DRA

Additions and Renovations
Platt Technical High School
Milford, CT

ADDENDUM NO. 1

November 8, 2019

The original Specifications and Drawings dated October 11, 2019 for the above-captioned project are amended as stated in this Addendum. This Addendum consists of 2 (two) pages, plus the following attachments.

ATTACHMENTS

MECHANCIAL DRAWINGS

Entire Mechanical Drawing Set which includes the following drawings: (47 pages)
M1-1-1A, M1-1-1B, M1-1-1C, M1-1-1D, M1-1-1E, M1-1-1F, M1-1-1G, M1-1-2B, M1-1-2C, M1-1-2D, M1-1-2E, M1-1-MB, M1-1-ME, M1-1-MF, M1-2-1A, M1-2-1B, M1-2-1C, M1-2-1D, M1-2-1E, M1-2-1F, M2-1-1A, M2-1-1B, M2-1-1C, M2-1-1D, M2-1-1E, M2-1-1F, M2-1-1G, M2-1-2B, M2-1-2C, M2-1-2D, M2-1-2E, M2-1-MB, M2-1-ME, M2-1-MF, M2-3-1A, M2-3-1C, M3-1-1, M3-1-2, M3-1-3, M4-1-1, M4-1-2, M4-1-3, M4-1-4, M5-1-1, M5-1-2, M5-1-3, M5-1-4.

AMENDMENTS TO PROJECT MANUAL

The Morganti Group Inc., Construction Manager at Risk, has recently moved their office. Their new address is:

The Morganti Group Inc.
100 Reserve Road, Suite D 210
Danbury CT 06810

Any reference to Morganti's old address, within the Bid Documents, should be replaced with the address above.

DIVISION 23 – HEATING VENTILATION AND AIR CONDITIONING

ADD 1-001 **SECTION 23 36 00 – AIR TERMINAL UNITS**
Page 3, Article 2.1, at list of MANUFACTURERS, add:
5. Johnson Controls.

ADD 1-002 **SECTION 23 64 13 – CENTRIFUGAL WATER CHILLERS**
Page 4, Article 2.1, at list of MANUFACTURERS, add:
5. Johnson Controls.

AMENDMENTS TO DRAWINGS

MECHANICAL

ADD 1-003 **MECHANICAL DRAWINGS**

All mechanical drawings reissued to show duct sizes.

Reissued Drawing include:
M1-1-1A, M1-1-1B, M1-1-1C, M1-1-1D, M1-1-1E, M1-1-1F, M1-1-1G, M1-1-2B, M1-1-2C, M1-1-2D, M1-1-2E, M1-1-MB, M1-1-ME, M1-1-MF, M1-2-1A, M1-2-1B, M1-2-1C, M1-2-1D, M1-2-1E, M1-2-1F, M2-1-1A, M2-1-1B, M2-1-1C, M2-1-1D, M2-1-1E, M2-1-1F, M2-1-1G, M2-1-2B, M2-1-2C, M2-1-2D, M2-1-2E, M2-1-MB, M2-1-ME, M2-1-MF, M2-3-1A, M2-3-1C, M3-1-1, M3-1-2, M3-1-3, M4-1-1, M4-1-2, M4-1-3, M4-1-4, M5-1-1, M5-1-2, M5-1-3, M5-1-4.

E N D O F A D D E N D U M N O . 1

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
3. SEE DRAWINGS M5-1-1, M5-1-2, M5-1-3 & M5-1-4 FOR CONTROLS DIAGRAMS.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS ON GENERAL CONDITIONS, MATERIAL SPECIFICATIONS AND INSTALLATION.
5. PROVIDE CLEARANCE ADJACENT TO EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED TO PROPERLY MAINTAIN EQUIPMENT. PROVIDE MINIMUM 42" CLEARANCE IN FRONT OF EQUIPMENT, PIPE DROPS, ETC. CLEARANCES SHALL BE IDENTIFIED ON COORDINATION SHOP DRAWINGS.
6. PROVIDE REMOTELY CONTROLLED VOLUME DAMPERS AT ALL SHEETROCK AND METAL CEILINGS AND WHERE VOLUME DAMPERS ARE NOT ACCESSIBLE THRU ACCESSIBLE CEILINGS WITH STANDARD STEP LADDER.
7. VOLUME DAMPERS SHALL BE INSTALLED MINIMUM 8'-0" FROM EACH DIFFUSER, GRILLE AND REGISTER WHERE EVER POSSIBLE. FLEXIBLE CONNECTIONS SHALL NOT EXCEED 8'-0" IN LENGTH.
8. NOT ALL BRANCH PIPING TO DEVICES ARE SHOWN. PROVIDE BRANCH PIPING TO ALL DEVICES PER DETAILS AND SCHEDULES. PIPE BRANCHES SHALL BE MINIMUM 3/4" DIAMETER UNLESS NOTED OTHERWISE.
9. ALL PENETRATIONS THROUGH FULL HEIGHT CORRIDOR WALLS SHALL BE SEALED. REFER TO ARCHITECTURAL DRAWINGS FOR TYPES OF WALLS AND REQUIREMENTS FOR SEALING.
10. DUCTWORK AND PIPING LAYOUTS DO NOT SHOW ALL TRANSITIONS AND OFFSETS THAT WILL BE REQUIRED. PROVIDE COORDINATION DRAWINGS AND OFFSET DUCTWORK AND PIPING AS REQUIRED.

MECHANICAL DUCTWORK KEY NOTES

- M1 OFFSET DUCT IN CEILING SPACE TO INSTALL DUCT IN CENTER OF THE HOLLOW CORE OF THE MEZZANINE FLOOR PLANK.
- M2 TERMINATE DUCT WITH FLANGED CONNECTION AND 1/2"x1/2" GALVANIZED STEEL MESH.
- M3 INSTALL THIS SECTION OF DUCT IN SPACE BETWEEN PRE-CAST TEES.
- M4 PROVIDE 60"X42" PLENUM AT CONNECTION TO ROOF HOOD. PLENUM SHALL TERMINATE 12" BELOW ROOF DECK.

CONSTRUCTION GENERAL NOTES

GENERAL NOTES: ALL ELECTRICAL, FIRE ALARM, AUDIO VISUAL, TECHNOLOGY AND SECURITY SYSTEMS AND COMPONENTS INCLUDING BUT NOT LIMITED TO CONDUITS, BACK-BOXES, DEVICES ETC., INSTALLED AT THE ARCHITECTURAL PRECAST CONCRETE PANELS SHALL BE CAST INTO THE PRE-CAST CONCRETE PANELS IN THE FACTORY TO AVOID EXPOSED TO VIEW EXTERIOR OR INTERIOR CONDITIONS. CM-R MUST COORDINATE ALL REQUIRED ELECTRICAL PASS WAYS AND COMPONENTS WITH THE PRECAST SUB-CONTRACTOR AS PART OF THE MEP&FP COORDINATION PROCESS, AND PRE-CAST SHOP DRAWINGS COORDINATION PROCESS.
ALL MECHANICAL, ELECTRICAL AND FIRE PROTECTION (MEP&FP) SYSTEMS AND COMPONENTS THAT REQUIRE ATTACHMENT TO THE ARCHITECTURAL PRE-CAST CONCRETE PANELS SHALL BE COORDINATED WITH THE PRE-CAST CONCRETE SUB-CONTRACTOR DURING COORDINATION AND SHOP DRAWING PROCESS. NO ATTACHMENT OF THE MEP&FP COMPONENTS TO THE PRE-CAST CONCRETE PANELS SHALL BE ALLOWED IN THE FIELD WITHOUT PRIOR REVIEW AND APPROVAL BY THE PRE-CAST CONCRETE SUB-CONTRACTOR. NO CUTTING AND/OR PATCHING OF THE PRE-CAST CONCRETE PANELS IS ALLOWED IN THE FIELD. ALL PENETRATIONS THROUGH PRECAST COMPONENTS INCLUDING WALLS, DOUBLE TEES AND HOLLOW CORE PLANK FLOORS AND ROOFS SHALL BE COORDINATED BY THE SUB-CONTRACTORS AND THE CM-R PRIOR TO MANUFACTURING OF THE PRECAST CONCRETE COMPONENTS.

FIRST FLOOR - AREA B: ALL MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION (MEP&FP) SYSTEMS COMPONENTS THAT REQUIRE PENETRATIONS THROUGH PRE-CAST CONCRETE PLANK AT MEZZANINES FLOOR STRUCTURE SHALL BE COORDINATED WITH THE PRE-CAST PLANK CORE LOCATIONS. PENETRATIONS THROUGH THE PRE-CAST HOLLOW CORE PLANK, ARE ONLY ALLOWED THROUGH THE CORES. CM-R MUST COORDINATE ALL OPENINGS IN THE PRE-CAST CONCRETE PLANK AS PART OF THE MEP&FP COORDINATION PROCESS.

MECHANICAL, ELECTRICAL AND FIRE PROTECTION (MEP&FP) CONTRACTORS REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS, SECTIONS AND DETAILS DRAWINGS FOR LOCATIONS OF THE SOUND BARRIER CEILING SYSTEM. THIS IS A SPECIALTY SOUND ISOLATION SUSPENDED CEILING SYSTEM. MEP&FP SYSTEMS COMPONENTS ARE NOT ALLOWED TO BE ATTACHED/SUSPENDED, OR INSTALLED ABOVE THIS CEILING SYSTEM UNLESS SPECIFICALLY NOTED OTHERWISE. EACH SUB-CONTRACTOR SHALL PROVIDE UNISTRUT SUPPORTS ATTACHED TO BOTTOM CORD OF STRUCTURAL STEEL BEAMS OR INSERTS PROVIDED AS PART OF THE PRECAST DOUBLE TEES AS REQUIRED TO SUPPORT MEP&FP SYSTEMS COMPONENTS. SPECIALTY ACOUSTICALLY RATED ACCESS PANELS MAY BE ALLOWED TO ACCESS MEP&FP SYSTEMS COMPONENTS LOCATED ABOVE THE SOUND BARRIER SYSTEM ON THE LIMITED BASES AT LOCATIONS SPECIFICALLY INDICATED ON THE MEP&FP DRAWINGS.

FIRST FLOOR - AREA E: ALL MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION (MEP&FP) SYSTEMS COMPONENTS THAT REQUIRE PENETRATIONS THROUGH PRE-CAST CONCRETE PLANK AT MEZZANINES FLOOR STRUCTURE SHALL BE COORDINATED WITH THE PRE-CAST PLANK CORE LOCATIONS. PENETRATIONS THROUGH THE PRE-CAST HOLLOW CORE PLANK, ARE ONLY ALLOWED THROUGH THE CORES. CM-R MUST COORDINATE ALL OPENINGS IN THE PRE-CAST CONCRETE PLANK AS PART OF THE MEP&FP COORDINATION PROCESS.

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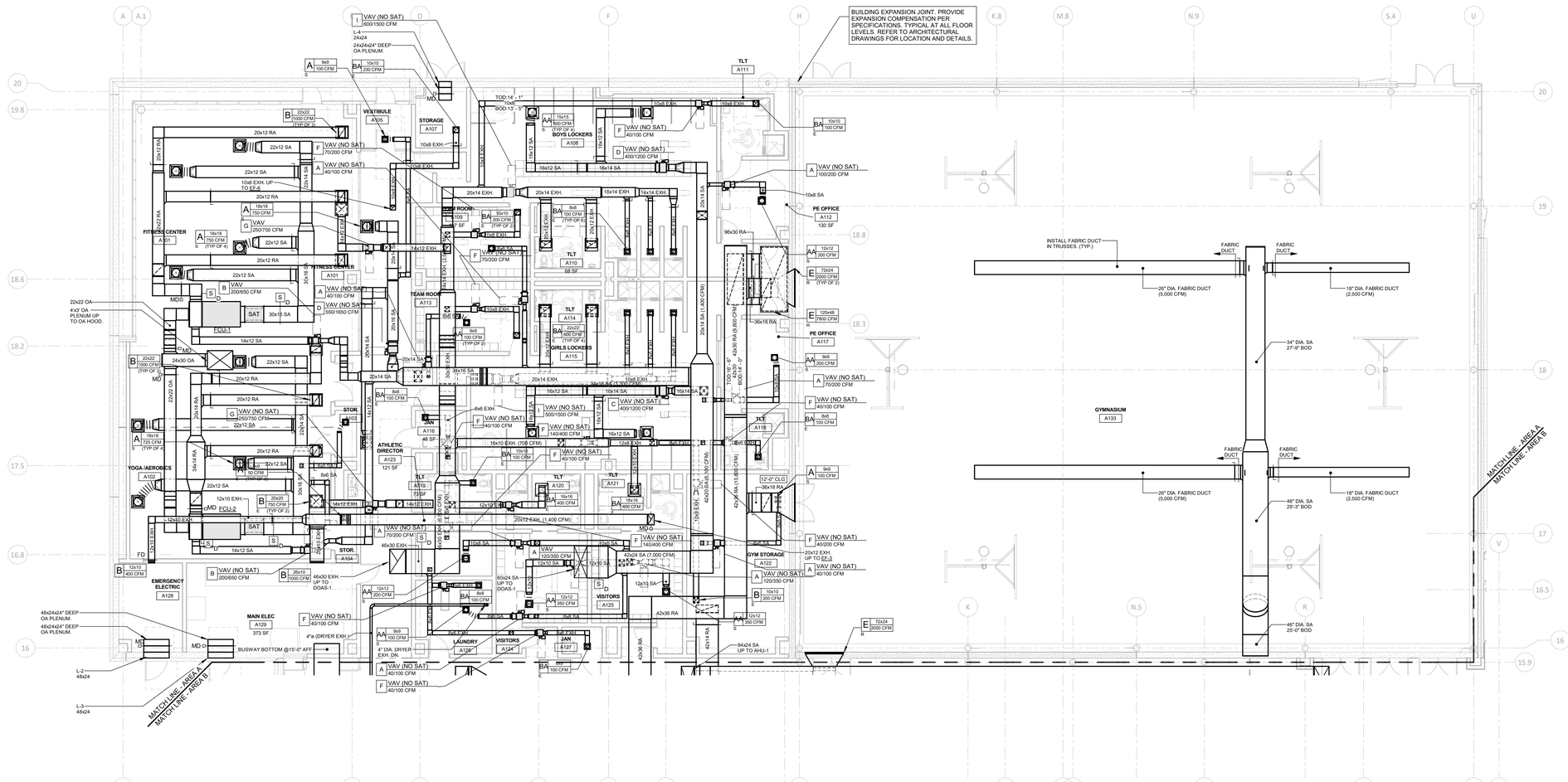
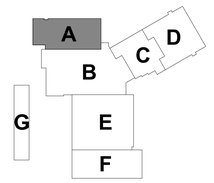
FIRST FLOOR - AREA F: ALL MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION (MEP&FP) SYSTEMS COMPONENTS THAT REQUIRE PENETRATIONS THROUGH PRE-CAST CONCRETE PLANK AT MEZZANINES FLOOR STRUCTURE SHALL BE COORDINATED WITH THE PRE-CAST PLANK CORE LOCATIONS. PENETRATIONS THROUGH THE PRE-CAST HOLLOW CORE PLANK, ARE ONLY ALLOWED THROUGH THE CORES. CM-R MUST COORDINATE ALL OPENINGS IN THE PRE-CAST CONCRETE PLANK AS PART OF THE MEP&FP COORDINATION PROCESS.
MECHANICAL, ELECTRICAL AND FIRE PROTECTION (MEP&FP) CONTRACTORS SHALL FOLLOW SPECIFIC DETAILS INDICATED ON THE DRAWINGS FOR ATTACHMENT TO THE DOUBLE TEES AND HOLLOW CORE PRECAST PLANK AT FLOORS AND ROOFS.

SECOND FLOOR AREA E: MECHANICAL, ELECTRICAL AND FIRE PROTECTION (MEP&FP) CONTRACTORS SHALL FOLLOW SPECIFIC DETAILS INDICATED ON THE DRAWINGS FOR ATTACHMENT TO THE DOUBLE TEES AND HOLLOW CORE PRECAST PLANK AT FLOORS AND ROOFS.



1 FIRST FLOOR MECHANICAL PLAN - AREA A
1/8" = 1'-0"



BID DOCUMENTS

drawing title: FIRST FLOOR MECHANICAL PLAN AREA A

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS		
mark	date	description
	11/8/2019	Addendum No.1

drawing prepared by: **Consulting Engineering Services, Inc.**
811 Middle St., Middletown, CT 06457

date: 10/11/2019
scale: As indicated
drawn by: BEK
approved by: BDW
drawing no.: **M1-1-1A**

project: **Additions and Renovations**
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.	DCS project no.	OSCGR project no.
	BI-RT-878 CM-R	900-0013

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
3. SEE DRAWINGS M5-1-1, M5-1-2, M5-1-3 & M5-1-4 FOR CONTROLS DIAGRAMS.
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1 FIRST FLOOR MECHANICAL PLAN - AREA B
1/8" = 1'-0"

BID DOCUMENTS

drawing title	FIRST FLOOR MECHANICAL PLAN AREA B
	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES
REVISIONS	mark: — ; date: 11/8/2019 ; description: Addendum No.1
drawing prepared by	**Consulting Engineering Services, Inc.** 911 Middle St., Middletown, CT 06457
date	10/11/2019
scale	As indicated
drawn by	BEK
approved by	BDW
project	**Additions and Renovations** **Platt Technical High School** 600 Orange Avenue Milford, CT 06461
drawing no.	**M1-1-1B**
CAD no.	
DCS project no.	BI-RT-878 CM-R
OSCGR project no.	900-0013

MECHANICAL NOTES

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1 FIRST FLOOR MECHANICAL PLAN - AREA C
1/8" = 1'-0"

BID DOCUMENTS

drawing title
FIRST FLOOR
MECHANICAL PLAN
AREA C

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS

mark	date	description
	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date 10/11/2019
scale As indicated
drawn by BEK
approved by BDW
drawing no. **M1-1-1C**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no. | DCS project no. BI-RT-878 CM-R | OSCGR project no. 900-0013

1 FIRST FLOOR MECHANICAL PLAN - AREA D
1/8" = 1'-0"

MECHANICAL NOTES

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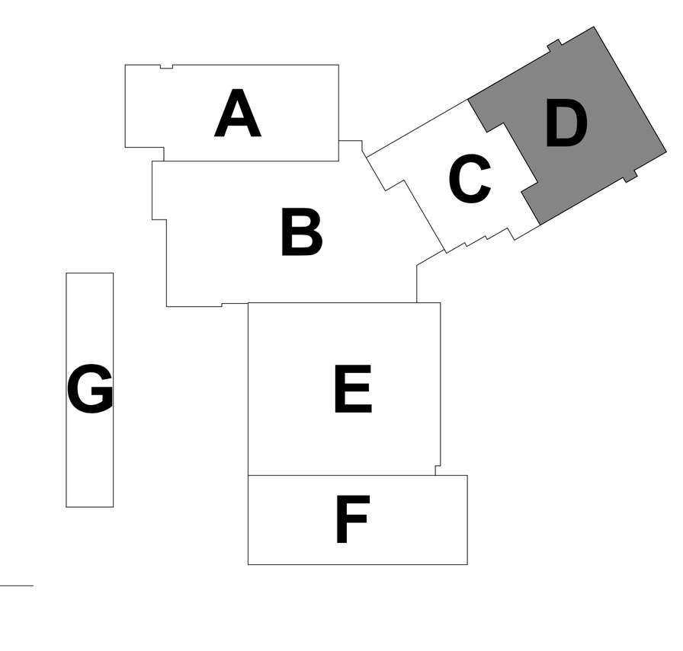
MECHANICAL DUCTWORK KEY NOTES

M1	OFFSET DUCT IN CEILING SPACE TO INSTALL DUCT IN CENTER OF THE HOLLOW CORE OF THE MEZZANINE FLOOR PLANK.
M2	TERMINATE DUCT WITH FLANGED CONNECTION AND 1/2"x1/2" GALVANIZED STEEL MESH.
M3	INSTALL THIS SECTION OF DUCT IN SPACE BETWEEN PRE-CAST TEES.
M4	PROVIDE 60"X42" PLENUM AT CONNECTION TO ROOF HOOD. PLENUM SHALL TERMINATE 12" BELOW ROOF DECK.



BID DOCUMENTS

drawing title
FIRST FLOOR
MECHANICAL PLAN
AREA D

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

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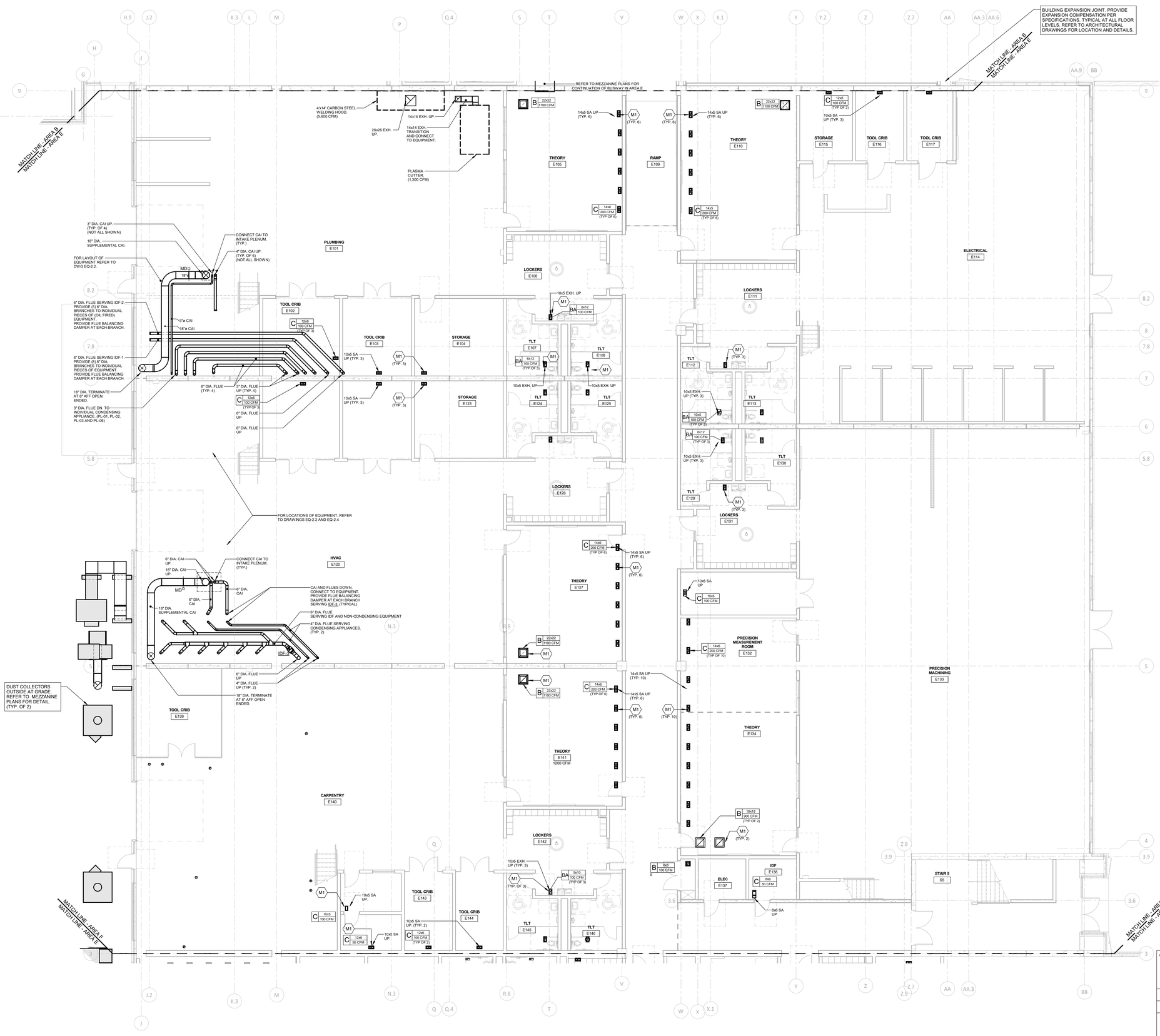
drawing no. M1-1-1D



1 FIRST FLOOR MECHANICAL PLAN - AREA E
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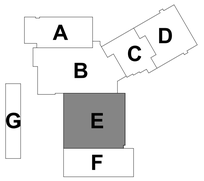

BID DOCUMENTS

drawing title
FIRST FLOOR MECHANICAL PLAN AREA E

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

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	11/8/2019	Addendum No.1

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811 Middle St., Middletown, CT 06457

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Platt Technical High School
600 Orange Avenue Milford, CT 06461

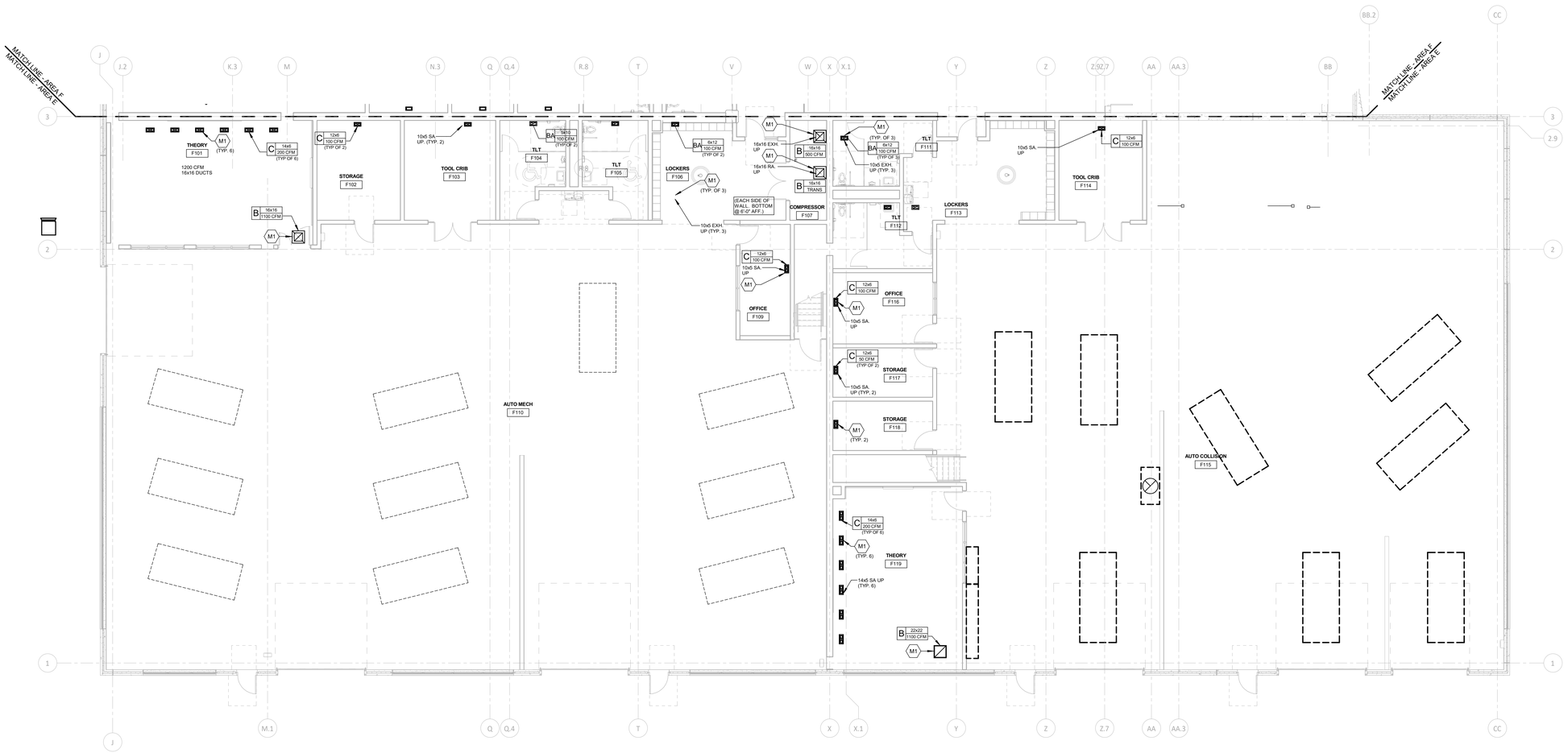
CAD no. | DCS project no. BI-RT-878 CM-R | OSCGR project no. 900-0013

MECHANICAL NOTES

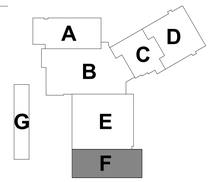
1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
3. SEE DRAWINGS M5-1-1, M5-1-2, M5-1-3 & M5-1-4 FOR CONTROLS DIAGRAMS.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS ON GENERAL CONDITIONS, MATERIAL SPECIFICATIONS AND INSTALLATION.
5. PROVIDE CLEARANCE ADJACENT TO EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED TO PROPERLY MAINTAIN EQUIPMENT. PROVIDE MINIMUM 42" CLEARANCE IN FRONT OF EQUIPMENT, PIPE DROPS, ETC. CLEARANCES SHALL BE IDENTIFIED ON COORDINATION SHOP DRAWINGS.
6. PROVIDE REMOTELY CONTROLLED VOLUME DAMPERS AT ALL SHEETROCK AND METAL CEILINGS AND WHERE VOLUME DAMPERS ARE NOT ACCESSIBLE THRU ACCESSIBLE CEILINGS WITH STANDARD STEP LADDER.
7. VOLUME DAMPERS SHALL BE INSTALLED MINIMUM 8'-0" FROM EACH DIFFUSER, GRILLE AND REGISTER WHERE EVER POSSIBLE. FLEXIBLE CONNECTIONS SHALL NOT EXCEED 8'-0" IN LENGTH.
8. NOT ALL BRANCH PIPING TO DEVICES ARE SHOWN. PROVIDE BRANCH PIPING TO ALL DEVICES PER DETAILS AND SCHEDULES. PIPE BRANCHES SHALL BE MINIMUM 3/4" DIAMETER UNLESS NOTED OTHERWISE.
9. ALL PENETRATIONS THROUGH FULL HEIGHT CORRIDOR WALLS SHALL BE SEALED. REFER TO ARCHITECTURAL DRAWINGS FOR TYPES OF WALLS AND REQUIREMENTS FOR SEALING.
10. DUCTWORK AND PIPING LAYOUTS DO NOT SHOW ALL TRANSITIONS AND OFFSETS THAT WILL BE REQUIRED. PROVIDE COORDINATION DRAWINGS AND OFFSET DUCTWORK AND PIPING AS REQUIRED.

MECHANICAL DUCTWORK KEY NOTES

- M1 — OFFSET DUCT IN CEILING SPACE TO INSTALL DUCT IN CENTER OF THE HOLLOW CORE OF THE MEZZANINE FLOOR PLANK.
- M2 — TERMINATE DUCT WITH FLANGED CONNECTION AND 1/2"x1/2" GALVANIZED STEEL MESH.
- M3 — INSTALL THIS SECTION OF DUCT IN SPACE BETWEEN PRE-CAST TEES.
- M4 — PROVIDE 60"X42" PLENUM AT CONNECTION TO ROOF HOOD. PLENUM SHALL TERMINATE 12" BELOW ROOF DECK.



1 FIRST FLOOR MECHANICAL PLAN - AREA F
1/8" = 1'-0"



BID DOCUMENTS

drawing title: FIRST FLOOR MECHANICAL PLAN AREA F

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS		
mark	date	description
	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date: 10/11/2019
scale: As indicated
drawn by: BEK
approved by: BDW

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no.: BI-RT-075 CM-R
OSCGR project no.: 900-0013

drawing no.: **M1-1-1F**

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
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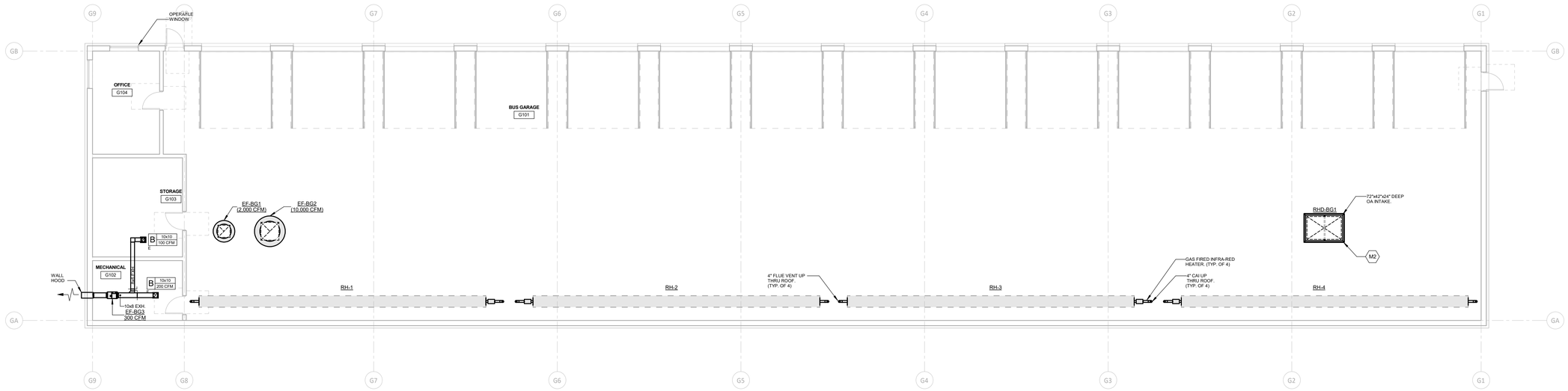
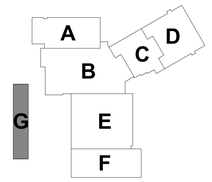


1 FIRST FLOOR MECHANICAL PLAN - AREA G - ALTERNATE NO. 2
1/8" = 1'-0"



BID DOCUMENTS

drawing title
FIRST FLOOR
MECHANICAL PLAN
AREA G - ALTERNATE NO. 2

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS

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drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date 10/11/2019
scale As indicated
drawn by BEK
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drawing no. **M1-1-1G**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no. BI-RT-075 CM-R
OSCGR project no. 900-0013

FIRE DAMPER NOTE FOR FLOOR PENETRATIONS

PROVIDE FIRE DAMPERS AT ALL DUCTWORK PENETRATIONS THROUGH THE 2ND FLOOR AND FLOOR OF THE MECHANICAL PENTHOUSE. AT EACH FIRE DAMPER, PROVIDE A DUCT ACCESS DOOR TO PROVIDE ACCESS FROM THE FLOOR ABOVE. EACH ACCESS DOOR SHALL BE MINIMUM 24"X24" AND SHALL BE INSTALLED AT 6" AFF TO THE BOTTOM. WHERE DUCT WIDTH IS LESS THAN 24", ACCESS DOOR SHALL BE WIDTH OF DUCT LESS 2". HEIGHT SHALL REMAIN 24". PROVIDE 24"X24" ACCESS PANEL IN THE PARTITION AT THE SAME HEIGHT TO ALLOW ACCESS TO THE DUCT ACCESS DOOR.

