Addendum No. 003

Subject: Rhawnhurst Elementary School- Additions and Renovations
SDP Contracts No. B-070, B-071, B-072 and B-073 of 2019/20

Location: Rhawnhurst Elementary School
7809 Castor Avenue
Philadelphia, Pennsylvania 19152

This Addendum, dated March 30, 2021 shall modify and become part of the Contract Documents for the work of this project. Any items not mentioned herein, or affected by, shall be performed strictly in accordance with the original documents.

BID PROPOSAL FORMS

REPLACE GC BID PROPOSAL FORM with the attached Revised Bid Proposal Form-GC.
It adds a Unit Price Item for Disposal of Contaminated Soils

DIVISION 0-1 SPECIFICATIONS

SECTION 01 1145 - SOILS MANAGEMENT

1. ADD SECTION 01 1145 SOILS MANAGEMENT-Attached

SECTION 015214 – MODULAR CLASSROOM BUILDING

1. REPLACE SPECIFICATION SECTION 015214 – MODULAR CLASSROOM BUILDING in its entirety. Page 8 was added to the classroom building detailing additional electrical scope to be provided by the general contractor as part of the modular classroom building.

ARCHITECTURAL SPECIFICATIONS
SECTION 095113 – ACOUSTICAL PANEL CEILINGS
1. ADD 2.8.a.3 as follows:
   3. Rockfon LLC, Curvagrid Metal Ceiling System with full range of colors, acoustical characteristics and perforations to match basis of design, 2.8.A.1.

PLUMBING SPECIFICATIONS

SECTION 220010 – PLUMBING GENERAL PROVISIONS
1. Paragraph 1.25 DELETE Section 1.25 PLUMBING MATERIAL ALLOWANCES in their entirety.

MECHANICAL SPECIFICATIONS

SECTION 230010 MECHANICAL GENERAL PROVISIONS
1. REPLACE paragraphs 1.4.B through 1.4.D with the following:
   b. Conduit, raceways, boxes and fittings for control wiring shall be provided by the MC but must be installed by an electrical contractor licensed per City of Philadelphia requirements. Materials and installation shall be in accordance with applicable Division 26 sections. All wiring shall be plenum rated.
   c. Power wiring from panelboard or similar source through all equipment disconnects to motors or heating equipment shall be furnished and installed by the EC.
   d. Equipment disconnect switches, unless otherwise specified to be supplied by the equipment manufacturer as an integral part of the equipment, shall be furnished and installed by the EC.

2. REPLACE the first sentence of paragraph 1.23.A with the following:
   a. This Contractor shall be responsible for all cutting and patching required for demolition or installation of work on this project.

SECTION 230900 ATC SYSTEMS
1. ADD Monitoring of Ion levels in each Bi-polar Ionization system.
2. ADD An alarm for low ion levels in each Bi-polar Ionization system per manufacturers recommended ion levels.

SECTION 230510 HVAC PIPING AND SPECIALTIES
1. REPLACE The first sentence in Paragraph 2.1B with the following:
   b. PEX-a Plastic Tubing (Uponor HePEX or equal): ASTM F876, AST F 877. (for piping 3” and smaller)

ELECTRICAL SPECIFICATIONS

SECTION 260940 Distributed Digital Lighting Control System
1. ADD Acuity nLight to the list of alternate manufacturers in paragraph 2.1.B.

SECTION 262420 Panelboard Schedules
1. Panel HDPB, ckt #12: DELETE 3P.200A breaker for Panel HPV (Photovoltaic System).
2. Panel HDPB, ckt #13: DELETE 2P.600A breaker for Temporary Modular Classrooms.
3. Panel HC1, ckt #41: ADD 15A, 1P in Breaker pole and amp descriptions.
4. Panel OS-LBB, ckt #20: ADD 1P.30A breaker with notes 3,5, for “Chiller Heat Trace”.
SECTION 2631000 Photovoltaic System
1. ADD paragraph 2.3.Q as follows:

Q. Listings/Certifications:
1. UL 1741
2. IEEE 1547

SECTION 265200 Luminaire Schedule
1. DELETE Note 8 from Fixture Type CH1.

CIVIL DRAWINGS

DRAWING C-500 Utility Plan
1. REVISED SMP-3 6” cast iron storm sewer connection
2. ADD Modification of existing summit manhole on Chandler Street.
3. ADD Two (2) 30” pre-cast concrete manholes with gray iron frame and covers.
4. ADD Sixty-five (65) L.F. new 18” stormwater conduit with wye connection.

ARCHITECTURAL DRAWINGS

DRAWING D1.3 – FIRST FLOOR DEMOLITION PLAN UNITS “A & B”
1. REPLACE D1.3 in its entirety as part of Addendum #3. Chase walls are being demoed in B109, B110E, B115A, B116A, B117A and B118A.

DRAWING A1.4 – FIRST FLOOR PLAN UNIT “A” & A4.1 – LARGE SCALE TOILET PLANS
1. REPLACE A1.4 AND A4.1 in their entirety as part of Addendum #3. Walls are being demolished and replaced as indicated on the revised drawing to allow for plumbing demolition and replacement in the plumbing chases. These walls include B109, B110E, B115A, B116A, B117A and B118A. General contractor shall coordinate for the new installation of new plumbing and penetrations, sleeves etc. through these walls.

DRAWING I7.9 – OVERALL FIRST FLOOR – FINISH PLAN
1. ADD notes for tile accent wall at A107, B103, C124, & C125.

DRAWING I7.10 – OVERALL SECOND FLOOR – FINISH PLAN
1. ADD notes for tile accent wall at B202, B210, C203, & C204.

STRUCTURAL DRAWINGS

DRAWING S1.9 – S1.14 – STRUCTURAL DRAWINGS
1. ADD the following wording to MASONRY LINTEL PLAN NOTE #1:
   a. Note #1 is for general construction lintels, all mechanical, plumbing, fire protection and electrical sleeves and lintels that need to penetrate NEW walls are to be provided by mechanical, electrical and plumbing contractors for their work as detailed on the MASONRY LINTEL SCHEDULE on S1.9, provided to the general contractor and installed by the general contractor during construction of walls. If mechanical, plumbing and electrical contractor do not coordinate prior to construction of walls with the general contractor they are responsible to cut, install and patch walls for the installation of their sleeves, lintels and work.
MECHANICAL DRAWINGS

DRAWING M0.0 LEGEND, ABBREVIATION AND NOTES
1. ADD the following General Note:
   a. All mechanical sleeves and lintels that need to penetrate NEW walls are to be provided by mechanical contractor for their work as detailed on the MASONRY LINTEL SCHEDULE on S1.9, provided to the general contractor and installed by the general contractor during construction of walls. If mechanical contractor does not coordinate prior to construction of walls with the general contractor, the contractor is responsible to cut, install and patch walls for the installation of their sleeves, lintels and work.

