BLACK HORSE PIKE REGIONAL SCHOOL DISTRICT
Highland HS 2025 LMC Corridor & Classroom Renovations (GA# 23-73)
Addendum #1– Cover Sheet
January 9, 2025

Bid Package Clarification and Changes

This Addendum dated January 9, 2025 for the **Highland HS 2025 LMC Corridor & Classroom Renovations** shall be included as part of the Contract Bid Documents. This Addendum shall supplement and clarify the current Contract Bid Documents.

ADDENDUM #1 CONSISTS OF **ALL OF THE ITEMS LISTED BELOW**.

1. Addendum #1 – Narrative **(3 pages)**
2. Contractor Questions and Answers **(2 pages)**

3. Sketch ADM-1.01 **(1 sketch)**
4. Sketch ADM-1.02 **(1 sketch)**
5. Sketch ADM-1.03 **(1 sketch)**
6. Sketch ADM-1.04 **(1 sketch)**

One (1) full size drawing of each of the following are included in this Addendum with an Addendum #1 Revision Date of January 9, 2025

7. Drawing M1.1
8. Drawing M1.1A
9. Drawing M2.1
10. Drawing M2.1A
11. Drawing M4.1

PLEASE **ACKNOWLEDGE RECEIPT OF THIS ENTIRE ADDENDUM** BY SIGNING BELOW AND **EMAILING BACK IMMEDIATELY TO jminniti@garrisonarch.com**. If this information is unclear, please call (856) 396-6200. If you are not bidding this project, please write "No Bid" and send this page back.

_____ _____

Signature **Company**

BLACK HORSE PIKE REGIONAL SCHOOL DISTRICT
Highland HS 2025 LMC Corridor & Classroom Renovations (GA# 23-73)
Addendum #1 - Narrative
January 9, 2025

SPECIFICATIONS

1. In Specification Section Summary of Work 01010 **DELETE** Section 01010.1.1E.3 in its entirety and **REPLACE** with the following

    a. The **On-Site Construction** period, during which all work on site is to be performed, is to start on **April 18, 2025**. This is the start of Spring Recess which runs from April 18, 2025 thru April 27, 2025. Students and Staff will return on Monday, April 28, 2025. The intent during the Spring Recess period is for the Contractor to construct a new GWB and metal stud partition wall and associated ceiling work for the new Corridor which is adjacent to the LMC space. The new wall shall be taped, spackled, sanded and painted with new base on the LMC side only (Base Bid). If Alternate #1 is accepted, the Contractor shall construct an additional new GWB and metal stud partition wall as shown on the documents and associated ceiling work. The wall(s) will separate the LMC space from the proposed work area and will allow for the Contractor to work while school is in session for the remainder of the school year (from 4/28/25 to on or about 6/20/25). **NO WORK can begin in the work area until the new partition wall(s) is in place.** Any work that needs to be done on the LMC side of the partition(s) while school is in session will need to be done on second shift or with special arrangements and written approval by the Owner. On May 20, 2025 and May 21, 2025 there will be testing taking place in the LMC in the morning, therefore NO WORK can take place in the work area until after dismissal time of 12:30 p.m. on those days. Upon completion of the school year (on or about 6/20/25) the Contractor will have full access to the LMC space to complete the remaining work which must be completed on or before August 1, 2025.

2. The **ATTACHED** "Addendum #1 - Contractor Questions and Answers" shall be considered as part of this Addendum #1. **(2 Pages)**

DRAWINGS

ARCHITECTURAL

1. On Drawing A-0:
    a. **REVISE** Drawing as per the **ATTACHED Sketch ADM-1.01 (1 Sketch).**
    b. **REVISE** Drawing as per the **ATTACHED Sketch ADM-1.02 (1 Sketch).**

2. On Drawing A-0.1:
    a. **REVISE** Drawing as per the **ATTACHED Sketch ADM-1.03 (1 Sketch).**
    b. **REVISE** Drawing as per the **ATTACHED Sketch ADM-1.04 (1 Sketch).**

3. On Drawing A-1: At detail 1/A-1 Existing/Demolition Floor Plan – Base Bid **REVISE** per the following:

a. In Literacy Lab C100G on the north wall the Owner shall **REMOVE** the existing Smartboard and track system and the Contractor shall **REMOVE** the 10' whiteboard and patch and prep the entire wall to receive new finishes per the room finish schedule.
b. In Literacy Lab C100G on the south wall the Contractor shall **REMOVE** the existing 12' tackboard and patch wall to receive new finishes per the room finish schedule.
c. In Computer Resource C100H on the east wall the Contractor shall **REMOVE** the existing clock/speaker and infill opening with CMU to match and prep wall to receive new finishes per the room finish schedule.

4. On Drawing A-1: At detail 2/A-1 Existing/Demolition Floor Plan – Alternate Bid **REVISE** per the following:
   a. In Office C100F on the west wall the Owner shall **REMOVE** the wall mounted projector and speakers and the Contractor shall **REMOVE** the existing 6' whiteboard and patch and prep wall to receive new finishes per the room finish schedule.
   b. In Office C100F on the south wall the Contractor shall **REMOVE** the existing 12' whiteboard and patch wall to receive new finishes per the room finish schedule.

MECHANICAL

1. Drawings M1.1: **DELETE** Drawing in its entirety and **REPLACE with the ATTACHED** Drawing M1.1 ISSUED FOR ADDENDUM #1: 1/9/25 (1 Full Size Drawing).

2. Drawings M1.1A: **DELETE** Drawing in its entirety and **REPLACE with the ATTACHED** Drawing M1.1A ISSUED FOR ADDENDUM #1: 1/9/25 (1 Full Size Drawing).

3. Drawings M2.1: **DELETE** Drawing in its entirety and **REPLACE with the ATTACHED** Drawing M2.1 ISSUED FOR ADDENDUM #1: 1/9/25 (1 Full Size Drawing).

4. Drawings M2.1A: **DELETE** Drawing in its entirety and **REPLACE with the ATTACHED** Drawing M2.1A ISSUED FOR ADDENDUM #1: 1/9/25 (1 Full Size Drawing).

5. Drawings M4.1: **DELETE** Drawing in its entirety and **REPLACE with the ATTACHED** Drawing M4.1 ISSUED FOR ADDENDUM #1: 1/9/25 (1 Full Size Drawing).

ELECTRICAL

1. On Drawing 1/E1: **RELOCATE** pull station (door is getting wider) in Corridor outside existing Literacy Lab C100G.

2. On Drawing 2/E1: **CHANGE** switch in IDF room to wireless dimmer switch.

3. On Drawing 2/E1: **ADD** one additional occupancy sensor to Classroom C105 and Classroom C106.

4. On Drawing 2/E2: The three way switch shall be compatible with wireless lighting control relay.

5. On Drawing 1/E2: If the Alternate is accepted, the Owner will **REMOVE** and **RELOCATE** the wiring for the Copy Machine, CO-EX.

6. On Drawing 2/E2: **ADD** one additional occupancy sensor to Classroom C108.

7. On Drawing 1/E4: **CHANGE** DOAS-1A in Single Line Diagram to DOAS-1.

8. General Note: Clock and Speaker Vendor is Eastern Datacomm (Marylou Wallner mwallner@easterndatacomm.com).

9. General Note: Fire Alarm Vendor is Jim Minnick (856-318-9637, mfssystems@makofiresecurity.com).

BLACK HORSE PIKE REGIONAL SCHOOL DISTRICT
Highland HS 2025 LMC Corridor & Classroom Renovations (GA# 23-73)
Addendum #1 – Contractor Questions and Answers

Levy Construction 12-20-24

1) Please advise who the current fire alarm provider.

Answer: MFS Sysytems
mfssystems@makofiresecurity.com
Jim Minnick, 856-318-9637

2) Please provide who the electronic clock provider.

Answer: Eastern DataComm
mwallner@easterndatacomm.com
Marylou Wallner

Russo Corp. 12-27-24

1) Do permit fees actually apply to this project, or will the municipality waive permitting fees for this project? Often with public projects, the fees are waived by the township.

Answer: See Specification Section 01010.1.1.K

2) I noticed the below passage from p. 192 of the bid specs pdf, which I highlighted in yellow 3 (Section 01500 Part 1.3 Execution Paragraph G Item #2). Can you please confirm whether this contract will REQUIRE the contractor to provide an onsite job trailer, or is it optional?

Answer: No onsite job trailer is required.

