

BID
ADDENDUM NO. 4
TO
CONTRACT DOCUMENTS
AND
TECHNICAL SPECIFICATIONS
FOR
2019 BOND REFERENDUM
CAPITAL IMPROVEMENTS
AT
MAMARONECK HIGH SCHOOL
PHASE 2
NYSED #66-07-01-03-0-001-039
BID # 20/21 – MUFSD-00

Mamaroneck Union Free School District
1000 West Boston Post Road
Mamaroneck, NY 10543

Telephone No. 914-220-3040

Contact: Ms. Sylvia Wallach
Assistant Superintendent for Business

LAN Job #4.1092.72.06
January 13, 2022

Michael J. McGovern, RA
NYS #022257

1.0 General: The original contract documents dated **November 22, 2021**, issued to the New York State Education Department (NYSED) for this project, are hereby amended as noted in this NYSED addendum which shall become part of said contract documents, as if originally included therein. Bidders must acknowledge receipt of this NYSED addendum and all other addenda on the proposal form when submitting proposals. In case any bidder fails to acknowledge receipt of addenda, his proposal will nevertheless be construed as though it has been received, acknowledged, and the submission of his proposal shall constitute acknowledgment by the bidder of the receipt of same.

This is to advise all prospective bidders that this addendum has been issued to all bidders and that it contains a change in the contract documents.

Sealed bid proposals shall be received by **2:00 p.m. prevailing time on Wednesday, January 19, 2022**, by mail or in person at the Boston Post Road main entrance, at the Mamaroneck Union Free School District Office, 1000 West Boston Post Road, NY 10543. All bids must be received by 2:00 p.m. prevailing time at which time they shall be publicly opened and read aloud at 3:00 p.m. prevailing time. **Staff will be available to accept hand delivered bids between the hours of 8:00 a.m. and 2:00 p.m. on January 19, 2022. Please be advised that masks are mandatory, and all attendees will be required to socially distance during the bid opening.**

2.0 Amendments to Specifications:

Section No.	Page No.	Addendum Requirements
00 21 13	All	Specification Section 00 21 13 – Instructions to Bidders was revised per comments from the District’s Attorney. Paragraphs 1.0, 2.0, 3.0, 5.0, 6.0, 14.0, 15.0 and 22.0.
00 41 00	All	Specification Section 00 41 00 – Bid Proposal Form was revised per comments from the District’s Attorney.
00 41 02	1a-1e	<p>ALL BID FORMS HAVE BEEN UPDATED PER THIS ADDENDUM. PLEASE MAKE SURE YOU USE THE CORRECT BID FORMS WITH YOUR BID SUBMISSION.</p> <p>Bid Form 00 41 02-1a: Contract #6a - General Construction Revised to reflect additional allowance language.</p> <p>Revised to add Allowance No. 6a-2: Masonry Allowance Post Road Building</p> <p>Revised to add Allowance No. 6a-3: Masonry Allowance Palmer Ave. Building</p> <p>Revised adding the following unit prices:</p> <ul style="list-style-type: none"> • Unit Price #6a-4 - Masonry Repointing • Unit Price #6a-5 - Single Brick Replacement • Unit Price #6a-6 - Area Brick Replacement • Unit Price #6a-7 - Masonry/Stone Restoration • Unit Price #6a-8 - Slab Trenching for Underground Services <p>Bid Form 00 41 02-1b: Contract #6b - Mechanical Construction Revised to reflect additional allowance language.</p>

2.0 Amendments to Specifications: (Cont.)

Section No.	Page No.	Addendum Requirements
		Bid Form 00 41 02-1c: Contract #6c - Plumbing Construction Revised to reflect additional allowance language. Revised adding the following unit prices: <ul style="list-style-type: none">• Unit Price #6c-1 - Hanging of Piping Under Slab
		Bid Form 00 41 02-1d: Contract #6d - Electrical Construction Revised to reflect additional allowance language. Revised to add Allowance 6d-2 – Fire Alarm System Upgrade Allowance.
		Bid Form 00 41 02-1e: Contract #6e - Elevator Modernization Revised to reflect additional allowance language.
00 43 92	All	Specification Section 00 43 92 – Qualifications of Bidders has been replaced.
01 21 00		Specification Section 01 21 00 – Allowances. Schedule of Allowances have been updated. <ul style="list-style-type: none">• Allowance 6d-2 – Fire Alarm Upgrade Allowance was added.
01 22 00		Specification Section 01 22 00 – Unit Prices has been revised to reflect additional unit prices for Contracts 6a and 6c.
04 21 13		Specification Section 04 21 13 has been modified to include further information on face brick types and allowance prices for brick to be match existing.
28 00 00	All	Specification Section 28 00 00 - Electronic Safety and Security has been removed from the project.

3.0 Amendments to Drawings:

Drawing No.	Addendum Requirements
A2.01	Notes for Work Area 'A' revised to add note #73.
A3.01 – A3.08	Drawings revised to reflect masonry restoration percentages and square footages for bidding purposes. Symbol Legend on Drawing A3.03 was also updated. Drawings A3.03, A3.07 and A3.08 were revised to reflect re-glazing of select windows as identified on the plans.
A7.11	Drawing 3/A7.11 revised to add vinyl locker numbering to new metal lockers.
M1.11	Drawing revised to add Key Note #8.
M2.11	Drawing revised to show scope regarding the louver for MAU-1.

3.0 Amendments to Drawings: (Cont.)

Drawing No.	Addendum Requirements
M1.81	<p>Drawing revised to show section of the existing exhaust ductwork to be disconnected and removed.</p> <p>Drawing revised to add Key Note #15.</p>
M2.82	<p>Drawing revised to show the rerouting of boiler room breeching/flue and the new routing of the exhaust ductwork.</p>
E1.10	<p>The first note in the "Fire Alarm Demolition Notes" have been revised to read:</p> <ul style="list-style-type: none">• FIRE ALARM SYSTEM IS UNDER WARRANTY AND AS SUCH, ALL FIRE ALARM MODIFICATIONS SHALL BE PERFORMED BY THE FIRE ALARM VENDOR HOLDING THE WARRANTY AS PART OF THE FIRE ALARM ALLOWANCE. <p>This drawing is not being reissued.</p>
E1.20	<p>The first note in the "Fire Alarm Demolition Notes" have been revised to read:</p> <ul style="list-style-type: none">• FIRE ALARM SYSTEM IS UNDER WARRANTY AND AS SUCH, ALL FIRE ALARM MODIFICATIONS SHALL BE PERFORMED BY THE FIRE ALARM VENDOR HOLDING THE WARRANTY AS PART OF THE FIRE ALARM ALLOWANCE. <p>This drawing is not being reissued.</p>
FA2.10	<p>Note #1 under the "Fire Alarm General Requirements has been revised to read "THE FIRE ALARM SYSTEM IS UNDER WARRANTY AND AS SUCH, ALL FIRE ALARM MODIFICATIONS SHALL BE PERFORMED BY THE FIRE ALARM VENDOR HOLDING THE WARRANTY. THE COSTS ASSOCIATED WITH THE FIRE ALARM DEVICES, DEVICE INSTALLATION AND SYSTEM MODIFICATIONS SHALL BE PAID FOR UTILIZING THE FIRE ALARM MODIFICATIONS ALLOWANCE. THE EC SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL BACKBOXES AND STUB UPS AS PART OF THE BASE BID. THE FIRE ALARM VENDOR SHALL BE RESPONSIBLE FOR PROGRAMMING AND TO PROVIDE AND INSTALL THE DEVICES AND WIRING AS PART OF THE ALLOWANCE." This drawing is not being reissued.</p>

4.0 Requests for Information (RFIs):

No.	Question / Response
1	<p>Question: Please clarify the cleaning/repointing scope at the Post Road Building. Can an allowance be provided to carry? Notes are telling us to repoint scope will be determined after cleaning. Can we get an idea at the time of the bid?</p> <p>Response: Masonry scope of work has been clarified per revised Elevation Drawings A3.01 – A3.08. Symbol Legend on Drawing A3.03 was also updated.</p>

4.0 Requests for Information (RFIs): (Cont.)

No. Question / Response

- 2 Question: Fireproofing and intumescent fireproofing is included in the specifications, however there is no fireproof seen in scope. The new steel is Type IIB and does not require fireproofing, please clarify.
- Response: Intumescent Fireproofing is included on the drawings for the Wood Shop and Metal Shop ceilings in the STEAM Lab. Applied Fireproofing specification section is included because there is existing fireproofing in the building. Where a fireproofing material that is integral to the rating of an existing fire-rated assembly is removed or disturbed, contractor is required to replace the material to preserve the rating.
- 3 Question: Please refer to Contract Drawing M1.81 and M2.82 for the boiler room breeching. The routing shown for the new boiler breeching conflicts with existing conditions and may conflict with switchgear and electrical panel clearances. At the walkthrough it was discussed reusing the routing of the existing breeching above the switchgear. Please advise if this is acceptable. Please also advise if the mechanical contractor will be required to provide protection above the switchgear during construction, if so what type of protection is required.
- Response: Refer to revised drawings M1.81 and M2.82 for boiler room breeching. All prime contractors are responsible to protect existing equipment adjacent to their work from damage during construction.
- 4 Question: Upon review of plans and specifications there appears to be conflicting requirements. Please refer to Note 15 on M2.71 "Packaged Air Cooled Chiller Schedule" which states, "PROVIDE TWO YEAR COMPLETE MATERIAL AND LABOR WARRANTY FOR PROPER OPERATION OF CHILLER INCLUDING MFR RECOMMENDED PERIODIC PREVENTATIVE MAINTENANCE". Spec. Section 23 64 26, Part 1, 1.6, A,2 calls for Warranty period of (5) Five Years from date of Substantial Completion. Please advise on the required length of warranty on the chiller and clarify if preventative maintenance is to be included. If required, please provide the duration.
- Response: Warranty period is five (5) years.
- 5 Question: Section 28 00 00 refers to Fairlawn BOE School. Is this section an error or is Fairlawn BOE School an error? If this section pertains to Mamaroneck HS, please provide the Security Drawings.
- Response: Section 28 00 00 - Electronic Safety and Security is being removed from the project.
- 6 Question: All Mechanical scope for Demolition and disposal is included in Mech. Contractor proposal. Please confirm
- Response: Mechanical Contractor (MC) is responsible for their demolition work as shown on the Mechanical Drawings. In addition, MC shall refer to "Multiple Prime Contract Notes" on DWG. A1.00 & Specification Section 011200 -Special Provisions for additional contractors' responsibilities.
- 7 Question: Following note #4 from Symbols Legends DWG A3.03, "Area of sand/limestone/stone to be cleaned, repaired and/or repointed." Please advise a percentage of repairs and percentage of pointing.
- Response: Masonry scope of work has been clarified per revised Elevation Drawings A3.01 – A3.08. Symbol Legend on Drawing A3.03 was also updated.

4.0 Requests for Information (RFIs): (Cont.)

No. Question / Response

8 Question: Note #1 under "Existing System" on Drawing FA2.10 requires bidders to get pricing from Talt Electric for all Fire Alarm System Modifications. Does this mean that Talt will not be bidding the project?

Response: To eliminate any potential conflict of interest, the requirements of the Fire Alarm System Modifications have been changed to an allowance. Allowance 6d-2 has been added to the revised bid form and to Specification Section 01 21 00. Additionally, a note indicating all Fire Alarm System Modifications shall be performed under this allowance has been added to drawing FA2.10. (Refer to Section 3.0 above).

9 Question: What is the access to the space above the existing plaster barrel vault ceiling in the STEAM Lab?

Response: Access to the space above the existing plaster barrel vault ceiling is through an opening from the attic. There are currently no catwalks or planking in the area above the ceiling. Each prime shall submit to the Construction Manager an OSHA compliant planking plan for their respective work above this ceiling.

10 Question: The work included in the alternates are only an add to the base bid?
Or
The alternates need to be included in the base bid? and owner may deduct alternates?

Response: All alternates are defined on the Bid Forms and in Section 01 23 00 – Alternates, as to if they are ADD Alternates or DEDUCT Alternates.

ADD Alternates get added to the Base Bid
DEDUCT Alternates get deducted from the Base Bid

5.0 Clarifications:

No.

N/A

6.0 Substitution Requests:

Specification
Section No.

N/A

END OF ADDENDUM NO. 4

Attachment: #1 – Revised Specification Section 002113, 004101, 004102, 004392, 012100, 012200 & 042113
#2 – Revised Drawings: A2.01, A3.01, A3.02, A3.03, A3.04, A3.05, A3.06, A3.07, A3.08, A7.11, M1.11, M2.11, M1.81 & M2.82.

SECTION 002113 – INSTRUCTIONS TO BIDDERS

1.0 Opening of Bids: Bids will be opened at the time and place set forth in the Notice to Bidders. Every bid received by or before that time, or authorized postponement thereof, will be publicly opened and read aloud.

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof or may waive any informalities in or reject any or all bids. Any bid may be withdrawn prior to the advertised time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within forty-five (45) days after the actual opening thereof.

Conditional bids will not be accepted.

2.0 Bidding Documents: The bidding documents include the Notice to Bidders, Instruction to Bidders, Form of Proposal, General Conditions, Supplementary General Conditions, Division 1 - General Requirements, Specifications, Drawings, and all Addenda issued prior to the opening of bids.

3.0 Preparation of Proposal: Proposals must be submitted on prescribed forms. All blank spaces must be filled in, by hand, in ink or in typewritten format. Where indicated by the forms, figures must be inserted.

Note - All contractors, this project is to be bid, the contracts drawn and payments made in such a manner that Sales and Compensating Use Taxes of the State of New York and of cities and counties will not apply to purchases and sales of materials and supplies.

All envelopes containing bids shall bear on the face of the sealed envelope the words **“January 19, 2022, Bid for Capital Improvements at Mamaroneck High School, AND the Contract number being bid on.”** Each proposal must be submitted in a sealed envelope and shall have clearly designated on the outside the name and address of the bidder, the name of the project, and the contract for which proposal is submitted.

4.0 Non-Collusive Bidding Certificate: Each prime bidder submitting a bid for any portion of the work contemplated by the bidding documents shall execute a non-collusive certificate as required by applicable New York State law, in the form herein provided, to the effect that he has not colluded with any other person, firm, or corporation in regard to any bid submitted. Such certificate shall be attached to the bid. Failure of any bidder to abide by this provision shall be cause for rejection of his bid.

5.0 Qualification of Bidders: The Owner may make such investigation as it deems necessary to determine the ability of the bidder to perform the work and the bidder shall furnish to the Owner all information and data for this purpose as the Owner may request. The Owner reserves the right, in its sole discretion, to reject any bid if the evidence submitted by, or through investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated herein within the time frame specified. The bidder must complete and submit with its bid the Statement of Bidder's Qualifications and the Qualifications of Bidders forms. Failure to submit the documentation requested may result in disqualification of the bid.

6.0 Bid Security: Each proposal shall be accompanied by a bid bond or certified check. The type of security to be submitted with the bid shall be at the option of the contractor.

Bid security shall be in amounts as follows:

1. Bid Bond shall be in the amount of 10% of the base bid and shall be on AIA Form A310. It shall be duly executed by the bidder as principal, having as surety thereon a surety company approved by the Owner.
2. Certified checks shall be in the amount of 10% of the base bid made payable to the Mamaroneck Union Free School District.

Security of the two lowest bidders will be returned within forty-eight (48) hours after the Owner and the successful bidder have executed the contract, or, if no contract has been so executed, within forty-five (45) days after the formal bid opening provided that the bidder has not been notified of the award of the contract.

7.0 Liquidated Damages for Failure to Enter Into Contract: A successful bidder, upon his failure or refusal to execute and deliver the Contract and bonds required within ten (10) days after he has received notice of the acceptance of his proposal, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his proposal.

8.0 Subcontractors and Material Suppliers: The successful bidder for each Contract shall submit to the Architect/Engineer within ten (10) calendar days after receipt of notification of award of contract, on the form supplied, a list of subcontractors, material suppliers, and manufacturers proposed for the various portions of the work.

9.0 Conditions of Work: Each bidder must inform himself fully of the conditions relating to the construction and labor under which the work is now being or will be performed. Failure to do so will not relieve a successful bidder of his obligations to furnish all material and labor necessary to carry out the provisions of the contract documents and to complete the contemplated work for the consideration set forth in his bid. The Contractor in the carrying out of his work must employ such methods or means as will not cause any interruption or interference with the work of any other contractor, or the operations of the Owner.

10.0 Obligations of Bidders: At the time of the opening of bids, each bidder will be presumed to have inspected the site, to have familiarized himself with local conditions, and to have read and to be thoroughly familiar with the bidding documents, including all addenda. The failure or omission of any bidder to receive or examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect to his bid or resultant contract.

11.0 Assessments and Taxes:

1. Exemptions from Sales Tax: The Sales and Compensating Use Taxes of the State of New York and the cities and counties do not apply to purchases and sales of materials and supplies pursuant to the provisions of this contract. These taxes are not to be included in the bids. This exception does not, however, apply to tools, machinery, equipment or other property leased by or to the Contractor or a Subcontractor or to materials and supplies of a kind which will not be incorporated into the completed project.
2. Other Assessments and Taxes: Each bidder shall include in his base bid proposal all other costs and liabilities other than that excluded in the above paragraph for the amounts assessed or taxes upon the wages and salaries paid to employees of the Contractor and his Subcontractors, under the Contractor, or any other taxes assessed by the Federal, State, or Local Government.

12.0 Addenda and Interpretations: No interpretations of the meaning of the drawings, specifications or other contract documents will be made to any bidder orally. Any and all such interpretations and any supplementary instructions will be provided in the form of written addenda to the specifications or addenda drawings. Addenda will be sent to all prospective bidders at the respective address, fax or email address furnished by the bidder. Failure of any bidder to receive any such addendum or interpretation shall not relieve any bidder from any obligations under this bid as submitted. All addenda so issued shall become part of the contract documents.

13.0 Security for Faithful Performance: The successful bidder shall deliver to the Owner, simultaneously with the executed contract, an executed Performance and Labor and Material Payment Bond each on AIA Form 312 in quadruplicate, in the amount of one hundred percent (100%) of the contract amount, and which meets the requirements of Article 11 of the General Conditions. The premium for said bonds shall be included in the Contractor's Base Bid. The surety company or companies shall be acceptable to the Owner and Architect/Engineer and authorized to transact business in New York State.

The current power of attorney for the person who signs for any surety company shall be attached to such bond, indicating the surety or sureties on the bond.

14.0 Method of Award: Award of Contract may be made to the Lowest Responsible Bidder by method as follows:

1. If the award is to be made on the basis of Base Bid only, it may be made to that responsible bidder whose Base Bid therefor is the lowest and responsive to the bid specifications.
2. If the award is to be made on the basis of the combination of Base Bid with Alternates, it may be made to that responsible bidder whose net bid on such combination is the lowest, using Alternates in any order elected by the Owner.

The District reserves the right to award a contract to the lowest responsible bidder providing the required security within forty-five (45) days of the date opening of the bids. Bidders may not withdraw their respective bids for a period of forty-five (45) days after the bid opening date, unless otherwise authorized by law. To the fullest extent allowed by law, the District further reserves the right to award the contract with or without alternates, using alternates in any order elected by the owner, whichever is deemed to be in the best interests of the District.

The District further reserves the right to reject bids that contain conditions, omissions, exceptions or modifications, or in its sole discretion to waive any irregularities in the bids, or to reject any or all bids or to accept any bid which in the opinion of the District is in its best interest.

15.0 Owner-Contractor Agreement: Form of contract to be used will be the Owner-Contractor Agreement included in these specifications and prepared by this office.

16.0 Maintenance Bond: Prior to authorization of the final payment by the Owner, and prior to the receipt by the Contractor of its final payment, the Contractor shall furnish to the Owner a maintenance bond in the amount of 100% of the total compensation earned by the Contractor in connection with the work. The bond shall be in a form acceptable to the Owner and with a surety company acceptable to the Owner. It shall remain in effect for two years after the date of authorization of the final payment by the Owner.

17.0 Payment/Performance Bond: The successful bidder will be required to procure a performance and a payment bond as set forth at Article 11 of the General Conditions. All bonds shall be issued by a Surety licensed to issue bonds in the State of New York. All surety companies are subject to approval by the Owner.

18.0 Compliance with Applicable Laws and Regulations:

- A. Bidder must comply with applicable federal, state, and local laws as well as all ordinances, rules, and regulations affecting work.
- B. The provisions of General Municipal Law, Section 103A, as it relates to refusal to testify or sign a waiver of immunity against prosecution and the submittal of bids and transactions with the State of New York, or a political subdivision thereof, governs work under this contract.
- C. Wage rates as determined by the New York State Industrial Commission pursuant to the labor laws of the State of New York apply to all work under this contract.

19.0 Pre-Bid Conference:

- A. A pre-bid conference, including site visit, will be held on Thursday, December 2, 2021 at the Mamaroneck High School 1000 W. Boston Post Rd., Mamaroneck, NY 10543 at 4:00 p.m. All bidders are strongly encouraged to attend this pre-bid conference. Please be advised that masks are mandatory and temperature scan will be done upon entry to the building. Any bidder who cannot attend the pre-bid conference should schedule a site visit on an appointment only basis by contacting Mr. Stephen Brugge, Director of Facilities, at 914-220-3081. No questions will be answered at the site visit. Knowledge of the site is crucial to obtain a proper understanding of the Work. All bidders must be fully familiar with the site.
- B. All requests for clarification and/or questions concerning the bid specifications will be addressed via written addendum to all prospective bidders. Addenda clarifying pertinent questions or concerns raised during the bidding period and following site-visits requiring modification of the bid documents, will be issued for the record and become part of the bid documents.
- C. Notice as to the time and place of pre-bid conference is stated in the Invitation to Bidders.

20.0 Modification or Withdrawal of Proposal:

- A. Bid may not be modified after it has been deposited with Owner.
- B. Bid may not be withdrawn after time set for receipt of bids except as set forth in section 103, subsection eleven (11) of the General Municipal Law.
- C. Withdrawn bid may not be resubmitted.
- D. Bid withdrawn after opening of bids may result in forfeiture of bid security.

21.0 Time of Completion: Bidder shall agree to start work upon receipt of Notice to Proceed, and complete within the number of calendar days specified in the Special Provisions of the Specification. Project must be completed no later than the date specified in the Special Provisions of the Specification.

22.0 Condition of Work Operations:

- A. Work under this Contract shall be executed and pursued without interruption of or interference with the Owner's operations.

- B. Work operations, access to buildings, and the extent of movement of personnel within buildings shall be coordinated with the Construction Manager and may be limited by School District Authorities.
- C. Contractor shall notify the Construction Manager at least twenty-four (24) hours in advance to advise of intended work operations to be scheduled and receive approval prior to starting work.

23.0 Sexual Harassment Prevention Form:

- A. A Sexual Harassment Prevention Form has been included under Specification Section 004400.
- B. By submission of this form, the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all of its employees.

24.0 Insurance Coverage Affidavit:

- A. An Insurance Coverage Affidavit has been included in Specification Section 007316 and shall accompany bids.

END OF SECTION 002113

BID PROPOSAL

MAMARONECK UNION FREE SCHOOL DISTRICT

FOR THE **2019 BOND REFERENDUM /
CAPITAL IMPROVEMENTS AT MAMARONECK HIGH SCHOOL**

Made this _____ Day of _____, _____

(Corporation, Individual, or Partnership)

Address: _____

The party above named, as bidder, declares that the only person or persons interested in this bid or proposal as principal or principals is or are named above and that no other person(s) has an interest in this proposal or in the contract proposed to be taken; that this bid or proposal is not made with any person or persons making a bid or proposal for the same purpose; and that no officer or employee of the Mamaroneck Union Free School District, is or shall be, or will become, directly or indirectly interested as a contracting party, partner, stockholder, surety or otherwise in the performance of the contract, or in the supplies, work, that business to which it relates, or any portion of the profits thereof; that he has examined the site of the work, that he has examined the Contract Documents and the drawings therein referred to and has read the "Information to Bidders" hereto attached; and he proposes and agrees that if this Proposal be accepted, that he will contract in the form provided for the **2019 BOND REFERENDUM/ CAPITAL IMPROVEMENTS AT MAMARONECK HIGH SCHOOL** to furnish all necessary labor, material, plant, power tools, equipment, supplies, and transportation, and perform all work mentioned in the contract documents for the following lump sum base bid price, alternates, and unit prices:

(SEE FOLLOWING PAGES AND FILL IN ALL INFORMATION REQUIRED.)

