



**ADDENDUM NO.: 3**

**IFB or RFP NO.: 666**

Description: Furnish and Deliver a Split System  
Air Conditioner

Project: Queens College

Bid Opening Date: April 3, 2020

Specifics of the Addendum: Provide additional drawing.

Please refer to attached construction documents drawing M-900 for basic of design and system heating and cooling requirements. There are 4 rooms with their respective thermostats.

All other terms and conditions of the original Invitation for Bids or Request for Proposals shall remain the same. This notice shall be signed and attached to the Invitation for Bids and shall form a part of your bid.

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SPLIT-AIR HANDLING UNIT SCHEDULE																												BASIS OF DESIGN: TRANE		
UNIT No.	LOCATION	AREA SERVED	TOTAL CFM	FAN DATA								ELECTRIC DATA PER SUPPLY FAN MOTOR (EACH)								DX-COOLING COIL						STEAM-HUMIDIFIER				
				NO. OF FANS	FAN TYPE	E.S.P. (IN. H2O)	T.S.P. (IN. H2O)	RPM	BHP	HP	VOLT/Hz/PH	RPM	NO OF CIRCUIT	FLA (A)	MCA (A)	FUSE SIZE (A)	SENSIBLE CAPACITY (MBTU/HR)	TOTAL CAPACITY (MBTU/HR)	EAT. DB (°F)	EAT. WB (°F)	LAT. DB (°F)	LAT. WB (°F)	F.V. (FT/MIN)	A.P.D. (IN. H2O)	REFRIGERANT TYPE	EAT. RH (%)	LAT. RH (%)	EAT. DB (°F)	STEAM FLOW (LB/HR)	COND. LOSS (LB/HR)
AHU-1	2ND FLOOR LOW ROOF	200-A,B&C, 201& 207	12,000	4	FEG75	3	5.17	2740	16	5	460/60/3	1800	1	32.8	34.85	40	487	886	92	76	55	54.9	452	0.64	R-410	25	50	78	287	19.16

SPLIT-AIR HANDLING UNIT SCHEDULE (CONTINUED)																												BASIS OF DESIGN: TRANE	
STEAM PRE-HEAT COIL								STEAM HEAT COIL								PANEL FILTER						OPERATING WEIGHT (LBS)	MODEL	REMARKS					
TOTAL CAPACITY (MBTU/HR)	EAT. DB (°F)	LAT. DB (°F)	F.V. (FT/MIN)	AIR P.D. (IN. H2O)	PRESSURE (PSIG)	COND. (LB/HR)	STEAM P.D. (IN. H2O)	TOTAL CAPACITY (MBTU/HR)	EAT. DB (°F)	LAT. DB (°F)	F.V. (FT/MIN)	A.P.D. (IN. H2O)	PRESSURE (PSIG)	COND. (LB/HR)	S.P.D. (IN. H2O)	TYPE	EFFICIENCY (%)	CLEAN P.D. (IN. H2O)	DIRTY P.D. (IN. H2O)	MEAN P.D. (IN. H2O)									
650	0	50	474	0.09	5	677	8.581	585	50	95	474	0.106	5	609	6.9	PLEATED (MERV 13)	80	0.18	1	0.59	8500	PSCA	1-8						

- REMARKS:
- EXTERNAL PIPE CABINET FOR STEAM VALVE.
  - SUPPLY FAN MOTOR: DIRECT DRIVE W/VFD.
  - BACNET I/P INTERFACE.
  - UNIT CONTROLLER- TRANE TD7- DISCHARGE AIR CONTROL.
  - SMOKE DETECTOR.
  - VFD PER FAN.
  - HUMIDIFIERS SHALL BE PROVIDED WITH A CONTROL VALVE, INVERTED BUCKET STEAM TRAP, WYE STRAINER, AND TWO FLOAT AND THERMOSTATIC STEAM TRAPS SHIPPED LOOSE FOR FIELD INSTALLATION.
  - STANDARD MANUFACTURER WARRANTY FROM DATE OF ACCEPTANCE BY CUNY.

