

BRIDGEPORT MENTAL HEALTH CENTER

CONTACT INFORMATION:
SOUTHERN CT GAS COMPANY
BRIAN EARLY
(203) 499-3188

SOUTHERN CONN. GAS CO. (SCG) WILL BE RESPONSIBLE FOR ALL ASPECTS OF NEW GAS SERVICE FROM STREET THROUGH OUTLET OF METER. COORDINATE WITH SCG FOR FINAL METER LOCATION. REGULATE DOWNSTREAM PRESSURE TO 2 PSI.

PROVIDE CONCRETE PAD AND BOLLARDS
SEE DETAILS 5 & 6/ME507

ROUTE 2" GAS PIPING AROUND VENT AT PARAPET PENETRATION ELEVATION. CORE THROUGH PARAPET IN FIRST FLOOR PATIO ENCLOSURE 35" BELOW TOP OF WALL (14" ABOVE PATIO DECK)

EXISTING UST VENT

SUPPORT NEW GAS LINE ON EXISTING PIPE RACK

TOP OF EXISTING PARAPET WALL

FOR CONTINUATION SEE DRAWING 1/ME401

2" GAS

EXTENTS OF EXISTING CANOPY

EXISTING HP'S AND REF. PIPING TO REMAIN

EXISTING WIRE FENCE TO REMAIN

HP-14 HP-13 HP-12 HP-11 HP-10 HP-9 HP-8 HP-7 HP-6 HP-5 HP-4

SIDEWALK

CURB

EXISTING WATER MAIN

EXISTING 8" GAS MAIN

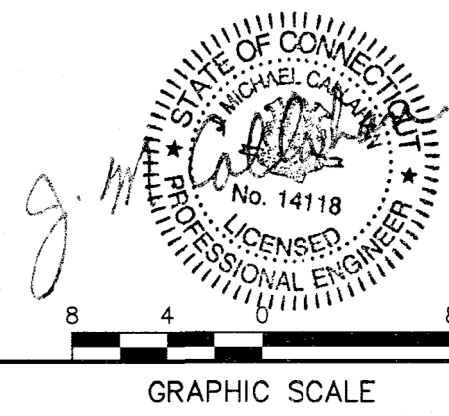
EXISTING 16" COMBINED

MEAD STREET

MH

NOTES:
1. INSTALL SENSORS ON NORTH WALL OF BUILDING, 10' ABOVE CONCRETE WALK AT GROUND FLOOR ELEVATION AND UNDER CONCRETE CANOPY SO THEY WILL ALWAYS BE SHADED FROM DIRECT SUNLIGHT.

1 PARTIAL SITE PLAN
SCALE: 1/8" = 1'-0"

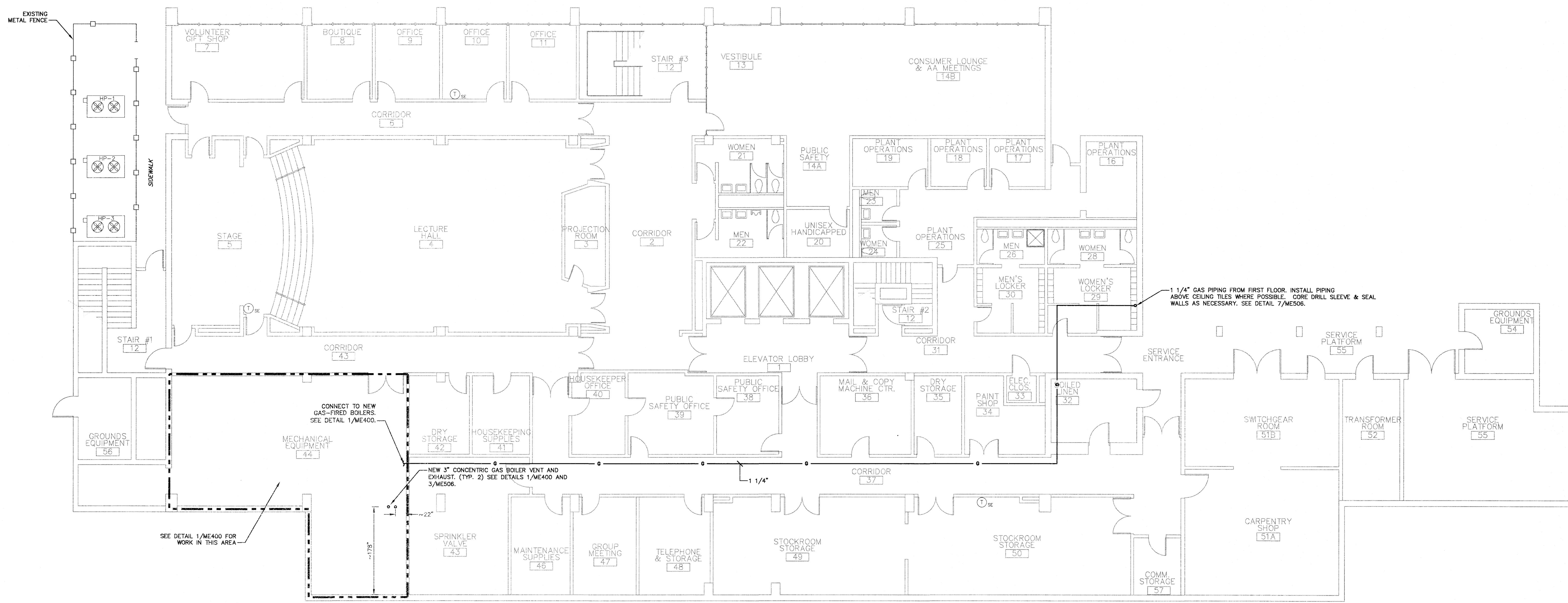


GRAPHIC SCALE

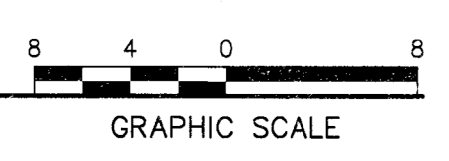
drawing title PARTIAL SITE PLAN		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS	drawing prepared by FUSS & O'NEILL 145 HARTFORD ROAD MANCHESTER, CONNECTICUT	date 02/08/19
	mark	date	description
	0	2/8/19	TRACINGS AND MASTERS
project BRIDGEPORT MENTAL HEALTH CENTER ENERGY IMPROVEMENT DESIGN BRIDGEPORT, CT		approved by EYL	scale 1/8" = 1'-0"
CAD no. 20050024.D50.dwg	project no. BI-MH-111	drawing no. CU101	

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LINETYPE LEGEND	
	EXISTING TO REMAIN
	DEMOLITION
	NEW WORK



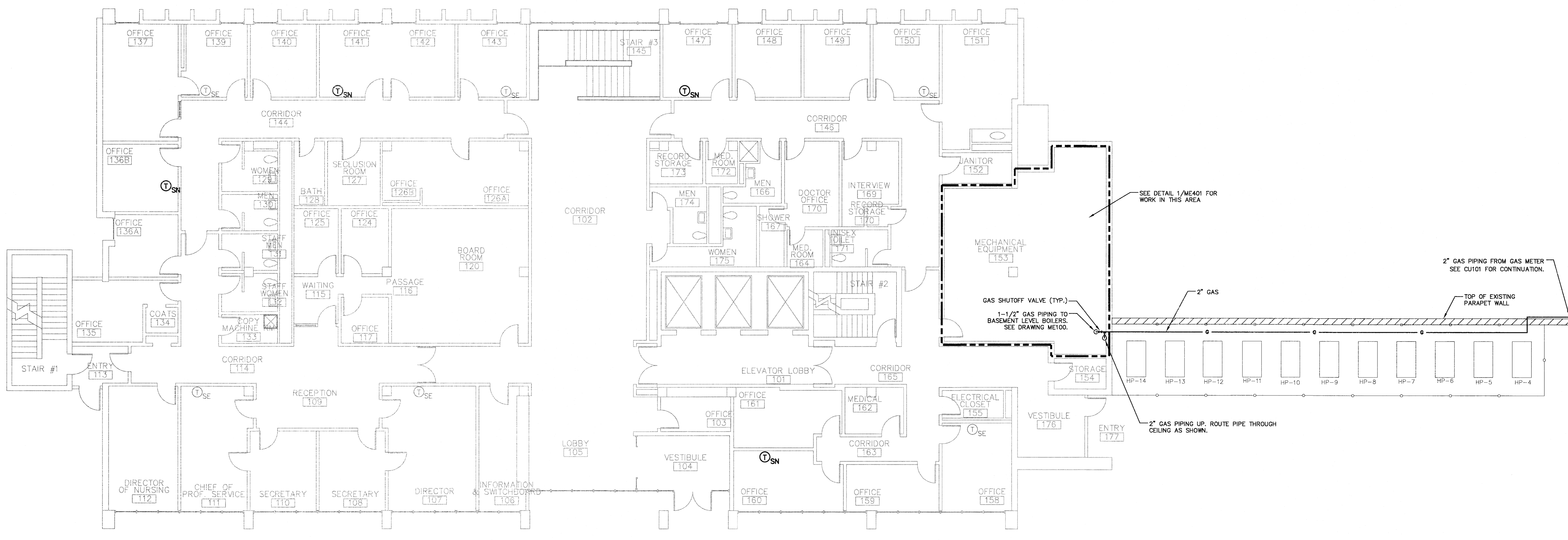
1 MECHANICAL & ELECTRICAL PLAN GROUND FLOOR
 SCALE: 1/8" = 1'-0"



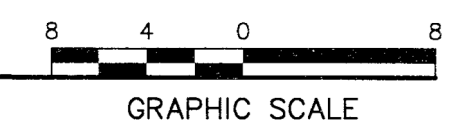
drawing title MECHANICAL & ELECTRICAL PLAN GROUND FLOOR		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS	drawing prepared by FUSS & O'NEILL 148 HARTFORD ROAD MANCHESTER, CONNECTICUT	date 02/08/19
	mark	description	scale 1/8" = 1'-0"
	0	2/8/19	TRACINGS AND MASTERS
project BRIDGEPORT MENTAL HEALTH CENTER		approved by EYL	drawing no. ME100
project ENERGY IMPROVEMENT DESIGN		BRIDGEPORT, CT	project no. BI-MH-111
CAD no. 20050024.D50.dwg			

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TEMPERATURE CONTROL NOTES:
 T.1: T_{SE} = EXISTING SPACE TEMPERATURE SENSOR
 T.2: T_{SN} = NEW WIRELESS SPACE TEMPERATURE SENSOR
 T.3: CONTRACTOR TO VERIFY NUMBER AND LOCATIONS OF ALL EXISTING DDC POINTS. ALL EXISTING POINTS ARE TO BE TRANSFERRED TO THE UPGRADED DDC SYSTEM.

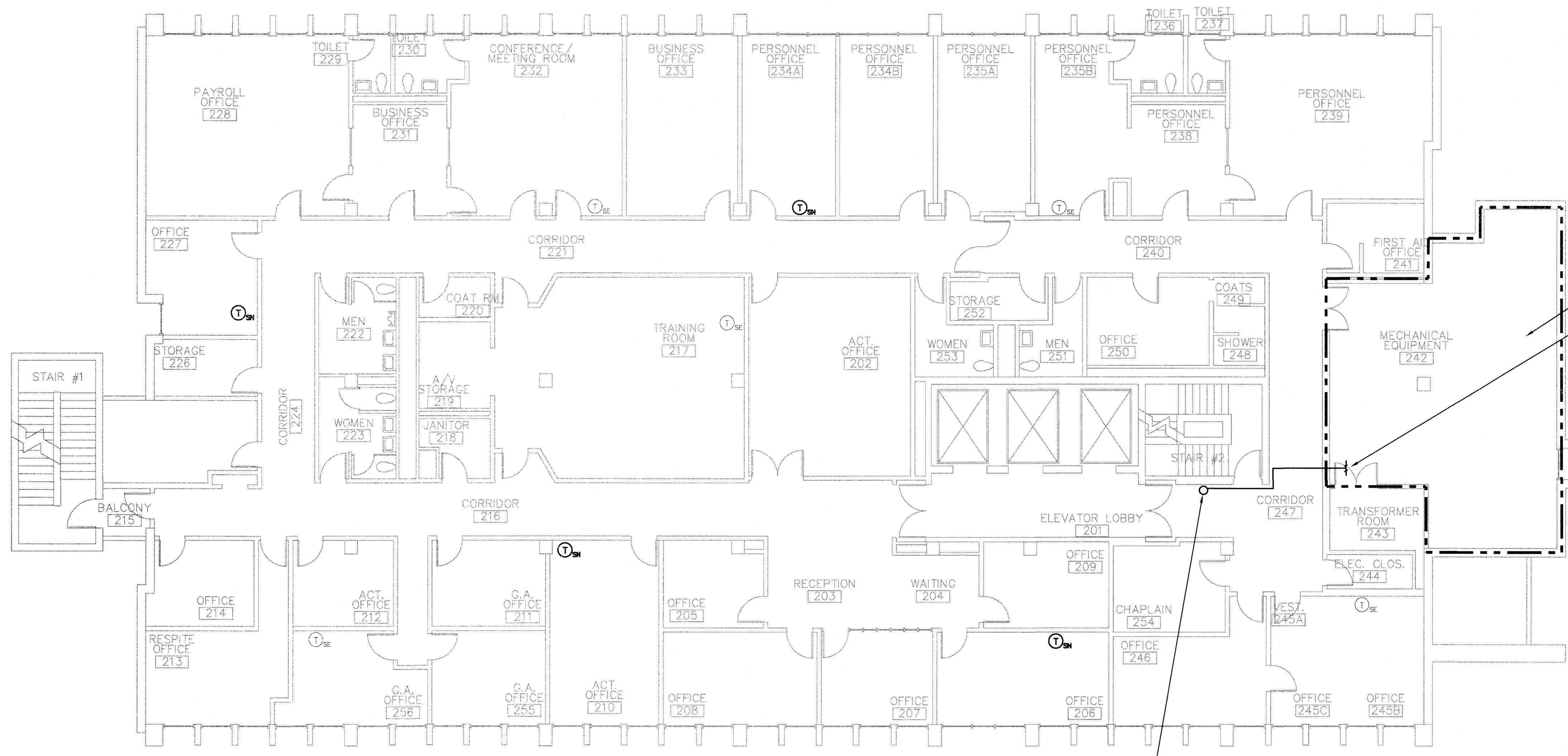


1 MECHANICAL & ELECTRICAL NEW CONSTRUCTION PLAN FIRST FLOOR
 SCALE: 1/8" = 1'-0"



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drawing title MECHANICAL & ELECTRICAL PLAN FIRST FLOOR		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS		drawing prepared by FUSS & O'NEILL 146 HARTFORD ROAD MANCHESTER, CONNECTICUT
	mark	date	description
	0	2/8/19	TRACINGS AND MASTERS
project BRIDGEPORT MENTAL HEALTH CENTER ENERGY IMPROVEMENT DESIGN		date 02/08/19	scale 1/8" = 1'-0"
BRIDGEPORT, CT		drawn by JLT	approved by EYL
CAD no. 20050024.D50.dwg	project no. BI-MH-111	drawing no. ME101	

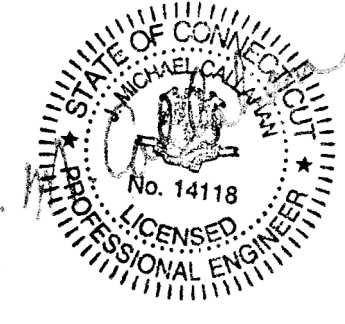
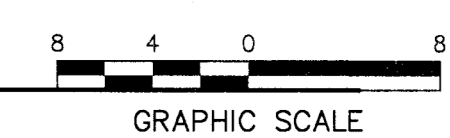


TEMPERATURE CONTROL NOTES:
 T.1: T_{SE} = EXISTING SPACE TEMPERATURE SENSOR
 T.2: T_{SN} = NEW WIRELESS SPACE TEMPERATURE SENSOR
 T.3: CONTRACTOR TO VERIFY NUMBER AND LOCATIONS OF ALL EXISTING DDC POINTS.

SEE DETAIL 1/ME402 FOR WORK IN THIS AREA
 SEE ME402 FOR CONTINUATION

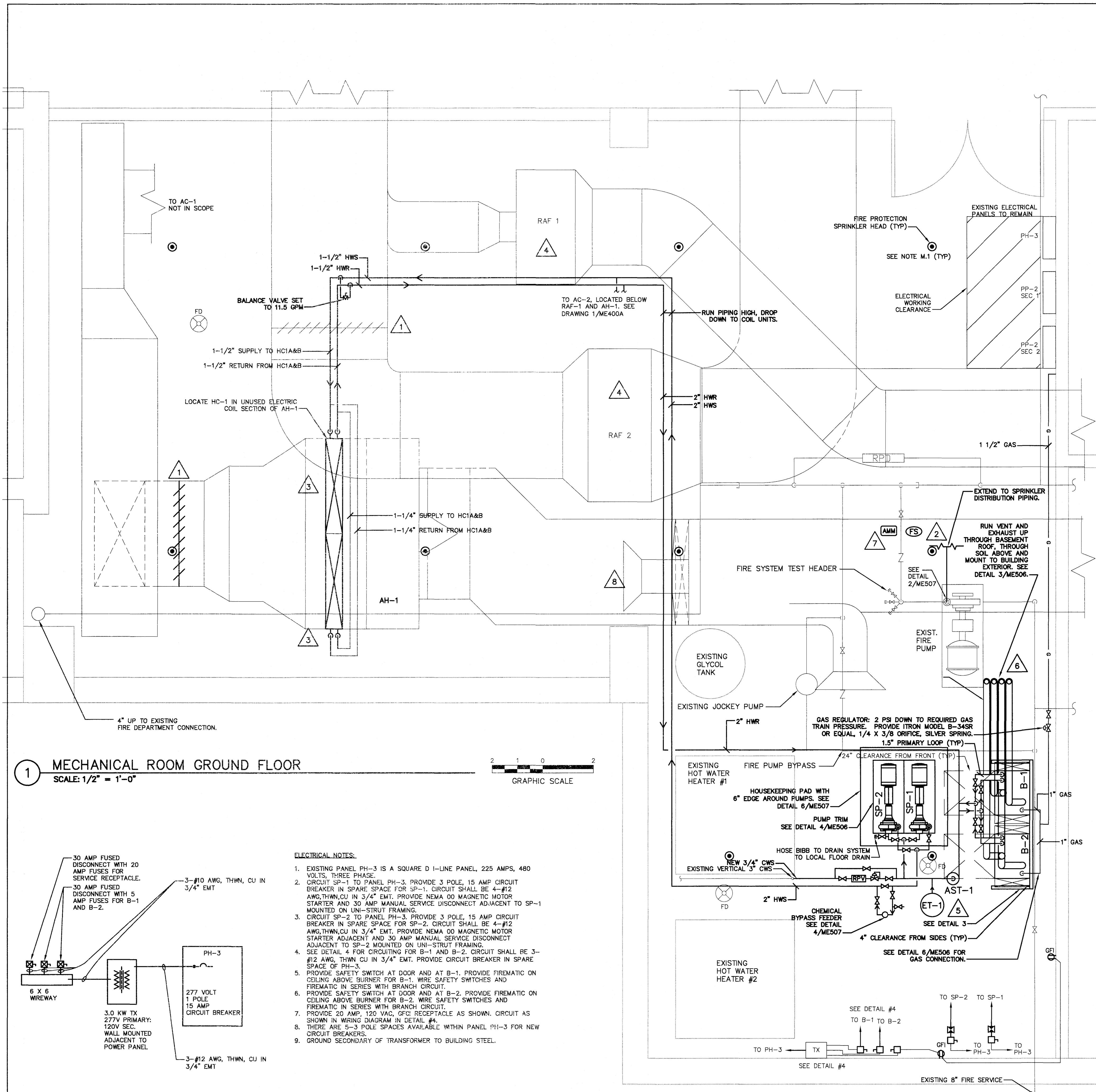
CONNECT NEW SPRINKLER PIPING TO EXISTING FIRE-PROTECTION PIPING. PIPE SIZE BY FIRE PROTECTION CONTRACTOR. SEE SPECIFICATION SECTION 211313 AND DETAIL 2/ME507.

1 MECHANICAL & ELECTRICAL PLAN SECOND FLOOR
 SCALE: 1/8" = 1'-0"

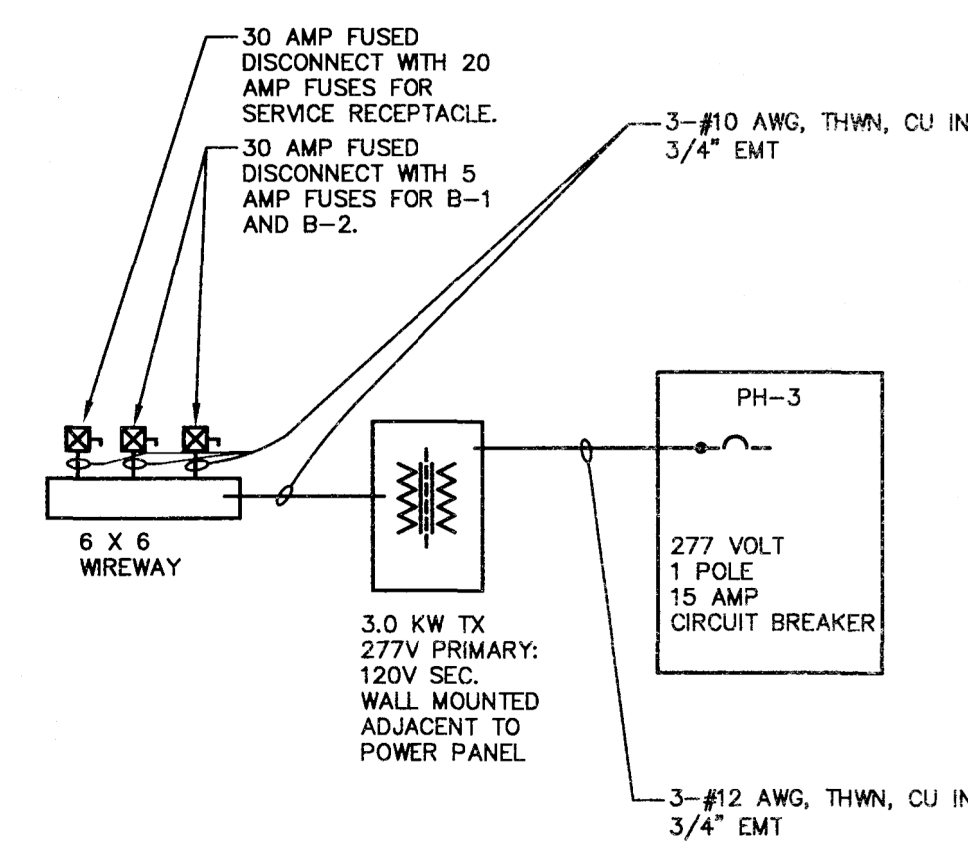
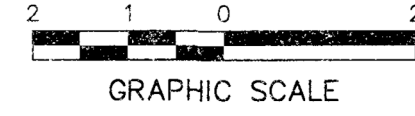


drawing title MECHANICAL & ELECTRICAL PLAN SECOND FLOOR		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS	drawing prepared by FUSS & O'NEILL 146 HARTFORD ROAD MANCHESTER, CONNECTICUT	date 02/08/19
	mark	description	scale 1/8" = 1'-0"
	0	2/8/19 TRACINGS AND MASTERS	drawn by JLT
project BRIDGEPORT MENTAL HEALTH CENTER		approved by EYL	drawing no. ME102
project ENERGY IMPROVEMENT DESIGN		BRIDGEPORT, CT	
CAD no. 20050024.D50.dwg	project no. BI-MH-111		