Levy Construction 12-31-24

1) Please advise when you anticipate the demolition of the alternate bid scope of work to take place, if alternate # 1 is accepted.

Answer: See revision of Specification Section 01010.1.1.E.3 in the Addendum #1 Narrative.

Levy Construction 01-02-25

1) Who is the current BMS contractor for the school?

Answer: See Specification Section 15930.1.01.2

2) On M1.1 and M1.1a demo prints there are some missing branch duct sizing needed for patch work (mech sheet note #3). The CFM information is missing for (mech sheet note 5) on several of the GRD's. Needed to rebalance. I also need the existing GRD's CFM for rebalancing as called out in note 5.

Answer: Please see Addendum Narrative for answer.

3) Please provide duct sizes for the DOAS unit duct drops and elevation print, with duct height listed.

Answer: Duct openings are full size of unit openings. Elevations are to be verified in the field.

4) Is there a time/date for subcontractors to re-visit the site?

Answer: See Specification Section 01010 Summary of Work. Site visits can be arranged through Rob Mortka, the cell number is (609) 929-8141, office number is (856) 227-4100 ext. 4009.

Russo Corp. 01-06-25

1) Who is the existing fire alarm vendor?

Answer: See answer above. (Levy Construction – 12-20-24 #1)

2) Who is the existing clock/speaker vendor?

Answer: See answer above. (Levy Construction – 12-20-24 #2)

Straga Brothers 01-06-25

1) Please confirm there is no Plumbing work required within the project.

Answer: The project will have plumbing work. Please see Drawing M1.1 Re-Issued for Addendum #1:01-09-25.

USA Electric 01-06-25

1) The name and phone number of the service company for the PA system?

Answer: See answer above. (Levy Construction – 12-20-24 #2)

2) Will the [3] classroom ceiling speakers shown on electrical plans need to go back to PA headend individually or can they all connect to corridor speakers?

Answer: Coordinate with the District's vendor.

3) Can the new corridor speakers connect to either the existing circuit that fed library demo speakers or connect to existing corridor outside of construction area?

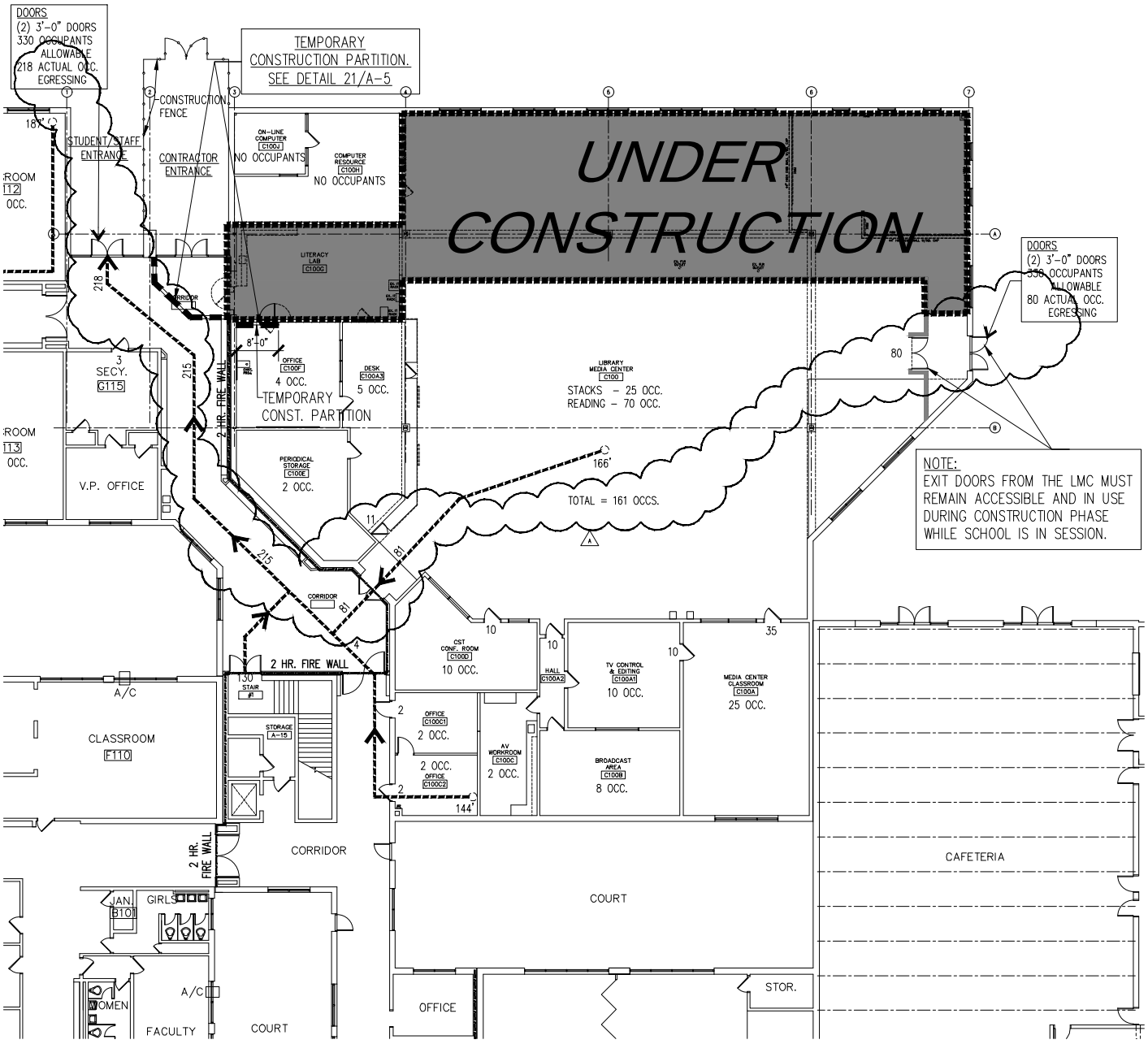
Answer: Coordinate with the District's vendor.

4) Can the new clocks in classrooms be connected to existing clock circuits adjacent to the work area?

Answer: Coordinate with the District's vendor.

Joseph Porretta Builders 01-07-25

1) Is there any on site testing of materials, from a licensed testing agency, for structural steel and masonry required for this project?
Answer: No.



1 / A-0 EGRESS FLOOR PLAN – BASE BID – CONSTRUCTION PHASE (DURNG SCHOOL YEAR) – 4/28/25 THRU 6/20/25

SCALE: 1/16" = 1'-0"

