 	<p><i>Floor power outlets are not shown on the architectural Edge of Slab drawings. Suggest including these for clarity.</i></p> <p>Design Team Response: Outlets locations shall be coordinated during shop drawings submissions.</p>

<ul style="list-style-type: none"> Power system: Locations, types and control method for all motors, heaters, appliances, controllers, starters, branch circuits, feeder conductors and conduits. Indicate riser diagrams. Show electrical conduit supporting method and details. For larger projects, thermostats and control wiring are normally covered under the HVAC sub-contract, assure coordination. 	<p><i>It appears one De-strat Gym Fan symbol is missing from the layout. This should be reviewed and, if needed, revised in the next submission.</i></p> <p>Design Team Response: This will be reviewed prior to the next submission.</p> <p><i>Electrical service is not shown to the vegetated roof gardens. It is not clear if this is intentional. This should be reviewed and, if needed, revised in the next submission.</i></p> <p>Design Team Response: This will be reviewed prior to the next submission.</p>
<ul style="list-style-type: none"> Fire Alarm, Data, Communications, CATV/CCTV Systems: device types and locations, outlets and equipment, service connections, wiring diagrams, all other essential details 	<p><i>Knox box(s) are not shown. Please include in the next submission.</i></p> <p>Design Team Response: This will be included in the next submission.</p>
<ul style="list-style-type: none"> Services: location and details, whether overhead or underground, feeder sizes, switchgear and transformer plans and elevations, metering and service switchboard arrangements, wiring and ground fault diagram and bus ducts 	<p><i>It appears a conflict may exist with the Main Distribution Electrical Pull Boxes with Architectural and Structural features at Column Line Y.9. This should be reviewed and, if needed, revised in the next submission.</i></p> <p>Design Team Response: This has been coordinated with Structural and will be reviewed again prior to the next submission.</p>
<ul style="list-style-type: none"> Utility interconnection pathways to Solar Readiness areas 	<p><i>The riser diagram for solar path is not included. Please provide in the next submission.</i></p> <p>Design Team Response: This will be included in the next submission.</p>
<ul style="list-style-type: none"> General stations and sub-stations: Location, size, connection method and generator protection, transformers, exciters, motor generators, switch gear, and associated equipment, current characteristics and equipment capacities. Indicate equipment connections with one line and/or wiring diagrams and schedule all major equipment and instruments items. 	<p><i>Electric panel schedules are not completed. Please include in the next submission.</i></p> <p>Design Team Response: Panel schedules will be completed for the next submission.</p>
<ul style="list-style-type: none"> Underground work: manholes sizes and locations, cable types, duct number, sizes and locations, cable support sizes, types and locations, fireproofing, duct line profile, and one-line connection diagrams 	<p><i>This is part of an early bid package. Consequently, it is not reviewed as part of this submission.</i></p> <p>Design Team Response: Acknowledged</p>
<ul style="list-style-type: none"> Pole line work: Location, length, treatment and class of poles, guying, cross arms, insulators, circuiting, transformers, protective and switching devices, lightning arresters, special structures, diagrams, current characteristics and grounding 	<p><i>This is part of an early bid package. Consequently, it is not reviewed as part of this submission.</i></p> <p>Design Team Response: Acknowledged</p>
<ul style="list-style-type: none"> Exterior lighting: Location, size, and transformer types, luminary, poles, light standards, cables, ducts, and manholes, control equipment details and connection diagrams 	<p><i>This is part of an early bid package. Consequently, it is not reviewed as part of this submission.</i></p> <p>Design Team Response: Acknowledged</p>
<ul style="list-style-type: none"> Emergency system (where provided) details including transfer switch, fuel types 	
<ul style="list-style-type: none"> One-line diagram indicating load KVA, and available short circuit amperes at each transformer, 	

	switchboard, distribution panel board, branch circuit panel board, and at major equipment	
	o Riser diagrams for all systems	<p><i>Clarify if a Bi-Directional Amplifier System will be included in the next submission.</i></p> <p>Design Team Response: This will be clarified in the next submission.</p>

6B.3.6 Project Manual (developed to 60% CD progress level)	Comments
<ul style="list-style-type: none"> If applicable, include early bid package contract documents in the submittal to show a complete project. 	<p><i>There are two early bid packages: #1 Early Site Preparation and #2 Early Structural (Foundations & Steel), which are not included in the Project Manual. Please include contract documents for both early bid packages in the next submission.</i></p> <p>Design Team Response: Acknowledged</p>
<ul style="list-style-type: none"> The technical specifications format in CSI Master format (full-length, current version) with separate sections for each class of work required by M.G.L. c. 149 §44F. 	
<ul style="list-style-type: none"> Confirmation that the contract meets the applicable requirements of M.G.L. c. 149, § 44A (2)(g) and contains workforce participation goals for minorities and women. Confirm that the contract includes the processes and procedures to ensure compliance with the workforce participation goals, including reporting and enforcement provisions. 	<p><i>Workforce participation goals for minorities and women, and processes and procedures to include compliance are not included in the Project Manual. Please include this information in the next submission.</i></p> <p>Design Team Response: Construction Managers Responsibility-Division 0</p>
<ul style="list-style-type: none"> Confirmation that the contract meets the applicable requirements of M.G.L. c 7c, §6 and M.G.L. c. 7, §61(I), and contains Annual Program Goals for Minority Business Enterprise ("MBE") and Women Business Enterprise ("WBE") Participation and includes the processes and procedures to ensure compliance with the Minority and Women Business Goals, including reporting and enforcement provisions. 	<p><i>Participation goals for MBE/WBE and processes and procedures to ensure compliance are not included in the Project Manual. Please include this information in the next submission.</i></p> <p>Design Team Response: Construction Managers Responsibility-Division 0</p>
<ul style="list-style-type: none"> For each material or equipment item, the specifications shall provide for a minimum three named material or equipment brands and the words "or equal" or a material or equipment description which can be met by a minimum three manufacturers or producers, and the words "or equal". Proprietary products shall not be specified except as provided by M.G.L. c. 30, § 39M; however, when they are specified, proprietary specifications are subject to the "or equal" provisions of c. 30, § 39M. 	<p><i>Some sections (for example, 113300 "Retractable Stairs", 1158230 "Cosmetology Equipment", 116100 "Automotive Equipment", 116620 "Athletic Equipment") do not specify a minimum of three brands or manufacturers. For the next submission, please include at least three named material or equipment brands or a material or equipment description which can be met by a minimum of three manufacturers and the words "or equal".</i></p> <p>Design Team Response: Currently the specifications are written in a manner describing equipment that can be met by a minimum of three manufacturers. Listed Manufacturers will be added in the next specification update.</p>
<ul style="list-style-type: none"> Do not specify that a product or system shall require prequalification for use prior to bidding. 	
<ul style="list-style-type: none"> Include a copy of the geotechnical report, including test boring hole locations and dates, and soil investigation results, including water levels, allowable 	