PACKAGED AIR-COOLED CONDENSING UNIT																						BASIS OF DESIGN: TRANE	
UNIT NO.	UNIT SERVE	REFRIGERATION EFFECT (MBTU/HR)	CAPACITY (TON)	POWER (KW)	EER	SUCTION TEMP (°F)	AMBIENT TEMP (°F)	CONDENSER				ELECTRICAL DATA						WEIGHT (LBS)	REFRIGERANT	MODEL NO.	REMARKS		
								COIL TYPE	FINS PER IN.	NO. OF CIRCUIT	FAN TYPE	QUANTITY	EMER. POWER (YES OR NO)	VOLT /PH/Hz.	MCA (A)	MOP (A)	RDE (A)					COMP. POWER (KW)	FAN POWER (KW)
ACC-1	AHU-1	1121.31	80	102	11	44.0	95.0	ALUMINUM TUBE MICRO-CHANNEL	18	2	STANDARD	1	NO	460/3/60	174	200	175	95	7.04	5800	R410A	RCAUC80-1	1-3

- REMARKS:
- SPRING VIBRATION ISOLATORS
  - SUCTION SERVICE VALVE
  - BLEED THERMAL EXPANSION VALVE
  - STANDARD MANUFACTURER WARRANTY FROM DATE OF ACCEPTANCE BY CUNY.

CONDENSATE PUMP AND RECEIVER SCHEDULE														BASIS OF DESIGN: SHIPCO PUMPS	
UNIT No.	LOCATION	SERVICE	PUMP DATA				MOTOR DATA			RECEIVER CAPACITY (GAL.)	MODEL	REMARKS			
			GPM (EACH)	DISCH. PRESS. (PSIG)	RPM	OPER. TEMP. (°F)	No. OF PUMPS	HP (EACH)	VOLT/PH						
CP-1	REMSEN PIPE TUNNEL	AHU-1	3	30	3500	180	1	3/4	208/3	16	63 DSD-MU3	1-5			

- REMARKS:
- STAINLESS STEEL CONSTRUCTION.
  - BASKET INLET STRAINER, GAUGE GLASS ASSEMBLY, DIAL THERMOMETER, DISCHARGE PRESSURE GAUGE, HIGH WATER ALARM SWITCH.
  - ALL UNIT SHALL BE COMPLETELY ASSEMBLED, PIPED, WIRED AND TESTED BEFORE SHIPMENT.
  - UNIT WILL BE FURNISHED WITH REMOVABLE SUPPORT STAND WHICH WILL ELEVATE RECEIVER 12" FROM BASE.
  - STANDARD MANUFACTURER WARRANTY FROM DATE OF ACCEPTANCE BY CUNY.

SPLIT AIR COOLED HEAT PUMP SYSTEM SCHEDULE																								BASIS OF DESIGN: MITSUBISHI										
UNIT No.	LOCATION	AREA SERVED	CFM RANGE	TOTAL CAPACITY				POWER INPUT		MARK No.	CFM	OUTDOOR AIR D.B.	MIN. OPER. TEMP.	CONDENSER				EVAPORATOR				DIMENSION WxDxH (IN.)	E.A.T. D.B.	E.A.T. W.B.	COOLING L.A.T. D.B.	HEATING L.A.T. D.B.	MOTOR OUTPUT KW	MOTOR FLA	VOLT /PH/Hz.	DIMENSION WxDxH (IN.)	EFFICIENCY (SEER)	CONDENSING UNIT MODEL No.	EVAPORATOR MODEL No.	REMARKS
				COOLING (MBH)	HEATING (MBH)	COOLING (KW)	HEATING (KW)	CONDENSER FAN	COMPRESSOR					MCA	MOCQ	TYPE	RLA	LRA	MODEL No.															
AC-R1	1ST FLOOR	RM 104	700	34.2	38	3.3	3.7	ACC-R1	3880	95°F	0°F	25	31	INVERTER	8	13	MNB33FBRMC-L	42x17x56	95	76	75	70	0.56	0.57	208/1/60	51x19x15	18.8	PUZ-A36NHA (BS)	PKA-A36FA	1-5				

- REMARKS:
- LINESET-TWIN TUBE-INSULATION
  - HEAVY DUTY WALL MOUNTING BRACKET FOR OUTDOOR UNIT-COATED STEEL. MODEL-QS2B200M-1
  - BACNET AND MODBUS INTERFACE
  - FLARED CONNECTION
  - WARRANTY- 5 YEARS FROM THE DATE OF ACCEPTANCE FROM CUNY.

