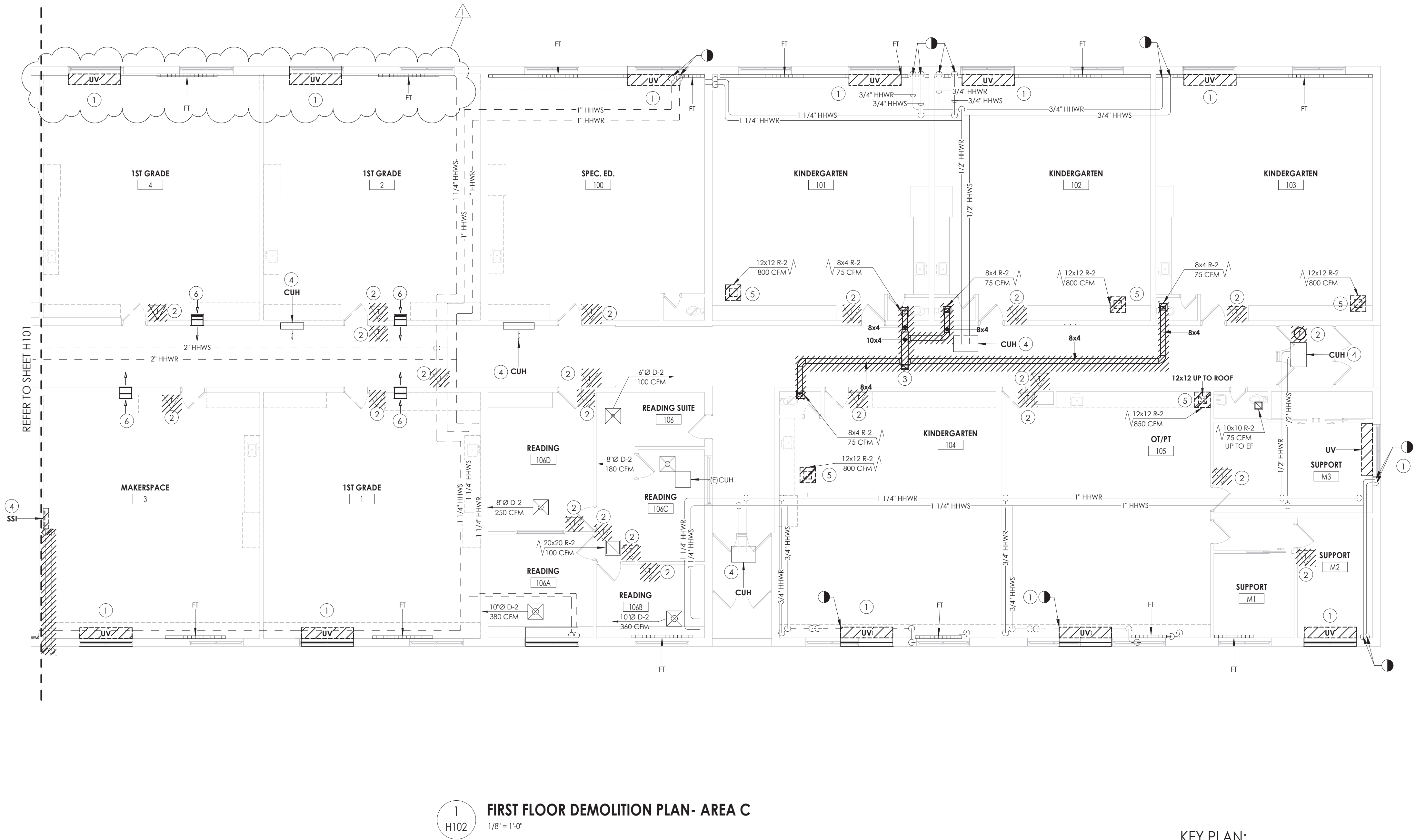
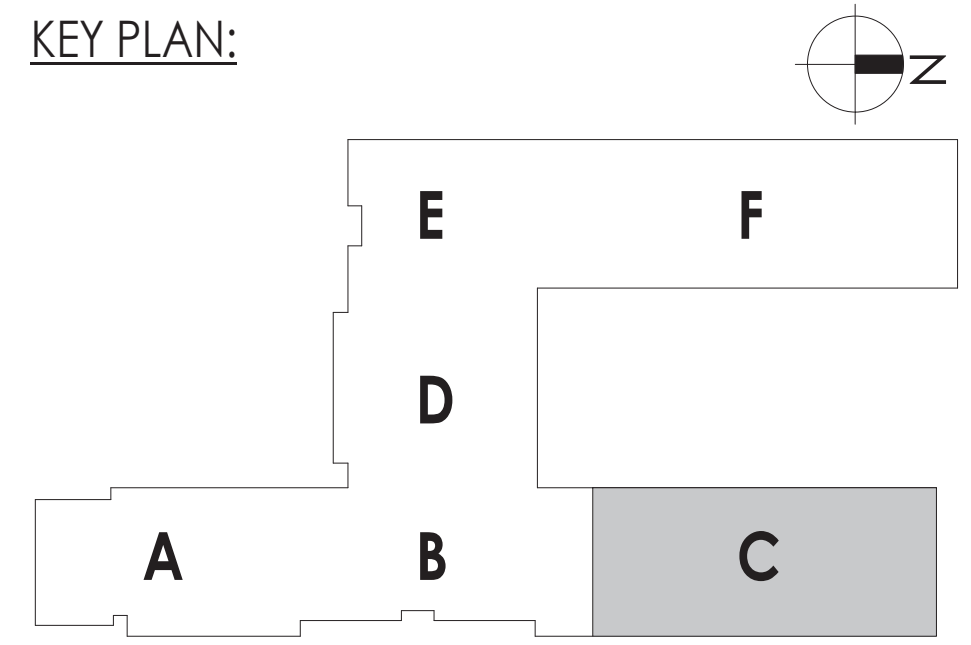




1 FIRST FLOOR DEMOLITION PLAN- AREA C
H102 1/8" = 1'-0"

- KEY NOTES**
- 1 REMOVE EXISTING UNIT VENTILATOR, LOUVER AND SLEEVE TO REMAIN. DISCONNECT PIPING AT FINITUBE. REFER TO ARCH. PLANS. MAINTAIN PIPING LOOP. PREPARE FOR NEW WORK.
 - 2 REMOVE EXISTING ROOM TEMPERATURE SENSOR AND WRING BACK TO CONTROL HEAD END. PREPARE FOR NEW WORK.
 - 3 REMOVE EXISTING DUCT, GRILLES, AND SUPPORTS UP TO ROOF.
 - 4 REMOVE CONTROLS AND PREPARE EXISTING EQUIPMENT FOR NEW CONTROLS. **BID ALTERNATE MC-01.**
 - 5 REMOVE EXISTING RELIEF AIR GRILLE AND ASSOCIATED DUCTWORK UP TO ROOF FAN.
 - 6 REMOVE EXISTING LOW RELIEF AIR GRILLE IN ROOM AND HIGH RELIEF AIR GRILLE IN COORIDOR. ABANDON DUCTWORK WITHIN WALL. G.C TO PATCH WALL OPENINGS.



