Fairfax County PUBLIC SCHOOLS
ENGAGE • INSPIRE • THRIVE

Department of Facilities and Transportation Services
Office of Facilities Management
5025 Sideburn Road
Fairfax, VA 22032

November 16, 2017

ADDENDUM #1

TO ALL PROSPECTIVE BIDDERS:

SUBJECT: Rooftop Unit Replacement at Mosby Woods Elementary School (MMB-035-18)

BID OPENING DATE: (ORIGINAL DATE) November 30, 2017 at 2:00 PM

THE SUBJECT INVITATION FOR BID IS AMENDED AS FOLLOWS:

THIS ADDENDUM IS SUPPLEMENTARY TO THE PLANS AND SPECIFICATIONS FOR THE ABOVE SUBJECT REQUIREMENT. ALL CHANGES, ADDITIONS AND DELETIONS SHALL BECOME PART OF THE CONTRACT.

CHANGE:

Drawing ME-1, the attached Rooftop Units (Gas/DX High Efficiency) Schedule has been changed and is provided as information to Bidders.

All other terms and conditions remain unchanged.

Angela C. David

Angela C. David, Contracts Administrator
Office of Administrative Services

THIS ADDENDUM IS ACKNOWLEDGED AND IS CONSIDERED A PART OF THE SUBJECT INVITATION FOR BID.

SIGNATURE:_____ DATE:_____

NAME OF FIRM:_____

A SIGNED COPY MAY BE RETURNED PRIOR TO BID OPENING OR MAY ACCOMPANY YOUR BID.

ROOFTOP UNITS (GAS/DX HIGH EFFICIENCY) SCHEDULE

UNIT	TONS	AREA SERVED	INDOOR FAN DATA			COOLING DATA				NAT. GAS HEATING (MBH)			POWER SUPPLY			UNIT WEIGHT LBS	BASIS OF DESIGN
			CFM TOTAL	O.A. (CFM)	E.S.P. (IN.W.G.)	TOTAL (MBH)	SENSIBLE (BMH)	MIN STAGE	MIN (SEER/EER)	INPUT CAPACITY	OUTPUT CAPACITY	MIN. STAGES	VOLT/ PH/CYCLES	MINIMUM CKT AMP	MOCP		TRANE
RTU-1	20	CAFETERIA	8800	2200	0.75	251.56	205.79	2	10	400	320	2	460/3/60	51	70	2409.0	YSH240
RTU-2	10	CLASS ROOMS	4000	350	0.75	119.00	92.65	2	11.3	250	205.21	2	460/3/60	22.70	30	1156.0	YSC120
RTU-4	12.5	LIBRARY	4800	350	0.75	136.58	109.27	2	11	250	200	2	460/3/60	29	40	600	YSD150

COOLING OUTDOOR AMBIENT – 95F D.B., HEATING OUTDOOR AMBIENT – 10F D.B.
FAN DATA INCLUDES LOSSES FOR FILTERS AND WET COILS
COOLING CAPACITIES LISTED ARE GROSS CAPACITIES AND DO NOT DEDUCT FAN MOTOR HEAT
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A. PROVIDE BELT DRIVE FAN, MOTORIZED OUTSIDE AIR DAMPER, AND INTAKE HOOD (UNIT MOUNTED).

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C. CONTROLS – PROVIDE STD CONVENTIONAL THERMOSTAT INTERFACE FOR HARDWIRE 2H/2C AND FAN CONNECTION.

D. GAS HEAT – PROVIDE STAINLESS HEAT EXCHANGER.

E. RTU-1,2,4: PROVIDE FACTORY INSTALLED AND CONTROLLED ENTHALPY COMPARISON ECONOMIZER WITH BAROMETRIC RELIEF CONTROLLED BY THE MANUFACTURER. BAROMETRIC RELIEF DAMPER PACKAGE SHALL INCLUDE DAMPER, SEALS, HARDWARE AND HOODS TO RELIEVE EXCESS INTERNAL PRESSURE. OUTSIDE DAMPER SHALL CLOSE DUE TO GRAVITY UPON UNIT SHUTDOWN.

F. PROVIDE AND INSTALL BACNET MS/TP MODULE. THE MANUFACTURER SHALL CONFIGURE IN THE BACNET MODULE AND MADE AVAILABLE FOR FUTURE INTEGRATION. THE RTU WILL NOT BE CONTROLLED VIA BACNET AT THIS MOMENT.

