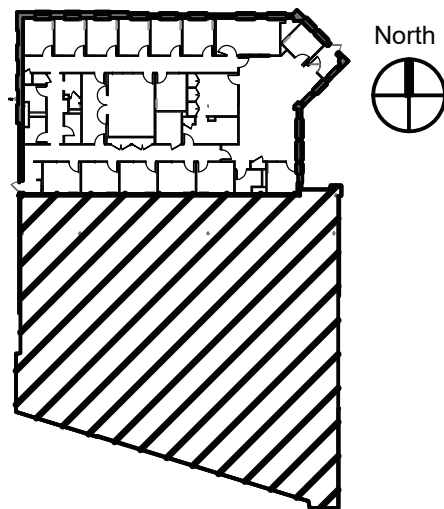













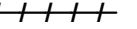
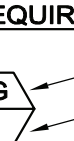








### Key Plan:



	TAKE-OFF TO DIFFUSER/GRILLE	
	CEILING DUCT MOUNTED DIFFUSER/GRILLE	
	SUPPLY CEILING LINEAR DIFFUSER (W/ INSUL. SHEETMETAL PLENUM)	
	SIDEWALL DUCT MOUNTED REGISTER/GRILLE	
	OPEN END DUCT W/ 1/2"x12" WMS	

<b>CALLOUT SYMBOLS</b>	
	CONNECT NEW TO EXISTING
	REVISION NUMBER
	TEMPERATURE SENSOR OR THERMOSTAT
	REMOVE EXISTING ITEM
SA(100) —	S = SUPPLY, A = SCHEDULED DIFFUSER. (100) = CFM TO BALANCE TO
RA(100) —	R = RETURN, A = SCHEDULED GRILLE. (100) = CFM TO BALANCED TO
EA(100) —	E = EXHAUST, A = SCHEDULED GRILLE (100) = CFM TO BALANCED TO
TA(100) —	T = TRANSFER, A = SCHEDULED GRILLE (100) = CFM TO BALANCED TO
EQUIPMENT REQUIRING ELECTRICAL SERVICE, SEE SCHEDULE FOR PERFORMANCE REQUIREMENTS:	
	SCHEDULED EQUIPMENT UNIT NUMBER FIRST DIGIT(S) = UNIT IDENTIFICATION NUMBER (DUE TO EQUIPMENT NOT ALL NUMBERS MAY BE USED) XX — EQUIPMENT REUSE

STARTER	STARTER
	CENTRIFUGAL FAN
	UPBLAST FAN
	OPPOSED BLADE DAMPER W/ TWO POSITION ACTUATOR
	OPPOSED BLADE DAMPER W/ MODULATING ACTUATOR
	PARALLEL BLADE DAMPER W/ TWO POSITION ACTUATOR
	PARALLEL BLADE DAMPER W/ MODULATING ACTUATOR

CONTROL ABBREVIATIONS	
ACD	AUTOMATIC CONTROL DAMPER
ALM	ALARM
ATC	AUTOMATIC TEMPERATURE CONTROL
DAT	DISCHARGE AIR TEMPERATURE SENSOR
DDC	DIRECT DIGITAL CONTROL
EAD	EXHAUST AIR DAMPER
ES	END SWITCH
FA	FAULT ALARM
FID	FAN ISOLATION DAMPER
FMT	FLOW METER/TRANSMITTER
FS	FLOW SWITCH
FZ	FREEZE/STAT
HGB	HOT GAS BYPASS
HOK	HANDS-OFF AUTOMATIC SWITCH
HS	HAND SWITCH
LAT	LEAVING AIR TEMPERATURE SENSOR
LSPS	LOW STATIC PRESSURE SWITCH
LS	LEVEL SENSOR OR LIGHT SWITCH INTERFACE
MAT	MIXED AIR TEMPERATURE SENSOR
MD	MOTION DETECTOR
NC	NORMALLY CLOSED (ON LOSS OF POWER)
NO	NORMALLY OPEN (ON LOSS OF POWER)
OAD	OUTSIDE AIR DAMPER
OAT	OUTSIDE AIR TEMPERATURE SENSOR (DRY BULB)
RAD	RETURN AIR DAMPER
S	SWITCH
SAD	SUPPLY AIR DAMPER
SP	STATIC PRESSURE SENSOR
SPD	SPEED CONTROL
S/S	START/STOP
T	TEMPERATURE SENSOR/THERMOSTAT
TR	TEMPERATURE SENSOR/THERMOSTAT (ROOM)
WC	WATER COLUMN
X	REMOVE EXISTING ITEM

Landlord Comments:

Project No.: Y021006  
Copyright: 2021

Drawing Sheet Title:

HVAC LEGEND, NOTES,  
AND ABBREVIATIONS

Drawing Sheet Number:

M-000

Owner's Branch No.:532





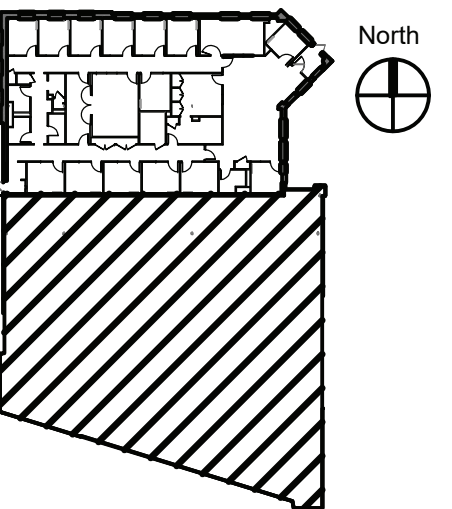




Fidelity Investor Center  
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Nanuet, NY  
10954

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**Key Plan:**



Drawing Sheet Title:

HVAC 1ST FLOOR PLAN

M-201

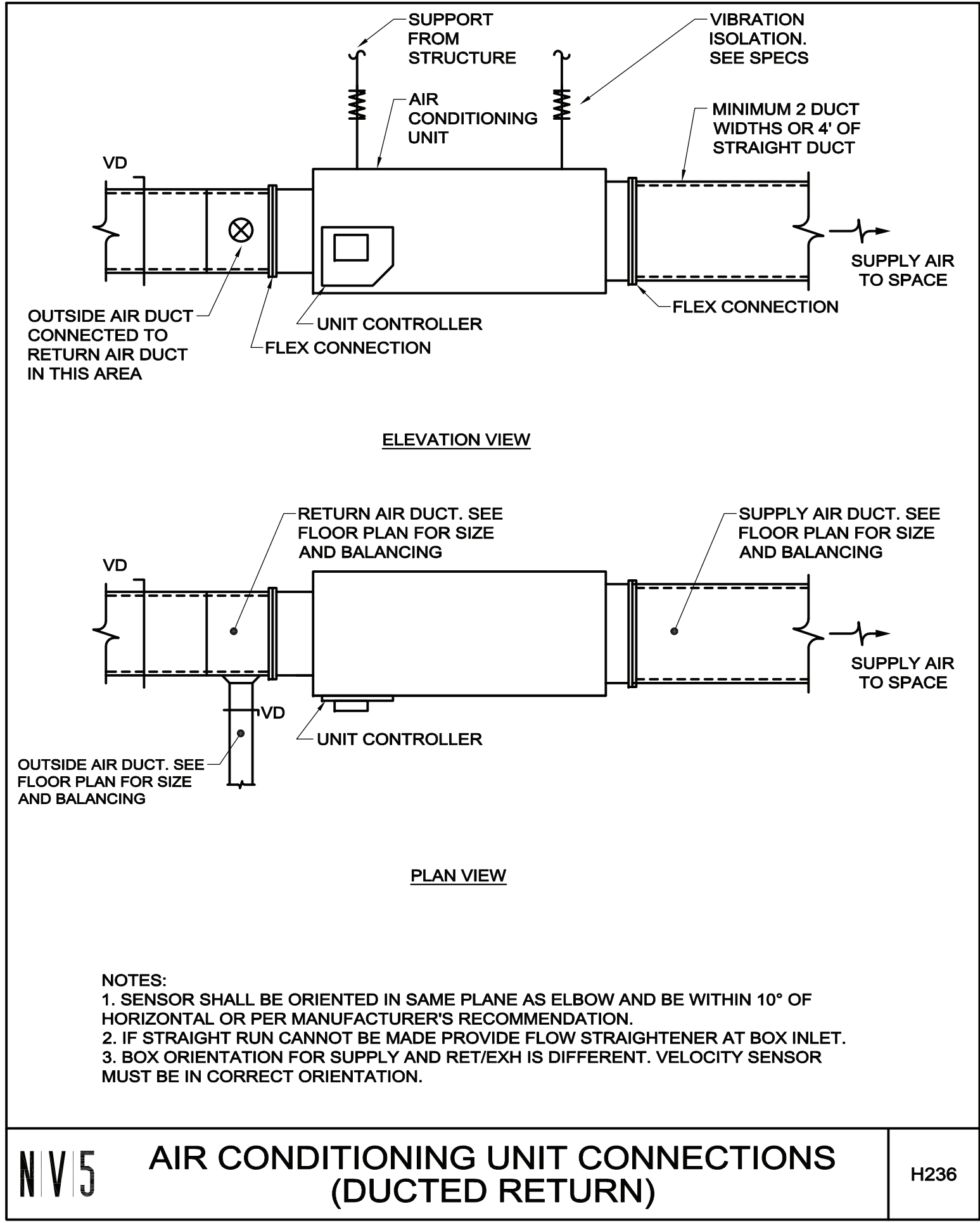
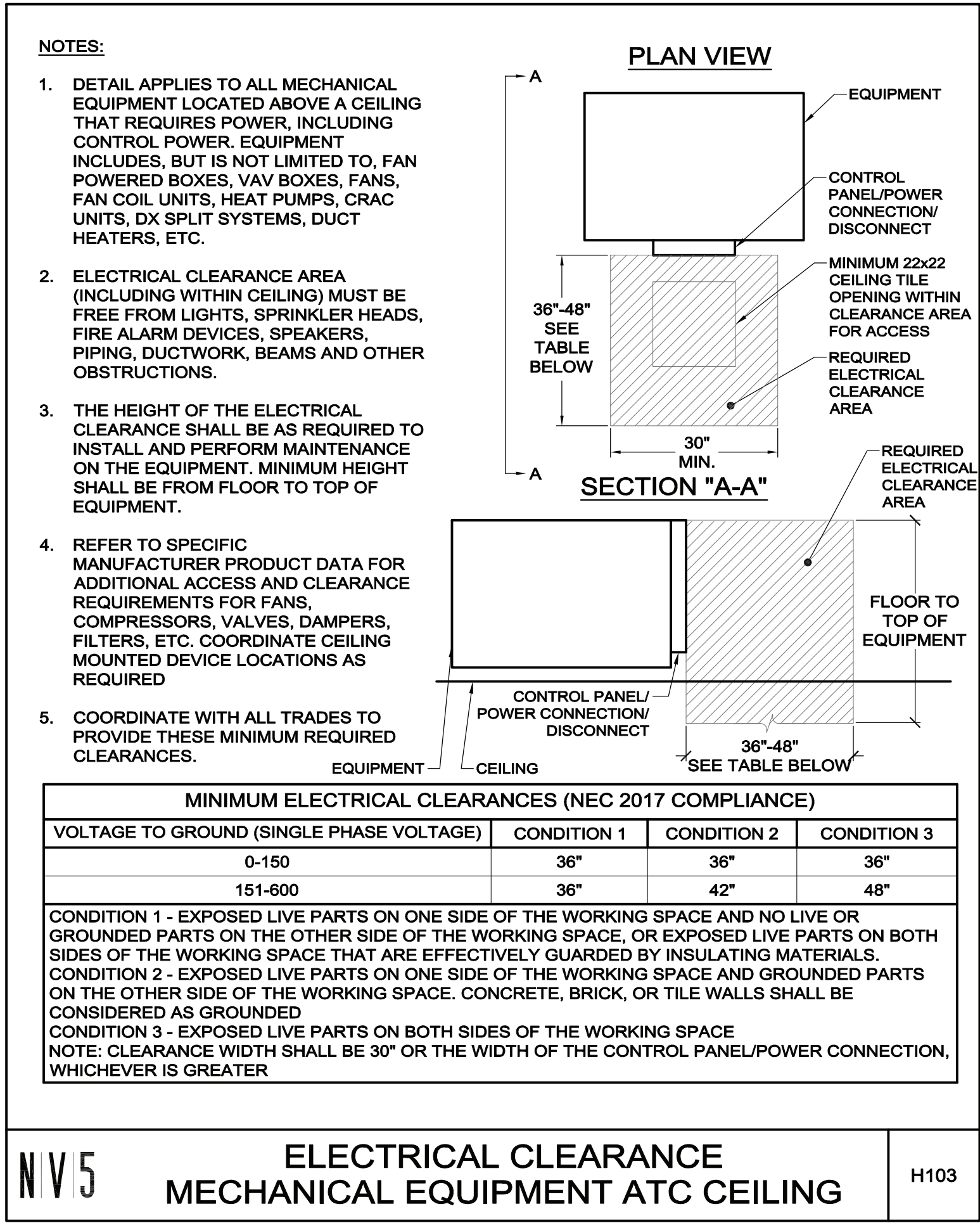
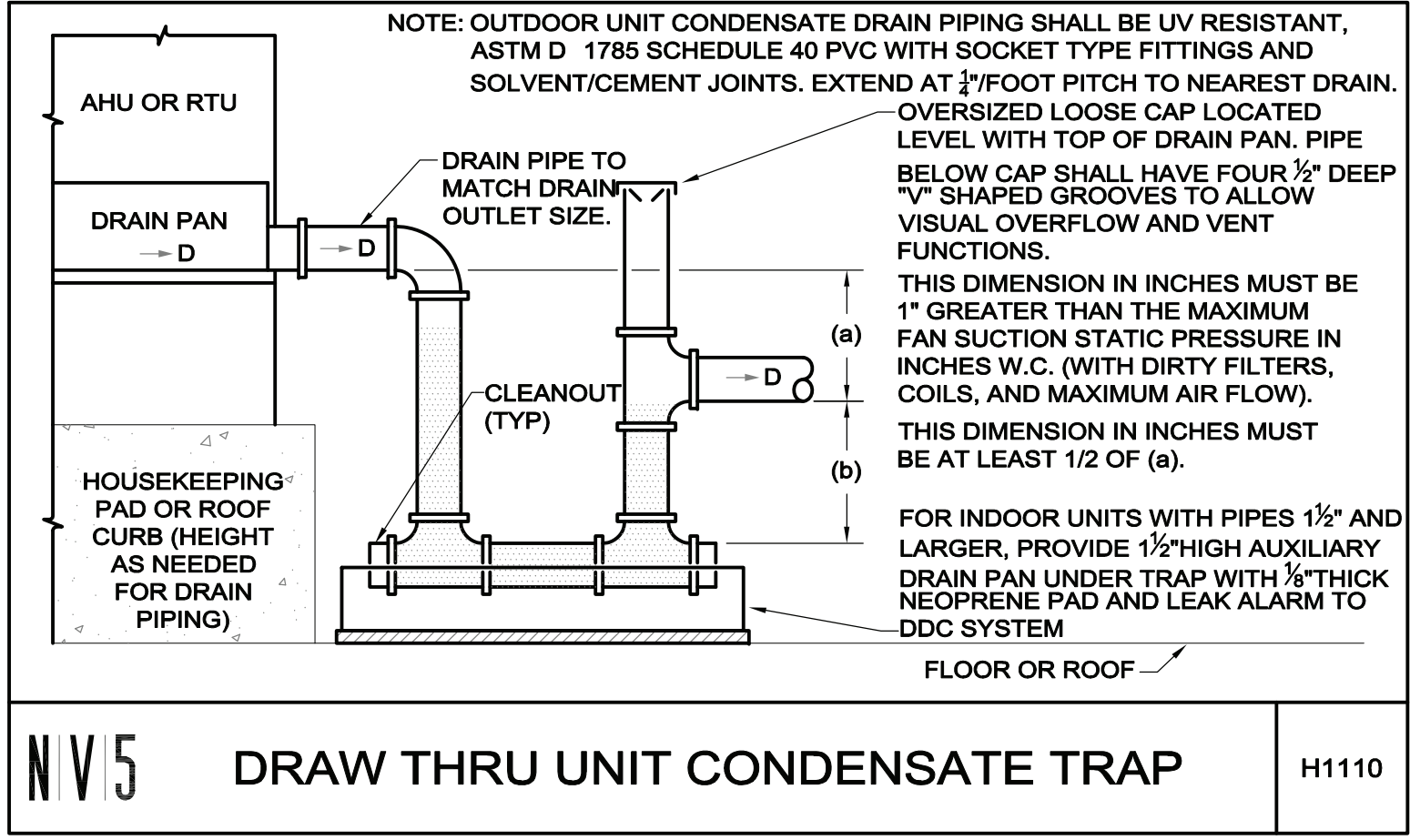
