November 1, 2023

WHITE PLAINS CITY SCHOOL DISTRICT
AC AND VENTILATION UPGRADES AT RIDGEWAY ELEMENTARY SCHOOL
SED Control Number: 66-22-00-01-0-014-017

CONTRACT H- HVAC WORK
CONTRACT E - ELECTRICAL WORK

WESTCHESTER COUNTY, NEW YORK

NOTE: *This clarification forms a part of the contract documents for the above project and must be acknowledged in the plans and specifications. Attach it to the inside front cover of each of the specifications.*

GENERAL CLARIFICATION TO PROJECT:

1. The District has previously executed a Board resolution to standardize Daikin equipment for Unit Ventilators and Condensers throughout the District. As such the Base Bid shall include equipment as provided by Daikin. However, the District also reserves it right to entertain alternate manufacturers for this equipment (alternative manufacturers listed with Technical Specifications) and may be listed as Deduct Alternates. Supply Deduct Alternate along with alternative manufacturer within the space(s) provided. Refer to revised SPECIFICATION SECTION PROPOSAL PB-H attached herewith.

2. The District has previously executed a Board resolution to standardize with EMF, Inc. as the equipment Controls Vendor throughout the District. As such the Bid shall include Controls as provided by EMF, Inc..
    a. Energy Management of Facilities, Inc
    Chip Greenwood
    914-747-1007
    greenwoodw@emfcontrols.com

3. For additional pipe trench information, see attached existing pipe trench floor plan for reference only.

CLARIFICATION TO SPECIFICATIONS:

1. Insert SPECIFICATION SECTION SPECIAL PROVISIONS, attached herewith.

2. Insert SPECIFICATION SECTION CONSTRUCTION SCHEDULE, attached herewith.

3. Remove SPECIFICATION SECTION 004116.11-PB-H and replace with revised SPECIFICATION SECTION 004116.17-PB-H, attached herewith.

4. Remove SPECIFICATION SECTION 238223 – UNIT VENTILATOR and replace with revised SPECIFICATION SECTION 238223 – UNIT VENTILATOR, attached herewith.

CLARIFICATION TO DRAWINGS:

1. REMOVE DRAWING G000.00 COVER SHEET AND REPLACE WITH REVISED DRAWING G000.00 COVER SHEET attached herewith. Please note that this drawing has been revised to clarify the sheet list.

2. REMOVE DRAWING M000.00 HVAC GENERAL NOTES AND LEGENDS AND REPLACE WITH REVISED DRAWING M000.00 HVAC GENERAL NOTES AND LEGENDS attached herewith. Please note that this drawing has been revised to clarify scope for the controls.

3. REMOVE DRAWING M110.00 MECHANICAL FLOOR PLAN PART A AND REPLACE WITH REVISED DRAWING M110.00 MECHANICAL FLOOR PLAN PART A attached herewith. Please note that this drawing has been revised to clarify scope for the controls.

4. REMOVE DRAWING M111.00 MECHANICAL FLOOR PLAN PART B AND REPLACE WITH REVISED DRAWING M110.00 MECHANICAL FLOOR PLAN PART B attached herewith. Please note that this drawing has been revised to clarify scope for the controls and piping.

5. REMOVE DRAWING M112.00 MECHANICAL FLOOR PLAN PART C AND REPLACE WITH REVISED DRAWING M112.00 MECHANICAL FLOOR PLAN PART C attached herewith. Please note that this drawing has been revised to clarify scope for the detailing of control and mechanical work in music room A146.

6. REMOVE DRAWING M500.00 Mechanical Details AND REPLACE WITH REVISED DRAWING M500.00 Mechanical Details attached herewith. Please note that this drawing has been revised to add the steam unit ventilator piping detail.

REQUEST FOR INFORMATION FROM BERTUSSI CONTRACTING INC.:

1. M000.000 Contract H Scope shows many notes (1, 4, 5, 6, &8) referring to work for a contract G. There is no contract G. Please advise.

   RFI response: There is no contract G. All work is responsibility of the mechanical contractor except where otherwise noted in the contract documents.

2. Drawing M100 is missing from the bid set. Please advise.

   RFI response: There is no sheet M100.

3. Drawing M112 is not on the list of contract drawings. Please advise.

   RFI response: Drawing numbers on the title sheet have been corrected. The M sheet drawing numbers in the set are correct.

4. Drawing E400 is missing from the bid set, please advise.

   RFI response: Electrical drawing numbers have been corrected.

5. There are two drawings labeled E500, please advise.

   RFI response: Electrical drawing numbers have been corrected.

REQUEST FOR INFORMATION FROM JOSEPH LOMBARDO P&H:

1. Drawing M500.00 Detail 1 shows UV hot water coil piping diagram only. Please provide a detail drawing for the UV Steam Coil Piping.

   RFI response: A unit ventilator steam coil piping detail has been added to sheet M500.00

ADDENDUM NO. 1
WHITE PLAINS CITY SCHOOL DISTRICT
AC AND VENTILATION UPGRADES AT RIDGEWAY ELEMENTARY SCHOOL
SED CONTROL NUMBER: 66-22-00-01-0-014-017

November 1, 2023

REQUEST FOR INFORMATION FROM SOUTHEAST MECHANICAL CORP.:

1. Who is the current ATC vendor serving the Ridgeway E.S.?

   RFI response: The current ATC vendor is EMF. Information on the controls vendor has been added to drawings M110, M111, and M112

2. 1.) Majority of the DX piping is running behind the existing casework. Are there accessible false backs to the existing casework or do the cabinets needs to be modified to allow for the installation?
   2.) Drawing M500.00 detail #7 shows 18" high roof rails being installed under the CU's on a roof. These units are being installed on the ground level. Are these rails necessary or is the new concrete pad sufficient?

   RFI response: Contractor is to modify, patch and repair the casework as required in execution of the work. Concrete pad is sufficient for CU's on grade. One CU will be added to the roof above the music room shown on sheet M112.

End of Addendum No. 1

"X:\WPSD (White Plains Central School District) - 10991\WPSD 2113 - (GW UV Replacements)\03-Bid\Addenda\WPSD 2113 Clarification 1.docx"

SPECIAL PROVISIONS

These Special Provisions are in addition to the Plans, Specifications and the other Contract Documents and shall be part of this Agreement between the Owner and the Contractor. All references to "This Prime Contractor", "This Contractor" or "Contractor" refers to the **Mechanical Prime Contractor** and **Electrical Prime Contractor** per each respective building project and associated SED **#.** The following provisions shall apply for each individual project and each Prime Contractor associated along with it. In cases of contradictions, the most stringent Provision shall govern.

General Requirements for Each Prime Contractor

I. General

1. All dates, durations, etc. defined herein shall be in business days.
2. Except for the basic building permit, each Prime Contractor's price shall include all fees and other costs for securing and maintaining (by the Prime Contractors or their subcontractors) for the life of the job; all permits, PE licenses, connection fees, inspections, etc., applicable to, or customarily secured for the Work. This provision includes any applications and/or permits to be issued by utility companies in the name of the Prime Contractor, or the Owner, as required for the Work. Originals of all permits are to be issued in the name of the Prime Contractor as required for the Work. Each Prime Contractor shall furnish the Construction Manager with original copies of all permits prior to the commencement of the Work, and, shall prominently display a copy of all permits at a location agreed to with the Construction Manager.
3. One week prior to the start of physical work, each Prime Contractor shall provide two copies of a video taped recording of all existing conditions to the Construction Manager. This taping shall provide a record of all-existing buildings, grounds, exterior conditions and interior conditions. The Contractor shall schedule a representative of both the Owner and the Construction Manager to be present at this taping. In the absence of this record, each Prime Contractor shall be responsible for paying the costs associated with any and all repairs or replacements of existing materials and/ or conditions that were damaged in an area where the Prime Contractor is working or has worked, as may be deemed necessary by the Owner or the Construction Manager.
4. Each Prime Contractor is responsible for providing the required mock-ups defined by the Contract Documents out of sequence as needed by the Architect.
5. Each Prime Contractor is responsible for providing all required Engineered material calculations as defined by the contract documents.
6. Each Prime Contractor shall provide drinking water for his own employees.
7. <u>On Site Communications.</u> Each Prime Contractor shall provide, or otherwise see that, the project manager, or site managers, and/or responsible workers of each Prime Contractor and major subcontractor are equipped with cellular phones for the purpose of staying in contact with the Construction Manager.

8. Each Prime Contractor shall include in his base price the cost of all rigging and equipment required for the performance and installation of the Work.

9. **Each bidder who is awarded a contract must perform its work in compliance with all applicable CDC, OSHA and New York State protocols related to the COVID-19 pandemic, including social distancing, cleaning and disinfection protocols. Each bidder who is awarded a contract must ensure the individuals and entities retained by it to perform work comply with all applicable CDC, OSHA and New York State protocols related to the COVID-19 pandemic. Each bidder who is awarded a contract will be responsible to ensure the safety of those retained by the individuals and entities retained by it to perform its contract obligations and will be responsible for the means and the methods utilized to perform the Work. Each bidder who is awarded a contract will be required to cooperate with other contractors engaged by the School District/Owner in providing access to construction areas at the Project site while maintaining compliance with all applicable CDC, OSHA and New York State protocols related to the COVID-19 pandemic.**

   Any fines imposed or incurred for violation(s) of the Executive Orders of the Governor of New York State related to the COVID-19 pandemic as well as for violation(s) of all applicable CDC, OSHA and New York State protocols related to the COVID-19 pandemic will be the sole responsibility of the bidder awarded a contract whose conduct caused the violation(s).

   Each bidder awarded a contract must implement and follow all NYS guidelines and regulations regarding COVID-19. Including but not limited to hand washing/sanitizing stations, disinfecting, social distancing, contact tracing logs, etc... COVID-19 protocols, policy and procedures must be detailed and included in each prime contractor's safety manual and logistics plan and is to be submitted to the Construction Manager. This requirement extends to all subcontractors of each prime contractor.

   Each bidder awarded a contract will also be required to abide by the School District/ Owner's most recent requirements for COVID protection, which may continue to adjust due to Federal/State and Local government policies. Contractors not willing to abide by the School District/ Owner's requirements will not be able to access the School District/Owner's property to execute their work, and will be neglecting the terms of their contract.

II. Schedule

1. All Contractors are to recognize that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect a 'time is of the essence' construction strategy. The attached 'Bid Schedules' serves as a guide of critical milestone dates to the Project. Failure to meet intermediate milestone dates will jeopardize the overall Project Schedule. This failure will mandate Contractor(s) to, increase staff, work overtime, or use other means to recover time, at the costs of those Contractor(s) responsible for such delays. In addition, all costs due to delays in completion of the Work, which require additional Custodial Overtime, Construction Management services, Architectural services, and Engineering services beyond the Work duration in the Bid Schedule, shall be borne by Contractor(s) responsible for delays.

2. Each contractor, prior to being awarded the contract shall prepare and submit a Preliminary Master Project Schedule for their Work. **Within (3) weeks of NOA (Notice of Award) all Prime Contractors will provide a coordinated Draft master schedule**. Each Prime's Project Schedule are to reflect all requirements for submittals, material and equipment procurement, material stockpiling, setting up Contractor's staging area and surveying of existing conditions. These Schedules, reflecting the critical milestone dates established by the attached 'Bid Schedule', are to be coordinated and shall be inclusive of other Prime Contractor's activity. The "Final" agreed upon overall schedule of work shall be developed and maintained by the Prime Contractor for Mechanical Construction in conjunction with the Construction Manager utilizing each Prime Contractor's Preliminary and updated Schedule(s). Specific relationships between Contractors, sequencing of activities, phasing, and critical "ties" of coordinated Work must be detailed on the Project Schedule. All Contractors shall utilize "Sure Track Project Manager 3.0-" as produced by Primavera Systems, Inc., -or- equal platform producing Gant Style Scheduling.
3. All Prime Contractors shall review the completed "Final" detailed construction schedule and acknowledge their acceptance of this schedule by signing a copy to be kept on record by the Construction Manager. This agreed upon schedule must incorporate all milestone dates and shall be established within four (4) weeks of Notice of Award .
4. The Prime Contractor for Mechanical Construction shall update the detailed construction schedule with the Construction Manager and issue copies to the other Prime Contractors, the Owner, Construction Manager, and the Architect monthly. Each Prime Contractor shall provide the Prime Contractor for Mechanical Construction with all information necessary to provide these updates.
5. Each Prime Contractor is to submit a schedule of projected fabrication on long lead items (items requiring four weeks and over to fabricate) three weeks after Notice of Award. Progress/Status reports on fabrication to be submitted to the Construction Manager every two weeks. 'Rate of Change' chart and marked up shop drawings to be included in these reports.
6. Each Prime Contractor shall be responsible for coordinating and expediting their fabrication and delivery schedules and keeping the Construction Manager informed as to their progress and their anticipated ability to stay on schedule. Should it become necessary (in the opinion of the Construction Manager) to supplement the Prime Contractor's expediting efforts in order to maintain job progress, the Construction Manager may elect to charge all costs incurred to said Prime Contractor.
7. In the event that Owner makes special arrangements to open a building at the request of a Contractor and the Contractor does not show, the Prime Contractor shall pay the Owner all costs incurred. All parties agree that any action taken to enforce this requirement shall not be construed by any Prime Contractor or its subcontractors/suppliers, as a reason for a claim (for either time or money) for delay to the Work or to the Prime Contractor, its subcontractors, or suppliers.
8. The Owner shall take partial occupancy of the building's renovated spaces in accordance with the dates established by the Bid Schedule and the Special Provisions. The Contractors shall perform all Work necessary to maintain the Owner's move-in and occupancy schedule.
9. The Contractors shall include in their base price, all out of sequence Work and any Work required to be performed during overtime hours or non-working hours necessary to maintain the Master Schedule, the Prime Contractors' project schedule, or, the Owner's move-in schedule.

III. Submittal Milestone Requirements

Submittal Priorities

The following submittal dates (in business days) are critical to allow for proper fabrication timeframes to ensure timely completion of the project to meet the attached bid schedule. A complete listing of all submittal requirements is located in "Section 01 3300 Submissions", which shall be accompanied by each division's specific submittal requirements.

Major Mechanical Construction Submittals

Scaffolding and/or Stair tower-(may require PE Stamp)	15 days from Notice of Award
Bracing/Shoring-(may require PE Stamp)	15 days from Notice of Award
Rebar/Reinforcing Shop Drawings	15 days from Notice of Award
Structural Steel/Decking	15 days from Notice of Award
Masonry Submittals/Shop Drawings	15 days from Notice of Award
Interior Finishes	20 days from Notice of Award
Casework	20 days from Notice of Award
All remaining Submittals with-in	**20 days from Notice of Award**

Major HVAC Equipment

Duct Work	15 days from Notice of Award
Equipment	15 days from Notice of Award
Controls	20 days from Notice of Award
Hot/Chilled Piping and Enclosures	20 days from Notice of Award
HVAC Shop Drawings	20 days from Notice of Award
All remaining Submittals with-in	**20 days from Notice of Award**

Major Electrical Equipment

Service Equipment	15 days from Notice of Award
Fire Alarm	15 days from Notice of Award
All remaining Submittal with-in	**20 days from Notice of Award**

IV. Construction Milestones

All Prime Contractors:

Special consideration should be made to the requirements of the project bid schedule attached in the Specifications. Prime Contractors will be required to man each contract to meet the milestone dates indicated below and/or in the contract bid schedule. All costs should be included in the bid for working multiple shifts, nights, weekends, and holidays to complete each phase of the project.

Time frames indicated show milestone dates required to be met by all Prime Contractors. These areas, once completed, will be punch-listed and given partial occupancy for the Owner to occupy. Occupying

these areas is critical to the Owner. If said dates are not met Liquidated damages may be assessed and back-charged to the responsible Contractor**.**

KEY MILESTONE DATES:

Ridgeway Elementary School

Air Conditioning and Ventilation Upgrades: Reference attached schedule for further schedule component breakdown, but key milestones are:

- Submittals & Shop Drawings: **12/12/23 through 1/8/24**
- Fabrication, equipment lead times: **1/9/24 through 6/24/24**
- Mobilization: **6/27/24**
- Equipment Start Up: **8/27/24 through 9/2/24**
- Commissioning: **9/3/24 though 9/30/24**
- Substantial Completion: **9/30/24**

Any work that cannot be completed by the Substantial Completion Dates above, must be completed after-hours. After-hours are defined within section "VI. SCHOOL OPERATIONS & CONTRACTOR WORK HOURS".

V. Summary Overview

Introduction for All Buildings & Projects

Each building must be ready for the **2024-25** school year which will begin shortly after **August 31, 2024** and each Prime Contractor shall reference the dated set forth in the Bid Schedule . This requires all trades to work multiple shifts to execute the work-as needed. After **August 31, 2024**, each classroom that has been-or-is being worked on, must be able to produce fresh air, based on the NYS/Federal/NYCRR 155.5 Codes, Rules and Regulations. Each Unit must be able to supply heat to the room, no later than September 15th 2024- no exceptions taken. If any of the contractors will be unable to meet this requirement, the School District reserves their right to take over the work in accordance with the contract documents.

Commissioning Agent: The District will be obtaining the services of a Commissioning Agent as a Third-Party professional. All contracts associated with the installation of new mechanical equipment, including the Mechanical Equipment Vendor, Controls Contractor, the Prime Mechanical Contractor and the Prime Electrical Contractor agrees to work in harmony with the Commissioning Agent and the data provided, in line with the Contract Documents. This includes any interim punch lists, final punch lists, equipment tagging, testing and balancing, equipment scheduling, daily/weekly oversite and similar. Reference the section 230800 within the contract specifications.

VI. SCHOOL OPERATIONS & CONTRACTOR WORK HOURS

Each project will impact many areas within existing buildings, which in some cases will remain in operation during construction.

All contract work occurring **over the summer recess**, outside of normal school session, may be performed during the hours of 7:00am and 4:00pm, with second-shift work happening continuously until 11:00pm - once approved by the CM & Owner. Any other contract work impacting the operation of the school, at any point over the project schedule, must be performed on an after-hours schedule, weekends or school holidays.

All contract work being performed **before and after the summer recess** – if permitted, during normal school session, will need to be perform after-hours (3:30pm-11:00pm). If approved, the contractor is responsible for abiding by the local sound ordinance for construction activities, and will be responsible for any fines they may incur if not followed. All punch-list work shall be performed after school hours on a second-shift schedule.

Each Prime Contractor may work Saturday & Sundays to make up for lost time (Saturday/Sunday work will be required if necessary to meet deadline) with prior approval from the Owner and after the Contractor has verified allowable working hours by town ordinance. If any Prime Contractor must work on either a Saturday, Sunday or a Holiday, in order to make up time that has been lost due to the same contractor, that Contractor will be responsible to reimburse the District for any custodial overtime costs.

VII. SAFETY / LOGISTICS/STORAGE

1. Two weeks after the receipt of the Notice of Award, each Prime Contractor for Mechanical Construction and Electrical Construction shall provide a Site Safety/Logistics Plan to the Construction Manager. The site logistics plan should minimally include locations of the **eight-foot high temporary fence**, traffic plans for deliveries and removals, refuse container locations, crane locations, pick locations, boom radius, and lift locations. This plan shall also show the location of all staging and storage areas, non-rated and fire-rated partitions used to separate construction and school areas, made with plywood and/or gypsum wallboard, etc. The logistical information represented by the construction documents shall serve as a minimal guide.
2. Each prime contractor is to submit their corporate safety policy (2) weeks after Notice of Award . Plan to minimally meet OSHA standards. Each Prime Contractor shall make the participation of their subcontractors in this program mandatory. These Safety Programs should be a detailed Company Policy defining the specifics as to how a safe work environment shall be maintained
3. Each Prime Contractor and Sub Contractors shall schedule weekly safety meetings (Job Site Safety Talks) and submit meeting minutes indicating attendees and topics to the Construction Manager.
4. Each Prime Contractor is to identify in writing to the Construction Manager their “OSHA Competent Person Regarding Safety” Definition. "Competent person" means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

5. All flagmen required for deliveries to the site are to be furnished by the Prime Contractor responsible for the delivery. Any and all deliveries crossing the site or student traffic areas shall be escorted by flagmen. All flagmen shall wear orange vests. All deliveries shall be scheduled and coordinated with the Construction Manager and the Owner. Delivery blackout periods for bus traffic interference shall be established with the Construction Manager.

6. Smoking, firearms, alcoholic beverages, and indecent photography are expressly prohibited on all school properties. All persons representing Contractors, subcontractors or suppliers shall wear shirts, long pants and other proper attire while on school property. All persons representing Contractors, subcontractors or suppliers shall conduct themselves in a professional manner consistent with the rules and policies of The School District, and the New York State Education Department while on school property or otherwise representing this project.

7. Each Prime Contractor will ensure that all their employees, while on school property, will wear hard hats, high visibility vests, and ID badges at all times. Anyone on site without this the proper Personal Protection Equipment (PPE) will be escorted off school property.

8. Each Prime Contractor will ensure that every employee working on this project has completed a 10-hour OSHA training course. Any worker that cannot present a 10-hour OSHA safety-training card will be escorted off the property.

9. Food truck vendors for Construction Workers will only be allowed on school property with prior authorization from the School District. The District may allow or discontinue food vendor truck service at any time for any reason.

10. **Identification Badges**. Each Prime Contractor will provide an ID badge for each of their field personnel prior to coming on school property. All workmen shall display the badge on their person while on site, and at all times. Failure to wear identification badge at all times will result in the immediate removal from the jobsite.

11. Each Prime Contractor is responsible for their own storage and personnel trailers at each site. Each Contractor will be required to supply man trailers and storage box trailers as required. All costs related to its delivery, construction, protection, power, etc. is borne by the individual Contractors utilizing space. The Owner WILL NOT PROVIDE STORAGE SPACE. The placement of these trailers will be strictly limited to predetermined locations. Approval of the placement of any trailer or storage box must be received from the Construction Manager.

12. The parking for construction personnel shall be limited to designated parking areas only. Failure to abide by this rule will result in towing of cars at the expense of the Prime Contractor whom employs the individual.

13. All delivery vehicles/trucks/machinery/etc. permitted on site, must be equipped with back-up alarms and enter through the designated access points. Failure to demonstrate this ability will result in cancellation of delivery or stoppage of work. All delays associated with this cancellation will be the responsibility of the Prime Contractor responsible for the Work involved.

14. All temporary construction site fences installed by any Contractor shall be installed with a tightly woven, blind screen mesh. This mesh is to be installed on the “construction” side of the fence. The Mechanical Contractor will maintain all fencing daily and lock gates at the end of the day.

15. All crane picks, material delivery, etc. must be coordinated so as not to lift over any occupied area of the building. If absolutely necessary, this work shall be done on off hours to ensure the safety of the building occupants. Crane location must be carefully chosen to ensure the safety of building occupants. Crane picks must also not be conducted during academic hours within 20' of an occupied building.
16. The Owner or Construction Manager reserve the right to have all hoisting equipment periodically inspected by an independent inspector whose findings will be binding. The Prime Contractor at its own expense must make corrections before continuing work. The Owner or Construction Manager will not assume any responsibility for the safe operation of any hoisting equipment by exercising this right. Each Prime Contractor or Sub Contractor shall cooperate with the inspector by allowing time for the inspection. The Prime Contractor shall be notified 24 hours prior to the time of the inspection. These inspections do not release the Prime Contractor of their responsibility to provide all engineering, permits, and inspections as required by OSHA or the SED prior to use of any hoisting equipment.
17. All vehicular traffic (personal vehicles, trucks, equipment, deliveries, etc.) are to use the designated entrances as outlined on the Logistics Drawings. Access by other routes is to be on exception basis only.