PROJECT INFORMATION

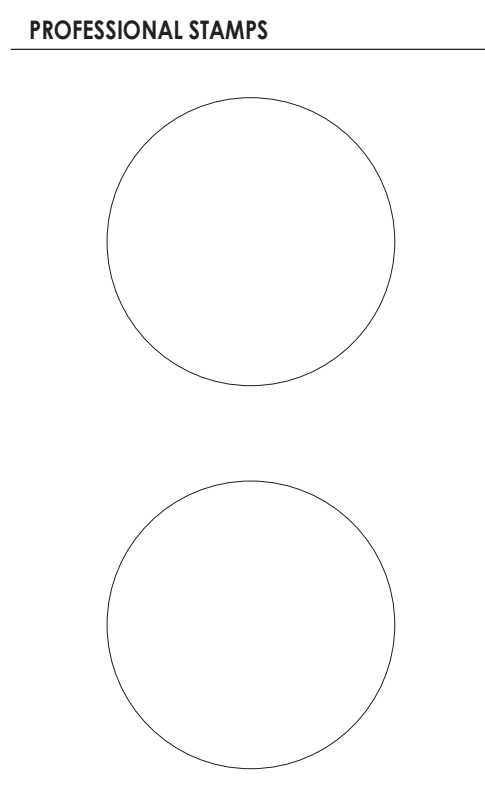
Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD. BLAUVELT, NY 10913

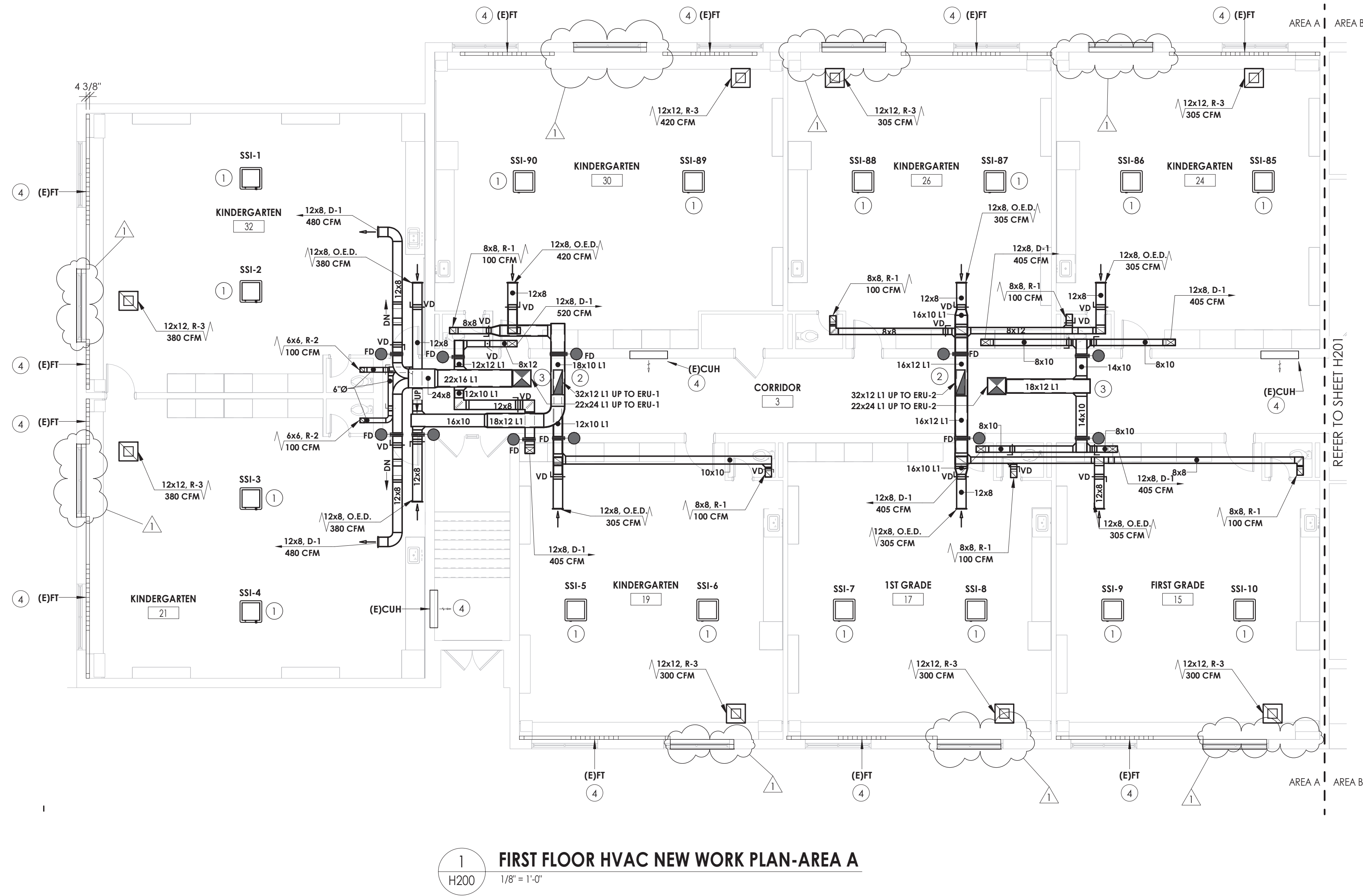
- SOUTH ORANGETOWN CSD**
- WILLIAM O. SCHAFER SED# 35-03-01-06-0-010-2019
 - COTTAGE LANE ELEMENTARY SED# 35-03-01-06-0-010-002
 - TAPPAN ZEE HIGH SCHOOL SED# 35-03-01-06-0-004-002
 - WILLIAM O. SCHAFER SAL SED# 35-03-01-06-0-010-002
 - COTTAGE LANE SAL SED# 35-03-01-06-0-010-003
 - COTTAGE LANE LIBRARY SAL SED# 35-03-01-06-8-003-002
 - WOS OUTDOOR CLASSROOM SED# 35-03-01-06-7-035-001
 - WOS OUTDOOR CLASSROOM SED# 35-03-01-06-7-036-001
 - CLE OUTDOOR CLASSROOM SED# 35-03-01-06-7-034-001
 - 12HS OUTDOOR CLASSROOM SED# 35-03-01-06-7-035-001
- PROJECT ISSUE & REVISION SCHEDULE**
- | No. | Date | Description |
|-----|------------|-----------------|
| 1 | 10/27/2023 | BID ADDENDUM #1 |



NEW YORK STATE EDUCATION STATMENT
I, AS A VIOLATOR OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATION FOR ANY PERSON, UNDER ACTUAL OR CONSTRUCTIVE CONTROL OF A COVERED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ACT AS AN IDA IN ANY WAY, IF ANY IDA, BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR LAND SURVEYOR, IS ALLEGED, THE ALLEGING PARTY SHALL FILE WITH THE NEW YORK STATE EDUCATION LAW ENFORCEMENT DIVISION, THEIR SIGNATURE AND THE DATE OF SUCH ABRANDON, AND A SPECIFIC DESCRIPTION OF THE ABRANDON.

SHEET INFORMATION

Issued	Scale
10/18/2023	1/8" = 1'-0"
Project Status	
BID DOCUMENTS	
Drawn By	Checked By
KCM	JJM
Drawing Title	
FIRST FLOOR DEMOLITION PLAN- AREA C	
Drawing Number	
WOS H102	



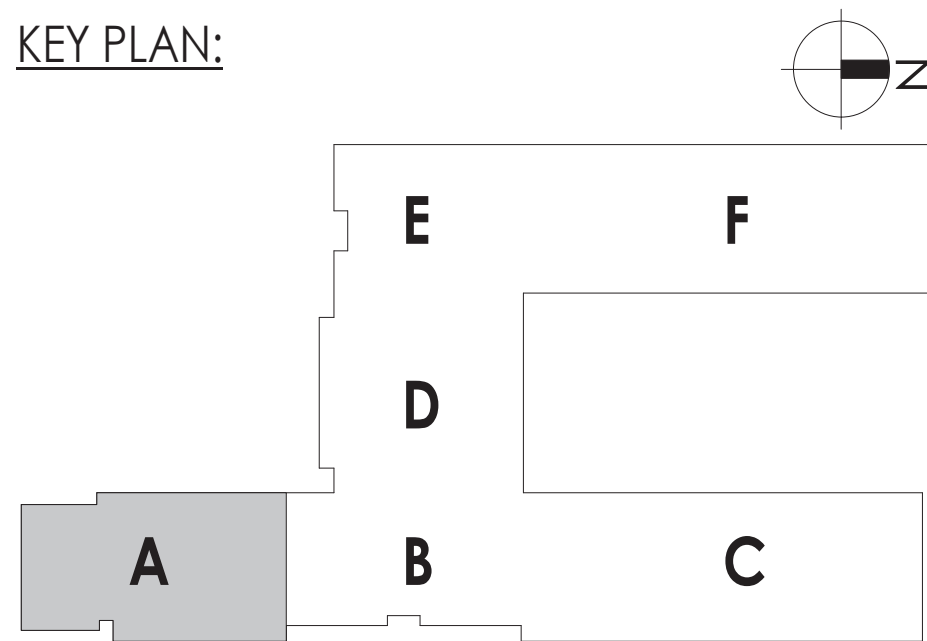
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H200
1/8" = 1'-0"