DRAWING M0.0 – LEGEND, ABBREVIATIONS AND NOTES
1. REPLACE drawing with the attached.

DRAWING M2.1 – FIRST FLOOR UNITS “A” & “B” HVAC
1. REPLACE drawing with the attached.

DRAWING M2.8 – FIRST FLOOR UNIT “C” HVAC PIPING
1. ADD a Thermostat in room “Girls C124”

DRAWING M2.9 – SECOND FLOOR UNITS “A” & “B” HVAC PIPING
1. REPLACE drawing with the attached.

DRAWING M2.12 – ENLARGED MECHANICAL PLAN
1. REPLACE drawing with the attached.

PLUMBING DRAWINGS

DRAWING P0.0 PLUMBING SYMBOLS, NOTES
2. ADD the following General Note:
   b. All plumbing sleeves and lintels that need to penetrate NEW walls are to be provided by plumbing contractor for their work as detailed on the MASONRY LINTEL SCHEDULE on S1.9, provided to the general contractor and installed by the general contractor during construction of walls. If plumbing contractor does not coordinate prior to construction of walls with the general contractor, the contractor is responsible to cut, install and patch walls for the installation of their sleeves, lintels and work. Plumbing contractor is also responsible for their own cutting and patching of existing walls and installation of sleeves, lintels to allow for their work.

DRAWING P0.2 – SITE PLAN
1. REVISE drawing notes 6 and 7 to read as follows:

   6. PLUMBING CONTRACTOR SHALL RUN 4” SANITARY PIPING TO MODULAR BUILDING (FOR EXTENSION BY MODULAR BUILDING CONTRACTOR). COORDINATE EXACT LOCATION AND INVERT OF PIPING WITH ALL OTHER TRADES AND MODULAR BUILDING CONTRACTOR. WHEN MODULAR BUILDING IS REMOVED FROM THE SITE IN PHASING PLAN, REMOVE ALL PIPING SERVING MODULAR BUILDING BACK TO THE BRANCH CONNECTION AT THE MAIN AND CAP.

   7. PLUMBING CONTRACTOR SHALL RUN 2” DOMESTIC COLD WATER PIPING TO MODULAR BUILDING (FOR EXTENSION BY MODULAR BUILDING CONTRACTOR). COORDINATE EXACT LOCATION OF PIPING WITH ALL OTHER TRADES AND MODULAR BUILDING CONTRACTOR. WHEN MODULAR BUILDING IS REMOVED FROM THE SITE REMOVE ALL PIPING SERVING MODULAR BUILDING BACK TO THE BRANCH CONNECTION AT THE MAIN AND CAP INCLUDING ALL BRANCH PIPING INSIDE BUILDING.
DRAWING P1.0 – BASEMENT UNIT A & B PLUMBING DEMOLITION
1. ADD removal of all existing piping insulation from all existing domestic water piping and prepare piping for replacement insulation.
2. ADD removal of all existing domestic water branch piping back to the main and cap all piping that is not being reused in the new plumbing system.

DRAWING P1.1 – BASEMENT UNIT C PLUMBING DEMOLITION
1. ADD removal of all existing piping insulation from all existing domestic water piping and prepare piping for replacement insulation.
2. ADD removal of all existing domestic water branch piping back to the main and cap all piping that is not being reused in the new plumbing system.

DRAWING P2.0 – BASEMENT UNIT A & B PLUMBING
1. ADD new insulation as specified, insulation shall be furnished and installed for all existing domestic water piping.

DRAWING P2.1 – BASEMENT UNIT C PLUMBING
1. ADD new insulation as specified, insulation shall be furnished and installed for all existing domestic water piping.

DRAWING P2.5 – SECOND FLOOR UNIT C PLUMBING
1. Refer to exterior wall at Faculty Planning C207 at overflow storm piping. Drawing note at exterior shall be Note 10. ADD drawing note 10 to drawing to read as follows:
   10. RUN OVERFLOW PIPING ABOVE CEILING AND TERMINATE OUTSIDE BUILDING AT EXTERIOR WALL WITH OVERFLOW STORM SPOUT OSS-1.
2. Refer to Science Classroom C210. Revise the domestic water piping to the sink on the right to be run in a similar manner as the sanitary piping along the wall at the back of the casework. DELETE the vent piping from the sink on the right. REVISE the vent piping size to be 2” from the sink on the left.

FIRE PROTECTION DRAWINGS

DRAWING FP1.0 FIRE PROTECTION ZONING PLANS
1. ADD the following General Note:
   c. All fire protection sleeves and lintels that need to penetrate NEW walls are to be provided by plumbing contractor for their work as detailed on the MASONRY LINTEL SCHEDULE on S1.9, provided to the general contractor and installed by the general contractor during construction of walls. If plumbing contractor does not coordinate prior to construction of walls with the general contractor, the contractor is responsible to cut, install and patch walls for the installation of their sleeves, lintels and work. Plumbing contractor is also responsible for their own cutting and patching of existing walls and installation of sleeves, lintels to allow for their work.

ELECTRICAL DRAWINGS

DRAWING E0.0 SYMBOLS
1. ADD the following General Note:
   d. All electrical sleeves and lintels that need to penetrate NEW walls are to be provided by electrical contractor for their work as detailed on the MASONRY LINTEL SCHEDULE on S1.9, provided to the general contractor and installed by the general contractor during construction of walls. If electrical contractor does not coordinate prior to construction of walls with the general contractor, the contractor is responsible to cut, install and patch
walls for the installation of their sleeves, lintels and work. Electrical contractor is also responsible for their own cutting and patching of existing walls and installation of sleeves, lintels to allow for their work.

**DRAWING E0.2 – SITE PLAN**
1. REPLACE drawing with the attached.

**DRAWING E3.6 – ROOF POWER**
1. REPLACE drawing with the attached.

**DRAWING E5.2 – FIRST FLOOR FIRE ALARM**
1. ADD one TS (tamper switch) and one FS (flow switch) in Custodial B102.
2. ADD two TS (tamper switches) and two FS (flow switches) in Custodial C127.
3. ADD weatherproof speaker/strobe with Drawing Note 1 and 2 tags on exterior wall outside of Principal B101B office.
4. DELETE FMP fire alarm addressable module from the elevator.
5. ADD Drawing Note 2 as follows: Alarm on sprinkler water flow.

