MECHANICAL GENERAL NOTES

- 1. ALL WORK SHALL BE EXECUTED IN A NEAT AND WORKMANLIKE MANNER AND SHALL BE DONE IN ACCORDANCE WITH GOOD TRADE PRACTICE AND IN CONFORMANCE WITH APPLICABLE MANUFACTURERS RECOMMENDATIONS.
- 2. THIS INSTALLATION SHALL CONFORM TO THE FOLLOWING CODES AND THE REQUIREMENTS OF FEDERAL, STATE, AND LOCAL REGULATORY AGENCIES HAVING JURISDICTION:
- 3. HVAC DRAWINGS ARE IN PART DIAGRAMMATIC AND INTENDED TO SHOW THE SCOPE AND GENERAL ARRANGEMENT OF THE WORK UNDER THIS CONTRACT. WHERE JOB CONDITIONS REQUIRE MINOR CHANGES OR ADJUSTMENTS IN THE INDICATED LOCATIONS OR ARRANGEMENT OF THE WORK SUCH CHANGES SHALL BE MADE WITHOUT CHANGE IN THE CONTRACT AMOUNT.
- 4. CONTRACTOR SHALL REVIEW ALL DISCIPLINE DRAWINGS INCLUDING ARCHITECTURAL, AND SHALL COORDINATE ALL WORK WITH OTHER TRADES AND WITH EXISTING CONDITIONS PRIOR TO INSTALLATION OF ANY WORK. REPORT ALL CONFLICTS IMMEDIATELY TO ARCHITECT AND ENGINEER.
- 5. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATIONS AND EXACT DIMENSIONS OF ALL EQUIPMENT, CASEWORK, DEVICES, FIXTURES. SWITCHES, SENSORS, ETC. DURING FIELD VISITS AND PRIOR TO PERFORMING ANY ROUGH-IN WORK FOR THE UTILITIES AND DUCTWORK. DISCREPANCIES SHALL BE IMMEDIATELY COMMUNICATED WITH THE ARCHITECT AND ENGINEER.
- 6. ANY CHANGES AND/OR MODIFICATIONS MUST BE REVIEWED AND APPROVED BY THE ENGINEER OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
- 7. THE EQUIPMENT INDICATED ON THE DRAWINGS, TOGETHER WITH ITS BASE AND/OR SUPPORT, DUCTWORK, WALL, FLOOR AND ROOF OPENINGS AND ELECTRICAL SERVICE ARE BASED ON THE MAKE AND MODEL INDICATED IN THE EQUIPMENT SCHEDULE. SHOULD CONTRACTOR SELECT AN EQUIVALENT ALTERNATE MAKE OF EQUIPMENT, EVEN IF APPROVED BY THE OWNER AS EQUAL, THE CONTRACTOR SHALL NOTIFY ENGINEER, COORDINATE AND MAKE THE MODIFICATIONS IN THE WORK WITHOUT CHANGE IN CONTRACT AMOUNT.
- 8. SCHEDULE ALL WORK, CUTTING AND BUILDING SERVICE INTERRUPTIONS WITH BUILDING OWNER AND CONSTRUCTION MANAGER, PRIOR TO COMMENCING WORK. ALL CORING TO BE COMPLETED THIRD SHIFT.
- 9. ALL DUCT DIMENSIONS INDICATED FOR NEW DUCTS ARE INSIDE CLEAR DIMENSIONS.
- 10. WALL DEVICES SHOWN ON DRAWINGS ARE DIAGRAMMATIC IN LOCATION AND FOR GENERAL WIRING ONLY. DEVICES INDICATED TO BE INSTALLED IN ONE LOCATION SHALL BE ALIGNED VERTICALLY AND/OR HORIZONTALLY. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS. COORDINATE ALL LOCATIONS BETWEEN TRADES.
- 11. ALL NEW AND EXISTING PIPES AND DUCTS SHALL HAVE FIRE RATED SLEEVES AND/OR FIRE RATED DAMPERS, WHEN PASSING THROUGH FIRE RATED CONSTRUCTION.
- 12. VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS, VERIFY AND PROVIDE DUCT AND PIPE TRANSITIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION.
- 13. UNIT & DUCT ACCESS PANELS & DOORS SHALL BE PROVIDED TO CLEAN COILS AND SERVICE DAMPERS, HEATERS, VALVES, AND ALL CONCEALED MECHANICAL EQUIPMENT.
- 14. SUPPORT ALL EQUIPMENT, PIPING AND DUCTWORK FROM BUILDING STRUCTURE TO PROVIDE A VIBRATION FREE INSTALLATION.
- 15. THE CONTRACTOR SHALL INSPECT ALL EXISTING DUCTWORK AND REPAIR/REPLACE ALL DAMAGED DUCTWORK, AND RECONNECT DUCTWORK NOT PROPERLY CONNECTED. 16. IN GENERAL, FLEXIBLE DUCTS SHALL BE THE SAME SIZE AS THE DIFFUSER NECK INDICATED ON THE TAGS.
- 17. IN THE ABSENCE OF OTHER SPECIFIC INSTRUCTIONS, ALL WORK AND MATERIALS SUPPLIED SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF THEIR ACCEPTANCE BY THE OWNER.
- 18. INSTALLATION OF WORK SHALL PROVIDE REASONABLE ACCESSIBILITY FOR OPERATION, INSPECTION AND MAINTENANCE OF EQUIPMENT AND ACCESSORIES. 19. CUTTING AND PATCHING SHALL BE PROVIDED AS REQUIRED AND WHERE NECESSARY TO ACCOMMODATE NEW WORK AND THE REPAIR OF EXISTING WORK. 20. EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM DUST, DIRT AND DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE ALL DUCT AND EQUIPMENT OPENINGS DURING CONSTRUCTION WITH SUITABLE PROTECTIVE COVERING FOR EQUIPMENT AND MATERIALS BEFORE, DURING AND FOLLOWING INSTALLATION.
- 21. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL CLEAN AND ADJUST ALL DUCTWORK, PIPING, AND EQUIPMENT AND TEST ALL SYSTEMS TO SATISFACTION OF OWNER/ENGINEER. TEST CASINGS & DUCTWORK FOR LEAKS.

