

BID
ADDENDUM NO. 3
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 7, 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.

*****PLEASE NOTE THE CHANGE IN THE BID DUE DATE AND OPENING AS NOTED BELOW*****

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 11 13	All	Revised Notice to Bidders has been included reflecting the new bid date of January 19, 2022 .
08 71 00	All	Revised Specification Section 08 71 00 Door Hardware. Also see revised drawing A6.01.
09 67 13	All	Revised Specification Section 09 67 13.
10 51 13	All	Specification Section 10 51 13 – Metal Lockers has been added to the project for STEAM Lab lockers.

3.0 Amendments to Drawings:

Drawing No.	Addendum Requirements
A0.01	Work Area 'P' – Dunnage Painting (Various Work Areas) has been added to the SCOPE OF WORK AREAS/ITEMS list as well as the Dunnage Painting Note below it.
A0.02	Work Area 'P' – Dunnage Painting (Various Work Areas) has been added to the SCOPE OF WORK AREAS/ITEMS list as well as the Dunnage Painting Note below it.
A2.01	Drawing updated to reflect convector covers to be painted by the GC.
A2.11	Drawing updated to reflect convector covers to be painted by the GC.

3.0 Amendments to Drawings: (Continued)

Drawing No.	Addendum Requirements
A2.12	Drawing updated to reflect convector covers to be painted by the GC.
A6.01	Drawing updated to reflect changed in hardware sets. Also see revised Specification Section 08 71 00.
M0.01	Note regarding external insulation thickness has been revised. Notes have been revised referencing multiple prime contract work with references to Specification Section 011200 – Special Provisions.
M1.11	Notes have been added or revised referencing multiple prime contract work with references to Specification Section 01 12 00 – Special Provisions.
M1.21	Drawing has been updated to reflect the existing pipe diameters. Notes have been added or revised referencing multiple prime contract work with references to Specification Section 01 12 00 – Special Provisions.
M1.22	Notes have been added or revised referencing multiple prime contract work with references to Specification Section 01 12 00 – Special Provisions.
M2.11	Notes have been added or revised referencing multiple prime contract work with references to Specification Section 01 12 00 – Special Provisions. FD/SD updated to FSD/AD. Drawing updated to reflect convector covers to be painted by the GC. <u>Revised designation of the inline freeze protection pumps to FPP-1 & FPP-2 for MAU-1 and RTU-1, respectively.</u>
M2.21	Drawing has been updated to reflect the new pipe diameters. (2) two fire dampers have been added at the corridor duct penetrations. Notes have been added or revised referencing multiple prime contract work with references to Specification Section 01 12 00 – Special Provisions.
M2.22	Notes have been added or revised referencing multiple prime contract work with references to Specification Section 01 12 00 – Special Provisions
M2.71	The note referencing the GC to paint the existing dunnage has been modified and expanded upon to reference drawings A0.01 & A0.02.

3.0 Amendments to Drawings: (Continued)

Drawing No.	Addendum Requirements
M2.91	DEMOLITION/CONSTRUCTION KEYNOTE #1 has been modified.
M6.11	Revised designation of the inline freeze protection pumps to FPP-1 & FPP-2 for MAU-1 and RTU-1, respectively.
P2.81	Drawing revised to show existing and proposed gas venting. Note added to drawing regarding existing sanitary piping.
E2.10	Drawing updated to add additional data jacks and requirements.
E2.11	Drawing updated to add circuiting for Sewage Pump Kit and to add additional data jacks and requirements.
E2.12	Drawing updated to add additional data jacks and requirements.
E2.13	Drawing updated to add circuiting for pumps P-1 & P-2.
E2.20	Drawing updated to add additional data jacks and requirements.
E2.22	Drawing updated to add circuiting for pump RCP-1.
FA2.10	Drawing updated to reflect the work requirements associated with the Fire Smoke Dampers ("FSD/AD").

4.0 Requests for Information (RFIs):

No.	Question / Response
1	Question: STEAM Lab Convector Cover Painting: Please refer to contract Drawing M2.11, note 1 regarding FTR-1. Existing cover is to be reinstalled and painted. Please advise if GC is to perform the painting of the cover as part of the surrounding areas that are scheduled to be painted. Response: Convector covers to be painted by the GC. Refer to updating notes on drawings on A2.01, A2.11, A2.12 and M2.11.
2	Question: A2.01 - Please provide specifications for lockers following note #31. Response: Please refer to new Specification Section 10 51 13 – Metal Lockers.
3	Question: M2.13 – Please confirm who is furnishing STEAM equipment listed on M2.13. Response: Per STEAM Equipment Schedule on A2.10. <i>STEAM EQUIPMENT TO BE PROVIDED AND INSTALLED BY DISTRICT VENDOR. EC, MC, AND PC TO PROVIDE ALL REQUIRED UTILITIES AND MAKE ALL FINAL CONNECTIONS TO EQUIPMENT AS OUTLINED IN THE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. GC SHALL BE REQUIRED TO BRING NEW EQUIPMENT TO THE 3RD FLOOR AND INSTALL IN FINAL LOCATIONS ON THE PLANS. THIS MAY INCLUDE THE USE OF A HOIST OR A CRANE. GC SHALL COORDINATE WITH DISTRICT VENDOR FOR SCHEDULING, DELIVERY, AND INSTALLATION.</i>

4.0 Requests for Information (RFIs):

No. Question / Response

- 4 Question: M2.21 – Please clarify pipe diameters for pipes scheduled to get Metraflex expansion bellows.
- Response: Drawing M2.21 has been updated to reflect the pipe diameters.
- 5 Question: M2.71 – Does the chilled water loop need to be refilled with glycol. If so what's the type and mixture percentage?
- Response: There is no glycol in the system.
- 6 Question: Upon review of spec section 010000-1.10 - Insurance, reference is made to Section 007316 & Article 10. The Insurance requirements for this project call for an additional policy: Owners Contractors Policy (OCP). Are subcontractors required to obtain this policy in addition to the primary contractor? Are subcontractors required to supply insurance to the school district and do they have to match or exceed the project requirements? In addition, upon review of Spec Section 007316 Item 5.E. - Builders Risk, please advise if this is required and provide the limit of insurance.
- Response: All contractor's and subcontractors are responsible for purchasing the OCP in the name of the District. Insurances for contractors and subcontractors should be sent into the owner for review and approval to ensure that they meet the same terms and conditions of the insurance requirements in the specifications. The General Contractor needs to provide the Builder's Risk.
- 7 Question: As discussed in the walkthrough the Existing Dunnage Scraping and Painting is to be performed by the GC. After review of the following Contract Drawings, M2.71 includes the following note, "Insert Note GC to scrape and Paint Steel Dunnage" and in addition refer to M2.91, Demo and Construction Key Notes 1, 2 & 4. Please confirm if any portion of this work including Alternate 6B-2 is to be provided by the General Contractor.
- Response: Painting of the dunnage shall be by the GC. Refer to updated drawings A0.01, A0.02, M2.71, and M2.91.
- 8 Question: Please refer to Contract Drawing M2.11, FD/SD is indicated on the plan in several locations. Please refer to M0.01 where FD/AD and FSD/AD symbols are indicated. Please clarify the desired assembly to be provided on M2.11.
- Response: FSD/AD shall be used as updated on M2.11.
- 9 Question: Please refer to Contract Drawing M2.81, "New Gas Leak Detection Panel" is indicated. Please provide specification for desired system. Please advise if this is to be furnished and installed by the Mechanical Contractor.
- Response: Gas leak detection panel is specified on detail 4/M2.84. The panel, devices and low voltage wiring shall be furnished and installed by the Mechanical Contractor (MC). Electrical contractor (EC) shall provide and install all required 120VAC power wiring as per Drawing E2.80.

4.0 Requests for Information (RFIs):

No.	Question / Response
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|----|---|
| 10 | <p>Question: The symbol legend shown on drawing FA2.10 shows a corresponding Key Note # for each device that has some work revolving around it, whether the device is new or existing to be relocated. And it shows a number of devices that are existing to remain with somewhat dim or light lines. Please confirm that all devices without a corresponding Key Note # are intended to be existing to remain.</p> <p>Response: Yes, all light line devices without Key Notes are existing to remain. Refer to the Symbol Legend in the top right portion of the drawing for additional information.</p> |
| 11 | <p>Question: Per Door Schedule are doors DB05, DB06, and DB08 Aluminum doors with fire frames? Fire rated? Is door DA20 a pair of fire rated doors?</p> <p>Response: Doors DB05, DB06, and DB08 are aluminum "Fireframes" series doors per the schedule for consistency throughout the space. No fire rating is required for these three doors as indicated in the schedule. Door DA20 is a double swing fire rated door.</p> |
| 12 | <p>Question: Plumbing Contract; Demo of existing gas vent piping & routing new gas piping vents to the exterior in the Palmer Lower Level Boiler Room. Please clarify on drawing where the existing gas vents are & where new gas vent to be routed to the exterior of the building.</p> <p>Response: Existing and proposed Gas Venting shown on P2.81</p> |
| 13 | <p>Question: Plumbing Contract; Drawing P2.81 shows GC to trench and saw cut slab for installation of new floor drains and piping by PC, drawing does not show existing sanitary piping that PC would be connecting new floor drains to. Please clarify.</p> <p>Response: Note added "CONTRACTOR SHALL SNAKE, SCOPE, AND TELEVIEW ALL EXISTING WASTE LINES THAT ARE TO BE REUSED TO ENSURE THEY ARE CLEAR AND FREE FROM DEBRIS, DEFECTS, CRACKS, ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR TELEVIEWING ALL WASTE LINES FOR A MINIMUM OF FIFTY (50') FEET FROM THE END OF LINE CLEANOUT AT A GROUP OF FIXTURES. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY IF DEFECTS IN THE EXISTING PIPING ARE FOUND." to P2.81. There are no known drawings that show the exact location of the sanitary line between the floor drains. P.C. to verify in the field.</p> |
| 14 | <p>Question: Are Divisions 27 & 28 applicable to the Electrical Contract? If so, where are the plan pages?</p> <p>Response: Divisions 27 & 28 are part of the Electrical Contractor's contract. The data portion of these divisions is located on the "E" drawings. The Fire Alarm portion of these divisions is located on the "E1.xx" drawings and drawing FA2.10</p> |

5.0 Clarifications:

No.

N/A

Specification
Section No.

END OF ADDENDUM NO. 3

ADD NO. 3 - 7

NOTICE TO BIDDERS

MAMARONECK UNION FREE SCHOOL DISTRICT

2019 Bond Referendum

Capital Improvements at Mamaroneck High School

(NYSED #66-07-01-03-0-001-039)

BID # 21/22-MUFSD-003

PUBLIC NOTICE is hereby given that sealed bids shall be received by the Board of Education, Mamaroneck Union Free School District, 1000 West Boston Post Road, Mamaroneck, New York 10543 for the following contracts:

Contract #6a - General Construction

(includes site/civil & abatement)

Contract #6b - Mechanical

Contract #6c - Plumbing

Contract #6d – Electrical

Contract #6e – Elevator Modernization

A detailed description of the work is included in the bid specifications.

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.

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.” No Bids shall be accepted after 2:00 p.m. prevailing time on January 19, 2022. Please be reminded that USPS, UPS and FedEx delivery schedules may be limited. Please allow enough time for your proposal to arrive on or before the due date and time.

The plans and specifications may be examined/obtained at REV Ventures, Inc., 330 Route 17A, Suite 3, Goshen, NY 10924, or at their website www.usinglesspaper.com or by phone (845) 651-3845 between 9:00 a.m. and 5:00 p.m. Monday through Friday beginning on **Tuesday, November 23, 2021**. A bid deposit of \$100 payable to Mamaroneck Union Free School District by check or money order is required to obtain printed documents. The deposit is refundable if the bid documents are returned in good condition within 30 days of contract award. Complete digital sets of Bidding Documents, drawings and specifications may also be viewed online with a free user account or downloaded for a non-refundable fee of Forty-Nine (\$49.00) dollars at www.usinglesspaper.com under public projects.

Please note that all bidders must obtain bid packages from REV Ventures, Inc. or at their website www.usinglesspaper.com in order to submit a bid for this project. REV Ventures, Inc. or their website www.usinglesspaper.com is the **ONLY** authorized distributor of the bid package and all bidders must be on their bidders list.

All bid addenda will be transmitted to registered plan holders via email and will be available at www.usinglesspaper.com. Plan holders who have paid a deposit for hard copies of the bid documents will need to make the determination if hard copies of the addenda are required for their use, and coordinate directly with Rev. Ventures Inc. for hard copies of addenda to be issued. There will be no charge for registered plan holders to obtain hard copies of the bid addenda.

Mamaroneck UFSD/2019 Bond Referendum

000113-1

#4.1092.72.06

Capital Improvements at Mamaroneck

ADD NO. 3

High School – Phase 2

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

Any questions regarding the bid process shall be directed to Lauren Leone, Purchasing Agent, in writing by fax to 914-220-3091 or by email to LLeone@mamkschools.org. All technical questions regarding the bid should be directed to LAN (Attention Ms. Danielle Farrell) in writing by fax to 845-615-0351 or by email to danielle.farrell@lanassociates.com with a copy to the District's Purchasing Agent at LLeone@mamkschools.org. All questions regarding the bid or the bid process will be answered in the form of a written addendum to the specifications and distributed to all prospective bidders.

A pre-bid conference, including site visit has already taken place. 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.

Each bid must be accompanied by a certified check payable to Mamaroneck Union Free School District or by a Bid Bond in an amount equal to ten percent (10%) of the bid as set forth in the Bid Specifications.

Each Bidder shall prepare their bid proposal, along with a bid security, in accordance with the terms and subject to the conditions set forth in the Bid Specifications. Attention of bidders is particularly called to the minimum wage rates to be paid under the contracts. Wages to workers, laborers and mechanics employed to work on this project shall be paid in accordance with Section 220 of the Labor Law and in accordance with the Prevailing Rate Schedules found in the Project Manual. Submission of certified payroll is required as a condition of this contract. Additional information can be obtained at <http://www.labor.state.ny.us/workerprotection/publicwork/PWContents.shtm>.

The Contractor must comply with all applicable laws, rules and regulations governing the Project, including the "Equal Opportunity for Employment" requirements as promulgated by the Federal and State governments.

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 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.

BOARD OF EDUCATION
MAMARONECK UNION FREE
SCHOOL DISTRICT
1000 West Boston Post Road
Mamaroneck, New York 10543
By: Lauren Leone
Purchasing Agent

SECTION 087100 – DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes:
 - 1. Mechanical (and electrified) door hardware for the following:
 - a. Swinging doors.
 - 2. Field verification, preparation and modification of existing doors and frames to receive new door hardware.
- B. Exclusions: Hardware for the following is not provided under the scope of this section, unless specifically listed in the hardware sets:
 - 1. Windows
 - 2. Cabinets (casework), including locks in cabinets
 - 3. Signage
 - 4. Toilet accessories
 - 5. Overhead doors
- C. Related Sections:
 - 1. Division 01 Section "Alternates" for alternates affecting the work of this section.
 - 2. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation under the work of this section.
 - 3. Division 09 Sections for touchup finishing or refinishing of existing openings modified by the work of this section.

1.3 REFERENCES

- A. Applicable state and local building codes and standards.
- B. Fire/Life Safety
 - 1. NFPA - National Fire Protection Association
 - a. NFPA 70 – National Electric Code
 - b. NFPA 80 - Standard for Fire Doors and Fire Windows
 - c. NFPA 101 - Life Safety Code
 - d. NFPA 105 - Smoke and Draft Control Door Assemblies

2. State and/or City Fire Safety Code
- C. UL - Underwriters Laboratories
 1. UL 10B - Fire Test of Door Assemblies
 2. UL 10C - Positive Pressure Test of Fire Door Assemblies
 3. UL 1784 - Air Leakage Tests of Door Assemblies
 4. UL 305 - Panic Hardware
- D. Accessibility
 1. ADA - Americans with Disabilities Act.
 2. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
- E. DHI - Door and Hardware Institute
 1. Sequence and Format for the Hardware Schedule
 2. Recommended Locations for Builders Hardware
- F. ANSI - American National Standards Institute
 1. ANSI/BHMA A156.1 - A156.29, and ANSI A156.31 - Standards for Hardware and Specialties

1.4 SUBMITTALS

- A. General:
 1. Submit the following in accordance with Conditions of Contract and Division 01 requirements.
 2. Advise Architect within the submittal package of incompatibility or issues which may detrimentally affect the work of this section.
 3. Prior To Forwarding Submittal: Comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, "EXAMINATION" article, herein.
- B. Action Submittals:
 1. Product Data: Product data including manufacturers' technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
 2. Riser and Wiring Diagrams: After final approval of the hardware schedule, submit details of electrified door hardware, indicating the following:
 - a. Wiring Diagrams: For power, signal, and control wiring and including the following:
 - 1) Details of interface of electrified door hardware and building safety and security systems.
 - 2) Schematic diagram of systems that interface with electrified door hardware.
 - 3) Point-to-point wiring.
 - 4) Risers.
 3. Samples for Verification: If requested by the Architect, submit production sample or sample installations as requested of each type of exposed hardware unit in the finish indicated, and tagged with a full description for coordination with the schedule.

- a. Samples will be returned to the supplier in like-new condition. Units that are acceptable to the Architect may, after final check of operations, be incorporated into the Work, within limitations of key coordination requirements.
4. Door Hardware Schedule: Submit schedule with hardware sets in vertical format as illustrated by the Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Indicate complete designations of each item required for each door or opening. Include the following information:
 - a. Door Index; include door number, heading number, and Architects hardware set number.
 - b. Opening Lock Function Spreadsheet; list locking device and function for each opening.
 - c. Type, style, function, size, and finish of each hardware item.
 - d. Name and manufacturer of each item.
 - e. Fastenings and other pertinent information.
 - f. Location of each hardware set cross-referenced to indications on Drawings.
 - g. Explanation of all abbreviations, symbols, and codes contained in schedule.
 - h. Mounting locations for hardware.
 - i. Door and frame sizes and materials.
 - j. Name and phone number for the local manufacturer's representative for each product.
 - k. Operational Description of openings with any electrified hardware (locks, exits, electromagnetic locks, electric strikes, automatic operators, door position switches, magnetic holders or closer/holder units, and/or access control components). Operational description should include how the door will operate on egress, ingress, and fire/smoke alarm connection.
 - 1) Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate the fabrication of other work that is critical in Project construction schedule.
5. Key Schedule:
 - a. After a keying meeting between representatives of the Owner, Architect, hardware supplier—provide a keying schedule listing the levels of keying as well as an explanation of the key system's function, the key symbols used and the door numbers controlled.
 - b. Utilize ANSI A156.28 "Recommended Practices for Keying Systems" as a guideline for nomenclature, definitions, and approach for selecting the optimal keying system.
 - c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
 - d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
 - e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion.
 - 1) Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
 - f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.

6. Templates: After final approval of the hardware schedule, provide templates for doors, frames and other work specified to be factory prepared for the installation of door hardware.
- C. Informational Submittals:
1. Qualification Data: For Supplier, Installer and Architectural Hardware Consultant.
 2. Product Certificates for electrified door hardware, signed by the manufacturer:
 - a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
 3. Certificates of Compliance:
 - a. Upon request of Architect or Authority Having Jurisdiction certificates of compliance for fire-rated hardware and installation instructions shall be made available.
 4. Product Test Reports: For compliance with accessibility requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for door hardware on doors located in accessible routes.
 5. Warranty: Special warranty specified in this Section.
- D. Closeout Submittals:
1. Operations and Maintenance Data : Provide in accordance with Division 01 and include the following:
 - a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
 - b. Catalog pages for each product.
 - c. Name, address, and phone number of local representative for each manufacturer.
 - d. Parts list for each product.
 - e. Copy of final approved hardware schedule, edited to reflect conditions as-installed.
 - f. Copy of final keying schedule.
 - g. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
 - h. Copy of warranties including appropriate reference numbers for manufacturers to identify the project.

1.5 QUALITY ASSURANCE

- A. Product Substitutions: For the purpose of performing the work of this section, comply with product requirements stated in Division 01 and as specified herein.
1. Where a specific manufacturer's product is named and accompanied by the words "No Substitute," including make or model number or other designation, provide the product exactly as specified. (Note: Certain products have been selected for their unique characteristics and particular project suitability.)
- B. Supplier Qualifications and Responsibilities: A recognized architectural hardware supplier that has a record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project and that provides a certified Architectural Hardware Consultant (AHC) available to the Owner, Architect, and Contractor, at reasonable times during the course of the Work for consultation.

1. Warehousing Facilities: In Project's vicinity.
 2. Scheduling Responsibility: Preparation of door hardware and keying schedules.
 3. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
 4. Coordination Responsibility: Coordinate installation of the electronic security hardware with the Architect and electrical engineers and provide installation and technical data to the Architect and other related subcontractors.
 - a. Upon completion of electronic security hardware installation, inspect and verify that all components are working properly.
- C. Installer Qualifications: Qualified tradesmen, skilled in the application of commercial grade hardware that has a record of successful in-service performance for installing door hardware similar in quantity, type, and quality to that indicated for this Project.
- D. Architectural Hardware Consultant Qualifications: A person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and who can meet the following qualification requirements:
1. For door hardware, DHI-certified, Architectural Hardware Consultant (AHC).
 2. Can provide installation and technical data to the Architect and other related subcontractors.
 3. Can inspect and verify components are in working order upon completion of installation.
 4. Capable of producing wiring diagrams.
 5. Capable of coordinating installation of the electrified hardware with the Architect and electrical engineers.
- E. Single Source Responsibility: Obtain each type of door hardware from a single manufacturer.
1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated.
 2. Manufacturers that perform electrical modifications and that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.
- F. Fire-Rated Door Openings: Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and are identical to products tested by Underwriters Laboratories, Intertek Testing Services, or other testing and inspecting organizations acceptable to the authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.
- G. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
1. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at the tested pressure differential of 0.3-inch wg (75 Pa) of water.
- H. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.

- I. Means of Egress Doors: Latches do not require more than 15 lbf (67 N) to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.
- J. Accessibility Requirements: For door hardware on doors in an accessible route, comply with governing accessibility regulations cited in "REFERENCES" article, herein.
 - 1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf (22.2 N).
 - 2. Comply with the following maximum opening-force requirements:
 - a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
 - b. Sliding or Folding Doors: 5 lbf (22.2 N) applied parallel to door at latch.
 - c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
 - 3. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch (13 mm) high [and] 3/4 inch (19 mm) high for exterior sliding doors].
 - 4. Adjust door closer sweep periods so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.
- K. Keying Conference: Conduct conference at Project site to comply with requirements in Division 01.
 - 1. Attendees: Owner, Contractor, Architect, Installer, Supplier's Architectural Hardware Consultant.
 - 2. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including, but not limited to, the following:
 - a. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
 - b. Preliminary key system schematic diagram.
 - c. Requirements for key control system.
 - d. Requirements for access control.
 - e. Address for delivery of keys.
- L. Pre-installation Conference: Conduct conference at Project site.
 - 1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 2. Inspect and discuss preparatory work performed by other trades.
 - 3. Review required testing, inspecting, and certifying procedures.
- M. Coordination Conferences:
 - 1. Installation Coordination Conference: Prior to hardware installation, schedule and hold a meeting for the purpose of reviewing any questions or concerns related to the proper installation and adjustment of door hardware.
 - a. Attendees: doors hardware supplier, door hardware installer, Contractor.
 - b. After the meeting, provide letter of compliance to the Architect, indicating when the meeting was held and who was in attendance.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site.
- B. Tag each item or package separately with identification coordinated with the final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.
 - 1. Each article of hardware shall be individually packaged in manufacturer's original packaging.
- C. Project Conditions:
 - 1. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
 - 2. Provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.
- D. Protection and Damage:
 - 1. Promptly replace products damaged during shipping with exactly the same products.
 - 2. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during the course of the Work.
 - 3. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
- E. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.
- F. Deliver keys (and permanent cores) to Owner by registered mail or overnight package service.

1.7 COORDINATION

- A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Division 03.
- B. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
- D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.
- E. Existing Openings: Where hardware components are scheduled for application to existing construction or where modifications to existing door hardware are required, field verify existing conditions and coordinate installation of door hardware to suit opening conditions and to provide proper door operation.
- F. Direct shipments not permitted, unless approved by the Contractor.

1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Years from date of Substantial Completion, for durations indicated.

a. Closers:

- 1) Mechanical: 10 years.
- 2) Electrified: 2 years.

b. Exit Devices:

- 1) Mechanical: 3 years.
- 2) Electrified: 1 year.

c. Locksets:

- 1) Mechanical: 3 years.
- 2) Electrified: 1 year.

d. Continuous Hinges: Lifetime warranty

e. Key Blanks: Lifetime

2. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.

1.9 MAINTENANCE

A. Maintenance Tools:

1. Furnish One (1) complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. The Awarding Authority has determined that certain products will be selected for their unique characteristics and particular project suitability to insure continuity of existing and future performance and maintenance standards. After investigating available product offerings the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: "No Substitute."

- B. Approval of manufacturers other than those listed shall be in accordance with QUALITY ASSURANCE article, herein.

Item	Scheduled Manufacturer
Hinges	Ives (IVE)
Flush Bolts & Coordinators	Ives (IVE)
Locksets & Deadlocks	Schlage (SCH)
Cylinders	Best (BES)
Door Closers	LCN (LCN)
Overhead Stops	Glynn Johnson (GLY)
Door Trim	Ives (IVE)
Stops & Holders	Ives (IVE)
Silencers	Ives (IVE)
Weather Seals	Zero (ZER)
Key Cabinets	Telkee (TEL)

- C. Hand of Door: Drawings show direction of slide, swing, or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement as shown.
- D. Where the hardware specified is not adaptable to the finished shape or size of the members requiring hardware, furnish suitable types having the same operation and quality as the type specified, subject to the Architect's approval.

2.2 EXISTING MATERIALS

- A. Where existing door hardware is indicated to be removed and reinstalled:
1. Carefully remove door hardware and components.
 2. Clean, protect and store existing door hardware in accordance with storage and handling requirements specified herein.
 3. Reinstall in accordance with installation requirements for new door hardware.

2.3 MATERIALS

A. Fasteners

1. Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surfaces to receive painted finish.
3. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent that no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless their use is the only means of reinforcing the work adequately to fasten the hardware securely. Review door specification and advise Architect if thru-bolts are required.
4. Hardware shall be installed with the fasteners provided by the hardware manufacturer.

B. Modification and Preparation of Existing Doors: Provide necessary fillers, Dutchmen, reinforcements, and fasteners, compatible with existing materials, as required for mounting new opening hardware and to cover existing door and frame preparations.

1. When possible, use materials which match materials of adjacent modified areas.
2. When modifying existing fire-rated openings, provide materials permitted by NFPA 80 as required to maintain fire-rating.

C. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

2.4 HINGES

A. Provide five-knuckle, ball bearing hinges of type, material, and height as outlined in the following guide for this specification:

1. Manufacturers:

a. Scheduled Manufacturer: Ives.

B. Requirements:

1. 1-3/4 inch thick doors, up to and including 36 inches wide:

- a. Exterior: standard weight, bronze/stainless steel, 4-1/2 inches high
- b. Interior: standard weight, steel, 4-1/2 inches high

2. 1-3/4 inch thick doors over 36 inches wide:

- a. Exterior: heavy weight, bronze/stainless steel, 5 inches high
- b. Interior: heavy weight, steel, 5 inches high

3. 2 inches or thicker doors:

- a. Exterior: heavy weight, bronze/stainless steel, 5 inches high
- b. Interior: heavy weight, steel, 5 inches high

4. Provide three hinges per door leaf for doors 90 inches or less in height, and one additional hinge for each 30 inches of additional door height.

5. Where new hinges are specified for existing doors and/or existing frames, the new hinge size must be identical to hinge preparation present in the existing door and/or existing frame.

6. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:

- a. Steel Hinges: Steel pins
- b. Non-Ferrous Hinges: Stainless steel pins
- c. Out-Swinging Exterior Doors: Non-removable pins
- d. Out-Swinging Interior Lockable Doors: Non-removable pins
- e. Interior Non-lockable Doors: Non-rising pins

7. The width of hinges shall be 4-1/2 inches at 1-3/4 inch thick doors, and 5 inches at 2 inches or thicker doors. Adjust hinge width as required for door, frame, and/or wall conditions to allow proper degree of opening.

8. Provide hinges with electrified option where specified. Provide with sufficient number and gage of concealed wires to accommodate electric function of specified hardware. Locate electric hinge at second hinge from bottom or nearest to the electrified locking component.

9. Provide mortar guard for each electrified hinge specified, unless specified in hollow metal frame specification.

10. Provide spring hinges where specified. Provide two spring hinges and one bearing hinge per door leaf for doors 90 inches or less in height. Provide one additional bearing hinge for each 30 inches of additional door height.

2.5 CYLINDERICAL LOCKS – GRADE 1

A. Manufacturer:

1. Scheduled Manufacturer: Schlage ND Series

B. Requirements:

1. Provide cylindrical locks conforming to ANSI A156.2 Series 4000, Grade 1. Cylinders: Refer to “KEYING” article, herein.
2. Provide locksets able to withstand 1500 inch pounds of torque applied to the locked outside lever without gaining access per ANSI A156.2 Abusive Locked Lever Torque Test and cycle tested to 3 million cycles per ANSI A156.2 Cycle Test.
3. Provide levers with vandal resistant technology for use at heavy traffic or abusive applications. Levers feature internal lock components that prevent damage caused by excessive force from persons kicking, hitting or standing on the lever to gain access.
4. Provide solid steel rotational stops to control excessive rotation of the lever.
5. Lockset to be completely refunctionable. Lockset design shall allow function of lock to be changed into over twenty other common functions by swapping easily accessible parts.
6. Provide locks with a standard 2-3/4 inches backset, unless noted otherwise, with a 1/2 inch latch throw. Provide proper latch throw for UL listing at pairs.
7. Provide locksets with a separate anti-rotation throughbolts, and shall have no exposed screws. Levers shall operate independently, and shall have two external return spring cassettes mounted under roses to prevent lever sag.
8. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
9. Provide electrical options as scheduled.
10. Lever trim shall be solid cast levers without plastic inserts, and wrought roses on both sides. Locksets shall be thru-bolted to assure proper alignment.
 - a. Lever design shall be Schlage Rhodes.
 - b. Lever trim on the secure side of doors serving rooms considered by the authority having jurisdiction to be hazardous shall have a tactile warning.

2.6 EXIT DEVICES – BAR TYPE

A. Manufacturers:

1. Scheduled Manufacturer: Von Duprin 55 series.

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1, and UL listed for Panic Exit and/or Fire Exit Hardware. Cylinders: Refer to "KEYING" article, herein.
2. Provide bar type exit devices, cast or forged of brass, bronze, or stainless steel, plated to the standard architectural finishes to match the balance of the door hardware.
3. Rim and Mortise type devices shall have 3/4 inch throw latch bolt. Surface and Concealed Vertical Rod devices shall have 5/8 inch throw latch bolts.
4. Mechanism case will be one piece without a cover plate, and shall sit flush on the face of all flush doors, or spacers shall be furnished to fill gaps behind devices. Where glass trim or molding projects off the face of the door, provide glass bead kits.
5. Exit devices for fire rated openings shall be UL labeled fire exit hardware.
6. Provide manufacturer's standard strikes.
7. Provide exit devices cut to door width and height. Locate exit devices at a height recommended by the exit device manufacturer, allowable by governing building codes, and approved by the Architect.
8. Removable mullions shall be a 2 inches x 3 inches steel tube. Where scheduled, mullion shall be of a type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
9. Provide electrical options as scheduled.
10. Furnish all necessary wood door kit, and cover plates, for proper installation for the exit device.

2.7 FINAL CYLINDERS AND KEYING

- A. Tie into existing Best key system.
- B. General contractor furnish core 0 bit and turn over to the district locksmith for keying. All cost of keying and installation of final core shall be included in the lump sum of the contract.
- C. Coordinate a meeting with the owner to determine the key system and keying requirements for the building. Locks to be small format interchangeable core by Best.
- D. Furnish temporary cores. Return all temporary cores to the hardware supplier after final cores have been installed.
- E. Final Cylinders to have the following;
 - 1. Core to have concealed key control stampings
 - 2. Final biting list to be delivered to the owner.
- F. Keys shall have the following;
 - 1. Material: Nickel silver; minimum thickness of .092-inch (2.3mm)
 - 2. Keys to be stamped with visual key control.
 - 3. Key bow to have stamped "DO NOT DUPLICATE".
 - 4. Quantity: Furnish in the following quantities.
 - a. Change (Day) Keys: 3 per cylinder/core.
 - b. Final Control Keys: 3.
 - c. Master Keys: 6.

2.8 DOOR CLOSERS

A. Manufacturers:

1. Scheduled Manufacturer: LCN 4040XP Series.

B. Requirements:

1. Provide door closers certified to ANSI/BHMA A156.4 Grade 1 requirements by a BHMA certified independent testing laboratory. Closers shall be ISO 9000 certified. Units shall be stamped with date of manufacture code.
2. Door closers shall have fully hydraulic, full rack and pinion action with a high strength cast iron cylinder, and shall utilize full complement bearings at shaft. Cylinder body shall be 1-1/2 inch diameter, and double heat-treated pinion shall be 11/16 inch diameter.
3. Provide hydraulic fluid requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F. Fluid shall be fireproof and shall pass the requirements of the UL10C "positive pressure" fire test.
4. Spring power shall be continuously adjustable over the full range of closer sizes, and allow for reduced opening force as required by accessibility codes and standards. Hydraulic regulation shall be by tamper-proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed, and backcheck.
5. Provide closers with a solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
6. Closers shall not incorporate Pressure Relief Valve (PRV) technology.
7. Closer cylinders, arms, adapter plates, and metal covers shall have a powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or shall have special rust inhibitor (SRI).
8. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.
9. Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Closers shall not be visible in corridors, lobbies and other public spaces unless approved by Architect.

PROTECTION PLATES

C. Manufacturers:

1. Scheduled Manufacturer: Ives.

D. Requirements:

1. Provide kick plates, mop plates, and armor plates minimum of 0.050 inch thick as scheduled. Furnish with machine or wood screws, finished to match plates. Sizes of plates shall be as follows:
 - a. Kick Plates – 8 inches high x 2 inches less width of door on single doors, 1 inch less width of door on pairs
 - b. Mop Plates – 8 inches high x 2 inches less width of door on single doors, 1 inch less width of door on pairs

2.9 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.

Provide door stops for all doors in accordance with the following requirements:

2. Provide wall stops wherever possible. Provide convex type where mortise type locks are used and concave type where cylindrical type locks are used.
3. Where wall stops cannot be used, provide dome type floor stops of the proper height.
4. At any opening where a wall or floor stop cannot be used, a medium duty surface mounted overhead stop shall be used.

2.10 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer: Zero.

B. Requirements:

1. Provide thresholds, weatherstripping (including door sweeps, seals, astragals) and gasketing systems (including smoke, sound, and light) as specified and per architectural details. Match finish of other items as closely as possible. Size of thresholds shall be as follows:
 - a. Saddle Thresholds – 1/2 inch high x jamb width x door width
 - b. Bumper Seal Thresholds – 1/2 inch high x 5 inches wide x door width
2. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.

2.11 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.

B. Requirements:

1. Provide "Push-in" type silencers for each hollow metal or wood frame. Provide three for each single frame and two for each pair frame. Omit where gasketing is specified or required by code.

2.12 FINISHES

- A. Finish of all hardware shall be as specified within the hardware sets.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Existing Door and Frame Compatibility: Field verify existing doors and frames receiving new hardware and existing conditions receiving new openings. Verify that new hardware is compatible with the existing door and frame preparation and existing conditions.
- C. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Where on-site modification of doors and frames is required, prepare hardware locations in accordance with the following:
 - 1. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.
 - 2. Wood Doors: Comply with DHI WDHS.5 "Recommended Hardware Reinforcement Locations for Mineral Core Wood Flush Doors."
 - 3. Where doors are in rated assemblies, comply with NFPA 80 for restrictions on on-site door hardware preparation.
 - 4. Where on-site modification of existing doors and frames is required:
 - a. Remove existing hardware being replaced, tag, and store according to contract documents.
 - b. Field modify and prepare existing door and/or frame for new hardware being installed.
 - c. When modifications are exposed to view, use concealed fasteners, when possible.

3.3 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
 - 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
 - 2. Custom Steel Doors and Frames: HMMA 831.
 - 3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- B. Install each hardware item in compliance with the manufacturer's instructions and recommendations, using only the fasteners provided by the manufacturer.
- C. Do not install surface mounted items until finishes have been completed on the substrate. Protect all installed hardware during painting.
- D. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- E. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- F. Operating parts shall move freely and smoothly without binding, sticking, or excessive clearance.
- G. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.
- H. Intermediate Offset Pivots: Where offset pivots are indicated, provide intermediate offset pivots in quantities indicated in door hardware schedule but not fewer than one intermediate offset pivot per door and one additional intermediate offset pivot for every 30 inches (750 mm) of door height greater than 90 inches (2286 mm).
- I. Lock Cylinders: Install construction cores to secure building and areas during construction period.
 - 1. Replace construction cores with permanent cores as indicated in keying section.
 - 2. Coordinate with owner for direction of the installation of permanent.
- J. Wire (including low voltage): Coordinate with the following work, provided under the scope of Division 26, ELECTRICAL.
 - 1. Conduit, junction boxes and wire pulls.
 - 2. Connections to and from power supplies to electrified hardware.
 - 3. Connections to fire/smoke alarm system and smoke evacuation system.
 - 4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
 - 5. Testing and labeling wires with the Architect's opening number.
- K. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.

- L. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.
 - 1. Configuration: Provide [one power supply for each door opening][least number of power supplies required to adequately serve doors] with electrified door hardware.
- M. Thresholds: Set thresholds scheduled herein, in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
- N. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present a tripping hazard.
- O. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
- P. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
- Q. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.4 FIELD QUALITY CONTROL

- A. Architectural Hardware Consultant: Engage a qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.
 - 1. Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
 - 1. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
 - 2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
 - 3. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.
- B. Occupancy Adjustment: Approximately three [six] <Insert number> months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors, door hardware, and electrified door hardware.

3.6 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.7 DEMONSTRATION

- A. Provide training for the Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Division 01 Section "Demonstration and Training."

3.8 DOOR HARDWARE SCHEDULE

- A. Provide hardware for each door to comply with requirements of this section and the below-listed scheduled sets.
- B. It is intended that the following schedule includes complete items of door hardware necessary to complete the work. If a discrepancy is found in the scheduled hardware sets, such as a missing item, improper hardware for a frame, door or fire codes, provisions of the above-specifications shall govern.
- C. Locksets, exit devices, and other hardware items are referenced in the following hardware sets for series, type and function. Refer to the above-specifications for special features, options, cylinders/keying, and other requirements.