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
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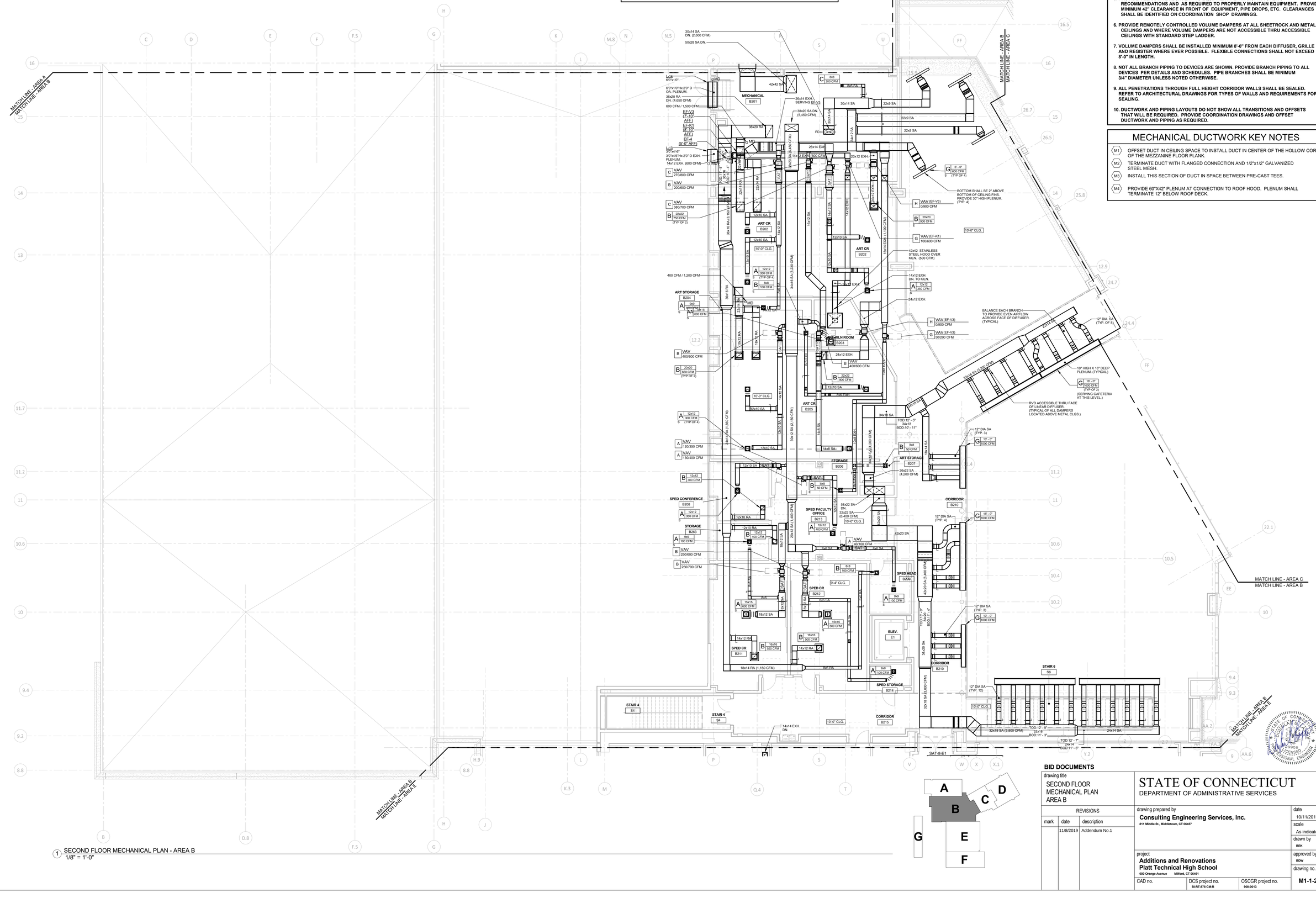

1 SECOND FLOOR MECHANICAL PLAN - AREA B
1/8" = 1'-0"

BID DOCUMENTS

drawing title: SECOND FLOOR MECHANICAL PLAN AREA B	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES
REVISIONS mark / date / description 11/8/2019 Addendum No.1	drawing prepared by: **Consulting Engineering Services, Inc.** 811 Middle St., Middletown, CT 06457
project: **Additions and Renovations** **Platt Technical High School** 600 Orange Avenue Milford, CT 06461	date: 10/11/2019 scale: As indicated drawn by: BEK approved by: BDW drawing no.: **M1-1-2B**
CAD no.	DCS project no.: BI-RT-878 C&R OSCGR project no.: 900-0013

FIRE DAMPER NOTE FOR FLOOR PENETRATIONS

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MECHANICAL DUCTWORK KEY NOTES

M1	OFFSET DUCT IN CEILING SPACE TO INSTALL DUCT IN CENTER OF THE HOLLOW CORE OF THE MEZZANINE FLOOR PLANK.
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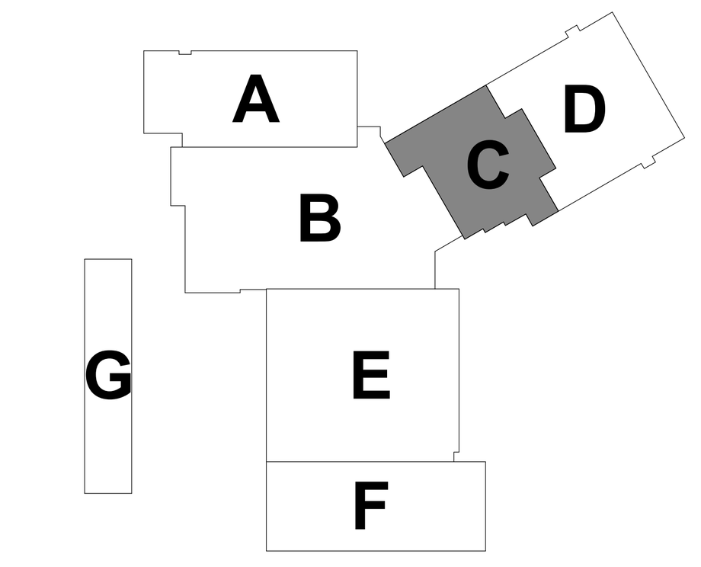

1 SECOND FLOOR MECHANICAL PLAN - AREA C
1/8" = 1'-0"

BID DOCUMENTS

drawing title	SECOND FLOOR MECHANICAL PLAN AREA C
	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES
drawing prepared by	Consulting Engineering Services, Inc. 811 Middle St., Middletown, CT 06457
project	Additions and Renovations Platt Technical High School 600 Orange Avenue Milford, CT 06461
date	10/11/2019
scale	As indicated
drawn by	BEK
approved by	BDW
CAD no.	
DCS project no.	BI-RT-878 CM-R
OSCGR project no.	900-0013
drawing no.	M1-1-2C

REVISIONS

mark	date	description
	11/8/2019	Addendum No.1

STATE OF CONNECTICUT DOUGLAS S. LAPLANTE No. 20909 LICENSED PROFESSIONAL ENGINEER

FIRE DAMPER NOTE FOR FLOOR PENETRATIONS

PROVIDE FIRE DAMPERS AT ALL DUCTWORK PENETRATIONS THROUGH THE 2ND FLOOR AND FLOOR OF THE MECHANICAL PENTHOUSE. AT EACH FIRE DAMPER, PROVIDE A DUCT ACCESS DOOR TO PROVIDE ACCESS FROM THE FLOOR ABOVE. EACH ACCESS DOOR SHALL BE MINIMUM 24"X24" AND SHALL BE INSTALLED AT 6' AFF TO THE BOTTOM. WHERE DUCT WIDTH IS LESS THAN 24", ACCESS DOOR SHALL BE WIDTH OF DUCT LESS 2". HEIGHT SHALL REMAIN 24". PROVIDE 24"X24" ACCESS PANEL IN THE PARTITION AT THE SAME HEIGHT TO ALLOW ACCESS TO THE DUCT ACCESS DOOR.

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1 SECOND FLOOR MECHANICAL PLAN - AREA D
1/8" = 1'-0"

BID DOCUMENTS

drawing title
SECOND FLOOR MECHANICAL PLAN AREA D

REVISIONS

mark	date	description
	11/8/2019	Addendum No.1

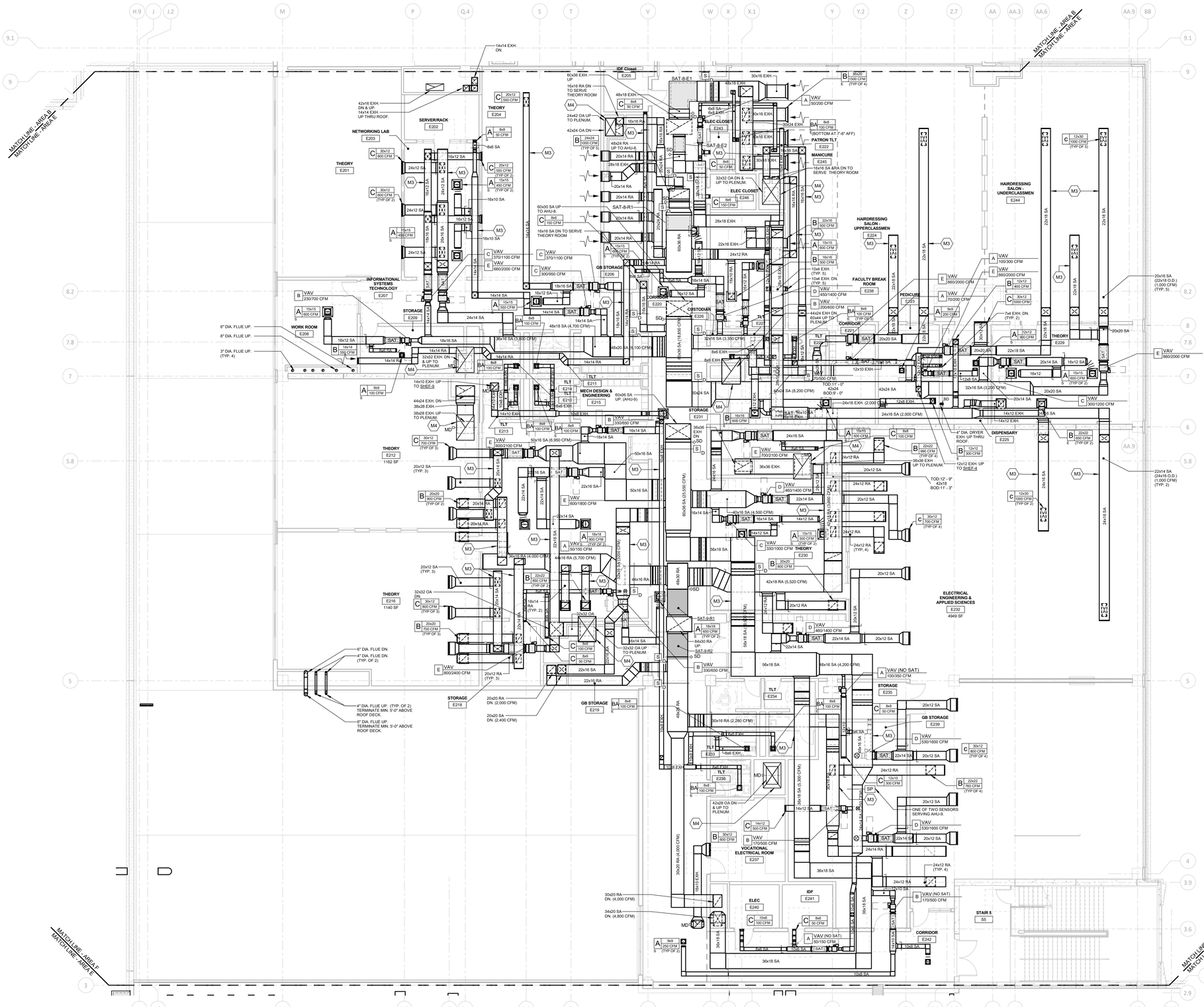
STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date: 10/11/2019
scale: As indicated
drawn by: Author
approved by: Approver
drawing no.: **M1-1-2D**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no. | DCS project no.: BI-RT-070 CM-R | OSCGR project no.: 900-0013



1 SECOND FLOOR MECHANICAL PLAN - AREA E
1/8" = 1'-0"

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
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BID DOCUMENTS

drawing title
SECOND FLOOR MECHANICAL PLAN AREA E

REVISIONS		
mark	date	description
	11/8/2019	Addendum No.1

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date 10/11/2019
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project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

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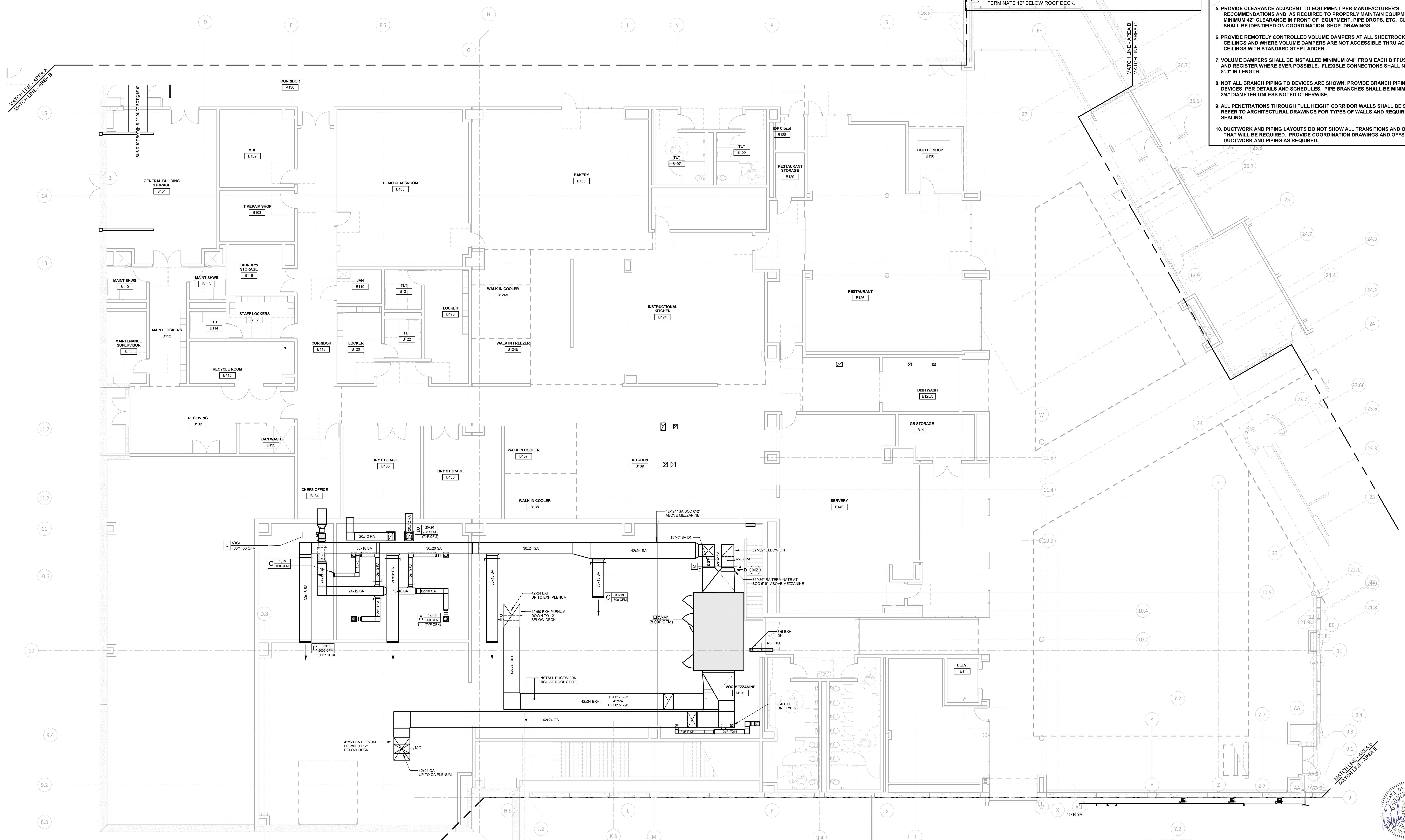

1 MEZZANINE MECHANICAL PLAN - AREA B
1/8" = 1'-0"

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7. VOLUME DAMPERS SHALL BE INSTALLED MINIMUM 8'-0" FROM EACH DIFFUSER, GRILLE AND REGISTER WHERE EVER POSSIBLE. FLEXIBLE CONNECTIONS SHALL NOT EXCEED 8'-0" IN LENGTH.
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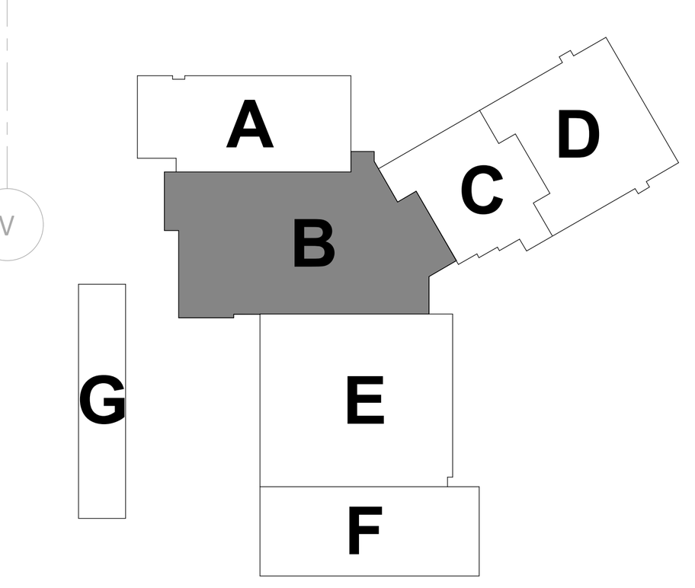
9. ALL PENETRATIONS THROUGH FULL HEIGHT CORRIDOR WALLS SHALL BE SEALED. REFER TO ARCHITECTURAL DRAWINGS FOR TYPES OF WALLS AND REQUIREMENTS FOR SEALING.
10. DUCTWORK AND PIPING LAYOUTS DO NOT SHOW ALL TRANSITIONS AND OFFSETS THAT WILL BE REQUIRED. PROVIDE COORDINATION DRAWINGS AND OFFSET DUCTWORK AND PIPING AS REQUIRED.



BID DOCUMENTS

drawing title
MEZZANINE
MECHANICAL PLAN
AREA B

REVISIONS

mark	date	description
	11/8/2019	Addendum No.1

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.	DCS project no.	OSCGR project no.
	BI-RT-878 CM-R	900-0013

date: 10/11/2019
scale: As indicated
drawn by: BEK
approved by: BDW
drawing no.: **M1-1-MB**

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
3. SEE DRAWINGS M5-1-1, M5-1-2, M5-1-3 & M5-1-4 FOR CONTROLS DIAGRAMS.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS ON GENERAL CONDITIONS, MATERIAL SPECIFICATIONS AND INSTALLATION.
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MECHANICAL DUCTWORK KEY NOTES

- M1 OFFSET DUCT IN CEILING SPACE TO INSTALL DUCT IN CENTER OF THE HOLLOW CORE OF THE MEZZANINE FLOOR PLANK.
- M2 TERMINATE DUCT WITH FLANGED CONNECTION AND 1/2"x1/2" GALVANIZED STEEL MESH.
- M3 INSTALL THIS SECTION OF DUCT IN SPACE BETWEEN PRE-CAST TEES.
- M4 PROVIDE 60"X42" PLENUM AT CONNECTION TO ROOF HOOD. PLENUM SHALL TERMINATE 4'0" BELOW ROOF DECK.

DUST COLLECTOR DC-1 SCHEDULE

CP#	EQUIPMENT	CFM	BRANCH DUCT SIZE (DIA.)
CP2	JOINTER	800	6"
CP7	BAND SAW	350	4"
CP13	BAND SAW	350	4"
CP13	BAND SAW	350	4"
CP14	RADIAL SAW	350	4"
CP22	JOINTER	800	6"
CP26	CNC ROUTER	1,500	8"
FS1	FLOOR SWEEP	-	6"
FS2	FLOOR SWEEP	-	6"

NOTES:

1. PROVIDE BLAST GATE FOR BALANCING AT EACH BRANCH DUCT AT 10'-0" AFF.
2. TRANSITION AT CONNECTION TO EACH PIECE OF EQUIPMENT
3. FOR FLOOR SWEEPS, PROVIDE BLAST GATE AT 60" AFF. PROVIDE SIGN NEXT TO EACH ON WALL, "KEEP BLAST GATE CLOSES WHEN NOT IN USE."

DUST COLLECTOR DC-2 SCHEDULE

CP#	EQUIPMENT	CFM	BRANCH DUCT SIZE (DIA.)
CP1	PLANER	1,500	8"
CP3	RIP SAW	350	4"
CP4	TABLE SAW	650	6"
CP5	TABLE SAW	650	6"
CP6	BAND SAW	350	4"
CP15	COPY LATHE	750	6"
CP19	PANEL SAW	700	6"
CP20	JOINTER	800	6"
CP23	DOOR MACHINE	800	6"
CP24	BELT SANDER	800	6"
CP28	EDGE BANDER	300	4"
FS3	FLOOR SWEEP	-	6"
FS4	FLOOR SWEEP	-	6"
FS5	FLOOR SWEEP	-	6"

NOTES:

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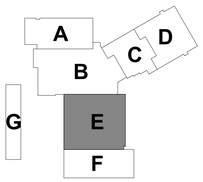
1 MEZZANINE MECHANICAL PLAN - AREA E
1/8" = 1'-0"



BID DOCUMENTS

drawing title: MEZZANINE MECHANICAL PLAN AREA E

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS		
mark	date	description
	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
611 Middle St., Middletown, CT 06457

date: 10/11/2019
scale: As indicated
drawn by: BEK
approved by: BDW
drawing no.: **M1-1-ME**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no.: BI-RT-878 CM-R
OSCGR project no.: 900-0013

MECHANICAL NOTES

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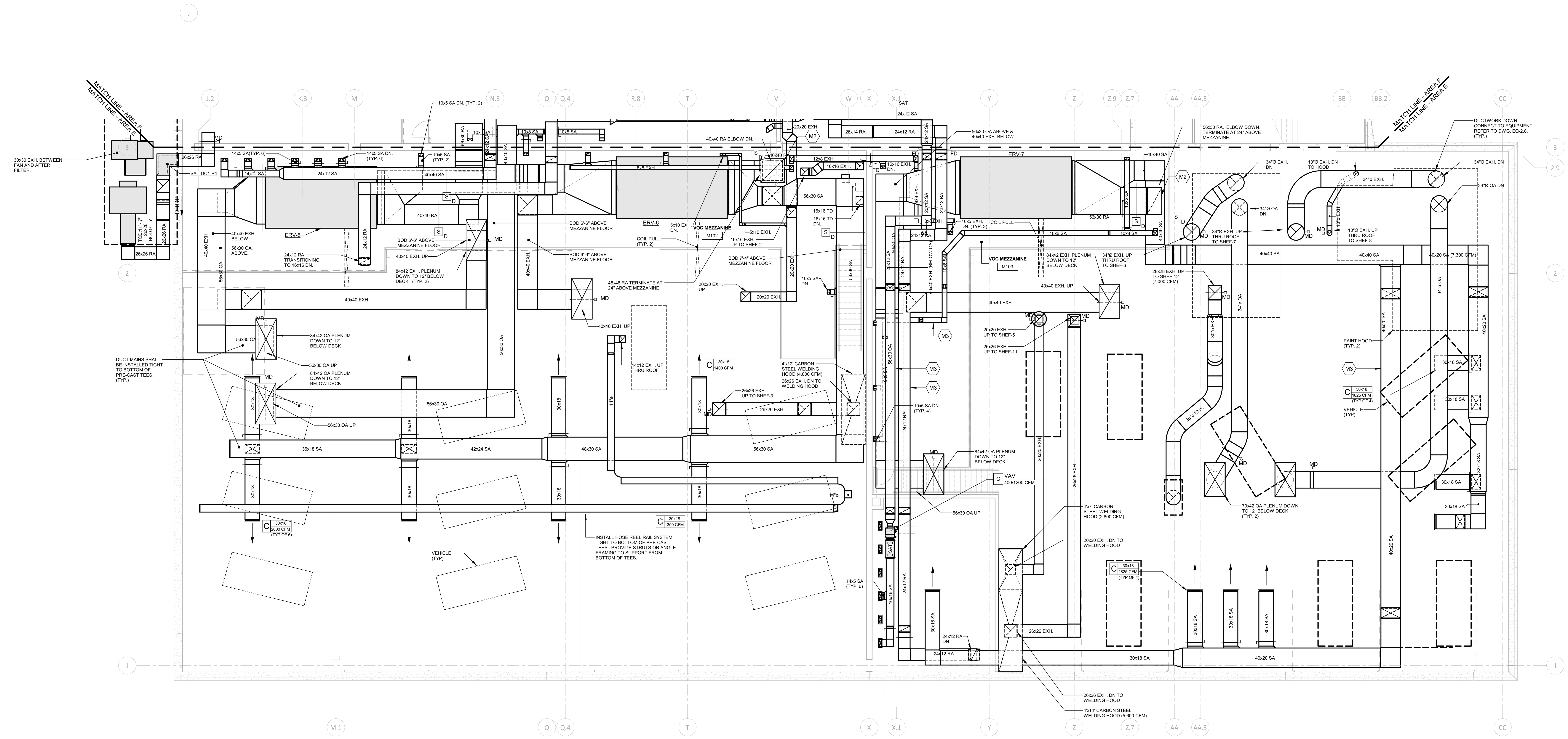
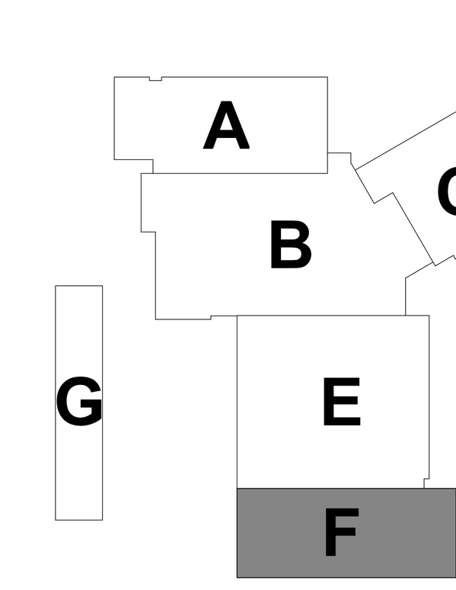
MECHANICAL DUCTWORK KEY NOTES

M1	OFFSET DUCT IN CEILING SPACE TO INSTALL DUCT IN CENTER OF THE HOLLOW CORE OF THE MEZZANINE FLOOR PLANK.
M2	TERMINATE DUCT WITH FLANGED CONNECTION AND 1/2"x1/2" GALVANIZED STEEL MESH.
M3	INSTALL THIS SECTION OF DUCT IN SPACE BETWEEN PRE-CAST TEES.
M4	PROVIDE 60"X42" PLENUM AT CONNECTION TO ROOF HOOD. PLENUM SHALL TERMINATE 12" BELOW ROOF DECK.



1 MEZZANINE MECHANICAL PLAN - AREA F
1/8" = 1'-0"



BID DOCUMENTS

drawing title
MEZZANINE MECHANICAL PLAN AREA F

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS

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	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date: 10/11/2019
scale: As indicated
drawn by: BEK
approved by: BDW

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no. BI-RT-878 CM-R
OSCGR project no. 900-0013
drawing no. **M1-1-MF**

MECHANICAL NOTES

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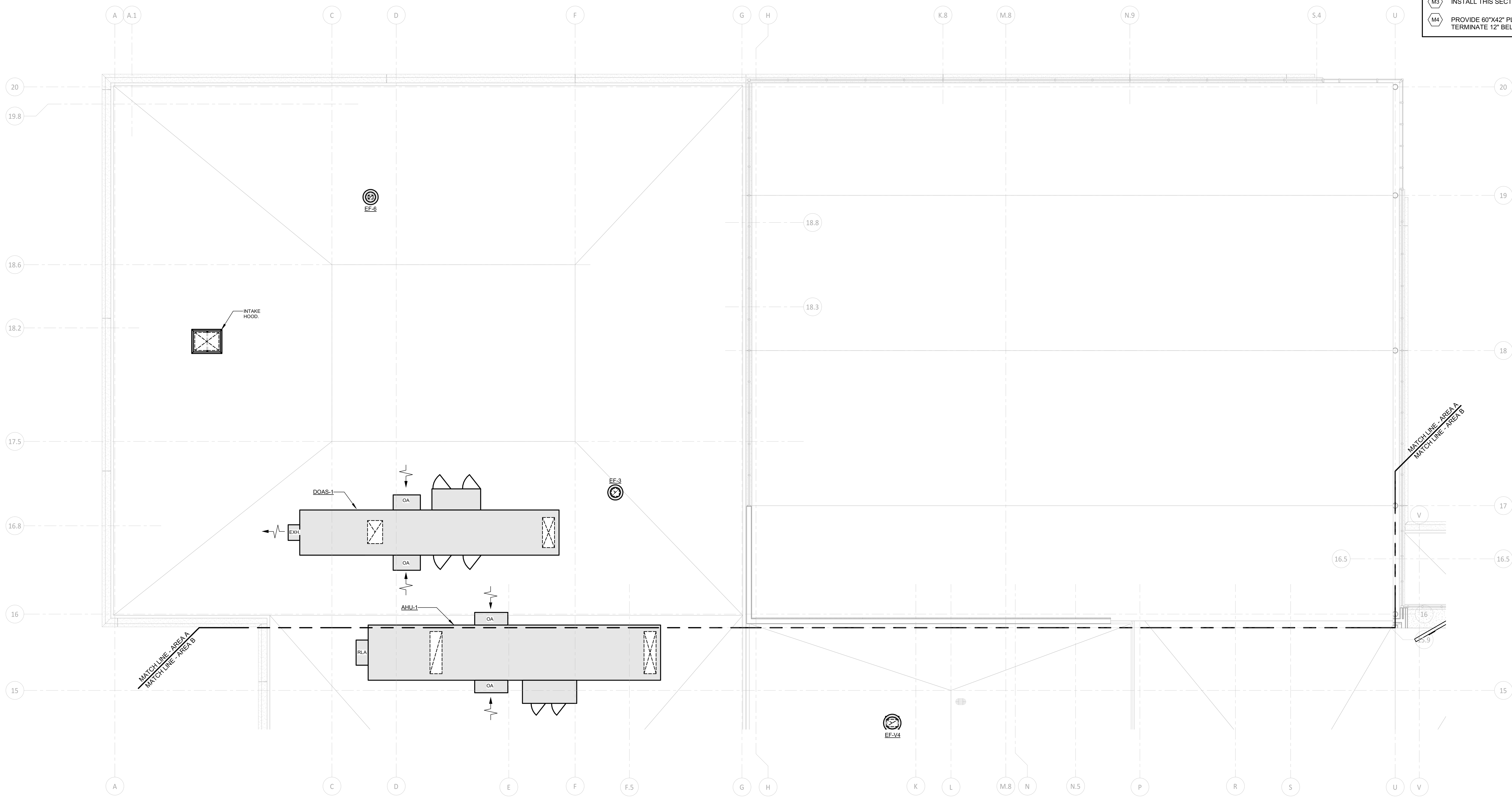
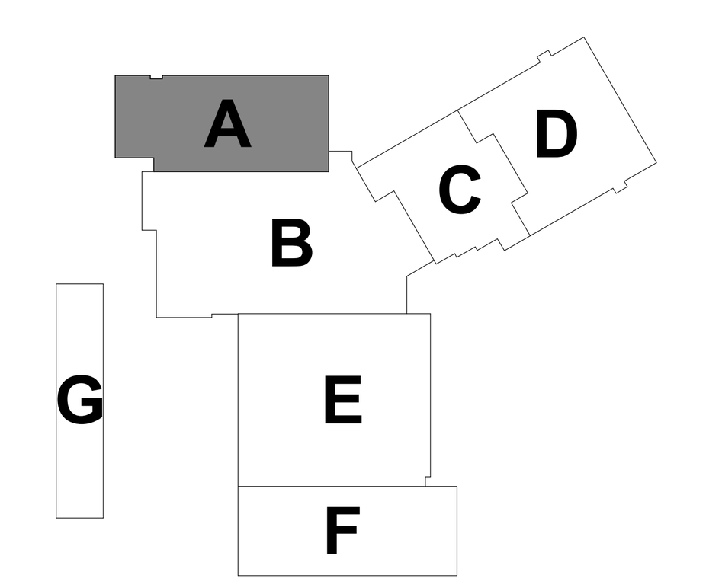


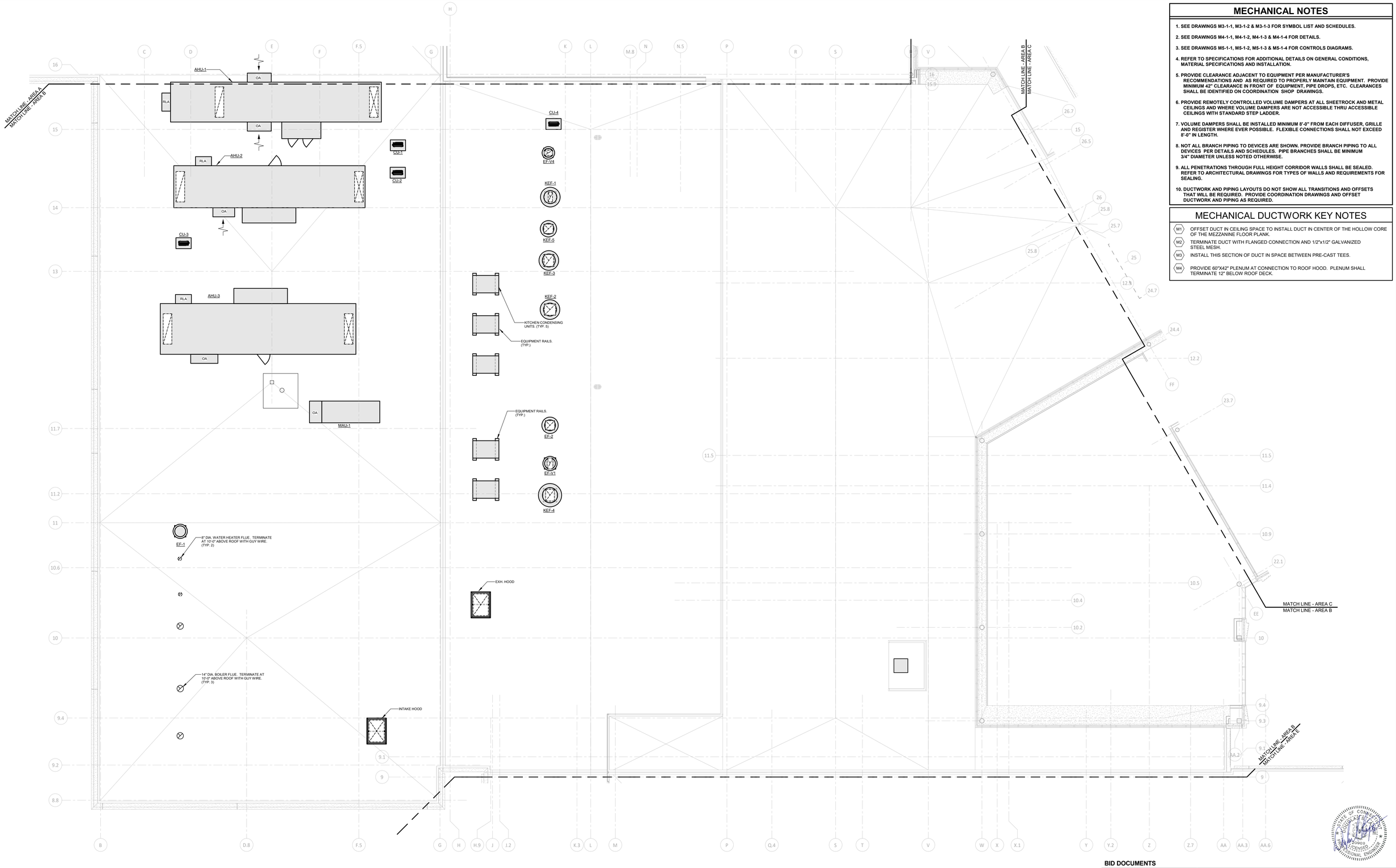
1 ROOF MECHANICAL PLAN - AREA A
1/8" = 1'-0"



BID DOCUMENTS

drawing title	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
ROOF MECHANICAL PLAN AREA A	drawing prepared by **Consulting Engineering Services, Inc.** 811 Middle St., Middletown, CT 06457	date 10/11/2019 scale As indicated drawn by BEK
REVISIONS	project **Additions and Renovations** **Platt Technical High School** 600 Orange Avenue Milford, CT 06461	approved by BDW
mark / date / description: 11/8/2019 Addendum No.1	CAD no. / DCS project no. BI-RT-878 CM-R / OSCGR project no. 900-0013	drawing no. **M1-2-1A**

STATE OF CONNECTICUT · DOUGLAS S. [illegible] · 20909 · LICENSED · PROFESSIONAL ENGINEER



1 ROOF MECHANICAL PLAN - AREA B
1/8" = 1'-0"

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
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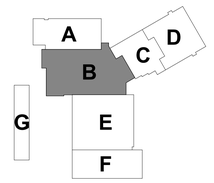

BID DOCUMENTS

drawing title
ROOF
MECHANICAL PLAN
AREA B

REVISIONS

mark	date	description
	11/8/2019	Addendum No.1

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date: 10/11/2019
scale: As indicated
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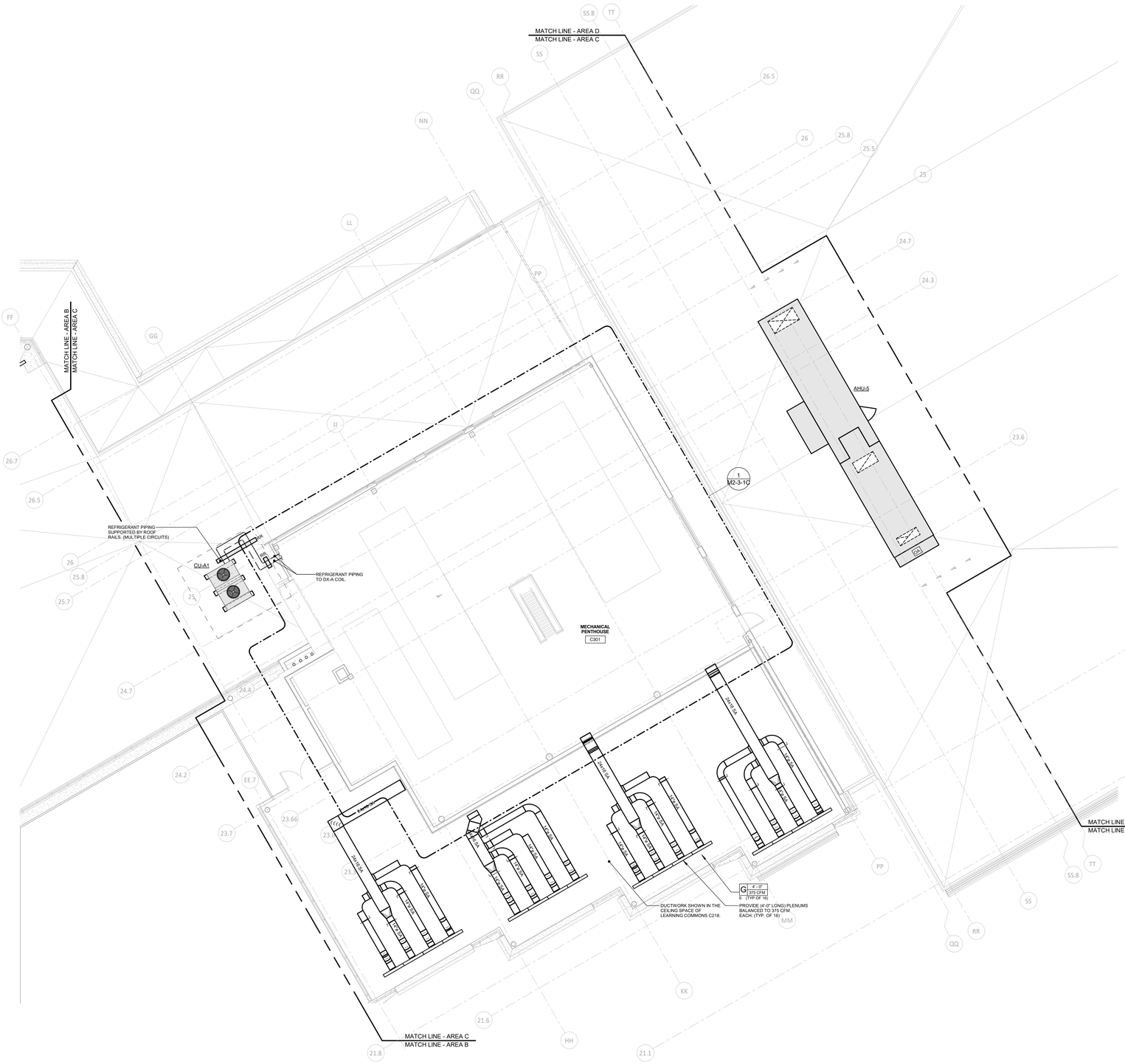
project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no.: BI-RT-878 CM-R
OSCGR project no.: 900-0013

drawing no.: **M1-2-1B**



1 ROOF MECHANICAL PLAN - AREA C
1/8" = 1'-0"

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1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
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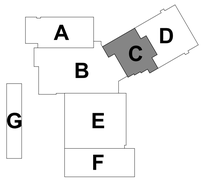