VIII. SUBMITTALS

1. Each copy of each submittal shall have attached as the cover page the specified "Submittal Cover Sheet". All information requested in "Section 01 33 00 Submittal Requirements" shall be provided by the respective Contractor. Submittals will be returned without review if the cover sheet is not accurately completed.

2. Each Prime Contractor shall generate a complete "Submittal Log" within one business week of the Notice of Award. This log is to list all required submittals specific to your trade as detailed in the Project Manual/Specs. See enclosed form for your use. "ROJ" stands for Required on Job to assist your judgment of the time gap between submission, Architect review, fabrication/procurement and on-site need for putting the work item into place.

3. Each Prime Contractor shall review all submissions for completeness. Each Prime Contractor is responsible to stamp all shop drawings prior to submission to the Architect. The Architect will not review any shop drawings unless first reviewed by said Contractor. Bundle similar material submissions for proper review. Use the Architects Submittal cover sheet located in the Specifications
4. **All submissions shall be sent electronically to the Architect. Submittals will be processed and stored electronically, with access available to all Prime Contractors for coordination. The District has elected to use the program NewForma for all project correspondence.**
5. Each Prime Contractor shall provide one transmittal for each submission package identifying each unique submission individually. For each submittal with the submission package, the Prime Contractor shall identify the length of the delivery time and the necessary "last date" an item may be received on site. Each Prime Contractor shall keep a log of all submissions in a manner prescribed by the Construction Manager and the attached form. Minimally, the Contractor shall update this submittal log biweekly and provide a copy to the Construction Manager for review and information.

6. Each Prime Contractor shall copy the Construction Manager's Project Manager on all transmittals, correspondence, RFI's and any other documents sent to the Architect, his consultants or the Owner
7. At the direction of the Construction Manager, each Prime Contractor shall provide copies of either document and/or data files for any requested document on one of the following programs: Microsoft Word, Microsoft Excel, or Primavera's SureTrack – Project Manager 2.0 scheduling program.

IX. LINE, LEVELS & GRADE

1. Each Prime Contractor for Mechanical Construction shall establish a baseline and benchmark system for each area of renovation or component. This survey work shall be completed by a NYS licensed professional surveyor. The surveyor(s) employed to establish this system or to extend and maintain an existing benchmark system for the work of other trades shall not have less than five years' experience in performing construction surveys similar to the work they will perform for this project. The other Prime Contractors and their subcontractors shall be responsible for extending these lines, levels and grades, and for performing all layouts for their own work. Each Prime Contractor is solely responsible for any damage or loss due to incorrect extension of lines, level or grades in their layout. Each Prime Contractor and their subcontractors shall be responsible for the accuracy with respect to the layout of their work. Any discrepancies or errors in the drawings, perceived by a Prime Contractor or subcontractor, shall be immediately reported to the Construction Manager and Architect. If any corrections are necessary, they shall be executed in accordance with procedures approved by the Construction Manager.
2. Each Prime Contractor and their subcontractors shall be responsible to offset, or to protect, their markings from anything that may disturb them.
3. Each Prime Contractor for Mechanical Construction and all other Contracts will build to existing conditions of the site and joining buildings. To confirm line, level and grade, the Prime Mechanical Construction Contractor will employ a licensed NYS surveyor by the end of the project and produce an 'As-Built' drawing including final elevations and boundaries of any structural or earth modifications.

X. MANAGEMENT OF WORK

1. **Each Prime Contractor shall employ (from one week after Notice of Award until punch-list and closeout are complete) at a minimum a full-time Project Manager and a separate dedicated full-time on-site Superintendent. The Project Manager and Site Superintendent shall represent the Prime Contractor. All communications given to the Project Manager or Site Superintendent -either verbal or written- shall be binding. Important communications shall be so confirmed in writing.**

   If a contractor is awarded multiple contracts, they must include multiple superintendents and foreman per building/contracts. There is no exception to this requirement.
2. Each Prime Contractor shall provide copies of their daily construction reports to the Construction Manager's either through the Submittal Program or Electronically via E-mail. These reports shall be submitted no later than 10:00am the following workday. The daily reports shall provide detailed information concerning the Prime Contractors' activities and operation only. Daily Construction Reports

to the Construction Manager shall detail manpower for each subcontractor and direct work-force, weather and work activities on site.

3. Each Prime Contractor shall have responsible representation at the **MANDATORY** weekly job meetings held at the Construction Manager's job office from Notice of Award thru close out. These meetings will be held to arrange for a satisfactory coordination of all building trades so as not to impede job progress. Prime Contractors or subcontractors who fail to attend the meetings will be **back-charged $500.00 per each occurrence.**

4. Each Prime Contractor shall submit two-week look ahead schedules identifying the anticipated activity, and material needs for all of the work scheduled to be formed by the Prime Contractor and his subcontractors for the identified time period. Each Prime Contractor shall keep this schedule current and provide a biweekly report to the Construction Manager concerning the actual performance and activity compared to the two-week look ahead. The two-week look ahead shall be uploaded to the submittal Program by the End of Business of each weekly meeting.

5. The MEP Coordination shall follow the guidelines stated below:

    a. Each Prime Contractor shall have sufficient responsible representatives at mechanical/electrical/plumbing coordination meetings held at a location to be determined. These meetings shall be held as frequently as required by the Construction Manager or any other Prime Contractor. The Mechanical Construction Prime Contractor shall also include a representative at these meetings.

    b. All Contractors are expected to jointly produce coordination drawings. Prime Contractors are to first submit their respective shop drawings for approval, to the Owner's Architect and Engineers in order to make any necessary changes prior to going through the coordination process. The HVAC Contractor shall provide orange line CAD Drawings showing all of the approved ductwork. The HVAC Contractor shall locate on these CAD Drawings all piping in orange pencil/ lines. The Plumbing Contractor shall locate the plumbing lines on these CAD Drawings in blue pencil/ lines. The Electrical Contractor shall indicate conduit runs in green pencil/ lines. The Mechanical Construction Prime will have the last coordination review. As each coordination drawing is completed, Contractors are to meet with the Construction Manager and the Architect to review and resolve all identified conflicts on the coordination drawings.

        Note: for areas without HVAC work, the Mechanical Prime shall provide the necessary CAD Drawings with black line. All coordination meetings will be held at the Construction Manager's office.

    c. It is the responsibility of the Prime Contractor for Mechanical Construction to coordinate all points of entry through the foundations, slab penetrations, sleeves, roof openings and penetrations, wall openings and penetrations etc. with the work of all other Contractors, including but not limited to M. E. P. Primes, kitchen equipment, casework and casework accessories.

    d. It is the responsibility of each Prime Contractor to coordinate with the architectural details and elements, such as soffits, variations in ceiling height and materials, fire/smoke partitions or barriers, folding partition, doors, lockers, and any other Mechanical Construction items that

impact the space above the ceiling or otherwise requiring light framing and/or miscellaneous support or bracing.

6. Site cleanliness: If any Prime Contractor fails to keep the site safe and clean within four hours of being notified by the Construction Manager either verbally or in writing, the Construction Manager will have this work performed and back charged to the appropriate Prime Contractor at prevailing overtime rates plus 15%. Notice to field personnel is deemed notice to this Prime Contractor.

7. Dust and fume control is essential to the reduction of health risks to the surrounding personnel. Methods of dust control shall include but not be limited to the following:

    a. Adequate ventilation.
    b. Wetting down.
    c. Keeping bags of insulating materials, cement, etc. closed.
    d. Controlled mixing of materials under field conditions.
    e. Special attention should be utilized in sawing of insulation and certain acoustical materials and storage of materials.
    f. Job housekeeping must be maintained.
    g. Advising all personnel of hazardous conditions, including supervisors and workmen.
    h. Installing temporary barriers.
    i. Each Prime Contractor shall be responsible for instituting the above policies to insure minimal impact to surrounding occupied areas.

8. Each Prime Contractor shall confine operations on the premises to areas designated by the Construction Manager and permitted by law, ordinances, permits and the Contract Documents, and shall not unreasonably encumber the premises with any materials or equipment. Each Prime Contractor shall coordinate all of his operations with, and secure approval from, the Construction Manager before using any portion of the Premises. Field personnel are to be confined to the work area assigned.

9. Where material is specified to be furnished by others or furnished and delivered only, the Prime Contractor installing the material shall be responsible for scheduling the delivery and receiving, unloading, storing, handling, relocating, hoisting, distribution, laying out and installing this material. Upon receipt of material by the Prime Contractor installing the material, any risk of loss and damage of the material shall be the responsibility of that Prime Contractor accepting the material.

10. All Prime Contractors and their subcontractors shall allow sufficient time to inspect and accept the work of the previous Contractors. Should any discrepancies be discovered, The Construction Manager shall be notified sufficiently in advance so that corrective action can be agreed to and taken (by all necessary parties) without affecting the progress of any Contractor or the work.

11. All Prime Contractors are advised to exert the utmost care and diligence when working in or near any existing buildings or site work which is to remain. The absence of protection around such items shall not excuse any of the Prime Contractors from their liability to provide protection. Any damages to the existing buildings, sitework or facilities shall be repaired and expensed to the responsible Prime Contractor.

12. Each Prime Contractor shall be solely responsible to remove and replace the existing ceiling tiles and grid in areas of the existing building where their work is required but new ceilings are not scheduled. In the event that the existing ceilings are damaged and cannot be replaced to the satisfaction of the Owner, the

responsible Prime Contractor shall be solely responsible for replacing, in kind, the existing ceilings with new tile and grid. A qualified Contractor, acceptable to the Owner, shall perform all ceiling replacements.

13. All disconnect and/or tie-in work involving any utilities that would interfere with the ongoing operations of the Owner shall be completed on an after-hours basis. The performance of this work shall be projected on the required schedules and the Owners Representative is to be notified at least forty-eight hours in advance of commencing with this work. All overtime and standby personnel necessary to complete these tie-ins shall be the responsibility of the Prime Contractor performing the work.

14. At the same time the Prime Contractor submits their Insurance Certificate they shall also submit to the Construction Manager the labor rates of each category of labor for which he or his subcontractors shall employ (either directly or indirectly). This information shall be itemized in the format shown below.

Contractor's Name	
Contractor's Address	
Contractor's Office Phone	
Contractor's Fax Number	
Contractor's Email Address	

Labor Rate Breakdown					
Worker's Title		**Journey man**	**1.5 Rate**	**Fore man**	**1.5 Rate**
Base Hourly Rate					
Payroll Tax & Insurance:	**% Per Hr**				
FICA					
Federal Unemployment					
State					
Workers Compensation					
Disability					
Other (Explanation Required)					
Subtotal					
Benefits:	**$ Per Hr**				
Vacation					
Health & Welfare					
Pension					
Annuity					
401K Fund					
Other (Explanation Required)					

Other (Explanation Required)					
Subtotal					
Hourly Labor Rate					

XI. REQUEST FOR INFORMATION (RFIs)

1. Refer to the specifications for a complete explanation of the Request For Information process, and copy of the RFI form. RFIs will be corresponded electronically and will be required for an interpretation needed by the Architect of the Drawings and Specifications. Questions asked within the field to the Architect or Engineer, shall be recorded by the prime contractor asking the question and submitted via RFI for formality.

XII. TESTING/INSPECTIONS

1. If NYSED, the Architect or Owner or determines that any work requires special inspection, testing or approval, the Construction Manager will instruct the Prime Contractor of such special inspection, or testing. If such special inspection or testing reveals a failure of the work to comply with the requirements of the Contract Documents, the Prime Contractor responsible shall bear all costs thereof, including compensation for the Architect's, Construction Manager, and Testing Lab costs.
2. Each Prime Contractor shall furnish incidental labor to:
    a. Provide access to the work to be tested, sampled and inspected.
    b. Obtain and handle samples at the project site or at the source of the product to be tested.
    c. Facilitate inspections, samplings and tests.
    d. Coordinate with the Owners Rep and testing lab and submit schedule of required tests one week in advance.
    e. Coordinate inspections
3. As they relate to the timely prosecution of the work, all Prime Contractors shall coordinate independent testing and inspections. If any Prime fails to coordinate such inspections and additional costs are incurred to the Owner, the Prime Contractor will be responsible for that inspection cost.
4. **The following is a list of intended controlled inspections:**
    a. Soil bearing, sub-grade inspection and/or compaction
    b. Concrete field and plant testing & rebar placement
    c. Masonry or stone field inspection, mortar sampling, reinforcement placement inspection
    d. Structural steel field welding, bolting, connections, and metal deck
    e. Asphalt and sub-base inspection
    f. Soil compaction, density and sieve analysis testing, soil bearing
    g. Water and air infiltration for windows
    h. Roofing & flashing – ***by Contractor performing the work***
    i. Waterproofing
    j. Under slab plumbing work – ***by Contractor performing the work***
    k. Firestopping

l. Fireproofing
m. Underwriters/UL inspection – ***by Contractor performing the work***
n. Asbestos air monitoring

5. The Architect and Construction Manager shall be notified twenty-four hours prior to the need of testing, in the event the Contractor does not give proper notification and the work is done with no test, that Contractor will bear all costs for such tests.

6. ***All controlled inspection testing costs will be paid for by the Owner except as noted above.***

7. As part of the two-week look ahead, each Prime Contractor shall provide the Construction Manager with a schedule of all anticipated on-site Owner supplied inspections (if any are required). The Prime Contractor shall submit all requests for Owner-supplied inspection for all items of controlled inspection by 1:30 p.m. of the day previous.

XIII. CHANGES TO THE WORK

1. Refer to Article 7 of the General Conditions for additional information pertaining to this subject.

2. All change proposals for extra work by the Prime Contractors shall be submitted to the Construction Manager, with a complete labor and material breakdown and on the basis of net difference in quantities. The Owner reserves the right to request adequate back up such as invoices, subcontractor quotes, etc., to substantiate the change order cost. Current labor rates for all trades are to be submitted to the Construction Manager by the respective Prime Contractors at the first scheduled job meeting. When both additions and deductions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of net increase or decrease.

   All change requests shall follow the cost breakdown found in § 7.2.1 of Article 7 located in the General Conditions.

XIV. SCHEDULE OF VALUES/PAYMENTS

1. Within one week after Notice of Award , the Prime Contractor shall submit a detailed billing breakdown on the AIA G702/ G703 – CM Version form for approval by Construction Manager and Architect. No payments will be made until such billing breakdown is approved. Each Prime Contractor will be required to breakdown the project cost for each building project, by NYSED #.

2. The schedule of values will be reviewed and adjusted if necessary. Once approved, the schedule of values is to be used for the AIA pay application. The schedule of value will take into account and include at minimum the following items:

   a. Bonds/Insurance based on actual invoice amount
   b. Labor and material shown per line items greater than $5,000 in work.
   c. Submittals - 1% of contract sum
   d. Punch list - 1% of contract sum
   e. Close-out documents/warranties - 3% of the contract sum
   f. Meeting Attendance & Meeting Documentation - 2% of the contract sum
   g. Allowances

h. Approved Alternates
i. Labor and Material breakdown for each line Item

Note: Punch list value will be dispersed only when the work has been confirmed to be completed 100%. ALL PAYMENT APPLICATIONS SHALL INCLUDE A 5% RETAINAGE FACTOR.

3. The Owner has elected to require the Prime Contractor to submit releases of liens with respect to all Work previously performed and for which payments were made under a preceding application. Beginning with the second payment requisition and with each subsequent payment requisition, each Prime Contractor shall furnish to Owner the following documents:
    a. Labor and/or Materials Affidavit
    b. Daily and Weekly Wage Affidavit
    c. Prime Contractor's-Partial Release and Wavier of Lien
4. Monthly Payment Applications for Payments shall be made as per Article 9 of the General Conditions of the Contract
5. All Payment Applications for Payment are to include certified payroll for each employee working directly under the Prime Contractor, as well as all subcontractors working under agreements with the Prime Contractor.
6. All Payment Applications for Payment are to include 10-Hour (or higher) OSHA cards for all workers listed on the certified payrolls.

XV. PUNCH LIST

1. Upon substantial completion of each phase of work, each Prime Contractor is to submit to the Owner/Architect/Construction Manager a letter declaring the work is substantial complete. Included with said letter is to be the Contractor's punchlist.

    Upon the receipt of above, the Construction Manager will schedule with the Owner, Architect, and Contractor a walk through to develop an Owner's punchlist. This Owner's punchlist agreed by all parties shall serve as the only punchlist. Upon failure to complete the Owner's punchlist within four weeks from receipt, the Owner reserves the right to complete same work and backcharge the costs of material, labor, supervision and other incidental costs.

XVI. INSURANCE/INDEMNIFICATION

1. All Prime Contractors must issue a Certificate of Insurance with liability limits as defined in the General Conditions and Division 01, naming Triton Construction Company, The Architect, The Architect's Consultants and the School District as an 'Additional Insured' in addition to all other parties as stipulated in the General Conditions of the Contract in the project manual.
2. All Prime Contractors agree to indemnify and hold harmless Triton Construction Company, The Architect, The Architect's Consultants, the School District, its agents and employees in addition to all other parties as stipulated in the General Conditions of the Contract in the project manual.

3. All Prime Contractors and Sub-Contractors/sub-subcontractor's/vendors/etc. insurance/indemnification shall comply with Article 11 "Insurance" as specified in the General Conditions of the Contract in the project manual.

Specific Scope Requirements for Each Prime Contractor

Each Prime Contractor is to refer to the technical specifications and drawings for further, or more comprehensive requirements.

Prime Contractor for Mechanical Construction (PCM)

1. This Prime Contractor shall provide, for all the building construction work, all necessary site refuse containers and disposal services to maintain the site in a clean and safe condition. This Prime Contractor shall be responsible for emptying and/or replacing all containers on a regular basis or when full. All containers and disposal services shall be provided by a single entity. This Prime Contractor shall provide sufficient labor to keep the site clean on a daily basis and shall be responsible for providing the daily broom cleaning as necessary to maintain site safety.
2. This Prime Contractor shall coordinate with the Electrical Contractor to allow all Contractors unabated access to the building and surrounding work areas.
3. This Prime Contractor shall provide and maintain temporary chemical toilets for the duration of the project. The quantity of these toilets should be as required to properly maintain sanitary facilities and easy access for the personnel on the job. This quantity shall be a minimum of two toilets per major work area. This requirement shall include all necessary paper products, supplies and services, as well as the maintenance of these toilets until all work is complete and the Owner assumes partial occupancy of the completed work areas. As a minimum, this Contractor shall include the pumping and servicing of these toilets twice per week.
4. All Scaffolding or Stair Towers shall be designed and stamped by a licensed NYS PE. When designing this scaffolding consideration should be given to the environment, scaffolding system being used, means of access, means of tying the scaffolding to the structure, location, length of time to be erected, climate conditions, wrapping/containment of building, purpose of use, loadings, etc. all scaffolding and/ or stair tower access points must be secured while not in use. If and when needed, the scaffolding may be used for access by other Prime Contractors during construction- this contractor will not restrict access by others using the scaffold.
5. This Prime Contractor shall provide testing and inspection of the scaffolding on a daily basis and per governing regulation (e.g.,: OSHA). A log of these inspections are to be kept in the PCM's job trailer, along with inspections tags that identify the status of the scaffolding (inspection dates, okay to use, caution, danger). Report to the Construction Manager all corrective work required through the course of the project.
6. As shown on the logistics plan, this Prime Contractor shall include in his bid price, all costs to provide an **8' ht.** rental type chain link construction fencing and gates. All fencing shall have a tightly woven, blind screen mesh installed on the "construction" side of the fence. Mesh to be dark green or black. When

directed by the Construction Manager, this Prime Contractor shall remove and dispose of this fencing and all related materials. Gates for man access shall be passive to the exterior of the jobsite during the event of an emergency, but remain closed for un-authorized entry during construction. All gates shall be locked when the site is not active, with a double-keyed system, granting the District access to the site at all times.

7. This Prime Contractor will repair, replace, correct, or finish grade, topsoil, and seed all areas with-in the construction site and staging area that was disturbed by the work of this project.

8. This Prime Contractor shall provide and maintain all temporary plastic barriers, partition walls, doors, hardware and plywood barriers for the duration of the project to separate work areas from public areas and to maintain security, dust, and noise control. Temporary partitions and doors will be painted with 1x coat of primer and 2x coats of paint for esthetics. Where needed, temporary fire-rated systems will need to be installed to maintain the build's existing fire code conformance.

9. Construction Signage. The PCM shall include in his base price all construction signage required by OSHA and the Site Logistics plans. At the site fence, "Construction Area keep out", "Hard Hats Required" and "Authorized personal only" signage shall be posted every 10' on site fencing. This Prime Contractor shall reference the logistics plans for each project to include any other signage designated for entry gates. Signs shall be made of either metal of durable PVC to endure the project duration.

   This Prime Contractor shall also include signage for COVID-19 protection, alike the construction signage, stating "Keep Social Distance", "Wear Mask" and "Sanitize Frequently".

10. Final Cleaning: The PCM shall provide a final cleaning service to prepare all areas of interior construction for use and to provide a final cleaning after substantial completion is achieved and after direction to provide such service is received form the Construction Manager. This work shall be completed in cooperation with the building maintenance staff and their respective procedures.

11. Equipment Pads: Unless specifically noted on the contract documents, the associated Prime Contractor for the Equipment (PCM, PCE) will provide all **interior and exterior** concrete equipment pads whether shown on the contract documents or not.

    This Prime Contractor will provide any modifications to existing or provide new equipment pads for mechanical equipment, as called out on the drawings.

12. This Prime Contractor is responsible for protection of finished work. Including but not limited to; floors, walls, equipment and ceilings. This Prime Contractor will provide, maintain, and remove the appropriate protection materials necessary to adequately protect his finished product.

13. This Prime Contractor should note there are numerous areas where the existing ceilings are remaining. This Contractor will be required to remove and reinstall any ceilings displaced by installation of this Contractor's Work. If open ceilings are not replaced within a twenty-four hour period after a request by the Construction Manager, either verbal or written, the Construction Manager will have said ceilings reinstalled and all related costs will be back charged to said Contractor.

14. Unless otherwise noted in the construction documents, this Prime Contractor will repair and patch all walls, floors, and ceilings to match adjacent finishes after the removal of interior partitions, ceilings, floors, Mechanical conduit, piping and ductwork. This includes all walls and ceilings above finished ceilings or spaces. Each Prime Contractor will cut and cap their own work inside finished walls, floors and ceilings.

15. This Prime Contractor shall provide fire extinguishers for the life of the project, the extinguishers are to be hung and identified as per OSHA requirements (1 per 3000 sq ft, or better). These extinguishers are to be re-charged and inspected for the life of the project.
16. If due to location of fabrication plant, a local storage yard is required, all cost associated with this storage yard including receiving, unloading, storing, shake-out, reloading, and delivery to the site shall be this Prime Contractors' cost.
    a) The Owner may have an Inspector at the plant during the fabrication period. Appropriate access shall be provided at all times for this individual.
17. Abatement Work: If identified in the documents, this Prime Contractor will be responsible to hire a qualified and DOL licensed Abatement Contractor to perform ALL Hazardous Material removal at areas indicated in the drawings. This work will only take place during the summer recess or over an extended break/holiday with the Owner's approval.

    In the event buildings will be occupied over the summer recess all abatement activities shall take place after 3:30pm and no later than 7:00am each morning.
18. Under slab **MEP Trenching at New & Existing Slabs**:

    New Slabs: The Prime Contractor for Mechanical Construction (PCM) will be responsible to coordinate with the MEP contractors and Construction Manager through the Contract Documents and the Coordination Drawings, for any under-slab piping. The PCM will be responsible to provide the trenching, bedding, backfill and compaction for such MEP under-slab items. Each MEP Prime Contractor (the PCP, PCM & PCE) will be responsible to provide a final layout to the PCM, prior to trenching. Each MEP Prime contractor will be responsible to level their piping with provided bedding from the PCM, testing the piping prior to back filling.