D. Hardware Sets: As follows.

Abbreviation	Name
BES	Best Locking Systems
GLY	Glynn-Johnson Corp
IVE	H.B. Ives
LCN	Lcn Commercial Division
SCE	Schlage Electronic Security
SCH	Schlage Lock Company
TGP	Technical Glass Products
VON	Von Duprin
ZER	Zero International Inc

44300 OPT0182448 Version 7

Hardware Group No. CA-01

Provide each SGL door(s) with the following:

QT		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
Y						
1	EA	PA MOUNTING PLATE	4040XP-18PA		689	LCN
1	SET	OFFSET PIVOT SET	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	SET	INT OFFSET PIVOT	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	EA	PANIC HARDWARE (OFFICE FUNCTION LOCK W/ MATCHING BRW LEVER)	55-L-02-SNB-(BY TECHNICAL GLASS PRODUCTS)		613/62 6-(630)	VON (TGP)
1	EA	SFIC MORTISE CYL.	80-134 GRN X K510-680		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	SURFACE CLOSER	4040XP RW/PA		689	LCN
1	EA	FLOOR STOP	FS436 X RISER TO SUIT		626	IVE
4	EA	GASKETING	488FSBK-PSA		BK	ZER
1	EA	PERIMETER SEAL	BY TECHNICAL GLASS PRODUCTS		630	TGP

Hardware Group No. CA-02

Provide each PR door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	PA MOUNTING PLATE	4040XP-18PA		689	LCN
2	SET	INT OFFSET PIVOT	BY TECHNICAL GLASS PRODUCTS		630	TGP
2	SET	OFFSET PIVOT SET	BY TECHNICAL GLASS PRODUCTS		630	TGP
4	SET	CONST LATCHING BOLT	FB51P		630	IVE
4	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	FIRE EXIT HARDWARE (OFFICE FUNCTION LOCK W/ MATCHING BRW LEVER)	5547-L-F-371-02-SNB (BY TECHNICAL GLASS PRODUCTS)		626 (630)	VON (TGP)
1	EA	SFIC MORTISE CYL.	80-134 GRN X K510-680		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
4	EA	COORDINATOR	COR X FL		628	IVE
2	EA	SURFACE CLOSER	4040XP (4040XP RW/PA PARALLEL ARE MOUNT)		689	LCN
2	EA	FLOOR STOP	FS436 X RISER TO SUIT		626	IVE
1	EA	PERIMETER SEAL	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	EA	MEETING STILE SEALS	BY TECHNICAL GLASS PRODUCTS		630	TGP

Hardware Group No. CA-03

Provide each PR door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5 (5BB1 4.5 X 4.5 NRP)		652	IVE
2	EA	MANUAL FLUSH BOLT	FB458		626	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	CLASSROOM LOCK	ND70HD BRW		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
2	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-3182 @ ACTIVE		689	LCN
1	EA	FLUSH CEILING MTG PLT	4040XP-18G @ ACTIVE		689	LCN
2	EA	KICK PLATE	8400 8" X 1 1/2" LDW B-CS		630	IVE
2	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. CA-04

Provide each SGL door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP		652	IVE
1	EA	CLASSROOM LOCK	ND70HD BRW		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	OH STOP & HOLDER	100H		630	GLY
1	EA	KICK PLATE	8400 8" X 2" LDW B-CS		630	IVE
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. CA-05

Provide each SGL door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	SET	OFFSET PIVOT SET	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	SET	INT OFFSET PIVOT	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	EA	OFFICE FUNCTION LOCK W/ MATCHING BRW LEVER	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	EA	SFIC MORTISE CYL.	80-134 GRN X K510-680		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	SURFACE CLOSER	4040XP RW/PA (MOUNT PARELEL ARM)		689	LCN
1	EA	FLOOR STOP	FS436 X RISER TO SUIT		626	IVE
1	EA	PERIMETER SEAL	BY TECHNICAL GLASS PRODUCTS		630	TGP

Hardware Group No. CA-06

Provide each BF door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	ALL HARDWARE	BY NANA WALL SYSTEM			

Hardware Group No. CA-07

Provide each SGL door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	CONT. HINGE	112XY		628	IVE
1	EA	PANIC HARDWARE	55-NL-110MD-SNB		613/62 6-(626)	VON
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	LONG DOOR PULL	9266F 36" O		630- 316	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	SET	GASKETING	429BK-S		BK	ZER
1	EA	DOOR SWEEP	8193AA SIZE TO SUIT		AA	ZER
1	EA	THRESHOLD	546BK-223		BK	ZER
1	EA	DOOR CONTACT	679-05 BY DR MATERIAL TO SUIT	  ✓	WHT	SCE

Hardware Group No. CA-08

Provide each SGL door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP		652	IVE
1	EA	STOREROOM LOCK	ND80HD BRW		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	488FSBK PSA		BK	ZER

Hardware Group No. **CA-09**

Hardware Group No. **CA-10**

Provide each SGL door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP		652	IVE
1	EA	STOREROOM LOCK	ND80HD BRW		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA ST-3182		689	LCN
1	EA	FLUSH CEILING MTG PLT	4040XP-18G		689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW B-CS		630	IVE
1	EA	SILENCER	SR64		GRY	IVE

Hardware Group No.**CA-11**

Provide each PR door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5 NRP		630	IVE
2	EA	FIRE EXIT HARDWARE	5547-L-F-371-02-SNB		626	VON
2	EA	SFIC RIM CYLINDER	80-159 GRN		626	SCH
2	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	SET	MEETING STILE	328AA-S		AA	ZER
1	EA	GASKETING	488FSBK PSA		BK	ZER
1	EA	THRESHOLD	546BK-223		BK	ZER

Hardware Group No.**CA-12**

Provide each PR door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5 NRP		652	IVE
2	EA	MANUAL FLUSH BOLT	FB458		626	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	STOREROOM LOCK	ND80HD BRW		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	OH STOP	100S		630	GLY
			@ INACTIVE			
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
			@ ACTIVE			
2	EA	KICK PLATE	8400 8" X 1 1/2" LDW B-CS		630	IVE
2	EA	SILENCER	SR64		GRY	IVE

Hardware Group No.**CA-13**

Provide each SGL door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	PA MOUNTING PLATE	4040XP-18PA		689	LCN
1	SET	INT OFFSET PIVOT	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	SET	OFFSET PIVOT SET	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	EA	STOREROOM FUNCTION LOCK W/ MATCHING BRW LEVER	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	EA	SFIC MORTISE CYL.	80-134 GRN X K510-680		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	SURFACE CLOSER	4040XP RW/PA		689	LCN
1	EA	FLOOR STOP	FS436 X RISER TO SUIT		626	IVE
1	EA	GASKETING	488FSBK PSA		BK	ZER
1	EA	PERIMETER SEAL	BY TECHNICAL GLASS PRODUCTS		630	TGP

Hardware Group No.**CA-14**

Provide each SGL door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	SET	OFFSET PIVOT SET	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	SET	INT OFFSET PIVOT	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	EA	OFFICE FUNCTION LOCK W/ MATCHING BRW LEVER	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	EA	SFIC MORTISE CYL.	80-134 GRN X K510-680		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	SURFACE CLOSER	4040XP RW/PA		689	LCN
1	EA	FLOOR STOP	(MOUNT PARELEL ARM) FS436 X RISER TO SUIT		626	IVE
1	EA	PERIMETER SEAL	BY TECHNICAL GLASS PRODUCTS		630	TGP

Hardware Group No. SL-01

Provide each SGL door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	CLASSROOM LOCK	ND70HD BRW		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA (4040XP RW/PA ST-1630)		689	LCN
1	EA	GASKETING	488FSBK PSA @ DRS DA16, DA18		BK	ZER
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. SL-02

Provide each FLD door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	ALL HARDWARE	BY FOLDING PARTITION MANUFACTURER			

Hardware Group No. SL-03

Provide each PR door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
4 (2)	SET	INT OFFSET PIVOT	BY TECHNICAL GLASS PRODUCTS		630	TGP
2	SET	OFFSET PIVOT SET	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	SET	CONST LATCHING BOLT	FB51P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	OFFICE FUNCTION LOCK W/ MATCHING BRW LEVER	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	COORDINATOR	COR X FL		628	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	PERIMETER SEAL	BY TECHNICAL GLASS PRODUCTS		630	TGP
2	EA	MEETING STILE SEALS	BY TECHNICAL GLASS PRODUCTS		630	TGP

Hardware Group No. SL-03.1

Provide each PR door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	SET	OFFSET PIVOT SET	BY TECHNICAL GLASS PRODUCTS		630	TGP
2	SET	INT OFFSET PIVOT	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	SET	CONST LATCHING BOLT	FB51P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	OFFICE FUNCTION LOCK W/ MATCHING BRW LEVER	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	EA	OFFICE FUNCTION LOCK W/ MATCHING BRW LEVER	BY TECHNICAL GLASS PRODUCTS		630	TGP
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	COORDINATOR	COR X FL		628	IVE
2	EA	OH STOP	100S		630	GLY
2	EA	SURFACE CLOSER	4040XP (4040XP REG OR PA AS REQ ST-1630)		689	LCN
1	EA	PERIMETER SEAL	BY TECHNICAL GLASS PRODUCTS		630	TGP
2	EA	MEETING STILE SEALS	BY TECHNICAL GLASS PRODUCTS		630	TGP

Hardware Group No. SL-03.2

Provide each PR door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	SET	OFFSET PIVOT SET	BY TECHNICAL GLASS PRODUCTS		630	TGP
2	SET	INT OFFSET PIVOT	BY TECHNICAL GLASS PRODUCTS		630	TGP
2	SET	INT OFFSET PIVOT	BY TECHNICAL GLASS PRODUCTS		630	TGP
2	SET	OFFSET PIVOT SET	BY TECHNICAL GLASS PRODUCTS		630	TGP
2	EA	FIRE EXIT HARDWARE	5547-L-F-371-02-SNB		626	VON
1	EA	SFIC MORTISE CYL.	80-134 GRN X K510-680		626	SCH
2	EA	SFIC RIM CYLINDER	80-159 GRN		626	SCH
2	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
4	EA	COORDINATOR	GOR X FL		628	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	PERIMETER SEAL	BY TECHNICAL GLASS PRODUCTS		630	TGP
2	EA	MEETING STILE SEALS	BY TECHNICAL GLASS PRODUCTS		630	TGP

Hardware Group No. SL-04

Provide each SGL door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
4	EA	HINGE	5BB1 5 X 4.5 NRP		652	IVE
1	EA	STOREROOM LOCK	ND80HD BRW		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	KICK PLATE	8400 8" X 1 1/2" LDW B-CS		630	IVE
1	EA	KICK PLATE	8400 8" X 2" LDW B-CS		630	IVE
3	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. SL-05

Provide each PR door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	MANUAL FLUSH BOLT	FB458		626	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	STOREROOM LOCK	ND80HD BRW		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
2	EA	OH STOP	100S (100S		630	GLY
(1)			@ INACTIVE)			
1	EA	SURFACE CLOSER	4040XP RW/PA ST-3182		689	LCN
(2)			@ ACTIVE (4040XP REG OR			
			PA AS REQ			
			@ ACTIVE)			
1	EA	FLUSH CEILING MTG PLT	4040XP-18G		689	LCN
2	EA	KICK PLATE	8400 8" X 1 1/2" LDW B-CS		630	IVE
2	EA	KICK PLATE	8400 8" X 2" LDW B-CS		630	IVE
4	EA	FLOOR STOP	FS436 X RISER TO SUIT		626	IVE
			@ ACTIVE			
2	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. SL-06

Provide each SGL door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
1	EA	PIVOTS	BY GLASS WALL MANUFACTURER			
1	EA	FLOOR CLOSER	MY GLASS WALL MANUFACTURER			
1	EA	LONG DOOR PULL	PR 9266F 24" P		630	IVE
1	EA	FLOOR STOP	FS436 X RISER TO SUIT		626	IVE

Hardware Group No. SL-07

Provide each PR door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
8	EA	HINGE	5BB1 4.5 X 4.5 NRP		652	IVE
1	SET	CONST LATCHING BOLT	FB51P		630	IVE
1	EA	DUST PROOF STRIKE	DP2		626	IVE
1	EA	STOREROOM LOCK	ND80HD BRW		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	OH STOP	100S		630	GLY
			@ INACTIVE			
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
			@ ACTIVE			
2	EA	KICK PLATE	8400 8" X 1 1/2" LDW B-CS		630	IVE
2	EA	KICK PLATE	8400 8" X 2" LDW B-CS		630	IVE
2	EA	SILENCER	SR64		GRY	IVE

Hardware Group No. **SL-08**

Provide each SGL door(s) with the following:

QT Y		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	NEW HINGE	TO MATCH EXISTING IN SIZE AND WEIGHT		652	
1	EA	CLASSROOM LOCK	ND70HD BRW		626	SCH
1	EA	SFIC FINAL CORE	BEST TO SUIT		630	BES
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4040XP RW/PA		689	LCN
1	EA	GASKETING	488FSBK PSA		BK	ZER
			@ DRS DA16, DA18			
3	EA	SILENCER	SR64		GRY	IVE

End of Section 087100

SECTION 096713 - ELASTOMERIC LIQUID FLOORING
SMOOTH DUO - 2MM

PART 1 – GENERAL

1.1. RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2. SUMMARY

- A. Definitions: Elastomeric liquid flooring includes penetrating and sealing, two-component polymeric primer, free flowing polymer formulation including resin, curing agent and finely graded aggregate and powder.
- B. Related Work:
 - 1. Division 3 Section Case-in-place Concrete
 - 2. Division 7 Section Joint Sealants

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data, installation instructions and general recommendations for each resinous flooring material required. Include Health Product Declarations (HPD's) and certifications indicating compliance of materials with requirements.
- B. Samples: Submit, for verification purposes, 4.25-inch square samples of each type of elastomeric liquid flooring required, applied to a rigid backing, in color, finish, and top-coat indicated.
- C. Product Schedule: Use resinous flooring designations indicated in Part 2 and room designations indicated on drawings in product schedule.
- D. Maintenance and Cleaning Data: For resinous flooring to include in maintenance manual.

1.4 QUALITY ASSURANCE

- A. Single Source Responsibility: Obtain primary, elastomeric liquid flooring materials including primers, resins, hardening agents, finish or sealing coats from a single manufacturer with not less than ten (10) years of successful experience in manufacturing and installing principal materials described in this section. Contractor shall have completed at least five projects of similar size and complexity; Liquid Elements or approved equal. Provide secondary materials only of type and from source recommended by manufacturer of primary materials.
- B. Installer Qualifications: Engage an experienced installer (applicator) who is experienced in applying resinous flooring systems similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance, and who is acceptable to resinous flooring manufacturer.
 - 1. Contractor shall have completed at least ten (10) projects of similar size and complexity.

- C. Pre-Installation Conference:

1. General contractor shall arrange a meeting not less than thirty days prior to starting work.
2. Attendance:
 - a. General Contractor
 - b. Architect/Owner's Representative
 - c. Manufacturer/Installer's Representative
- D. Manufacturer Field Technical Service Representatives: Field Technical Service Representatives shall be employed by the system manufacturer to assist in the quality assurance and quality control process of the installation and shall be available to perform field problem solving issues with the installer.
- E. ISO 9001-2008: All materials, including primers, resins, curing agents, finish coats, aggregates and sealants are manufactured and tested under an ISO 9001 registered quality system.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Material shall be delivered to job site and checked by flooring contractor for completeness and shipping damage prior to job start.
- B. All materials used shall be factory pre-weighed and pre-packaged in single, easy to manage batches to eliminate onsite mixing errors. No onsite weighing or volumetric measurements allowed.
- C. Store components protected from exposure to harmful weather conditions and in a temperature controlled area as recommended by manufacturer. Do not allow product to freeze.
- D. Deliver products to areas to receive moisture treatment at least 48 hours prior to application to allow them to acclimate to the space.

1.6 ENVIRONMENTAL CONDITIONS

- A. Concrete substrate shall be properly cured for a minimum of 30 days. A vapor barrier must be present for concrete subfloors on or below grade. Otherwise, an osmotic pressure resistant grout must be installed prior to the resinous flooring.
- B. Utilities, including electric, water, heat (air temperature between 65 and 85°F/18 and 30°C) and finished lighting to be supplied by General Contractor.
- C. Job area to be free of other trades during the installation and for a period of 24 hours after floor installation.
- D. Protection of finished floor from damage by subsequent trades shall be the responsibility of the General Contractor.
- E. Protection: precautions shall be taken to avoid damage or contamination of any surfaces near the work zone.
- F. Do not install product in this section until one (1) week after building is enclosed and weatherproof, wet work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

1.7 WARRANTY

- A. Manufacturer shall furnish a single written warranty covering both material and workmanship for a period of one (1) full year from date of installation.

PART 2 – PRODUCTS

2.1 RESINOUS FLOORING

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the work.
- B. Acceptable Manufacturers:
 - 1. Basis of Design: Liquid Elements/Stonhard (Contact Stephanie Litchkowski 201.396.5599/slitchkowski@stonhard.com)
- C. Products: Subject to compliance with requirements:
 - 1. Liquid Elements, Smooth Duo.
- D. System Characteristics:
 - 1. Color and Pattern: Select from Liquid Elements standards.
 - 2. Wearing Surface: Medium
 - 3. Overall System Thickness: 2mm
- E. System Components: Manufacturer's standard components that are compatible with each other and as follows:
 - 1. Primer Coat:
 - a. Material Basis: Primer 150.
 - b. Resin: epoxy.
 - c. Formulation: two (2) component, high solids, moisture suppressant.
 - d. Application Method: rubber squeegee back roll.
 - e. Number of Coats: one (1) (15 mils).
 - 2. Base System:
 - a. Material Basis: Smooth Duo, Two (2) Color Blend.
 - b. Formulation: resilient aromatic polyurethane.
 - c. Type: pigmented.
 - d. Finish: standard.
 - e. Number of Coats: one (1).
 - 3. Topcoat:
 - a. Material Basis: Stonseal SK6 SF
 - b. Formulation: waterbased aliphatic polyurethane.
 - c. Type: clear.
 - d. Finish: Satin
 - e. Number of Coats: One

2.2 EPOXY FLOORING

A. Liquid Elements – Smooth Duo as manufactured by Stonhard

1. Physical Properties: Provide flooring system in which physical properties of topping including aggregate, when tested in accordance with standards or procedures referenced below, are as follows:

Tensile Strength..... 800 psi
(ASTM D-638)

Hardness..... 95-100
(ASTM D-2240/Shore A Durometer)

Scratch Resistance 17% reduction after 100 cycles
(F-1679/Soft Scrub)

Impact Resistance 50 in-lb
(D-2794)

Indentation Resistance 32% Indentation/0% Residual Indentation
(F-1914)

Static Load Limit >250 psi
(F-970)

VOC Content 1 g/L
(ASTM D-2369 Method E)

Noise Reduction (2mm version only)
(ASTM E492-09/E989-06) 11C 34dB-35dB
(ASTM E90-09/E413-10 STC 49dB-50dB

Cure Rate Allow 24 hours for foot traffic
(at 77°F/25°C) 48-72 hours for normal operations

2.3 ACCESSORY MATERIALS

- A. Patching and Fill Material: Resinous products of or approved by resinous flooring manufacturer and recommended by manufacturer for application indicated.
- B. Crack Bridging, Waterproofing: If required, utilize Stonproof ME7 Crack Bridging, Positive Side Waterproof Membrane, minimum, 25 mils.
- C. Joint Sealant: Type produced by manufacturer of elastomeric liquid flooring system for type of service and joint condition indicated. Allowances should be included for Stonflex MP7 joint fill material.
- D. Glides and felt pads should be used on all table and chair legs, recommended diameter is 1-1/4" or greater.

PART 3 - EXECUTION

3.1 PREPARATION

Mamaroneck UFSD/2019 Bond Referendum
Capital Improvements at Mamaroneck
High School – Phase 2
NYSED # 66-07-01-03-0-001-039

096713-4
ADD NO. 3

#4.1092.72.06

- A. General: Prepare and clean substrates according to resinous flooring manufacturer's written instructions for substrate indicated. Provide clean, dry, and neutral Ph substrate for resinous flooring application.
- B. Concrete Substrates: Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring.
 - 1. Mechanically prepare substrates as follows:
 - a. Shot-blast surfaces with an apparatus that abrades the concrete surface, contains the dispensed shot within the apparatus and re-circulates the shot by vacuum pickup. Obtain a CSP3 profile.
 - b. Comply with ASTM C 811 requirements, unless manufacturer's written instructions are more stringent.
 - 2. Repair damaged and deteriorated concrete according to resinous flooring manufacturer's written recommendations.
 - 3. Verify that concrete substrates are dry.
 - a. Perform in situ probe test, ASTM F 2170. Proceed with application only after substrates do not exceed a maximum potential equilibrium relative humidity of 85 percent.
 - b. Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with application only after substrates have maximum moisture-vapor-emission rate of 2-3 lb of water/1000 sq. ft. of slab in 24 hours.
 - c. Perform additional moisture tests recommended by manufacturer. Proceed with application only after substrates pass testing.
 - 4. Verify that concrete substrates have neutral Ph and that resinous flooring will adhere to them. Perform tests recommended by manufacturer. Proceed with application only after substrates pass testing.
- A. Resinous Materials: Mix components and prepare materials according to resinous flooring manufacturer's written instructions.
- B. Use patching and fill material to fill holes and depressions in substrates according to manufacturer's written instructions.
- C. Treat control joints and other non-moving substrate cracks to prevent cracks from reflecting through resinous flooring according to manufacturer's written recommendations.

3.2 APPLICATION

- A. General: Apply each component of elastomeric liquid flooring system in compliance with manufacturer's direction to produce a uniform monolithic wearing surface of thickness indicated, uninterrupted except at divider strips, sawn joints or other types of joints (if any), indicated or required.
- B. Primer: Mix and apply primer over properly prepared substrate with strict adherence to manufacturer's installation procedures and coverage rates.
- C. Base: Mix base material according to manufacturer's recommended procedures. Uniformly spread mixed material over previously primed and sealed substrate using manufacturer's specially designed squeegee. Roll material using manufacturer's specially designed roller. Strict adherence to manufacturer's installation procedures and coverage rates is imperative.
- D. Sealant: Mix and apply topcoat material over base with strict adherence to manufacturer's installation procedures and coverage rates.

3.3 TRANSITIONS

- A. Traditional "L" transitions are not recommended for use with self-levelers, due to the inherent difficulty with obtaining a flush transition with a self-leveling material. Where a flush transition is desired, please contact your local Liquid Elements representative.
- B. A "T" style transition is recommended when adjoining a similar height surface.

3.4 JOINTS AND CRACKS

- A. Treat control joints to bridge potential cracks and to maintain monolithic protection.
- B. Treat cold joints and construction joints to bridge potential cracks and to maintain monolithic protection on horizontal and vertical surfaces as well as horizontal and vertical interfaces.
- C. Discontinue floor coating system at vertical and horizontal contraction and expansion joints by installing backer rod and compatible sealant after coating installation is completed. Provide sealant type recommended by manufacturer for traffic conditions and chemical exposures to be encountered.

3.5 FIELD QUALITY CONTROL

- A. The right is reserved to invoke the following material testing procedure at any time, and any number of times during period of flooring application.
- B. The Owner will engage service of an independent testing laboratory to sample materials being used on the job site. Samples of material will be taken, identified and sealed, and certified in presence of Contractor.
- C. Testing laboratory will perform tests for any of characteristics specified, using applicable testing procedures referenced herein, or if none referenced, in manufacturer's product data.
- D. If test results show materials being used do not comply with specified requirements,

Contractor may be directed by Owner to stop work; remove non-complying materials; pay for testing; reapply flooring materials to properly prepared surfaces which had previously been coated with unacceptable materials.

3.6 CURING, PROTECTION AND CLEANING

- A. Cure elastomeric liquid flooring materials in compliance with manufacturer's directions, taking care to prevent contamination during stages of application and prior to completion of curing process. Close area of application for a minimum of 24 hours.
- B. Protect elastomeric liquid flooring materials from damage and wear during construction operation. Where temporary covering is required for this purpose, comply with manufacturer's recommendations for protective materials and method of application. General Contractor is responsible for protection and cleaning of surfaces after final coats.
- C. Cleaning: Remove temporary covering and clean elastomeric liquid flooring just prior to final inspection. Use cleaning materials and procedures recommended by elastomeric liquid flooring manufacturer.

END OF SECTION 096713

METAL LOCKERS - 105113

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following: Day Use lockers in single and multi-tier configurations.

1.3 REFERENCES

- A. American National Standards Institute (ANSI) Standards:
Applicable standards for fasteners used for assembly.
- B. American Society for Testing and Materials (ASTM) Standards:
Applicable standards for steel sheet materials used for fabrication
Applicable standards for the testing of electrostatically applied Powder Coat Paint
- C. American Institute Of Steel Construction (AISC) Standards:
Applicable standards for steel materials used for fabrication.

1.4 DESCRIPTION

- A. General: Metal Lockers with locks for assigned or unassigned use. Available in single door or multi-tier configurations.
- B. Finishes:
Fabricated Metal Components and Assemblies: All components to be painted with an electrostatically applied Powder Coat paint that can meet or exceed test requirements set out by ASTM standard D3451-06 Standard Guide for Testing Coating Powders and Powder Coatings.
- C. Sizes:
Day Use Lockers: nominal frame heights of [24] inches to [96] inches, nominal widths of [11] inches to [24] inches, and nominal depths of [12] inches to [24] inches all in 1 inch increments. Single door and 2,3,4, or 5 tier configurations available.

1.5 PERFORMANCE REQUIREMENTS

- A. Design Requirements:
Limit overall width not to exceed specified nominal width; locker width designed for zero growth.
- B. Seismic Performance: Provide Metal Lockers capable of withstanding the effects of earthquake movement when required by applicable building codes.

1.6 SUBMITTALS

- A. Product Data: Submit manufacturer's product literature and installation instructions for each type of metal locker required. Include data substantiating that products to be furnished comply with requirements of the contract documents.
- B. Shop Drawings: Show fabrication, assembly, and installation details, including descriptions of procedures and diagrams. Show complete locker installation layout, including quantities, locations and types of accessory units required. Include notations and descriptions of all installation items and components.

Show installation details at non-standard conditions, if any.

Provide layout, dimensions, and identification of each unit, corresponding to sequence of installation procedures.

Provide installation schedule and procedures to ensure proper installation.
- C. Samples: Provide minimum 3 inches square example of each color and texture on actual substrate for each component to remain exposed after installation.
- D. Selection Samples: For initial selection of colors and textures, submit manufacturer's color charts, consisting of actual product pieces, showing full range of colors and textures available.
- E. Warranty: Submit draft copy of proposed warranty for review by the Architect.
- F. Maintenance Data: Provide written documentation of the manufacturer's statement, claiming the maintenance free nature of the product.
- G. Reference List: Provide a list of recently installed metal lockers to be visited by owner, architect, and contractor. Intent of list is to aid in verifying the suitability of manufacturer's products and comparison with materials and product specified in this section. Include contact name, address, and phone numbers.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Engage an experienced manufacturer who is ISO 9001:2008 certified for the design, production, installation and service of metal lockers. Furnish certification attesting ISO 9001:2008 quality system registration.
- B. Installer Qualifications: Engage an experienced installer who is the manufacturer's authorized representative for the specified products for installing metal lockers.

Minimum Qualifications: 1-year experience installing metal lockers of comparable size and complexity to specified project requirements.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Follow manufacturer's instructions and recommendations for delivery, storage and handling requirements.

1.9 PROJECT CONDITIONS

- A. Field Measurements: Verify quantities of metal locker units before fabrication. Indicate verified measurements on shop drawings. Coordinate fabrication and delivery to ensure no delay in progress of the work.
- B. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating metal lockers units without field measurements. Coordinate construction to ensure actual dimensions correspond to established dimensions.

1.10 [SEQUENCING AND SCHEDULING]

- A. Sequence metal lockers [with other work] to minimize possibility of damage and soiling, during remainder of construction period.
- B. Schedule installation of specified metal lockers after finishing operations, including painting, have been completed.
- C. Provide components, which must be built in at a time, which causes no delays in the general progress of the work.
- D. Pre-installation Conference: Schedule and conduct conference on project site to review methods and procedures for installing Metal Lockers including, but not limited to, the following:

Recommended attendees include:

- 1. Owner's Representative.
- 2. Prime Contractor or representative.
- 3. The Architect.
- 4. Manufacturer's representative.
- 5. Subcontractors or installers whose work may affect, or be affected by, the work of this section.

1.11 WARRANTY

- A. Provide a written warranty, executed by Contractor, Installer, and Manufacturer, agreeing to repair or replace units, which fail in materials or workmanship within the established warranty period. This warranty shall be in addition to, and not a limitation of, other rights the Owner may have under General Condition's provisions of the Contract Documents.
- B. Limited Lifetime Warranty: Subject to the terms in the written warranty, warrant the original purchaser exclusively that the locker frames manufactured by it will be free from defects in materials and workmanship for the lifetime of the locker.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. General: Day Use Lockers available in single door or multi-tier configurations. Based upon metal lockers manufactured by Spacesaver Corporation, 1450 Janesville Avenue, Fort Atkinson, Wisconsin 53538-2798. Telephone: 800-492-3434.

2.2 BASIC MATERIALS

- A. General: Provide materials and quality of workmanship, which meets or exceeds established industry standards for products specified. Use furniture grade sheet metal and fasteners for component fabrication unless indicated otherwise. Material thicknesses/gauges are manufacturer's option unless indicated otherwise.

2.3 LOCKER TYPES

- A. Day Use Locker. Provide metal storage lockers in single door and multi-tier configurations by Spacesaver Corporation. Provide lockers equipped with accessories as requested

2.4 MANUFACTURED COMPONENTS

A. Welded Frame:

1. The welded frame must consist of top, bottom, back, and sides constructed of a minimum of 18-gauge steel. All frame components shall be joined using resistance welding.
2. Multi-tier lockers shall include a fixed position shelf or shelves to separate the tiers. Shelf shall be constructed of a minimum of 18-gauge steel. Shelf shall be mechanically fastened to interior locker sides using a locking lance feature.
 - a. Width:
 - 1) Frame: [11] to [48] inches in 1 inch increments.
 - 2) Individual Openings [11] to [24] inches in 1 inch increments.
 - b. Height:
 - 1) Frame: [12] to [90] inches in 1 inch increments.
 - 2) Individual Openings: [10] to [72] inches in 1 inch increments.
 - c. Depth:
 - 1) [10] to [30] inches in 1 inch increments.

B. High Pressure Laminate Doors

1. Shall be ¾" thick MDF with HPL on both faces
2. Shall have matching 3mm thick edge banding
3. Doors shall be full overlay style.
4. Hinge:
 - a. Full overlay [1] inch hinge
 - b. Soft close style

- c. One-piece wraparound hinge
- d. Steel, nickel-plated
- e. Opens 110 degrees
- f. Minimum of 2 hinges per door.
 - 1) Door heights up to 27" require 2 hinges
 - 2) Door heights $\geq$ [28] inches and $<$ [56] inches require 3 hinges
 - 3) Door heights $\geq$ [56] inches require 4 hinges
- 5. Locks
 - a. Locks shall be centered vertically in door.
 - b. Locks shall be available in assigned or unassigned usage to be specified at time of order.
 - c. Provide multiple locking options
 - 1) Electronic Keypad
 - d. Keypad, Combination, and keyed locks shall have master override.
- 6. Doors to remain closed when in unlocked mode.

C. ACCESSORIES:

- 1. Welded Base: Provide manufacturer's standard.
- 2. Trim and Fillers: Provide manufacturer's standard.

2.5 FABRICATION

- A. General: Coordinate fabrication and delivery to ensure no delay in progress of the work.

2.6 FINISHES

- A. Colors: High Pressure Laminate shall be selected by the architect from Wilsonart's full range of laminate selections.
- B. Paint Finish: Textured (Standard) – Provide factory applied electrostatic powder coat paint. Meet or exceed specifications of the American Society for Testing and Materials (ASTM) Standards. Color as selected by the architect from manufacturer's full range of powder coating options (custom colors included).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine Lockers scheduled to receive accessories [with Installer present] for compliance with requirements for installation tolerances and other conditions affecting performance of specified accessory items.
- B. Proceed with accessory installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Follow manufacturer's written instructions for installation of each type of accessory item specified.

3.3 FIELD QUALITY CONTROL

- A. Verify accessory unit alignment and plumb after installation. Correct if required, following manufacturer's instructions.
- B. Remove components that are chipped, scratched, or otherwise damaged and which do not match adjoining work. Replace with new matching units, installed as specified and in manner to eliminate evidence of replacement.

3.4 ADJUSTING

- A. Adjust all accessories to provide smoothly operating, visually acceptable installation.

3.5 CLEANING

- A. Immediately upon completion of installation, clean components and surfaces. Remove surplus materials, rubbish and debris, resulting from installation, upon completion of work and leave areas of installation in neat, clean condition.

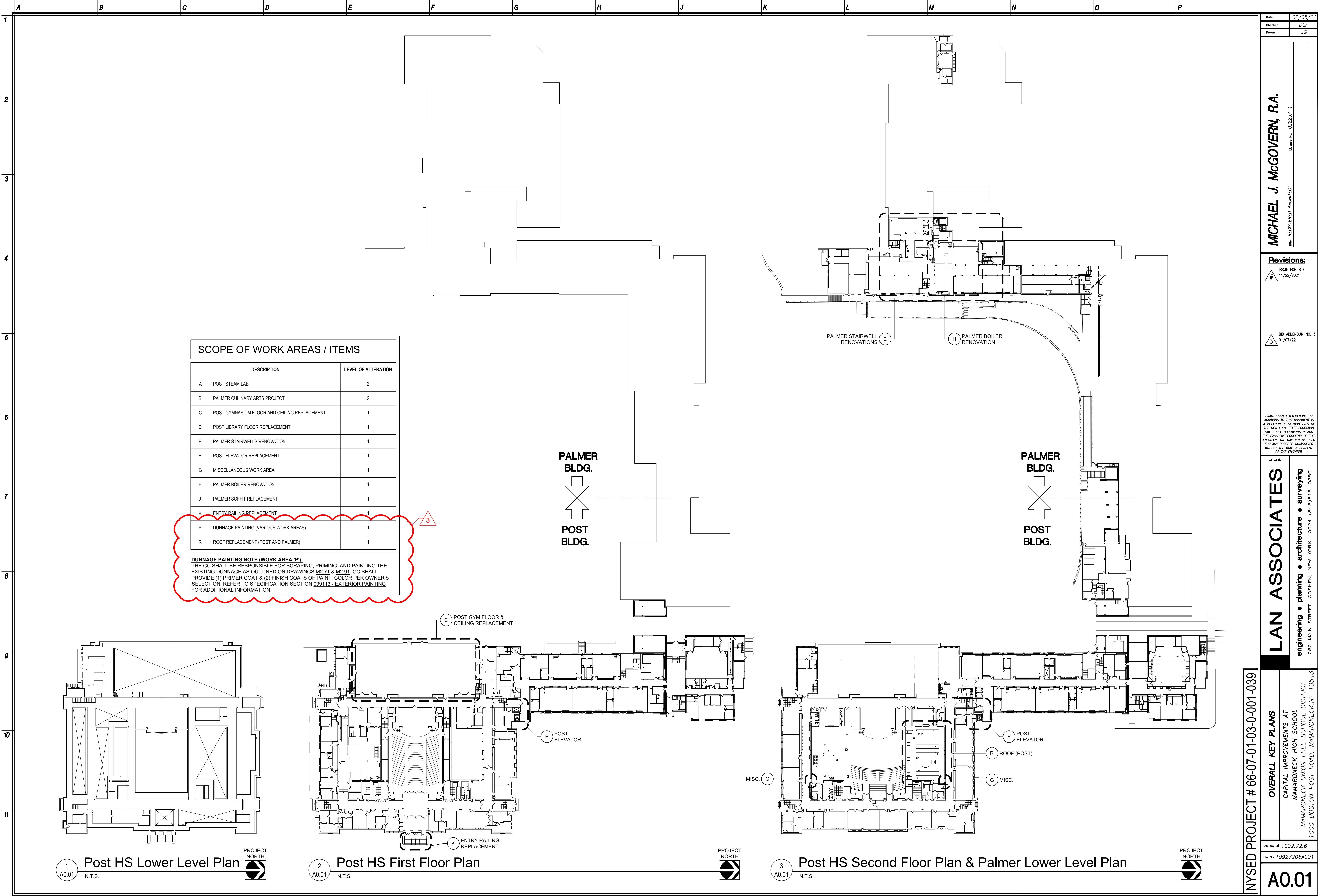
3.6 DEMONSTRATION/TRAINING

- A. Schedule and conduct demonstration of installed accessory items and features with Owner's personnel.
- B. Schedule and conduct maintenance training with Owner's maintenance personnel. Training session should include lecture and demonstration of all maintenance and repair procedures that end-user personnel would normally perform.

3.7 PROTECTION

- A. Protect system against damage during remainder of construction period. Advise owner of additional protection needed to ensure that system will be without damage or deterioration at time of substantial completion.