SECTION 004102 - BID FORM
MAMARONECK UFSD/2019 Bond Referendum
Capital Improvements at
Mamaroneck High School - Phase 2
Contract #6a - General Construction
State Plan #66-07-01-03-0-001-039

BUSINESS NAME:	
ADDRESS:	
TELEPHONE NO.:	
FAX NO.:	
CONTRACT #6a (GC): Base Bid	(Subtotal)
Allowance No. 6a-1: Contingency Allowance: For unforeseen conditions, as directed by District. Include a lump sum contingency allowance of \$50,000 for use according to Owner's written instructions.	\$ 50,000.00
Allowance No. 6a-2: Masonry Allowance Post Road Building For unforeseen masonry conditions, as directed by District. Include a lump sum contingency allowance of \$30,000 for use according to Owner's written instructions. (This allowance will only be used if Add Alternate # 6a-7: Masonry Restoration Work – Post Road Building – Work Area "M" is accepted)	\$ 30,000.00
Allowance No. 6a-3: Masonry Allowance Palmer Ave. Building For unforeseen masonry conditions, as directed by District. Include a lump sum contingency allowance of \$30,000 for use according to Owner's written instructions. (This allowance will only be used if Add Alternate # 6a-8: Masonry Restoration Work – Palmer Ave. Building – Work Area "M" is accepted)	\$ 30,000.00
CONTRACT #6a (GC): Combined Base Bid (Sum)	(Total)
ALTERNATES: <i>The following amounts proposed for identified work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if the Owner chooses to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents. Specification Section 012300 for Alternate descriptions.</i>	
Add Alternate # 6a-1: Hoisting and Installation of Plasma Cutter (STEAM Lab Equipment Item #35)	+\$
Add Alternate # 6a-2: Post Road Building Library Floor Replacement – Work Area "D"	+\$
Add Alternate # 6a-3: Palmer Ave. Building Stairwell Renovations – Work Area "E"	+\$
Add Alternate # 6a-4: Palmer Avenue Building Roof Access – Work Area "G"	+\$
Add Alternate # 6a-5: Post Road Building North and South Courtyard Roof Access – Work Area "G"	+\$
Add Alternate # 6a-6: Entry Railing Replacement – Work Area "K"	+\$
Add Alternate # 6a-7: Masonry Restoration Work – Post Road Building – Work Area "M"	+\$
Add Alternate # 6a-8: Masonry Restoration Work – Palmer Ave. Building – Work Area "M"	+\$
UNIT PRICES: <i>Should the contract work be increased or decreased as per the General Conditions of the Contract, Article 8, Changes in the Work, the bidder hereby agrees that the following unit price is the basis for the extra or the credit. The price includes all labor, material, overhead, profit, administration, insurance, applicable taxes, and incidental or contributory items, or cost to the contractor and/or suppliers in connection therewith. The undersigned agrees to the following prices stipulated below as the amount of extra or credit to be applied to the contract for the increase or decrease in the scope of work if required during the course of the project. Refer to Specification Section 012200 for Unit Price descriptions.</i>	
Unit Price #6a-1 - Asbestos – Large Project Decon	\$ /unit
Unit Price #6a-2 - Asbestos – Small Project Decon	\$ /unit
Unit Price #6a-3 – Asbestos – OSHA Wash Station for Minor Project	\$ /unit
Unit Price #6a-4 - Masonry Repointing	\$ /SF
Unit Price #6a-5 - Single Brick Replacement	\$ /Brick
Unit Price #6a-6 - Area Brick Replacement	\$ /SF
Unit Price #6a-7 – Masonry/Stone Restoration	\$ /SF
Unit Price #6a-8 - Slab Trenching for Underground Services	\$ /LF
Acknowledgement by Bidder – Receipt of Addendum (please initial all boxes to verify)	
No.1	No.2
No.3	No.4
No.5	No.6
No.7	No.8
REFER TO PAGE SECTION 004100 FOR A COMPLETE LIST OF FORMS TO BE SUBMITTED WITH THE BID.	
NOTES:	
1). Method of Award: Award of Contract may be made to the Lowest Responsible Bidder by method as follows: •If the award is to be made on the basis of Base Bid only, it may be made to that responsible bidder whose Base Bid therefor is the lowest and responsive to the bid specifications. •If the award is to be made on the basis of the combination of Base Bid with Alternates, it may be made to that responsible bidder whose net bid on such combination is the lowest, using Alternates in any order elected by the Owner. The District reserves the right to award a contract to the lowest responsible bidder providing the required security within forty-five (45) days of the date opening of the bids. Bidders may not withdraw their respective bids for a period of forty-five (45) days after the bid opening date, unless otherwise authorized by law. To the fullest extent allowed by law, the District further reserves the right to award the contract with or without alternates, using alternates in any order elected by the owner, whichever is deemed to be in the best interests of the District. The District further reserves the right to reject bids that contain conditions, omissions, exceptions or modifications, or in its sole discretion to waive any irregularities in the bids, or to reject any or all bids or to accept any bid which in the opinion of the District is in its best interest.	
2). On acceptance of the bid for the work, the undersigned hereby binds himself/herself/themselves to enter into a written contract with the Board of Education within ten (10) days of the notice of award, and to comply in all respects with the requirements and provisions set forth in the Bid Specifications, including but not limited to the Bid Instructions and the General Conditions in relation to security for the faithful performance of the terms of said contract.	
Signature:	
Printed Name of Person Signing:	
Title of Person Signing:	004102-1a

SECTION 004102 - BID FORM
MAMARONECK UFSD/2019 Bond Referendum
Capital Improvements at
Mamaroneck High School - Phase 2
Contract #6b - Mechanical Construction
State Plan #66-07-01-03-0-001-039

BUSINESS NAME:	
ADDRESS:	
TELEPHONE NO.:	
FAX NO.:	
CONTRACT #6b (Mechanical): Base Bid	\$ (Subtotal)
Allowance No. 6b-1: Contingency Allowance: For unforeseen conditions, as directed by District. Include a lump sum contingency allowance of \$50,000 for use according to Owner's written instructions.	\$ 50,000.00
CONTRACT #6b (Mechanical): Combined Base Bid (Sum)	\$ (Total)
ALTERNATES:	
<i>The following amounts proposed for identified work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if the Owner chooses to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents. Specification Section 012300 for Alternate descriptions.</i>	
Add Alternate # 6b-1 - Mechanical work associated with the Plasma Cutter (STEAM Lab Equipment Item #35), Modular Hood HD-1 and Blower Fan BF-1	+ \$
Add Alternate # 6b-2 – Existing Mechanical Dunnage Painting – Work Area “R”	+ \$
Acknowledgement by Bidder – Receipt of Addendum (please initial all boxes to verify)	
No.1 ___ No.2 ___ No.3 ___ No.4 ___ No.5 ___ No.6 ___ No.7 ___ No.8 ___	
REFER TO PAGE SECTION 004100 FOR A COMPLETE LIST OF FORMS TO BE SUBMITTED WITH THE BID.	
NOTES:	
1). <i>Method of Award: Award of Contract may be made to the Lowest Responsible Bidder on the basis of Base Bid only, it may be made to that responsible bidder whose Base Bid therefor is the lowest and responsive to the bid specifications.</i>	
<i>The District reserves the right to award a contract to the lowest responsible bidder providing the required security within forty-five (45) days of the date opening of the bids. Bidders may not withdraw their respective bids for a period of forty-five (45) days after the bid opening date, unless otherwise authorized by law.</i>	
<i>The District further reserves the right to reject bids that contain conditions, omissions, exceptions or modifications, or in its sole discretion to waive any irregularities in the bids, or to reject any or all bids or to accept any bid which in the opinion of the District is in its best interest.</i>	
2). <i>On acceptance of the bid for the work, the undersigned hereby binds himself/herself/themselves to enter into a written contract with the Board of Education within ten (10) days of the notice of award, and to comply in all respects with the requirements and provisions set forth in the Bid Specifications, including but not limited to the Bid Instructions and the General Conditions in relation to security for the faithful performance of the terms of said contract.</i>	
Signature:	
Printed Name of Person Signing:	
Title of Person Signing:	

SECTION 004102 - BID FORM
MAMARONECK UFSD/2019 Bond Referendum
Capital Improvements at
Mamaroneck High School - Phase 2
Contract #6c - Plumbing Construction
State Plan #66-07-01-03-0-001-039

BUSINESS NAME:	
ADDRESS:	
TELEPHONE NO.:	
FAX NO.:	
CONTRACT #6c (Plumbing): Base Bid	\$ (Subtotal)
Allowance No. 6c-1: Contingency Allowance: For unforeseen conditions, as directed by District. Include a lump sum contingency allowance of \$25,000 for use according to Owner's	\$ 25,000.00
CONTRACT #6c (Plumbing): Combined Base Bid (Sum)	\$ (Total)
ALTERNATES:	
<p><i>The following amounts proposed for identified work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if the Owner chooses to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents. Specification Section 012300 for Alternate descriptions.</i></p>	
Add Alternate # 6c-1 - Plumbing work associated with the Plasma Cutter (STEAM Lab Equipment Item #35)	+ \$
UNIT PRICES:	
<p><i>Should the contract work be increased or decreased as per the General Conditions of the Contract, Article 8, Changes in the Work, the bidder hereby agrees that the following unit price is the basis for the extra or the credit. The price includes all labor, material, overhead, profit, administration, insurance, applicable taxes, and incidental or contributory items, or cost to the contractor and/or suppliers in connection therewith. The undersigned agrees to the following prices stipulated below as the amount of extra or credit to be applied to the contract for the increase or decrease in the scope of work if required during the course of the project. Refer to Specification Section 012200 for Unit Price descriptions.</i></p>	
Unit Price #6c-1 - Hanging of Piping Under Slab	\$ /LF
Acknowledgement by Bidder – Receipt of Addendum (please initial all boxes to verify)	
No.1 ___ No.2 ___ No.3 ___ No.4 ___ No.5 ___ No.6 ___ No.7 ___ No.8 ___	
REFER TO PAGE SECTION 004100 FOR A COMPLETE LIST OF FORMS TO BE SUBMITTED WITH THE BID.	
NOTES:	
<p>1). <i>Method of Award: Award of Contract may be made to the Lowest Responsible Bidder on the basis of Base Bid only, it may be made to that responsible bidder whose Base Bid therefor is the lowest and responsive to the bid specifications.</i></p> <p><i>The District reserves the right to award a contract to the lowest responsible bidder providing the required security within forty-five (45) days of the date opening of the bids. Bidders may not withdraw their respective bids for a period of forty-five (45) days after the bid opening date, unless otherwise authorized by law.</i></p> <p><i>The District further reserves the right to reject bids that contain conditions, omissions, exceptions or modifications, or in its sole discretion to waive any irregularities in the bids, or to reject any or all bids or to accept any bid which in the opinion of the District is in its best interest.</i></p> <p>2). <i>On acceptance of the bid for the work, the undersigned hereby binds himself/herself/themselves to enter into a written contract with the Board of Education within ten (10) days of the notice of award, and to comply in all respects with the requirements and provisions set forth in the Bid Specifications, including but not limited to the Bid Instructions and the General Conditions in relation to security for the faithful performance of the terms of said contract.</i></p>	
Signature:	
Printed Name of Person Signing:	
Title of Person Signing:	

SECTION 004102 - BID FORM
MAMARONECK UFSD/2019 Bond Referendum
Capital Improvements at
Mamaroneck High School - Phase 2
Contract #6d - Electrical Construction
State Plan #66-07-01-03-0-001-039

BUSINESS NAME:	
ADDRESS:	
TELEPHONE NO.:	
FAX NO.:	
CONTRACT #6d (Electrical): Base Bid	\$ (Subtotal)
Allowance No. 6d-1: Contingency Allowance: For unforeseen conditions, as directed by District. Include a lump sum contingency allowance of \$25,000 for use according to Owner's	\$ 25,000.00
Allowance No. 6d-2: Fire Alarm Upgrade Allowance: Provide a \$66,600 Fire Alarm Upgrade Allowance for use as directed by District.	\$ 66,600.00
CONTRACT #6d (Electrical): Combined Base Bid (Sum)	\$ (Total)
ALTERNATES:	
<i>The following amounts proposed for identified work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if the Owner chooses to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents. Specification Section 012300 for Alternate descriptions.</i>	
Add Alternate # 6d-1 - Electrical work associated with the Plasma Cutter (STEAM Lab Equipment Item #35), Modular Hood HD-1 and Blower Fan BF-1	+ \$
Add Alternate # 6d-2: Palmer Avenue Building Stairwell Lighting Replacement – Work Area "E"	+ \$
Acknowledgement by Bidder – Receipt of Addendum (please initial all boxes to verify)	
No.1 ___ No.2 ___ No.3 ___ No.4 ___ No.5 ___ No.6 ___ No.7 ___ No.8 ___	
REFER TO PAGE SECTION 004100 FOR A COMPLETE LIST OF FORMS TO BE SUBMITTED WITH THE BID.	
NOTES:	
1). <i>Method of Award: Award of Contract may be made to the Lowest Responsible Bidder on the basis of Base Bid only, it may be made to that responsible bidder whose Base Bid therefor is the lowest and responsive to the bid specifications.</i>	
<i>The District reserves the right to award a contract to the lowest responsible bidder providing the required security within forty-five (45) days of the date opening of the bids. Bidders may not withdraw their respective bids for a period of forty-five (45) days after the bid opening date, unless otherwise authorized by law.</i>	
<i>The District further reserves the right to reject bids that contain conditions, omissions, exceptions or modifications, or in its sole discretion to waive any irregularities in the bids, or to reject any or all bids or to accept any bid which in the opinion of the District is in its best interest.</i>	
2). <i>On acceptance of the bid for the work, the undersigned hereby binds himself/herself/themselves to enter into a written contract with the Board of Education within ten (10) days of the notice of award, and to comply in all respects with the requirements and provisions set forth in the Bid Specifications, including but not limited to the Bid Instructions and the General Conditions in relation to security for the faithful performance of the terms of said contract.</i>	
Signature:	
Printed Name of Person Signing:	
Title of Person Signing:	

SECTION 004102 - BID FORM
MAMARONECK UFSD/2019 Bond Referendum
Capital Improvements at
Mamaroneck High School - Phase 2
Contract #6e - Elevator Modernization
State Plan #66-07-01-03-0-001-039

BUSINESS NAME:	
ADDRESS:	
TELEPHONE NO.:	
FAX NO.:	
CONTRACT #6e (Elevator Modernization): Base Bid	\$ (Subtotal)
Allowance No. 6e-1: Contingency Allowance: For unforeseen conditions, as directed by District. Include a lump sum contingency allowance of \$10,000 for use according to Owner's	\$ 10,000.00
Allowance No. 6e-2: Cab Allowance: Provide a \$15,000 Cab Allowance for use as directed by District. Refer to specification section 142423 – Hydraulic Elevator Modernization for additional information.	\$ 15,000.00
CONTRACT #6e (Elevator Modernization): Combined Base Bid (Sum)	\$ (Total)
ALTERNATES:	
<i>The following amounts proposed for identified work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if the Owner chooses to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents. Specification Section 012300 for Alternate descriptions.</i>	
Add Alternate # 6e-1 - Replace Elevator Jack Assembly as per Specification Section 142423 Hydraulic Elevator Modernization.	+ \$
Add Alternate # 6e-2 - Paint Hoistway Doors (All Floors).	+ \$
Acknowledgement by Bidder – Receipt of Addendum (please initial all boxes to verify)	
No.1 <input type="checkbox"/> No.2 <input type="checkbox"/> No.3 <input type="checkbox"/> No.4 <input type="checkbox"/> No.5 <input type="checkbox"/> No.6 <input type="checkbox"/> No.7 <input type="checkbox"/> No.8 <input type="checkbox"/>	
REFER TO PAGE SECTION 004100 FOR A COMPLETE LIST OF FORMS TO BE SUBMITTED WITH THE BID.	
NOTES:	
1). <i>Method of Award: Award of Contract may be made to the Lowest Responsible Bidder on the basis of Base Bid only, it may be made to that responsible bidder whose Base Bid therefor is the lowest and responsive to the bid specifications.</i>	
<i>The District reserves the right to award a contract to the lowest responsible bidder providing the required security within forty-five (45) days of the date opening of the bids. Bidders may not withdraw their respective bids for a period of forty-five (45) days after the bid opening date, unless otherwise authorized by law.</i>	
<i>The District further reserves the right to reject bids that contain conditions, omissions, exceptions or modifications, or in its sole discretion to waive any irregularities in the bids, or to reject any or all bids or to accept any bid which in the opinion of the District is in its best interest.</i>	
2). <i>On acceptance of the bid for the work, the undersigned hereby binds himself/herself/themselves to enter into a written contract with the Board of Education within ten (10) days of the notice of award, and to comply in all respects with the requirements and provisions set forth in the Bid Specifications, including but not limited to the Bid Instructions and the General Conditions in relation to security for the faithful performance of the terms of said contract.</i>	
Signature:	
Printed Name of Person Signing:	
Title of Person Signing:	

QUALIFICATIONS OF BIDDERS

Experience and Qualifications of the Bidder: Each bidder is required to submit the following documentation to demonstrate its experience and qualifications for the work of the Project for which a bid is submitted:

- a. A description of its experience with projects of comparative size, complexity, and cost, together with documentary evidence showing that said projects were completed to the Owner's satisfaction and were completed in a timely fashion;
- b. Documentation from each of the projects it has performed capital work in the last five (5) years concerning the bidder's:
 - (i) timeliness of performance of the work of the project
 - (ii) evidence that the project was completed to the Owner's satisfaction;
 - (iii) whether or not any extensions of time were requested by the contractor and whether or not such requests were granted;
 - (iv) whether litigation and/or arbitration was commenced by either the Owner or the bidder as a result of the work of the project performed by the bidder;
 - (v) whether any liens were filed on the project by subcontractors or material suppliers of the bidder;
 - (vi) whether the bidder was defaulted on the project by the owner;
 - (vii) whether the bidder made any claims for extra work on the project, including whether said claim resulted in a change order;
- c. Documentation evidencing the bidder's financial responsibility, including a certified financial statement prepared by a certified public accountant.
- d. Documentation evidencing the bidder's existence under the same name for the last five (5) years.
- e. Documentation evidencing the bidder's Worker's Compensation Experience Modification.

STATEMENT OF BIDDER'S QUALIFICATIONS

IMPORTANT: BIDDERS ARE REQUIRED TO FURNISH A COMPLETE ANSWER TO ALL OF THE QUESTIONS IN THIS STATEMENT. IF ADDITIONAL SPACE IS REQUIRED TO FURNISH A COMPLETE ANSWER, BIDDER MAY ATTACH PAGES AS NECESSARY. IN THE EVENT THAT COMPLETE ANSWERS ARE NOT PROVIDED TO EVERY QUESTION, THE BID WILL BE REJECTED.

1. Name of Bidder

2. Type of Business Entity

3. If the bidder is a corporation, state the date and place of incorporation of the corporation.

4. For how many years has the bidder done business under its present name?

5. List the persons who are directors, officers, owners, managerial employees or partners in the bidder's business.

6. Have any of the persons listed in Number 5 owned/operated/been shareholders in any other companies? If so, please state the names of the other companies and the individuals who owned, operated, or have been shareholders:

7. Has any director, officer, owner or managerial employee had any professional license suspended or revoked? If the answer to this question is yes, list the name of the individual, the professional license he/she formerly held, whether said license was revoked or suspended and the date of the revocation or suspension.

8. Has the bidder been found guilty of any OSHA Violations? If the answer to this question is yes, describe the nature of the OSHA violation, an explanation of remediation or other steps taken regarding such violation(s).

9. Has the bidder been charged with any claims pertaining to unlawful intimidation or discrimination against any employee by reason of race, creed, color, disability, sex or natural origin and/or violations of an employee's civil rights or equal employment opportunities? If the answer to this question is yes, list the persons making such claim against the bidder, a description of the claim, the status of the claim, and what disposition (if any) has been made regarding such claim.

10. Has the bidder been named as a party in any lawsuit arising from performance of work related to any project in which it has been engaged? If the answer to this question is yes, list all such lawsuits, the index number associated with said suit and the status of the lawsuit at the time of the submission of this bid.

11. Has the bidder been the subject of an investigation and/or proceedings before the Department of Labor for alleged violations of the Labor Law as it relates to the payment of prevailing wages and/or supplemental payment requirements? If the answer to this question is yes, please list each such instance of the commencement of a Department of Labor proceeding, for which project such proceeding was commenced, and the status of the proceeding at the time of the submission of this bid.

12. Has the bidder been the subject of an investigation and/or proceeding before any law enforcement agency, including, but not limited to any District Attorney's Office? If the answer to this question is yes, please list each such instance, the law enforcement agency, the nature of the proceeding, the project for which such proceeding was commenced, if applicable to a project, and the status of the proceeding at the time of the submission of this bid.

13. Has the bidder been the subject of proceedings involving allegations that it violated the Workers' Compensation Law, including but not limited to, the failure to provide proof of worker's compensation or disability coverage and/or any lapses thereof? If the answer to this question is yes, list each such instance of violation and the status of the claimed violation at the time of the submissions of this bid.

14. Has the bidder, its officers, directors, owner and/or managerial employees been convicted of a crime or been the subject of a criminal indictment? If the answer to this question is yes, list the name of the individual convicted or indicted, the charge against the individual and the date of disposition of the charge.

15. Has the bidder been charged with and/or found guilty of any violations of federal, state, or municipal environmental and/or health laws, codes, rules and/or regulations? If the answer to this question is yes, list the nature of the charge against the bidder, the date of the charge, and the status of the charge at the time of the submission of this bid.

16. Has the bidder bid on any projects in the last five years preceding the date of this bid submission? If the answer to this question is yes, list the projects bid on, whether said bid was awarded to the bidder and the expected date of commencement of the work for said project. For those projects listed, if the bidder was not awarded the contract, state whether the bidder was the lowest monetary bidder.

IMPORTANT: BIDDERS ARE REQUIRED TO FURNISH A COMPLETE LIST OF PROJECTS AS REQUIRED BY THIS QUESTION #16 WITH ITS BID. IN THE EVENT THE LIST REQUESTED IS NOT SUBMITTED WITH THE BIDDER'S BID, THE BID WILL BE REJECTED.

17. Does the bidder have any projects ongoing at the time of the submission of this bid? If the answer to this question is yes, list the projects on which the bidder is currently working, the percentage complete, and the expected date of completion of said project.

IMPORTANT: BIDDERS ARE REQUIRED TO FURNISH A COMPLETE LIST OF PROJECTS AS REQUIRED BY THIS QUESTION #17 WITH ITS BID. IN THE EVENT THE LIST REQUESTED IS NOT SUBMITTED WITH THE BIDDER'S BID, THE BID WILL BE REJECTED.

18. Have the bidder and its bond surety ever been notified by a project Owner that the Owner is contemplating declaring a default and requested a conference to discuss the performance of the contract? If the answer to this question is yes, list the projects on which such a conference was held, and the result of the conference, and the status of the project in question.

19. Has the bidder ever been terminated from a Project by the Owner? If the answer to this question is yes, list the projects on which the bidder was terminated, the nature of the termination (convenience, suspension, for cause), and the date of said termination.

IMPORTANT: BIDDERS ARE REQUIRED TO FURNISH A COMPLETE LIST OF PROJECTS AS REQUIRED BY THIS QUESTION #19 WITH ITS BID. IN THE EVENT THE LIST REQUESTED IS NOT SUBMITTED WITH THE BIDDER'S BID, THE BID WILL BE REJECTED.

20. Has the bidder's surety ever been contacted to provide supervisory services in connection with an on-going project. If the answer to this question is yes, list the project(s) for which the surety provided supervisory services.

IMPORTANT: BIDDERS ARE REQUIRED TO FURNISH A COMPLETE LIST OF PROJECTS AS REQUIRED BY THIS QUESTION #20 WITH ITS BID. IN THE EVENT THE LIST REQUESTED IS NOT SUBMITTED WITH THE BIDDER'S BID, THE BID WILL BE REJECTED.

21. Bidder's Worker's Compensation Experience Modifier: _____

Dated:

By: _____
(Signature)

(Print Name and Title)

Sworn to before me this _____
day of _____, 20____.