G. COMPRESSORS IN THE RTU SHALL BE INTERNALLY SPRING MOUNTED TO PROVIDE VIBRATION ISOLATION.

H. UNIT MANUFACTURER SHALL FIELD VERIFY THE DIMENSIONS OF THE EXISTING SCREEN ENCLOSURE BEFORE SUBMITTING THE BID. THE OVERALL DIMENSIONS OF THE NEW UNITS SHALL FIT INSIDE THE EXISTING SCREEN ENCLOSURE. ANY NECESSARY MODIFICATIONS TO THE EXISTING SCREEN ENCLOSURE TO ACCOMMODATE THE CLEARANCE REQUIRED BY THE UNIT MANUFACTURER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

I. PROVIDE FACTORY INSTALLED HINGED ACCESS PANELS WITH HANDLES AND FACTORY STARTUP OF THE NEW RTU'S.

J. RTU-2: PROVIDE VARIABLE FREQUENCY DRIVE TO BLOWER FAN MOTOR FOR BALANCING ONLY.

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THE FOLLOWING ITEMS MUST BE COMPLETED BY THE CONTRACTOR BEFORE ANY WORK COULD BE PERFORMED AT THE SCHOOL.

[1] PROVIDE TRADE PERMITS TO THE OWNER.

[2] SCHEDULE A PRE-CONSTRCTION MEETING WITH THE PRINCIPAL AND THE OWNER.

[3] SUBMIT WRITTEN PROPOSAL FROM THE CONTROL SUB-CONTRACTOR WITH THE SCOPE OF WORK. CONTROL CONTRACTOR CAN NOT START THEIR WORK UNTIL MR. SERGHEI MALCOV (703.764.4373) HAS BEEN NOTIFIED.

GENERAL NOTES

1. ALL WORK SHALL CONFORM WITH ALL STATE AND LOCAL CODES.
2. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES AND TAXES.
3. EACH ITEM OF EQUIPMENT SHALL BE MOUNTED AND CONNECTED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS & SHALL BE U.L. LISTED, AS SPECIFIED.
4. CONTRACTOR SHALL MAKE AN ON-SITE INSPECTION TO DETERMINE FULLY THE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION.
5. LOCATION OF EQUIPMENT AND OTHER MECHANICAL WORK IS INDICATED DIA-GRAMMATICALLY BY THE DRAWINGS. DETERMINE EXACT LOCATIONS ON THE JOB SITE, SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF OTHER CONTRACTORS.
6. AFTER INSTALLATION AND START-UP, EACH ITEM OF EQUIPMENT SHALL BE THOROUGHLY CHECKED FOR VIBRATION TRANSMISSION TO THE STRUCTURE OR EXCESSIVE NOISE, AND IF EITHER OCCURS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING THE FAULTY SITUATION IMMEDIATELY.
7. ALL EXISTING EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE OWNER AND SHALL BE REMOVED, STORED, OR DISPOSED OF AT THE DIRECTION OF THE OWNER.
8. ALL OPENINGS IN ROOF, WALLS, CEILINGS AND FLOORS RESULTING FROM DEMOLITION SHALL BE CLOSED AND FINISHED TO MATCH THE SURROUNDING AREAS.
9. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF MECHANICAL EQUIPMENT'S ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR. CON-TRACTOR ORIGINATED MODIFICATIONS TO THE MECHANICAL EQUIPMENT'S ELECTRICAL INSTALLATION, DUE TO DEVIATIONS FROM THE MECHANICAL EQUIPMENT "BASIS OF DESIGN" OR "PROTOTYPE" ELECTRICAL DATA, SHALL BE AT A COST TO THE MECHANICAL CONTRACTOR.

ROOFTOP UNITS DEMOLITION DRAWING NOTES:

(A) REMOVE EXISTING ROOFTOP UNITS. EXISTING ROOF CURBS SHALL REMAIN. EXISTING LOAD SIDE CONDUCTORS AND CONDUITS SHALL BE REMOVED TO THE DISCONNECTS. REMOVE EXISTING FUSED SAFETY SWITCHES FOR ROOFTOP UNITS.

(B) RTU-1: REMOVE OLD DUCTWORK FOR SUPPLY AND RETURN BETWEEN RTU-1 AND THE CAFETERIA WALL.

(C) REMOVE GFCI SERVICE RECEPTACLE AT EACH ROOFTOP UNIT.

(D) REMOVE EXISTING GAS PIPE TO THE FIRST ELBOW ABOVE THE ROOF INCLUDING THE ISOLATION VALVE.