    Existing Slabs: Where existing slabs require new/modified underground MEP piping or conduit; The PCM will be responsible to survey/mark-out, sawcut, trench, lay bedding, backfill, dowel/reinforce and place new concrete level with existing floors. Each MEP Prime Contractor (PCM & PCE) will be responsible to provide a final layout to the PCM, prior to trenching. Each MEP Prime contractor will be responsible to level their piping with provided bedding from the PCM, testing the piping prior to back filling.
19. Openings in Existing Systems: Each respective Prime Contractor will be responsible to provide their own openings through existing wall, floor, and ceiling systems not shown to be removed on the Architectural Drawings. Where openings for MEPs are required in new wall, floor or ceiling systems, the MC shall coordinate with the respective MEP Prime contractor to locate those openings and frame the system to incorporate the new opening.
20. Core Drilling: Each respective Prime Contractor shall provide their own core drilling through existing and new wall, floor, foundation, or slab systems.
21. Roof Systems: In any case, the MC shall make all penetrations through the existing Roofing System with a qualified roofer who is certified on the existing roof system. Openings in the roof deck shall be coordinated by the respective contractor requiring the opening, and the opening shall be made by the PCM, this Prime Contractor.
22. Each Prime Contractor is required to fire stop and/ or smoke stop all walls, floors and ceilings after completion of all their own work.

23. This Prime Contractor will hire the services of an underground utility surveyor to locate and mark all existing underground utilities and services with-in the Area of Work.
24. This Prime Contractor will repair, replace, correct, or finish grade, topsoil, and seed all areas with-in the construction site that was disturbed by the work of this project, including any staging areas for material and equipment.
25. New Mechanical Roof Top Units, Exhaust Fans and Pipe Portals will be furnished and installed by the Mechanical Prime (including roof membrane/insulation cutting and patching), with final Electrical/ Fire-Alarm terminations by the Electrical Prime under separate contracts. Roof Top Curbs and Pipe Portals will be furnished, lifted/picked, and set/installed by the Prime Mechanical Contract. Blocking for curbs, final flashing, roof deck penetrations/openings and structural reinforcing shall be by the Prime Mechanical Contract. Coordination between each trade to install the roof system and new curbs in a seamless matter is required per each Prime's contract. The following sequence clarifies the coordination between the Mechanical Construction Prime (PCM) and Electrical (PCE) trades for New Mechanical RTU/ Exhausts Fan Equipment:

    A. Roof Top Unit Curbs:
        1. Furnished, coordinated, lifted/picked and installed by Mechanical (PCM) Prime
        2. Deck/Roof Opening, Structural Reinforcing, Blocking, Insulation and Roof Flashing by Mechanical Construction (PCM) Prime
        3. Pipe Portals/ Pitch Pockets Furnished by Mechanical (PCM) Prime
        4. Pipe Portals/ Pitch Pockets Installed and Flashed by Mechanical Construction (PCM) Prime
    B. Rooftop Dunnage
        1. Furnished, coordinated, lifted/picked and installed by Mechanical Construction (PCM) Prime
        2. Deck/Roof Opening, Structural Reinforcing, Blocking, Insulation and Roof Flashing by Mechanical Construction (PCM) Prime
    C. Mechanical Equipment (RTUs):
        1. Furnished, hoisted/picked and installed by Mechanical (PCM) Prime
        2. Piping by Mechanical (PCM) Prime
        3. Ductwork by Mechanical (PCM) Prime
        4. Controls by Mechanical (PCM) Prime
        5. Electrical by Electrical (PCE) Prime
        6. Fire Alarm/ Shutdowns by Electrical (PCE) Prime

    Temporary protection of open curbs prior to units being installed, will be provided and maintained, by the Mechanical Construction Contractor in cooperation of all other trades. Water infiltration as a result the Mechanical or Electrical Primes not re-protecting open roof curbs, will be the sole responsibility of that trade to reimburse the PCM Prime - to correct the temporary protection. Any damages to the interior finishes of the building, caused by water infiltration, will be the responsibility of that Prime Contractor causing the leak, to correct the damages per the terms of the General Conditions.

26. This Prime Contractor shall coordinate with the Electrician and Mechanical Construction Prime Contractors to allow all Contractors unabated access to the building.
27. Each Prime Contractor is required to fire stop and/ or smoke stop all walls, floors and ceilings after completion of all their own work.

28. This Prime Contractor will include modification to existing casework required to replace existing equipment. Case work will require Shop Drawings to be submitted to the Architect for approval. Casework will need to be installed by the end of the Summer, prior to student arriving for the 2024-25 academic year. In any case that the case work is not available, this Prime Contractor will deploy temporary protection in place of the casework, so that the space is finished and ready for occupancy.
29. Note that this Prime Mechanical Contractor shall furnish approved HVAC equipment (Basis of Design Daikin, with Alternates as identified in the Specifications) and shall equipment controls services as provided by EMF.

Prime Contractor for Electrical (PCE)

1. The PCM shall provide dumpsters for this contractor to use for day-to-day rubbish. Each Prime Contractor is responsible for collecting, moving, placing, breaking down boxes and pallets, and disposing rubbish, on a daily basis, all debris from their activities into a dumpster supplied by the PCM. Each Prime Contractor is responsible to broom clean the areas they worked in at the end of each day.
2. The PCE shall use the dedicated staging areas for the PCE's Construction Field Office. The PCE will be required to remove and reinstall the fencing that surrounds this location for installation of the PCE's construction office. The PCE will be required to install electric, sanitary, water, phone, cable etc. at the PCP's expense. Electric bills to the trailer only will be paid by the Owner.
3. The Prime Contractor for Electrical is to temporarily support existing ceiling mounted equipment/devices (i.e., speakers, fire alarm apparatuses, exit signs, wiring, light fixtures, etc.) as required for demolition of existing ceilings until new equipment/devices are installed or existing equipment/device can be permanently remounted in the new ceiling by this Prime Contractor – whether shown on the plans or not.
4. The Prime Contractor for Electrical shall provide and keep temporary light and power operational for a period from fifteen minutes before the earliest starting time of the earliest trade, to fifteen minutes after the established quitting time of the trade which stops latest in the evening (fifteen foot candles) throughout the entire construction area (normal working hours 7:00 am to 4:00 pm, second-shift 3:00pm-11:00pm).

   This applies to all scheduled workdays, Monday through Saturday inclusive, which are established as regular workdays for any trade engaged in the work, including such days that are holidays for Electricians but are regular workdays for other trades. These services are to be kept operational until the CM determines that they are no longer required for the execution of the work. Temporary light shall consist of a minimum of (1) bulb and cage per 10 square feet of floor space in all spaces no matter of size throughout the existing building spaces being renovated.
5. The Prime Contractor for Electrical shall include in his base price all costs associated with providing and maintaining adequate temporary light and power to all areas of work required by the construction documents. Each major area of work shall be provided with an adequate sized distribution panel for temporary light and power.
6. The Prime Contractor for Electrical shall provide temporary power for masonry work, mixers, steel work, or fire proofing work, compressors etc. that may require 220V temporary power. Power is to be provided at each major area of work if required.

7. **Existing Ceilings:** This Prime Contractor (PCE) should note there are numerous areas where the existing ceilings are remaining. **This Contractor will be required to remove and reinstall any ceilings displaced by installation of this Contractor's Work, where ceilings are not being removed on the Architectural Plans.** If open ceilings are not replaced within a twenty-four hour period after a request by the Construction Manager, either verbal or written, the Construction Manager will have said ceilings reinstalled and all related costs will be back charged to said Contractor.

   Any damage or dirt from the removal and reinstallation of ceiling systems, caused by this Prime Contractor will the responsibility of this contractor to replace in kind, or better.

8. The Prime Contractor for Electrical shall replace all burned out light bulbs, within the work areas, when building is turned over to the owner at substantial completion.

9. This Prime Contractor shall coordinate with the General Construction Prime and Mechanical Prime Contractors to allow all Contractors unabated access to the building.

10. Access to Work within Existing Walls, Ceiling & Floors: Unless otherwise noted in the construction documents, this Prime Contractor will cut and cap their own work inside finished walls, floors and ceilings. Access for removals, installation and capping within existing chase walls, walls, soffits or hard ceilings that are not indicated on the drawings for the PCM to remove and replace- will be cut and patched by the MEP contractor requiring access. For shared access to the same wall/ceiling systems, the contractor with the most work will be responsible for cutting and patching the shared openings. Patching must be performed by a skilled tradesman of the associated work (carpentry, taping, painting, etc.,,).

11. Each Prime Contractor is required to fire stop and/ or smoke stop all walls, floors and ceilings after completion of all their own work.

12. This Prime Contractor is responsible for protection of finished work. This Prime Contractor will provide, maintain, and remove the appropriate protection materials necessary to adequately protect his finished product.

13. This Prime Contractor will modify all existing Fire Alarm devices that are part of the existing building being renovated, maintain the devices throughout construction, and or disconnect as needed. This Prime Contractor will assure that no troubles exist, by hiring a Fire Alarm vendor who is licensed to modify the existing Fire Alarm system to accept any temporary changes through construction.

    Surface Mounted Devices: This Prime Contractor shall remove all existing surface-mounted Fire Alarm Devices such as Strobes, Horns, Pull-Stations, etc., on walls receiving new finishes, such as Tile, etc., and shall reinstall devices on face of new finish. This includes any type of surface-mounted conduit/ wire-mold.

    Recessed Devices: This Prime Contractor shall modify any in-wall/recessed Fire-Alarm boxes for devices such as Strobes, Horns, Pull-Stations, etc., with collars or extensions to meet the face of the new wall finish in areas where existing walls are receiving new finishes, such as tile, etc.,.

14. This Prime contractor will modify existing power devices where walls are receiving new finishes, such as Tile, etc.,.
    Surface Mounted Devices: This Prime Contractor shall remove all existing surface-mounted Electrical Devices such as light switches, receptacles, junction boxes, etc., on walls receiving new finishes, such as

Tile, etc., and shall reinstall devices on face of new finish. This includes any type of surface-mounted conduit/ wire-mold.

Recessed Devices: This Prime Contractor shall modify any in-wall/recessed Electrical Devices such as light switches, receptacles, junction boxes, etc., with collars or extensions to meet the face of the new wall finish in areas where existing walls are receiving new finishes, such as tile, etc.,.

15. This Prime Contractor is to develop a separate site-specific electrical service shutdown/upgrade schedule within four weeks after Notice of Award. This schedule will be developed in conjunction with the Construction Manager and the Owner. No shutdown/transfer will be permitted at any time without prior written notification. The Prime Contractor for Electrical shall provide temporary power for all 'others' work ongoing at the site during any electrical shutdown or transfer period that would otherwise deny other Contractors power. No shutdown or transfer shall be allowed during active school hours. Any and all shutdowns must be scheduled on the Owners off days (weekends, holidays). Any shutdown longer than three days will require this Prime Contractor to supply temporary power for the Owner (i.e., generators). The Electrical Prime Contractor shall provide a minimum of forty-eight hours' notice to the Owner and the Construction Manager or any necessary power shutdown.

16. New Mechanical Roof Top Units, Exhaust Fans and Pipe Portals will be furnished and installed by the Mechanical Prime (including roof membrane/insulation cutting and patching), with final Electrical/ Fire-Alarm terminations by the Electrical Prime under separate contracts. Roof Top Curbs and Pipe Portals will be furnished, lifted/picked, and set/installed by the Prime Mechanical Contract. Blocking for curbs, final flashing, roof deck penetrations/openings and structural reinforcing shall be by the Prime Mechanical Contract. Coordination between each trade to install the roof system and new curbs in a seamless matter is required per each Prime's contract. The following sequence clarifies the coordination between the Mechanical Construction Prime (PCM), Mechanical (PCM) and Electrical (PCE) trades for New Mechanical RTU/ Exhausts Fan Equipment:
    D. Roof Top Unit Curbs:
        1. Furnished, coordinated, lifted/picked and installed by Mechanical (PCM) Prime
        2. Deck/Roof Opening, Structural Reinforcing, Blocking, Insulation and Roof Flashing by Mechanical Construction (PCM) Prime
        3. Pipe Portals/ Pitch Pockets Furnished by Mechanical (PCM) Prime
        4. Pipe Portals/ Pitch Pockets Installed and Flashed by Mechanical Construction (PCM) Prime
    E. Rooftop Dunnage
        1. Furnished, coordinated, lifted/picked and installed by Mechanical Construction (PCM) Prime
        2. Deck/Roof Opening, Structural Reinforcing, Blocking, Insulation and Roof Flashing by Mechanical Construction (PCM) Prime
    F. Mechanical Equipment (RTUs):
        1. Furnished, hoisted/picked and installed by Mechanical (PCM) Prime
        2. Piping by Mechanical (PCM) Prime
        3. Ductwork by Mechanical (PCM) Prime
        4. Controls by Mechanical (PCM) Prime
        5. Electrical by Electrical (PCE) Prime
        6. Fire Alarm/ Shutdowns by Electrical (PCE) Prime

Temporary protection of open curbs prior to units being installed, will be provided and maintained, by the Mechanical Construction Contractor in cooperation of all other trades. Water infiltration as a result the Mechanical or Electrical Primes not re-protecting open roof curbs, will be the sole responsibility of that trade to reimburse the PCM Prime - to correct the temporary protection. Any damages to the interior finishes of the building, caused by water infiltration, will be the responsibility of that Prime Contractor causing the leak, to correct the damages per the terms of the General Conditions.

17. Under slab **MEP Trenching at New & Existing Slabs**:

    New Slabs: This Prime contractor will be responsible to coordinate with the PCM contractor and Construction Manager through the Contract Documents and the Coordination Drawings, for any under-slab piping. The Prime Contractor for Mechanical Construction (PCM) will be responsible to provide the trenching, bedding, backfill and compaction for such MEP under-slab items. Each MEP Prime Contractor (the PCP, PCM & PCE) will be responsible to provide a final layout to the PCM, prior to trenching. Each MEP Prime contractor will be responsible to level their piping with provided bedding from the PCM, testing the piping prior to back filling.

    Existing Slabs: Where existing slabs require new/modified underground MEP piping or conduit; The PCM will be responsible to survey/mark-out, sawcut, trench, lay bedding, backfill, dowel/reinforce and place new concrete level with existing floors. Each MEP Prime Contractor (the PCP, PCM & PCE) will be responsible to provide a final layout to the PCM, prior to trenching. Each MEP Prime contractor will be responsible to level their piping with provided bedding from the PCM, testing the piping prior to back filling.

1. Openings in Existing Systems: Each respective Prime Contractor will be responsible to provide their own openings through existing wall, floor, and ceiling systems not shown to be removed on the Architectural Drawings. Where openings for MEPs are required in new wall, floor or ceiling systems, the MC shall coordinate with the respective MEP Prime contractor to locate those openings and frame the system to incorporate the new opening.

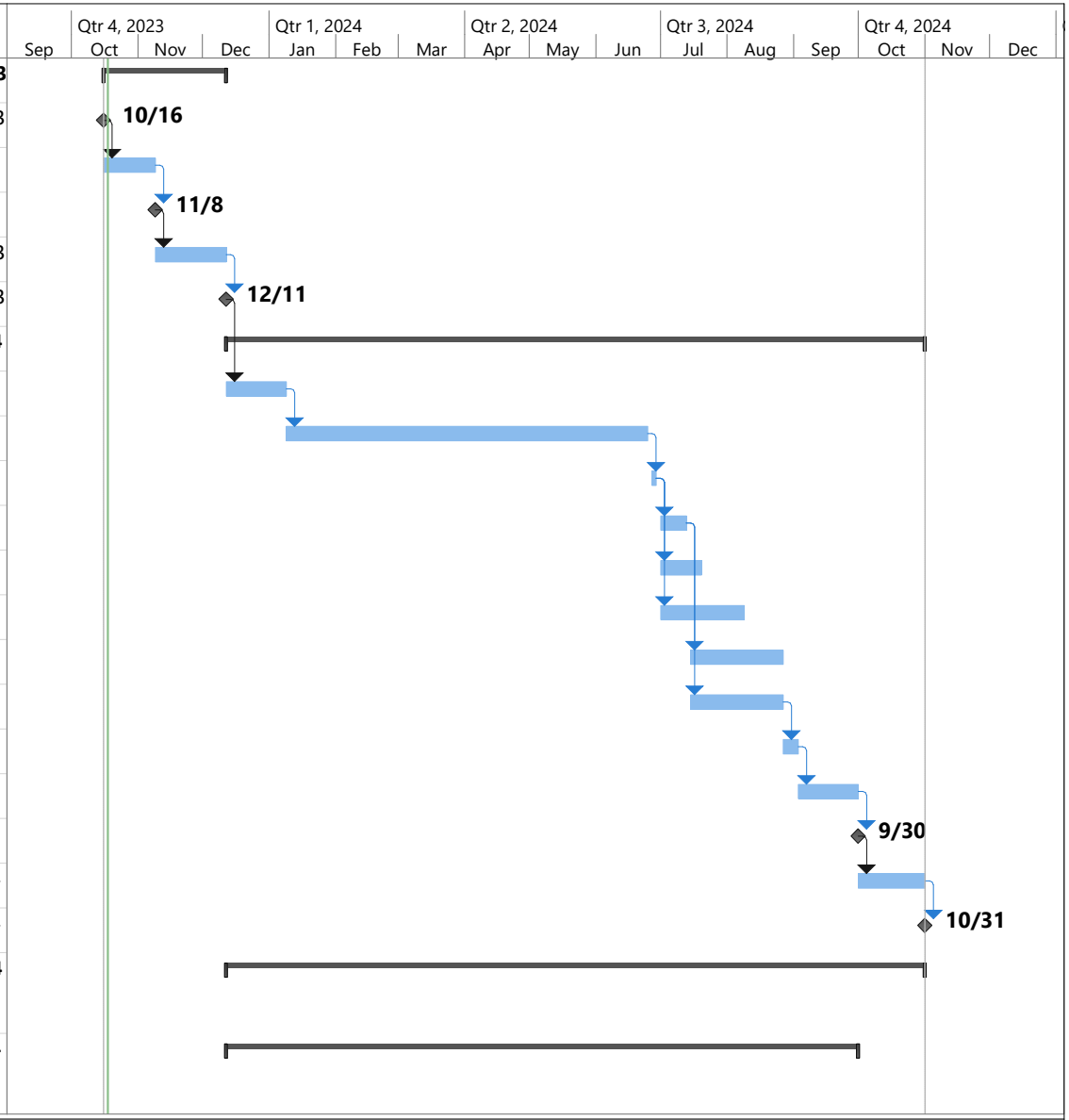
2. Core Drilling: Each respective Prime Contractor shall provide their own core drilling through existing and new wall, floor/slab or foundation systems.

3. Roof Systems: In any case, the PCM shall make all penetrations through the existing Roofing System with a qualified roofer who is certified on the existing roof system. Openings in the roof deck shall be coordinated by the respective contractor requiring the opening, and the opening shall be made by the PCM.

4. Existing Fire Alarm: This Prime Contractor (PCE) shall include in their base price all costs associated to temporarily maintain the existing fire alarm during construction, through a qualified vendor certified to work on the building's FA system. In the case that the fire alarm needs to be taken off-line, the EC is to provide a dedicated Firewatch per NFPA and NYSED's requirements.

   Any work which modifies the existing Fire Alarm shall take place after-hours in buildings that are occupied with Students and Faculty. This includes Student and Faculty occupancy over the Summer academic-recess months.

ID	Task Name	Duration	Start	Finish
1	**Bid & Award**	**41 days**	**Mon 10/16/23**	**Mon 12/11/23**
2	Release Bids	0 days	Mon 10/16/23	Mon 10/16/23
3	Bid Timeframe	18 days	Mon 10/16/23	Wed 11/8/23
4	Bid Opening	0 days	Wed 11/8/23	Wed 11/8/23
5	Interview Bidders	23 days	Thu 11/9/23	Mon 12/11/23
6	Award Bids	0 days	Mon 12/11/23	Mon 12/11/23
7	**Ridgeway ES HVAC & Filtration Upgra**	**233 days**	**Tue 12/12/23**	**Thu 10/31/24**
8	Submtitals & Shop Drawings	20 days	Tue 12/12/23	Mon 1/8/24
9	Fabrication of Equipment	120 days	Tue 1/9/24	Mon 6/24/24
10	Mobilize	2 days	Thu 6/27/24	Fri 6/28/24
11	Demo Existing Equipment	10 days	Mon 7/1/24	Fri 7/12/24
12	Demo Existing Controls	15 days	Mon 7/1/24	Fri 7/19/24
13	Install New Electrical	29 days	Mon 7/1/24	Thu 8/8/24
14	Install New Unit Ventilators	31 days	Mon 7/15/24	Mon 8/26/24
15	Install New Condensers	31 days	Mon 7/15/24	Mon 8/26/24
16	Start-up Equipment	5 days	Tue 8/27/24	Mon 9/2/24
17	Commisioning	20 days	Tue 9/3/24	Mon 9/30/24
18	Substantial Completion	0 days	Mon 9/30/24	Mon 9/30/24
19	Punchlist & Closeout	23 days	Tue 10/1/24	Thu 10/31/24
20	Contract Closed Out	0 days	Thu 10/31/24	Thu 10/31/24
21	**Mamaroneck Ave ES HVAC & Filtration Upgrades**	**233 days**	**Tue 12/12/23**	**Thu 10/31/24**
35	**George Washington ES Restroom Renovations**	**210 days**	**Tue 12/12/23**	**Mon 9/30/24**



Project: WPCSD_Ridgeway Unit Ventilators_Bid Schedule_10-18-23
Run Date: Wed 10/18/23
Company: Triton Construction Co.

Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

Note: The bidder is asked to use either black ink or typewriter (black ribbon) in completing this proposal form. Each line item amount must be completed. Failure to do so will be grounds for disqualification of the bidder.

BASE BID: Contract H – HVAC Construction Work

ITEM 1 – BONDS and INSURANCES

(written in words) _____($)

ITEM 2 – DIVISION 1 – GENERAL REQUIREMENTS

(written in words) _____($)

ITEM 3 – DIVISION 1 – PROJECT SUPERVISION

(written in words) _____($)

ITEM 4 – DIVISION 2 – EXISTING CONDITIONS & DEMOLITION WORK

(written in words) _____($)

ITEM 5 – DIVISION 7 – FIRE STOPPING

(written in words) _____($)

ITEM 6 – DIVISION 23 – PIPE, VALVES, FITTINGS, PIPE HANGERS AND SUPPORTS

(written in words)_____($)

ITEM 7 – DIVISION 23 – MECHANICAL SYSTEM IDENTIFICATION

(written in words)_____($)

ITEM 8 – DIVISION 23 – BALANCING OF AIR SYSTEMS

(written in words)_____($)

ITEM 9 – DIVISION 23 – PIPING & DUCTWORK INSULATION

(written in words)_____($)

ITEM 10 – DIVISION 23 – CONTROLS

(written in words) _____($)

ITEM 11 – DIVISION 23 – STEAM SPECIALTIES

(written in words) _____($)

ITEM 12 – DIVISION 23 – SHEET METAL WORK

(written in words)_____($)

ITEM 13 – DIVISION 23 – DIFFUSERS, REGISTERS AND GRILLES

(written in words) _____ ($)

ITEM 14 – DIVISION 23 – BOILERS

(written in words) _____ ($)

ITEM 15 – DIVISION 23 – AIR COOLED CONDENSING UNITS

(written in words) _____ ($)

ITEM 16 – DIVISION 23 – UNIT VENTILATOR

(written in words) _____ ($)

ITEM 17 – DIVISION 23 – FINNED-TUBE RADIATION HEATERS

(written in words)_____ ($)

ITEM 18 – AS-BUILT DRAWINGS

(written in words) _____ ($)

ITEM 19 – PROJECT CLOSEOUT

(written in words) _____ ($)

ALLOWANCE H1 – ALLOWANCE FOR GENERAL CONTINGENCY

(written in words) *Seventy Thousand Dollars and 00 Cents* (**$70,000.00**)

TOTAL BASE BID (ITEMS 1 –19 INCLUSIVE, PLUS ALLOWANCE H1)
(written in words) _____ ($)

ALTERNATES

The contractor shall clearly state whether cost indicated is to be added to or deducted from the base bid cost. Failure to clearly state same will be grounds for disqualification of the bidder.