FIRST FLOOR HVAC NEW WORK PLAN-AREA A

KEY NOTES:

- 1 SSI TO BE INSTALLED IN JOIST SPACE. REMOVE BRACING AS NEEDED FOR INSTALLATION. PROVIDE NEW BRACING IN NEW LOCATION IF EXISTING BRACING IS REMOVED.
- 2 RETURN DUCTWORK TO BE ROUTED IN HALLWAY CEILING. COORDINATE WITH EXISTING UTILITIES AND REFRIGERANT PIPING.
- 3 SUPPLY DUCTWORK TO BE ROUTED IN CEILING. COORDINATE WITH EXISTING UTILITIES AND REFRIGERANT PIPING.
- 4 CONNECT EXISTING EQUIPMENT TO NEW BMS SYSTEM, PROVIDE NEW CONTROL VALVE OR BACNET CARD DEPENDING UPON THE TYPE OF EQUIPMENT. **BID ALTERNATE MC-01.**

KEY PLAN:



PROJECT INFORMATION

Project Number
14457.20
Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT
Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD. BLAUVELT, NY 10913

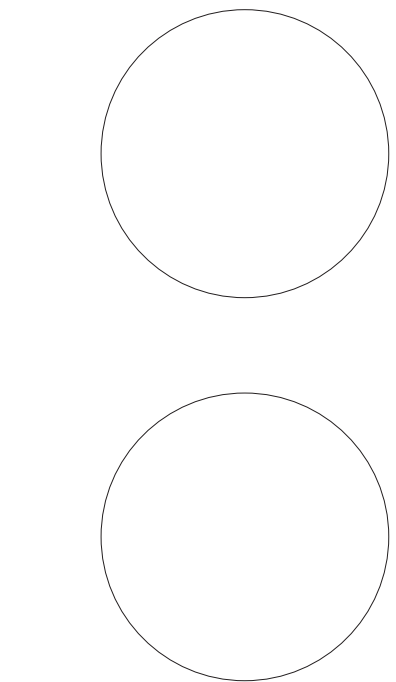
SOUTH ORANGETOWN CSD

- WILLIAM O. SCHAFER SED# 35-03-01-06-010-012-019
- COTTAGE LANE ELEMENTARY SED# 35-03-01-06-010-010-022
- TAPPAN ZEE HIGH SCHOOL SED# 35-03-01-06-010-010-022
- WILLIAM O. SCHAFER SAL SED# 35-03-01-06-010-012-020
- COTTAGE LANE SAL SED# 35-03-01-06-010-010-023
- COTTAGE LANE LIBRARY SAL SED# 35-03-01-06-010-023-002
- WOS OUTDOOR CLASSROOM SED# 35-03-01-06-7-035-001
- SCONE OUTDOOR CLASSROOM SED# 35-03-01-06-7-036-001
- CLE OUTDOOR CLASSROOM SED# 35-03-01-06-7-034-001
- TMS OUTDOOR CLASSROOM SED# 35-03-01-06-7-035-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	10/27/2023	BID ADDENDUM #1

PROFESSIONAL STAMPS



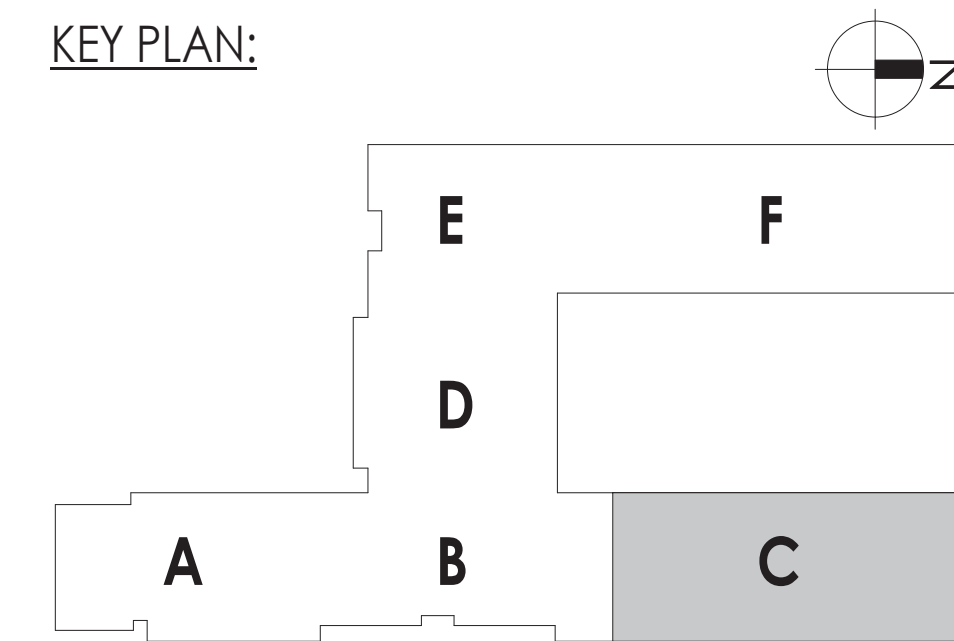
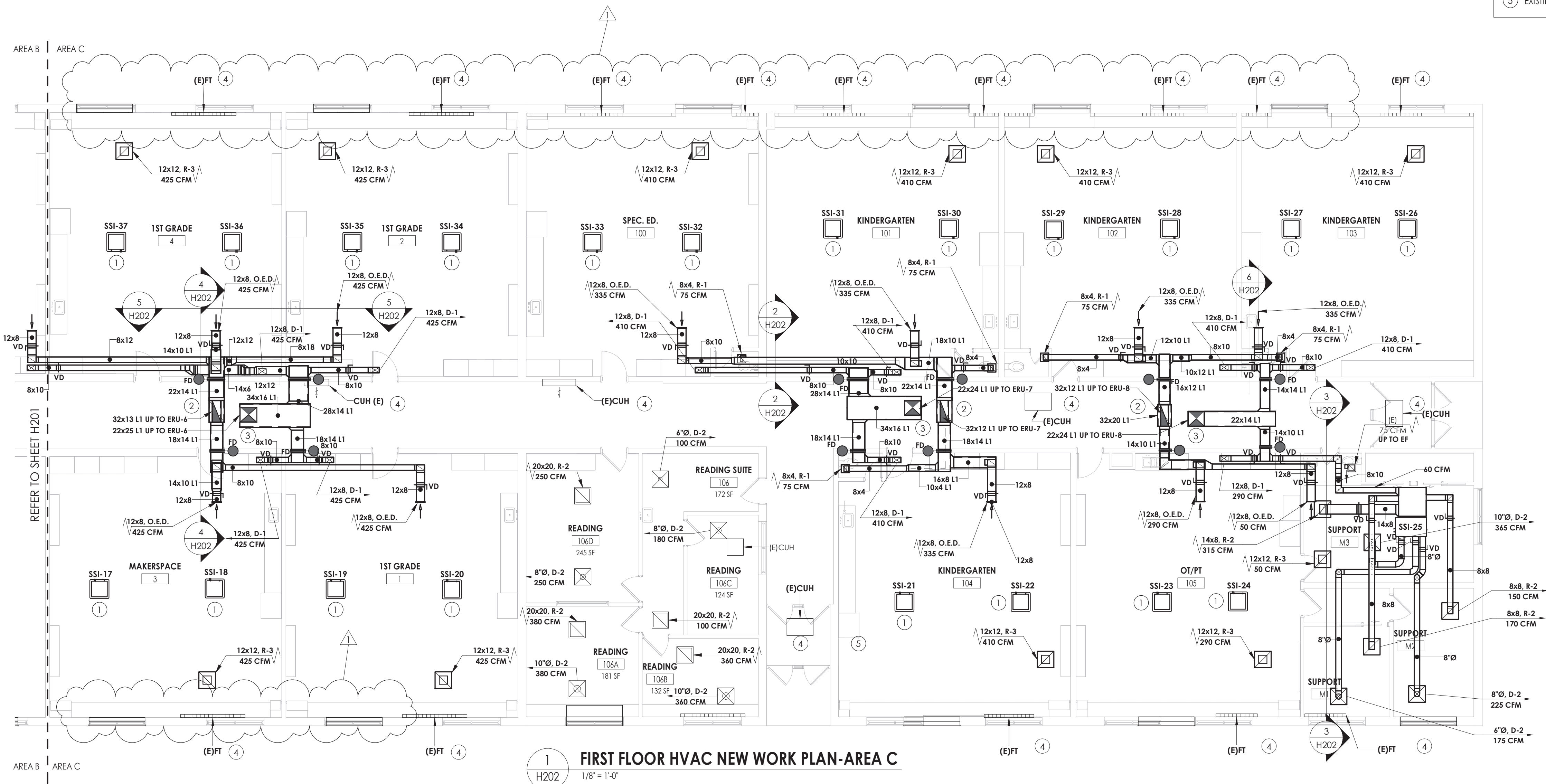
NEW YORK STATE EDUCATION STATEMENT
I, AS A LICENSED PROFESSIONAL ENGINEER, HAVE REVIEWED THE DESIGN OF THE PROJECT AND THE DESIGNER'S REPRESENTATION OF THE DESIGN. I HAVE FOUND THE DESIGN TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PROJECT. I HAVE REVIEWED THE DESIGN OF THE PROJECT AND THE DESIGNER'S REPRESENTATION OF THE DESIGN. I HAVE FOUND THE DESIGN TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PROJECT.