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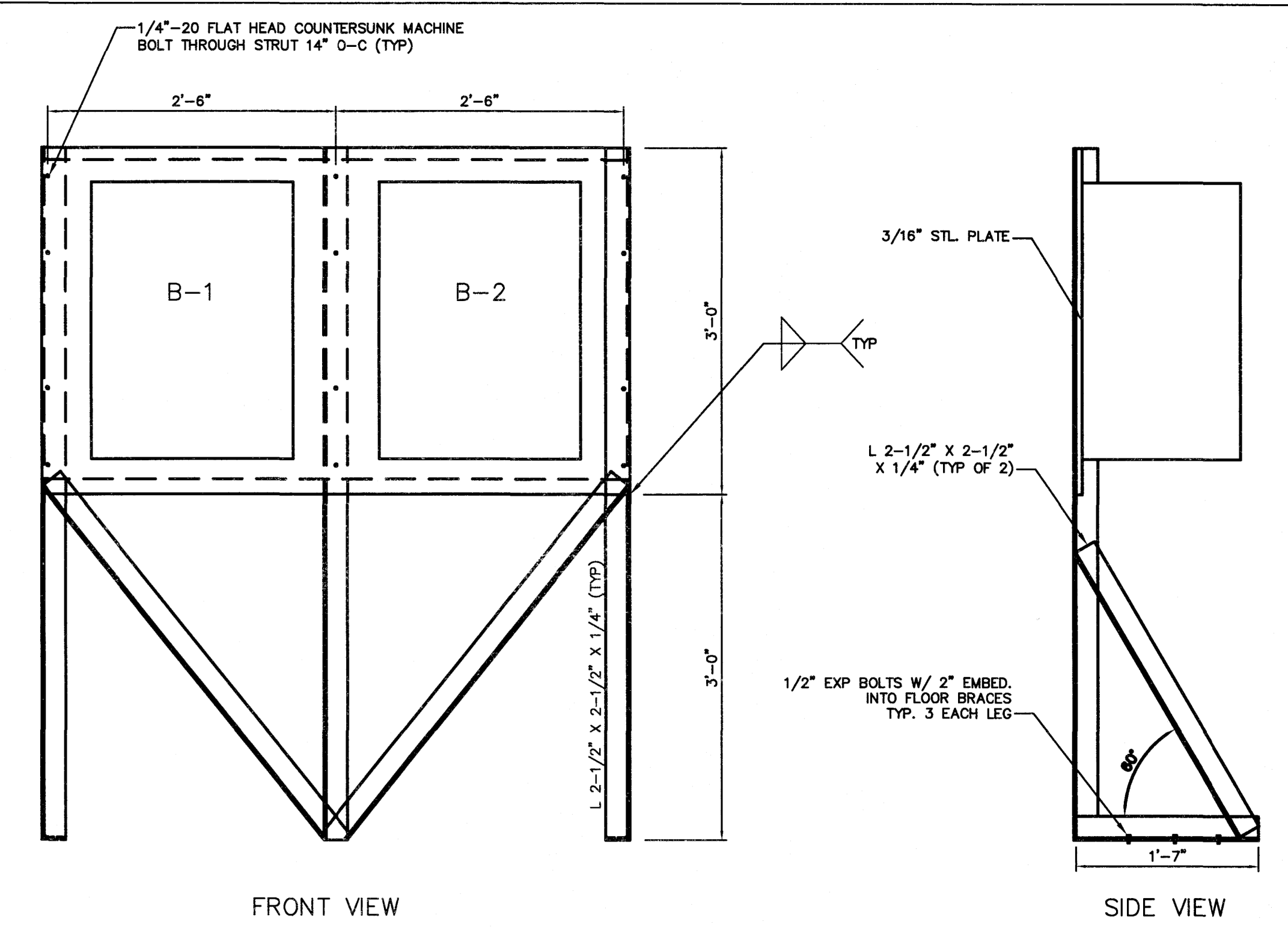


1 MECHANICAL ROOM GROUND FLOOR
SCALE: 1/2" = 1'-0"

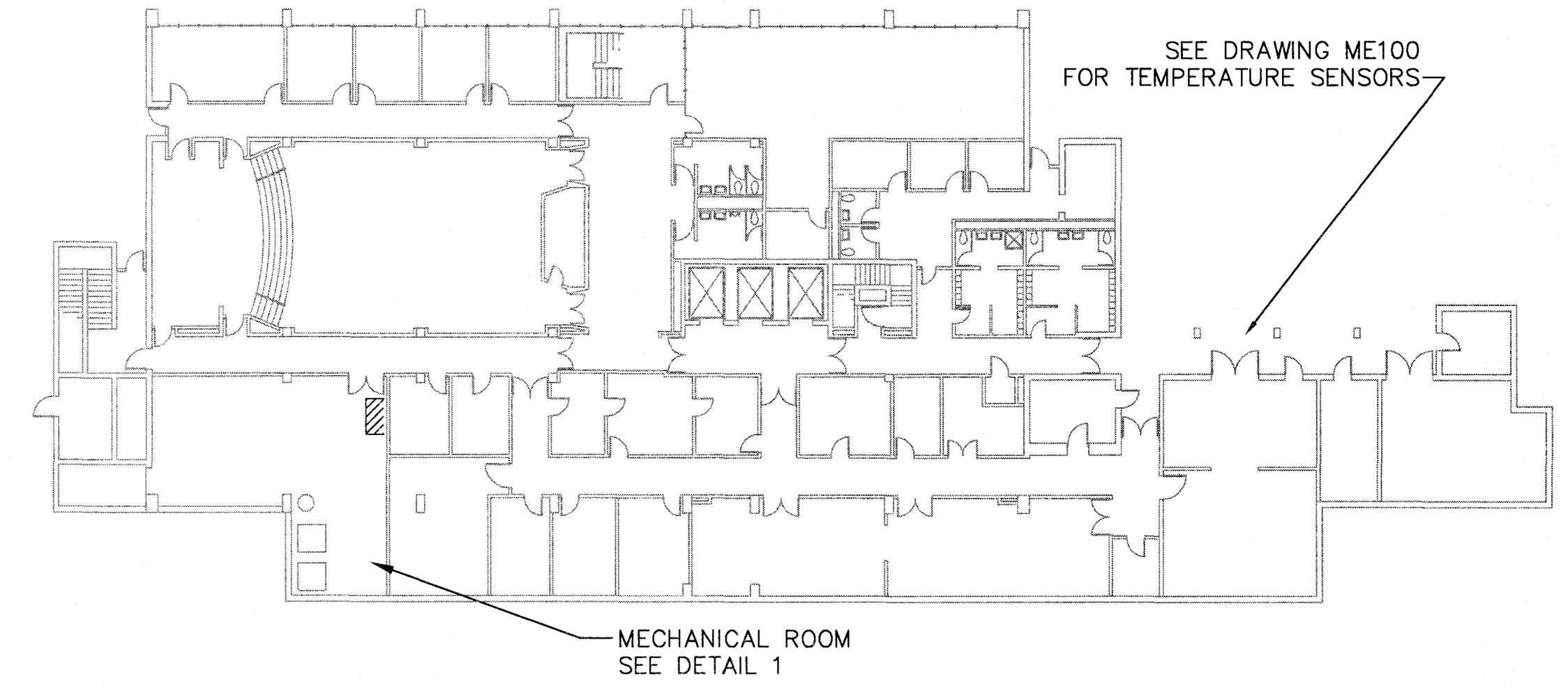


- ELECTRICAL NOTES:**
- EXISTING PANEL PH-3 IS A SQUARE D I-LINE PANEL, 225 AMPS, 480 VOLTS, THREE PHASE.
 - CIRCUIT SP-1 TO PANEL PH-3. PROVIDE 3 POLE, 15 AMP CIRCUIT BREAKER IN SPARE SPACE FOR SP-1. CIRCUIT SHALL BE 4-#12 AWG THWN CU IN 3/4" EMT. PROVIDE NEMA 00 MAGNETIC MOTOR STARTER AND 30 AMP MANUAL SERVICE DISCONNECT ADJACENT TO SP-1 MOUNTED ON UNI-STRUT FRAMING.
 - CIRCUIT SP-2 TO PANEL PH-3. PROVIDE 3 POLE, 15 AMP CIRCUIT BREAKER IN SPARE SPACE FOR SP-2. CIRCUIT SHALL BE 4-#12 AWG THWN CU IN 3/4" EMT. PROVIDE NEMA 00 MAGNETIC MOTOR STARTER ADJACENT AND 30 AMP MANUAL SERVICE DISCONNECT ADJACENT TO SP-2 MOUNTED ON UNI-STRUT FRAMING.
 - SEE DETAIL 4 FOR CIRCUITING FOR B-1 AND B-2. CIRCUIT SHALL BE 3-#12 AWG THWN CU IN 3/4" EMT. PROVIDE CIRCUIT BREAKER IN SPARE SPACE OF PH-3.
 - PROVIDE SAFETY SWITCH AT DOOR AND AT B-1. PROVIDE FIREMATIC ON CEILING ABOVE BURNER FOR B-1. WIRE SAFETY SWITCHES AND FIREMATIC IN SERIES WITH BRANCH CIRCUIT.
 - PROVIDE SAFETY SWITCH AT DOOR AND AT B-2. PROVIDE FIREMATIC ON CEILING ABOVE BURNER FOR B-2. WIRE SAFETY SWITCHES AND FIREMATIC IN SERIES WITH BRANCH CIRCUIT.
 - PROVIDE 20 AMP, 120 VAC, GFCI RECEPTACLE AS SHOWN. CIRCUIT AS SHOWN IN WIRING DIAGRAM IN DETAIL #4.
 - THERE ARE 5-3 POLE SPACES AVAILABLE WITHIN PANEL PH-3 FOR NEW CIRCUIT BREAKERS.
 - GROUND SECONDARY OF TRANSFORMER TO BUILDING STEEL.

4 ELECTRICAL DETAIL
SCALE: N.T.S.



3 BOILER MOUNTING BACKBOARD DETAIL
SCALE: 1" = 1'-0"

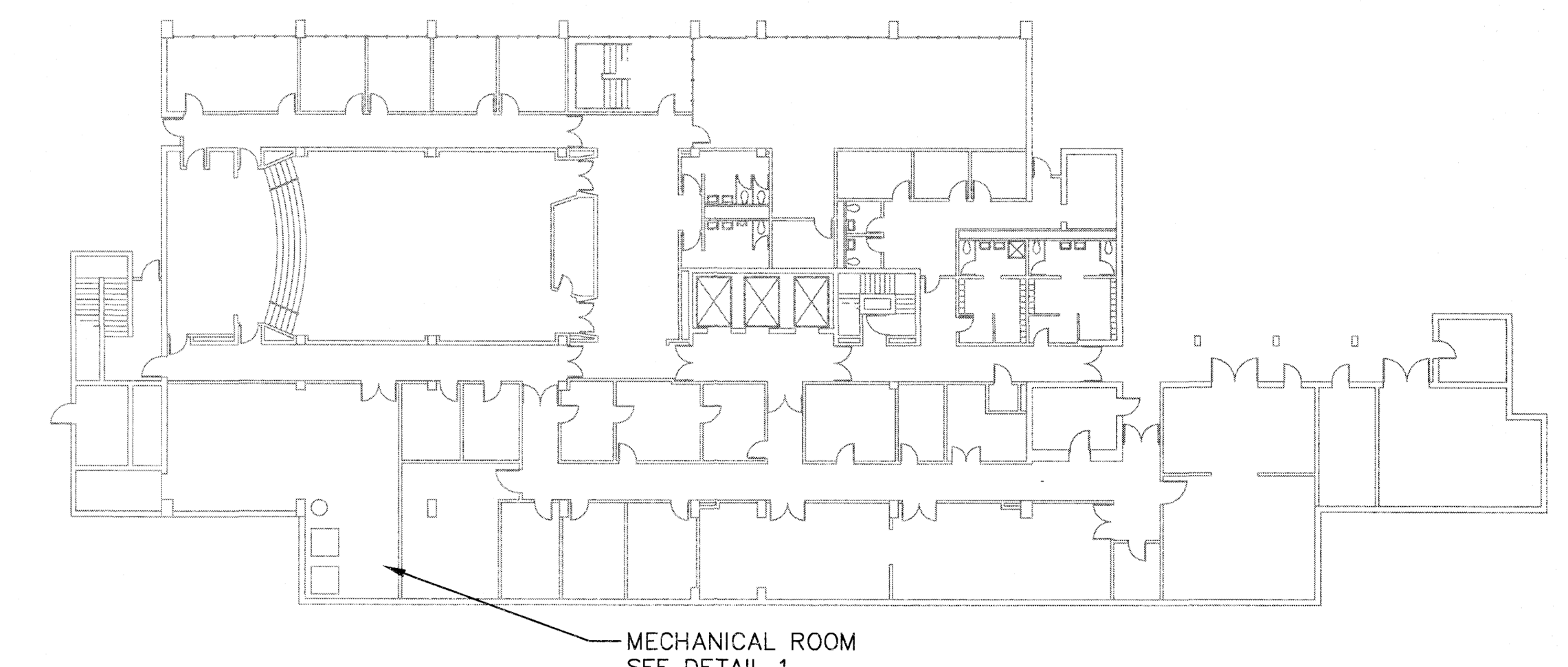
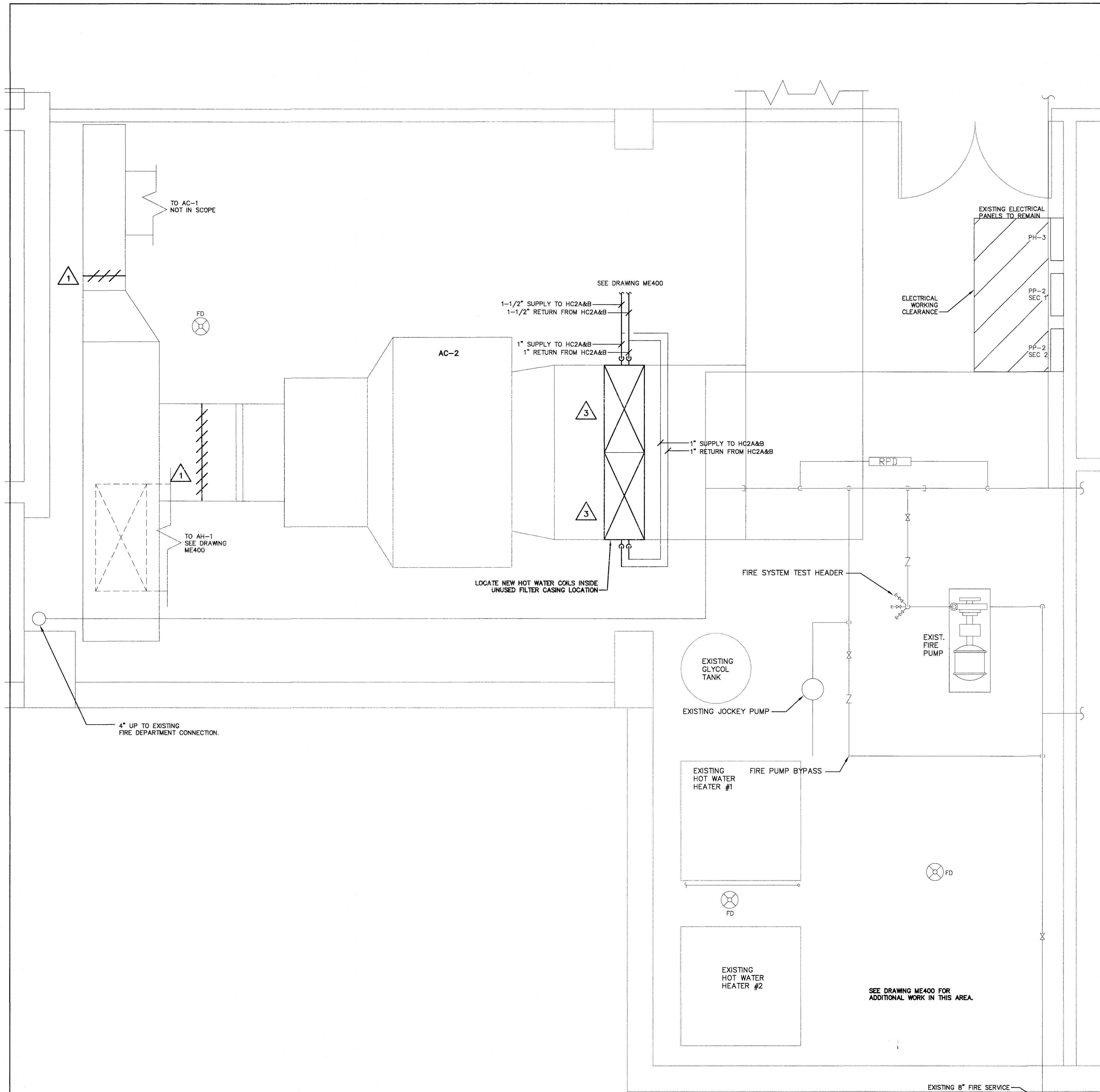


2 GROUND FLOOR KEY PLAN
SCALE: N.T.S.

- KEY NOTES:**
- PROVIDE NEW DAMPERS AND ACTUATORS. REUSE EXISTING POWER & CONTROLS.
 - PROVIDE WET SPRINKLER PROTECTION FOR MECHANICAL ROOM. DESIGN FOR ORDINARY HAZARD GROUP 1. PROVIDE ADDITIONAL SPRINKLERS AS REQUIRED BY BLOCKAGE OF DUCTWORK AND AIR-MOVING EQUIPMENT. CONNECT TO SPRINKLER RISER AS SHOWN. PROVIDE FLOW SWITCH AND TIE INTO FIRE ALARM SYSTEM. SPRINKLER TEST DATED APRIL 19, 2012 SHOWED RESIDUAL PRESSURE OF 76 PSI @ 629 GPM.
 - PROVIDE NEW HOT WATER COILS TO BE INSTALLED IN EXISTING AHU SECTION AS SHOWN. SEE COIL SCHEDULE ON DRAWING ME01. ADAPT AIR HANDLING UNIT CASING AND DUCTWORK TO NEW COIL CASINGS.
 - SEE MECHANICAL SCHEDULE ON DRAWING ME01 FOR MOTOR REPLACEMENT SCHEDULE.
 - EXPANSION TANK, PUMPS AND AIR SEPARATOR TANK SHALL HAVE DRAINS WITH HOSE BIBBS ATTACHED FOR TANK DRAINAGE TO LOCAL FLOOR DRAIN.
 - CONTRACTOR IS RESPONSIBLE FOR AVOIDING ANY EMBEDDED ELECTRICAL WIRING WITHIN CONCRETE FLOOR SLAB.
 - EXISTING FIRE ALARM CONTROL PANEL IS A NFS2-3030 AS MANUFACTURED BY HONEYWELL NOTIFIER. EXTEND EXISTING ANNUNCIATION CIRCUIT TO NEW DEVICES. FIRE ALARM WIRING SHALL BE IN EMT CONDUIT. NEW DEVICES SHALL BE LISTED FOR EXISTING FAC.
 - REMOVE ELECTRIC HEATING COIL AND BRANCH CIRCUIT BACK TO POWER PANEL.
- MECHANICAL NOTES:**
- SPRINKLERS ARE QUICK RESPONSE UPRIGHT ABOVE AND BELOW DUCT AS APPLICABLE.
 - RPV = REDUCED PRESSURE BACKFLOW PREVENTER
 - VENT AND COMBUSTION AIR SHOWN IN SCHEMATICALLY. MAINTAIN ALL WORKING CLEARANCES TO EQUIPMENT AND ELECTRICAL PANELS
- SPRINKLER HEAD LOCATION

drawing title MECHANICAL ROOM GROUND FLOOR		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS	drawing prepared by FUSS & O'NEILL 148 HARTFORD ROAD MANCHESTER, CONNECTICUT	date 02/08/19
	mark date description	project BRIDGEPORT MENTAL HEALTH CENTER ENERGY IMPROVEMENT DESIGN	scale AS NOTED
	0 2/8/19 TRACINGS AND MASTERS	BRIDGEPORT, CT	drawn by JLT
		CAD no. 20050024.D50 dwg	approved by EYL
		project no. BI-MH-111	drawing no. ME400

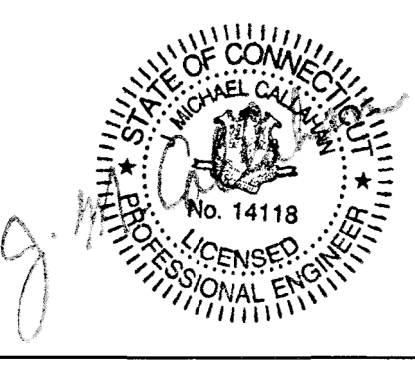
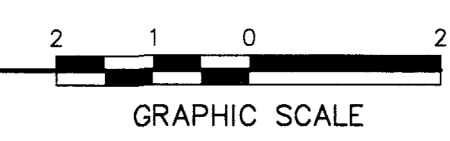
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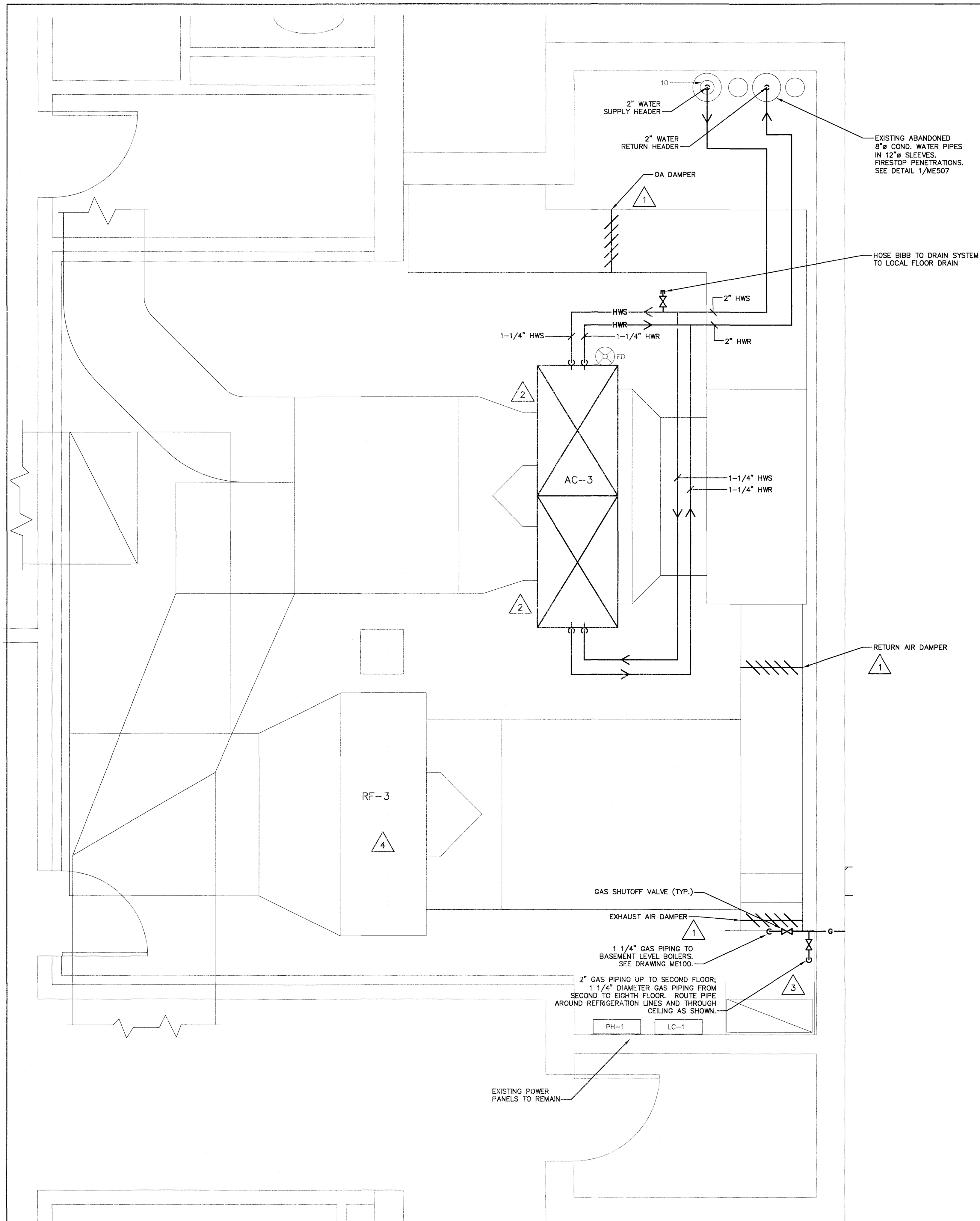
2 GROUND FLOOR KEY PLAN
SCALE: N.T.S.