All work included under this heading shall be subject to the general conditions of the project. All construction, workmanship and finishes required by the alternates shall be as specified in the applicable sections of the specifications manual.

The undersigned proposes and agrees that should the following alternates be accepted and included in the contract, the amount of the TOTAL BASE BID will be revised as follows. The undersigned further agrees that should the following Alternates be accepted, the alternate bid prices indicated shall be held and honored for a period of one year from the date of contract signing.

NUMBER	DESCRIPTION	COST
ALT-H1 (Deduct)	**Contractor to provide and install all equipment for Unit Ventilators and Condensers from an alternate manufacturer as per Section 238223 - Unit Ventilator in lieu of Daikin.**	**($)**

Note: The WHITE PLAINS CITY SCHOOL DISTRICT is exempt from Federal, New York State and local taxes. TOTAL AMOUNT BID shall be exclusive of all taxes.

EACH BIDDER SHALL SUBMIT WITH IT'S BID A SEPARATE SEALED LIST THAT NAMES THE SUBCONTRACTORS THAT THE BIDDER WILL USE TO PERFORM WORK AND THE AGREED UPON AMOUNT TO BE PAID FOR A.) HEATING, VENTILATION AND AIR-CONDITIONING WORK, B.) PLUMBING WORK AND C.) ELECTRICAL WORK. AFTER THE LOW BID IS ANNOUNCED, THE SEALED LIST OF SUBCONTRACTORS SUBMITTED BY THE APPARENT LOW BIDDER SHALL BE OPENED AND THE NAMES OF THE SUBCONTRACTORS ANNOUNCED. ANY CHANGE OF SUBCONTRACTOR OR AGREED UPON AMOUNT TO BE PAID SHALL REQUIRE THE APPROVAL OF THE PUBLIC OWNER, UPON A SHOWING OF "LEGITIMATE CONSTRUCTION NEED" FOR SUCH CHANGE.

"LEGITIMATE CONSTRUCTION NEED" SHALL INCLUDE, BUT NOT BE LIMITED TO:

A CHANGE IN PROJECT SPECIFICATIONS,
A CHANGE IN CONSTRUCTION MATERIAL COSTS,
A CHANGE IN SUBCONTRACTOR STATUS, OR
THE SUBCONTRACTOR HAS BECOME UNWILLING, UNABLE OR UNAVAILABLE TO PERFORM THE SUBCONTRACT.

THE SEALED LISTS OF SUBCONTRACTORS SUBMITTED BY ALL OTHER BIDDERS SHALL BE RETURNED TO THEM UNOPENED AFTER THE CONTRACT AWARD.

PAYMENTS TO SUBCONTRACTORS AND MATERIAL MEN MUST BE MADE WITHIN 7 CALENDAR DAYS AS OPPOSED TO 15 CALENDAR DAYS OF THE RECEIPT OF PAYMENT FORM THE PUBLIC OWNER. FAILURE TO PAY WITHIN 7 CALENDAR DAYS WILL RESULT IN INTEREST DUE FOR ALL CALENDAR DAYS SUBSEQUENT TO THE SEVENTH DAY THROUGH THE DATE THAT PAYMENT IS MADE.

THE BIDDER UNDERSTANDS THAT THE OWNER RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS AND TO WAIVE ANY INFORMALITIES IN THE BIDDING.

THE BIDDER AGREES THAT THE BID SHALL BE GOOD AND MAY NOT BE WITHDRAWN FOR A PERIOD OF **FORTY-FIVE (45)** CALENDAR DAYS AFTER THE SCHEDULED CLOSING TIME FOR RECEIVING BIDS.

THE BIDDER HAS SUBMITTED ALL REQUESTS FOR OTHER BRAND NAMES OR PRODUCTS NOT LISTED IN THE SPECIFICATIONS IN ACCORDANCE WITH ARTICLE 6(W) OF THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION.

SITE SUPERVISION

THE SUCCESSFUL CONTRACTOR IS TO PROVIDE FULL TIME SITE SUPERVISION FOR HIS OR HER STAFF, SUBCONTRACTORS AND SUPPLIERS FOR THE DURATION OF THIS PROJECT. A COMPETENT SUPERINTENDENT SHALL BE IN ATTENDANCE AT THE JOB SITE AT ALL TIMES WHEN WORK IS BEING PERFORMED UNDER THEIR CONTRACT. THE SUPERINTENDENT IS RESPONSIBLE TO VISIT THE JOB SITE DAILY WHEN WORK IS NOT BEING PERFORMED UNDER THEIR CONTRACT AND TO MONITOR THE OVERALL CONSTRUCTION PROGRESS. A QUALIFIED SITE SUPERINTENDENT MUST HAVE THE AUTHORITY TO REPRESENT AND MAKE DECISIONS FOR HIS OR HER COMPANY WITH REGARDS TO THE SUBJECT JOB, MUST BE ABLE TO GIVE GUIDANCE AND DIRECTION TO EMPLOYEES, SUBCONTRACTORS AND SUPPLIERS, AND MUST BE KNOWLEDGEABLE ABOUT THE WORK TO BE PROVIDED. **FAILURE TO PROVIDE A QUALIFIED SITE SUPERINTENDENT AT THE JOB SITE SHALL SUBJECT SAID PRIME CONTRACTOR TO A PENALTY OF $1,000 PER DAY FOR EVERY OCCURRENCE.**

TIME OF COMPLETION

ALL WORK UNDER THIS CONTRACT SHALL BE COMPLETED BETWEEN THE FOLLOWING HOURS, IN ACCORDANCE WITH THE FOLLOWING DATES:

WORK DAYS:	**Monday – Friday**
WORK HOURS:	**7:00 AM - 4:00 PM**
CONSTRUCTION START DATE:	**June 26, 2024**
SUBSTANTIAL COMPLETION:	**August 30, 2024**
FINAL COMPLETION:	**September 13, 2024**

IF NECESSARY, WEEKEND, HOLIDAY AND EVENING WORK SHALL BE PROVIDED TO ENSURE THE COMPLETION DATES LISTED ABOVE, AT THE SOLE COST AND EXPENSE OF THE BIDDER.

FAILURE OF THE CONTRACTOR TO COMPLETE WORK BY THE SPECIFIED TIME SHALL SUBJECT HIM/HER TO LIQUIDATED DAMAGES AS SET FORTH IN ARTICLE 13 OF THE GENERAL CONDITIONS.

THE ARCHITECT/ENGINEER SHALL ACT AS THE RECORD KEEPER OF CONTRACT DAYS; HE WILL BE THE SOLE JUDGE OF DELAYS CAUSED BY WEATHER. ONLY WEATHER DELAYS, AS ADJUDGED BY THE ARCHITECT/ENGINEER, WILL BE CONSIDERED FOR EXTENSIONS OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL SUBMIT A BI-WEEKLY REQUEST FOR DELAYS DUE TO WEATHER TO THE ARCHITECT/ENGINEER FOR APPROVAL. NO OTHER DELAY CLAIMS WILL BE ACCEPTED, FOR CREDIT TOWARDS THE PROJECT COMPLETION SCHEDULE, REGARDLESS OF THE SOURCE OF THE DELAY.

FAILURE OF THE CONTRACTOR TO COMPLETE ALL WORK SHOWN AND SPECIFIED IN THE CONTRACT DOCUMENTS, BY ALL OF THE SPECIFIED TIME FRAMES, SHALL SUBJECT THE CONTRACTOR TO LIQUIDATED DAMAGES, AS SET FORTH IN ARTICLE 13 OF THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, IN THE SUM OF ONE THOUSAND DOLLARS ($1,000.00) PER CALENDAR DAY. SUCH DAMAGES WILL COMMENCE ON THE DAY AFTER THE COMPLETION DATE OR THE DAY AFTER ANY LISTED MILESTONE DATE IN THE NOTICE TO PROCEED.

WITHIN TEN (10) CONSECUTIVE CALENDAR DAYS AFTER THE DATE OF THE NOTICE OF AWARD, THE BIDDER SHALL EXECUTE THE CONTRACT AND FURNISH THE REQUIRED PERFORMANCE BOND, PAYMENT BOND AND INSURANCES.

THE BOARD OF EDUCATION OF THE DISTRICT RESERVES THE RIGHT TO AWARD THIS CONTRACT TO OTHER THAN THE LOW BIDDER IF THE LAW SO PERMITS.

THE UNDERSIGNED HEREBY ACKNOWLEDGES RECEIPT OF THE FOLLOWING ADDENDA (IF ANY):

ADDENDUM NO.	DATED
_____	_____
_____	_____

SPECIFIC DAMAGES WILL BE ASSESSED AND DEDUCTED FROM AMOUNTS OTHERWISE DUE THE CONTRACTOR FOR ADDITIONAL INSPECTION (FIELD) AND CONTRACT ADMINISTRATION (OFFICE) TIME EXPENDED BY THE ARCHITECT/ENGINEER AND/OR OTHER CONSTRUCTION

EMPLOYEE(S) HIRED TO ADMINISTER OR OBSERVE THE CONTRACT, SHOULD THE CONTRACTOR COMPLETE THE CONTRACT BEYOND THE CONTRACT COMPLETION PERIOD SPECIFIED ABOVE.

SUCH DEDUCTION SHALL BE IN ACCORDANCE WITH THE ARCHITECT, ENGINEER'S, AND/OR OTHER CONSTRUCTION EMPLOYEE(S) STANDARD HOURLY BILLING RATES IN EFFECT AT THE TIME FOR THE SCHOOL DISTRICT.

THE REQUIREMENTS OF THE PROPOSAL HAVE BEEN COMPLETELY READ, UNDERSTOOD AND ACKNOWLEDGED BY THE BIDDER.

BIDDER: _____

BIDDER'S ADDRESS: _____

SIGNED BY: _____ TITLE: _____

DATE: _____

Telephone number where the contractor or a competent representative can accept a telephone message and provide a reasonable reply as soon as possible, but not later than twenty-four (24) hours:

DAY: (___) _____ NIGHT: (___) _____

FAX: (___) _____

FEDERAL I.D. NO. OR SOCIAL SECURITY NO.: _____

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

A. The contractor shall furnish and install packaged unit ventilator systems, of the capacities, performance, and configuration, as indicated in the unit schedule. Each unit shall be complete with factory furnished components and accessories as shown in the plans and as specified herein.

B. Electrical work required as an integral part of the temperature control work is indicated on the mechanical drawings, and is the responsibility of the HVAC contractor to hire the services of a temperature control contractor and/or system integrator contractor to provide a complete system to perform the sequence of operation shown, or as described in this specification. The full sequence of operation must be provided and installed by this contractor for all trades.

C. Power supply wiring from power source to power connection on terminal unit. Include starters, disconnects, and required electrical devices, except where specified as furnished, or factory-installed, by manufacturer.

D. Provide interlock wiring between electrically-operated terminal units; and between terminal units and field-installed control devices.

E. Interlock wiring specified, as factory-installed is work of this section.

F. Provide the following electrical work as work of this section:
   1. Control wiring between field-installed controls, indicating devices, and terminal unit control panels.
   2. Control wiring specified, as work of Division 23 for HVAC controls is work of that section.

1.03 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of terminal units, of types and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.

B. Units shall be tested and certified in accordance with ARI Standard 840.

C. Unit insulation and adhesive shall meet the requirements for flame spread rating of lower than 25 per ASTM E84 and smoke generation rating of lower than 50 per ASTM E84. Only closed cell insulation shall be used. The use of fiberglass insulation is not acceptable.

D. Each coil shall be factory tested for leakage at 350 psig air pressure with coil submerged in water.

E. Unit ventilators shall be listed by Underwriters Laboratories Inc. (U.L.) for the United States and Canada.

F. Motors shall conform to the latest applicable requirements of NEMA, IEEE, ANSI, and NEC standards.

G. Unit ventilation rate to be certified and tested per Air Conditioning and Refrigeration Institute (ARI) standard 840.

H. Unit to be certified and labeled compliant with the seismic design provisions of the International Building Code (IBC) Chapter 16 and independent test agency requirements of Chapter 17.

1.04 SUBMITTALS

A. Product Data: Submit manufacturer's specifications for terminal units showing dimensions, capacities, ratings, performance characteristics, gages and finishes of materials, and installation instructions.

B. Shop Drawings: Submit assembly-type shop drawings showing unit dimensions, construction details, and field connection details.

C. Wiring Diagrams: Submit manufacturer's electrical requirements for power supply wiring to terminal units. Submit manufacturer's ladder-type wiring diagrams for interlock and control wiring. Clearly differentiate between portions of wiring that are factory-installed and portions to be field-installed.

D. Samples: Submit 3 samples of each type of cabinet finish and color furnished.

E. Maintenance Data: Submit maintenance instructions, including lubrication instructions, filter replacement, motor and drive replacement, and spare parts lists. Include this data, product data, and shop drawings in maintenance manuals; in accordance with requirements of Division 1.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Handle terminal units and components carefully to prevent damage, breaking, denting and scoring. Do not install damaged terminal units or components; replace with new.

B. Store terminal units and components in clean dry place. Protect from weather, dirt, fumes, water, construction debris, and physical damage.

C. Comply with Manufacturer's rigging and installation instructions for unloading terminal units, and moving them to final location.

PART 2 - PRODUCTS

2.01 UNIT VENTILATORS

A. Basis of Design:
   1. Daikin.
   2. Acceptable Alternates:
      a. The District has previously executed a Board Resolution to standardize Daikin equipment for Unit Ventilators and Condensers throughout the District. As such the Base Bid shall include equipment as provided by Daikin. However, the District also reserves it right to entertain alternate manufacturers for this equipment and may be listed as Deduct Alternates. Supply Deduct Alternate along with alternative manufacturer within the space(s) provided. Acceptable alternate manufacturers include LG or others deemed equal by the design Engineer.

B. Cabinet and Chassis:

1. Unit frames shall be of unitized, welded construction, with structural elements aligned in an assembly jig prior to welding, to insure proper dimensions, rigidity, and squareness. Frames assembled with mechanical fasteners shall not be acceptable.
2. Internal sheet metal parts shall be constructed of galvanized steel to inhibit corrosion.
3. Exterior cabinet panels shall be fabricated from furniture grade steel of not less than 16 gauge steel with no sharp edges and no unsightly screw heads and shall receive an electro-statically applied powder paint, and be oven baked with environmentally friendly thermosetting urethane powder finish to provide a high quality appearance. Finish color shall be as selected by Architect from manufacturer's standard colors.
4. Exterior cabinet panels shall be fabricated from furniture grade steel of not less than 18 gauge steel with no sharp edges and shall receive an electrostatically applied powder paint, and be oven baked with environmentally friendly thermosetting urethane powder finish to provide a high quality appearance. Finish color shall be off- white.
5. Heating only units shall be suitable for the later addition of a cooling coil and related components, without chassis modification for a drain pan.
6. The interior areas of the unit ventilator shall be insulated for sound attenuation and to provide protection against condensation of moisture on or within the unit. The unit shall be provided with an ultra-quiet sound package consisting of acoustically matched low speed fans to fan housing, sound barrier insulation material (non-fiberglass) adhered to the bottom underside of the unit top panel, sides of the fan section and sound absorbing insulation (non-fiberglass) material applied to the unit front panel.
7. Units shall be constructed so that testing and troubleshooting can be accomplished in the end pockets of operating units, without affecting the normal air flow patterns through the unit.
8. Each unit shall be provided with a non-fused power interrupt switch that disconnects the main power to the unit for servicing or when the unit is to be shut down for an extended period of time. The fan motor and controls shall have the hot line(s) protected by factory installed cartridge type fuse(s).
9. The manufacturer shall have published cataloged sound data available for the engineer's review. Sound data shall have been conducted using a qualified reverberant room per ANSI S1.31 and ANSI S12.32. Sound test data shall be based on standard cfm at standard air (fixed density of air at 70F) in accordance with ARI procedures based upon ARI 350. The engineer shall have the right to reject equipment not conforming to the specified manufacturer's sound data, as a minimum.
10. The manufacturer shall have published cataloged sound data available for the engineer's review. Sound data shall have been conducted using a qualified reverberant room per ANSI S1.31 and ANSI S12.32. Sound test data shall be based on standard cfm at standard air (fixed density of air at 70F) in accordance with ARI procedures based upon ARI 350. The engineer shall have the right to reject equipment not conforming to the specified manufacturer's sound data, as a minimum.

C. Floor Units:
1. Floor mounted units shall have an integral pipe tunnel for convenient crossover of piping and a built-in metal wire raceway from right end compartment to left end compartment to contain any line voltage electrical wiring separate from the air stream. Line voltage wiring shall not be touchable in the air stream of the unit during normal maintenance procedures of oiling bearings or motors. Unit shall come standard with a factory installed and wired disconnect switch.
2. Unit top surface shall be supplied with a charcoal bronze textured finish, to resist scuffing, reduce glare and help hide fingerprints. Unit top shall have two access doors, one at each end (for access to motor and bearings for easy servicing). The front and ends shall be available in a selection of architecturally pleasing colors by the manufacturer, for selection by the Architect.
3. Unit discharge grille shall be constructed of continuous rounded edge steel bars to provide 10 degree vertical deflection. A 1/4" painted, galvanized mesh screen shall be provided

beneath the discharge grille to protect against objects being dropped through the discharge grille.

4. The unit top and grille shall be of a modular construction so that it is removable for service and maintenance.
5. The unit front surface shall be comprised of three separate removable panels. The controls and piping shall be accessible without removing the entire front panel. Panels shall be secured to the unit with recessed, tamper resistant, Allen head fasteners. Slots for flat head screwdrivers shall not be acceptable as tamper resistant.
6. An extended cabinet depth unit, 21 7/8” deep, shall incorporate a partial adapter back with an open pipe tunnel with the same features of the standard cabinet depth units with the additional capability of bringing in fresh air from 1” to 13” from the floor. The outdoor fresh air enclosure shall be insulated to form a thermal barrier. The vertical and horizontal insulated fresh air enclosure metal extensions shall have a 1” wide compressible gasket to form an airtight seal between the wall and the unit. The top shall be supported with metal braces. The space between the top extension and insulated fresh air enclosure shall arrive from the factory without the requirement to be field modified for the installation of piping or moving of a partition that would require re-sealing. A field removable horizontal support plate between the unit bottom and top shall not be acceptable.

D. Ceiling Units (Ceiling units shall be similar in construction to floor units, with the following additional features):
   1. Three bottom panels, two of which are hinged, shall be provided for ease of service access and handling. Retainer chains shall be provided to prevent sudden release of the hinged bottom panels. End panels shall be secured to the unit with recessed, tamper resistant, Allen head fasteners. Slots for flat head screwdrivers shall not be acceptable as tamper resistant.
   2. Ceiling mounted units shall have a built-in metal wire raceway from right end compartment to left end compartment to contain any line voltage electrical wiring separate from the air stream. Line voltage wiring shall not be touchable in the air stream of the unit during normal maintenance procedures of oiling bearings or motors.
   3. The discharge opening of the unit shall be fitted with a duct collar.
   4. A ceiling trim flange shall be provided for recessed units. The trim flange shall be 3-sided or 4-sided as required.
   5. The centerline of the cooling condensate drain shall be a minimum of 4" above the bottom of the unit to allow for appropriate trapping of the condensate disposal line.

E. Coils:
   1. Coil assembly shall be of a modular construction so that it is removable from the bottom of the unit.
   2. Coil assembly shall be of a modular construction so that it is removable from the front of the unit.
   3. All coils shall be installed in a draw through position to assure uniform air distribution over the full-face area of the coil, and an even unit discharge temperature.
   4. All heating and cooling coils shall be constructed with copper tubes and mechanically bonded aluminum corrugated plate type fins. All coils shall have aluminum individual unshared fin surfaces. An air break shall exist between coils.
   5. Water heating and cooling coils shall be furnished with a threaded drain plug at the lowest point and a manual air vent at the high point of the coil. A factory installed low temperature freezestat shall be provided on the leaving edge of the water heating coil in a wave-like configuration to sense multiple locations and shall react to possible freezing conditions. The unit-mounted controls shall incorporate this device.
   6. Steam heating exchanger elements shall be double tube (DT) steam distributing, freeze resistant type with same end (or for floor units, either same end or opposite end connections), as indicated on the plans. A pressure equalizing device (vacuum breaker) shall be factory installed to prevent the retention of condensate in the coil. The installing

contractor shall connect the equalizing device to the return line beyond the trap using the tubing provided.

F. Drain Pan:
1. All units (either heating only, heat/cool, cool only or reheat) shall come furnished with an insulated drain pan constructed of stainless steel. A drain outlet shall be provided on both ends of the drain pan with one outlet capped. The drain hand of connection shall be easily field-reversed by relocating the cap to the opposite end without disassembly of the unit or movement of the unit drain pan.
2. The drain pan shall be able to be sloped in either direction for proper condensate removal.
3. Drain shall be provided with a secondary, overflow drain connection on both ends of the pan.

G. Fans and Motor:
1. The fan and motor assembly shall be of a low speed design to assure maximum quietness and efficiency.
2. Fans shall be double-inlet, forward-curved, centrifugal type with offset aerodynamic blades. Fans and shaft shall be statically and dynamically balanced as an assembly in the unit before shipment.
3. Fan housings shall be constructed of galvanized steel incorporating logarithmic expansion for quiet operation. Fan and motor assembly shall be of the direct drive type. Belt drive fans shall not be allowed.
4. Motors shall be 115 volt, single phase, 60Hz, ECM with auto reset internal thermal overload device designed specifically for unit ventilator operation. Motors shall be located out of the conditioned air stream.
5. High Static units with external static pressures (ESP) up to 0.45 shall utilize an Electrically Commutated Motor (ECM).
6. All components of the fan/motor assembly shall be removable from the bottom of ceiling mounted units.
7. All components of the fan/motor assembly shall be removable from the top of floor-mounted units.
8. Units shall have sleeve type motor and fan shaft bearings , and shall not require oiling more than annually. All bearings shall be located out of the airstream. Bearings in the air stream are not acceptable.
9. ECM Motor speed shall be factory programed for three (3) speeds, HIGH-MEDIUM-LOW-OFF (not accessible from the exterior of the unit). Fan motor shall have hot leg protected by a factory installed cartridge fuse.

H. Valve Control Type Units:
1. Each unit shall be provided with a factory-installed metal blockoff to ensure all air is drawn from the filter through the coil. This shall be in addition to the outside front panel.

I. Outdoor & Room Dampers:
1. Each unit shall be provided with separate room air and outdoor air dampers.
2. The room air damper shall be two-piece, double-wall construction fabricated from aluminum, and be counterbalanced against back pressure to close by gusts of wind pressure, thereby preventing outdoor air from blowing directly into the room.
3. The outdoor air damper shall be two piece, double wall construction fabricated from galvanized steel, with ½" thick, 1½ lb. density glass-fiber insulation encapsulated between the welded blade halves for rigidity and to inhibit corrosion. The outdoor air damper shall have additional foam insulation on the exterior surface damper blade and on the ends of the outdoor air chamber. A single blade damper, which can be twisted and will leak air, will not be considered.
4. Dampers shall be fitted with blended mohair seals along all sealing edges. Pressure adhesive sponge neoprene or plastic clip-on brush type sealers for damper seals are not

acceptable. Rubber type gasket using pressure adhesive for fastening to metal and exposed to the outside air is not acceptable.