Notary Public

SECTION 012100 – ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
 - 1. Contingency allowances.
- C. Related Requirements:
 - 1. Section 012200 "Unit Prices" for procedures for using unit prices.
 - 2. Section 014000 "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.4 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

1.5 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.6 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.7 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.8 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
 - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
 - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 - 3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
 - 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
 - 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
 - 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES – **CONTRACT 6a - General Construction (PCGC)**

- A. Allowance No. 6a-1: Contingency Allowance: For unforeseen condition, as directed by District. Include a lump sum allowance of **\$50,000** for use according to Owner's written instructions.
- B. Allowance No. 6a-2: Masonry Allowance Post Road Building
For unforeseen masonry conditions, as directed by District. Include a lump sum contingency allowance of **\$30,000** for use according to Owner's written instructions.
 - 1. This allowance will only be used if Add Alternate # 6a-7: Masonry Restoration Work – Post Road Building – Work Area “M” is accepted.
- C. Allowance No. 6a-3: Masonry Allowance Palmer Ave. Building
For unforeseen masonry conditions, as directed by District. Include a lump sum contingency allowance of **\$30,000** for use according to Owner's written instructions.
 - 1. This allowance will only be used if Add Alternate # 6a-8: Masonry Restoration Work – Palmer Ave. Building – Work Area “M” is accepted.

3.4 SCHEDULE OF ALLOWANCES – **CONTRACT 6b - Mechanical Construction (PCM)**

- A. Allowance No. 6b-1: Contingency Allowance: For unforeseen conditions, as directed by District. Include a lump sum contingency allowance of **\$50,000** for use according to Owner's written instructions.

3.5 SCHEDULE OF ALLOWANCES – **CONTRACT 6c - Plumbing Construction (PCP)**

- A. Allowance No. 6c-1: Contingency Allowance: For unforeseen conditions, as directed by District. Include a lump sum contingency allowance of **\$25,000** for use according to Owner's written instructions.

3.6 SCHEDULE OF ALLOWANCES – **CONTRACT 6d - Electrical Construction (PCE)**

- A. Allowance No. 6d-1: Contingency Allowance: For unforeseen conditions, as directed by District. Include a lump sum contingency allowance of **\$25,000** for use according to Owner's written instructions.
- B. Allowance No. 6d-2: Fire Alarm Upgrade Allowance: Provide a **\$66,600** Fire Alarm Upgrade Allowance for use as directed by District.

3.7 SCHEDULE OF ALLOWANCES – **CONTRACT 6e- Elevator Modernization Construction (PEEC)**

- A. Allowance No. 6e-1: Contingency Allowance: For unforeseen conditions, as directed by District. Include a lump sum contingency allowance of **\$10,000** for use according to Owner's written instructions.
- B. Allowance No. 6e-2: Cab Allowance: Provide a **\$15,000** Cab Allowance for use as directed by District. Refer to specification section 142423 – Hydraulic Elevator Modernization for additional information.

END OF SECTION 012100

SECTION 012200 – UNIT PRICES

PART 1 - GENERAL

1.01 SUMMARY

- A. This section specifies administrative and procedural requirements for handling and processing work associated with unit prices. Related documents include drawings and other general provisions of the Contract, including General Conditions and other Division 1 specification sections.

1.02 RELATED SECTIONS

- A. Section 012600 - "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
- B. Section 013300 – "Submittal Procedures"

1.03 DEFINITIONS

- A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.04 PURPOSE

- A. Unit prices stated on the Bid Form shall be used as a basis of compensation for increases, or decreases, in specified items of Work by Change Order in accordance with the General Conditions.

1.05 PROCEDURES

- A. Include in unit prices all necessary material, plus cost of delivery, installation, insurance, overhead and profit.
- B. When requested by the Architect/Engineer, submit data identified in the General Conditions supporting the unit price costs.
- C. The Owner reserves the right to reject the Contractor's measurement of work in place that involves the use of established unit prices and to have work measured at the Owner's expense by an independent surveyor.
- D. List of Unit Prices: A list of unit prices is included in Part 3 of this specification.

PART 2 PRODUCT: NOT USED

PART 3 EXECUTION

3.01 LIST OF UNIT PRICES – **CONTRACT 6a (General Construction)**

A. Contract 6a (GC): Unit Price #6a-1 – Asbestos – Large Project Decon:

Bidder to provide a unit price for the installation, use and removal of one (1) Large Project Decontamination work area to remove additional piping insulation and MJPs. Refer to Specification Section 028200. Unit price to be per enclosure and shall include all required prep work.

B. Contract 6a (GC): Unit Price #6a-2 – Asbestos – Small Project Decon:

Bidder to provide a unit price for the installation, use and removal of one (1) Small Project Decontamination work area to remove additional piping insulation and MJPs. Refer to Specification Section 028200. Unit price to be per enclosure and shall include all required prep work.

C. Contract 6a (GC): Unit Price #6a-3 – Asbestos – OSHA Wash Station for Minor Project:

Bidder to provide a unit price for the installation, use and removal of one (1) OSHA Wash Station for Minor Project, Abatement up to nine (9) MJPs and less than 10SF of Floor Tile & Mastic. Refer to Specification Section 028200. Unit price to be per wash station and shall include all required prep work.

D. Contract 6a (GC): Unit Price #6a-4 - Masonry Repointing:

Bidder to provide a unit price to perform masonry repointing as shown on detail 4/A8.80. Refer to Specification Section 040120. Unit price to be per square foot (SF) and includes all required prep work.

E. Contract 6a (GC): Unit Price #6a-5 - Single Brick Replacement:

Bidder to provide a unit price to replace a single brick as shown on detail 2/A8.80. Refer to Specification Section 040120. Unit price is per brick replacement and includes all required prep work.

F. Contract 6a (GC): Unit Price #6a-6 - Area Brick Replacement:

Bidder to provide a unit price to replace an area of brick as shown on detail 5/A8.80. Refer to Specification Section 040120. Unit price is for the square footage (SF) of replacement and includes all required prep work.

G. Contract 6a (GC): Unit Price #6a-7 – Masonry/Stone Restoration:

Bidder to provide a unit price to perform masonry/stone restoration as shown on detail 7/A8.80. Refer to Specification Section 040122. Unit price is for the square footage (SF) of restoration and includes all required prep work.

H. Contract 6a (GC): Unit Price #6a-8 - Slab Trenching for Underground Services:

Bidder to provide a unit price per linear foot for additional trenching in addition to or less than that shown on the base bid documents as being included as part of the scope of work. Trenches shall be assumed 18" wide by the depth required per the type of utility and slope (where required). Refer to drawing A1.20 and A1.80 for base bid scope.

3.02 LIST OF UNIT PRICES – **CONTRACT 6c (Plumbing Construction)**

A. Contract 6c (PC): Unit Price #6c-1 – Hanging of Piping Under Slab

Bidder to provide a unit price per linear foot for the hanging of piping below slab in the event that the slab is not on grade. Pipe size ranging from 1" to 4". Refer to Pipe Support Hangers on drawing 5/P1.14

END OF SECTION 012200

SECTION 042113 – BRICK MASONRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Clay face brick.
 2. Mortar and grout.
 3. Steel reinforcing bars.
 4. Masonry-joint reinforcement.
 5. Ties and anchors.
 6. Embedded flashing.
 7. Miscellaneous masonry accessories.
- B. Products Installed but not Furnished under This Section:
1. Cast-stone trim in unit masonry.
 2. Steel lintels in unit masonry.
 3. Cavity wall insulation.
- C. Related Requirements:
1. Section 033000 "Cast-in-Place Concrete"
 2. Section 047200 "Cast Stone Masonry"
 3. Section 072100 "Building Insulation"
 4. Section 040110 "Masonry Cleaning"

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For the following:
1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.
 2. Stone Trim Units: Show sizes, profiles, and locations of each stone trim unit required.
 3. Reinforcing Steel: Detail bending, lap lengths, and placement of unit masonry reinforcing bars. Comply with ACI 315.
 4. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.
- C. Samples for Initial Selection:
1. Clay face brick
 2. Stone trim.
 3. Colored mortar.
 4. Weep vents/cavity cell vents.
- D. Samples for Verification: For each type and color of the following:
1. Clay face brick
 2. Special brick shapes.

3. Stone trim.
4. Pigmented mortar. Make Samples using same sand and mortar ingredients to be used on Project.
5. Weep holes and cavity vents.
6. Accessories embedded in masonry.

1.3 INFORMATIONAL SUBMITTALS

- A. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, model numbers, batch numbers, and other information as required to identify materials used. Include mix proportions for mortar and grout and source of aggregates.
1. Submittal is for information only. Receipt of list does not constitute approval of deviations from the Contract Documents unless such deviations are specifically brought to the attention of Architect and approved in writing.
- B. Qualification Data: For testing agency.
- C. Material Certificates: For each type and size of the following:
1. Masonry units.
 - a. Include material test reports substantiating compliance with requirements.
 - b. For brick, include size-variation data verifying that actual range of sizes falls within specified tolerances.
 - c. For exposed brick, include test report for efflorescence according to ASTM C 67.
 - d. For masonry units, include data and calculations establishing average net-area compressive strength of units.
 2. Cementitious materials. Include name of manufacturer, brand name, and type.
 3. Mortar admixtures.
 4. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
 5. Grout mixes. Include description of type and proportions of ingredients.
 6. Reinforcing bars.
 7. Joint reinforcement.
 8. Anchors, ties, and metal accessories.
- D. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.
1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C 109/C 109M for compressive strength, ASTM C 1506 for water retention, and ASTM C 91/C 91M for air content.
 2. Include test reports, according to ASTM C 1019, for grout mixes required to comply with compressive strength requirement.
- E. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

1.4 QUALITY ASSURANCE

- A. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.

- B. Sample Panels: Build sample panels to verify selections made under Sample submittals and to demonstrate aesthetic effects. Comply with requirements in Division 1.
1. Build sample panels for each type of exterior unit masonry construction in sizes approximately 48 inches long by 48 inches high by full thickness.
 2. Build sample panels facing south.
 3. Where masonry is to match existing, build panels adjacent and parallel to existing surface.
 4. Clean one-half of exposed faces of panels with masonry cleaner indicated.
 5. Protect approved sample panels from the elements with weather-resistant membrane.
 6. Approval of sample panels is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; aesthetic qualities of workmanship; and other material and construction qualities specifically approved by Architect in writing.
 - a. Approval of sample panels does not constitute approval of deviations from the Contract Documents contained in sample panels unless Architect specifically approves such deviations in writing.
- C. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
1. Build mockups for each type of exposed exterior unit masonry construction in sizes approximately 48 inches long by 48 inches high by full thickness, including face and backup wythes and accessories. Additionally, provide mock-ups of locations listed in architectural drawings.
 - a. Include a sealant-filled joint at least 16 inches long in exterior wall mockup.
 - b. Include lower corner of window opening at upper corner of exterior wall mockup. Make opening approximately 12 inches wide by 16 inches high.
 - c. Include through-wall flashing installed for a 24-inch length in corner of exterior wall mockup approximately 16 inches down from top of mockup, with a 18-inch length of flashing left exposed to view (omit masonry above half of flashing).
 - d. Include metal studs, sheathing, vapor barrier, veneer anchors, flashing, preformed corners and end dams, cavity drainage material, and weep vents in exterior masonry-veneer wall mockup.
 2. Where masonry is to match existing, erect mockups adjacent and parallel to existing surface.
 3. Clean one-half of exposed faces of mockups with masonry cleaner as indicated.
 4. Protect accepted mockups from the elements with weather-resistant membrane.
 5. Approval of mockups is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; and aesthetic qualities of workmanship.
 - a. Approval of mockups is also for other material and construction qualities specifically approved by Architect in writing.
 - b. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 6. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.6 PROJECT CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
 - 1. Extend cover a minimum of 24 inches down both sides of walls, and hold cover securely in place.
- B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.
- C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
 - 1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
 - 2. Protect sills, ledges, and projections from mortar droppings.
 - 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
 - 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
 - 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.
- E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 MASONRY UNITS, GENERAL

- A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.
- C. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed Work.

2.2 PERFORMANCE REQUIREMENTS

- A. Provide unit masonry that develops indicated net-area compressive strengths at 28 days.
 - 1. Determine net-area compressive strength of masonry from average net-area compressive strengths of masonry units and mortar types (unit-strength method) according to TMS 602/ACI 530.1/ASCE 6.
 - 2. Determine net-area compressive strength of masonry by testing masonry prisms according to ASTM C 1314.

2.3 BRICK MASONRY

- A. Regional Materials: Brick shall be manufactured within 500 miles of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- B. General: Provide shapes indicated and as follows.
 - 1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
 - 2. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.

C. **Clay Face Brick: Facing brick complying with ASTM C 216**

1. **Basis of Design Products**

a. **Brick Type: Modular (To match existing)**

- 1. **As much existing brick as possible should be salvaged, cleaned and reused.**
- 2. **There will be numerous brick types per building that need to be selected to match existing.**
- 3. **Each brick type will require a custom blend. Contact Consolidated Brick, (860) 335-4905. Contact: Leona Bohjalian.**
- 4. **Brick selection to be determined after award – provide an allowance of \$1.50 per brick for modular brick.**

2. Grade: SW
3. Type: FBS
4. Initial Rate of Absorption: Less than 30 g/30 sq. in. per minute when tested per ASTM C 67.
5. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."
6. Surface Coating: Brick with colors or textures produced by application of coatings shall withstand 50 cycles of freezing and thawing per ASTM C 67 with no observable difference in the applied finish when viewed from 10 feet.
7. Size (Actual Dimensions): 3-5/8 inches wide by 2-1/4 inches high by 7-5/8 inches long.

D. Rocked Norman Brick

1. Basis of Design Products

a. Brick Type Rocked Norman: (To match existing)

1. **As much existing brick as possible should be salvaged, cleaned and reused.**
2. **This brick relates to the newest addition of the building shown on the drawings in elevations on drawings A3.07 and A3.08.**
3. **Contact Consolidated Brick, (860) 335-4905. Contact: Leona Bohjalian.**
4. **Brick selection to be determined after award – provide an allowance of \$3.00 per brick for rocked norman brick.**

E. Fire-Resistance Ratings: Comply with requirements for fire-resistance-rated assembly designs indicated.

1. Where fire-resistance-rated construction is indicated, units shall be listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction.

2.4 MORTAR MATERIALS

A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.

B. Hydrated Lime: ASTM C 207, Type S.

C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.

D. Masonry Cement: ASTM C 91/C 91M.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. Cemex S.A.B. de C.V.
- b. Essroc.
- c. Holcim (US) Inc.
- d. Lafarge North America Inc.
- e. Lehigh Hanson; HeidelbergCement Group.

E. Mortar Cement: ASTM C 1329/C 1329M.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Lafarge North America Inc.
 - b. Approved Equal

- F. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes and complying with ASTM C 979/C 979M. Use only pigments with a record of satisfactory performance in masonry mortar.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Davis Colors.
 - b. Lanxess Corporation.
 - c. Solomon Colors, Inc.

- G. Mixes in first paragraph below allow better control of color than job-mixed colored mortar. If retaining, also retain paragraphs above that specify materials included in the mixes retained below.

- H. Colored Cement Products: Packaged blend made from portland cement and hydrated lime and mortar pigments, all complying with specified requirements, and containing no other ingredients.
 1. Colored Portland Cement-Lime Mix:
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Essroc.
 - 2) Holcim (US) Inc.
 - 3) Lafarge North America Inc.
 - 4) Lehigh Hanson; HeidelbergCement Group.
 2. Colored Masonry Cement:
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Cemex S.A.B. de C.V.
 - 2) Essroc.
 - 3) Holcim (US) Inc.
 - 4) Lafarge North America Inc.
 - 5) Lehigh Hanson; HeidelbergCement Group.
 3. Formulate blend as required to produce color indicated or, if not indicated, as selected from manufacturer's standard colors.
 4. Pigments shall not exceed 10 percent of portland cement by weight.
 5. Pigments shall not exceed 5 percent of masonry cement or mortar cement by weight.

- I. Aggregate for Mortar: ASTM C 144.
 1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.

2. For joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 sieve.
3. White-Mortar Aggregates: Natural white sand or crushed white stone.
4. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.

J. Aggregate for Grout: ASTM C 404.

K. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. BASF Corporation; Construction Systems.
 - b. Euclid Chemical Company (The); an RPM company.
 - c. Grace Construction Products; W.R. Grace & Co. -- Conn.

L. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with CMUs containing integral water repellent from same manufacturer.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. ACM Chemistries.
 - b. BASF Corporation; Construction Systems.
 - c. Euclid Chemical Company (The); an RPM company.
 - d. Grace Construction Products; W.R. Grace & Co. -- Conn.

M. Water: Potable

2.5 REINFORCEMENT

A. Masonry Joint Reinforcement, General: ASTM A 951/A 951M.

B. Masonry Joint Reinforcement for Veneers Anchored with Seismic Masonry-Veneer Anchors: Single 0.187-inch- diameter, hot-dip galvanized, carbon-steel continuous wire.

2.6 TIES AND ANCHORS

A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:

1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2 coating.
2. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.

B. Wire Ties, General: Unless otherwise indicated, size wire ties to extend at least halfway through veneer but with at least 5/8-inch cover on outside face. Outer ends of wires are bent 90 degrees and extend 2 inches parallel to face of veneer.

C. Adjustable Masonry-Veneer Anchors:

1. General: Ties and anchors shall extend at least 1-1/2 inches into veneer but with at least a 5/8-inch cover on outside face.
2. Veneer Anchor
 - a. Basis of Design: DW-10HS by Hohmann & Barnard, Inc.
3. Veneer Anchor with Pronged Legs
 - a. Basis of Design: X-Seal Anchor by Hohmann & Barnard, Inc.
4. Materials Conformance:
 - a. Wire (Carbon Steel): Prefabricated from cold-drawn steel wire conforming to ASTM A1064/A1064M.
 - 1) Tensile Strength – 80,000 p.s.i., Yield Point – 70,000 p.s.i. minimum.
 - 2) Zinc Coating: Hot-Dipped Galvanized after fabrication: ASTM A153/A153M-B (1.5 oz/ft²)
 - b. Wire (Stainless Steel): ASTM A580/A580M – AISI Type 304 or Type 312
 - c. Sheet Metal (Carbon Steel): ASTM A1008/A1008M
 - 1) Zinc Coating: Hot-Dip Galvanized ASTM A153/A153M Class B2 (1.5 oz/ft²). (Sheet metal ties and anchors galvanized after fabrication.
 - d. Sheet Metal (Stainless Steel): ASTM A666, ASTM A480/480M, and ASTM A240/A240M, AISI Type 304 or 316.
 - e. X-Seal Tape: ASTM D751-95, ASTM D4533-91, ASTM G154-98, ASTM E96-B
 - f. Leg Depth: 1 1/2" to 2" (Or equal to thickness of wallboard + insulation)
 - g. Thickness: 14 Gauge
 - h. Vee-Byna Tie Diameter: 3/16"Ø
 - i. Vee-Byna Tie Length: 4"
 - j. X-Seal Tape: Adhesive backed 3" x 75' rolls

2.7 EMBEDDED FLASHING MATERIALS

- A. Flexible Flashing: For flashing not exposed to the exterior, use the following, unless otherwise indicated:
 1. Asphalt – Coated Copper Flashing: 5-oz./sq. ft. (1.5 – kg/sq.m) copper sheet coated with flexible asphalt. Use only where flashing is fully concealed in masonry.
 - a. Products:
 - 1) Hohmann & Barnard, Inc.; H & B C – Coat Flashing C-FAB
 - 2) Sandell Manufacturing Co., Inc.; Coated Copper Flashing
 - 3) York Manufacturing, Inc.; Copperseal
- B. Single – Wythe CMU Flashing System: System of CMU cell flashing pans and interlocking CMU web covers made from high density polyethylene incorporating chemical stabilizers that prevent UV degradation. Cell flashing panes have integral weep spouts that are designed to be built into mortar bed joints and weep collected moisture to the exterior of CMU walls and that extend into the cell to prevent clogging mortar.
 1. Product: Subject to compliance with requirements, provide "Blok-Flash" by Advanced Building Products, Inc.
- C. Solder and Sealants for Sheet Metal Flashings:
 1. Solder for Stainless Steel: ASTM B 32, Grade Sn60, with acid flux of type recommended by stainless-steel sheet manufacturer.
 2. Solder for Copper: ASTM B 32, Grade Sn50, 50 percent lead.
 3. Elastomeric Sealant: ASTM C 920, chemically curing urethane sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashings and trim remain watertight.

- D. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.
- E. Cavity Wall Drainage System:
- a. Basis-of-Design Product: Mortar Net Solutions; TotalFlash unitized flashing and cavity drainage system or comparable product by one of the following:
 - 1) Advanced Building Products Inc.
 - 2) Hyload, Inc.
 - b. Flashing Membrane: Composite flashing product consisting of UV stable thermoplastic vinyl of an overall thickness of not less than 0.040 inch.
 - c. Termination Bars:
 - 1) Stainless Steel: 1.25" high x 16 gauge thick, pre-drilled holes 6" on-center, 100% recyclable
 - d. Drip Edges:

Material and finish per location as noted on architectural drawings.

 - 1) Stainless Steel: 3.0" high x 28 gauge, 3/8" hemmed edge, 100% recyclable
 - 2) Cold-rolled Copper: 3.0" high x 24 gauge, 3/8" hemmed edge, 100% recyclable
 - 3) Kynar®-coated galvanized steel: 3.0" high x 24 gauge, 3/8" hemmed edge, 4 color choices (Almond, Tan, Gray, Terra-cotta)
 - e. Complete Flash™: TPO, or synthetic rubber/polypropylene blend
 - 1) 14" High inside/outside Corner Boots
 - 2) 14" High inside/outside Corner Boots
 - f. Metal Drip Edge Corners:
 - 1) 14" High inside/outside Corner Boots
 - 2) 14" High inside/outside Corner Boots
 - g. Accessories: Provide preformed corners, end dams, and materials produced by flashing manufacturer.
 - 1) Basis-of-Design Product: Mortar Net Solutions; CompleteFlash.
 - h. Sealants:
 - 1) Basis-of-Design Product: Mortar Net Solutions; BTL-1, Butyl.
- F. Application: Unless otherwise indicated, use the following:
1. Where flashing is indicated to receive counterflashing, use metal flashing.
 2. Where flashing is indicated to be turned down at or beyond the wall face, use metal flashing.
 3. Where flashing is partly exposed and is indicated to terminate at the wall face, use a flexible flashing with a metal drip edge.

- G. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

2.8 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene.
- B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.
- C. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D 226/D 226M, Type I (No. 15 asphalt felt).
- D. Weep/Cavity Vent Products: Use the following unless otherwise indicated:
 - 1. Cellular Plastic Weep/Vent: One-piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth 1/8 inch (3 mm) less than depth of outer wythe, in color selected from manufacturer's standard.
 - a. Basis-of-Design Product: Mortar Net Solutions; CellVent or compatible product by one of the following:
 - 1) Advanced Building Products Inc.
 - 2) Heckmann Building Products, Inc.
 - 3) Wire-Bond.
 - 2. Mesh Weep/Vent: Free-draining mesh; made from polyethylene strands, full height and width of head joint and depth 1/8 inch less than depth of outer wythe; in color selected from manufacturer's standard.
 - a. Basis-of-Design Product: Subject to compliance with requirements, provide Mortar Net Solutions; WeepVent or comparable product by one of the following:
 - 1) Advanced Building Products Inc.
 - 2) Keene Building Products.
 - 3) Wire-Bond.
- E. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.
 - 1. Basis-of-Design Product: Mortar Net Solutions; Mortar Net with Insect Barrier or comparable product by one of the following:
 - a. Advanced Building Products Inc.
 - b. Heckmann Building Products, Inc.
 - c. Wire-Bond.

2.9 MASONRY CLEANERS

- A. Refer to Spec Section 040110 "Masonry Cleaning"

2.10 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
 - 1. Do not use calcium chloride in mortar or grout.
- B. Mixing: Use mechanical batch mixer and comply with referenced ASTM standards.
- C. Mortar for Unit Masonry: ASTM C 270, Proportion Specification.
 - 1. Limit cementitious materials to lime and portland cement.
 - 2. Masonry below grade and in contact with earth: Type M
 - 3. Reinforced masonry: Type S.
 - 4. Applications as follows: Type N.
 - a. Locations for which another mortar type has not been specifically indicated.
- D. Grout: ASTM C 476; provide consistency required at time of placement to fill completely all spaces indicated to be grouted.
 - 1. Use fine grout in spaces less than 2 inches in least horizontal dimension.
 - 2. Use coarse grout in spaces 2 inches or more in least horizontal dimension.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 - 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
 - 2. Verify that foundations are within tolerances specified.
 - 3. Verify that reinforcing dowels are properly placed.
 - 4. Verify that substrates are free of substances that impair mortar bond.
- B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.
- B. Build chases and recesses to accommodate items specified in this and other Sections.