END OF SECTION 105113



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

MICHAEL J. MCGOVERN, R.A.
Title: REGISTERED ARCHITECT
License No.: 022257-1

Revisions:

#	ISSUE FOR BID
1	11/22/2021
2	
3	BID ADDENDUM NO. 3 01/07/22

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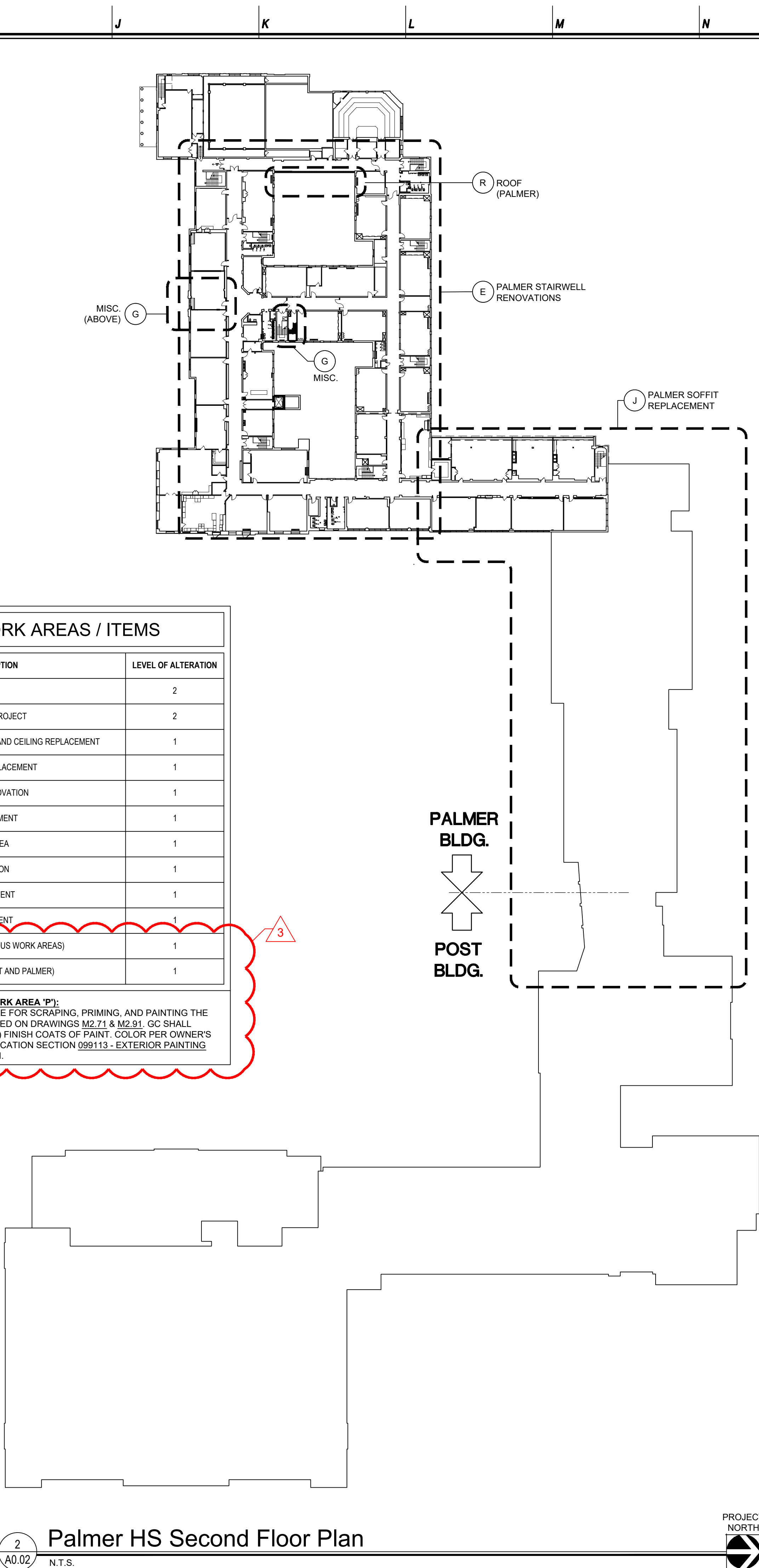
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252 MAIN STREET, GOSHEN, NEW YORK 10924 (845)815-0350

OVERALL KEY 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. 10927206A001

A0.01

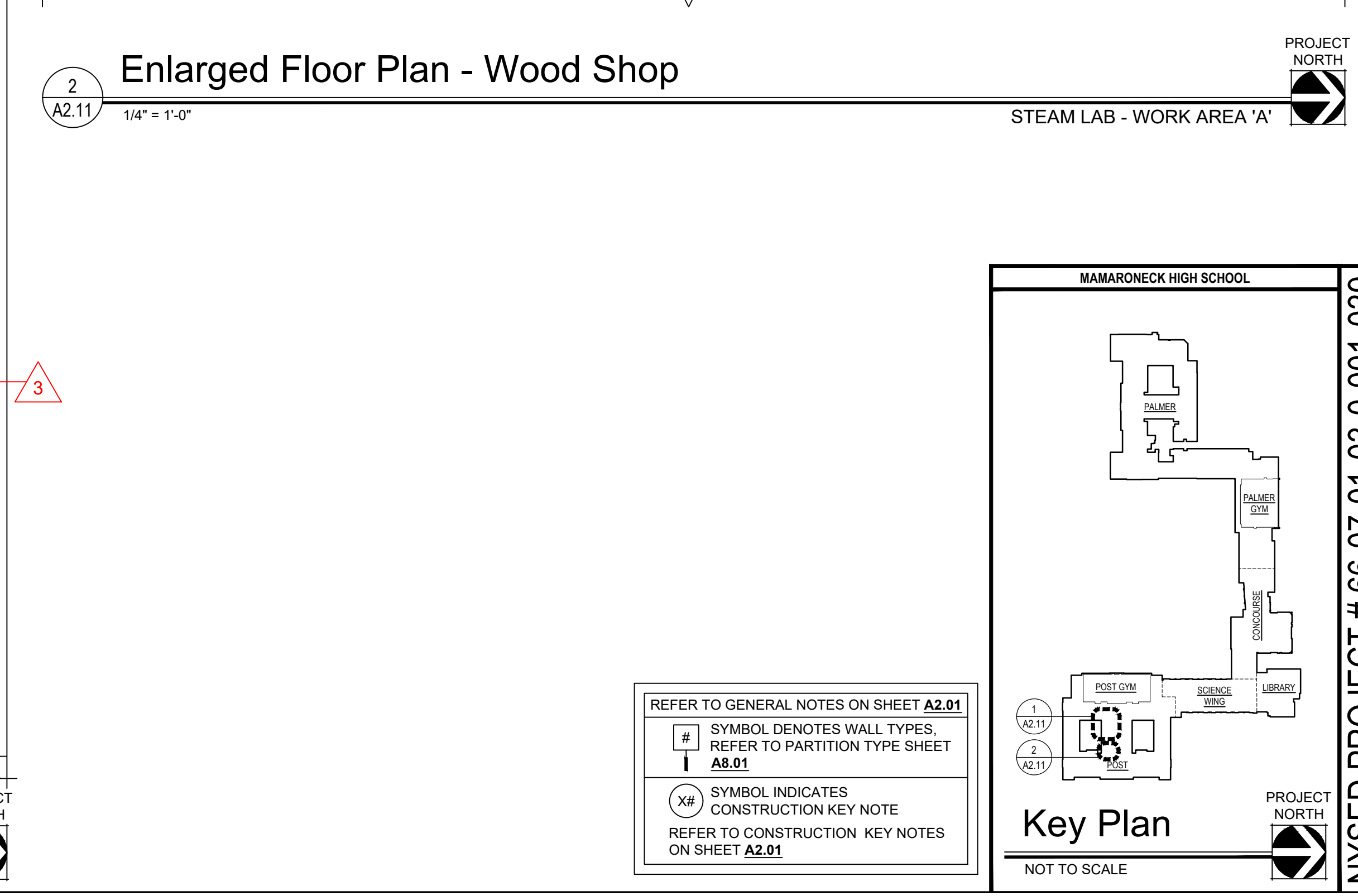
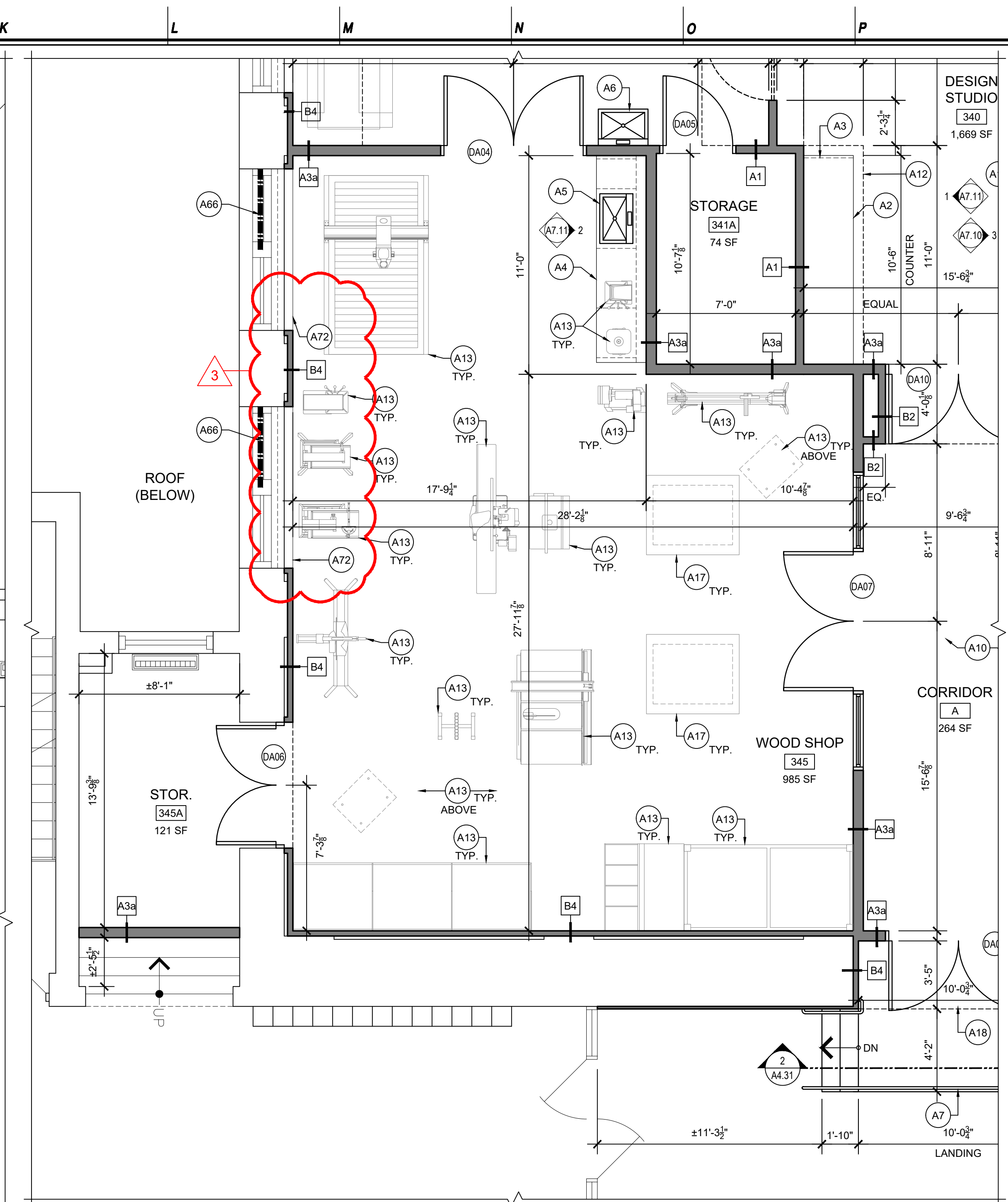
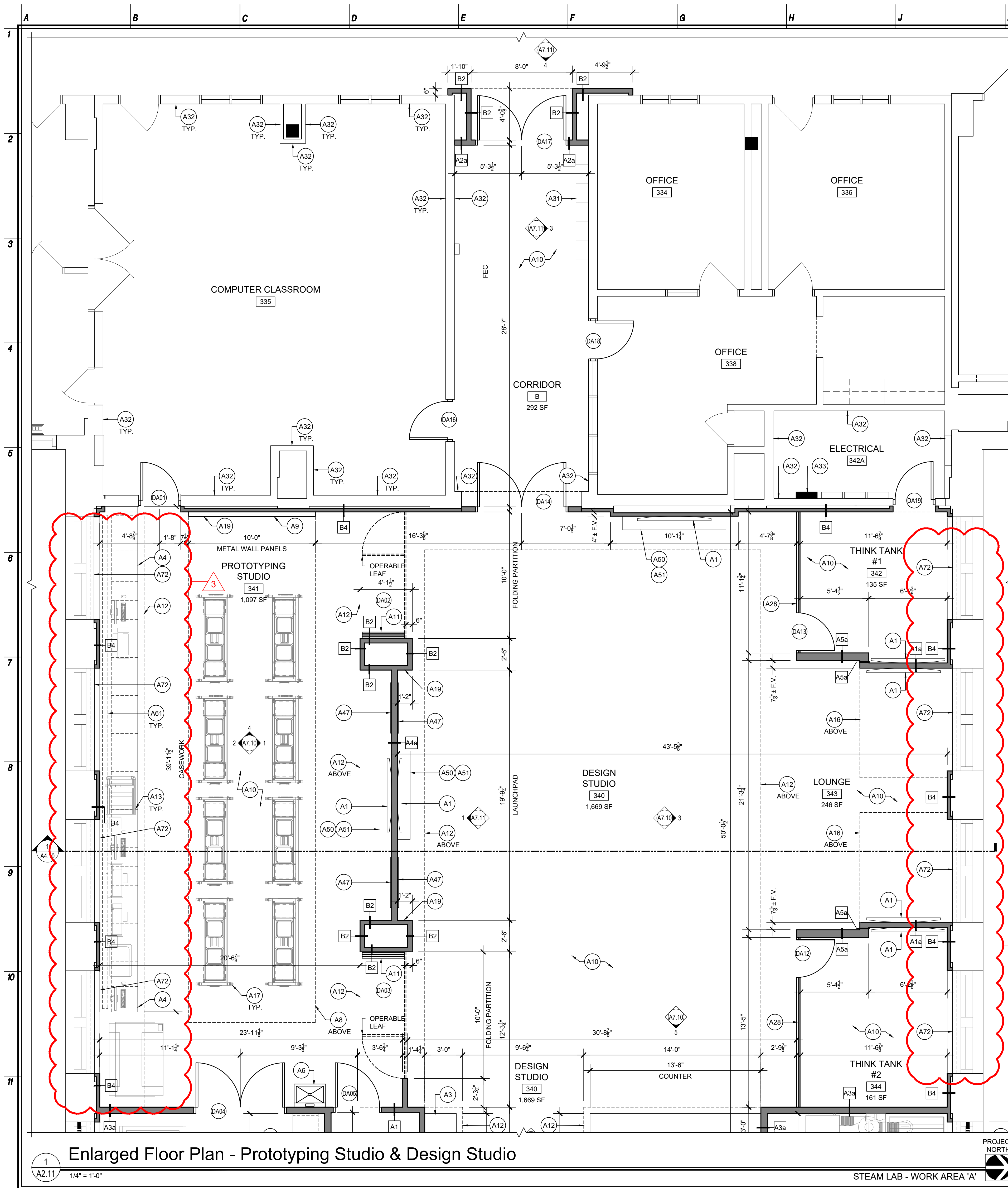
NYSed PROJECT # 66-07-01-03-0-001-039



SCOPE OF WORK AREAS / ITEMS		
	DESCRIPTION	LEVEL OF ALTERATION
A	POST STEAM LAB	2
B	PALMER CULINARY ARTS PROJECT	2
C	POST GYMNASIUM FLOOR AND CEILING REPLACEMENT	1
D	POST LIBRARY FLOOR REPLACEMENT	1
E	PALMER STAIRWELLS RENOVATION	1
F	POST ELEVATOR REPLACEMENT	1
G	MISCELLANEOUS WORK AREA	1
H	PALMER BOILER RENOVATION	1
J	PALMER SOFFIT REPLACEMENT	1
K	ENTRY RAILING REPLACEMENT	1
P	DUNNAGE PAINTING (VARIOUS WORK AREAS)	1
R	ROOF REPLACEMENT (POST AND PALMER)	1

DUNNAGE PAINTING NOTE (WORK AREA "P"):
 THE GC SHALL BE RESPONSIBLE FOR SCRAPING, PRIMING, AND PAINTING THE EXISTING DUNNAGE AS OUTLINED ON DRAWINGS M2.71 & M2.91. GC SHALL PROVIDE (1) PRIMER COAT & (2) FINISH COATS OF PAINT. COLOR PER OWNER'S SELECTION. REFER TO SPECIFICATION SECTION 099113 - EXTERIOR PAINTING FOR ADDITIONAL INFORMATION.

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Date	02/05/21
Checked	DLF
Drawn	TT
MICHAEL J. MCGOVERN, R.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
UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DOCUMENT IS A VIOLATION OF SECTION 2205 OF THE NEW YORK STATE EDUCATION LAW. THESE DOCUMENTS REMAIN THE EXCLUSIVE PROPERTY OF THE ENGINEER, AND MAY NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.	
LAN ASSOCIATES engineering • planning • architecture • surveying 252 MAIN STREET, GOSHEN, NEW YORK 10924 (845)815-0350	
ENLARGED FLOOR PLANS - WORK AREA 'A' 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. 10927206A210	
A2.11	

	B	C	D	E	F	G													
1	DOOR SCHEDULE																		
	DOOR NO.	DOOR TYPE	ROOM NAME/ NUMBER	DOOR					FRAME			SILL	HARDWARE (SEE SPECIFICATIONS)			NOTES			
				ACTION	MATERIAL	FIRE RATING	DOOR FINISH	DOOR SIZE		VISION PANEL	DETAIL NO.			DETAIL NO.	HARDWARE SET		CLOSER	PANIC	
								WIDTH	HEIGHT		MAT.	HEAD	JAMB						
2	POST - THIRD FLOOR (WORK AREA 'A')																		
	DA01	J	PROTOTYPING STUDIO 341	SINGLE SWING	ALUM./ GLASS	-	KYNAR	3'-0"	7'-0"	■	ALUM.	16/A6.05	17/A6.05	18/A6.05	SL-01	■	-	BASIS OF DESIGN: DOOR MODEL 'SL-15' IN 2"x4" ALUMINUM FRAME BY 'SPECIAL-LITE'	
	DA02	K	PROTOTYPING STUDIO 341	FOLDING PARTITION	ALUM./ GLASS	-	KYNAR	10'-0"	10'-0"	■	ALUM.	5/A6.06	6/A6.06		CA-06	-	-	NANAWALL SL-45 FOLDING PARTITION	
	DA03	K	PROTOTYPING STUDIO 341	FOLDING PARTITION	ALUM./ GLASS	-	KYNAR	10'-0"	10'-0"	■	ALUM.	5/A6.06	6/A6.06		CA-06	-	-	NANAWALL SL-45 FOLDING PARTITION	
3		DA04	L	WOOD SHOP 345	DOUBLE SWING	ALUM./ GLASS	90 MIN.	KYNAR	7'-0"	8'-0"	■	ALUM.	13/A6.05	14/A6.05	15/A6.05	SL-03	■	-	BASIS OF DESIGN: 'FIREFRAMES HEAT BARRIER SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP' FIRE RATED VISION PANEL: D-H-W-90.
	DA05	A	STORAGE 341A	SINGLE SWING	METAL	-	PRIME/ PAINT	3'-6"	8'-0"	-	MTL	1/A6.05	2/A6.05	3/A6.05	SL-04	-	-		
	DA06	M	STORAGE 345A	DOUBLE SWING	METAL	-	PRIME/ PAINT	6'-0"	7'-0"	-	MTL	22/A6.05	23/A6.05		SL-05	-	-		
4		DA07	H	WOOD SHOP 345	DOUBLE SWING	ALUM./ GLASS	90 MIN.	KYNAR	7'-0"	8'-0"	■	ALUM.	13/A6.05	14/A6.05	15/A6.05	SL-03.1	■	-	BASIS OF DESIGN: 'FIREFRAMES HEAT BARRIER SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP' FIRE RATED VISION PANEL: D-H-W-90. FIRE RATED SIDELIGHT: W-120
	DA08	H	METAL SHOP 346	DOUBLE SWING	ALUM./ GLASS	90 MIN.	KYNAR	7'-0"	8'-0"	■	ALUM.	13/A6.05	14/A6.05	15/A6.05	SL-03.1	■	-	BASIS OF DESIGN: 'FIREFRAMES HEAT BARRIER SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP' FIRE RATED VISION PANEL: D-H-W-90. FIRE RATED SIDELIGHT: W-120	
	DA09	L	CORRIDOR 'A'	DOUBLE SWING	ALUM./ GLASS	20 MIN.	KYNAR	7'-0"	8'-0"	■	ALUM.	13/A6.05	14/A6.05	15/A6.05	SL-03.2	■	-	BASIS OF DESIGN: 'FIREFRAMES HEAT BARRIER SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP' FIRE RATED VISION PANEL: D-20.	
5		DA10	L	DESIGN STUDIO 340	DOUBLE SWING	ALUM./ GLASS	20 MIN.	KYNAR	7'-0"	8'-0"	■	ALUM.	13/A6.05	14/A6.05	15/A6.05	SL-03.2	■	-	BASIS OF DESIGN: 'FIREFRAMES HEAT BARRIER SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP' FIRE RATED VISION PANEL: D-20. PROVIDE W/ VINYL GRAPHIC ON GLASS.
	DA11	B	MECHANICAL 346A	DOUBLE SWING	WOOD	-	PRIME/ PAINT	6'-0"	8'-0"	-	MTL	1/A6.05	2/A6.05	3/A6.05	SL-07	-	-		
	DA12	O	THINK TANK #2 344	SINGLE SWING	GLASS	-	GLASS	3'-0"	7'-0"	-	ALUM.				SL-06	■	-	REFER TO DRAWING A8.20 FOR GLASS WALL INFORMATION	
	DA13	N	THINK TANK #1 342	SINGLE SWING	GLASS	-	GLASS	3'-0"	7'-0"	-	ALUM.				SL-06	■	-	REFER TO DRAWING A8.20 FOR GLASS WALL INFORMATION	
6		DA14	L	DESIGN STUDIO 340	DOUBLE SWING	ALUM./ GLASS	20 MIN.	KYNAR	7'-0"	8'-0"	■	ALUM.	1/A6.06	2/A6.06	4/A6.06	SL-03.2	■	-	BASIS OF DESIGN: 'FIREFRAMES HEAT BARRIER SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP' FIRE RATED VISION PANEL: D-20.
	DA15	A	ATTIC ACCESS 310A	SINGLE SWING	WOOD	90 MIN.	STAIN/ POLY	3'-0"	7'-0"	-	MTL	13/A6.05	14/A6.05	15/A6.05	CA-13	■	-	BASIS OF DESIGN: 'FIREFRAMES HEAT BARRIER SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP' FIRE RATED VISION PANEL: D-H-W-90.	
	DA16	P	COMPUTER CLASSROOM 335	SINGLE SWING	METAL	20 MIN.	PRIME/ PAINT	3'-0"	7'-0"	■	EXIST.	13/A6.05	14/A6.05	15/A6.05	SL-08	■	-	NEW DOOR IN EXISTING FRAME	
7		DA17	L	CORRIDOR B	DOUBLE SWING	ALUM./ GLASS	90 MIN.	KYNAR	7'-0"	8'-0"	■	ALUM.	1/A6.06	2/A6.06	4/A6.06	SL-03.2	■	-	BASIS OF DESIGN: 'FIREFRAMES HEAT BARRIER SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP' FIRE RATED VISION PANEL: D-H-W-90. PROVIDE W/ VINYL GRAPHIC ON GLASS.
	DA18	P	OFFICE 338	SINGLE SWING	METAL	20 MIN.	PRIME/ PAINT	3'-0"	7'-0"	■	EXIST.	13/A6.05	14/A6.05	15/A6.05	SL-08	■	-	NEW DOOR IN EXISTING FRAME	
	DA19	Q	ELECTRICAL	SINGLE SWING	METAL	-	PRIME/ PAINT	3'-0"	7'-0"	-	MTL	19/A6.05	20/A6.05	21/A6.05	CA-10	-	-		
	DA20	K	METAL SHOP 346	DOUBLE SWING	ALUM./ GLASS	90 MIN.	KYNAR	6'-0"	7'-0"	■	MTL	22/A6.05	23/A6.05		CA-11	■	-		
8	PALMER - FIRST FLOOR (WORK AREA 'B')																		
	DB01	C	CULINARY ARTS CLASSROOM C100A	SINGLE SWING	ALUM./ GLASS	45 MIN.	CLEAR ANODIZED	3'-0"	6'-10"	■	ALUM.	5/A6.05	4&10 A6.05	6/A6.05	CA-01	■	-	BASIS OF DESIGN: 'FIREFRAMES ALUMINUM SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP' FIRE RATED VISION PANEL: D-H-45. FIRE RATED SIDELIGHT: D-H-45	
	DB02	C	CULINARY ARTS C100	SINGLE SWING	ALUM./ GLASS	45 MIN.	CLEAR ANODIZED	3'-0"	6'-10"	■	ALUM.	5/A6.05	4&10 A6.05	6/A6.05	CA-02	■	-	BASIS OF DESIGN: 'FIREFRAMES ALUMINUM SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP' FIRE RATED VISION PANEL: D-H-45. FIRE RATED SIDELIGHT: D-H-45	
9		DB03	B	CLOSET C100F	SINGLE SWING	WOOD	-	STAIN/POLY	6'-0"	7'-0"	-	MTL	1/A6.05	2/A6.05	3/A6.05	CA-03	-	-	
	DB04	A	STORAGE C100B	SINGLE SWING	WOOD	-	STAIN/POLY	3'-0"	7'-0"	-	MTL	1/A6.05	2/A6.05	3/A6.05	CA-04	-	-		
	DB05	E	OFFICE C100C	SINGLE SWING	ALUM./ GLASS	-	CLEAR ANODIZED	3'-0"	6'-10"	■	ALUM.	9/A6.05	7&8 A6.05	6/A6.05	CA-05	-	-	BASIS OF DESIGN: 'FIREFRAMES ALUMINUM SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP'	
	DB06	E	CULINARY ARTS CLASSROOM C100A	SINGLE SWING	ALUM./ GLASS	-	CLEAR ANODIZED	3'-0"	6'-10"	■	ALUM.	9/A6.05	7&8 A6.05	6/A6.05	CA-14	-	-	BASIS OF DESIGN: 'FIREFRAMES ALUMINUM SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP'	
	DB07	F	CULINARY ARTS CLASSROOM C100A	FOLDING PARTITION	ALUM./ GLASS	-	CLEAR ANODIZED	15'-0"	8'-0"	■	ALUM.	2/A4.21	-	3/A4.21	CA-06	-	-	BASIS OF DESIGN: MODEL 'FSW75F' FRAMELESS FOLDING SYSTEM BY 'NANA WALL' CONFIGURATION 2L3R	
10		DB08	D	CULINARY ARTS CLASSROOM C100A	SINGLE SWING	ALUM./ GLASS	-	CLEAR ANODIZED	3'-0"	6'-10"	■	ALUM.	9/A6.05	10 A6.05	6/A6.05	CA-14	-	-	BASIS OF DESIGN: 'FIREFRAMES ALUMINUM SERIES' FRAME ASSEMBLY WITH 'FIREFRAMES DESIGNER SERIES' DOORS BY 'TGP'
	DB09	G	CULINARY ARTS CLASSROOM C100A	SINGLE SWING	ALUM./ GLASS	-	CLEAR ANODIZED	3'-0"	7'-0"	■	ALUM.	4&5/ A4.20	6&7 A4.20	3/A4.20	CA-07	■	-	BASIS OF DESIGN: DOOR MODEL 'SL-14' IN 2"x6" THERMALLY BROKEN ALUMINUM FRAME BY 'SPECIAL-LITE'	
	DB10	A	STORAGE C100G	SINGLE SWING	WOOD	20 MIN.	STAIN/POLY	3'-0"	7'-0"	-	MTL	11 A6.05	11&12 A6.05	EXIST.	CA-08	■	-	NEW DOOR AND FRAME IN EXISTING OPENING. VERIFY SIZE IN FIELD	
	PALMER - SECOND FLOOR (WORK AREA 'B')																		
	DB11	B	CLASSROOM D202	SINGLE SWING	WOOD	-	STAIN/POLY	5'-0"	7'-0"	-	MTL	1/A6.05	2/A6.05	3/A6.05	CA-12	-	-		
11																			

Door & Door Hardware Notes

- DOOR ELEVATIONS & DOOR HARDWARE ARE PROVIDED TO DEMONSTRATE THE "TYPICAL" CONDITION. REFER TO DOOR SCHEDULE AND DOOR HARDWARE SPECIFICATION FOR ACTUAL DOOR HARDWARE REQUIREMENTS. REFER TO FINISH HARDWARE SPECIFICATION AND SCHEDULE FOR HARDWARE SET INFORMATION.
- CONTRACTOR TO FIELD VERIFY ALL MASONRY OPENING SIZES, DOOR SIZES, HINGE LOCATIONS, DOOR SWING ETC. AND PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO ORDERING DOORS.
- WHENEVER BRAND NAMES OR SPECIFIC PRODUCT SYSTEMS ARE INDICATED IT SHALL BE CLEARLY UNDERSTOOD THAT SUCH IDENTIFICATION IS FOR THE PURPOSE OF ILLUSTRATING THE TYPE OF PRODUCT AND DEGREE OF QUALITY DESIRED. SUCH IDENTIFICATION IN NO WAY PRECLUDES THE CONTRACTOR FROM USING PRODUCTS OF OTHER MANUFACTURERS WHICH CAN BE SHOWN PRIOR TO THE BID TO BE OF LIKE KIND AND OF EQUAL QUALITY.
- ALL DOOR FINISHES ARE SPECIFIED ON THE DOOR SCHEDULE AND NOTED IN THE SPECIFICATIONS. COLOR SHALL BE SELECTED BY OWNER FROM MANUFACTURER'S FULL RANGE.
- CONTRACTOR TO PATCH AND REPAIR ALL DISTURBED INTERIOR AND EXTERIOR FINISHES AS REQUIRED.
- WHERE SECURITY FILM IS USED, SECURITY FILM SHALL BE INSTALLED BY MANUFACTURER TO ENSURE FILM EXTENDS BEYOND GLAZING STOPS.
- CONTRACTOR SHALL VERIFY AND COORDINATE ALL HARDWARE WITH OWNER PRIOR TO ORDERING OR INSTALLING. COORDINATE WITH ACTUAL FIELD CONDITIONS FOR A COMPLETE INSTALLATION.
- CONTRACTOR SHALL COORDINATE WITH OWNER TO KEY ALL CYLINDERS TO MATCH EXISTING MASTER KEYING SYSTEM FOR DISTRICT STANDARDS.
- CONTRACTOR SHALL PROVIDE & INSTALL WEATHER STRIPPING FOR ALL EXTERIOR DOORS.
- CONTRACTOR SHALL PROVIDE AND INSTALL ASTRAGALS AND DOOR BOTTOM SHOES FOR ALL EXTERIOR DOUBLE DOORS.
- CONTRACTOR SHALL PROVIDE FIRE RATED GLAZING IN FIRE RATED DOOR AND FRAME ASSEMBLIES AS REQUIRED TO ACHIEVE THE MINIMUM FIRE RATING. REFER TO DOOR ELEVATIONS.
- ALL INTERIOR FIRE RATED GLAZING IN DOORS, SIDELITES AND WINDOWS SHALL BE FIRELITE PLUS 1/4" THICK CLEAR GLASS OR PILKINGTON PYROSTOP CLEAR GLASS AS INDICATED ON DOOR SCHEDULE / DOOR ELEVATIONS.
- CONTRACTOR SHALL PROVIDE FIRE RATED DOOR ASSEMBLY INCLUDING FRAMES AND GLAZING TO COMPLY WITH BUILDING CODE. SEE DOOR SCHEDULE FOR ASSEMBLY FIRE RATINGS.
- ALL DOOR HARDWARE, CARD ACCESS READER AND SECURITY HARDWARE SHALL BE COORDINATED WITH OWNER REQUIREMENTS. PROVIDE POWER AS REQUIRED.
- GC TO PROVIDE AND INSTALL ALL REQUIRED BLOCKING, SHIMS, AND SEALANT FOR A COMPLETE INSTALLATION. WOOD TO BE PRESSURE TREATED WHERE APPLICABLE.
- ALL GLAZING IN DOORS, SIDELITES AND TRANSOMS SHALL BE SAFETY GLAZING AS REQUIRED BY IBC SECTION 2406.2 AND THE NYSED MANUAL OF PLANNING STANDARDS.

Energy Code Requirements

IECC 2020 - Table C402.4

Climate ZONE - 4

Vertical Fenestration:
U-Factor
Fixed Fenestration: 0.38
Operable Fenestration: 0.45
Entrance Doors: 0.77

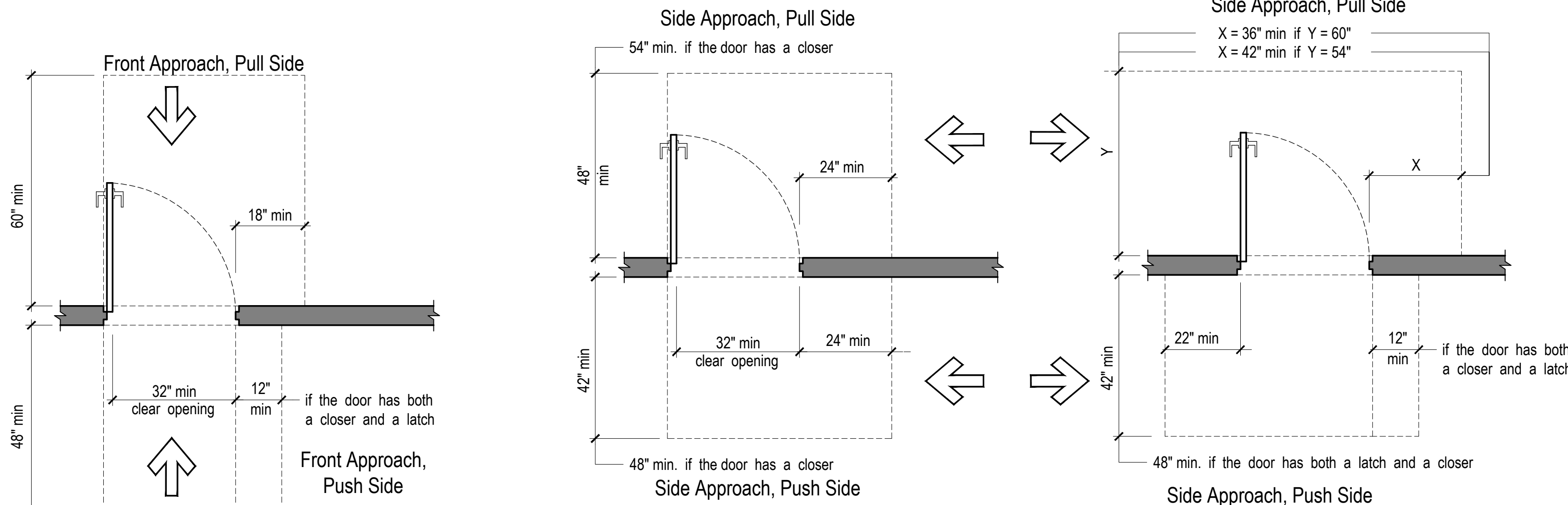
SHGC
0.36

NOTE: ALL EXTERIOR DOORS AND WINDOWS SHALL MEET OR EXCEED THE ENERGY CODE MINIMUM REQUIREMENTS.

Table 716.1(1) - Marking Fire-Rated Glazing Assemblies

FIRE TEST STANDARD	MARKING	DEFINITION OF MARKING
ASTM E119 OR UL 263	W	MEETS WALL ASSEMBLY CRITERIA
ASTM E119 OR UL 263	FC	MEETS FLOOR/CEILING CRITERIA
NFPA 257 OR UL 9	OH	MEETS FIRE WINDOW ASSEMBLY CRITERIA INCLUDING THE HOSE STREAM TEST.
NFPA 252 OR UL 10B OR UL 10C	D	MEETS FIRE DOOR ASSEMBLY CRITERIA.
	H	MEETS FIRE DOOR ASSEMBLY HOSE STREAM TEST
	T	MEETS 450°F TEMPERATURE RISE CRITERIA FOR 30 MINUTES.
	XXX	THE TIME IN MINUTES OF FIRE-RESISTANCE OR FIRE PROTECTION RATING OF THE GLAZING ASSEMBLY.

SEE SPECIFICATIONS SECTION 088100 - GLASS AND GLAZING AND SECTION 088117 - FIRE-RATED GLASS, FOR GLAZING TYPES MEETING THE ABOVE LISTED TEST CRITERIA



Door Maneuv. Clearances

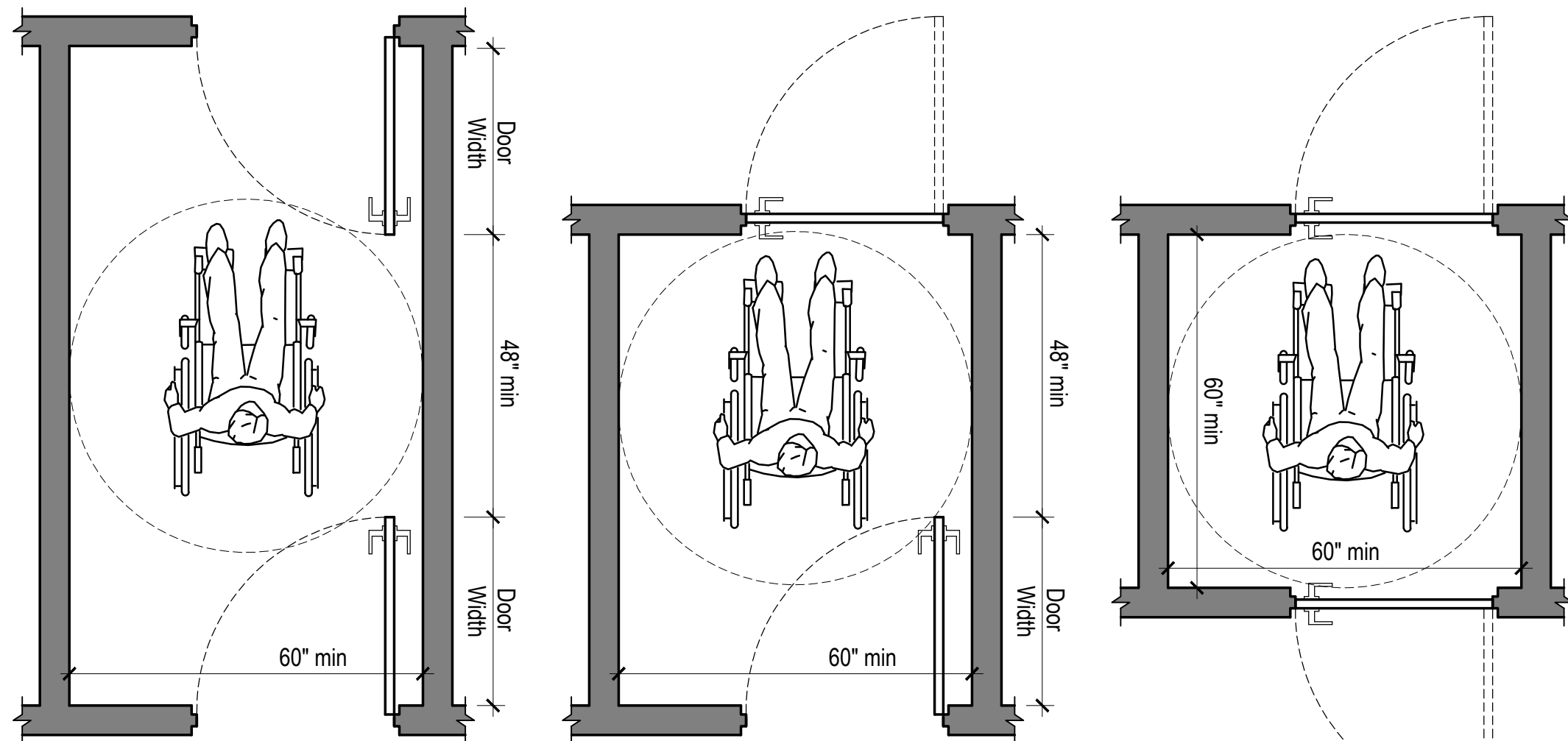
N.T.S.

Door Maneuv. Clearances

N.T.S.

Door Maneuv. Clearances

N.T.S.



Door Maneuv. Clearances - Two Hinged Doors In Series

N.T.S.