**DRAWING E5.3 – SECOND FLOOR FIRE ALARM**
1. ADD one TS (tamper switch) and one FS (flow switch) in pipe chase outside of Boys B202.
2. ADD one TS (tamper switch) and one FS (flow switch) in Custodial C201.

**DRAWING E8.2 – POWER RISER DIAGRAM**
1. REPLACE drawing with the attached.

**DRAWING E9.3 – ELECTRICAL DETAILS**
1. DELETE each instance of “and Wireless Network Bridges” from details on this Drawing.

**BIDDER QUESTIONS SUBMITTED TO DATE & RESPONSES ARE AS FOLLOWS:**

1. Restrooms B115/C, B116B/C, B117B/C, B118B/C, B110E, B109 require that the behind the wall plumbing risers be removed and replaced, drawing P1.2. The walls are not shown to be removed on drawing D1.3. Who will be responsible for cutting and patching of the wall to permit the plumbing demolition and installation of the new work? This question will apply any locations not specifically mentioned above?

   **Answer:** Yes, the plumbing is to bring the new underground water and sanitary connections to the trailer to a single point connection for the modular trailer supplier to connect to under the general construction contract. General and plumbing contractors are required to coordinate these connections. After the trailers are removed from the construction site as part of the phasing, plumbing and electrical contractors will be required remove their lines to the modular and replace soil for site contractor to preform final paving in these areas.

2. Will the new underground water and sanitary connections to the modular trailers be single point connection?

   **Answer:** Yes, the plumbing is to bring the new underground water and sanitary connections to the trailer to a single point connection for the modular trailer supplier to connect to under the general construction contract. General and plumbing contractors are required to coordinate these connections. After the
trailers are removed from the construction site as part of the phasing, plumbing and electrical contractors will be required remove their lines to the modular and replace soil for site contractor to preform final paving in these areas.

3. Does the crawl space extend under the existing kitchen?

**Answer:** Yes, as per EX1.0 EXISTING BASEMENT FLOOR PLAN the crawl space does extend under the existing kitchen.

4. Will the crawl space extend under the new kitchen addition?

**Answer:** No as per floor plans and sections the crawl space will not extend under the new kitchen addition.

5. Will temporary lighting be installed in the crawl space?

**Answer:** This is a contractor means and methods for temporary conditions between the prime contractors. The crawl space currently has lighting as shown on the E1.1 that is being replaced with new lighting. It is assumed that the old lighting will be kept in place until the new lighting is installed and operational, however, this will be a task for the prime contractors to coordinate among each other or provide temporary lighting.

6. Drawing notes referenced on drawing S1.9 thru S1.14, indicate that the Contractor for General Construction is responsible for Masonry Lintels and Masonry Reinforcing for mechanical penetrations.

Please confirm, is the GC likewise responsible for wall openings (penetrations) for mechanical systems going thru the masonry walls?

**Answer:** ALL contractors are to reference notes added to S1.9 through S1.14 and M0.0, P0.0, FP1.0 and E0.0 that define each contractors responsibilities in both new and existing wall construction.

7. The summary of work for Contract B-070C of 2019/2020 GC: Item 22 indicates that the General Contractor is responsible to make utility connections including water, electrical and IT to the Modular Classroom Building (MCB). Please consider limiting the GC’s responsibility to site water services to within 5’ outside the MCB building footprint only. It will be more cost effective to have the Electrical Prime provide the service, final connections, IT connections and related disconnections – and the Plumbing Prime all water and sewer connections/disconnections.

**Answer:** See end of REPLACED Specification Section 015214 – Modular Classroom Building. Electrical and plumbing will bring water, power, IT and sanitary to one location for modular classroom building installer under the General Contractor. Due to exact layout and number of connections that are only known to each MCB fabricator/installer no change can be made to the approach.
Refer to Drawing P0.2 for water and sewer services to the modular classrooms. Refer to E0.2 and E8.2 for electrical (power) service to the modular classrooms. Refer to E0.2 for conduit pathway provided for low-voltage systems from the modular classrooms to the Rhawnhurst ES building (wiring and connections to be provided by the modular contractor).

8. **Please clarify which prime has the scope of providing the security bollards shown on drawing E0.2 note 13 - GC or EC?**

   **Answer:** The EC shall provide bollards at the padmount transformer as shown on E0.2.

9. **Drawing note 8 on drawing E0.2 does not appear to be shown in plan. Please confirm this note can be ignored.**

   **Answer:** Chiller heat trace circuit with Note 8 reference added on Drawing E0.2. See ELECTRICAL DRAWINGS revisions above.

10. **Specification section 260940-2.8 specifies (3) different photocells - open loop, closed loop, and dual loop. It is not clear from the specs or drawings which type we are to provide. Please clarify which type are to provide for this project.**

    **Answer:** Provide open loop photosensors unless otherwise recommended by the lighting controls system manufacturer.

11. **Please confirm the motorized shade scope for the EC only includes install and wiring per detail 8 on E9.1. Please confirm all devices will be furnished by the GC.**

    **Answer:** Motorized shades, controllers, and switches are furnished by the GC. Shades and shade controllers shall be installed by the GC; control switches shall be installed by the EC. All wiring and raceways shall be provided by the GC.

12. **Specification section 281600-2.1C lists (3) different motion detectors. It is unclear from the specs and drawings which type of motion sensor should be provided in each area. Please indicate which type should be specified for each location.**

    **Answer:** The Intrusion Detection System manufacturer shall provide the motion sensor type(s) best suited to provide optimal coverage of each space.

13. **Specification section 262817 for the elevator disconnect is mentioned in note 5 on drawing E8.2 and mentioned in spec 260180, but this specification section has not been provided. Please provide this specification or clarify design. Please confirm the elevator disconnect should be a 100A-3P 480V fused safety switch in a NEMA 1 enclosure with 70A fuses.**

    **Answer:** Specification 262817 elevator disconnect switch is not applicable. Please provide a 3P.100A, 480V fused disconnect switch with auxiliary contact. Assume 70A
fuses for bidding purposes. Final fuse size will be based on approved elevator submittal.

14. Luminaire Note 8 in specification section 265200 for fixture types CH1 and RD4 states to include ceiling slope adapters, but sloped ceiling locations have not been indicated on the electrical plans. Please indicate the areas where sloped ceiling adapters are required.

   Answer: Note 8 is not applicable, and will be deleted, for Type CH1 fixtures. Provide sloped ceiling adapters for Type RD4 mounted in curved ceiling clouds in Cafeteria C105.

15. A fire alarm addressable relay is shown outdoors at the generator on drawing E0.2, but addressable relays are not rated for outdoors. Please confirm it is acceptable to locate this relay inside as close to the generator as possible.