- C. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match construction immediately adjacent to opening.
- D. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- E. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.
- F. Matching Existing Masonry: Match coursing, bonding, color, and texture of existing masonry.
- G. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested according to ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.

3.3 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch or minus 1/4 inch
2. For location of elements in plan, do not vary from that indicated by more than plus or minus 1/2
3. For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls, do not vary from level by more than 1/4 inch in 10 feet or 1/2-inch maximum.
2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet 1/4 inch in 20 feet or 1/2-inch maximum.
3. For vertical lines and surfaces, do not vary from plumb by more than 1/4 inch in 10 feet 3/8 inch in 20 feet or 1/2-inch maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2-inch maximum.
5. For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2-inch maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, or 1/2-inch maximum.
7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.

3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch.
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch.
5. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch from one masonry unit to the next.

3.4 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond as indicated on Drawings; do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.
- C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 2 inches Bond and interlock each course of each wythe at corners. Do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.
- D. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.
- E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- F. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.
- G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below, and rod mortar or grout into core.
- H. Fill cores in hollow CMUs with grout 24 inches under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.
- I. Build nonload-bearing interior partitions full height of story to underside of solid floor or roof structure above unless otherwise indicated.
 1. Install compressible filler in joint between top of partition and underside of structure above.
 2. Fasten partition top anchors to structure above and build into top of partition. Grout cells of CMUs solidly around plastic tubes of anchors and push tubes down into grout to provide 1/2-inch clearance between end of anchor rod and end of tube. Space anchors 48 inches o.c. unless otherwise indicated.
 3. Wedge nonload-bearing partitions against structure above with small pieces of tile, slate, or metal. Fill joint with mortar after dead-load deflection of structure above approaches final position.
 4. At fire-rated partitions, treat joint between top of partition and underside of structure above to comply with Section 078443 "Through Penetration Firestopping Systems."

3.5 MORTAR BEDDING AND JOINTING

- A. Lay brick as follows:
1. Bed face shells in mortar and make head joints of depth equal to bed joints.
 2. Bed webs in mortar in all courses of piers, columns, and pilasters.
 3. Bed webs in mortar in grouted masonry, including starting course on footings.
 4. Fully bed entire units, including areas under cells, at starting course on footings where cells are not grouted.
 5. Fully bed units and fill cells with mortar at anchors and ties as needed to fully embed anchors and ties in mortar.
- B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- C. Lay structural clay tile as follows:
1. Lay vertical-cell units with full head joints unless otherwise indicated. Provide bed joints with full mortar coverage on face shells and webs.
 2. Lay horizontal-cell units with full bed joints unless otherwise indicated. Keep drainage channels, if any, free of mortar. Form head joints with sufficient mortar so excess will be squeezed out as units are placed in position. Butter both sides of units to be placed, or butter one side of unit already in place and one side of unit to be placed.
 3. Maintain joint thicknesses indicated except for minor variations required to maintain bond alignment. If not indicated, lay walls with 1/4- to 3/8-inch- thick joints.
- D. Set firebox brick in full bed of refractory mortar with full head joints. Form joints by buttering both surfaces of adjoining brick and sliding it into place. Make joints just wide enough to accommodate variations in size of brick, approximately 1/8 inch. Tool joints smooth on surfaces exposed to fire or smoke.
- E. Install clay flue liners to comply with ASTM C 1283. Install flue liners ahead of surrounding masonry. Set clay flue liners in full bed of refractory mortar 1/16 to 1/8 inch thick. Strike joints flush on inside of flue to provide smooth surface. Maintain expansion space between flue liner and surrounding masonry except where surrounding masonry is required to provide lateral support for flue liners.
- F. Set cast-stone trim units in full bed of mortar with full vertical joints. Fill dowel, anchor, and similar holes.
1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
 2. Allow cleaned surfaces to dry before setting.
 3. Wet joint surfaces thoroughly before applying mortar.
 4. Rake out mortar joints for pointing with sealant.
- G. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.
1. For glazed masonry units, use a nonmetallic jointer 3/4 inch or more in width.
- H. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint) unless otherwise indicated.

- I. Cut joints flush where indicated to receive cavity wall insulation and vapor barriers unless otherwise indicated.

3.6 ANCHORED MASONRY VENEERS

- A. Anchor masonry veneers to wall framing with seismic masonry-veneer anchors to comply with the following requirements:
 - 1. Fasten anchors through sheathing to wall framing with metal fasteners of type indicated in Part 2. Use two fasteners unless anchor design only uses one fastener.
 - 2. Embed tie sections in masonry joints.
 - 3. Locate anchor sections to allow maximum vertical differential movement of ties up and down.
 - 4. Space anchors as indicated, but not more than 24 inches o.c. vertically and 16 inches o.c. horizontally, with not less than one anchor for each 2 sq. ft. of wall area. Install additional anchors within 8 inches of openings and at intervals, not exceeding 8 inches around perimeter.
- B. Provide not less than 2 inches of airspace between back of masonry veneer and face of insulation.
 - 1. Keep airspace clean of mortar droppings and other materials during construction. Bevel beds away from airspace, to minimize mortar protrusions into airspace. Do not attempt to trowel or remove mortar fins protruding into airspace.

3.7 MASONRY-CELL FILL

- A. Pour lightweight-aggregate fill into cavities to fill void spaces. Maintain inspection ports to show presence of fill at extremities of each pour area. Close the ports after filling has been confirmed. Limit the fall of fill to one story high, but not more than 20 feet.
- B. Install molded-polystyrene insulation units into masonry unit cells before laying units.

3.8 CONTROL AND EXPANSION JOINTS

- A. General: Install control- and expansion-joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.
- B. Form expansion joints in brick as follows:
 - 1. Build flanges of metal expansion strips into masonry. Lap each joint 4 inches in direction of water flow. Seal joints below grade and at junctures with horizontal expansion joints if any.
 - 2. Build flanges of factory-fabricated, expansion-joint units into masonry.
 - 3. Build in compressible joint fillers where indicated.
 - 4. Form open joint full depth of brick wythe and of width indicated, but not less than 3/8 inch for installation of sealant and backer rod specified in Section 079200 "Joint Sealants."
- C. Provide horizontal, pressure-relieving joints by either leaving an airspace or inserting a compressible filler of width required for installing sealant and backer rod specified in Section 079200 "Joint Sealants," but not less than 3/8 inch.

1. Locate horizontal, pressure-relieving joints beneath shelf angles supporting masonry.

3.9 LINTELS

- A. Steel Lintels:
 1. Install steel lintels where indicated on structural drawings.
- B. Concealed Brick Lintel System:
 1. Install Concealed Arched Spline Lintel System by Hohmann & Bardard where indicated on structural drawings. Hot-Dipped Galvanized or Stainless Steel.

3.10 FLASHING, WEEP HOLES, AND CAVITY VENTS

- A. General: Install cavity vents at shelf angles, ledges, and other obstructions to upward flow of air in cavities, and where indicated.
- B. Install flashing as follows unless otherwise indicated:
 1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
 2. At masonry-veneer walls, extend flashing through veneer, across airspace behind veneer, and up face of sheathing at least 8 inches with upper edge tucked under vapor barrier lapping at least 4 inches. Fasten upper edge of flexible flashing to sheathing through termination bar.
 3. At lintels and shelf angles, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inches to form end dams.
 4. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal drip edge.
 5. Cut flexible flashing off flush with face of wall after masonry wall construction is completed.
- C. Install reglets and nailers for flashing and other related construction where they are shown to be built into masonry.
- D. Install weep holes in exterior wythes and veneers in head joints of first course of masonry immediately above embedded flashing.
 1. Use specified weep/cavity vent products to form weep holes.
 2. Use wicking material to form weep holes above flashing under brick sills. Turn wicking down at lip of sill to be as inconspicuous as possible.
 3. Space weep holes 24 inches o.c. unless otherwise indicated.
- E. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in "Miscellaneous Masonry Accessories" Article.

3.11 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas

as needed to perform tests and inspections. Retesting of materials that fail to comply with specified requirements shall be done at Contractor's expense.

- B. Inspections: Special inspections according to Level B in TMS 402/ACI 530/ASCE 5.
 - 1. Begin masonry construction only after inspectors have verified proportions of site-prepared mortar.
 - 2. Place grout only after inspectors have verified compliance of grout spaces and of grades, sizes, and locations of reinforcement.
 - 3. Place grout only after inspectors have verified proportions of site-prepared grout.
- C. Testing Prior to Construction: One set of tests.
- D. Testing Frequency: One set of tests for each 5000 sq. ft. (464 sq. m) of wall area or portion thereof.
- E. Clay Masonry Unit Test: For each type of unit provided, according to ASTM C 67 for compressive strength.
- F. Concrete Masonry Unit Test: For each type of unit provided, according to ASTM C 140 for compressive strength.
- G. Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, according to ASTM C 780.
- H. Mortar Test (Property Specification): For each mix provided, according to ASTM C 780. Test mortar for [mortar air content] [and] [compressive strength].

Grout Test (Compressive Strength): For each mix provided, according to ASTM C 1019.
- I. Prism Test: For each type of construction provided, according to ASTM C 1314 at 7 days and at 28 days.

3.12 PARGING

- A. Parge exterior faces of below-grade masonry walls, where indicated, in two uniform coats to a total thickness of 3/4 inch. Dampen wall before applying first coat and scarify first coat to ensure full bond to subsequent coat.
- B. Use a steel-trowel finish to produce a smooth, flat, dense surface with a maximum surface variation of 1/8 inch per foot. Form a wash at top of parging and a cove at bottom.
- C. Damp-cure parging for at least 24 hours and protect parging until cured.

3.13 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
 - 3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
 - 4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
 - 5. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
 - 6. Clean concrete masonry by applicable cleaning methods indicated in NCMA TEK 8-4A.
 - 7. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
 - 8. Clean stone trim to comply with stone supplier's written instructions.
 - 9. Clean limestone units to comply with recommendations in ILI's "Indiana Limestone Handbook."

3.14 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.
- B. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.
 - 1. Crush masonry waste to less than 4 inches in each dimension.
- C. Masonry Waste Recycling: Return broken CMUs not used as fill to manufacturer for recycling.
- D. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above or recycled, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042113

Construction Key Notes - Work Area 'A'

- 1. GC TO INSTALL NEW TELEVISION AND MOUNTING HARDWARE SUPPLIED BY OWNER. GC TO PROVIDE AND INSTALL WOOD BLOCKING WITHIN WALL AS REQUIRED FOR A SECURE INSTALLATION. COORDINATE EXACT LOCATION AND SIZE OF TELEVISION AND MOUNT WITH OWNER.

Construction Key Notes - Work Area 'B'

- 1. KEC TO PROVIDE AND INSTALL NEW WALK-IN COOLER AND FREEZER AS PART OF NEW KITCHEN EQUIPMENT PACKAGE. COORDINATE WORK WITH MC, PC, AND EC AS REQUIRED. SEE FOOD SERVICE DRAWINGS FOR ADDITIONAL INFORMATION.

- 38. GC TO PROVIDE AND INSTALL 1" THICK SOLID SURFACE WINDOW SILL. SILL SHALL HAVE 1" OVERHANG OF SUBSTRATE BELOW UNLESS NOTED OTHERWISE. ALL EXPOSED EDGES TO BE EASED WITH 1/2" RADIUS. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION. COLOR TO BE SELECTED BY ARCHITECT & OWNER FROM MANUFACTURER'S FULL RANGE.

- 27. GC TO PROVIDE AND INSTALL NEW CERAMIC WALL TILE AT DISPLAY WALL IN PATTERN AS SHOWN. TILE ALL SIDES, TYP. ALIGN ALL JOINTS AT ALL SIDES FOR A CONTINUOUS PATTERN. TYP. BASIS OF DESIGN MANUFACTURER: 'NASCO STONE & TILE' COLLECTION: 'MAJORCA' COLOR AND FINISH: TO BE SELECTED FROM MANUFACTURERS FULL RANGE. SIZE: 4" x 12" RECTIFIED AND MICRO-BEVELED. GC TO ALLOW FOR A (2) COLOR SCHEME. SEE SPECIFICATION SECTION 903013 FOR ADDITIONAL INFORMATION.

Construction Key Notes - Work Area 'C'

- 1. GC TO INSTALL NEW BUILT-UP GYMNASIUM FLOORING SYSTEM OVER EXISTING, CLEAN CONCRETE SUB-FLOOR. REFER TO DETAIL 3, 4, AND 5/2.30 FOR ADDITIONAL INFORMATION.

Construction Key Notes - Work Area 'D'

- 1. GC SHALL INSTALL NEW CARPET. REFER TO FLOOR FINISH LEGEND ON A2.40 AND SPECIFICATION FOR ADDITIONAL INFORMATION.

Construction Key Notes - Work Area 'E'

- REFER TO CONSTRUCTION LEGEND NOTES ON DRAWING A2.50 AND A2.51 FOR FLOORPLAN CONSTRUCTION NOTES. THE KEY NOTES BELOW PERTAIN TO THE REFLECTED CEILING PLANS ON DRAWINGS A5.50 AND A5.51.

Construction Key Notes - Work Area 'G'

- 1. GC TO PROVIDE AND INSTALL NEW WINDOW. PROVIDE SNAP TRIM MATCHING WINDOW FRAME AT INTERIOR. PROVIDE ALL ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION. GC TO PAINT LINTEL AT WINDOW OPENING IN ITS ENTIRETY PRIOR TO WINDOW INSTALLATION.

Construction Key Notes - Work Area 'R'

- 1. GC TO PROVIDE AND INSTALL NEW "ALPHAGARD SI" FLUID APPLIED, FULLY REINFORCED ALIPHATIC ROOF MEMBRANE BY 'TREMCO' OVER PROPERLY PREPARED FOAM ROOF SUBSTRATE. GC TO INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. GC TO BROADCAST SILICA SAND OVER ENTIRE ROOF SURFACE TO PROVIDE SLIP RESISTANCE. SEE DETAIL 7/A8.10 FOR ADDITIONAL INFORMATION.

Construction General Notes

- 1. DIMENSIONS SHOWN ARE FROM FACE OF FINISH MATERIALS UNLESS NOTED OTHERWISE.

Legend

Table with 2 columns: SYMBOL, DESCRIPTION. Includes symbols for PROPOSED NEW CONSTRUCTION (FRAMING), EXISTING WALLS TO REMAIN, and NEW DOORS.

DUCTWORK REMOVAL PATCH NOTE:

GC TO PATCH HOLES LEFT DUE TO REMOVAL OF DUCTWORK ETC. IN MASONRY AND OTHER WALL/FLOOR/CEILING CONSTRUCTION WITH NEW MATERIAL TO MATCH EXISTING. PAINT TO MATCH ADJACENT SURFACES WHERE APPLICABLE. GC TO COORDINATE WITH MC FOR EXACT LOCATION AND EXTENT OF REPAIR WORK.

MULTIPLE PRIME CONTRACTOR ABBREVIATIONS:

- GC - GENERAL CONTRACTOR
MC - MECHANICAL CONTRACTOR
EC - ELECTRICAL CONTRACTOR
PC - PLUMBING CONTRACTOR

MULTIPLE PRIME CONTRACTOR NOTES:

REFER TO SHEET A1.01 FOR NOTES REGARDING COORDINATION OF WORK AMONGST MULTIPLE PRIME CONTRACTORS

KEC = KITCHEN EQUIPMENT CONTRACTOR

ALL REFERENCES TO THE KEC IN THE CONTRACT DOCUMENTS ARE REFERENCING WORK THAT IS TO BE PERFORMED BY A SUB CONTRACTOR TO THE PRIME CONTRACTOR FOR GENERAL CONSTRUCTION (GC). THE KEC WILL NOT BE MAKING FINAL CONNECTIONS, ALL FINAL CONNECTIONS OF EQUIPMENT SHALL BE BY THE PRIME CONTRACTORS UNDER THIS PROJECT (MC, PC, EC). ALL PRIME CONTRACTORS ARE RESPONSIBLE FOR COORDINATION WITH ONE ANOTHER AND WITH THE KITCHEN EQUIPMENT CONTRACTOR UNDER THE GC PRIME CONTRACT. ALL PRIME CONTRACTORS SHALL REVIEW THE FOOD SERVICE DRAWINGS WITH MANUFACTURER'S INSTRUCTIONS. GC TO BROADCAST SILICA SAND OVER ENTIRE ROOF SURFACE TO PROVIDE SLIP RESISTANCE. SEE DETAIL 1/A8.10 FOR ADDITIONAL INFORMATION.

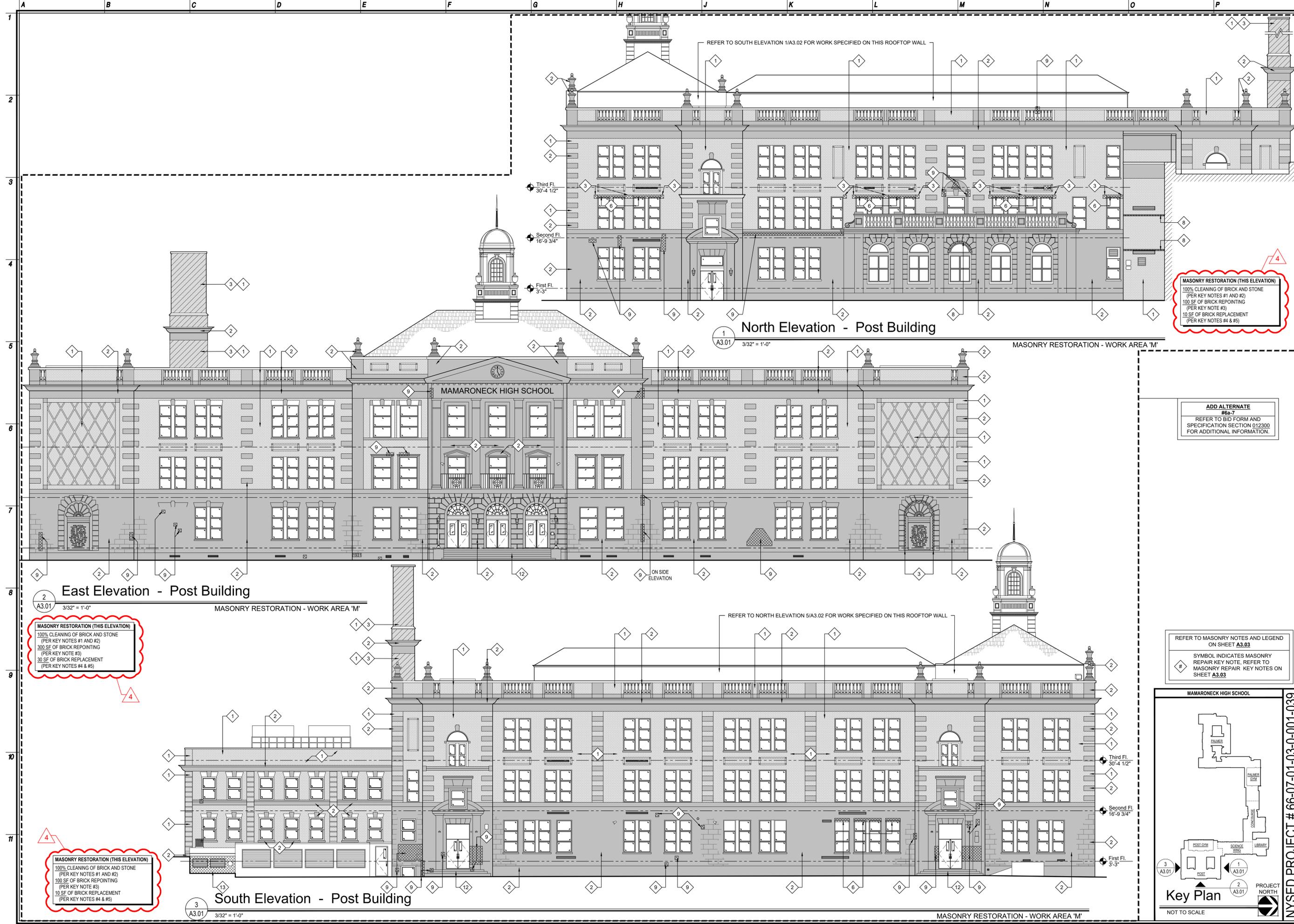
Project information including Date (02/05/21), Checked (DLF), Drawn (JT), Revisions table, and contractor logos for MICHAEL J. MCGOVERN, R.A. and I.LAN ASSOCIATES.

NYS ED PROJECT # 66-07-01-03-0-001-039

CONSTRUCTION KEY NOTES CAPITAL IMPROVEMENTS AT MAMARONECK UNION FREE SCHOOL DISTRICT 1000 BOSTON POST ROAD, MAMARONECK, NY 10543

A2.01

CONSTRUCTION KEYNOTES OMITTED FOR WORK AREAS: 'F'



North Elevation - Post Building

East Elevation - Post Building

South Elevation - Post Building

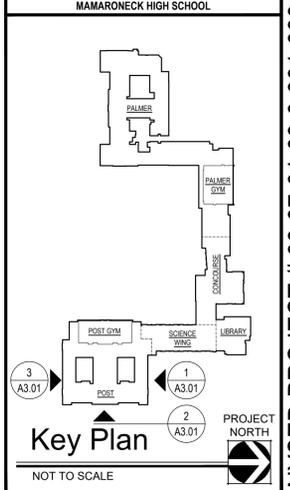
MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 100 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 10 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 300 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 30 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 100 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 10 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

ADD ALTERNATE #6a-7
 REFER TO BID FORM AND SPECIFICATION SECTION 012300 FOR ADDITIONAL INFORMATION.

REFER TO MASONRY NOTES AND LEGEND ON SHEET A3.03
 SYMBOL INDICATES MASONRY REPAIR KEY NOTE, REFER TO MASONRY REPAIR KEY NOTES ON SHEET A3.03



Date: 02/05/21
 Checked: DLF
 Drawn: JG
MICHAEL J. MCGOVERN, P.A.
 THE REGISTERED ARCHITECT
 License No. 022257-1

Revisions:

#	ISSUE FOR BID	11/22/2021
1	BID ADDENDUM NO. 1	12/10/21
2	BID ADDENDUM NO. 2	12/23/21
3	BID ADDENDUM NO. 3	01/07/22
4	BID ADDENDUM NO. 4	01/13/22

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NYSED PROJECT # 66-07-01-03-0-001-039
 EXTERIOR ELEVATIONS
 CAPITAL IMPROVEMENTS AT
 MAMARONECK HIGH SCHOOL
 MAMARONECK UNION FREE SCHOOL DISTRICT
 1000 BOSTON POST ROAD, MAMARONECK, NY 10543
 Job No. 4.1092.72.6
 File No. 10927206A301
A3.01



MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 450 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 40 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 100 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 10 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 120 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 10 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 100 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 10 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
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 (PER KEY NOTE #3)
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 (PER KEY NOTES #4 & #5)

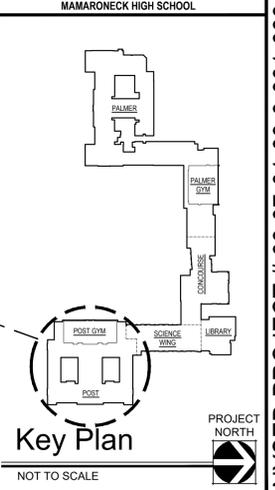
MASONRY RESTORATION (THIS ELEVATION)
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 (PER KEY NOTES #1 AND #2)
 10 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 5 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 10 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 5 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 10 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 5 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

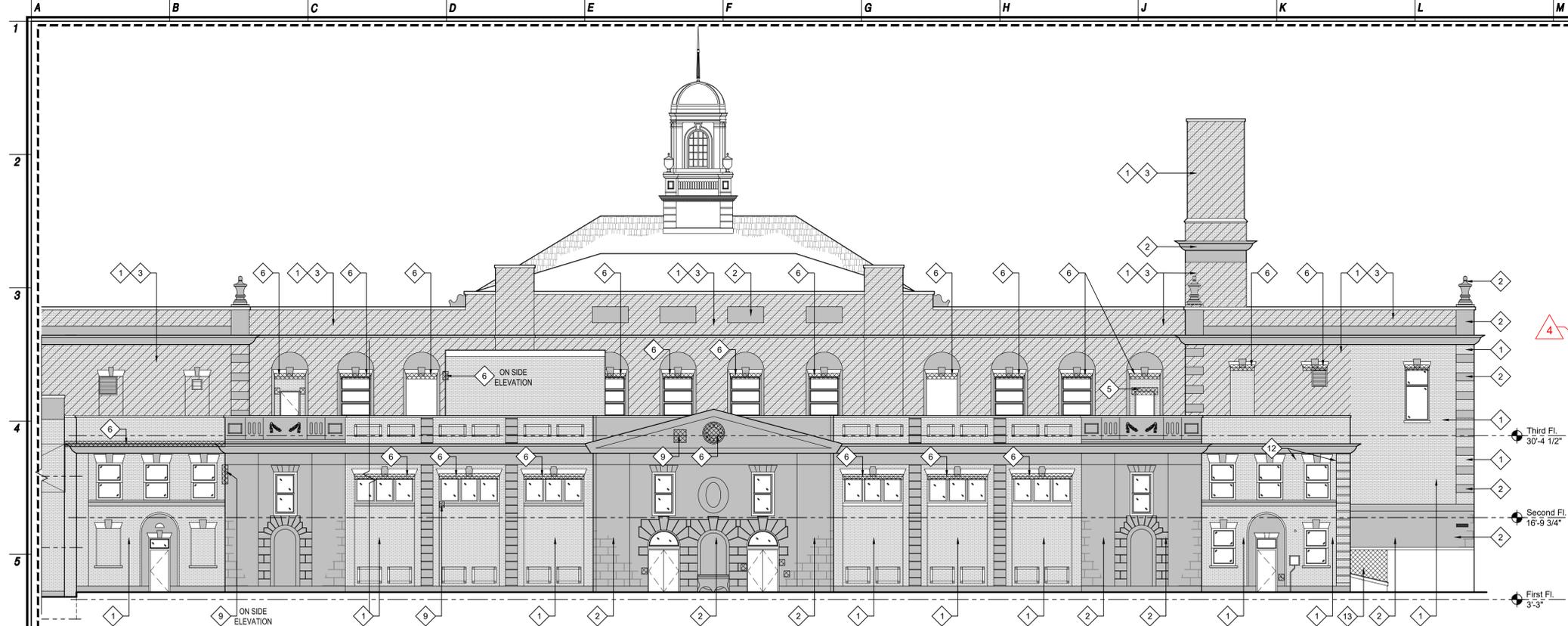
ADD ALTERNATE #6a-7
 REFER TO BID FORM AND SPECIFICATION SECTION 012300 FOR ADDITIONAL INFORMATION.