- KEY NOTES:**
- 1 PROVIDE NEW DAMPERS AND ACTUATORS. REUSE EXISTING POWER & CONTROLS.
 - 2 NOT USED
 - 3 PROVIDE NEW HOT WATER COILS TO BE INSTALLED IN EXISTING AHU SECTION AS SHOWN. SEE COIL SCHEDULE ON DRAWING ME301. ADAPT AIR HANDLING UNIT CASING AND DUCTWORK TO NEW COIL CASINGS.
- MECHANICAL NOTES:**
- M.1 SPRINKLERS ARE QUICK RESPONSE UPRIGHT ABOVE AND BELOW DUCT AS APPLICABLE.
 - M.2 RPV = REDUCED PRESSURE BACKFLOW PREVENTER
 - M.3 VENT AND COMBUSTION AIR SHOWN IN SCHEMATICALLY. MAINTAIN ALL WORKING CLEARANCES TO EQUIPMENT AND ELECTRICAL PANELS

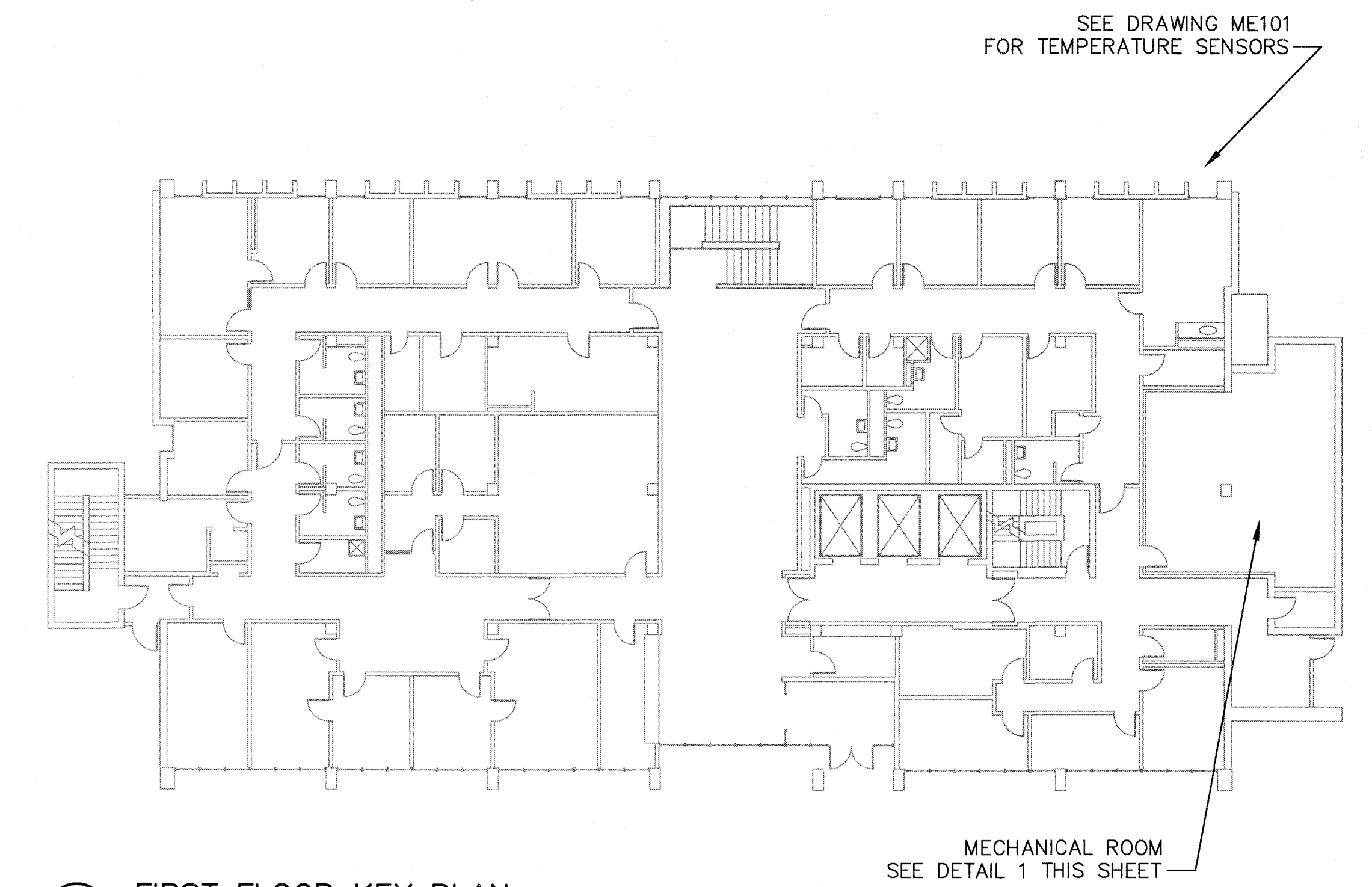
1 MECHANICAL ROOM GROUND FLOOR - AC-2 NEW WORK
SCALE: 1/2" = 1'-0"



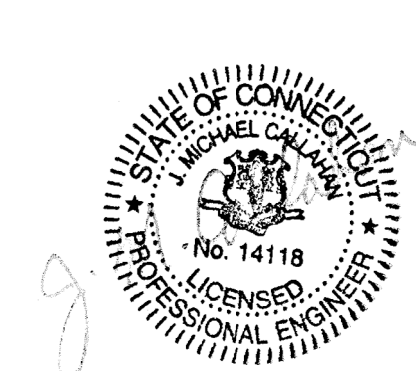
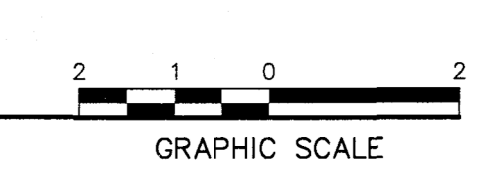
drawing title MECHANICAL ROOM GROUND FLOOR AC-2 NEW WORK		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS	drawing prepared by FUSS & O'NEILL 146 HARTFORD ROAD MANCHESTER, CONNECTICUT	date 02/08/19
	mark date description	project BRIDGEPORT MENTAL HEALTH CENTER	scale AS NOTED
	0 2/8/19 TRACINGS AND MASTERS	approved by EYL	drawing no. ME400A
BRIDGEPORT, CT		project no. BI-MH-111	
CAD no. 20050024.D50.dwg			



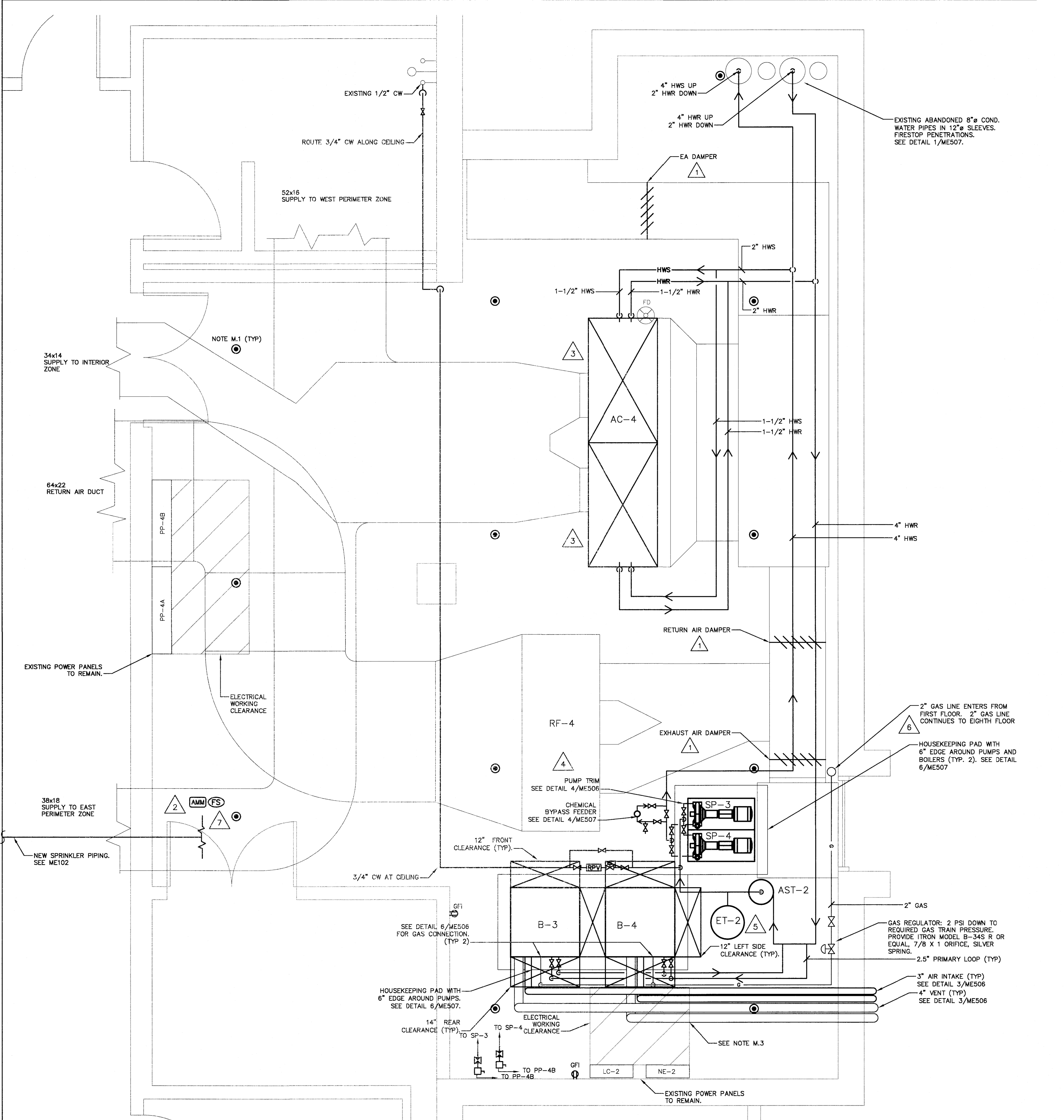
- KEY NOTES:**
- 1 PROVIDE NEW DAMPERS AND ACTUATORS.
 - 2 PROVIDE NEW HOT WATER COILS TO BE INSTALLED IN EXISTING AHU MIXING BOX SECTION, WHICH IS LOCATED BELOW THE FAN SECTION. SEE DETAILS 2 AND 8 ON DRAWING ME506. SEE COIL SCHEDULE ON DRAWING ME601. ADAPT AIR HANDLING UNIT CASING AND DUCTWORK TO NEW COIL CASINGS.
 - 3 CONTRACTOR IS RESPONSIBLE FOR AVOIDING ANY EMBEDDED ELECTRICAL WIRING WITHIN CONCRETE FLOOR SLAB.
 - 4 SEE MECHANICAL SCHEDULE ON DRAWING ME601 FOR MOTOR REPLACEMENT SCHEDULE.



1 MECHANICAL ROOM FIRST FLOOR
SCALE: 1/2" = 1'-0"



drawing title MECHANICAL ROOM FIRST FLOOR		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS		drawing prepared by FUSS & O'NEILL 146 HARTFORD ROAD MANCHESTER, CONNECTICUT
	mark	date	date 02/08/19
	0	2/8/19	scale AS NOTED
		TRACINGS AND MASTERS	drawn by JLT
project BRIDGEPORT MENTAL HEALTH CENTER ENERGY IMPROVEMENT DESIGN			approved by EYL
BRIDGEPORT, CT			drawing no. ME401
CAD no. 20050024 D50.dwg	project no. BI-MH-111		



KEY NOTES:

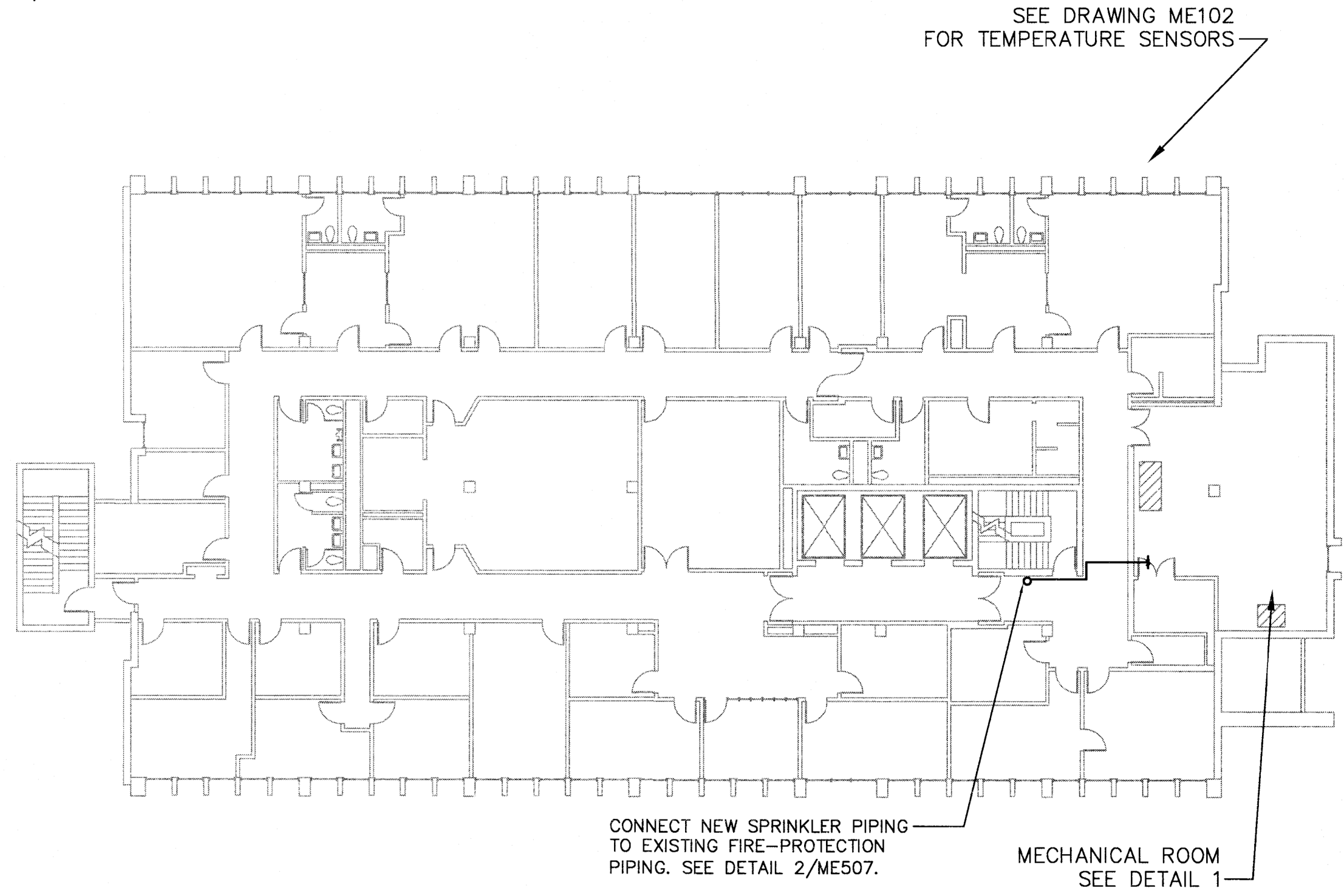
- 1 PROVIDE NEW DAMPERS AND ACTUATORS.
- 2 PROVIDE WET SPRINKLER PROTECTION FOR MECHANICAL ROOM. DESIGN FOR ORDINARY HAZARD GROUP 1. PROVIDE ADDITIONAL SPRINKLERS AS REQUIRED BY BLOCKAGE OF DUCTWORK AND AIR-MOVING EQUIPMENT. CONNECT TO SPRINKLER RISER AS SHOWN. PROVIDE FLOW SWITCH AND TIE INTO FIRE ALARM SYSTEM. SPRINKLER TEST DATED APRIL 19, 2012 SHOWED RESIDUAL PRESSURE OF 76 PSI @ 629 GPM.
- 3 PROVIDE NEW HOT WATER COILS TO BE INSTALLED IN EXISTING AHU MIXING BOX SECTION, WHICH IS LOCATED BELOW THE FAN SECTION. SEE DETAILS 2 AND 8 ON DRAWING ME506. SEE COIL SCHEDULE ON DRAWING ME601. ADAPT AIR HANDLING UNIT CASING AND DUCTWORK TO NEW COIL CASINGS.
- 4 SEE MECHANICAL SCHEDULE ON DRAWING ME601 FOR MOTOR REPLACEMENT SCHEDULE.
- 5 EXPANSION TANK, PUMPS AND AIR SEPARATOR TANK SHALL HAVE DRAINS WITH HOSE BIBBS ATTACHED FOR TANK DRAINAGE TO LOCAL FLOOR DRAIN.
- 6 CONTRACTOR IS RESPONSIBLE FOR AVOIDING ANY EMBEDDED ELECTRICAL WIRING WITHIN CONCRETE FLOOR SLAB.
- 7 EXISTING FIRE ALARM CONTROL PANEL IS A NFS2-3030 AS MANUFACTURED BY HONEYWELL NOTIFIER. EXTEND EXISTING ANNUNCIATION CIRCUIT TO NEW DEVICES. FIRE ALARM WIRING SHALL BE IN EMT CONDUIT. NEW DEVICES SHALL BE LISTED FOR EXISTING FACP.

MECHANICAL NOTES:

- M.1 SPRINKLERS ARE QUICK RESPONSE UPRIGHT ABOVE AND BELOW DUCT AS APPLICABLE.
M.2 RPV = REDUCED PRESSURE BACKFLOW PREVENTER
M.3 VENT AND COMBUSTION AIR SHOWN IN SCHEMATICALLY. MAINTAIN ALL WORKING CLEARANCES TO EQUIPMENT AND ELECTRICAL PANELS

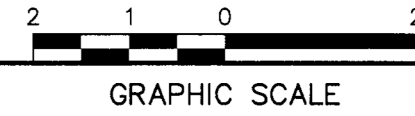
ELECTRICAL NOTES:

1. CIRCUIT SP-3 TO PANEL PP-4B. PROVIDE 3 POLE, 15 AMP CIRCUIT BREAKER IN SPARE SPACE FOR SP-3. CIRCUIT SHALL BE 4-#12 AWG, THW, CU IN 3/4" EMT. PROVIDE NEMA 00 MAGNETIC MOTOR STARTER AND MANUAL DISCONNECT ADJACENT TO LC-2 FOR SP-3.
2. CIRCUIT SP-4 TO PANEL PP-4B. PROVIDE 3 POLE, 15 AMP CIRCUIT BREAKER IN SPARE SPACE FOR SP-4. CIRCUIT SHALL BE 4-#12 AWG, THW, CU IN 3/4" EMT. PROVIDE NEMA 00 MAGNETIC MOTOR STARTER AND MANUAL DISCONNECT ADJACENT TO LC-2 FOR SP-4.
3. CIRCUIT B-3 TO PANEL LC-2. PROVIDE SINGLE POLE, 15 AMP CIRCUIT BREAKER IN SPARE SPACE FOR B-3. CIRCUIT SHALL BE 3-#12 AWG, THW, CU IN 3/4" EMT.
4. CIRCUIT B-4 TO PANEL LC-2. PROVIDE SINGLE POLE, 15 AMP CIRCUIT BREAKER IN SPARE SPACE FOR B-4. CIRCUIT SHALL BE 3-#12 AWG, THW, CU IN 3/4" EMT.
5. PROVIDE SAFETY SWITCH AT DOOR AND AT B-3. PROVIDE FIREMATIC ON CEILING ABOVE BURNER FOR B-3. WIRE SAFETY SWITCHES AND FIREMATIC IN SERIES WITH BRANCH CIRCUIT.
6. PROVIDE SAFETY SWITCH AT DOOR AND AT B-4. PROVIDE FIREMATIC ON CEILING ABOVE BURNER FOR B-4. WIRE SAFETY SWITCHES AND FIREMATIC IN SERIES WITH BRANCH CIRCUIT.
7. CIRCUIT GFI RECEPTACLES TO PANEL LC-2. PROVIDE SINGLE POLE, 20 AMP CIRCUIT BREAKER IN SPARE SPACE FOR RECEPTACLES. CIRCUIT SHALL BE 3-#12 AWG, THW, CU IN EMT.



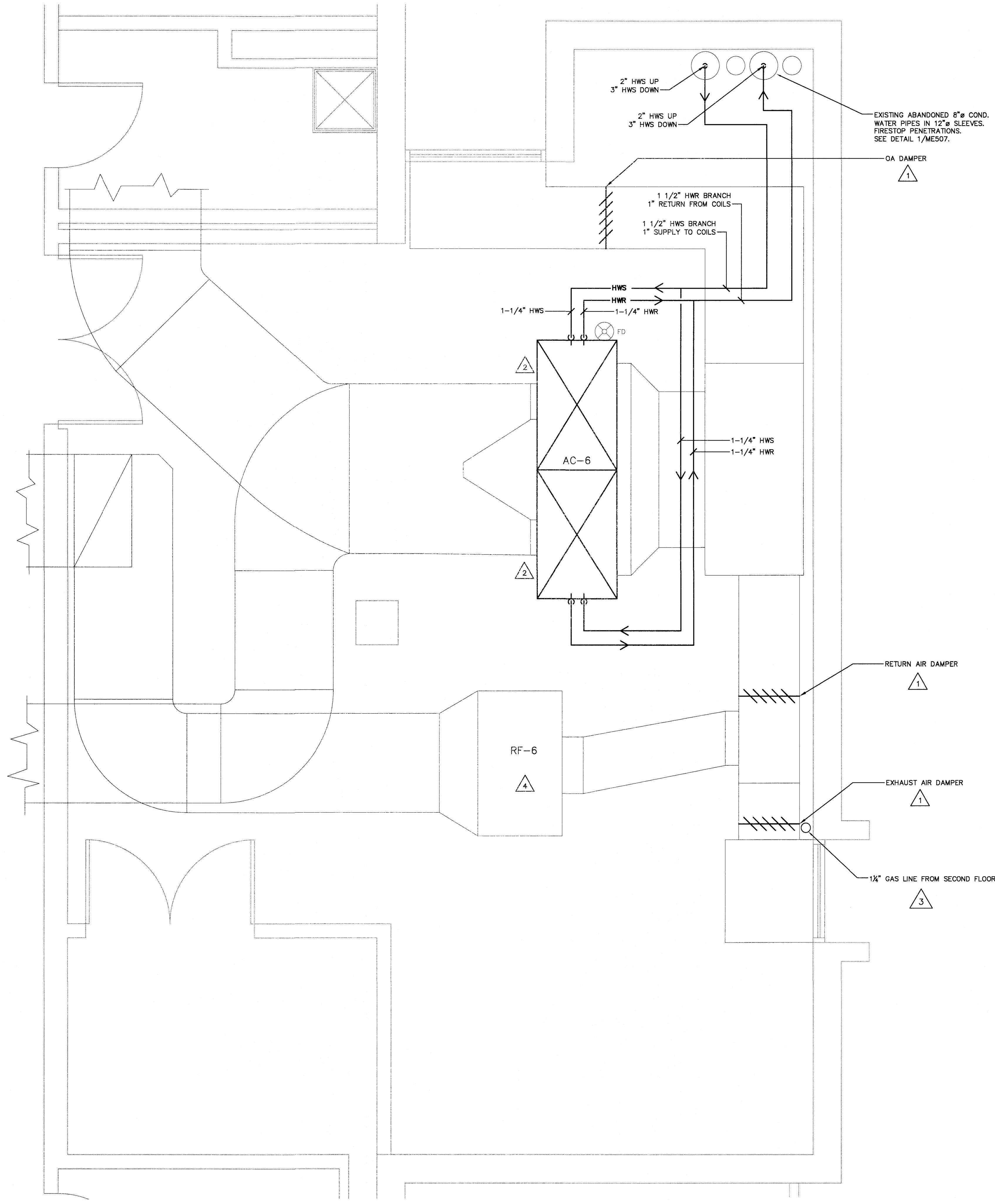
2 SECOND FLOOR KEY PLAN
SCALE: 1/16" = 1'-0"