5. Dampers shall use the turned-metal principle on long closing ends with no metal-to-metal contact for proper sealing.
6. The damper shaft shall be mechanically fastened to the blade, and shall operate in bearings made of nylon or other material which does not require lubrication.

J. Filters:
1. Each unit ventilator shall be equipped with a one-piece filter located to provide filtration of the return air/outdoor air mixture, in lieu of separate filters for each air stream. The entire filter surface must be useable for filtration of 100% room air or 100% of outdoor air. The filter shall be easily accessible from the bottom, and removable in one piece without removal of the unit return air damper stop. The unit shall ship with a factory installed 1" thick fiberglass, single-use type.
2. Each unit ventilator shall be equipped with a one-piece filter located to provide filtration of the return air/outdoor air mixture, in lieu of separate filters for each air stream. The entire filter surface must be useable for filtration of 100% room air or 100% of outdoor air. The filter shall be easily accessible from the front, and removable in one piece without removal of the unit return air damper stop. The unit shall ship with a factory installed 1" thick fiberglass, single-use type.

K. Control Components:
1. The hot water or steam heating coil shall use a factory selectable, field installed, modulating control valve to modulate the heating medium during the heating cycle. Upon a power failure, the modulating heating valve shall spring return to the normally open position for flow of water. Modulating valves without spring return to the normal position upon a power failure shall not be acceptable. The modulating valves shall be of the 2-way or 3-way configuration as specified in the valve specifications.
2. The hot water or steam heating coil shall use a factory selectable, field installed, end of cycle control valve to control the heating medium during the heating cycle. Upon a power failure, the heating valve shall spring return to the normally open position for flow of water. Valves without spring return to the normal position upon a power failure shall not be acceptable. The valves shall be of the 2-way or 3-way configuration as specified in the valve specifications.
3. The unit ventilator shall come with a factory installed pre-wired control package (called DigitalReady) of Direct Digital Control (DDC) control components which facilitates field hook up of DDC Unit Ventilator Controllers (UVC) by others which are compatible with the factory installed sensors and actuators and capable of providing standard ASHRAE II cycle control sequence. Electrical wiring shall be isolated from the airstream. It shall be the entire responsibility of the Automatic Temperature Control (ATC) supplier to ensure the controls operate correctly and protect the unit. DigitalReady shall consist of the following components which are factory wired and powered:
    a. 75 VA 24-volt NEC Class 2 transformer (50 VA or less is not acceptable) for 24-volt power supply with a complete 24-volt power wiring harness terminating in the left-hand end compartment at three 10-pole Europa type 16 awg terminal blocks rated for 10 amps at 300 volts;
    b. Terminal strips hooked up with the fan motor start/stop relay;
    c. A factory installed Low Air Temperature Limit (Freezestat);
    d. Unit mounted 10K NTC (negative temperature coefficient) and 1K PTC (positive temperature coefficient) Discharge Air Temperature Sensors;
    e. Unit mounted 10K NTC and 1K PTC Outdoor Air Temperature Sensors;
    f. 24 VAC power wired to the damper actuators;
    g. Direct coupled, proportional control (0 to 10 Vdc, or 4 to 20 mA), 35 inch-pounds of torque Outdoor Air/Return Air Damper Actuator that spring-returns the outdoor air damper shut upon a loss of power;

h. Terminal locations for 24-volt power to one or two Modulating valves (by ATC control contractor);
i. Direct coupled floating point (tri-state) Modulating Valve Actuator, non-spring returned;
j. Terminal connectors for interface with a DDC UVC Controller (by ATC control contractor).

L. Control Functions:
1. The Unit Ventilator Digital Controller (here after referred to as UVC) shall support ASHRAE Cycle II operation. The control cycle shall be used to maintain the required minimum amount of ventilation whenever possible, which can be increased during normal operation for economizer cooling, but can also be reduced to prevent excessively cold discharge air temperatures.
2. Cool Mode:
3. Modulating Valve Control
4. Water Coil Leaving Air Temperature Thermostat (Freezestat)
a. A normally-closed Low Temperature Thermostat (Freezestat) shall be factory provided to detect low leaving air temperature conditions on the unit indoor air hot water coil. This thermostat shall be mounted on the discharge airside of the unit's hot water coil. The low temperature thermostat cutout shall be 38 deg. F (38 deg. C) +/-2 and the cut-in shall be 45 deg. F (38 deg. C) +/-2. When the low temperature thermostat detects low leaving air temperatures (contacts open) the following shall occur during Valve Control Heating operation: when the freezestat cuts-out the OAD shall close immediately, the heating modulating valve shall fully open immediately, any mechanical cooling shall be de-energized immediately. If heating is required, the modulating valve shall modulate, as needed, auxiliary heat may be used as needed. When the Freezestat resets or cuts-in the UVC shall return to normal operation.

M. Unit Ventilator Options / Accessories:
1. Classroom Matching Accessories
a. Furnish and install in accordance with manufacturer's printed instructions, matching accessories; shelf cabinets, sink and bubbler cabinets, and filler sections, where indicated on the plans. Colors to match the unit ventilator. All accessory section to be with draft-stop system where the unit ventilator is so indicated. Shelving lengths to be scaled from drawings. Top of shelving to be made of Formica. Sinks to be stainless steel. All sections to have adjustable kick plates, and leveling legs and slots for spline attachment to the unit ventilator matching edges.
2. Outdoor Air Intake Louver: Outdoor air intake louver shall be provided by unit ventilator manufacturer except as otherwise noted on the drawings. (SELECT one:)
a. Masonry wall intake louver shall be constructed with horizontal chevron type blades. Provide weep holes in the louver frame and diamond pattern expanded aluminum bird screen on the interior side. Louver shall be fabricated of extruded aluminum 6063-T5. The intake assembly and frame shall be 16 ga. horizontal chevron type aluminum blades in a 12 ga. frame, with manufacturer’s oven baked powder paint finish and color for selection by the Architect.
3.

PART 3 - EXECUTION

3.01 INSPECTION

A. Examine areas and conditions under which terminal units are to be installed. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.

3.02 INSTALLATION OF UNIT VENTILATORS

A. Install all equipment in strict accordance with manufacturer's instructions and so as to be compatible with the intent of the respective system performance requirement.

B. Locate unit ventilators as indicated, level and shim units, anchor to substrate.

C. Install piping as indicated.

D. Protect units with protective covers during balance of construction.

E. Coordinate all demolition of existing equipment and adjacent cabinetry with the Owner prior to the start of any work.

F. The System Integrator/Controls contractor shall be responsible for the integration of all factory provided unit mounted controls and unit communications as required/specified for unit integration into the Building Automation System and proper unit operation.

G. Contractor shall clean each unit and accessory section of construction dust and debris, prior to turning systems over to the owner.

H. Contractor shall install clean filters in each unit at time of system commissioning, and shall deliver to the owner one complete set of spare filters, and one spare motor of each type used in the project.

I. System Integrator/Controls contractor shall be responsible for the integration of all factory provided unit mounted controls and unit communications as required/specified for unit integration into the Building Automation System and proper unit operation.

J. Installer shall engage the services of manufacturer's factory trained service technician to provide check, test, and start-up of each unit ventilator system.

K. Contractor shall provide one-year warranty for furnishing parts and labor for replacing any part of the unit ventilator or accessory sections, which becomes defective in operation. Unit ventilator manufacturer's representative shall maintain a local stock of replacement parts to support the systems specified herein.

L. Contractor shall submit a completed “Check Test and Start Sheet" for each Unit Ventilator installed for verification of proper installation and start up.

M.

3.03 ELECTRICAL WIRING

A. General: Install electrical devices furnished by manufacturer not specified to be factory-mounted. Furnish copy of manufacturer's wiring diagram.

B. Verify that electrical wiring installation is in accordance with manufacturer's submittal. Do not proceed with equipment start-up until wiring installation is acceptable to equipment installer.

3.04 ADJUSTMENT AND CLEANING

A. General: After construction is completed, including painting, clean unit exposed surfaces, vacuum clean terminal coils and inside of cabinets.

B. Retouch any marred or scratched surfaces of factory-finished cabinets, using finish materials furnished by manufacturer. Provide extra touch up paint to owner.

C. Install new filter units for terminals requiring the same.

D. Test, adjusting, and balancing is specified in other Division 23 sections; not work of this section.

END OF SECTION 238223

White Plains City School District

AC and Ventilation Upgrades at Ridgeway Elementary School

225 RIDGEWAY
WHITE PLAINS, NY 10605

SED PROJECT CONTROL NUMBER 66-22-00-01-0-014-017

CONTRACT H - HEATING VENTILATION AND AIR CONDITIONING
CONTRACT E - ELECTRICAL CONSTRCTION

ABBREVIATIONS

AB	Anchor Bolt	FIN	Finish
A/C	Air Conditioning	FR	Fire Retardent
ACI	American Concrete Institute	FTG	Footing
ACST	Acoustic	GA	Gauge
ACT	Acoustical Ceiling Tile	GWB	Gypsum Wall Board
ACU	Air Conditioning Unit	GYP	Gypsum
AD	Access Door	GYP. BD.	Gypsum Board
ADJ	Adjustable	HC	Handicapped
A/E	Architect/Engineer	HM	Hollow Metal
AFF	Above Finish Floor	HOR	Horizontal
ALUM	Aluminum	HW	Hot Water
ANCH	Anchor	INSUL	Insulation/Insulating
ANSI	American National Standards Institute	INT	Interior
APA	Access Panel	LAV	Lavatory
APPROX	Approximately	LDR	Leader
ASPH	Asphalt	LT	Light
ASTM	American Society for Testing & Materials	MAX	Maximum
AWS	American Welding Society	MECH	Mechanical
B	Fire Blanket	MISC	Miscellaneous
BAL	Balance	MO	Masonry Opening
BB	Bulletin Board	MR	Moisture Resistant
BD	Board	NIC	Not in Contract
BLDG	Building	NTS	Not to Scale
BLK	Block	OC	On Center
BLKG	Blocking	OD	Outside Diameter
BM	Beam	PLYWD	Plywood
B.O.	Bottom Of	PSF	Pounds per Square Foot
BOL	Bottom Of Lintel	PSI	Pounds per Square Inch
BOT	Bottom	PTD	Painted
CEIL	Ceiling	PVC	Polyvinyl Chloride
CEM	Cement	R	Radius or Riser
CER	Ceramic	RCP	Reflected Ceiling Plan
CLO	Closet	RD	Roof Drain
CMU	Concrete Masonry Unit	REINF	Reinforced
COL	Column	RM	Room
CONC	Concrete	RO	Rough Opening
CONST	Construction	SIM	Similar
CONT	Continuous	SPEC	Specifications
CORR	Corridor	SQ	Square
CPT	Carpet	SS	Stainless Steel
DS	Downspout	STL	Steel
DW	Dishwasher	TEMP	Temperature
DWG	Drawing	TER	Terrazzo
EA	Each	THK	Thick
EL	Elevation	TYP	Typical
ELEC	Electric/Electrical	UTIL	Utility
ELEV	Elevator	VB	Vapor Barrier
EP	Electrical Panel	VCT	Vinyl Composition Tile
EPY	Epoxy Coating	VERT	Vertical
EQ	Equal	VTR	Vent Thru Roof
EQUIP	Equipment	WC	Water Closet
EXIST	Existing	WH	Water Heater
EXST	Exhaust	WWF	Welded Wire Fabric
FAI	Fresh Air Intake		
F.C.	Fire Code		
FD	Floor Drain		

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE 2015 INTERNATIONAL BUILDING CODE WITH 2017 NEW YORK STATE SUPPLEMENT AS WELL AS THE NEW YORK STATE EDUCATION DEPARTMENT MANUAL OF PLANNING STANDARDS, AND ALL OTHER APPLICABLE CODES, LAWS, STATUTES AS REQUIRED.
2. ALL NOTES APPEARING HEREIN, WITH THOSE ON VARIOUS DRAWINGS SHALL APPLY TO ALL DRAWINGS AND FORM PART OF THE CONTRACT DOCUMENTS.
3. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL DIMENSIONS, SQUARE FOOTAGES, LOCATIONS AND QUANTITIES OF ALL ITEMS AND/OR SPACES WHETHER INDICATED IN THE DRAWINGS OR NOT.
4. DO NOT SCALE MEASURE ANY DRAWING. VERIFY THE FIGURES, DIMENSIONS AND DESIGN INTENTION SHOWN ON THE DRAWINGS BEFORE BEGINNING LAYOUT OF THE WORK AND REPORT ANY ERRORS, INACCURACIES, OR CONFLICTS TO THE ARCHITECT/ENGINEER IN WRITING BEFORE BEGINNING ANY WORK.
5. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, LAWS AND STATUTES AS REQUIRED. STRICTLY ADHERE TO MANUFACTURER'S PRINTED INSTRUCTIONS.
6. VERIFY EXACT LAYOUT COMPATIBILITY WITH ALL EXISTING CONDITIONS BEFORE BEGINNING WORK.
7. DISTURB ONLY THOSE AREAS OF THE SITE AFFECTED BY RENOVATION, UNLESS NOTED OTHERWISE. PROTECT ALL OTHER AREAS. CONTRACTORS SHALL BE RESPONSIBLE FOR ALL PATCH AND REPAIR OF EXISTING FINISHES WHICH ARE DAMAGED DURING CONSTRUCTION.
8. EACH CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF 2017 ANSI A117.1 AND PROVIDE WHERE APPLICABLE ADA COMPLIANT BUILDING COMPONENTS.
9. THE OWNER RESERVES THE RIGHT AT ALL TIMES TO DELIVER, PLACE AND INSTALL EQUIPMENT AND FURNISHINGS AS THE WORK PROGRESSES SO LONG AS THERE IS NOT A CONFLICT WITH THE CONTRACTORS.
10. THE CONTRACTOR SHALL MAINTAIN AT THE SITE ONE RECORD COPY OF ALL DRAWINGS, SPECIFICATIONS AND APPROVED SHOP DRAWINGS AND APPROVED SAMPLES MARKED CURRENTLY TO RECORD ALL CHANGES DURING CONSTRUCTION.
11. ANY CHANGES TO THE SCOPE OF WORK OR IN THE CONSTRUCTION DETAILS, WHETHER DUE TO FIELD CONDITIONS OR OMISSION SHALL BE DOCUMENTED BY THE ARCHITECT PRIOR TO EXECUTION. ANY INCREASE OR DECREASE IN THE CONTRACT PRICE MUST BE APPROVED IN WRITING PRIOR TO EXECUTION.

DRAWING LIST

INFORMATIONAL DRAWINGS

G 000.00	GENERAL NOTES, MAPS, DRAWING LIST, STAGING PLAN, EXIT PLAN & LEGENDS
G 100.00	BUILDING CODE NOTES, FIRST FLOOR PLAN (REFERENCE ONLY)

MECHANICAL DRAWINGS

M 000.00	HVAC GENERAL NOTES AND LEGENDS
MD 110.00	MECHANICAL DEMOLITION FLOOR PLAN PART A
MD 111.00	MECHANICAL DEMOLITION FLOOR PLAN PART B
MD 112.00	MECHANICAL DEMOLITION FLOOR PLAN PART C & D
M 110.00	MECHANICAL FLOOR PLAN PART A
M 111.00	MECHANICAL FLOOR PLAN PART B
M 112.00	MECHANICAL FLOOR PLAN PART C
M 500.00	MECHANICAL DETAILS
M 600.00	MECHANICAL SCHEDULES SHEET 1
M 601.00	MECHANICAL SCHEDULES SHEET 2

ELECTRICAL DRAWINGS

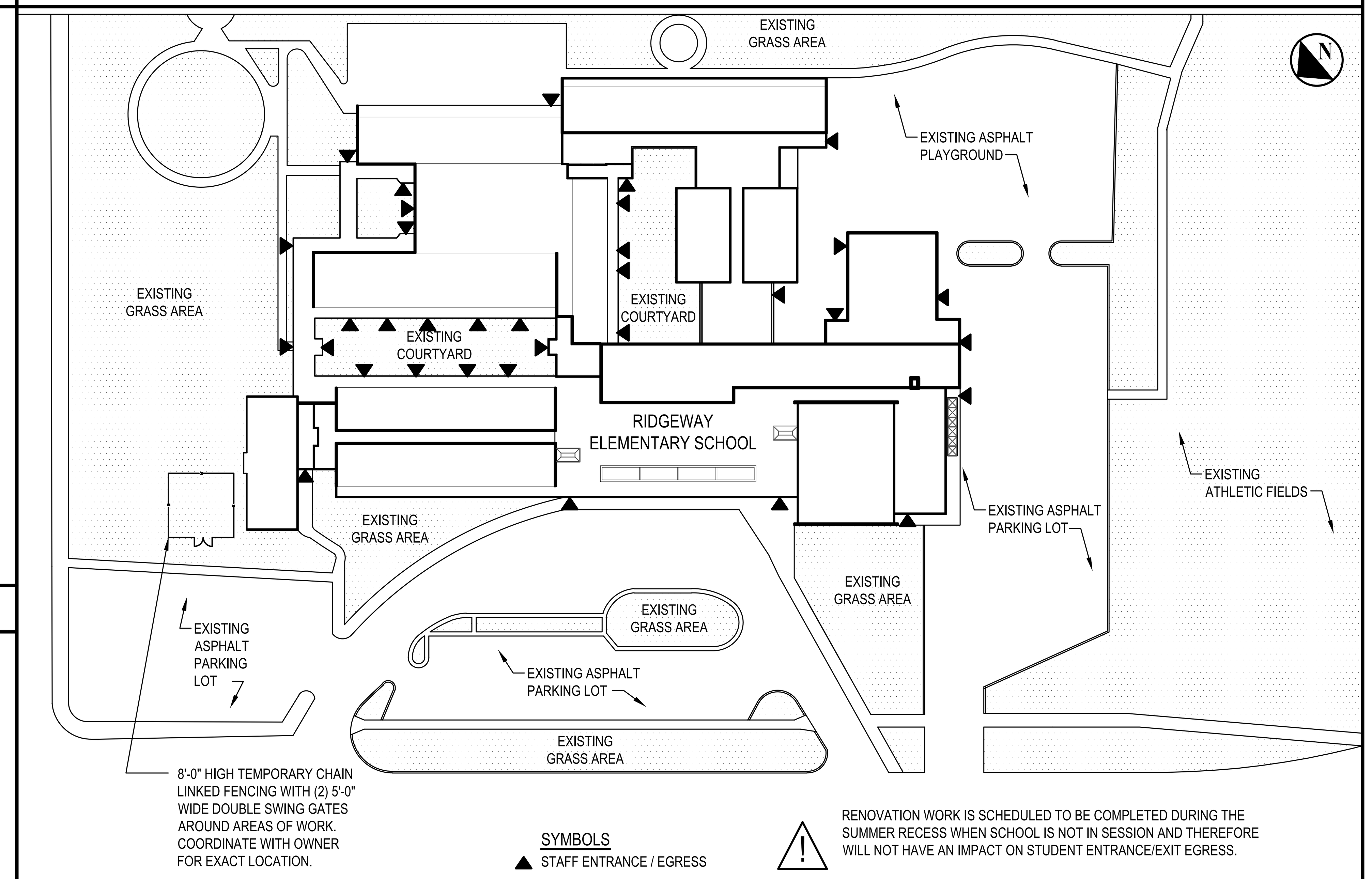
E 001.00	ELECTRICAL LEGENDS
ED 100.00	ELECTRICAL FIRST FLOOR FULL BUILDING DEMOLITION PLAN
ED 200.00	ELECTRICAL PARTIAL FIRST FLOOR DEMOLITION PLAN A
ED 201.00	ELECTRICAL PARTIAL FIRST FLOOR DEMOLITION PLAN B
ED 202.00	ELECTRICAL PARTIAL FIRST FLOOR DEMOLITION PLAN C
E 100.00	ELECTRICAL FIRST FLOOR BUILDING POWER PLAN
E 200.00	ELECTRICAL PARTIAL FIRST FLOOR HVAC POWER PLAN A
E 201.00	ELECTRICAL PARTIAL FIRST FLOOR HVAC POWER PLAN B
E 202.00	ELECTRICAL PARTIAL FIRST FLOOR HVAC POWER PLAN C
E 300.00	ELECTRICAL DETAILS AND SINGLE LINE DIAGRAMS
E 400.00	ELECTRICAL SCHEDULES
E 500.00	ELECTRICAL SWITCHBOARD ELEVATION

1

STAGING NOTES

1. POST SIGNS INDICATING CONSTRUCTION AREA AND CONSTRUCTION EMPLOYEE ENTRANCE.
2. CONSTRUCTION FENCE TO BE 8'-0" HIGH CHAIN LINK FENCE LOCATED A MINIMUM OF 15'-0" FROM ALL WINDOW OPENINGS. ALL GATES ARE TO BE LOCKED AT ALL TIMES, EXCEPT FOR WHEN A WORKER IS IN ATTENDANCE TO PREVENT UNAUTHORIZED ENTRY.
3. CONTRACTOR IS TO STAGE ON THE SITE IN SUCH A MANNER AS TO NOT BLOCK OR ENCROACH UPON EXISTING EXITS/ENTRANCES TO BUILDING, AND VEHICLE ACCESS.
4. CONTRACTOR SHALL RESTORE ALL STAGING AREAS TO PRE-CONSTRUCTION CONDITION, UPON COMPLETION OF WORK IN THAT AREA.

STAGING PLAN



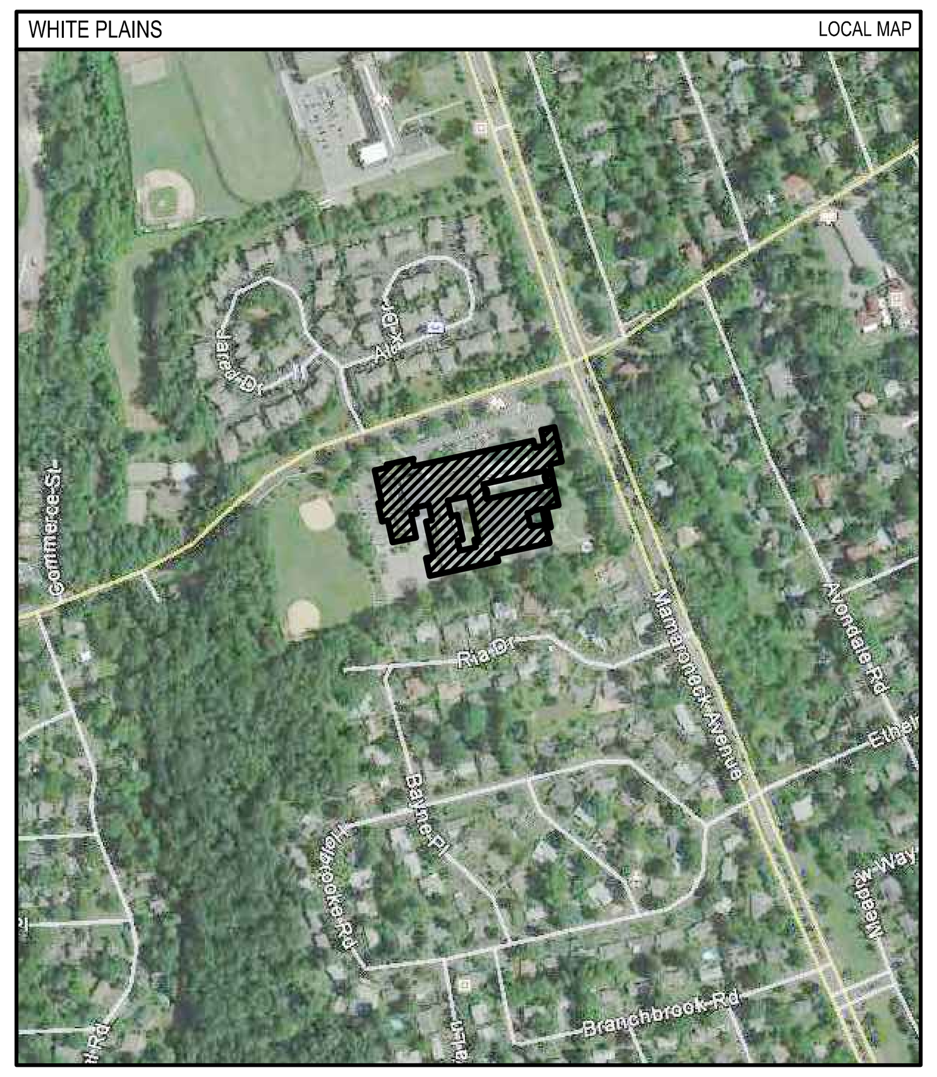
SYMBOLS
▲ STAFF ENTRANCE / EGRESS

RENOVATION WORK IS SCHEDULED TO BE COMPLETED DURING THE SUMMER RECESS WHEN SCHOOL IS NOT IN SESSION AND THEREFORE WILL NOT HAVE AN IMPACT ON STUDENT ENTRANCE/EXIT EGRESS.