BID DOCUMENTS

drawing title
ROOF
MECHANICAL PLAN
AREA C

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STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date 10/11/2019
scale As indicated
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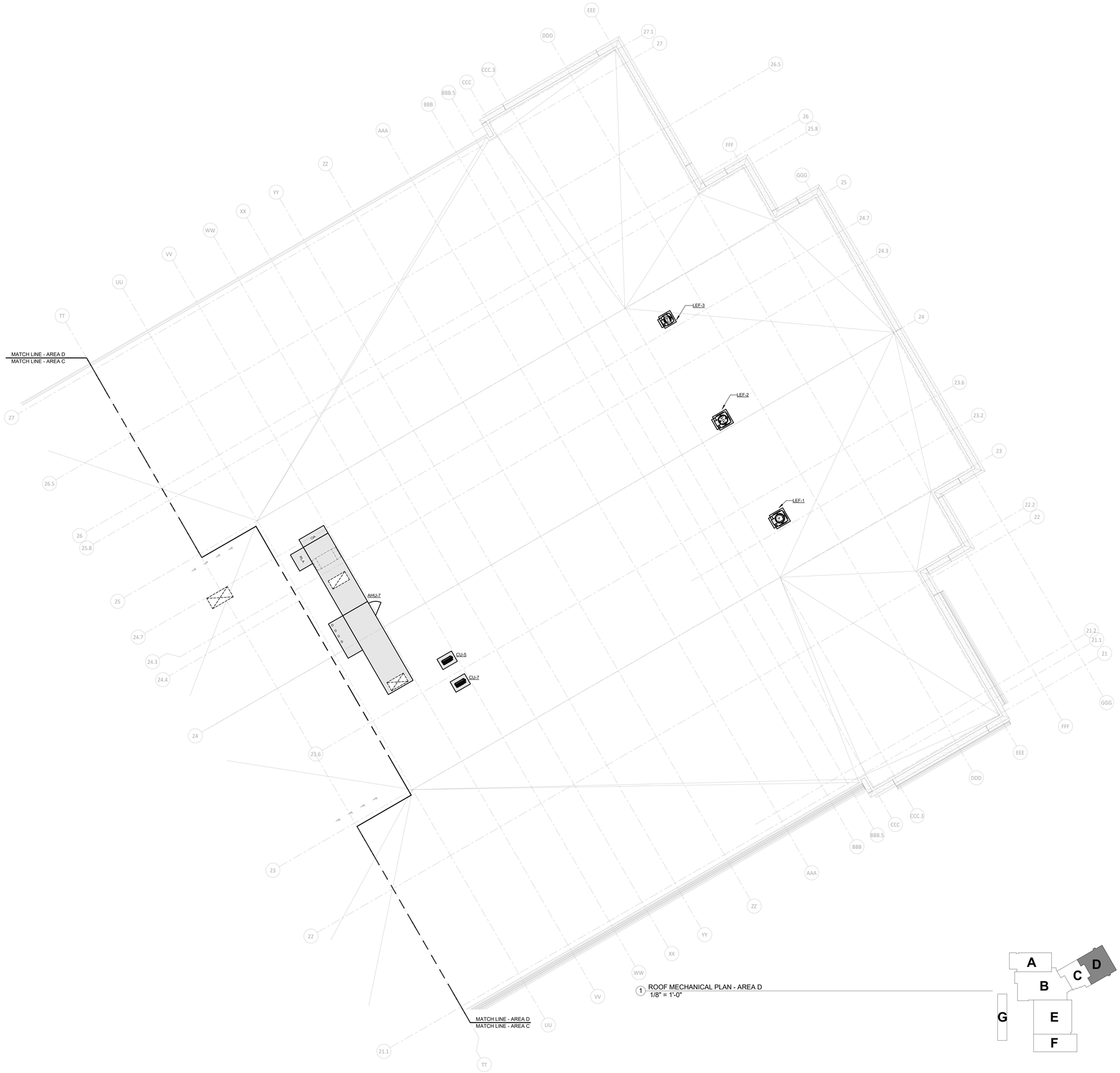
drawing no. **M1-2-1C**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no. | DCS project no. BI-RT-878 CM-R | OSCGR project no. 900-0013



1 ROOF MECHANICAL PLAN - AREA D
1/8" = 1'-0"

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BID DOCUMENTS

drawing title
ROOF
MECHANICAL PLAN
AREA D

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	11/8/2019	Addendum No.1

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date 10/11/2019
scale As indicated
drawn by BEK
approved by BDW
drawing no. **M1-2-1D**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

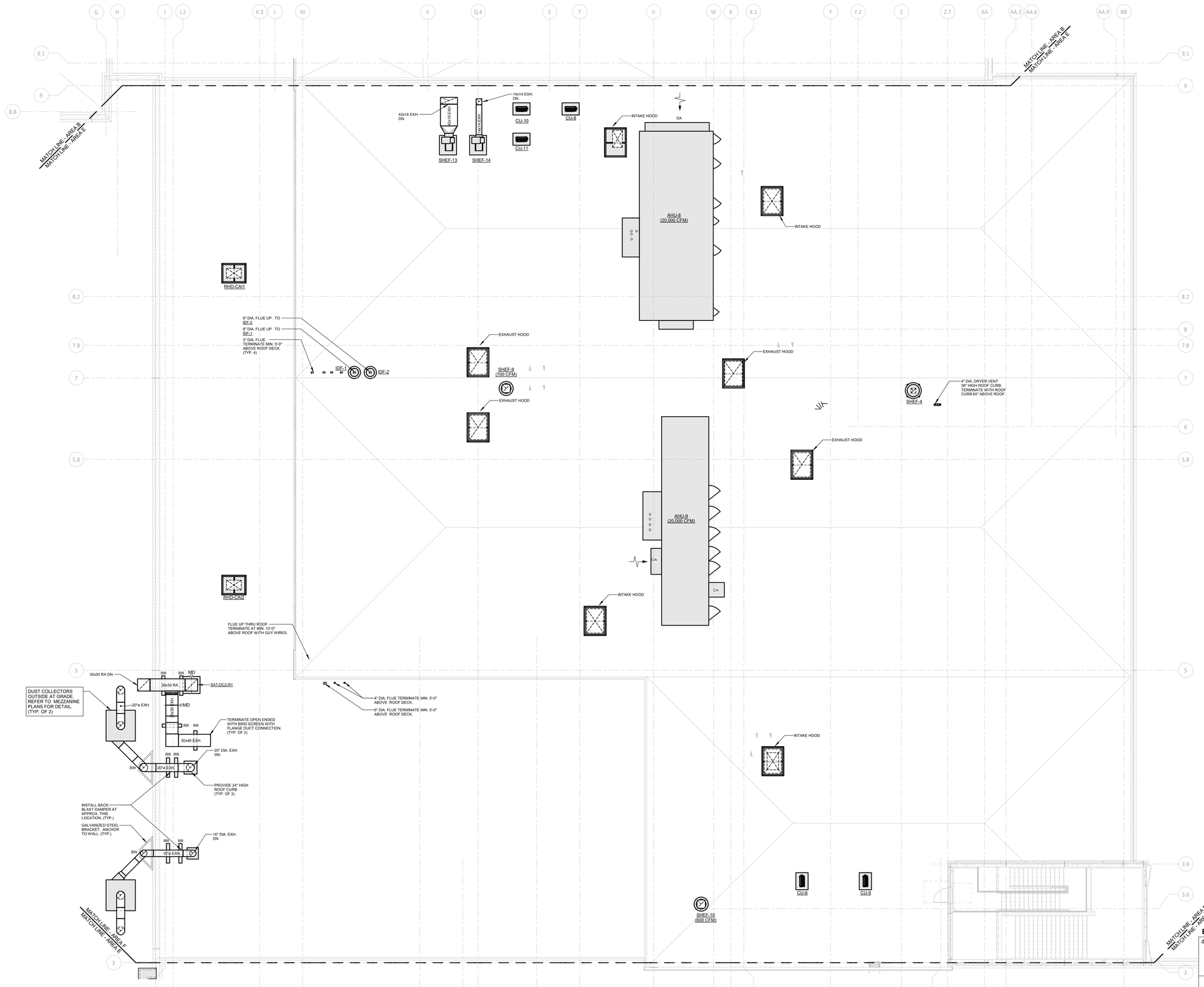
CAD no.
DCS project no. 81-RT-878 CM-R
OSCGR project no. 900-0013

MECHANICAL NOTES

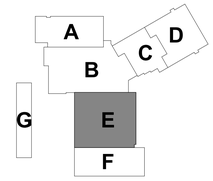
1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
3. SEE DRAWINGS M5-1-1, M5-1-2, M5-1-3 & M5-1-4 FOR CONTROLS DIAGRAMS.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS ON GENERAL CONDITIONS, MATERIAL SPECIFICATIONS AND INSTALLATION.
5. PROVIDE CLEARANCE ADJACENT TO EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED TO PROPERLY MAINTAIN EQUIPMENT. PROVIDE MINIMUM 42" CLEARANCE IN FRONT OF EQUIPMENT, PIPE DROPS, ETC. CLEARANCES SHALL BE IDENTIFIED ON COORDINATION SHOP DRAWINGS.
6. PROVIDE REMOTELY CONTROLLED VOLUME DAMPERS AT ALL SHEETROCK AND METAL CEILINGS AND WHERE VOLUME DAMPERS ARE NOT ACCESSIBLE THRU ACCESSIBLE CEILINGS WITH STANDARD STEP LADDER.
7. VOLUME DAMPERS SHALL BE INSTALLED MINIMUM 8'-0" FROM EACH DIFFUSER, GRILLE AND REGISTER WHERE EVER POSSIBLE. FLEXIBLE CONNECTIONS SHALL NOT EXCEED 8'-0" IN LENGTH.
8. NOT ALL BRANCH PIPING TO DEVICES ARE SHOWN. PROVIDE BRANCH PIPING TO ALL DEVICES PER DETAILS AND SCHEDULES. PIPE BRANCHES SHALL BE MINIMUM 3/4" DIAMETER UNLESS NOTED OTHERWISE.
9. ALL PENETRATIONS THROUGH FULL HEIGHT CORRIDOR WALLS SHALL BE SEALED. REFER TO ARCHITECTURAL DRAWINGS FOR TYPES OF WALLS AND REQUIREMENTS FOR SEALING.
10. DUCTWORK AND PIPING LAYOUTS DO NOT SHOW ALL TRANSITIONS AND OFFSETS THAT WILL BE REQUIRED. PROVIDE COORDINATION DRAWINGS AND OFFSET DUCTWORK AND PIPING AS REQUIRED.

MECHANICAL DUCTWORK KEY NOTES

- M1 OFFSET DUCT IN CEILING SPACE TO INSTALL DUCT IN CENTER OF THE HOLLOW CORE OF THE MEZZANINE FLOOR PLANK.
- M2 TERMINATE DUCT WITH FLANGED CONNECTION AND 1/2"x1/2" GALVANIZED STEEL MESH.
- M3 INSTALL THIS SECTION OF DUCT IN SPACE BETWEEN PRE-CAST TEES.
- M4 PROVIDE 60"X42" PLENUM AT CONNECTION TO ROOF HOOD. PLENUM SHALL TERMINATE 12" BELOW ROOF DECK.



1 ROOF MECHANICAL PLAN - AREA E
1/8" = 1'-0"



BID DOCUMENTS

drawing title
ROOF MECHANICAL PLAN AREA E

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DEPARTMENT OF ADMINISTRATIVE SERVICES

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project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no. | DCS project no. BI-RT-078 CM-R | OSCGR project no. 900-0013

drawing no. **M1-2-1E**

MECHANICAL NOTES

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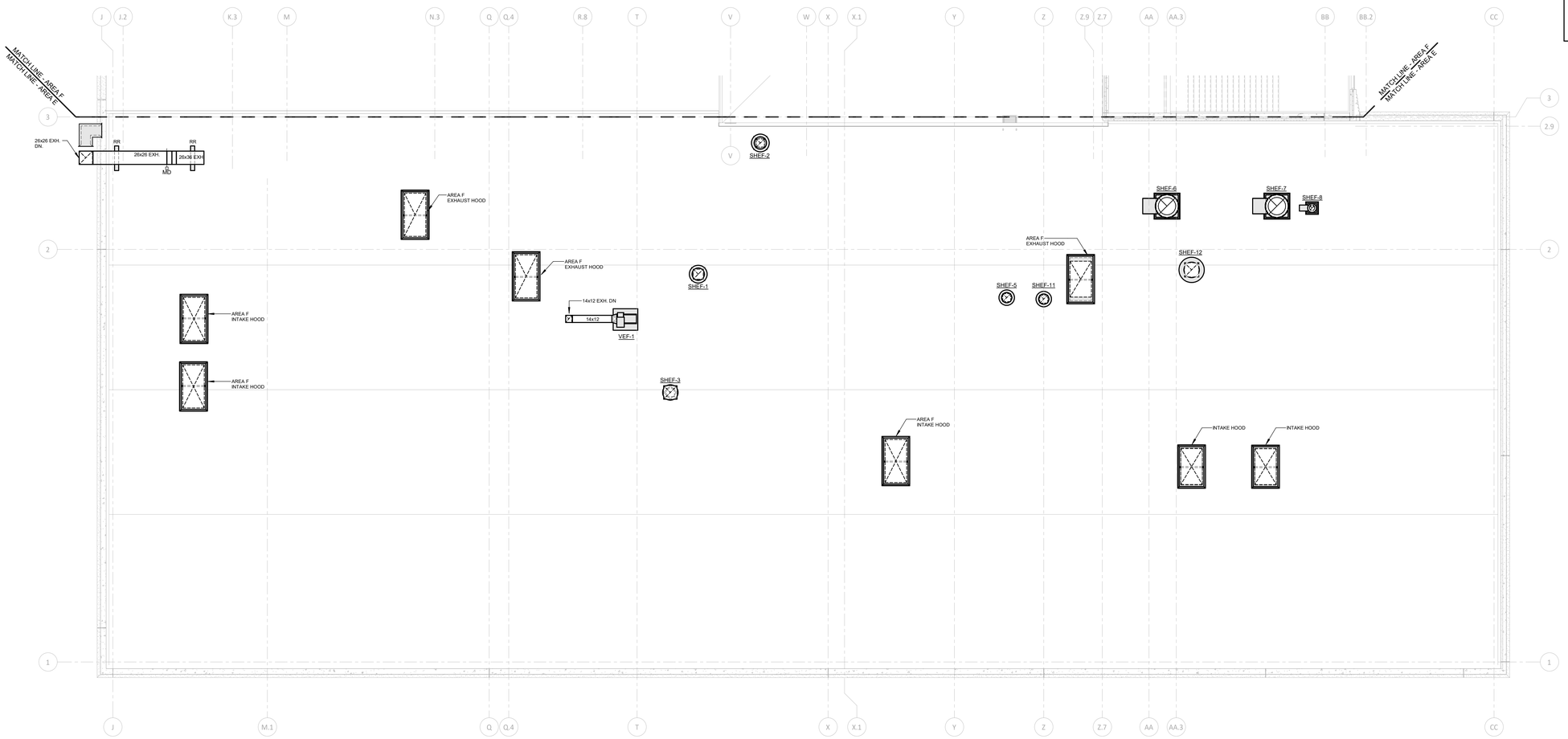
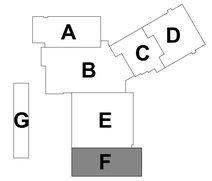


1 ROOF MECHANICAL PLAN - AREA F
1/8" = 1'-0"



BID DOCUMENTS

drawing title
ROOF
MECHANICAL PLAN
AREA F

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS

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drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date 10/11/2019
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drawn by BEK
approved by BDW
drawing no. **M1-2-1F**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no. | DCS project no. BI-RT-878 CM-R | OSCGR project no. 900-0013

MECHANICAL NOTES

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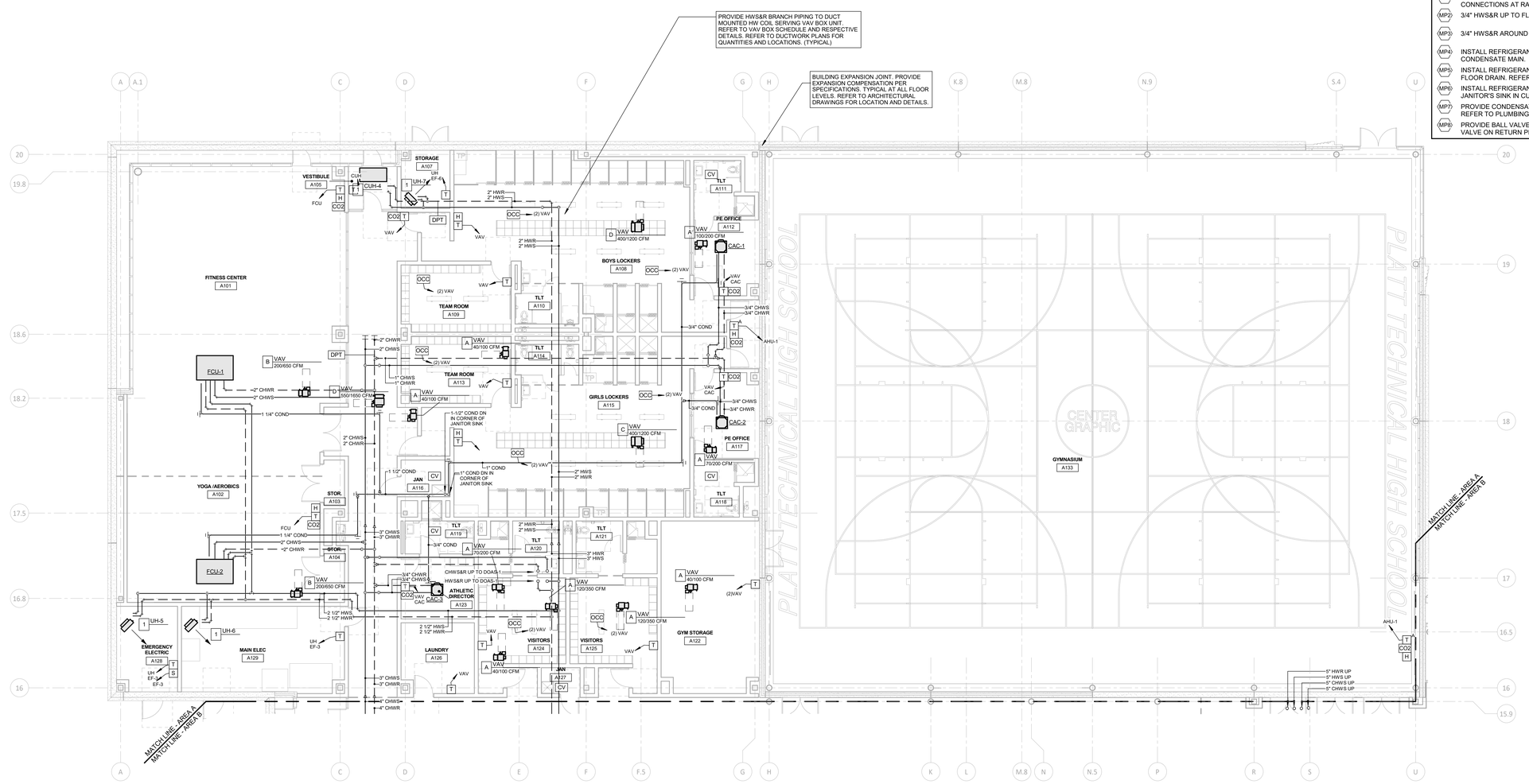
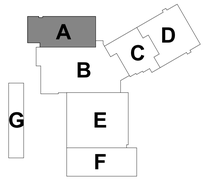
MECHANICAL PIPING KEY NOTES

(MP1) 3/4" HWS&R DOWN. OFFSET AND PROVIDE ELBOWS IN PARTITION TO ALIGN WITH PIPE CONNECTIONS AT RADIATION.
(MP2) 3/4" HWS&R UP TO FLOOR ABOVE.
(MP3) 3/4" HWS&R AROUND COLUMN FEEDING RADIATION.
(MP4) INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO CONDENSATE MAIN.
(MP5) INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO FLOOR DRAIN. REFER TO PLUMBING DRAWINGS FOR LOCATION.
(MP6) INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO JANITOR'S SINK IN CUSTODIAL CLOSET.
(MP7) PROVIDE CONDENSATE PIPING FROM ERV TO FLOOR DRAIN AT THE SHOP LEVEL. REFER TO PLUMBING DRAWINGS FOR LOCATION.
(MP8) PROVIDE BALL VALVES ON SUPPLY AND RETURN PIPING AND MANUAL BALANCE VALVE ON RETURN PIPING.



1 FIRST FLOOR MECHANICAL PIPING PLAN - AREA A
1/8" = 1'-0"



BID DOCUMENTS

drawing title: FIRST FLOOR MECHANICAL PIPING PLAN AREA A

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS		
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	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date: 10/11/2019
scale: As indicated
drawn by: ANK
approved by: BDW
drawing no.: **M2-1-1A**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no.: BUR7-075 CM-R
OSCGR project no.: 900-0013

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
3. SEE DRAWINGS M5-1-1, M5-1-2, M5-1-3 & M5-1-4 FOR CONTROLS DIAGRAMS.
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MECHANICAL PIPING KEY NOTES

- (MP1) 3/4" HWS&R DOWN. OFFSET AND PROVIDE ELBOWS IN PARTITION TO ALIGN WITH PIPE CONNECTIONS AT RADIATION.
- (MP2) 3/4" HWS&R UP TO FLOOR ABOVE.
- (MP3) 3/4" HWS&R AROUND COLUMN FEEDING RADIATION.
- (MP4) INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO CONDENSATE MAIN.
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- (MP7) PROVIDE CONDENSATE PIPING FROM ERV TO FLOOR DRAIN AT THE SHOP LEVEL. REFER TO PLUMBING DRAWINGS FOR LOCATION.
- (MP8) PROVIDE BALL VALVES ON SUPPLY AND RETURN PIPING AND MANUAL BALANCE VALVE ON RETURN PIPING.

1 FIRST FLOOR MECHANICAL PIPING PLAN - AREA B
1/8" = 1'-0"

BID DOCUMENTS

drawing title	FIRST FLOOR MECHANICAL PIPING PLAN AREA B
	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES
REVISIONS	mark: — / date: — / description: — ; 11/8/2019 / Addendum No.1
drawing prepared by	**Consulting Engineering Services, Inc.** 811 Middle St., Middletown, CT 06457
date	10/11/2019
scale	As indicated
drawn by	ANK
approved by	Approver
project	**Additions and Renovations** **Platt Technical High School** 600 Orange Avenue Milford, CT 06461
drawing no.	**M2-1-1B**
CAD no.	
DCS project no.	BI-RT-878 C&R
OSCGR project no.	900-0013

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
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MECHANICAL PIPING KEY NOTES

MP1	3/4" HWS&R DOWN. OFFSET AND PROVIDE ELBOWS IN PARTITION TO ALIGN WITH PIPE CONNECTIONS AT RADIATION.
MP2	3/4" HWS&R UP TO FLOOR ABOVE.
MP3	3/4" HWS&R AROUND COLUMN FEEDING RADIATION.
MP4	INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO CONDENSATE MAIN.
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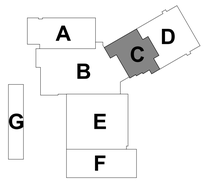
1/8" = 1'-0"



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drawing title
FIRST FLOOR MECHANICAL PIPING PLAN AREA C

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

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911 Middle St., Middletown, CT 06457

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project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.	DCS project no.	OSCGR project no.
	BI-RT-878 CM-R	900-0013

MECHANICAL NOTES

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1 FIRST FLOOR MECHANICAL PIPING PLAN - AREA D
1/8" = 1'-0"

BID DOCUMENTS

drawing title: FIRST FLOOR MECHANICAL PIPING PLAN AREA D

STATE OF CONNECTICUT
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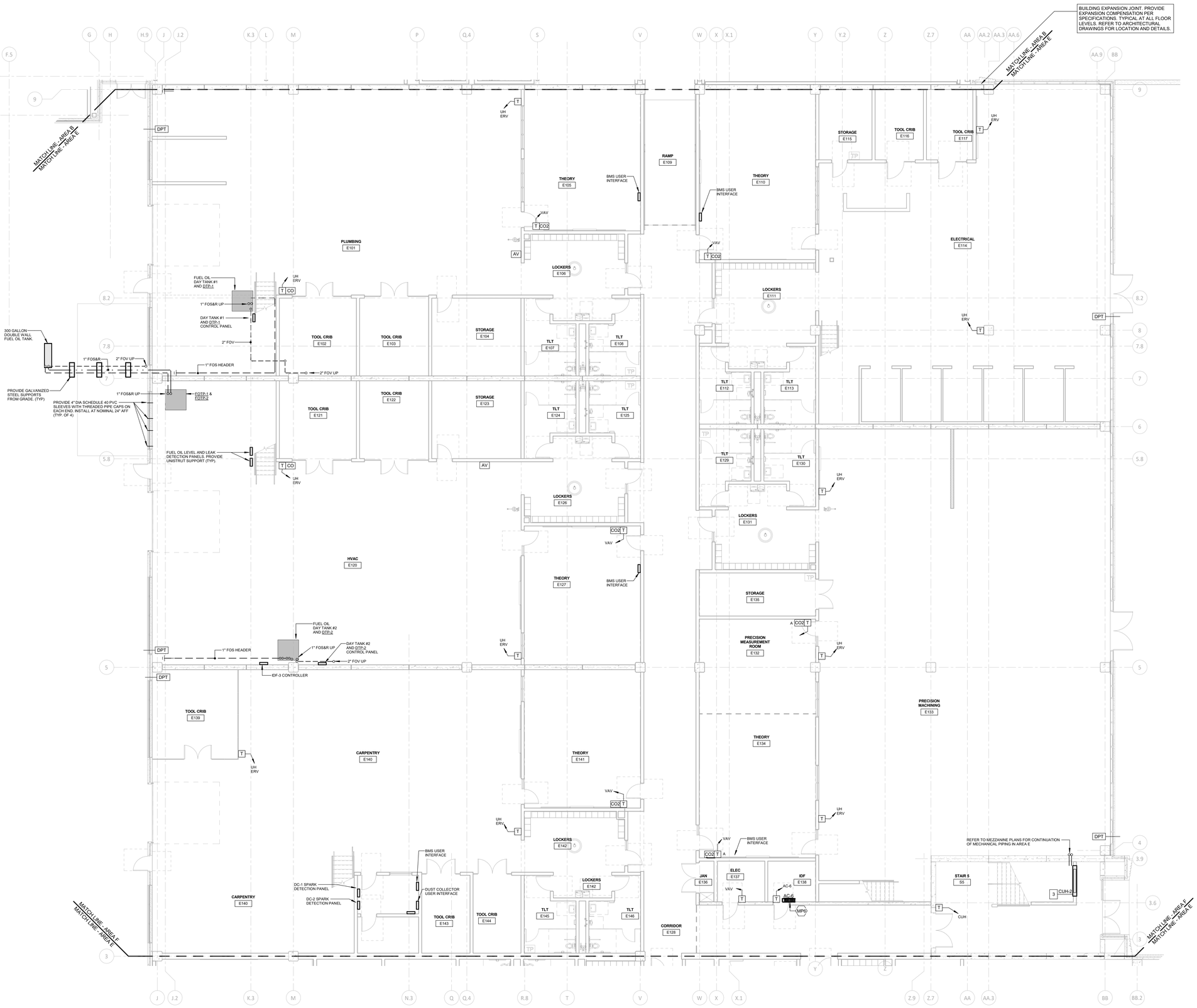
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no.: BI-RT-078 CM-R
OSCGR project no.: 990-0013

drawing no.: **M2-1-1D**



1 FIRST FLOOR MECHANICAL PIPING PLAN - AREA E
1/8" = 1'-0"

MECHANICAL NOTES

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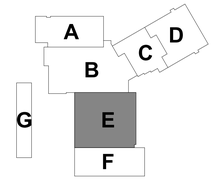
8. NOT ALL BRANCH PIPING TO DEVICES ARE SHOWN. PROVIDE BRANCH PIPING TO ALL DEVICES PER DETAILS AND SCHEDULES. PIPE BRANCHES SHALL BE MINIMUM 3/4" DIAMETER UNLESS NOTED OTHERWISE.
9. ALL PENETRATIONS THROUGH FULL HEIGHT CORRIDOR WALLS SHALL BE SEALED. REFER TO ARCHITECTURAL DRAWINGS FOR TYPES OF WALLS AND REQUIREMENTS FOR SEALING.
10. DUCTWORK AND PIPING LAYOUTS DO NOT SHOW ALL TRANSITIONS AND OFFSETS THAT WILL BE REQUIRED. PROVIDE COORDINATION DRAWINGS AND OFFSET DUCTWORK AND PIPING AS REQUIRED.

MECHANICAL PIPING KEY NOTES

MP1	3/4" HWS&R DOWN, OFFSET AND PROVIDE ELBOWS IN PARTITION TO ALIGN WITH PIPE CONNECTIONS AT RADIATION.
MP2	3/4" HWS&R UP TO FLOOR ABOVE.
MP3	3/4" HWS&R AROUND COLUMN FEEDING RADIATION.
MP4	INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO CONDENSATE MAIN.
MP5	INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO FLOOR DRAIN. REFER TO PLUMBING DRAWINGS FOR LOCATION.
MP6	INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO JANITOR'S SINK IN CUSTODIAL CLOSET.
MP7	PROVIDE CONDENSATE PIPING FROM ERV TO FLOOR DRAIN AT THE SHOP LEVEL. REFER TO PLUMBING DRAWINGS FOR LOCATION.
MP8	PROVIDE BALL VALVES ON SUPPLY AND RETURN PIPING AND MANUAL BALANCE VALVE ON RETURN PIPING.



BID DOCUMENTS

drawing title: FIRST FLOOR MECHANICAL PIPING PLAN AREA E

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS		
mark	date	description
	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date: 10/11/2019
scale: As indicated
drawn by: ANK
approved by: BDW
drawing no.: **M2-1-1E**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no.: BI-RT-075 CM-R
OSCGR project no.: 500-0013

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
3. SEE DRAWINGS M5-1-1, M5-1-2, M5-1-3 & M5-1-4 FOR CONTROLS DIAGRAMS.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS ON GENERAL CONDITIONS, MATERIAL SPECIFICATIONS AND INSTALLATION.
5. PROVIDE CLEARANCE ADJACENT TO EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED TO PROPERLY MAINTAIN EQUIPMENT. PROVIDE MINIMUM 42" CLEARANCE IN FRONT OF EQUIPMENT, PIPE DROPS, ETC. CLEARANCES SHALL BE IDENTIFIED ON COORDINATION SHOP DRAWINGS.
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MECHANICAL PIPING KEY NOTES

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(MP2) 3/4" HWS&R UP TO FLOOR ABOVE.
(MP3) 3/4" HWS&R AROUND COLUMN FEEDING RADIATION.
(MP4) INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO CONDENSATE MAIN.
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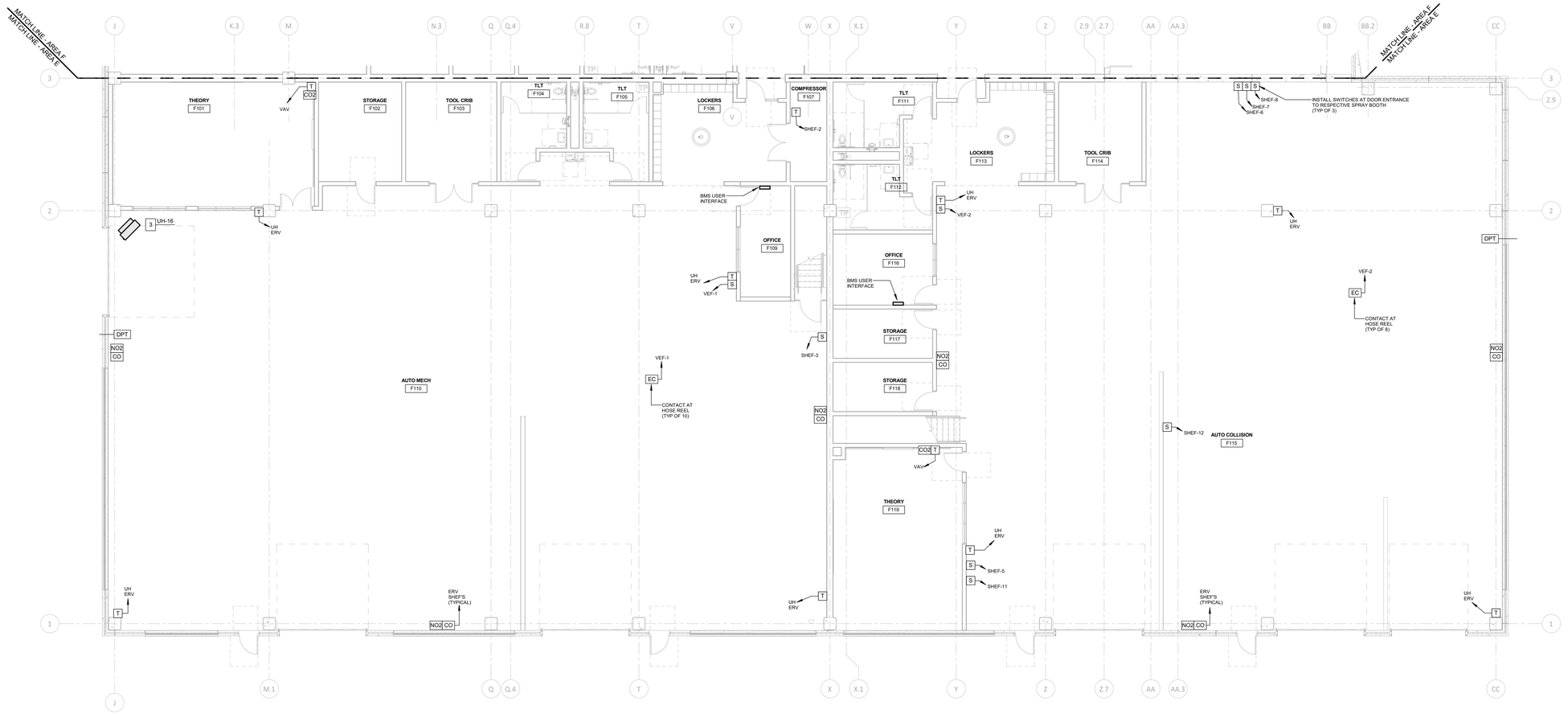
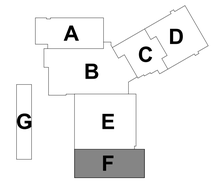
(MP6) INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO JANITOR'S SINK IN CUSTODIAL CLOSET.
(MP7) PROVIDE CONDENSATE PIPING FROM ERV TO FLOOR DRAIN AT THE SHOP LEVEL. REFER TO PLUMBING DRAWINGS FOR LOCATION.
(MP8) PROVIDE BALL VALVES ON SUPPLY AND RETURN PIPING AND MANUAL BALANCE VALVE ON RETURN PIPING.