   Answer: This is acceptable.

16. The lighting control details on E9.3 include a note at the room controllers to provide cables to wireless network bridges. It is our understanding that the design intent is to have lighting controls that are local/standalone for each room and not networked together. Please confirm our understanding is correct and that we do not need to provide network bridges or head end equipment to control rooms from a computer workstation. If we do need to provide network bridges and headend equipment, please provide details and specs for this design.

   Answer: Lighting controls for this project are non-networked. Wireless network bridges are not required. References to network bridges will be removed from E9.3 details.

17. M2.11 - There is supply and return duct on the roof, but no outdoors insulation spec. Please provide if this is lined duct or to be exterior insulated.

   Answer: Refer to Paragraph 2.3 in specification section 230890 for pre-manufactured exterior ductwork product. This product shall be used for all exterior ductwork.

18. What is the existing Fire Alarm System at Rhawnhurst?

   Answer: The main Fire Alarm System is a 120V, 1948 vintage, manual system with bell annunciation; manufacturer unknown. An existing EST FireShield Plus fire alarm panel monitors duct detectors on two air handling units.

19. We need lighting Fixture Panel Schedule we went through all drawings and can’t find.

   Answer: Luminaire schedules, panelboard schedules and lighting control schedules are found in the specifications as follows:

   Specification Section 260944 – Digital Lighting Schedules
ATTACHMENTS
This Addendum includes the following attachments:

Bid Proposal Forms
REVISED BID PROPOSAL FORM-GC

Project Specifications
SECTION 01 1145 SOILS MANAGEMENT
SECTION 015214 – MODULAR CLASSROOM BUILDING

Civil Drawings
Drawing C-500 UTILITY PLAN (Revised for Addendum #3)

Architectural Drawings:
DRAWING D1.3  FIRST FLOOR DEMOLITION PLAN UNITS “A & B”
DRAWING A1.4  FIRST FLOOR PLAN UNIT “B”
DRAWING A4.1  LARGE SCALE TOILET PLANS
DRAWING I7.9  OVERALL FIRST FLOOR – FINISH PLAN
DRAWING I7.10 COLOR SECOND FLOOR – FINISH PLAN

Mechanical Drawings
M0.0 – LEGEND, ABBREVIATIONS AND NOTES
M2.1 – FIRST FLOOR UNITS “A” & “B” HVAC
M2.9 – SECOND FLOOR UNITS “A” & “B” HVAC PIPING
M2.12 – ENLARGED MECHANICAL PLAN

Electrical Drawings
DRAWING E0.2  SITE PLAN
DRAWING E3.6  ROOF POWER
DRAWING E8.2  POWER RISER DIAGRAM

END OF ADDENDUM #003
TO: The School District of Philadelphia
    Board of Education

    Office of Capital Programs
    The School District of Philadelphia
    440 North Broad Street
    Third Floor - Suite 371
    Philadelphia, PA 19130-4015

FROM: __________________________________________

CONTRACTOR
__________________________________________

ADDRESS
__________________________________________

CITY/STATE
__________________________________________

CONTACT NAME
__________________________________________

PHONE NO.

BASE CONTRACT PROPOSAL:

1. Having become completely familiar with the local conditions affecting the cost of Work at the place where Work is to be executed, and having carefully examined the site conditions as they currently exist, and having carefully examined the Bidding and Contract Documents prepared for this project, together with any Addenda to such Bidding and Contract Documents as listed hereinafter, the Undersigned hereby proposes and agrees to provide all labor, materials, plant, equipment, transportation and other facilities as necessary and/or required to execute all of the Work described by the Contract Documents for the above cited Contract for the lump sum consideration of:

   ____________________________ Dollars
   ($__________________________), said amount being hereinafter referred to as the Base Proposal Amount. Base proposal Amount includes Unit Price Items listed below, if applicable.

BID ALTERNATES (Not applicable to this Contract – No Alternates)
UNIT PRICES:

UNIT PRICE NO. 1: EXCAVATION AND DISPOSAL OF CONTAMINATED SOILS

1. Excavation and Disposal of Soils determined to be Contaminated, in accordance with PA DEP Clean Fill Regulations, including all costs of excavation, stockpiling, testing and hauling, in accordance with Section 01 1145 SOILS MANAGEMENT, as directed by the District’s Environmental Consultant.

2. Unit of Measurement: per ton (T)

3. Payment: Payment to be made for the actual quantities in accordance with Section 01 1600-UNIT PRICES.

4. Estimated Quantity included in Base Bid: 400 TONS

5. Unit Price Calculation (to be included in Base Bid Amount):

   400 TONS @ $\text{______________________________ per TON} = \\
   $\text{______________________________ Total*}

*This amount included in Base Bid Amount

ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA:

2. The Undersigned acknowledges receipt of the following Addenda (list by number and date appearing on Addenda):

   Addendum No. | Date   | Addendum No. | Date   |
              |        |              |        |
   ___________ | _______ | ___________  | _______ |
   ___________ | _______ | ___________  | _______ |
   ___________ | _______ | ___________  | _______ |
   ___________ | _______ | ___________  | _______ |
   ___________ | _______ | ___________  | _______ |

TIME OF COMPLETION:
3. The Undersigned agrees to Substantially Complete all Work under this Contract within the time periods specified in Division 1, General Requirements, Section 00 1300 entitled “Time of Completion, Milestones and Phasing or Sequencing Requirements”.

INSURANCE:

4. All Bidders are instructed to refer to Article GC-11 of the General Conditions. All Contractors or Subcontractors bidding Work on the Project shall include in their bids the costs of Workers Compensation and Employer’s Liability Insurance, Commercial General Liability Insurance, Automobile Liability Insurance, Excess Umbrella Liability Insurance (Commercial Umbrella Liability Insurance) and any other types of insurance identified in Division 1- General Requirements, Section 01200 (or 01 1200) entitled “Special Insurance Requirements”.

LIQUIDATED DAMAGES:

5. Upon failure by the Contractor to achieve Substantial Completion within the time specified in Article GC-8 of the General Conditions from the Date of Commencement as set forth in the Notice to Proceed, the Contractor shall pay to the School District, as liquidated damages and not as a penalty, the sum of One Thousand Dollars ($1,000.00) per day for each consecutive calendar day of delay until such time as Substantial Completion of the Work is achieved.

6. In addition, the Contractor shall be responsible for and pay for the cost of completion of construction of the Work, as well as for any and all additional charges of the School District, Architect/Engineer, other Project Contractors, and any other Consultants to the School District relating to the Contractor's failure to achieve Substantial Completion on a timely basis, including, but not limited to, delay damages, disruption damages, acceleration costs or expenses, investigative expenses, consulting fees, experts' fees, and attorneys' fees.