1 MECHANICAL ROOM SECOND FLOOR
SCALE: 1/2" = 1'-0"



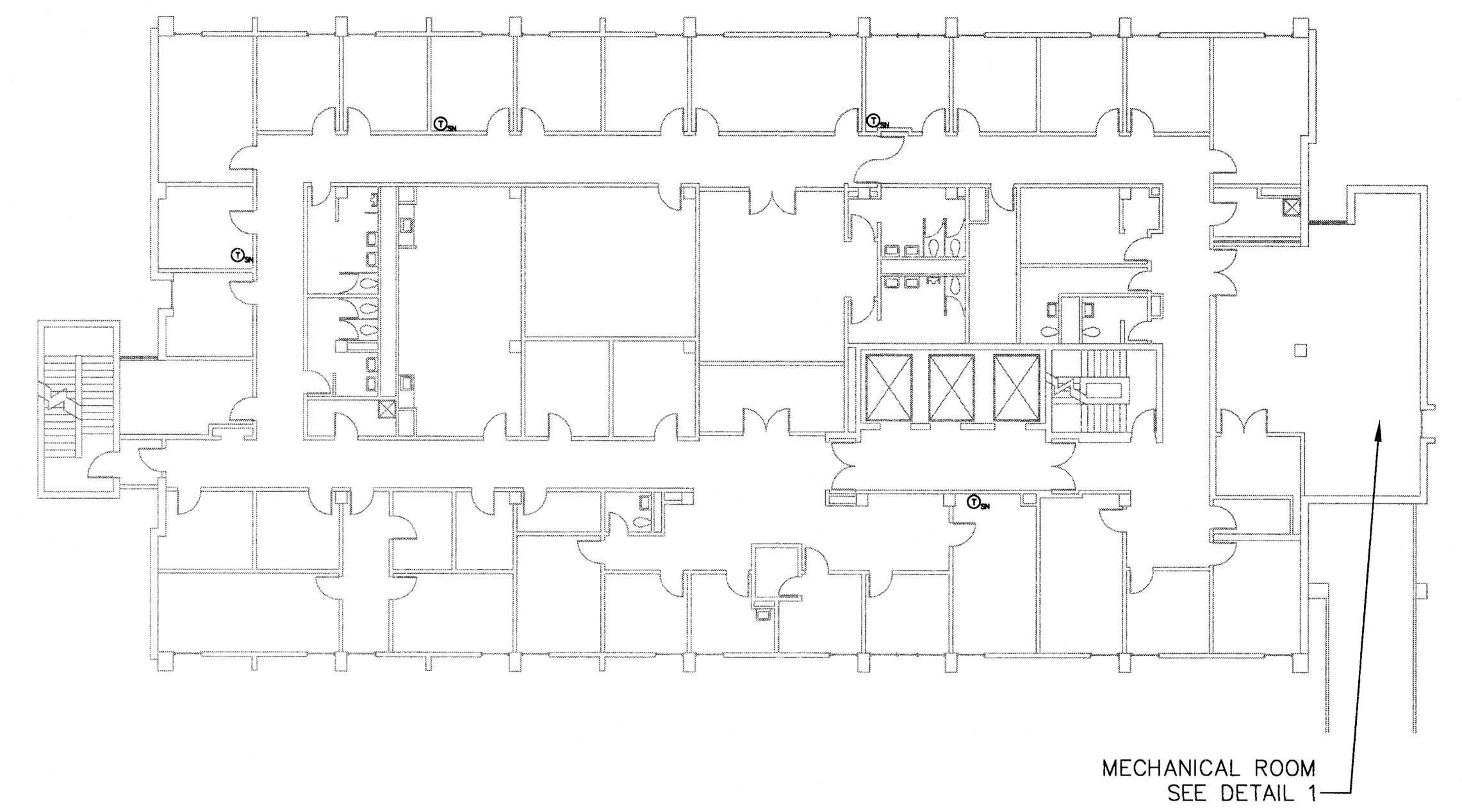
drawing title MECHANICAL ROOM SECOND FLOOR		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS		drawing prepared by FUSS & O'NEILL 145 HARTFORD ROAD MANCHESTER, CONNECTICUT
	mark	date	description
	0	2/8/19	TRACINGS AND MASTERS
project BRIDGEPORT MENTAL HEALTH CENTER ENERGY IMPROVEMENT DESIGN		date 02/08/19	scale AS NOTED
BRIDGEPORT, CT		drawn by JLT	approved by EYL
CAD no. 2005024.D50.dwg		project no. BI-MH-111	drawing no. ME402

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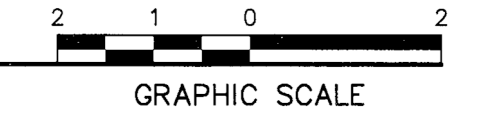
- KEY NOTES:**
- 1 PROVIDE NEW DAMPERS AND ACTUATORS.
 - 2 PROVIDE NEW HOT WATER COILS TO BE INSTALLED IN EXISTING AHU MIXING BOX SECTION, WHICH IS LOCATED BELOW THE FAN SECTION. SEE DETAILS 2 AND 8 ON DRAWING ME506. SEE COIL SCHEDULE ON DRAWING ME601. ADAPT AIR HANDLING UNIT CASING AND DUCTWORK TO NEW COIL CASINGS.
 - 3 CONTRACTOR IS RESPONSIBLE FOR AVOIDING ANY EMBEDDED ELECTRICAL WIRING WITHIN CONCRETE FLOOR SLAB.
 - 4 SEE MECHANICAL SCHEDULE ON DRAWING ME601 FOR MOTOR REPLACEMENT SCHEDULE.

- TEMPERATURE CONTROL NOTES:**
- T.1: TS = EXISTING SPACE TEMPERATURE SENSOR
 - T.2: TW = NEW WIRELESS SPACE TEMPERATURE SENSOR
 - T.3: CONTRACTOR TO VERIFY NUMBER AND LOCATIONS OF ALL EXISTING DDC POINTS. ALL EXISTING POINTS ARE TO BE TRANSFERRED TO THE UPGRADED DDC SYSTEM.

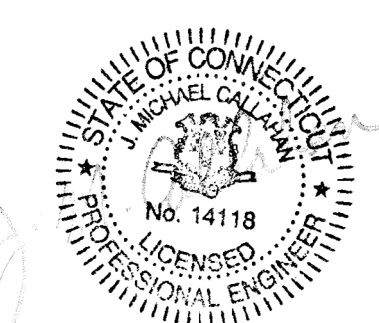


2 FOURTH FLOOR KEY PLAN
SCALE: N.T.S.

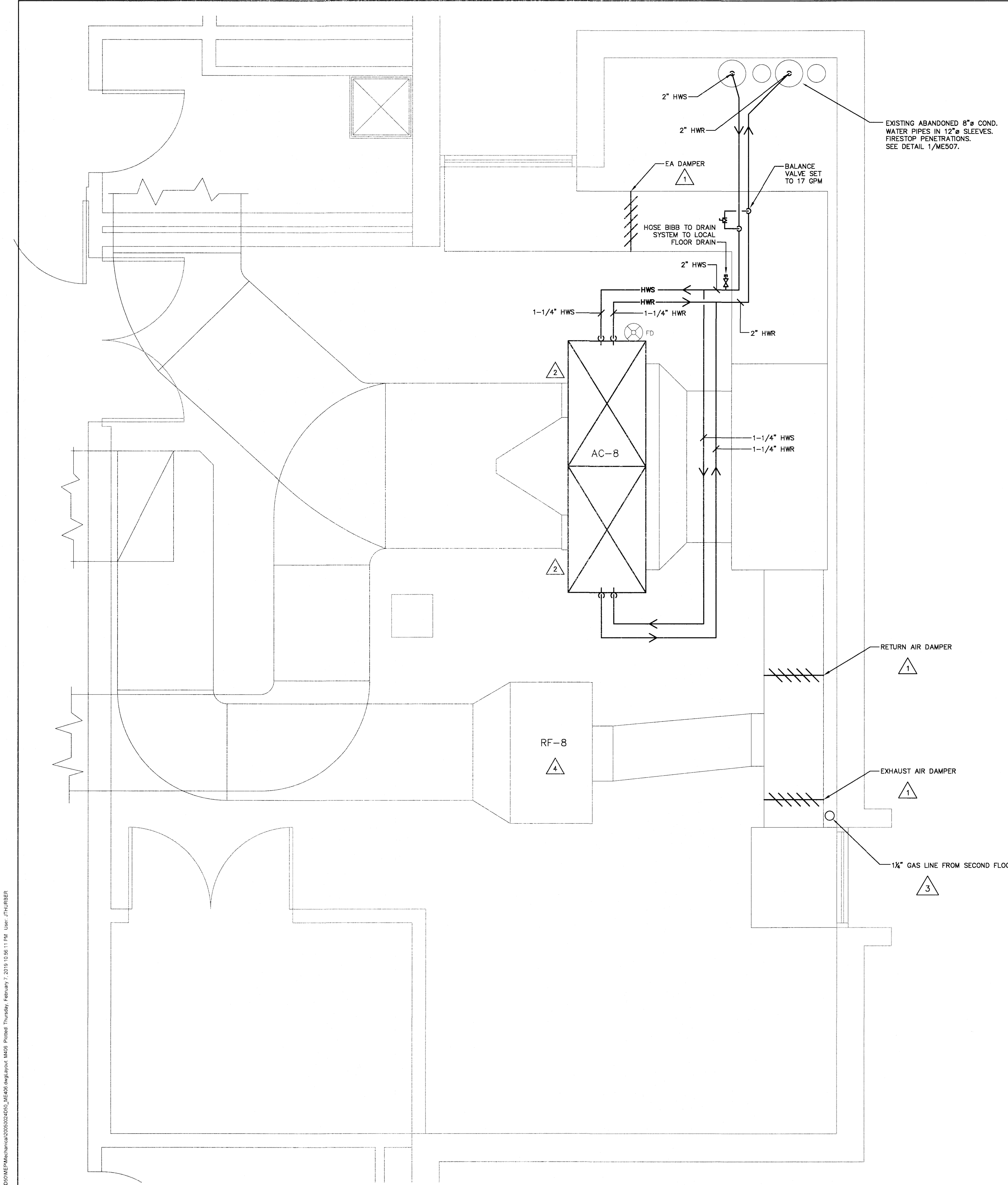
1 MECHANICAL ROOM FOURTH FLOOR
SCALE: 1/2" = 1'-0"



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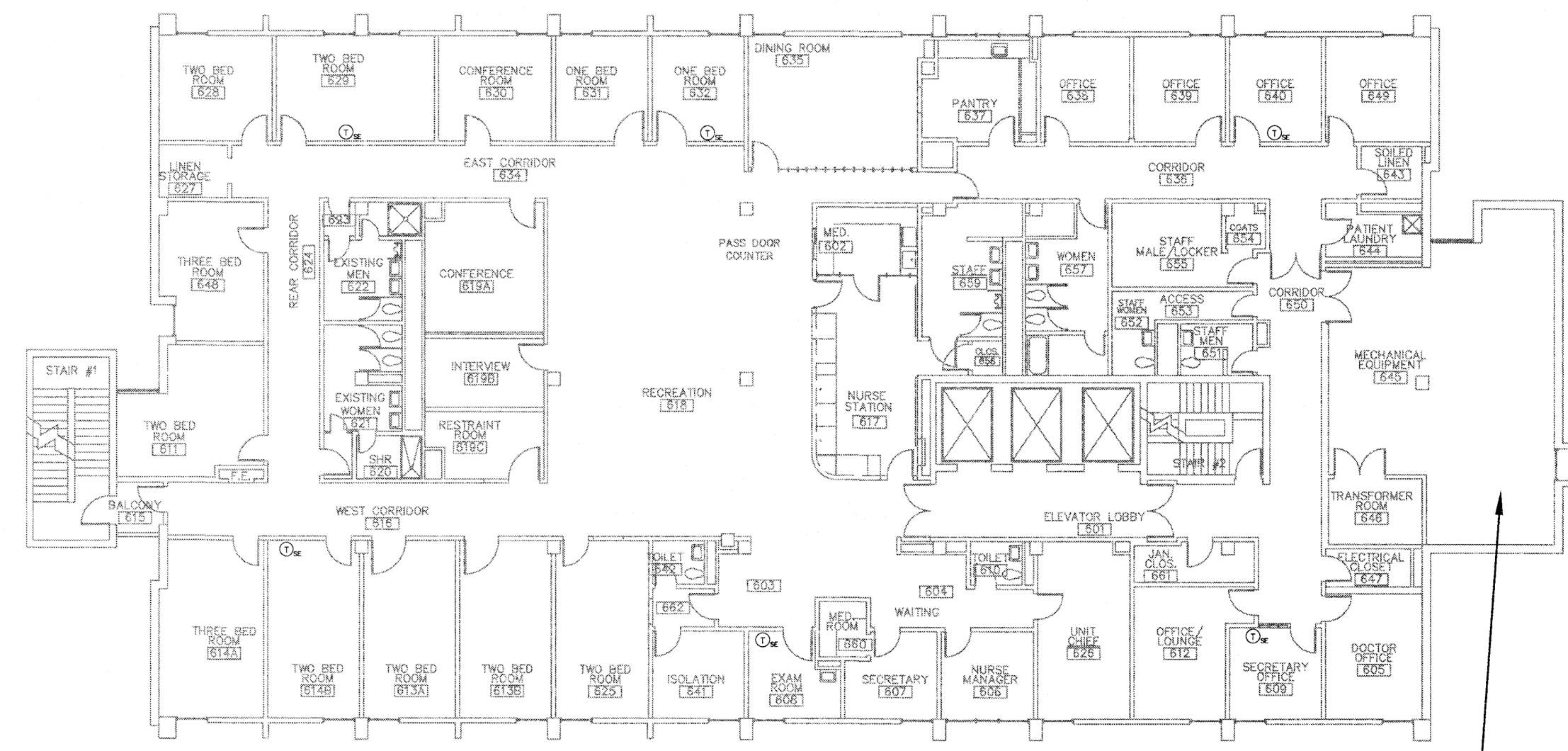


drawing title MECHANICAL ROOM FOURTH FLOOR		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS		drawing prepared by FUSS & O'NEILL 146 HARTFORD ROAD MANCHESTER, CONNECTICUT
	mark	date	description
	0	2/8/19	TRACINGS AND MASTERS
project BRIDGEPORT MENTAL HEALTH CENTER ENERGY IMPROVEMENT DESIGN		date 02/08/19	scale AS NOTED
BRIDGEPORT, CT		drawn by JLT	approved by EYL
CAD no. 20050024.D50.dwg	project no. BH-MH-111	drawing no. ME404	



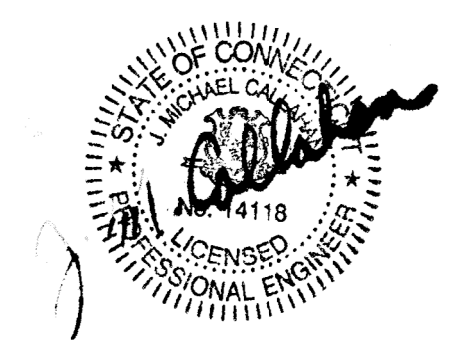
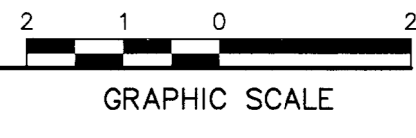
- KEY NOTES:**
- 1 PROVIDE NEW DAMPERS AND ACTUATORS.
 - 2 PROVIDE NEW HOT WATER COILS TO BE INSTALLED IN EXISTING AHU MIXING BOX SECTION, WHICH IS LOCATED BELOW THE FAN SECTION. SEE DETAILS 2 AND 8 ON DRAWING ME506. SEE COIL SCHEDULE ON DRAWING ME601. ADAPT AIR HANDLING UNIT CASING AND DUCTWORK TO NEW COIL CASINGS.
 - 3 CONTRACTOR IS RESPONSIBLE FOR AVOIDING ANY EMBEDDED ELECTRICAL WIRING WITHIN CONCRETE FLOOR SLAB.
 - 4 SEE MECHANICAL SCHEDULE ON DRAWING ME601 FOR MOTOR REPLACEMENT SCHEDULE.

- TEMPERATURE CONTROL NOTES:**
- T.1: SE = EXISTING SPACE TEMPERATURE SENSOR
 - T.2: NO NEW SPACE TEMPERATURE SENSORS REQUIRED
 - T.3: CONTRACTOR TO VERIFY NUMBER AND LOCATIONS OF ALL EXISTING DDC POINTS. ALL EXISTING POINTS ARE TO BE TRANSFERRED TO THE UPGRADED DDC SYSTEM.



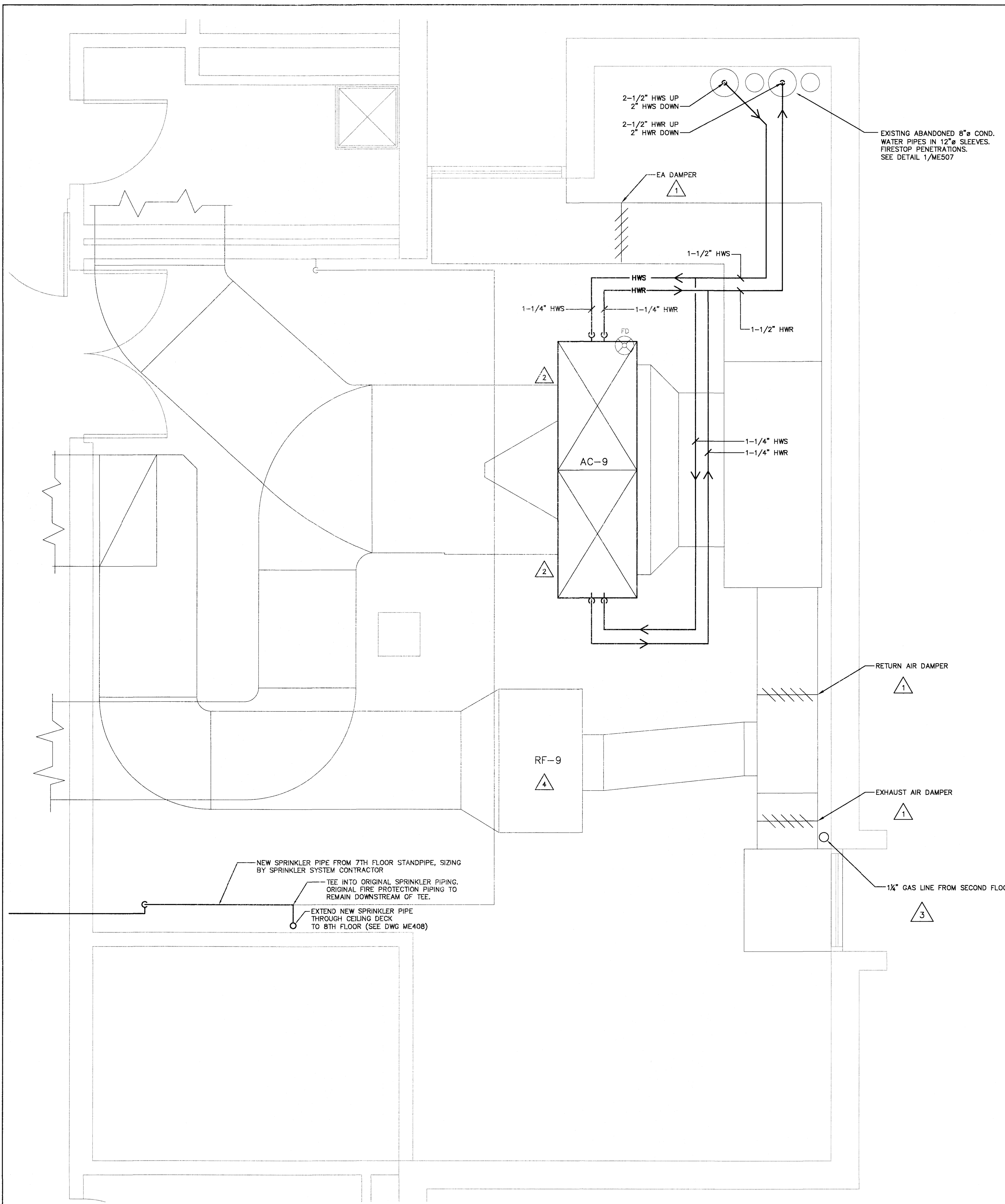
2 SIXTH FLOOR KEY PLAN
SCALE: N.T.S.

1 MECHANICAL ROOM SIXTH FLOOR
SCALE: 1/2" = 1'-0"



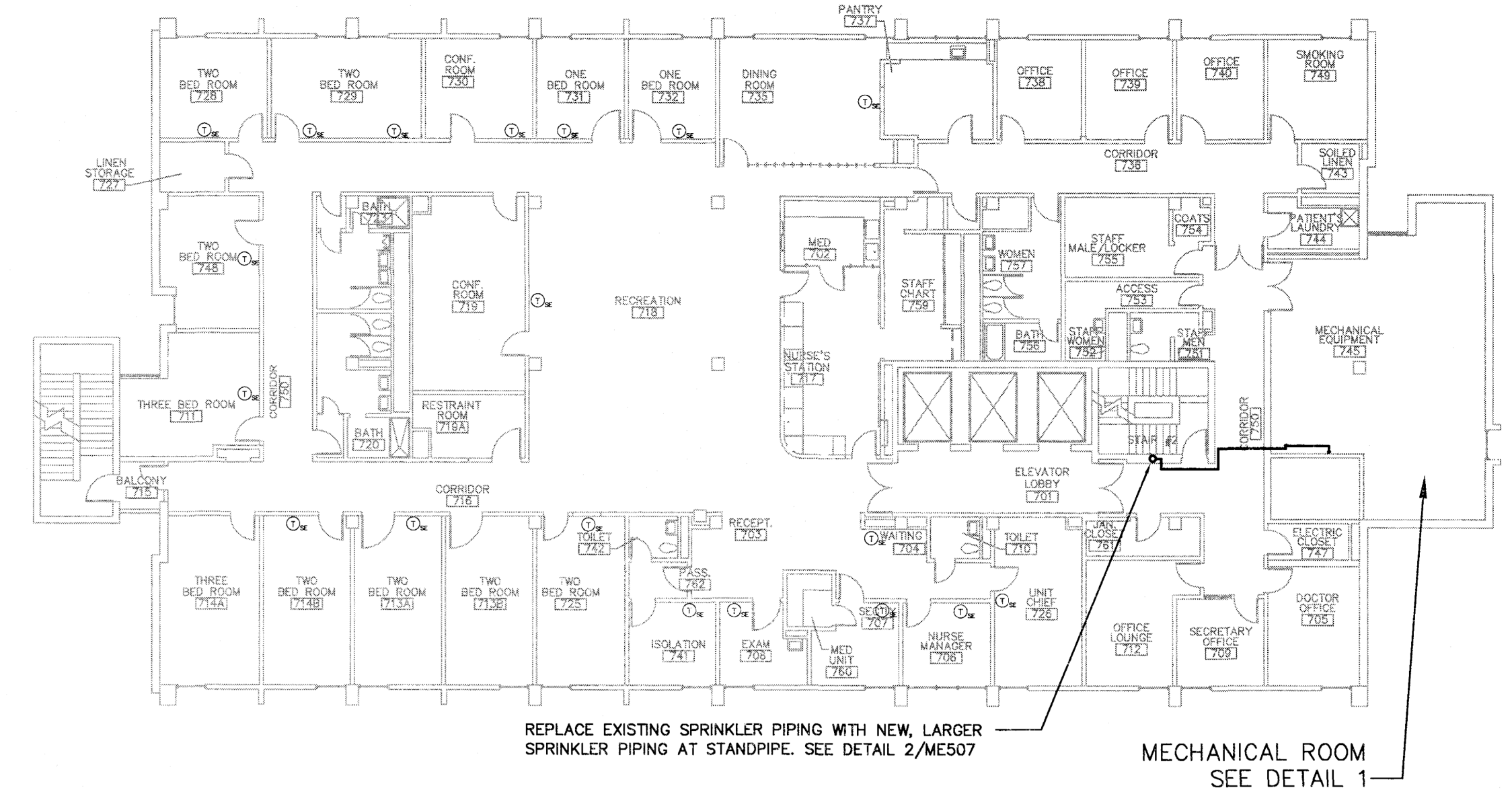
drawing title MECHANICAL ROOM SIXTH FLOOR		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS		drawing prepared by FUSS & O'NEILL 145 HARTFORD ROAD MANCHESTER, CONNECTICUT
	mark	date	description
	0	2/8/19	TRACINGS AND MASTERS
project BRIDGEPORT MENTAL HEALTH CENTER ENERGY IMPROVEMENT DESIGN		date 02/08/19	scale AS NOTED
BRIDGEPORT, CT		drawn by JLT	approved by EYL
CAD no 20050024.D50.dwg	project no BH-MH-111	drawing no. ME406	

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- KEY NOTES:**
- 1 PROVIDE NEW DAMPERS AND ACTUATORS.
 - 2 PROVIDE NEW HOT WATER COILS TO BE INSTALLED IN EXISTING AHU MIXING BOX SECTION, WHICH IS LOCATED BELOW THE FAN SECTION. SEE DETAILS 2 AND 8 ON DRAWING ME506. SEE COIL SCHEDULE ON DRAWING ME601. ADAPT AIR HANDLING UNIT CASING AND DUCTWORK TO NEW COIL CASINGS.
 - 3 CONTRACTOR IS RESPONSIBLE FOR AVOIDING ANY EMBEDDED ELECTRICAL WIRING WITHIN CONCRETE FLOOR SLAB.
 - 4 SEE MECHANICAL SCHEDULE ON DRAWING ME601 FOR MOTOR REPLACEMENT SCHEDULE.