LOCATION MAPS

N

WHITE PLAINS — LOCAL MAP



SYMBOLS LEGEND

GYMNASIUM -	ROOM DESIGNATION
1 / A5.0	SECTION MARK
1 / A5.1	DETAIL SYMBOL
1 / A4.0	ELEVATION KEY
A B C D	INTERIOR ELEVATION REFERENCE
	ELEVATION LINE
5	REVISION
3	PARTITION TYPE

GYPSUM
CONCRETE
AGGREGATE SUB-BASE
EARTH
BATT INSULATION
PLYWOOD
RIGID INSULATION
STEEL
WOOD
WOOD BLOCKING

UNIFORM SAFETY STANDARDS - FOR SCHOOL CONSTRUCTION AND MAINTENANCE PROJECTS

1. "THE OCCUPIED PORTION OF ANY SCHOOL BUILDING SHALL ALWAYS COMPLY WITH THE MINIMUM REQUIREMENTS NECESSARY TO MAINTAIN A CERTIFICATE OF OCCUPANCY."
2. SCHOOL AREAS TO BE DISTURBED DURING RENOATION OR DEMOLITION ACTIVITIES HAVE BEEN TESTED AND FOUND TO CONTAIN ASBESTOS. THESE AREAS WILL BE ABATED IN ACCORDANCE WITH SPECIFICATION SECTION 028200. A COPY OF THE TEST RESULTS IS INCLUDED WITHIN THE ENVIRONMENTAL REPORT FOUND IN THE APPENDIX OF THE PROJECT MANUAL FOR THIS PROJECT.
3. "GENERAL SAFETY AND SECURITY STANDARDS FOR CONSTRUCTION PROJECTS:
   (1) ALL CONSTRUCTION MATERIALS SHALL BE STORED IN A SAFE AND SECURE MANNER.
   (2) FENCES AROUND CONSTRUCTION SUPPLIES OR DEBRIS SHALL BE MAINTAINED.
   (3) GATES SHALL ALWAYS BE LOCKED UNLESS A WORKER IS IN ATTENDANCE TO PREVENT UNAUTHORIZED ENTRY.
   (4) DURING EXTERIOR RENOVATION WORK, OVERHEAD PROTECTION SHALL BE PROVIDED FOR ANY SIDEWALKS OR AREAS IMMEDIATELY BENEATH THE WORK SITE OR SUCH AREAS SHALL BE FENCED OFF AND PROVIDED WITH WARNING SIGNS TO PREVENT ENTRY.
   (5) WORKERS SHALL BE REQUIRED TO WEAR PHOTO-IDENTIFICATION BADGES AT ALL TIMES FOR IDENTIFICATION AND SECURITY PURPOSES WHILE WORKING AT OCCUPIED SITES."
4. "SEPARATION OF CONSTRUCTION AREAS FROM OCCUPIED SPACES: CONSTRUCTION AREAS WHICH ARE UNDER THE CONTROL OF A CONTRACTOR AND THEREFORE NOT OCCUPIED BY DISTRICT STAFF OR STUDENTS SHALL BE SEPARATED FROM OCCUPIED AREAS. PROVISIONS SHALL BE MADE TO PREVENT THE PASSAGE OF DUST AND CONTAMINANTS INTO OCCUPIED PARTS OF THE BUILDING. PERIODIC INSPECTION AND REPAIRS OF THE CONTAINMENT BARRIERS MUST BE MADE TO PREVENT EXPOSURE TO DUST OR CONTAMINANTS. GYPSUM BOARD MUST BE USED IN EXIT WAYS OR OTHER AREAS THAT REQUIRE FIRE RATED SEPARATION. HEAVY DUTY PLASTIC SHEETING MAY BE USED ONLY FOR A VAPOR, FINE DUST OR AIR INFILTRATION BARRIER, AND SHALL NOT BE USED TO SEPARATE OCCUPIED SPACES FROM CONSTRUCTION AREAS.
   (1) A SPECIFIC STAIRWELL AND/OR ELEVATOR SHALL BE ASSIGNED OR CONSTRUCTION WORKER USE DURING WORK HOURS. IN GENERAL, WORKERS MAY NOT USE CORRIDORS, STAIRS OR ELEVATORS DESIGNATED FOR STUDENTS OR SCHOOL STAFF. WHERE NO STAIRWELL AND OR ELEVATOR IS ASSIGNED, WORKERS MUST ENTER THE CONSTRUCTION SPACES DIRECTLY FROM THE BUILDING EXTERIOR.
   (2) LARGE AMOUNTS OF DEBRIS MUST BE REMOVED BY USING ENCLOSED CHUTES OR A SIMILAR SEALED SYSTEM. THERE SHALL BE NO MOVEMENT OF DEBRIS THROUGH HALLS OF OCCUPIED SPACES OF THE BUILDING. NO MATERIAL SHALL BE DROPPED OR THROWN OUTSIDE THE WALLS OF THE BUILDING.
   (3) ALL OCCUPIED PARTS OF THE BUILDING AFFECTED BY RENOVATION ACTIVITY SHALL BE CLEANED AT THE CLOSE OF EACH WORKDAY. SCHOOL BUILDINGS OCCUPIED DURING A CONSTRUCTION PROJECT SHALL MAINTAIN REQUIRED HEALTH, SAFETY AND EDUCATIONAL CAPABILITIES AT ALL TIMES THAT CLASSES ARE IN SESSION."
5. A PLAN DETAILING HOW EXITING REQUIRED BY THE APPLICABLE BUILDING CODE WILL BE MAINTAINED.
6. WORK UNDER THIS CONTRACT WILL BE CONDUCTED DURING THE SUMMER RECESS WHEN THE BUILDING IS UNOCCUPIED. IF THE BUILDING BECOMES OCCUPIED THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ALL EXISTING MEANS OF EGRESS IN A CLEAR AND FREE MANNER, INCLUDING THE STORAGE OF MATERIALS AND STAGING OF EQUIPMENT ON THE SITE. IF ANY PORTION OF THE BUILDING DOES BECOME OCCUPIED THE ARCHITECT WILL PROVIDE A DETAILED PLAN FOR EXITING, OVERHEAD PROTECTION AND EGRESS IN ACCORDANCE WITH APPLICABLE BUILDING CODES.
7. A PLAN DETAILING HOW ADEQUATE VENTILATION WILL BE MAINTAINED DURING CONSTRUCTION.
8. IF A PORTION OF THE BUILDING IS TO BECOME OCCUPIED DURING THE CONSTRUCTION PROCESS THE CONTRACTOR SHALL CLOSE OFF ALL INTAKES, OPENINGS, AND MECHANICAL VENTILATION SYSTEMS ADJACENT TO THE WORK AREA. THE ARCHITECT SHALL ASSIST THE CONTRACTOR IN DEVELOPING A PLAN TO PROVIDE ALTERNATE MEANS OF FRESH AIR TO ALL OCCUPIED SPACES.

   "CONSTRUCTION AND MAINTENANCE OPERATIONS SHALL NOT PRODUCE NOISE IN EXCESS OF 60 DBA IN OCCUPIED SPACES OR SHALL BE SCHEDULED FOR TIMES WHEN THE BUILDING OR AFFECTED BUILDING SPACES ARE NOT OCCUPIED OR ACOUSTICAL ABATEMENT MEASURES SHALL BE TAKEN."

   "THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF CHEMICAL FUMES, GASES, AND OTHER CONTAMINATES PRODUCED BY WELDING, GASOLINE OR DIESEL ENGINES, ROOFING, PAVING, PAINTING, ETC. TO ENSURE THEY DO NOT ENTER OCCUPIED PORTIONS OF THE BUILDING OR AIR INTAKES." ALL VENTS SHALL BE SEALED TO PREVENT CONTAMINANTS FROM THE CONSTRUCTION AREA FROM ENTERING THE OCCUPIED AREAS OF THE BUILDING.
9. "THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ACTIVITIES AND MATERIALS WHICH RESULT IN "OFF-GASSING" OF VOLATILE ORGANIC COMPOUNDS SUCH AS GLUES, PAINTS, FURNITURE, CARPETING, WALL COVERING, DRAPERY, ETC. ARE SCHEDULED, CURED OR VENTILATED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS BEFORE A SPACE CAN BE OCCUPIED."
10. "LARGE AND SMALL ASBESTOS ABATEMENT PROJECTS AS DEFINED BY 12NYCRR56 SHALL NOT BE PERFORMED WHILE THE BUILDING IS OCCUPIED." IT IS OUR INTERPRETATION THAT THE TERM "BUILDING", AS REFERENCED IN THIS SECTION, MEANS A WING OR MAJOR SECTION OF A BUILDING THAT CAN BE COMPLETELY ISOLATED FROM THE REST OF THE BUILDING WITH SEALED NON COMBUSTIBLE CONSTRUCTION. THE ISOLATED PORTION OF THE BUILDING MUST CONTAIN EXITS THAT DO NOT PASS THROUGH THE OCCUPIED PORTION AND VENTILATION SYSTEMS MUST BE PHYSICALLY SEPARATED AND SEALED AT THE ISOLATION BARRIER.
11. EXTERIOR WORK SUCH AS ROOFING, FLASHING, SIDING, OR SOFFIT WORK MAY BE PERFORMED ON OCCUPIED BUILDINGS PROVIDED PROPER VARIANCES ARE IN PLACE AS REQUIRED, AND COMPLETE ISOLATION OF VENTILATION SYSTEMS AND AT WINDOWS IS PROVIDED. CARE MUST BE TAKEN TO SCHEDULE WORK SO THAT CLASSES ARE NOT DISRUPTED BY NOISE OR VISUAL DISTRACTION.

    MINOR ASBESTOS PROJECTS DEFINED BY 12NYCRR56 AS AN ASBESTOS PROJECT INVOLVING THE REMOVAL, DISTURBANCE, REPAIR, ENCAPSULATION, ENCLOSURE OR HANDLING OF 10 SQUARE FEET OF ASBESTOS OR ASBESTOS MATERIAL MAY BE PERFORMED IN UNOCCUPIED AREAS OF AN OCCUPIED BUILDING IN ACCORDANCE WITH 12NYCRR56.

    SPECIFIC AREAS HAVE BEEN TESTED AND FOUND TO CONTAIN LEAD AS DESCRIBED IN THE PROJECT MANUAL. THESE AREAS WILL BE ABATED IN ACCORDANCE WITH SPECIFICATION SECTION 026000.
12. UNDER NEW YORK STATE LAW SMOKING IS PROHIBITED ON SCHOOL GROUNDS. EMPLOYEES FOUND TO BE SMOKING ON SCHOOL GROUNDS SHALL BE ORDERED OFF SITE AND A SECOND OFFENSE WILL BE GROUNDS FOR PERMANENT REMOVAL FROM PROJECT. LEGAL PENALTIES MAY ALSO BE APPLIED.

    ALL CONTRACTORS SHALL TAKE EVERY PRECAUTION AND SHALL PROVIDE SUCH EQUIPMENT AND FACILITIES AS ARE NECESSARY OR REQUIRED FOR THE SAFETY OF ITS EMPLOYEES. IN CASE OF AN ACCIDENT, FIRST AID SHALL BE ADMINISTERED TO ANY WHO MAY BE INJURED IN THE PROGRESS OF THE WORK. IN ADDITION, THE CONTRACTOR SHALL BE PREPARED FOR THE REMOVAL TO THE HOSPITAL FOR TREATMENT OF ANY EMPLOYEE EITHER SERIOUSLY INJURED OR ILL.

    THE CONTRACTOR FOR GENERAL CONSTRUCTION SHALL PROVIDE TEMPORARY WEATHER-TIGHT AND INSULATED ENCLOSURES AS MAY BE REQUIRED BY THE SCOPE OF WORK FOR ALL EXTERIOR OPENINGS SO AS TO PROTECT ALL WORK FROM THE WEATHER, AND TO PROVIDE SECURITY AGAINST UNAUTHORIZED ENTRY. ENCLOSURES SHALL NOT CREATE DEAD END CONDITIONS, REQUIRED EXITS SHALL BE MAINTAINED FREE AND CLEAR.

H2M architects + engineers
2700 Westchester Ave., Suite 415
Purchase, NY 10577
914.358.5623 • www.h2m.com

CONSULTANTS:

MARK	DATE	DESCRIPTION
	10-16-23	FINAL BID DOCUMENT
1	11-01-20	ADDENDUM #1

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:

PROJECT No.:	DATE:	SCALE:
WPSD 2204	OCTOBER 2023	

CLIENT
White Plains City School District

AC and Ventilation Upgrades at Ridgeway Elementary School

225 Ridgeway
White Plains, NY 10605

SED PROJECT CONTROL NO. 66-22-00-01-0-014-017

CONTRACT
ALL CONTRACTS

STATUS
FINAL BID DOCUMENT

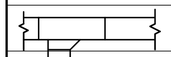
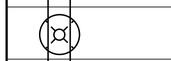
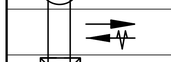
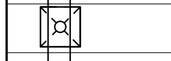
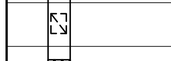
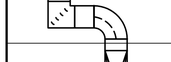
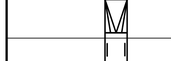
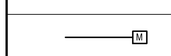
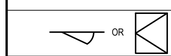
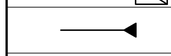
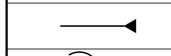
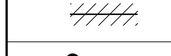
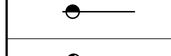
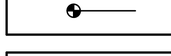
SHEET TITLE
GENERAL NOTES, MAPS, DRAWINGS LIST, STAGING PLAN, EXIT PLAN AND LEGENDS

DRAWING No.
G000.00

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
BCU	BUILDING CONTROL UNIT
BTU	BRITISH THERMAL UNIT
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
COMM.	COMMUNICATION
CV	CONTROL VALVE
(D)	DEMOLISH
DB	DRY BULB
DCV	DEMAND CONTROLLED VENTILATION
DEG. F	DEGREES FAHRENHEIT
DIA	DIAMETER
DX	DIRECT EXPANSION
'E'	ELECTRICAL CONTRACTOR
(E)	EXISTING
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATING
ESP	EXTERNAL STATIC PRESSURE
FAI	FRESH AIR INTAKE
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FT. H20	FEET OF WATER
'G'	GENERAL CONSTRUCTION CONTRACTOR
GPM	GALLONS PER MINUTE
GPH	GALLONS PER HOUR
H	HEIGHT
'H'	HVAC CONTRACTOR
HP	HORSEPOWER
IN.	INCHES
IN. W.C. (W.G.)	INCHES WATER COLUMN (WATER GAUGE)
KW	KILOWATTS
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LCD	LIQUID CRYSTAL DISPLAY
LDB	LEAVING DRY BULB TEMPERATURE
LWB	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
M	METER
MAX	MAXIMUM
MBH	1,000 BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MIN	MINIMUM
MNF	MANUFACTURER
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OAI	OUTDOOR AIR INTAKE
OD	OUTER DIAMETER
OED	OPEN ENDED DUCT
'P'	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PSIG	LBS / SQUARE INCH (GAUGE PRESSURE)
RD	ROOF DRAIN
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
SAT	SUPPLY AIR TEMPERATURE
SEER	SEASONAL ENERGY EFFICIENCY RATING
TEMP	TEMPERATURE
TG	TRANSFER GRILLE
TYP	TYPICAL
VFD	VARIABLE FREQUENCY DRIVE
W	WIDTH
WB	WET BULB
WMS	WIRE MESH SCREEN

DUCTWORK LEGEND

SYMBOL	ABBREV	DESCRIPTION
		DUCTWORK BRANCH CONNECTION
	VD	VOLUME DAMPER
	CD	ROUND FACE SUPPLY DIFFUSER
	SEE AIR DEVICE SCHEDULE	SIDEWALL SUPPLY, RETURN OR EXHAUST GRILLE/REGISTER
	SEE AIR DEVICE SCHEDULE	SQUARE FACE SUPPLY DIFFUSER
	SEE AIR DEVICE SCHEDULE	BOTTOM RETURN OR EXHAUST GRILLE/REGISTER
	FC	FLEXIBLE CONNECTION
		TURNING VANES
		RECTANGULAR TO ROUND TRANSITION
	AL	ACOUSTICAL LINING
		END CAP
	SEE AIR DEVICE SCHEDULE	SUPPLY DIFFUSER WITH DIRECTIONAL FLOW (SOLID HATCH INDICATES BLANK OFF PANEL)
		SUPPLY DUCT DROP (TURN DOWN)
		RETURN/EXHAUST DUCT DROP (TURN DOWN)
		SUPPLY DUCT RISE
		RETURN/EXHAUST DUCT RISE
	DSD	DUCT SMOKE DETECTOR
	MD	MOTORIZED DAMPER WITH ACTUATOR
	AD	ACCESS DOOR
	FD/AD	FIRE DAMPER WITH ACCESS DOOR
	FSD/AD	FIRE SMOKE DAMPER WITH ACCESS DOOR
		FAN
		WORK TO BE REMOVED
		POINT OF DISCONNECTION FROM EXISTING
		POINT OF CONNECTION TO EXISTING

CONTROLS LEGEND

SYMBOL	ABBREV	DESCRIPTION
C		CARBON MONOXIDE SENSOR
T		THERMOSTAT
S		DIGITAL TEMPERATURE SENSOR
H		HUMIDITY SENSOR
CZ		CARBON DIOXIDE SENSOR
P		PRESSURE SENSOR

PIPING LEGEND

SYMBOL	ABBREV	DESCRIPTION
		NEW WORK
		PIPING DOWN/ PIPING UP
		BALL VALVE WITH HOSE END CONNECTION
	TH	THERMOMETER
	U	UNION
	FPC	FLEXIBLE PIPE CONNECTION
		DIRECTION OF FLOW
	PSR	PRESSURE SAFETY AND RELIEF VALVE
	PRV	PRESSURE REDUCING VALVE
	BV	BALL VALVE
	BA	BALANCING VALVE
	BFV	BUTTERFLY VALVE
		TEMPERATURE SENSOR WITH THERMOWELL
	GA	GATE VALVE
	GB	GLOBE VALVE
	AV	AUTOMATIC AIR VENT
	CV	2-WAY ELECTRONIC CONTROL VALVE
	CV	3-WAY ELECTRONIC CONTROL VALVE
	CV	2-WAY PNEUMATIC CONTROL VALVE
	CV	3-WAY PNEUMATIC CONTROL VALVE
	STR	STRAINER WITH BLOW OFF VALVE WITH HOSE END CONNECTION
	FD	FLOOR DRAIN
		AIR SEPARATOR
		STEAM TRAPS (INDICATE TYPE)
	CH	CHECK VALVE
	PG	PRESSURE GAUGE WITH GAUGE COCK
	RED	REDUCER
	CO	CLEANOUT END CAP
		PIPE GUIDE
		PIPE ANCHOR
		CAPPED PIPE
		PUMP
		WORK TO BE REMOVED
		POINT OF DISCONNECTION FROM EXISTING
		POINT OF CONNECTION TO EXISTING
	TDV	TRIPLE DUTY VALVE

GENERAL NOTES

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
2. THE CONTRACTOR, BY PRESENTING THEIR BID FOR THE WORK, REPRESENTS THAT HE/SHE HAS INSPECTED THE SITE AND IS COMPLETELY FAMILIAR WITH THE SCOPE OF WORK AND ALL FIELD CONDITIONS RELATED TO, AND AFFECTING THE WORK AND ITS PERFORMANCE. EXCEPTIONS AFFECTING THE WORK AND ITS PERFORMANCE, OR CONFLICTS BETWEEN FIELD CONDITIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE SUBMISSION OF BIDS.
3. PERFORM ALL WORK IN ACCORDANCE WITH THE PLUMBING CODE, FIRE CODE, MECHANICAL CODE, ENERGY CONSERVATION CONSTRUCTION CODE, AND FUEL GAS CODE OF NEW YORK STATE AND THE REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
4. COMPLY WITH THE NATIONAL ELECTRIC CODE AND THE REQUIREMENTS OF DIVISION 26 FOR ALL ELECTRICAL INSTALLATIONS.
5. FIRE STOP ALL OPENINGS IN FIRE RATED CONSTRUCTION FOR PIPING, DUCTWORK, CONDUIT, ETC. PROVIDE FIRE DAMPERS AND ACCESS DOORS IN ALL OPENINGS IN FIRE RATED FLOORS, PARTITIONS, AND WALLS FOR DUCTWORK AS PER THE MECHANICAL CODE OF NEW YORK STATE. (SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED CONSTRUCTION.)
6. DO NOT SCALE DRAWINGS. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. COORDINATE CONTRACT DOCUMENTS, PROJECT REQUIREMENTS, WORK OF OTHERS, AND EQUIPMENT AND MATERIALS PURCHASED WITH FIELD DIMENSIONS. INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S REQUIREMENTS TO PROVIDE PROPER CLEARANCE FOR INSTALLATION, OPERATION, AND MAINTENANCE. CONTRACTOR'S INTENDED MEANS AND METHODS OF INSTALLATION AND CONTRACTOR'S FABRICATED ITEMS SHALL ENSURE A PROPER "FIT" AND INSTALLATION. BRING ANY CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER DURING THE SUBMITTAL PHASE FOR RESOLUTION PRIOR TO PURCHASING ANY EQUIPMENT.
7. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS, WHERE HEADROOM AND SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH INSTALLATION. MAINTAIN A MINIMUM OF 6'-8" CLEARANCE FROM FINISHED FLOOR TO UNDERSIDE OF PIPES, DUCTS, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.
8. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION. MAKE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK. OBTAIN THE APPROVAL OF THE ARCHITECT/ENGINEER FOR MODIFICATIONS.
9. PROVIDE PRODUCTS OF ONE MANUFACTURER WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF MATERIAL OR EQUIPMENT IS REQUIRED.
10. INSTALL ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS. REFER TO DETAILS FOR ADDITIONAL PIPING AND EQUIPMENT INSTALLATION REQUIREMENTS.
11. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UP- AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER TO ENSURE MANUFACTURER CERTIFIED ACCURACY.
12. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL PIPING AND DUCT TRANSITIONS REQUIRED FOR FINAL CONNECTIONS TO EQUIPMENT.
13. COORDINATE LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS WITH ALL OTHER TRADES. COORDINATE ALL PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURE WITH GENERAL CONSTRUCTION WORK.
14. COORDINATE INSTALLATION OF SUPPLY AND RETURN GRILLES WITH INSTALLATION OF FINISHED CEILINGS.
15. COMPLETE ALL PRESSURE TESTS BEFORE ANY MECHANICAL EQUIPMENT, DUCTWORK, OR PIPING INSULATION IS APPLIED.
16. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). PERFORM ALL TESTING, ADJUSTING, AND BALANCING IN ACCORDANCE WITH THE SPECIFICATIONS.
17. MAKE ALL ATTACHMENTS TO JOISTS, TRUSSES, OR JOIST GIRDERS AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. THE USE OF C-CLAMPS IS NOT PERMITTED.
18. PROVIDE CONCRETE PADS A MINIMUM OF 6 INCHES HIGH FOR ALL FLOOR MOUNTED EQUIPMENT. EXTEND PAD 4 INCHES BEYOND THE EQUIPMENT ON ALL SIDES.
19. INTERNALLY LINE ALL SUPPLY AND RETURN DUCTWORK WITHIN 20 FEET UPSTREAM AND DOWNSTREAM OF FANS WITH 1" THICK INSULATION. INTERNALLY LINED DUCTWORK MEETING THIS REQUIREMENT SHALL ALSO BE PROVIDED WITH EXTERNALLY APPLIED INSULATION AS REQUIRED BY THE SPECIFICATIONS. SEE SPECIFICATION SECTION 230719 FOR ADDITIONAL REQUIREMENTS.
20. PROVIDE TRAPPED DRAIN PIPING FROM DRAIN PANS OF ALL COOLING COILS, FANS, AND OTHER ACTIVE DRAINS EXPOSED TO SYSTEM AIR STREAM. PROVIDE TRAP AT CONNECTION, WATER SEAL DEPTH 1 INCH GREATER THAN UNIT OPERATING PRESSURE. DIRECT DRAINS TO NEAREST FLOOR DRAIN, MOP SINK, OR OTHER LOCATION APPROVED BY THE ARCHITECT/ENGINEER.
21. INSTALL PIPING, DUCTWORK, AND CONDUIT CONCEALED IN AREAS HAVING HUNG CEILINGS AND/OR FURRED SPACES UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

WORK IN EXISTING AREAS

1. EXISTING CONDITIONS, INCLUDING EQUIPMENT, DUCT AND PIPE SIZES AND LOCATIONS, INDICATED ON THE DRAWINGS ARE DIAGRAMMATIC. CONFIRM ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH THE WORK.
2. CUT AND ROUGH PATCH EXISTING CONSTRUCTION AS REQUIRED FOR THE PERFORMANCE OF THE WORK. FINISH PATCHING AND FLASHING REQUIREMENTS ARE SHOWN ON THE ARCHITECTURAL DRAWINGS. PERFORM ALL CUTTING AND PATCHING WORK IN A MANNER SUCH THAT ANY EXISTING WARRANTEES/GUARANTEES ARE NOT VOIDED. USE QUALIFIED PERSONNEL IN PERFORMANCE OF THE WORK.