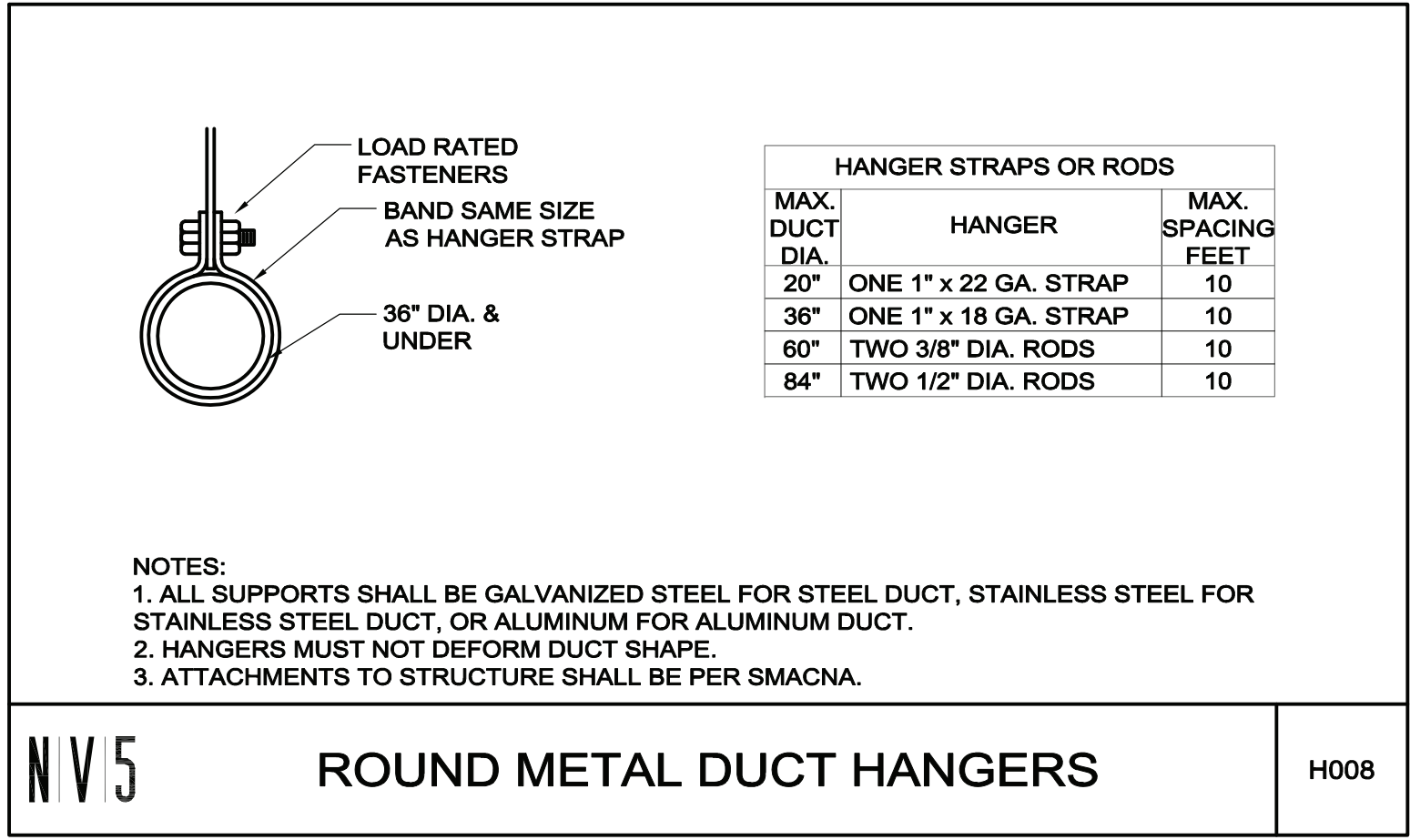
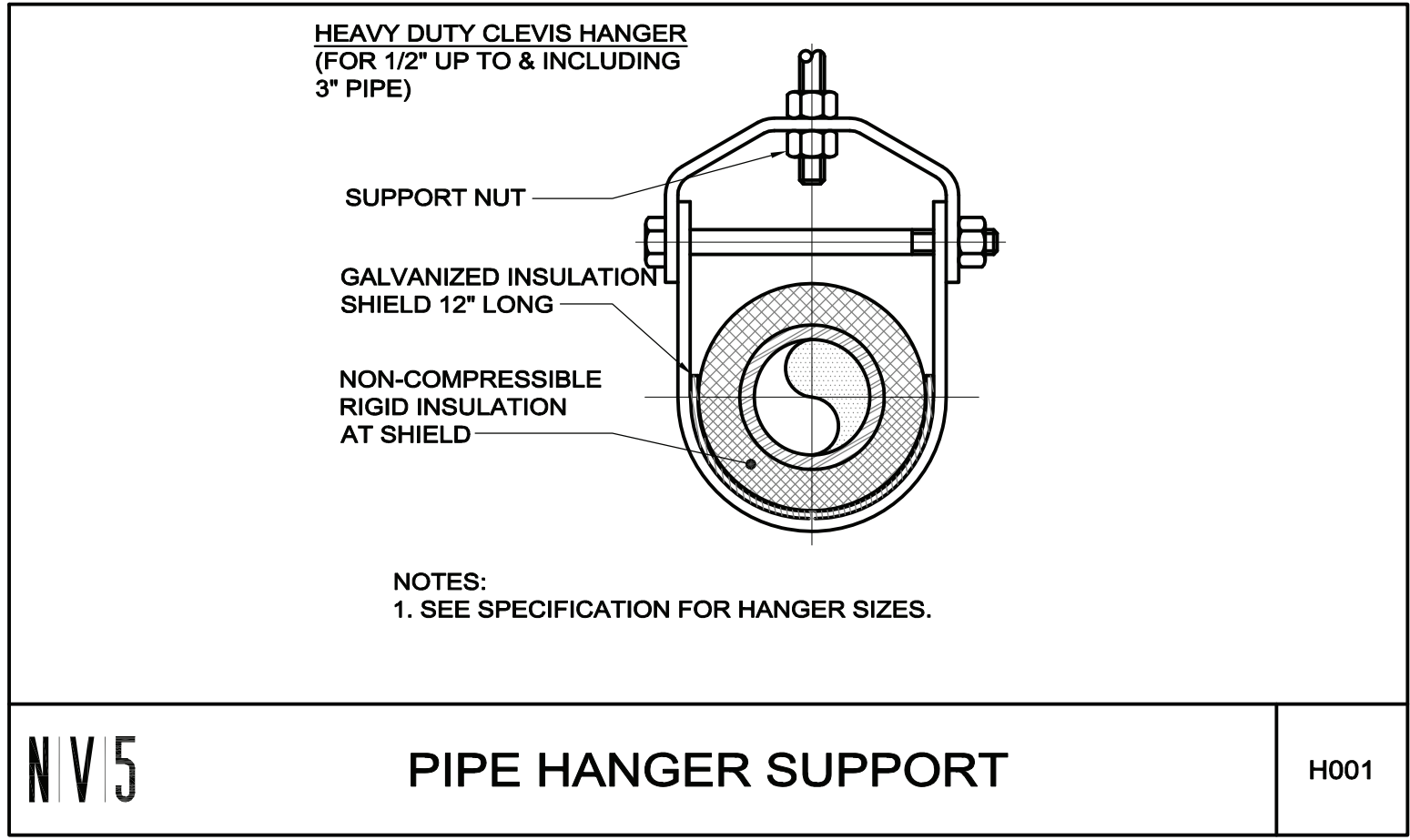
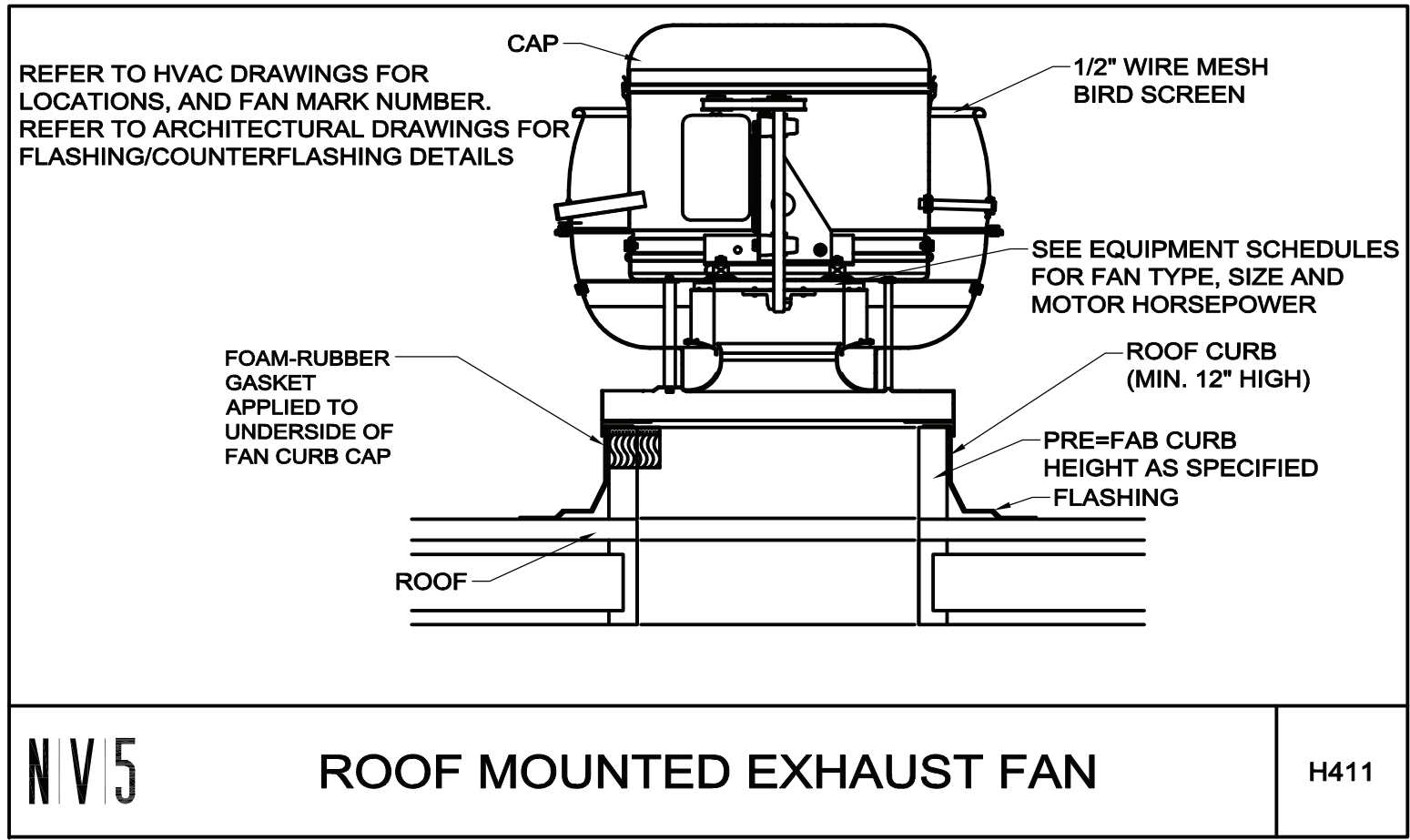