	solid bearing pressure recommendations, foundations and bottom grades of footing and slabs.	
•	Indicate all required filed sub-bids specification sections.	
•	Each filed sub-bid section shall detail all labor and materials required by the sub-trade.	<p><i>It is unclear whether duct-mounted smoke detectors are to be furnished and installed by 264621 "Addressable Fire Alarm Systems" or 233300 "Air Duct Accessories". This should be reviewed and updated in the next submission.</i></p> <p>Design Team Response: This will be clarified in the next submission.</p> <p><i>Section 260000 "General Requirements for Electrical" includes several sections as Paragraph E/Sub-sub-bids that are not otherwise indicated to be part of the Electrical Trade Contract (for example, 116133 "Theater Rigging") and also a number of sections with incorrect section names or numbers. This should be reviewed and coordinated in the next submission.</i></p> <p>Design Team Response: This will be reviewed and coordinated in the next submission.</p>
•	Staging, scaffolding, cutting and patching, refuse collection and disposal, demolition work and cleaning task, allocation policy and proposed language shall be carefully assigned to avoid duplication or omission.	<p><i>Some further coordination is needed. For example, Section 015000 "Temporary Facilities & Controls" states that each trade shall provide all staging and scaffolding necessary for their work. However, some filed sub-bid sections (for example, 042000) specify that all staging and scaffolding will be furnished by the General Contractor. This should be reviewed and coordinated in the next submission.</i></p> <p>Design Team Response: This will be clarified going forward.</p> <p><i>Similarly, Section 017329 "Cutting & Patching" specifies that openings in masonry walls shall be performed by 042000; and that penetrations in non-masonry construction shall be performed by the trade responsible for surrounding construction. However, some sections (for example, 220000, 230000) state that all cutting, coring and patching shall be performed "by others", while Sections 210000 and 260000 specify that all cutting and patching shall be performed by the Fire Protection Subcontractor and Electrical Subcontractor respectively. This should be reviewed and coordinated in the next submission.</i></p> <p>Design Team Response: This will be reviewed and coordinated in the next submission.</p>
•	Describe the work extent, the materials and workmanship, and include the work under the proper section. If any portion of work included in a specifications section is to be performed by a trade covered by another section, there shall be clear and distinct cross-referencing between the sections. Merely to state "by others" is not acceptable.	<p><i>Some sections (for example, 087100, 116100, 116833) refer to materials furnished or work performed "by others". In the next submission, please cross-reference the relevant specification section for all work performed or materials furnished by other trades.</i></p> <p>Design Team Response: Further coordination between trades and additional cross-referencing will be added where required.</p>

<ul style="list-style-type: none"> • All "Work by Others" specification references are coordinated. 	<i>See above comment.</i>
<ul style="list-style-type: none"> • Specify work in appropriate Sections according to local trade jurisdiction. 	
<ul style="list-style-type: none"> • In sections for which filed sub-bids are required, refrain from using such terms as "the Contractor," the "Heating Contractor," or "the Plumbing Contractor," but where necessary for clarity refer to the "HVAC Subcontractor," the "General Contractor" and so on. 	<p><i>The term "the Contractor" is used in some trade contract sections. For clarity, consider referring to "the General Contractor", the "Plumbing Subcontractor", "the HVAC Subcontractor" and so on in the next submission.</i></p> <p>Design Team Response: This will be reviewed and coordinated in the next submission.</p>
<ul style="list-style-type: none"> • Alternates, if approved in writing by the owner, shall be properly described and cross-referenced in the project manual and drawings. 	<p><i>An Alternates section is included, with 9 alternates listed. For the next submission, consider cross-referencing relevant specification sections and drawings on the Schedule of Alternates.</i></p> <p>Design Team Response: Alternates are still being explored and reviewed. Once complete the specifications will be updated and cross-referenced.</p>
<ul style="list-style-type: none"> • Allowances are prohibited pursuant to M.G.L. c. 149, § 44G(A). 	<p><i>Section 142150 "Gearless Machine Room Less Traction Elevators" contains reference to a \$25,000 allowance per car for cab finishes. Allowances are prohibited pursuant to MGL c. 149§44G(A). This should be reviewed and corrected in the next submission.</i></p> <p>Design Team Response: The reference was included only for Cost Estimate purposes. This will be removed and replaced with specified finishes in the next submission.</p>
<ul style="list-style-type: none"> • Unit price items, if permitted or ordered by the owner, shall be properly described in the specifications. 	<p><i>A Unit Prices section is included. However, no unit price items are identified on the Unit Price Schedule. Section 310000 "Earth Moving" appears to contain unit price items. This should be reviewed and coordinated in the next submission.</i></p> <p>Design Team Response: Unit prices will be reviewed and included as appropriate near bidding time.</p>
<ul style="list-style-type: none"> • Do not use general clauses intended to be all-inclusive in lieu of complete descriptions. 	
<ul style="list-style-type: none"> • Do not duplicate standard requirements that are contained in the contract form. 	
<ul style="list-style-type: none"> • Use consistency throughout. The word "will" shall be used to designate what the owner, authority, owner's project manager, or the Designer can be expected to do, and the word "shall" shall be used to designate what is mandatory for the contractor or subcontractors to do. 	<p><i>The term "will" is sometimes used to designate what is mandatory for the contractor to do, and "shall" is sometimes used to designate what the Owner or Architect can be expected to do.</i></p> <p>Design Team Response: This will be reviewed, and specifications will be updated accordingly.</p>
<ul style="list-style-type: none"> • Use the same term throughout for the same subject and the term shall be the same as that used on the drawings. 	
<ul style="list-style-type: none"> • Do not use the term "etc.". 	<p><i>The term "etc." is used throughout the project manual, particularly in Volume 2. This should be reviewed and, if necessary, updated in the next submission.</i></p> <p>Design Team Response: This will be reviewed and updated in the next submission.</p>
<ul style="list-style-type: none"> • Avoid such terms as "to the satisfaction of the Designer", "as directed by the Designer", "as approved" and "as required". 	<p><i>The terms "to the satisfaction of the Architect", "to the satisfaction of the Engineer", "as directed by the Architect", "as required" and "as approved" are used</i></p>