REFER TO MASONRY NOTES AND LEGEND ON SHEET **A3.03**
 SYMBOL INDICATES MASONRY REPAIR KEY NOTE, REFER TO MASONRY REPAIR KEY NOTES ON SHEET **A3.03**



Date	02/05/21
Checked	DLF
Drawn	JG
MICHAEL J. MCGOVERN, P.A. REGISTERED ARCHITECT License No. 022257-1	
Revisions:	
#	ISSUE FOR BID 11/22/2021
1	BID ADDENDUM NO. 1 12/10/21
2	BID ADDENDUM NO. 2 12/23/21
3	BID ADDENDUM NO. 3 01/07/22
4	BID ADDENDUM NO. 4 01/13/22
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LAN ASSOCIATES engineering • planning • architecture • surveying 252 MAIN STREET, GOSHEN, NEW YORK 10924 (845)815-0350	
EXTERIOR ELEVATIONS CAPITAL IMPROVEMENTS AT MAMARONECK HIGH SCHOOL MAMARONECK UNION FREE SCHOOL DISTRICT 1000 BOSTON POST ROAD, MAMARONECK, NY 10543 Job No. 4.1092.72.6 File No. 10927206A301	
A3.02	

NYS ED PROJECT # 66-07-01-03-0-001-039



- ### Masonry Repair Key Notes
- GC TO CLEAN EXISTING BRICK MASONRY SURFACE WITH APPROPRIATE CLEANING AGENT. CONTRACTOR SHALL FOLLOW ALL APPLICATION PROCEDURES AS SET FORTH BY THE MANUFACTURER. GC TO PROVIDE MOCK-UP OF CLEANED SURFACE. SEE NOTES BELOW AND REFER TO MASONRY CLEANING NOTES FOR ADDITIONAL INFORMATION.
 - GC TO CLEAN EXISTING SAND/LIMESTONE/STONE MASONRY SURFACE WITH APPROPRIATE CLEANING AGENT. CONTRACTOR SHALL FOLLOW ALL APPLICATION PROCEDURES AS SET FORTH BY THE MANUFACTURER. GC TO PROVIDE MOCK-UP OF CLEANED SURFACE. SEE NOTES BELOW AND REFER TO MASONRY CLEANING NOTES FOR ADDITIONAL INFORMATION. REPOINT STONE JOINTS PER MASONRY REPAIR KEY NOTE 3 BELOW AS REQUIRED.
 - GC TO REPOINT EXISTING BRICK/STONE. REFER TO SYMBOLS LEGEND BELOW FOR EXTENT OF REPOINTING AND SCOPE OF WORK. SEE DETAILS, NOTES AND "RE-POINTING CORRECTIVE PROCEDURE" ON SHEET **A8.80** FOR ADDITIONAL INFORMATION.
 - GC TO FIELD VERIFY LOCATIONS OF STEP CRACKS/CRACKS IN EXISTING MASONRY WALL AND REPAIR. REPLACE CRACKED BRICK WITH NEW BRICK TO MATCH EXISTING. SEE DETAILS ON **A8.80** FOR ADDITIONAL INFORMATION.
 - GC TO REMOVE EXISTING DAMAGED BRICK AND INSTALL NEW BRICK AND MORTAR TO MATCH EXISTING.
 - GC TO SCRAPE, PRIME AND PAINT EXISTING LINTEL OR OTHER METAL SURFACE AND REGROUT UNDER ENDS OF EXISTING LINTEL AS REQUIRED.
 - GC TO INSTALL ALUMINUM BREAKMETAL ON EXISTING WOOD FASCIA AND SOFFIT. REPAIR/REPLACE DAMAGED/ROTTEN WOOD, AS REQUIRED. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
 - GC TO REMOVE EXISTING CAULKING AND BAKER ROD AND INSTALL NEW TO MATCH EXISTING SIZE AND TYPE.
 - GC TO REPAIR/REPLACE EXISTING CRACKED/MISSING/REPLACEMENT STONE TO MATCH EXISTING.
 - GC TO REPLACE EXISTING FLASHING TO MATCH EXISTING.
 - GC TO REPAIR PLASTER SOFFIT TO MATCH EXISTING.
 - GC TO GROUT STONE STEPS.
 - GC TO REPAIR EXISTING PARGED SURFACE AND REPAIR/REPLACE ENTIRE SURFACE AS REQUIRED.
 - GC TO REMOVE EXISTING WOOD TRIM AROUND LOUVER AT WEST SIDE OF PALMER GYM. REMOVE MORTAR/CAULK ON FACE OF BRICK AND REPAIR DAMAGED BRICK. CAULK AROUND PERIMETER OF LOUVER.
 - GC TO REMOVE EXISTING CLOUDED WINDOW PANELS AND REPLACE WITH SAME TO MATCH EXISTING FROM ORIGINAL WINDOW MANUFACTURER. CAULK AND SEAL PER MANUFACTURER REQUIREMENTS.
- NOTES:**
- GC TO HIRE A CONSERVATOR TO PROVIDE MORTAR ANALYSIS OF EXISTING MORTAR FOR MATCHING. BASE BID TO INCLUDE UP TO EIGHT (8) MORTAR TEST LOCATIONS. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
 - GC TO PROVIDE MOCK-UPS OF EXTERIOR WALL ASSEMBLIES WHERE INDICATED. MOCK-UPS SHALL BE FULLY FINISHED EXTERIOR ASSEMBLIES, AND SHALL INCLUDE ALL FLASHINGS.
 - GC TO PROVIDE CLEANING MOCK-UP OF EACH TYPE OF CLEANED SURFACE. CLEANING MOCK-UPS MINIMUM 4' x 4' AND SHALL BE LOCATED IN AN INCONSPICUOUS AREA. REFER TO SPECIFICATION SECTION **040110**.
 - REFER TO SPECIFICATION SECTION **042113** FOR ADDITIONAL INFORMATION REGARDING BRICK CONSTRUCTION.
 - WHERE MASONRY INFILL/REBUILDING/RECONSTRUCTION IS INDICATED, BRICK TYPE, MORTAR COLOR, COMPOSITION, COLOR AND BONDING PATTERN SHALL MATCH ADJACENT IN LIKE AND KIND.

- ### Masonry Cleaning Notes
- GC TO PROTECT ADJACENT SURFACES NOT TO BE CLEANED.
 - GC TO CLEAN ALL EXPOSED SURFACES OF MASONRY (WHERE INDICATED) USING CLEANING MATERIALS SPECIFIED. ALL CLEANED SURFACES SHALL HAVE A UNIFORM FINISHED APPEARANCE.
 - GC TO TEST EXISTING MASONRY FOR COMPOSITION AND SELECT APPROPRIATE CLEANER BASED ON MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR SUBSTRATE TO BE CLEANED.
 - GC TO UTILIZE CLEANERS AND CLEANING METHODS THAT MINIMIZE DAMAGE TO SURFACES AND DETERIORATION OF APPEARANCE.
 - GC SHALL CONFER WITH ARCHITECT FOR INSPECTION OF CLEANING FOR EACH MASONRY TYPE. CLEANING WORK AREA SHALL ONLY BE CONSIDERED COMPLETE WHEN ACCEPTED BY ARCHITECT AND OWNER.
 - AT COMPLETION OF WORK, GC TO REMOVE AND DISCARD PROTECTIVE COVERINGS. IN THE EVENT THAT PROTECTED SURFACES BECOME DAMAGED, CLEAN/REPAIR TO THE SATISFACTION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
 - GC SHALL COLLECT, NEUTRALIZE AND DISPOSE OF ANY EXCESS CLEANING CHEMICALS / AFTER-WASH IN AN APPROVED MANNER AS DIRECTED BY THE MANUFACTURER. GC SHALL BE RESPONSIBLE FOR ANY RUNOFF OF EXCESS MATERIALS.
 - REFER TO SPECIFICATION SECTION **040110** FOR ADDITIONAL INFORMATION.
 - ALL MASONRY CLEANING AND REPOINTING SHALL COMPLY WITH THE NATIONAL PARK SERVICE - "PRESERVATION BRIEFS #1 & #2".

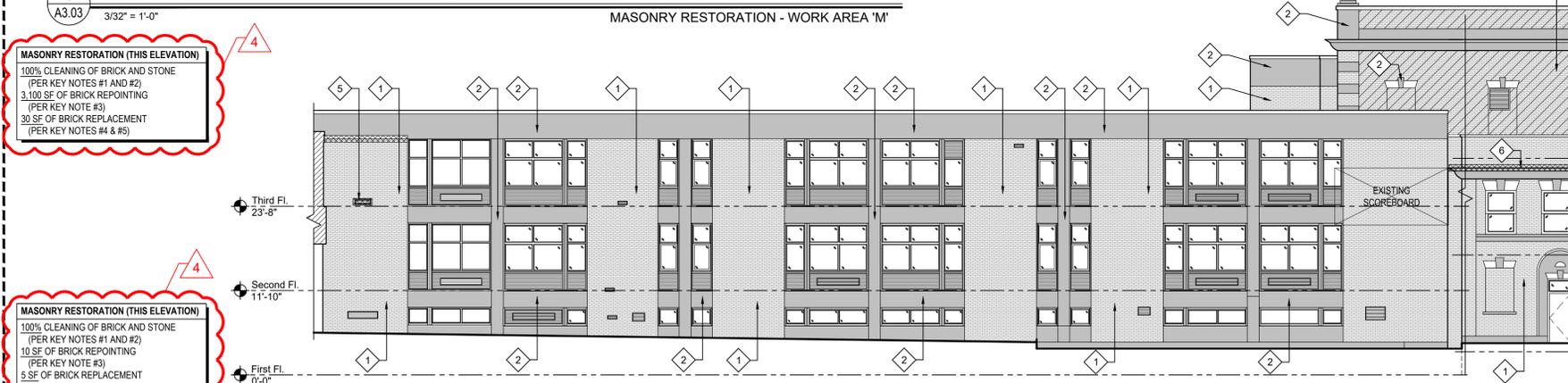
Symbols Legend

	AREA OF BRICK CLEANING. 100% OF ALL BRICK TO BE CLEANED UNLESS OTHERWISE NOTED. REFER TO MASONRY REPAIR KEY NOTES.
	AREA OF BRICK REPOINTING AND REPLACEMENT. REFER TO SQUARE FOOTAGES PROVIDED FOR EACH ELEVATION. REFER TO MASONRY REPAIR KEY NOTES.
	AREA OF REPAIR. REFER TO ASSOCIATED MASONRY REPAIR KEY NOTE FOR ADDITIONAL INFORMATION.
	AREA OF SAND/LIMESTONE/STONE TO BE 100% CLEANED. ASSUME 20% REPOINTING OF JOINTS AND 5% REPAIR OF STONE. REFER TO MASONRY CLEANING NOTES.

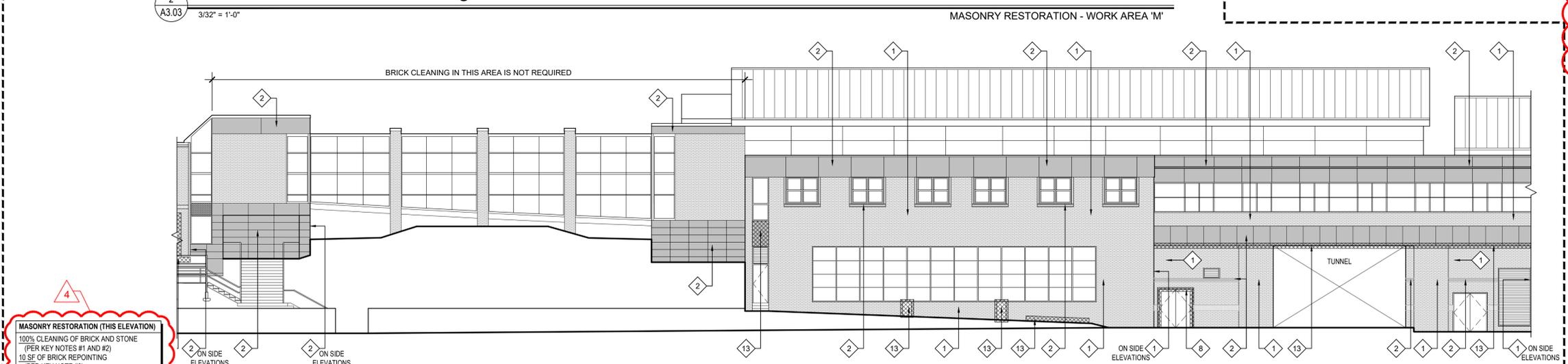
ENTIRE BUILDING EXTERIOR TO BE 100% CLEANED UNLESS OTHERWISE NOTED ON ELEVATIONS. CLEANING SHALL OCCUR PRIOR TO ANY MASONRY REPOINTING OR REPAIR. REFER TO MASONRY CLEANING NOTES FOR ADDITIONAL INFORMATION.

AREAS OF REPOINTING, REPAIR AND/OR REPLACEMENT ARE SHOWN ON THESE PLANS AS THE BASIS OF BID. THERE MAY BE AN ADDITION OR REDUCTION TO THE REPOINTING AND/OR REPAIR REQUIRED AFTER CLEANING. GC SHALL SURVEY THE MASONRY FOLLOWING CLEANING AND REPORT ANY CHANGES TO THE ARCHITECT. ADDITIONAL OR REDUCTIONS TO THE MASONRY SCOPE WILL BE HANDLED USING UNIT PRICES PROVIDED IN THE BID FORM.

West Elevation - Post Building

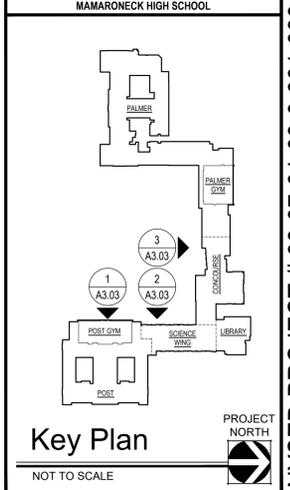


West Elevation - Post Building



South Elevation - Post Building

MASONRY RESTORATION - WORK AREA 'M'



Key Plan
NOT TO SCALE

Date: 02/05/21
Checked: DLF
Drawn: JG

MICHAEL J. MCGOVERN, P.A.
REGISTERED ARCHITECT
License No. 022257-1

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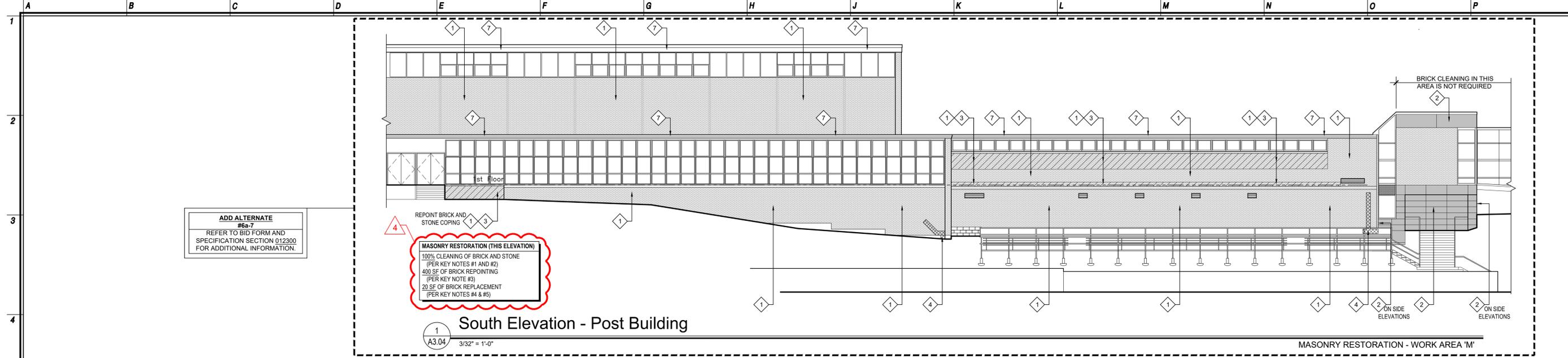
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Job No. 4.1092.72.6
File No. 10927206A301

A3.03

NYS PROJECT # 66-07-01-03-0-001-039
EXTERIOR ELEVATIONS
CAPITAL IMPROVEMENTS AT
MAMARONECK HIGH SCHOOL
MAMARONECK UNION FREE SCHOOL DISTRICT
1000 BOSTON POST ROAD, MAMARONECK, NY 10543



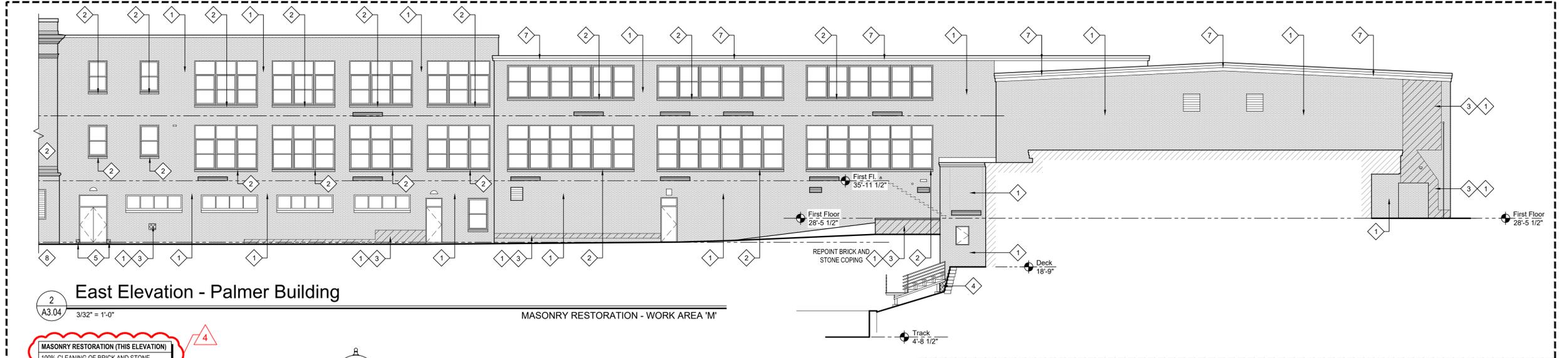
1
A3.04 3/32" = 1'-0"

South Elevation - Post Building

MASONRY RESTORATION - WORK AREA 'M'

ADD ALTERNATE #6a-7
REFER TO BID FORM AND SPECIFICATION SECTION 012300 FOR ADDITIONAL INFORMATION.

MASONRY RESTORATION (THIS ELEVATION)
100% CLEANING OF BRICK AND STONE (PER KEY NOTES #1 AND #2)
400 SF OF BRICK REPOINTING (PER KEY NOTE #3)
20 SF OF BRICK REPLACEMENT (PER KEY NOTES #4 & #5)



2
A3.04 3/32" = 1'-0"

East Elevation - Palmer Building

MASONRY RESTORATION - WORK AREA 'M'

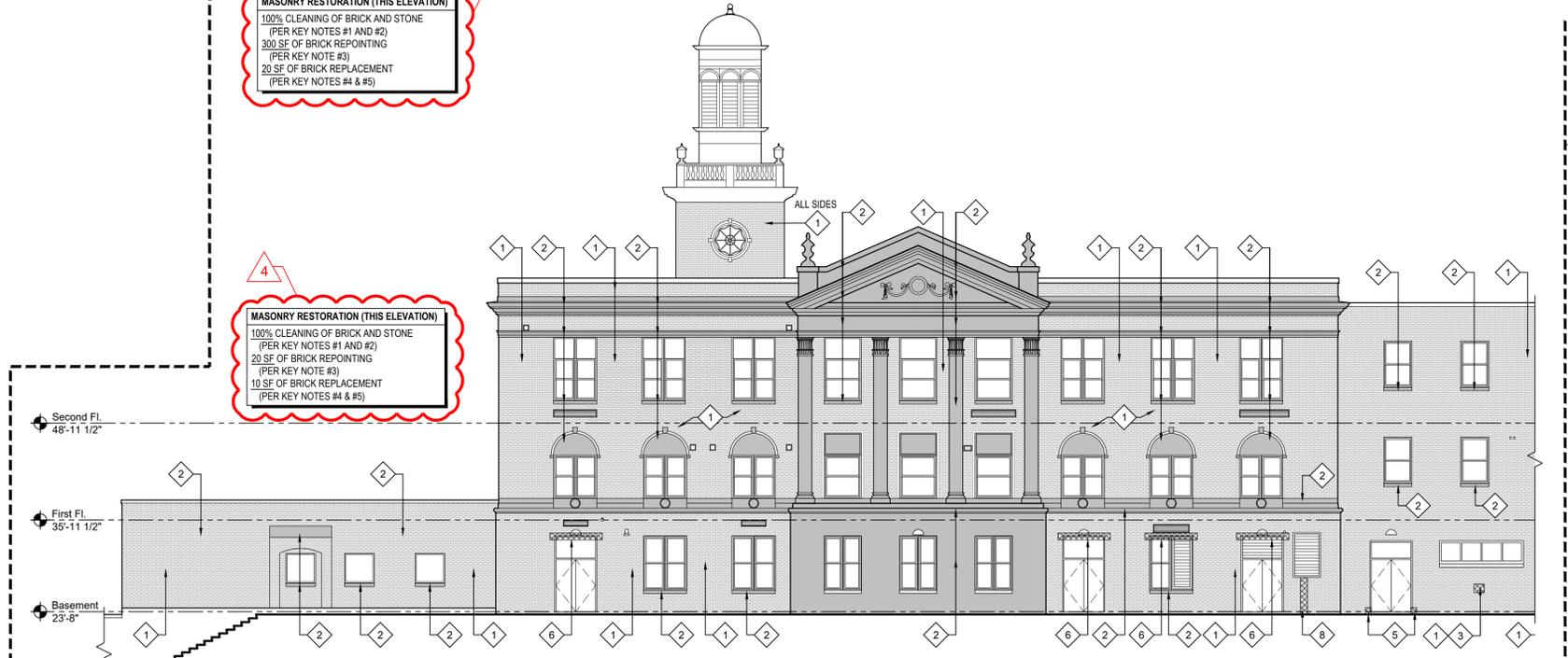
MASONRY RESTORATION (THIS ELEVATION)
100% CLEANING OF BRICK AND STONE (PER KEY NOTES #1 AND #2)
300 SF OF BRICK REPOINTING (PER KEY NOTE #3)
20 SF OF BRICK REPLACEMENT (PER KEY NOTES #4 & #5)

ADD ALTERNATE #6a-8
REFER TO BID FORM AND SPECIFICATION SECTION 012300 FOR ADDITIONAL INFORMATION.