- TEMPERATURE CONTROL NOTES:**
- T.1: ①_{SE} = EXISTING SPACE TEMPERATURE SENSOR
 - T.2: NO NEW SPACE TEMPERATURE SENSORS REQUIRED
 - T.3: CONTRACTOR TO VERIFY NUMBER AND LOCATIONS OF ALL EXISTING DDC POINTS. ALL EXISTING POINTS ARE TO BE TRANSFERRED TO THE UPGRADED DDC SYSTEM.



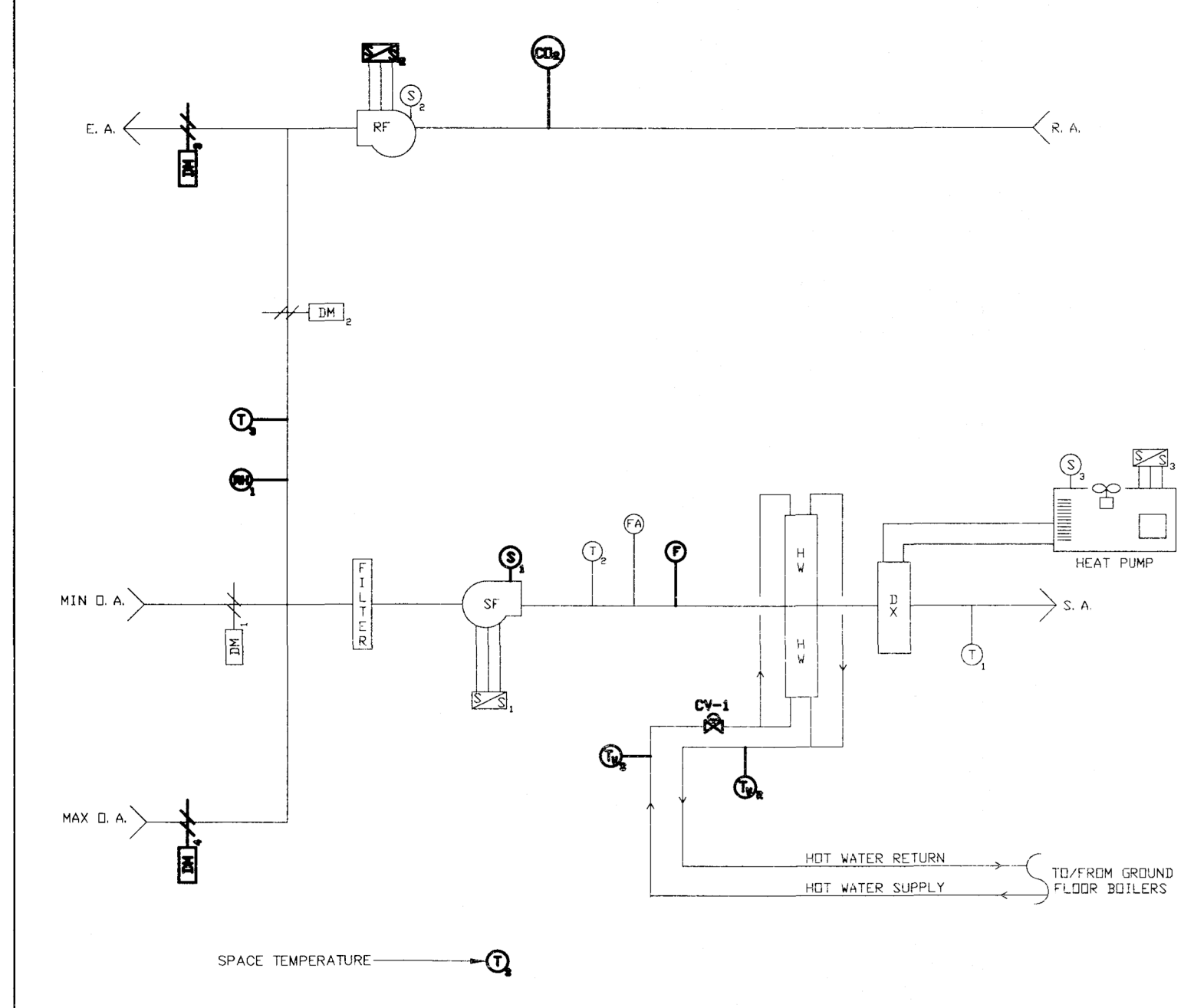
2 SEVENTH FLOOR KEY PLAN
SCALE: N.T.S.

1 MECHANICAL ROOM SEVENTH FLOOR
SCALE: 1/2" = 1'-0"



drawing title MECHANICAL ROOM SEVENTH FLOOR		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS		drawing prepared by FUSS & O'NEILL 145 HARTFORD ROAD MANCHESTER, CONNECTICUT
	mark	date	description
	0	2/8/19	TRACINGS AND MASTERS
project BRIDGEPORT MENTAL HEALTH CENTER		date 02/08/19	scale AS NOTED
ENERGY IMPROVEMENT DESIGN		drawn by .JLT	approved by EYL
BRIDGEPORT, CT		drawing no. ME407	
CAD no. 20050024.D50.dwg	project no. BI-MH-111		

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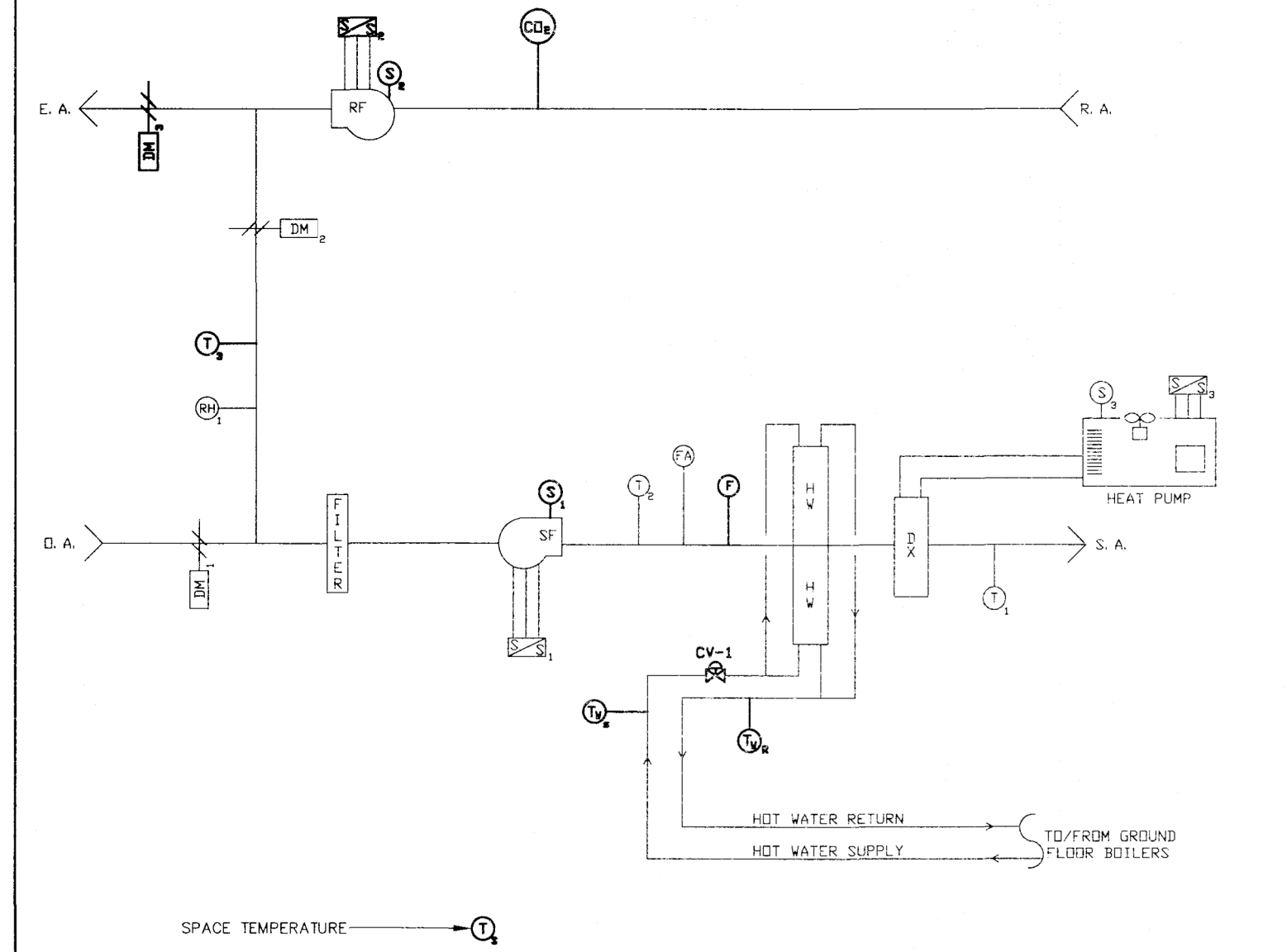


AIR HANDLING UNIT CONTROL POINTS LIST				
SYMBOL	DESCRIPTION	TYPE	EXISTING/NEW	REMARKS
①	SPACE AIR TEMPERATURE SENSOR	AI	E & N	REFER TO PLANS FOR QTY & LOCATIONS OF EXISTING AND NEW.
②	SUPPLY AIR TEMPERATURE SENSOR	AI	E	
③	MIXED AIR TEMPERATURE SENSOR	AI	E	
④	RETURN AIR TEMPERATURE SENSOR	AI	N	
⑤	RETURN AIR CARBON DIOXIDE SENSOR	AI	N	
⑥	RETURN AIR RELATIVE HUMIDITY SENSOR	AI	N	
⑦	SUPPLY FAN START/STOP	DO	E	WIRED IN SERIES WITH SAFETY CKT.
⑧	RETURN FAN START/STOP	DO	N	WIRED IN SERIES WITH SAFETY CKT.
⑨	MIN. OUTSIDE AIR DAMPER	AO	E	MODULATING ACTUATOR
⑩	RETURN AIR DAMPER	AO	E	MODULATING ACTUATOR
⑪	EXHAUST AIR DAMPER	AO	N	MODULATING ACTUATOR
⑫	HOT WATER COIL CONTROL VALVE	AO	N	MODULATING TWO-WAY (N.O.) VALVE
⑬	MAX. OUTSIDE AIR DAMPER	AO	N	MODULATING ACTUATOR
⑭	CONDENSING UNIT START/STOP	DO	E	
⑮	SUPPLY FAN STATUS	DI	N	ALARM DDC
⑯	RETURN FAN STATUS	DI	N	HARD WIRED FAN SHUTDOWN, DDC TO ALARM
⑰	CONDENSING UNIT STATUS	DI	E	
⑱	FREEZE-STAT	DI	N	
⑲	FIRE ALARM	DI	E	
⑳	RETURN WATER TEMPERATURE	AI	N	ONE PER COIL
㉑	SUPPLY WATER TEMPERATURE	AI	N	ONE PER COIL

NOTES:
 1. CONTROLLED DEVICES ARE NOT NECESSARILY LOCATED CLOSE TO THE EQUIPMENT. REFER TO PLAN VIEW FOR LOCATION OF CONTROL DEVICES.
 2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 3. CONTRACTOR TO VERIFY NUMBER AND LOCATIONS OF ALL EXISTING DDC POINTS. ALL EXISTING POINTS ARE TO BE TRANSFERRED TO THE UPGRADED DDC SYSTEM.

* DI = DIGITAL INPUT
 DO = DIGITAL OUTPUT
 AI = ANALOG INPUT
 AO = ANALOG OUTPUT

2 AHU AC-2, GROUND FLOOR CONTROL DIAGRAM
SCALE: N.T.S.

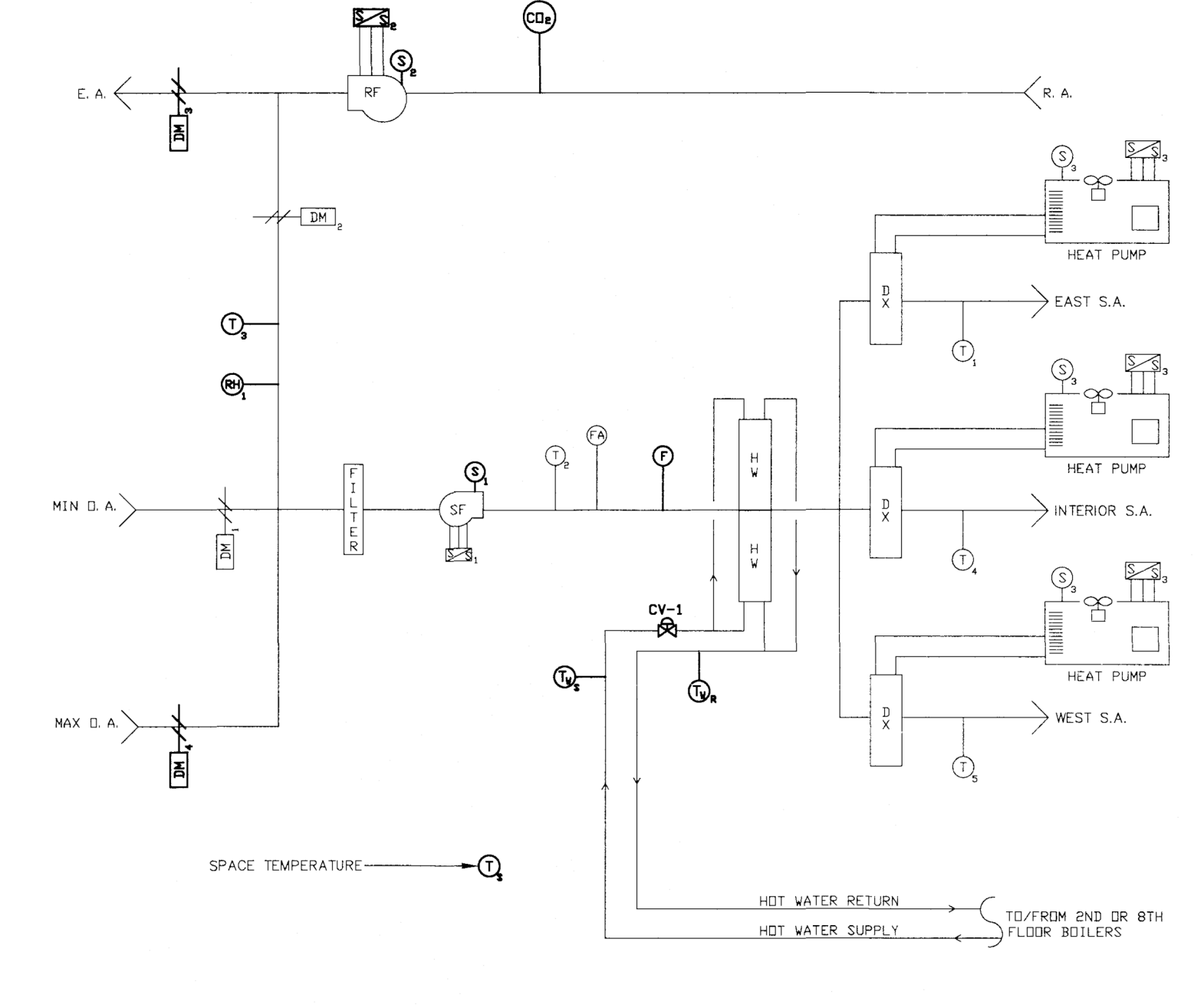


AIR HANDLING UNIT CONTROL POINTS LIST				
SYMBOL	DESCRIPTION	TYPE	EXISTING/NEW	REMARKS
①	SPACE AIR TEMPERATURE SENSOR	AI	E & N	REFER TO PLANS FOR QTY & LOCATIONS OF EXISTING AND NEW.
②	SUPPLY AIR TEMPERATURE SENSOR	AI	E	
③	MIXED AIR TEMPERATURE SENSOR	AI	E	
④	RETURN AIR TEMPERATURE SENSOR	AI	N	
⑤	RETURN AIR CARBON DIOXIDE SENSOR	AI	N	
⑥	RETURN AIR RELATIVE HUMIDITY SENSOR	AI	N	
⑦	SUPPLY FAN START/STOP	DO	E	WIRED IN SERIES WITH SAFETY CKT.
⑧	RETURN FAN START/STOP	DO	N	WIRED IN SERIES WITH SAFETY CKT.
⑨	OUTSIDE AIR DAMPER	AO	E	MODULATING ACTUATOR
⑩	RETURN AIR DAMPER	AO	E	MODULATING ACTUATOR
⑪	EXHAUST AIR DAMPER	AO	N	MODULATING ACTUATOR
⑫	HOT WATER COIL CONTROL VALVE	AO	N	MODULATING TWO-WAY (N.O.) VALVE
⑬	CONDENSING UNIT START/STOP	DO	E	
⑭	SUPPLY FAN STATUS	DI	N	HARD WIRED FAN SHUTDOWN, DDC TO ALARM
⑮	RETURN FAN STATUS	DI	N	ALARM DDC
⑯	CONDENSING UNIT STATUS	DI	E	
⑰	FREEZE-STAT	DI	N	
⑱	FIRE ALARM	DI	E	
⑳	RETURN WATER TEMPERATURE	AI	N	ONE PER COIL
㉑	SUPPLY WATER TEMPERATURE	AI	N	ONE PER COIL

NOTES:
 1. CONTROLLED DEVICES ARE NOT NECESSARILY LOCATED CLOSE TO THE EQUIPMENT. REFER TO PLAN VIEW FOR LOCATION OF CONTROL DEVICES.
 2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 3. CONTRACTOR TO VERIFY NUMBER AND LOCATIONS OF ALL EXISTING DDC POINTS. ALL EXISTING POINTS ARE TO BE TRANSFERRED TO THE UPGRADED DDC SYSTEM.

* DI = DIGITAL INPUT
 DO = DIGITAL OUTPUT
 AI = ANALOG INPUT
 AO = ANALOG OUTPUT

1 AHU AH-1, GROUND FLOOR CONTROL DIAGRAM
SCALE: N.T.S.

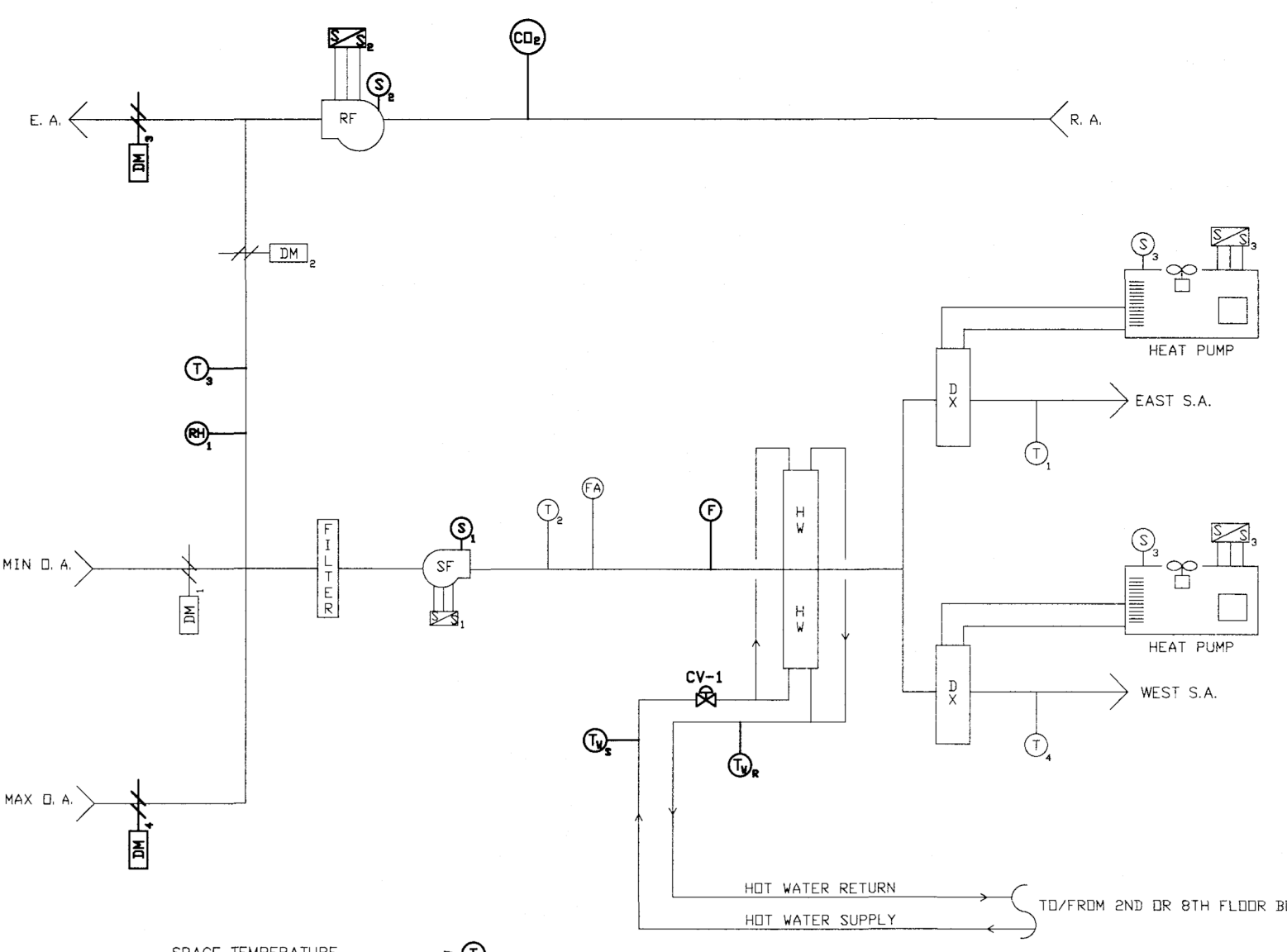


AIR HANDLING UNIT CONTROL POINTS LIST				
SYMBOL	DESCRIPTION	TYPE	EXISTING/NEW	REMARKS
①	SPACE AIR TEMPERATURE SENSOR	AI	E & N	REFER TO PLANS FOR QTY & LOCATIONS OF EXISTING AND NEW.
②	BRANCH SUPPLY AIR TEMPERATURE SENSOR	AI	E	ONE PER BRANCH
③	MIXED AIR TEMPERATURE SENSOR	AI	E	
④	RETURN AIR TEMPERATURE SENSOR	AI	N	
⑤	BRANCH SUPPLY AIR TEMPERATURE SENSOR	AI	E	
⑥	BRANCH SUPPLY AIR TEMPERATURE SENSOR	AI	E	
⑦	RETURN AIR CARBON DIOXIDE SENSOR	AI	N	
⑧	RETURN AIR RELATIVE HUMIDITY SENSOR	AI	N	
⑨	SUPPLY FAN START/STOP	DO	E	WIRED IN SERIES WITH SAFETY CKT.
⑩	RETURN FAN START/STOP	DO	N	WIRED IN SERIES WITH SAFETY CKT.
⑪	MIN. OUTSIDE AIR DAMPER	AO	E	MODULATING ACTUATOR
⑫	RETURN AIR DAMPER	AO	E	MODULATING ACTUATOR
⑬	EXHAUST AIR DAMPER	AO	N	MODULATING ACTUATOR
⑭	HOT WATER COIL CONTROL VALVE	AO	N	MODULATING TWO-WAY (N.O.) VALVE ONE PER COIL
⑮	MAX. OUTSIDE AIR DAMPER	AO	N	
⑯	BRANCH CONDENSING UNIT START/STOP	DO	E	ONE PER BRANCH
⑰	RETURN FAN STATUS	DI	N	ALARM DDC
⑱	SUPPLY FAN STATUS	DI	E	HARD WIRED FAN SHUTDOWN, DDC TO ALARM
⑲	BRANCH CONDENSING UNIT STATUS	DI	E	ONE PER BRANCH
㉑	FREEZE-STAT	DI	N	ONE PER COIL
㉒	FIRE ALARM	DI	E	
㉓	RETURN WATER TEMPERATURE	AI	N	ONE PER COIL
㉔	SUPPLY WATER TEMPERATURE	AI	N	ONE PER COIL

NOTES:
 1. CONTROLLED DEVICES ARE NOT NECESSARILY LOCATED CLOSE TO THE EQUIPMENT. REFER TO PLAN VIEW FOR LOCATION OF CONTROL DEVICES.
 2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 3. CONTRACTOR TO VERIFY NUMBER AND LOCATIONS OF ALL EXISTING DDC POINTS. ALL EXISTING POINTS ARE TO BE TRANSFERRED TO THE UPGRADED DDC SYSTEM.