		<i>throughout the Project Manual. This should be reviewed and, if necessary, updated in the next submission.</i> Design Team Response: This will be reviewed and updated in the next submission.
•	Avoid using symbols.	
•	Do not give numbers both in words and figures. Numbers less than 10 shall be written in words, 10 and higher numbers shall be written in figures. In expressing dimensions, figures such as 2 in., 16 in., 7 ft., 6 in., shall be used.	<i>Numbers are sometimes expressed in both words and figures. This should be reviewed and, if necessary, updated in the next submission.</i> Design Team Response: This will be reviewed, and specifications will be updated accordingly.
•	Specify materials mined or manufactured in Massachusetts first and the United States of America second whenever possible.	

6B.3.7 Project Coordination		Comments
•	Verify the submittal is coordinated with any early-bid packages, if applicable.	<i>Drawings for early bid packages are included, but specifications are not. Coordination could not be verified.</i> Design Team Response: Early bid package site specifications are included in their entirety in the MSBA package for coordination purposes. These sections will remain in the specifications "For Reference Only" going forward with the final Bid Documents.
•	Room names and numbers are coordinated between all disciplines.	
•	Finish grade elevations coordinated between all disciplines.	<i>The finish grade elevations for the architectural drawings do not match the ones on the civil drawings. This should be reviewed and coordinated.</i> Design Team Response: Landscape drawings indicate top of first floor slab, as it relates to sea level, as 163.5 feet. Refer to drawings L402 & L403. Architectural drawings indicate the top of slab at the first floor as 100'-0". Reasoning behind this is to avoid mathematical errors for tradesmen who are measuring from finished floor slab. The Architectural floor plans have a general note that states: T.O. SLAB @ FIRST FLOOR DATUM ELEVATION OF 100'-0" CORRESPONDS TO 163.50' MEAN SEA LEVEL, AS SHOWN ON SITE AND CIVIL DRAWINGS. ALL OTHER ELEVATION DATUM SHOWN IN THE ARCHITECTURAL SET IS RELATIVE TO 100'-0"
•	Civil earthwork grading and excavation plans are coordinated with architectural and landscape plans.	<i>This is part of an early bid package. Consequently, it is not reviewed as part of this submission.</i> Design Team Response: Acknowledged
•	Materials/soil terms used in the Earthwork specification is coordinated with architectural, structural and civil specifications and plans.	<i>This is part of an early bid package. Consequently, it is not reviewed as part of this submission.</i> Design Team Response: Acknowledged
•	Seismic detailing coordinates with architectural drawings.	<i>This is part of an early bid package. Consequently, it is not reviewed as part of this submission.</i> Design Team Response: Acknowledged

• Confirm that there are no beams and columns protruding horizontally and vertically into stairwells, and other interior spaces.	
• Structural dimensions match architectural drawings.	<i>This is part of an early bid package. Consequently, it is not reviewed as part of this submission.</i> Design Team Response: Acknowledged
• 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.	
• Slab depressions are indicated in the structural drawings and coordinated with the architectural finishes and plumbing drawings.	<i>Not all items are shown on the slab depression drawings such as floor drain locations. This should be reviewed and, if needed, revised in the next submission.</i> Design Team Response: They will be indicated in large scale plans.
• Verify that the structural, mechanical, or other disciplines, do not conflict with architectural plans or specifications.	
• Verify coursing dimensions at vertical masonry construction.	
• Coordinate thermal insulation and thermal breaks between conditioned interior spaces and unconditioned exterior spaces.	
• Room wall/floor/ceiling construction coordinated with the finish schedule.	<i>This is mostly coordinated, however, some areas are less clear. Suggest including additional interior elevations to clarify scope of finishes.</i> Design Team Response: We will review interior elevations and add additional views as needed.
• Coordinate access to mechanical and plumbing systems with architectural finishes. Confirm that requirements for access panel sizes and locations are coordinated between architectural and MEP/FP drawings and specifications.	
• Mechanical equipment power requirements and physical locations, including special information as to who mounts, connects, tests, etc.	
• Coordinate outside air intake opening locations and any hazard or noxious contaminants as described by 780 CMR: Massachusetts State Building Code.	<i>Clearance information is not fully shown. Therefore, coordination could not be confirmed. Suggest including clearance information for clarity.</i> Design Team Response: Clearance information has been indicated for the majority of equipment. All clearances will be identified in the next submission.
• Verify potential spatial conflicts in mechanical equipment.	<i>Clearance information is not fully shown. Therefore, coordination could not be confirmed. Suggest including clearance information for clarity.</i> Design Team Response: Clearance information has been indicated for the majority of equipment. All clearances will be identified in the next submission.
• Coordinate roof plans with MEP drawings; indicate roof top systems, access, walk pads & guardrails.	

<ul style="list-style-type: none"> • 	<p>Coordinate Solar Readiness areas on roof plans, structural plans and electrical/plumbing drawings.</p>	<p><i>The solar riser diagram is not included. Therefore, coordination could not be confirmed.</i> Design Team Response: Solar readiness riser diagram will be provided in the next submission.</p>
<ul style="list-style-type: none"> • 	<p>Equipment plan coordinates with architectural plans.</p>	<p><i>Clearance information is not fully shown. Therefore, coordination could not be confirmed. Suggest including clearance information for clarity.</i> Design Team Response: Clearances at major equipment will be added for the next submission.</p>
<ul style="list-style-type: none"> • 	<p>The Designer confirms that the project continues to comply with the MSBA High School Science Lab Guidelines and/or Recommendations of Best Practices for K-12 STEM learning Spaces.</p>	<p><i>Confirmation of compliance to these standards are not included. Please include this in the next submission.</i> Design Team Response: Please refer to Section 6B.3.7-01, located within the MSBA 60% CD Submission, for Designer's confirmation that science labs comply with MSBA guidelines.</p>

6C.2.1 – 04b

COMMENTS
ADDRESSED
SINCE 60%
CD REVIEW

MSBA 60% CD Review

6C.2.1-04b

MSBA COMMENTS ADDRESSED SINCE 60% CD REVIEW

The following describes items addressed from MSBA's review of the previous 60% Construction Document Submission. Refer to Section 6C.2.1-04a, within this submittal, for a copy of MSBA's 60% Construction Documents Review.