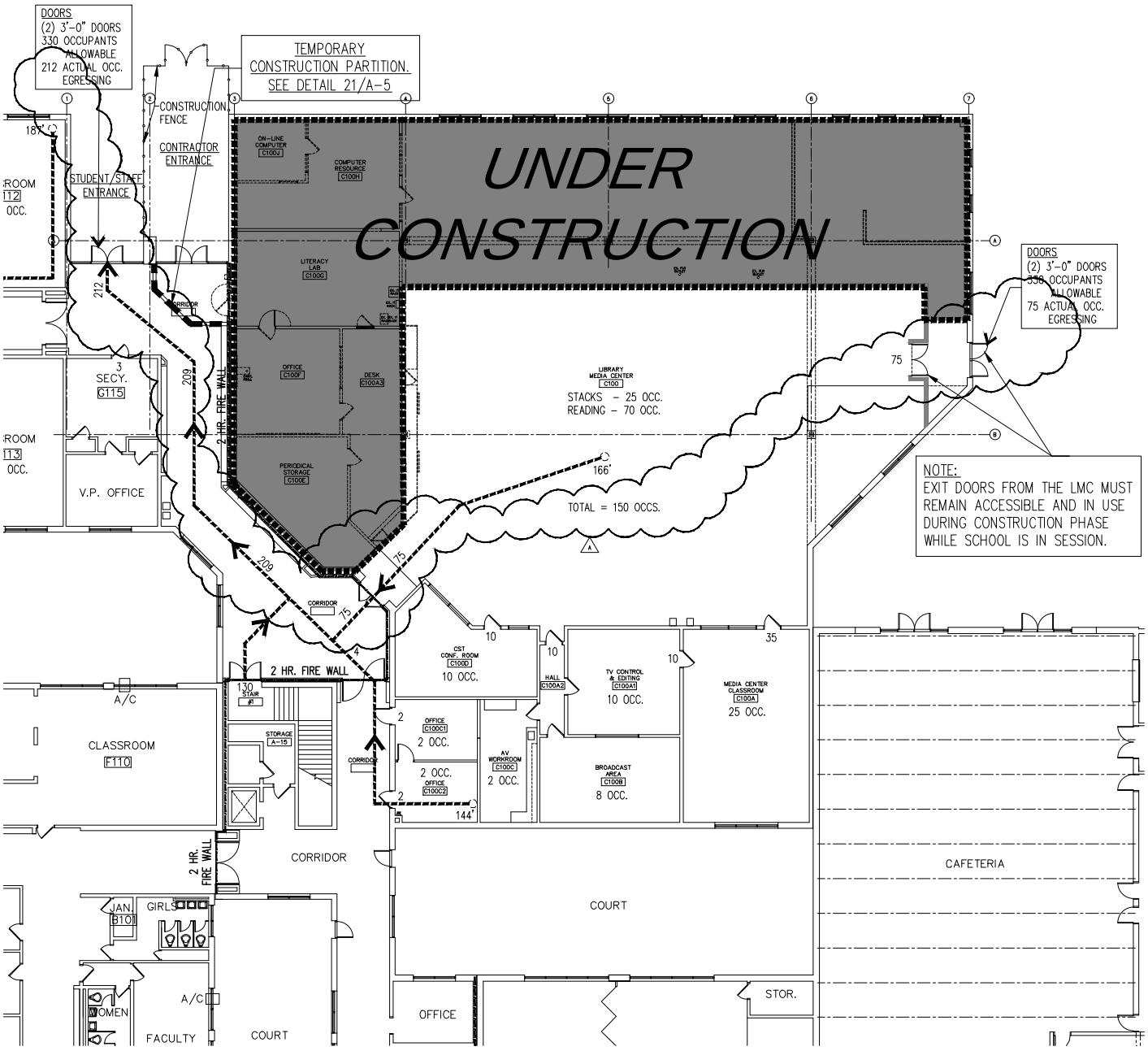
GARRISON ARCHITECTS
A Professional Corporation of Architects and Planners
713 CREEK ROAD, BELLMAWR, NEW JERSEY 08031 (856) 396-6200

PROJECT NAME: HIGHLAND REGIONAL HIGH SCHOOL 2025 LMC NEW CORRIDOR & CLASSROOMS RENOVATIONS

PROJECT NUMBER: 23-73

DATE: 01/09/25

ADM-1.01



2 A-0 EGRESS FLOOR PLAN – BASE & ALTERNATE BID – CONSTRUCTION PHASE (DURNG SCHOOL YEAR) – 4/28/25 THRU 6/20/25

SCALE: 1/16" = 1'-0"

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A Professional Corporation of Architects and Planners
713 CREEK ROAD, BELLMAWR, NEW JERSEY 08031 (856) 396-6200

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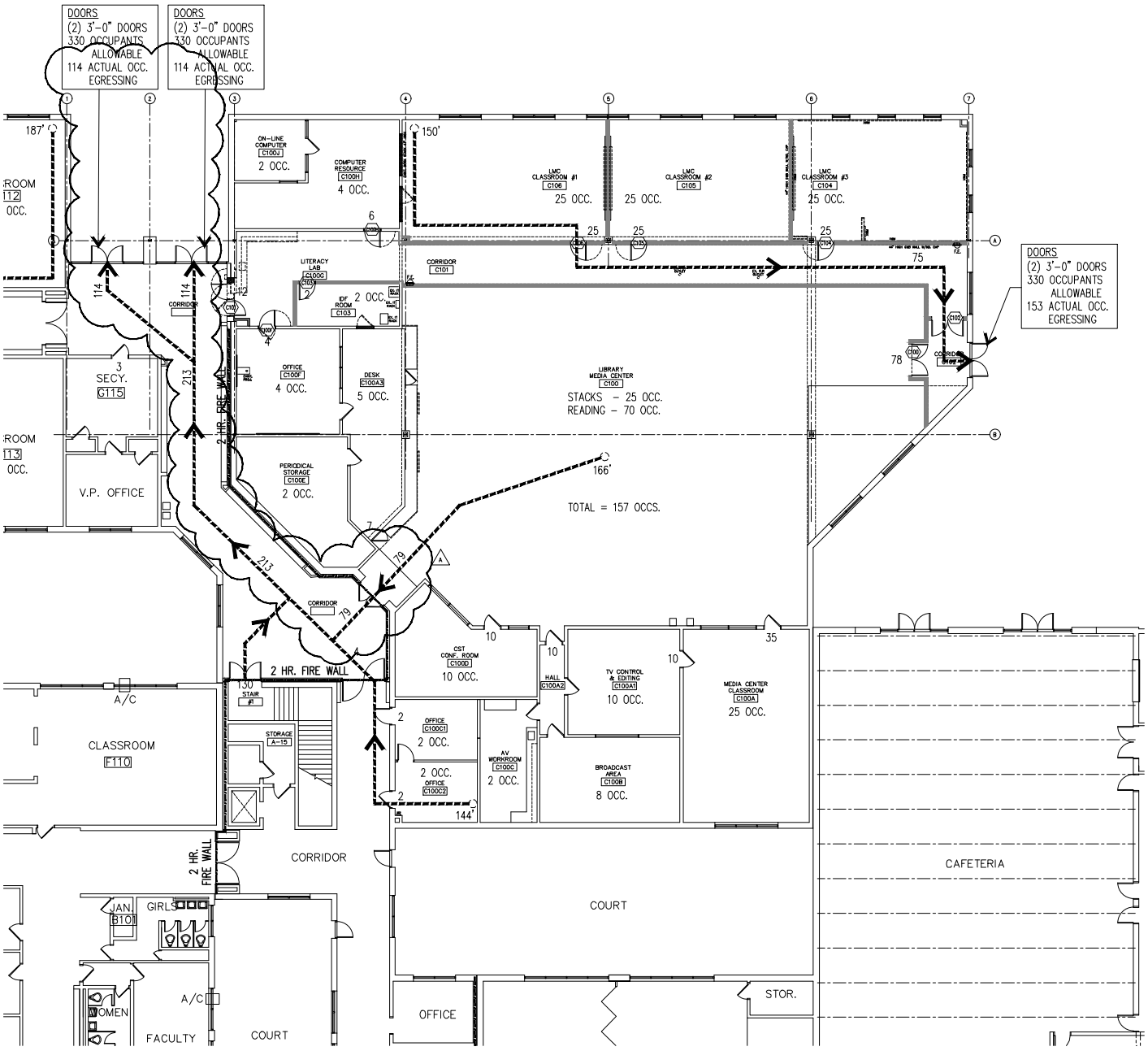
PROJECT NUMBER: 23-73

DATE: 01/09/25

ADM-1.02



1 / A-0.1 EGRESS FLOOR PLAN – BASE BID – POST CONSTRUCTION (2025–2026 SCHOOL YEAR)

SCALE: 1/16" = 1'-0"