CONTRACT 'H' SCOPE NOTES

1. INSTALL SMOKE DETECTORS IN DUCTWORK FOR AIR HANDLING UNITS RATED AT 2,000 CFM OR GREATER. SMOKE DETECTOR SUPPLY AND WIRING IS PART OF CONTRACT 'E'.
2. FURNISH AND INSTALL ALL NECESSARY CONTROL WIRING, CONDUIT, AND ACCESSORIES AS REQUIRED TO PROVIDE FULLY FUNCTIONING SYSTEMS AND SEQUENCES OF OPERATION.
3. REMOVE CHASE ENCLOSURE COVER WHEN PERFORMING WORK IN ANY CHASE, AND REINSTALL THE CHASE ENCLOSURE COVER WHEN WORK IS COMPLETE.
4. PERFORM ALL CUTTING AND PATCHING AS REQUIRED IN THE EXECUTION OF THE WORK.

LEGENDS/ABBREVIATIONS NOTES

1. ABBREVIATIONS AND SYMBOLS ON THIS SHEET DO NOT DEFINE THE SCOPE OF WORK.

H2M architects + engineers
2700 Westchester Ave., Suite 415
Purchase, NY 10577
914.358.5623 • www.h2m.com

CONSULTANTS:

MARK	DATE	DESCRIPTION
	10-16-23	FINAL BID DOCUMENT
1	11-01-23	ADDENDUM #1

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
CAK	CAK	BMC	AEH

PROJECT No.:	DATE:	SCALE:
WPSD 2204	OCTOBER 2023	SEE PLANS

CLIENT

White Plains City School District

AC and Ventilation Upgrades at Ridgeway Elementary School

225 Ridgeway
White Plains, NY 10605

SED PROJECT CONTROL NO. 66-22-00-01-0-014-017

CONTRACT

CONTRACT H
HEATING VENTILATION AND AIR CONDITIONING

STATUS

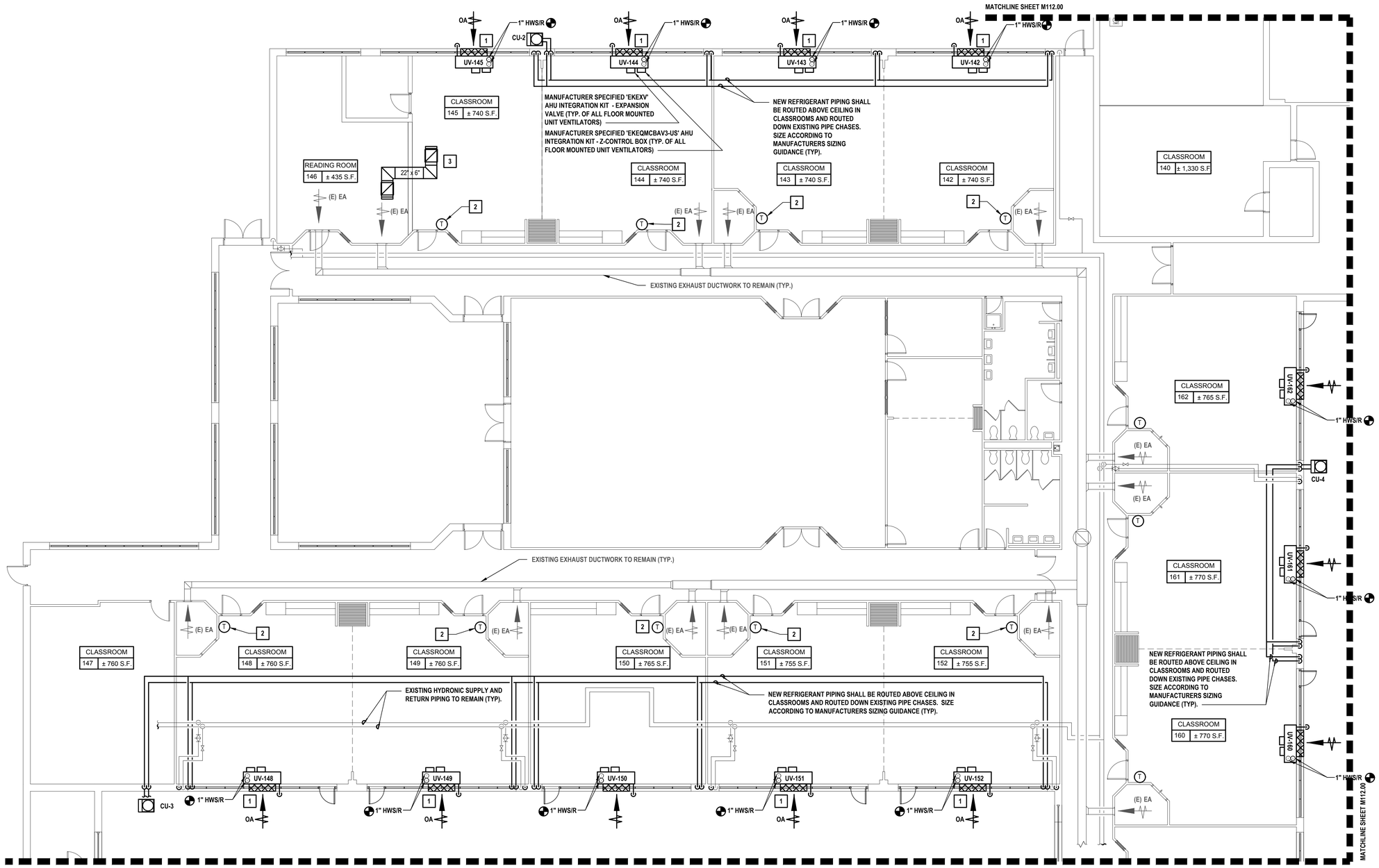
FINAL BID DOCUMENT

SHEET TITLE

HVAC GENERAL NOTES AND LEGENDS

DRAWING No.

M000.00



1 First Floor Plan Part A

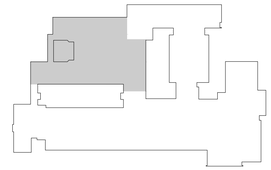
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. EXISTING CONDITIONS ARE BASED ON A LIMITED FIELD SURVEY. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING CONDITIONS FOR ALL CONFLICTS AND SHALL ALERT ENGINEER PRIOR TO COMMENCEMENT OF NEW WORK AND PURCHASE OF EQUIPMENT.
2. DO NOT SCALE DRAWINGS. LINE WORK SHOWN IS SCHEMATIC. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS BASED ON DESIGN INTENT, SURVEY OF EXISTING CONDITIONS, AND COORDINATION WITH OTHER TRADES.
3. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S REQUIRED MAINTENANCE CLEARANCES AND PREVAILING CODE.
4. CONTRACTOR TO COORDINATE THE FINAL PLACEMENT OF ALL TEMPERATURE SENSORS AND NEW MANUFACTURER'S Z-CONTROL BOXES WITH THE DISTRICT AND/OR MANUFACTURER.
5. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALTERATIONS TO EXISTING CASEWORK TO PROPERLY HIDE REFRIGERANT PIPING, EXPANSION VALVES, AND MAINTAIN EXISTING AESTHETIC.
6. CONTRACTOR TO IDENTIFY BEST REQUIRED QUANTITIES OF DIFFERENT STEAM / DX COILS CONFIGURATIONS (LEFT / RIGHT) FOR ALL UNIT VENTILATORS PRIOR TO PURCHASE AND INSTALLATION OF NEW UNIT VENTILATORS. QUANTITIES SHOULD BE BASED ON EXISTING FIELD CONDITIONS, NEW WORK, AND LIMITING ALTERATIONS TO EXISTING CASEWORK.
7. CONTRACTOR SHALL ROUTE ALL HORIZONTAL REFRIGERANT PIPING IN CEILING SPACES.
10. ALL CONTROL WORK (DEMOLITION AND NEW WORK) SHALL BE PERFORMED BY ENERGY MANAGEMENT OF FACILITIES (EMF) AT 581 N STATE ROAD, BRIARCLIFF MANOR, NY 10510 - PHONE 914-747-1007 AS A SUB TO THE MECHANICAL CONTRACTOR. EMF IS A PARTNER OF SCHNEIDER ELECTRIC.
11. ALL NEW CONTROLS SHALL BE DIRECT DIGITAL CONTROLS AND AN EXTENSION OF EMF'S EXISTING BMS SYSTEM.

KEYED CONSTRUCTION NOTES:

1. PROVIDE AND INSTALL NEW VERTICAL FLOOR-MOUNTED UNIT VENTILATOR (UV) WITH NEW DDC CONTROLS, NEW DDC THERMOSTAT, LOUVER, AND WALL SLEEVE. RECONNECT WITH NEW HYDRONIC PIPING (SEE UNIT VENTILATOR PIPING DETAIL) INCLUDING NEW DDC CONTROL VALVE, ETC. RECONNECT ANY FIN-TUBE RADIATION (FT) PIPING BRANCHES OR CONTROL INTERLOCKS (FT CONTROL VALVE AND SHARED UV THERMOSTAT). SEE ARCHITECTURAL DRAWINGS FOR MODIFICATIONS OR REPLACEMENTS OF EXISTING SHELVING UNITS.
2. PROVIDE AND INSTALL NEW MANUFACTURER SPECIFIED LOW VOLTAGE THERMOSTAT/CONTROLLER.
3. PROVIDE AND INSTALL NEW TRANSFER AIR DUCT AS SHOWN ABOVE EXISTING CEILING. COORDINATE RETURN GRILLE LOCATIONS WITH EXISTING CEILING GRID.



Key Plan

H2M architects + engineers
2700 Westchester Ave., Suite 415
Purchase, NY 10577
914.358.5623 • www.h2m.com

CONSULTANTS:

MARK	DATE	DESCRIPTION
	10-16-23	FINAL BID DOCUMENT
1	11-01-2023	BID ADDENDUM #1

STATE OF NEW YORK · BRIAN CASTELLI · 099167 · LICENSED PROFESSIONAL ENGINEER

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
CAK	CAK	BMC	AEH

PROJECT No.:	DATE:	SCALE:
WPSD 2204	OCTOBER 2023	SEE PLANS

CLIENT

White Plains City School District

AC and Ventilation Upgrades at Ridgeway Elementary School

225 Ridgeway
White Plains, NY 10605

SED PROJECT CONTROL NO. 66-22-00-01-0-014-017

CONTRACT

CONTRACT H
HEATING VENTILATION AND AIR CONDITIONING

STATUS

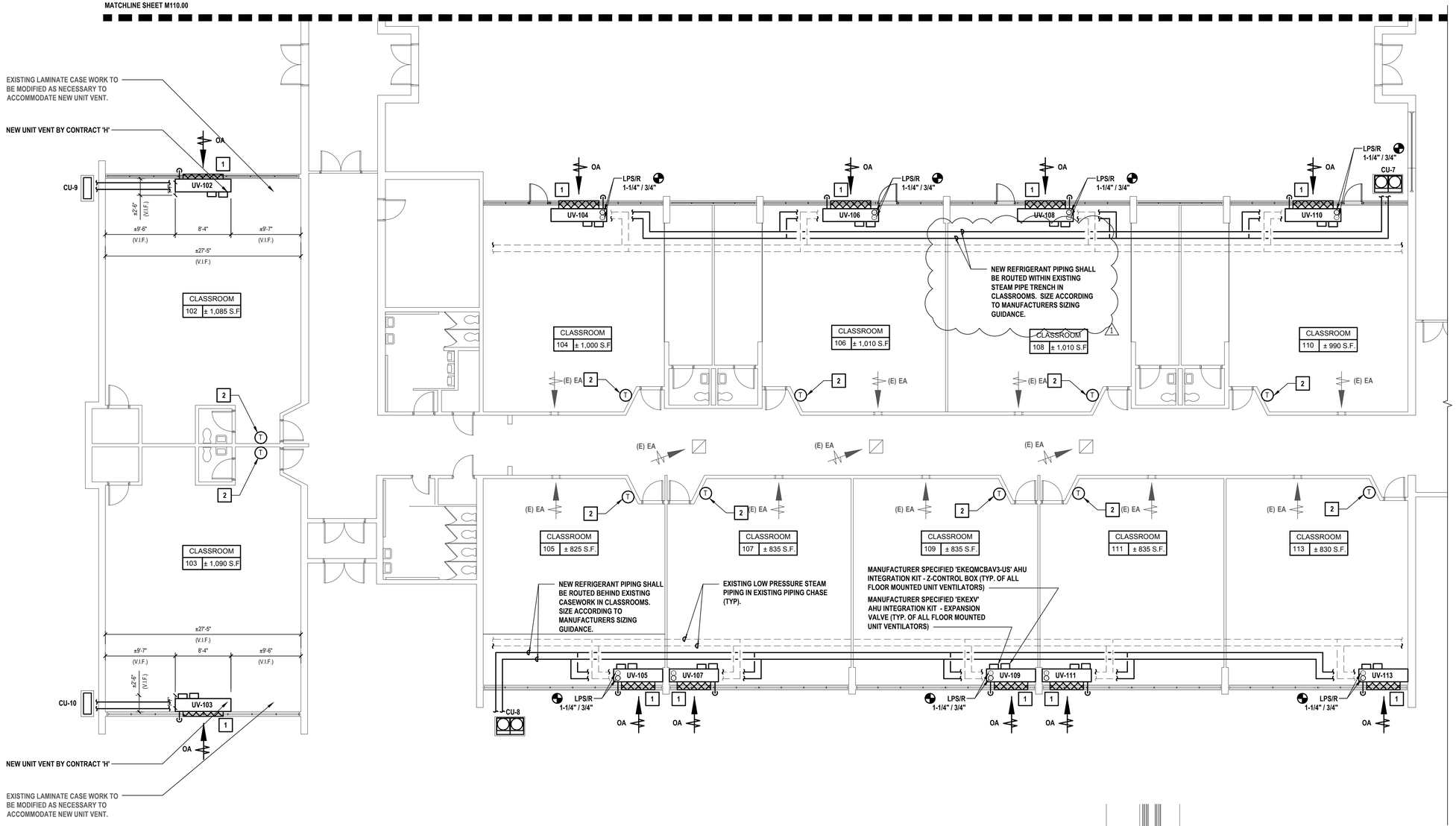
FINAL BID DOCUMENT

SHEET TITLE

MECHANICAL FLOOR PLAN PART A

DRAWING No.

M 110.00

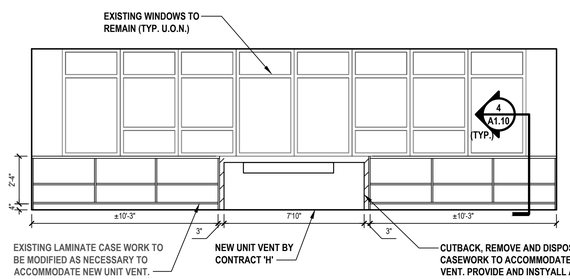


1 First Floor Plan Part B

SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. EXISTING CONDITIONS ARE BASED ON A LIMITED FIELD SURVEY. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING CONDITIONS FOR ALL CONFLICTS AND SHALL ALERT ENGINEER PRIOR TO COMMENCEMENT OF NEW WORK AND PURCHASE OF EQUIPMENT.
2. DO NOT SCALE DRAWINGS. LINE WORK SHOWN IS SCHEMATIC. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS BASED ON DESIGN INTENT, SURVEY OF EXISTING CONDITIONS, AND COORDINATION WITH OTHER TRADES.
3. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S REQUIRED MAINTENANCE CLEARANCES AND PREVAILING CODE.
4. CONTRACTOR TO COORDINATE THE FINAL PLACEMENT OF ALL TEMPERATURE SENSORS AND NEW MANUFACTURER'S Z-CONTROL BOXES WITH THE DISTRICT AND/OR MANUFACTURER.
5. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALTERATIONS TO EXISTING CASEWORK TO PROPERLY HIDE REFRIGERANT PIPING, EXPANSION VALVES, AND MAINTAIN EXISTING AESTHETIC.
6. CONTRACTOR TO IDENTIFY BEST REQUIRED QUANTITIES OF DIFFERENT STEAM / DX COILS CONFIGURATIONS (LEFT / RIGHT) FOR ALL UNIT VENTILATORS PRIOR TO PURCHASE AND INSTALLATION OF NEW UNIT VENTILATORS. QUANTITIES SHOULD BE BASED ON EXISTING FIELD CONDITIONS, NEW WORK, AND LIMITING ALTERATIONS TO EXISTING CASEWORK.
7. CONTRACTOR SHALL ROUTE ALL HORIZONTAL REFRIGERANT PIPING IN CEILING SPACES.
8. PROVIDE ALLOWANCE FOR MODIFICATION OF CASEWORK IN ROOM 138. NEW UV'S ARE GREATER IN LENGTH THAN EXISTING.
9. ALL CONDENSING UNITS SHOWN ON PLAN TO BE INSTALLED ON NEW CONCRETE PADS AT EXTERIOR OF BUILDING IN LOCATIONS SHOWN ON PLAN.
10. ALL CONTROL WORK (DEMOLITION AND NEW WORK) SHALL BE PERFORMED BY ENERGY MANAGEMENT OF FACILITIES (EMF) AT 581 N STATE ROAD, BRIARCLIFF MANOR, NY 10510 - PHONE 914-747-1007 AS A SUB TO THE MECHANICAL CONTRACTOR. EMF IS A PARTNER OF SCHNEIDER ELECTRIC.
11. ALL NEW CONTROLS SHALL BE DIRECT DIGITAL CONTROLS AND AN EXTENSION OF EMF'S EXISTING BMS SYSTEM.

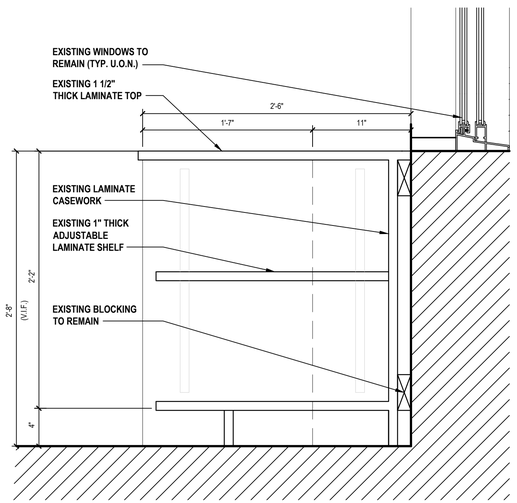


3 Typical Case Work Elevation

SCALE: 1/4"=1'-0"

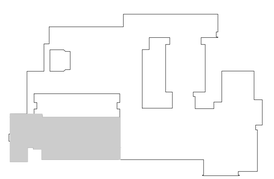
KEYED CONSTRUCTION NOTES:

1. PROVIDE AND INSTALL NEW VERTICAL FLOOR-MOUNTED UNIT VENTILATOR (UV) WITH NEW DDC CONTROLS, NEW DDC THERMOSTAT, LOUVER, AND WALL SLEEVE. RECONNECT WITH NEW PIPING (SEE UNIT VENTILATOR PIPING DETAIL) INCLUDING NEW DDC CONTROL VALVE, ETC. RECONNECT ANY FIN-TUBE RADIATION (FT) PIPING BRANCHES OR CONTROL INTERLOCKS (FT CONTROL VALVE AND SHARED UV THERMOSTAT). SEE DETAIL 3 AND 4 ON THIS SHEET FOR ADDITIONAL INFORMATION.
2. PROVIDE AND INSTALL NEW MANUFACTURER SPECIFIED LOW VOLTAGE THERMOSTAT/CONTROLLER.