6B.1 Summary Comments

	MSBA's 60% CD Review Comment	Current Status
GSF Area	<i>It appears there is a discrepancy regarding the GSF area. The project summary and space summary both indicate 386,630 GSF, which matches the PFA. However, the Cost Estimate Comparison Form indicates 382,610 GSF, a difference of 4,020 GSF. Please clarify with the response to these comments.</i>	Design Team Response: The cost estimate summary does not include the add alternate for the Satellite Locker Building. Within the Space Summary, under Health & Physical Education, this is under line-item Satellite Locker Rooms.
Early Bid Packages	<i>Work included in early bid packages issued either before this submission or within 35 days of this submission is not included in this review. Consequently, items included in the Early Bid Package are not reviewed here. It is clear an early site work package has already been issued to bid. It is not clear if the foundations and steel package has either already been or will soon be issued to bid. Consequently, site work, foundations, and steel are not included in this review. Please clarify in the response to this review.</i>	Design Team Response: Both the Early Site Preparation and Early Structural Bid Package have been bid. Drawings for these bid packages can be found in section 6C.3.5-03a and 6C.3.5-03b of the MSBA 90% CD Submittal.
Code Analysis	<i>The Code Analysis does not mention if the building can be classified as "high-rise", and there are parts of the building that appear to be over the threshold for "high-rise". Please confirm that this was reviewed by the District, and describe in the response to this review.</i>	Design Team Response: The building is <u>not</u> classified as a high-rise building. The International Building Code defines a high-rise building as a building with an occupied floor located more than 75-feet above the lowest level of the fire department vehicle access. The distance from the Lower Level to the Fourth Floor, at the proposed NE Metro building, is 68-feet.
Workforce Participation	<i>Workforce participation goals for minorities and women, and processes and procedures to include compliance are not included in the Project Manual. Please include this information in the next submission.</i>	OPM Response: Addressed, please refer to Section 6C.3.6-04 MBE-WEBE Goals of the 90% CD binder submission. PMA has previously reached out to the Supplier Diversity Office (SDO) regarding establishing Minority and Women owned business workforce

		participation goals. The SDO informed them that they do not review projects until at least 75% CD cost estimates have been performed. Following the 90% CD submission, PMA will be re-engage the SDO and established workforce goals for incorporation into the 100% CD bid set.
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6B.2 OPM Deliverables

	MSBA's 60% CD Review Comment	Current Status
Coordinated Design Review	<i>Not addressed. Please address this in the next submission.</i>	OPM Response: This was addressed in the 60% CD submission, please refer to cover letter and the OPM/CM/Cx review comments.

6B.2.2 Project Schedule

	MSBA's 60% CD Review Comment	Current Status
Letter Regarding State Reviews	<i>Not included. Please include this in the next submission.</i>	Project Team Response: Addressed, please see Section 6C.2.2-02 District Letter Confirming State & Local Approvals of the 90% CD binder submission.

6B.2.3 Project Scope and Budget

	MSBA's 60% CD Review Comment	Current Status
Cost Estimate Comparison Form	<i>The included Cost Estimate Comparison Form only includes the cost estimate for the 60% CD phase and the blank template for the 90% CD phase. Earlier phases, such as PS&B, PFA, and DD are not shown. Please include the full cost estimate comparison form showing all relevant phases in the next submission.</i>	OPM Response: Omission of the Uniformat Cost Comparison spreadsheet was a clerical error and was emailed to the MSBA project team on 2/16/23 in conjunction with the responses to the MSBA 60% CD review comments.
Updated Project Budget	<i>The submission's Total Project Budget uses an Estimated Construction Cost of \$244,991,092 instead of the reconciled estimate of \$249,224,736. It is not clear why another value is used or where the value came from. Please clarify and provide an updated Total Project Budget that uses the reconciled cost estimate with the response to these comments.</i>	OPM Response: Please refer to the OPM Cover Letter from the 60% CD submission which clarifies the recent grant received by the District and associated impact to the Total Project Budget. Please note, the grant funds are reflected in the submitted Total Project Budget as ineligible third party funding on the final page.
Value Engineering – Committee Vote	<i>Not included. Include this in the next submission.</i>	OPM Response: On January 19, 2023, the NEMT School Building Committee voted to approve the 60% CD submission to the MSBA which included the associated value engineering log. The 90% CD submission was under budget and did not require value engineering efforts.

6B.3 Designer Deliverables

	MSBA's 60% CD Review Comment	Current Status
Building Code	<i>The Code Analysis does not mention if the building can be classified as "high-rise", and there are parts of the building that appear to be over the threshold for "high-rise". Please confirm that this was reviewed by the District and describe in the response to these review comments.</i>	Design Team Response: The building is <u>not</u> classified as a high-rise building. The International Building Code defines a high-rise building as a building with an occupied floor located more than 75-feet above the lowest level of the fire department vehicle access. The distance from the Lower Level to the Fourth Floor, at the proposed NE Metro building, is 68-feet.
Interior Color Theory Statement	<i>The submission does not confirm if color and material selections have been presented to or approved by the District. Please address this in the next submission.</i>	Design Team Response: The Interior Color Theory Statement, has been updated to reflect all colors reviewed and approved by the district to date.
District's Emergency Procedure	<i>The submission does not confirm if emergency medical personnel have been consulted. Please address this in the next submission.</i>	Design Team Response: A follow-up meeting with the Wakefield Fire Department took place on April 21, 2023. We met with Thomas Purcell, Deputy Fire Chief to follow up on earlier discussions and to confirm that design was in compliance with their earlier requests. Medical dispatches are handled through the fire department.
Facility & Maintenance Light Fixture & Controls	<i>Not included. Include this in the next submission.</i>	Design Team Response: Light Control Sequence of Operations and Lighting Control Diagrams are included on drawings E4-0-0 and E4-0-16. The fixture schedule can be found on sheets E4-0-18 through E4-0-20.
Facility & Maintenance Cleaning Procedures & Materials	<i>Not included. Include this in the next submission.</i>	Design Team Response: Interior finish materials have been reviewed with the District's Maintenance Personnel regarding durability and cleaning procedures. The specifications require that the CM submit O&M manuals with all cleaning and maintenance procedures for specifically installed material.