* DI = DIGITAL INPUT
 DO = DIGITAL OUTPUT
 AI = ANALOG INPUT
 AO = ANALOG OUTPUT

4 AHUs AC-4, 10, FLOORS 2, 8 CONTROL DIAGRAM
SCALE: N.T.S.



AIR HANDLING UNIT CONTROL POINTS LIST				
SYMBOL	DESCRIPTION	TYPE	EXISTING/NEW	REMARKS
①	SPACE AIR TEMPERATURE SENSOR	AI	E & N	REFER TO PLANS FOR QTY & LOCATIONS OF EXISTING AND NEW.
②	BRANCH SUPPLY AIR TEMPERATURE SENSOR	AI	E	ONE PER BRANCH
③	MIXED AIR TEMPERATURE SENSOR	AI	E	
④	RETURN AIR TEMPERATURE SENSOR	AI	N	
⑤	BRANCH SUPPLY AIR TEMPERATURE SENSOR	AI	E	
⑥	BRANCH SUPPLY AIR TEMPERATURE SENSOR	AI	E	
⑦	RETURN AIR CARBON DIOXIDE SENSOR	AI	N	
⑧	RETURN AIR RELATIVE HUMIDITY SENSOR	AI	N	
⑨	SUPPLY FAN START/STOP	DO	E	WIRED IN SERIES WITH SAFETY CKT.
⑩	RETURN FAN START/STOP	DO	N	WIRED IN SERIES WITH SAFETY CKT.
⑪	MIN. OUTSIDE AIR DAMPER	AO	E	MODULATING ACTUATOR
⑫	RETURN AIR DAMPER	AO	E	MODULATING ACTUATOR
⑬	EXHAUST AIR DAMPER	AO	N	MODULATING ACTUATOR
⑭	HOT WATER COIL CONTROL VALVE	AO	N	MODULATING TWO-WAY (N.O.) VALVE ONE PER COIL
⑮	MAX. OUTSIDE AIR DAMPER	AO	N	
⑯	BRANCH CONDENSING UNIT START/STOP	DO	E	ONE PER BRANCH
⑰	RETURN FAN STATUS	DI	N	ALARM DDC
⑱	SUPPLY FAN STATUS	DI	N	HARD WIRED FAN SHUTDOWN, DDC TO ALARM
⑲	BRANCH CONDENSING UNIT STATUS	DI	E	ONE PER BRANCH
㉑	FREEZE-STAT	DI	N	ONE PER COIL
㉒	FIRE ALARM	DI	E	
㉓	RETURN WATER TEMPERATURE	AI	N	ONE PER COIL
㉔	SUPPLY WATER TEMPERATURE	AI	N	ONE PER COIL

NOTES:
 1. CONTROLLED DEVICES ARE NOT NECESSARILY LOCATED CLOSE TO THE EQUIPMENT. REFER TO PLAN VIEW FOR LOCATION OF CONTROL DEVICES.
 2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 3. CONTRACTOR TO VERIFY NUMBER AND LOCATIONS OF ALL EXISTING DDC POINTS. ALL EXISTING POINTS ARE TO BE TRANSFERRED TO THE UPGRADED DDC SYSTEM.

* DI = DIGITAL INPUT
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 AI = ANALOG INPUT
 AO = ANALOG OUTPUT

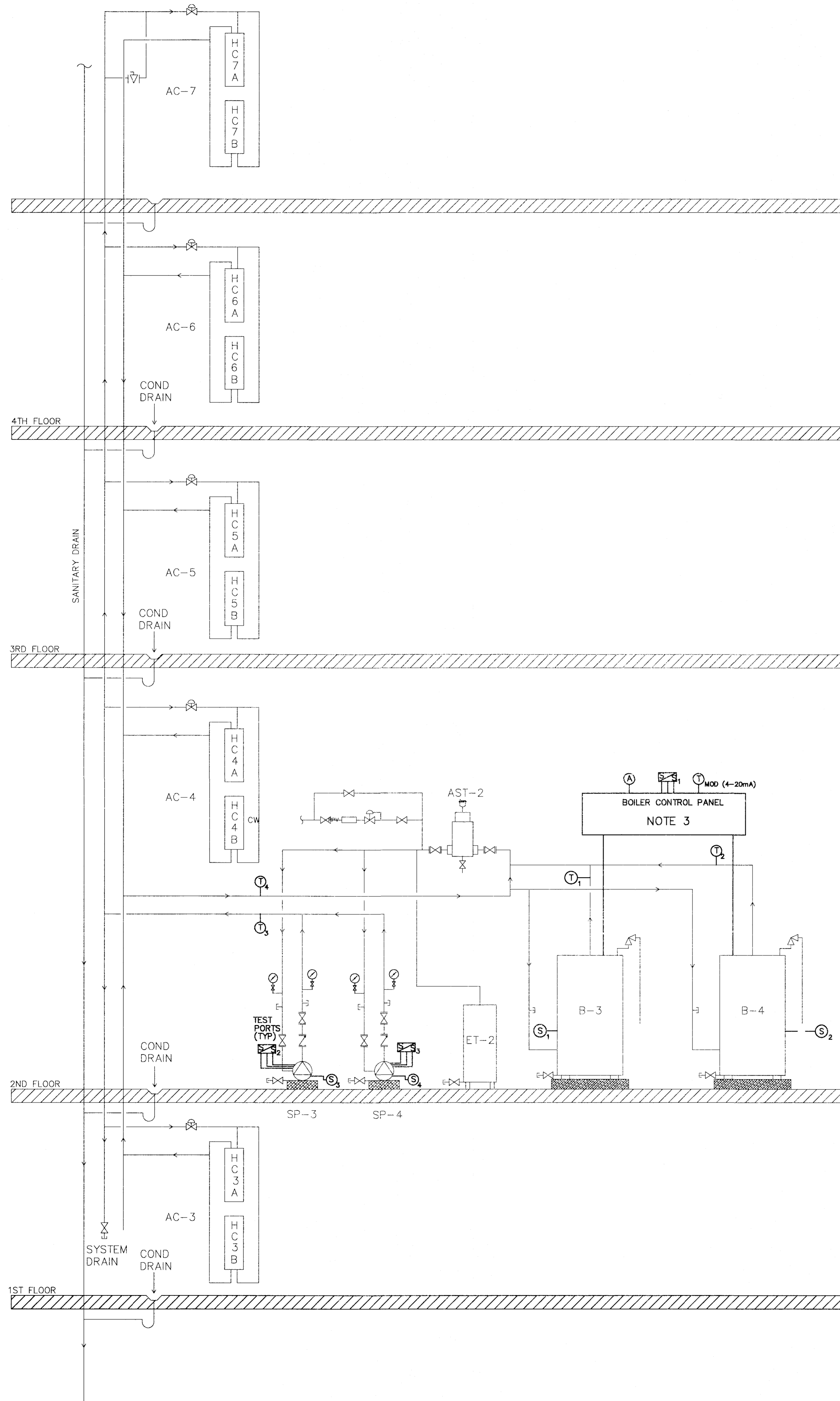
3 AHUs AC-3, 6, 7, 8, 9, FLOORS 1, 4, 5, 6, 7 CONTROL DIAGRAM
SCALE: N.T.S.

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drawing title AIR HANDLING UNIT CONTROL DIAGRAMS		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS		drawing prepared by FUSS & O'NEILL 146 HARTFORD ROAD MANCHESTER, CONNECTICUT
	mark	date	description
	0	2/8/19	TRACINGS AND MASTERS
project BRIDGEPORT MENTAL HEALTH CENTER ENERGY IMPROVEMENT DESIGN		BRIDGEPORT, CT	project no. BI-MH-111
CAD no. 20050224.D50.dwg		date 02/08/19 scale N. T. S.	
		drawn by JLT	approved by EYL
		drawing no. ME502	

- NOTES
1. PRIMARY PUMPS ARE PROVIDED AND SPECIFIED BY THE BOILER MANUFACTURER.
 2. SEE AIR HANDLER CONTROL DIAGRAM ON SHEETS ME502 & ME503 FOR AIR COIL CONTROLS.
 3. FURNISHED BY BOILER MANUFACTURER. INSTALLED & WIRED BY MECHANICAL CONTRACTOR.

- LEGEND
- PUMP
 - PETE'S PLUG
 - PRESSURE GAUGE
 - RELIEF VALVE
 - CONTROL VALVE
 - VALVE
 - REDUCED PRESSURE BACKFLOW PREVENTOR
 - PRESSURE CONTROL VALVE
 - EXISTING FLOOR DRAIN
 - DAMPER & ACTUATOR



SECOND FLOOR BOILER CONTROL POINTS LIST				
SYMBOL	DESCRIPTION	TYPE*	EXISTING/NEW	REMARKS
S1	BOILER CONTROL PANEL START/STOP	DO	N	
S2,3	SECONDARY PUMP START/STOP	DO	N	
MOD (4-20mA)	TEMPERATURE MOD. TO BOILER CONTROL PANEL	AO	N	
T1	BOILER B-3 PRIMARY PUMP DISCHARGE TEMPERATURE SENSOR	AI	N	
T2	BOILER B-4 PRIMARY PUMP DISCHARGE TEMPERATURE SENSOR	AI	N	
T3	HOT WATER COIL SUPPLY TEMPERATURE SENSOR	AI	N	
T4	HOT WATER COIL RETURN TEMPERATURE SENSOR	AI	N	
S1,2	BOILER STATUS	DI	N	
S3,4	SECONDARY PUMP STATUS/SPEED	AI	N	
VFD1,2	SECONDARY PUMP VARIABLE FREQUENCY DRIVE	AO	N	
A	BOILER PANEL ALARM	AI	N	

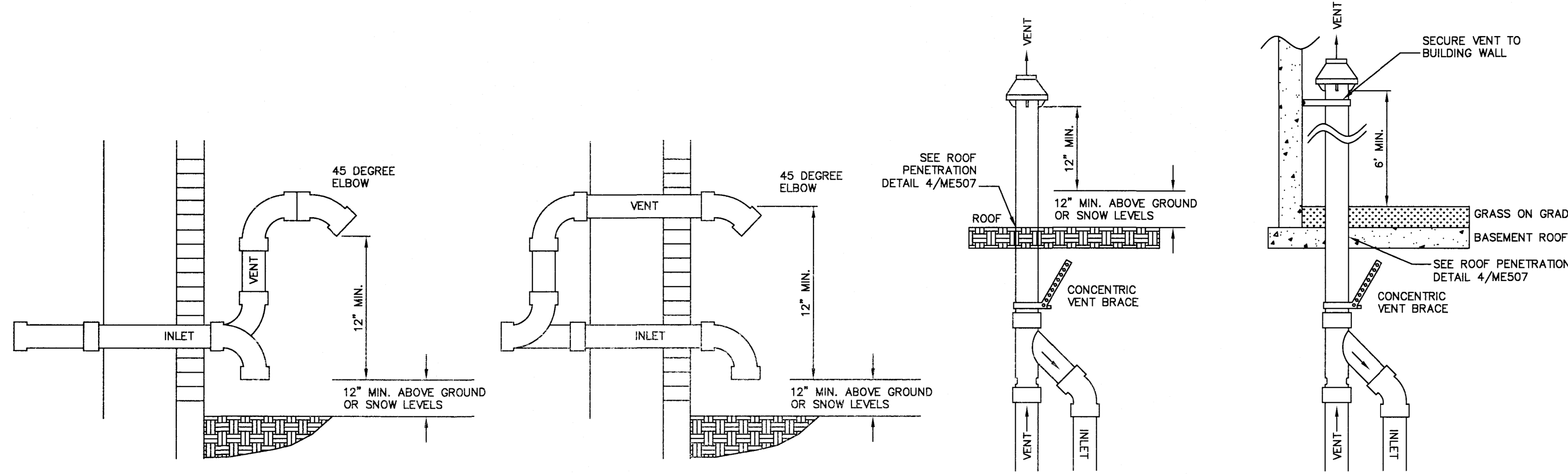
NOTES:

1. CONTROLLED DEVICES ARE NOT NECESSARILY LOCATED CLOSE TO THE EQUIPMENT. REFER TO PLAN VIEW FOR LOCATION OF CONTROL DEVICES.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. SEE AHU CONTROL DIAGRAMS FOR HOT WATER COIL RETURN TEMPERATURE POINTS AND CONTROL VALVE POINTS.

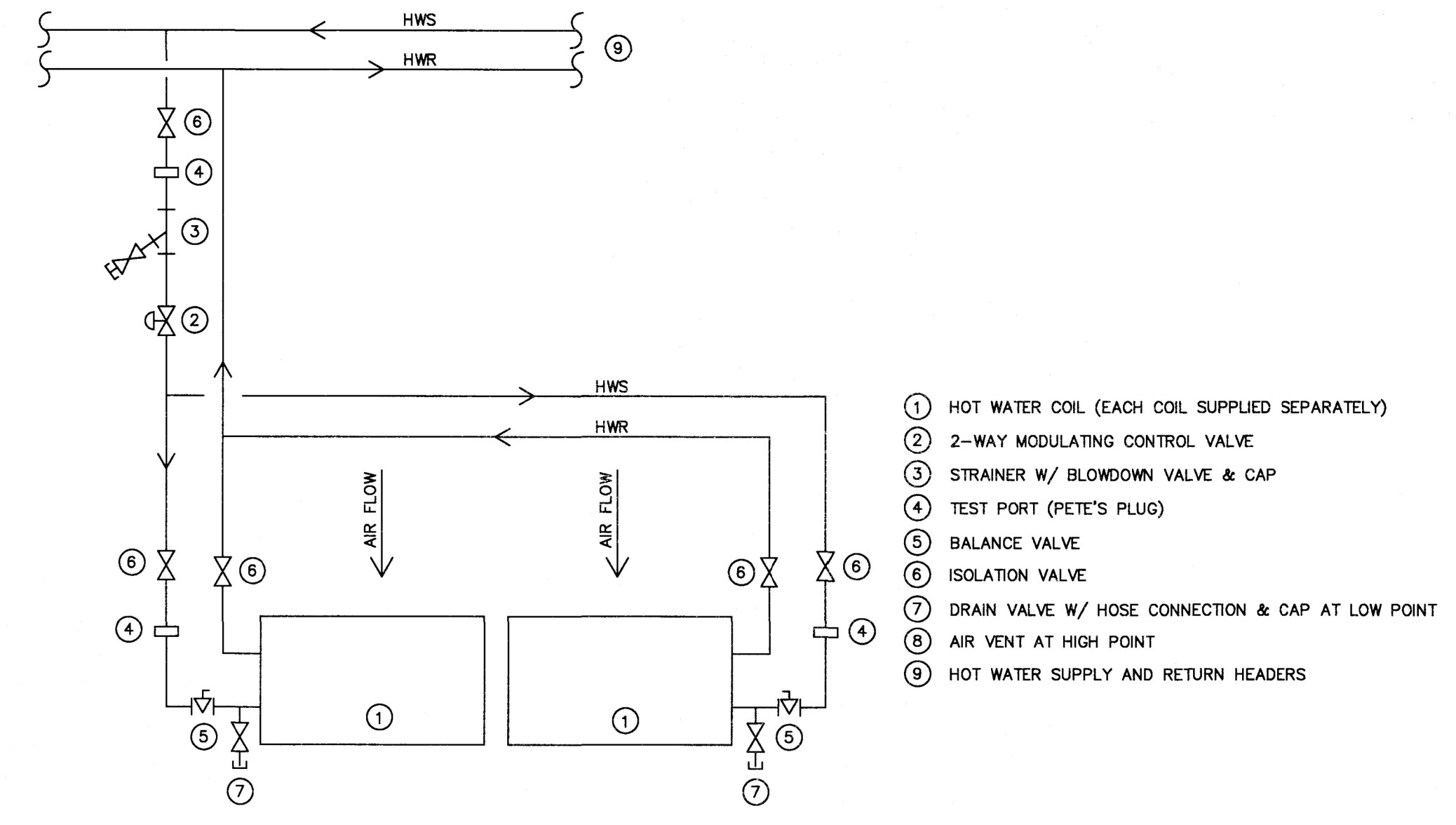
*DI = DIGITAL INPUT
DO = DIGITAL OUTPUT
AI = ANALOG INPUT
AO = ANALOG OUTPUT

1 SECOND FLOOR CONTROL DIAGRAM
SCALE: N.T.S.

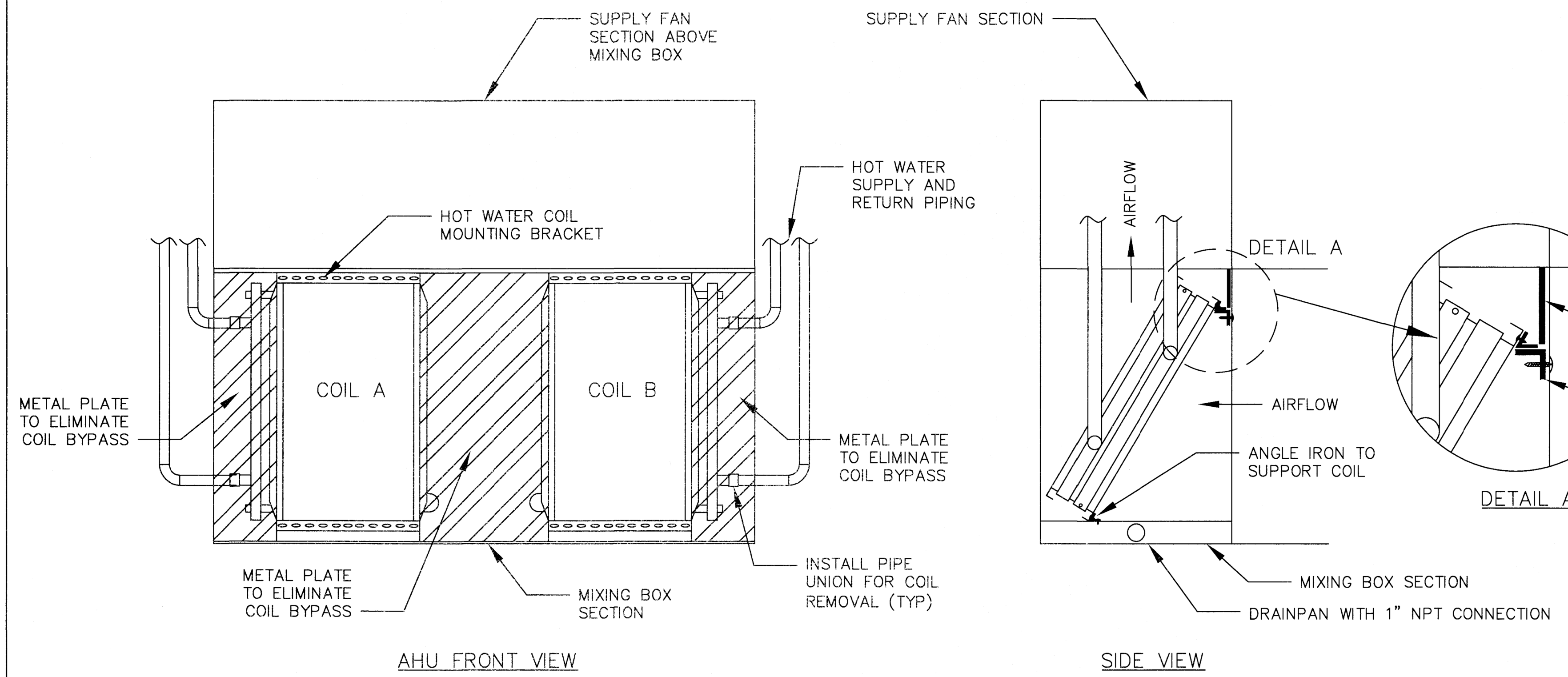
drawing title HOT WATER AND AIR HANDLER CONTROL DIAGRAM		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS		drawing prepared by FUSS & O'NEILL 146 HARTFORD ROAD MANCHESTER, CONNECTICUT
	mark	date	description
	0	2/8/19	TRACINGS AND MASTERS
project BRIDGEPORT MENTAL HEALTH CENTER ENERGY IMPROVEMENT DESIGN		date 02/08/19	scale N. T. S.
BRIDGEPORT, CT		drawn by JLT	approved by EYL
CAD no. 20050024.D50.dwg	project no. BI-MH-111	drawing no. ME505	



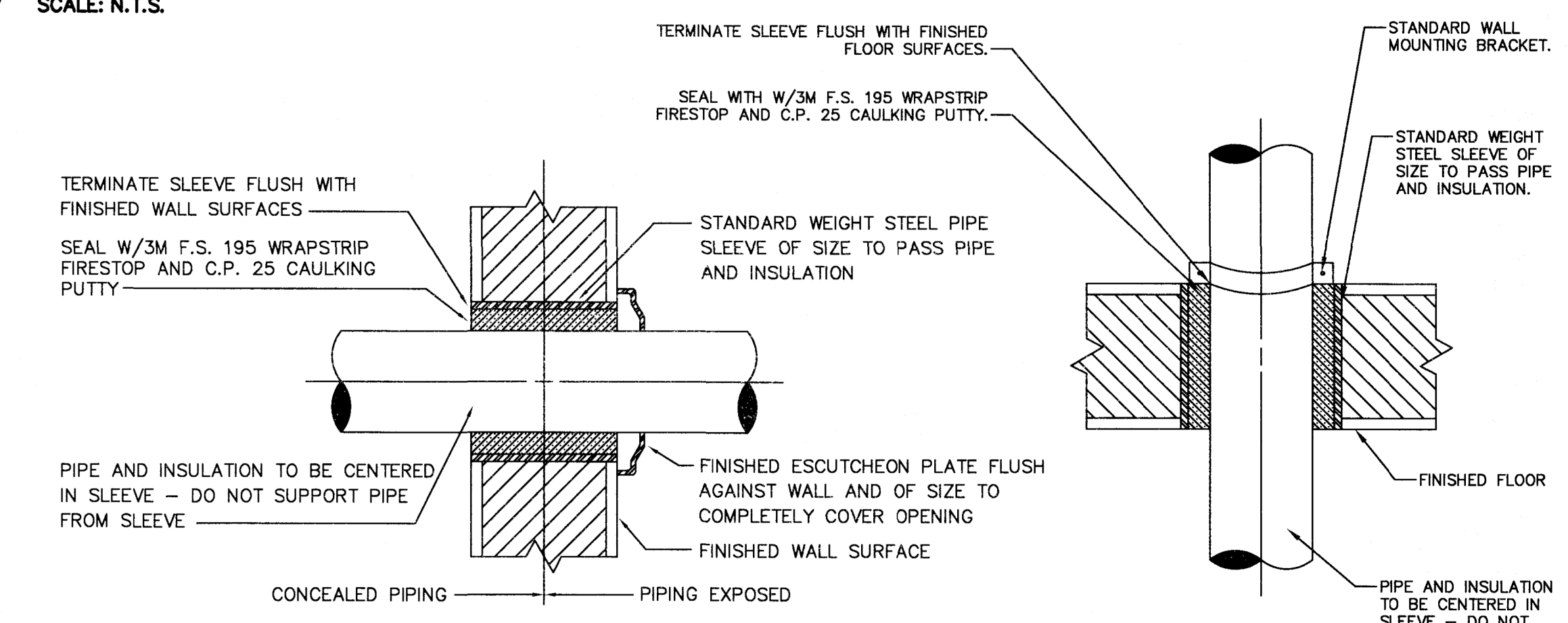
3 BOILER VENT AND AIR INLET DETAILS
SCALE: N.T.S.