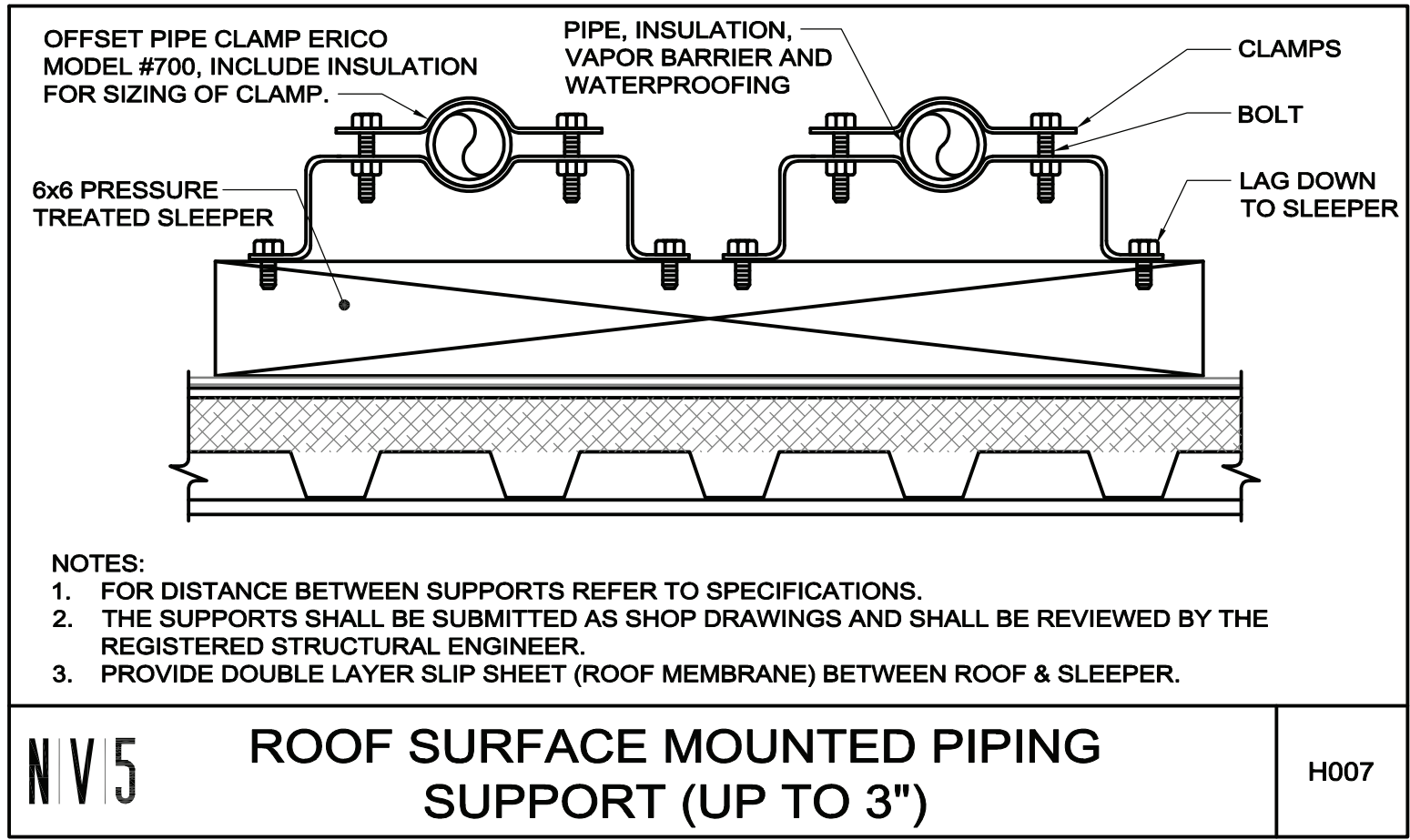
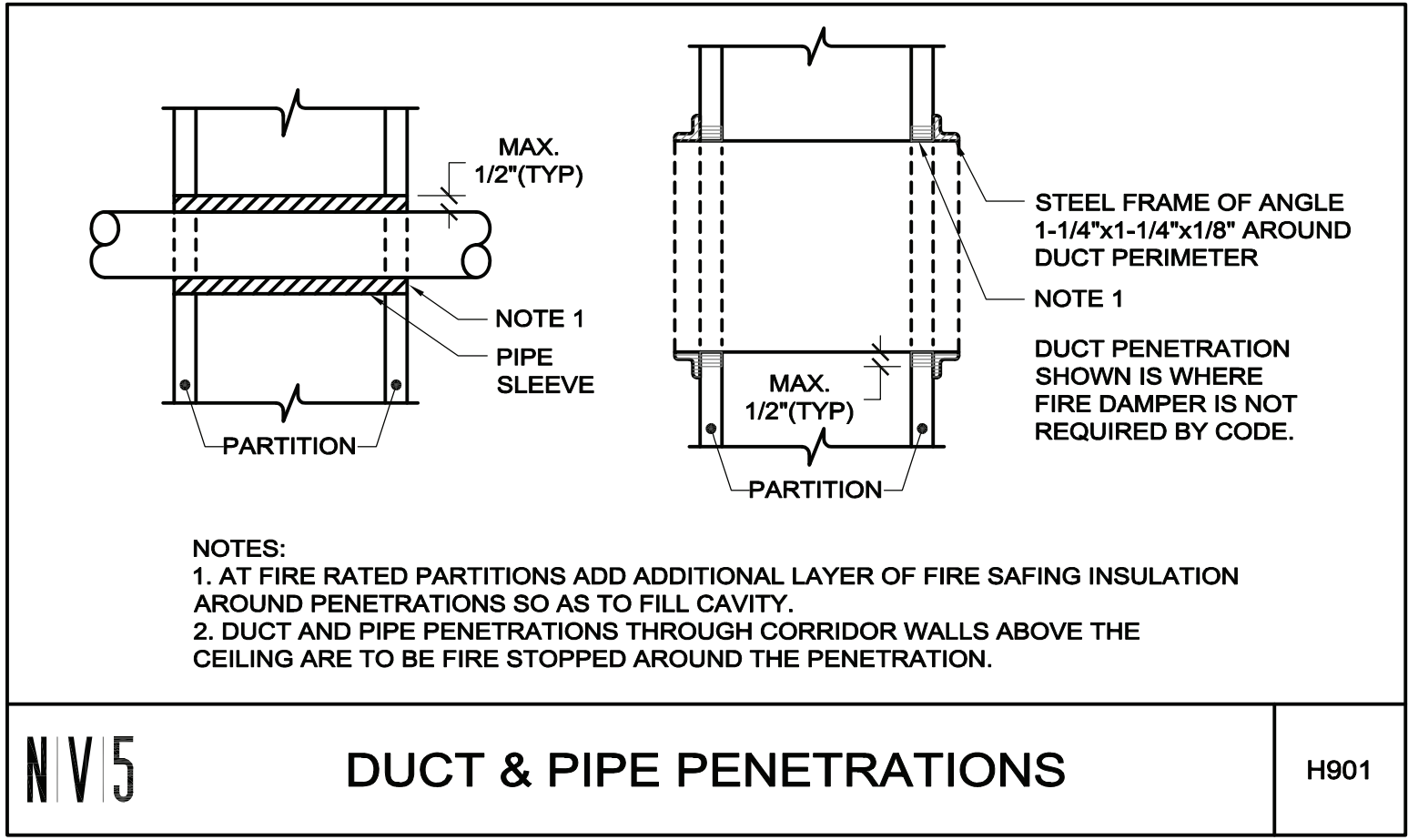
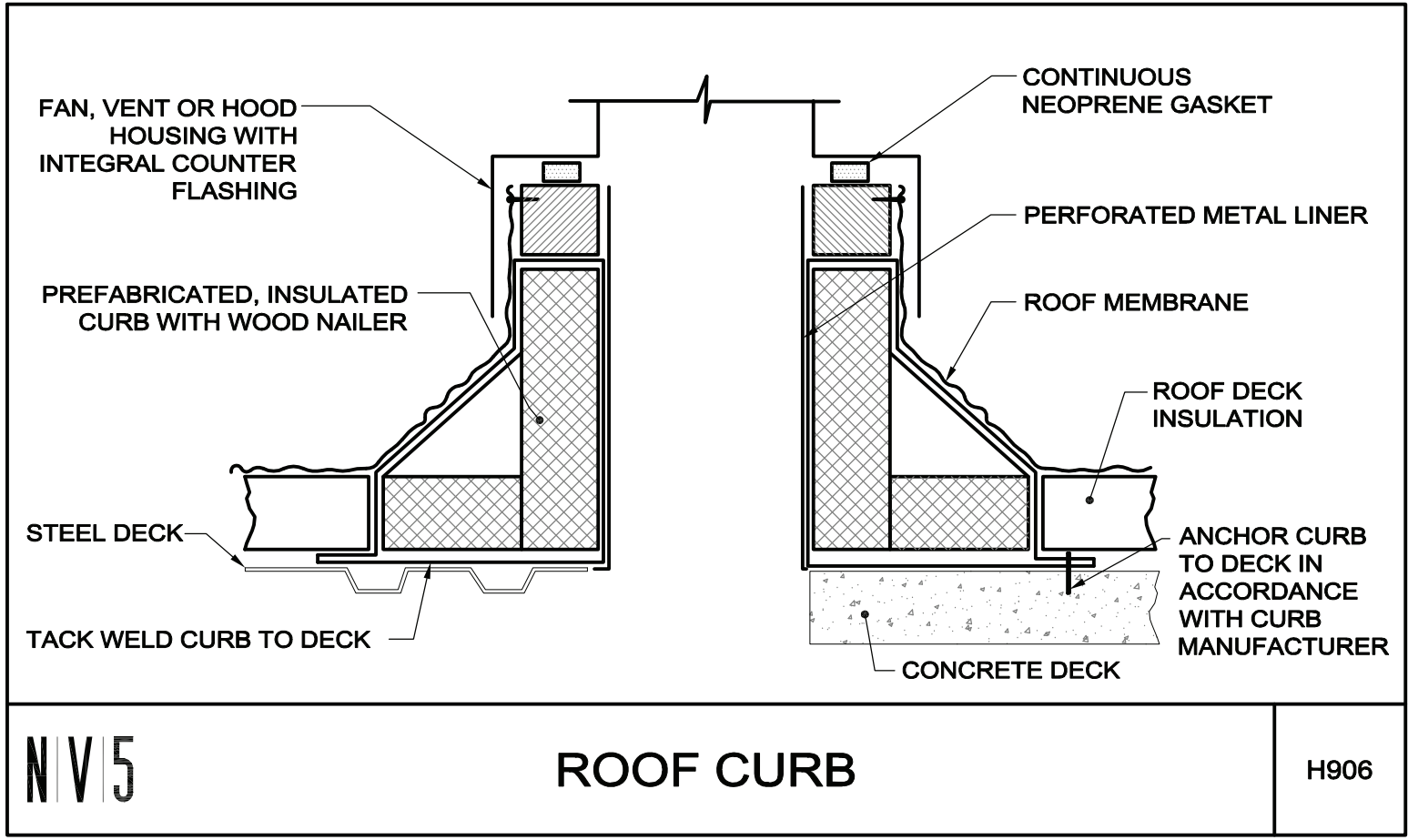