6B.3.2 Space Summary

	MSBA's 60% CD Review Comment	Current Status
Core Academic Spaces	<i>General classrooms reduced 85 sf; Teacher Planning/ Workrooms added 15 sf; Science Classrooms/Labs added 85 sf; Prep Room added 5 sf; Health CR/Team Meeting Room reduced 10 sf; Language Lab/Distance Learning reduced 20 sf. In the response to these review comments, please confirm that no classroom sizes are below the minimum size stated in MSBA's guidelines.</i>	Design Team Follow-up Response: All the General Classrooms comply within MSBA's square footage guidelines (825 SF minimum and maximum of 950 SF). All the science classrooms meet MSBA minimum size requirement of 1440 square feet. Special Education spaces meet the square footage and location requirements as approved by DESE and included in the MSBA Schematic Design Submission.
Vocational & Technology	<i>Tech./Engineering Rooms reduced 5 sf; Automotive Collision Rpr reduced 80 sf; Automotive Technology reduced 115 sf; Business Office Tech. increased 25 sf; Carpentry reduced 150 sf;</i>	Design Team Follow-up Response: The latest revisions are consistent with the previous DESE approval. Spaces that are being presented at the current DESE Chapter 74 review meetings reflect plans that were submitted as a part of the MSBA 60% CD Submission.

	<p><i>Culinary Arts increased 5 sf; Dental Assisting reduced 50 sf; Design & Visual Communications reduced 25 sf; Drafting & Design reduced 5 sf; Early Childhood Ed. increased 20 sf; Electrical Tech. reduced 110 sf; Health Assisting reduced 40 sf; HVAC Tech. reduced 35 sf; Plumbing & Pipefitting reduced 35 sf; Robotics & Automation reduced 5 sf; Biotech. reduced 30 sf; Marketing increased 25 sf; Medical Assisting increased 20 sf. In the response to these review comments, please confirm DESE includes the revisions in this submission.</i></p>	
Health & Physical Education	<p><i>Gym reduced 165 sf; PE Alternatives increased 160 sf; Gym Storeroom reduced 20 sf; Locker Rooms w/Toilets reduced 900 sf; Satellite Locker Rooms reduced 15 sf; Phys Ed Storage & Closets increased 25 sf; Athletic Director's Office increased 15 sf; Officials/Trans Locker Room w/Shower & Toilet increased 10 sf; PE Instructor & Coach Office w/Shower & toilet reduced 65 sf; Trainer increased 25 sf; Auxiliary PE increased 930 sf. Space Summary indicates Aux. PE space to be 835 NFA and 930 total area. In the response to these review comments, please resubmit the Space Summary and confirm area of Aux. PE.</i></p>	<p>Design Team Follow-up Response: Auxiliary PE is intended to be 930 SF and not 835 SF. The Space Summary has been corrected.</p>
Custodial & Maintenance	<p><i>Custodian Storage increased 90 sf; Recycling Room/Trash increased 5 sf; Receiving & General Supply increased 90 sf. Space Summary includes Network/Telecom Room & Offices as both 200 sf and 255 sf. In the response to these review comments, please resubmit the Space Summary to clarify.</i></p>	<p>Design Team Follow-up Response: Network / Telecom Room is intended to be 255 SF. This square footage matches the space summary area from Schematic Design. The Space Summary has been corrected.</p>
DESE Letter	<p><i>A letter from July 2021 is included in the submission that anticipates approval in August 2021. Please provide an update with the response to these comments.</i></p>	<p>Design Team Follow-up Response: The July 2021 letter from DESE, which was included in the 60% CD submission, states that DESE has reviewed the proposed career tech programs and they are viable and the number of students per program is reasonable. The August 2021 date referenced in this letter is referring to the anticipated date of MSBA's grant approval (which occurred at the 8/25/21 MSBA Board of Directors meeting) and not a DESE milestone. Please let us know if additional clarification is needed.</p>

DESE Chapter 74 Deviations	<i>Changes to Chapter 74 Program spaces were noted in the Space Summary review. In the response to these review comments, please confirm that DESE approval of Chapter 74 Program includes the most recent revisions included in this submission.</i>	Design Team Response: The latest minor revisions are consistent with previous DESE approval of Chapter 74 Program Offerings. Spaces that were presented at the 60% CD DESE Chapter 74 review meetings are consistent with the spaces shown in the MSBA 90% CD submission. Layouts for Carpentry and Cosmetology have been revised based on feedback from Vocational Department Heads and industry advisory groups. Please refer 6C.3.2-07 within the 90% CD submission for revised equipment layouts.
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6B.3.3 Project Approvals

	MSBA's 60% CD Review Comment	Current Status
	<i>No MSBA Comments</i>	

6B.3.4 Cost Estimates

	MSBA's 60% CD Review Comment	Current Status
Summary Sheet Bid Date, Contract Number, Estimate for each work phase, bid form	<i>Not included. Please include in the next submission.</i>	Design Team Response: Acknowledged.

6B.3.5 Drawings

	MSBA's 60% CD Review Comment	Current Status
Architectural – Floor Plans Curb Elevations	<i>Top of curb elevations are not shown on the Edge of Slab drawings. Suggest including this information for clarity.</i>	Design Team Response: We are trying to understand your request. We do not have any concrete “curbs” at the slab edge. Refer to wall sections for edge of slab conditions.
Architectural – Floor Plans Dimensioning Interior Partitions	<i>Interior partitions and doors are not dimensioned on the drawings. Suggest including this information for clarity.</i>	Design Team Response: Dimensions have been provided to column grids. Prior to going out to bid, interior partitions and doors will be dimensioned.
Architectural – Floor Plans	<i>Sheets A1-1-3C, 4C, and D include remnant MEP symbols and elements. This should be</i>	Design Team Response: Graphics have been cleaned up removing the remnant MEP symbols.