EXHAUST FAN SCHEDULE																						BASIS OF DESIGN: STROBIC AIR	
ITEM NO.	UNIT NO.	AREA SERVED	LOCATION	NO OF FAN	LABORATORY EXHAUST (CFM)	STATIC PRESSURE IN WG	FAN (RPM)	INLET FLOW RATE (CFM)	BYPASS FLOW (CFM)	ENTRAINED FLOW (CFM)	POWER	EMER. POWER (YES OR NO)	SINGLE FAN PERFORMANCE					MODEL NO.	OPERATING WEIGHT	REMARKS			
													BHP	HP	FAN FLOW RATE (CFM)	TOTAL FLOW RATE (CFM)	NOZZLE VELOCITY (CFM)				DILUTION RATIO (%)		
1	EF-1A&1B	200-A,B&C, 201, 207, 000, 000A, 000B	ROOF	2	15,000	2.5	1200	15,000	1818	10090	460/3/60	NO	7	7.5	8400	13454	4426	179	TS25075A12	5088	1 THRU 8		

- REMARKS:
- FAN SHALL BE SPARK RESISTANT AND EXPLOSION PROOF CONSTRUCTION.
  - ISOLATION MOTORIZED DAMPER.
  - BYPASS MOTORIZED DAMPER.
  - BYPASS RAIN HOOD.
  - MIXING FLENUM.
  - DISCONNECT SWITCH/FAN.
  - OUTLET NOZZLE SILENCER.
  - STANDARD MANUFACTURER WARRANTY FROM DATE OF ACCEPTANCE BY CUNY.

DUCT SILENCER																		BASIS OF DESIGN: VIBRO-ACOUSTICS	
UNIT NO.	AHU TAG	LOCATION	NO	FLOW RATE (CFM)	STATIC PRESSURE IN WG	PD IN WG	DIMENSION LxWxH (IN.)	MIN. INSERTION LOSS								MANUFACTURER	MODEL NO.	OPERATING WEIGHT	REMARKS
								63	125	250	500	1000	2000	4000	8000				
S-1	AHU-1	LOWER ROOF	1	12,000	0.29	0.26	84x36x30	9	14	19	22	31	28	23	20	VIBRO-ACOUSTICS	TS25075A12	325	1 THRU 5

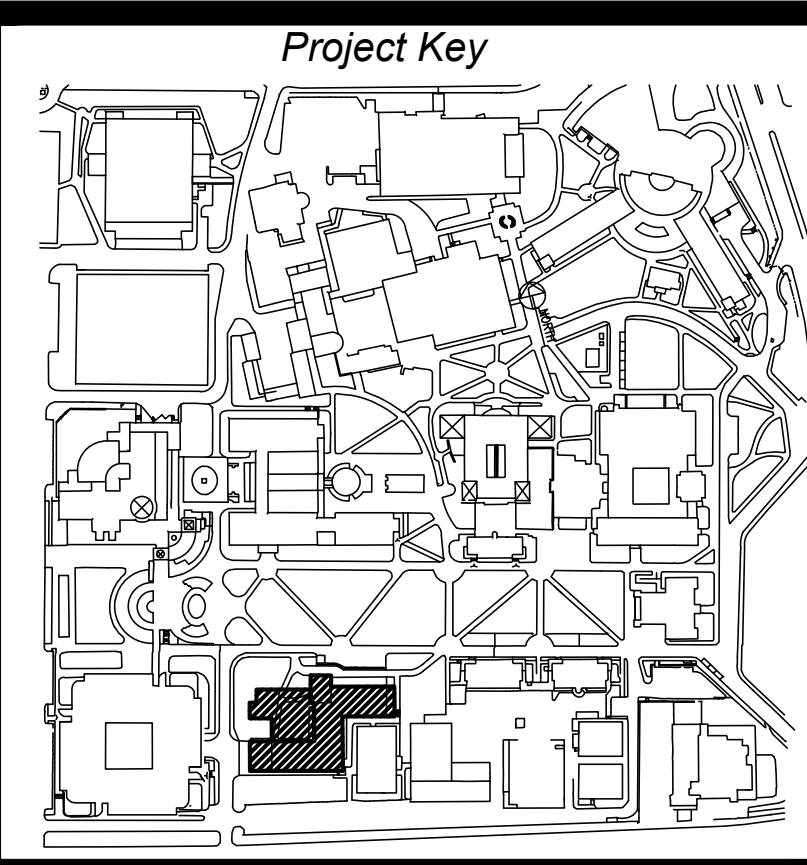
- REMARKS:
- FOR NON BASIS OF DESIGN, PROVIDE P.E STAMP CALS TO PROVIDE 20 DB REDUCTION IN THE VIVARIUM LAGS.
  - FOR NON BASIS OF DESIGN, PROVIDE P.E STAMP CALS TO PROVIDE PRESSURE DROP WITH SYSTEM EFFECTS.
  - REFL = RECTANGULAR ELBOW FILM LINED SILENCER WITH G90, 18 GA. CASING AND 22 GA. PERF MATERIAL CONSTRUCTION.
  - VIBAR FILM LINING INCLUDED. VIBAR FILM IS FIRE/SMOKE RATED AND MEETS NFPA 90A AND ASTM E84 STANDARDS.
  - FOR NON BASIS OF DESIGN, CONTRACTOR IS RESPONSIBLE FOR MEETING THE REQUIRED DB REDUCTION.