12x10	NEW DUCTWORK
	(SIZE INDICATES INTERNAL FREE AREA) CONNECT TO EXISTING
WEG.	VERIFY EXACT LOCATION IN FIELD
MFG	MANUFACTURER
AFF	ABOVE FINISHED FLOOR
UNO	UNLESS NOTED OTHERWISE
V-PH-HZ	VOLTAGE-PHASE-HERTZ
S.P.	STATIC PRESSURE
GPM	GALLONS PER MINUTE
ENT	ENTERING
— с ——	CONDENSATE
— CA ——	COMPRESSED AIR
LVG	LEAVING
— G ——	GAS
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
	THERMOMETER
\boxtimes	☐ AIR DEVICE NO. NEW CEILING DIFFUSER SUPPLY AIR DEVICE CD-3/100 AIR DEVICE TYPE ☐ CFM
	NEW RETURN GRILL (REFER TO AIR DEVICE SCHEDULE)
	DIRECTION OF FLOW
	REDUCTION IN DIRECTION OF FLOW
п п	CAP
(E)	FLEXIBLE CONNECTOR
(E)	EXISTING TO REMAIN
S.R	SUPPLY REGISTER
R.R	RETURN REGISTER
EHC	ELECTRIC LIEAT COIL
	ELECTRIC HEAT COIL
<u>—</u>	MOD
(RB)	REBALANCE EXISTING TO CFM'S INDICATED
/D 	VOLUME DAMPER
—— FD	FIRE DAMPER WITH ACCESS PANEL
NO.	NUMBER
FPM	EEET DED MINI ITE
	FEET PER MINUTE
#	NUMBER
W/	WITH
@	AT
VFD	VARIABLE FREQUENCY DRIVE
FLR	FLOOR
MOD	MODULATING MOTORIZED DAMPER
TYP	TYPICAL
WP	WEATHERPROOF
VIF	VERIFY IN FIELD
(RE)	RELOCATE EXISTING
B.D.D.	BACK DRAFT DAMPER
HD FT	DYNAMIC HEAD IN FEET OF WATER
PD FT	PRESSURE DROP IN FEET OF WATER
EWT	ENTERING WATER TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
P/T F.C.	PRESSURE/TEMPERATURE TEST PLUG FLEXIBLE CONNECTION
A.P.	ACCESS PANEL
CLG	CEILING
T.A.	TRANSFER AIR SLEEVE WITH FIRE DAMPER
(T)	THERMOSTAT 48" ABOVE FINISHED FLOOR WITH LOCKABLE COVER (FINAL LOCATION TO BE APPROVED BY OWNER PRIOR TO INSTALLATION)
$\overline{}$	FLEXIBLE DUCT
DN	DOWN
CFM	CUBIC FEET PER MINUTE
	HVAC SMOKE DETECTOR
©	TITAL BETEGING

			PIPING LEGEND			
SYMBOL	SERVICE	SIZE	MATERIAL	JOINTS	INSULATION	REMARKS
— с —	CONDENSATE	ALL	PVC	GLUED	1" ARMAFLEX	REFER TO SPECIFICATIONS
—— DW ——	DOMESTIC WATER	ALL	COPPER TYPE 'L'	SOLDERED	1" ARMAFLEX	REFER TO SPECIFICATIONS
—— RS ——	REFRIGERANT SUCTION	ALL	ACR COPPER TYPE L	BRAZED	1/2" ARMAFLEX	-
— RL —	REFRIGERANT LIQUID	ALL	ACR COPPER TYPE L	BRAZED	NONE	-
— HWS —	HOT WATER SUPPLY	LESS THAN OR EQUAL 3"	COPPER TYPE "L" HARD	SOLDERED/SCREWED	2" FIBERGLASS	-
— HWR —	HOT WATER RETURN	LESS THAN OR EQUAL 3"	COPPER TYPE "L" HARD	SOLDERED/SCREWED	2" FIBERGLASS	-