REFER TO MASONRY NOTES AND LEGEND ON SHEET A3.03

SYMBOL INDICATES MASONRY REPAIR KEY NOTE, REFER TO MASONRY REPAIR KEY NOTES ON SHEET A3.03

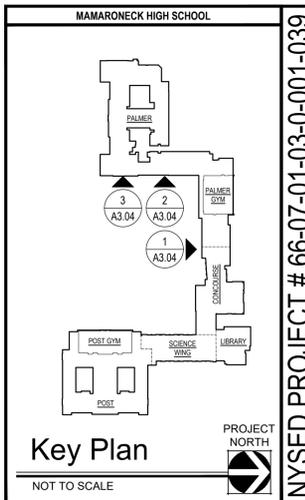
MASONRY RESTORATION (THIS ELEVATION)
100% CLEANING OF BRICK AND STONE (PER KEY NOTES #1 AND #2)
20 SF OF BRICK REPOINTING (PER KEY NOTE #3)
10 SF OF BRICK REPLACEMENT (PER KEY NOTES #4 & #5)



3
A3.04 3/32" = 1'-0"

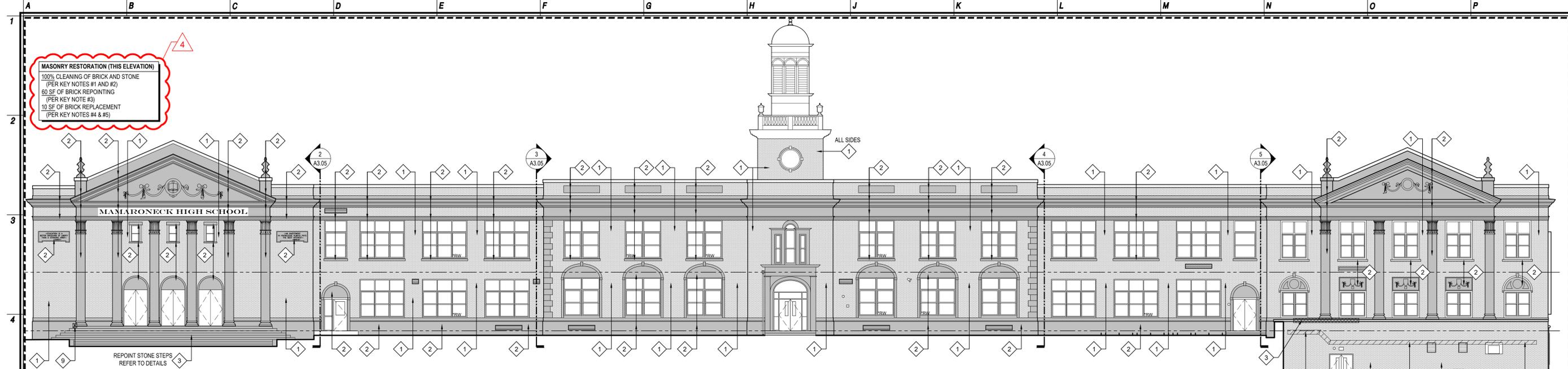
East Elevation - Palmer Building

MASONRY RESTORATION - WORK AREA 'M'

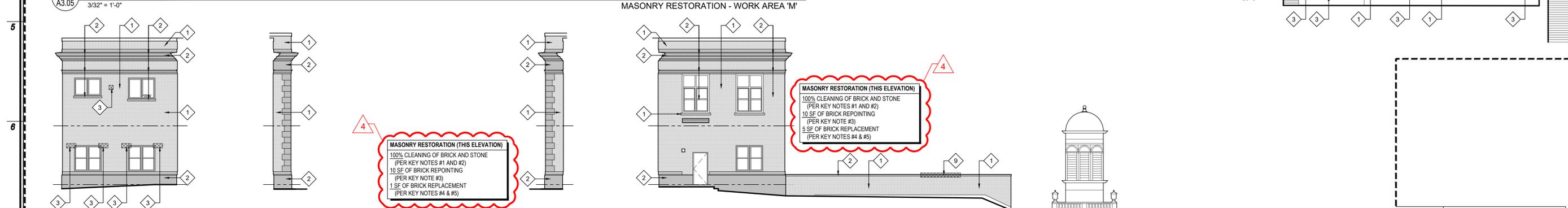


Key Plan
NOT TO SCALE

Date	02/05/21
Checked	DLF
Drawn	JG
MICHAEL J. MCGOVERN, P.A. REGISTERED ARCHITECT License No. 022257-1	
Revisions:	
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NYS PROJECT # 66-07-01-03-0-001-039	
EXTERIOR ELEVATIONS CAPITAL IMPROVEMENTS AT MAMARONECK HIGH SCHOOL MAMARONECK UNION FREE SCHOOL DISTRICT 1000 BOSTON POST ROAD, MAMARONECK, NY 10543	
Job No.	4.1092.72.6
File No.	10927206A301
A3.04	



1 South Elevation - Palmer Elevation



2 East Elev.

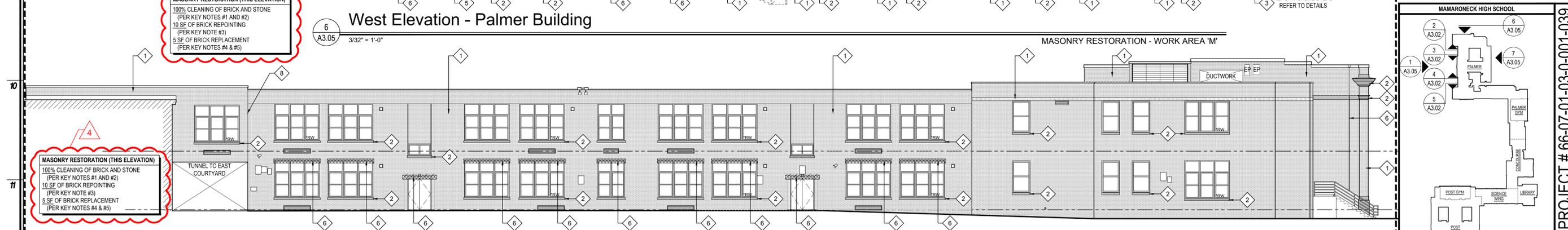
3 West Elev.

4 East Elev.

5 West Elev.



6 West Elevation - Palmer Building

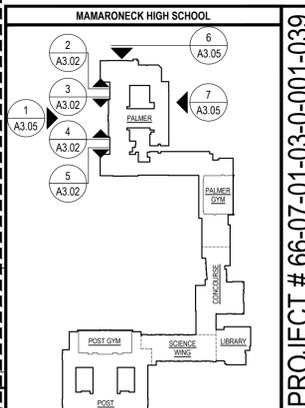


7 North Elevation - Palmer Building

ADD ALTERNATE #6a-8
REFER TO BID FORM AND SPECIFICATION SECTION 012300 FOR ADDITIONAL INFORMATION.

REFER TO MASONRY NOTES AND LEGEND ON SHEET A3.03

SYMBOL INDICATES MASONRY REPAIR KEY NOTE, REFER TO MASONRY REPAIR KEY NOTES ON SHEET A3.03



Key Plan
NOT TO SCALE

Date: 02/05/21
Checked: DLF
Drawn: JG

MICHAEL J. MCGOVERN, P.A.
REGISTERED ARCHITECT
License No. 022257-1

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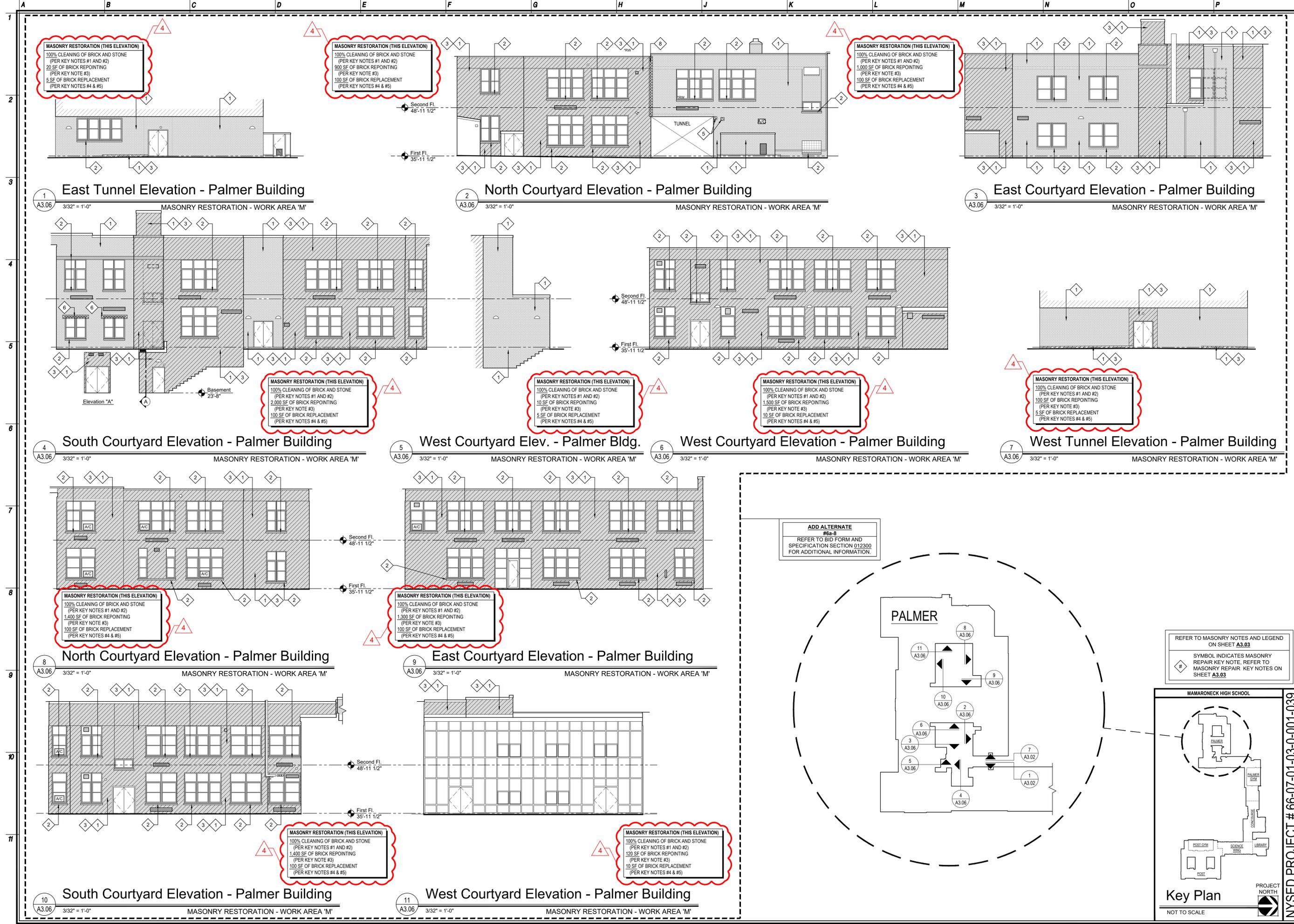
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EXTERIOR ELEVATIONS
CAPITAL IMPROVEMENTS AT
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MAMARONECK UNION FREE SCHOOL DISTRICT
1000 BOSTON POST ROAD, MAMARONECK, NY 10543

Job No. 4.1092.72.6
File No. 10927206A301

A3.05

NYS PROJECT # 66-07-01-03-0-001-039



MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 20 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 5 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 900 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 100 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 1,000 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 100 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 2,000 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 100 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 10 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 5 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 1,500 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 10 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 100 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 5 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 1,400 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 100 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

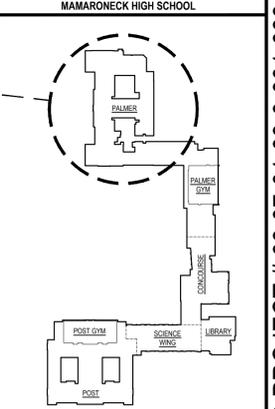
MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 1,300 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 100 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 1,400 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 100 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 120 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 10 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

ADD ALTERNATE #6a-8
 REFER TO BID FORM AND SPECIFICATION SECTION 012300 FOR ADDITIONAL INFORMATION.

REFER TO MASONRY NOTES AND LEGEND ON SHEET A3.03
 SYMBOL INDICATES MASONRY REPAIR KEY NOTE, REFER TO MASONRY REPAIR KEY NOTES ON SHEET A3.03



Key Plan
 NOT TO SCALE

Date: 02/05/21
 Checked: DLF
 Drawn: JG

MICHAEL J. MCGOVERN, P.A.
 LICENSE NO. 022257-1
 REGISTERED ARCHITECT

Revisions:

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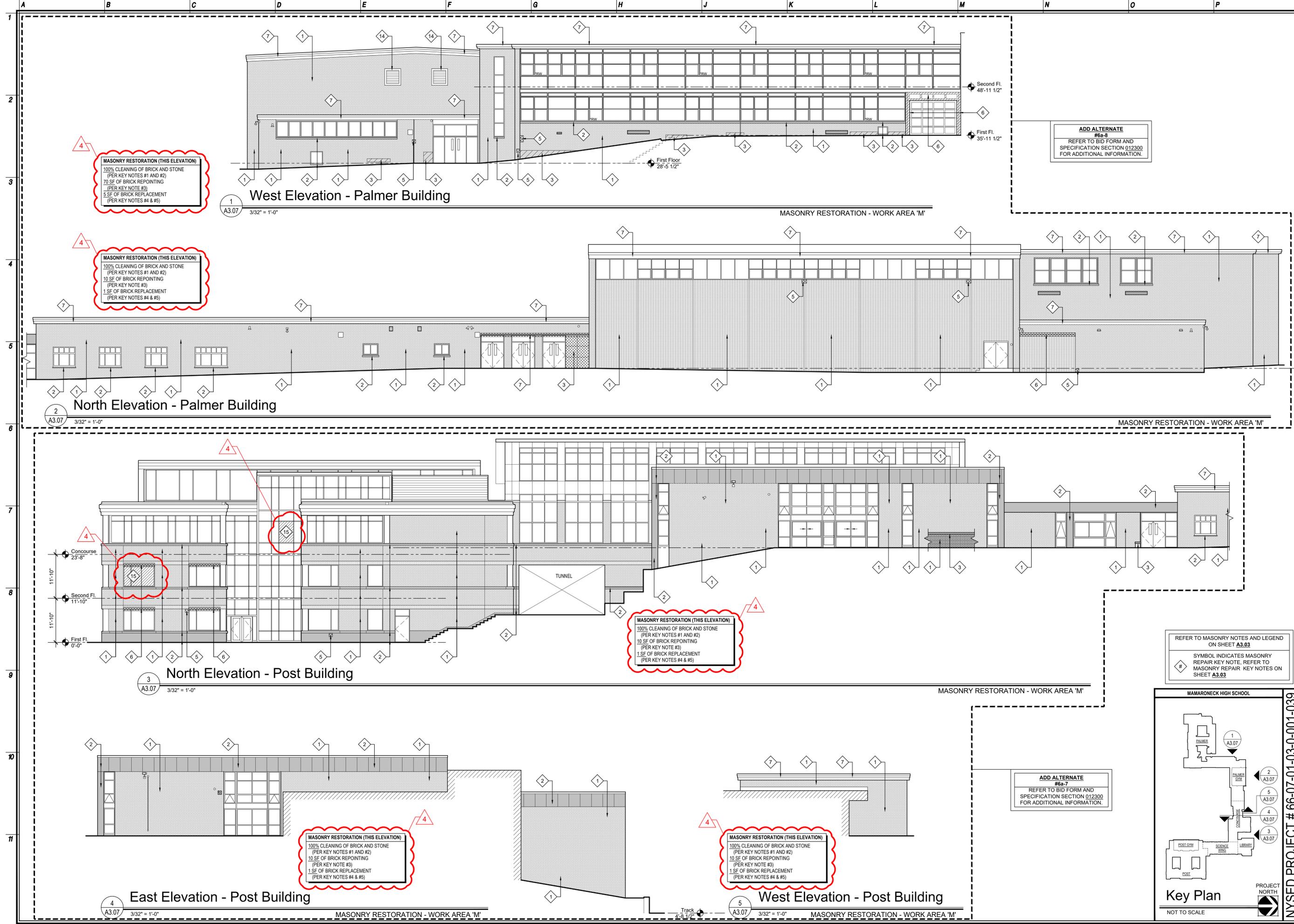
EXTERIOR ELEVATIONS
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 MAMARONECK UNION FREE SCHOOL DISTRICT
 1000 BOSTON POST ROAD, MAMARONECK, NY 10543

Job No. 4.1092.72.6
 File No. 10927206A301

A3.06

PROJECT NORTH

NYSED PROJECT # 66-07-01-03-0-001-039



Date: 02/05/21
 Checked: DLF
 Drawn: JG
 MICHAEL J. MCGOVERN, P.A.
 LICENSE NO. 022257-1
 THE REGISTERED ARCHITECT

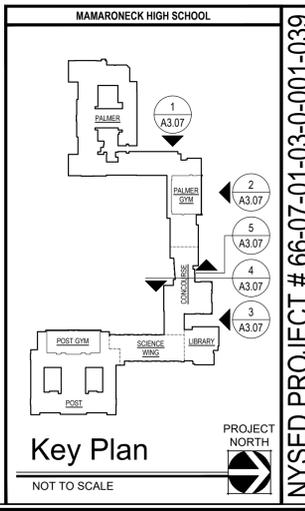
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EXTERIOR ELEVATIONS
 CAPITAL IMPROVEMENTS AT
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 File No. 10927206A301
A3.07



ADD ALTERNATE #6a-8
 REFER TO BID FORM AND SPECIFICATION SECTION 012300 FOR ADDITIONAL INFORMATION.

REFER TO MASONRY NOTES AND LEGEND ON SHEET A3.03

SYMBOL INDICATES MASONRY REPAIR KEY NOTE, REFER TO MASONRY REPAIR KEY NOTES ON SHEET A3.03

ADD ALTERNATE #6a-7
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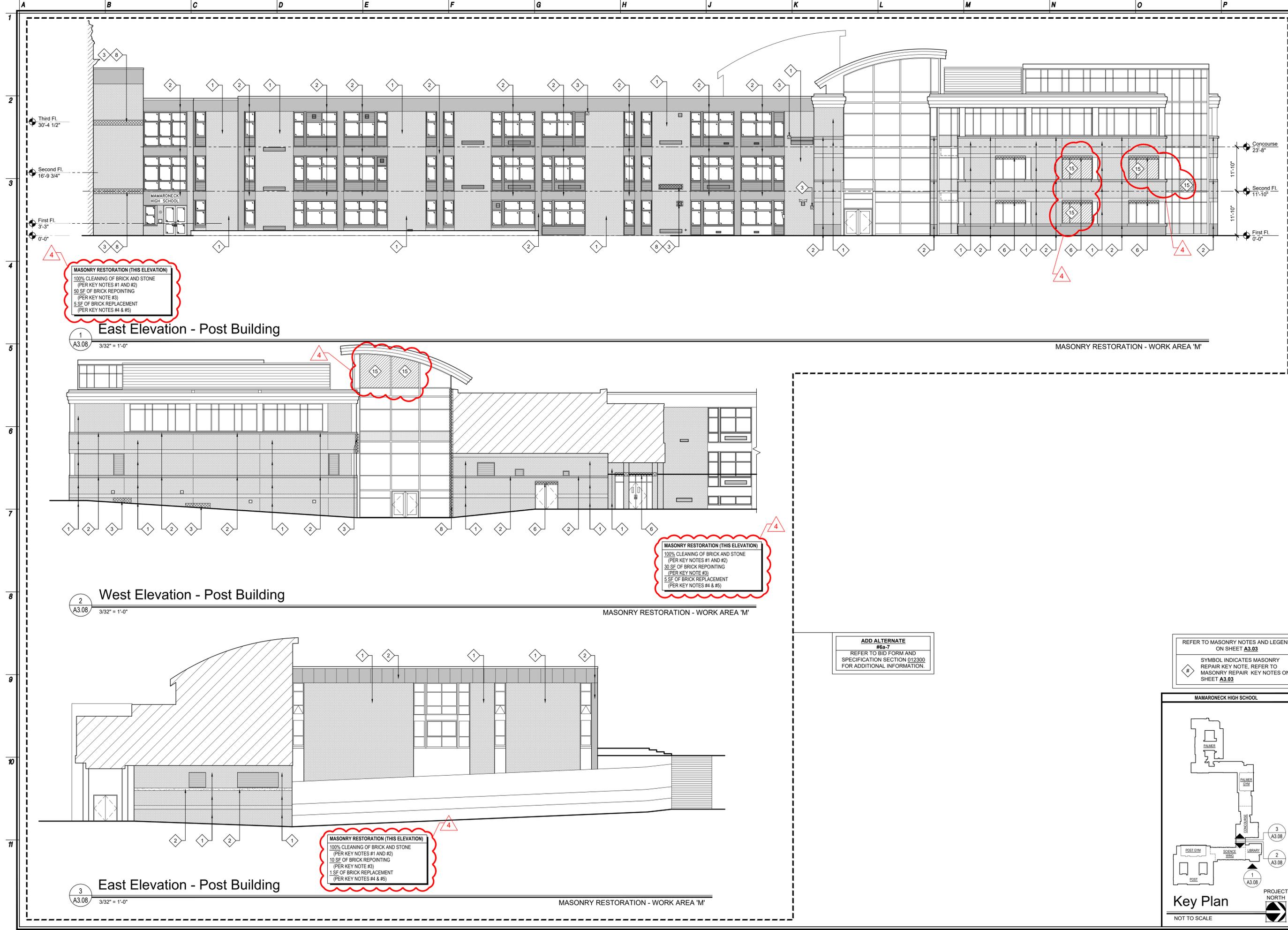
MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE (PER KEY NOTES #1 AND #2)
 70 SF OF BRICK REPOINTING (PER KEY NOTE #3)
 5 SF OF BRICK REPLACEMENT (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE (PER KEY NOTES #1 AND #2)
 10 SF OF BRICK REPOINTING (PER KEY NOTE #3)
 1 SF OF BRICK REPLACEMENT (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE (PER KEY NOTES #1 AND #2)
 10 SF OF BRICK REPOINTING (PER KEY NOTE #3)
 1 SF OF BRICK REPLACEMENT (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE (PER KEY NOTES #1 AND #2)
 10 SF OF BRICK REPOINTING (PER KEY NOTE #3)
 1 SF OF BRICK REPLACEMENT (PER KEY NOTES #4 & #5)

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE (PER KEY NOTES #1 AND #2)
 10 SF OF BRICK REPOINTING (PER KEY NOTE #3)
 1 SF OF BRICK REPLACEMENT (PER KEY NOTES #4 & #5)



MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 50 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 5 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

1 East Elevation - Post Building
 A3.08 3/32" = 1'-0"

MASONRY RESTORATION (THIS ELEVATION)
 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 30 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 5 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

2 West Elevation - Post Building
 A3.08 3/32" = 1'-0"

MASONRY RESTORATION - WORK AREA 'M'

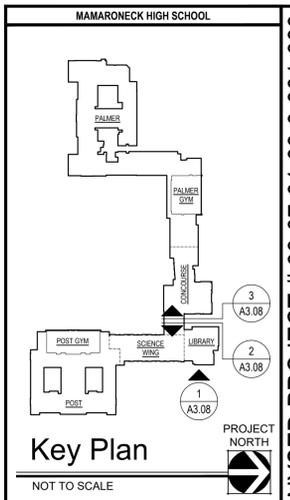
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 100% CLEANING OF BRICK AND STONE
 (PER KEY NOTES #1 AND #2)
 10 SF OF BRICK REPOINTING
 (PER KEY NOTE #3)
 1 SF OF BRICK REPLACEMENT
 (PER KEY NOTES #4 & #5)

3 East Elevation - Post Building
 A3.08 3/32" = 1'-0"

MASONRY RESTORATION - WORK AREA 'M'

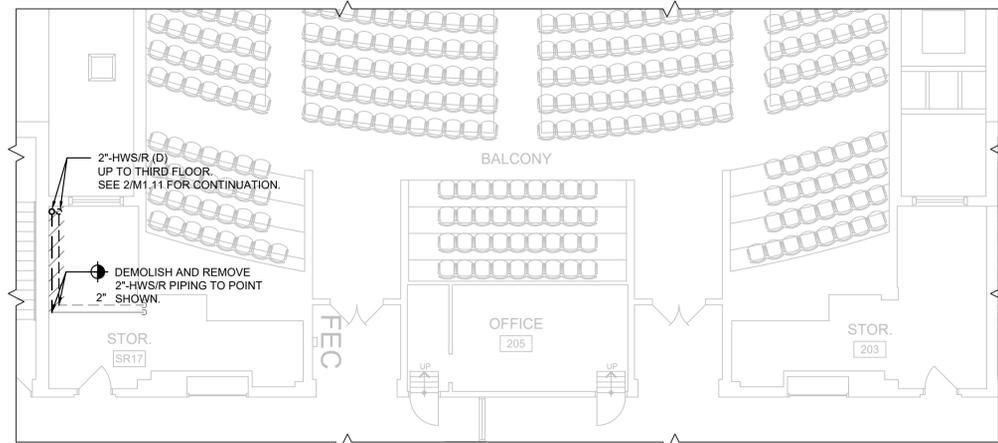
ADD ALTERNATE #6a-7
 REFER TO BID FORM AND SPECIFICATION SECTION 012300 FOR ADDITIONAL INFORMATION.