	<i>reviewed and cleaned up in the next submission.</i>	
<u>Architectural – Large Scale Plans</u>	<i>Specialized areas are shown on the general floor plans and are not shown on large-scale plans. Suggest including large scale plans of these areas for clarity.</i>	Design Team Response: Large scale plans were reviewed/added, as needed, for areas requiring additional detailing.
<u>Architectural – Building Elevations</u> Floor Elevations	<i>The floor elevations on the architectural building elevations and wall sections show the finish floor at 100'-0", but the civil drawings (which do not indicate the finish floor level) show typically underground utility connections being around 130' or 140'. This should be reviewed. Suggest providing more information to make the relationship between the civil elevations and architectural elevations clearer.</i>	Design Team Response: Landscape drawings indicate top of first floor slab, as it relates to sea level, as 163.5 feet. Refer to drawings L402 & L403. Architectural drawings indicate the top of slab at the first floor as 100'-0." Reasoning behind this is to avoid mathematical errors for tradesmen who are measuring from finished floor slab. The Architectural floor plans have a general note that states: T.O. SLAB @ FIRST FLOOR DATUM ELEVATION OF 100'-0" CORRESPONDS TO 163.50' MEAN SEA LEVEL, AS SHOWN ON SITE AND CIVIL DRAWINGS. ALL OTHER ELEVATION DATUM SHOWN IN THE ARCHITECTURAL SET IS RELATIVE TO 100'-0"
<u>Architectural – Building Elevations</u> Control Joints	<i>Control and expansion joints and lintel relief are not shown. This should be reviewed and, if needed, added in the next submission.</i>	Design Team Response: Expansion joint detailing can be found on plan detail 1/A5-1-4 and sections 2,3 & 4/A3-2-17 and 3/A3-2-18. Masonry control joints are shown on the exterior elevations. Relieving Angle/brick relief detail can be found on details 9 and 18/A3-3-1
<u>Architectural – Building Elevations</u> Wall Sections	<i>Tags for wall sections are not shown on the elevations. Suggest including these for clarity.</i>	Design Team Response: On this project, section detailing occurs not only at the exterior of the building, but at interior locations as well. To show information in a consistent location, our office standard is to show wall section tags on the floor plans and <u>not</u> on exterior elevations.
	<i>Interior courtyard details and wall construction are not shown. Suggest including these for clarity.</i>	Design Team Response: Detailing of the courtyard walls can be found on wall sections 1, 2, 3, 4, 5 and 6 on drawing sheet A3-2-3.
	<i>The roof drain appears to be shown in an incorrect location on Section 8 on Sheet A5-3-2. This should be reviewed and, if needed, revised in the next submission.</i>	Design Team Response: Detailing of the courtyard walls can be found on wall sections 1, 2, 3, 4, 5 and 6 on drawing sheet A3-2-3.
<u>Architectural – Building Sections</u> Thermal Insulation	<i>See note above regarding interior courtyard details.</i>	Design Team Response: Detailing of the courtyard walls can be found on wall sections 1, 2, 3, 4, 5 and 6 on drawing sheet A3-2-3.
<u>Architectural – Building Sections</u>	<i>The center handrails are missing or shown inconsistently</i>	Design Team Response:

Handrails	<i>such as on the stair plans on Sheet A7-1-1 & 3. This should be reviewed and, if needed, revised in the next submission.</i>	Graphics for Stair 1 on sheet A7-1-1, Stair 3 on sheet A7-1-4, and Stair 6 on A7-1-6 have been updated. The remaining stairs do not have center rails as the width of the stairs allows a 30" reach to the handrail per the International Building Code requirements.
<u>Architectural</u> Casework / Paneling / Acoustics	<i>Casework details are not shown. This should be reviewed and, if needed, revised in the next submission.</i>	Design Team Response: Casework is shown on the Equipment Drawings. Refer to the sequence of drawings with the prefix EQ.
	<i>Interior finishes on some interior elevations are not clear. Suggest adding more interior elevations for clarity.</i>	Design Team Response: Interior Elevations have been updated. In addition, the AF series drawings contain wall finish plans for materials used in every room.
Ceiling Details		
<u>Schedules</u> Finishes	<i>Suggest including floor patterning, layouts, and transition details at floor material drawings for next submission.</i>	Design Team Response: Floor pattern layouts have been further developed. Transition details can be found on drawings AF1-3-1 and AF1-3-2.
	<i>Suggest including game layout for Gymnasium.</i>	Design Team Response: Game lines are shown on drawing AF1-1-2D for reference. Specification Section 096460, Wood Athletic Flooring, calls out game line and school logo scope of work.
<u>Schedules</u> Doors	<i>Door details are not keyed and require further development. This should be reviewed and, if needed, revised in the next submission.</i>	Design Team Response: The door schedules have been updated to include detail references.
<u>Schedules</u> Windows	<i>Window details are not keyed and require further development. This should be reviewed and, if needed, revised in the next submission.</i>	Design Team Response: Detail tags have been added to the Curtain wall and window types.
	<i>The air and vapor barrier terminations are not shown consistently at storefront and curtain wall transitions. One example is Detail 13 on Sheet A5-1-2. This should be reviewed and, if needed, revised in the next submission.</i>	Design Team Response: We are in the process of finalizing the curtainwall and window details and will be sure that the AVB terminations and transitions are clearly shown in the final submission.
<u>Fire Protection</u> Piping / Equipment / Fixtures / Valves	<i>Sprinklers are not shown under the Gym bleachers. This should be reviewed and, if needed, revised in the next submission.</i>	Design Team Response: Sprinklers have been included on sheet FP1-1-2D
<u>Plumbing</u> Work done by Plumbing Subcontractor	<i>It is not clear where the division is between the plumbing filed sub-bid and the civil work for plumbing outside of the building. This is part of</i>	Design Team Response: Limit of work for plumbing piping is 10'-0" outside the building, as noted on the under-slab plumbing drawings.