SINGLE LINE SYMBOLS	DOUBLE LINE SYMBOLS	DESCRIPTION
	}	NEW DUCTWORK EXISTING DUCTWORK/EQUIPMENT TO REMAIN
		EXISTING DUCTWORK/EQUIPMENT TO BE REMOVE NEW THERMOSTAT WIRE
	D	DROP IN DUCT ELEVATION RISE IN DUCT ELEVATION
	<u> </u>	MANUAL VOLUME DAMPER
<u>AP</u> AD	AP \AD	ACCESS DOOR /ACCESS PANEL
1		VANED ELBOW
		90-DEG ELBOW WITH RADIUS/DIAMETER RATIO EQUAL TO OR GREATER THAN 1.5. INSTALL MITERED ELBOW WITH VANES ONLY IF RADIUS ELBOW DOES NOT FIT
		SIDEWALL SUPPLY REGISTER
		RETURN REGISTER/GRILLE
	}	FLEXIBLE CONNECTION (FC)
		BRANCH DUCT TAKE-OFF
		90 DEG SPLIT (TEE, WITH VANES)
		ROUND DUCT TURNING UP
		ROUND DUCT TURNING DOWN
		RECTANGULAR DUCT TURNING UP RECTANGULAR DUCT TURNING DOWN
		FLEXIBLE DUCTWORK
	7	TRANSITION
*		HUMIDIFIER
		TERMINAL UNIT WITH REHEAT TERMINAL UNIT
	<u>}</u>	EXHAUST FAN (IN-LINE TYPE)
↓FD	FD }	FIRE DAMPER
FSD	FSD	COMBINATION FIRE/SMOKE DAMPER
MOD	MOD	MOTOR-OPERATED DAMPER
<u>SD</u>	SD CAD	MOTOR-OPERATED SMOKE DAMPER
CAD -		CLEAN AGENT DAMPER
<u> </u>	<u> </u>	TRANSFER DUCT
	\	ELECTRIC DUCT HEATER
Œ	<u> </u>	HUMIDITY SENSOR, DUCT MOUNTED
(T		TEMPERATURE SENSOR, DUCT OR PIPE MOUNTED PRESSURE SENSOR PIPE MOUNTED
		STATIC PRESSURE SENSOR, DUCT MOUNTED
\$		SMOKE DETECTOR, DUCT MOUNTED
(1		THERMOSTAT, WALL MOUNTED
<u>(</u>	<u>_</u>	HUMIDISTAT, WALL MOUNTED
	·]	FIRESTAT
TA NE CF	\G	DIFFUSER/GRILLE/REGISTER DESIGNATION

DESIGNATIONS				
•	POINT OF CONNECTION BETWEEN NEW WORK AND EXISTING WORK.			
•	POINT BETWEEN EXIST'G WORK TO REMAIN AND EXIST'G WORK TO BE REMOVED.			
XXX	EQUIPMENT DESIGNATION EQUIPMENT DESIGNATION EQUIPMENT NUMBER			
х	SECTION DESIGNATION SECTION LETTER/NUMBER DRAWING SECTION SHOWN			
(x-x)	DETAIL DESIGNATION DETAIL LETTER/NUMBER DRAWING NUMBER CONTAINING DETAIL			

DUCTWORK SCHEDULE									
FAN SYSTEM	DUCT MATERIAL	PRESSURE CLASS	INTERNAL LINER		EXTERNAL INSUL	ATION	REMARKS		
1744 6161EM	BOOTWATERWA	T REGOGNE GE/100	TYPE	THICKNESS	TYPE	THICKNESS	REMARKS		
EXHAUST DUCTWORK	GALVANIZED STEEL	2"	INTERNAL LINER	1	-	=			
RETURN DUCTWORK	GALVANIZED STEEL	2"	INTERNAL LINER	1"	-	-			
TRANSFER DUCTWORK	GALVANIZED STEEL	1/2"	INTERNAL LINER	1/2"	-	-			
MEDIUM PRESSURE SUPPLY CONCEALED	GALVANIZED STEEL	3"	INTERNAL LINER	1"	FLEXIBLE FIBERGLASS	1-1/2"			
MEDIUM PRESSURE SUPPLY EXPOSED	GALVANIZED STEEL	3"	INTERNAL LINER	1"	RIGID	2"	WITH EXTERNAL RIGID COVER		
LOW PRESSURE SUPPLY CONCEALED	GALVANIZED STEEL	1"	INTERNAL LINER	1/2"	FLEXIBLE FIBERGLASS	1-1/2"			
LOW PRESSURE SUPPLY EXPOSED	GALVANIZED STEEL	1"	-	-	RIGID	2"	WITH EXTERNAL RIGID COVER		

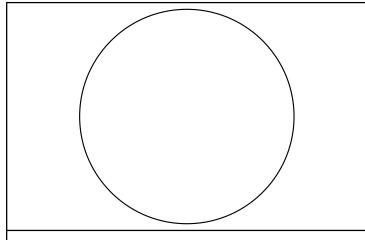
NOTES: 1. PROVIDE INTERNALLY LINED DUCTWORK WHERE SHOWN 2. DUCTWORK DOWNSTREAM OF EXHAUST FAN TO BE LINED FOR THE FIRST 5'-0", THEN EXTERNALLY INSULATED. 3. ALL DUCTWORK SHALLED BE SEAL CLASS A, EXCEPT FOR RELIEF & TRANSFER DUCTS.