REFER TO MASONRY NOTES AND LEGEND ON SHEET A3.03
 SYMBOL INDICATES MASONRY REPAIR KEY NOTE, REFER TO MASONRY REPAIR KEY NOTES ON SHEET A3.03

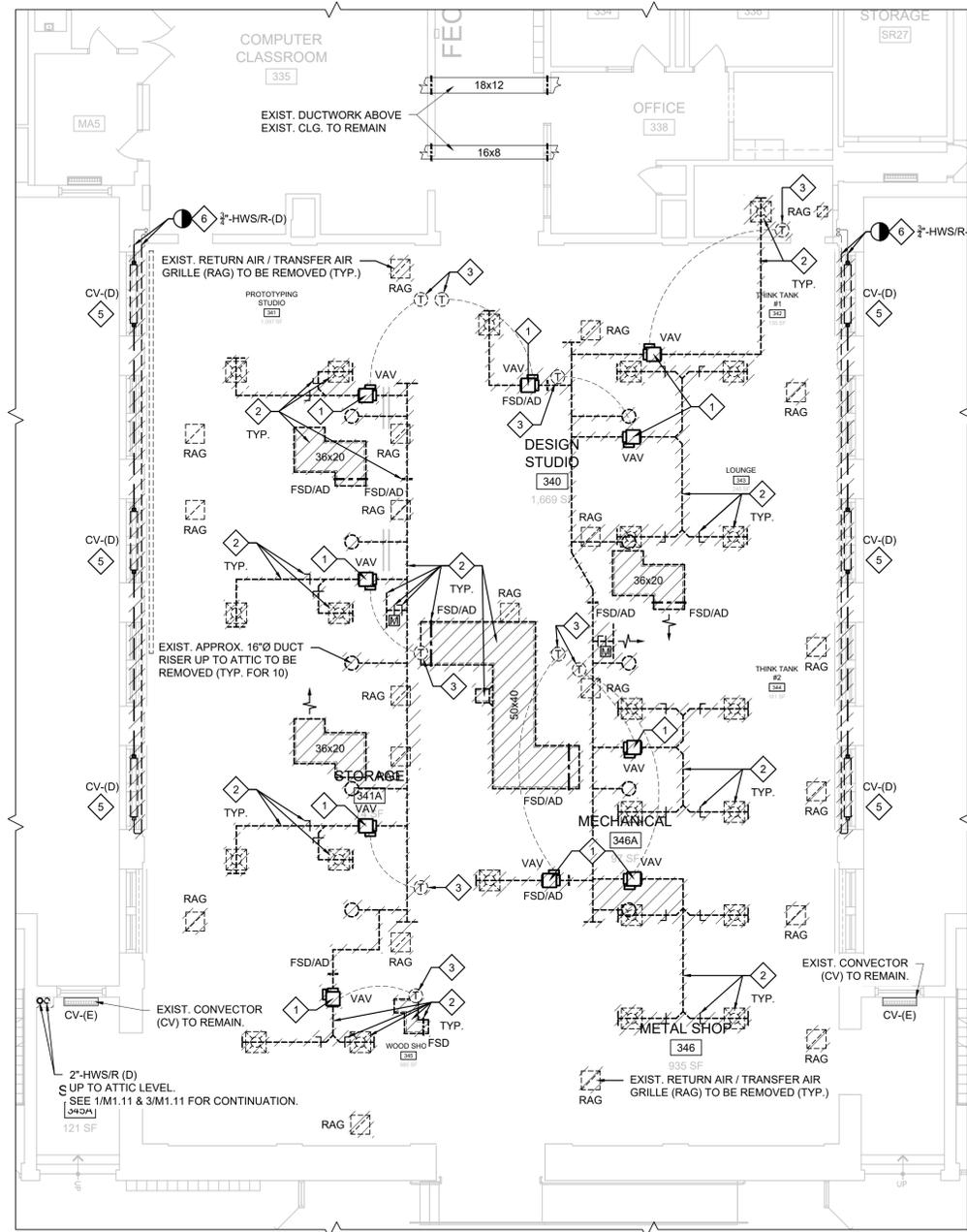


Date	02/05/21
Checked	DLF
Drawn	JG
MICHAEL J. MCGOVERN, P.A. REGISTERED ARCHITECT License No. 022257-1	
Revisions:	
#	ISSUE FOR BID 11/22/2021
1	BID ADDENDUM NO. 1 12/10/21
2	BID ADDENDUM NO. 2 12/23/21
3	BID ADDENDUM NO. 3 01/07/22
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EXTERIOR ELEVATIONS CAPITAL IMPROVEMENTS AT MAMARONECK HIGH SCHOOL MAMARONECK UNION FREE SCHOOL DISTRICT 1000 BOSTON POST ROAD, MAMARONECK, NY 10543 Job No. 4.1092.72.6 File No. 10927206A301	
A3.08	

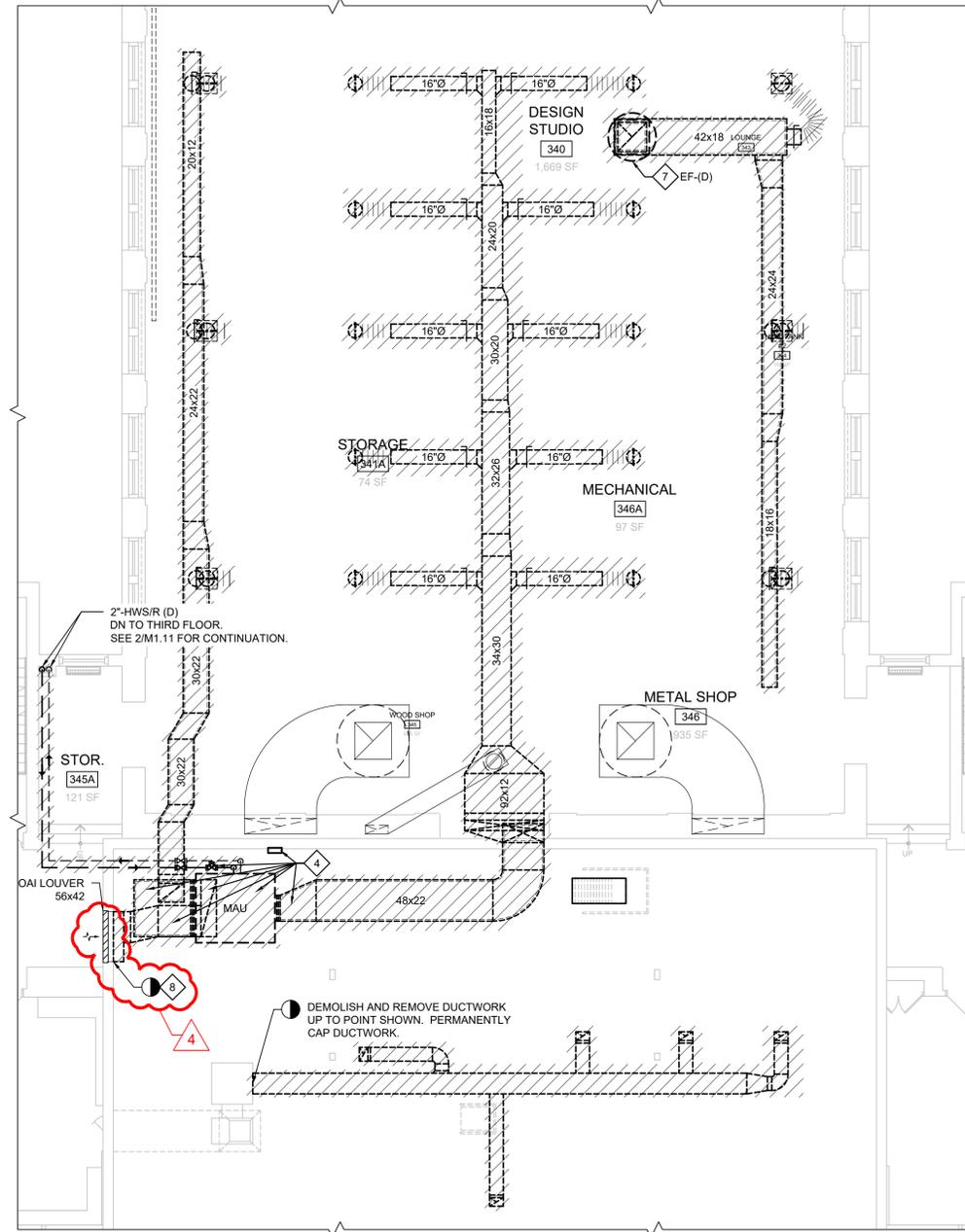
NYS PROJECT # 66-07-01-03-0-001-039
 PROJECT NORTH



1 PARTIAL SECOND FLOOR MECHANICAL DEMOLITION PLAN
 M1.10 1/8" = 1'-0" STEAM LAB - WORK AREA 'A'



2 PARTIAL THIRD FLOOR MECHANICAL DEMOLITION PLAN
 M1.11 1/8" = 1'-0" STEAM LAB - WORK AREA 'A'

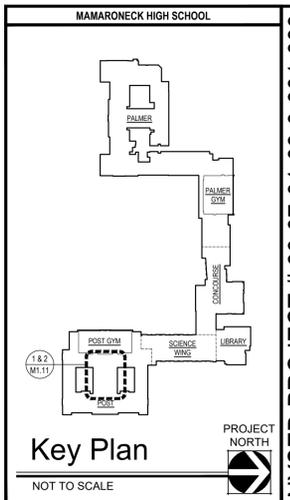


3 ATTIC MECHANICAL DEMOLITION PLAN
 M1.11 1/8" = 1'-0" STEAM LAB - WORK AREA 'A'

REFER TO "MULTIPLE PRIME CONTRACT NOTES" ON DWG. A1.00 & SPECIFICATION SECTION 011200 - SPECIAL PROVISIONS FOR CONTRACTORS' RESPONSIBILITIES.

- GENERAL DEMOLITION NOTES**
- SIZES & LOCATIONS OF EXIST. MECH. EQUIPMENT, DUCTWORK, AIR INLETS/OUTLETS, PIPING, ETC. SHOWN ON DRAWINGS ARE BASED ON SITE OBSERVATIONS & THEY ARE APPROXIMATE. SOME OF DUCT & PIPE ROUTING COULD BE DIFFERENT FROM THAT SHOWN. MC IS REQUIRED TO PROVIDE DUCTWORK SHOP DRAWINGS IDENTIFYING THEM.
 - NOT ALL EXIST. DUCTWORK, PIPING & UTILITIES ARE SHOWN ON DRAWINGS. VERIFY IN FIELD.
 - REMOVED.
 - EC IS RESPONSIBLE TO TEMPORARILY REMOVE/RELOCATE EXIST. LIGHT FIXTURES, ELECTRICAL DEVICES, FIRE ALARM & COMMUNICATION DEVICES, ETC TO ACCOMMODATE MECH. DEMOLITION. REINSTALL TO MATCH EXISTING. CHECK IN FIELD.
 - REMOVED.
 - REMOVED.
 - MC IS RESPONSIBLE TO ISOLATE/SHUTDOWN & DRAIN-DOWN EXIST. HOT WATER HEATING PIPING SYSTEM TO ACCOMMODATE REMOVAL OF EXIST. HWS/HWR PIPING ASSOCIATED W/ DEMOLISHED MECH. EQUIPMENT AND INSTALLATION OF NEW MECH. EQUIPMENT & PIPING. RESTORE THE SYSTEM AFTER ALL WORK IS COMPLETE.
 - MC TO REMOVE ALL EXIST. CONTROLS & RELATED WIRING & CONDUITS, ETC. WHICH BECOME OBSOLETE, WHETHER OR NOT SHOWN ON DWGS. GC TO PATCH AND PAINT WALLS TO MATCH EXISTING.

ITEM #	DEMOLITION KEY NOTES
1	EXISTING VAV BOXES & RELATED DUCTWORK, DAMPERS, SUPPORTS, CONTROLS, ELECTRICAL, ETC. TO BE REMOVED.
2	EXISTING DUCTWORK & RELATED DAMPERS, INSULATION, SUPPORTS, AIR GRILLES, WIRE SCREENS, CONTROLS, ELECTRICAL, ETC. TO BE REMOVED.
3	EXISTING THERMOSTATS/SENSORS & RELATED CONTROL WIRING, CONDUITS, WIREMOLDS, ETC. TO BE REMOVED. INFILL & PATCH EXISTING WALL OPENINGS & PAINT TO MATCH EXISTING.
4	EXISTING MAKEUP AIR (MUA) UNIT & RELATED DUCTWORK, DAMPERS, PLENUM AIR BOXES, INSULATION, PIPING, VALVES, SUPPORTS, CONTROLS, ELECTRICAL, DISCONNECT SWITCH, ETC. TO BE REMOVED.
5	EXISTING FINNED TUBE RADIATION & RELATED PIPING, VALVES, FITTINGS/COMPONENTS, SUPPORTS, INSULATION, CONTROLS, ETC. TO BE REMOVED. COVER SHALL REMAIN TO BE REUSED.
6	DEMOLISH AND REMOVE 3"-HWS/R PIPING UP TO POINT SHOWN. COMPLETE WITH REMOVAL OF INSULATION, VALVES, FITTINGS, COMPONENTS, HANGERS, SUPPORTS, AND ALL ASSOCIATED WORK. TEMPORARY CAP PIPING FOR PROPOSED WORK PHASE OF THE PROJECT.
7	DEMOLISH AND REMOVE ROOF MOUNTED EXHAUST FAN & RELATED. COMPLETE WITH REMOVAL OF ASSOCIATED DUCTWORK, DAMPERS, SUPPORTS, CONTROLS, ELECTRICAL, DISCONNECT SWITCH, ETC. PATCH AND REPAIR ROOF OPENING WITH MATERIAL TO MATCH EXISTING. SEAL ROOF OPENING AIR AND WATER TIGHT.
8	DISCONNECT AND REMOVE EXISTING DUCTWORK TO THE EXISTING EXTERIOR WALL. EXISTING 56" x 42" OUTSIDE AIR LOUVER SHALL REMAIN. CAP THE EXISTING DUCTWORK OPENING WITH A 1" INSULATED PANEL ON THE INTERIOR SIDE OF THE LOUVER.



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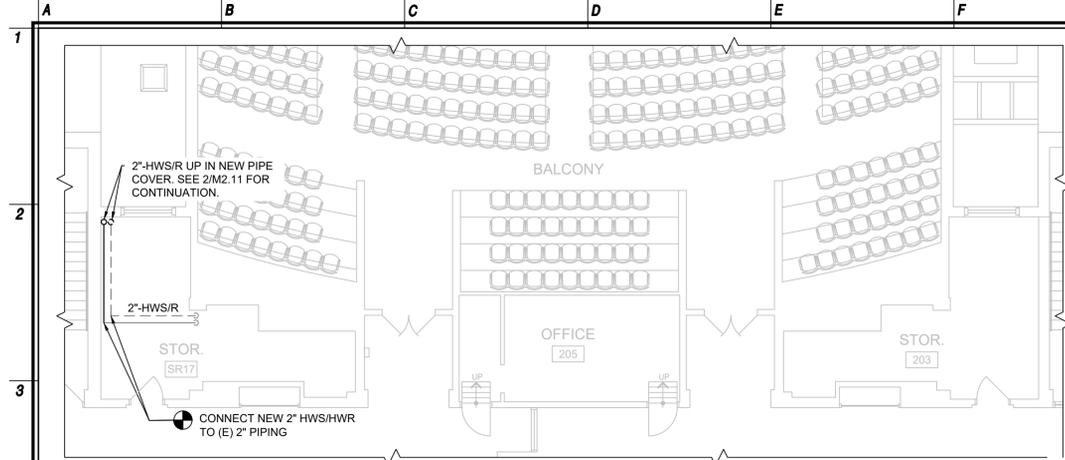
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MICHAEL J. MCGOVERN, P.E.
 REGISTERED ARCHITECT
 License No. 022257-1

NYSED PROJECT # 66-07-01-03-0-001-039
 STEAM LAB MECHANICAL DEMO PLANS
 CAPITAL IMPROVEMENTS AT
 MAMARONECK HIGH SCHOOL
 MAMARONECK UNION FREE SCHOOL DISTRICT
 1000 BOSTON POST ROAD, MAMARONECK, NY 10543

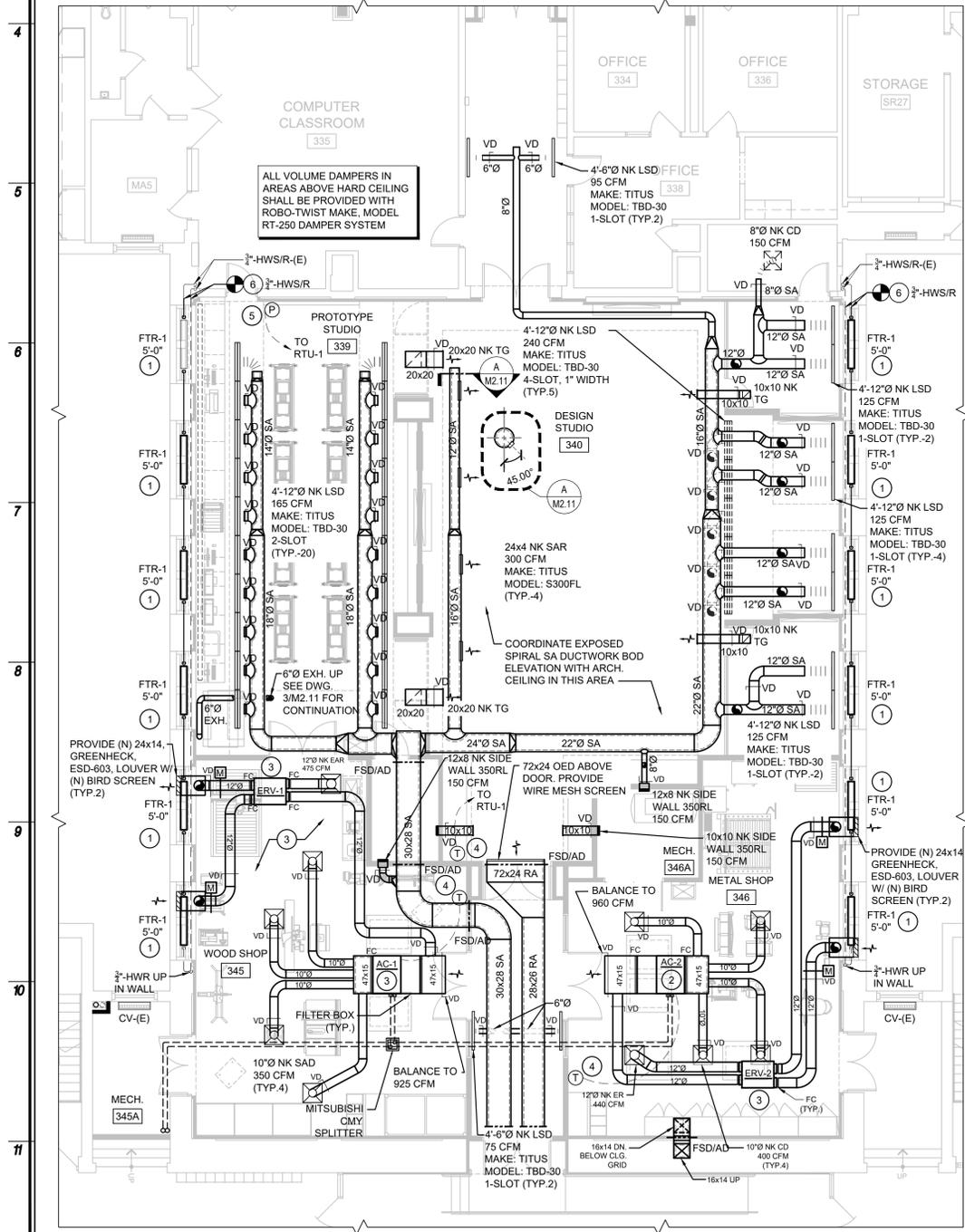
Job No. 4.1092.72.6
 File No. 10927206M210

M1.11



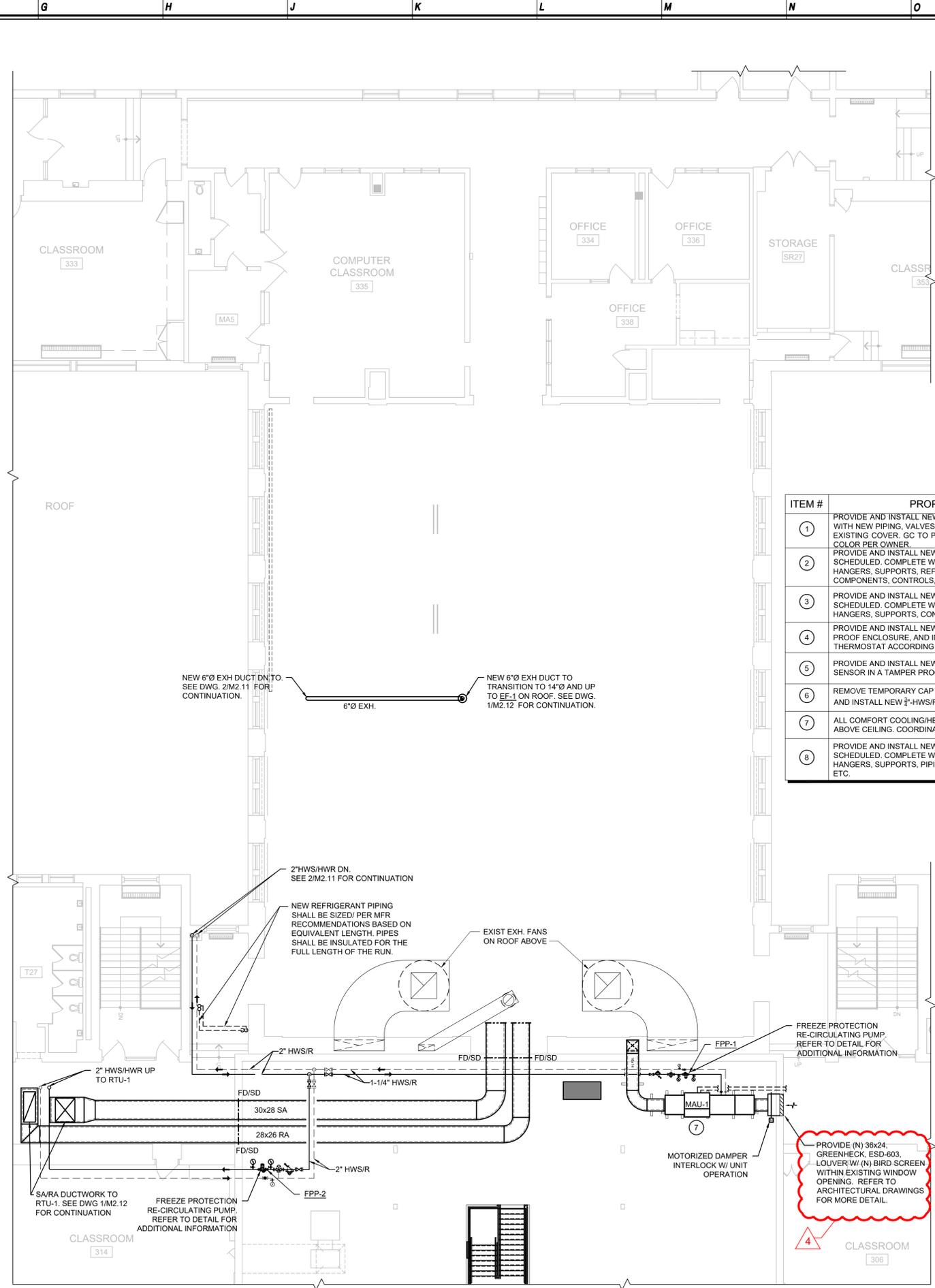
1 PARTIAL SECOND FLOOR MECHANICAL PROPOSED PLAN

M2.11 1/8" = 1'-0" STEAM LAB - WORK AREA 'A'



2 PARTIAL THIRD FLOOR MECHANICAL PROPOSED WORK PLAN

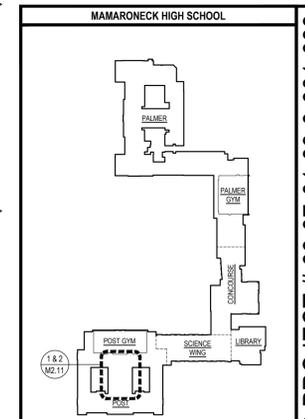
M2.11 1/8" = 1'-0" STEAM LAB - WORK AREA 'A'



3 ATTIC MECHANICAL PROPOSED PLAN

M2.11 1/8" = 1'-0" STEAM LAB - WORK AREA 'A'

ITEM #	PROPOSED WORK KEY NOTES
1	PROVIDE AND INSTALL NEW FINNED TUBE RADIATION SCHEDULED, COMPLETE WITH NEW PIPING, VALVES, FITTINGS, COMPONENTS, INSULATION, ETC. REUSE EXISTING COVER. GC TO PAINT COVER. MC TO REMOVE & REINSTALL COVER. COLOR PER OWNER.
2	PROVIDE AND INSTALL NEW DUCTED AC UNIT OF SIZES AND CAPACITIES SCHEDULED, COMPLETE WITH NEW DUCTWORK, DAMPERS, INSULATION, HANGERS, SUPPORTS, REFRIGERANT PIPING, VALVES, FITTINGS, COMPONENTS, CONTROLS, ETC.
3	PROVIDE AND INSTALL NEW DUCTED ERV OF SIZES AND CAPACITIES SCHEDULED, COMPLETE WITH NEW DUCTWORK, DAMPERS, INSULATION, HANGERS, SUPPORTS, CONTROLS, ETC.
4	PROVIDE AND INSTALL NEW WALL MOUNTED THERMOSTAT IN A TAMPER PROOF ENCLOSURE, AND INTERLOCK WITH ASSOCIATED UNIT. MOUNT THERMOSTAT ACCORDING TO ADA REQUIREMENTS.
5	PROVIDE AND INSTALL NEW WALL MOUNTED PRESSURE DIFFERENTIAL SENSOR IN A TAMPER PROOF ENCLOSURE, AND INTERLOCK WITH RTU-1.
6	REMOVE TEMPORARY CAP INSTALLED DURING DEMOLITION PHASE. PROVIDE AND INSTALL NEW 3\"/>
7	ALL COMFORT COOLING/HEATING HVAC DUCTWORK SHALL RUN CONCEALED ABOVE CEILING. COORDINATE ELEVATIONS WITH ARCH. PLANS.
8	PROVIDE AND INSTALL NEW DUCTED MUA UNIT OF SIZES AND CAPACITIES SCHEDULED, COMPLETE WITH NEW DUCTWORK, DAMPERS, INSULATION, HANGERS, SUPPORTS, PIPING, VALVES, FITTINGS, COMPONENTS, CONTROLS, ETC.