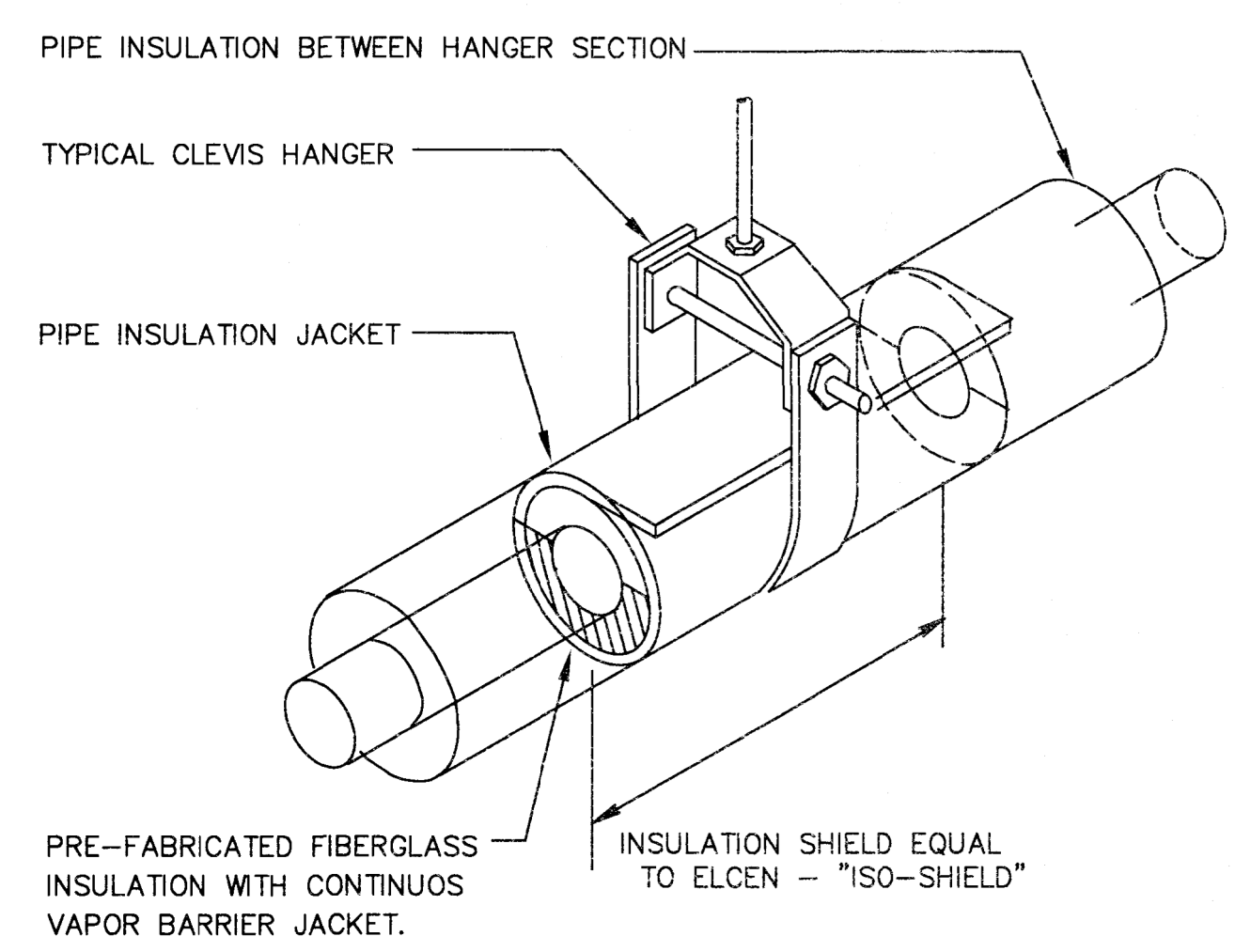
8 HOT WATER COIL PIPING DETAIL (TYP)
SCALE: N.T.S.



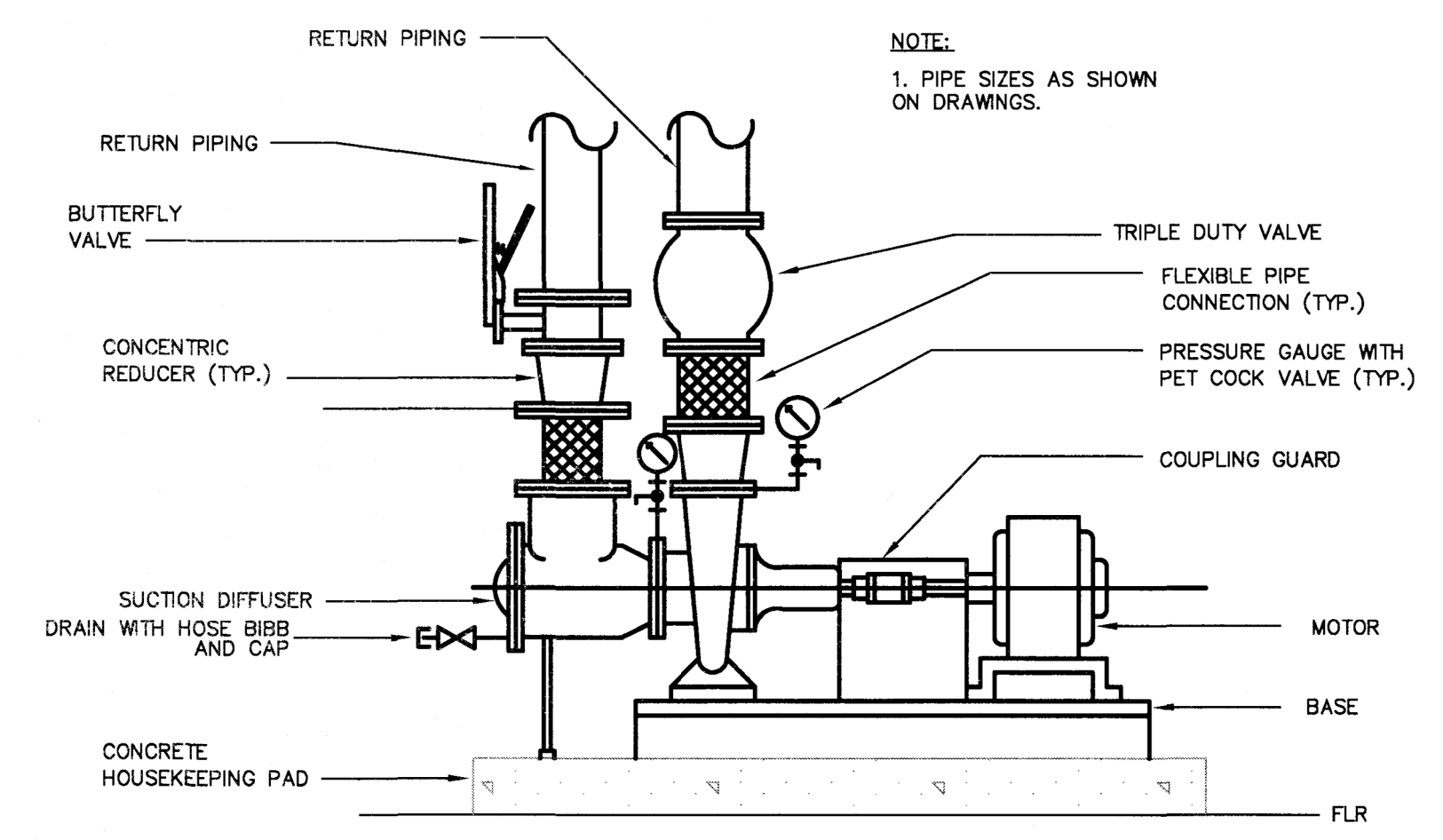
2 HOT WATER COIL INSTALLATION DETAIL (TYP FLOORS 1-8)
SCALE: N.T.S.



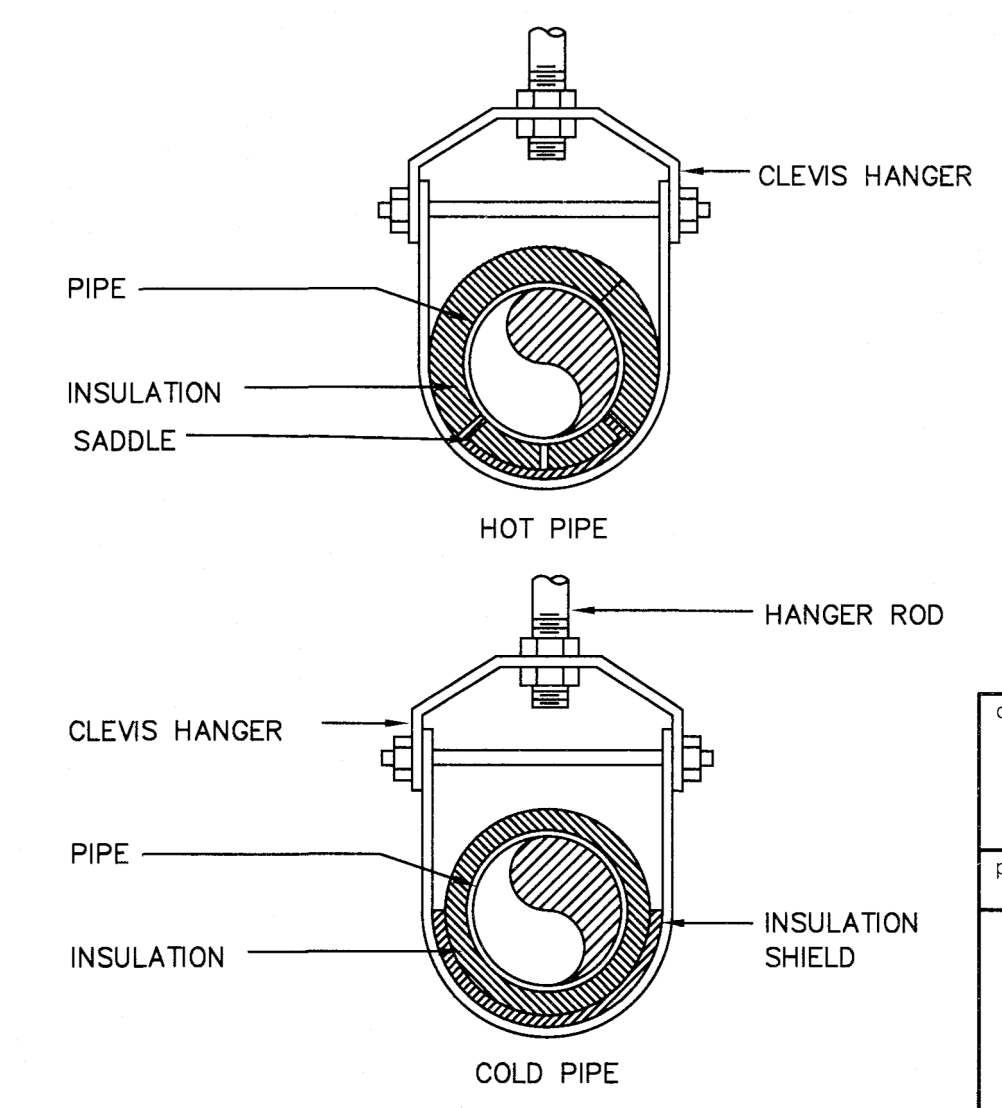
7 INTERIOR WALL AND FLOOR PIPING PENETRATION DETAIL
SCALE: N.T.S.



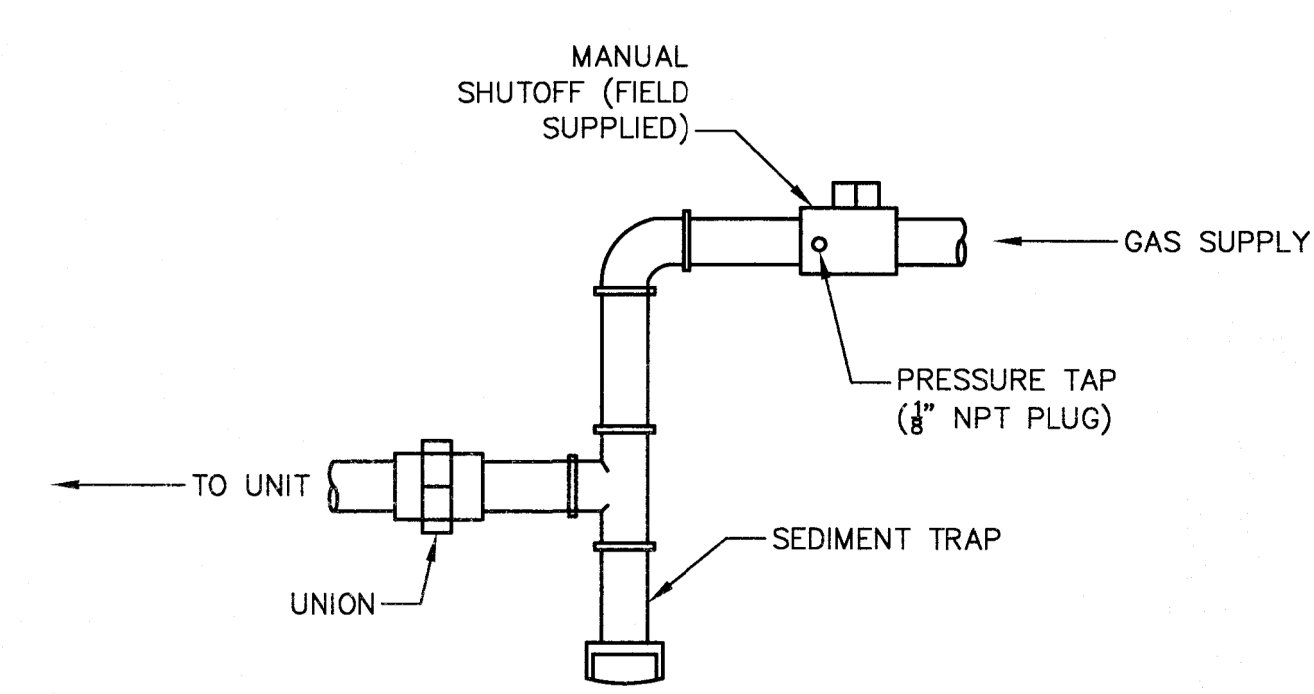
1 INSULATED PIPE HANGER DETAIL
SCALE: N.T.S.



4 BASE MOUNTED PUMP DETAIL
SCALE: N.T.S.



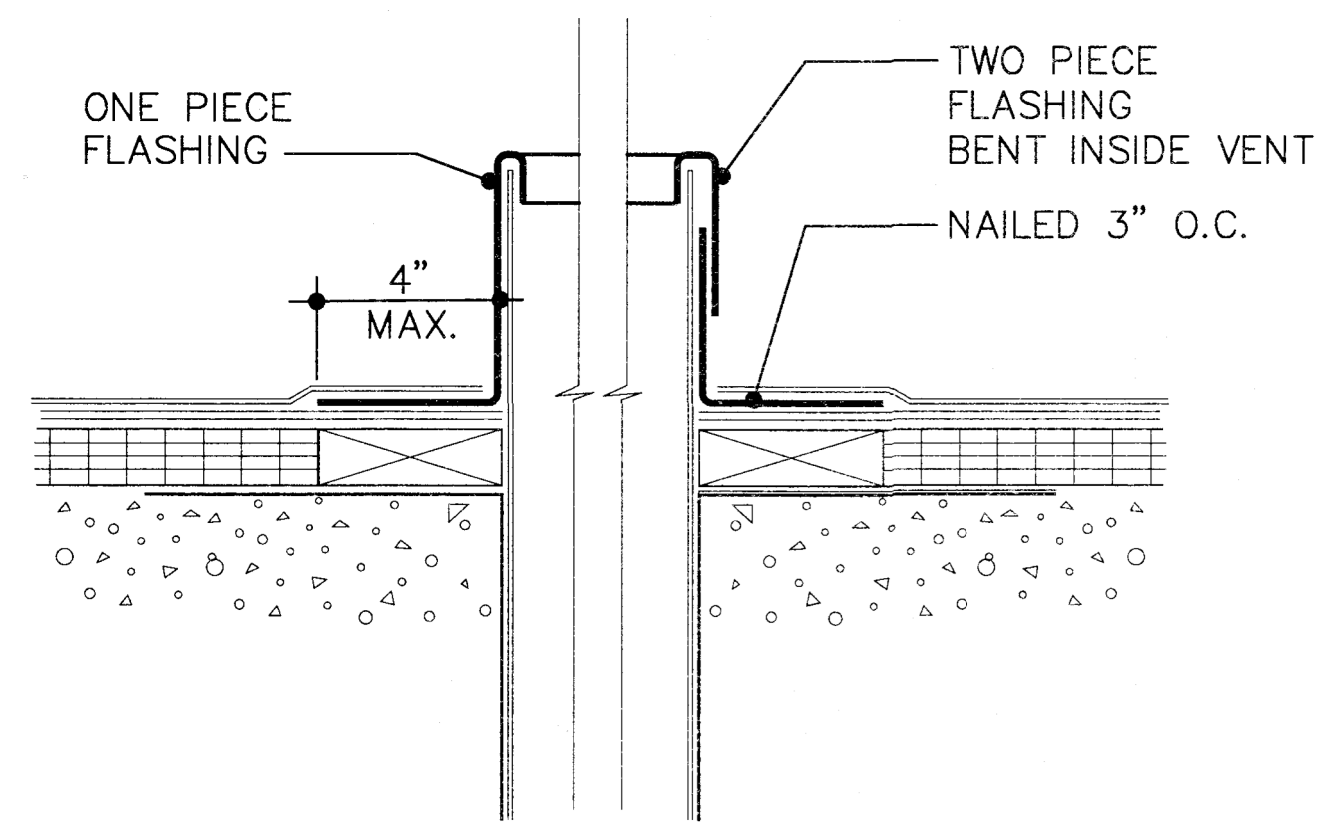
5 CLEVIS HANGER PIPING DETAIL
SCALE: N.T.S.



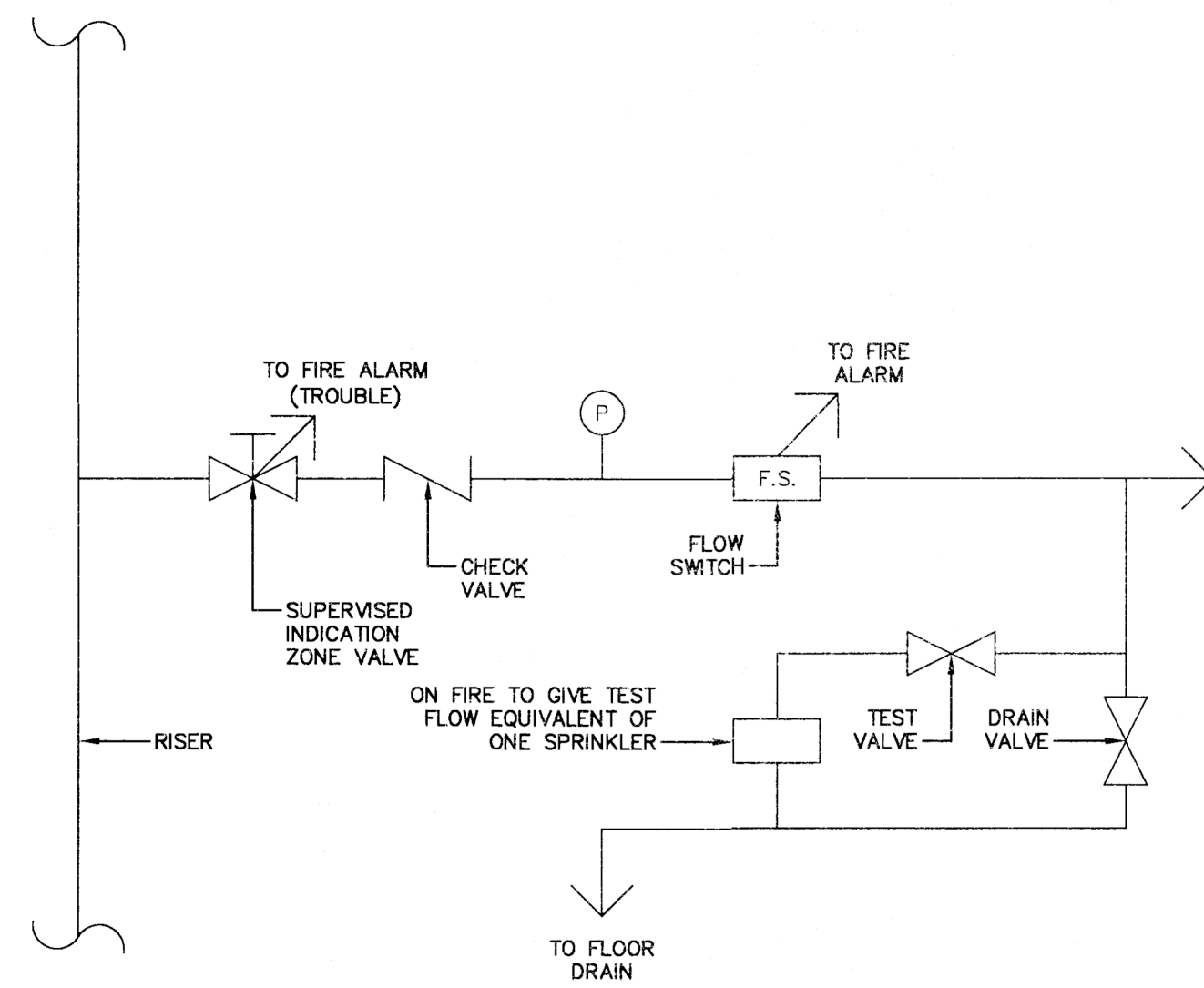
6 GAS CONNECTION DETAIL
SCALE: N.T.S.

DETAILS		REVISIONS		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal		mark	date	description	drawing prepared by
		0	2/8/19	TRACINGS AND MASTERS	FUSS & O'NEILL 148 HARTFORD ROAD MANCHESTER, CONNECTICUT
					date
					02/08/19
					scale
					NTS
					project
					BRIDGEPORT MENTAL HEALTH CENTER ENERGY IMPROVEMENT DESIGN
					drawn by
					JLT
					approved by
					EYL
					drawing no.
					ME506
					BRIDGEPORT_CT
					CAD no.
					20050024 D50.dwg
					project no.
					BI-MH-111

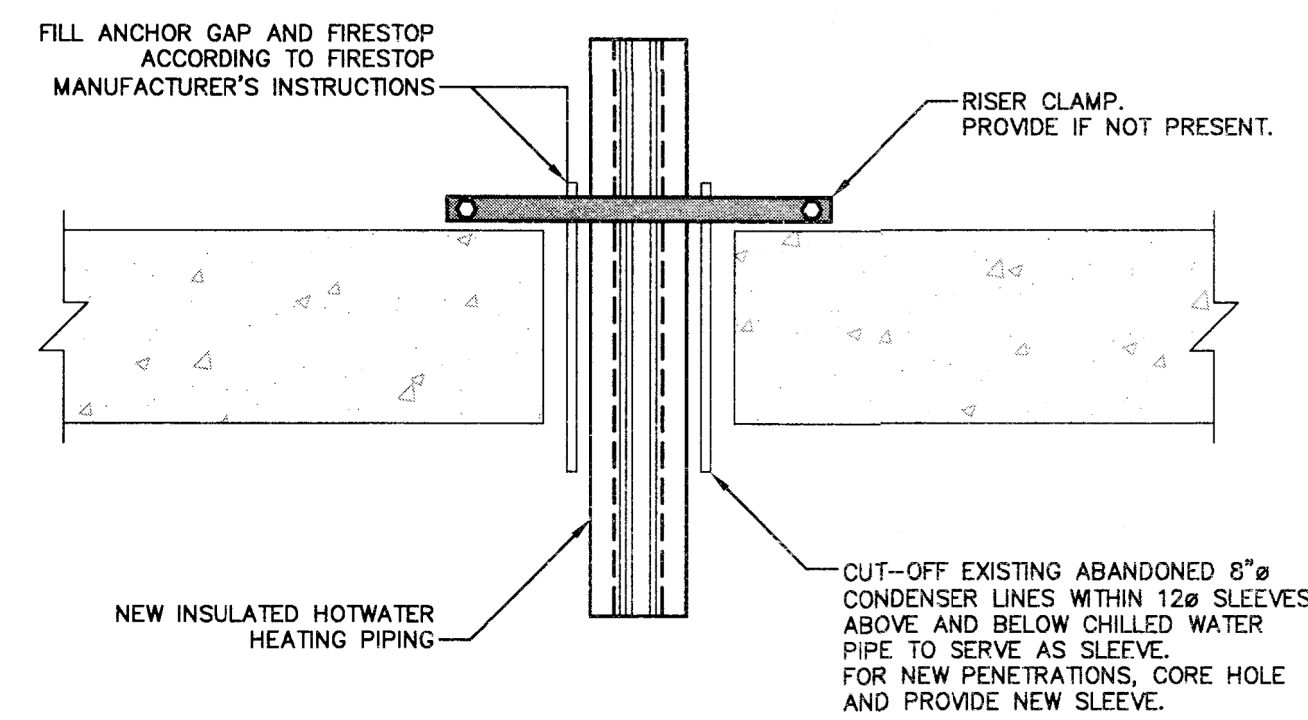
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3 ROOF VENT PENETRATION DETAIL
SCALE: N.T.S.