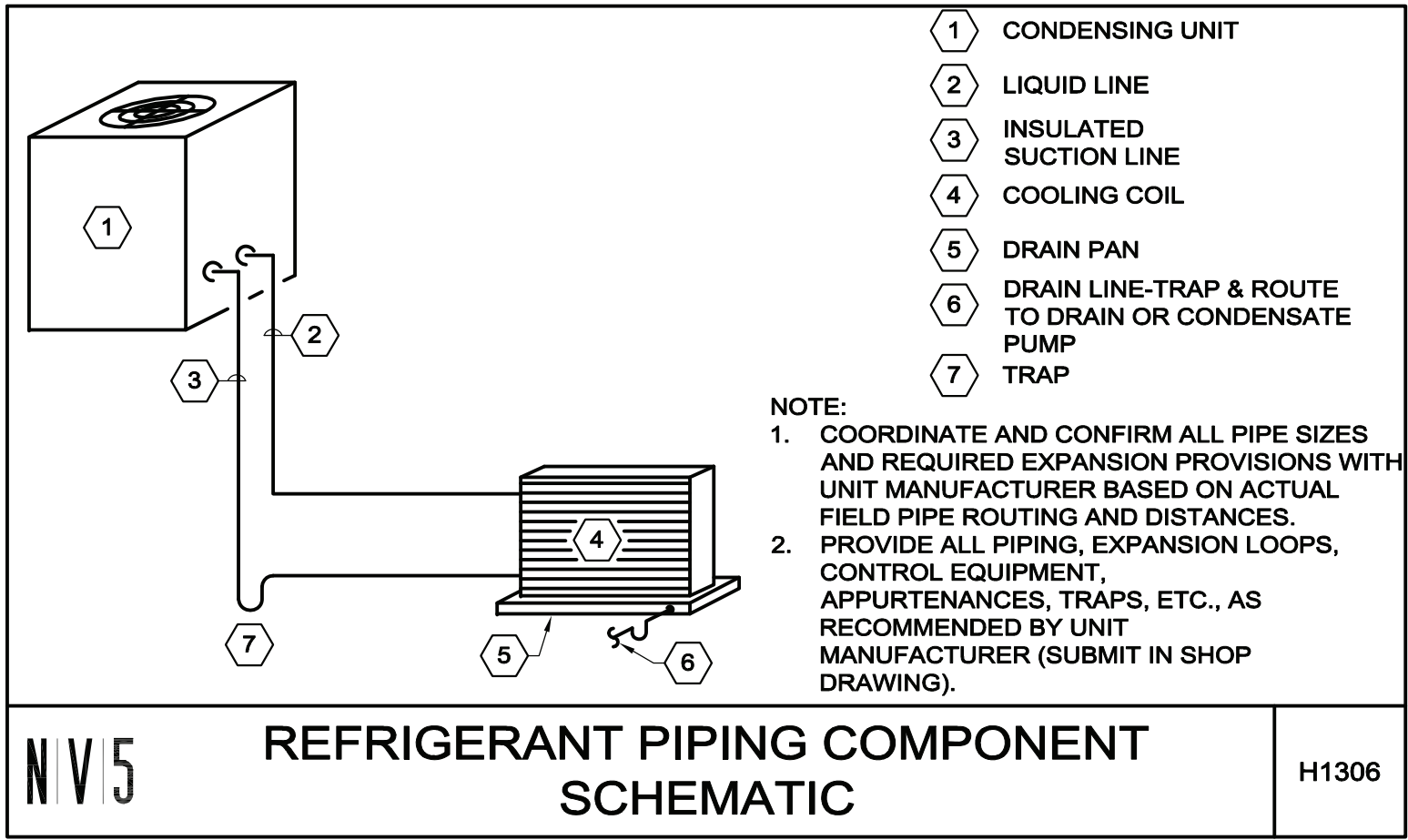
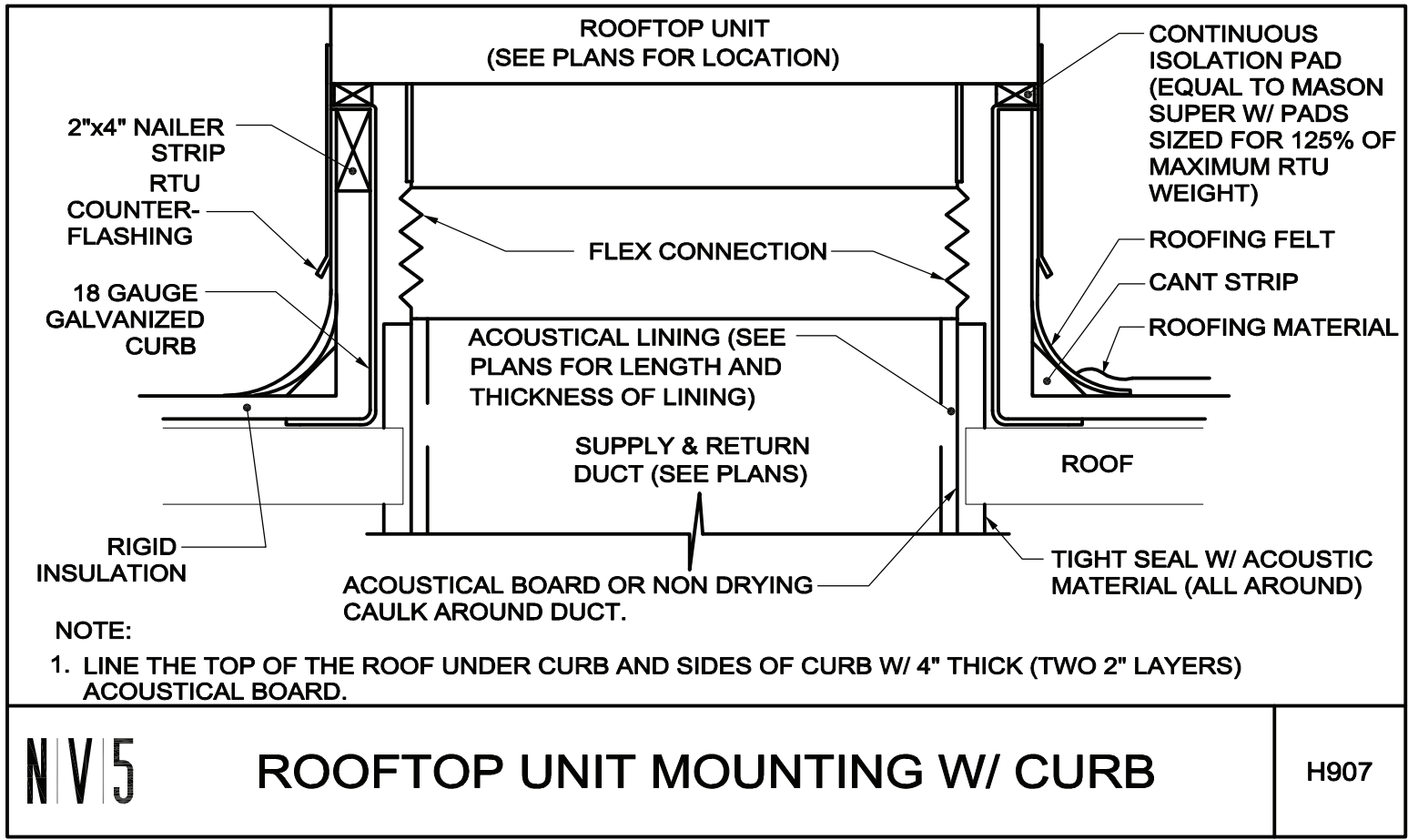
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Landlord Comments:

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Seals:

General Notes:

Project Title:

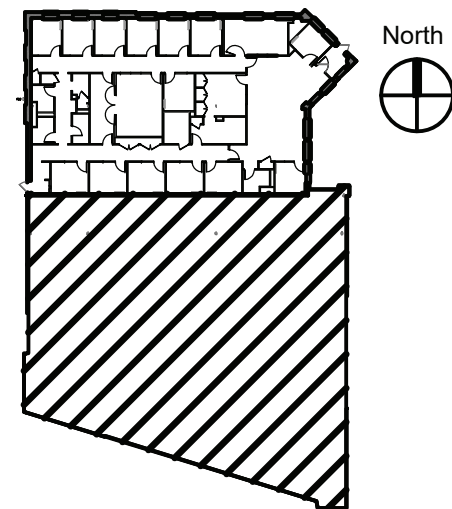


Fidelity Real Estate Company  
245 Summer Street  
Boston, MA 02110

Fidelity Investor Center  
2142 Fashion Drive  
Nanuet, NY  
10954

Number	Description	Date
	ISSUED FOR PERMIT & CONST.	23 JULY 2021

Key Plan:



Project No.: Y021006  
Copyright: 2021

Drawing Sheet Title:  
HVAC DETAILS

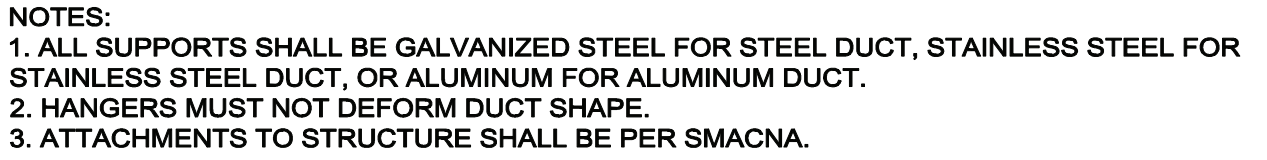
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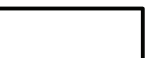
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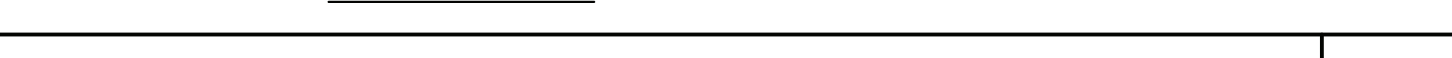