1 FIRST FLOOR MECHANICAL PIPING PLAN - AREA F
1/8" = 1'-0"



BID DOCUMENTS

drawing title: FIRST FLOOR MECHANICAL PIPING PLAN AREA F

REVISIONS

mark	date	description
	11/8/2019	Addendum No.1

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date: 10/11/2019
scale: As indicated
drawn by: ANK
approved by: BDW
drawing no.: **M2-1-1F**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no.: BI-RT-878 CM-R
OSCGR project no.: 900-0013

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
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MECHANICAL PIPING KEY NOTES

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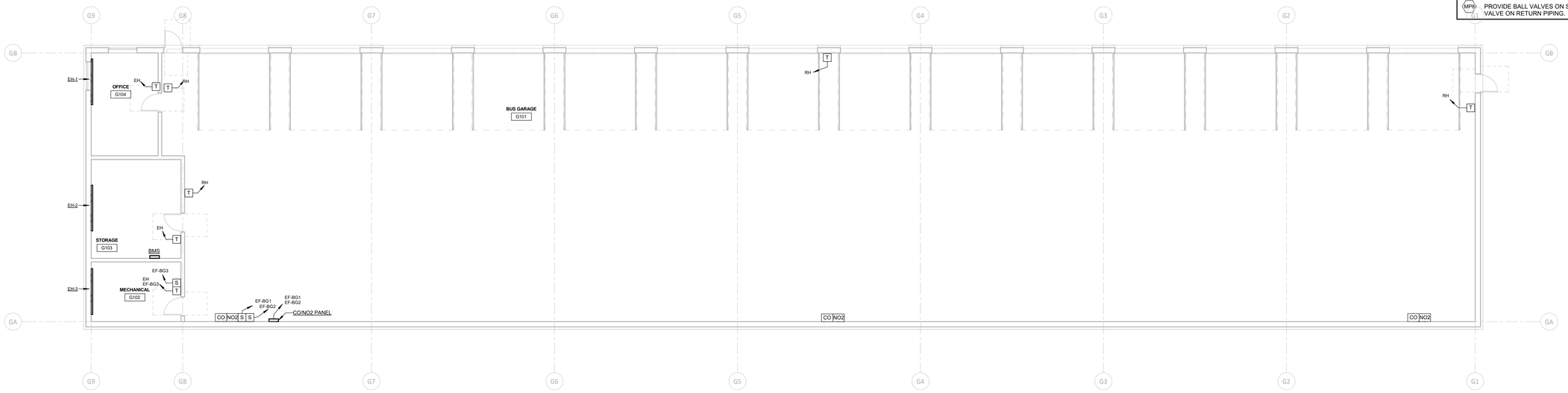
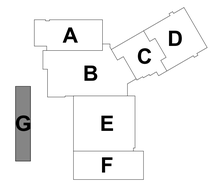


1 FIRST FLOOR MECHANICAL PIPING PLAN - AREA G - ALTERNATE NO. 2
1/8" = 1'-0"



BID DOCUMENTS

drawing title
FIRST FLOOR
MECHANICAL PIPING PLAN
AREA G - ALTERNATE NO. 2

REVISIONS

mark	date	description
	11/8/2019	Addendum No.1

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date 10/11/2019
scale As indicated
drawn by ANK
approved by BDW
drawing no. **M2-1-1G**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no. BI-RT-878 CM-R
OSCGR project no. 900-0013

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
3. SEE DRAWINGS M5-1-1, M5-1-2, M5-1-3 & M5-1-4 FOR CONTROLS DIAGRAMS.
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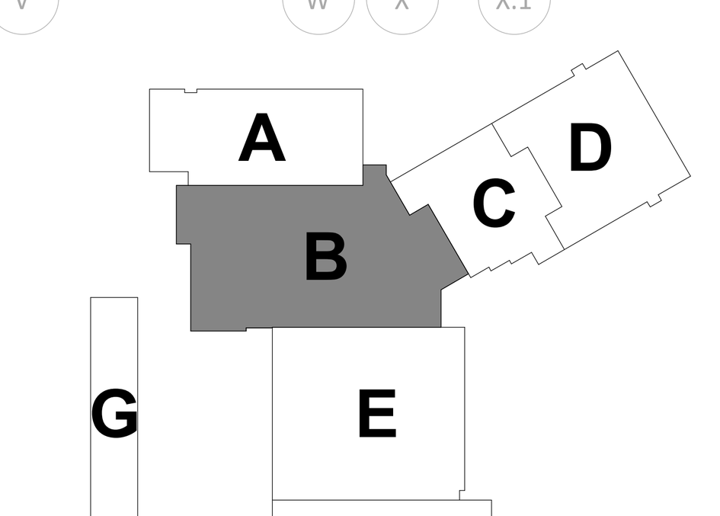
1 SECOND FLOOR MECHANICAL PIPING PLAN - AREA B
1/8" = 1'-0"



BID DOCUMENTS

drawing title	SECOND FLOOR MECHANICAL PIPING PLAN AREA B

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS

mark	date	description
	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

date	scale	drawn by	approved by	drawing no.
10/11/2019	As indicated	ANK	BDW	M2-1-2B

CAD no.	DCS project no.	OSCGR project no.
	BI-RT-878 CM-R	900-0013

1 SECOND FLOOR MECHANICAL PIPING PLAN - AREA C
1/8" = 1'-0"

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
3. SEE DRAWINGS M5-1-1, M5-1-2, M5-1-3 & M5-1-4 FOR CONTROLS DIAGRAMS.
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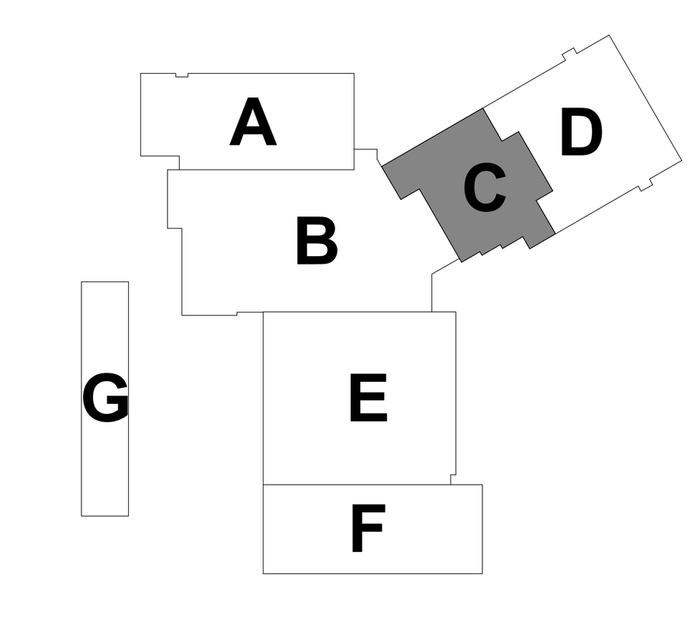

STATE OF CONNECTICUT PROFESSIONAL ENGINEER DOUGLAS S. LAIRE 20909 LICENSED

BID DOCUMENTS

drawing title
SECOND FLOOR
MECHANICAL PIPING PLAN
AREA C

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS		
mark	date	description
	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.	DCS project no.	OSCGR project no.
	BI-RT-878 CM-R	900-0013

date: 10/11/2019
scale: As indicated
drawn by: ANK
approved by: BDW
drawing no.: M2-1-2C

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
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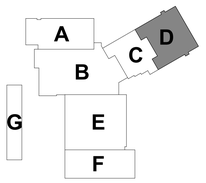
PROVIDE HWS&R BRANCH PIPING TO DUCT MOUNTED HW COIL SERVING VAV BOX UNIT. REFER TO VAV BOX SCHEDULE AND RESPECTIVE DETAILS. REFER TO DUCTWORK PLANS FOR QUANTITIES AND LOCATIONS. (TYPICAL)

HW/S&R AND CHW/S&R UP TO AHU-7

BMS BUILDING CONTROLLER WITH IP ADDRESS

MATCH LINE - AREA D
MATCH LINE - AREA C

1 SECOND FLOOR MECHANICAL PIPING PLAN - AREA D
1/8" = 1'-0"



BID DOCUMENTS

drawing title
SECOND FLOOR MECHANICAL PIPING PLAN AREA D

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

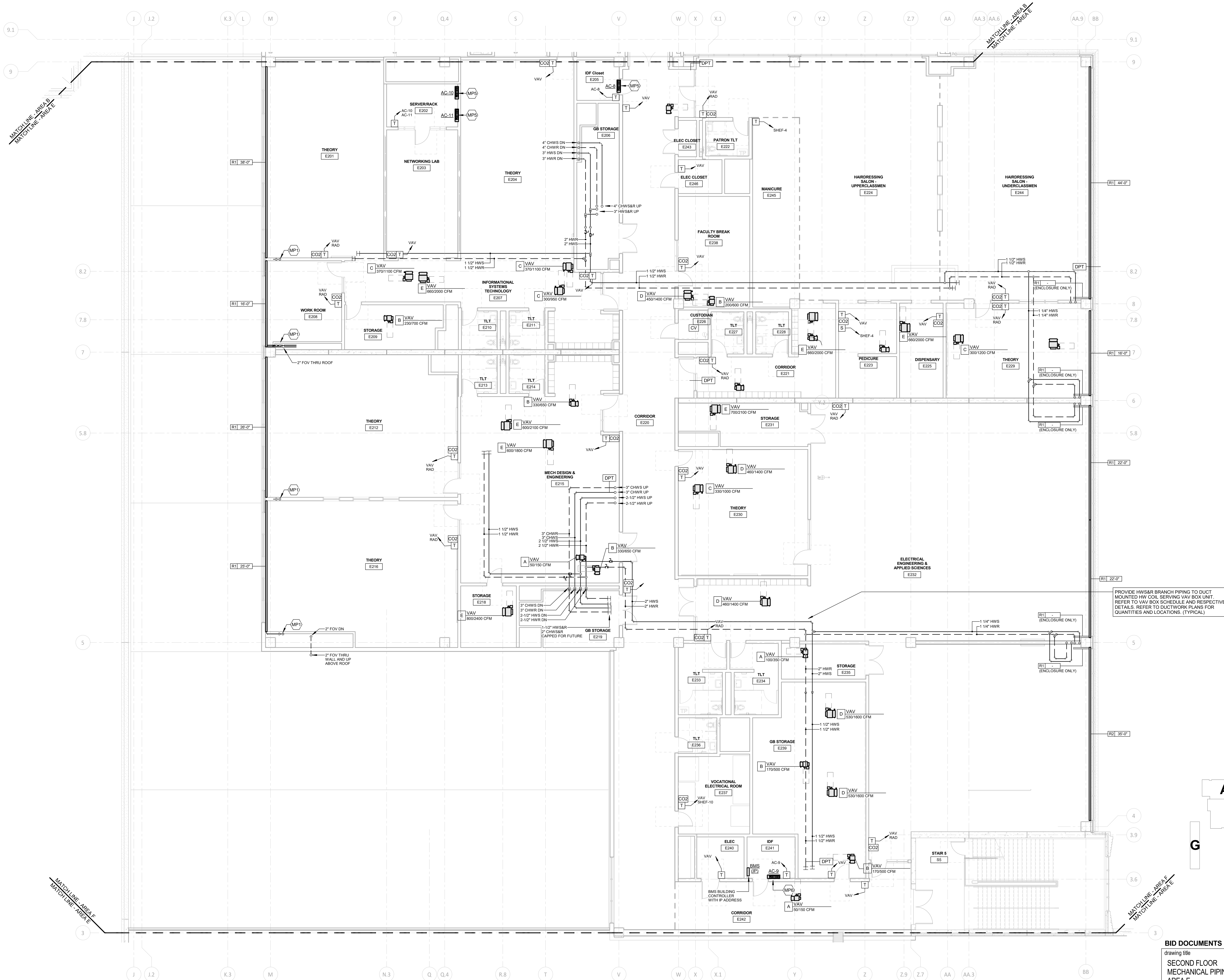
REVISIONS		
mark	date	description
	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date 10/11/2019
scale As indicated
drawn by ANK
approved by BDW
drawing no. **M2-1-2D**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no. BI-RT-878 CM-R
OSCGR project no. 900-0013



MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
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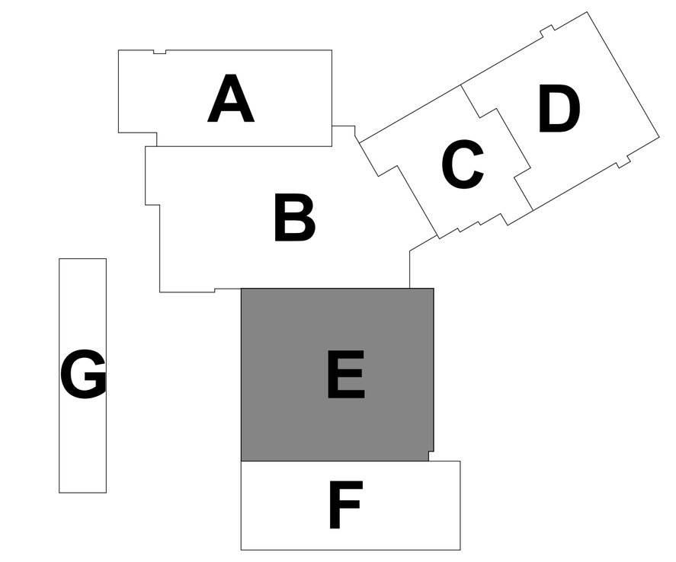
7. VOLUME DAMPERS SHALL BE INSTALLED MINIMUM 8'-0" FROM EACH DIFFUSER, GRILLE AND REGISTER WHERE EVER POSSIBLE. FLEXIBLE CONNECTIONS SHALL NOT EXCEED 8'-0" IN LENGTH.
8. NOT ALL BRANCH PIPING TO DEVICES ARE SHOWN. PROVIDE BRANCH PIPING TO ALL DEVICES PER DETAILS AND SCHEDULES. PIPE BRANCHES SHALL BE MINIMUM 3/4" DIAMETER UNLESS NOTED OTHERWISE.
9. ALL PENETRATIONS THROUGH FULL HEIGHT CORRIDOR WALLS SHALL BE SEALED. REFER TO ARCHITECTURAL DRAWINGS FOR TYPES OF WALLS AND REQUIREMENTS FOR SEALING.
10. DUCTWORK AND PIPING LAYOUTS DO NOT SHOW ALL TRANSITIONS AND OFFSETS THAT WILL BE REQUIRED. PROVIDE COORDINATION DRAWINGS AND OFFSET DUCTWORK AND PIPING AS REQUIRED.

MECHANICAL PIPING KEY NOTES

MP1	3/4" HWS&R DOWN. OFFSET AND PROVIDE ELBOWS IN PARTITION TO ALIGN WITH PIPE CONNECTIONS AT RADIATION.
MP2	3/4" HWS&R UP TO FLOOR ABOVE.
MP3	3/4" HWS&R AROUND COLUMN FEEDING RADIATION.
MP4	INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO CONDENSATE MAIN.
MP5	INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO FLOOR DRAIN. REFER TO PLUMBING DRAWINGS FOR LOCATION.
MP6	INSTALL REFRIGERANT PIPING UP TO CU ON THE ROOF. INSTALL 3/4" CONDENSATE TO JANITOR'S SINK IN CUSTODIAL CLOSET.
MP7	PROVIDE CONDENSATE PIPING FROM ERV TO FLOOR DRAIN AT THE SHOP LEVEL. REFER TO PLUMBING DRAWINGS FOR LOCATION.
MP8	PROVIDE BALL VALVES ON SUPPLY AND RETURN PIPING AND MANUAL BALANCE VALVE ON RETURN PIPING.



1 SECOND FLOOR MECHANICAL PIPING PLAN - AREA E
1/8" = 1'-0"

BID DOCUMENTS

drawing title: SECOND FLOOR MECHANICAL PIPING PLAN AREA E	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
REVISIONS	drawing prepared by: **Consulting Engineering Services, Inc.** 811 Middle St., Middletown, CT 06457	date: 10/11/2019 scale: As indicated drawn by: ANK
mark | date | description | 11/8/2019 | Addendum No.1	project: **Additions and Renovations** **Platt Technical High School** 600 Orange Avenue Milford, CT 06461	approved by: BDW
	CAD no. | DCS project no. BI-RT-878 CM-R | OSCGR project no. 900-0013	drawing no. M2-1-2E

MATCH LINE - AREA A
MATCH LINE - AREA B
MATCH LINE - AREA C
MATCH LINE - AREA E
CORRIDOR A130
GENERAL BUILDING STORAGE B101
MDF B102
IT REPAIR SHOP B103
DEMO CLASSROOM B105
BAKERY B106
TLT B107
TEACHERS OFFICE B108
TLT B109
IDF Closet B128
RESTAURANT STORAGE B129
COFFEE SHOP B130
VESTIBULE B157
DEAN OF STUDENTS C101
GUIDANCE WAITING C111
FAMILY ENGAGEMENT CENTER C119
LAUNDRY/ STORAGE B116
MAINT SHWS B110
MAINT SHWS B113
STAFF LOCKERS B117
MAINT LOCKERS B112
TLT B114
MAINTENANCE SUPERVISOR B111
RECYCLE ROOM B115
CORRIDOR B118
JAN B119
TLT B121
TLT B122
LOCKER B123
LOCKER B120
WALK IN COOLER B124A
WALK IN FREEZER B124B
INSTRUCTIONAL KITCHEN B124
RESTAURANT B126
CAFETERIA SEATING B158
CORRIDOR B160
DISH WASH B125A
GB STORAGE B141
RECEIVING B132
CAN WASH B133
WALK IN COOLER B137
WALK IN COOLER B138
KITCHEN B139
DRY STORAGE B135
DRY STORAGE B136
CHEFS OFFICE B134
SERVERY B140
LOBBY B161
VESTIBULE B162
CAFETERIA SEATING B159
BOILER B163
VOC MEZZANINE M101
ERV-M1
CORRIDOR B150
RAMP B151
ELEV. E1
SCHOOL STORE B155
CORRIDOR B160
TLT B153
TLT B154
REFER TO SHOP LEVEL PLANS FOR CONTINUATION OF MECHANICAL PIPING IN AREA B
VAV 460/1400 CFM
2" HWR
2" HWS
PP
OCC
DPT
UH-8
UH-9
UH-10
MP7
MP8
PROVIDE HWS&R BRANCH PIPING TO DUCT MOUNTED HW COIL SERVING VAV BOX UNIT REFER TO VAV BOX SCHEDULE AND RESPECTIVE DETAILS. REFER TO DUCTWORK PLANS FOR QUANTITIES AND LOCATIONS. (TYPICAL)
REFER TO FIRST FLOOR PLANS FOR CONTINUATION OF MECHANICAL PIPING IN AREA B
4" CHWS
4" CHWR
6" HWS
6" HWR
4" HWS
4" HWR
A
B
C
D
E
F
G

1 MEZZANINE MECHANICAL PIPING PLAN - AREA B
1/8" = 1'-0"

MECHANICAL NOTES

1. SEE DRAWINGS M3-1-1, M3-1-2 & M3-1-3 FOR SYMBOL LIST AND SCHEDULES.
2. SEE DRAWINGS M4-1-1, M4-1-2, M4-1-3 & M4-1-4 FOR DETAILS.
3. SEE DRAWINGS M5-1-1, M5-1-2, M5-1-3 & M5-1-4 FOR CONTROLS DIAGRAMS.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS ON GENERAL CONDITIONS, MATERIAL SPECIFICATIONS AND INSTALLATION.
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MECHANICAL PIPING KEY NOTES

MP1	3/4" HWS&R DOWN. OFFSET AND PROVIDE ELBOWS IN PARTITION TO ALIGN WITH PIPE CONNECTIONS AT RADIATION.
MP2	3/4" HWS&R UP TO FLOOR ABOVE.
MP3	3/4" HWS&R AROUND COLUMN FEEDING RADIATION.
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MP8	PROVIDE BALL VALVES ON SUPPLY AND RETURN PIPING AND MANUAL BALANCE VALVE ON RETURN PIPING.

STATE OF CONNECTICUT · DOUGLAS S. LAPRE · 20909 · LICENSED · PROFESSIONAL ENGINEER

BID DOCUMENTS

drawing title
MEZZANINE
MECHANICAL PIPING PLAN
AREA B

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

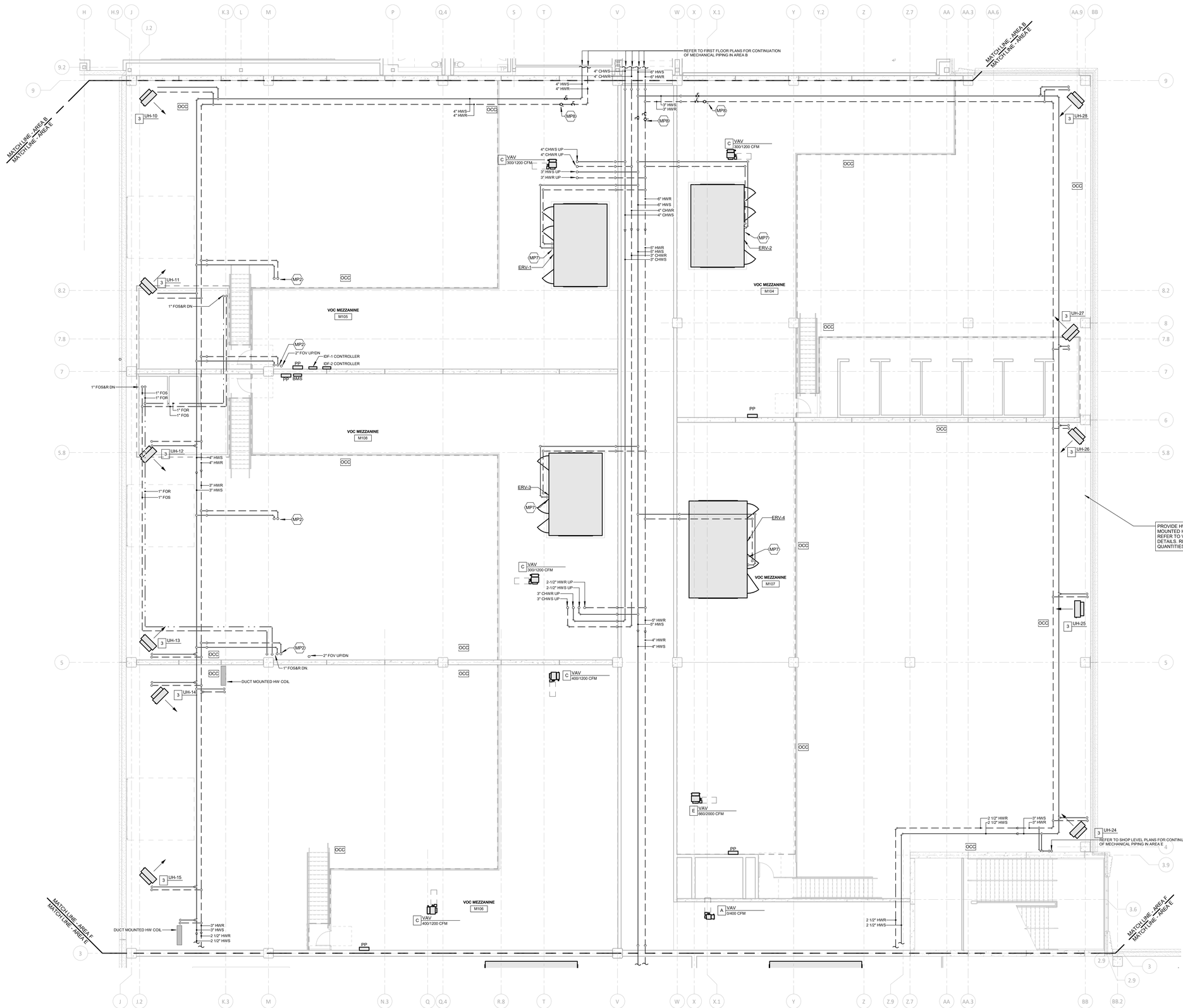
REVISIONS

mark	date	description
	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

date	10/11/2019
scale	As indicated
drawn by	ANK
approved by	BDW
drawing no.	M2-1-MB
CAD no.	
DCS project no.	BI-RT-878 CM-R
OSCGR project no.	900-0013



1 MEZZANINE MECHANICAL PIPING PLAN - AREA E
1/8" = 1'-0"

MECHANICAL NOTES

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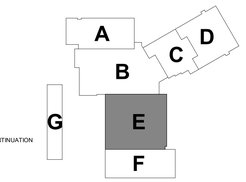

BID DOCUMENTS

drawing title
MEZZANINE
MECHANICAL PIPING PLAN
AREA E

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS

mark	date	description
	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
911 Middle St., Middletown, CT 06457

date 10/11/2019
scale As indicated
drawn by ANK
approved by BDW
drawing no. **M2-1-ME**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no. BI-RT-878 CM-R
OSCGR project no. 900-0013

MECHANICAL NOTES

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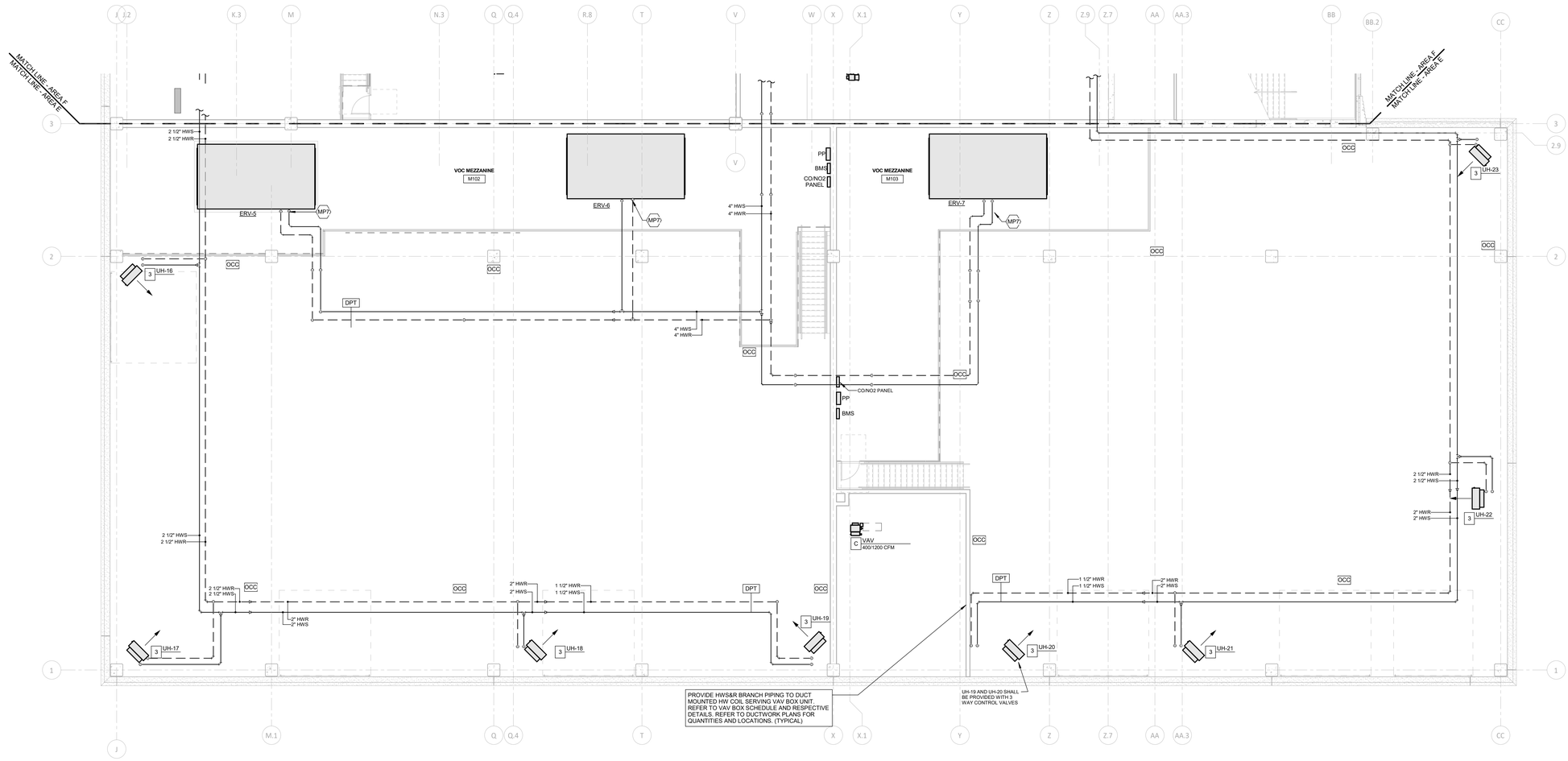

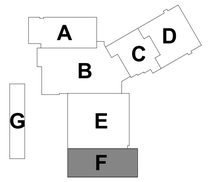

BID DOCUMENTS

drawing title
MEZZANINE
MECHANICAL PIPING PLAN
AREA F

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS

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	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
911 Middle St., Middletown, CT 06457

date 10/11/2019
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drawn by ANK
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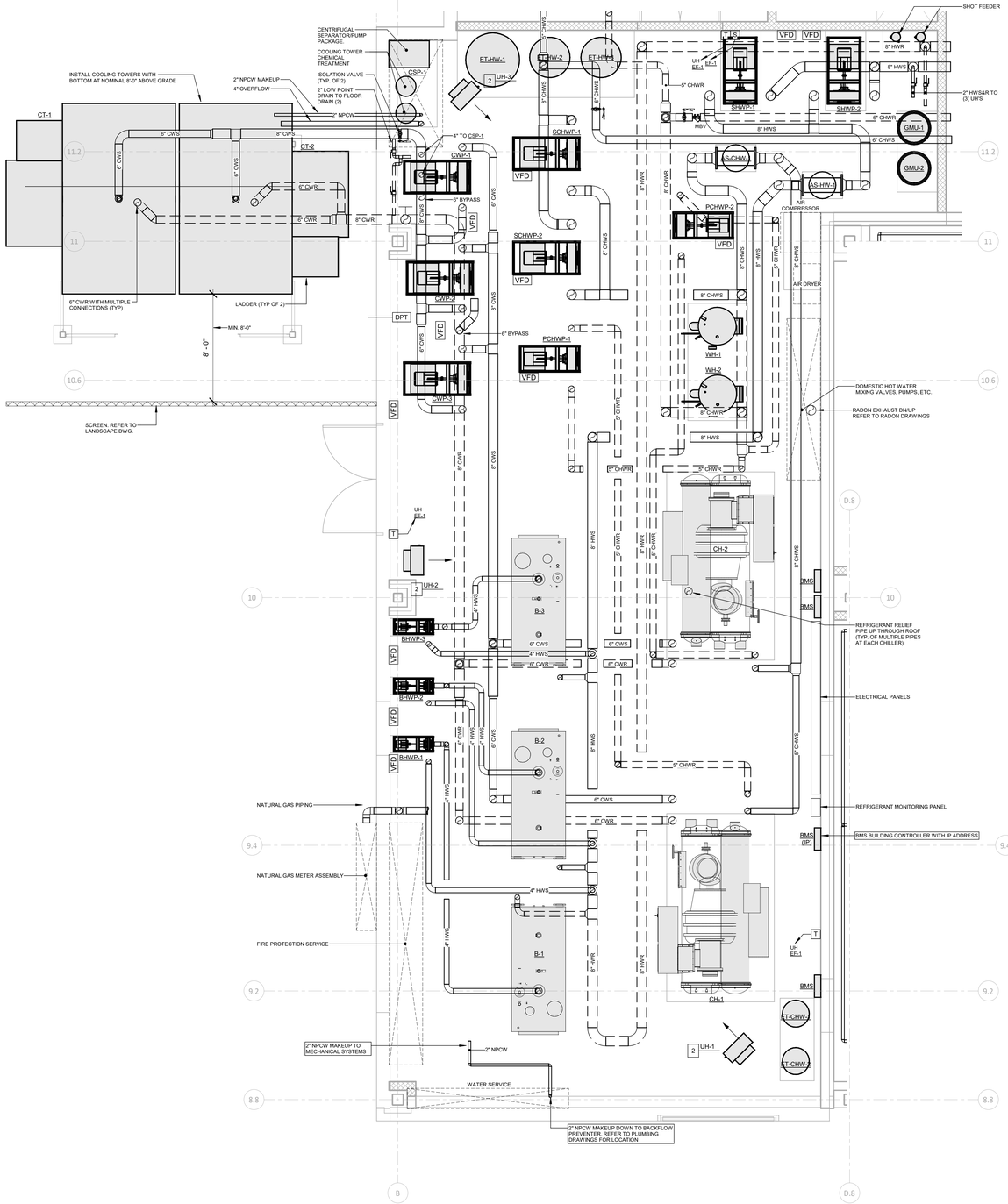
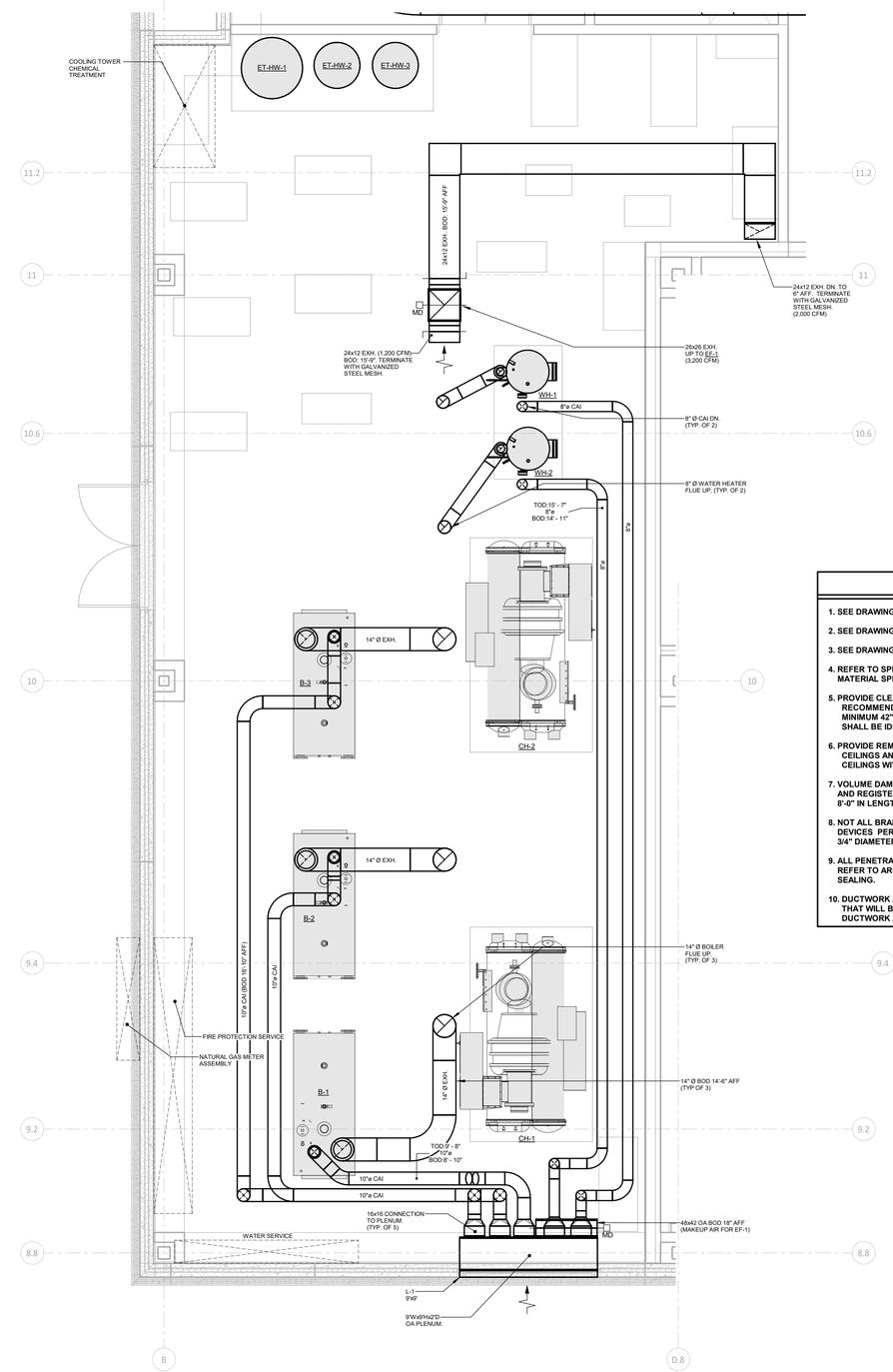
drawing no. **M2-1-MF**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no. BI-RT-078 CM-R
OSCGR project no. 900-0013



2 MECHANICAL BOILER ROOM PARTIAL PIPING PLAN
1/4" = 1'-0"



1 MECHANICAL BOILER ROOM PARTIAL PLAN
1/4" = 1'-0"

MECHANICAL NOTES

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drawing title
MECHANICAL PARTIAL PLAN

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS		
mark	date	description
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drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

date 10/11/2019
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drawing no. **M2-3-1A**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

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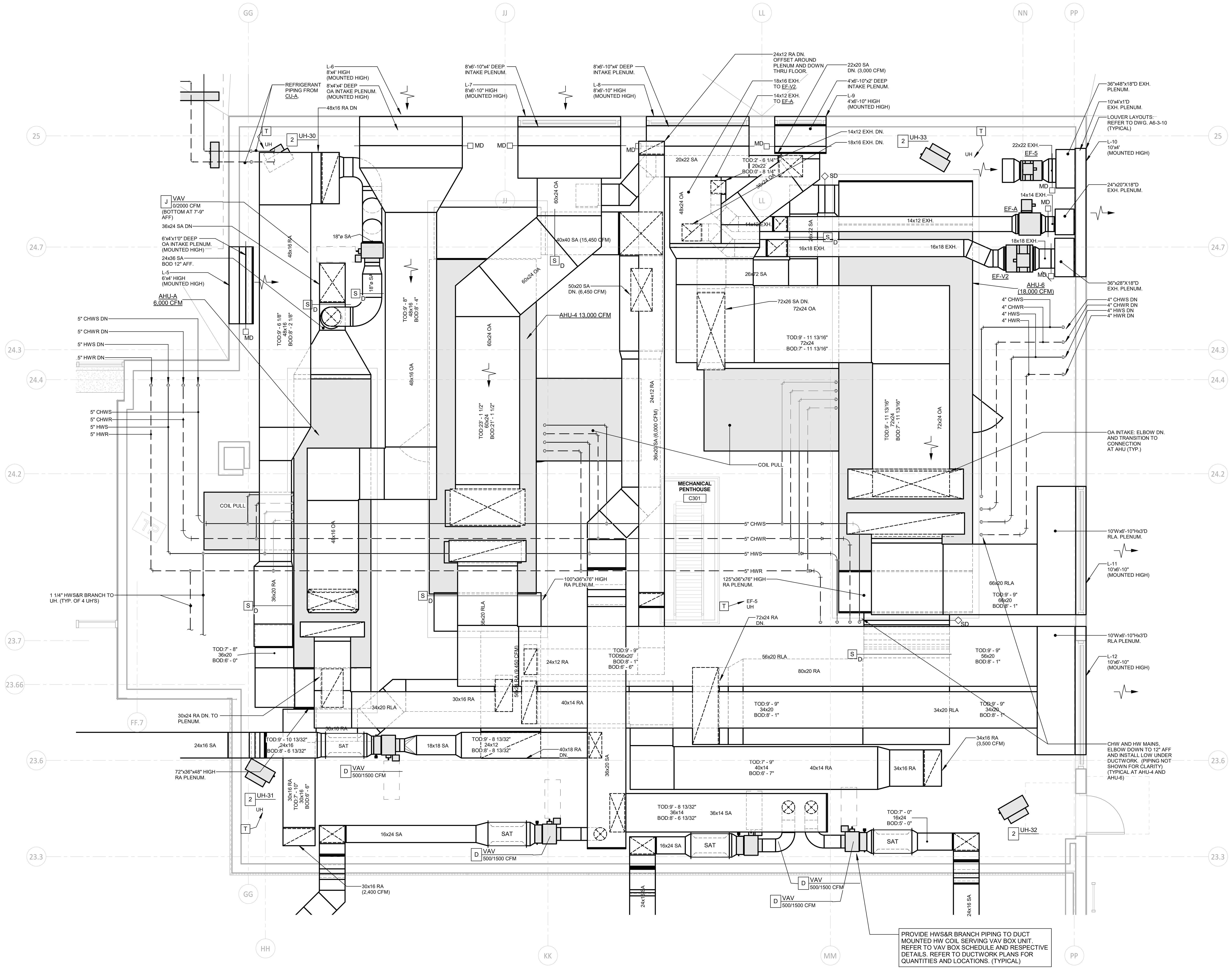

1 MECHANICAL ROOM PARTIAL PLAN
1/4" = 1'-0"

FIRE DAMPER NOTE FOR FLOOR PENETRATIONS

PROVIDE FIRE DAMPERS AT ALL DUCTWORK PENETRATIONS THROUGH THE 2ND FLOOR AND FLOOR OF THE MECHANICAL PENTHOUSE. AT EACH FIRE DAMPER, PROVIDE A DUCT ACCESS DOOR TO PROVIDE ACCESS FROM THE FLOOR ABOVE. EACH ACCESS DOOR SHALL BE MINIMUM 24"X24" AND SHALL BE INSTALLED AT 6" AFF TO THE BOTTOM. WHERE DUCT WIDTH IS LESS THAN 24", ACCESS DOOR SHALL BE WIDTH OF DUCT LESS 2". HEIGHT SHALL REMAIN 24". PROVIDE 24"X24" ACCESS PANEL IN THE PARTITION AT THE SAME HEIGHT TO ALLOW ACCESS TO THE DUCT ACCESS DOOR.