4 DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS

PLATO MARINAKOS, JR. ARCHITECT, LLC

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107 S 2nd Street 4th Floor Philadephia, PA 19106 267-866-0930 OFFICE 267-866-0931 DIRECT plato@plato-studio.com



ARCHITECT SEAL MUST BE IN RED INK

OWNER

APPROVED AS IS CLIENT IS REQUIRED TO APPROVED AS NOTED CHECK (X) ONE BOX **CLIENT SIGNATURE** NAME (PLEASE PRINT) KINDLY RETURN ALL DRAWINGS FOR THE COMPLETE BUILDING, SIGNED AND DATED TO OUR OFFICE

ISSUED BY:

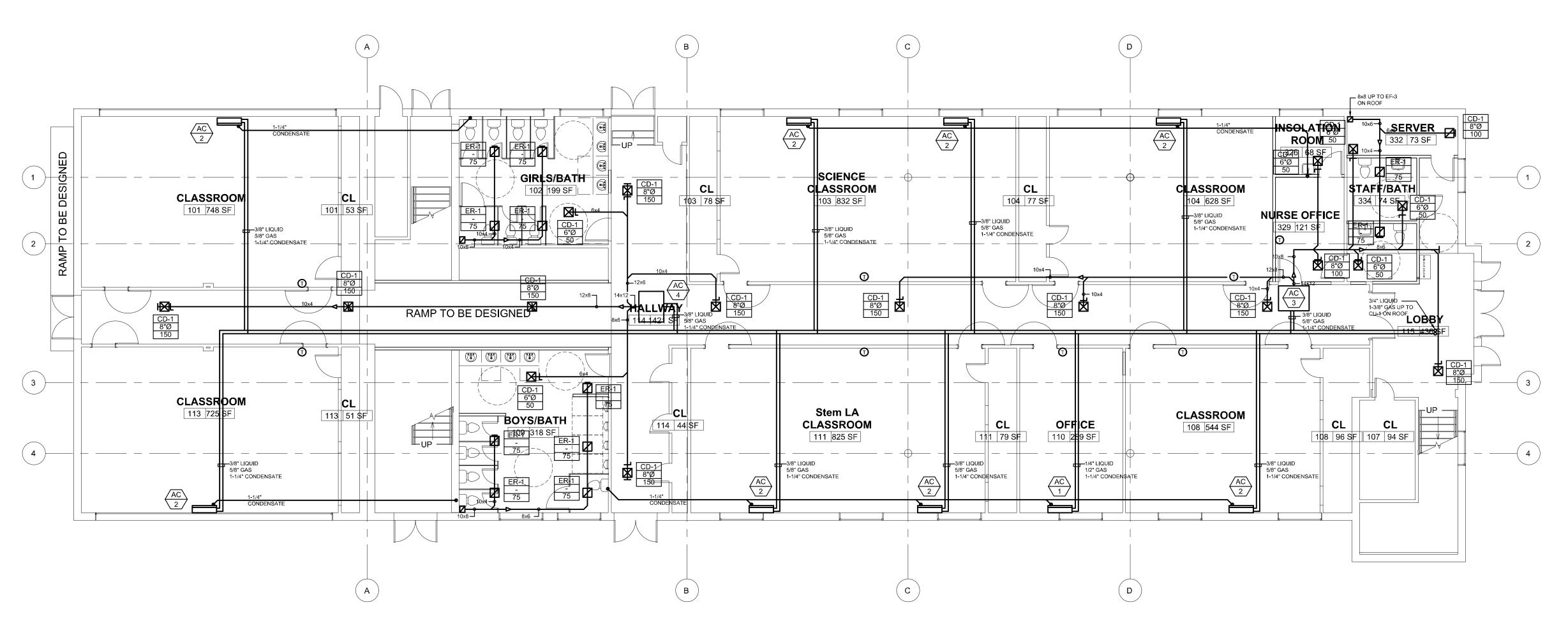
PLATO A. MARINAKOS JR ARCHITECT, LLC

FOR "APPROVAL" BY OUR CLIENT AND CUSTOMER

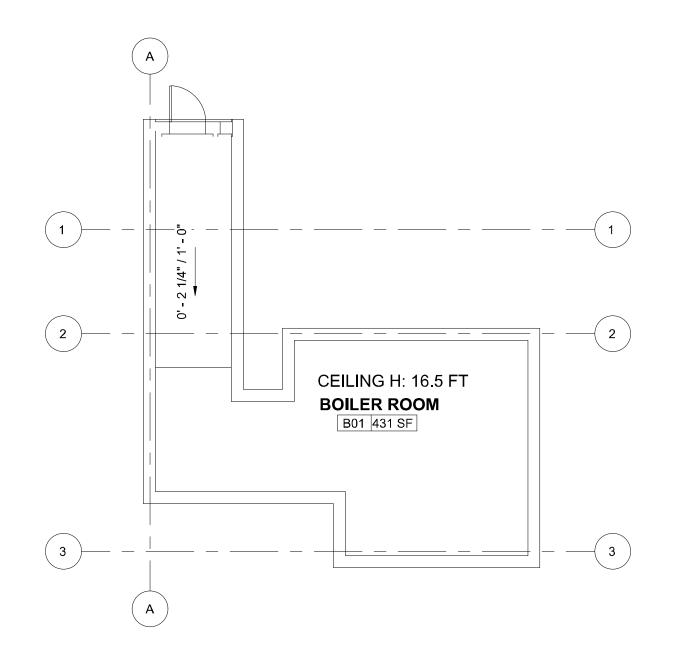
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Project number 05/01/2021 Drawn by Author Checked by Checker 1/8" = 1'-0" Scale