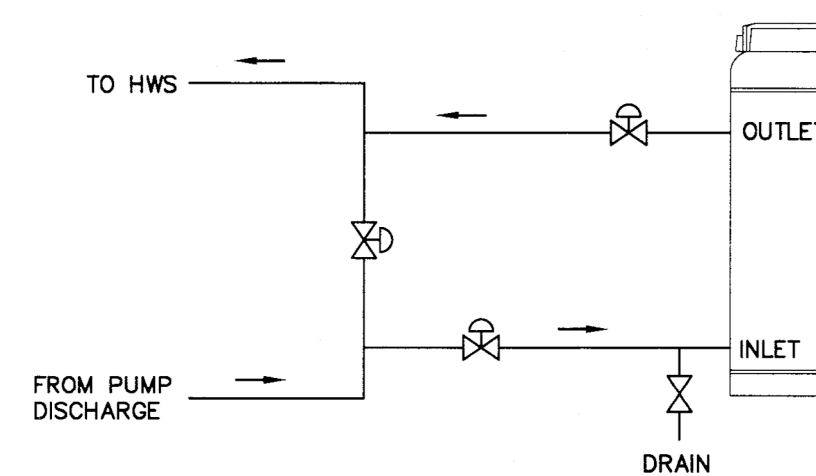


2 CONNECTION DETAIL - MECHANICAL ROOM SPRINKLER SYSTEM
SCALE: N.T.S.



1 PIPE - FLOOR PENETRATION DETAIL
SCALE: N.T.S.

NOTES:
1. CHEMICAL FEEDER WILL BE INSTALLED DOWNSTREAM OF NEW PUMP SETS LOCATED IN BASEMENT, 2ND FLOOR AND 8TH FLOOR MECHANICAL ROOMS.



4 CHEMICAL FEEDER DETAIL
SCALE: N.T.S.

DETAILS			STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
drawing title	professional seal		drawing prepared by	date
			FUSS & O'NEILL 146 HARTFORD ROAD MANCHESTER, CONNECTICUT	02/08/19
			project	scale
			BRIDGEPORT MENTAL HEALTH CENTER ENERGY IMPROVEMENT DESIGN	NTS
			BRIDGEPORT, CT	drawn by
			CAD no. 20050024.D50.dwg	JLT
			project no. BI-MH-111	approved by
				EYL
				drawing no.
				ME507

PUMP SCHEDULE
(BASED ON TACO)

UNIT	SERVING	MODEL	TYPE	GPM	HEAD (FT)	IMPELLER DIAMETER	PUMP EFF.	SUCTION DIFF. MODEL	TRIPLE DUTY VALVE	MOTOR			ELECTRICAL	
										HP	BHP	RPM	VOLTS	PHASE
SP-1 & 2	B-1 & B-2 GROUND FLOOR	F11206D	END SUCTION	38	20	6.6	64	SD020020-5	MPV015-4	0.75	0.29	1160	480	3
SP-3 & 4	B-3 & B-4 2ND FLOOR	F12009D	END SUCTION	186	58	8.2	71	SD040025-5	MPV030-4	5.0	3.55	1760	480	3
SP-5 & 6	B-5 & B-6 8TH FLOOR	F11207D	END SUCTION	89	25	5.8	60	SD030020-5	MPV015-4	1.5	0.92	1760	480	3

NOTES:

- SECONDARY PUMP SELECTIONS BASED ON TACO.
- PRIMARY PUMPS TO BE PROVIDED WITH BOILER MANUFACTURER.
- POWER WIRING, DISCONNECT, RACEWAY AND MOTOR STARTER BY ELECTRICAL CONTRACTOR.
- EACH PUMP SHALL BE BRONZE-FITTED.
- INSTALLING CONTRACTOR TO PROVIDE VIBRATION CONTROLS & SEISMIC BRACING.
- PREMIUM EFFICIENCY INVERTER-DUTY MOTORS ON ALL PUMPS.
- SECONDARY PUMPS SHALL BE OPERATED BY VARIABLE SPEED DRIVE.

HEATING COIL SCHEDULE
(BASED ON TRANE)

AHU	FLR	ZONE	UNIT	COIL MODEL	EAT DEG F	LAT DEG F	EWT DEG F	LWT DEG F	GPM	WPD	TOTAL MBH	CFM	FACE VEL. FPM	FACE DIMENSIONS			# ROWS
														HEIGHT (N)	LENGTH (N)	AREA (FT2)	
AH-1	G	G EAST	HC-1A & HC-1B	D5WB48	60	95	180	150	14.5	0.43	218	5750	383	54	48	18.0	1
AC-2	G	G WEST	HC-2A & HC-2B	D5WB48	60	95	180	150	14.5	0.43	218	5750	383	48	45	15.0	1
AC-3	1	EAST & WEST	HC-3A & HC-3B	D5WB54	60	95	180	150	15.2	0.44	228	6000	333	54	48	18.0	1
AC-4	2	EAST, WEST & INTERIOR	HC-4A & HC-4B	D5WB54	60	95	180	150	17.7	0.59	266	7000	389	54	48	18.0	1
AC-5	3	EAST, WEST & CAFETERIA	HC-5A & HC-5B	D5WB54	60	95	180	150	25.7	1.23	385	10150	564	54	48	18.0	1
AC-6	4	EAST & WEST	HC-6A & HC-6B	D5WB42	60	95	180	150	12.7	0.36	191	5032	479	42	36	10.5	1
AC-7	5	EAST & WEST	HC-7A & HC-7B	D5WB48	60	95	180	150	13.7	0.38	205	5400	360	48	45	15.0	1
AC-8	6	EAST & WEST	HC-8A & HC-8B	D5WB48	60	95	180	150	13.7	0.38	205	5400	360	48	45	15.0	1
AC-9	7	EAST & WEST	HC-9A & HC-9B	D5WB48	60	95	180	150	13.7	0.38	205	5400	360	48	45	15.0	1
AC-10	8	EAST & WEST	HC-10A & HC-10B	D5WB54	60	95	180	150	16.0	0.98	240	6315	351	54	48	18.0	1

NOTES:

- ENTERING AIR FRACTIONS WHICH AFFECT ENTERING AIR TEMPERATURES TO BE CONFIRMED BY BALANCER.
- CONTRACTOR SHALL FIELD VERIFY COIL DIMENSIONS.
- PRE-CONSTRUCTION BALANCING (MEASUREMENTS, NOT ADJUSTMENTS) SHALL BE COMPLETE AND REPORT REVIEWED BY ENGINEER BEFORE COILS ARE SUBMITTED OR ORDERED. SEE SPECIFICATION SECTION 23 05 93.

CONDENSING GAS BOILER SCHEDULE
(BASED ON CAMUS DYNAMAX HS)

UNIT	LOCATION	MODEL	INPUT MBH	MAX OUTPUT MBH	EWT DEG F	LWT DEG F	HEAD LOSS (FT)	MAX P (PSI)	GPM	ELECTRICAL			
										VOLTS	PH	MOCP	FLA
B-1	BASEMENT	DMH0151	150	139.5	150	180	10.4	160	9.5	120	1	15	4
B-2	BASEMENT	DMH0151	150	139.5	150	180	10.4	160	9.5	120	1	15	4
B-3	2ND FLOOR	DMH0701	700	651.0	150	180	18.2	160	45.3	120	1	15	6
B-4	2ND FLOOR	DMH0701	700	651.0	150	180	18.2	160	45.3	120	1	15	6
B-5	8TH FLOOR	DMH0391	399	371.0	150	180	8.4	160	25.2	120	1	15	4
B-6	8TH FLOOR	DMH0391	399	371.0	150	180	8.4	160	25.2	120	1	15	4

NOTES:

- PRIMARY PUMP SHALL BE INTERNAL TO BOILER UNIT.
- PROVIDE CONDENSATE NEUTRALIZER KIT BY MANUFACTURER:
 - PART NUMBER 90-15100-00 FOR B-1 & B-2.
 - PART NUMBER 90-100030-01 FOR B-3 THROUGH B-6.
 - NEUTRALIZER KIT SHALL BE INTERNAL TO BOILER UNIT.
- CONTROLLER IS INTEGRAL WITH BOILER UNIT. PROVIDE GATEWAY PROTOCOL CONVERTER FOR BACNET COMMUNICATION.
- PROVIDE ON/OFF STATUS MONITORING CONTACTS.
- PROVIDE CONCENTRIC BOILER VENT KIT.

TANK SCHEDULE
(BASED ON BELL & GOSSETT)

UNIT	SERVING	MODEL	SIZE	CAPACITY (GPM)	VOLUME		NPT (IN)	INITIAL PSI	MWP (PSI)	Cv
					TOTAL	ACC.				
AST-1	B-1 & B-2 GROUND FLOOR	R-3N	10.75D X 26.9H	190	-	-	3	-	125	119
AST-2	B-3 & B-4 2ND FLOOR	R-3N	10.75D X 26.9H	190	-	-	3	-	125	119
AST-3	B-5 & B-6 8TH FLOOR	R-3N	10.75D X 26.9H	190	-	-	3	-	125	119
ET-1	B-1 & B-2 GROUND FLOOR	HFT-30	11D X 14H	-	4.4	2.5	1/2	12	100	-
ET-2	B-3 & B-4 2ND FLOOR	HFT-60V	15.375D X 47.5H	-	32	11.3	1	12	100	-
ET-3	B-5 & B-6 8TH FLOOR	HFT-90	15.375D X 21H	-	14	11.3	1/2	12	100	-

NOTES:


- AST'S TO BE SUPPLIED WITH STRAINER.

MOTOR REPLACEMENT SCHEDULE
(BASED ON TRANE AMERICAN STANDARD)

FAN TAG	AREA SERVED	NOMINAL FAN MOTOR HP	VOLTAGE/#	VFD
AC2 SF	GND FL WEST	15.0	460 / 3	NO
AC2 RF	GND FL WEST	3.0	460 / 3	NO
AH1 SF	GND FL EAST	10.0	460 / 3	NO
AH1 RF/EF7	GND FL EAST	3.0	460 / 3	NO
AC3 SF	1ST FL	25.0	460 / 3	NO
AC3 RF	1ST FL	5.0 NOTE 1	460 / 3	NO
AC4 SF	2ND FL	20.0	460 / 3	NO
AC4 RF	2ND FL	5.0 NOTE 1	460 / 3	NO
AC5 SF	3RD FL	25.0	460 / 3	NO
AC5 RF	3RD FL	5.0	460 / 3	NO
AC6 SF	4TH FL	15.0	460 / 3	NO
AC6 RF	4TH FL	3.0	460 / 3	NO
AC7 SF	5TH FL	15.0	460 / 3	NO
AC7 RF	5TH FL	2.0	460 / 3	NO
AC8 SF	6TH FL	20.0	460 / 3	NO
AC8 RF	6TH FL	2.0	460 / 3	NO
AC9 SF	7TH FL	15.0	460 / 3	NO
AC9 RF	7TH FL	2.0	460 / 3	NO
AC10 SF	8TH FL	25.0	460 / 3	NO
AC10 RF	8TH FL	5.0	460 / 3	NO

NOTES:

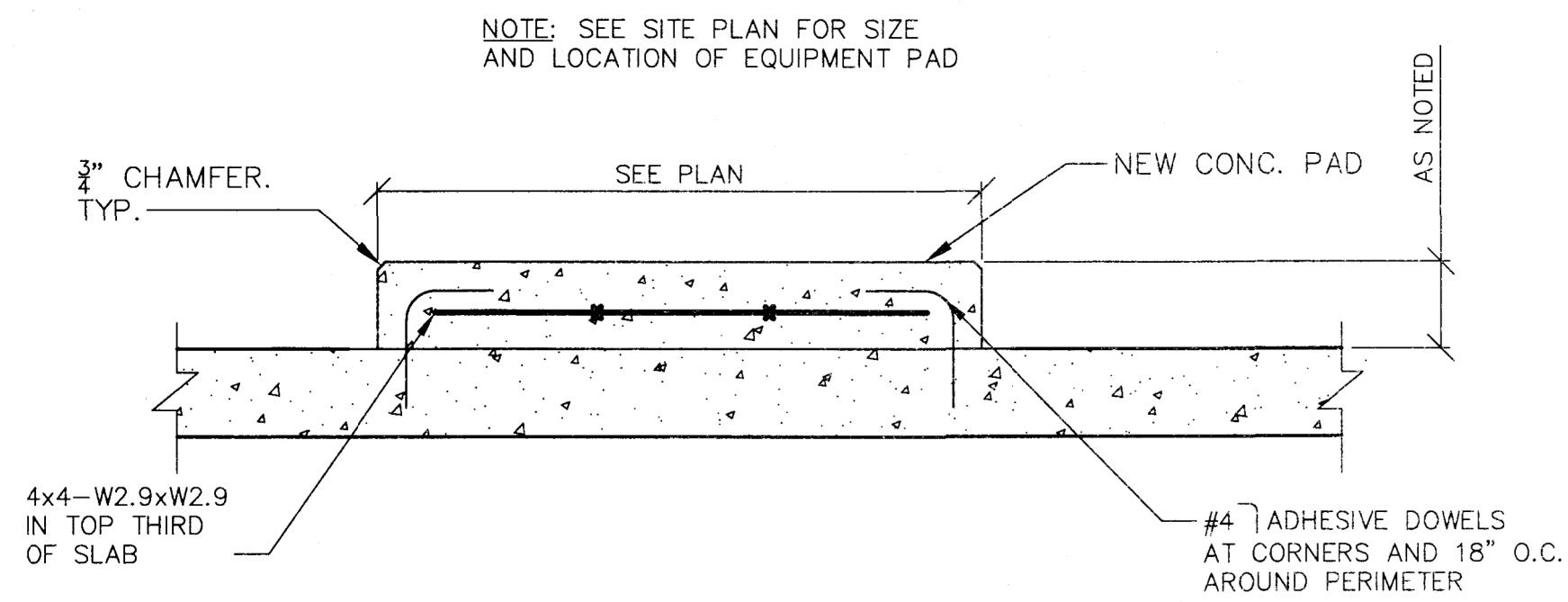
- MOTOR NAMEPLATE IS MISSING. CONTRACTOR TO VERIFY MOTOR HORSEPOWER.
- ELECTRICAL CONTRACTOR SHALL DISCONNECT AND RECONNECT EXISTING MOTOR BRANCH CIRCUIT TO FACILITATE MOTOR REPLACEMENT. EXTEND EXISTING CONDUIT WIRING AS REQUIRED.
- CONTRACTOR TO VERIFY VOLTAGE AND PHASE OF ALL MOTORS IN THE FIELD PRIOR TO INSTALLATION.
- POWER AND WIRING BY DIVISION 26.
- MOTOR BY DIVISION 23.

drawing title MECHANICAL SCHEDULES		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS	drawing prepared by FUSS & O'NEILL 146 HARTFORD ROAD MANCHESTER, CONNECTICUT	date 02/08/19
	mark	date	description
	0	2/8/19	TRACINGS AND MASTERS
project BRIDGEPORT MENTAL HEALTH CENTER ENERGY IMPROVEMENT DESIGN		drawing no. ME601	approved by EYL
CAD no. 20050204.D50.dwg		project no. BI-MH-111	drawing no.

GENERAL NOTES:

THE WORK SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED IN ACCORDANCE WITH THE STRUCTURAL REQUIREMENTS FOR THE 2015 CONNECTICUT STATE BUILDING CODE, EXCEPT AS AMENDED, ALTERED OR DELETED BY THE ADDITIONAL PROVISIONS IN THE CONNECTICUT SUPPLEMENT.

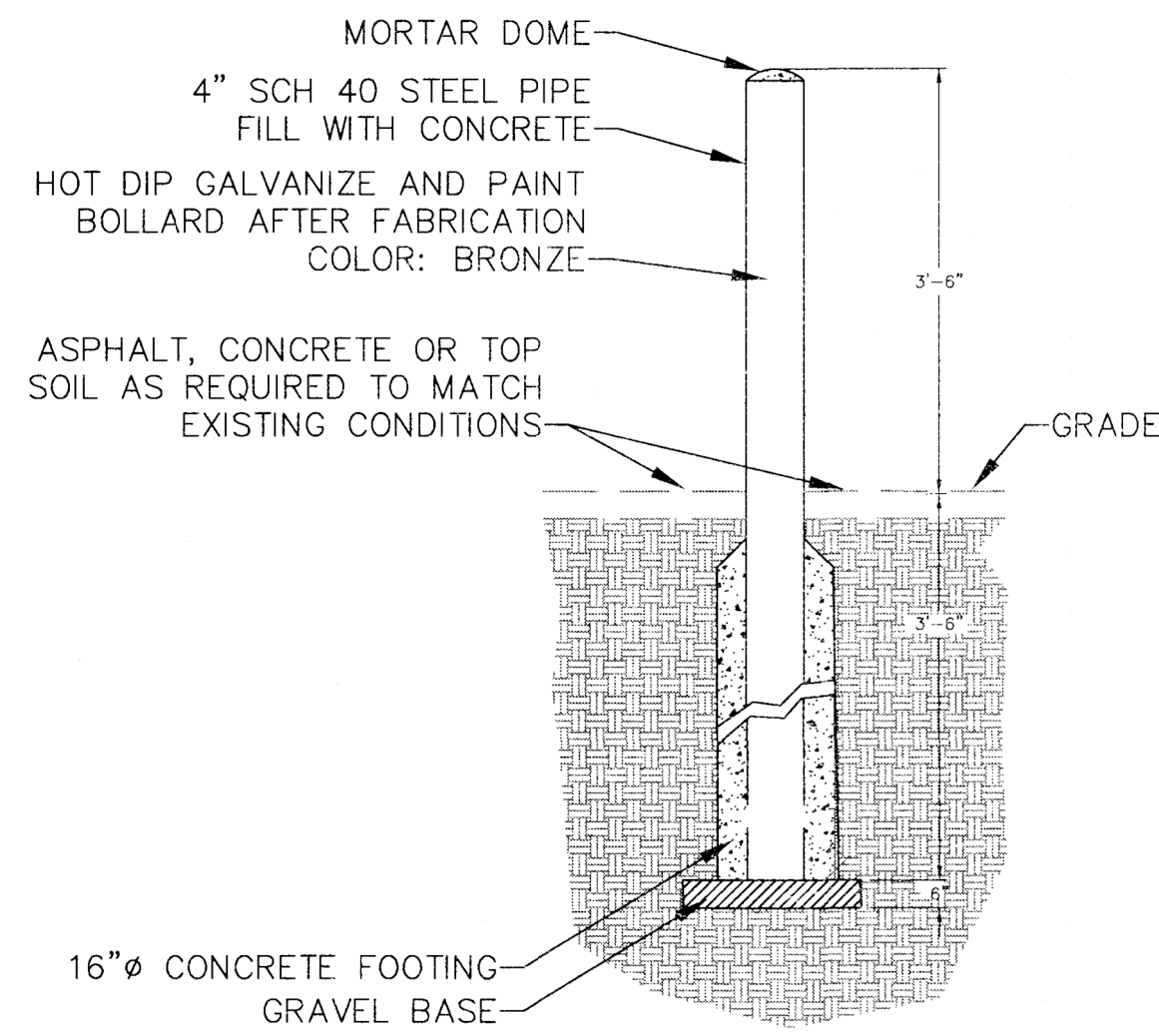
1. ALL STRUCTURAL WORK SHOWN OR SPECIFIED ON THESE DRAWINGS IS SUBJECT TO REVIEW BY THE STRUCTURAL ENGINEER OF RECORD. ASPECTS OF THE WORK FOUND NOT IN CONFORMANCE WITH THE STRUCTURAL DOCUMENTS SHALL BE CORRECTED AS DIRECTED BY THE ENGINEER.
2. DIMENSIONS OF EXISTING STRUCTURES SHOWN ON THESE PLANS HAVE BEEN TAKEN FROM THE ORIGINAL DESIGN DRAWINGS AND ASSUMED CORRECT, BUT ARE NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS IN THE FIELD.
3. THE TERM 'BEYOND' USED IN SECTION VIEWS OF STRUCTURAL ELEMENTS INDICATES THAT SAID ELEMENT IS NOT IN THE LINE OF THE SECTION CUT; HOWEVER, IT PROVIDES A GREATER UNDERSTANDING OF THE STRUCTURE.
4. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF REINFORCING STEEL, METAL FLOOR AND ROOF DECK AND STRUCTURAL STEEL FOR REVIEW BEFORE PROCEEDING WITH WORK. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND ACCEPT FULL RESPONSIBILITY FOR DIMENSIONAL CORRECTNESS. SHOP DRAWINGS SHALL BEAR THE REVIEW AND APPROVAL STAMP OF THE CONTRACTOR, IN ACCORDANCE WITH THE GENERAL CONDITIONS.
5. STRUCTURAL PLANS SHALL NOT BE REPRODUCED IN WHOLE OR IN PART FOR USE AS SHOP DRAWINGS OR ERECTION PLANS. (THERE WILL BE NO RELAXATION OF THIS RESTRICTION FOR ANY TRADE).



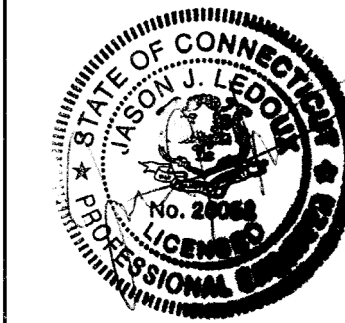
2 CONCRETE PAD DETAIL
SCALE: N.T.S.

CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
2. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 AND BE DETAILED IN ACCORDANCE WITH ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
3. REBARS SHALL HAVE A MINIMUM CONCRETE COVER AS FOLLOWS:
CONCRETE DEPOSITED AGAINST GROUND.....3 IN.
CONCRETE EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
FOR BARS #5 AND LARGER.....2 IN.
FOR BARS SMALLER THAN #5.....1 1/2 IN.
CONCRETE NOT EXPOSED TO THE WEATHER OR THE GROUND:
SLABS AND WALLS.....3/4 IN.
4. ALL REINFORCING BARS SHALL BE CONTINUOUS AND LAPPED A MINIMUM OF 48 BAR DIAMETERS AT ALL SPLICES, CORNERS, AND INTERSECTIONS UNLESS NOTED OTHERWISE.
5. ALL REINFORCEMENT SHALL BE SECURELY TIED IN ITS PROPOSED LOCATION PRIOR TO AND DURING PLACEMENT OF CONCRETE USING APPROVED CHAIRS, SPACERS AND TIE WIRE AS REQUIRED. NO BARS SHALL BE CUT OR OMITTED IN THE FIELD WITHOUT THE APPROVAL OF THE ENGINEER.
6. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185, WITH A MINIMUM YIELD STRENGTH OF 75 KSI. LAP EDGES AND ENDS OF FABRIC SHEETS A MINIMUM OF ONE MESH SPACING PLUS 2 INCHES, AND WIRE TOGETHER. ALTERNATIVELY, SLABS-ON-GRADE MAY BE REINFORCED WITH FIBER REINFORCEMENT, SUCH AS FIBERMESH, APPLIED AT A DOSAGE RATE OF NO LESS THAN 1.5 LBS/CJ YD.
7. CONCRETE FOR FLOOR SLABS SHALL BE NORMAL WEIGHT CONCRETE AND SHALL DEVELOP A COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS. CONCRETE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 3/4 INCH, A MINIMUM CEMENT CONTENT OF 560 LBS/CU YD., AND A MAXIMUM SLUMP OF 4 INCHES.
8. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4 INCH CHAMFER UNLESS NOTED OTHERWISE.
9. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE AIR-ENTRAINED.
10. SIZES AND LOCATIONS OF ALL REQUIRED EMBEDDED ITEMS FOR ALL TRADES SUCH AS ANCHOR BOLTS, PIPING SLEEVES, HOLDOWN ANCHORS, ETC., SHALL BE COORDINATED BY THE CONTRACTOR WITH OTHER TRADES.
11. CONSTRUCTION JOINTS SHALL BE DETAILED AND LOCATED ON SHOP DRAWINGS AND APPROVED BY THE ENGINEER. UNLESS SHOWN OTHERWISE, CONSTRUCTION JOINTS ARE TO BE KEYPED AND PROVIDE FOR CONTINUITY OF REINFORCING STEEL. CONSTRUCTION JOINTS ARE TO BE LOCATED WHERE CONSTRUCTION OPERATIONS ARE SUSPENDED FOR 30 MINUTES OR MORE.



1 BOLLARD DETAIL
SCALE: N.T.S.

drawing title STRUCTURAL DETAILS		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
professional seal	REVISIONS		drawing prepared by FUSS & O'NEILL 146 HARTFORD ROAD MANCHESTER, CONNECTICUT
	mark	date	description
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project BRIDGEPORT MENTAL HEALTH CENTER		date 02/08/19	scale NTS
project ENERGY IMPROVEMENT DESIGN		drawing by JLT	approved by EYL
BRIDGEPORT, CT		drawing no. S500	
CAD no. 20050024.D50.dwg	project no. BI-MH-111		