(E) REMOVE EXISTING VIBRATION ISOLATION RAILS UNDER RTU'S IF ANY.

(F) ALL EXISTING ENERGY MANAGEMENT COMPONENTS AND WIRING SHALL BE IDENTIFIED, LABELED, AND DE-ENERGIZED. POWER TO THE COMPONENTS SHALL BE SHUT OFF AT EACH SYSTEM CONTROLLER. CONTROL CONTRACTOR SHALL COORDINATE ALL CONTROL DEMOLITION/INSTALLTION WORK WITH FCPS ENERGY MANAGEMENT DEPT. 48 HOURS BEFORE ANY WORK BEGINS, PLEASE CONTACT SERGHEI MALCOV @703.764.4373.

ROOFTOP UNITS NEW WORK DRAWING NOTES:

(A) MOUNT ALL NEW ROOFTOP UNITS ON NEW CURB ADAPTERS MANUFACTURED TO ACCOMMODATE EXISTING ROOF CURBS. CURB ADAPTER SHALL BE PAINTED WITH TWO COATS OF GRAY SHERWIN WILLIAM INDUSTRIAL ENAMEL HS WEATHER PROOF OUTDOOR PAINT.

(B) FURNISH AND INSTALL NEW F.S.S. WITH NEW FUSES SIZED PER MANUFACTURER'S RECOMMENDATIONS. SAND AND PAINT THE EXISTING F.S.S. MOUNTING POLES. MOUNT THE NEW F.S.S. ON THE POLE. ROUTE NEW THHN PLUS GROUND IN NEW IMC CONDUIT FROM FUSED SAFETY SWITCH TO NEW RTU. PROVIDE RIGID CONDUIT WITH A SHORT LENGTH (36") OF LIQUIDTIGHT CONDUIT CLOSE TO THE RTU. SEE SYSTEM POWER WIRING AND CONDUIT SIZE TABLE BELOW. EXTEND EXISTING POWER AND CONTROLS TO NEW F.S.S. AS NECESSARY.

(C) PROVIDE NEW CONDENSATE DRAIN AND TRAP FROM THE NEW RTU'S. SEE CONDENSATE DRAIN DETAIL.

(D) PROVIDE NEW GFCI RECEPTACLE AT EACH RTU AND CONNECT THEM TO THE EXISTING WIRES AND CONDUIT ON THE ROOF.

(E) PROVIDE NEW GAS PIPING ON ROOF FOR ALL RTU'S WITH NEW ISOLATION VALVE. SAND AND PAINT THE EXISTING AND NEW GAS PIPE ON THE ROOF TO MATCH EXISTING COLOR.

(F) VACUUM INSIDE OF THE EXISTING TO REMAIN SUPPLY AND RETURN DUCTWORK ON THE ROOF TO THE FIRST ELBOW BELOW THE ROOF LINE.

(G) BALANCING CONTRACTOR SHALL BALANCE THE OUTDOOR AIR AND SUPPLY AIR QUANTITY FOR EACH RTU PER SCHEDULE, BALANCING CONTRACTOR SHALL CONTACT THE CONTRACTOR AND OWNER IF DESIGNED AIRFLOW CAN'T BE ACHIEVED ON SITE.

(H) CONTRACTOR SHALL TIE DUCT SMOKE DETECTOR TO UNIT SHUTDOWN FOR ROOFTOP UNITS. CONTRACTOR SHALL INFORM AND COORDINATE WITH FCPS FIRE ALARM SPECIALIST (GREG ROSE 703.898.5734) PRIOR TO STARTUP THE NEW RTU'S.

(I) NEW RTU'S SHALL BE IDENTIFIED BY ENGRAVED NAME TAG WITH THE TITLE OF THE EQUIPMENT AS TAKEN FROM THE PLANS IN A POSITION THAT IS CLEARLY VISIBLE. THE LETTERS SHALL BE NOT LESS THAN 1/2" HIGH. THE TITLES SHALL BE SHORT AND CONCISE.

(J) PROVIDE PITCH POCKET FOR RTU-1 & 2, ELECTRICAL STAND TO SUPPORT CONDUITS AND WIRING. THE NEW CONDUIT SHALL BE RUN UNDERNEATH THE ROOF AND COME UP NEAR THE NEW RTU. EXTEND POWER AND CONTROLS AS NECESSARY. SEE FREE STANDING SAFETY SWITCH ROOF MOUNTING DETAIL.