1 FIRST FLOOR PLAN
M100 SCALE: 1/8" = 1'-0"



\bigcirc 2	BOILER ROOM PLAN
M100	SCALE: 1/8" = 1'-0"

	INDOOR UNIT									
No	No CFM MANUFACTURE		MODEL	VOLTAGE	COOLING	HEATING	COMMENTS			
INO	CFIVI	MANUFACTURE	MODEL	VOLTAGE	CAPACITY	CAPACITY	COMMENTS			
AC-1	400	YORK	YICS015B21S	208/1/60	15,000	17,000				
AC-2	800	YORK	YICS024B21S	208/1/60	24,000	27,000				
AC-3	800	YORK	YIDS018B21S	208/1/60	18,000	20,000				
AC-4	1,200	YORK	YIDM048B22S	208/1/60	48,000	54,000				

	CONDENSER UNIT SCHEDULE								
No	No CFM MANUFACTURE MODEL		MODEL	ELECTRICAL		COOLING	HEATING	COMMENTS	
No	CFIVI	I WANOFACTORE WODEL		MOP	MCA	VOLTAGE	CAPACITY	CAPACITY	COMMENTS
CU-1	18,074	YORK	YVAHP288B32S	70+70	58+58	208-230V/60/3	288,000	324,000	NUMBER OF INDOOR UNITS CONNECTION 20/59
CU-2	15,744	YORK	YVAHR216B32S	70+40	58+29	208-230V/60/3	216,000	243,000	NUMBER OF INDOOR UNITS CONNECTION 18/46
CU-3	18,074	YORK	YVAHR240B32S	60+60	46+46	208-230V/60/3	240,000	270,000	NUMBER OF INDOOR UNITS CONNECTION 18/52

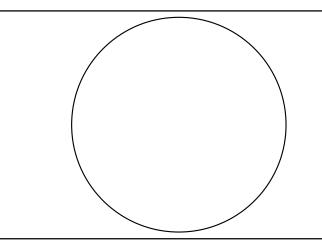
FAN SCHEDULE								
FAN	CFM	S.P. "WC	FAN RPM	HP	V-PH-HZ	MFG/MODEL	REMARKS	
EF-1	400	.625	1540	1/6	120-1-60	COOK/100 ACRUB	TIME CLOCK, SPEED CONTROL, ROOF CAP WITH BIRD SCREEN	
EF-2	400	.625	1540	1/6	120-1-60	COOK/100 ACRUB	TIME CLOCK, SPEED CONTROL, ROOF CAP WITH BIRD SCREEN	
EF-3	850	1	1549	1/3	120-1-60	COOK/120 ACRUB	TIME CLOCK, SPEED CONTROL, ROOF CAP WITH BIRD SCREEN	

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ISSUED BY:
PLATO A. MARINAKOS JR ARCHITECT, LLC
FOR " APPROVAL" BY OUR CLIENT AND CUSTOMER

CLIENT IS REQUIRED TO
CHECK (X) ONE BOX
ONLY

RED TO APPROVED AS IS
BOX APPROVED AS NOTED

DATE

NAME (PLEASE PRINT)