Date: 02/05/21
Checked: DLF
Drawn: CTB/TT

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

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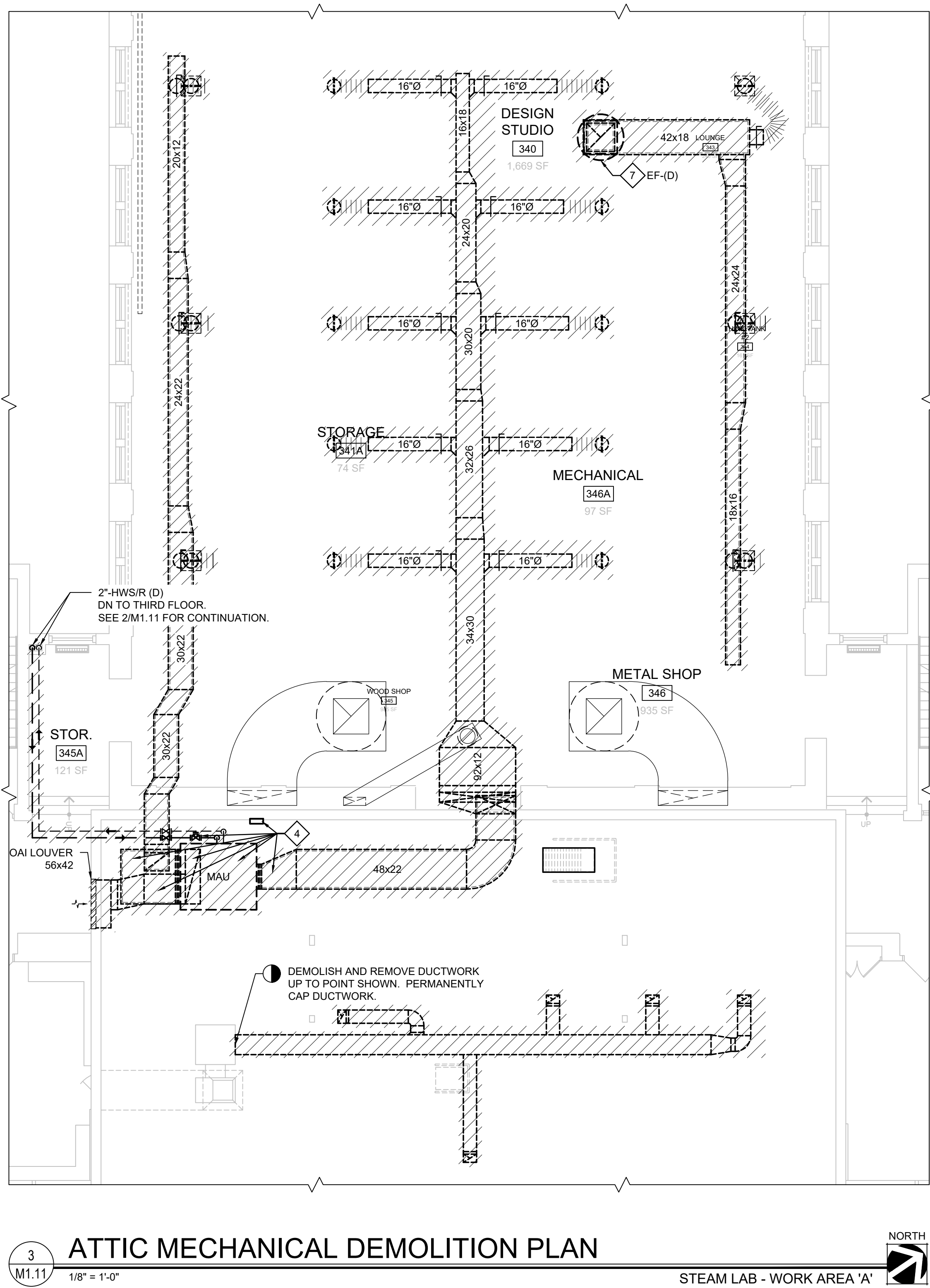
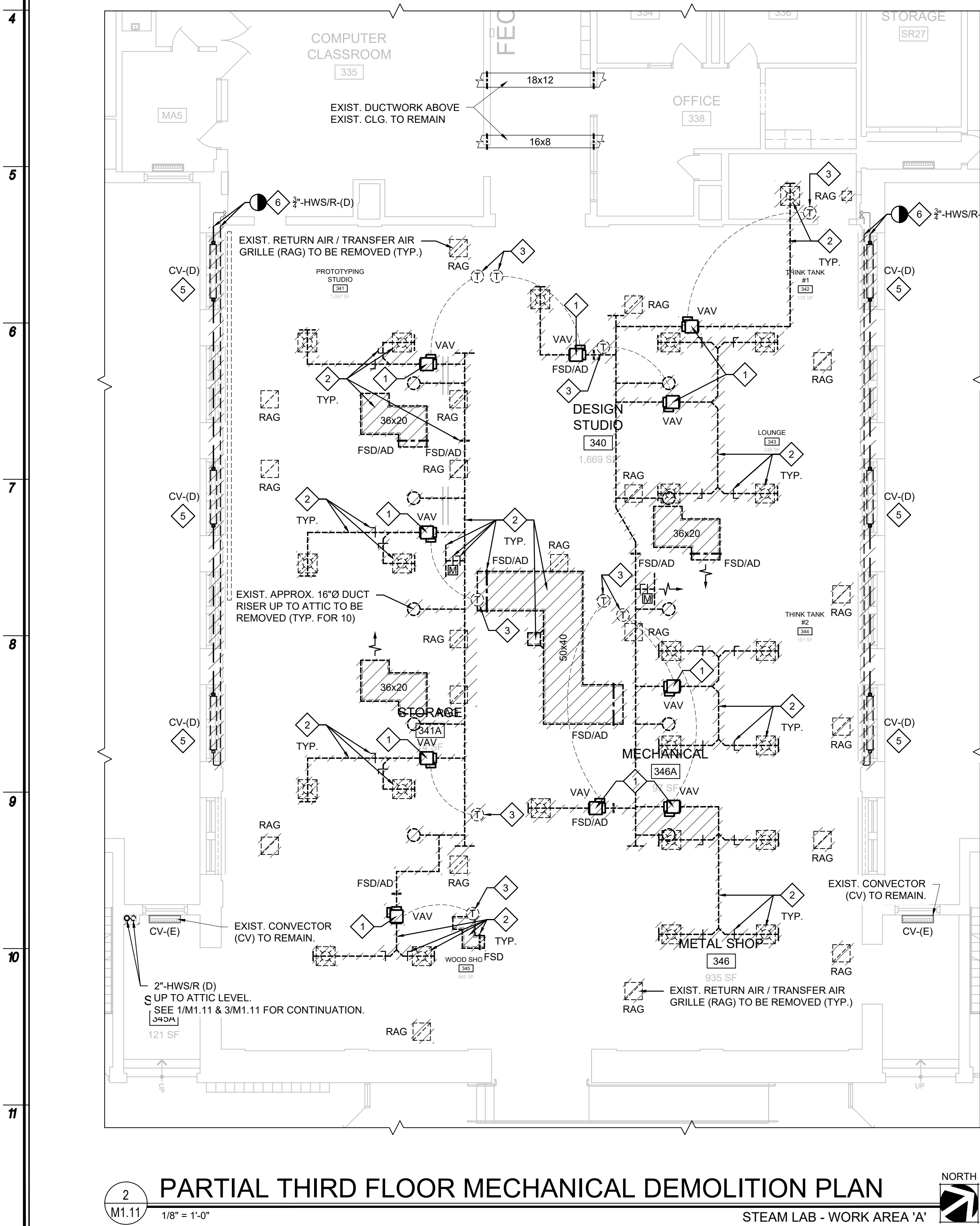
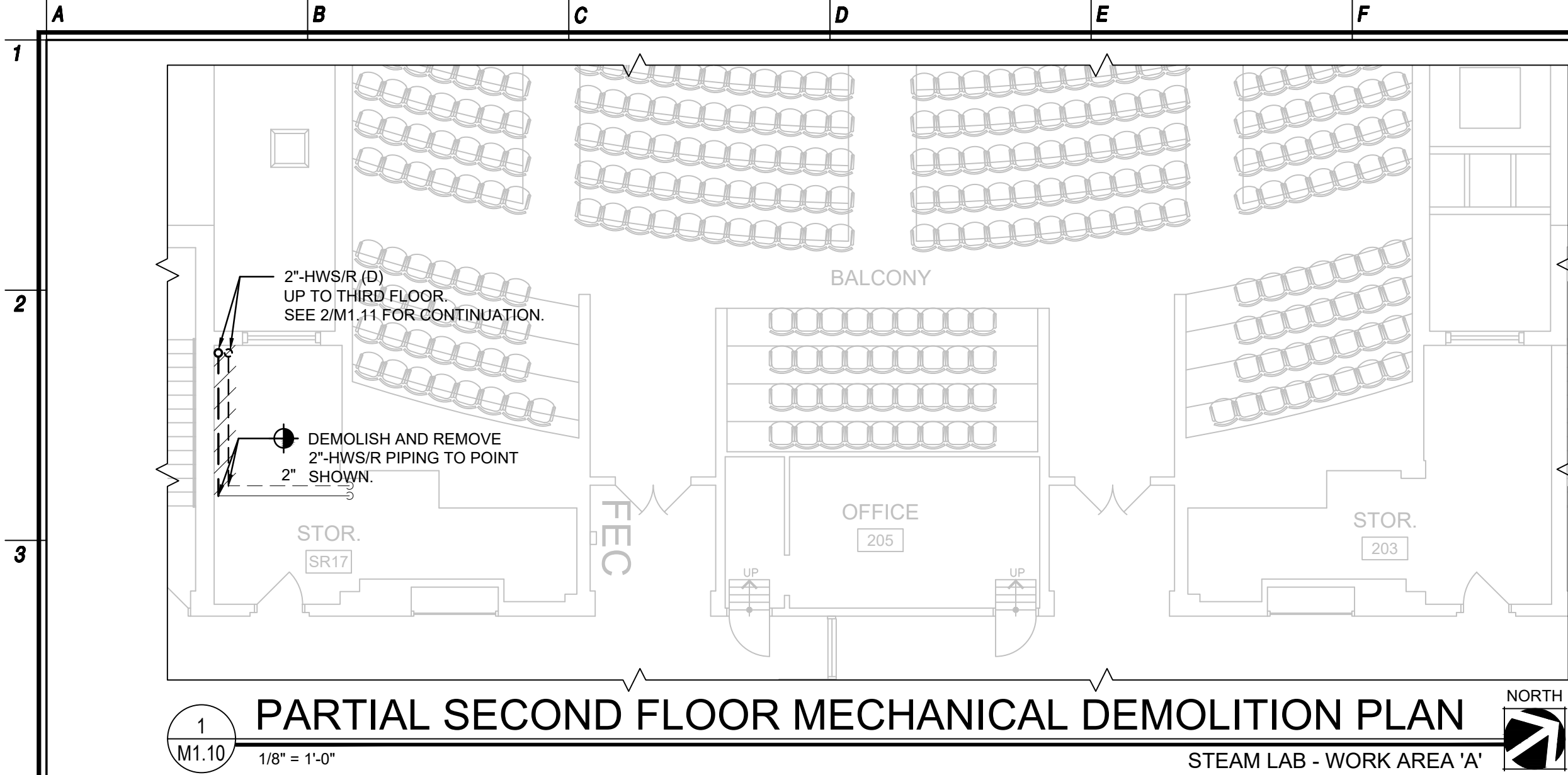
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NYSED PROJECT # 66-07-01-03-0-001-039

DOOR SCHEDULE
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. 10927206A601

A6.01

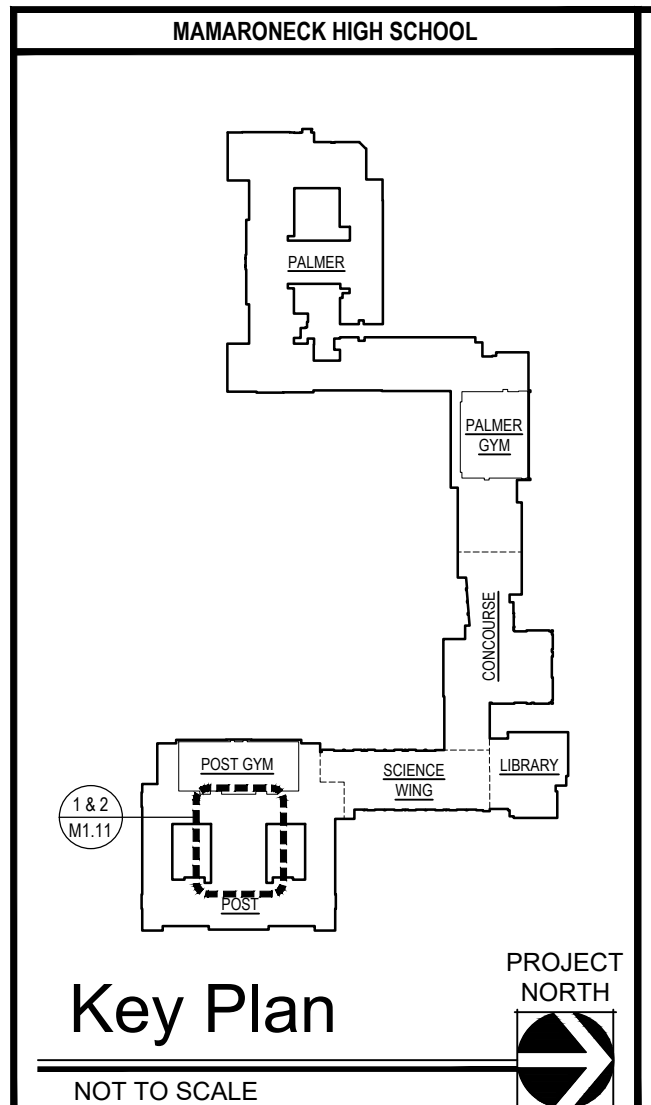


REFER TO "MULTIPLE PRIME CONTRACT NOTES" ON DWG. A1.00 & SPECIFICATION SECTION 011200 - SPECIAL PROVISIONS FOR CONTRACTORS' RESPONSIBILITIES.

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.



02/05/21
MAM
IM

MICHAEL J. MCGOVERN, R.A.
REGISTERED ARCHITECT
022257-1

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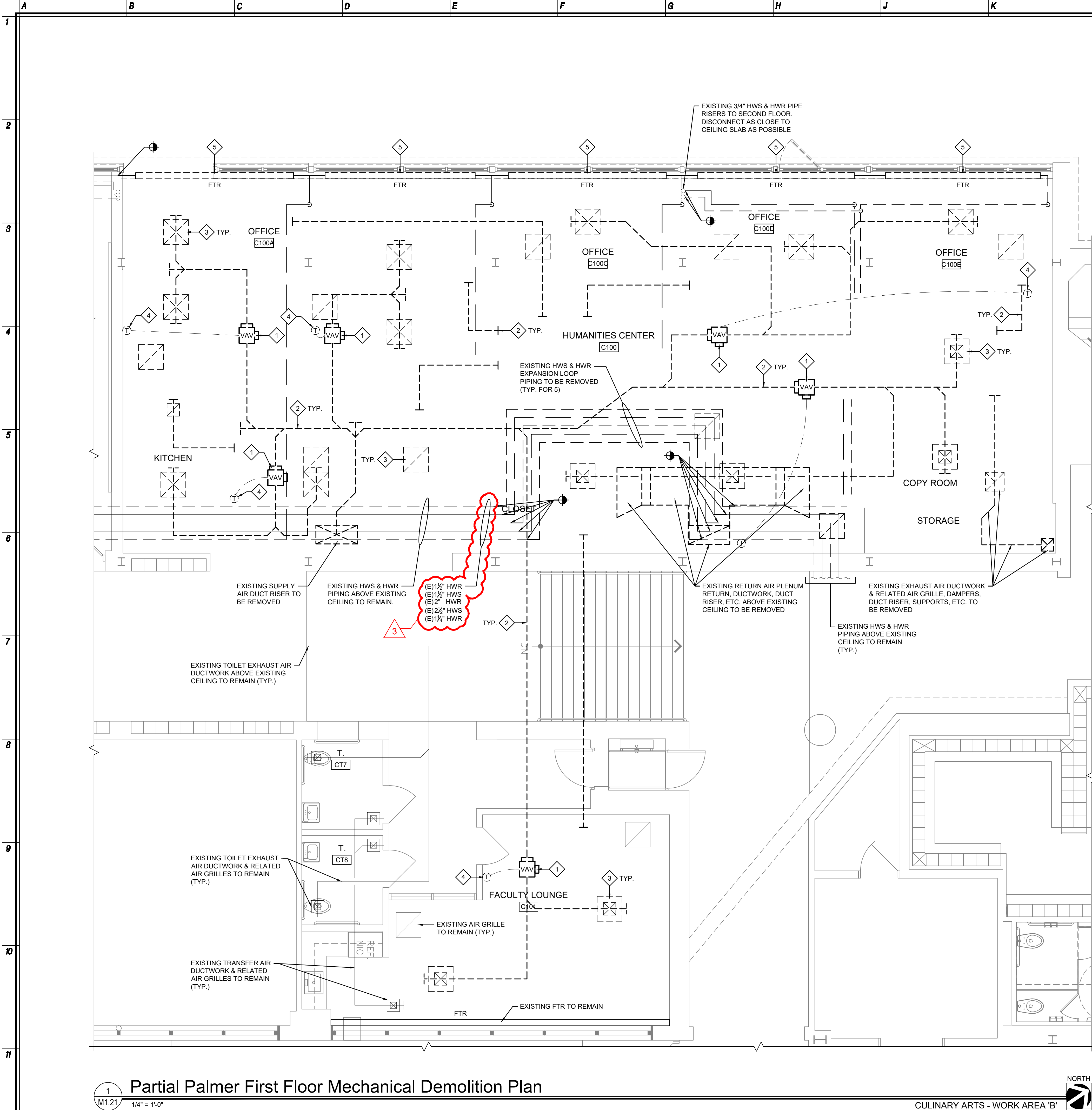
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STEAM LAB MECHANICAL DEMO PLANS
CAPITAL IMPROVEMENTS AT
MAMARONECK HIGH SCHOOL
MAMARONECK UNION FREE SCHOOL DISTRICT
1000 BOSTON POST ROAD, MAMARONECK, NY 10543

Job No. 4.1092.72.6
File No. 10927206M210

M1.11

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



GENERAL DEMOLITION NOTES

1. 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.

2. NOT ALL EXIST. DUCTWORK, PIPING & UTILITIES ARE SHOWN ON DRAWINGS. VERIFY IN FIELD.

3. REMOVED 3

4. 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.

5. REMOVED 3

6. REMOVED 3

7. 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.

8. 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.

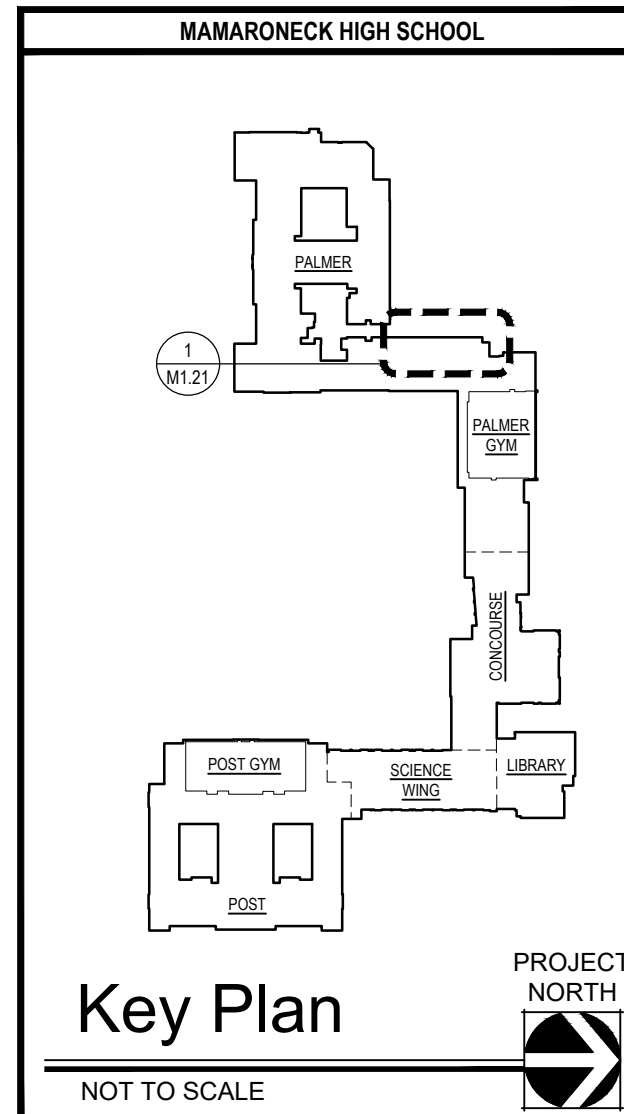
ITEM #	DEMOLITION KEY NOTES
1	EXISTING VARIABLE AIR VOLUME (VAV) BOXES & RELATED DUCTWORK, DAMPERS, SUPPORTS, ELECTRICAL, CONTROLS, ETC. TO BE REMOVED.
2	EXISTING DUCTWORK ABOVE EXISTING CEILING & RELATED DAMPERS, INSULATION, SUPPORTS, AIR GRILLES, WIRE SCREENS, ETC. TO BE REMOVED.
3	EXISTING AIR GRILLES & RELATED DUCTWORK, DAMPERS, ETC. TO BE REMOVED.
4	EXISTING THERMOSTATS/SENSORS & RELATED CONTROL WIRING, CONDUITS, WIREMOLDS, ETC. TO BE REMOVED. INFILL & PATCH EXISTING WALL OPENINGS & PAINT TO MATCH EXISTING.
5	EXISTING FINNED TUBE RADIATION (FTR) & RELATED PIPING (NOT SHOWN), VALVES, PIPE COVERS, SUPPORTS, CONTROLS, ETC. TO BE REMOVED. CAP EXISTING PIPE OPENINGS AT MAINS. INFILL & PATCH EXISTING WALL OPENINGS AS REQUIRED TO MATCH EXISTING.

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

3

1 Partial Palmer First Floor Mechanical Demolition Plan
1/4" = 1'-0"

CULINARY ARTS - WORK AREA 'B'
NORTH



Date02/05/21

CheckedMAM

DrawnIM

02227-1

License No.

MICHAEL J. MCGOVERN, R.A.

REGISTERED ARCHITECT

Revisions:

#

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11/22/2021

1

BD ADDENDUM NO. 1

12/10/21

2

BD ADDENDUM NO. 2

12/23/21

3

BD ADDENDUM NO. 3

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

MECHANICAL DEMOLITION PLAN

CAPITAL IMPROVEMENTS AT

MAMARONECK HIGH SCHOOL

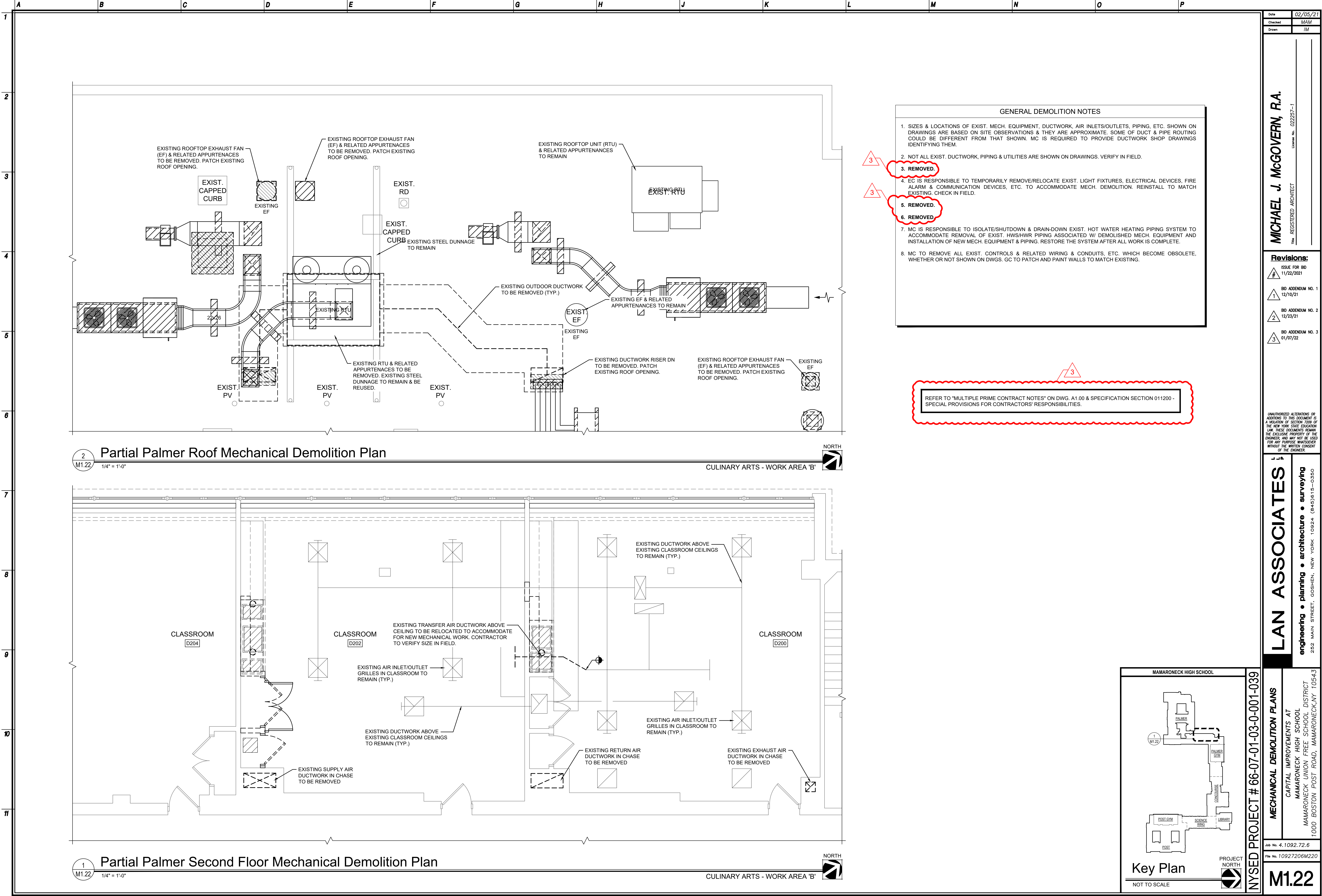
MAMARONECK UNION FREE SCHOOL DISTRICT

1000 BOSTON POST ROAD, MAMARONECK, NY 10543

Job No. 4.1092.72.6

File No. 10927206M220

M1.21



Date02/05/21

CheckedMAM

DrawnIM

Michael J. McGovern, R.A.

REGISTERED ARCHITECT

License No. 022257-1

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MECHANICAL DEMOLITION 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

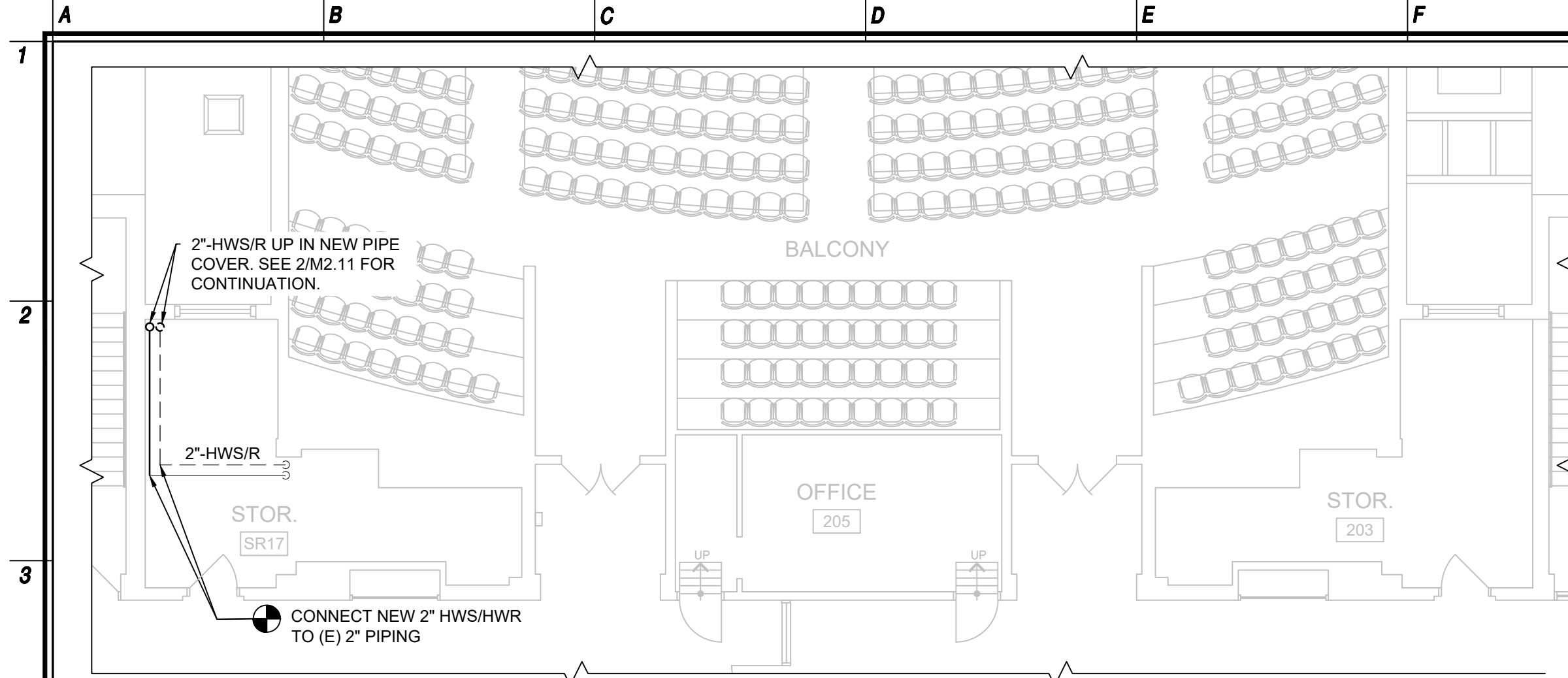
File No. 10927206M220

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

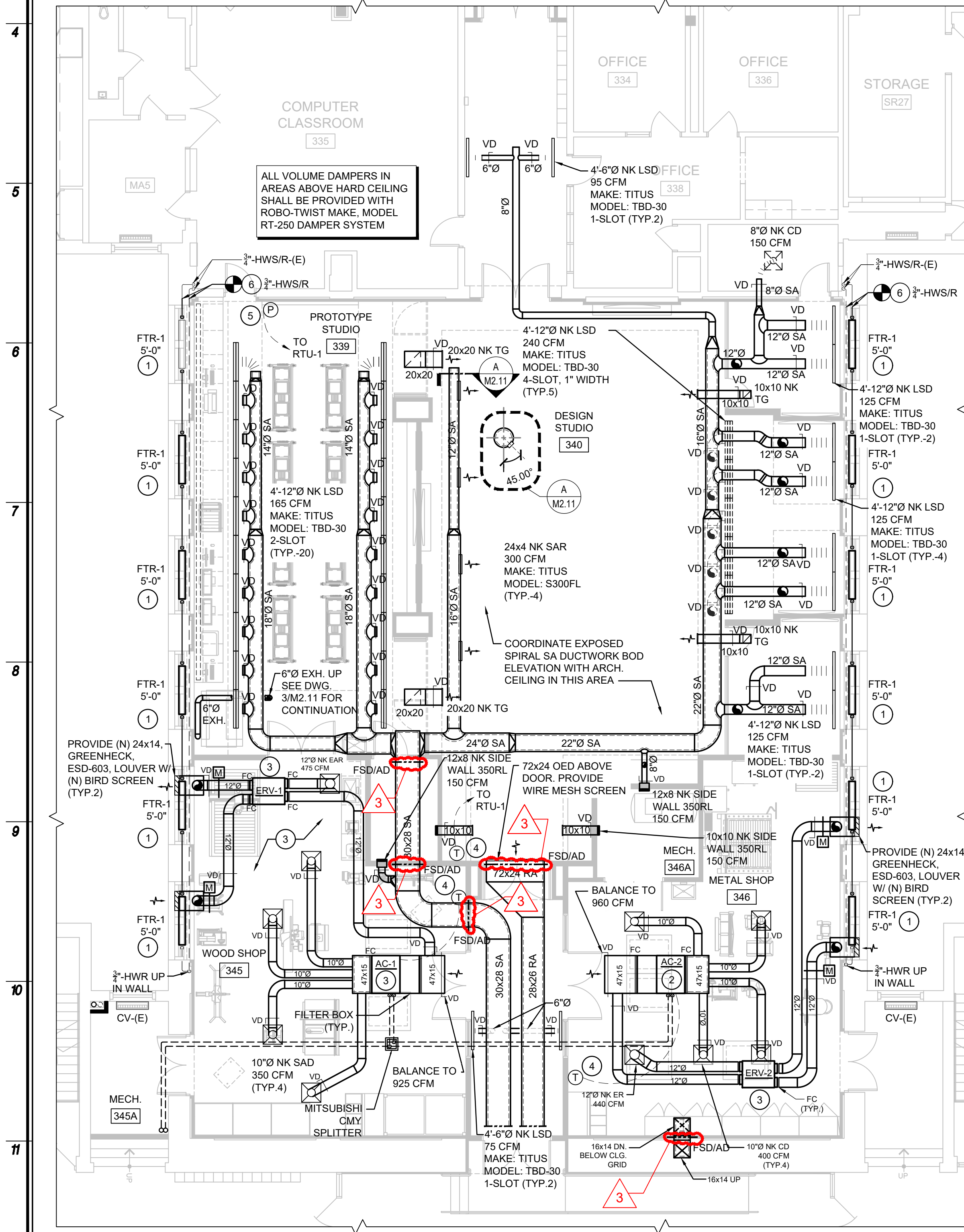
Key Plan

NOT TO SCALE

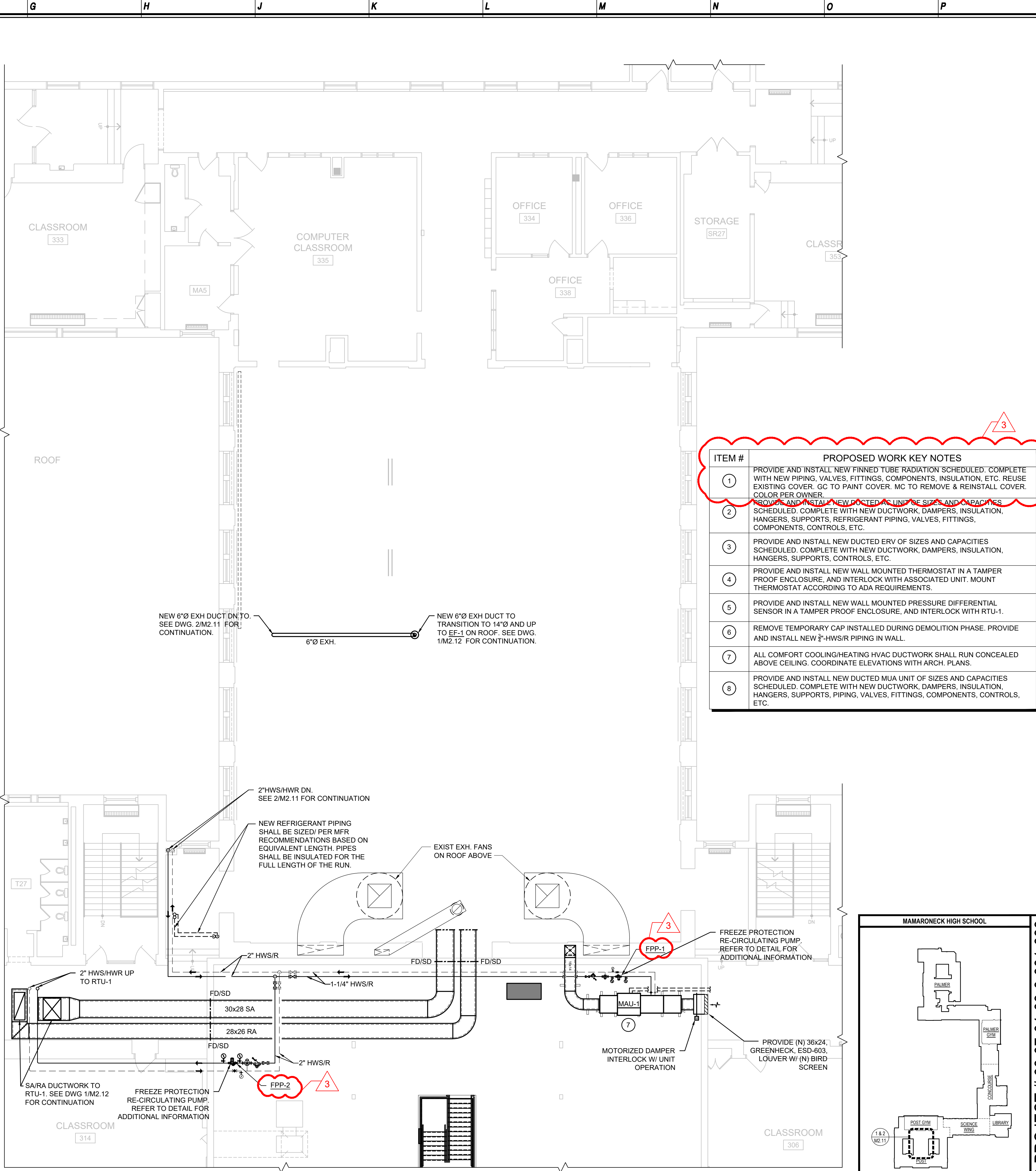
M1.22



1 PARTIAL SECOND FLOOR MECHANICAL PROPOSED PLAN
1/8" = 1'-0" STEAM LAB - WORK AREA 'A'

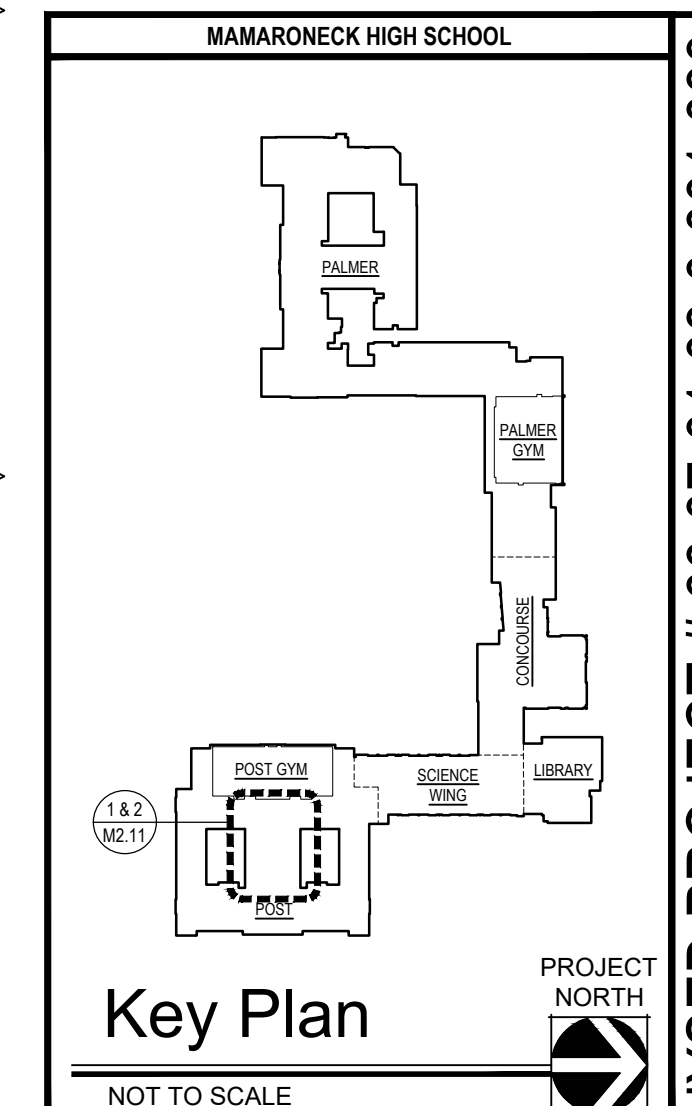


2 PARTIAL THIRD FLOOR MECHANICAL PROPOSED WORK PLAN
1/8" = 1'-0" STEAM LAB - WORK AREA 'A'



3 ATTIC MECHANICAL PROPOSED PLAN
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	REMOVE AND INSTALL NEW DUCTED MUA 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 2" HWS/R PIPING IN WALL.
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.