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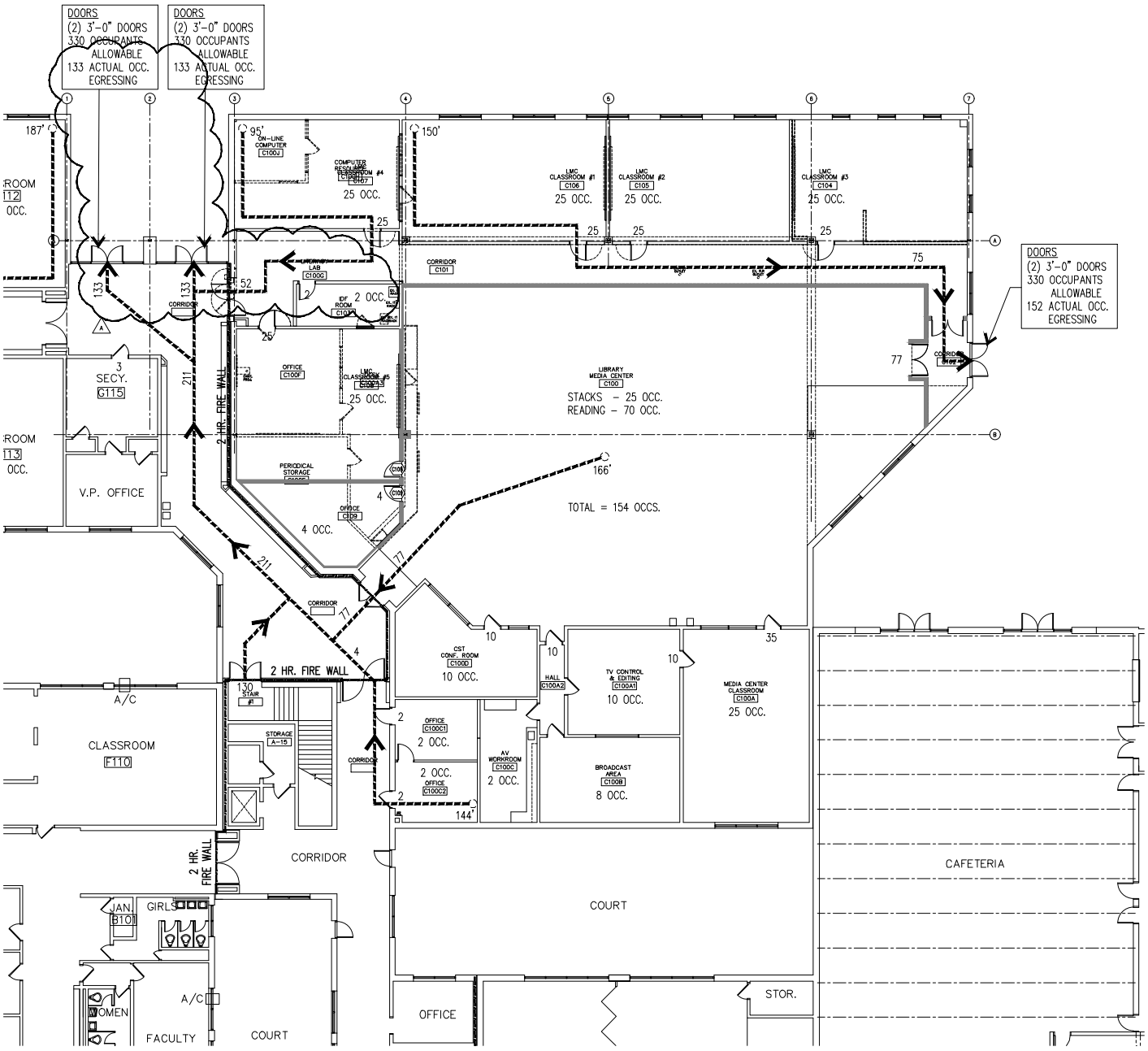
713 CREEK ROAD, BELLMAWR, NEW JERSEY 08031 (856) 396-6200

PROJECT NAME:
HIGHLAND REGIONAL HIGH SCHOOL
2025 LMC NEW CORRIDOR & CLASSROOMS RENOVATIONS

PROJECT NUMBER:
23-73

DATE: 01/09/25

ADM-1.03



2 A-0.1 EGRESS FLOOR PLAN – BASE & ALTERNATE BID – POST CONSTRUCTION (2025–2026 SCHOOL YEAR)

SCALE: 1/16" = 1'-0"

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2025 LMC NEW CORRIDOR & CLASSROOMS RENOVATIONS

PROJECT NUMBER:
23-73

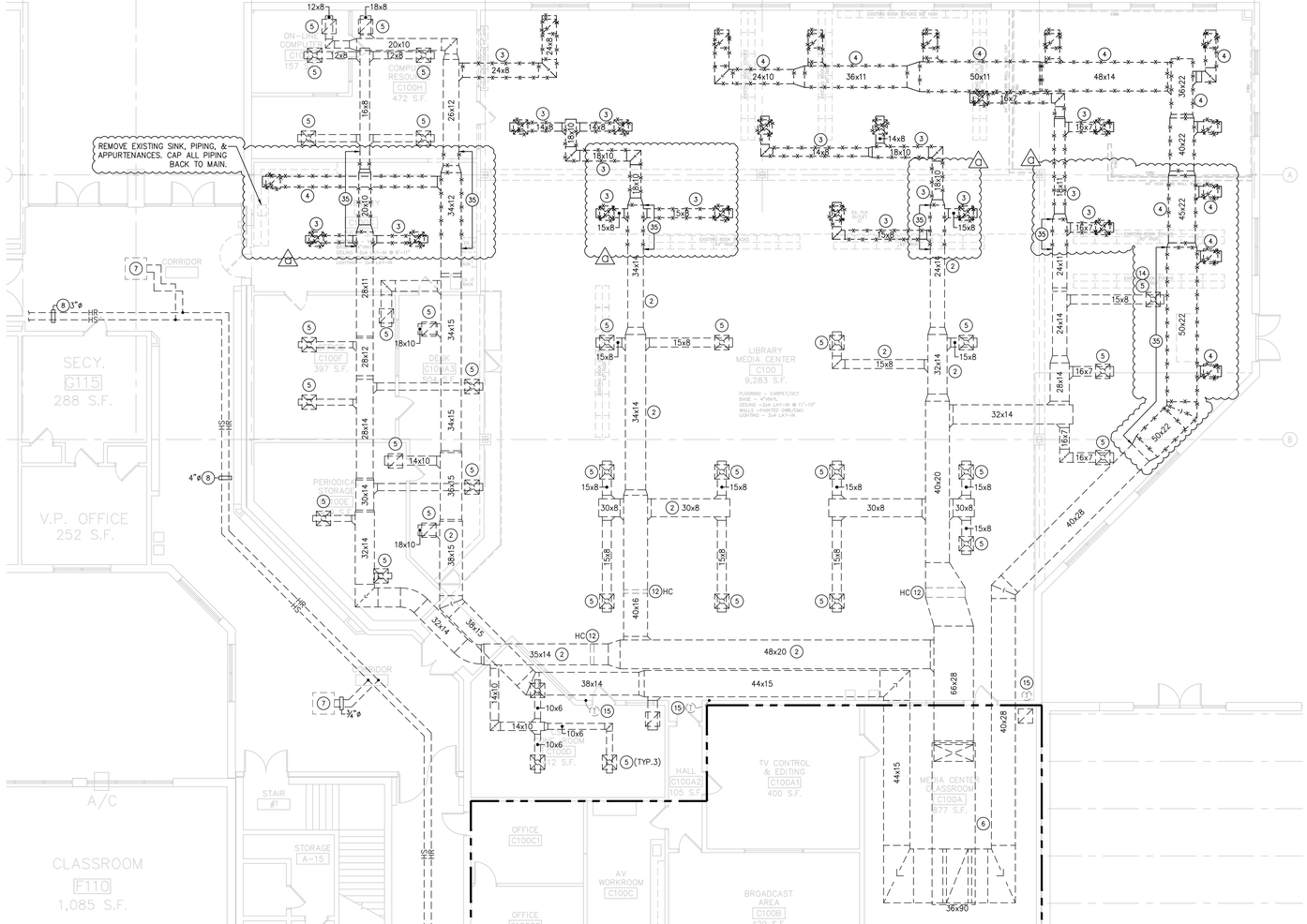
DATE: 01/09/25

ADM-1.04

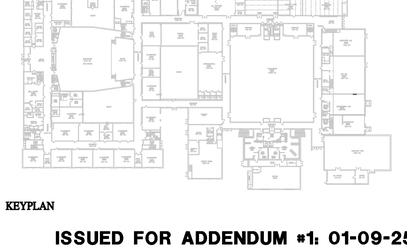
MULHERN
and ASSOCIATES, Incorporated
321 South York Road
Hatboro, Pennsylvania 19040
Phone: (215) 293-9900
Fax: (215) 293-9214

ALL NOTES ON PLANS MAY NOT BE ON THIS SHEET
FOR ALL NOTES REFER TO NOTES ON M4.1

PRIOR TO BIDDING, MECHANICAL CONTRACTOR
TO VISIT SITE PER SPECIFICATION 15010
ALL WORK NEW U.N.O.
ALL WORK BASE BID U.N.O.



1 BASE BID
MECHANICAL DEMOLITION FLOOR PLAN
SCALE: 1/8" = 1'-0"



KEYPLAN

ISSUED FOR ADDENDUM #1: 01-09-25

GARRISON ARCHITECTS
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713 CREEK ROAD, BELLMAWR, NEW JERSEY 08031 (856) 306-6200

BLACK HORSE PIKE REGIONAL SCHOOL DISTRICT
HIGHLAND REGIONAL HIGH SCHOOL
2025 LMC NEW CORRIDOR & CLASSROOMS RENOVATIONS
450 ERIAL ROAD
BLACKWOOD, NEW JERSEY 08012

REVISIONS
a. ADDENDUM #1 01-09-25
b.
c.