(K) ANY ROOFING WORK SHALL BE DONE BY THE FOLLOWING ROOFER.
COLBERT ROOFING
CHRIS COLBERT
703.550.9171

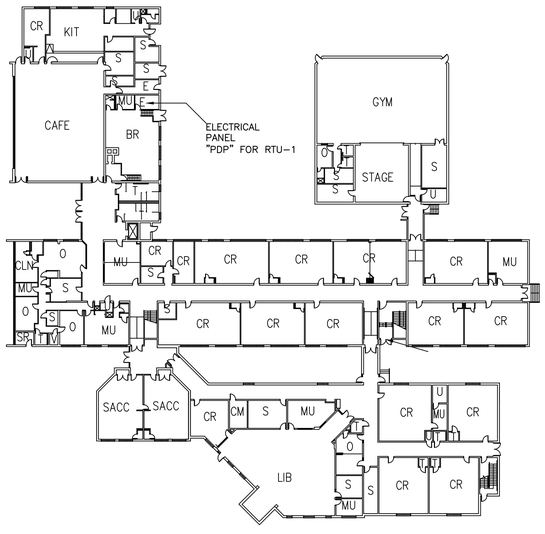
(L) RTU-1: PROVIDE AND INSTALL ALL NEW GALVANIZED 22 GAUGE DUCTWORK FROM THE CAFETERIA EXTERIOR WALL TO THE SUPPLY AND RETURN AIR OPENINGS OF RTU-1. DUCT WORK SHALL BE SOUND LINED. SEE DRAWING OF EXISTING DUCTWORK ATTACHED TO NEW DRAWING FOR PROPER DUCTWORK SIZING.

(M) PROVIDE 2" R-MAX THERMAL SHEET R-13 CLOSED CELL EXTERIOR DUCT INSULATION AND COVER WITH "VENTURECLAD" ZERO PERMEABLE INSULATION ON ALL EXTERIOR DUCTWORK. CONTRACTOR SHALL HIRE ONE OF THE FOLLOWING INSULATION COMPANIES FOR ALL EXTERIOR DUCT INSULATION:

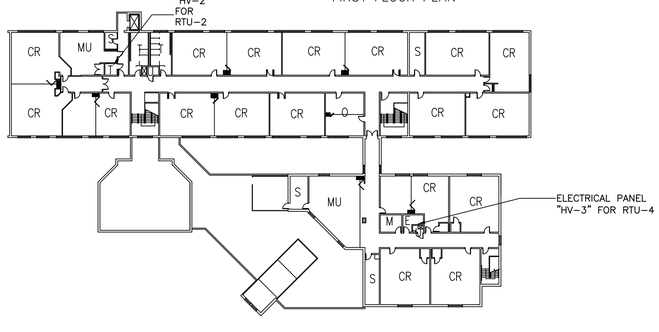
-FREESTATE INSULATION, CHUCK ABLE @410.279.1592
-FAIRFAX INSULATION, DAN POTTER @703.264.0818.

(N) PROVIDE WEATHERPROOF SEAL TO WALL PENETRATIONS. EXTERIOR DUCTWORK SHALL HAVE PROPER SUPPORTS.

(O) RTU-1 SCRAPE AND SAND THE EXISTING SUPPORT STRUCTURE TO BARE METAL. PAINT ALL SURFACES WITH TWO COATS OF SHERMAN WILLIAMS INDUSTRIAL ENAMEL HS WEATHERPROOF OUTDOOR PAINT.



FIRST FLOOR PLAN



SECOND FLOOR PLAN

DDC POINT LIST

RTU-1,2,4

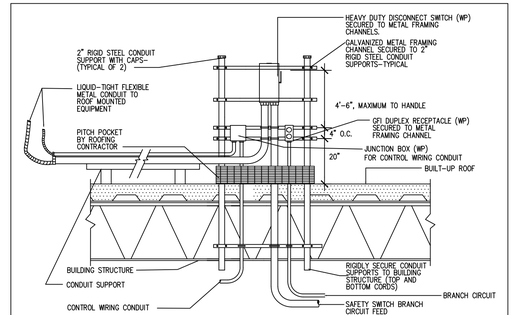
UNIVERSAL INPUTS	UNIVERSAL OUTPUTS
MIXED AIR TEMPERATURE SAF.STATUS (PROOF) D.I. NORM. OPEN	SUPPLY FAN START/STOP DX COOL 1 DX COOL 2 GAS HEAT 1 GAS HEAT 2 O.A. DAMPER CMD