H008



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H1501



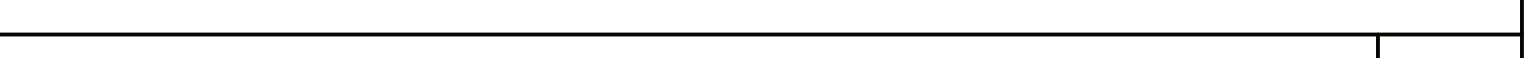
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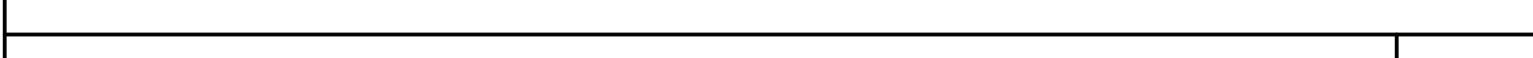
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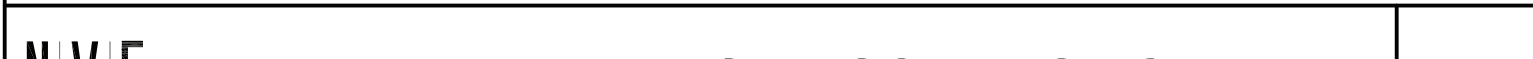
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H1505



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PACKAGED DX ROOFTOP AIR HANDLING UNIT SCHEDULE																																					
TAG	LOCATION	OPERATING WEIGHT (LBS)	REFRIGERANT	SUPPLY FAN				UNIT COOLING COIL								UNIT HEATING (GAS)						ELECTRICAL										COOLING EFF.	HEATING THERMAL EFF. (%)	MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS		
				TYPE	CFM		EXT. STATIC PRESS. (IN.WG)	MOTOR (BHP)	CAPACITY (MBH)				EAT (°F)		LAT (°F)		CAPACITY (MBH)		PRESSURE (IN. WG)	STAGES	EAT (°F)		LAT (°F)		TOTAL UNIT					COMPRESSOR						INDOOR FAN	CONDENSER FAN
					TOTAL	MIN. O.A.			TONS	TOTAL	SENS.	DB	WB	DB	WB	INPUT	OUTPUT	MIN/MAX			DB	DB	V	PH	HZ	MCA	MOCP	RLA	LRA	FLA	FLA						
RTU-1	ROOF	513	R-410A	1120	120	1.2	0.75	3	29.2	23.5	80	65	60	57	67/110	54/88	4/13	2	65	109	480	3	60	12	15	5.7	73	2.4	2.4	16.0 SEER	81	CARRIER 48GCDM04	SEE NOTES				
NOTES: 1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION. 2. PROVIDE MANUFACTURERS 7-DAY PROGRAMMABLE THERMOSTAT. 3. PROVIDE WITH ENTHALPY ECONOMIZER, THREE SETS OF FILTERS, CONVENIENCE OUTLET, AND INSULATED CABINET. 4. PROVIDE ALL RTUs WITH RAWAL APR CONTROL DEVICE.																																					

SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE																																				
TAG	LOCATION	MANUFACTURER AND MODEL NUMBER (AS STANDARD)	INDOOR AIR CONDITIONING UNITS																	REFRIGERANT		OUTDOOR CONDENSING UNIT										EFFICIENCY (SEER)	REMARKS			
							UNIT COOLING				UNIT HEATING				ELECTRIC DATA							TYPE	TAG	LOCATION	DESIGN AMBIENT TEMP (°F)	MINIMUM AMBIENT TEMP (°F)	MANUFACTURER AND MODEL NUMBER (AS STANDARD)	ELECTRIC DATA (OUTDOOR UNIT)								
							CAPACITY		EAT(°F)		LAT(°F)		CAPACITY															EAT(°F)		LAT(°F)				TOTAL UNIT		
			CFM		MOTOR (HP)	ESP (IN. WG.)	TOTAL	SENSIBLE	DB	WB	DB	WB	kW	DB	DB	V	PH	HZ	MCA	MOCP	V							PH	HZ	MCA	MOCP			RLA	LRA	FLA
			TOTAL	O.A.																																
ACU-1	ABOVE CEILING	CARRIER 40MBDQ12	310	90	.18	0.5	18	-	75	62	58	53	2	68	88	208	1	60	.2	-	R-410A	ACCU-1	ROOF	110	32	CARRIER 38MAQB12R	208	1	60	15	20	5.7	-	-	21.5	SEE NOTES
ACU-2	ABOVE CEILING	CARRIER 40MBDQ18	400	135	.27	0.5	14.7	-	75	62	58	53	2.5	68	88	208	1	60	.2	-	R-410A	ACCU-2	ROOF	110	32	CARRIER 38MAQB18R	208	1	60	13	20	7.3	-	-	18.5	SEE NOTES
ACU-3	ABOVE CEILING	CARRIER FV4C	630	60	1/3	0.5	18	11.6	75	62	58	53	4	68	88	208	1	60	5.4	15	R-410A	ACCU-3	ROOF	110	32	CARRIER 25HHA424	208	1	60	16.5	25	12.8	58.3	0.5	14	SEE NOTES
ACU-4	ABOVE CEILING	CARRIER FV4C	450	45	1/3	0.5	18	11.6	75	62	58	53	2.5	68	88	208	1	60	5.4	15	R-410A	ACCU-4	ROOF	110	32	CARRIER 25HHA418	208	1	60	11.8	20	9.0	48.0	0.5	14	SEE NOTES
ACU-5	ABOVE CEILING	CARRIER FV4C	360	60	1/3	0.5	18	11.6	75	62	58	53	2.5	68	88	208	1	60	5.4	15	R-410A	ACCU-5	ROOF	110	32	CARRIER 25HHA418	208	1	60	11.8	20	9.0	48.0	0.5	14	SEE NOTES
ACU-6	ABOVE CEILING	CARRIER FV4C	480	65	1/3	0.5	18	11.6	75	62	58	53	3	68	88	208	1	60	5.4	15	R-410A	ACCU-6	ROOF	110	32	CARRIER 25HHA424	208	1	60	16.5	25	12.8	58.3	0.5	14	SEE NOTES
ACU-7	ABOVE CEILING	CARRIER FV4C	425	60	1/3	0.5	18	11.6	75	62	58	53	2.5	68	88	208	1	60	5.4	15	R-410A	ACCU-7	ROOF	110	32	CARRIER 25HHA418	208	1	60	11.8	20	9.0	48.0	0.5	14	SEE NOTES
NOTES: 1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION. 2. INDOOR UNIT - PROVIDE WITH 3 SETS OF FILTERS, VIBRATION ISOLATION PER SPECIFICATIONS, AND 7-DAY PROGRAMMABLE THERMOSTAT. 3. DISCONNECTS PROVIDED BY ELECTRICAL CONTRACTOR.																																				

DUCTWORK PRESSURE CLASS AND SEAL CLASS					
PRESSURE CLASS	STATIC PRESSURE CLASS	SMACNA SEAL CLASS	SMACNA LEAKAGE CLASS		DESIGN VELOCITY LIMITS
			RECTANGULAR	ROUND	
2"	2" POS. OR NEG.	A	6	3	2000 FPM OR LESS
UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS, USE THE FOLLOWING PRESSURE CLASSIFICATIONS FOR THE TYPES OF DUCTWORK LISTED BELOW					
2" CLASS:		ALL DUCTWORK.			
NOTES:					
1. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.					

MINIMUM DUCT INSULATION R-VALUES (IECC - 2018 AND ASHRAE 90.1-2016 COMPLIANCE)					
LOCATION	SUPPLY	RETURN	RAW OUTDOOR AIR	EXHAUST	
				WITH ENERGY RECOVERY	WITHOUT ENERGY RECOVERY
OUTDOORS	R-12	R-12	-0-	R-12	-0-
UNCONDITIONED SPACE (SHAFT OR CEILING WITH DUCTED RETURN AIR)	R-6	R-6	R-6	R-6	-0-
DUCT LINING SCOPE: ACOUSTIC DUCT LINING OF THE TYPE AND THICKNESS SPECIFIED SHALL BE INSTALLED ON ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK WITHIN 20 FEET OF ALL TYPES OF AIR HANDLING UNITS (INCLUDING RTU, ERU, FCU, MUA, ETC., AND ALL BRANCHES WITHIN 20') ALL FANS (INCLUDING BRANCHES), ALL LOW PRESSURE DUCTWORK DOWNSTREAM OF ALL TYPES OF SUPPLY VOLUME BOXES (CV, VAV, FPAVAV, ETC.), AND WHERE DETAILED OR SHOWN ON DRAWINGS.					
NOTES: (SEE SPECIFICATIONS FOR R-VALUES OF VARIOUS DUCT INSULATION AND LINERS). 1. R-VALUES SHOWN MAY BE OBTAINED BY ADDING THE R-VALUES OF BOTH THE LINING (WHERE SHOWN OR USED) AND EXTERNAL DUCT INSULATION. 2. R-VALUES SHOWN ARE AS INSTALLED. USE R-VALUES FOR 25% COMPRESSION FOR NON-RIGID INSULATION. 3. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.					