Project No. 23-73
Date: 12-18-24
Scale: AS NOTED

BASE BID
MECHANICAL
DEMOLITION
FLOOR PLAN
M1.1

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PRIOR TO BIDDING, MECHANICAL CONTRACTOR
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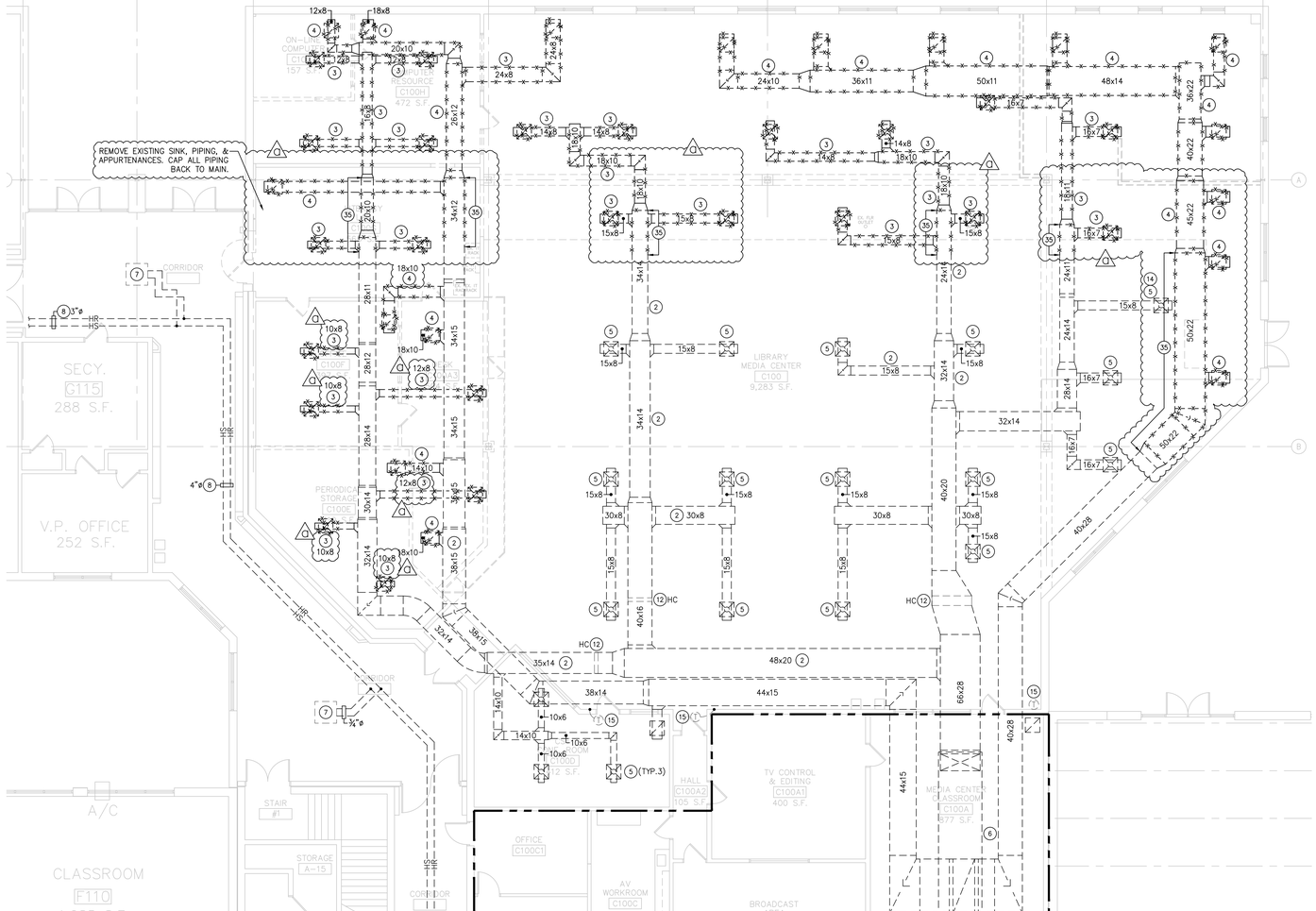
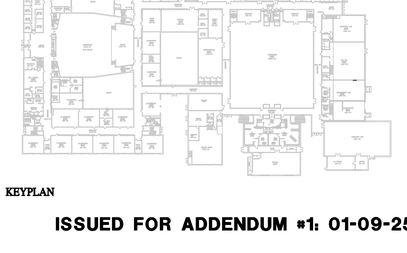
ALL WORK NEW U.N.O.
ALL WORK BASE BID U.N.O.

ALTERNATE BID CONSISTS OF ALL WORK SHOWN
ASSOCIATED WITH ROOMS C100H, C100J, C100J



1 ALTERNATE BID
MECHANICAL DEMOLITION FLOOR PLAN
SCALE: 1/8" = 1'-0"

NOTE:
CONTRACTOR IS CAUTIONED, BASE BID WORK IS SHOWN FOR CLARITY.
ALTERNATE BID CONSISTS OF ALL ADDITIONAL DEMOLITION WORK SHOWN ASSOCIATED WITH ROOMS C100A3, C100E, C100F, C100G, C100H, C100J.



KEYPLAN

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450 ERIAL ROAD
BLACKWOOD, NEW JERSEY 08012

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c.

Project No. 23-73
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ALTERNATE BID MECHANICAL DEMOLITION FLOOR PLAN
M1.1A

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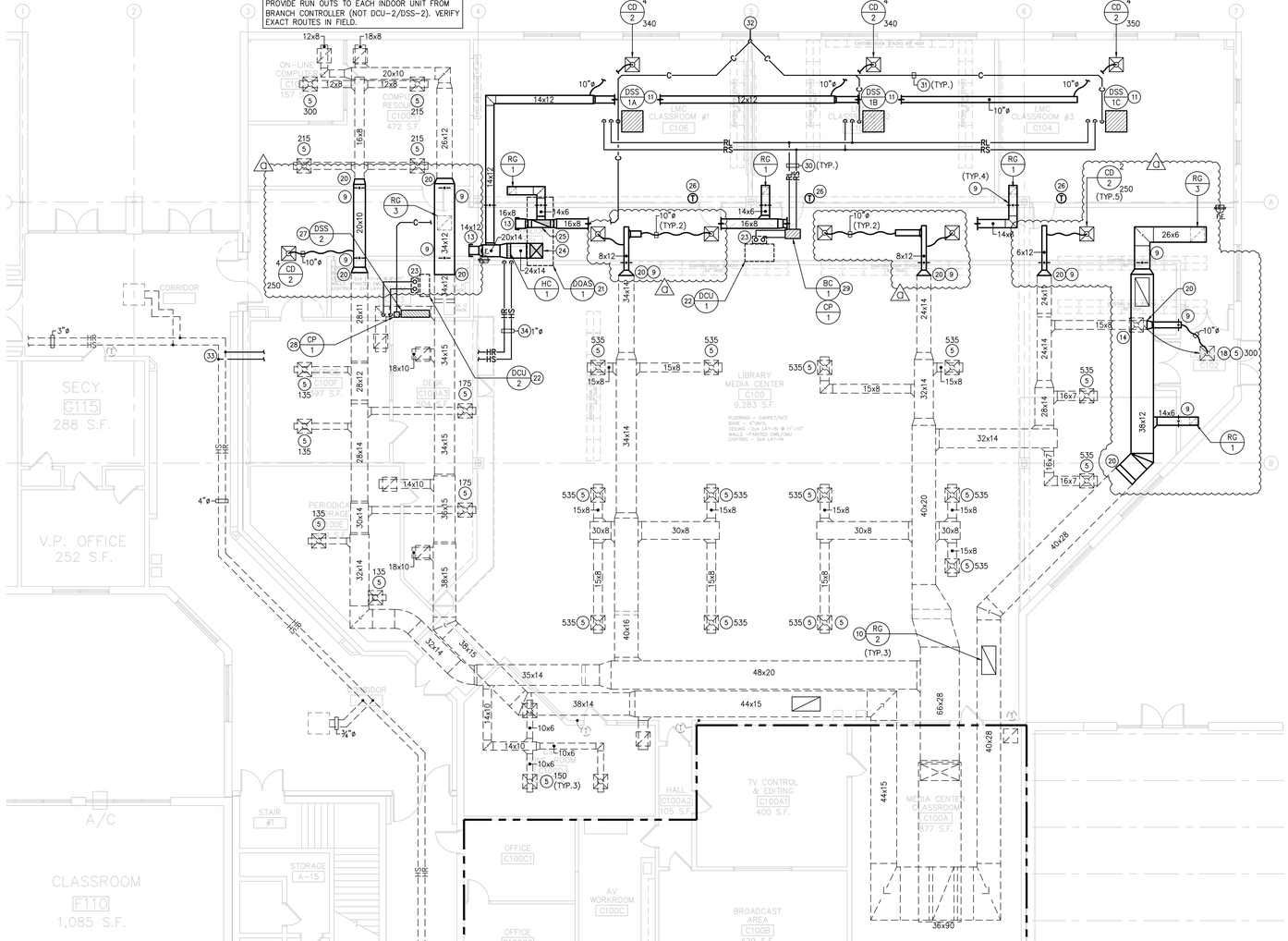
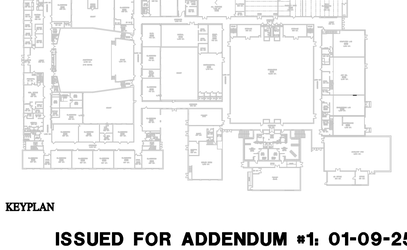
TO VISIT SITE PER SPECIFICATION 15010
ALL WORK NEW U.N.O.
ALL WORK BASE BID U.N.O.