SHEET INFORMATION

Issued
10/18/2023
Scale
1/8" = 1'-0"
Project Status
BID DOCUMENTS
Drawn By
KCM
Checked By
JJM
Drawing Title
**FIRST FLOOR HVAC NEW WORK
PLAN- AREA A**

Drawing Number

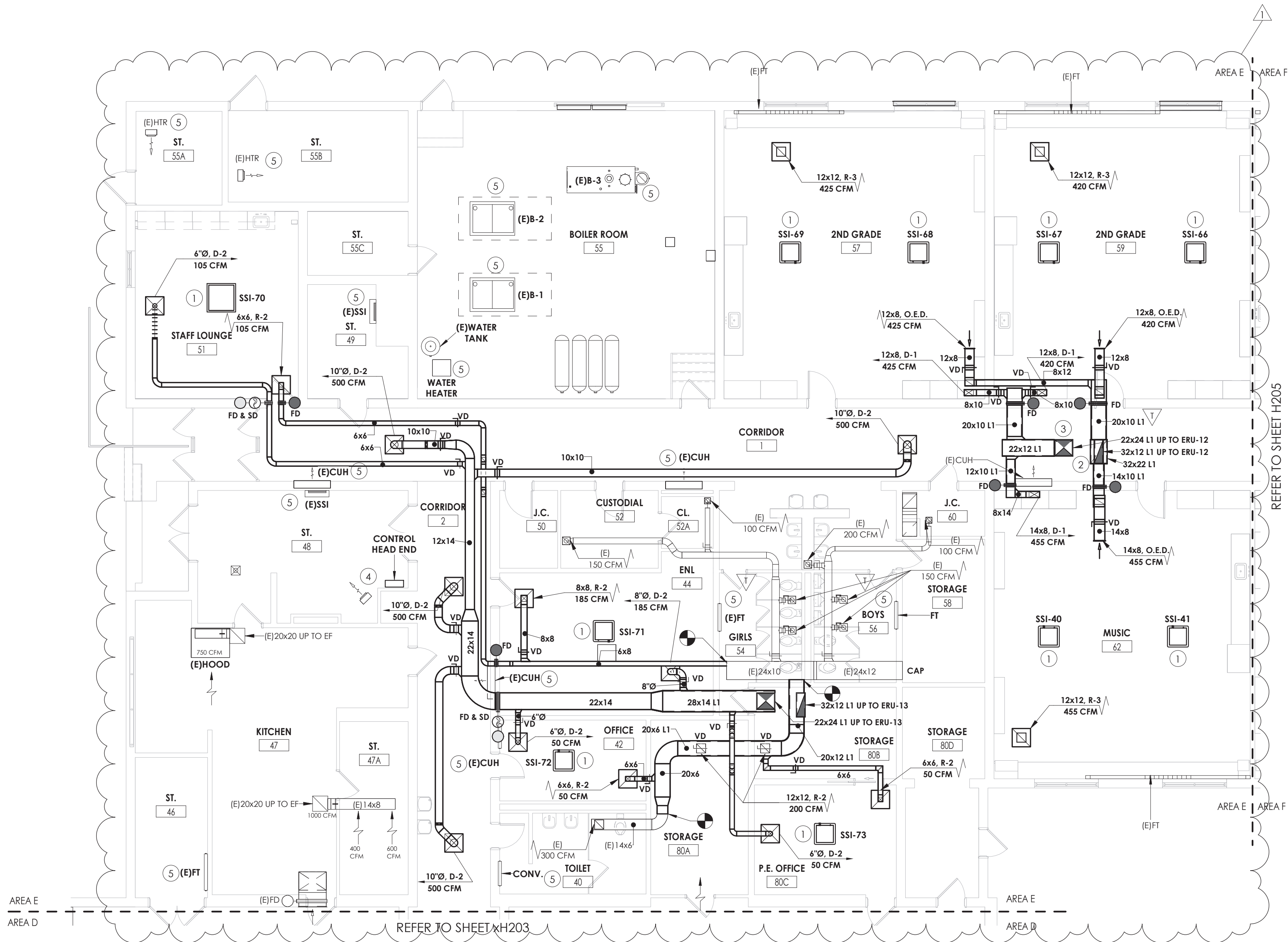
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H200**



Drawing Number

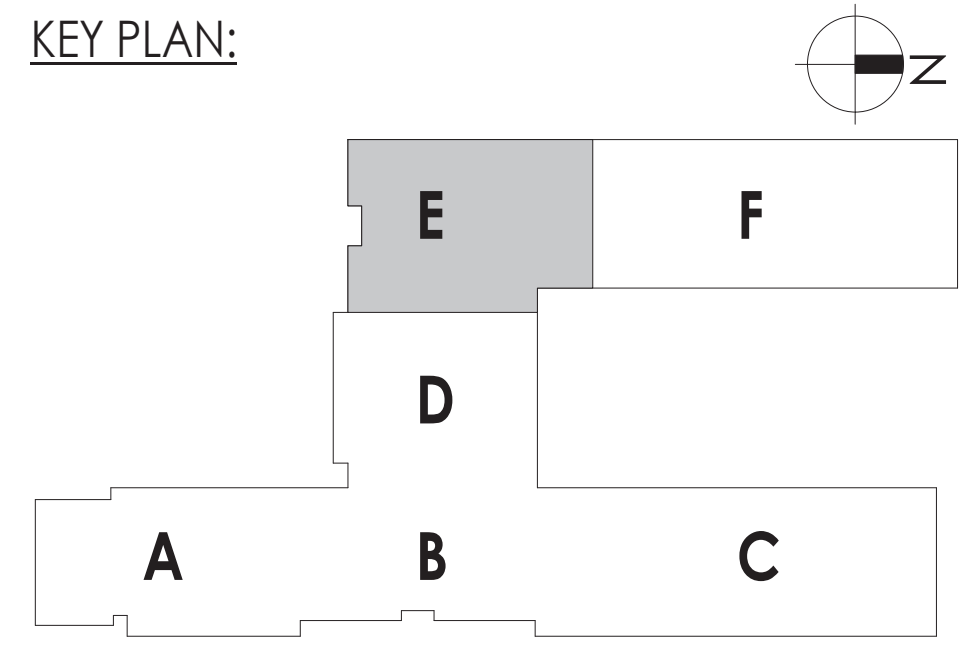
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H202

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1 FIRST FLOOR HVAC NEW WORK PLAN-AREA E
H204 1/8" = 1'-0"

- KEY NOTES:**
- 1 SSI TO BE INSTALLED IN JOIST SPACE. REMOVE BRACING AS NEEDED FOR INSTALLATION. PROVIDE NEW BRACING IN NEW LOCATION IF EXISTING BRACING IS REMOVED.
 - 2 RETURN DUCTWORK TO BE ROUTED IN HALLWAY CEILING. COORDINATE WITH EXISTING UTILITIES AND REFRIGERANT PIPING.
 - 3 SUPPLY DUCTWORK TO BE ROUTED IN CEILING. COORDINATE WITH EXISTING UTILITIES AND REFRIGERANT PIPING.
 - 4 PROVIDE NEW CONTROLS HEAD END. **BID ALTERNATE MC-01.**
 - 5 CONNECT EXISTING EQUIPMENT TO NEW BMS SYSTEM. PROVIDE NEW CONTROL VALVE OR BACNET CARD DEPENDING UPON THE TYPE OF EQUIPMENT. **BID ALTERNATE MC-01.**