7. The Contractor and the School District agree that the amounts so fixed herein as liquidated damages are reasonable forecasts of just compensation for the harm that will be caused to the School District by the Contractor's breach.

GENERAL STATEMENT:

8. The Undersigned declares that the person or persons signing this Proposal is/are fully authorized to sign on behalf of the firm listed and to fully bind the firm listed to all the Proposal's conditions and provisions thereof.

9. It is agreed that the Undersigned has complied or will comply with all
requirements of local, state, and federal laws, and that no legal requirement has been or
will be violated in making or accepting this Proposal, in awarding the Contract to it and/or
in prosecution of the Work.

10. Bid Security in the amount of ten percent (10%) of the Base Bid, plus all
additive Alternates Proposal amounts, is attached hereto and made a part hereof, without
derendorsement, in the sum of __________________ Dollars ($_________________),
which shall become the property of the School District in the event the Contract and
Performance Bond and Labor and Materialmen's Bond are not executed within the time
set forth, as liquidated damages.

11. The Undersigned further agrees within five (5) calendar days from date of
Notice of Acceptance of this Proposal or Contract award, to sign and deliver to the School
District, all required copies of the School District/Contractor Agreement, the Performance
Bond, the Labor and Materialmen's Bond, and the Maintenance Bond, in the forms
included in the Bidding Documents, and the policies of insurance or insurance certificates
as required by the General Conditions. In case the undersigned fails or neglects to deliver
within the specified time the School District/Contractor Agreement, the Performance
Bond, the Labor and Materialmen's Bond, and the Maintenance Bond, and the insurance
policies or certificates, all as aforesaid, the undersigned shall be considered as having
abandoned the Contract, and the Bid Bond accompanying this Proposal shall be forfeited
to the School District by reason of such failure on the part of the undersigned, as
liquidated damages and not as a penalty.

12. The Undersigned further agrees that the Bid Security may be retained by
the School District and shall remain with the School District until the School
District/Contractor Agreement has been signed and delivered to the School District and
the Performance Bond, the Labor and Materialmen's Bond, and the Maintenance Bond,
and insurance policies or certificates have been made and delivered to the School District.

Respectfully submitted this _____day of ____________, 201_.

Individual Proprietorship or Partnership

If Contractor is an individual proprietorship or is a partnership, sign here:

__________________________
(Trade Name of Firm)

By: _______________________ By: ______________________ (SEAL)
(Witness)                         (Owner or Partner)
Corporation

If Contractor is a corporation, sign here:

______________________________
(Name of Corporation)

ATTEST:

By: _______________________ By: ______________________ (SEAL)
(Secretary or Treasurer)     (President or Vice President)

(CORPORATE SEAL)

Signature by anyone other than the President or Vice President and the Secretary or Treasurer of the Corporation must be accompanied by a power of attorney, executed by the proper corporate officers under the corporate seal indicating authority to execute this Bid.
SECTION 01 1145 - SOIL MANAGEMENT

3.1 EXCAVATED SOIL MANAGEMENT

A. The Contractor shall remove, and recycle or dispose of all excess soil. All disposal of regulated soil/fill material shall be by the Contractor in accordance with local, State, and Federal regulations. Regulated material disposal shall be to an Owner-approved recycling method, an approved recycling facility, or an approved non-hazardous landfill. The removal and subsequent recycling or disposal of all excess soil needs to be managed in accordance with the PADEP Management of Fill Policy, effective January 1, 2020.

B. The Contractor is responsible for all testing required by the landfill or other site selected for recycling or disposal of excavated soil.

C. The excavation activities of known or suspected contaminated soil/fill material will be monitored by the Project Environmental Engineer on a continuous basis to advise the Contractor regarding the segregation of excavated soil. The Project Environmental Engineer is required to be onsite during all excavation activities of known or suspected contaminated soil/fill material.

D. The Contractor shall stage all excavated soil, as advised by the Project Environmental Engineer to be potentially contaminated, on six-mil thick polyethylene plastic, and cover with same, pending analysis and subsequent disposal/recycling. A six- to eight-inch berm shall be placed at the perimeter of the staging area to prevent run-on/run-off.

E. Soil samples shall be collected from the stockpiles by the testing entity selected by the Contractor and samples submitted to a PADEP-certified analytical laboratory for analyses. The Project Environmental Engineer will receive results back from the laboratory on a standard laboratory turnaround basis, typically 10 business days. The Contractor cannot claim a delay while soil samples are being analyzed. Expedited turnaround may be arranged for by the Contractor at no additional cost to the Owner.

F. Soil that meets the definition of a non-hazardous soil as defined within the Resource Conservation Recovery Act, Title 40 of the CFR parts 239 through 259 that cannot be reused on-site, will be sampled and analyzed by the Contractor in order to obtain disposal approval at a landfill or recycling facility. Sampling and analysis of the soil will be at the Contractor's expense at no additional cost to the Owner.

G. The Contractor shall provide a per ton Unit Price to transport and dispose of an estimated 400 tons of soil that does not meet the criteria to be certified as PADEP Clean Fill but meets the definition of a non-hazardous soil as defined within the Resource Conservation Recovery Act, Title 40 of the CFR parts 239 through 259.

H. All excess soil will be recycled or disposed off-site in a manner consistent with all applicable local, State, and Federal regulations. The disposal or recycling facility shall be approved by the Owner before the excess soil is transported off-site. The name of the proposed disposal or recycling facility is to be submitted to the Owner a minimum of 7 days prior to disposal.

I. The Contractor must follow the recommendations concerning handling of excavated excess Soil onsite as presented in PADEP's Management of Fill Policy, dated January 1, 2020.

J. In the event suspected contaminated soil is encountered that is unrelated to the excess soil described, the Contractor will notify the Owner. Following notification, the Owner will provide the
Contractor with the necessary procedures to manage the handling and disposal of the suspected contaminated soil.

3.2 SPECIAL CONDITIONS FOR SOIL MANAGEMENT

A. The following Special Conditions apply to all Work to be conducted in order to complete this project:

1. The Contractor shall make all required notifications and take all necessary precautions to ensure against damage including but not limited to access roads, sidewalks and driveways, utilities and structures. Any damage to such items shall be repaired or replaced by the Contractor at no additional cost to the Owner.

2. The use of burning at the Site for the disposal of refuse and debris will not be permitted.

3. The Contractor will furnish and install all fencing, barricades, warning signs, lights, etc., wherever necessary to protect the public during work on this project. Fencing, barricades, and other protection devices will remain in place until all tasks associated with the contract are completed.