PIPE INSULATION (2018 AND ASHRAE 90.1 - 2016 COMPLIANCE)							
MINIMUM INSULATION THICKNESS IN INCHES FOR INDOOR PIPE SIZES (SEE NOTES BELOW)							
PIPING SYSTEM TYPES	FLUID TEMP. RANGE (°F)	< 1"	1" & 1½"	1½" - 3"	4" - 6"	8" & UP	K-FACTOR (BTU-INCH/°F-HR-SF) AT AVE. TEMP. (°F)
REFRIGERANT OR COOLING COIL	≤ 60	0.5	1	1	1	1.5	0.20-0.27 @ 75°F
CONDENSATE DRAIN							
NOTES: 1. FOR MINIMUM THICKNESS OF ALTERNATIVE INSULATION TYPES OUTSIDE THE STATED CONDUCTIVITY RANGE, SEE TEST METHOD FOR STEADY STATE HEAT TRANSFER PROPERTIES OF HORIZONTAL PIPE INSULATIONS, ASTM C 335-95, AND THE STATE ENERGY CODE. 2. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.							

ELECTRIC HEATING COIL SCHEDULE																	
TAG	SERVICE	LOCATION	CFM	TYPE	CAPACITY		AIR TEMP (°F)		DUCT SIZE		VELOCITY (FPM)	NO. OF STEPS	ELECTRIC SERVICE			MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS
					KW	BTUH	ENT	LVG	W (IN.)	H (IN.)			V	PH	HZ		
EHC-1	OA	DUCT	630	OC	5	17.1	30	55	12	12	696	SCR	480	3	60	INDEECO QUIZ	SEE NOTES
NOTES: 1. PROVIDE WITH THERMAL CUTOUPS, DOOR DISCONNECT SWITCH, AIRFLOW SWITCH, CONTROL TRANSFORMER, FUSES AND MANUFACTURERS SAFETIES. 2. ELECTRIC COIL SHALL BE FLANGED TYPE.																	

ELECTRIC CABINET UNIT HEATER SCHEDULE															
TAG	LOCATION	TYPE	MOUNTING	WEIGHT (LBS)	INPUT (KW)	OUTPUT (MBH)	AIR			ELECTRIC SERVICE				MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS
							CFM	EAT (°F)	LAT (°F)	V	PH	HZ	TOTAL AMPS		
ECUJ-1	VESTIBULE	HORIZ	HUNG	120	3.0	10.2	250	60	98	480	3	60	3.6	QMARK CU935	SEE NOTES
NOTES: 1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION. 2. PROVIDE WITH CONCEALED CABINET, CASING WITH FRONT & BACK DUCT COLLARS, AND REMOTE DUCT MOUNTED TWO STAGE T-STAT. 3. UNIT MOUNTED DISCONNECT SWITCH PROVIDED BY ELECTRICAL CONTRACTOR. 4. PROVIDE WITH TEMPERATURE SENSOR IN THE RETURN GRILLE.															

CONDENSATE PUMP SCHEDULE											
TAG	SERVICE	LOCATION	REC. CAP. GAL.	FLUID TEMP. (°F)	DISCHARGE PRESS (FT)	PUMP CAP. (GPM)	ELECTRICAL				REMARKS
							HP	V	PH	AMPS	
CP-1	ACU-1	PLENUM	1	55	12	4	1/10	120	1	3.1	HARTELL AZX-1965
NOTES: 1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION. 2. CONDENSATE PUMP SHALL BE HARD WIRED AND PLENUM RATED											

ELECTRIC BASEBOARD SCHEDULE									
TAG	LENGTH	WATTS PER FOOT	TOTAL WATTS	OUTPUT (MBH)	ELECTRIC SERVICE			MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS
					AMPS	V	PH		
EBB-1	3'-0"	250	750	2.6	2.7	277	1	QMARK CPH05A3250	SEE NOTES
NOTES:									
1. REFER TO SPECIFICATIONS AND CONTROL DIAGRAMS FOR ADDITIONAL INFORMATION									
2. PROVIDE WITH INTEGRAL CONCEALED DISCONNECT PREWIRED TO THE UNIT. DISCONNECTING MEANS SHALL BE NEMA RATED AND SUITABLE FOR LOCKING IN THE OFF POSITION.									
3. CONFIRM EQUIPMENT FINISH WITH THE ARCHITECT.									
4. PROVIDE WITH INTEGRAL THERMOSTAT AND PEDESTAL KIT.									

DUCTLESS SPLIT AIR-CONDITIONING UNIT SCHEDULE																						
INDOOR UNIT							REFRIGERANT TYPE	OUTDOOR CONDENSING UNIT												REMARKS		
TAG	LOCATION	MANUFACTURER AND MODEL NUMBER (AS STANDARD)	COOLING CAPACITY (BTU)		HEATING CAPACITY (BTU)			FAN DATA (CFM)	TAG	LOCATION	WEIGHT (LBS)	SOUND PRESSURE DB(A)	DESIGN AMBIENT TEMP (°F)		MANUFACTURER AND MODEL NUMBER (AS STANDARD)	ELECTRICAL DATA					EFFICIENCY	
			TOTAL	SENSIBLE	TOTAL	TOTAL							SUMMER	WINTER		V	PH	HZ	MOCP		SEER	HSPF
ACU-LAN	LAN ROOM	mitsubishi PKA-A24KA	24,000	18,000	23,000	775	R410A	ACCU-LAN	ROOF	163	48	95	0	mitsubishi PUZ-A24NHA	208	1	60	30	21	11	SEE NOTES	
ACU-ELE	ELE ROOM	mitsubishi PKA-A12HA	12,000	9,700	11,100	425	R410A	ACCU-ELE	ROOF	163	48	95	0	mitsubishi PUZ-A12NKA	208	1	60	15	20	10.2	SEE NOTES	
NOTES:																						
1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.																						
2. DISCONNECT SWITCH BY ELECTRICAL CONTRACTOR.																						
3. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.																						
4. INDOOR UNIT - PROVIDE WALL MOUNTED THERMOSTAT THERMOSTAT AND MANUFACTURERS INTEGRAL CONDENSATE PUMP.																						
5. REFRIGERANT PIPE SIZES AND REQUIRED ACCESSORIES SHALL BE PER MANUFACTURERS RECOMMENDATIONS.																						
6. LOCATE AIR COOLED CONDENSING UNIT ON ROOF.																						



N V 5

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**General Notes:**

RTU-1 OUTDOOR AIR CALCULATIONS													DESIGN OA	DESIGN RA
FPE#/ROOM NAME	ZONE POP. (PEOPLE)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	ROOM FLOOR AREA (SF)	AREA OUTDOOR AIR RATE (CFM/SF)	PEOPLE OUTDOOR AIRFLOW (CFM)	AREA OUTDOOR AIRFLOW (CFM)	BREATHING ZONE OUTDOOR AIRFLOW (CFM)	AIR DISTRIBUTION EFFECTIVENESS	ZONE OUTDOOR AIRFLOW (CFM) MIN	ROOM SUPPLY AIRFLOW (CFM)	EXHAUST AIRFLOW (CFM)	RETURN AIR BALANCE	DESIGN OA	DESIGN RA
	Pz (Input)	Rp (Input)	Az (Input)	Ra (Input)	Rp*Az (Output)	Ra*Az (Output)	Vbz (Output)	Ez (Input)	(Output)	Vpz (Input)	(Input)	(Output)	(Input)	(Input)
LOBBY 101	6.94	5	694	0.06	34.70	42	76	0.8	95	670	0	575	100	495
7-TR OFFICE 102	0.46	5	92	0.06	2.30	6	8	0.8	10	225	0	215	10	215
7-TR OFFICE 130	0.46	5	92	0.06	2.30	6	8	0.8	10	225	0	215	10	215
RESTROOM 128	0	0	56	0.06	0	3	3	0.8	4	0	75	0	0	0
RTU-1 TOTALS:	7.86		934		39.30	56	95		119	1120	75	1005	120	925



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Drawing Sheet Title:  
HVAC SCHEDULES

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