CPL | Architecture Engineering Planning
50 Front Street Suite 202,
Newburgh, NY 12550
CPLteam.com

SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

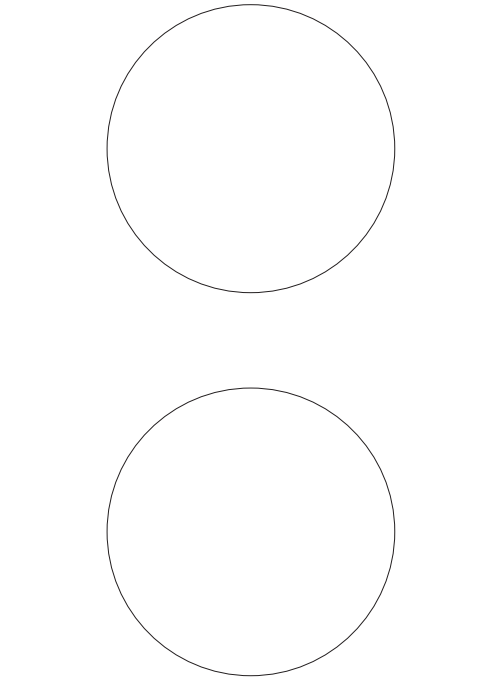
PROJECT INFORMATION
Project Number
14457.20
Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT
Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD. BLAUVELT, NY 10913

- SOUTH ORANGETOWN CSD**
- ☒ WILLIAM O. SCHAFER SED# 35-03-01-06-010-010
 - ☐ COTTAGE LAKE ELEMENTARY SED# 35-03-01-06-010-022
 - ☐ TAPPAN ZEE HIGH SCHOOL SED# 35-03-01-06-010-022
 - ☐ WILLIAM O. SCHAFER SAL SED# 35-03-01-06-010-022
 - ☐ COTTAGE LAKE SAL SED# 35-03-01-06-010-022
 - ☐ COTTAGE LAKE LIBRARY SAL SED# 35-03-01-06-010-022
 - ☐ WOS OUTDOOR CLASSROOM SED# 35-03-01-06-010-022
 - ☐ WOS OUTDOOR CLASSROOM SED# 35-03-01-06-010-022
 - ☐ CLE OUTDOOR CLASSROOM SED# 35-03-01-06-010-022
 - ☐ 12HS OUTDOOR CLASSROOM SED# 35-03-01-06-010-022

PROJECT ISSUE & REVISION SCHEDULE		
No.	Date	Description
1	10/27/2023	BID ADDENDUM #1

PROFESSIONAL STAMPS



NEW YORK STATE EDUCATION STATEMENT
I, the undersigned, being a duly licensed architect under the laws of the State of New York, do hereby certify that the above described project has been designed by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of New York.

SHEET INFORMATION	
Issued	Scale
10/18/2023	1/8" = 1'-0"
Project Status	
BID DOCUMENTS	
Drawn By	Checked By
KCM	JJM
Drawing Title	
FIRST FLOOR HVAC NEW WORK PLAN- AREA E	

Drawing Number
WOS H204



- 
- CPL | Architecture Engineering Planning**
 50 Front Street Suite 202,
 Newburgh, NY 12550
CPLteam.com

PROJECT INFORMATION

Project Number
14457.20

Client Name
**SOUTH ORANGETOWN CENTRAL
SCHOOL DISTRICT**

Project Name
PHASE 1: 2022 BOND

SOUTH ORANGETOWN CSD

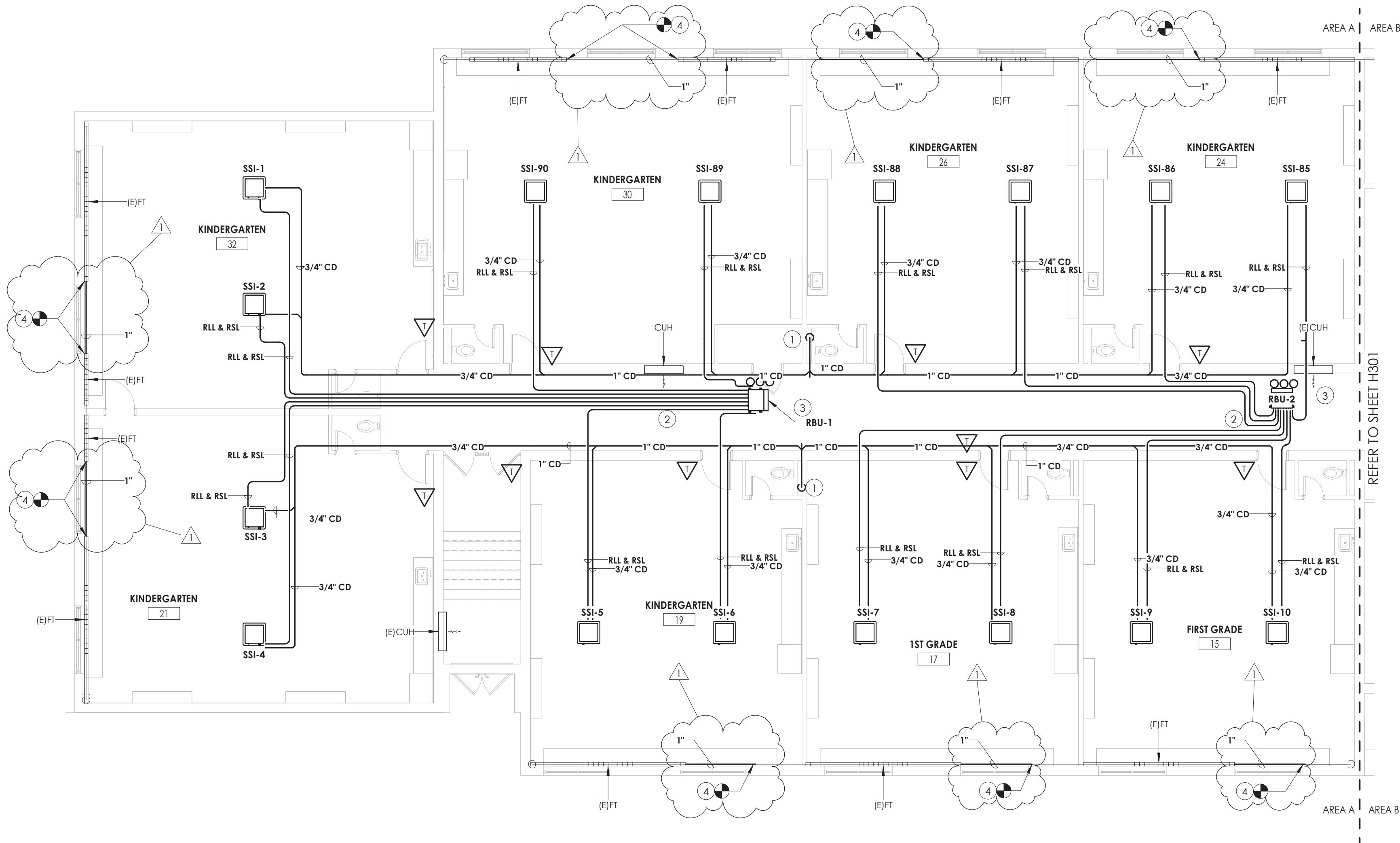
- WILLIAM O. SCHAEFER SED#: 50-03-01-06-0-012-019
- COTTAGE LAKE ELEMENTARY SED#: 50-03-01-06-0-010-0122
- TAPPAN ZEE HIGH SCHOOL SED#: 50-03-01-06-0-006-003
- WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- COTTAGE LAKE S&L SED#: 50-03-01-06-0-010-023
- COTTAGE LAKE LIBRARY S&L SED#: 50-03-01-06-0-023-002
- WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-0-053-000
- SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-0-054-000
- CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-0-074-000
- THS OUTDOOR CLASSROOM SED#: 50-03-01-06-0-055-000