STATE OF CONNECTICUT DOUGLAS S. LAMBERTE 20909 LICENSED PROFESSIONAL ENGINEER

BID DOCUMENTS

drawing title
MECHANICAL PENTHOUSE PARTIAL PLAN

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

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drawing prepared by
Consulting Engineering Services, Inc.
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project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

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OSCGR project no.	900-0013

RADIATION SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	CAPACITY BTUH/LF	AVERAGE WATER TEMPERATURE (°F)	ENCLOSURE HEIGHT	MOUNTING HEIGHT TO BOTTOM	NUMBER OF TIERS	PIPE SIZE	FIN SIZE	REMARKS
R1	STERLING PRGF-04 (WALL MOUNTED)	PANEL RADIATOR	905	140	11 ½"	3"	4 TUBES	¾"	-	-
R2	STERLING PRGF-04 (PEDESTAL MOUNTED)	PANEL RADIATOR	905	140	11 ½"	3"	4 TUBES	¾"	-	-
R3	STERLING MODEL LP-024	RADIANT CEILING PANEL	272	140	N/A	N/A	4-PASS	¾"	-	5
R4	MODINE MODEL S-018	FIN TUBE RADIATION	900	140	18"	4"	2	¾"	4-1/4" x 4-1/4"	1,2,3,4

INDICATES TYPE OF RADIATION → R2 6' - 0" ← INDICATES LENGTH OF ACTIVE ELEMENT

REMARKS:
1. PROVIDE SUPPORT SADDLE FOR RETURN PIPE WHERE SHOWN ON THE DRAWINGS.
2. ENCLOSURE COVER SHALL BE MINIMUM 16 GAUGE AND COMPLETELY ENCLOSE ALL PIPING, FITTINGS AND VALVES.
3. REMOVABLE COVER SECTION OR DOORS SHALL BE PROVIDED FOR ACCESS TO ISOLATION VALVES, CONTROL VALVES, DRAIN VALVES, BALANCING VALVES AND AIR VENTS.
4. PROVIDE WITH DAMPER AND KNOB WHERE MORE THAN ONE SECTION SERVES ONE TEMPERATURE SENSOR ZONE.
5. 24" WIDE, CEILING MOUNTED PANEL. PROVIDE WITH INSULATION ON TOP OF PANEL.

NOTE:
1. ALL RATINGS INCLUDE 30% PPG FACTOR.
2. BALANCE EACH SECTION OF RADIATION TO 3 GPM.
3. FOR ALL TYPES, INSTALL COVER/ENCLOSURES WALL-TO-WALL UNLESS NOTED OTHERWISE.

DIFFUSER AND REGISTER SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	DUTY	TYPE	BORDER TYPE	CONSTRUCTION			MAX NC	REMARKS
					OBD	FRAME	BLADES		
A	KRUEGER SH	SUPPLY	LF	REMARK #2	-	STEEL	STEEL	24	1
AA	KRUEGER SSH	SUPPLY	LF	REMARK #2	-	ALUM.	ALUM.	24	1
B	KRUEGER S80	RETURN EXHAUST	LF	REMARK #2	-	STEEL	STEEL	24	-
BA	KRUEGER S580	RETURN EXHAUST	LF	REMARK #2	-	ALUM.	ALUM.	24	-
C	KRUEGER 880	SUPPLY	LF	FLUSH	-	STEEL	STEEL	24	-
CA	KRUEGER S880	SUPPLY	LF	FLUSH	-	ALUM.	ALUM.	24	-
D	KRUEGER S80 WITH 5PF FILTER FRAME	RETURN EXHAUST	LF	REMARK #2	-	STEEL	STEEL	24	3
E	KRUEGER S480	RETURN EXHAUST	HD	FLUSH	-	STEEL	STEEL	24	4
F	KRUEGER SERIES 1900	SUPPLY	LS	REMARK #8	-	ALUMINUM	ALUMINUM	21	5
G	KRUEGER SERIES 1900	SUPPLY	LS	REMARK #8	-	ALUMINUM	ALUMINUM	21	6
H	KRUEGER SERIES 1600	RETURN	LB	REMARK #8	-	ALUMINUM	ALUMINUM	15	7

TYPES:
DD - DIRECTIONAL DIFFUSER
DL - DRUM LOUVER
EC - EGG CRATE
HD - HEAVY DUTY
LF - LOUVERED FACE
LS - LINEAR SLOT
LB - LINEAR BAR

INDICATES DIFFUSER → A 12x12 / 300 ← INDICATES NECK SIZE; INDICATES UNIT CFM CAPACITY

REMARKS:
1. SQUARE TO ROUND TRANSITION. ALSO SEE FLEXIBLE DUCT SCHEDULE NOTES.
2. PROVIDE T-BAR MOUNTING FOR NECK SIZES 18X18 AND LARGER. PROVIDE FLUSH MOUNTING FOR SIZES LESS THAN 18X18.
3. PROVIDE WITH HINGED, STEEL FILTER FRAME AND 2" MERV 8 FILTERS; AIR GUARD TYPE DP MAX CLEAN; P.D. OF 0.08" AT 250 FPM.
4. 1/2" BLADE SPACING; 30° BLADE DEFLECTION; 14 GAGE BLADES, 16 GUAGE FRAME.
5. (2) 1" SLOTS. PROVIDE WITH INSULATED PLENUM & CUSTOM COLOR.
6. (4) 1" SLOTS. PROVIDE WITH INSULATED PLENUM & CUSTOM COLOR.
7. 1/8" BLADES; 0° DEFLECTION; 12" WIDTH.
8. REFER TO ARCHITECTURAL CEILING PLANS FOR TYPE OF CEILING AND CORRESPONDING BORDER.
9. ALL DIFFUSERS, REGISTERS AND GRILLES SERVING TOILET ROOMS, LOCKER ROOMS AND KITCHENS SHALL BE ALL ALUMINUM CONSTRUCTION.

HOT WATER UNIT HEATER SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	CAPACITY (MBH)	COIL FLOW (GPM)	COIL PD (FT HD)	EWT (°F)	EAT (°F)	AIR FLOW (CFM)	ELECTRICAL DATA				HWS&R BRANCH SIZE	WEIGHT (LBS)	REMARKS
									HP	VOLTAGE	PHASE				
1 UH-	MODINE MODEL HC SIZE 63	H	24.9	4.7	0.6	140	60	1,120	1/12	120	1	1"	50	1,3,4	
2 UH-	MODINE MODEL HC SIZE 108	H	45.8	8.7	2.8	140	60	2,010	1/8	120	1	1 1/4"	74	1,3,4	
3 UH-	MODINE MODEL HC SIZE 258	H	110.7	21.0	5.7	140 BTU	60	4,560	1/2	120	1	1 1/2"	162	1,3,4	
1 CUH-	MODINE MODEL CW SIZE 004 ARRANGEMENT 58	FRC	23.8	4.7	8.7	140	60	250	0.03	115	1	3/4"	115	2,3,4	
2 CUH-	MODINE MODEL CW SIZE 010 ARRANGEMENT 58	FRC	44.7	8.8	2.5	140	60	840	0.05(2)	115	1	1 1/4"	205	2,3,4	
3 CUH-	MODINE MODEL CW SIZE 010 ARRANGEMENT 08	WR	44.7	8.8	2.5	140	60	1050	0.05(2)	115	1	1 1/4"	205	3,4	
4 CUH-	MODINE MODEL CW SIZE 004 ARRANGEMENT 08	WR	23.8	4.7	8.7	140	60	840	0.03	115	1	1 1/4"	115	3,4	

UH TYPES:
H = HORIZONTAL
V = VERTICAL

CUH TYPES:
F = FLOOR MOUNTED; SLOPED TOP
FRC = FULLY RECESSED CEILING
WR = RECESSED
WPR = WALL MOUNTED PARTIALLY RECESSED

NOTES (APPLY TO ALL UNITS):
1. PROVIDE WITH PERMANENT SPLIT CAPACITOR (PSC) MOTORS.

REMARKS:
1. PROVIDE WITH WALL BRACKET, ADJUSTABLE HORIZONTAL AND VERTICAL BLADES.
2. PROVIDE WITH LEVELING LEGS, TAMPER RESISTANT ACCESS FASTENERS, TWO SPEED FAN AND 2 ROW COIL.
3. DISCONNECT SWITCH FURNISHED BY DIV. 26.
4. RATINGS LISTED USING 30% PROPYLENE GLYCOL SOLUTION.

PUMP SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	LOCATION	SYSTEM SERVING	MEDIA	FLOW RATE (GPM)	TDH (FT)	FLUID TEMP (°F)	PUMP EFF (%)	BHP	MOTOR DATA				REMARKS
											HP	RPM	VOLTS	PHASE	
BHWP-1	ARMSTRONG SERIES 4030 SIZE 4x3x8	ES	BOILER ROOM	HOT WATER	PPG	260	45	180	79	3.75	5	1750	480	3	
BHWP-2	ARMSTRONG SERIES 4030 SIZE 4x3x8	ES	BOILER ROOM	HOT WATER	PPG	260	45	180	79	3.75	5	1750	480	3	
BHWP-3	ARMSTRONG SERIES 4030 SIZE 4x3x8	ES	BOILER ROOM	HOT WATER	PPG	260	45	180	79	3.75	5	1750	480	3	
SHWP-1	ARMSTRONG SERIES 4600 6x5x15L	HSC	BOILER ROOM	HOT WATER	PPG	1200	160	180	81.9	60.08	75	1790	480	3	
SHWP-2	ARMSTRONG SERIES 4600 6x5x15L	HSC	BOILER ROOM	HOT WATER	PPG	1200	160	180	81.9	60.08	75	1790	480	3	
PCHWP-1	ARMSTRONG SERIES 4600 - 5x4x15L	HSC	BOILER ROOM	CHILLED WATER	PPG	510	65	45	81	10.45	15	1638	480	3	
PCHWP-2	ARMSTRONG SERIES 4600 - 5x4x15L	HSC	BOILER ROOM	CHILLED WATER	PPG	510	65	45	81	10.45	15	1638	480	3	
SCHWP-1	ARMSTRONG SERIES 4600 6x5x15L	HSC	BOILER ROOM	CHILLED WATER	PPG	1100	150	45	81.45	51.91	60	1790	480	3	
SCHWP-2	ARMSTRONG SERIES 4600 6x5x15L	HSC	BOILER ROOM	CHILLED WATER	PPG	1100	150	45	81.45	51.91	60	1790	480	3	
CWP-1	ARMSTRONG SERIES 4600 - 6x5x15L	HSC	BOILER ROOM	CONDENSER WATER	W	610	70	85	79	13.65	20	1180	480	3	1,2
CWP-2	ARMSTRONG SERIES 4600 - 6x5x15L	HSC	BOILER ROOM	CONDENSER WATER	W	610	70	85	79	13.65	20	1180	480	3	1,2
CWP-3	ARMSTRONG SERIES 4600 - 6x5x15L	HSC	BOILER ROOM	CONDENSER WATER	W	610	70	85	79	13.65	20	1180	480	3	1,2
CSP-1	COOLING TOWER WATER TREATMENT PUMP	ES	BOILER ROOM	CONDENSER WATER	W	160	30	85			5		480	3	3

TYPE:
ES = END SUCTION
CC = CLOSE COUPLED
IL = IN-LINE
HSC = HORIZONTAL SPLIT CASE

MEDIA:
PPG = 30% PROPYLENE GLYCOL/WATER SOLUTION

REMARKS:
1. NPSHR SHALL NOT EXCEED 4.0 FEET HEAD.
SUCTION DIFFUSER PRESSURE DROP NOT EXCEED 1 PSIG.
2. PROVIDE WITH SIDESTREAM FILTRATION SYSTEM.
3. PUMP SHALL BE PART OF CENTRIFUGAL SEPARATOR/PUMP PACKAGE

MECHANICAL ABBREVIATION LIST

ABBREVIATION	
AC-#	AIR CONDITIONING UNIT
AC	ABOVE CEILING
AD	ACCESS DOOR
AF	AIR FILTER
A/FF	ABOVE FINISHED FLOOR
AHU-#	AIR HANDLING UNIT
AMB	AMBIENT
APPROX	APPROXIMATE
AVG	AVERAGE
BHP	BREAK HORSE POWER
BHWP	BOILER HOT WATER PUMP
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BW	BRACKET ANCHORED TO WALL
CAI	COMBUSTION AIR INTAKE
CAP	CAPACITY
CD	CONDENSATE DRAIN
CPD	CONDENSATE PUMPED DISCHARGE
CFM	CUBIC FEET PER MINUTE
CU-#	CONDENSING UNIT
CU FT	CUBIC FOOT
CV	CONSTANT VOLUME
CW	COLD WATER
dB	DECIBELS
DB	DRY BULB
DOAS	DEDICATED OUTSIDE AIR SYSTEM
E	EXISTING TO REMAIN
EAT	ENTERING AIR TEMPERATURE
EF-#	EXHAUST FAN
ENT	ENTERING
ER	ENERGY RECOVERY
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXG	EXISTING
EXH	EXHAUST
EXP	EXPANSION
EXT	EXTERNAL
oF	DEGREES FAHRENHEIT
FD	FIRE DAMPER
FLD	FLOOR DRAIN
FLEX	FLEXIBLE
FOS	FUEL OIL SUPPLY
FOR	FUEL OIL RETURN
FOV	FUEL OIL VENT
FPM	FEET PER MINUTE
FT	FEET
FTR	FIN-TUBE RADIATION
GA	GAUGE
GAL	GALLON
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H-#	HUMIDIFIER
HD	HEAD
HG	MERCURY
HP	HORSE POWER
HR	HOUR
HV-#	HEATING & VENTILATION UNIT
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HX-#	HEAT EXCHANGER
HZ	FREQUENCY
IDF	INDUCED DRAFT FAN
IN.	INCH
IN.W.G	INCHES WATER GAUGE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LBS/HOUR	POUNDS PER HOUR
LF	LINEAR FEET
LP	PROPANE
LWT	LEAVING WATER TEMPERATURE
MBH	BTU PER HOUR (THOUSAND)
MIN	MINIMUM
MBV	MANUAL BALANCING VALVE
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
N.T.S.	NOT TO SCALE
N/A	NOT APPLICABLE
NC	NOISE CRITERIA
NIC	NOT IN CONTRACT
NL	NEW LOCATION
NPCW	NON-POTABLE COLD WATER
OA	OUTSIDE AIR
PCHWP	PRIMARY CHILLED WATER PUMP
PD	PRESSURE DROP (FEET OF WATER OR INCHES OF WATER)
PH	PHASE
PPG	PROPYLENE GLYCOL
PP	POWER PACK
PR	PRESSURE RELIEF
PRESS	PRESSURE
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RAD	RADIATION
RH	RELATIVE HUMIDITY
RHD	ROOF HOOD
RPM	REVOLUTIONS PER MINUTE
RGL	REFRIGERANT GAS LINE
RL	RELOCATE EXISTING
RDL	REFRIGERANT DISCHARGE LINE
RLA	RELIEF AIR
RLL	REFRIGERANT LIQUID LINE
RR	ROOF RAIL
RSL	REFRIGERANT SUCTION LINE
RVD	REMOTELY OPERATED VOLUME DAMPER
SA	SUPPLY AIR
SAT	SOUND ATTENUATOR
SCHWP	SECONDARY CHILLED WATER PUMP
SHEF	SHOP EXHAUST FAN
SHWP	SECONDARY HOT WATER PUMP
SP	STATIC PRESSURE
SQ.FT.	SQUARE FEET
TD	TRANSFER DUCT
TYP	TYPICAL
UH-#	UNIT HEATER
VAV-#	VARIABLE AIR VOLUME BOX
VD	VOLUME DAMPER
VEL	VELOCITY
VOL	VOLUME
WB	WET BULB

HVAC DUCTWORK LEGEND

SYMBOL	DESCRIPTION
	REMOVE EXISTING DUCTWORK/EQUIPMENT
	FLEXIBLE DUCTWORK
	EXISTING DUCTWORK (DOUBLE LINE)
	EXISTING DUCTWORK (SINGLE LINE)
	NEW DUCTWORK (DOUBLE LINE)
	NEW DUCTWORK (SINGLE LINE)
	EXHAUST DUCT DROP (DOUBLE LINE)
	EXHAUST DUCT DROP (SINGLE LINE)
	EXHAUST DUCT RISE (DOUBLE LINE)
	EXHAUST DUCT RISE (SINGLE LINE)
	RETURN DUCT DROP (DOUBLE LINE)
	RETURN DUCT DROP (SINGLE LINE)
	RETURN DUCT RISE (DOUBLE LINE)
	RETURN DUCT RISE (SINGLE LINE)
	SUPPLY DUCT DROP (DOUBLE LINE)
	SUPPLY DUCT DROP (SINGLE LINE)
	SUPPLY DUCT RISE (DOUBLE LINE)
	SUPPLY DUCT RISE (SINGLE LINE)
	VOLUME DAMPER
FD	FIRE DAMPER
FSD	COMBINATION FIRE & SMOKE DAMPER
MD	MOTORIZED DAMPER
SD	DUCT MOUNTED SMOKE DETECTOR
	RETURN/EXHAUST/OUTSIDE AIR ARROW
	SUPPLY ARROW
1/2"	UNDERCUT DOOR
	CONNECTION TO EXISTING
	SUPPLY DIFFUSER
	RETURN/EXHAUST REGISTER
	ACCESS DOOR

PIPING LEGEND

SYMBOL	DESCRIPTION
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
COND	CONDENSATE DRAIN
CWR	CONDENSATE WATER RETURN
CWS	CONDENSATE WATER SUPPLY
CPD	CONDENSATE PUMP DISCHARGE
	GATE VALVE
	BALL VALVE
	GLOBE VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	UNION
	STRAINER WITH VALVED BLOWDOWN
PA	PIPE ANCHOR
M	MANUAL BALANCE VALVE
A	AUTOMATIC AUTO FLOW BALANCE VALVE
	PIPE DROP
	PIPE RISE

GENERAL NOTES

1. NOTES APPLY TO ALL DRAWINGS.
2. RETURN AIR PLENUMS; WIDTH AND HEIGHT SHALL MATCH RETURN AIR OPENING AT EACH AHU. PROVIDE MINIMUM 24"W x 36"H HINGED ACCESS DOORS AT EACH PLENUM.
3. CONTRACTOR SHALL "BLANK OFF" ALL UNUSED SECTIONS OF ROOF HOODS AND LOUVERS WITH INSULATED PANELS. SEE SPECIFICATION SECTION 23 07 00.
4. ALL DUCTWORK CONNECTIONS TO LOUVERS SHALL BE MADE WITH DUCTWORK TRANSITIONS AT MAXIMUM 45° ANGLES. LOUVER PLENUMS AND DUCT CONNECTIONS SHALL BE WATER TIGHT. PITCH BOTTOM TO WEEP HOLES IN LOUVER.
5. AT EACH AHU'S, PROVIDE SHEET METAL BLANK-OFF SECTIONS AT UNUSED SECTIONS OF SUPPLY AIR AND RETURN AIR DUCT CONNECTIONS.
6. PROVIDE STEEL SUPPORT FRAMES TO SUPPORT ALL VFD'S.
7. COORDINATE ALL PIPING WITH ELECTRICAL WORK. PIPING SHALL NOT BE INSTALLED ABOVE PANELS, TRANSFER SWITCHES, AND PANEL BOARDS.
8. PROVIDE VOLUME DAMPERS AT EACH DIFFUSER, REGISTER AND GRILLE AND AS NEEDED TO PROPERLY BALANCE AIR SYSTEM.
9. AT ALL HOT WATER SUPPLY AND RETURN MAINS PROVIDE EXPANSION LOOPS PER SPECIFICATION SECTION 23 05 16.
10. EXHAUST AIR AND PLUMBING VENT TERMINATIONS SHALL BE MINIMUM 25'-0" AWAY FROM OPERABLE WINDOWS AND OUTSIDE AIR INTAKES. COORDINATE LAYOUTS PER REQUIREMENTS FOR SHOP DRAWINGS.

GLYCOL MAKEUP UNIT SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TANK VOLUME (GAL)	PUMP CAPACITY		MOTOR DATA			REMARKS
			FLOW (GPM)	PRESSURE (PSIG)	HP	VOLTS	PHASE	
GMU-1	WESSELS GMP-15100	100	1.8	70	3/4	120	1	1,2
GMU-2	WESSELS GMP-15100	100	1.8	70	3/4	120	1	1,2

REMARKS:
1. REFER TO SPEC SECTION 232500.
2. THE SYSTEM SHALL BE 30% PROPYLENE GLYCOL SOLUTION.

FLEXIBLE DUCT SCHEDULE

DIFFUSER SYMBOL	NECK SIZE	FLEX SIZE
A	6x6	8"
A	9x9	10"
A	12x12	12"
A	15x15	14"
A	18x18	16"

REMARKS:
1. MAX FLEX DUCT LENGTH SHALL BE 8 FEET.
2. TYP. FOR TYPE A AND TYPE AA DIFFUSERS.

BOILER SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	MEDIA	OUTPUT (MBH)	INPUT (MBH)	MINIMUM FLOW	FUEL DATA			WATER CONTENT (GALS)	OPERATING WEIGHT (LBS)	CONTROL CIRCUIT			FAN ELECTRICAL DATA		
						TYPE	RATE (MBH)	PRESSURE (IN. WG)			AMPS	VOLTS	PHASE	HP	VOLTS	PHASE
B-1	CLEAVER BROOKS CFLC-4000	PPG	3,760	4,000	80 GPM	NG	4,000	14" TO 1.2 PSIG	400	11,000	10.5	120	1	5.0	208	3
B-2	CLEAVER BROOKS CFLC-4000	PPG	3,760	4,000	80 GPM	NG	4,000	14" TO 1.2 PSIG	400	11,000	10.5	120	1	5.0	208	3
B-3	CLEAVER BROOKS CFLC-4000	PPG	3,760	4,000	80 GPM	NG	4,000	14" TO 1.2 PSIG	400	11,000	10.5	120	1	5.0	208	3

REMARKS:
1. PROVIDE WITH DIRECT COMBUSTION AIR INTAKE CONNECTION.
2. OUTPUT RATING BASED ON 80°F RETURN WATER TEMP.
3. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
4. PROVIDE WITH ELECTRIC SPARK IGNITION.
5. PROVIDE WITH ACID NEUTRALIZATION DEVICES AT CONDENSATE PIPING.

MEDIA:
PPG = 30% PROPYLENE GLYCOL/WATER SOLUTION.

WATER COOLED CHILLER SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	MEDIA	REFRIGERANT	CAPACITY (TONS)	CHILLED WATER (PPG)				CONDENSER WATER				ELECTRICAL DATA				OPERATING WEIGHT (LBS)	PRIMARY EFFICIENCY (KW/TON)	NPLV (KW/TON)	MAX SOUND PRESSURE (dB)			
					FLOW (GPM)	EWT (°F)	LWT (°F)	PD (FT HD)	FLOW (GPM)	EWT (°F)	LWT (°F)	PD (FT HD)	MCA	MOCP	VOLTS	PHASE				% LOAD			
																				100%	75%	50%	25%
CH-1	TRANE CENTRA-VAC CVHF	30 % PPG	R-514A	300	503.7	59	44	11.1	613.3	85	99	12.1	320	500	480	3	19,881	0.6391	0.4600	79	78	78	79
CH-2	TRANE CENTRA-VAC CVHF	30 % PPG	R-514A	300	503.7	59	44	11.1	613.3	85	99	12.1	320	500	480	3	19,881	0.6391	0.4600	79	78	78	79

REMARKS:
1. PROVIDE WITH DISCONNECT SWITCH AND VFD AT EACH COMPRESSOR.

MEDIA:
W = WATER
PPG = 30% PROPYLENE/GLYCOL WATER SOLUTION

COOLING TOWER SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	ENTERING AIR WET BULB (°F)	NOMINAL CAPACITY (TONS)	AIRFLOW (CFM)	CONDENSER WATER			ELECTRICAL DATA					ELECTRIC BASIN HEATER				OPERATING WEIGHT (LBS)
					FLOW (GPM)	EWT (°F)	LWT (°F)	HP	MOTOR RPM	FAN RPM	VOLTS	PHASE	QTY	KW	VOLTS	PHASE	
CT-1	SPX/ MARLEY NC8402PLN2	78	354	83,750	610	99	85	15.0	1800	370	480	3	1	12	480	3	12,000
CT-2	SPX/ MARLEY NC8402PLN2	78	354	83,750	610	99	85	15.0	1800	370	480	3	1	12	480	3	12,000

REMARKS:
1. PROVIDE EACH TOWER WITH BOTTOM SCREENS, VIBRATION CUT-OUT SWITCH (FACTORY WIRED), STAINLESS STEEL DRAIN PAN, AND WATER CONNECTIONS.
2. SOUND PRESSURE LEVELS SHALL NOT EXCEED LISTED VALUES. DATA IS AT A DISTANCE OF 5 FEET FROM FACE OF THE COOLING TOWER IN ANY DIRECTION.
A. FACE OF THE COOLING TOWER IN ANY DIRECTION.
B. THE COOLING TOWER FAN DISCHARGE.
3. PROVIDE WITH LOW SOUND FAN. MOTORS SHALL BE INVERTER DUTY RATED.
4. BASIN HEATER SHALL PREVENT FREEZING DOWN TO -5°F
5. PROVIDE PIPE CONNECTIONS AS SHOWN ON PIPING DIAGRAMS AND TEMPERATURE CONTROL DIAGRAMS.
6. CONDENSER WATER RETURN PIPE CONNECTION SHALL BE AT BOTTOM OF TOWER. PROVIDE INTERNAL PIPING TO TOP HEADERS.
7. BOTTOM OF COOLING TOWER SHALL BE INSTALLED AT NOMINAL 8'-0" ABOVE GRADE.
8. PROVIDE WITH FOUR (4) LADDERS; TWO ON EACH SIDE. ALL LADDERS SHALL HAVE SAFETY CAGES.

MEDIA:
W = WATER

		MAXIMUM SOUND PRESSURE (dB)								
		OCTAVE BAND (HZ)								
		63	125	250	500	1K	2K	4K	8K	
A		72	77	72	70	67	64	59	51	
B		72	75	74	74	70	68	65	56	

STATE OF CONNECTICUT · DEPARTMENT OF ADMINISTRATIVE SERVICES · 20909 · LICENSED PROFESSIONAL ENGINEER

BID DOCUMENTS

drawing title
MECHANICAL ABREVIATIONS, LEGENDS AND SCHEDULES

REVISIONS

mark	date	description
	11/8/2019	Addendum No.1

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

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Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

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project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no. BI-RT-878 CM-R
OSCGR project no. 990-0013

AIR HANDLING UNIT SCHEDULE

SYMBOL	MFR MODEL NO	SA DUCT CONNECTION SIZE	SA PLENUM	SOUND ATTENUATORS AT SUPPLY AIR	NO. SA FANS	TOTAL SA CFM	SUPPLY FAN DATA (PER FAN) CFM	ESP (IN WG)	TSP (IN WG)	SPEED (RPM)	MOTOR DATA BHP	HP	RPM	VOLTS	PH
DOAS-1	TRANE CUSTOM OR PERFORMANCE CLIMATE CHANGER	60" x 24"	30" LONG	36" LONG	1	7,000	7,000	2.0	6.2	2,470	9.52	15.0	1,800	460	3
AHU-A	TRANE PERFORMANCE CLIMATE CHANGER	60" x 24"	N/A	36" LONG	2	6,000	3,000	2.0	4.7	3,200	3.6	5	1,800	460	3
AHU-1	TRANE CUSTOM OR PERFORMANCE CLIMATE CHANGER	84" x 24"	40 " LONG	36" LONG	2	15,000	7,500	1.5	5.7	2,400	9.8	15	1,800	460	3
AHU-2	TRANE CUSTOM OR PERFORMANCE CLIMATE CHANGER	84" x 24"	24" LONG	60" LONG	2	15,000	7,500	2.5	7	3,000	12	15	1,800	460	3
AHU-3	TRANE CUSTOM OR PERFORMANCE CLIMATE CHANGER	84"x 24"	24" LONG	60" LONG	2	18,000	9,000	2.0	6.2	2,200	12	15.0	1,800	460	3
AHU-4	TRANE PERFORMANCE CLIMATE CHANGER	100" x 66"	N/A	60" LONG	2	13,000	6,500	2.0	4.8	2,000	7.5	10.0	1,800	460	3
AHU-5	TRANE CUSTOM OR PERFORMANCE CLIMATE CHANGER	60" x 30"	48" LONG	60" LONG	2	18,000	9,000	2.0	7.0	2127	14.0	20.0	1,800	460	3
AHU-6	TRANE PERFORMANCE CLIMATE CHANGER	124" x 72"	N/A	60" LONG	2	18,000	9,000	2.0	4.7	1,620	11	15.0	1,200	460	3
AHU-7	TRANE CUSTOM OR PERFORMANCE CLIMATE CHANGER	48" x 24"	40" LONG	36" LONG	1	7,000	7,000	1.5	6.1	2,200	9.8	15	1,800	460	3
AHU-8	TRANE CUSTOM OR PERFORMANCE CLIMATE CHANGER	60" x 36"	N/A	36" LONG	2	20,000	10,000	2.0	6.5	2,300	14.2	20.0	1,800	460	3
AHU-9	TRANE CUSTOM OR PERFORMANCE CLIMATE CHANGER	60" x 36"	36" LONG	60" LONG	2	20,000	10,000	2.0	5.1	1,800	10.7	15.0	1,800	460	3

SYMBOL	ACCESS SECTION (LENGTH)	COOLING COIL SECTION	ACCESS SECTION (LENGTH)	HEATING COIL SECTION	ACCESS SECTION (LENGTH)	CARTRIDGE FILTER SECTION	ECONOMIZER AND MIXING BOX SECTIONS	ER	NO. EA/RA FANS	TOTAL EXH. CFM	EXHAUST / RETURN FAN DATA (PER FAN) CFM	ESP (IN WG)	TSP (IN WG)	SPEED (RPM)	MOTOR DATA BHP	HP	RPM	VOLTS	PH	RA DUCT CONNECTION SIZE	OVERALL LENGTH OF UNIT	OUTSIDE AIR (CFM) MIN./MAX.	OPERATING WEIGHT (LBS)	NOTES
DOAS-1	MIN 18"	CHWC-D1	MIN 18"	HWC-D1	MIN 18"	REMARK #1	YES	ER-D1	1	6,500	6,500	1.5	3.8	2,115	5.86	10	1,800	460	3	46" x 30"	43'-0"	6,500 / 7,000	27,000	-
AHU-A	MIN 18"	CHWC-A, DX-A	MIN 18"	HWC-A	MIN 18"	REMARK #1	YES	N/A	2	5,400	2,700	1.0	1.34	2,100	1.6	3.0	1,800	460	3	46" x 30"	21'-0"	600 / 1,200	6,000	1,3
AHU-1	MIN 18"	CHWC-1	MIN 18"	HWC-1	MIN 12"	REMARK #1	YES	ER-1	2	13,800	6,900	1.0	2.8	1,300	4.2	7.5	1,200	460	3	84" x 24"	48'-6"	1,200 / 4,500	35,000	-
AHU-2	MIN 18"	CHWC-2	MIN 18"	HWC-2	MIN 12"	REMARK #1	YES	N/A	2	12,000	6,000	1.5	2.1	1,300	2.7	5	1,200	460	3	84" x 24"	44'-0"	3,000/ 4,200	33,000	2
AHU-3	MIN 18"	CHWC-3	MIN 18"	HWC-3	MIN 12"	REMARK #1	YES	N/A	2	15,000	7,500	1.2	2.0	1,000	3.1	5.0	1,200	460	3	84" x 24"	45'-0"	4,000/ 18,000	40,000	2
AHU-4	MIN 18"	CHWC-4	MIN 18"	HWC-4	MIN 12"	REMARK #1	YES	N/A	2	12,000	6,000	1.0	2.0	1,250	2.8	5.0	1,200	460	3	100" x 66"	26'-0"	1,600/ 3.600	9,000	3
AHU-5	MIN 18"	CHWC-5	MIN 18"	HWC-5	MIN 18"	REMARK #1	YES	ER-5	2	16,000	8,000	1.0	2.7	1,600	5.5	7.5	1,800	460	3	50" x 24"	45'-3"	9,000/ 9,000	26,000	-
AHU-6	MIN 18"	CHWC-6	MIN 18"	HWC-6	MIN 18"	REMARK #1	YES	N/A	2	16,000	8,000	1.5	2.0	1,220	4.4	7.5	1,200	460	3	124" x 72"	27'-0"	4,000/ 5,000	12,500	3
AHU-7	MIN 18"	CHWC-7	MIN 18"	HWC-7	MIN 18"	REMARK #1	YES	ER-7	1	6,400	6,400	1.0	2.5	1,740	4.8	7.5	1,800	460	3	48" x 24"	35'-10"	600/5,000	12,000	-
AHU-8	MIN 18"	CHWC-8	MIN 18"	HWC-8	MIN 18"	REMARK #1	YES	ER-8	2	18,000	9,000	1.0	3.0	1,500	5.7	7.5	1,200	460	3	48"x 24"	38'-10"	12,000/ 12,000	40,000	-
AHU-9	MIN 18"	CHWC-9	MIN 18"	HWC-9	MIN 18"	REMARK #1	YES	N/A	2	18,000	9,000	1.5	2.4	1,400	4.7	7.5	1,200	460	3	60"x 36"	41'-5"	2,000/ 5,500	34,000	-

REMARKS APPLY TO ALL UNITS:
1. FILTERS SHALL BE MERV 12 CARTRIDGE FILTERS. (12" DEEP). FACE VELOCITY SHALL BE MAXIMUM 400 FPM. AT EACH AHU, PROVIDE MERV 8 PRE-FILTERS BEFORE THE MERV 12 FILTERS.
2. PROVIDE WITH STAINLESS STEEL DRAIN PANS AT COOLING COILS AND HEAT PIPE COILS.
3. SOUND ATTENUATOR SECTION SHALL BE MAX. FACE VELOCITY OF 450 FPM.
4. PROVIDE CUSTOM ROOF CURBS; REFER TO SPEC SECTION 230548
5. PROVIDE EACH FAN MOTOR WITH INDIVIDUAL VFD AND DISCONNECT SWITCH MOUNTED AT MAX. 36" ABOVE ROOF TO BOTTOM.
6. PROVIDE WITH INTAKE HOOD AND EXHAUST HOOD; MAX 36" DEEP OFF FACE OF AHU / DOAS.
7. EACH UNIT SHALL HAVE (2) SUPPLY FANS AND (2) EXH/RETURN FANS UNLESS OTHERWISE NOTED. EACH FAN SHALL BE PROVIDED WITH DEDICATED MOTOR, VFD, AND SHAFT GROUNDING RING.
8. PROVIDE EACH FAN WITH BACKDRAFT DAMPER.
9. FRAMING TO SUPPORT UNITS SHALL MATCH LAYOUT OF FRAMING SHOWN ON STRUCTURAL DRAWINGS.
10. LENGTH OF UNIT SHALL MATCH SUPPORT FRAMING AND SHALL MATCH OPENINGS FOR SUPPLY AIR AND RETURN AIR/EXHAUST AIR AS SHOWN ON THE MECHANICAL FLOOR PLANS AND STRUCTURAL DRAWINGS.
11. PROVIDE MIN. 96"X 42" DEEP INSULATED PIPE ENCLOSURE WITH ROOF CURB AT THE FOLLOWING SECTIONS: HEATING COIL; ACCESS SECTION; CHILLED WATER COIL. PROVIDE (2) INSULATED ACCESS DOORS AT EACH PIPE ENCLOSURE. EACH ACCESS DOOR SHALL BE 30" WIDE; FULL HEIGHT. PROVIDE ACCESS DOORS FOR ACCESS TO COILS AND RESPECTIVE ACCESS SECTIONS ON OPPOSITE SIDE OF THE PIPE ENCLOSURE.
12. EACH AHU SHALL BE PROVIDED WITH LED LIGHT FIXTURES AND SWITCHES PER SPECIFICATIONS. (120 VOLT / 1 PHASE.)
13. OUTSIDE AIR INTAKE/RELIEF AIR HOODS SHALL BE SIZED FOR 100% OF SUPPLY AIR FLOW/ 100% RETURN - EXHAUST AIR FLOW FOR FULL ECONOMIZER CYCLE OPERATION. NET FREE AREA VELOCITY AT INTAKE SHALL BE MAX 500 FPM.