CLIENT SIGNATURE

KINDLY RETURN ALL DRAWINGS FOR THE COMPLETE BUILDING, SIGNED AND DATED TO OUR OFFICE

716 EMERSON AVE -SCHOOL

MECHANICAL FLOOR PLANS

Project number

Date

Drawn by

Checked by

Scale

M100

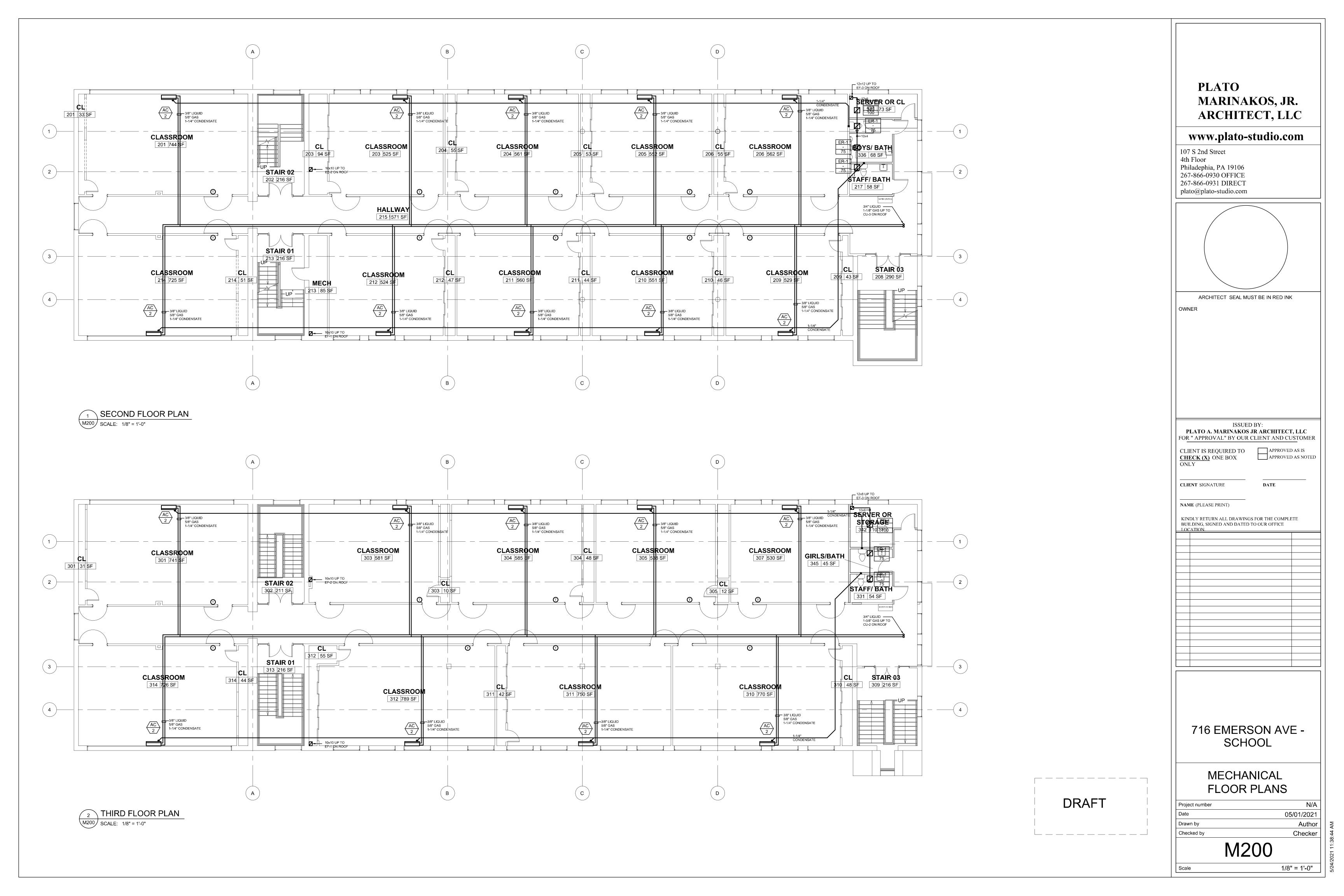
1/8" = 1'-0"

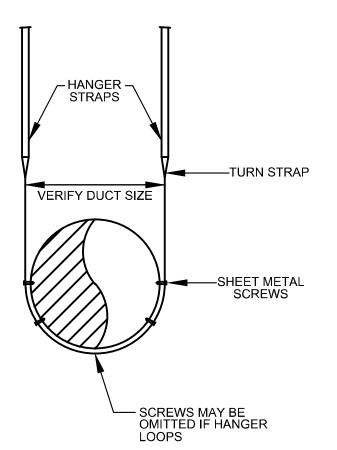
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05/01/2021

Author

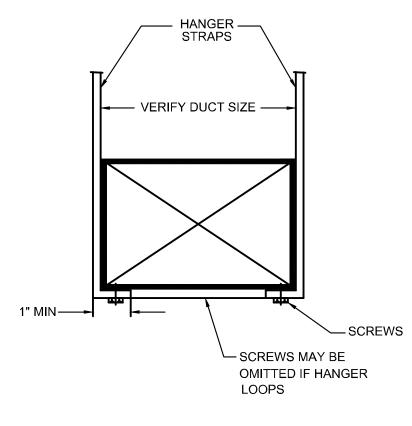
Checker





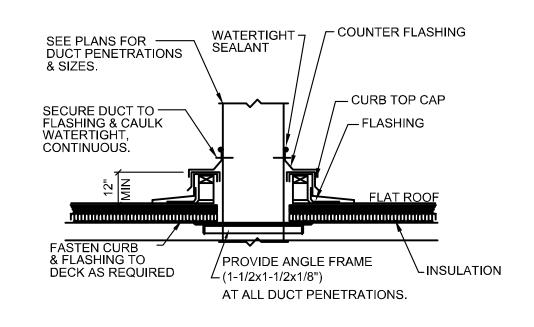
1 ROUND DUCT SUPPORT DETAIL M300 SCALE: NTS

NOTES: 1. REFER TO SMACNA HVAC DUCT CONSTRUCTION STANDARD



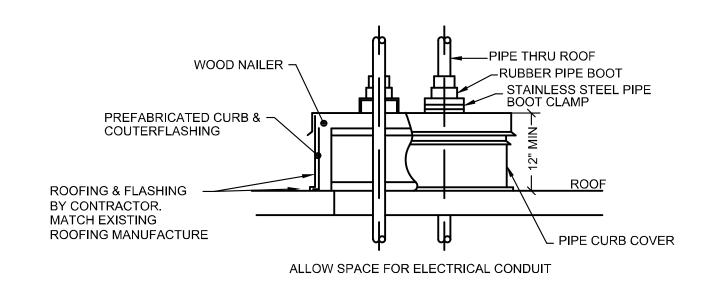
2 DUCT SUPPORT DETAIL M300 SCALE: NTS

NOTES: 1. REFER TO SMACNA HVAC DUCT CONSTRUCTION STANDARD TABLE - RECTANGULAR DUCT HANGERS MIN. SIZE SCHEDULE.