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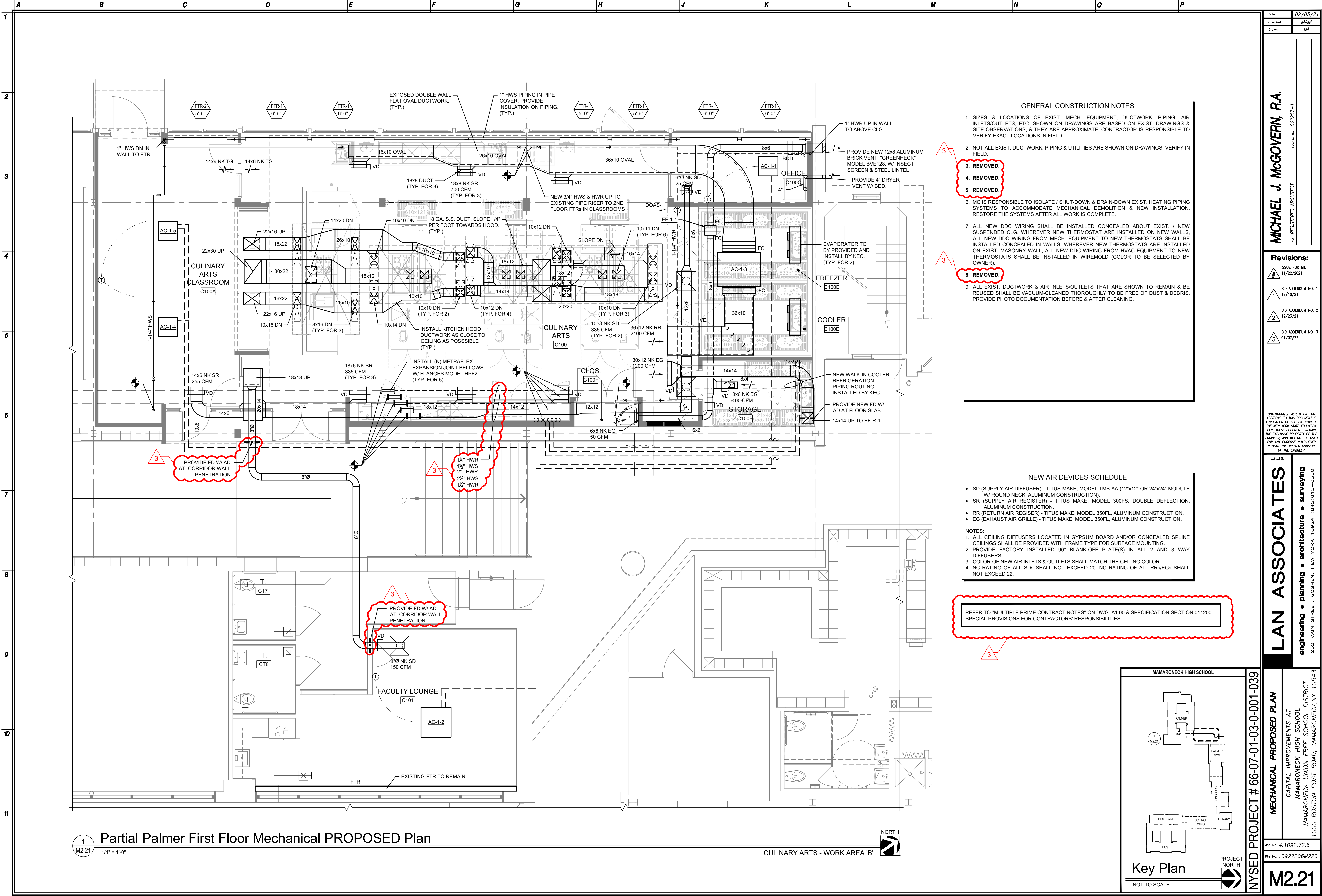
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STEAM LAB MECH PROPOSED PLANS
CAPITAL IMPROVEMENTS AT
MAMARONECK HIGH SCHOOL
MAMARONECK UNION FREE SCHOOL DISTRICT
1000 BOSTON POST ROAD, MAMARONECK, NY 10543
Job No. 4.1092.72.6
File No. 10927206M210

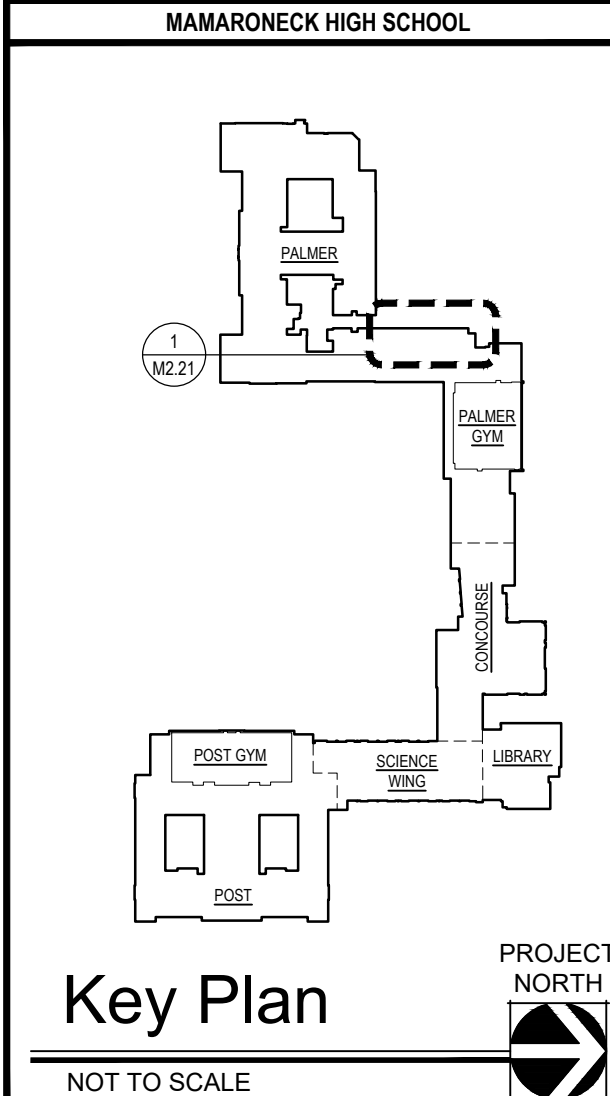
M2.11



- GENERAL CONSTRUCTION NOTES**
- SIZES & LOCATIONS OF EXIST. MECH. EQUIPMENT, DUCTWORK, PIPING, AIR INLETS/OUTLETS, ETC. SHOWN ON DRAWINGS ARE BASED ON EXIST. DRAWINGS & SITE OBSERVATIONS. & THEY ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE TO VERIFY EXACT LOCATIONS IN FIELD.
 - NOT ALL EXIST. DUCTWORK, PIPING & UTILITIES ARE SHOWN ON DRAWINGS. VERIFY IN FIELD.
 - REMOVED.
 - REMOVED.
 - REMOVED.
 - MC IS RESPONSIBLE TO ISOLATE / SHUT-DOWN & DRAIN-DOWN EXIST. HEATING PIPING SYSTEMS TO ACCOMMODATE MECHANICAL DEMOLITION & NEW INSTALLATION. RESTORE THE SYSTEMS AFTER ALL WORK IS COMPLETE.
 - ALL NEW DDC WIRING SHALL BE INSTALLED CONCEALED ABOUT EXIST. / NEW SUSPENDED CLG. WHEREVER NEW THERMOSTAT ARE INSTALLED ON NEW WALLS, ALL NEW DDC WIRING FROM MECH. EQUIPMENT TO NEW THERMOSTATS SHALL BE INSTALLED CONCEALED IN WALLS. WHEREVER NEW THERMOSTATS ARE INSTALLED ON EXIST. MASONRY WALL, ALL NEW DDC WIRING FROM MECH. EQUIPMENT TO NEW THERMOSTATS SHALL BE INSTALLED IN WIREMOLD (COLOR TO BE SELECTED BY OWNER).
 - REMOVED.
 - ALL EXIST. DUCTWORK & AIR INLETS/OUTLETS THAT ARE SHOWN TO REMAIN & BE REUSED SHALL BE VACUUM-CLEANED THOROUGHLY TO BE FREE OF DUST & DEBRIS. PROVIDE PHOTO DOCUMENTATION BEFORE & AFTER CLEANING.

- NEW AIR DEVICES SCHEDULE**
- SD (SUPPLY AIR DIFFUSER) - TITUS MAKE, MODEL TMS-AA (12"x12" OR 24"x24" MODULE W/ ROUND NECK, ALUMINUM CONSTRUCTION)
 - SR (SUPPLY AIR REGISTER) - TITUS MAKE, MODEL 300FS, DOUBLE DEFLECTION, ALUMINUM CONSTRUCTION.
 - RR (RETURN AIR REGISTER) - TITUS MAKE, MODEL 350FL, ALUMINUM CONSTRUCTION.
 - EG (EXHAUST AIR GRILLE) - TITUS MAKE, MODEL 350FL, ALUMINUM CONSTRUCTION.
- NOTES:**
- ALL CEILING DIFFUSERS LOCATED IN GYPSUM BOARD AND/OR CONCEALED SPLINE CEILINGS SHALL BE PROVIDED WITH FRAME TYPE FOR SURFACE MOUNTING.
 - PROVIDE FACTORY INSTALLED 90° BLANK-OFF PLATE(S) IN ALL 2 AND 3 WAY DIFFUSERS.
 - COLOR OF NEW AIR INLETS & OUTLETS SHALL MATCH THE CEILING COLOR.
 - NC RATING OF ALL SDs SHALL NOT EXCEED 20. NC RATING OF ALL RRs/EGs SHALL NOT EXCEED 22.

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



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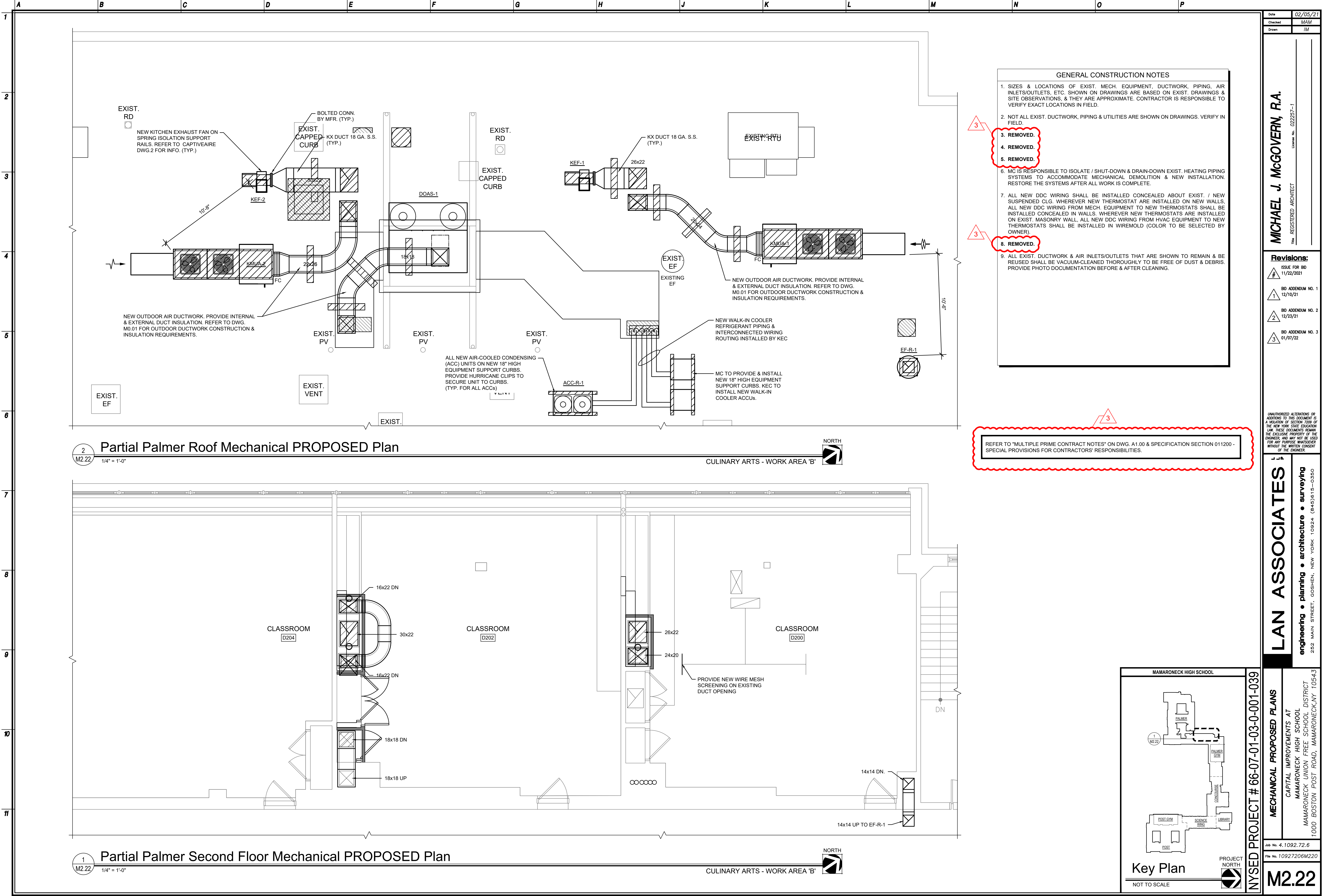
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MECHANICAL PROPOSED PLAN
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File No. 10927206M220
M2.21

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



PACKAGED AIR COOLED CHILLER SCHEDULE																				
MARK No.	LOCATION	TONS	GPM	EWT (°F)	LWT (°F)	Δ P FT.	REFRIGERANT TYPE	OADB (°F)	ELECTRICAL DATA			COMPRESSOR		MODEL & MANUFACTURER	EFFICIENCY		APPROX. DIMENSIONS L x W x H (IN)	APPROX. OPER. WEIGHT (LBS)	REMARKS	
									VOLT/PH/Hz	MCA	MOP	NO.	RLA		EER	IPLV				
CH-1, & 2	ROOF	131.6	314	54	44	13.0	R-134A	95	208/3/60	588	800	1	--	30XA	CARRIER	10.8	14.7	236 x 88 x91	10,700	SEE NOTES.

NOTES:

1. PROVIDE BASE SUPPORT RAILS AND SPRING VIBRATION ISOLATORS FOR THE CHILLERS.

2. PROVIDE MICROCHANNEL CONDENSER COIL W/ E COATED INHERENT CORROSION RESISTANCE.

3. PROVIDE WITH COMPRESSOR SOUND REDUCTION ENCLOSURE.

4. PROVIDE WITH SUCTION LINE INSULATION.

5. PROVIDE WATER FLOW SWITCH, CONDENSER COIL PANELS, UNIT MOUNTED NON-FUSED DISCONNECT.

6. PROVIDE LOW AMBIENT CONTROL TO 20°F. LOW SOUND COMPRESSOR ENCLOSURES & DISCONNECT SWITCH.

7. PROVIDE FLEXIBLE CONNECTORS AT THE PIPING CONNECTIONS TO THE CHILLER.

8. INTERNAL AND EXTERNAL AUTOMATIC TEMPERATURE CONTROLS SHALL BE PROVIDED BY ATC CONTRACTOR. UNIT TO BE INTERLOCK WITH EXISTING AND/OVER BMS SYSTEM. DISTRICT HAS A STANDARDIZATION OF SCHNEIDER ELECTRIC/CONTINUUM DDC PER BOARD OF EDUCATION RESOLUTION. NO SUBSTITUTIONS ALLOWED.

9. THE CHILLER UNIT SHALL BE PROVIDED WITH A SINGLE POINT POWER CONNECTION.

10. FACTORY INSTALLED GFCI CONVENIENCE OUTLET.

11. FACTORY INSTALL STRAINER.

12. PROVIDE ALL NECESSARY PIPE CONNECTIONS INCLUDING DRAIN, AIR VENT, ETC..

13. REFER TO SCHEMATIC CHILLER PIPING DIAGRAM FOR REQUIRED VALVES, GAUGES, ETC..

14. REFER TO SPECS FOR ADDITIONAL DETAILS.

15. PROVIDE TWO YEARS COMPLETE MATERIAL AND LABOR WARRANTY FOR PROPER OPERATION OF CHILLER INCLUDING MFR RECOMMENDED PERIODIC PREVENTIVE MAINTENANCE.

16. PROVIDE DETAILED START-UP AND TEST REPORT (DURING PEAK COOLING SEASON) BY FACTORY AUTHORIZED PERSONNEL.

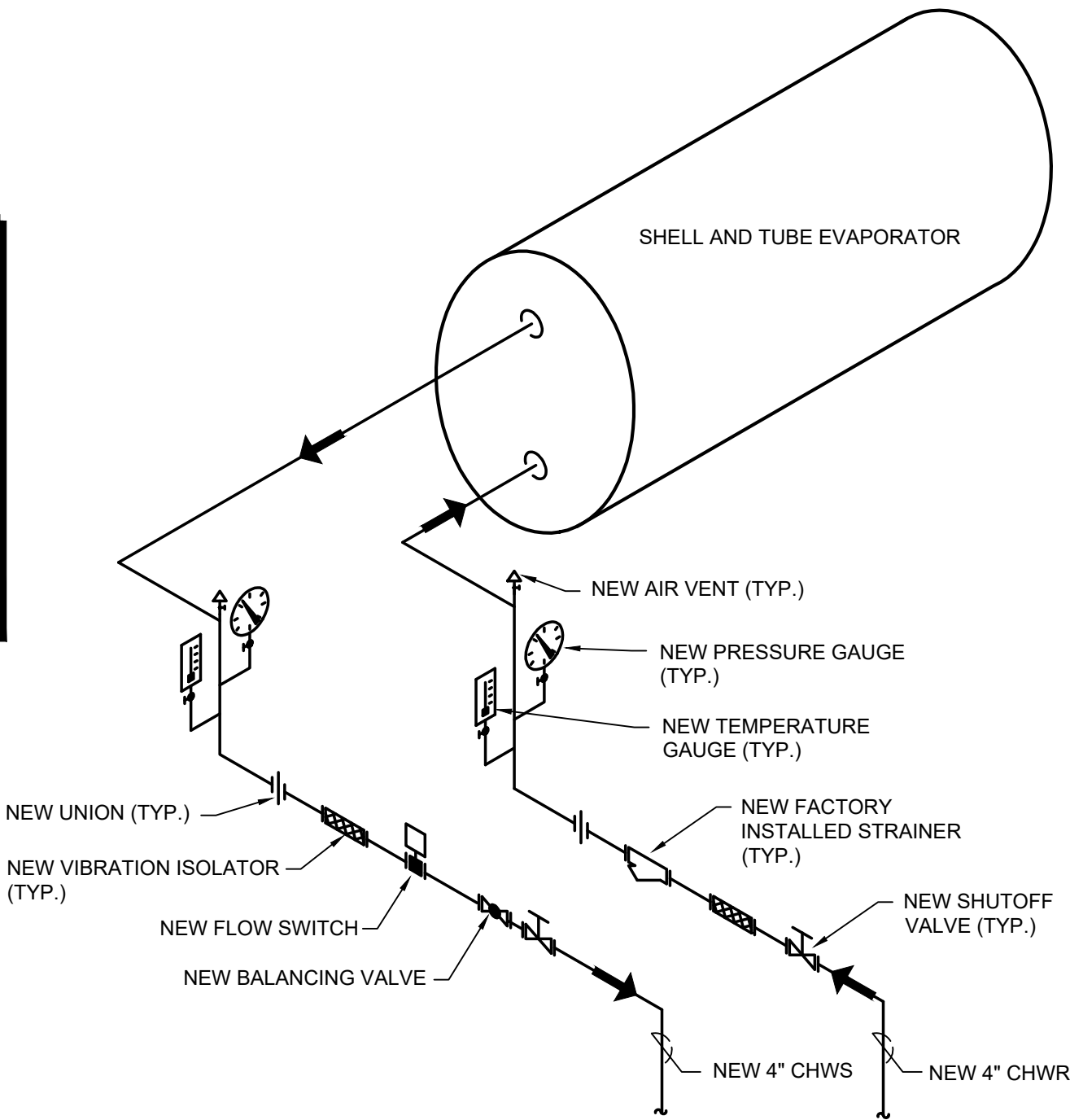
17. PROVIDE DRAINS AT ALL LOW POINTS IN THE SYSTEM AND ISOLATION VALVES TO PROPERLY ISOLATE THE CHILLERS AND DRAIN DOWN ALL PIPING BETWEEN THE BOILER ROOM AND THE CHILLERS. THE CHILLED WATER SYSTEM WILL NOT BE PROVIDED WITH ANY ANTI-FREEZE AND WILL BE DRAINED DOWN SEASONALLY BY THE OWNERS STAFF.

- CHILLER INSTALLATION NOTES
1. CONTRACTOR TO PROVIDE SHOP DRAWING SUBMITTALS OF ALL ITEMS FOR REVIEW & APPROVAL BEFORE PROCEEDING WITH PROCUREMENT AND INSTALLATION.

2. CONTRACTOR TO PROTECT INSULATION MATERIALS DURING STORAGE/INSTALLATION FROM MOISTURE.

3. THE CONTROLS SUB-CONTRACTOR SHALL PROVIDE ALL NECESSARY CONTROLS, RELAYS, TRANSFORMERS, ETC. FOR THE TIE-IN OF NEW CHILLER TO EXISTING AND/OVER BUILDING AUTOMATION SYSTEM. PROVIDE NEW ELECTRICAL AND CONTROL WIRING & CONDUITS REQUIRED FOR A COMPLETE & FUNCTIONAL SYSTEM.

4. PROVIDE IDENTIFICATION LABELS AND TAGS FOR ALL NEW EQUIPMENT INCLUDING CHILLER UNITS, PIPING, VALVES, ETC. PROVIDE PIPE IDENTIFICATION ARROWS.



3

M2.71

Schematic Chiller Piping Diagram

NOT TO SCALE

3

DUNNAGE PAINTING NOTE:
GC TO SCRAPE, PRIME & PAINT EXISTING STEEL DUNNAGE PER THE DUNNAGE PAINTING NOTE ON DRAWINGS A0.01 & A0.02. REFER TO SPECIFICATION SECTION 099113 - EXTERIOR PAINTING FOR ADDITIONAL INFORMATION.

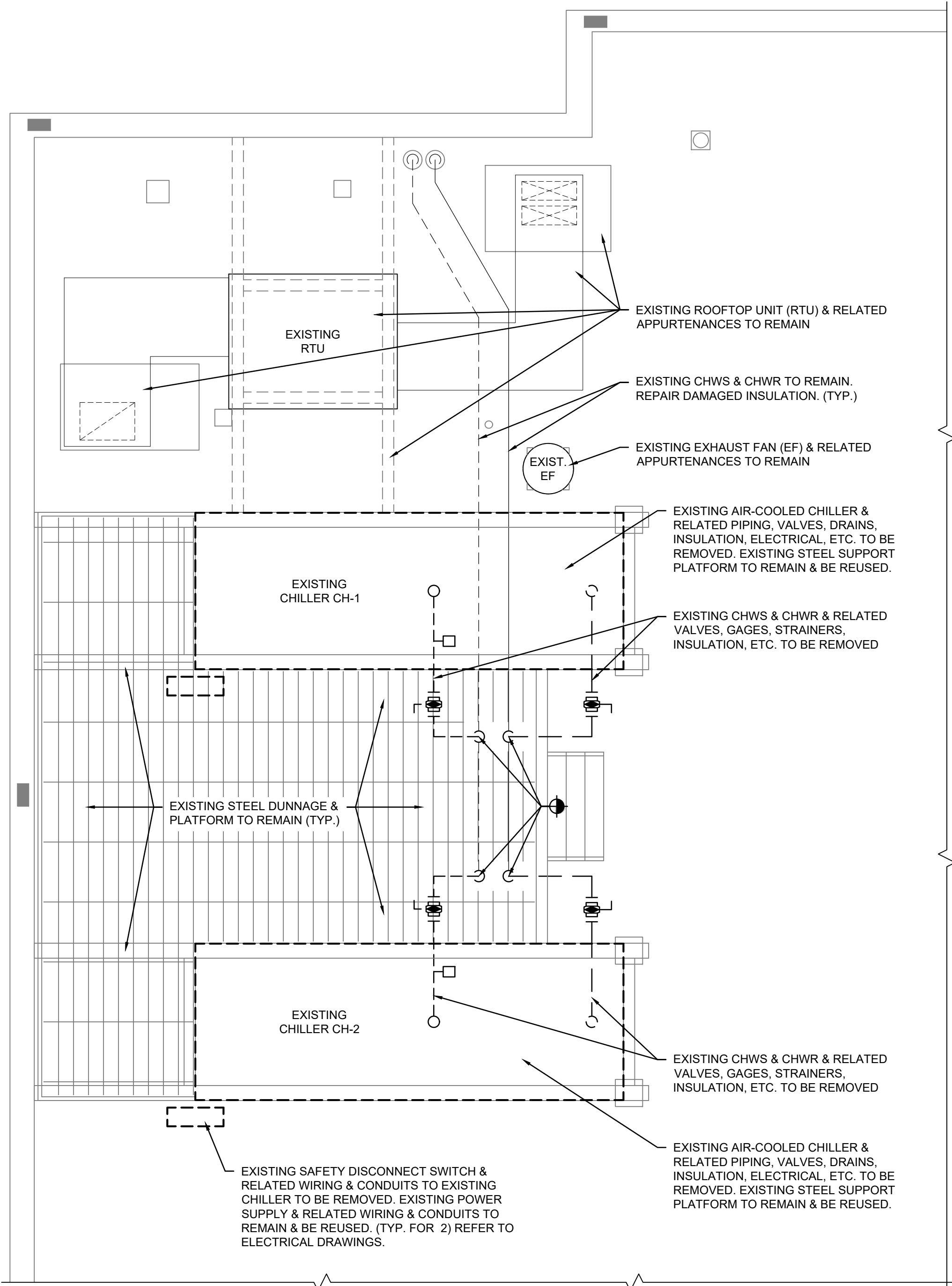
- GENERAL CONSTRUCTION NOTES
1. SIZES & LOCATIONS OF EXIST. CHILLER, MECH./HVAC EQUIPMENT, PIPING, VALVES, ETC. SHOWN ON DRAWING ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE TO VERIFY IN FIELD.

2. CONTRACTOR TO NOTE THAT NOT ALL EXIST. EQUIPMENT, DUCTWORK, PIPING & UTILITIES ARE SHOWN ON THIS DRAWING. CONTRACTOR SHALL VERIFY IN FIELD.

3. CONTRACTOR IS RESPONSIBLE TO RECOVER ALL REFRIGERANT IN EXISTING CHILLER SYSTEM PRIOR TO REMOVAL OF EXIST. CHILLER & PIPING & PROPERLY DISPOSE OF OFF SITE AS PER EPA & ALL APPLICABLE CODES.

4. CONTRACTOR IS REQUIRED TO DRAIN-DOWN THE ENTIRE CHILLED WATER PIPING SYSTEM THROUGHOUT THE SCHOOL CONTINUOUSLY UNTIL ALL SCALE SLUDGE ARE REMOVED FROM THE PIPING SYSTEM. CLEAN ALL STRAINERS. BLEED ALL AIR OUT OF THE PIPING SYSTEM. ENGAGE SERVICES OF A LICENSED CHEMICAL WATER TREATMENT CONTRACTOR & PROVIDE ONE (1) TIME CHEMICAL WATER TREATMENT FOR CHILLED WATER SYSTEM. & SUBMIT A TESTING REPORT LISTING PH LEVEL/WATER HARDNESS/NITRITE/ CONDUCTIVITY, ETC. BEFORE & AFTER WATER TREATMENT. PAY FOR ALL COSTS.

5. CONTRACTOR TO NOTE THAT EXIST. ROOF IS STILL UNDER WARRANTY. PROTECT THE ROOF AT ALL TIMES DURING DEMOLITION OF EXISTING EQUIPMENT & INSTALLATION OF NEW. PROVIDE NECESSARY AND SUITABLE PROTECTION INCLUDING WALK PADS ON ROOF SURFACE. ANY DAMAGE TO THE ROOF BY THIS CONTRACTOR DURING THE COURSE OF THIS PROJECT SHALL BE PROMPTLY & PROPERLY FIXED TO THE SATISFACTION OF OWNER & ENGINEER. ALL CUTTING, PATCHING & REPAIR SHALL BE PERFORMED BY A FACTORY-CERTIFIED ROOFING CONTRACTOR.



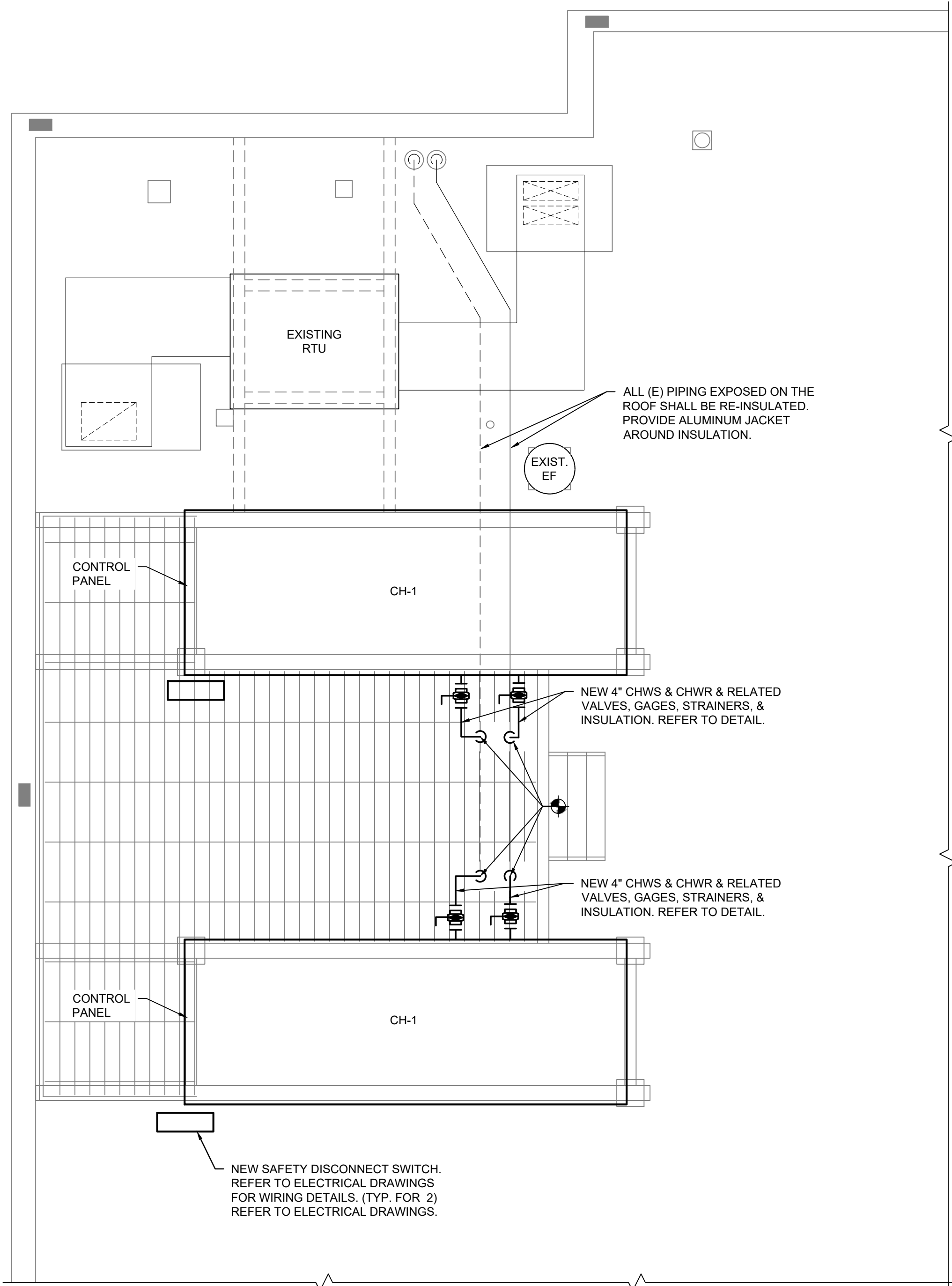
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M2.71

Partial Roof Mechanical Demolition Plan

1/4" = 1'-0"

NORTH



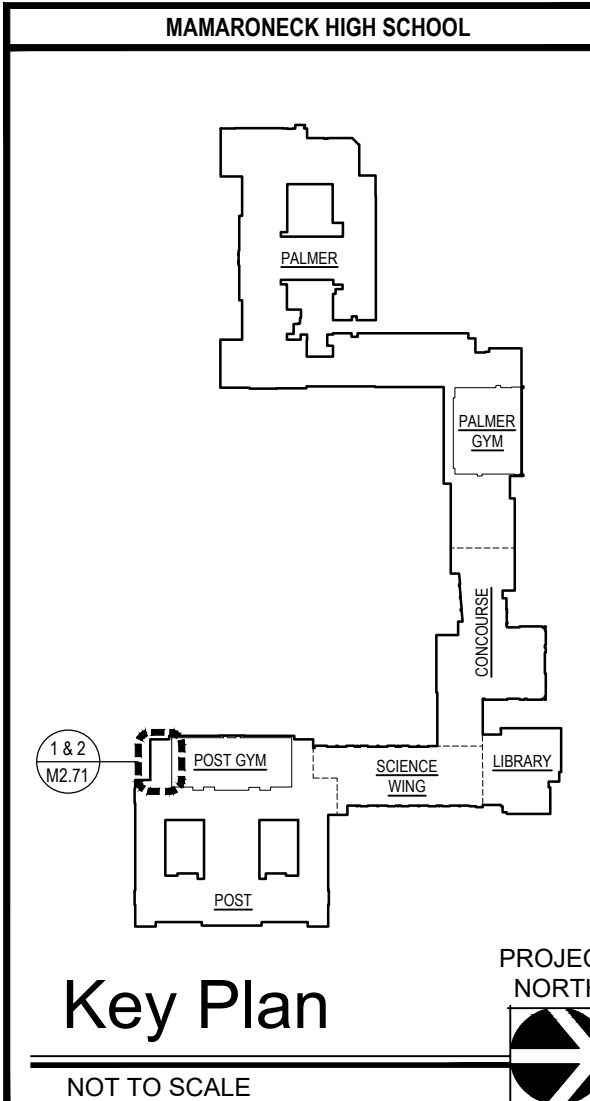
2

M2.71

Partial Roof Mechanical Proposed Plan

1/4" = 1'-0"

NORTH



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

MECHANICAL 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. 10927206M270

M2.71

MICHAEL J. MCGOVERN, P.E.

REGISTERED ARCHITECT

License No. 022257-1

Revisions:

ISSUE FOR BD

11/22/2021

BD ADDENDUM NO. 3

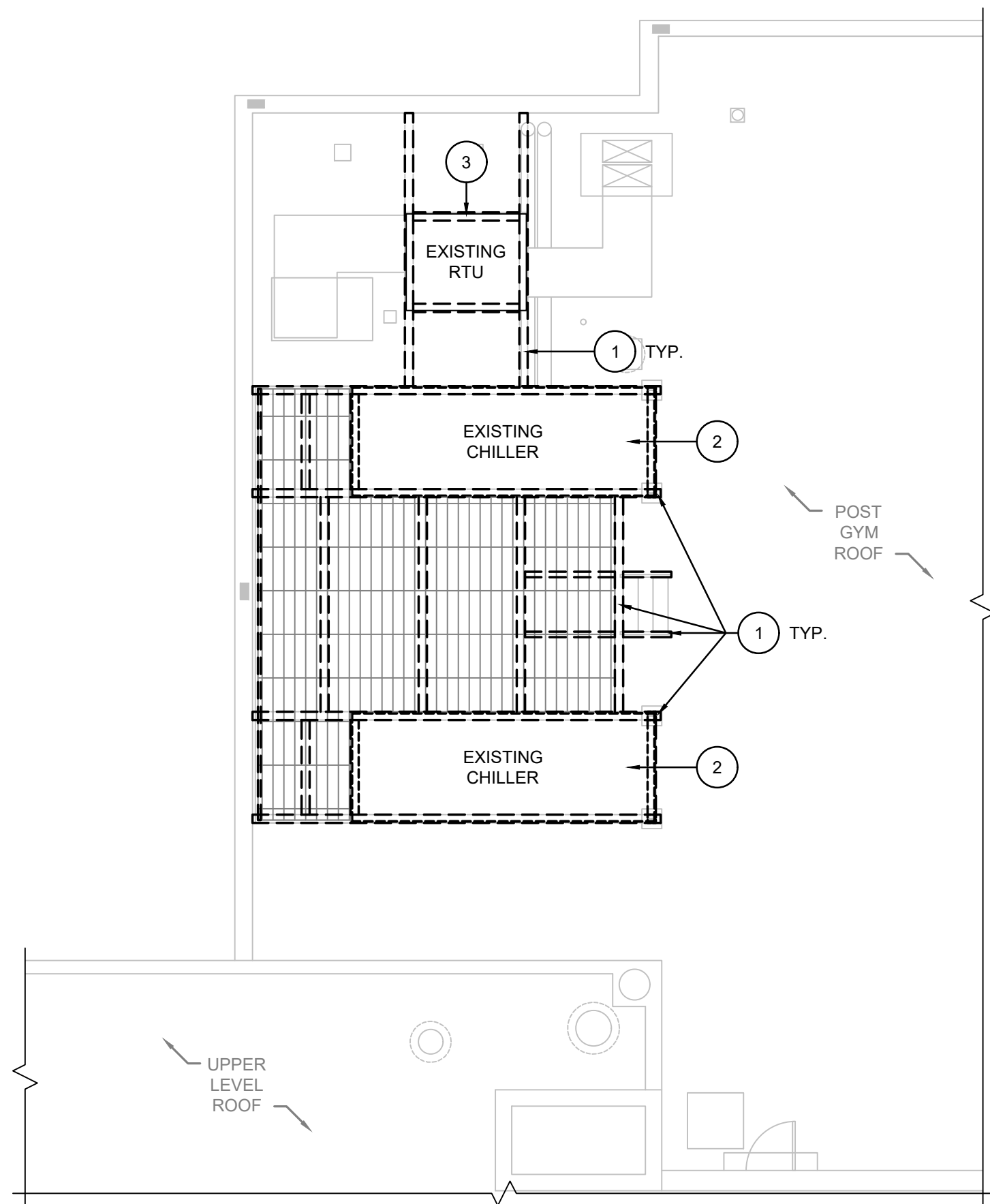
01/07/22

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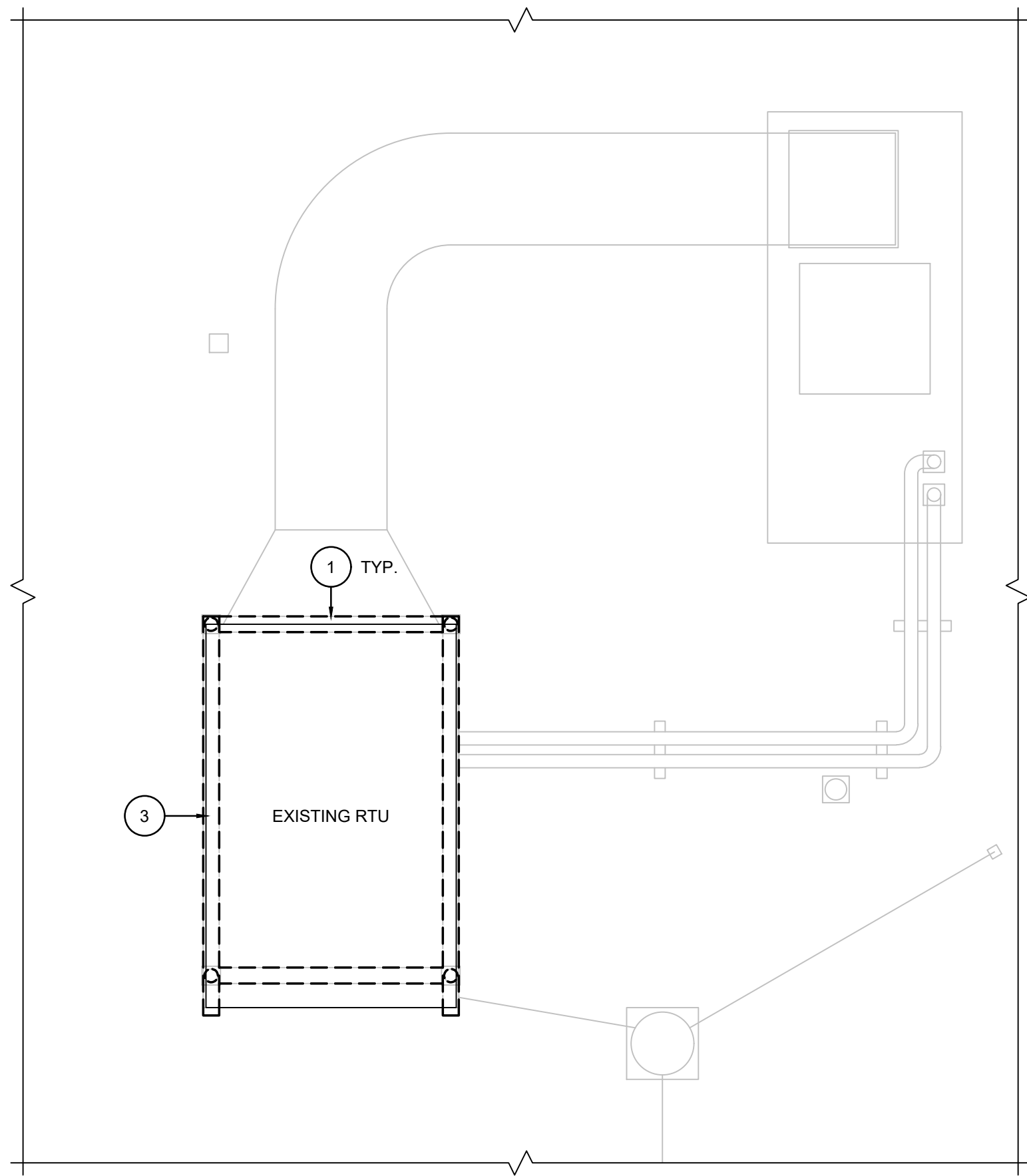
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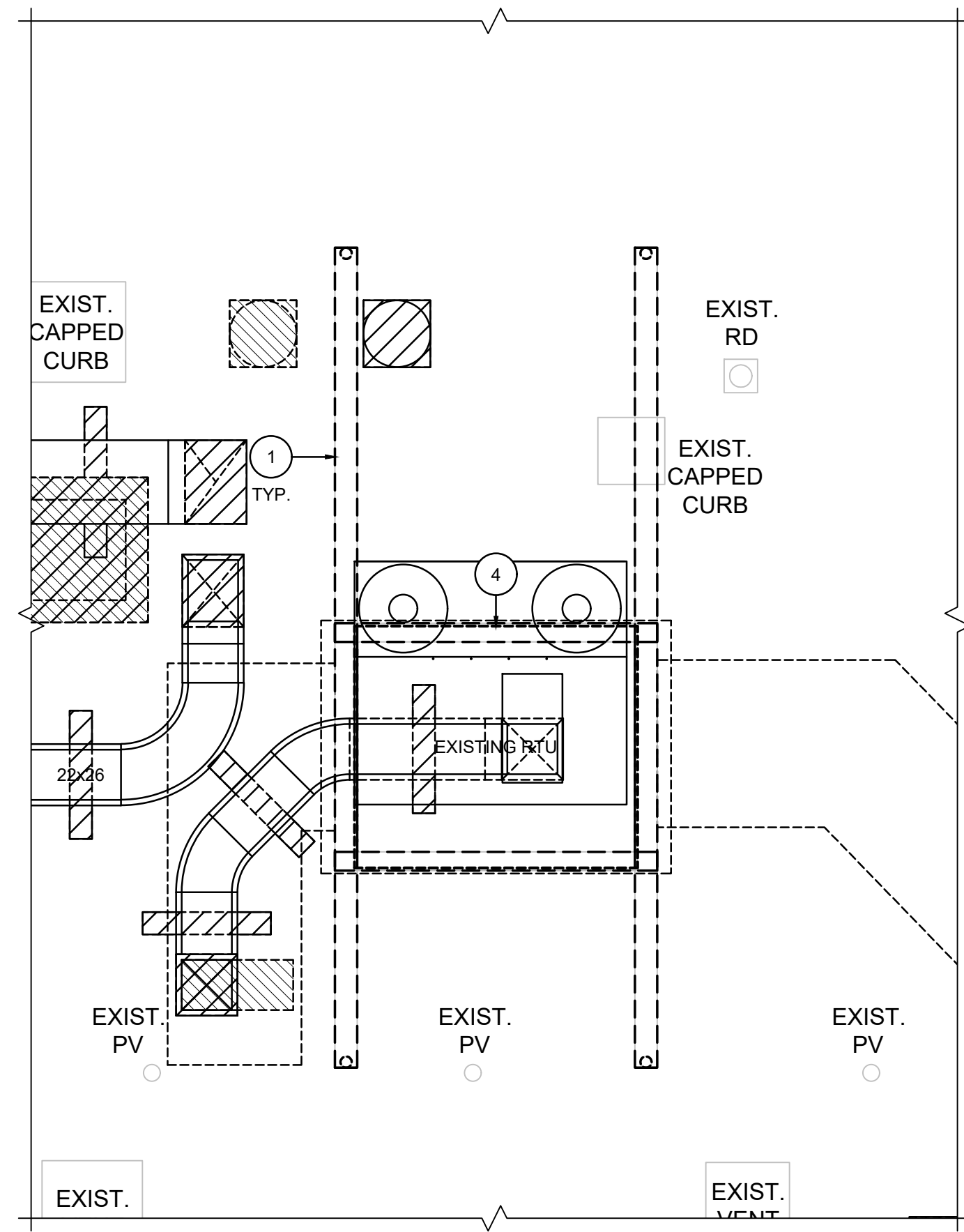
252 MAIN STREET, GOSHEN, NEW YORK 10924 (845) 815-0350