NOTE
1. AHU-A SHALL BE PROVIDED WITH DX COIL AND CHW COIL.
2. AHU-2 AND AHU-3 SHALL BE PROVIDED WITH WRAP AROUND HEAT PIPES AT THE CHILLED WATER COIL.
3. ALL AHU'S LOCATED IN PENTHOUSE SHALL BE PROVIDED WITH INTERNAL SPRING ISOLATORS WITH MINIMUM 1.5" STATIC DEFLECTION.

CONDENSATE DRAIN SCHEDULE

UNIT TYPE	PIPE SIZE	NOTES
A/C UNIT	3/4"	1, 2
CAC UNITS	3/4"	1, 2
AHU/DOAS	2"	1, 3
ERV'S	1"	1, 2
FCU'S	1 1/4"	1, 2

REMARKS:
1. PROVIDE PIPE TRAP AT CONNECTION TO UNIT. PROVIDE CLEAN-OUT AT BOTTOM OF TRAP FOR CLEANING & DRAINING.
2. REFER TO FLOOR PLANS FOR PIPE TERMINATION.
3. INSTALL CONDENSATE DRAIN PIPE TO NEAREST ROOF DRAIN OR FLOOR DRAIN.

VARIABLE AIR VOLUME BOX SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	INLET SIZE (DIAMETER IN INCHES)	AIR FLOW (CFM) MAXIMUM	MINIMUM	MINIMUM INLET PRESSURE (IN WG)	ELECTRICAL DATA VOLTS	PHASE	HOT WATER COIL CAPACITY (MBH)	NO. OF ROWS	AIR SIDE CFM	EAT (°F)	LAT (°F)	30% PPG FLOW (GPM)	EWT (°F)	LWT (°F)	PD (FT HD)	HWS&R BRANCH SIZE
A	TRANE VCWF	6	400	60	1	24	1	16.3	4	300	55	105	1.7	140	120	3.5	3/4"
B	TRANE VCWF	8	700	110	1	24	1	24.4	4	450	55	105	4.2	140	128	2.0	1"
C	TRANE VCWF	10	1200	165	1	24	1	43.4	4	800	55	105	6.0	140	125	10.0	1"
D	TRANE VCWF	12	1600	235	1	24	1	65.0	4	1200	55	105	11.2	140	128	9.3	1 1/4"
E	TRANE VCWF	14	2500	400	1	24	1	81.0	4	1500	55	105	10.0	140	123	6.1	1 1/4"
F	TRANE VCCF	6	400	60	1	24	1	-	-	-	NO HEATING COIL REQUIRED			-	-		
G	TRANE VCCF	8	700	110	1	24	1	-	-	-	NO HEATING COIL REQUIRED			-	-		
H	TRANE VCCF	10	1200	165	1	24	1	-	-	-	NO HEATING COIL REQUIRED			-	-		
I	TRANE VCCF	12	1600	235	1	24	1	-	-	-	NO HEATING COIL REQUIRED			-	-		
J	TRANE VCCF	14	2500	400	1	24	1	-	-	-	NO HEATING COIL REQUIRED			-	-		

NOTES:
1. PROVIDE EACH VAV WITH DISCONNECT SWITCH AND SAFETY INTERLOCKS.
2. ALL VAV BOXES SHALL BE ARI CERTIFIED.
3. REFER TO SPECIFICATION SECTION 23 33 03 FOR SPEC ON SOUND ATTENUATORS.
4. ALL VAV'S SHALL BE PROVIDED WITH 1" THICK ACOUSTICAL INSTALLATION. VAV TYPES A,C,F AND H SHALL BE PROVIDED WITH DOUBLE WALL CONSTRUCTION WITH GALVANIZED STEEL INNER LINING AND EXTERIOR CASING.

INDICATES VAV SYMBOL → A VAV 50/2000 ← INDICATES MIN/MAX CFM SETTING

CHILLED WATER COIL SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	TOTAL CAP (MBH)	SENS CAP (MBH)	MAX. FACE VELOCITY (FPM)	AIR SIDE FLOW (CFM)	EAT (°F) DB/WB	LAT (°F) DB	PD (IN WG)	30% GLYCOL SOLUTION SIDE FLOW (GPM)	EWT (°F)	LWT (°F)	PD (FT HD)	CHWS&R BRANCH SIZE
CHWC-D1	TRANE	UM	308	177	400	7,000	80.0/70.1	56.8	0.65	43	45	60	17.6	2-1/2"
CHWC-A	TRANE	UM	222.32	165.2	439	6,000	79/66	54.0	0.601	30	45	60	6.41	2"
CHWC-1	TRANE	UM	849.6	459.9	400	15,000	80.93/70.6	53.0	0.9	119	45	60	19.5	4"
CHWC-2	TRANE	UM	694.4	481.1	410	15,000	83/68.5	53.7	0.8	97	45	60	15.09	3"
CHWC-3	TRANE	UM	1,196.7	736.2	400	18,000	90/73	52.6	0.9	167	45	60.1	18.3	4"
CHWC-4	TRANE	UM	500.2	372.34	400	13,000	80/66.5	54.0	0.50	72.1	45	60	9.0	2-1/2"
CHWC-5	TRANE	UM	790.49	496.91	467	18,000	79/68	54.0	1.085	114	45	60	4.57	3"
CHWC-6	TRANE	UM	740.7	535.38	400	18,000	80/66.5	53.0	0.5	107	45	60	19.21	3"
CHWC-7	TRANE	UM	320.3	198.09	467	7,000	78.6/68	54.0	0.974	46.17	45	60	7.0	2"
CHWC-8	TRANE	UM	1,040.9	570.8	400	20,000	79.9/70.1	53.8	1.03	153	45	59.4	11.91	4"
CHWC-9	TRANE	UM	775.3	571.9	401	20,000	80/66.5	53.85	0.651	109.1	45	60.01	15.05	3"

TYPES:
UM = UNIT MOUNTED

REMARKS:
1. WATER/GYCOL SOLUTION SHALL BE 30% PROPYLENE GLYCOL.
2. LAT IS SATURATED

HOT WATER COIL SCHEDULE

SYMBOL	MANUFACTURER	TYPE	TOTAL CAP (MBH)	MAXIMUM FACE VELOCITY (FPM)	AIR SIDE FLOW (CFM)	EAT (°F)	LAT (°F)	PD (IN WG)	30% GLYCOL SOLUTION SIDE FLOW (GPM)	EWT (°F)	LWT (°F)	PD (FT HD)	HWS&R BRANCH SIZE
HWC-D1	TRANE	UM	693	400	7,000	0	91.3	0.22	47	140	109.2	7.17	2-1/2"
HWC-A	TRANE	UM	260	439	6,000	50	90	0.239	18.4	140	110	0.86	1-1/2"
HWC-1	TRANE	UM	926.9	400	15,000	45	100	0.17	63	140	110	9.6	2-1/2"
HWC-2	TRANE	UM	916.2	375	15,000	35	91.32	0.101	62.5	140	109	12.16	2-1/2"
HWC-3	TRANE	UM	1991.2	400	18,000	0	102	0.204	136	140	109	16.8	3"
HWC-4	TRANE	UM	634.43	400	13,000	50	95	0.162	44.8	140	110	2.0	2"
HWC-5	TRANE	UM	1,756.89	467	18,000	0	90	0.257	124	140	110	8.51	3"
HWC-6	TRANE	UM	878.45	400	18,000	50	95	0.14	62	140	110	2.51	2-1/2"
HWC-7	TRANE	UM	531.41	448	7,000	20	90	0.251	37.52	140	110	1.07	2"
HWC-8	TRANE	UM	2,031.4	400	20,000	0	93.66	0.168	136.28	140	109	17.25	3"
HWC-9	TRANE	UM	924.4	401	20,000	48	90.62	0.148	63.6	140	109.56	5.73	2-1/2"

TYPES:
UM = UNIT MOUNTED
DM = DUCT MOUNTED

REMARKS:
1. WATER/GYCOL SOLUTION SHALL BE 30% PROPYLENE GLYCOL.

ENERGY RECOVERY SCHEDULE

SYMBOL	TYPE	WINTER PERFORMANCE VENTILATION AIR FLOW (CFM)	EAT (°F) DB/WB	LAT (°F) DB/WB	PD (IN WG)	EXHAUST AIR FLOW (CFM)	EAT (°F) DB/WB	PD (IN WG)	SUMMER PERFORMANCE VENTILATION AIR FLOW (CFM)	EAT (°F) DB/WB	LAT (°F) DB/WB	PD (IN WG)	EXHAUST AIR FLOW (CFM)	EAT (°F) DB/WB	PD (IN WG)	ELECTRICAL DATA HP	VOLTS	PHASE
ER-D1	HORIZ. WHEEL	7,000	0/-1	22/21.8	0.75	6,500	70/59.7	0.81	7,000	90/73	80.1/70.1	1.00	6,500	75/68.6	0.91	1	480	3
ER-1	HORIZ. WHEEL	4,500	0/-1	16.5/16.4	0.79	3,000	70/60	0.63	4,500	90/73	81.1/70.6	0.95	3,000	75/69	0.63	1	480	3
ER-5	PLATE TYPE	9,000	0/-2	16.46/11.43	0.857	6,900	70/59.7	0.101	9,000	91/74	79/68	0.221	6,900	75/64	0.093	N/A	N/A	N/A
ER-7	HORIZ. WHEEL	5,000	0/-2	16.48/15.71	0.578	4,400	70/53	0.49	5,000	91/74	79.95/67.58	0.578	4,400	75/64	0.49	1	480	3
ER-8	PLATE TYPE	12,000	0/0	57/38.6	1.02	9,500	70/60	0.89	12,000	90/73	79.9/70.1	1.15	9,500	75/69	0.79	N/A	N/A	N/A

NOTES:
1. PRESSURE DROP DATA IS MAXIMUM PRESSURE DROP ACROSS ENTIRE ENERGY RECOVERY SECTION.
2. PROVIDE EACH ENERGY RECOVERY MOTOR WITH INDIVIDUAL VFD AND MOTOR STARTER.

DUCTLESS SPLIT SYSTEM AIR CONDITIONER SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TOTAL CAPACITY MBH	FLOW RATE (CFM)	REFRIGERANT LINE SIZES LIQUID	SUCTION	INDOOR UNIT MCA	VOLTS	PH	WEIGHT (LBS)	OUTDOOR UNIT MCA	VOLTS	PH	WEIGHT (LBS)
AC-1 & CU-1	DAIKIN FTK24NMVJU RK24NMVJU	24	713	(1) 1/4"	(1) 5/8"	1	208	1	46	18.3	208	1	108
AC-2 & CU-2	DAIKIN FTK24NMVJU RK24NMVJU	24	713	(1) 1/4"	(1) 5/8"	1	208	1	46	18.3	208	1	108
AC-3 & CU-3	DAIKIN FTK12NMVJU RK12NMVJU	12	434	(1) 1/4"	(1) 3/8"	1	208	1	29	12.2	208	1	60
AC-4 & CU-4	DAIKIN FTK12NMVJU RK12NMVJU	12	434	(1) 1/4"	(1) 3/8"	1	208	1	29	12.2	208	1	60
AC-5 & CU-5	DAIKIN FTK12NMVJU RK12NMVJU	12	434	(1) 1/4"	(1) 3/8"	1	208	1	29	12.2	208	1	60
AC-6 & CU-6	DAIKIN FTK12NMVJU RK12NMVJU	12	434	(1) 1/4"	(1) 3/8"	1	208	1	29	12.2	208	1	60
AC-7 & CU-7	DAIKIN FTK12NMVJU RK12NMVJU	12	434	(1) 1/4"	(1) 3/8"	1	208	1	29	12.2	208	1	60
AC-8 & CU-8	DAIKIN FTK12NMVJU RK12NMVJU	12	434	(1) 1/4"	(1) 3/8"	1	208	1	29	12.2	208	1	60
AC-9 & CU-9	FTK12NMVJU RK12NMVJU	12	434	(1) 1/4"	(1) 3/8"	1	208	1	29	12.2	208	1	60
AC-10 & CU-10	DAIKIN FTK12NMVJU RK12NMVJU	12	434	(1) 1/4"	(1) 3/8"	1	208	1	29	12.2	208	1	60
AC-11 & CU-11	DAIKIN FTK12NMVJU RK12NMVJU	12	434	(1) 1/4"	(1) 3/8"	1	208	1	29	12.2	208	1	60

NOTES:
1. PROVIDE UNIT WITH LOW AMBIENT CONTROL TO 0°F AND PROGRAMMABLE THERMOSTAT.
2. PROVIDE WITH WALL MOUNTING BRACKETS.
3. MOUNT THERMOSTATS TO WALL.
4. COOLING CAPACITY IS RATED AT 95°F OUTSIDE AIR AND 80°F INDOOR AIR.
5. PROVIDE EACH AC UNIT WITH FIELD INSTALLED CONDENSATE PUMP; SAUERMANN SI3100, 120V, 1PH OR APPROVED EQUAL WITH COMPLETE INSTALLATION KIT INCLUDING PVC SNAP-ON COVERS
6. PROVIDE CONDENSATE PUMP WITH ALL REQUIRED TUBING, VALVES, AND FITTINGS.

WRAP AROUND HEAT PIPE SCHEDULE

SYMBOL	UNIT SERVED	FLOW (CFM)	MAX. FACE VELOCITY (FPM)	REFRIGERANT	PRE-COOL EAT (°F) DB/WB	LAT (°F) DB/WB	PD (IN WG)	REHEAT EAT (°F) DB/WB	LAT (°F) DB/WB	PD (IN WG)	REMARKS
HP-2	AHU-2	15,000	825	R-134a	83 / 68.5	76.1/66.3	0.22	55 / 55	60.6 / 56.2	0.22	1
HP-3	AHU-3	18,000	807	R-134a	90 / 73	82.6/70.9	0.16	52.6 / 52.4	60.1/55.5	0.16	1

REMARKS:
1. PROVIDE WITH MULTIPLE SOLENOID VALVES TO PROVIDE (4) STAGE OF CONTROL. COORDINATE TYPE OF CONTROL SIGNAL WITH BMS.
2. CONTROLLER SHALL BE 24 VOLT AND FACTORY INSTALLED.

AIR COOLED CONDENSING UNIT SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	SYSTEM SERVERD	REFRIGERANT	SEER	TOTAL CAP (MBH)	SUCTION TEMP (°F)	AMBIENT AIR TEMP (°F)	ELECTRICAL DATA MCA	MOCP	VOLTS	PHASE	WEIGHT (LBS)	REMARKS
CU-A	TRANE TTA24044D	DX-A	R-410A	11.6	244	45	95	40	50	480	3	875	1,2,3,4

REMARKS:
1. PROVIDE WITH UNIT MOUNTED FUSED DISCONNECT SWITCH, NEMA 3R RATED.
2. PROVIDE WITH FILTER DRYER, EXPANSION VALVE, SOLENOID VALVE, SIGHT GLASS, INTERNAL PRESSURE RELIEF AND ISOLATION VALVES.
3. PROVIDE WITH AMBIENT OPERATION TO 50 DEGREES F.
4. PROVIDE WITH TWO SETS OF REFRIGERANT CIRCUITS.

DIRECT EXPANSION COOLING COIL SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	NO. OF ROWS	TOTAL CAP (MBH)	SENS CAP (MBH)	MAXIMUM FACE VELOCITY (FPM)	AIR SIDE FLOW (CFM)	EAT (°F) DB/WB	LAT (°F) DB/WB	PD (IN WG)	REFRIGERANT TYPE	LIQUID TEMP. (°F)	SUCTION TEMP. (°F)	REMARKS
DX-A	TRANE UF	UM	4	234.9	164.5	439	6,000	79/ 66	54.0/ 53.01	0.396	R-410A	115	45	-

TYPES:
UM = UNIT MOUNTED

BID DOCUMENTS

drawing title: MECHANICAL SCHEDULES	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES
REVISIONS — mark / date / description: 11/8/2019 Addendum No.1	drawing prepared by: Consulting Engineering Services, Inc. 811 Middle St., Middletown, CT 06457
date: 10/11/2019	scale: NTS
drawn by: ANK	approved by: BDW
project: Additions and Renovations Platt Technical High School 600 Orange Avenue Milford, CT 06461	drawing no.: M3-1-2
CAD no.	DCS project no. BI-RT-878 CM-R
OSCGR project no. 900-0013	

GAS FIRED INFRA-RED HEATER SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	STAGES	LENGTH (FEET)	FUEL	BTUH INPUT (LOW FIRE)	BTUH INPUT (HIGH FIRE)	GAS PRESSURE	ELECTRICAL		
								AMPS	VOLTS	PHASE
RH-1	SUPERIOR RADIANT MODEL WTS100	2	40	NATURAL GAS	75,000	100,000	5" TO 14"	12	120	1
RH-2	SUPERIOR RADIANT MODEL 100	2	40	NATURAL GAS	75,000	100,000	5" TO 14"	12	120	1
RH-3	SUPERIOR RADIANT MODEL 100	2	40	NATURAL GAS	75,000	100,000	5" TO 14"	12	120	1
RH-4	SUPERIOR RADIANT MODEL 100	2	40	NATURAL GAS	75,000	100,000	5" TO 14"	12	120	1

REMARKS:
1. FURNISH RADIANT HEATERS WITH INTERFACE TO BMS.
2. FURNISH RADIANT HEATERS WITH ALL REQUIRED MOUNTING HARDWARE.
3. FURNISH RADIANT HEATERS WITH BLACK COATED ALUMINIZED STEEL BURNER WITH HOT SURFACE IGNITION.
4. PROVIDE OUTDOOR COMBUSTION INTAKE ROOF CAPS.
5. PROVIDE FACTORY PRE & POST PURGE CONTROLS AND MICRO-PROCESSOR CIRCUITY.
6. PROVIDE WITH ALUMINUM REFLECTOR.
7. DISCONNECT SWITCHES SHALL BE BY DIVISION 26.

CASSETTE AIR CONDITIONING UNIT SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TOTAL CAP (MBH)	SENS CAP (MBH)	AIR SIDE		WATER SIDE				MOTOR DATA			BRANCH PIPE SIZE
				FLOW (CFM)	EAT (°F) DB/WB	FLOW (GPM)	EWT (°F)	LWT (°F)	PD (FT HD)	MCA	VOLTS	PH	
CAC-1	MODINE SCW-20	12.3	11.7	630	75.0/ 62.5	3.0	45	55	3.5	1.0	208	1	3/4"
CAC-2	MODINE SCW-20	12.3	11.7	630	75.0/ 62.5	3.0	45	55	3.5	1.0	208	1	3/4"
CAC-3	MODINE SCW-20	12.3	11.7	630	75.0/ 62.5	3.0	45	55	3.5	1.0	208	1	3/4"

REMARKS:
1. DISCHARGE PATTERN SHALL BE 4-WAY.
2. FILTERS SHALL BE MERV 8.
3. PROVIDE EACH WITH INTEGRAL CONDENSATE PUMP.
4. RATINGS ARE BASED ON UNIT RUNNING WITH 100% WATER.

FAN SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	LOCATION	AREA SERVING	AIR FLOW (CFM)	SP (IN WG)	FAN SPEED (RPM)	DRIVE	BHP	MOTOR DATA			WEIGHT (LBS)	REMARKS
										HP	VOLTS	PH		
EF-A	LOREN COOK / SQN-D 100 VF	IL	PENTHOUSE C301	C	900	1.0	1832	D	0.314	1/2	115	1	130	1,2,5
EF-1	LOREN COOK / ACRU-D 165R VF	RMUBF	ROOF	B	3,200	0.5	1364	D	0.869	1.5	480	3	200	1,5
EF-2	LOREN COOK / ACRU-D 150R VF	RMUBF	ROOF	B	1,600	1.0	1281	D	0.47	3/4	480	3	110	1,5
EF-3	LOREN COOK / ACE-D 120C VF	RMDBF	ROOF	A	1,400	0.5	1558	D	0.267	1/2	115	1	100	1,5
EF-4	LOREN COOK / SQN-D 135 VF	IL	MECH. B201	B (2nd FLOOR)	1,200	0.5	1150	D	0.201	1/3	115	1	200	1,2,5
EF-5	LOREN COOK / SQN-D 165 VF	IL	PENTHOUSE C301	C	3,000	0.5	1340	D	0.736	1.5	480	3	300	1,2,5
EF-6	LOREN COOK / ACE-D 100C EC	RMDBF	ROOF	A	250	0.5	1308	D	53 (W)	1/4	115	1	60	1,5
EF-7	FANTECH / DBF 110	IL	STORAGE B101	B	75.2	1.23	2318	D	0.54 (A)	1/10	115	1	30	1,2
EF-8	FANTECH / DBF 110	IL	STORAGE B101	B	75.2	1.23	2318	D	0.54 (A)	1/10	115	1	30	1,2
EF-K1	LOREN COOK / SQN-D 100 VF	IL	MECH. B201	B	600	0.8	1855	D	0.2	1/3	115	1	100	1,2,5
EF-V1	LOREN COOK / ACRU-D-HP 210	RMUBF	ROOF	B	4,200	1.5	1386	D	1.92	3	480	3	500	1,7
EF-V2	LOREN COOK / SQN-D 165	IL	PENTHOUSE C301	C & D	2,000	1.5	1595	D	0.94	1.5	480	3	400	1,2
EF-V3	LOREN COOK / SQN-D 165	IL	MECH. B201	B (2nd FLOOR)	2,000	1.2	1518	D	0.801	1.5	480	3	400	1,2
EF-V4	LOREN COOK / ACRU-D 165R VF	RMUBF	ROOF	B	2,100	0.8	1131	D	0.525	1.0	480	3	160	1,7
KEF-1	LOREN COOK / 210 VCR-HP	RMUBF	ROOF	B	3,131	2.0	1352	B	1.9	3	480	3	375	1,4
KEF-2	LOREN COOK / 225 VCR-HP	RMUBF	ROOF	B	3,915	2.0	1285	B	2.41	3	480	3	400	1,4
KEF-3	LOREN COOK / 365 VCR-XP	RMUBF	ROOF	B	8,443	2.0	993	B	5.29	7.5	480	3	700	1,4
KEF-4	LOREN COOK / 330 VCR-HP	RMUBF	ROOF	B	7,635	2.0	869	B	4.73	7.5	480	3	700	1,4
KEF-5	LOREN COOK / 225 VCR-XP	RMUBF	ROOF	B	2,208	2.0	1356	B	1.27	1.5	480	3	400	1,4
LEF-1	LOREN COOK / 120TCNHBLE07	HPDF	ROOF	D	1,020	1.0	2360	B	0.829	1.5	208	3	1200	1,8
LEF-2	LOREN COOK / 120TCNHBLE09	HPDF	ROOF	D	1,400	1.0	2378	B	0.899	1.5	208	3	1200	1,8
LEF-3	LOREN COOK / 135TCNHBLE09	HPDF	ROOF	D	1,500	1.0	2002	B	0.992	1.5	208	3	1300	1,8
SHEF-1	LOREN COOK / ACRU-D 165R VF	RMUBF	ROOF	E & F	2,200	0.8	1131	D	0.525	1.0	480	3	120	1,5,7
SHEF-2	LOREN COOK / ACRU-D-HP 150RH VF	RMUBF	ROOF	F	500	0.8	1140	D	0.142	1/4	115	1	125	1,5
SHEF-3	LOREN COOK / ACRU-D 195R VF	RMUBF	ROOF	F	4,800	1.0	1212	D	1.65	3.0	480	3	400	1,5,7
SHEF-4	LOREN COOK / ACRU-D-HP 150RH VF	RMUBF	ROOF	E	1,000	1.0	1,519	D	0.36	3/4	480	3	220	1,5,7
SHEF-5	LOREN COOK / ACRU-D 180R VF	RMUBF	ROOF	F	2,800	1.0	1141	D	0.938	2.0	480	3	280	1,5,7
SHEF-6	LOREN COOK / 245QMXU	RMUBF	ROOF	F	10,000	1.5	1144	B	4.23	5.0	208	3	2000	1,7,9
SHEF-7	LOREN COOK / 245QMXU	RMUBF	ROOF	F	10,000	1.5	1144	B	4.23	5.0	208	3	2000	1,7,9
SHEF-8	LOREN COOK / 90QMXU	RMUBF	ROOF	F	1,150	1.5	2982	B	0.609	1.0	208	3	600	1,7,9
SHEF-9	LOREN COOK / ACRU-D-HP 150RH VF	RMUBF	ROOF	E	700	0.8	1244	D	0.197	1/3	115	1	150	1,5
SHEF-10	LOREN COOK / ACRU-D-EC 101R	RMUBF	ROOF	E	600	0.5	1522	D	92 (W)	1/4	115	1	150	1,5
SHEF-11	LOREN COOK / ACRU-HP 245RH10B	RMUBF	ROOF	F	5,600	1.0	1031	B	1.93	3.0	480	3	400	1,7
SHEF-12	LOREN COOK / ACRU-XP 365RX11B	RMUBF	ROOF	F	7,000	2.0	891	B	3.97	5.0	480	3	500	1,7
SHEF-13	LOREN COOK / 195 CPS	CUF	ROOF	E	5,600	1.0	1349	B	2.11	3	480	3	600	1,6,7
SHEF-14	LOREN COOK / 120 CPS	CUF	ROOF	E	1,300	0.5	1618	B	0.279	1/2	480	3	300	1,6,7
VEF-1	PLYMOVENT / TEV-585	CUF	ROOF	F	1,200	10.0	3500	D	5.5	7.5	480	3	750	1,6,7
EF-BG1	LOREN COOK / ACRU-B 330R	RMUBF	ROOF	BG	10,000	0.5	508	B	1.78	2.0	208	3	560	1
EF-BG2	LOREN COOK / ACRU-D 150R VF	RMUBF	ROOF	BG	2,000	0.5	1224	D	0.401	3/4	208	3	160	1,5
EF-BG3	LOREN COOK / 90SQND-EC	IL	MEP G102	BG	300	0.5	1569	D	75 (W)	1/6	115	1	150	1,2,5

TYPE:
IL = IN-LINE
HPDF = HIGH PLUME DISCHARGE FAN
CUF = CENTRIFUGAL UTILITY FAN
RMDBF = ROOF MOUNTED DOWNBLAST FAN
RMUBF = ROOF MOUNTED UPBLAST FAN
CF = CEILING FAN

DRIVE:
B = BELT DRIVE
D = DIRECT DRIVE

NOTE:
1. FOR DAMPER SPEC; REFER TO SPEC SECTION 230923.
2. FOR ROOF CURB SPECIFICATION; REFER TO SPECIFICATION SECTION 230548 UNLESS NOTED OTHERWISE.

REMARKS:
1. PROVIDE WITH DISCONNECT SWITCH.
2. PROVIDE WITH VIBRATION ISOLATORS.
3. NOT USED.
4. FAN SHALL SERVE GREASE HOOD AND SHALL BE UL762 LISTED.
5. PROVIDE WITH UNIT MOUNTED VARIABLE SPEED CONTROLLER AND ECM MOTOR.
6. PROVIDE WITH STEEL ACCESS DOOR-BOLT AND OSHA BG/WEATHERCOVER-STEEL.
7. INSTALL ON VIBRATION ISOLATION ROOF CURB AS SPECIFIED IN SPEC SECTION 230548.
8. PROVIDE WITH MIXING BOX WITH BYPASS DAMPER AND DISCHARGE NOZZLE. BALANCE EXTRA AIRFLOW AT MIXING BOX DAMPER. PROVIDE WITH HEAVY DUTY CURB AND MOUNTING BRACKET.
9. PROVIDE WITH EXPLOSION PROOF MOTOR AND CONSTRUCTED TO MEET AMCA "A" SPARK RESISTANT RATING.

AIR HANDLING UNIT SCHEDULE

SYMBOL	MFR MODEL NO	SA DUCT CONNECTION SIZE	NO. SA FANS	TOTAL SA CFM	SUPPLY FAN DATA (PER FAN)									ACCESS SECTION (LENGTH)	HEATING COIL SECTION	FILTER SECTION	ECONOMIZER AND MIXING BOX SECTIONS	ER	NO. FANS	TOTAL EXH. CFM	EXHAUST / RETURN FAN DATA (PER FAN)									RA DUCT CONNECTION SIZE	OPERATING WEIGHT (LBS)	MAX HEIGHT INCLUDING BASE RAIL	NOTES
					CFM	ESP (IN WG)	TSP (IN WG)	SPEED (RPM)	MOTOR DATA														MOTOR DATA								
									BHP	HP	RPM	VOLTS	PH								CFM	ESP (IN WG)	TSP (IN WG)	SPEED (RPM)	BHP	HP	RPM	VOLTS	PH			
ERV-M1	XeteX XHR-30-78-BP-HW	84"x18"	1	8,000	8,000	1.5	3.95	2,075	7.74	10	1,800	460	3	MIN 18"	HWC-EM1	REMARK #1	YES	PER-EM1	1	7,000	7,000	1.0	2.8	1,784	4.91	7.5	1,800	460	3	84"x16"	10,000	60	
ERV-1	XeteX XHR-30-78-BP-HW	84"x18"	1	8,000	8,000	1.5	3.95	2,075	7.74	10	1,800	460	3	MIN 18"	HWC-E1	REMARK #1	YES	PER-1	1	7,000	7,000	1.0	2.8	1,784	4.91	7.5	1,800	460	3	84"x16"	10,000	60	
ERV-2	XeteX XHR-30-78-BP-HW	84"x18"	1	8,000	8,000	1.5	3.95	2,075	7.74	10	1,800	460	3	MIN 18"	HWC-E2	REMARK #1	YES	PER-2	1	7,000	7,000	1.0	2.8	1,784	4.91	7.5	1,800	460	3	84"x16"	10,000	60	
ERV-3	XeteX XHR-30-78-BP-HW	84"x18"	1	8,000	8,000	1.5	3.95	2,075	7.74	10	1,800	460	3	MIN 18"	HWC-E3	REMARK #1	YES	PER-3	1	7,000	7,000	1.0	2.8	1,784	4.91	7.5	1,800	460	3	84"x16"	10,000	60	
ERV-4	XeteX XHR-40-80-RC-BP-HW	100"x28"	2	10,000	5,000	1.5	4.25	2,075	4.67	7.5	1,800	460	3	MIN 18"	HWC-E4	REMARK #1	YES	PER-4	1	9,000	9,000	1.0	2.95	1,784	4.91	7.5	1,800	460	3	100"x28"	16,000	72	
ERV-5	XeteX XHR-59-90-BP-HW	126"x32"	2	15,000	7,500	1.5	4.4	2,066	7.69	10	1,800	460	3	MIN 18"	HWC-E5	REMARK #1	YES	PER-5	2	14,000	7,000	1.0	3.35	1,862	5.62	7.5	1,800	460	3	126"x36"	17,000	96	
ERV-6	XeteX XHR-59-90-BP-HW	126"x32"	2	15,000	7,500	1.5	4.4	2,066	7.69	10	1,800	460	3	MIN 18"	HWC-E6	REMARK #1	YES	PER-6	2	14,000	7,000	1.0	3.35	1,862	5.62	7.5	1,800	460	3	126"x36"	17,000	96	
ERV-7	XeteX XHR-59-90-BP-HW	126"x32"	2	15,000	7,500	1.5	4.4	2,066	7.69	10	1,800	460	3	MIN 18"	HWC-E7	REMARK #1	YES	PER-7	2	14,000	7,000	1.0	3.35	1,862	5.62	7.5	1,800	460	3	126"x36"	17,000	96	

REMARKS APPLY TO ALL UNITS:
1. FILTERS SHALL BE MERV 12 FILTERS (2" DEEP) AT OA AND RA AND SHALL BE ANGLE FILTER ARRANGEMENT.
2. PROVIDE EACH FAN MOTOR WITH INDIVIDUAL VFD AND DISCONNECT SWITCH. EACH FAN SHALL BE PROVIDED WITH SHAFT GROUNDING RING.
3. PROVIDE EACH FAN WITH BACKDRAFT DAMPER WHERE UNIT IS SERVED BY TWO FANS.
4. PROVIDE WITH MODULATING FACE AND BYPASS DAMPERS AT ER SECTION.
5. PROVIDE WITH MODULATING RA/EXHAUST AIR DAMPERS.
6. PROVIDE DAMPERS AT OUTSIDE AIR AND EXHAUST AIR. DAMPERS SHALL BE REMOTE MOUNTED AT OUTSIDE AIR INTAKE HOOD AND EXHAUST AIR HOOD.
7. ALL FANS SHALL BE PROVIDED WITH INTERNAL SPRING ISOLATORS WITH MINIMUM 1.5" STATIC DEFLECTION.

NOTE

ENERGY RECOVERY SCHEDULE

SYMBOL	TYPE	WINTER PERFORMANCE							SUMMER PERFORMANCE						
		VENTILATION AIR				EXHAUST AIR			VENTILATION AIR				EXHAUST AIR		
		FLOW (CFM)	EAT (°F) DB	LAT (°F) DB	PD (IN WG)	FLOW (CFM)	EAT (°F) DB	PD (IN WG)	FLOW (CFM)	EAT (°F) DB/WB	LAT (°F) DB/WB	PD (IN WG)	FLOW (CFM)	EAT (°F) DB/WB	PD (IN WG)
PER-M1	PLATE TYPE	8,000	6	38.9	1.24	7,000	70	1.0	8,000	91/74	82.8/70.5	1.24	7,000	75/63	1.0
PER-1	PLATE TYPE	8,000	6	38.9	1.24	7,000	70	1.0	8,000	91/74	82.8/70.5	1.24	7,000	75/63	1.0
PER-2	PLATE TYPE	8,000	6	38.9	1.24	7,000	70	1.0	8,000	91/74	82.8/70.5	1.24	7,000	75/63	1.0
PER-3	PLATE TYPE	8,000	6	38.9	1.24	7,000	70	1.0	8,000	91/74	82.8/70.5	1.24	7,000	75/63	1.0
PER-4	PLATE TYPE	10,000	6	38.9	1.24	9,000	70	1.0	8,000	91/74	82.8/70.5	1.24	7,000	75/63	1.0
PER-5	PLATE TYPE	15,000	6	45.5	1.73	14,000	70	1.54	15,000	91/74	81.2/68.9	1.73	14,000	75/63	1.54
PER-6	PLATE TYPE	15,000	6	45.5	1.73	14,000	70	1.54	15,000	91/74	81.2/68.9	1.73	14,000	75/63	1.54
PER-7	PLATE TYPE	15,000	6	45.5	1.73	14,000	70	1.54	15,000	91/74	81.2/68.9	1.73	14,000	75/63	1.54

NOTES:
1. PRESSURE DROP DATA IS MAXIMUM PRESSURE DROP ACROSS ENTIRE ENERGY RECOVERY SECTION.

MAKE-UP AIR UNIT SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	LOCATION	FUEL	IGNITION TYPE	INPUT HEATING CAPACITY			% OA	ESP (IN. WG)	MOTOR HP	MCA	MOCP	VOLT	PHASE	WEIGHT (LBS)	REMARKS
						CAPACITY (MBH)	CFM	AIR TEMP RISE (°F)									
MAU-1	TRANE GRBA 80	I	ROOF	NG	ELECTRONIC	800	7,500	78	100	1.2	7.5	15	25	480	3	3,000	ALL

TYPE:
I = INDIRECT FIRED

REMARKS:
1. PROVIDE WITH INTERFACES WITH BMS PER SPEC SECTION 23 0393.
2. PROVIDE WITH UNIT MOUNTED FUSED DISCONNECT SWITCH.
3. PROVIDE WITH SA FAN WITH VFD.
4. PROVIDE WITH MERV 8 FILTERS.
5. PROVIDE PACKAGED FACTORY CONTROLS AIRFLOW PROVING SWITCH AND MODULATING GAS CONTROL VALVE.
6. PROVIDE CUSTOM ROOF CURBS. REFER TO SPEC SECTION 23 0548.