REGISTERS AND DIFFUSERS						BASIS OF DESIGN: TITUS	
TYPE	CFM RANGE	NECK SIZE	NOMINAL FACE SIZE	MODEL No.	REMARKS		
CD-1	100-180	7"	24"x24"	TLF-SS	1		
CD-2	100-180	7"	24"x48"	TLF-SS	1		
CD-3	190-300	10"	24"x48"	TLF-SS	1		
ER-1	100-300	10"x10"	12"x12"	PAR-SS	1		
ER-2	100-300	10"x10"	24"x24"	PAR-SS	1		
ER-3	300-550	12"x12"	24"x24"	PAR-SS	1		

- REMARKS:
- STAINLESS STEEL

ELECTRIC AIR HANDLING UNIT SCHEDULE																												BASIS OF DESIGN: TRANE				
UNIT No.	LOCATION	AREA SERVED	TOTAL CFM	COOLING COIL DATA						HEATING COIL DATA				FAN DATA				ELECTRICAL DATA						MODEL	DIMENSION LxWxH (FT.)	WEIGHT (LBS)	SOUND (dBA)	EER	REMARKS			
				ENT. DB (°F)	ENT. WB (°F)	LAT. DB (°F)	LAT. WB (°F)	TOTAL COOLING (MBTU/HR)	SEN. COOLING (BTU/HR)	MIN. DEW POINT (°F)	HEATING CAPACITY (KW)	EAT (°F)	LAT (°F)	STATIC PRESS. (IN.W.G.)	RPM	HP	RPM	BHP	DISCHARGE CONF.	EMER. POWER (YES OR NO)	HP	VOLT /PH/Hz.	MCA (A)							MFS (A)	FLA (A)	
AHU-3	FIRST FLOOR	CAGE AREA	2000	92	76	55	54.9	138	79	6	48	0	83	2.24	1944	1.5	1800	1	VERTICAL	NO	1.5	460/3/60	84.8	90	67.8	HORIZON	OADG010A3	14x5x6	3050	88.7	13.1	1-13

- REMARKS:
- HEAT: FIN & TUBE MODULATING HORH ELECTRIC.
  - ELECTRIC HEATING COIL WITH SCR(MODULATING CONTROL).
  - SUPPLY FAN MOTOR: DIRECT DRIVE W/VFD.
  - UNIT CONTROLLER- TRANE TD7- DISCHARGE AIR CONTROL.
  - W/BACNET W/DISPLAY.
  - COOLING CONTROL- RELIATEL.
  - STAINLESS STEEL DRIP PAN.
  - SMOKE DETECTOR.
  - SPACE TEMP THERMOSTAT.
  - HORIZONTAL DISCHARGE CURB-PRIMARY CABINET.
  - ADJUSTABLE DISCHARGE AIR TEMP. CONTROL.
  - FILTER- MERV-13.
  - SOUND ATTENUATION PACKAGE.
  - STANDARD MANUFACTURER WARRANTY FROM DATE OF ACCEPTANCE BY CUNY.



Rev/Iss	Description	Date:
1	CONSTRUCTION DOCUMENTS	12-19-19

Client: **CUNY THE CITY UNIVERSITY OF NEW YORK**  
555 WEST 57th STREET  
NEW YORK, NEW YORK, 10019

Project Title: **QUEENS COLLEGE**  
REHABILITATION/RENOVATION/SPRINKLER & ASBESTOS WORK  
66-50 KISSENA BLVD.,  
FLUSHING, NY 11367

Client: **CUNY THE CITY UNIVERSITY OF NEW YORK**  
555 WEST 57th STREET  
NEW YORK, NEW YORK, 10019

Project Title: **QUEENS COLLEGE**  
REHABILITATION/RENOVATION/SPRINKLER & ASBESTOS WORK  
66-50 KISSENA BLVD.,  
FLUSHING, NY 11367

Drawing Title: **SCHEDULE SHEET**

Drawn By: E.S. Checked By: G.S. Approved By: G.S. Date: 08/30/2019

Seal & Signature: GENESYS Project No: 036122-100 DASNY Project No: 3066809099

Drawing Number: **M-900.00**

CONSTRUCTION DOCUMENTS FULL SCALE DWG. SIZE 30"x42"