4. Procedures used to accomplish the Work shall be as specified herein unless submitted to the Project Environmental Engineer for approval prior to project implementation.

5. Any alternative procedures submitted for approval shall provide for safe conduct of Work, careful removal and disposition of materials specified, and protection of property. The procedures submitted shall include a detailed description of the methods and equipment to be used for each operation, and the sequence of operations.

6. All disposal or recycling shall be by the Contractor in accordance with local, State, and Federal regulations. Excess soil shall be disposed at an Owner-approved recycling facility, or an owner approved landfill. The name of the proposed disposal or recycling facility is to be submitted to the Owner a minimum of 7 days prior to disposal.

7. The Contractor shall install appropriate measures to control surface water run-on to and run-off from the stockpiled excess soil, and from any open excavation. Engineering controls and best-management practices must be utilized to prevent stormwater runoff from the stockpiled soil.

8. The Contractor shall maintain the job site in a neat and orderly condition. This includes the daily removal of rubbish, waste, tools, equipment, and material not required for the Work in progress.

9. The Contractor assumes all liability for soil that is transported off-site and shall indemnify and hold Owner harmless for improper transportation and disposal that is not in accordance with local, State and/or Federal regulations.

3.3 TEST DOCUMENTATION AND REPORTING

A. The Contractor shall document all testing and provide copies to the Owner and authorities having jurisdiction. Test records shall include:

1. Date and time of tests;

2. Name of person performing the tests;
3. Location and depth of samples;
4. Names of any inspectors present;
5. Field observations and field screening procedures;
6. Daily field notes, including photographs;
7. Test procedures followed;
8. Test results;
9. A narrative describing how field tests were completed and sampling locations were chosen.

B. The Contractor shall provide documentation to the Owner for all testing before the excess soil is transported off-site and with Contract close-out documentation to the Owner. The test documentation shall include, but not be limited to, laboratory analytical reports, laboratory chain of custody, Contractor field notes and daily logs.

C. Laboratory analytical testing shall be completed by a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory.

3.4 DISPOSAL OR RECYCLING DOCUMENTATION

A. The Contractor shall provide the following to the Engineer and Owner upon completion of the Work:

1. Excess excavated soil disposal or recycling documentation;
2. Disposal facility profile sheets or acceptance forms;
3. PADEP Form U (if applicable); Manifests; and, Bills of Lading.

3.5 FUGITIVE EMISSIONS

A. The following additional Special Conditions apply to all Work to be conducted in order to complete this project:

1. The Contractor shall incorporate means to prevent the carryout or track out of soil and other materials from the area where work is being performed onto undisturbed areas of the School property and onto areas of public access, including but not limited to road sand sidewalks.

2. The Contractor shall incorporate appropriate means to prevent fugitive dust emissions resulting from all construction activities, including but not limited to excavation, demolition, soil placement, stockpiling and transportation.

3. The Contractor is solely responsible for preventing the generation of fugitive dust emissions resulting from wind and other natural and man-made forces. The Contractor shall control the speed of vehicles and equipment moving on the site as it relates to safety and the creation of fugitive dust and shall make appropriate use of wind screens and dust suppressants.

4. No liquid dust suppressant other than water shall be used without the specific advanced approval of the School District. Information to be submitted to the School District for approval of any dust suppressant, other than water, shall include the product specification, manufacturer's
usage instructions, information on environmental impacts associated with usage and approvals or certifications related to appropriate and safe usage for ground application.

5. Any fugitive dust and/or soil materials which leaves the site in an uncontrolled form shall be immediately cleaned up by the Contractor to the satisfaction of the School District. At the discretion of the School District, cleanup may incorporate on-site or off-site environmental sampling, performed by the School District at the Contractor’s sole expense.
SECTION 01 5214 – MODULAR CLASSROOM BUILDING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary classrooms.
B. Maintenance and removal.

1.02 UTILITIES

A. Provide temporary electricity connection from local utility.
   1. Owner will pay for electric connection and usage if they are billed directly by the utility.

1.03 SUBMITTALS

A. Product Data: Provide data on profiles, component dimensions, finishes, and specialties.
B. Site Plan: Showing areas for temporary construction and classrooms.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of experience.
B. Installer Qualifications: Company specializing in performing work of the type specified and with minimum three years of experience.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. General Contractor shall provide a Modular Classroom Building (MCB) on site as located on Phasing Drawings PH.1, PH.2 and PH.3.

1. Basis of Design Manufacturer: MOBILEASE MODULAR SPACE, INC.
   a. Contact: Murph Barton
      • Ph: 856-686-9600
      • 856-686-9240 (fax)
      • murph@mobileasemodular.com

2. Main Classroom Building shall include
   a. Overall Dimensions: approximately 124'-5" long X 64'-0"
   b. (8) eight classrooms.
   c. Include separate boys and girls restrooms, each bathroom shall have 5 water closets as shown on PH.3 and 4 sinks
   d. (1) Separate Single Occupancy Toilet.
   e. Ramps and Stairs as required to accommodate modular on site at approximate elevation of 121'-0" on slope of site as located on Phasing Drawings.
   f. Foundation system to accommodate Modular Classroom Building.
   g. Contractor shall be responsible coordinate and to make final electrical, and plumbing connections brought to the MCB as stub up connections.
   h. All work shall be designed to meet applicable building codes for the City of Philadelphia.

3. MCB shall be designed to meet Specifications provided in following MOBILEASE

MODULAR CLASSROOM BUILDING
01 5214 - 1 of 2
PART 3 EXECUTION

3.01 PREPARATION
A. Fill and grade sites for temporary structures to provide drainage away from buildings.

3.02 INSTALLATION
A. Install classroom spaces ready for occupancy for dates as shown on the phasing drawings.

3.03 MAINTENANCE AND CLEANING
A. Maintain approach walks free of mud, water, and snow.

3.04 REMOVAL
A. At completion of use by the school district as shown on the phasing drawings remove buildings, foundations, utility services, and debris. Restore areas to original condition including the removal of all footings and restoration of turf, grasses and pavement restoration.