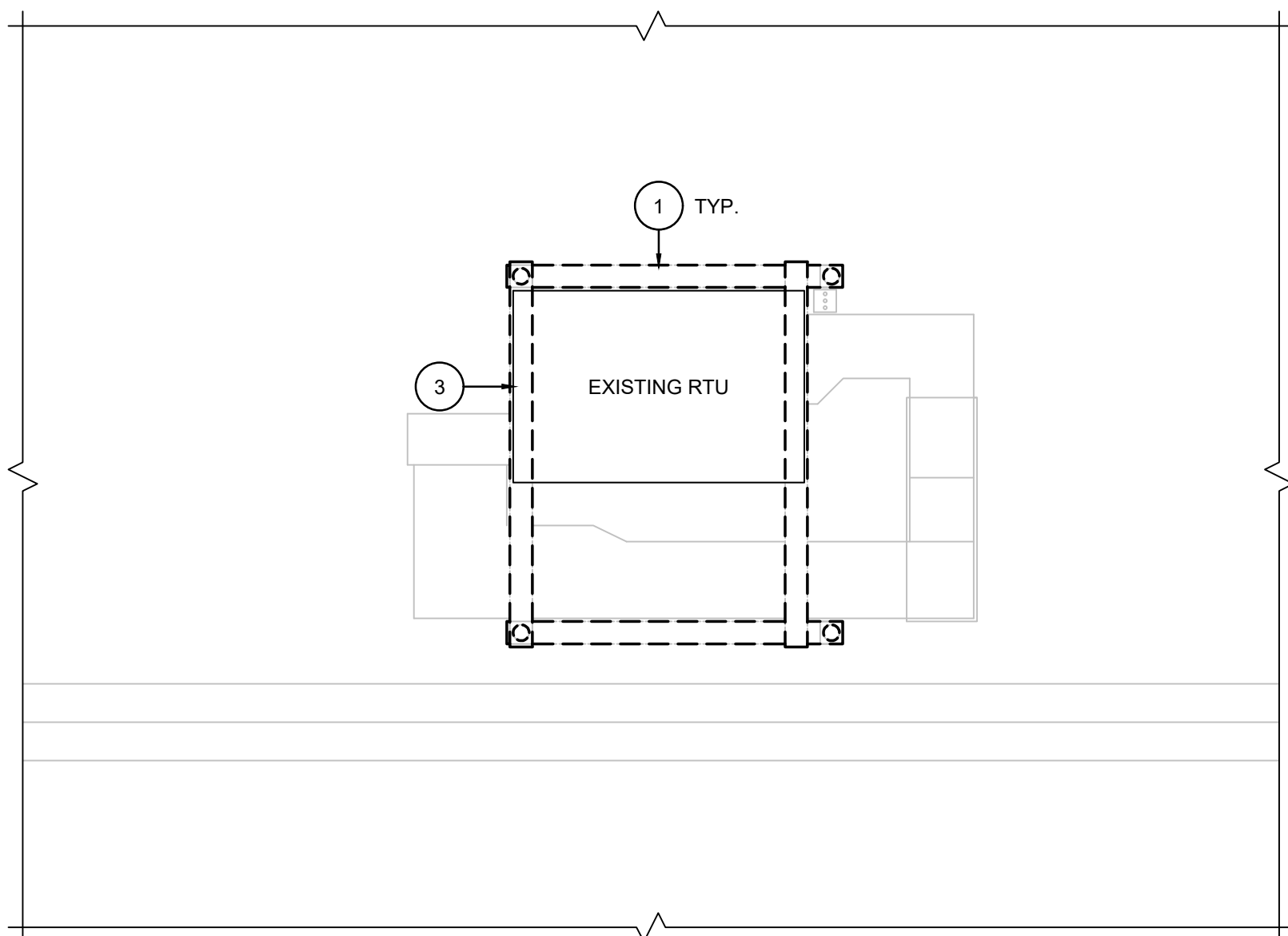
1 Post Road Gym Roof Mechanical Plan
1/8" = 1'-0" WORK AREA 'R'



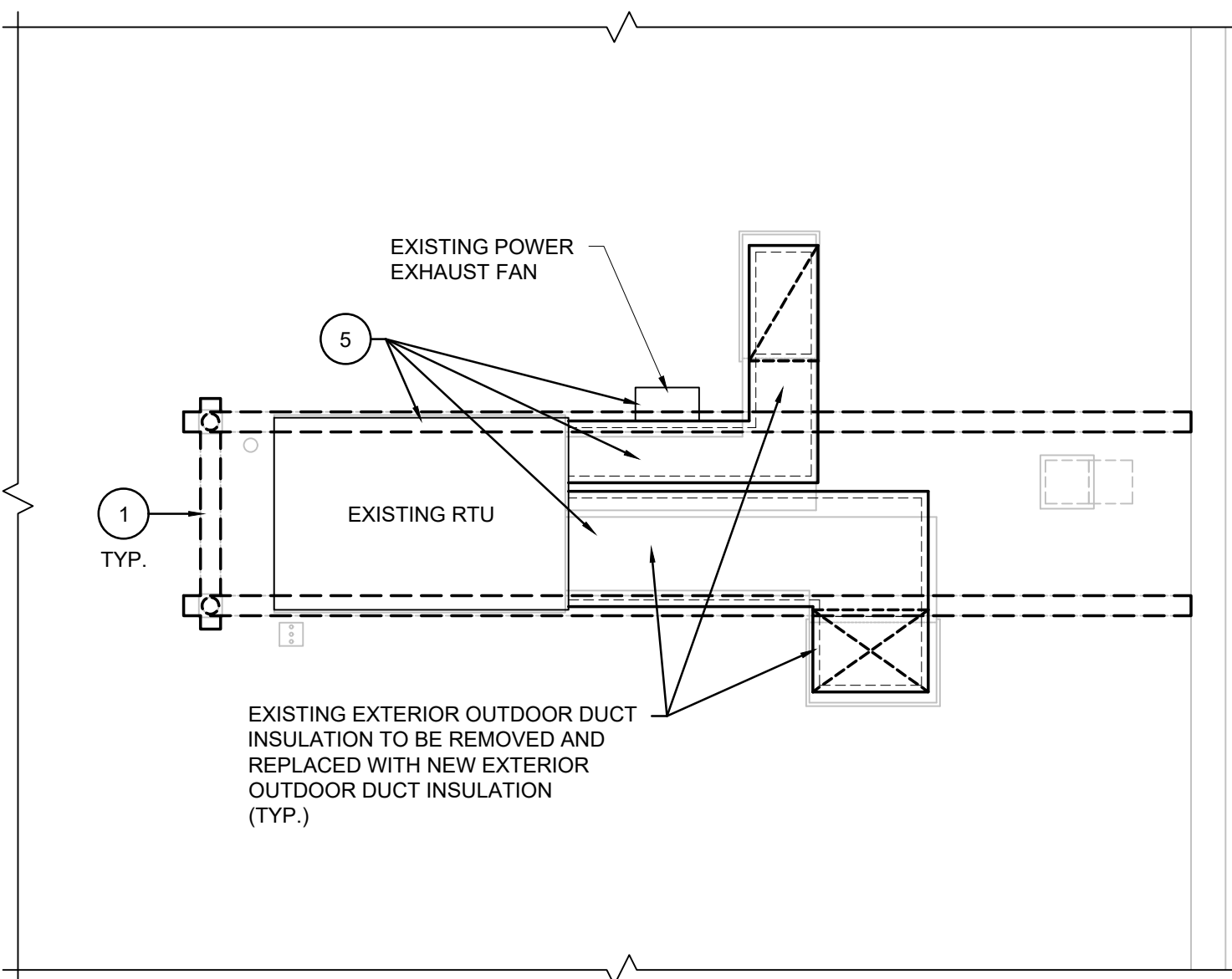
2 Post Road Science Wing Roof Mechanical Plan
1/4" = 1'-0" WORK AREA 'R'



3 Palmer Ave. Roof Mechanical Plan
1/4" = 1'-0" WORK AREA 'R'



4 Post Road Upper Roof Mechanical Plan - West Side
1/4" = 1'-0" WORK AREA 'R'

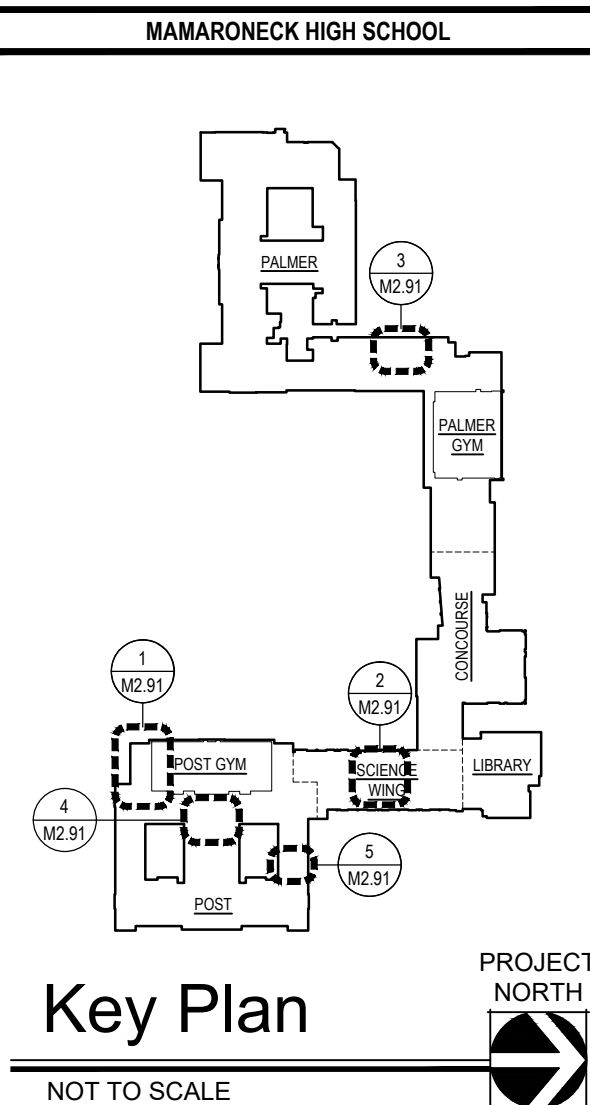


5 Post Road Upper Roof Mechanical Plan - North Side
1/4" = 1'-0" WORK AREA 'R'

- GENERAL DEMOLITION / CONSTRUCTION NOTES**
- LOCATIONS AND SIZES OF EXISTING ROOFTOP MECHANICAL EQUIPMENT, DUCTWORK, PIPING, STEEL DUNNAGE, ETC. SHOWN ON THIS DRAWING ARE BASED ON EXISTING DRAWINGS AND SITE OBSERVATIONS, AND THEY ARE APPROXIMATE AND MAY OR MAY NOT BE AS SHOWN. CONTRACTOR IS RESPONSIBLE TO VERIFY LOCATIONS AND SIZES IN FIELD.
 - NOT ALL EXISTING ROOFTOP EQUIPMENT, DUCTWORK, PIPING, ETC. ARE SHOWN ON THIS DRAWING. VERIFY IN FIELD.
 - ANY CUTTING, PATCHING OR FINISH REPAIR WORK REQUIRED FOR MECHANICAL DEMOLITION AND CONSTRUCTION IS RESPONSIBILITY OF THE CONTRACTOR.
 - CONTRACTOR TO PROTECT EXISTING ROOF AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION. PROVIDE ALL NECESSARY AND SUITABLE PROTECTION INCLUDING WALK PADS ON ROOF SURFACE. ANY DAMAGE TO THE ROOF BY THIS CONTRACTOR DURING THE COURSE OF THIS PROJECT SHALL BE PROMPTLY AND PROPERLY FIXED TO THE SATISFACTION OF OWNER AND ARCHITECT/ENGINEER. ALL CUTTING, PATCHING AND REPAIR OF EXISTING ROOF SHALL BE PERFORMED BY A FACTORY-CERTIFIED ROOFING CONTRACTOR.

ITEM #	DEMOLITION / CONSTRUCTION KEY NOTES
1	EXISTING STEEL DUNNAGE TO REMAIN. GO TO SCRAPE, PRIME & PAINT. EXISTING STEEL DUNNAGE PER DUNNAGE PAINTING NOTE ON A0.01 & A0.02. REFER TO SPECIFICATION SECTION 099113 - EXTERIOR PAINTING FOR ADDITIONAL INFORMATION.
2	EXISTING CHILLERS TO BE REPLACED. REFER TO MECHANICAL DRAWING M2.71 FOR CHILLER REPLACEMENT PROJECT FOR ADDITIONAL INFORMATION. COORDINATE SCRAPING AND PAINTING OF EXISTING STEEL DUNNAGE WITH REPLACEMENT OF EXISTING CHILLERS.
3	EXISTING ROOFTOP MECHANICAL EQUIPMENT (ROOFTOP UNITS (RTUs), ETC.) AND ASSOCIATED DUCTWORK, PIPING, SUPPORTS, CONTROLS, ELECTRICAL, ETC. TO REMAIN.
4	EXISTING ROOFTOP UNIT (RTU) TO BE REPLACED. REFER TO MECHANICAL DRAWINGS M1.20s, M2.20s AND M6.20s FOR NEW CULINARY ARTS RENOVATION PROJECT FOR ADDITIONAL INFORMATION. COORDINATE SCRAPING AND PAINTING OF EXISTING STEEL DUNNAGE WITH REPLACEMENT OF EXISTING RTU.
5	EXISTING ROOFTOP UNIT (RTU) AND ASSOCIATED DUCT, PIPING, POWER EXHAUST FAN, SUPPORTS, CONTROLS, ELECTRICAL, ETC. TO REMAIN. EXISTING EXTERIOR OUTDOOR DUCT INSULATION TO BE REPLACED WITH NEW.

ADD ALTERNATE #6b-2
REFER TO BID FORM AND SPECIFICATION SECTION 012300 FOR ADDITIONAL INFORMATION.



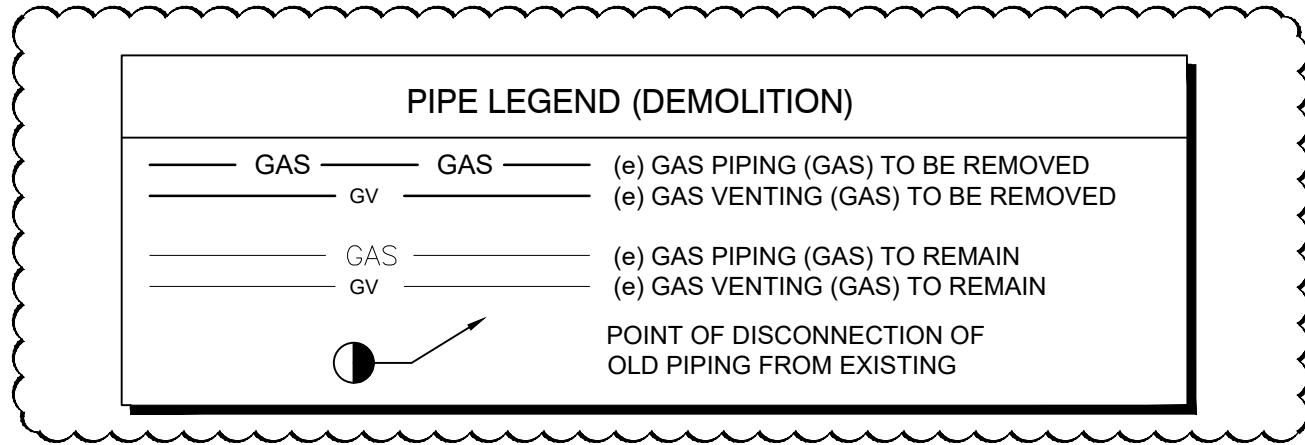
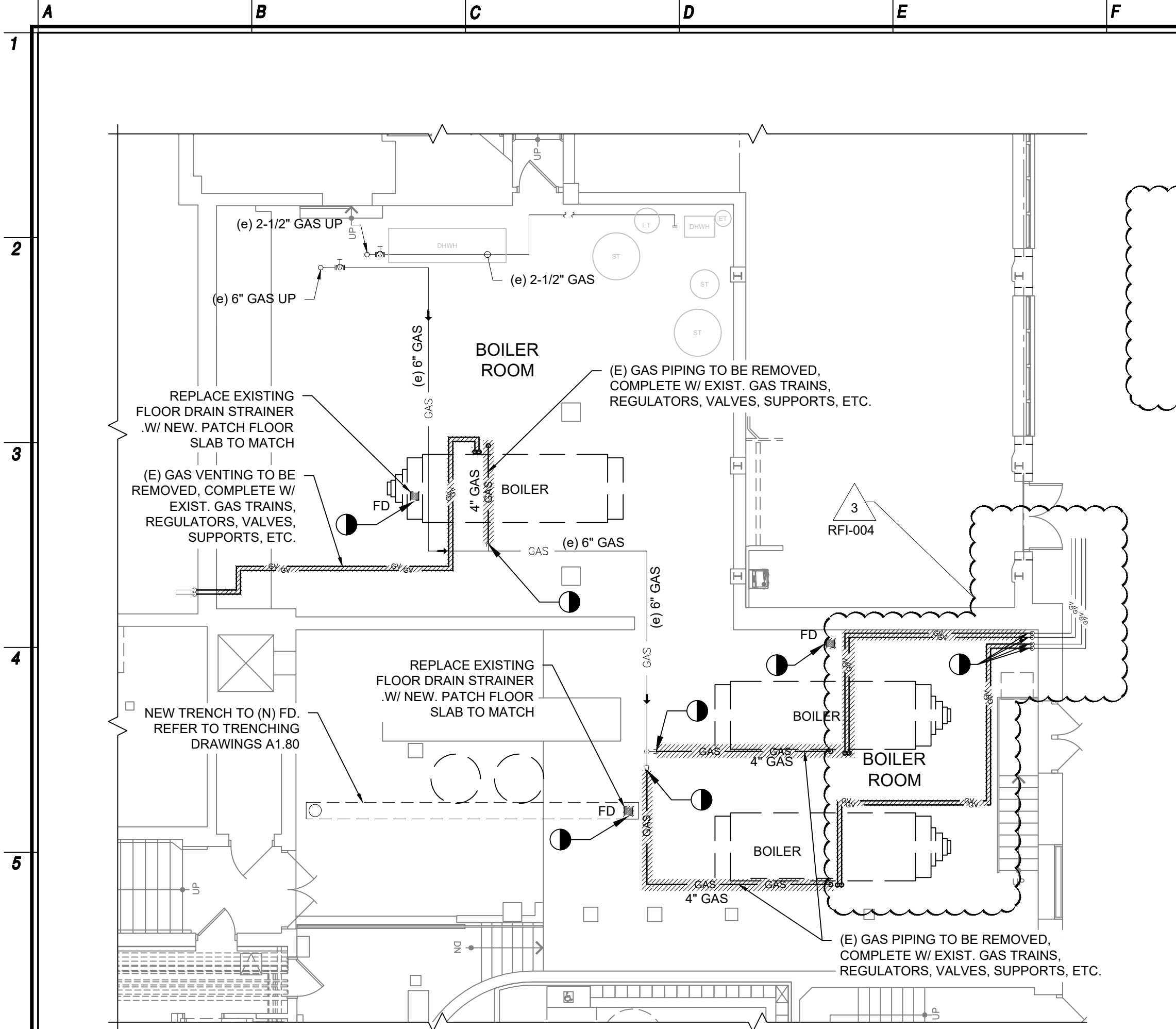
Date: 02/05/21
Checked: MAM
Drawn: IM
MICHAEL J. MCGOVERN, R.A.
REGISTERED ARCHITECT
License No. 022257-1

Revisions:
ISSUE FOR BID 11/22/2021
BID ADDENDUM NO. 3 01/07/22

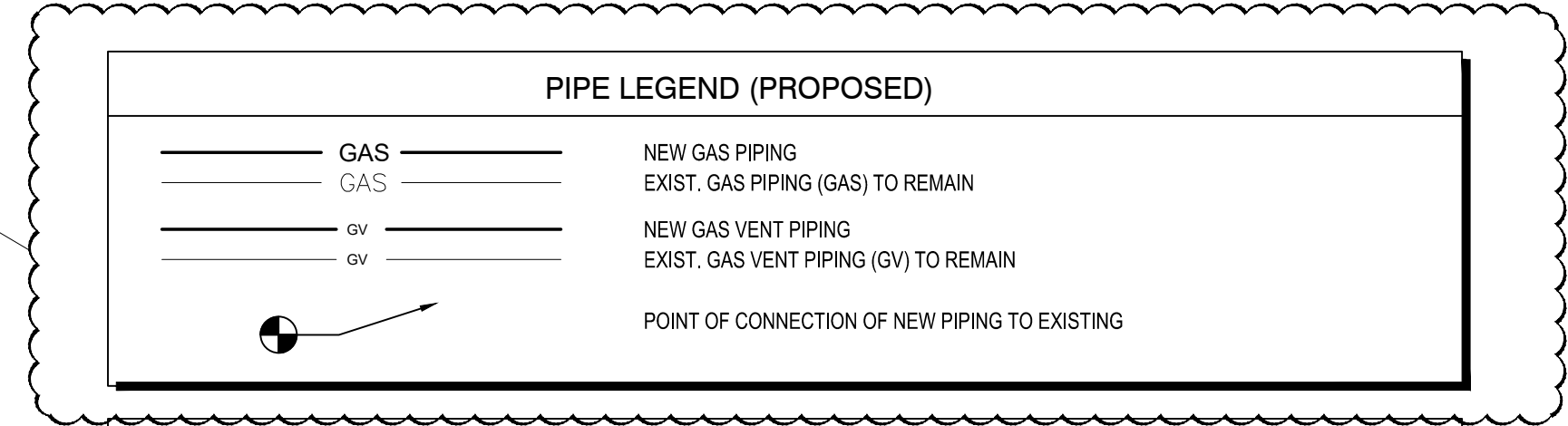
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NYSED PROJECT # 66-07-01-03-0-001-039
PARTIAL MECHANICAL ROOF PLANS
CAPITAL IMPROVEMENTS AT
MAMARONECK HIGH SCHOOL
MAMARONECK UNION FREE SCHOOL DISTRICT
1000 BOSTON POST ROAD, MAMARONECK, NY 10543
Job No. 4.1092.72.6
File No. 10927206M290
M2.91



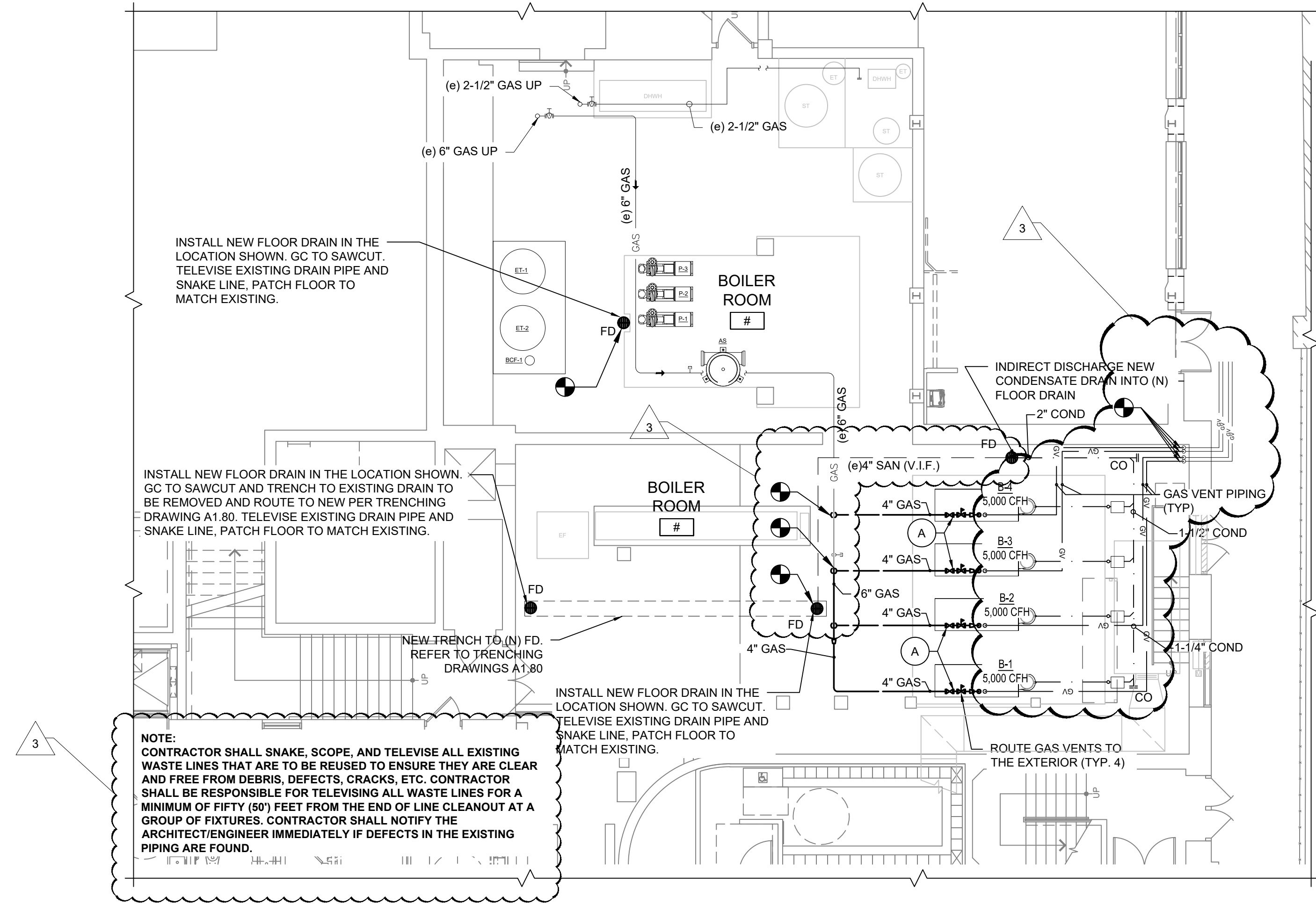
- DEMOLITION NOTES**
- HATCHED LINES INDICATE ITEMS TO BE REMOVED, UNLESS OTHERWISE NOTED.
 - ALL BURNER GAS VENT PIPING TO BE REMOVED IN ENTIRETY FROM BOILER ROOM TO TERMINATION. SEAL ALL WALL PENETRATIONS (IF NOT BEING REUSED) & CAULK WITH 2HR FIRE-STOPPING MATERIALS. PAINT TO MATCH EXISTING.
 - ALL 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.
 - CONTRACTOR TO NOTE THAT LOCATIONS & SIZES OF EXIST. PLUMBING PIPING SHOWN (GAS, WASTE, VENT, DOW, DHW, DHWR, ETC) ARE BASED ON FIELD OBSERVATIONS AND AVAILABLE BLUEPRINTS AND ARE APPROXIMATE. CONTRACTOR SHALL INVESTIGATE/TRACE (WITH CAMERA OR ELECTRONIC DEVICES) THE EXISTING SANITARY WASTE LINES TO BE REMOVED/REPLACED OR RESCHEDULED TO BE REUSED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. EXISTING VENTING AND WATER LINES ARE SHOWN GRAPHICALLY TO GIVE AN HONEST REPRESENTATION OF THE EXISTING CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL SIZES & LOCATIONS IN FIELD.
 - ALL SANITARY LINES BEING DEMOLISHED SHALL BE REMOVED BACK TO THE MAINS. DEAD END SHALL NOT EXCEED THE MAXIMUM LENGTH PER LATEST PLUMBING



- CONSTRUCTION NOTES**
- ALL NEW GAS LINES IN BOILER ROOM SHALL BE PAINTED YELLOW. ALL GAS VENT LINES AND BOILER DRAIN LINES SHALL BE PAINTED BLACK W/ HIGH TEMPERATURE PAINT. ALL EXTERIOR GAS VENT LINES SHALL BE PAINTED TO MATCH EXIST. MASONRY FINISH. ALL PAINTING SHALL BE 1 PRIMER & 2 FINISH COATS.
 - CONTRACTOR TO NOTE THAT NOT ALL EXIST. PIPING IN BOILER ROOM HAS BEEN SHOWN ON DRAWINGS. CONTRACTOR SHALL CHECK IN FIELD TO AVOID CONFLICTS W/ INSTALLATION OF NEW EQUIPMENT & PIPING, ETC.
 - SIZES OF HOT WATER PIPING (HWS & HWR) SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IN FIELD & PROVIDE. ALL NEW VALVES SHALL BE LINE-SIZE. CHECK IN FIELD.
 - NEW EQUIPMENT, PIPING, VALVES AND BREECHING INSTALLED ABOVE FINISHED FLOOR SHALL BE SUPPORTED OFF CEILING STRUCTURE WITH SUPPORT RODS AND HANGERS.
 - CONTRACTOR IS RESPONSIBLE FOR REMOVAL, RELOCATION, AND REINSTALLATION OF ALL EXIST. PIPING, WIRING & CONDUITS, ELECTRICAL, ETC. IN ORDER TO ACCOMMODATE INSTALLATION OF ALL NEW WORK, WHETHER OR NOT SHOWN/CALLED OUT ON DWGS. PROVIDE REQUIRED PIPE ELBOWS & FITTINGS, ETC.
 - CONTRACTOR IS REQUIRED TO DRAIN-DOWN THE ENTIRE HOT WATER HEATING SYSTEM CONTINUOUSLY UNTIL ALL SCALE & SLUDGE ARE REMOVED FROM THE PIPING SYSTEM. PROVIDE NEW BLEEDER VALVES (AIR VENTS) ON HEATING PIPING IN BOILER ROOM & ALSO USE EXIST. BLEEDER VALVES THROUGHOUT THE BUILDING TO BLEED OUT ALL AIR FROM THE PIPING SYSTEM. CLEAN ALL STRAINERS. PROVIDE ONE (1) TIME CHEMICAL WATER TREATMENT FOR NEW BOILER HEATING SYSTEM.
 - ALL NEW & EXIST. WALL/FLOOR OPENINGS SHALL BE PATCHED. USE UL FIRE STOPPING SYSTEM #C-BJ-5001 (2HR RATING) FOR ALL PIPE/CONDUIT WALL PENETRATIONS.
 - PERFORM HYDROSTATIC TEST ON ALL NEW INSTALLED PIPING AT NOT LESS THAN 1.5 TIMES THE WORKING PRESSURE FOR A MINIMUM OF TWO (2) HOURS. EXAMINE ALL PIPING JOINTS & CONNECTIONS FOR LEAKAGE. ELIMINATE LEAKAGE.

ITEM #	GAS KEY NOTES (PROPOSED)
A	NEW 4" GAS DN TO NEW BOILER. INSTALL NEW GAS PRESSURE REGULATOR, SHUTOFF BALL VALVE AT MIN. 24" ABOVE BOILER. (TYP.4)

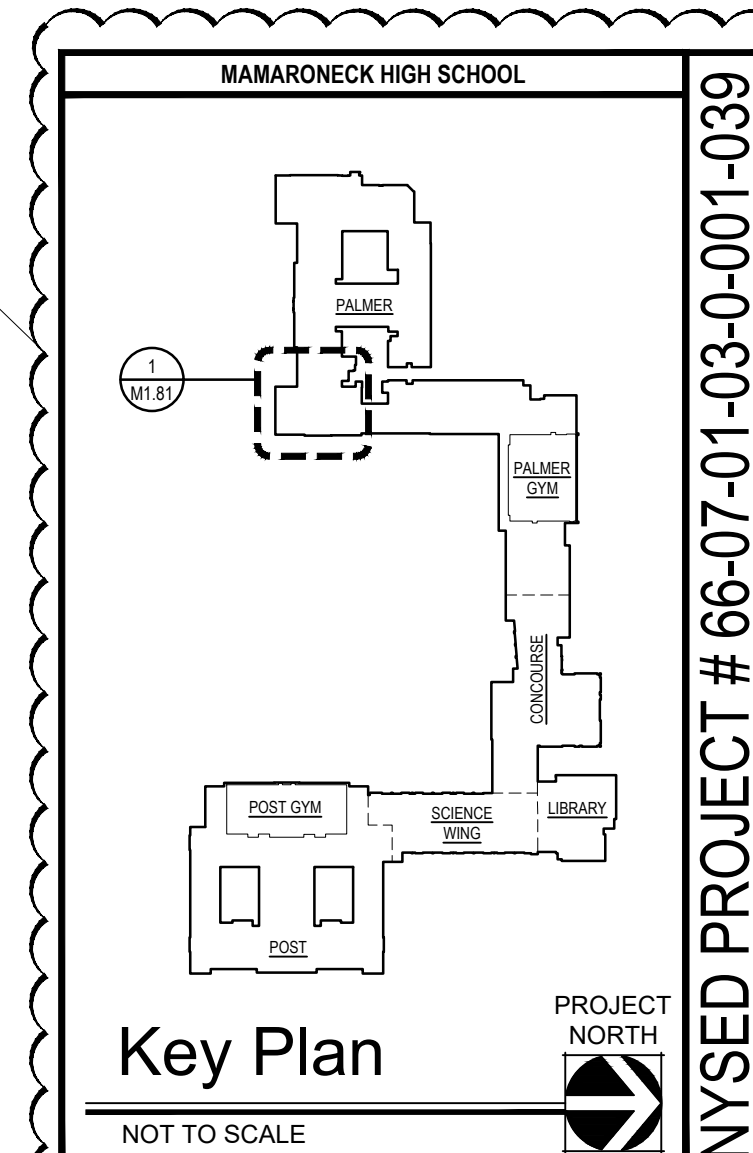
1 P2.81 1/4" = 1'-0" BOILER ROOM - WORK AREA 'H' NORTH



1 P2.81 1/4" = 1'-0" BOILER ROOM - WORK AREA 'H' NORTH

REFER TO ARCHITECTURAL, MECHANICAL & PLUMBING DRAWINGS FOR ADDITIONAL WORK REQUIREMENTS. PLUMBING CONTRACTOR RESPONSIBLE FOR ALL WORK CALLED OUT TO BE PERFORMED BY "PC" OR "PLUMBING 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.