4 Typical Case Work Detail

SCALE: 1 1/2"=1'-0"



Key Plan

H2M architects + engineers
2700 Westchester Ave., Suite 415
Purchase, NY 10577
914.358.5623 • www.h2m.com

CONSULTANTS:

MARK	DATE	DESCRIPTION
	10-16-23	FINAL BID DOCUMENT
1	11-01-2023	BID ADDENDUM #1

STATE OF NEW YORK · BRIAN CASTELLI · 099167 · LICENSED PROFESSIONAL ENGINEER

"ALTERATION OF THIS DOCUMENT EXCEPT BY A LICENSED PROFESSIONAL IS ILLEGAL"

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
CAK	CAK	BMC	AEH

PROJECT No.:	DATE:	SCALE:
WPSD 2204	OCTOBER 2023	SEE PLANS

CLIENT

White Plains City School District

AC and Ventilation Upgrades at Ridgeway Elementary School

White Plains Public Schools · WP · REAL LIFE LEARNING

225 Ridgeway
White Plains, NY 10605

SED PROJECT CONTROL NO. 66-22-00-01-0-014-017

CONTRACT

CONTRACT H
HEATING VENTILATION AND AIR CONDITIONING

STATUS

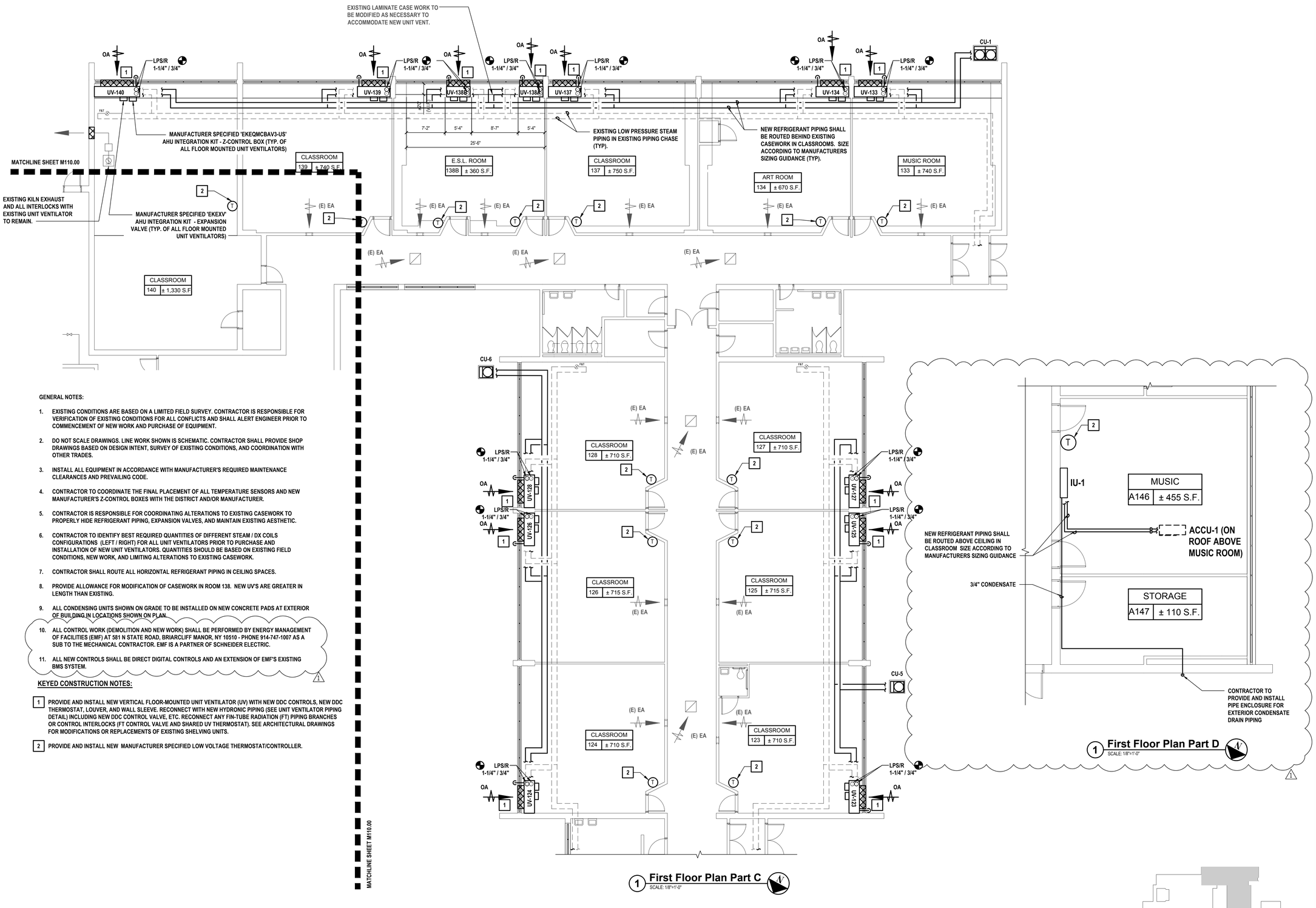
FINAL BID DOCUMENT

SHEET TITLE

MECHANICAL FLOOR PLAN PART B

DRAWING No.

M 111.00



GENERAL NOTES:

1. EXISTING CONDITIONS ARE BASED ON A LIMITED FIELD SURVEY. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING CONDITIONS FOR ALL CONFLICTS AND SHALL ALERT ENGINEER PRIOR TO COMMENCEMENT OF NEW WORK AND PURCHASE OF EQUIPMENT.
2. DO NOT SCALE DRAWINGS. LINE WORK SHOWN IS SCHEMATIC. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS BASED ON DESIGN INTENT, SURVEY OF EXISTING CONDITIONS, AND COORDINATION WITH OTHER TRADES.
3. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S REQUIRED MAINTENANCE CLEARANCES AND PREVAILING CODE.
4. CONTRACTOR TO COORDINATE THE FINAL PLACEMENT OF ALL TEMPERATURE SENSORS AND NEW MANUFACTURER'S Z-CONTROL BOXES WITH THE DISTRICT AND/OR MANUFACTURER.
5. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALTERATIONS TO EXISTING CASEWORK TO PROPERLY HIDE REFRIGERANT PIPING, EXPANSION VALVES, AND MAINTAIN EXISTING AESTHETIC.
6. CONTRACTOR TO IDENTIFY BEST REQUIRED QUANTITIES OF DIFFERENT STEAM / DX COILS CONFIGURATIONS (LEFT / RIGHT) FOR ALL UNIT VENTILATORS PRIOR TO PURCHASE AND INSTALLATION OF NEW UNIT VENTILATORS. QUANTITIES SHOULD BE BASED ON EXISTING FIELD CONDITIONS, NEW WORK, AND LIMITING ALTERATIONS TO EXISTING CASEWORK.
7. CONTRACTOR SHALL ROUTE ALL HORIZONTAL REFRIGERANT PIPING IN CEILING SPACES.
8. PROVIDE ALLOWANCE FOR MODIFICATION OF CASEWORK IN ROOM 138. NEW UV'S ARE GREATER IN LENGTH THAN EXISTING.
9. ALL CONDENSING UNITS SHOWN ON GRADE TO BE INSTALLED ON NEW CONCRETE PADS AT EXTERIOR OF BUILDING IN LOCATIONS SHOWN ON PLAN.
10. ALL CONTROL WORK (DEMOLITION AND NEW WORK) SHALL BE PERFORMED BY ENERGY MANAGEMENT OF FACILITIES (EMF) AT 581 N STATE ROAD, BRIARCLIFF MANOR, NY 10510 - PHONE 914-747-1007 AS A SUB TO THE MECHANICAL CONTRACTOR. EMF IS A PARTNER OF SCHNEIDER ELECTRIC.
11. ALL NEW CONTROLS SHALL BE DIRECT DIGITAL CONTROLS AND AN EXTENSION OF EMF'S EXISTING BMS SYSTEM.

1

KEYED CONSTRUCTION NOTES:

1 PROVIDE AND INSTALL NEW VERTICAL FLOOR-MOUNTED UNIT VENTILATOR (UV) WITH NEW DDC CONTROLS, NEW DDC THERMOSTAT, LOUVER, AND WALL SLEEVE. RECONNECT WITH NEW HYDRONIC PIPING (SEE UNIT VENTILATOR PIPING DETAIL) INCLUDING NEW DDC CONTROL VALVE, ETC. RECONNECT ANY FIN-TUBE RADIATION (FT) PIPING BRANCHES OR CONTROL INTERLOCKS (FT CONTROL VALVE AND SHARED UV THERMOSTAT). SEE ARCHITECTURAL DRAWINGS FOR MODIFICATIONS OR REPLACEMENTS OF EXISTING SHELVING UNITS.

2 PROVIDE AND INSTALL NEW MANUFACTURER SPECIFIED LOW VOLTAGE THERMOSTAT/CONTROLLER.

MATCHLINE SHEET M110.00

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CONTRACT

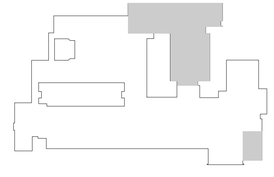
CONTRACT H
HEATING VENTILATION AND AIR CONDITIONING

STATUS

FINAL BID DOCUMENT

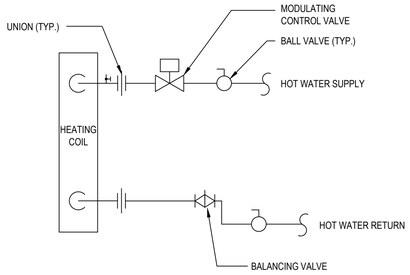
SHEET TITLE

MECHANICAL FLOOR PLAN PART C



DRAWING No.

M 112.00

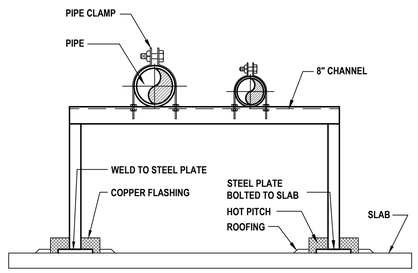


NOTES:

1. ALL COMPONENTS SHALL BE ENCLOSED WITHIN UNIT VENTILATOR CABINET.

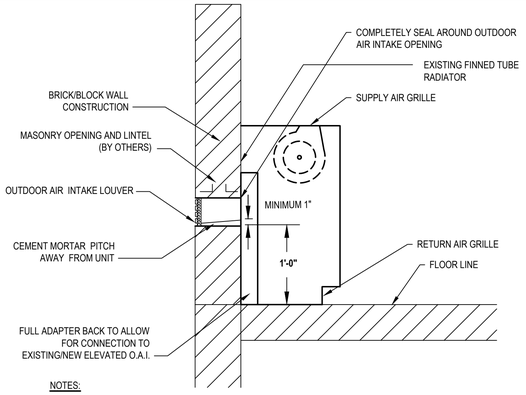
1 Unit Ventilator Hot Water Coil Piping Diagram - Modulating Control Valve

SCALE: NTS (DETAIL #)



2 Piping Support From Roof

SCALE: NTS (DETAIL #)

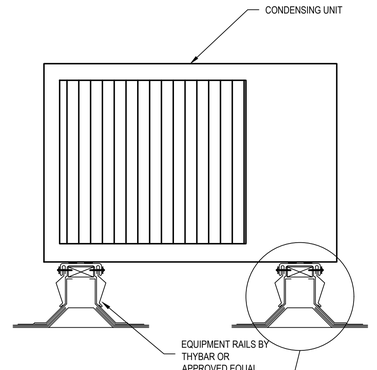


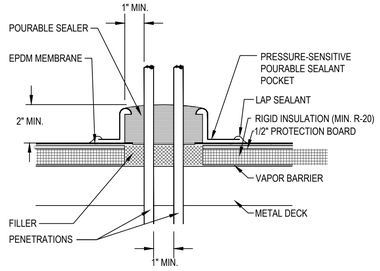
NOTES:

1. PROVIDE ALL BLOCKING AS NECESSARY TO PROVIDE AN AIR TIGHT SEAL FOR THE OUTDOOR AIR INTAKE PLENUM.

3 Unit Ventilator Detail

SCALE: NTS (DETAIL #)



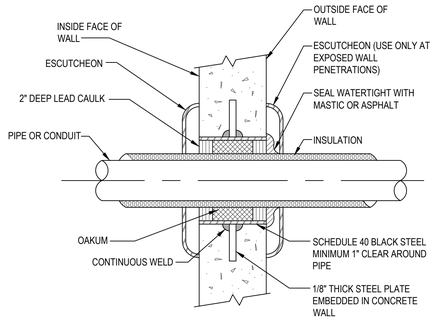


NOTES:

1. 180° F MAXIMUM TEMPERATURE.
2. POURABLE SEALER MUST CONTACT UNCURED ELASTOFORM FLASHING AND DECK MEMBRANE.
3. POURABLE SEALER POCKET TO BE 1" MINIMUM FROM PENETRATION ON ANY SIDE.
4. POURABLE SEALER MUST COMPLETELY FILL POURABLE SEALER POCKET TO PREVENT PONDING OF WATER.
5. SECUREMENT IS REQUIRED FOR POURABLE SEALER POCKETS WHICH ARE GREATER THAN 18" IN DIAMETER.
6. POURABLE SEALER TO BE MINIMUM 2" DEEP.
7. POURABLE SEALER MUST CONTACT THE BARE SURFACE OF THE PENETRATION. ALL DEBRIS (PAINT, RUST, LEAD, OTHER FLASHINGS, ETC.) MUST BE REMOVED FROM THE PENETRATION.

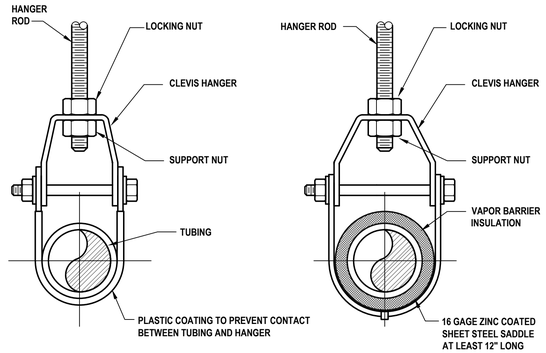
4 Pourable Sealer Pitch Pocket Detail

SCALE: NTS (DETAIL #)



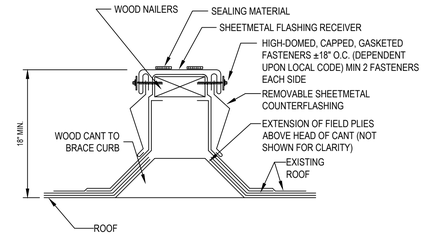
5 Pipe or Conduit Penetration Through Exterior Walls

SCALE: NTS (DETAIL #)



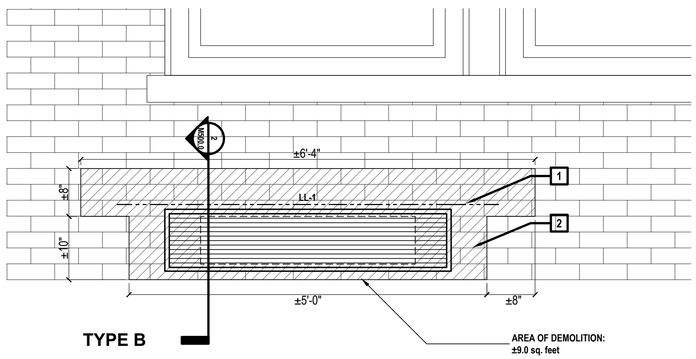
6 Copper Tubing Hanger Details

SCALE: NTS (DETAIL #)



7 Condensing Unit Curb Detail

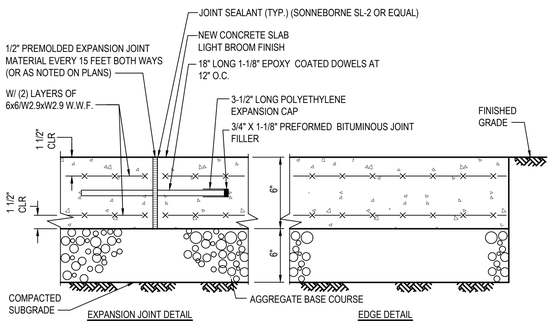
SCALE: NTS (DETAIL #)



TYPE B

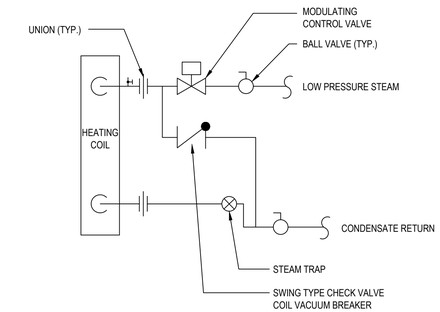
8 Existing and New Louver Elevations

SCALE: 1"=1'-0"



9 Concrete Pad Detail

SCALE: NTS (DETAIL #)



NOTES:

1. ALL COMPONENTS SHALL BE ENCLOSED WITHIN UNIT VENTILATOR CABINET.

10 Unit Ventilator Steam Coil Piping Diagram - Modulating Control Valve

SCALE: NTS (DETAIL #)

1

H 2 M architects + engineers

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Purchase, NY 10577
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STATE OF NEW YORK · BRIAN CASTELLI · 099167 · LICENSED PROFESSIONAL ENGINEER

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
CAK	CAK	BMC	AEH

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CLIENT

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CONTRACT

CONTRACT H
HEATING VENTILATION AND AIR CONDITIONING

STATUS

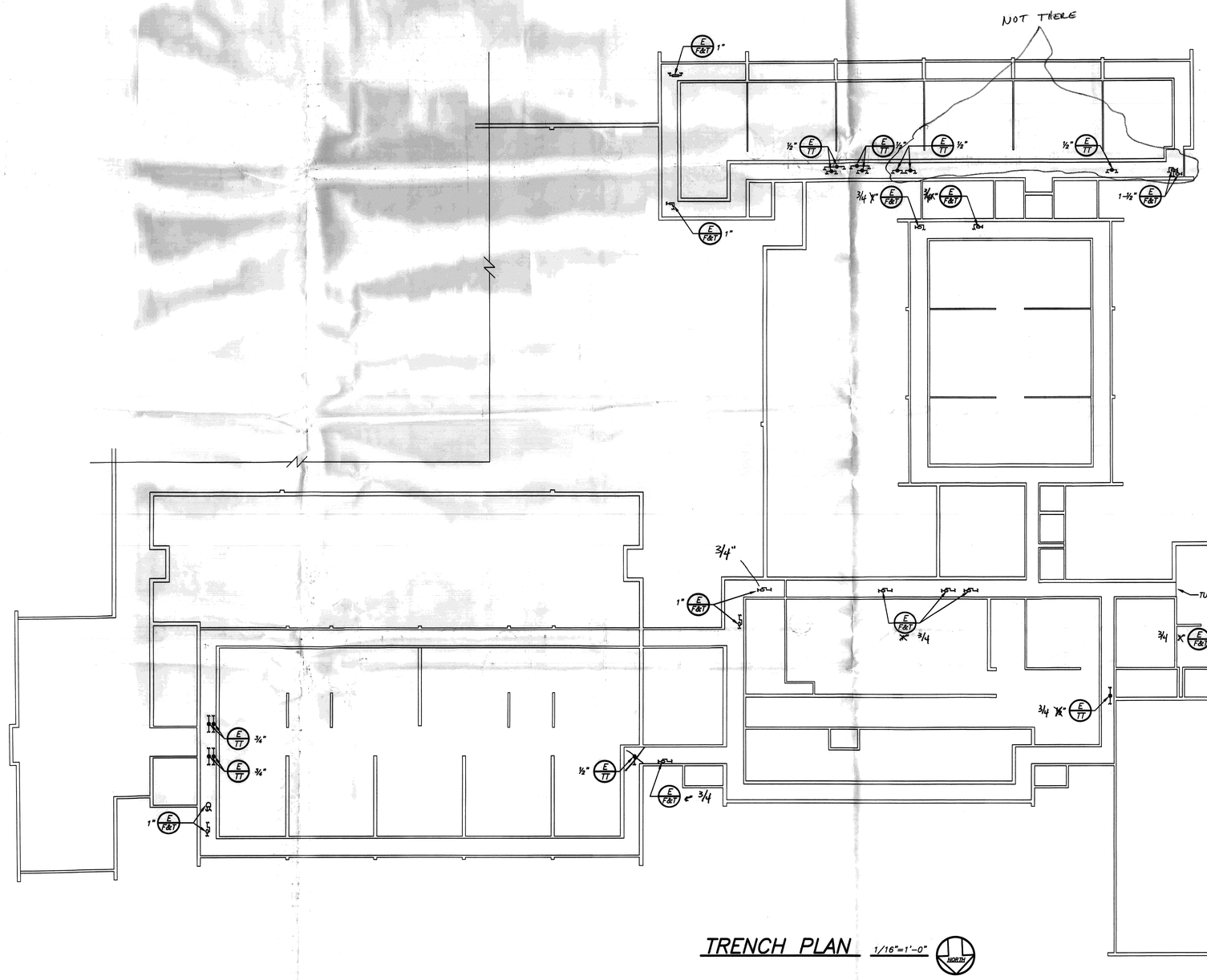
FINAL BID DOCUMENT

SHEET TITLE

MECHANICAL DETAILS

DRAWING No.

M500.00



TRENCH PLAN 1/16"=1'-0"

BEFORE FABRICATION THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS

LEGEND

— LPS —	EXISTING LOW PRESSURE STEAM SUPPLY PIPING
— LPR —	EXISTING LOW PRESSURE STEAM RETURN PIPING
	GATE VALVE
	PIPE CONNS. (BOTTOM, TOP 45 OR 90, PIPE UP)
	FLOW DIRECTION WITHIN PIPE
FT EXIST	EXISTING FIN TUBE RADIATION IDENTIFICATION (REPLACE TRAP)
E F&T	EXISTING FLOAT AND THERMOSTATIC TRAP TO BE REPLACED IDENTIFICATION
E TT	EXISTING THERMOSTATIC TRAP TO BE REPLACED IDENTIFICATION
RT EXIST	EXISTING HVAC ROOFTOP UNIT IDENTIFICATION (REPLACE TRAP)
UV EXIST	EXISTING UNIT VENTILATOR IDENTIFICATION (REPLACE TRAP)
CONV EXIST	EXISTING CONVECTOR IDENTIFICATION (REPLACE TRAP)
UH EXIST	EXISTING UNIT HEATER IDENTIFICATION (REPLACE TRAP)
A.F.F	ABOVE FINISHED FLOOR
HVAC	HEATING, VENTILATING, AIR CONDITIONING CONTRACTOR
EL	ELECTRICAL CONTRACTOR
PL	PLUMBING CONTRACTOR
CC	CONSTRUCTION CONTRACTOR

NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED ☐
REJECTED ☐ REVISE AND RESUBMIT ☐
EXAMINED ☒ SUBMIT SPECIFIED ITEM ☐

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE; FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.

KAEYER, GARMENT & DAVIDSON ARCHITECTS, P.C.
DATE 10/20/03 BY EB

RECEIVED
OCT 20 2003
01720-0014
KAEYER, GARMENT & DAVIDSON ARCHITECTS PC

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SEP 18 2003
DAMIANO BARILE ENGINEERS, P.C.

KEY PLAN N.T.S.

WHITE PLAINS SCHOOL DISTRICT

INFRASTRUCTURE IMPROVEMENTS
RIDGEWAY ELEMENTARY SCHOOL
WHITE PLAINS New York

KG&D architects
kaeyer, garment & davidson architects, pc
285 main street mount kisco, new york 10549
p: 914.666.5900 f: 914.666.0051 kgdarchitects.com

CONSTRUCTION DOCUMENTS

S.E.D. Control No.
66-22-00-01-0-014-009

DAMIANO BARILE ENGINEERS, P.C.
MECHANICAL ELECTRICAL CONSULTANTS
77 TARRYTOWN ROAD, WHITE PLAINS NY 10607
PHONE: 914.328.6060 FAX: 914.328.9304

KEY PLAN

SouthEast Mechanical
As Built
8/28/03

No.	Date	Issue
2	4/17/03	BID DOCUMENTS
1	11/01/02	SED SUBMITTAL

Sheet Title

TRENCH PLAN

Job No. 2002-1373	Sheet No. H-1
Date August 05, 2002	
Scale AS NOTED	
Drawn/Checked DBE / DBE	

I:\Allprojects\2002-1300 White Plains SD\2002-1313 Ridgeway Infrastructure\DRAWINGS\5-condoc\Mechanical\021402H1.DWG August 20, 2003