NOTE:
NOT ALL REFRIGERANT PIPING SHOWN FOR CLARITY.
PROVIDE RUN OUTS TO EACH INDOOR UNIT FROM
BRANCH CONTROLLER (NOT DCU-2/DSS-2). VERIFY
EXACT ROUTES IN FIELD.



1 BASE BID
MECHANICAL NEW WORK FLOOR PLAN
SCALE: 1/8" = 1'-0"



KEYPLAN

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Project No. 23-73
Date: 12-18-24
Scale: AS NOTED

BASE BID
MECHANICAL
NEW WORK
FLOOR PLAN
M2.1

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MECHANICAL SHEET NOTES

1 EXISTING TO BE REMOVED (ITEM AS INDICATED). REMOVE ALL SUPPORTS, APPURTENANCES, PIPE AND CONTROLS. REMOVE ALL PIPE TO POINT OF CONNECTION TO MAIN AND CAP MAIN OR TO BEHIND FINISHED SURFACES. PATCH AND RESTORE ALL EXISTING SURFACES TO MATCH EXISTING. VERIFY ALL CONDITIONS IN FIELD, ITEM AS INDICATED. REMOVE AND REPLACE EXISTING CEILING AS REQUIRED TO REMOVE ALL ITEMS ABOVE EXISTING CEILINGS.

2 EXISTING TO REMAIN. PROTECT DURING CONSTRUCTION. VERIFY ALL EXISTING CONDITIONS IN FIELD, ITEM AS INDICATED.

3 EXISTING SUPPLY AIR DUCT TO BE REMOVED. REMOVE DUCT AND ALL APPURTENANCES. VERIFY EXACT LOCATION IN FIELD. PATCH DUCT AT MAIN.

4 EXISTING RETURN AIR DUCT TO BE REMOVED. REMOVE DUCT AND ALL APPURTENANCES. VERIFY EXACT LOCATION IN FIELD. PATCH DUCT AT MAIN.

5 EXISTING AIR DEVICE TO REMAIN. CLEAN AND REBALANCE FOR CFM WHERE INDICATED. VERIFY EXACT LOCATION IN FIELD.

6 EXISTING ROOFTOP UNIT TRANE MODEL SLHPC04275. REFER TO SCHEDULE FOR CFM BALANCING. CONTRACTOR TO VERIFY SUPPLY QUANTITY AND RETURN.

7 EXISTING CABINET UNI HEATER TO REMAIN.

8 EXISTING HOT WATER PIPE TO REMAIN.

9 DUCT THRU WALL WITH FIRE DAMPER.

10 CONNECT NEW AIR DEVICE TO EXISTING DUCT.

11 NEW DUCTLESS SPLIT SYSTEM.

12 EXISTING HOT WATER COIL TO REMAIN.

13 CAP DUCT FOR FUTURE CONNECTION.

14 RELOCATE EXISTING CEILING DIFFUSER DUCT, EXTEND AND MODIFY DUCT FOR NEW LOCATION.

15 EXISTING THERMOSTAT TO REMAIN.

16 CAP EXISTING DUCT.

17 EXISTING AIR DEVICE IN NEW CEILING. MODIFY AND EXTEND DUCT FOR NEW AIR DEVICE LOCATION IN NEW CEILING.

18 NEW LOCATION OF EXISTING DIFFUSER.

19 NOT USED.

20 CONNECT NEW DUCT TO EXISTING, REPAIR INSULATION.

21 NEW ROOFTOP UNIT ON EXISTING ROOF WITH NEW ROOF CURB. COORDINATE EXACT LOCATION WITH STRUCTURAL PLANS.

22 NEW CONDENSING UNIT ON EXISTING ROOF.

23 NEW REFRIGERANT PIPE DOWN IN NEW PREFABRICATED ROOF PENETRATION HOUSING. REFER TO ARCHITECTURAL DETAIL. CONNECT PIPE TO CONDENSING UNIT PER MANUFACTURER REQUIREMENTS.

24 NEW SUPPLY DUCT DOWN THRU ROOF. CONNECT TO UNIT WITH 6" FLEXIBLE DUCT CONNECTION. DUCT FULL SIZE OF UNIT OPENING.

25 NEW RETURN AIR DUCT DOWN THRU ROOF. CONNECT UNIT WITH 6" FLEXIBLE DUCT CONNECTION. DUCT FULL SIZE OF UNIT OPENING.

26 NEW THERMOSTAT AND/OR HUMIDISTAT. VERIFY EXACT LOCATION IN FIELD. NOTE – DO NOT LOCATE BY HEAT GENERATING SOURCE, IE, COMPUTER MONITOR, ETC.

27 NEW WALL MOUNTED DUCTLESS SPLIT INDOOR UNIT. COORDINATE EXACT LOCATION WITH FINAL IT EQUIPMENT LAYOUT. ALL EXPOSED PIPING SHALL BE BEHIND PIPE COVER.

28 NEW CONDENSATE PUMP. CONCEAL IN PIPE COVER.

29 NEW BRANCH CONTROLLER UNIT ABOVE CEILING. MAINTAIN MANUFACTURER REQUIRED CLEARANCES. PROVIDE CONDENSATE PUMP ON SHELF BY UNIT.

30 NEW REFRIGERANT PIPE ABOVE CEILING. VERIFY EXACT ROUTE IN FIELD. NOT ALL PIPE IS SHOWN. PROVIDE PIPE PER MANUFACTURER REQUIREMENTS, SIZING AND QUANTITIES.

31 NEW 3/4" DIA. CONDENSATE PIPE ABOVE CEILING. SLOPE AT 1/16" / FT.

32 NEW CONDENSATE PIPE DOWN IN STUD WALL AND THRU EXTERIOR WALL. DISCHARGE TO GRADE.

33 CONNECT NEW HOT WATER HEATING PIPES TO EXISTING. VERIFY EXACT POINT OF CONNECTION IN FIELD. REPAIR INSULATION.

34 NEW HOT WATER HEATING PIPES ABOVE CEILING. VERIFY EXACT ROUTE IN FIELD.

35 REMOVE PORTION OF EXISTING DUCT FOR CONSTRUCTION OF NEW FIRE WALL. PROVIDE NEW DUCT CONNECTED TO EXISTING AND REPAIR INSULATION. PROVIDE FIRE DAMPER WHERE NEW DUCT PENETRATES NEW FIRE WALL. DUCT SIZE AS INDICATED.