END OF SECTION
Murphy Barton  
856-686-9600  
856-686-9240 (fax)  
murph@mobileasemodular.com
SPECIFICATIONS

Modular Building Institute Seal
100 MPH Wind Speed
Occupancy: Educational
Destination: Philadelphia, PA

FRAME:
- Perimeter Type with center C-Channel
- 64’ or longer perimeter frame
- I-Beam Size as Required

FLOOR:
- Nylon Impregnated Bottom Board
- 2 x 8 Joists, 16” OC
- ¾” T & G Plywood Decking
- 1/8” Vinyl Composite Block Tile

WALLS & PARTITIONS:
- Wall Height: 8’-6”
- 2 x 4 Wood Studs, 16” OC
- Double Top Plate
- 2 x 6 Wood Studs – Endwalls extended to roof decking
- 2 x 6 Wood Studs – Exterior Walls
- LF Interior Partition Walls (per print)
- Double Mateline Walls
- 5/8” Type X Vinyl Covered Gypsum Wallboard
- Standard Interior Trim Package
- 4” Vinyl Base Cove
INTERIOR DOORS:
- Restroom doors Passage/ Lever Hardware with Hydraulic Closer
  With classroom function deadbolt
- 36” x 80” Sol. Core Imp. Oak St. Fr. 20 Min.
  GRADE 2 HARDWARE
- 36” x 80” Sol. Core Imp. Oak St. Fr. 60 Min.
  GRADE 2 HARDWARE (janitor)
- 5” x 20” VIEW BLOCKS FOR CLASSROOM DOORS ONLY
- All door hardware to accept best IC cores

ROOF:
- Ground Snow Load: 30 psf
- Truss Spacing: 24” O.C.
- Transverse – no bottom cord – 24” o.c.
- FR-Deck
- 45 Mil White EPDM with FR
- Ceiling: 2 x 2 Acoustical T-Grid (MC required)
- Mateline Ridgebeam
- Ridgebeam: 4 Layer 24”, ¾” Plywood
- 1 Hour Rated Ceiling in Corridor (no dropdown)
  1 HOUR RATED CEILING TO BE SAME HEIGHT AS REST OF BUILDING.
- Attic Ventilation as Required

PLUMBING:
- Multi-station Restroom
- Handicap accessible ½ bath
- Wall mount lavatory with mirror & single lever faucet
- HC water closet with grab bars
- Standard elongated water closet
- SDP standard restroom accessories
- 30 Gal Water Heater
  *** set water heater at 110 degrees***
- Urinal
- Steel modesty partitions
- Steel urinal screen
- Utility sink with legs (PVC)
- Hi/Lo Handicap accessible water cooler
- Type L Copper Supply Lines (per fixture)
  ***INSTALL PLUMBING IN CEILING, DO NOT USE ZIP TIE’S FOR STAPPING, USE PLUMBER STRAP***
- CAST IRON DRAINS
ELECTRICAL:

- 125 Amp Panel (1) Per Classroom, (1) For Common Space
  **KEYED LOCKS ON PANELS**
- 2 x 2 LED T-GRID FLAT PANEL
  24-FPL1-LED-4000L-DIM 10-MVOLT-50K
- Emergency Lights (dual heads) (as required)
  ***LED IN ALL RESTROOMS, CLASSROOM & CORRIDOR***
- Combo Lighted Exit Sign/Emergency Light with Battery
  **LED**
- Exterior Remote Heads (Dual Head Type)
  **LED**
- Empty 2 x 4 J-Box with ¾” Conduit Stub
- Alarm Junction Boxes 2 x 4 with ½” conduit
- Commercial Grade 20 Amp 110v Recepts approx. 12’ oc
- GFI Protected Receptacle 20 Amp
- Exterior GFI Receptacle (in-use type) 20 Amp
- Dedicated 110v 20 Amp rec for water cooler
- Heat Tape Receptacle (GFI) 20 Amp
- Occupancy Sensors Intermatic IOS-DOV
- MC Cable Wiring
- Ceiling mount occ sensor with power pack in gang restrooms / classrooms
- L-200 CFM EXHAUST IN STAFF RESTROOMS
- NUVO 65-062 13W LED Wall Pack Fixture with Photocell
- Exhaust fans in Boys and Girls restroom to be on fan controller
  **Model 57V winnelec**
- Boys and Girls RESTROOMS & CLASSROOM should be on occupancy sensors tied into HOT leg. NO SWITCH
- L-300 cfm broad fan with Model 57V Speed control switch winnelec

See Attached

HVAC:

- 3 Ton Wall Mount Unit with 10kw Heat, heat pump, dehumidification, energy recovery ventilators, humidistat
- CRV Unit on Wall Mount HVAC
- Programmable Thermostats
- LF Fiberglass Supply Duct with Grilles
- Std. Return Air Grilles at Unit Only (No Duct)
  ALL CLASSROOMS
- LF Fiberglass Return Duct with Grills for toilet unit
- LF Plenum Wall
- 10” x 10” Fire Dampers (as required)
- 2 x 2 Supply Grilles for Suspended T-Grid Ceiling
- 2 x 2 Return Grilles for Suspended T-Grid Ceiling
- NO RETURN IN CORRIDOR
EXTERIOR:
- Hi-Rib 29ga Steel Siding with Steel Trim
- 100% House Wrap
- Hi-Rib 29ga Steel Mansard (20” to 24” avg. height)
- 100% 7/16” OSB Sheathing
- Skirting: Hi-rib 29ga St. with 2 x 2 T, Vents (36” avg.)

WINDOWS:
- 36” X 60” vs Lowe E Insulated. This is an egress window.
- Bronze Aluminum Frames
- Bronze Tinted Glass
- Vinyl Mini-Blinds
- Security Screens Over Windows

EXTERIOR DOORS:
- 72” x 80” ST/ST (Panic Ready) with 10”ADA Vision panel & Center Post
  Both sides are active. Center Post is secured with 4 screws and is removable.
- 6” x 32” view block mounted 43” to bottom of view block
- Removable Post, Both Sides Active (ST/ST only)
  Post is secured with 4 screws
- STANDARD CLOSER
- Panic Hardware with Lever handle
  GRADE 1 PANIC

INSULATION:
- Floor – R-30, 10”
- Exterior Wall – R-19
- Roof-R-60
- Interior Partitions – R-11, 3.5”
ELECTRICAL SCOPE (CONTINUED):

- Provide MC Cable feeders and connections from MDP (Provided by EC) to Classroom and Common Area panelboards.
- Provide complete Fire Alarm system in accordance with NFPA and ADA requirements and School District of Philadelphia standards; including cabling and connections to Rhawnhurst ES building Fire Alarm system and programming.
- Provide Telecommunications system including wall mount data rack in Common Area with all required patch panels and cable management, and fiber optic and copper telecommunications cabling connections from modular telecommunications rack to Rhawnhurst ES telecommunications systems.
- Provide Cat-6 data wall outlets (9 per classroom), and lockable wall mount WAP enclosure (1 per classroom) per District standards and associated Cat-6 UTP cabling and all required terminations.
- Provide surveillance cameras per District standards; including Cat-6 UTP cabling, terminations and all cabling/connections required for connection to Rhawnhurst ES surveillance camera system.
- Provide (1) PA system speaker and (1) clock per classroom per District standards and associated wiring and connections to Rhawnhurst ES PA/Clock systems.
- Provide all additional components and accessories required to tie Modular Classroom systems identified above into Rhawnhurst ES building systems.
- Provide all backboxes, raceway, j-hooks, and wiring required for the above. (EC provides empty conduit pathway from Modular Classroom to Rhawnhurst ES basement crawlspace for low voltage systems cabling).
- Provide all system programming and testing required to confirm proper system operation.