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT

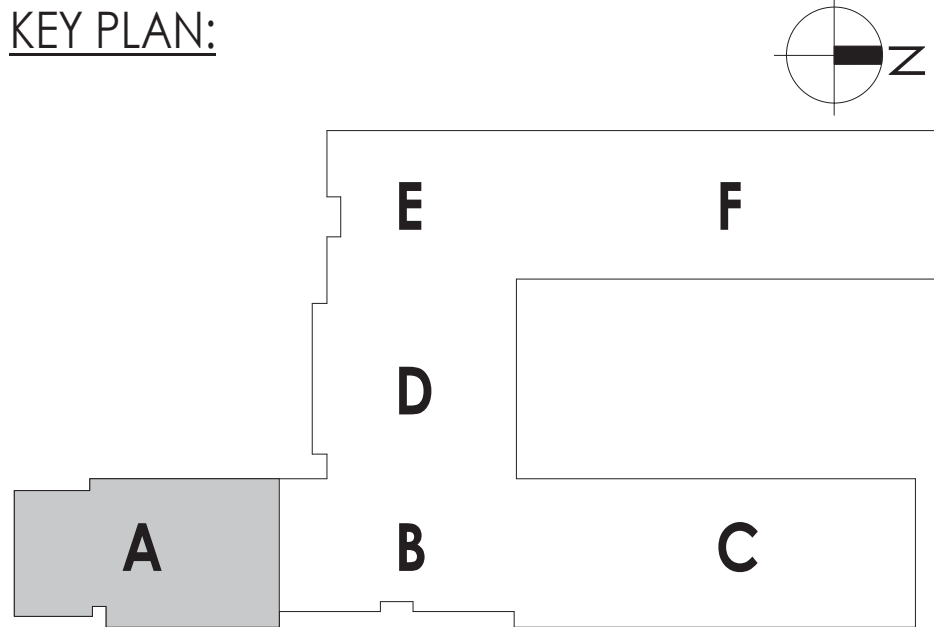
Drawing Number **W02**

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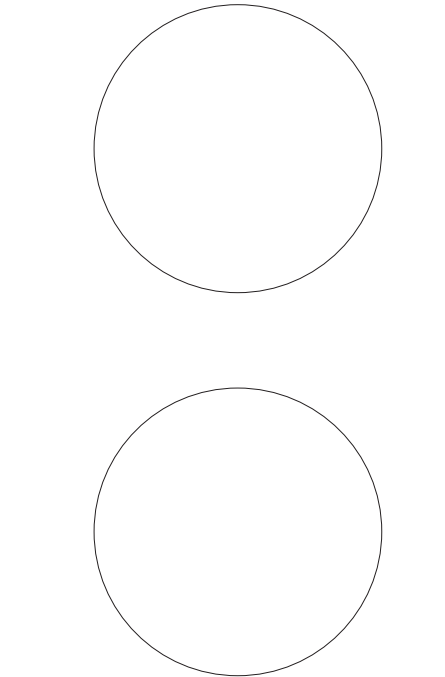


1 HVAC PIPING PLAN-AREA A
1/8" = 1'-0"

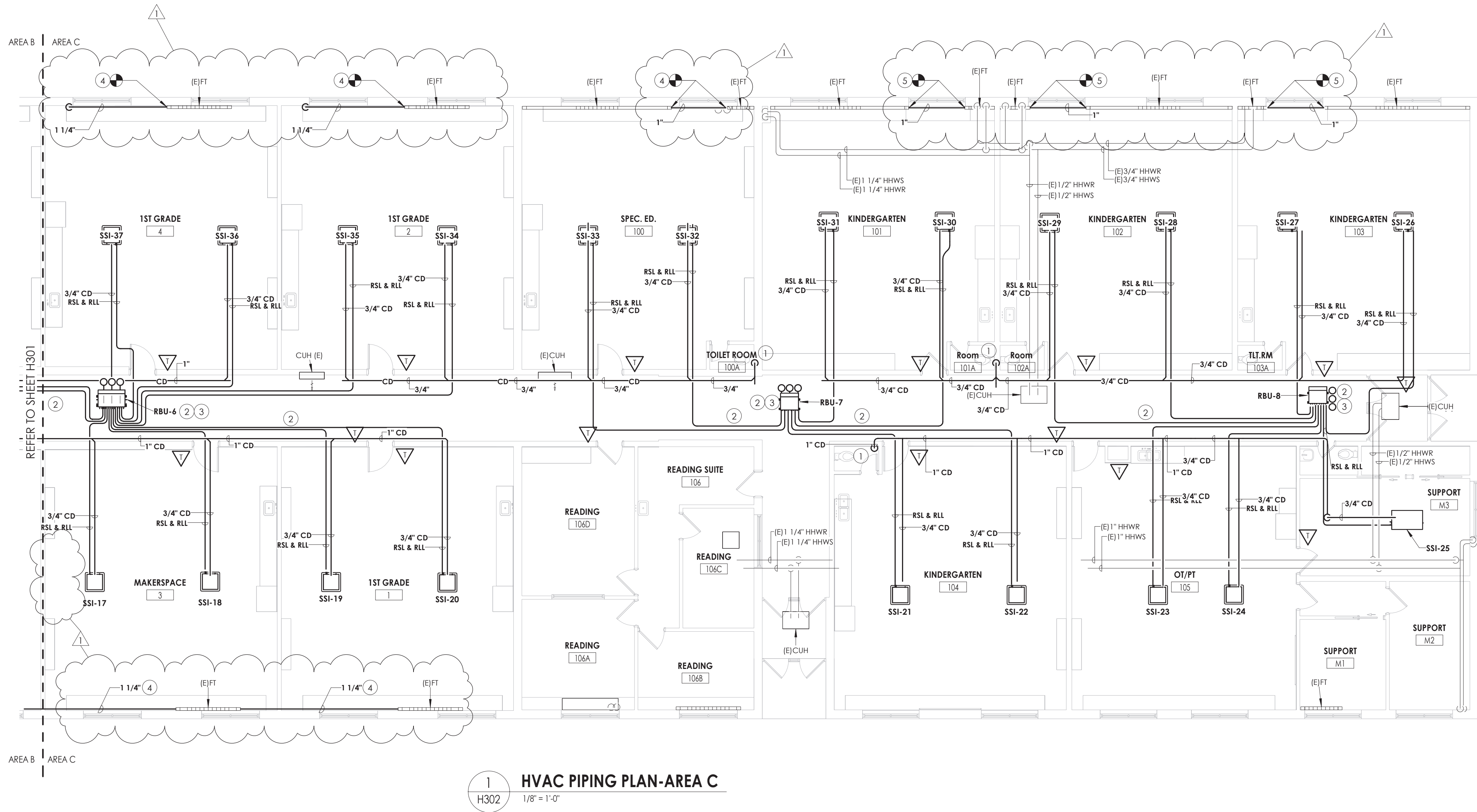
KEY PLAN:



- KEY NOTES:**
- 1 EXTEND CONDENSATE PIPING TO SANITARY. PROVIDE WITH AN INDIRECT CONNECTION.
 - 2 PROVIDE PIPING SIZING AND ROUTING. REFER TO MANUFACTURER'S RECOMMENDATIONS.
 - 3 PROVIDE BRANCH BOX. MOUNT UNIT AS HIGH AS POSSIBLE. COORDINATE PIPE ROUTING WITH DUCTWORK AND EXISTING STRUCTURE.
 - 4 PROVIDE PIPING TO COMPLETE HEATING LOOP. FIELD VERIFY PIPE SIZE.