Q

DEDICATED OUTSIDE AIR UNIT

SYMBOL DOAS

NO.	SUPPLY CFM	ESP.	SUPPLY FAN H.P.	COOL CAP'Y MBH	HEAT CAP'Y MBH	REMARKS	REHEAT COIL LAT	COIL LAT DB/WB	O.A. CFM (MIN.)	EXH CFM (MIN.)	COIL E.A.T DB/WB	EXHAUST CFM	EXHAUST ESP	EXHAUST HP	HEAT RECOVERY LAT SUMMER DB/WB	HEAT RECOVERY LAT WINTER DB/WB
1	1875	.75	2	70	SEE HC-1A	AAON MODEL RNA-007-A (A)(B)(C)(D)(E)(F)(G)(H)(I)(J)(K)	70 / 58.7	51.1 / 51.1	1735	1735	81 / 66.6	1735	.50	2	81 / 66.6	46.8 / 40.4

REMARKS NOTES

(A) PROVIDE ROOF CURB. (NOTE: CONTINUE ROOF DECK UNDER UNIT, SEE SPECS). PROVIDE VIBRATION ISOLATED SLOPE ADJUSTED STEEL CURB IN IN ACCORDANCE WITH IBC 2021 NEW JERSEY EDITION'S WIND AND SEIMIC REQUIREMENTS. PROVIDE SIGNED & SEALED STRUCTURAL DRAWINGS FOR REVIEW & APPROVAL.
(B) HINGED COMPRESSOR, EVAPORATOR, FILTER AND CONTROL PANEL ACCESS.
(C) BAS DDC INTERFACE PER SPECIFICATIONS. MODE ENABLE SENSOR OPTIONS: S.A.T., RAT & OAT.
(D) PROVIDE HUSHCORE HIR-52 DECK RIGID SOUND BOARD ACOUSTICAL INSULATION IN CURB (SEE SPECIFICATIONS).
(E) ACOUSTICAL WRAP ON COMPRESSORS.
(F) HAIL GUARDS.
(G) PROVIDE MERV-13 FILTERS.
(H) PROVIDE MODULATING VFD DRIVEN POWER EXHAUST FAN TO TRACK SUPPLY AIR FAN AND TO BE BASED ON BUILDING PRESSURIZATION TO MAINTAIN SLIGHT BUILDING PRESSURIZATION AND MINIMUM AIR FLOW WILL BE SETBY DCV SYSTEM.
(I) PROVIDE SMOKE DETECTOR
(J) PROVIDE HEAT RECOVERY.
(K) PROVIDE CONTROLLERS FOR FACTORY INSTALLATION AND WIRING BY UNIT MANUFACTURER.

HOT WATER HEATING COIL SCHEDULE

SYMBOL HC

NO.	CFM	FACE AREA SQ. FT.	NO. ROWS	FINS/ INCH	AIR TEMP IN	AIR TEMP OUT	WATER TEMP ENT / LVG	P.D. WATER FT.	GPM	AIR P.D. IN.	REMARKS
1	1875	3.5	2	14	46.8	90	180 / 150	5' MAX	6.0	.25	DOAS-1 DUCT MOUNTED

VRF DUCTLESS SYSTEM HEAT PUMP SCHEDULE

SYMBOL DSS DCU BCU

	NO.	MITSUBISHI MODEL	TYPE	CFM @ HIGH	OA CFM	COOLING CAP'Y MBH	HEATING CAP'Y MBH	ROOM AREA SERVED	REFRIGERANT PIPE SIZE LIQUID	REFRIGERANT PIPE SIZE SUCTION	REMARKS
	DCU-1	PURY-HP120YNU-A	OUTDOOR CU	N/A	N/A	120.0	135.0	N/A	PER MFG.	PER MFG.	
	BC-1	CMB-P106NU-J2	BRANCH CONTROL UNIT	N/A	N/A	N/A	N/A	N/A	PER MFG.	PER MFG.	
	DSS-1A	PLFY-EP24NEMU1	CEILING CASSETTE	812	N/A	24.0	26.0	LCM CLASSROOM #1	PER MFG.	PER MFG.	
	DSS-1B	PLFY-EP24NEMU1	CEILING CASSETTE	812	N/A	24.0	26.0	LCM CLASSROOM #2	PER MFG.	PER MFG.	
	DSS-1C	PLFY-EP24NEMU1	CEILING CASSETTE	812	N/A	24.0	26.0	LCM CLASSROOM #3	PER MFG.	PER MFG.	
*	DSS-1D	PLFY-EP24NEMU1	CEILING CASSETTE	812	N/A	24.0	26.0	LCM CLASSROOM #4	PER MFG.	PER MFG.	
*	DSS-1E	PLFY-EP24NEMU1	CEILING CASSETTE	812	N/A	18.0	19.0	LCM CLASSROOM #5	PER MFG.	PER MFG.	
*	DSS-1F	PLFY-EP08NEMU1	CEILING CASSETTE	600	N/A	6.0	6.0	OFFICE STORAGE	PER MFG.	PER MFG.	

*ALTERNATE BID
PROVIDE ALL REFRIGERANT PIPE MINIMUM LENGTH & SIZING PER MANUFACTURER.
LOCATE BRANCH CONTROLLER PER MANUFACTURER REQUIREMENTS AND CLEARANCES.
REFER TO ELECTRICAL PLANS FOR POWER WIRING INFORMATION.

CP 1 LITTLE GIANT MODEL EC-1-DV
1.2 GPH @ 20' HEAD

DUCTLESS SPLIT SYSTEM SCHEDULE

SYMBOL DSS DCU

NO.	COOLING CAP'Y BTU	HEATING CAP'Y BTU	INDOOR UNIT MODEL	CFM @ HIGH	TYPE	REMARKS	ROOM SERVED
2	24,000	N/A	PKA-A24KA7	775	WALL MOUNTED	DCU-2: 2 TON MITSUBISHI MODEL PUY-A24NHA7	IDF ROOM

PROVIDE REFRIGERANT PIPE PER MANUFACTURERS REQUIREMENTS.
INTERFACE W/ CENTRAL CONTROL SYSTEM FOR SCHEDULING.
PROVIDE LOW-AMBIENT COOLING OPERATION FOR ALL WALL MOUNTED UNITS.
MAINTAIN MANUFACTURE'S REQUIRED CLEARANCES FOR ALL INDOOR AND OUTDOOR UNITS.

CP 1 LITTLE GIANT MODEL EC-1-DV
1.2 GPH @ 20' HEAD

MULHERN and ASSOCIATES, Incorporated
321 South York Road
Hatboro, Pennsylvania 19040
Phone: (215) 293-9900
Fax: (215) 293-9214

ALL NOTES ON PLANS MAY NOT BE ON THIS SHEET FOR ALL NOTES REFER TO NOTES ON M4.1

PRIOR TO BIDDING, MECHANICAL CONTRACTOR TO VISIT SITE PER SPECIFICATION 15010
ALL WORK NEW U.N.O.
ALL WORK BASE BID U.N.O.

MECHANICAL LEGEND

A/L	ACOUSTICALLY LINED
AP	ACCESS PANEL
ACD	ACCESS DOOR
ADR	AUTOMATIC DAMPER
BDD	BACK DRAFT DAMPER
BTJ	BETWEEN THE JOISTS
CS	CHILLED WATER SUPPLY
CR	CHILLED WATER RETURN
CD	CEILING DIFFUSER
CU	CONDENSING UNIT
DBR	DOWN BLOW REGISTER
DL	DOOR LOUVER
DN	DOWN
DX	DIRECT EXPANSION COIL
(E)	EXISTING
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
FDR	FIRE DAMPER
FVAV	FAN POWERED VAV UNIT
GV	GATE VALVE
HR	HOT WATER HEATING RETURN
HS	HOT WATER HEATING SUPPLY
LAD	LOUVER/AUTO DAMPER
LBD	LOUVER/BACKDRAFT DAMPER
LID	LINEAR DIFFUSER
LMD	LOUVER/MANUAL DAMPER
LVR	LOUVER
MUA	MAKEUP AIR UNIT
MVD	MANUAL VOLUME DAMPER
OAI	OUTSIDE AIR INTAKE
RG	RETURN GRILLE
RR	RETURN REGISTER
SG	SUPPLY GRILLE
SF	SUPPLY FAN
SR	SUPPLY REGISTER
SDR/FDR	SMOKE/FIRE DAMPER
TF	TRANSFER FAN
TWJ	THROUGH WEB OF JOIST
TYP	TYPICAL (OF QUANTITY)
UNO	UNLESS NOTED OTHERWISE
VAV	VARIABLE AIR VOLUME TERMINAL UNIT
VVT	VARIABLE AIR VOLUME TEMPERATURE UNIT
WMS	WIRE MESH SCREEN