GENERAL NOTE:
Electrical and Plumbing contractor will bring electrical, IT, water and sanitary to one location for the MCB, it is the general contractor's responsibility form this point to make connections as needed throughout the MCB for electrical, water and sanitary. This is due to the MCB being provided by the general contractor which may facilitate small variations of layouts and connections that are not available to the other prime contractors during bidding.
5. **ALL KITCHEN HOOD MAKE**

FIELD VERIFY EXHAUST HOOD CONNECTION SIZES AND LOCATIONS BEFORE

MAINTAIN MINIMUM 6" CLEARANCE AROUND ALL SIDES OF KITCHEN HOOD

DISHWASHER EXHAUST SHALL BE ALL ALUMINUM CONSTRUCTION WITH

PROPERLY BY

OWNER DOES NOT WANT EQUIPMENT, IT SHALL BE DISPOSED OF

EQUIPMENT THAT IS REMOVED SHALL BE TURNED OVER TO OWNER. IF

OF THIS PROJECT.

HWS

R

S

RV

AIR SEPARATOR

HUMIDISTAT

ATC MOTORIZED DAMPER

CHILLED WATER RETURN PIPE

RECTANGULAR GRAVITY ROOF VENTILATOR

CHECK VALVE

FIRE DAMPER

GATE VALVE

-0" CLEARANCE BETWEEN INTAKE OF MAKE

COMPLETION

4. **ALL UNDERGROUND OR CONCEALED REFRIGERATION LINES SHALL BE**

( THESE NOTES APPLY TO ALL MECHANICAL DRAWINGS)

MECHANICAL NOTES:

( THESE NOTES APPLY TO ALL MECHANICAL DRAWINGS)

5. **THIS CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND**

9. THE MECHANICAL CONTRACTOR SHALL PAY FOR ALL FEES AND PERMITS

3. **THIS CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS STEEL AND**

7. THE MECHANICAL CONTRACTOR SHALL SEAL ALL HIS RESPECTIVE WALL

GENERAL NOTES:

(DUCTWORK NOTES:

MAXIMUM 1100 FPM AIR VELOCITY. DUCTWORK SYSTEMS SHALL BE SIZED

WITH THE SPECIFICATIONS.

ROUND DUCTWORK SHALL BE INTERNALLY LINED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND

RATED AND MEET FLAME/SMOKE INDEXES OF 25/50.

FIRE DAMPERS IN ACCORDANCE WITH NFPA 90A. THIS APPLIES EVEN IF THEY ARE NOT SPECIFICALLY

WITH PITTWRAP PROTECTIVE COVERING. INSTALL IN ACCORDANCE WITH EQUIPMENT BEING REMOVED.

MECHANICAL CONTRACTOR SHALL REMOVE ALL SUPPORTS, PADS, ETC., ASSOCIATED WITH EQUIPMENT AND MATERIALS REMOVED. CONTRACTOR SHALL VERIFY LOCATIONS OF EQUIPMENT AND MATERIALS REMOVED. CONTRACTOR SHALL VERIFY LOCATIONS OF SIZE DIFFERS FROM REMOVED EQUIPMENT.

ON THE PLANS.

MECHANICAL CONTRACTOR SHALL REMOVE ALL HVAC EQUIPMENT SCHEDULED ABOVE

OF EQUIPMENT AND MATERIALS REMOVED. CONTRACTOR SHALL VERIFY LOCATIONS OF

DEMO PLANS ARE SCHEMATIC AND NOT INTENDED TO SHOW EXACT LOCATIONS SIZE DIFFERS FROM REMOVED EQUIPMENT.

WITH EQUIPMENT BEING REMOVED.

MECHANICAL CONTRACTOR SHALL REMOVE ALL SUPPORTS, PADS, ETC., ASSOCIATED WITH EQUIPMENT AND MATERIALS REMOVED. CONTRACTOR SHALL VERIFY LOCATIONS OF EQUIPMENT AND MATERIALS REMOVED. CONTRACTOR SHALL VERIFY LOCATIONS OF SIZE DIFFERS FROM REMOVED EQUIPMENT.

ON THE PLANS.
2. 5" HWS/HWR PIPING DOWN TO FIRST FLOOR. SEE M2.7 FOR PROVIDE CLEAR LOCKABLE COVER.

3. 4" CWS/CWR PIPING DOWN TO FIRST FLOOR. SEE M2.7 FOR CONTINUATION.

CONTINUATION.
DRAWING NOTES:

1. REFER TO VOLTAGE DROP SCHEDULE ON DRAWING E10.4 FOR PHOTOVOLTAIC STRING SIZING.
2. REFER TO PHOTOVOLTAIC SYSTEM INVERTER SCHEDULE ON DRAWING E10.4 FOR INVERTER SIZES.
3. REFER TO PHOTOVOLTAIC PANEL RATINGS.
4. PROVIDE A BALLASTER FLAT ROOF PHOTOVOLTAIC MODULE MOUNTING SYSTEM.
5. USE LIQUID TIGHT FLEXIBLE METAL CONDUIT WHEN CROSSING ROOF/EXPANSION JOINTS.
6. REFER TO POWER RISER FOR WIRING INFORMATION AND SIZING.
7. DRAWER SHAPE SHOULDS BE MOUNTED TO INSIDE CORNER OF MASONRY TO MINIMIZE VISIBILITY AND PAINT EXPOSED CONDUIT RISER ON FACE OF PANEL.
8. COVER.
9. PROVIDE A BALLASTER FLAT ROOF PHOTOVOLTAIC MODULE MOUNTING SYSTEM.
10. REFER TO VOLTAGE DROP SCHEDULE ON DRAWING E10.4 FOR HOMERUN SIZING OF INVERTERS.
11. CONTRACTOR SHALL MOUNT CONDUIT TO INSIDE CORNER OF MASONRY TO MINIMIZE VISIBILITY AND PAINT EXPOSED CONDUIT RISER ON FACE OF PANEL.