FAN COIL UNIT SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	UNIT SIZE	SUPPLY FAN DATA								COOLING COIL SECTION	HEATING COIL SECTION	ANGLE FILTER SECTION	OUTSIDE AIR (CFM)	OPERATING WEIGHT (LBS)	REMARKS
			CFM	ESP (IN WG)	TSP (IN WG)	SPEED (RPM)	BHP	MOTOR DATA								
								HP	RPM	VOLTS	PH					
FCU-1	TRANE BCHD090G2	90	3,000	0.7	2	2531	2.062	3	1750	480	3	CHWC-F1	HWC-F1	NOTE #1	600	2500	ALL
FCU-2	TRANE BCHD090G2	90	3,000	0.7	2	2531	2.062	3	1750	480	3	CHWC-F2	HWC-F2	NOTE #1	600	2500	ALL

REMARKS:
1. FILTERS SHALL BE 2" PLEATED, MERV 13, INITIAL AND FINAL PRESSURE DROPS AT 500 FPM SHALL BE 0.43" AND 1.0".
2. PROVIDE WITH STAINLESS STEEL DRAIN PANS.

CHILLED WATER COIL SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	TOTAL CAP (MBH)	SENS CAP (MBH)	MAX. FACE VELOCITY (FPM)	AIR SIDE				30% GLYCOL SOLUTION SIDE				CHWS&R BRANCH SIZE
						FLOW (CFM)	EAT (°F) DB/WB	LAT (°F) DB	PD (IN WG)	FLOW (GPM)	EWT (°F)	LWT (°F)	PD (FT HD)	
CHWC-F1	TRANE	UM	116	86	480	3,000	80/66.5	54.0	-	28.5	45	53.8	23.2	2"
CHWC-F2	TRANE	UM	116	86	480	3,000	80/66.5	54.0	-	28.5	45	53.8	23.2	2"

TYPES:
UM = UNIT MOUNTED

REMARKS:
1. WATER/GYCOL SOLUTION SHALL BE 30% PROPYLENE GLYCOL.
2. LAT IS SATURATED

FILTER SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	SIZE (L x W)	DEPTH	MIN EFF (%)	FACE VELOCITY (FPM)	CLEAN PD (IN WG)	FINAL PD (IN WG)	REMARKS
F-DC1	AIRGUARD LEGACY LOADTECH	4'0" x 2'6"	4"	MERV 14	500	0.44"	1.5"	1,2
F-DC2	AIRGUARD LEGACY LOADTECH	4'0" x 4'0"	4"	MERV 14	500	0.44"	1.5"	1,2

NOTES:
1. PROVIDE WITH FILTER FRAMES WITH FLANGED DUCTWORK CONNECTIONS, SIDE ACCESS DOORS AT BOTH SIDES, SLIDE RAIL GUIDES AND RATING FOR MINIMUM 6" WG.
2. PROVIDE DIFFERENTIAL PRESSURE GAUGE WITH TWO SHUT OFF VALVES.

ELECTRIC BASEBOARD SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	OUTPUT BTU/HR	ELECTRICAL DATA WATT-VOLTS-PHASE	LENGTH LF	REMARKS
EH-1	QMARK QMKC	8533	2500 - 208 -1	8'	1
EH-2	QMARK QMKC	8533	2500 - 208 -1	8'	1
EH-3	QMARK QMKC	8533	2500 - 208 -1	8'	1

REMARKS:
1. PROVIDE WITH CONTROL TRANSFORMER FOR INTERFACING WITH BMS.
2. BASEBOARD SHALL BE QMARK MODEL LISTED OR APPROVED EQUAL BY BERKO OR MARLEY.

HOT WATER COIL SCHEDULE

SYMBOL	MANUFACTURER	TYPE	TOTAL CAP (MBH)	MAXIMUM FACE VELOCITY (FPM)	AIR SIDE				30% GLYCOL SOLUTION SIDE				HWS&R BRANCH SIZE
					FLOW (CFM)	EAT (°F)	LAT (°F)	PD (IN WG)	FLOW (GPM)	EWT (°F)	LWT (°F)	PD (FT HD)	
HWC-EM1	XeteX	UM	764.7	485	8,000	6	94.1	0.23	50	140	110	9.2	2"
HWC-E1	TRANE	UM	764.7	485	8,000	6	94.1	0.23	50	140	110	9.2	2"
HWC-E2	TRANE	UM	764.7	485	8,000	6	94.1	0.23	50	140	110	9.2	2"
HWC-E3	TRANE	UM	764.7	485	8,000	6	94.1	0.23	50	140	110	9.2	2"
HWC-E4	TRANE	UM	964.6	497	10,000	6	94.9	0.36	64	140	110	9.42	2-1/2"
HWC-E5	XeteX	UM	1401.3	526	15,000	6	92.1	0.22	100	140	110	15.0	3"
HWC-E6	TRANE	UM	1401.3	526	15,000	6	92.1	0.22	100	140	110	15.0	3"
HWC-E7	TRANE	UM	1401.3	526	15,000	6	92.1	0.22	100	140	110	15.0	3"
HWC-F1	TRANE	UM	162.7	480	3,000	50	100	-	31	140	129	12.04	2"
HWC-F2	TRANE	UM	162.7	480	3,000	50	100	-	31	140	129	12.04	2"
HWC-DC1	US COIL & AIR	DM	155.5	500	4,800	60	90	0.2	10.38	140	110	10	1-1/4"
HWC-DC2	US COIL & AIR	DM	259.2	500	8,000	60	90	0.2	17.28	140	110	10	1-1/2"

TYPES:
UM = UNIT MOUNTED
DM = DUCT MOUNTED

REMARKS:
1. WATER/GYCOL SOLUTION SHALL BE 30% PROPYLENE GLYCOL.
2. HWC-DC1 SHALL BE 48" x 36".
3. HWC-DC2 SHALL BE 48" x 48".

FUEL OIL TRANSFER PUMP SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	LOCATION	SYSTEM SERVING	MEDIA	FLOW RATE (GPH)	FLOW PRESSURE (PSI)	MOTOR DATA				REMARKS
								HP	RPM	VOLTAGE	PHASE	
FOTP-1	PREFERRED UTILITIES/ MODEL 101	ES	HVAC E120	HVAC & PLUMBING	#2 FUEL OIL	20	100	1/3	1725	208	1	1, 2
FOTP-2	PREFERRED UTILITIES/ MODEL 101	ES	HVAC E120	HVAC & PLUMBING	#2 FUEL OIL	20	100	1/3	1725	208	1	1, 2
DTP-1	PREFERRED UTILITIES	IL	PLUMBING E101	PLUMBING SHOP	#2 FUEL OIL	20	100	1/3	1725	120	1	
DTP-2	PREFERRED UTILITIES	IL	HVAC E120	HVAC SHOP	#2 FUEL OIL	20	100	1/3	1725	120	1	

TYPE:
ES = END SUCTION
IL = IN-LINE

FUEL OIL PIPE SIZES:
REFER TO FUEL OIL PIPING DIAGRAM FOR FUEL PIPE SIZES

REMARKS:
1. PUMPS SHALL BE DUPLEX TYPE TO PROVIDE 100% REDUNDANCY.
2. PROVIDE A LINE SIZE ANTI-SIPHON VALVE ON FUEL OIL INLET PIPE.

INDUCED DRAFT FAN SCHEDULE

SYMBOL	MANUFACTURER/ MODEL NUMBER	TYPE	LOCATION	AREA SERVING	AIR FLOW (CFM)	SP (IN WG)	DRIVE	MOTOR DATA			WEIGHT (LBS)	REMARKS
								HP	VOLTS	PH		
IDF-1	ENERVEX MODEL RSV 200	RMUBF	ROOF	PLUMBING SHOP	200	0.3	D	1/2	120	1	75.0	1,3
IDF-2	ENERVEX MODEL RSV 200	RMUBF	ROOF	PLUMBING SHOP	100	0.2	D	1/2	120	1	75.0	1,3
IDF-3	ENERVEX MODEL IPVB	IL	SHOP	HVAC SHOP	300	0.3	D	1/2	120	1	75.0	1,2

TYPE:
IL = IN-LINE
RMUBF = ROOF MOUNTED UPBLAST FAN

DRIVE:
B = BELT DRIVE
D = DIRECT DRIVE

REMARKS:
1. PROVIDE WITH DISCONNECT SWITCH.
2. PROVIDE WITH VIBRATION ISOLATORS.
3. INSTALL ON VIBRATION ISOLATION ROOF CURB AS SPECIFIED IN SPEC SECTION 230548.

BID DOCUMENTS

drawing title
MECHANICAL SCHEDULES

REVISIONS

mark	date	description
	11/8/2019	Addendum No.1

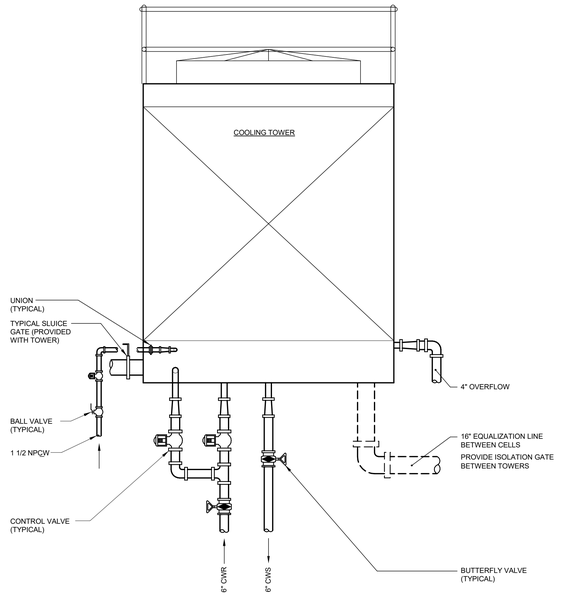
STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

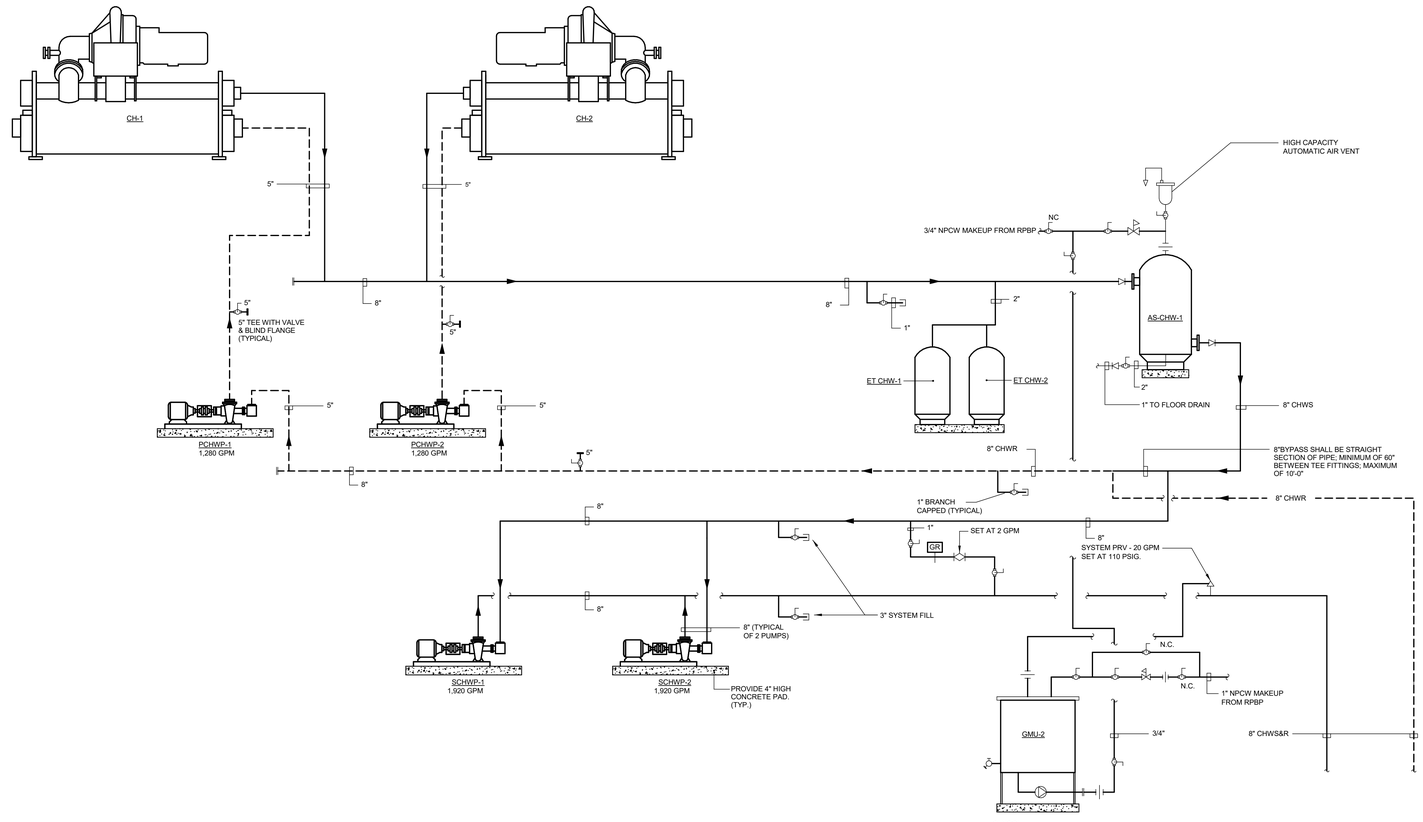
date 10/11/2019
scale 1/8" = 1'-0"
drawn by BEK
approved by BDW
drawing no. **M3-1-3**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

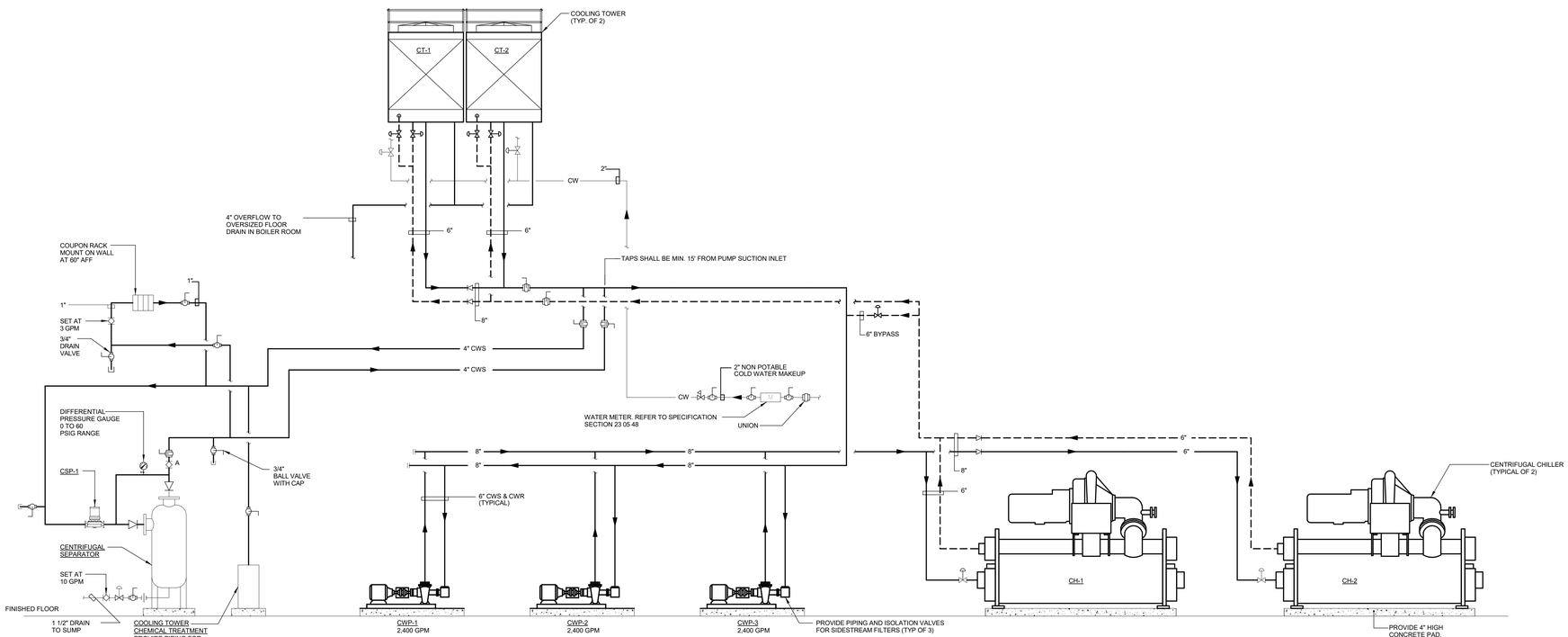
CAD no.
DCS project no. BI-RT-078 CM-R
OSCGR project no. 900-0013



1 COOLING TOWER PIPING DIAGRAM
SCALE: N.T.S.



2 CHILLED WATER SYSTEM PIPING DIAGRAM
SCALE: N.T.S.



3 CONDENSER WATER SYSTEM PIPING DIAGRAM
N.T.S.

BID DOCUMENTS

drawing title
MECHANICAL DETAILS

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS

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	11/8/2019	Addendum No.1

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811 Middle St., Middletown, CT 06457

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scale 1/8" = 1'-0"
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project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.
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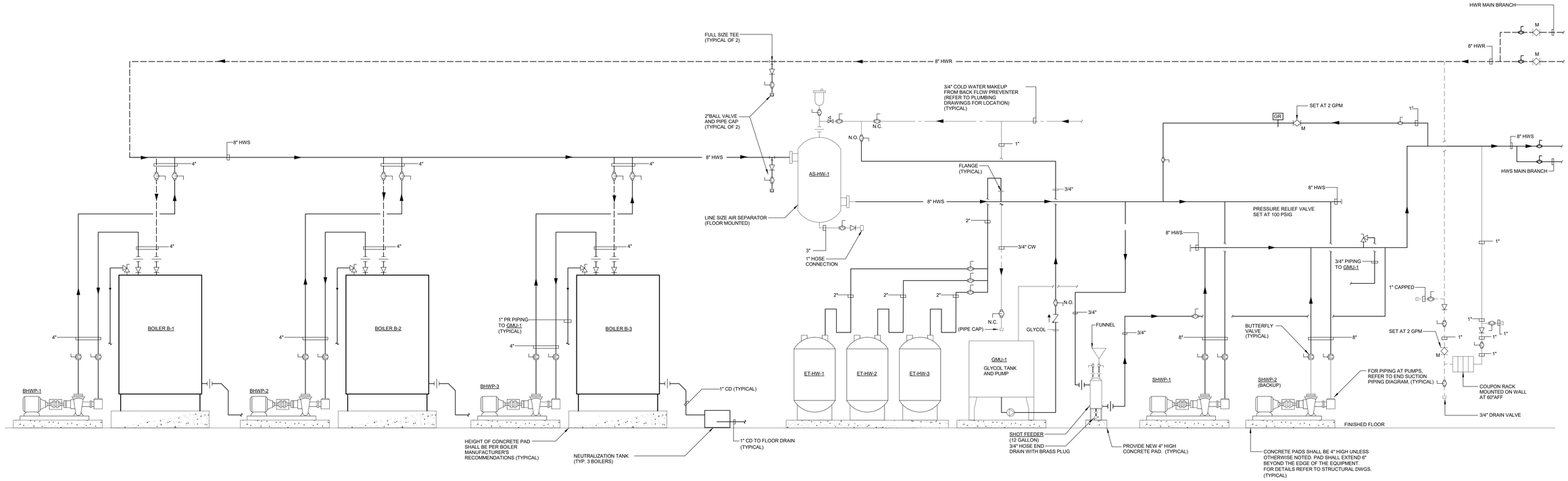
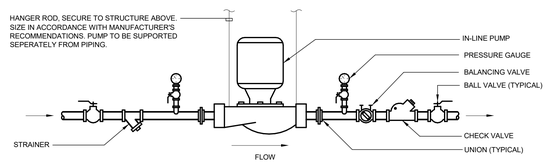


1 HOT WATER PLANT PIPING DIAGRAM
N.T.S.



2 INLINE PUMP DETAIL
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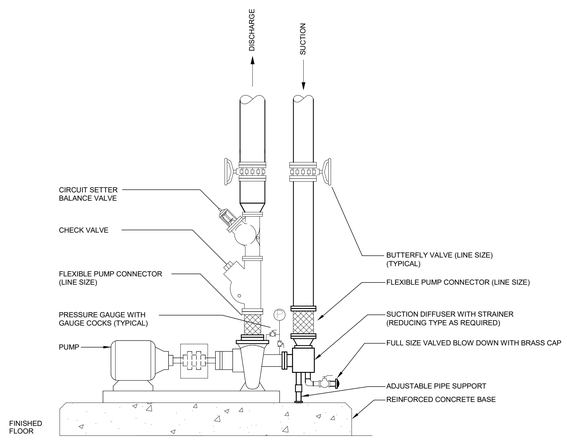

3 END SUCTION PUMP PIPING DETAIL
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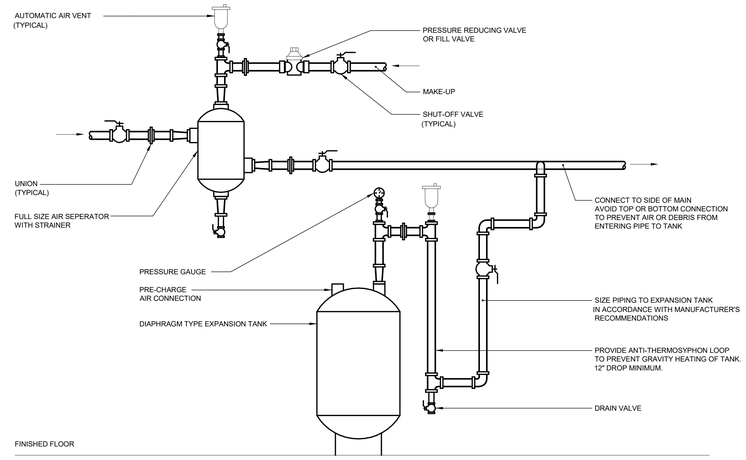
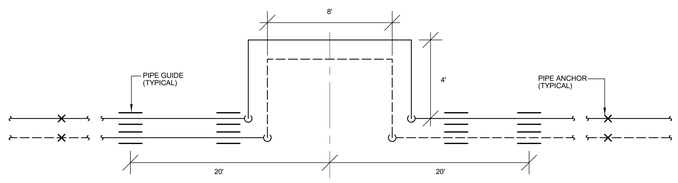
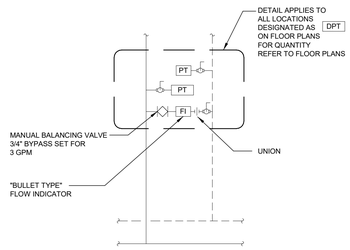


4 DIAPHRAGM EXPANSION TANK PIPING DIAGRAM
N.T.S.



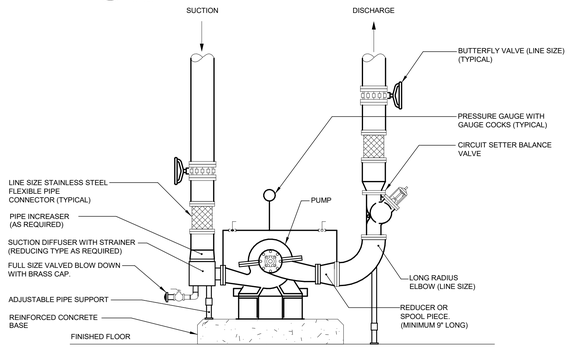
NOTES:
1. REFER TO SPECIFICATION SECTION 23 0516.
2. MINIMUM LOOP SIZE SHOWN, SIZES WILL VARY.

5 TYPICAL EXPANSION LOOP DETAIL
N.T.S.



NOTE:
TYPICAL FOR HOT WATER AND CHILLED WATER.

6 DIFFERENTIAL PRESSURE TRANSMITTER DETAIL
N.T.S.



7 HORIZONTAL SPLIT CASE PUMP DETAIL
N.T.S.

BID DOCUMENTS

drawing title
MECHANICAL DETAILS

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

REVISIONS

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drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

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scale 1/8" = 1'-0"
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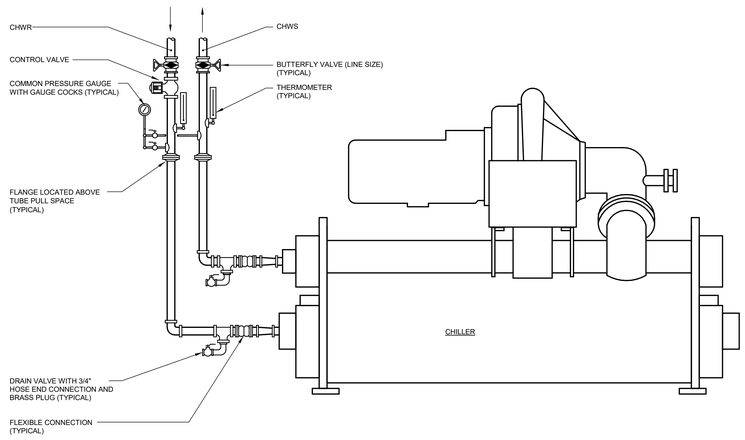
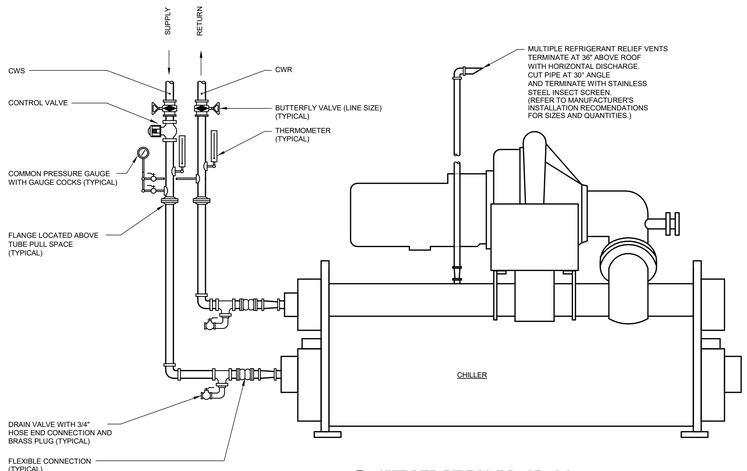
drawing no. **M4-1-2**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

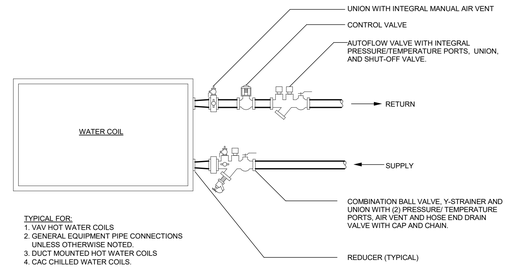
CAD no.
DCS project no. BI-RT-078 C&R
OSCGR project no. 900-0013



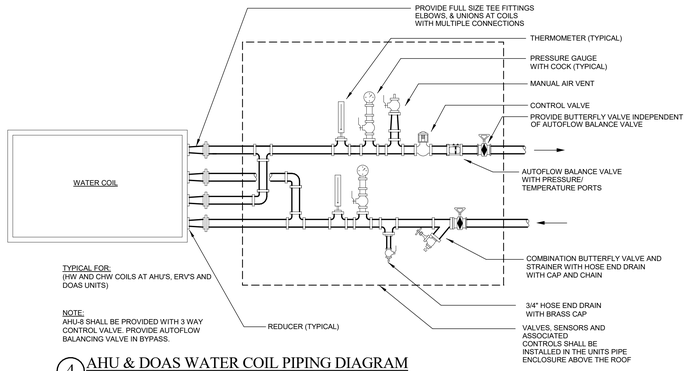
1 CHILLER PIPING DIAGRAM
SCALE: N.T.S.



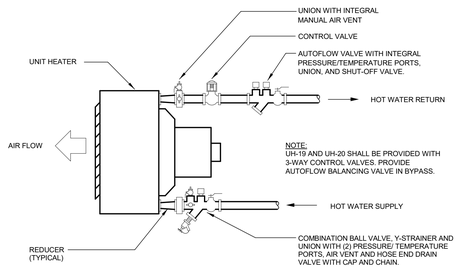
2 CHILLER PIPING DIAGRAM
SCALE: N.T.S.



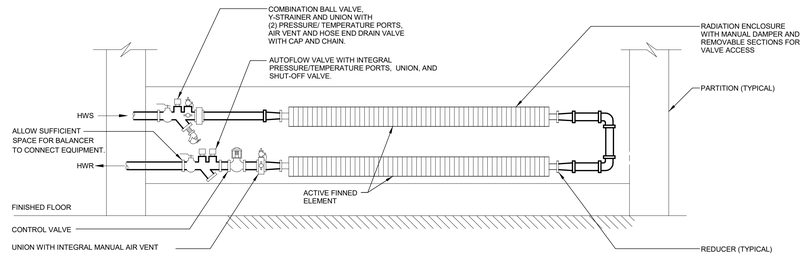
3 WATER COIL PIPING DIAGRAM
SCALE: N.T.S.



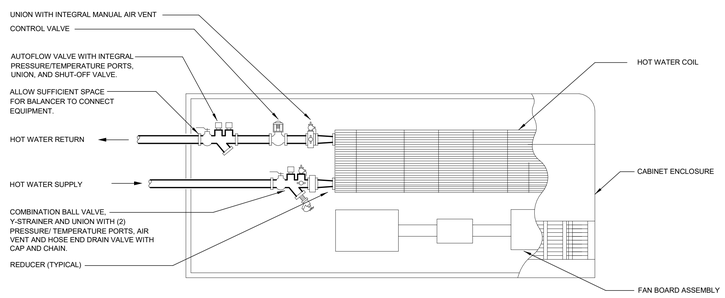
4 AHU & DOAS WATER COIL PIPING DIAGRAM
SCALE: N.T.S.



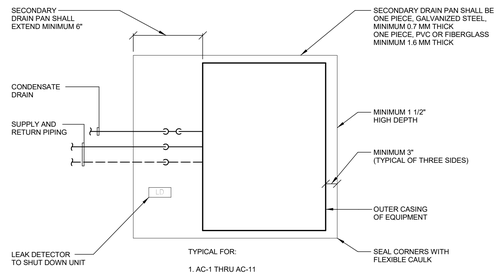
5 HOT WATER UNIT HEATER PIPING DIAGRAM
SCALE: N.T.S.



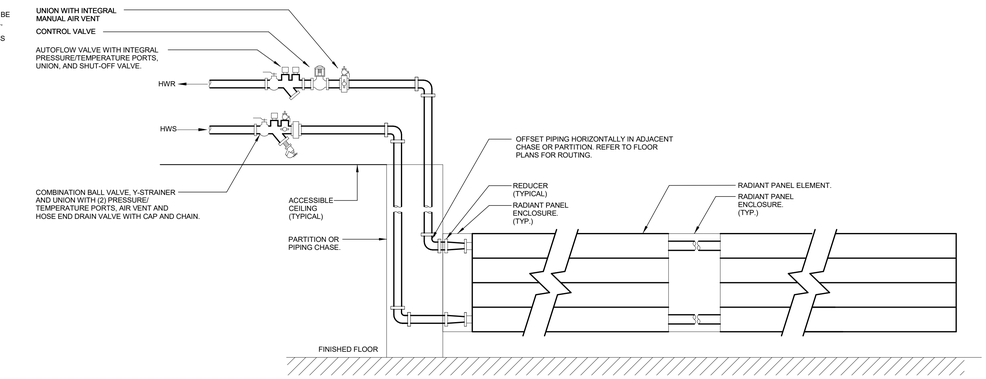
6 HOT WATER FIN TUBE RADIATION PIPING DIAGRAM
SCALE: N.T.S.



7 HOT WATER CABINET UNIT HEATER PIPING DIAGRAM
SCALE: N.T.S.



8 SECONDARY DRAIN PAN DETAIL
SCALE: N.T.S.



9 HOT WATER PANEL RADIATOR PIPING DIAGRAM
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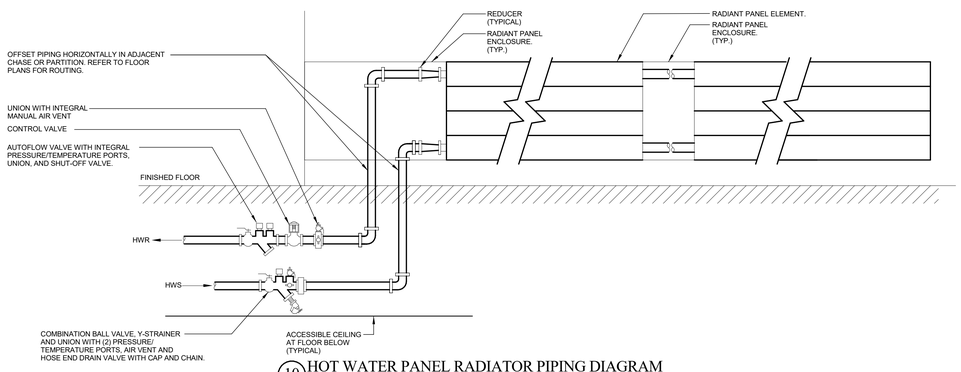
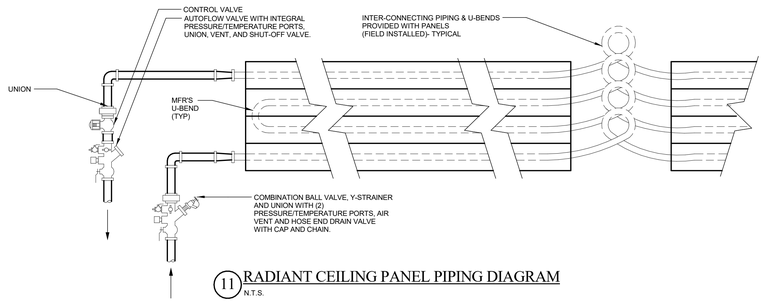


10 HOT WATER PANEL RADIATOR PIPING DIAGRAM
SCALE: N.T.S.



11 RADIANT CEILING PANEL PIPING DIAGRAM
N.T.S.

BID DOCUMENTS

drawing title
MECHANICAL DETAILS

REVISIONS		
mark	date	description
	11/8/2019	Addendum No.1

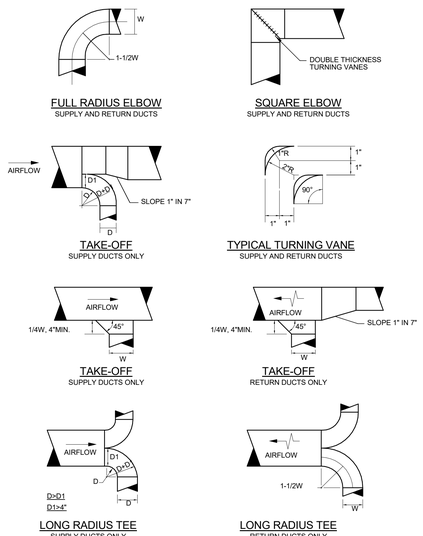
STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

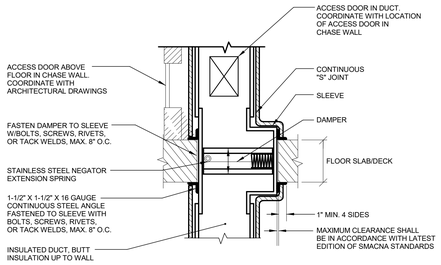
date: 10/11/2019
scale: 1/8" = 1'-0"
drawn by: BEK
approved by: BDW
drawing no.: **M4-1-3**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

CAD no.	DCS project no.	OSCGR project no.
	BI-RT-878 CM-R	900-0013



1 TYPICAL DUCT DETAILS
N.T.S.



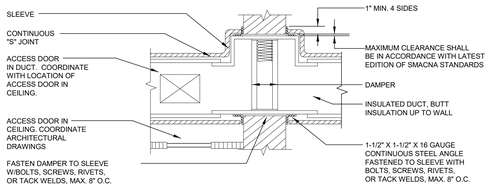
NOTES:

1. DAMPER STYLE & SLEEVE CONFIGURATION IS GOVERNED BY MAINTAINING A MAX. .06 STATIC PRESSURE @ 2500 F.P.M. FACE VELOCITY.
2. DEPTH OF DAMPER TO BE COORDINATED WITH WALL THICKNESS.
3. INSTALLATIONS & MATERIALS PER U.L. 555.
4. DETAIL FOR DAMPER IN FIRE RATED WALL SIMILAR EXCEPT ACCESS TO BE THROUGH CEILING.

2 VERTICAL FIRE DAMPER DETAIL
N.T.S.

FIRE DAMPER NOTE

PROVIDE FIRE DAMPERS AT ALL LOCATIONS WHERE DUCTS AND OUTLETS PASS THROUGH FIRE RATED COMPONENTS, WHERE INDICATED ON CONTRACT DOCUMENTS, AND WHERE REQUIRED BY AUTHORITIES HAVING JURISDICTION. INSTALL WITH REQUIRED PERIMETER MOUNTING ANGLES, SLEEVES, BREAKAWAY DUCT CONNECTIONS, CORROSION RESISTANT SPRINGS, BEARINGS, BUSHINGS AND HINGES.