Date	02/05/21
Checked	MB
Drawn	RJS

Revisions:

#	ISSUE FOR BD	DATE
1	BD ADDENDUM NO. 1	12/10/21
2	BD ADDENDUM NO. 2	12/23/21
3	BD ADDENDUM NO. 3	01/07/22

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BOILER ROOM PUMPING PLANS
CAPITAL IMPROVEMENTS AT
MAMARONECK HIGH SCHOOL
MAMARONECK UNION FREE SCHOOL DISTRICT
1000 BOSTON POST ROAD, MAMARONECK, NY 10543

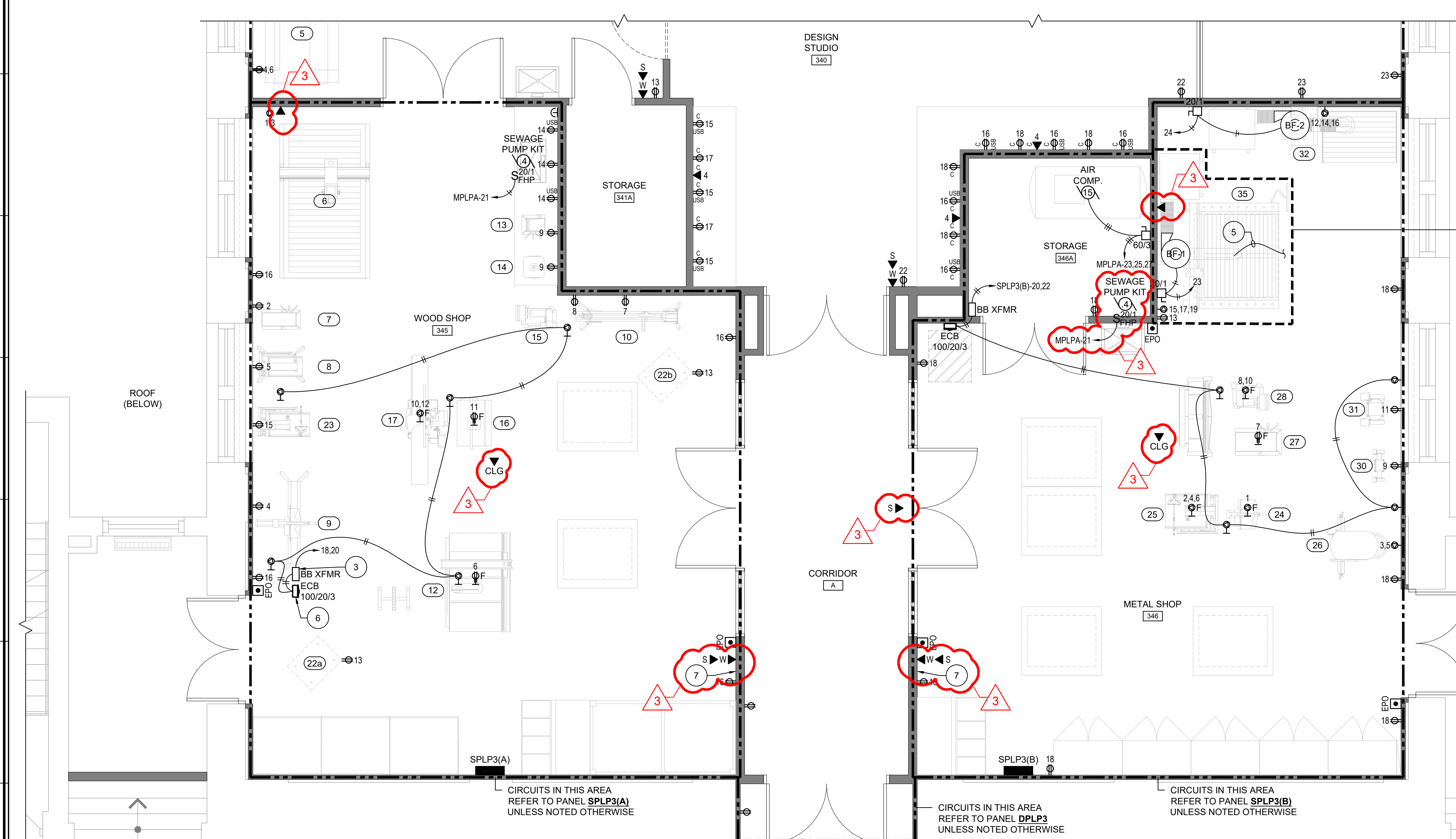
Job No. 4,1092.72.6
File No. 10927206P215

P2.81

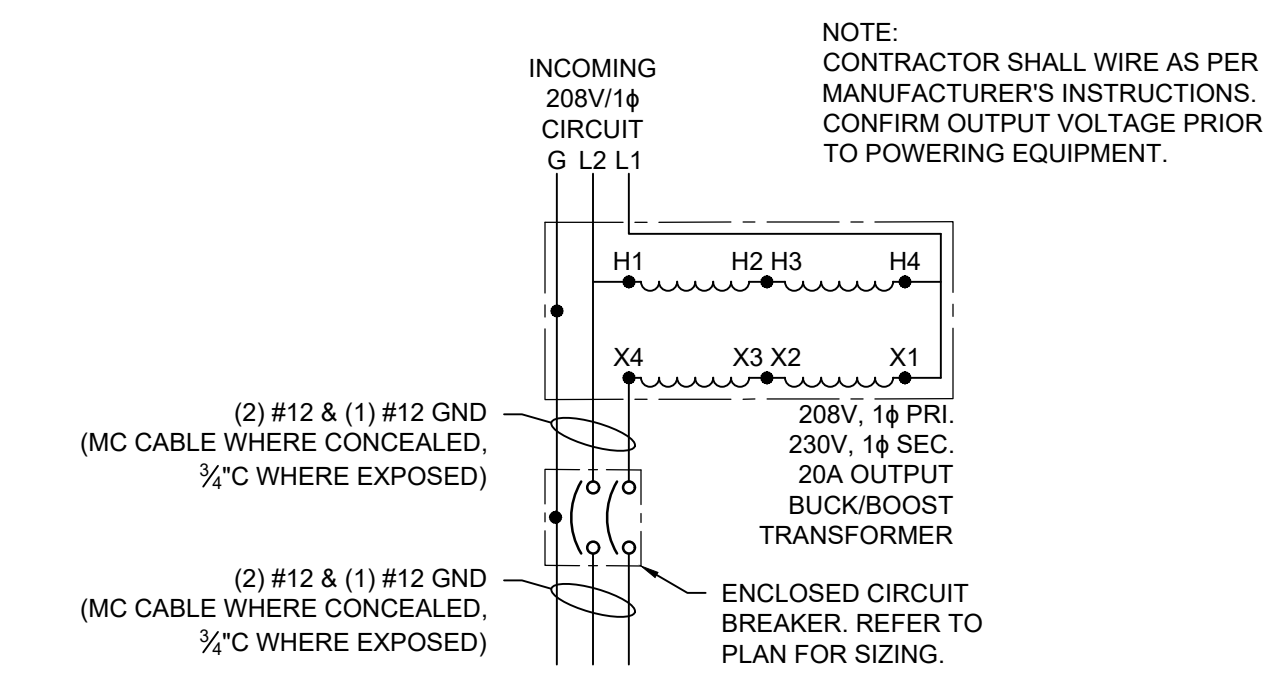
PANEL SCHEDULE - PANEL SPLP3(A) - WOOD SHOP											FED FROM PANEL DPLP3			208/120V			
CT#	Load Description	OCPD			Conductors			Ground	Raceway	Voltage	Load kVA	Load per Phase(A)			Voltage Drop %		
		Type	Poles	Rated	Current	Neutral	Phase A					Phase B	Phase C				
1/3	CNC MACHINE [6]	Std	2	30A	(2) 10 ga.	none	(1) 10 ga.	3/4 in EMT	208	4.74		24			4.78%		
2	DRILL PRESS [7]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	1.03		9			4.73%		
4	SLIDING MITER SAW [9]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	1.71			15		5.42%		
5	SCROLL SAW [8]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	0.15				1.3	3.85%		
6	TABLE SAW [12]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	1.6				14	5.31%		
7	LATHE [10]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	0.66	5.8				4.36%		
8	BELT/DISK SANDER [15]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	1.57	13.8				5.29%		
9	MORTISER [13] & SPINDLE SANDER	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	1.82			16		5.54%		
10/12	JOINTER [17]	Std	2	30A	(2) 10 ga.	none	(1) 10 ga.	3/4 in EMT	208	3.36			17	17	4.48%		
11	ROUTER [16]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	1.11				9.75	4.82%		
13	AIR FILTERS [22]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	1.32	11.6				5.03%		
14	COUNTER RECEPTACLES	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	0.54	4.74				4.24%		
15	BAND SAW [23]	Std	1	30A	(1) 10 ga.	(1) 10 ga.	(1) 10 ga.	3/4 in EMT	120	1.82			16		4.87%		
16	CONV. RECEPTACLES	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	0.72			6.32		4.42%		
17																	
18/20	DUST COLLECTOR BB XFMR	Std	2	35A	(2) 8 ga.	none	(1) 8 ga.	3/4 in. EMT	208	5.53		26.6		26.6	4.53%		
19																	
21-37																	
38/40/42	SPD	Std	3	30A	(3) 10 ga.	none	(1) 10 ga.	3/4 in. EMT	208	0.01					3.77%		
39																	
41																	
Total Circuits											18	Connected Loads: 27,821 VA			95.1 A	94 A	68.1 A
												Demand Loads: 21,144 VA			72.3 A	71.4 A	51.8 A
												Demand Factor: 76 %					
Voltage: 120 / 208											Main Connection: breaker						
Circuits: 21 / 30											Load kVA: 21						
Neutral Buss: Yes											OCPD Size: 150A						
Ground Buss: Yes											OCPD Type: Shunt Trip						
Buss Capacity: 200 A											Location:						
NEMA: Type 1											Remarks: 22kAIC SCCR						
											WHERE EMT IS INDICATED AS THE RACEWAY, THIS IS TO INDICATE THE MINIMUM RACEWAY SIZE. THE CONTRACTOR SHALL MEET THE REQUIREMENTS OF THE "APPLICATION OF RACEWAYS"						
											3-Phase Connection						
Voltage Drop % for 75 Feet is 3.77%											Current	Neutral	Ground				
Raceway: 3 in. dia. EMT											(3) 250 kcmils THHN	(1) 250 kcmils THHN	(1) 6 ga. THHN				

PANEL SCHEDULE - PANEL SPLP3(B) - METAL SHOP											FED FROM PANEL DPLP3		208/120V			
CT#	Load Description	OCPD			Conductors			Raceway	Voltage	Load kVA	Load per Phase(A)			Voltage Drop %		
		Type	Poles	Rated	Current	Neutral	Ground				Phase A	Phase B	Phase C			
1	MULTI CUTTER SAW [24]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	1.71				5.78%		
2/4/6	BAND SAW [25]	Std	3	20A	(3) 12 ga.	none	(1) 12 ga.	3/4 in EMT	208	2.67	7.8	7.8	7.8	4.58%		
3/5	MILLING/DRILLING MACHINE [26]	Std	2	20A	(2) 12 ga.	none	(1) 12 ga.	3/4 in EMT	208	2.37		12	12	4.93%		
7	DRILL PRESS [27]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	1.71	15			5.78%		
8/10	BELT/DISK SANDER [28]	Std	2	20A	(2) 12 ga.	none	(1) 12 ga.	3/4 in EMT	208	1.98	10	10		4.79%		
9	BUFFER [30]	Std	1	20A	(1) 10 ga.	(1) 10 ga.	(1) 10 ga.	3/4 in EMT	120	1.82			16	6.40%		
11	BENCH GRINDER [31]	Std	1	20A	(1) 10 ga.	(1) 10 ga.	(1) 10 ga.	3/4 in EMT	120	1.82			16	6.40%		
12/14/16	WELDER [32]	Std	3	60A	(3) 4 ga.	none	(1) 8 ga.	3/4 in EMT	208	18.37	51	51	51	4.94%		
13	PLASMA CUTTER [35] (ADD ALT #6d-1)	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	0.56	4.87			4.62%		
15/17/19	PLASMA CUTTER [35] (ADD ALT #6d-1)	Std	3	60A	(3) 4 ga.	none	(1) 8 ga.	1 in EMT	208	14.03	41	41	41	4.96%		
18	CONV. RECEPTACLES	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	1.08			9.47	5.15%		
20/22	DUST COLLECTOR BB XFMR	Std	2	35A	(2) 10 ga.	none	(1) 10 ga.	3/4 in EMT	208	5.53	26.6	26.6		5.33%		
21	BF-1 (ADD ALT. No. 6d-1)	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	0.83			7.67	4.94%		
23																
24	BF-2	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in EMT	120	0.83			7.67	4.94%		
25-27																
38/40/42	SPD	Std	3	30A	(3) 10 ga.	(1) 10 ga.	(1) 10 ga.	3/4 in EMT	208	0.01				4.13%		
39																
41																
		Total Circuits			23				Connected Loads: 55,287 VA				171 A		172 A	144.1 A
									Demand Loads: 45,336 VA				140.2 A		141 A	118.2 A
									Demand Factor: 82 %							
Voltage: 120 / 208		Main Connection: breaker			Load kVA: 45			OCPD Size: 200A			OCPD Type: Shunt Trip			Location:		
Circuits: 26 / 42														WHERE EMT IS INDICATED AS THE RACEWAY, THIS IS TO INDICATE THE MINIMUM RACEWAY SIZE. THE CONTRACTOR SHALL MEET THE REQUIREMENTS OF THE "APPLICATION OF RACEWAYS"		
Neutral Buss: Yes														3-Phase Connection		
Ground Buss: Yes														Voltage Drop % for 100 Feet is 4.13%		
Buss Capacity: 200 A														Current		
NEMA: Type 1														(3) 250 kcmils THHN		
														(1) 250 kcmils THHN		
														(1) 4 ga. THHN		

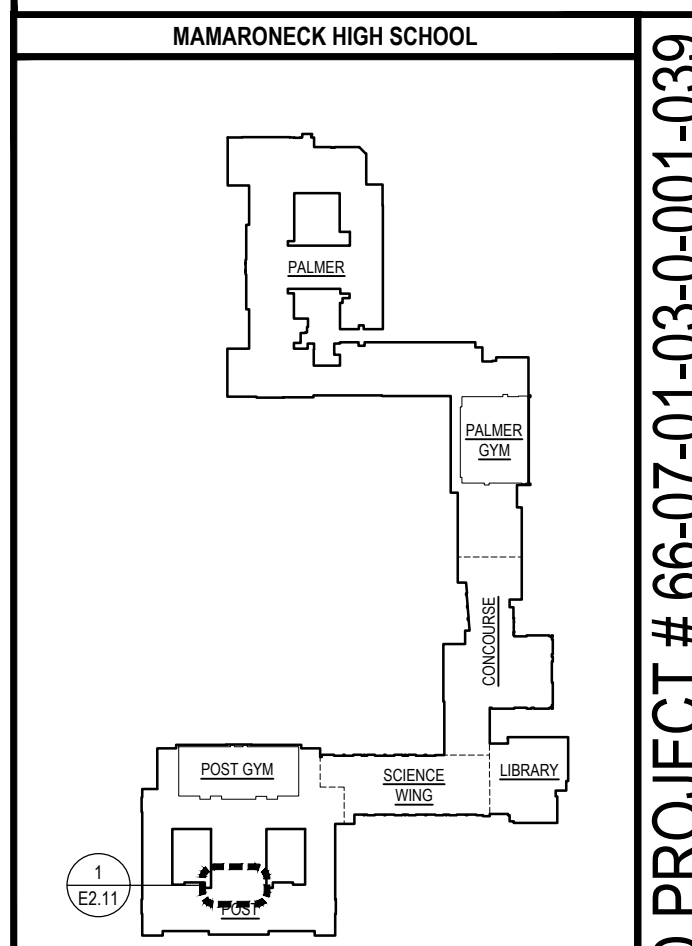
ADD ALTERNATE
#6d-1
REFER TO BID FORM AND
SPECIFICATION SECTION 012300
FOR ADDITIONAL INFORMATION.



ADD ALTERNATE
#6d-1
REFER TO BID FORM AND
SPECIFICATION SECTION 012300
FOR ADDITIONAL INFORMATION.



REFER TO DRAWING E0.01 & E2.11 FOR NOTES
REFER TO DRAWING E0.05 & E2.10 FOR SYMBOLS



Partial Post Third Floor Enlarged Electrical Power Plan
1/4" = 1'-0"

Buck/Boost Transformer Wiring Diagram
N.T.S.

Key Plan
NOT TO SCALE

DATE: 02/05/21
CHECKED: BH
DRAWN: MH

MICHAEL J. MCGOVERN, R.A.
REGISTERED ARCHITECT
LICENSE NO. 02227-1

Revisions:
#6d-1
ISSUE FOR BID
11/22/2021

BID ADDENDUM NO. 3
01/07/22

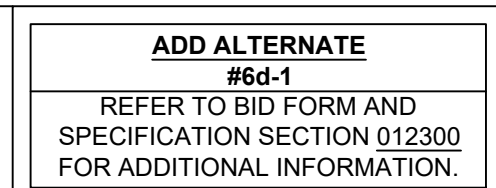
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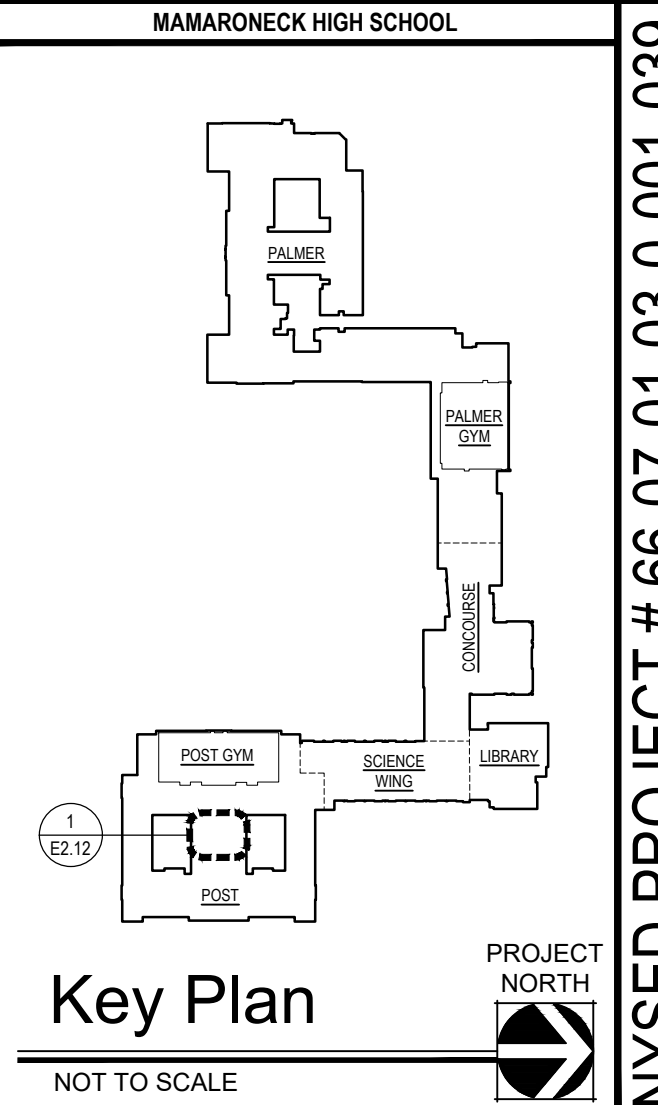
WORK AREA A: STEAM LAB
ENLARGED SHOP POWER PLAN
CAPITAL IMPROVEMENTS AT
MAMARONECK HIGH SCHOOL
MAMARONECK UNION FREE SCHOOL DISTRICT
1000 BOSTON POST ROAD, MAMARONECK, NY 10543

Job No. 4.1092.72.6
File No. 10927206E210

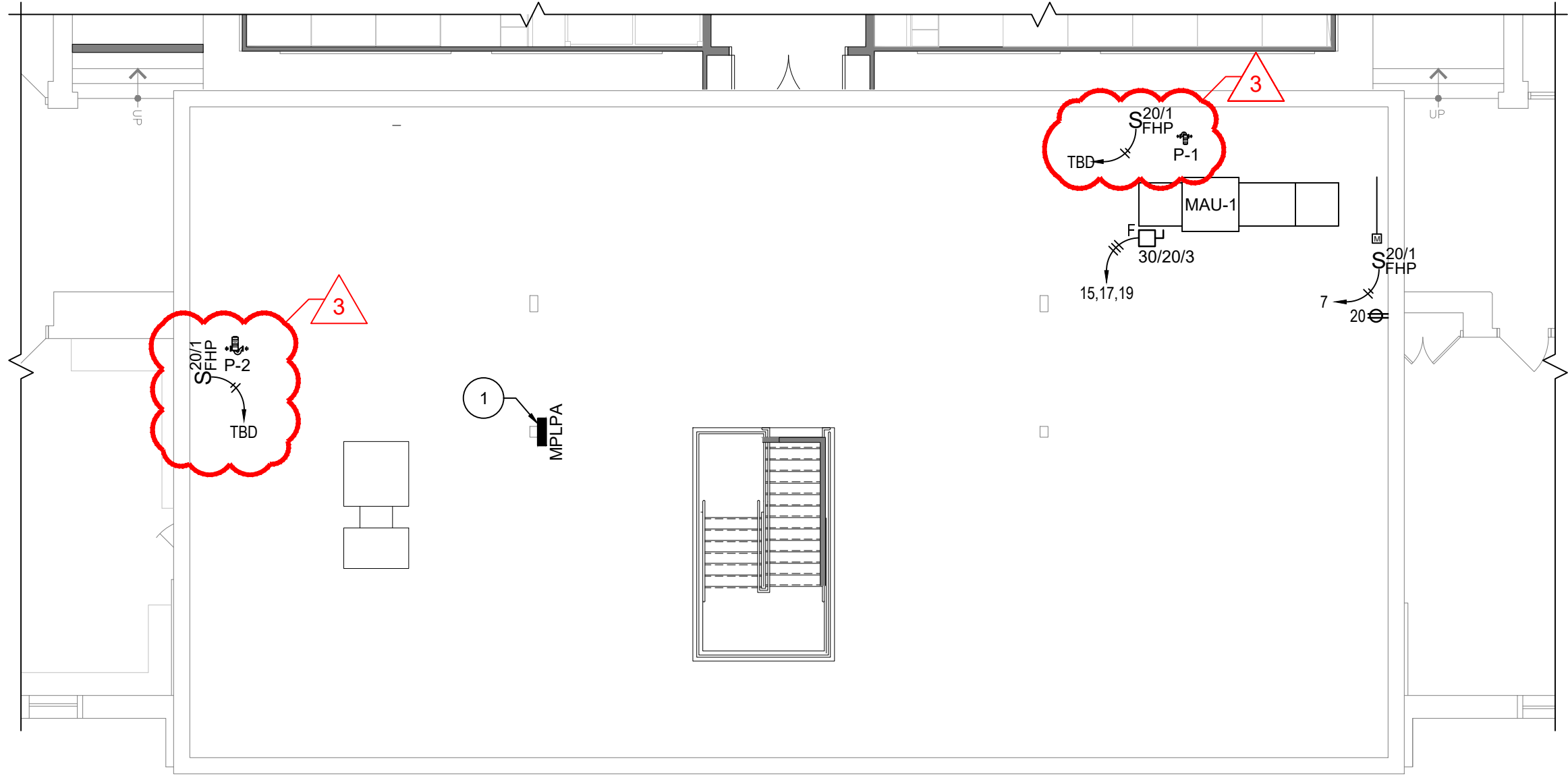
E2.11



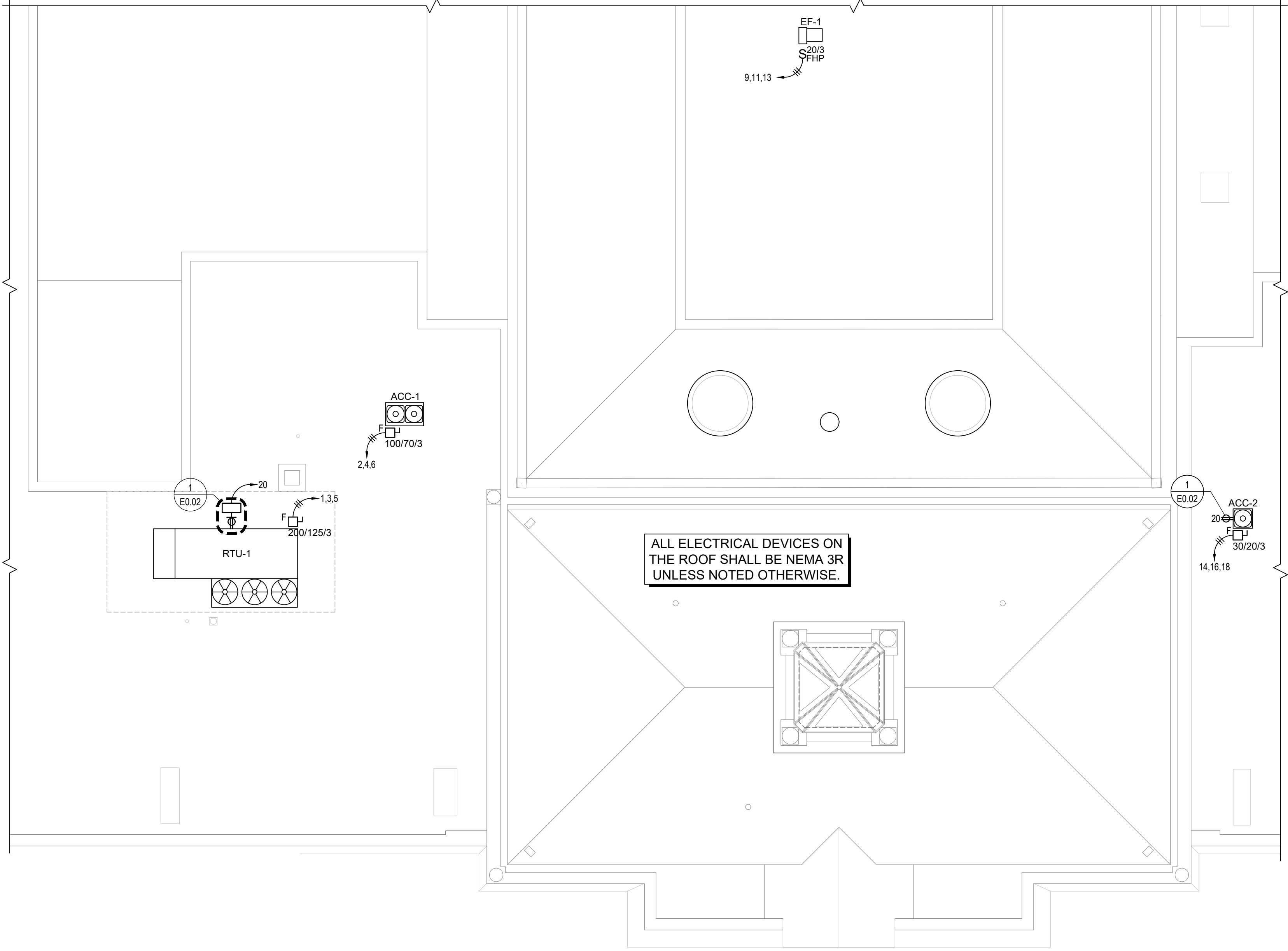
REFER TO DRAWING E0.01 & E2.11 FOR NOTES
REFER TO DRAWING E0.05 & E2.10 FOR SYMBOLS



Date	02/05/21
Checked	BH
Drawn	MH
MICHAEL J. McGOVERN, R.A.	
Title	REGISTERED ARCHITECT
License No.	022257-1
Revisions:  ISSUE FOR BID 11/22/2021	
 BID ADDENDUM NO. 3 01/07/22	
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WORK AREA A: STEAM LAB ENLARGED STUDIO POWER 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. 10927206E210	
E2.12	

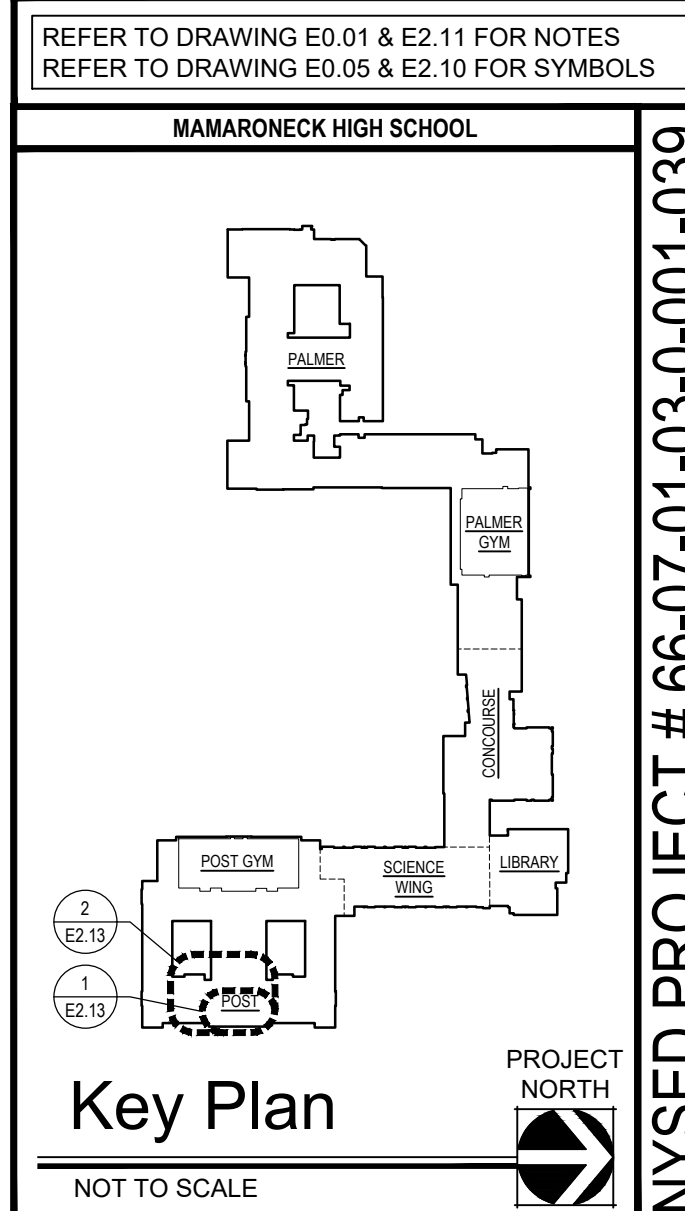


1 Partial Post Attic Electrical Power Plan
E2.13 1/8" = 1'-0"
STEAM LAB - WORK AREA 'A'
PROJECT NORTH
ALL CIRCUITS ON THIS PLAN REFER TO PANEL MPLPA(A) UNLESS NOTED OTHERWISE



2 Partial Post Roof Electrical Power Plan
E2.13 1/8" = 1'-0"
STEAM LAB - WORK AREA 'A'
PROJECT NORTH
ALL CIRCUITS ON THIS PLAN REFER TO PANEL MPLPA(A) UNLESS NOTED OTHERWISE

PANEL SCHEDULE - PANEL MPLPA - ATTIC MECHANICAL											FED FROM MDP		208/120V		
CT#	Load Description	OCPD			Conductors			Ground	Raceway	Voltage	Load kVA	Load per Phase(A)			Voltage Drop %
		Type	Poles	Rated	Current	Neutral	Phase A					Phase B	Phase C		
1/3/5	RTU-1	Std	3	125A	(3) 1/0 ga.	none	(1) 6 ga.	1-1/2 in. EMT	208	37.61	116	116	116	4.32%	
2/4/6	ACC-1	Std	3	70A	(3) 6 ga.	none	(1) 8 ga.	3/4 in. EMT	208	13.94	43	43	43	4.66%	
8	MODIFIED DAMPERS	Std	3	20A	(3) 12 ga.	none	(1) 12 ga.	3/4 in. EMT	120	0.61	1.7	1.7	1.7	3.78%	
10	DAF-1 DOUBLE AIR FILTER	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.18		1.7		3.78%	
12	P-1 & P-2 FREEZE PROTECTION	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.61			5.96	4.57%	
14/16/18	ACC-2	Std	3	20A	(3) 12 ga.	none	(1) 12 ga.	3/4 in. EMT	208	4.7	14.5	14.5	14.5	4.88%	
15/17/19	MAU-1	Std	3	20A	(3) 12 ga.	none	(1) 12 ga.	3/4 in. EMT	208	2.33	7.2	7.2	7.2	4.20%	
20	ROOFTOP RECEPT/LIGHT	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.71	6.61			4.69%	
21	SEWAGE PUMP KIT	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.43			4.18	4.24%	
22/24	AC-1 & AC-2	Std	2	20A	(2) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	208	1.27		6.8	6.8	4.26%	
23/25/27	AIR COMPRESSOR	Std	3	90A	(3) 8 ga.	(1) 8 ga.	(1) 8 ga.	3/4 in. EMT	208	14.79	48.3	48.3	48.3	4.47%	
28/28	ERV-1 & ERV-2 ENERGY RECOVERY	Std	2	20A	(2) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	208	1.46	7.8	7.8		4.37%	
29/37															
38/40/42	SPD	Std	3	30A	(3) 10 ga.	none	(1) 10 ga.	3/4 in. EMT	208	0.01				3.54%	
39															
41															
Total Circuits			27					Connected Loads: 80,770 VA			253 A	253 A	245 A		
Voltage: 120 / 208		3		Main Connection: breaker		Load kVA: 81		WHERE EMT IS INDICATED AS THE RACEWAY, THIS IS TO INDICATE THE MINIMUM RACEWAY SIZE. THE CONTRACTOR SHALL MEET THE REQUIREMENTS OF THE "APPLICATION OF RACEWAYS"							
Circuits: 31 / 42		3		OCPD Size: 400A		OCPD Type: Std		3-Phase Connection							
Neutral Buss: No				Location:				Voltage Drop % for 300 Feet is 3.28%		Current		Neutral		Ground	
Ground Buss: Yes				Remarks: 22kAIC SCCR				Raceway 4 in. dia. EMT		(3) 500 kcmils THHN		(1) 500 kcmils THHN		(1) 3 ga. THHN	
Buss Capacity: 400 A															
NEMA: Type 1															



02/05/21
BH
MH

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Revisions:
11/22/2021
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01/07/22

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WORK AREA A: STEAM LAB
ATTIC & ROOF POWER PLANS
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. 10927206E220

E2.13



Culinary Arts Equipment Power Requirements Schedule

SYMBOL INDICATES EQUIPMENT ITEM No.

ITEM	GENERAL INFORMATION				ELECTRICAL DATA								
NO.	EQUIPMENT TYPE	QTY	MANUFACTURER	MODEL No.	HP	AMP	PLUG	DIRECT WIRE	VOLTS	PHASE	NEMA TYPE	REMARKS	
1	ADA HAND SINK, WALL MNTD.	1	EAGLE GROUP/METAL MASTERS	HSAP-14-ADA-FE-B		5.0	✓		120	1	5-15P		
2	CHILLER/FREEZER, BLAST	1	AMERICAN PANEL	AP12BCF110-3		10.0	✓		208	3	L15-20P		
5	MICROWAVE OVEN	2	EXISTING TO BE REUSED			15.0	✓		120	1	5-15P		
8	REFRIGERATOR/ FREEZER, RESIDENTIAL	1	EXISTING TO BE REUSED	SUB-ZERO		15.0	✓		120	1	5-15P		
9	REFRIGERATOR/ FREEZER, RESIDENTIAL	1	EXISTING TO BE REUSED	SUB-ZERO		15.0	✓		120	1	5-15P		
10	WASHER/ DRYER, STACKED, ELEC.	1	UNIMAC	UTEESASP		15.0	✓		120	1	5-15P	WASHER DRYER	
						30.0		✓	120/240	1			
15	WALK-IN COOLER	1	TAFCO	CUSTOM		15.0	✓		120	1			
16	REFRIGERATION TO ITEM #15	1	TAFCO	BEZA008H8-HT3D	0.8	7.5	✓		208	3			
			TAFCO	BLP211MA-S1D		2.3	✓		120	1			
19	WALK-IN FREEZER	1	TAFCO	CUSTOM		15.0	✓		120	1			
20	REFRIGERATION TO ITEM #19	1	TAFCO	BEZA020L8-HT3D	2.0	11.8	✓		208	3			
			TAFCO	BLP209-LE-S2D		10.3	✓		208	1			
27	REFRIGERATOR, UNDERCOUNTER	5	CONTINENTAL REFRIGERATOR	SW27N-U-D	0.2	2.7	✓		120	1	5-15P		
29	EXHAUST HOOD, TYPE I	1	CAPTIVE AIRE		REFER TO MECHANICAL PLANS								
36	REFRIGERATOR, WORKTOP	3	CONTINENTAL REFRIGERATOR	SW72N	0.2	2.7	✓		120	1	5-15P		
37	FOOD PROCESSOR	3	EXISTING TO BE REUSED			15.0	✓		120	1	5-15P		
38	MIXER, COUNTER	3	HOBART US FOODSERVICE	N50	0.2	2.9	✓		120	1	5-15P		
41	EXHAUST HOOD, TYPE I	1	CAPTIVE AIRE		REFER TO MECHANICAL PLANS								
44	EXHAUST HOOD, CONTROL PANEL	1	CAPTIVE AIRE	CUSTOM		15.0		✓	120	1			
45	FIRE PROTECTION SYSTEM, BUILT-IN	1	CAPTIVE AIRE	UL-300 (R-102)		15.0		✓	120	1			
48	EXHAUST HOOD, TYPE I	1	CAPTIVE AIRE		REFER TO MECHANICAL PLANS								
51	FRYER WITH SPREADER, GAS	1	PITCO	SG14R-S		6.3	✓		120	1	5-15P		
54	OVEN, CONVECTION, GAS	1	MOFFAT	G32D5-2C		1.0	✓		120	1	5-15P		
						1.0	✓		120	1	5-15P		
55	EXHAUST HOOD, TYPE I	1	CAPTIVE AIRE		REFER TO MECHANICAL PLANS								
57	SUPPLY PLENUM, MAKE-UP AIR	1	CAPTIVE AIRE		REFER TO MECHANICAL PLANS								
58	EXHAUST HOOD, CONTROL PANEL	1	CAPTIVE AIRE	CUSTOM		15.0		✓	120	1			
59	FIRE PROTECTION SYSTEM, BUILT-IN	1	CAPTIVE AIRE	UL-300 (R-102)		15.0		✓	120	1			
60	RETARDER/ PROOFER, ROLL-IN	1	LBC BAKERY	LRP1-40		20.0		✓	208	3		50A MOP	
61	HAND SINK, WALL MNTD.	1	EAGLE GROUP/METAL MASTERS	HSA-10-FDPS		5.0	✓		120	1	5-15P		
66	WAREWASHER, DOOR TYPE, VENTLESS	1	HOBART US FOODSERVICE	AM15VL1-2		45.4		✓	208	3			
69	HAND SINK, WALL MNTD.	1	EAGLE GROUP/METAL MASTERS	HSA-10-FDPS		5.0	✓		120	1	5-15P		

Culinary Arts Electric General Notes

- ALL 15- AND 20-AMPERE, 120-VOLT RECEPTACLES IN NON-DWELLING KITCHENS (KITCHEN AREAS, BAR, ETC.) TO BE GFCI PROTECTED.
- ELECTRICAL SYSTEM IS DESIGNED FOR 208V, 3ø, 4W AND 60HZ.
- ELECTRICAL CONNECTIONS AND OUTLETS HAVE BEEN LOCATED AS ACCURATELY AS POSSIBLE AND ARE INTENDED TO SUIT EQUIPMENT TO BE SUPPLIED. THE ELECTRICAL PLANS ARE SCHEMATIC AND ARE SUBJECT TO FIELD CONDITIONS. COORDINATION REQUIREMENTS AMONG TRADESMEN, CHANGES NECESSARY BY LOCAL BUILDING CODES OR ORDINANCES, OR BY SUBSTITUTIONS, OR CHANGES SHOWN ON THIS PLAN. CONTRACTOR SHALL MAKE ALLOWANCES FOR THE REQUIRED FINAL CONNECTIONS AND SUPPLY ALL NECESSARY FITTINGS, STARTERS, ETC. EXCEPT WHERE SPECIFICALLY NOTED ON THE DRAWINGS OR SPECIFICATIONS. REFER TO FOOD SERVICE DRAWINGS FOR ADDITIONAL INFORMATION.
- FINAL CONNECTIONS TO ALL EQUIPMENT, INCLUDING MATERIALS SHALL BE MADE BY THE ELECTRICAL CONTRACTOR.
- HEIGHT OF OUTLET IS GIVEN FROM FINISHED FLOOR TO CENTERLINE OF OUTLET.
- ALL CONVENIENCE OUTLETS TO BE SET HORIZONTALLY. ALL 120 VOLT OUTLETS NOT DESIGNATED WITH SPECIFIC LOADS TO BE RATED 20 AMPS. ALL 208/230 VOLT OUTLETS NOT DESIGNATED TO BE RATED AT 3/4 HP.
- ALL ELECTRICAL POWER NOT OTHERWISE NOTED TO BE SINGLE PHASE.
- ELECTRICIAN TO "SIZE" ALL ELECTRICAL JUNCTION BOXES. ELECTRICIAN TO PROVIDE ALL JUNCTION BOXES. ELECTRICAL CONVENIENCE OUTLETS SHALL BE LOCATED IN WALLS. FIXTURE FABRICATOR TO LOCATE ALL CONVENIENCE OUTLETS AND SWITCHES WHERE PART OF FIXTURE, BUT INTERNAL WIRING FOR SUCH BOXES TO BE INSTALLED AND SUPPLIED BY THE ELECTRICAL CONTRACTOR. ALL CONVENIENCE OUTLETS IN WALLS TO BE FLUSH WITH FINISHED WALL UNLESS NOTED OTHERWISE. ELECTRICAL CONTRACTOR TO PROVIDE AND FIELD MOUNT ALL JUNCTION BOXES LOCATED IN ACCESS AREAS OF FIXTURES. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL ALL CONDUIT AND FIXTURES. CONDUIT WHERE STUBBING UP OUT OF FLOOR TO EXTEND MINIMUM OF 2" ABOVE FLOOR OR CURB. DRAWINGS DEPICT THE LOCATION OF OUTLETS, TYPE OF CONNECTION FOR EQUIPMENT AND ELECTRICAL LOAD. ELECTRICAL CONTRACTOR MUST COMPLY WITH ALL CODES RELATED TO THE INSTALLATION, WIRING AND FINAL CONNECTIONS OF EQUIPMENT.
- ELECTRICAL CONTRACTOR SHALL CONNECT ALL EQUIPMENT AND FIXTURES AND PERFORM INTERNAL WIRING WITHIN KITCHEN EQUIPMENT FIXTURES. ELECTRICIAN SHALL COORDINATE WITH KITCHEN EQUIPMENT FIXTURE FABRICATOR ON PROGRESS OF FABRICATION AND SHALL BE RESPONSIBLE FOR ANY REQUIRED INSPECTION OF INACCESSIBLE AREAS BEFORE SUCH AREAS ARE PERMANENTLY CLOSED OR SEALED.
- ELECTRICAL CONTRACTOR TO PROVIDE CONNECTION FOR EXHAUST FANS AND MAKE-UP AIR FANS AND LOCATE SWITCHES, AND FOR PILOT LIGHTS WHERE SHOWN ON PLANS. DISCONNECT SWITCHES TO BE MOUNTED CONVENIENT TO HOODS, EXHAUST AND MAKE-UP AIR FANS TO BE SWITCHED ON ONE SWITCH.
- ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL LOCKOUT DEVICES ON ALL BREAKERS FOR CLOCKS, REFRIGERATION, CONTROL WIRING AND FIRE EXHAUST SYSTEM CONTROLS.
- WHERE SYMBOLS ARE INDICATED FOR A DIRECT CONNECTION, A 4"x4" SECTION OF LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT TYPE LFNC SHALL BE STUBBED OUT AT THE PROPER LOCATION AND SHALL BE CONNECTED TO "J" BOXES LOCATED IN A CONVENIENT POSITION ON EQUIPMENT AFTER EQUIPMENT HAS BEEN PLACED IN POSITION.
- ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWING:
 - ALL JUNCTION-BOXES, ELECTRICAL OUTLETS, COVER PLATES, SWITCHES, ETC. NOT BUILT INTO FIXTURES OR EQUIPMENT. ALL OUTLETS, JUNCTION-BOXES, COVER PLATES, ETC. IN DISHWASHING AREAS, OR AS INDICATED ON SCHEDULES, MUST BE VAPOR-PROOF.
 - ALL PLUGS AND CORDS AS NOTED ON SCHEDULE. ALL CORDS SHALL BE NEMA RATED AND UL APPROVED FOR MANUFACTURED AND/OR FABRICATED EQUIPMENT.
 - ALL COMPONENTS, WITH THE EXCEPTION OF THE GAS SOLENOID VALVE, FOR THE AUTOMATIC GAS FUEL SHUT-OFF, ELECTRICAL RELEASES FOR FOOD SERVICE EQUIPMENT BELOW HOODS/VENTILATORS AS REQUIRED BY NFPA AND LOCAL CODES.
 - DISCONNECTS OR OTHER DEVICES AS REQUIRED BY CODE.