(A) CONTRACTOR WILL RETAIN ONE OF THE FOLLOWING CONTROL CONTRACTORS:
ESI ENGINEERING SERVICES INC. – DAVE ARMINGER (703-471-6310)
CONTROL UNLIMITED – MIKE LOONEY (703.897.4300)
CKS BUILDING SERVICES INC. – CHRIS STEVENS (703.975.4990)
METROPOLITAN CONTROLS – PAUL CABADA (443.532.5014)

(B) CONTROL CONTRACTOR MUST CALL THE FOLLOWING PEOPLE AT THE FAIRFAX COUNTY PUBLIC SCHOOLS BEFORE ANY EXISTING CONTROL WIRES AND RELAYS ARE REMOVED:
SERGHEI MALCOV @(703) 764-4373

(C) CONTROL CONTRACTOR SHALL REMOVE EXISTING CONTROL WIRES FROM THE UNITS WITHOUT CUTTING THEM AND LABEL EVERY CONTROL WIRE ON THE ROOF INSIDE THE NEW RTU. UPON COMPLETION, THE CONTROL CONTRACTOR SHALL VERIFY WITH FCPS TO MAKE SURE THAT ALL THE CONTROL POINTS WORK.

(D) REPLACE ALL RELAYS, CURRENT SENSOR AND MIXED AIR SENSOR INSIDE THE OLD RTU WITH LIKE COMPONENTS. LABEL EACH POINT INSIDE RTU (LABEL RELAY SOCKETS, NOT RELAYS, AS TO DEVICE CONTROLLED/FUNCTION). EXTEND CONTROL WIRES AS NECESSARY.



NOTE:
1. LOCATE SAFETY SWITCH ADJACENT ROOF MOUNTED EQUIPMENT'S POWER CONNECTION POINT.
2. DO NOT BLOCK ANY EQUIPMENT'S REMOVABLE PANELS OR IMPEDE REQUIRED WORKING CLEARANCE.
3. ALL PARTS AND MATERIALS SHALL BE GALVANIZED AND SUITABLE FOR OUTDOOR USE.
4. CONTRACTOR SHALL USE RTV SILICONE GASKET TO SEAL ALL OPENINGS INTO DISCONNECT AT FASTENING POINTS.

FREE STANDING SAFETY SWITCH ROOF MOUNTING DETAIL

NO SCALE

ROOFTOP UNITS (GAS/DX HIGH EFFICIENCY) SCHEDULE

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			CFM TOTAL	O.A. (CFM)	E.S.P. (IN.W.G.)	TOTAL (MBH)	SENSIBLE (SMH)	MIN STAGE	MIN (SEER/EER)	INPUT CAPACITY	OUTPUT CAPACITY	MIN. STAGES	VOLT/ PH/CYCLES	MINIMUM CKT. AMP	MOCP		TRANE
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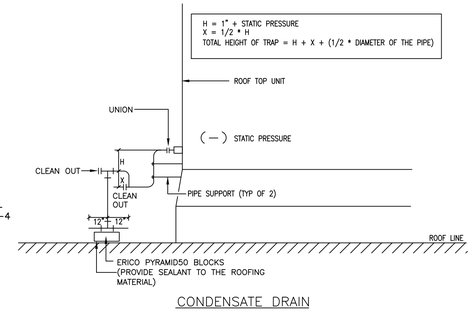

CONDENSATE DRAIN

NEW RTU'S POWER WIRING, CONDUIT SIZE				EXISTING BREAKER PANEL	
UNIT	NEW DISCONNECT SIZE (AMP)	WIRING SIZE	CONDUIT SIZE	BREAKER PANEL	BREAKER SIZE
RTU-1	100	#6 AWG	3/4	PANEL PDP	90 AMP
RTU-2	30	#10 AWG	3/4	PANEL HV-2	40 AMP
RTU-4	60	#10 AWG	3/4	PANEL HV-3	40 AMP

⚠1 ADDENDUM #1, ADDED NOTE J. 11/15/2017

MMB-035-18

ROOFTOP UNIT REPLACEMENT

MOSBY WOODS EMS
9819 FIVE OAKS ROAD
FAIRFAX VIRGINIA 22031

DATE: 09/29/17

FAIRFAX COUNTY PUBLIC SCHOOLS
OFFICE OF FACILITIES MANAGEMENT
5025 SIDEBURN ROAD
FAIRFAX, VIRGINIA 22032-2637
TEL.: 703-764-2423

SHEET: 1 OF 2
SCALE: NOTED
DRG #: ME-1