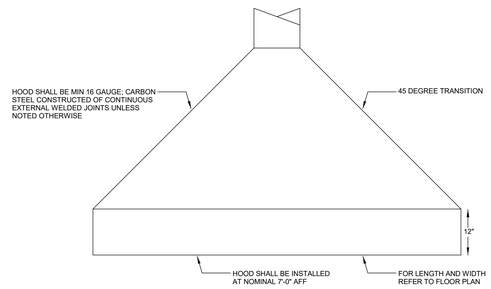
NOTES:

1. DAMPER STYLE & SLEEVE CONFIGURATION IS GOVERNED BY MAINTAINING A MAX. .06 STATIC PRESSURE @ 2500 F.P.M. FACE VELOCITY.
2. DEPTH OF DAMPER TO BE COORDINATED WITH WALL THICKNESS.
3. INSTALLATIONS & MATERIALS PER U.L. 555.

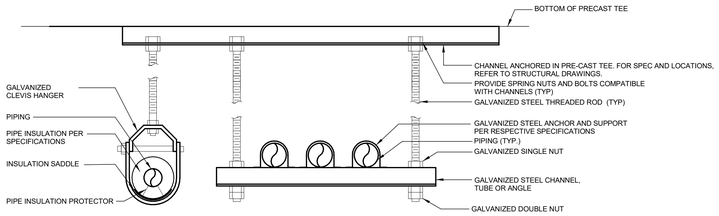
3 HORIZONTAL FIRE DAMPER DETAIL
N.T.S.

FIRE DAMPER NOTE

PROVIDE FIRE DAMPERS AT ALL LOCATIONS WHERE DUCTS AND OUTLETS PASS THROUGH FIRE RATED COMPONENTS, WHERE INDICATED ON CONTRACT DOCUMENTS, AND WHERE REQUIRED BY AUTHORITIES HAVING JURISDICTION. INSTALL WITH REQUIRED PERIMETER MOUNTING ANGLES, SLEEVES, BREAKAWAY DUCT CONNECTIONS, CORROSION RESISTANT SPRINGS, BEARINGS, BUSHINGS AND HINGES.



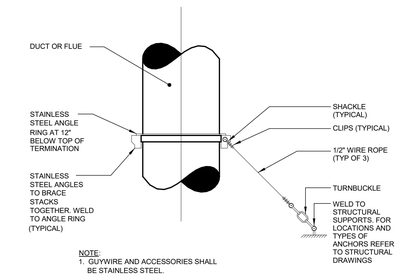
4 HOOD DETAIL
N.T.S.



NOTES:

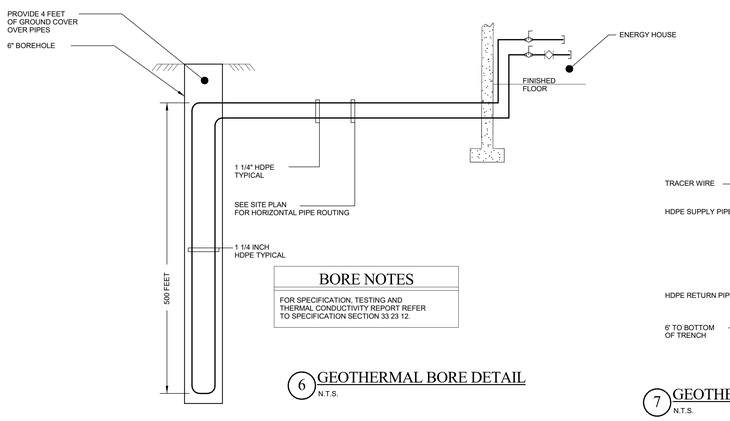
1. REFER TO STRUCTURAL DRAWINGS FOR LOCATIONS OF CHANNELS INSTALLED IN PRE-CAST CONCRETE. AT OTHER LOCATIONS, HANGERS SHALL BE DIRECTLY ANCHORED TO PRE-CAST CONCRETE. REFER TO DETAILS ON THE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE ALL REQUIRED HARDWARE INCLUDING BUT NOT LIMITED TO WASHERS, BOLTS, BEAM CLAMPS, STRAPS, AND CHANNEL SPRING NUTS.
3. SUPPORT DETAIL APPLIES TO DUCTWORK AND PIPING.
4. WHERE CHANNELS ARE INSTALLED IN PRE-CAST: DUCTWORK AND PIPING INSTALLED IN SPACE BETWEEN PRE-CAST TEES SHALL BE BOTTOM SUPPORTED FROM CHANNELS ANCHORED IN BOTTOM OR PRE-CAST TEES.

8 HANGER SUPPORT DETAIL AT PRE-CAST CONCRETE CONSTRUCTION
N.T.S.



NOTE:
1. GUYWIRE AND ACCESSORIES SHALL BE STAINLESS STEEL.

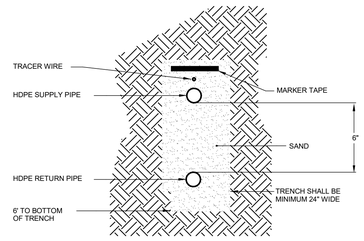
5 TYPICAL STACK GUY DETAIL
N.T.S.



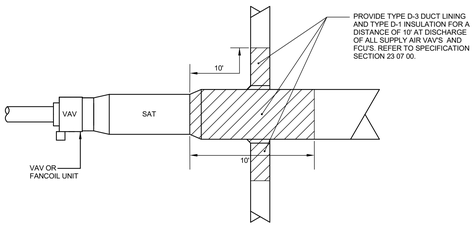
BORE NOTES

FOR SPECIFICATION, TESTING AND THERMAL CONDUCTIVITY REPORT REFER TO SPECIFICATION SECTION 33 23 12.

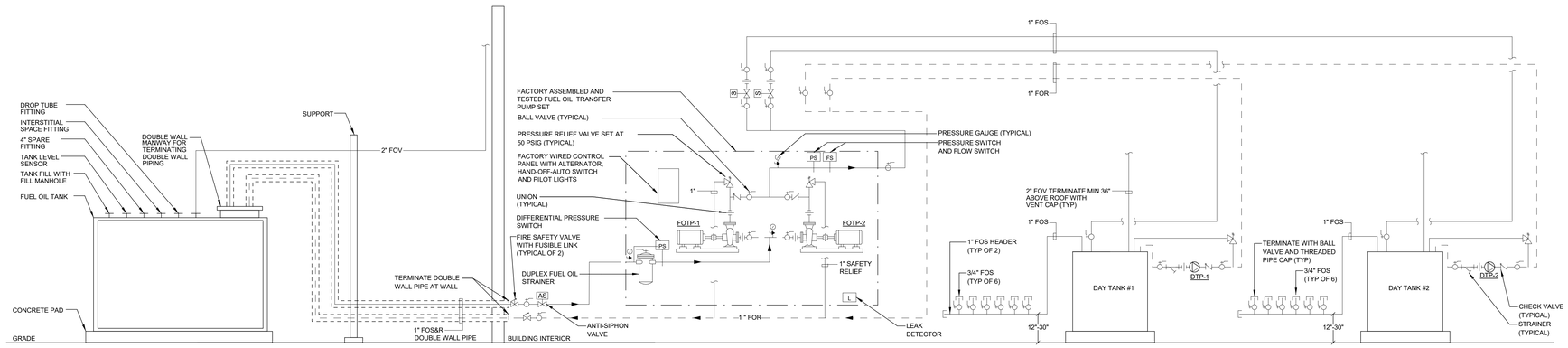
6 GEOTHERMAL BORE DETAIL
N.T.S.



7 GEOTHERMAL SUPPLY AND RETURN PIPING DETAIL
N.T.S.



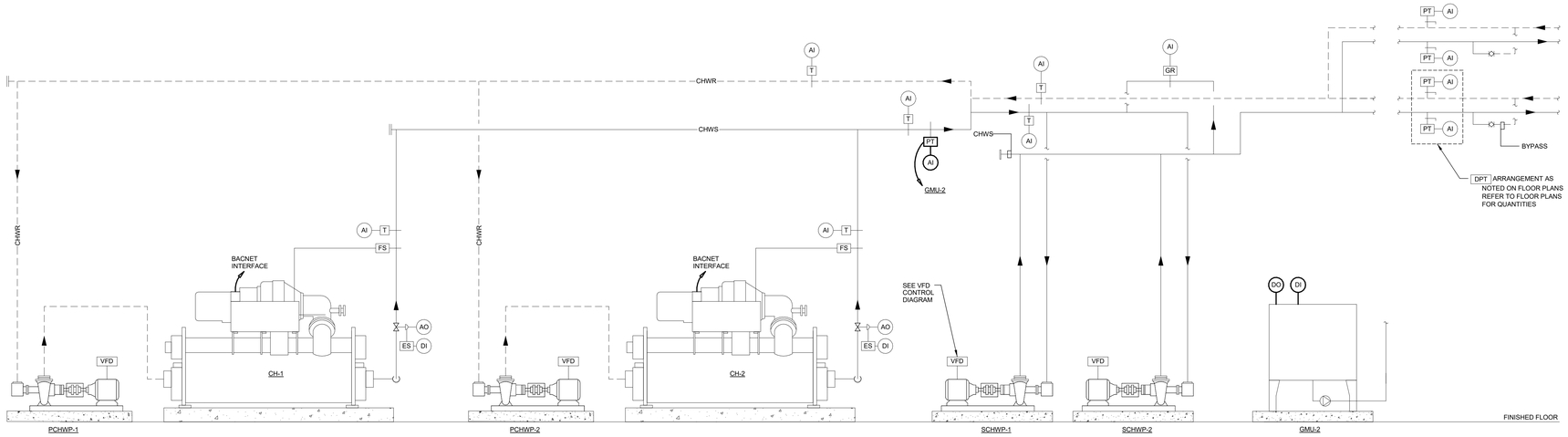
9 DUCT LINING DETAIL
N.T.S.



10 FUEL OIL PIPING DIAGRAM
N.T.S.

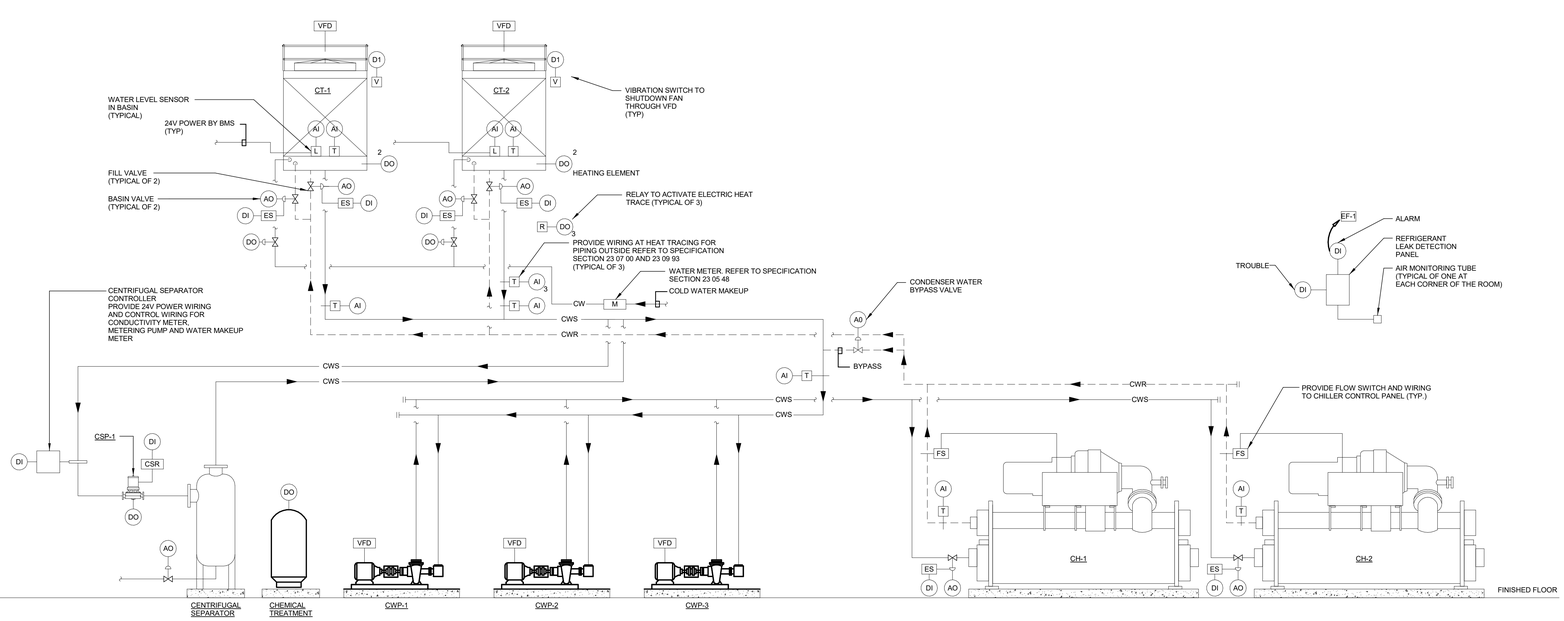
BID DOCUMENTS

drawing title: MECHANICAL DETAILS	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES
REVISIONS mark / date / description 11/8/2019 Addendum No.1	drawing prepared by **Consulting Engineering Services, Inc.** 811 Middle St., Middletown, CT 06457
project **Additions and Renovations** **Platt Technical High School** 600 Orange Avenue Milford, CT 06461	date: 10/11/2019 scale: 1/8" = 1'-0" drawn by: BEK approved by: BDW drawing no.: **M4-1-4**
CAD no. / DCS project no.: BI-RT-878 C&R / OSCGR project no.: 900-0013	



1 CHILLED WATER PLANT CONTROL DIAGRAM

N.T.S.



2 CONDENSER WATER PLANT CONTROL DIAGRAM

N.T.S.

TEMPERATURE CONTROL SYMBOLS

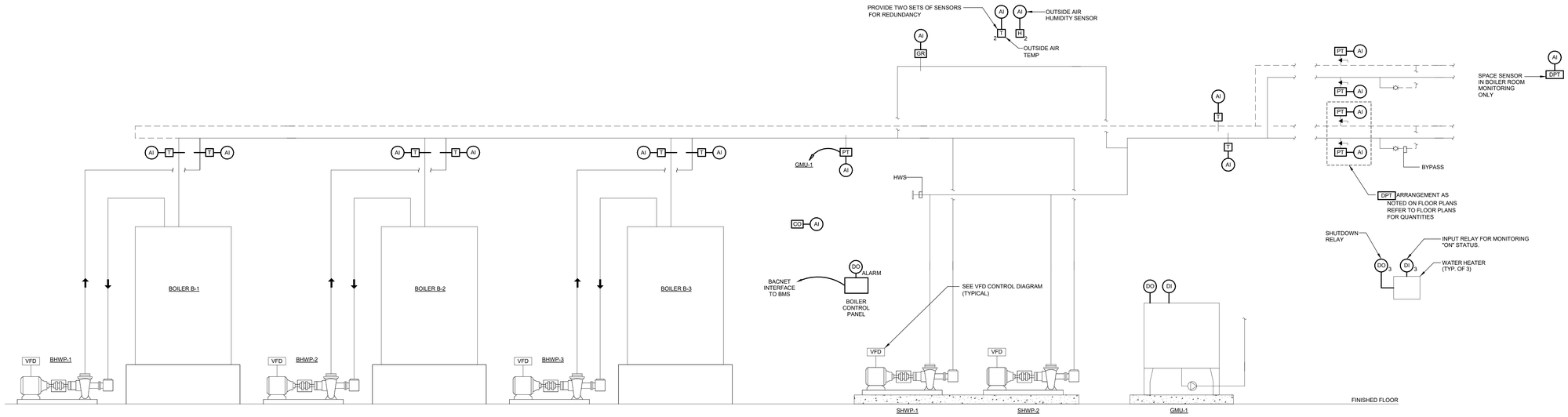
SYMBOLS	DESCRIPTION
?$_2$	ANALOG INPUT (SUBSCRIPT INDICATES QUANTITY - TYPICAL)
AI	ANALOG INPUT
AO	ANALOG OUTPUT
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
A	AQUASTAT
AFMS	AIR FLOW MONITORING STATION
AFS	AIR FLOW SWITCH
AV	AUDIO / VISUAL ALARM
BMS	BUILDING MANAGEMENT SYSTEM
CO	CARBON MONOXIDE SENSOR
CO2 C	CARBON DIOXIDE SENSOR
CSR	CURRENT SENSING RELAY
CV	CONSTANT VOLUME
DP	DIFFERENTIAL PRESSURE GAUGE WITH CONTACT SWITCH
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
E	ENTHALPY SENSOR
EC	EQUIPMENT CONTACT
ES	END SWITCH
F	FREEZESTAT
FM	FLOW METER
FS	FLOW SWITCH
GR	GLYCOL REFRACTOMETER
H	HUMIDITY SENSOR
LD	LEAK DETECTOR
MD	MOTORIZED DAMPER
ME	METHANE DETECTOR
NO2	NITROGEN DIOXIDE SENSOR
OCC	OCCUPANCY SENSOR
OV	OVERIDE PUSHBUTTON SWITCH
PP	POWER PACK
PT	PRESSURE TRANSMITTER
S	TOGGLE SWITCH
S$_P$	SWITCH WITH PILOT LIGHT
S$_T$	SWITCH: 0-60 MINUTE TWIST TIMER
SD	SMOKE DAMPER
SP	STATIC PRESSURE SENSOR
S	SMOKE DETECTOR
T	THERMOSTAT
T$_A$	LOCAL THERMOSTAT (24 VOLT)
T	TEMPERATURE SENSOR
T$_A$	AVERAGING TEMPERATURE SENSOR
T$_M$	TEMPERATURE SENSOR (MONITORING ONLY)
VFD	VARIABLE FREQUENCY DRIVE
	STARTER/DISCONNECT
	PETCOCK ISOLATION VALVE
	MAGNAHELIC PRESSURE GAUGE WITH ISOLATION VALVE
	2 WAY VALVE
	3 WAY VALVE

MISCELLANEOUS BMS CONTROL NOTES

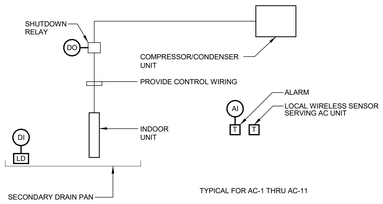
1. PROVIDE TEMPORARY CONTROLS TO MAINTAIN HVAC CONTROLS DURING PHASING. REFER TO PHASING DRAWINGS.
2. CONTROL OF ALL TEMPERATURE CONTROL DEVICES SHALL BE COMMISSIONED PER SPECIFICATIONS.
3. REFER TO FLOOR PLANS AND DETAILS FOR MISCELLANEOUS BMS SCOPE OF WORK.
4. 120V, 1 PHASE POWER TO ALL CONTROLS SHALL BE FED FROM DEDICATED CIRCUITS FROM ELECTRICAL PANELS TO BMS PANELS. REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS OF SOURCES OF 120 V POWER.
5. FOR QUANTITY OF SPACE TEMPERATURE SENSORS, DIFFERENTIAL PRESSURE SENSORS, SWITCHES AND OTHER DEVICES, REFER TO FLOOR PLAN DRAWINGS.
6. PROVIDE LABEL AT EACH SWITCH INDICATING FAN IT SERVES.

BID DOCUMENTS

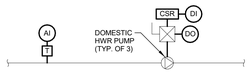
drawing title: MECHANICAL CONTROLS	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES
REVISIONS mark / date / description 1 / 11/8/2019 / Addendum No.1	drawing prepared by **Consulting Engineering Services, Inc.** 811 Middle St., Middletown, CT 06457
project **Additions and Renovations** **Platt Technical High School** 600 Orange Avenue Milford, CT 06461	date: 10/11/2019 scale: 1/8" = 1'-0" drawn by: BEK approved by: BDW drawing no.: **M5-1-1**
CAD no. / DCS project no.: BI-RT-878 CM-R / OSCGR project no.: 900-0013	



1 HOT WATER CONTROL DIAGRAM
N.T.S.

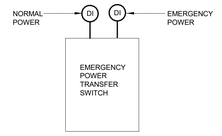


2 DUCTLESS SPLIT - CONTROL DIAGRAM
N.T.S.



3 DOMESTIC HW PUMPS CONTROL DIAGRAM
N.T.S.

4 LEAK DETECTOR CONTROL DIAGRAM
N.T.S.



5 EMERGENCY GENERATOR CONTROL DIAGRAM
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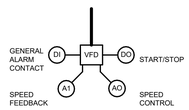

6 VFD CONTROL DIAGRAM
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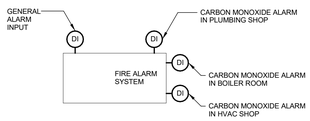
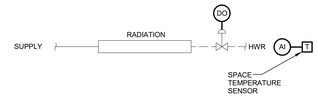
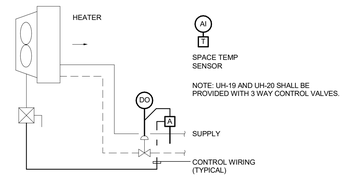


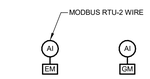
7 FIRE ALARM CONTROL DIAGRAM
N.T.S.



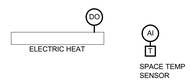
8 RADIATION CONTROL DIAGRAM
N.T.S.



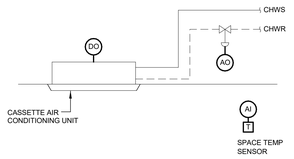
9 CABINET UNIT HEATER AND UNIT HEATER CONTROL DIAGRAM



10 UTILITY METERING CONTROL DIAGRAM
N.T.S.



11 ELECTRIC HEAT RADIATION CONTROL DIAGRAM
N.T.S.



12 CASETTE AIR CONDITIONING UNIT CONTROL DIAGRAM
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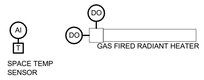
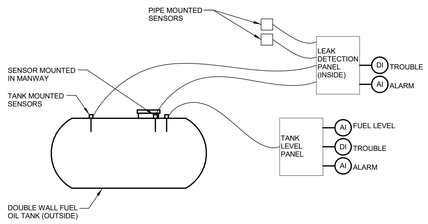


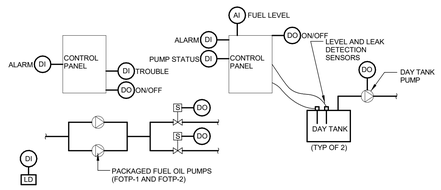
13 RADIANT HEATER CONTROL DIAGRAM
N.T.S.

14 ACID WASTE NEUTRALIZATION TANK
N.T.S.

15 LIGHTING CONTROL PANEL INTERFACE
N.T.S.



16 FUEL OIL TANK CONTROL DIAGRAM
N.T.S.



17 FUEL OIL TRANSFER PUMPS CONTROL DIAGRAM
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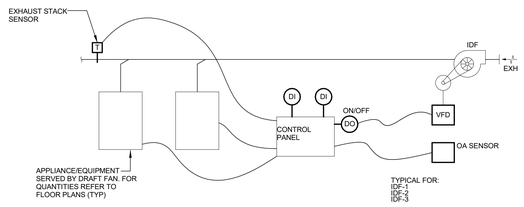


18 INDUCED DRAFT FAN CONTROL DIAGRAM
N.T.S.

BID DOCUMENTS

drawing title
MECHANICAL CONTROLS

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

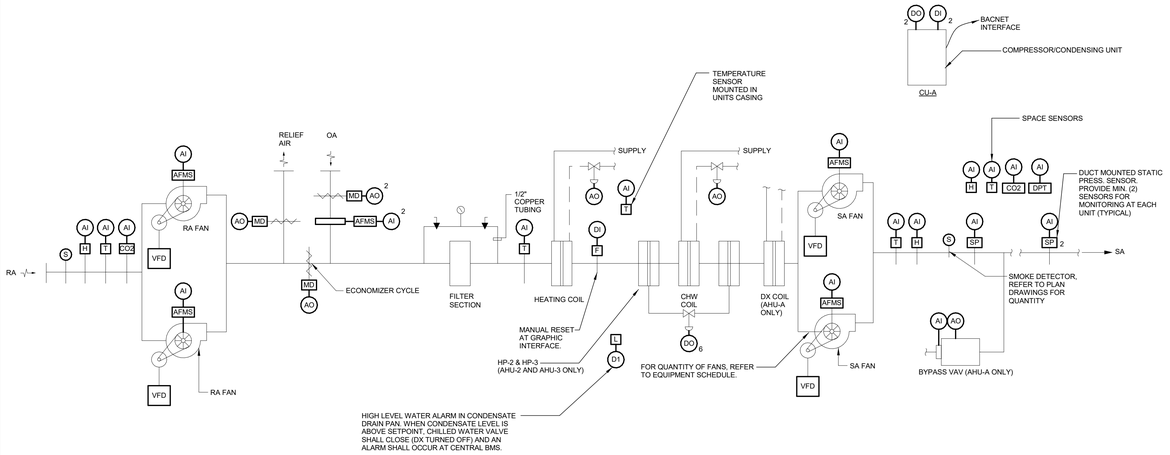
REVISIONS		
mark	date	description
	11/8/2019	Addendum No.1

drawing prepared by
Consulting Engineering Services, Inc.
811 Middle St., Middletown, CT 06457

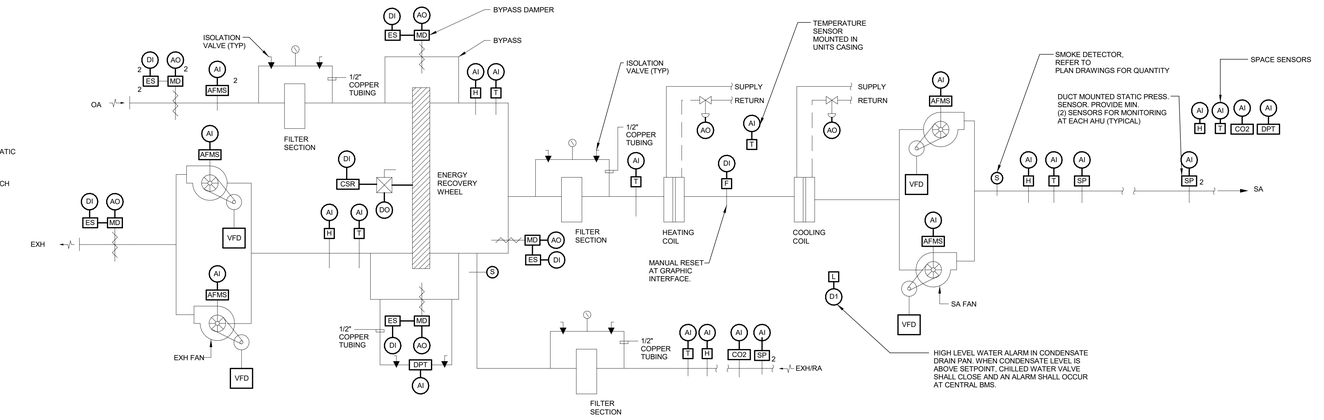
date 10/11/2019
scale 1/8" = 1'-0"
drawn by BEK
approved by BDW
drawing no. **M5-1-2**

project
Additions and Renovations
Platt Technical High School
600 Orange Avenue Milford, CT 06461

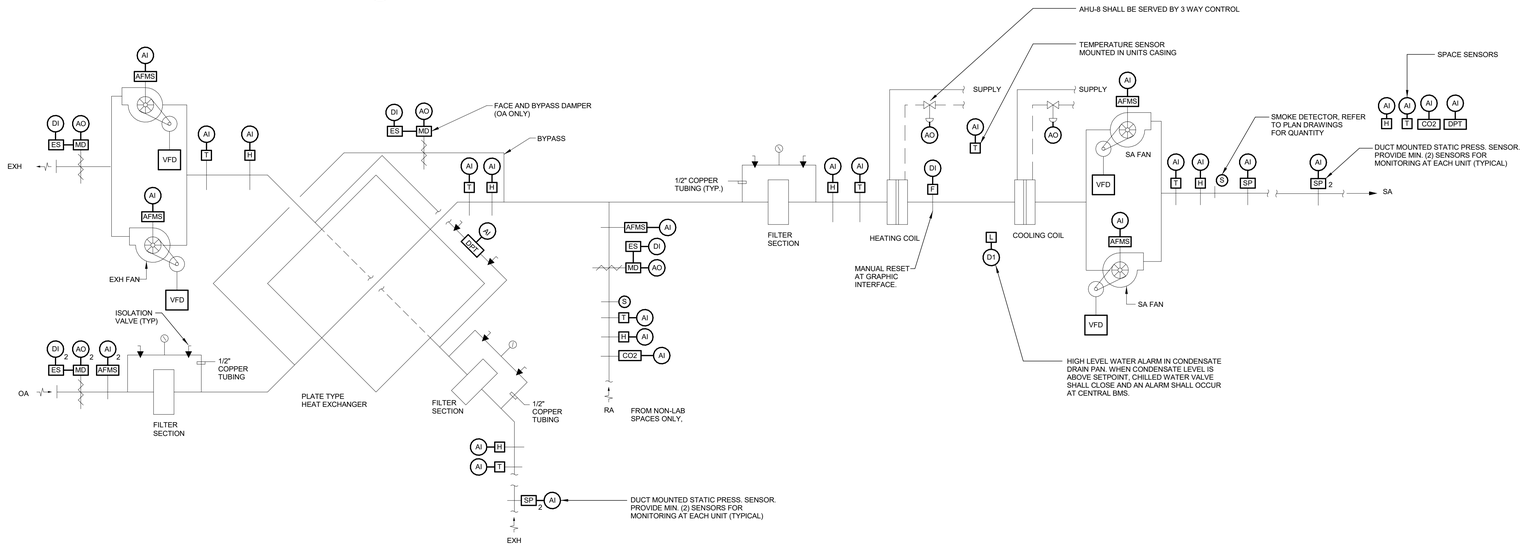
CAD no.	DCS project no.	OSCGR project no.
	BI-RT-878 CM-R	900-0013



1 TYPICAL AIR HANDLING UNIT CONTROL DIAGRAM
SCALE: N.T.S.



2 DOAS-1, AHU-1 AND AHU-7 CONTROL DIAGRAM
SCALE: N.T.S.



3 AHU-5 AND AHU-8 CONTROL DIAGRAM
SCALE: N.T.S.

4 FCU CONTROL DIAGRAM
SCALE: N.T.S.

5 ERV CONTROL DIAGRAM
SCALE: N.T.S.

6 SMOKE DAMPER CONTROL DIAGRAM
SCALE: N.T.S.

7 GAS FIRED MAKE-UP AIR UNIT
SCALE: N.T.S.

NOTES:
1. INSTALL DUCT MOUNTED SMOKE DETECTORS. REFER TO ELECTRICAL DRAWINGS.
2. COORDINATE WITH FIRE ALARM SYSTEM. REFER TO ELECTRICAL DRAWINGS.

8 SMOKE DAMPER CONTROL DIAGRAM
N.T.S.

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

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Additions and Renovations
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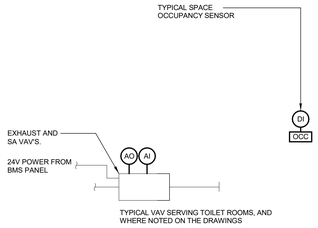
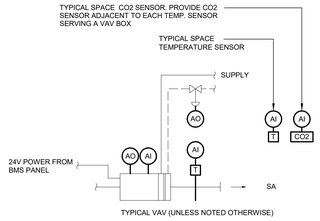
600 Orange Avenue Milford, CT 06461

CAD no.
DCS project no. BI-RT-878 CM-R
OSCGR project no. 990-0013



1 VAV CONTROL DIAGRAM-OCCUPANCY SENSOR
N.T.S.



2 VAV CONTROL DIAGRAM
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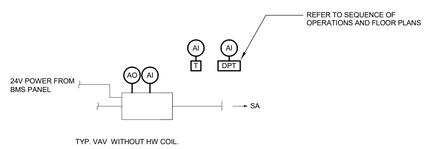

3 VAV CONTROL DIAGRAM
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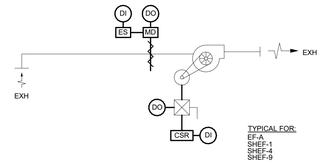
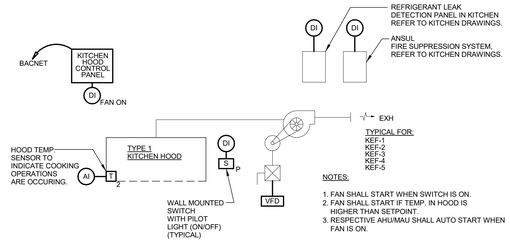


4 FAN CONTROL DIAGRAM - TIME OF DAY
N.T.S.



5 KITCHEN HOOD CONTROL DIAGRAM
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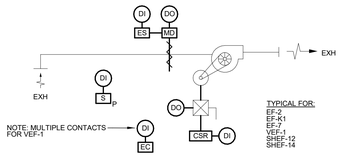
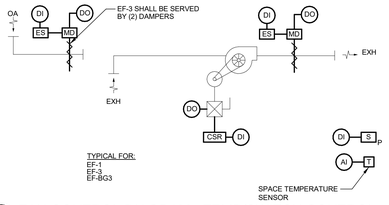
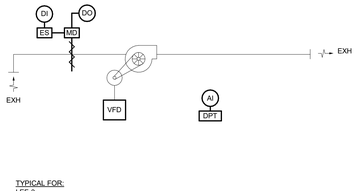


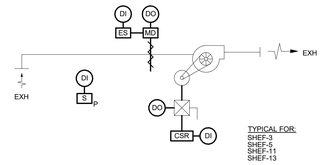
6 FAN CONTROL DIAGRAM - SWITCH/EQUIP. CONTACT
N.T.S.



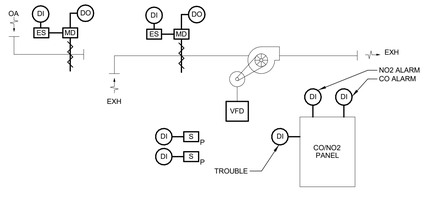
7 FAN CONTROL DIAGRAM - TEMP/SWITCH CONTROL
N.T.S.



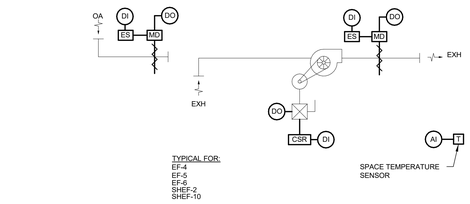
8 FAN CONTROL DIAGRAM - LEF-3
N.T.S.



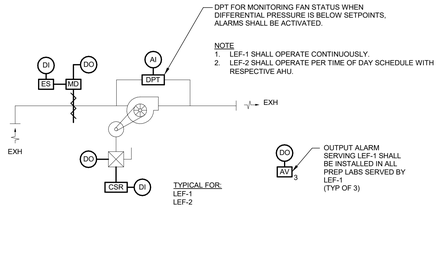
9 FAN CONTROL DIAGRAM - SWITCH OPERATED
N.T.S.



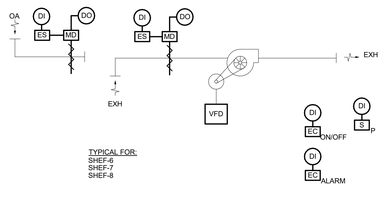
10 EF-BG1 AND EF-BG2 FAN CONTROL DIAGRAM
N.T.S.



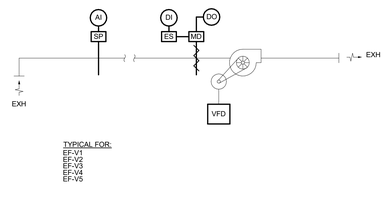
11 FAN CONTROL DIAGRAM - TEMPERATURE CONTROL
N.T.S.



12 FAN CONTROL DIAGRAM - LAB EXHAUST FAN
N.T.S.



13 FAN CONTROL DIAGRAM - SPRAY BOOTHS
N.T.S.



14 FAN CONTROL DIAGRAM - VARIABLE FLOW CONTROL
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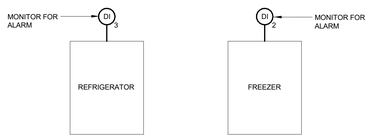
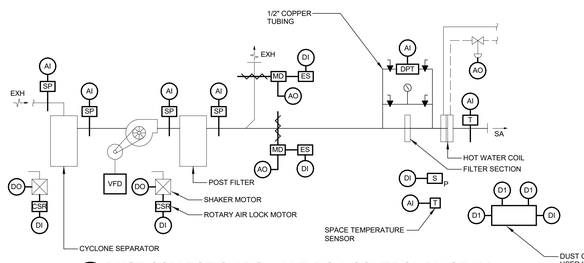


15 KITCHEN EQUIPMENT ALARMS
N.T.S.



16 DUST COLLECTION DC-1 AND DC-2 CONTROL DIAGRAM
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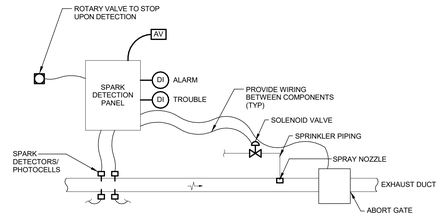

17 DC-1 & DC-2 SPARK DETECTION/EXTINGUISHING CONTROL DIAGRAM
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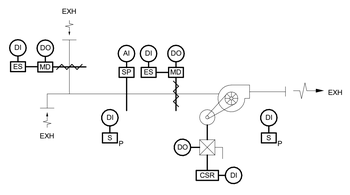

18 SHEF-4 CONTROL DIAGRAM - SWITCH OPERATED
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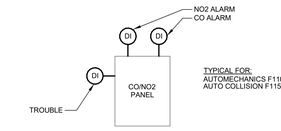

19 CO/NO2 CONTROL DIAGRAM
N.T.S.

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drawing title
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CONTROLS

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES

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