Key Plan

NOT TO SCALE PROJECT NORTH

Date: 02/05/21
 Checked: MAM
 Drawn: JM

MICHAEL J. MCGOVERN, P.E.
 LICENSE NO. 022257-1
 REGISTERED ARCHITECT

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JJA

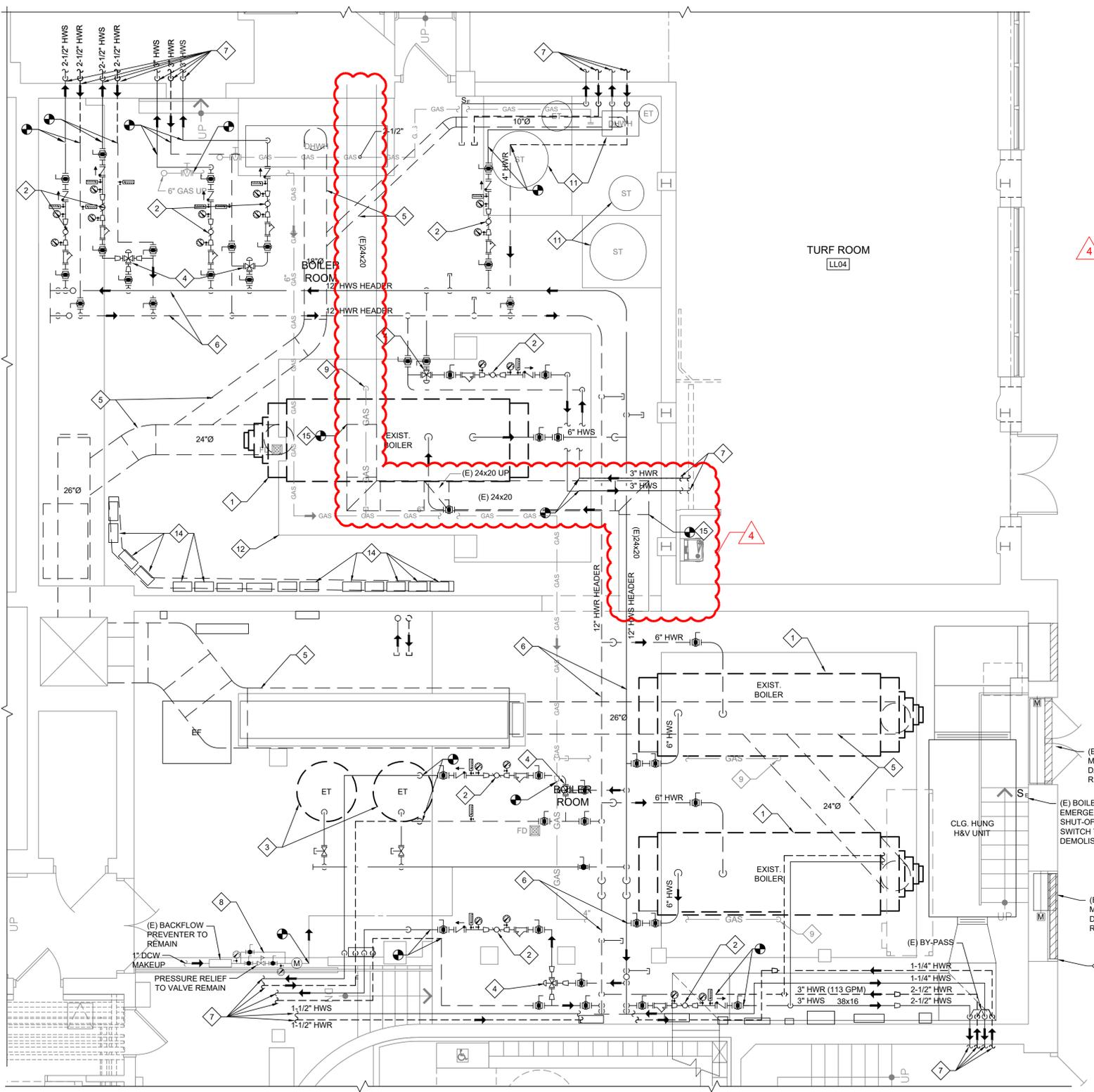
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STEAM LAB MECH PROPOSED PLANS
 CAPITAL IMPROVEMENTS AT
 MAMARONECK HIGH SCHOOL
 MAMARONECK UNION FREE SCHOOL DISTRICT
 1000 BOSTON POST ROAD, MAMARONECK, NY 10543

Job No. 4.1092.72.6
 File No. 10927206M210

M2.11

NYSED PROJECT # 66-07-01-03-0-001-039



ITEM #	DEMOLITION KEY NOTES
1	EXIST. BOILER TO BE DEMOLISHED, MECH. CONTRACTOR TO DISCONNECT & REMOVE BURNER, GAS TRAIN, BURNER CONTROL PANEL, PIPING, VALVES, DRAIN PIPING, FITTINGS, CONTROLS, ELECTRICAL, BASE, SUPPORTS, ETC.
2	EXIST. CIRCULATING PUMPS TO BE REMOVED, COMPLETE W/ EXIST. PIPING (HWS/HWR, ETC.), VALVES, FITTINGS, STRAINERS, INSULATION, SUPPORTS, MOTOR STARTERS & DISCONNECTS, ELECTRICAL, CONTROLS, ETC.
3	EXIST. EXPANSION TANKS TO BE REMOVED, COMPLETE W/ ALL EXIST. PIPING, VALVES, FITTINGS, ETC.
4	EXIST. 3-WAY CONTROL VALVE (MODULATING) & ALL RELATED PIPING (HWS/HWR), VALVES, STRAINERS, SUPPORTS, CONTROLS, ETC. TO BE REMOVED.
5	EXIST. BOILER AND WATER HEATER FLUES & BREECHING TO BE REMOVED, COMPLETE, INSULATION, SUPPORTS, ETC.
6	EXIST. PIPING HEADER (HWS/HWR) & ALL RELATED VALVES, INSULATION, SUPPORTS, ETC. TO BE REMOVED.
7	EXIST. PIPING (HWS/HWR) TO REMAIN.
8	EXIST. MAKEUP DCW ASSEMBLY TO REMAIN.
9	EXIST. GAS PIPING TO BE REMOVED, COMPLETE W/ EXIST. GAS TRAINS, REGULATORS, VALVES, SUPPORTS, ETC. (SEE PLUMBING PLAN P2.81)
10	EXIST. DHW SYSTEM (DHW HEATER HWH-1, STORAGE TANKS ST-1 & 2) & RELATED PIPING, VALVES, ETC. TO REMAIN.
11	EXIST. DHW SYSTEM (DHW HEATER HWH-1, STORAGE TANKS ST-1, 2, & 3) & RELATED PIPING, VALVES, ETC. TO REMAIN.
12	EXISTING HOUSEKEEPING PAD TO REMAIN. CONCRETE PAD SHALL BE PAINTED. REFER TO PAINT SPEC.
13	(E) 56x14 LOUVERS ABOVE WINDOW TO BE DEMOLISHED.
14	EXISTING CIRCULATING PUMPS ELECTRICAL PANELS TO BE DEMOLISHED PER LATEST N.E.C.
15	DISCONNECT AND REMOVE EXISTING 24"x20" EXHAUST DUCTWORK TO THE EXTENT SHOWN TO ACCOMMODATE ROUTING FOR BOILER FLUE. REFER TO DRAWING M2.82 FOR NEW EXHAUST DUCTWORK ROUTING.

PIPE LEGEND (DEMOLITION)	
	HWS EXIST. HOT WATER SUPPLY PIPING TO BE REMOVED
	HWR EXIST. HOT WATER RETURN PIPING TO BE REMOVED
	HWS EXIST. HOT WATER SUPPLY PIPING TO REMAIN
	HWR EXIST. HOT WATER RETURN PIPING TO REMAIN
	DCW EXIST. DOMESTIC/MAKEUP COLD WATER (DCW) PIPING TO BE REMOVED
	GAS EXIST. GAS PIPING (GAS) TO BE REMOVED (SEE PLUMBING PLAN P2.81)
	GAS EXIST. GAS PIPING (GAS) TO REMAIN (SEE PLUMBING PLAN P2.81)
	POINT OF DISCONNECTION OF OLD PIPING FROM EXISTING

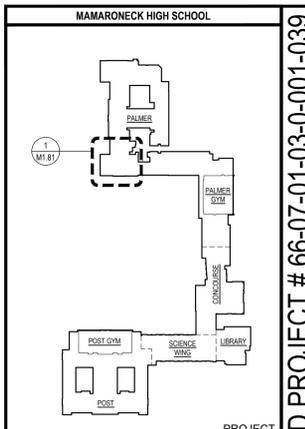
- DEMOLITION NOTES**
- DASHED LINES INDICATE ITEMS TO BE REMOVED, UNLESS OTHERWISE NOTED.
 - EXIST. HOT WATER SUPPLY & RETURN PIPING IN BOILER ROOM TO BE REMOVED AS SHOWN. CONTRACTOR TO NOTE THAT NOT ALL EXIST. PIPING IN BOILER ROOM ARE SHOWN ON THE PLANS, REMOVE ALL UNUSED OR ABANDONED PIPING INCLUDING BUT NOT LIMITED TO STEAM PIPING, DOMESTIC WATER PIPING, DRAIN PIPING, ETC. WHETHER OR NOT SHOWN ON THE PLANS. COORDINATE WITH THE OWNER/ENGINEER PRIOR TO REMOVAL.
 - EXIST. BOILERS & ALL RELATED CONTROLS & TRIMS INCLUDING LOW WATER CUTOFF DEVICES, SAFETY RELIEF VALVES, ETC. TO BE REMOVED, UNLESS OTHERWISE NOTED.
 - ALL ELECTRICAL RELATED TO EQUIPMENT BEING REMOVED SHALL BE PROPERLY TERMINATED IN ACCORDANCE WITH LATEST NEC CODES. REFER TO ELECTRICAL DRAWINGS.
 - ALL BURNER GAS VENT PIPING TO BE REMOVED IN ENTIRETY FROM BOILER ROOM TO TERMINATION. SEAL ALL WALL PENETRATIONS (IF NOT BEING REUSED) & CAULK WITH 2HR FIRE-STOPPING MATERIALS. PAINT TO MATCH EXISTING.
 - ALL EXIST. PILOT GAS LINES, REGULATORS, VALVES, ETC. (NOT SHOWN) ASSOCIATED WITH EXIST. BOILERS SHALL BE REMOVED IN BOILER ROOM. CHECK IN FIELD.
 - DURING DEMOLITION AND CONSTRUCTION, CONTRACTOR SHALL PROVIDE EXHAUST FANS AT STRATEGIC LOCATIONS IN BOILER ROOM TO DISCHARGE AIR OUTSIDE OF THE BUILDING & PREVENT ODORS OR FUME FROM MIGRATING INTO THE BUILDING.

REFER TO ARCHITECTURAL, MECHANICAL & PLUMBING DRAWINGS FOR ADDITIONAL WORK REQUIREMENTS. MECHANICAL CONTRACTOR RESPONSIBLE FOR ALL WORK CALLED OUT TO BE PERFORMED BY "MC" OR "MECHANICAL CONTRACTOR", REGARDLESS OF THE DRAWING.

- GENERAL CONSTRUCTION NOTES:**
- REFER TO "MULTIPLE PRIME CONTRACT NOTE" ON DWG A1.00 & SPECIFICATION SECTION 011200 - SPECIAL PROVISIONS FOR CONTRACTOR'S RESPONSIBILITIES.
 - CORE DRILLING SHALL BE PERFORMED BY EACH INDIVIDUAL PRIME CONTRACT. REFER TO SPECIFICATION SECTION 011200 - SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION. SEE DRAWINGS FOR APPROXIMATE LOCATIONS OF PIPES, DUCT, ETC.

Palmer Lower Level Boiler Room Mechanical Demolition Plan
 BOILER ROOM - WORK AREA 'H'

1 M1.81
 1/4" = 1'-0"



Key Plan
 NOT TO SCALE

Date: 02/05/21
 Checked: AL
 Drawn: JM

MICHAEL J. MCGOVERN, P.E.
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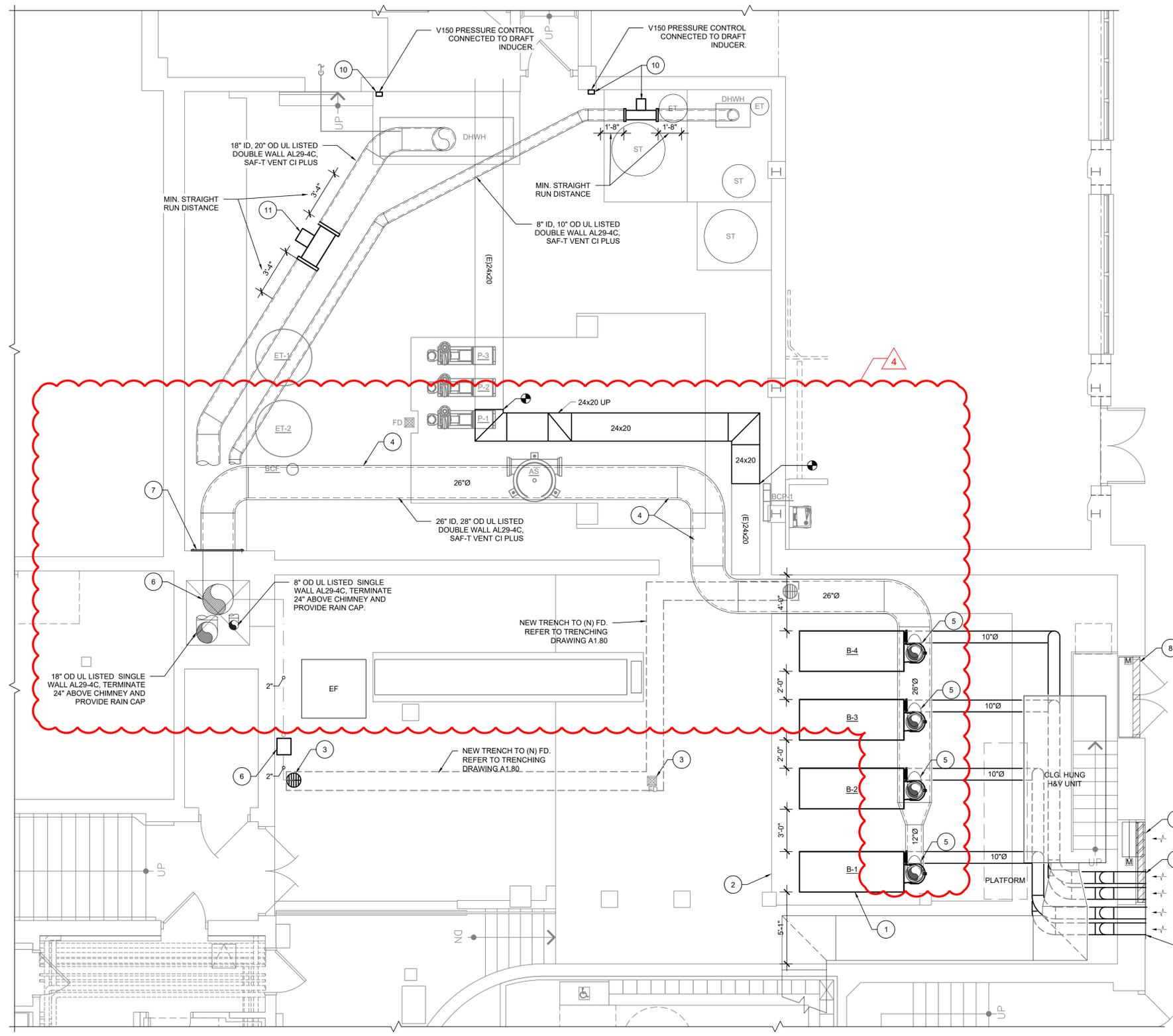
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BOILER ROOM DEMOLITION PLAN
 CAPITAL IMPROVEMENTS AT
 MAMARONECK HIGH SCHOOL
 MAMARONECK UNION FREE SCHOOL DISTRICT
 1000 BOSTON POST ROAD, MAMARONECK, NY 10543

Job No. 4.1092.72.6
 File No. 10927206M280

M1.81

NYSED PROJECT # 66-07-01-03-0-001-039



ITEM #	MECHANICAL KEY NOTES (PROPOSED)
1	INSTALL ALL 4 BOILERS ON EXIST. CONCRETE HOUSEKEEPING PAD. ANCHOR BOILERS TO SLAB AT ALL ANCHORING POINTS INDICATED ON THE MFR. INSTRUCTIONS. PROVIDE SEPARATION BETWEEN BOILERS AS INDICATED ON DRAWING.
2	EXIST. CONCRETE PAD TO REMAIN AND TO BE PAINTED.
3	INSTALL NEW FLOOR DRAIN IN THE LOCATION SHOWN. GC TO SAWCUT AND TRENCH TO EXISTING DRAIN TO BE REMOVED AND ROUTE TO NEW PER TRENCHING DRAWING A1.80. TELEVIEW EXISTING DRAIN PIPE AND SNAKE LINE. PATCH FLOOR TO MATCH EXISTING.
4	NEW BOILER FLUES/BREECHING (AL-29-4C, DOUBLE-WALL). INSTALL TIGHT TO CLG. PITCH UP TOWARD EXIST. CHIMNEY WITH SLOPE OF MIN. 1/4" PER FOOT.
5	NEW 12"Ø ID BOILER FLUES (AL-29-4C, DOUBLE WALL) DN TO NEW BOILERS. PROVIDE 45° OFFSETS FOR CONNECTION OF FLUES TO COMMON BREECHING. (TYP.4)
6	NEW 26"Ø CHIMNEY LINER (AL-29-4C, SINGLE-WALL) IN EXIST. MASONRY CHIMNEY. PROVIDE GUY WIRES & SUPPORT OFF TOP OF CHIMNEY FOR NEW LINER. NEW LINER SHALL TERMINATE 24" ABOVE TOP OF CHIMNEY WITH A HEAVY GAUGE RAIN CAP (APPROX. HEIGHT OF CHIMNEY IS 50 FEET). PROPERLY ANCHOR & SECURE RAIN CAP TO CHIMNEY TO WITHSTAND HIGH WIND. PROVIDE A CONDENSATE DRAIN AT BOTTOM OF LINER & ACID NEUTRALIZATION TUBE MODEL #JM-30 AND PIPE TO NEW FLOOR DRAIN.
7	INSTALL NEW 1/4" STEEL PLATE & ANCHOR TO MASONRY. PLATE TO EXTEND PAST EXISTING MASONRY OPENING MIN. 3" ON ALL SIDES. SEAL PERIMETER W/ HIGH TEMPERATURE CAULK. PAINT STEEL PLATES BLACK (2 FINISH COATS).
8	INTERLOCK EXISTING WATER HEATERS W/ EXISTING 64x34 MOTORIZED DAMPER.
9	EXISTING LOUVER TO REMAIN. DAMPERS TO BE LOCKED IN CLOSE POSITION.
10	PROVIDE MECHANICAL DRAFT INDUCER "US DRAFT COMPANY TRV-4". 120V/1PH, 8.1 AMPS, 1/2 HP. FAN TO BE PROVIDED W/ V150 PRESSURE CONTROL (W/ PRESSURE DIFFERENTIAL TRANSDUCER)
11	PROVIDE MECHANICAL DRAFT INDUCER "US DRAFT COMPANY TRV-18". 208-230V/1PH, 6.7 AMPS, 1 HP. FAN TO BE PROVIDED W/ V150 PRESSURE CONTROL (W/ PRESSURE DIFFERENTIAL TRANSDUCER)
12	PROVIDE 1/4" 16X50 STEEL PLATE AND PROPERLY SECURE TO WALL. STEEL PLATE SHALL HAVE FOUR (4) 10" PENETRATIONS TO ACCOMMODATE THE COMBUSTION AIR INTAKE. PAINT STEEL PLATE, ONE (1) COAT PRIMER AND TWO (2) PAINT. COLOR TO BE SELECTED BY ARCHITECT.

COMBUSTION AIR SCHEDULE			
EQUIPMENT	TOTAL INPUT (MBTU)	REQ'D FREE AREA FOR COMBUSTION	PROPOSED FREE AREA FOR COMBUSTION AIR
BOILERS B-1,2,3,&4	5,000	N/A	DIRECT CONNECTED TO EXTERIOR
EXIST. DHW HEATERS	2,610	870 SQ. IN.	1630 SQ. IN.

Date: 02/05/21
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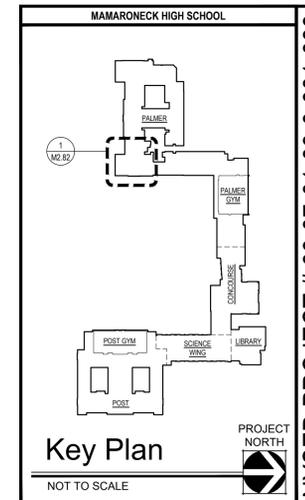
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1
M2.82
Palmer Lower Level Boiler Room Mechanical Proposed Plan
 1/4" = 1'-0"

NORTH
 BOILER ROOM - WORK AREA 'H'



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