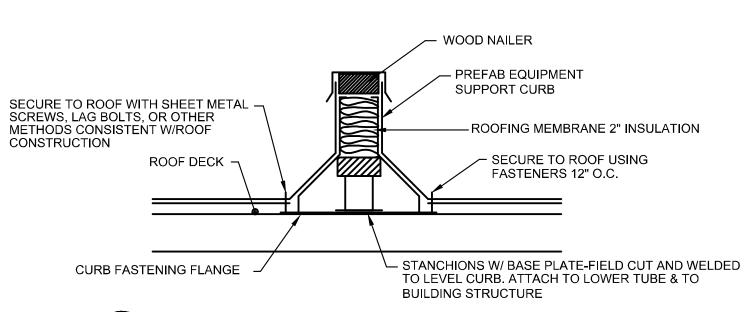




SHIM CURB LEVEL AS NEEDED.



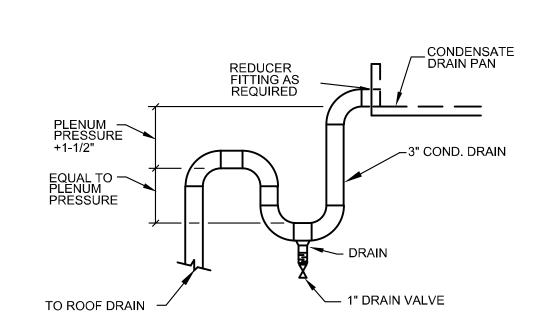




5 EQUIPENT/PIPE CURB SUPPORT DETAIL M300 SCALE: NTS

1- CURB MUST HANDLE WIND AND SEISMIC LOADS.

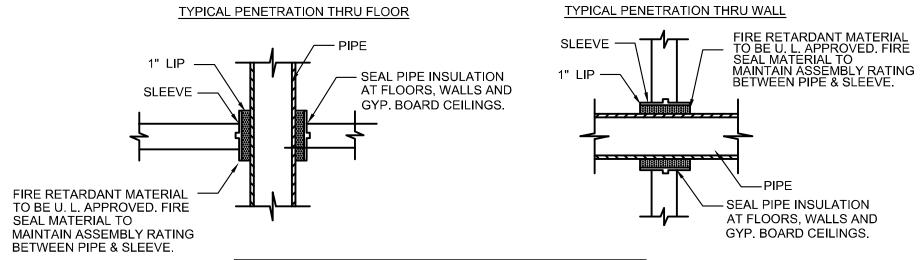
2- REFER TO UNIT MANUFACTURERS ROOF CURB INSTALLATION FOR EXACT EQUIPMENT INSTALLATION..



6 CONDENSATE DRAIN PIPING DETAIL
M300 SCALE: NTS

CONDESATE TRA	P SIZE SCHEDULE
UNIT NOMINAL TONS	MINIMUN TRAP
(MAXIMUN)	DIAMETER
2	3/4"
5	1"
25	1-1/4"
NOTE:SIZES ARE FOR EAC	CH TRAP CONNECTION. EXAMP
65 TONS, REQUIRES TWO	2" TRAPS AS NOTED ON DRAW

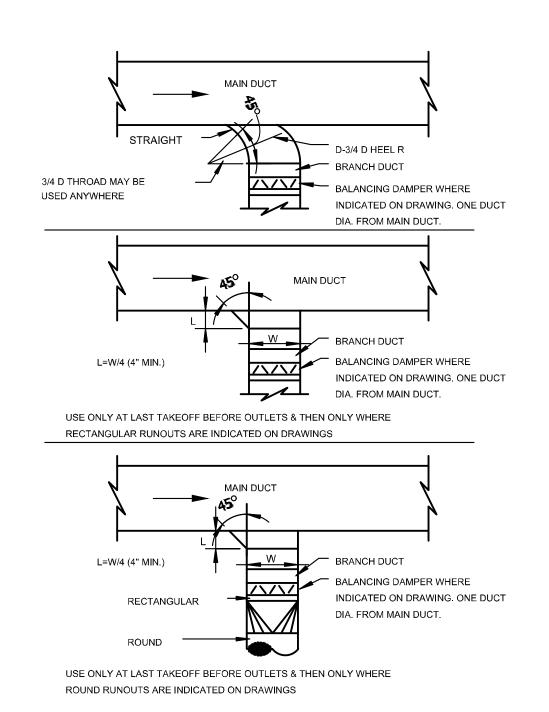
RETURN TAP



U.L. NUMBER REQ'D						
MATERIAL	GYPSUM WALL	CMU WALL	FLOOR			
STEEL PIPE STEEL PIPE	428	594	272			
W/INSULATION COPPER	444	444	443			
PIPE COPPER PIPE	442	442	429			
W/INSULATION	445	335	335			