COORDINATION NOTES:

- ELECTRICAL CONTRACTOR SHALL REVIEW THE FOOD SERVICE DRAWINGS ("FS.X") AND IS RESPONSIBLE FOR ALL WORK ITEMS CALLED OUT AS BEING BY THE ELECTRICAL CONTRACTOR OR "EC" EVEN IF NOT INDICATED ON THE "E2.XX" DWGS.
- COORDINATE ALL MOUNTING HEIGHTS WITH FS DRAWINGS. IF A DISCREPANCY ARISES, FS DRAWING SHALL TAKE PRECEDENCE.
- REFER TO DRAWINGS M6.24 THROUGH M6.27 FOR ADDITIONAL WIRING REQUIREMENTS.

PANEL SCHEDULE - PANEL KPLPA1(A)

FED FROM EXISTING CONCOURSE MDP 208/120V

CT#	Load Description	OCPD			Conductors			Raceway	Voltage	Load kVA	Load per Phase(A)			Voltage Drop %
		Type	Poles	Rated	Current	Neutral	Ground				Phase A	Phase B	Phase C	
1	CLASSROOM RECEPT	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.54	4.74			4.06%
2	TEACHER STATION CONV. RECEPT.	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.72	6.32			4.42%
3	SINK CTR CONV. RECEPT.	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.36		3.16		3.69%
4	OFFICE RECEPTACLES	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.72		6.32		4.42%
5	KITCHEN CONV. RECEPTACLES	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.8			7.89	4.78%
6	HAND WASHING SINKS [181/69]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.57			5	3.89%
7/8/11	BLAST CHILLER/FREEZER [2]	Std	3	20A	(3) 12 ga.	none	(1) 12 ga.	3/4 in. EMT	208	3.42	10	10	10	3.96%
8	MICROWAVE [5-1]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.57	13.78			4.23%
10	MICROWAVE [5-2]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.57		13.78		4.23%
12	REFRIG/FREEZER [8]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.71			15.04	3.80%
13	REFRIG/FREEZER [9]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.71	15.04			3.80%
14	WASHER [10]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.71	15			4.94%
15/17	DRYER [10]	Std	2	30A	(2) 10 ga.	(1) 10 ga.	(1) 10 ga.	3/4 in. EMT	208	4.74		24	24	4.97%
16	WALK-IN COOLER [15]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.71		15		5.07%
18	WALK-IN COOLER REFRIGERATION [16]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.26			2.3	3.39%
19	STORAGE CONV. RECEPT.	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.18	1.58			3.33%
20	WALK-IN FREEZER [19]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.71	15			4.38%
21	STA 1 CONV. RECEPT	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.72		6.32		4.42%
22/24	WALK-IN FREEZER REFRIGERATION	Std	2	20A	(2) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	208	2.04		10.3	10.3	4.13%
23	STA 2 CONV. RECEPT.	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.72			6.32	4.42%
25	STA 3 CONV. RECEPT	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.72	6.32			4.42%
26	UNDERCOUNTER REFRIG. [27]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.54	13.5			5.46%
27	STA 4 CONV. RECEPT	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.72		6.32		4.42%
28	STATION 1 CTR EQUIP. [36/37/38]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.66		14.6		5.67%
29														
30	STATION 2 CTR EQUIP. [36/37/38]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.66			14.6	5.02%
31	STATION 3 CTR EQUIP. [36/37/38]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.66	14.6			4.99%
32	STATION 2/3 HOOD CONTROL [44/45]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.71	6.27			4.12%
33	FRYER & CONVECTION OVEN [61/64]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.95		8.3		4.50%
34	STATION 1/1 HOOD CONTROL [58/59]	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.71		6.27		4.12%
35/37/39	RETARDER/PROOFER [60]	Std	3	50A	(3) 8 ga.	(1) 8 ga.	(1) 10 ga.	3/4 in. EMT	208	6.85	20	20	20	3.81%
36/38/40	DISHWASHER [66]	Std	3	50A	(3) 6 ga.	(1) 6 ga.	(1) 10 ga.	1 in. EMT	208	15.54	45.4	45.4	45.4	4.22%
41	ULINARY ARTS SUITE LIGHTING	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.26			10.48	5.59%
42/44/46	SPD	Std	3	30A	(3) 10 ga.	(1) 10 ga.	(1) 10 ga.	3/4 in. EMT	208					
43														
45														
47-72														
Total Circuits			40											
Voltage: 120 / 208 Circuits: 43 / 72 Neutral Buss: Yes Ground Buss: Yes Buss Capacity: 250 A NEMA Type 1										Main Connection: breaker Load kVA: 44 OCPD Size: 250A OCPD Type: Std Location: Remarks: 22kVAC SCCR				
										Connected Loads: 61,669 VA Demand Loads: 44,402 VA Demand Factor: 72 %				
										WHERE EMT IS INDICATED AS THE RACEWAY, THIS IS TO INDICATE THE MINIMUM RACEWAY SIZE. THE CONTRACTOR SHALL MEET THE REQUIREMENTS OF THE "APPLICATION OF RACEWAYS"				
										3-Phase Connection				
										Voltage Drop % for 500 Feet is 3.07% Raceway: 3-1/2 in. dia. EMT				
										Current	Neutral	Ground		
										(3) 400 kcmils THHN	(1) 400 kcmils THHN	(1) 1 ga. THHN		

PANEL SCHEDULE - PANEL KPLPA1(B)

FED FROM EXISTING CONCOURSE MDP 208/120V

CT#	Load Description	OCPD			Conductors			Raceway	Voltage	Load kVA	Load per Phase(A)			Voltage Drop %		
		Type	Poles	Rated	Current	Neutral	Ground				Phase A	Phase B	Phase C			
1/3/5	KEF-1	Std	3	20A	(3) 12 ga.	none	(1) 12 ga.	3/4 in. EMT	208	4.84	15.8	15.8	15.8	5.03%		
2/4/6	KEF-2	Std	3	30A	(3) 10 ga.	none	(1) 10 ga.	3/4 in. EMT	208	6.46	21.1	21.1	21.1	4.83%		
7/9/11	DOAS-1	Std	3	60A	(3) 4 ga.	none	(1) 10 ga.	1 in. EMT	208	16.54	54	54	54	4.53%		
8/10/12	ACCU [20]	Std	3	20A	(3) 12 ga.	none	(1) 12 ga.	3/4 in. EMT	208	3.83	11.8	11.8	11.8	4.67%		
13/15/17	ACCU [16]	Std	3	20A	(3) 12 ga.	none	(1) 12 ga.	3/4 in. EMT	208	2.43	7.5	7.5	7.5	4.27%		
14/16/18	KMJA-2 CONDENSER 2	Std	3	30A	(3) 10 ga.	none	(1) 10 ga.	3/4 in. EMT	208	6.55	21.4	21.4	21.4	4.84%		
19/21/23	KMJA-2 CONDENSER 1	Std	3	20A	(3) 12 ga.	none	(1) 12 ga.	3/4 in. EMT	208	4.44	14.5	14.5	14.5	4.91%		
20/22/24	ACC-R-1	Std	3	45A	(3) 8 ga.	none	(1) 10 ga.	3/4 in. EMT	208	11.77	36.3	36.3	36.3	4.96%		
25/27/29	KMJA-1 CONDENSER 2	Std	3	30A	(3) 10 ga.	none	(1) 10 ga.	3/4 in. EMT	208	6.55	21.4	21.4	21.4	4.84%		
26/28/30	KMJA-1 CONDENSER 1	Std	3	20A	(3) 12 ga.	none	(1) 12 ga.	3/4 in. EMT	208	3.43	11.2	11.2	11.2	4.61%		
31/33/35	KMJA-2 FAN	Std	3	30A	(3) 10 ga.	none	(1) 10 ga.	3/4 in. EMT	208	5.76	18.8	18.8	18.8	4.69%		
32/34/36	KMJA-1 FAN	Std	3	30A	(3) 10 ga.	none	(1) 10 ga.	3/4 in. EMT	208	5.76	18.8	18.8	18.8	4.69%		
37	EF-1 & EF-R-1	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.61	5.62			4.54%		
38/40	AC-1-1/2-3/4/5	Std	2	20A	(2) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	2.34	12.5			4.91%		
39	HEAT PATE	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	1.8		15.5		7.26%		
40	RCOP PUMP CONDENSEMENT	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.96			6	5.63%		
42	CIRCULATION PUMP RCP-1	Std	1	20A	(1) 12 ga.	(1) 12 ga.	(1) 12 ga.	3/4 in. EMT	120	0.04			0.42			
43/47	8FD	Std	3	30A	(3) 10 ga.	(1) 10 ga.	(1) 10 ga.	3/4 in. EMT	208	0.04				3.68%		
44/47																
46																
48-72																
Total Circuits 42											Connected Loads: 83.830 VA			270.1 A	280 A	259 A
Voltage: 208/208 Circuits: 45/72 Neutral Bus: Yes Ground Bus: Yes Buss Capacity 400 A NEMA Type 1																
Main Connection: breaker Load kVA: 84 OCPD Size: 400A OCPD Type: Std Location: Remarks: 22kVAC SCCR																
WHERE EMT IS INDICATED AS THE RACEWAY THIS IS TO INDICATE THE MINIMUM RACEWAY SIZE. THE CONTRACTOR SHALL MEET THE REQUIREMENTS OF THE "APPLICATION OF RACEWAYS"																
3-Phase Connection																
Voltage Drop % for 500 Feet is 3.58%																
Raceway (2 sets): 2-1/2 in. dia. EMT																
Current (6) 300 kcmils THHN																
Neutral (2) 300 kcmils THHN																
Ground (1) 3 ga. THHN																

Fire Alarm General Requirements

EXISTING SYSTEM:

1. FIRE ALARM SYSTEM IS UNDER WARRANTY AND AS SUCH ALL FIRE ALARM MODIFICATIONS SHALL BE PERFORMED BY THE CONTRACTOR HOLDING THE WARRANTY (TALT ELECTRIC, 914.632.5762). ELECTRICAL CONTRACTOR SHALL HIRE TALT ELECTRIC AS A SUBCONTRACTOR TO PERFORM THE F.A. WORK.
2. SALVAGE FIRE ALARM EQUIPMENT BEING REMOVED FOR REINSTALLATION. IF NOT USED, IT SHALL BE RETURNED TO THE OWNER IN WORKING CONDITION.
3. MAINTAIN FIRE ALARM INTEGRITY AND COVERAGE THROUGHOUT ALL CONSTRUCTION PHASES.

REACCEPTANCE TESTING:

4. ALL COMPONENTS, CIRCUITS, SYSTEMS OPERATIONS, OR SITE-SPECIFIC SOFTWARE FUNCTIONS KNOWN TO BE AFFECTED BY THE CHANGE OR IDENTIFIED BY A MEANS THAT INDICATES THE SYSTEM OPERATIONAL CHANGES SHALL BE 100 PERCENT TESTED AND VERIFIED FOR PROPER OPERATION BY THE CONTRACTOR. THIS SERVICE SHALL BE INCLUDED IN THE BASE BID AND SHALL NOT BE CAUSE FOR AN "EXTRA." IN ADDITION, 10 PERCENT OF INITIATING DEVICES THAT ARE NOT DIRECTLY AFFECTED BY THE SYSTEM MODIFICATIONS, UP TO A MAXIMUM OF 50 DEVICES, ALSO SHALL BE TESTED, AND CORRECT SYSTEM OPERATION SHALL BE VERIFIED. ALL TESTING SHALL COMPLY WITH NFPA72(13)-14.4.2.2 A REVISED "SYSTEM RECORD OF COMPLETION", IN ACCORDANCE WITH NFPA 72(13)-7.8.2, SHALL BE PREPARED TO DOCUMENT CHANGES.

CIRCUIT AND RACEWAY

5. RACEWAY FILL SHALL BE LESS THAN 40%. RACEWAY CAPACITY BETWEEN CONTROL PANELS AND TERMINAL CABINETS SHALL BE SUFFICIENTLY SIZED TO ACCEPT ADDITIONAL CIRCUITS IN THE FUTURE. THE CONTRACTOR IS REQUIRED TO INSTALL A MINIMUM SIZE THAT WOULD ACCOMMODATE FUTURE WORK.
6. ALL DEVICES SHALL BE PROPERLY FASTENED AND SECURED. CONTRACTOR SHALL VERIFY THAT EXISTING JUNCTION BOXES BEING REUSED ARE PROPERLY SECURED PRIOR TO INSTALLATION OF THE NEW DEVICES.
7. ALL WIRING SHALL BE CONTINUOUS WITHOUT SPLICES BETWEEN DEVICES.
8. FOLLOW POLARITY OF ALL DEVICES.
9. ALL WIRING AND CONDUITS INSTALLED UNDER METAL-CORRUGATED SHEET ROOF DECKING SHALL BE INSTALLED AND SUPPORTED SO THERE IS NOT LESS THAN 1-1/2" MEASURED FROM THE LOWEST SURFACE OF THE ROOF DECKING TO THE TOP OF THE CABLE, RACEWAY, OR BOX.

LABELING AND IDENTIFICATION

10. ALL NEW JUNCTION BOXES, OUTLET BOXES, AND ASSOC. COVER PLATES INSTALLED AS PART OF THIS FIRE ALARM SYSTEM SHALL BE PAINTED RED.

DEVICE LAYOUT

11. IN ALL AREAS, THE DETECTOR SHALL BE INSTALLED AT THE HIGHEST POINT AT THE LOCATION SHOWN ON THE PLANS.
12. THE LOCATIONS OF ALL DEVICES DEPICTED ON THE PLANS ARE APPROXIMATE AND SCHEMATIC. HOWEVER, THE DEVICES SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE LOCATION DEPICTED.
13. ADJUSTMENT OF SMOKE DETECTOR LOCATION OF MORE THAN 5'-0" WILL REQUIRE APPROVAL OF ARCHITECT.
14. IN ROOMS WITH SMOKE DETECTORS, ALL AREAS OF THE CEILING MUST BE WITHIN 21" OF A DETECTOR. CONTRACTOR SHALL BE AWARE OF EXACT PLACEMENT WITHIN THE ROOM.
15. VISUAL NOTIFICATION MUST BE IN COMPLIANCE WITH NFPA 72, INCLUDING MINIMUM CANDELA INTENSITY THROUGHOUT ALL PUBLIC SPACES INCLUDING BUT NOT

16. VISUAL NOTIFICATION - WHILE THE PLAN LOCATIONS ARE SCHEMATIC, THE CONTRACTOR SHALL INSTALL THE DEVICES UTILIZING THE FOLLOWING CRITERIA FOR WALL MOUNTED APPLIANCES:
 - a. CORRIDOR STROBES SHALL BE RATED NOT LESS THAN 15CD AND LOCATED NO MORE THAN 15'-0" FROM THE END OF THE CORRIDOR AND 100'-0" BETWEEN DEVICES.
 - b. STROBES RATED AT 15CD SHALL BE NO MORE THAN 10'-0" FROM THE FURTHEST ADJACENT WALL AND 20'-0" FROM THE FURTHEST OPPOSITE WALL.
 - c. STROBES RATED AT 30CD SHALL BE NO MORE THAN 14'-0" FROM THE FURTHEST ADJACENT WALL AND 28'-0" FROM THE FURTHEST OPPOSITE WALL.
 - d. STROBES RATED AT 75CD SHALL BE NO MORE THAN 22'-6" FROM THE FURTHEST ADJACENT WALL AND 50'-0" FROM THE FURTHEST OPPOSITE WALL.
 - e. STROBES RATED AT 95CD SHALL BE NO MORE THAN 25'-0" FROM THE FURTHEST ADJACENT WALL AND 50'-0" FROM THE FURTHEST OPPOSITE WALL.
 - f. STROBES RATED AT 110CD SHALL BE NO MORE THAN 27'-0" FROM THE FURTHEST ADJACENT WALL AND 54'-0" FROM THE FURTHEST OPPOSITE WALL.

NOTIFICATION OUTPUT

17. UPON OPERATION OF A FIRE ALARM INITIATING DEVICE, THE FIRE ALARM SYSTEM WILL:
 - a. NOTIFY OCCUPANTS BY ACTIVATING A TEMPORAL THREE ALARM SIGNAL AND
 - b. ACTIVATE THE VISIBLE APPLIANCES (STROBES).

SPARE CAPACITY

16. THE CAPACITY OF SLC & NAC'S SHALL BE DETERMINED BY THE CONTRACTOR. ACTIVE CAPACITY SHALL NOT EXCEED 80% OF THE CIRCUIT CONSIDERING BOTH CIRCUIT AND PANEL LIMITATIONS. THIS INCLUDES DEVICE COUNT, CIRCUIT LENGTH, VOLTAGE DROP, AND PANEL CAPACITY. OTHER SPARE CAPACITY SHOULD BE AS PER SPECIFICATION.

AUXILIARY CONTROLS

17. COORDINATE AUXILIARY CONTROLS FOR FANS, DAMPERS FIRE SPRINKLERS, AND DOOR CONTROL. INCLUDE ALL NECESSARY COMPONENTS AND RELAYS TO MAKE AN OPERATIONAL SYSTEM.

SITE CONDITION

18. THE CONTRACTOR IS ADVISED THAT THE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL DETAILS.
19. THE CONTRACTOR IS EXPECTED TO PROVIDE ALL MISCELLANEOUS PARTS AND LABOR REQUIRED TO INSTALL A COMPLETE OPERATIONAL SYSTEM.
20. THE AREA IS TO BE KEPT CLEAN AND NEAT AT ALL TIMES. CONSTRUCTION DEBRIS SHALL BE REMOVED DAILY.
21. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE SECURITY OF ALL ITEMS STORED IN THIS AREA.

22. WHERE IT IS NECESSARY TO SHUT DOWN EXISTING FIRE ALARM SYSTEMS BEYOND A SINGLE 7AM - 5PM WORKDAY, THE CONTRACTOR, AS PART OF THE BASE BID, SHALL PROVIDE A CONTINUOUS APPROVED FIRE WATCH DURING THE SHUTDOWN. CONSULT WITH ENGINEER AND LOCAL AUTHORITIES FOR SPECIFICS REGARDING FIRE WATCH REQUIREMENTS.
 - a. FIRE WATCH SHALL BE PERFORMED BY A CONTRACTOR'S REPRESENTATIVE, TRAINED IN THE USE AND OPERATION OF PORTABLE FIRE EXTINGUISHERS AND INSTRUCTED IN HOW TO CONTACT THE FIRE DEPARTMENT.

- b. THE INDIVIDUAL PERFORMING THE FIRE WATCH SHALL BE PROVIDED WITH AT LEAST ONE APPROVED MEANS FOR NOTIFICATION OF THE FIRE DEPARTMENT AND THEIR ONLY DUTY SHALL BE TO PERFORM CONSTANT PATROLS OF THE PROTECTED PREMISES AND KEEP WATCH FOR FIRES.
 - c. CONTINUOUS ROUNDS TO COVER ALL AREAS OF THE BUILDING ARE REQUIRED EVERY 30 MINUTES.
 - d. AN EVACUATION PLAN WHICH INCLUDES A METHOD TO NOTIFY ALL OCCUPANTS IS REQUIRED IN OCCUPIED BUILDINGS.
 - e. MAINTAIN A LOG OF THE ROUNDS AND COMPREHENSIVE NOTES.
 - f. A FIRE WATCH SHOULD AT LEAST INVOLVE SOME SPECIAL ACTION BEYOND NORMAL STAFFING, SUCH AS ASSIGNING AN ADDITIONAL SECURITY GUARD(S) TO WALK THE AREAS AFFECTED. THESE INDIVIDUALS SHOULD BE SPECIALLY TRAINED IN FIRE PREVENTION AND IN OCCUPANT AND FIRE DEPARTMENT NOTIFICATION TECHNIQUES, AND THEY SHOULD UNDERSTAND THE PARTICULAR FIRE SAFETY SITUATION FOR PUBLIC EDUCATION PURPOSES.
23. PROVIDE 14 DAYS WRITTEN NOTIFICATION TO THE OWNER, REQUESTING APPROVAL FOR FIRE PROTECTION SYSTEM SHUTDOWN OR FUNCTIONAL IMPAIRMENT; RECEIPT OF THE APPROVAL FROM THE OWNER IS REQUIRED BEFORE ANY SYSTEM SHUTDOWN OR FUNCTIONAL IMPAIRMENT.

SUBMITTALS

24. SIGNED & SEALED FIRE ALARM SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO SYSTEM INSTALLATION, AND SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL OF THE FOLLOWING WHERE APPLICABLE TO THE SYSTEM BEING INSTALLED:
 - a. A FLOOR PLAN THAT INDICATES THE USE OF ALL ROOMS IN THE AFFECTED AREA.
 - b. LOCATIONS OF ALARM-INITIATING DEVICES.
 - c. LOCATIONS OF ALARM NOTIFICATION APPLIANCES, INCLUDING CANDELA RATINGS FOR VISIBLE ALARM NOTIFICATION APPLIANCES.
 - d. POWER CONNECTION.
 - e. CONDUCTOR TYPE AND SIZES.
 - f. MANUFACTURERS' DATA SHEETS INDICATING MODEL NUMBERS AND LISTING INFORMATION FOR EQUIPMENT DEVICES AND MATERIALS.
 - g. SHOP DRAWINGS FOR THE FIRE ALARM SYSTEM SHALL BE SUBMITTED WITH THE CERTIFICATION OF A NICET LEVEL IV FIRE ALARM TECHNICIAN CERTIFYING THEY ARE IN COMPLIANCE WITH BOTH THE CONSTRUCTION DOCUMENTS AND THE CURRENT FIRE ALARM CODE.
25. REFER TO SPECIFICATIONS FOR AN ADDITIONAL LISTING OF ALL SUBMITTAL REQUIREMENTS. ALSO, REFER TO THE GENERAL NOTES.
26. BOTH FLOOR PLANS AND RISER DIAGRAM SHALL INCLUDE DEVICE ADDRESSES AND WIRE/CABLE ROUTING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

CLOSEOUT DOCUMENTS

27. "AS-BUILT" FLOOR PLANS AND RISER DIAGRAM INCLUDING DEVICE ADDRESSES AND WIRE ROUTING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

DUCT DETECTORS

28. THE LOCATION OF ALL DETECTORS IN AIR DUCT SYSTEMS SHALL BE PERMANENTLY AND CLEARLY IDENTIFIED AND RECORDED AT THE MAIN FIRE ALARM CONTROL PANEL IN COMPLIANCE WITH NFPA 72 AND NFPA 90A.
29. ALL DUCT DETECTORS SHALL BE PROVIDED WITH A REMOTE TEST STATATION IN AN AREA ADJACENT TO THE DEVICE AND APPROVED BY THE OWNER.

Fire Alarm Symbol Legend

SYMBOL LEGEND REFERS TO DRAWING FA2.01

EXISTING TO REMAIN

- A-4 S FIRE ALARM INITIATING DEVICE - EC TO PROTECT AND MAINTAIN CIRCUIT CONTINUITY DURING CONSTRUCTION.
- F-4 S FIRE ALARM NOTIFICATION DEVICE - EC TO PROTECT AND MAINTAIN CIRCUIT CONTINUITY DURING CONSTRUCTION.
- AQM-DH FIRE ALARM ACCESSORY DEVICE - EC TO PROTECT AND MAINTAIN CIRCUIT CONTINUITY DURING CONSTRUCTION.

NEW DEVICES

- F-4 S MANUAL PULL STATION REFER TO PROPOSED KEY NOTE No. 5
- CD-W WALL MOUNTED SPEAKER/STROBE "CD" MINIMUM CANDELA RATING "W" MINIMUM SPEAKER TAP SETTING REFER TO PROPOSED KEY NOTE No. 6
- AQM ADDRESSABLE INPUT MODULE TO MONITOR THE ITEM LISTED. REFER TO PROPOSED KEY NOTE No. 7
- AQM ADDRESSABLE OUTPUT MODULE TO CONTROL THE ITEM LISTED. REFER TO PROPOSED KEY NOTE No. 7
- FSD/AD FIRE/SMOKE DAMPER PROVIDED AND INSTALLED BY THE MC. EC SHALL CONNECT TO AN ADDRESSABLE INPUT/OUTPUT MODULE AS REQUIRED TO MONITOR POSITION OF THE DAMPER, SHUT DAMPER DURING AN ALARM CONDITION, AND REOPEN UPON THE ALARM BEING CLEARED

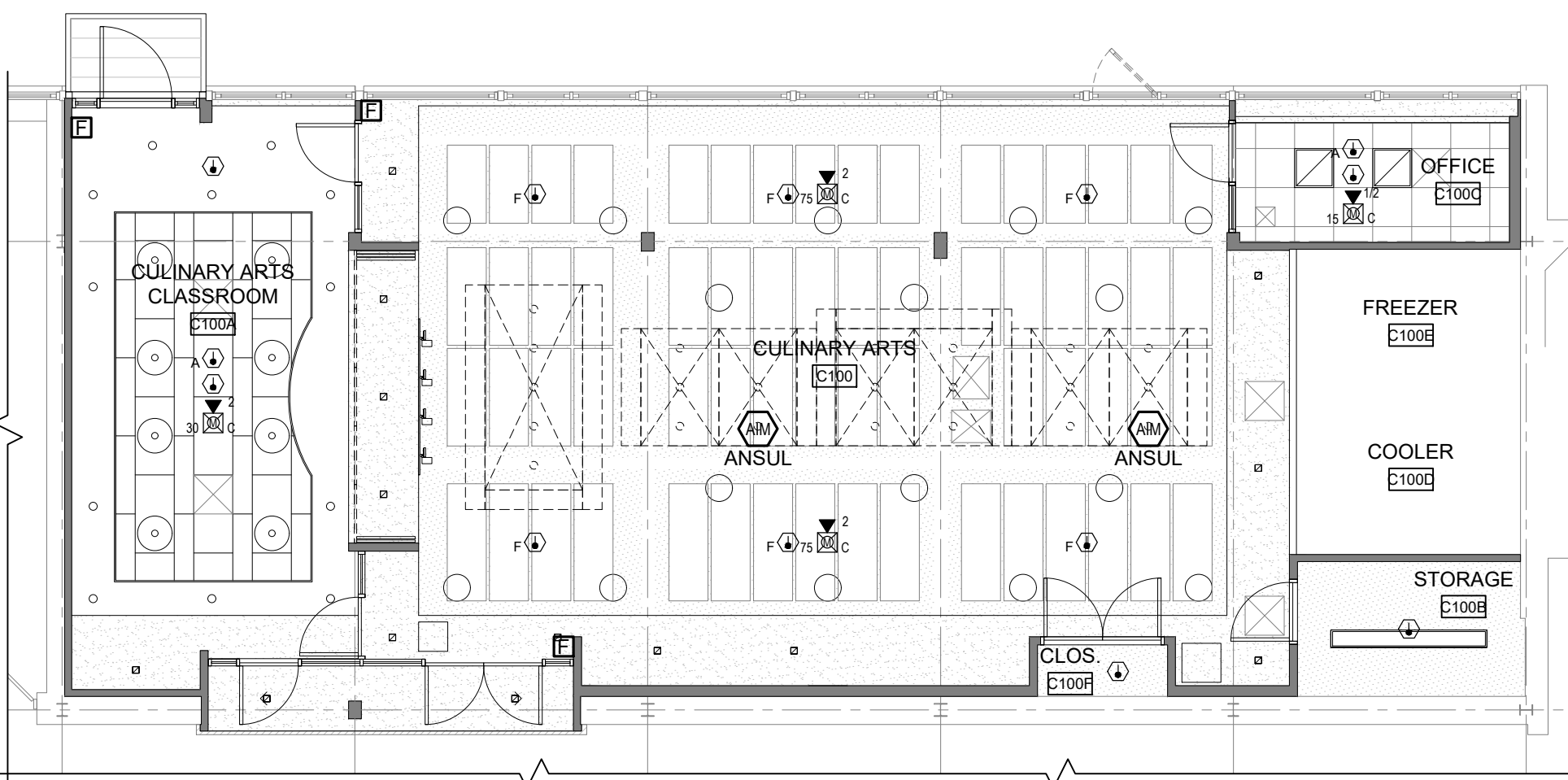
EXISTING TO RELOCATED

- S PHOTOELECTRIC SMOKE DETECTOR REFER TO PROPOSED KEY NOTE No. 1
- A-4 COMBO ROR/FIXED TEMP. HEAT DETECTOR "A" INDICATES MOUNTED ABOVE SUSPENDED CEILING. REFER TO PROPOSED KEY NOTE No. 1
- F-4 FIXED TEMPERATURE HEAT DETECTOR REFER TO PROPOSED KEY NOTE No. 8
- F MANUAL PULL STATION REFER TO PROPOSED KEY NOTE No. 2
- CD-W SPEAKER/STROBE "CD" MINIMUM CANDELA RATING "W" MINIMUM SPEAKER TAP SETTING "C" CEILING MOUNTED (WALL MOUNTED IF NOT INDICATED) REFER TO PROPOSED KEY NOTE No. 3
- CD CEILING MOUNTED STROBE "CD" MINIMUM CANDELA RATING REFER TO PROPOSED KEY NOTE No. 3
- DH MAGNETIC DOOR HOLDER REFER TO PROPOSED KEY NOTE No. 4

Fire Alarm Key Notes

KEY NOTES REFER TO DRAWING FA2.01

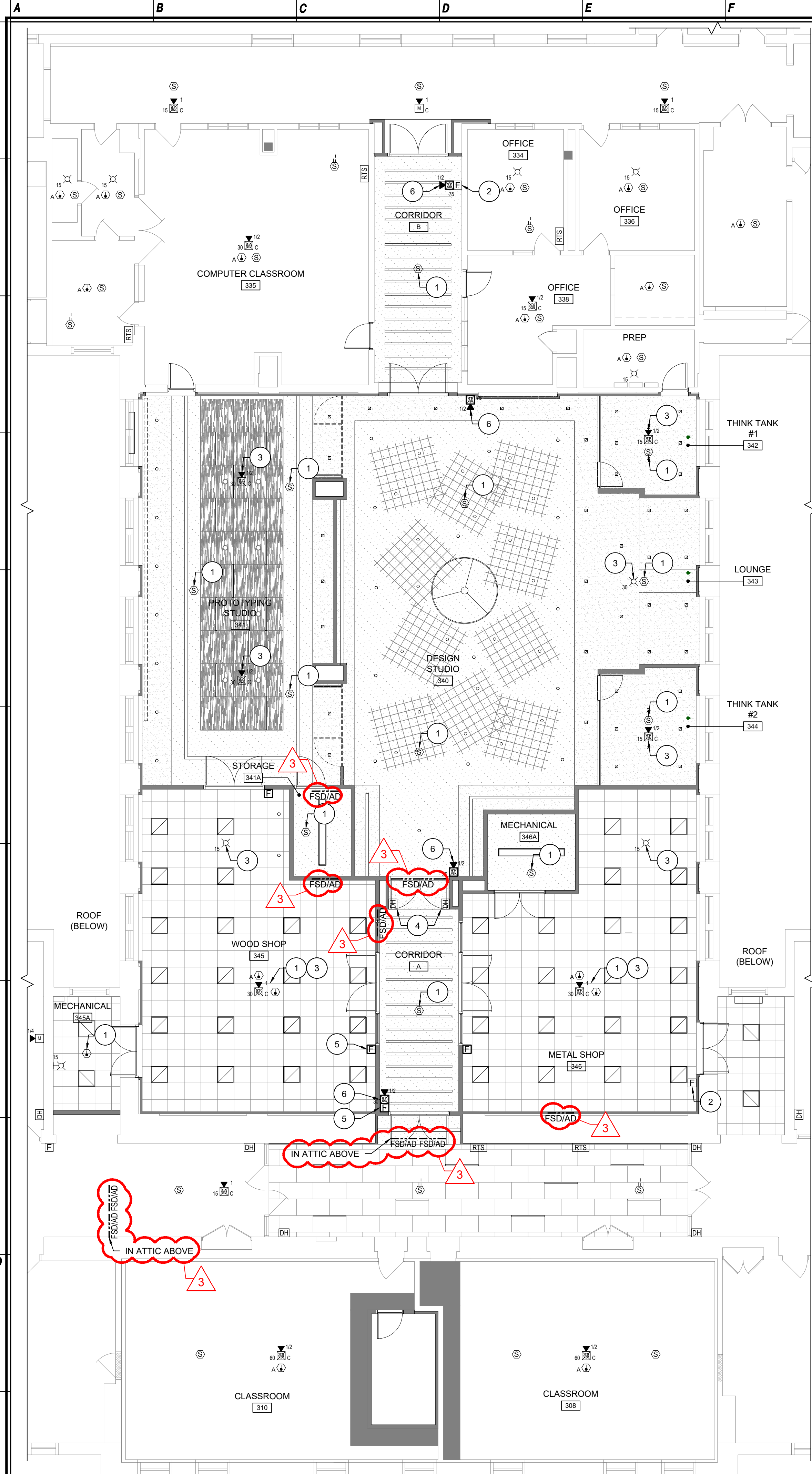
1. EXISTING DETECTOR TO BE REINSTALLED AT NEW CEILING. CONNECT TO SLC LOOP SERVING THIS AREA WITH SOUTHWIRE "RED ALERT PLENUM TYPE MC-FPLP" RED MC CABLE CONSISTING OF (1) TWISTED PAIR #16 AWG. REPROGRAM WITH NEW DEVICE LOCATION, LOOP NUMBER AND ADDRESS.
2. RELOCATE EXISTING PULL STATION TO NEW FINISHED WALL AND INSTALL FLUSH MOUNTED (REMOVE MANUFACTURER'S RED BACK BOX AS REQUIRED). EXTEND WIRING TO NEW LOCATION. EXISTING WIRING SHALL BE CONCEALED IN NEW FINISHED WALL. REINSTALL EXISTING LEXAN GUARD.
3. EXISTING NOTIFICATION DEVICES TO BE INSTALLED AT NEW CEILING. CONFIRM DEVICE CANDELA AND/OR TAP SETTINGS ARE SET AS INDICATED. CONFIRM NAC AND AMPLIFIER CIRCUITS ARE SIZED APPROPRIATELY TO HANDLE THE NEW LOADS. CONNECT TO EXISTING STROBE & SPEAKER CIRCUITS SERVING THIS AREA WITH SOUTHWIRE "RED ALERT PLENUM TYPE MC-FPLP" RED MC CABLE CONSISTING OF (1) SHIELDED PAIR #14 AWG & (1) TWISTED PAIR #16 AWG.
4. EXISTING 24VDC DOOR HOLDER TO BE REINSTALLED AT NEW DOOR. COORDINATE WITH DOOR HARDWARE AND GC. CONNECT TO DOOR HOLDER CIRCUIT SERVING THIS AREA WITH SOUTHWIRE "RED ALERT PLENUM TYPE MC-FPLP" RED MC CABLE CONSISTING OF (1) PAIR #14 AWG.
5. NEW DOUBLE ACTION MANUAL PULL STATION SHALL BE SIEMENS MODEL XMS-D WITH STOPPER II LEXAN GUARD MODEL No. ST-1130. CONNECT TO SLC LOOP SERVING THIS AREA WITH SOUTHWIRE "RED ALERT PLENUM TYPE MC-FPLP" RED MC CABLE CONSISTING OF (1) TWISTED PAIR #16 AWG. PROGRAM WITH DEVICE LOCATION, LOOP NUMBER AND ADDRESS.
6. NEW WALL MOUNTED SPEAKER/STROBE SHALL BE SIEMENS MODEL No. SLSPSWR-F. CONFIRM NAC AND AMPLIFIER CIRCUITS ARE SIZED APPROPRIATELY TO HANDLE THE NEW LOADS. CONNECT TO EXISTING STROBE & SPEAKER CIRCUITS SERVING THIS AREA WITH SOUTHWIRE "RED ALERT PLENUM TYPE MC-FPLP" RED MC CABLE CONSISTING OF (1) SHIELDED PAIR #14 AWG & (1) TWISTED PAIR #16 AWG.
7. NEW ADDRESSABLE INPUT (MONITOR) MODULE SHALL BE SIEMENS MODEL No. XTRI-R. CONNECT TO EXISTING STROBE & SPEAKER CIRCUITS SERVING THIS AREA WITH SOUTHWIRE "RED ALERT PLENUM TYPE MC-FPLP" RED MC CABLE CONSISTING OF (1) SHIELDED PAIR #14 AWG & (1) TWISTED PAIR #16 AWG. MODULE SHALL MONITOR THE EQUIPMENT LISTED.
8. EXISTING DETECTOR TO BE REINSTALLED AT NEW CEILING. CONNECT TO SLC LOOP SERVING THIS AREA WITH SOUTHWIRE "RED ALERT PLENUM TYPE MC-FPLP" RED MC CABLE CONSISTING OF (1) TWISTED PAIR #16 AWG FOR COMBO UNITS AND (1) SHIELDED PAIR #14 AWG FOR STROBE UNITS.



Partial Palmer First Floor Fire Alarm Plan

1/8" = 1'-0"

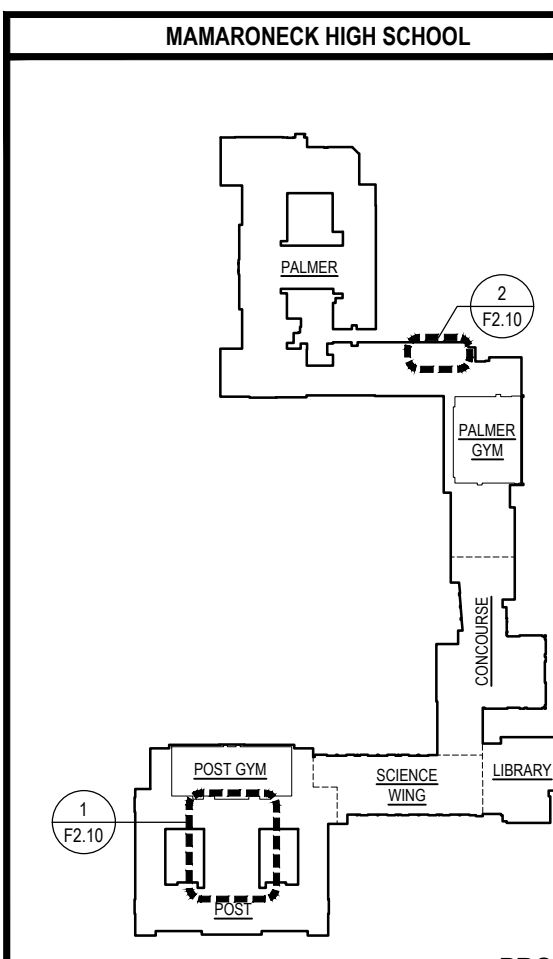
CULINARY ARTS - WORK AREA 'B'



Partial Post Third Floor Fire Alarm Plan

1/8" = 1'-0"

STEAM LAB - WORK AREA 'A'



Key Plan

NOT TO SCALE

Revisions:

Date	By	Check
02/05/21	BH	
11/22/2021	MH	

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

Revisions:

Date	By	Check
11/22/2021	BH	
01/07/22	MH	

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01/07/22

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NYSED PROJECT # 66-07-01-03-0-001-039
WORK AREAS A & B: STEAM LAB & CULINARY ARTS FIRE ALARM 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. 10927206E510
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