C	CONDENSATE PIPE
HWS	HOT WATER HEATING SUPPLY (SYSTEM)
HWR	HOT WATER HEATING RETURN (SYSTEM)
CHWR	CHILLED WATER RETURN (SYSTEM)
CHWS	CHILLED WATER SUPPLY (SYSTEM)
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
R	REFRIGERANT PIPE
	GATE VALVE
	CHECK VALVE
	RELIEF VALVE
	CONTROL VALVE
	AUTOMATIC THREE-WAY VALVE
	GLOBE VALVE
	PRESSURE REDUCING VALVE
	AUTOMATIC TWO-WAY VALVE
	PLUG OR BALL VALVE
	BALANCING VALVE
	STRAINER
	UNION
H	HUMIDISTAT
S	SWITCH
TH	HEATING THERMOSTAT
THC	HEATING & COOLING THERMOSTAT
TC	COOLING THERMOSTAT
	THERMOMETER
	PRESSURE GAUGE W/GAUGE COCK
AAV	AUTOMATIC AIR VENT
	FLEXIBLE CONNECTION
	NEW CONNECTION TO EXISTING
	POINT OF DEMOLITION
	DUCT REDUCER

AIR DEVICE SCHEDULE

NO.	CD	LID	SR / SG	RR / RG	ER / EG	LAD / LBD	WMS	REMARKS
1	8"ø (A)			12x12				
2	10"ø (A)			48x24				
3				24x24				

CD X – INDICATES NUMBER OF BLOWS
XXX – INDICATES AMOUNT OF CFM

Q

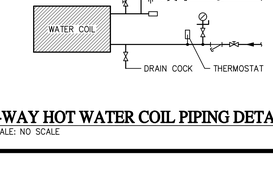
(A) KRUGER MODEL 1450 DIFFUSER OR EQUAL.

EXISTING ROOFTOP AIR CONDITIONER SCHEDULE

SYMBOL EAC

NO.	MANUFACTURER	MODEL NO.	NOMINAL TONS	ORIGINAL CFM	BASE BID CFM	ALT. BID CFM	REMARKS
1	TRANE	SLHFC50	50	24,000	10,630	10,650	

Q



2-WAY HOT WATER COIL PIPING DETAIL

SCALE: NO SCALE

ISSUED FOR ADDENDUM #1: 01-09-25

GARRISON ARCHITECTS
A Professional Corporation of Architects and Planners
713 CREEK ROAD, BELLMAWR, NEW JERSEY 08031 (856) 306-6200

BLACK HORSE PIKE REGIONAL SCHOOL DISTRICT
HIGHLAND REGIONAL HIGH SCHOOL
2025 LMC NEW CORRIDOR & CLASSROOMS RENOVATIONS
450 ERIAL ROAD
BLACKWOOD, NEW JERSEY 08012

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REVISIONS
a. ADDENDUM #1 01-09-25
b.
c.

Project No. 23-73
Date: 12-18-24
Scale: AS NOTED

MECHANICAL LEGEND, SCHEDULES & NOTES

M4.1

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and ASSOCIATES, Incorporated
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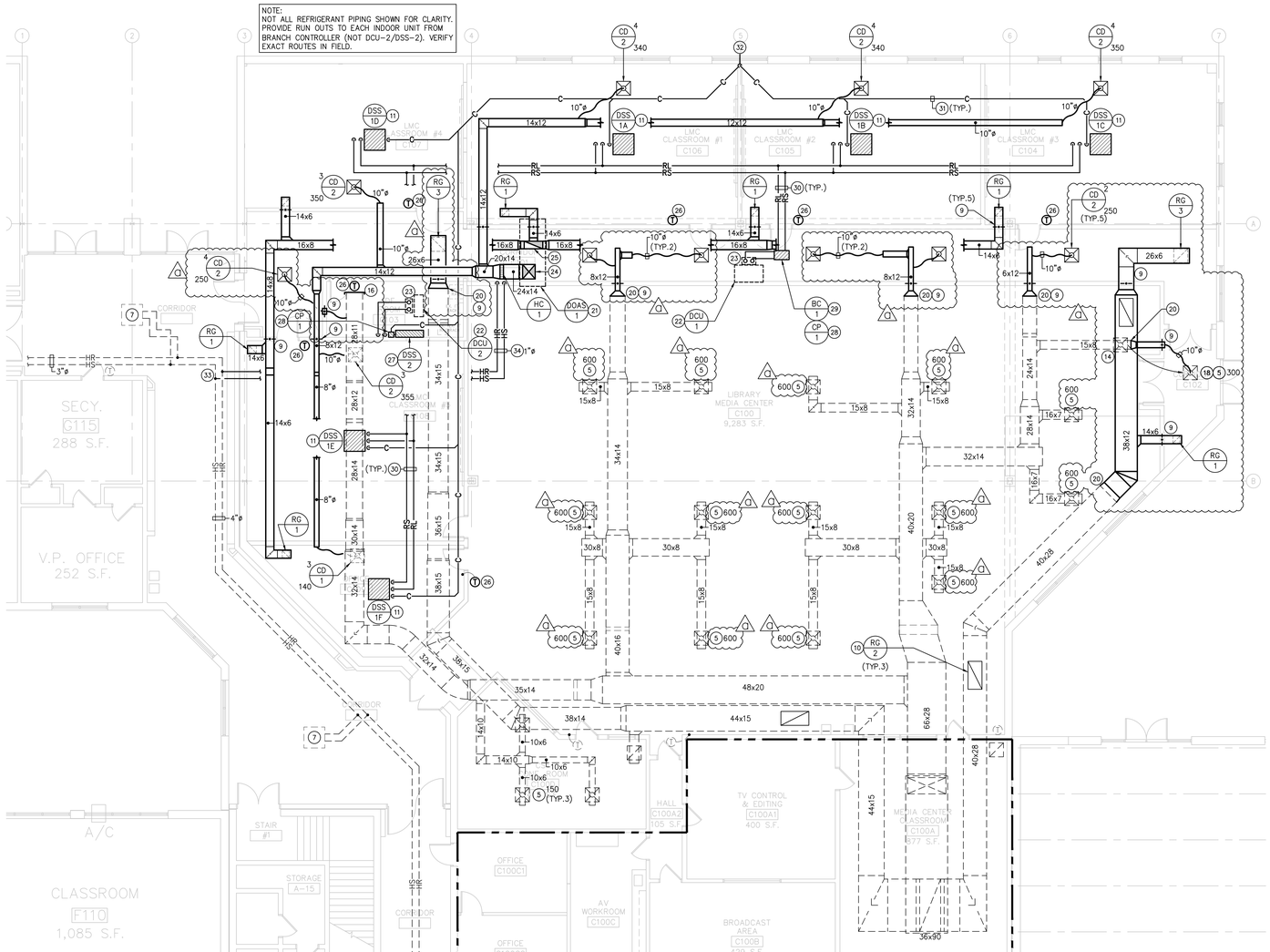
FOR ALL NOTES REFER TO NOTES ON M4.1

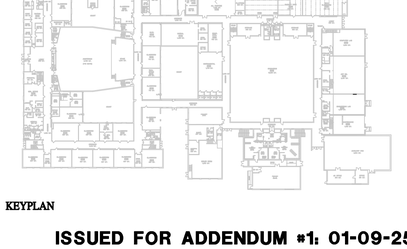
PRIOR TO BIDDING, MECHANICAL CONTRACTOR
TO VISIT SITE PER SPECIFICATION 15010
ALL WORK NEW U.N.O.
ALL WORK BASE BID U.N.O.

NOTE:
NOT ALL REFRIGERANT PIPING SHOWN FOR CLARITY.
PROVIDE RUN OUTS TO EACH INDOOR UNIT FROM
BRANCH CONTROLLER (NOT DCU-2/DSS-2). VERIFY
EXACT ROUTES IN FIELD.



1 ALTERNATE BID
MECHANICAL NEW WORK FLOOR PLAN
SCALE: 1/8" = 1'-0"

NOTE:
CONTRACTOR IS CAUTIONED, BASE BID WORK IS
SHOWN FOR CLARITY.
ALTERNATE BID CONSISTS OF ALL WORK SHOWN
ASSOCIATED WITH ROOMS C107, C108, & C109.



KEYPLAN

ISSUED FOR ADDENDUM #1: 01-09-25

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a. ADDENDUM #1 01-09-25
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ALTERNATE BID
MECHANICAL
NEW WORK
FLOOR PLAN
M2.1A

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