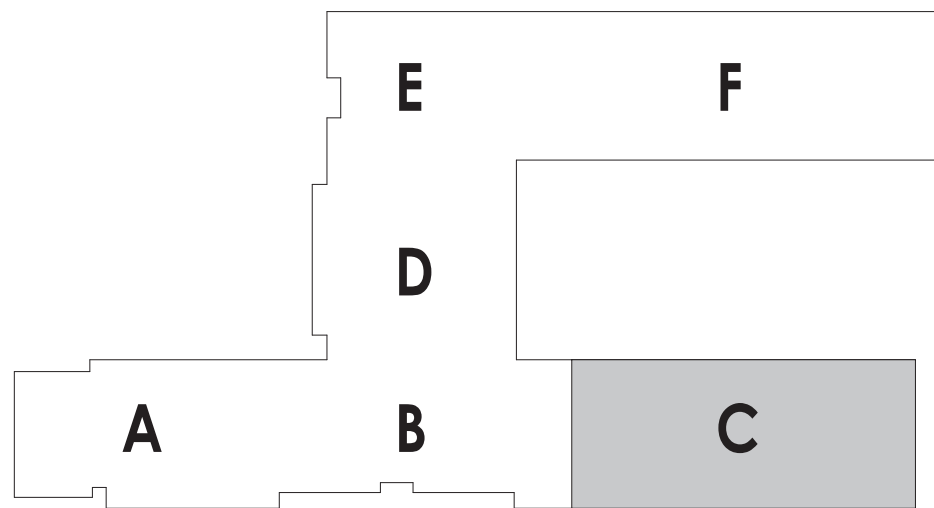


1
H302
HVAC PIPING PLAN-AREA C
1/8" = 1'-0"

KEY NOTES:

- 1 EXTEND CONDENSATE PIPING TO SANITARY. PROVIDE WITH AN INDIRECT CONNECTION.
- 2 PROVIDE PIPING SIZING AND ROUTING, REFER TO MANUFACTURER'S RECOMMENDATIONS.
- 3 PROVIDE BRANCH BOX. MOUNT UNIT AS HIGH AS POSSIBLE. COORDINATE PIPE ROUTING WITH DUCTWORK AND EXISTING STRUCTURE.
- 4 PROVIDE PIPING TO COMPLETE HEATING LOOP. FIELD VERIFY PIPE SIZE.
- 5 PROVIDE PIPING TO COMPLETE HEATING LOOP. FIELD VERIFY PIPE SIZE. PROVIDE COVER AND COORDINATE ENCLOSURE WITH CASEWORK. **BID ALTERNATE MC-02. DO NOT PROVIDE COVER.**

KEY PLAN:



PROJECT INFORMATION

Project Number
14457.20
Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT
Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD. BLAUVELT, NY 10913

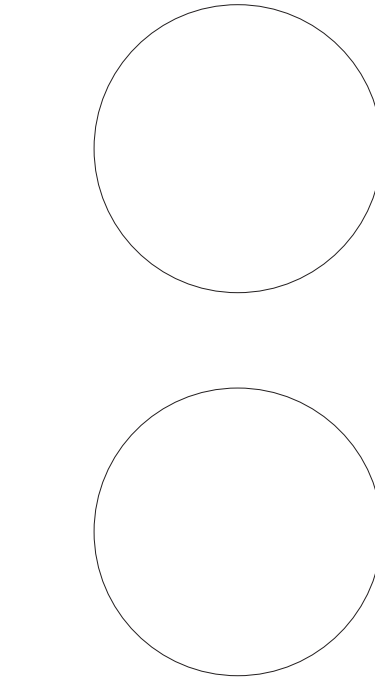
SOUTH ORANGETOWN CSD

- WILLIAM O. SCHAFER SED#35-03-01-06-0-010-0219
- COTTAGE LANE ELEMENTARY SED#35-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED#35-03-01-06-0-004-002
- WILLIAM O. SCHAFER SAL SED#35-03-01-06-0-010-020
- COTTAGE LANE SAL SED#35-03-01-06-0-010-023
- COTTAGE LANE LIBRARY SAL SED#35-03-01-06-0-023-002
- WOS OUTDOOR CLASSROOM SED#35-03-01-06-7-035-001
- SCONE OUTDOOR CLASSROOM SED#35-03-01-06-7-036-001
- CLE OUTDOOR CLASSROOM SED#35-03-01-06-7-034-001
- TMS OUTDOOR CLASSROOM SED#35-03-01-06-7-035-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	10/27/2023	BID ADDENDUM #1

PROFESSIONAL STAMPS



NEW YORK STATE EDUCATION STATEMENT
I, the undersigned, being a duly qualified Architect or Engineer, do hereby certify that I am the author of the design and specification herein, and that I am a duly licensed Architect or Engineer in the State of New York.

SHEET INFORMATION

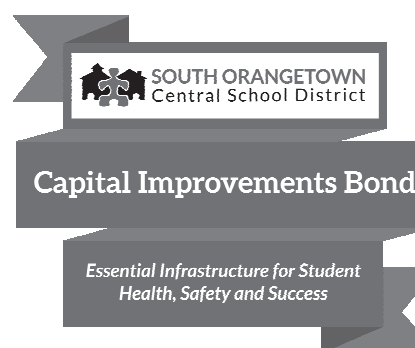
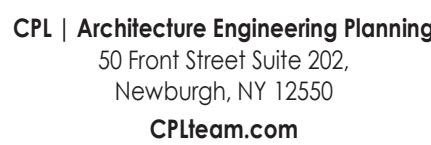
Issued
10/18/2023
Scale
1/8" = 1'-0"
Project Status
BID DOCUMENTS
Drawn By
KCM
Checked By
JJM
Drawing Title
FIRST FLOOR HVAC PIPING PLAN-
AREA C

Drawing Number

WOS
H302



- ① EXTEND CONDENSATE PIPING TO SANITARY. PROVIDE WITH AN INDIRECT CONNECTION.
- ② PROVIDE PIPING SIZING AND ROUTING. REFER TO MANUFACTURER'S RECOMMENDATIONS.
- ③ PROVIDE BRANCH BOX. MOUNT UNIT AS HIGH AS POSSIBLE. COORDINATE PIPE ROUTING WITH DUCTWORK AND EXISTING STRUCTURE.
- ④ PROVIDE PIPING TO COMPLETE HEATING LOOP. FIELD VERIFY PIPE SIZE.



Project Number
14457.20

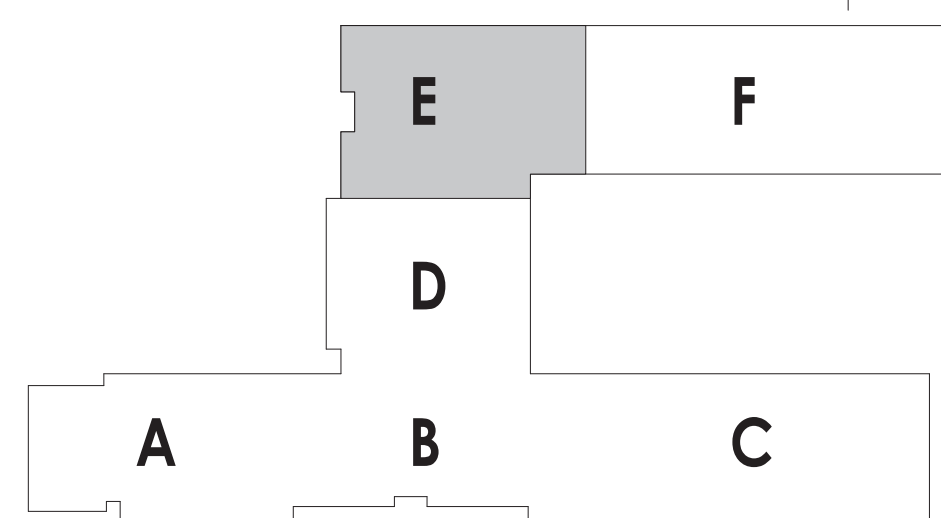
Client Name
**SOUTH ORANGETOWN CENTRAL
SCHOOL DISTRICT**