	<i>an early bid package. Consequently, it is not reviewed as part of this submission.</i>	
Plumbing Traps / Vents / Floor Drains	<i>It appears there is radon piping through the Gymnasium, and it is not clear if this is a coordination issue. This should be reviewed and, if needed, revised in the next submission.</i>	Design Team Response: The radon piping and other piping shown in the gymnasium are in the process of being coordinated and will be completed for the final submission.
Plumbing Dimension Floor Drains	<i>Floor drains are not located on the architectural Edge of Slab drawings. Suggest including them for clarity.</i>	Design Team Response: Floor drain dimension will be shown and dimensioned on the floor plans to show relationship to adjacent materials and equipment. This will occur prior to the final submission.
HVAC Servicing Clearances	<i>Service areas on Mechanical mezzanines not shown. Suggest including in the next submission to confirm layout requirements.</i>	Design Team Response: Service clearances have been indicated on the Mechanical drawings.
HVAC Fire & Smoke Dampers	<i>Suggest reviewing the requirements for Fire Dampers at all vertical chases prior to next submission.</i>	Design Team Response: Fire Damper coordination has been completed and included in the 90% Submission.
Electrical Interior Lighting Systems	<i>Floor power outlets are not shown on the architectural Edge of Slab drawings. Suggest including these for clarity.</i>	Design Team Response: Floor box dimensions, where appropriate, will be shown and dimensioned on the floor plans to show relationship to adjacent materials and equipment. Some floor boxes associated with specific equipment will not be dimensioned as they have to be coordinated between the equipment suppliers and the CM.
Electrical Power System	<i>It appears one De-strat Gym Fan symbol is missing from the layout. This should be reviewed and, if needed, revised in the next submission.</i>	Design Team Response: Both De-Strat fans currently scheduled are shown in the layout on E1-1-3D.
	<i>Electrical service is not shown to the vegetated roof gardens. It is not clear if this is intentional. This should be reviewed and, if needed, revised in the next submission.</i>	Design Team Response: Convenience receptacles are included on the building exterior at the roof garden.
Electrical Fire Alarm	<i>Knox box(s) are not shown. Please include in the next submission.</i>	Design Team Response: Knox Boxes are included in the 90% Submission
Electrical Services	<i>It appears a conflict may exist with the Main Distribution Electrical Pull Boxes with Architectural and Structural features at Column Line Y.9. This should be reviewed and, if</i>	Design Team Response: This has been coordinated with Structural and included in the 90% submission.

	<i>needed, revised in the next submission.</i>	
Electrical Solar	<i>The riser diagram for solar path is not included. Please provide in the next submission.</i>	Design Team Response: Solar Riser diagrams are included on sheet E3-0-4.
Electrical General Stations & Sub Stations	<i>Electric panel schedules are not completed. Please include in the next submission.</i>	Design Team Response: Electric Panel Schedules can be found on sheets E4-0-4 through E4-0-11.
Electrical Riser Diagrams	<i>Clarify if a Bi-Directional Amplifier System will be included in the next submission.</i>	Design Team Response: Bi-Directional Amplifier System has been included in this submission.

6B.3.6 Project Manual

	MSBA's 60% CD Review Comment	Current Status
Early Bid Packages	<i>There are two early bid packages: #1 Early Site Preparation and #2 Early Structural (Foundations & Steel), which are not included in the Project Manual. Please include contract documents for both early bid packages in the next submission.</i>	Design Team Response: Both the Early Site and Early Structural Bid Drawings are included with this submission. The Specifications always included the Sections that were issued with each Early packages. They will remain as part of the bid documents for reference purposes. The Table of Content notes which sections are For Reference Only and which package that they were originally issued with.
MBE / WBE Contracts	<i>Workforce participation goals for minorities and women, and processes and procedures to include compliance are not included in the Project Manual. Please include this information in the next submission.</i>	Design Team Response: PMA was informed by SDO that in order to calculate workforce participation goals a minimum of a 75% Cost Estimate must be completed. The reconciled 90% cost estimate has been completed as of 25 May 2023 and PMA will re-engage with SDO to determine the workforce participation goals. The goal will be included in the Construction Managers Division 0 specification section.
MBE / WBE Program Goals	<i>Participation goals for MBE/WBE and processes and procedures to ensure compliance are not included in the Project Manual. Please include this information in the next submission.</i>	Design Team Response: PMA was informed by SDO that in order to calculate workforce participation goals a minimum of a 75% Cost Estimate must be completed. The reconciled 90% cost estimate has been completed as of 25 May 2023 and PMA will re-engage with SDO to determine the workforce participation goals. The goal will be included in the Construction Managers Division 0 specification section.
Three Manufacturers	<i>Some sections (for example, 113300 "Retractable Stairs", 1158230 "Cosmetology Equipment", 116100 "Automotive Equipment", 116620 "Athletic</i>	Design Team Response: Currently the specifications are written in a manner describing equipment that can be met by a minimum of three manufacturers. Listed Manufacturers are also included in most sections.

	<i>Equipment”) do not specify a minimum of three brands or manufacturers. For the next submission, please include at least three named material or equipment brands or a material or equipment description which can be met by a minimum of three manufacturers and the words "or equal".</i>	
Filed Sub-Bid Labor & Materials	<i>It is unclear whether duct-mounted smoke detectors are to be furnished and installed by 264621 "Addressable Fire Alarm Systems" or 233300 "Air Duct Accessories". This should be reviewed and updated in the next submission.</i>	Design Team Response: Duct-mounted smoke detectors are furnished and installed by Section 284621-Addressable Fire Alarm Systems.
	<i>Section 260000 "General Requirements for Electrical" includes several sections as Paragraph E/Sub-sub-bids that are not otherwise indicated to be part of the Electrical Trade Contract (for example, 116133 "Theater Rigging") and also a number of sections with incorrect section names or numbers. This should be reviewed and coordinated in the next submission.</i>	Design Team Response: Final coordination between specification sections is currently underway and these items will be resolved for the final submission.
Staging, Scaffolding, Cutting & Patching	<i>Some further coordination is needed. For example, Section 015000 "Temporary Facilities & Controls" states that each trade shall provide all staging and scaffolding necessary for their work. However, some filed sub-bid sections (for example, 042000) specify that all staging and scaffolding will be furnished by the General Contractor. This should be reviewed and coordinated in the next submission.</i>	Design Team Response: The specifications have been updated to clarify the scaffolding requirements. Coordination is on-going to catch any other discrepancies.
	<i>Similarly, Section 017329 "Cutting & Patching" specifies that openings in masonry walls shall be performed by 042000; and that penetrations in non-masonry construction shall be performed by the trade responsible for surrounding construction. However, some sections (for example, 220000, 230000) state that all cutting, coring and</i>	Design Team Response: Final specification coordination is currently in process. This will be reviewed, and specifications will be updated accordingly.