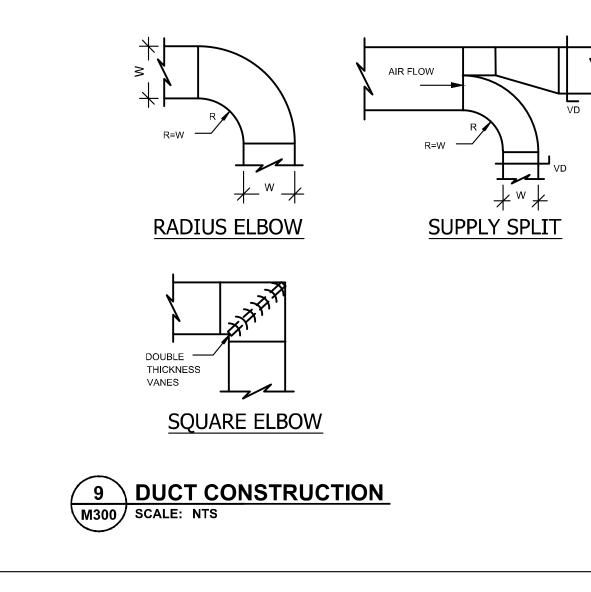
7 PIPE SLEEVE DETAIL M300 SCALE: NTS

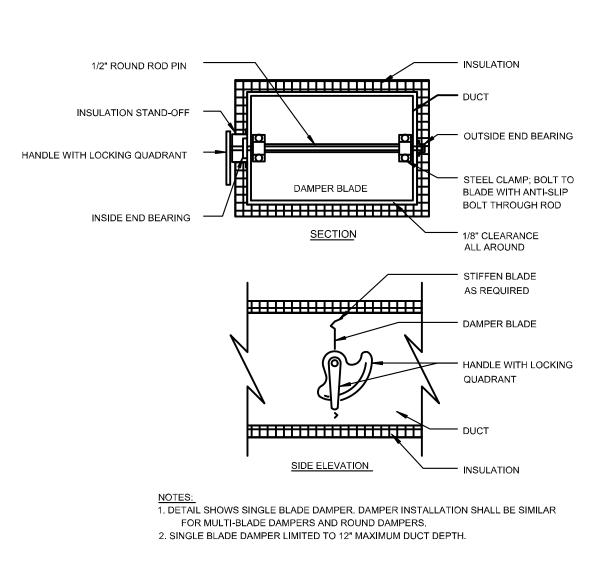
REFER TO ARCHITECTURAL PLANS FOR WALL RATINGS.



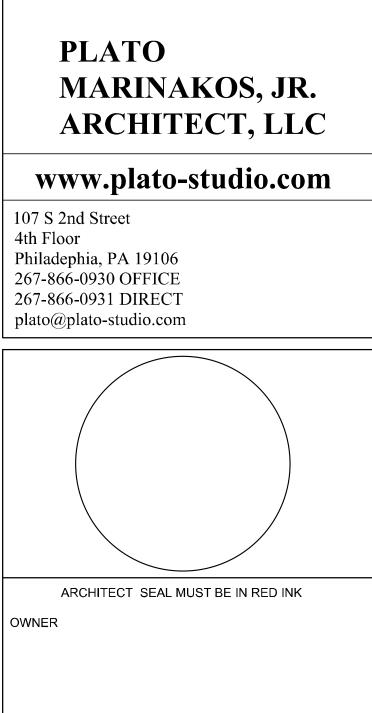
8 SUPPLY BRANCH TAKEOFF

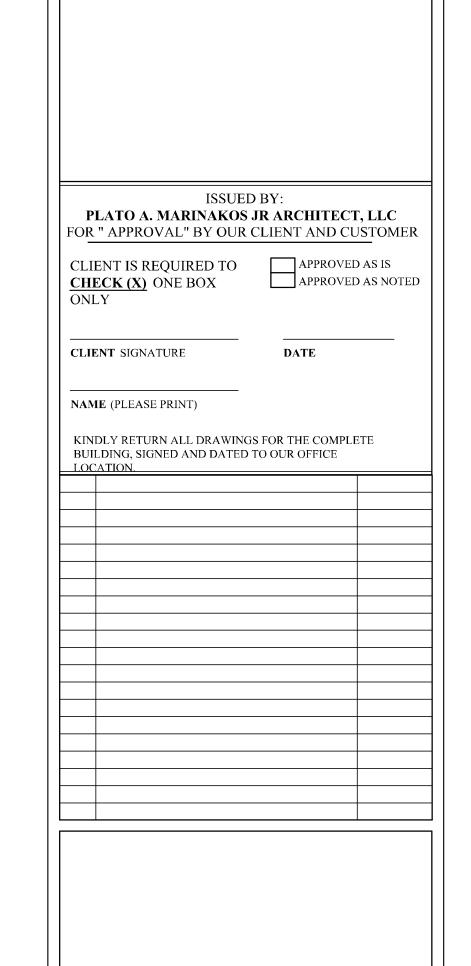
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MECHANICAL **DETAILS**

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ハイスし	\cap
Checked by	Checker
Drawn by	Author
Date	05/01/2021
Project number	N/A

MISUU

Scale

1/8" = 1'-0"