	<i>patching shall be performed "by others", while Sections 210000 and 260000 specify that all cutting and patching shall be performed by the Fire Protection Subcontractor and Electrical Subcontractor respectively. This should be reviewed and coordinated in the next submission.</i>	
"By Others"	<i>Some sections (for example, 087100, 116100, 116833) refer to materials furnished or work performed "by others". In the next submission, please cross-reference the relevant specification section for all work performed or materials furnished by other trades.</i>	Design Team Response: Further coordination between trades and additional cross-referencing is currently in process. These items will be picked up prior to the final submission.
"The Contractor"	<i>The term "the Contractor" is used in some trade contract sections. For clarity, consider referring to "the General Contractor", the "Plumbing Subcontractor", "the HVAC Subcontractor" and so on in the next submission.</i>	Design Team Response: Final specification coordination is currently in process. We will look to clarify "the Contractor" in the final submission.
Alternates	<i>An Alternates section is included, with 9 alternates listed. For the next submission, consider cross-referencing relevant specification sections and drawings on the Schedule of Alternates.</i>	Design Team Response: The alternates have recently been reviewed with the Owner and are included in this submission. Cross referencing is currently under review.
Allowances	<i>Section 142150 "Gearless Machine Room Less Traction Elevators" contains reference to a \$25,000 allowance per car for cab finishes. Allowances are prohibited pursuant to MGL c. 149§44G(A). This should be reviewed and corrected in the next submission.</i>	Design Team Response: The reference was included only for Cost Estimate purposes. It has since been removed and replaced with specified finishes for the elevators.
Unit Prices	<i>A Unit Prices section is included. However, no unit price items are identified on the Unit Price Schedule. Section 310000 "Earth Moving" appears to contain unit price items. This should be reviewed and coordinated in the next submission.</i>	Design Team Response: Unit prices will be reviewed and included as appropriate near bidding time. Early bid packages unit prices were included as part of the bidding.
"will" / "shall"	<i>The term "will" is sometimes used to designate what is mandatory for the contractor to do, and "shall" is sometimes used to</i>	Design Team Response: Final specification coordination is currently in process. This will be reviewed, and specifications will be updated accordingly.

	<i>designate what the Owner or Architect can be expected to do.</i>	
"etc"	<i>The term "etc." is used throughout the project manual, particularly in Volume 2. This should be reviewed and, if necessary, updated in the next submission.</i>	Design Team Response: Final specification coordination is currently in process. This will be reviewed, and specifications will be updated accordingly.
"as required"	<i>The terms "to the satisfaction of the Architect", "to the satisfaction of the Engineer", "as directed by the Architect", "as required" and "as approved" are used throughout the Project Manual. This should be reviewed and, if necessary, updated in the next submission.</i>	Design Team Response: Final specification coordination is currently in process. This will be reviewed, and specifications will be updated accordingly.
numbers	<i>Numbers are sometimes expressed in both words and figures. This should be reviewed and, if necessary, updated in the next submission.</i>	Design Team Response: Final specification coordination is currently in process. This will be reviewed, and specifications will be updated accordingly.

6B.3.7 Project Coordination

	MSBA's 60% CD Review Comment	Current Status
Architectural Early Bid Packages	<i>Drawings for early bid packages are included, but specifications are not. Coordination could not be verified.</i>	Design Team Response: The Specifications always included the Sections that were issued with each Early package. They will remain as part of the bid documents for reference purposes. The Table of Content notes which sections are For Reference Only and which package that they were originally issued with.
Architectural Finish Grade Elevations	<i>The finish grade elevations for the architectural drawings do not match the ones on the civil drawings. This should be reviewed and coordinated.</i>	Design Team Response: Landscape drawings indicate top of first floor slab, as it relates to sea level, as 163.5 feet. Refer to drawings L402 & L403. Architectural drawings indicate the top of slab at the first floor as 100'-0". The reasoning behind this is to avoid mathematical errors for tradesmen who are measuring from finished floor slab. The Architectural floor plans have a general note that states: T.O. SLAB @ FIRST FLOOR DATUM ELEVATION OF 100'-0" CORRESPONDS TO 163.50' MEAN SEA LEVEL, AS SHOWN ON SITE AND CIVIL DRAWINGS. ALL OTHER ELEVATION DATUM SHOWN IN THE ARCHITECTURAL SET IS RELATIVE TO 100'-0"
Architectural Slab Depressions	<i>Not all items are shown on the slab depression drawings such as floor drain locations. This should be</i>	Design Team Response: Floor box and floor drain dimensions, where appropriate, will be shown and dimensioned on the floor plans to show relationship

	<i>reviewed and, if needed, revised in the next submission.</i>	to adjacent materials and equipment. Some floor boxes and drains associated with specific equipment will not be dimensioned as they have to be coordinated between the equipment suppliers and the CM.
Architectural Wall/Floor/Ceiling Construction	<i>This is mostly coordinated, however, some areas are less clear. Suggest including additional interior elevations to clarify scope of finishes.</i>	Design Team Response: Interior Elevations have been updated. In addition, the AF drawings contain wall finish plans clarifying the finish scope in each room.
Mechanical Coord Outside Air Intake	<i>Clearance information is not fully shown. Therefore, coordination could not be confirmed. Suggest including clearance information for clarity.</i>	Design Team Response: Clearances have been included on the Mechanical drawings included in the 90% submission.
Mechanical Spatial Conflicts	<i>Clearance information is not fully shown. Therefore, coordination could not be confirmed. Suggest including clearance information for clarity.</i>	Design Team Response: Clearances have been included on the Mechanical drawings included in the 90% submission.
Electrical Solar	<i>The solar riser diagram is not included. Therefore, coordination could not be confirmed.</i>	Design Team Response: Solar Riser diagrams are included on sheet E3-0-4.
Equipment Coordinated w/ Architectural	<i>Clearance information is not fully shown. Therefore, coordination could not be confirmed. Suggest including clearance information for clarity.</i>	Design Team Response: Clearance zones around relevant equipment have been denoted on the Equipment drawings (EQ series) Safety Zone Paint Lines, defining a clear path of travel from the entrance into the shop are now defined on the Architectural Finish drawings (AF Series drawings).
MSBA Science Labs	<i>Confirmation of compliance to these standards are not included. Please include this in the next submission.</i>	Design Team Response: Compliance was addressed in the previous MSBA 60% CD Submission under Section 6B.3.7-01. In the 90% CD submission, refer to section 6C.3.7-01.