Project Name
PHASE 1: 2022 BOND

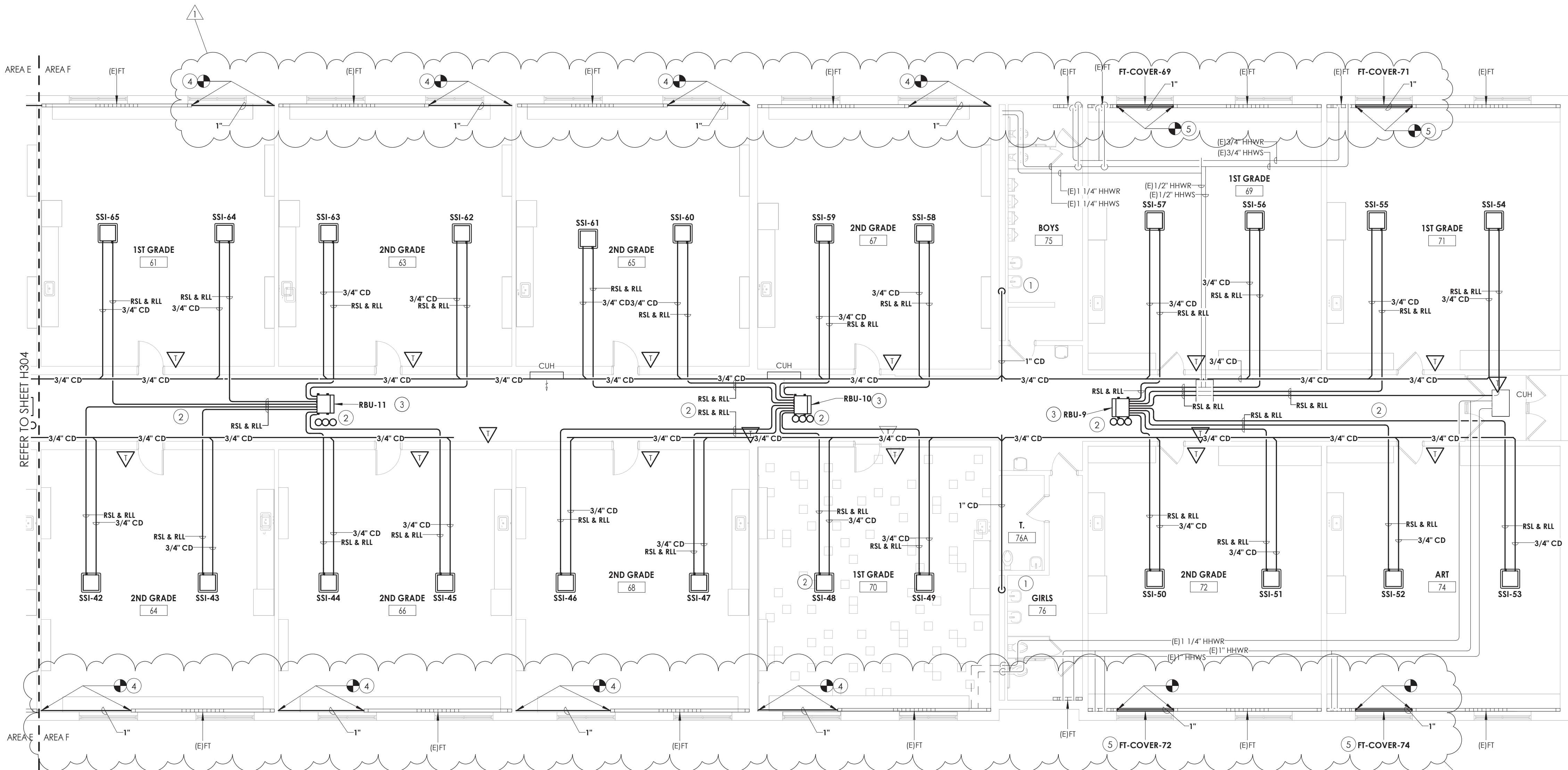
☐	WILLIAM O. SCHAEFER SED#: 50-03-01-06-0-012-019
☐	COTTAGE LANE ELEMENTARY SED#: 50-03-01-06-0-010-000
☐	TAPPAN TEE HIGH SCHOOL SED#: 50-03-01-06-0-006-032
☐	WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
☐	COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
☐	COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-0-023-022
☐	WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-000
☐	SOWS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-000
☐	CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
☐	TZS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-000

No.	Date	Description
1	10/27/2023	BID ADDENDUM #1

WOS
H304



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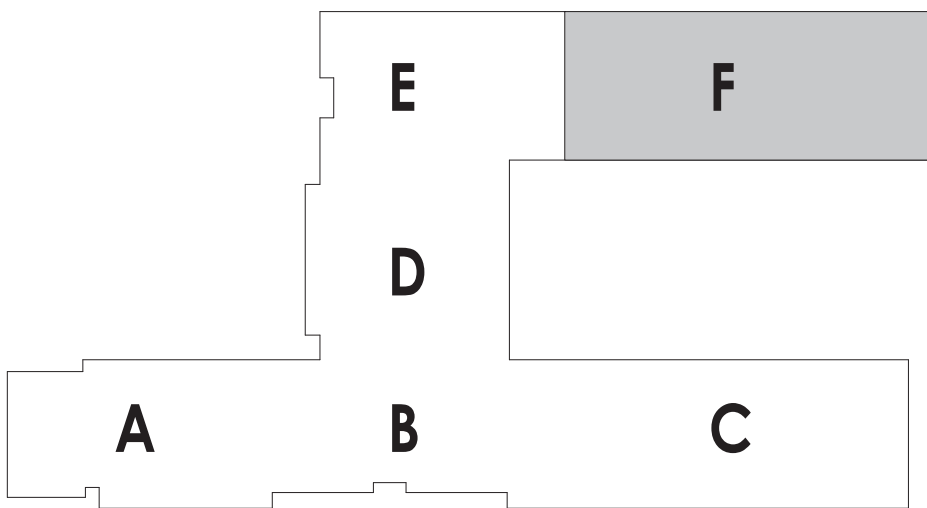


1 HVAC PIPING PLAN-AREA F
H305 1/8" = 1'-0"

KEY NOTES:

- 1 EXTEND CONDENSATE PIPING TO SANITARY. PROVIDE WITH AN INDIRECT CONNECTION.
- 2 PROVIDE PIPING SIZING AND ROUTING, REFER TO MANUFACTURER'S RECOMMENDATIONS.
- 3 PROVIDE BRANCH BOX. MOUNT UNIT AS HIGH AS POSSIBLE. COORDINATE PIPE ROUTING WITH DUCTWORK AND EXISTING STRUCTURE.
- 4 PROVIDE PIPING TO COMPLETE HEATING LOOP. FIELD VERIFY PIPE SIZE.
- 5 PROVIDE PIPING TO COMPLETE HEATING LOOP. FIELD VERIFY PIPE SIZE. PROVIDE COVER AND COORDINATE ENCLOSURE WITH CASEWORK. **BID ALTERNATE MC-02, DO NOT PROVIDE COVER.**

KEY PLAN:



PROJECT INFORMATION

Project Number
14457.20
Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT
Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD. BLAUVELT, NY 10913

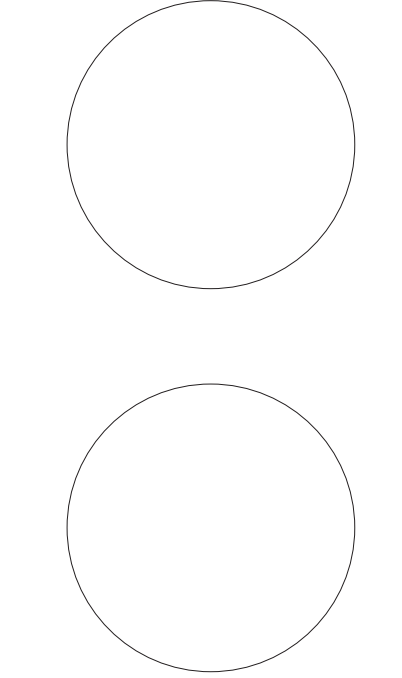
SOUTH ORANGETOWN CSD

- WILLIAM G. SCHAFER SED# 35-03-01-06-0-010-019
- COTTAGE LAKE ELEMENTARY SED# 35-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED# 35-03-01-06-0-004-002
- WILLIAM G. SCHAFER SAL SED# 35-03-01-06-0-010-020
- COTTAGE LAKE SAL SED# 35-03-01-06-0-010-023
- COTTAGE LAKE LIBRARY SAL SED# 35-03-01-06-8-023-002
- WOS OUTDOOR CLASSROOM SED# 35-03-01-06-7-035-001
- SCONE OUTDOOR CLASSROOM SED# 35-03-01-06-7-036-001
- CLE OUTDOOR CLASSROOM SED# 35-03-01-06-7-034-001
- 12HS OUTDOOR CLASSROOM SED# 35-03-01-06-7-035-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	10/27/2023	BID ADDENDUM #1

PROFESSIONAL STAMPS



NEW YORK STATE EDUCATION STATUTE
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S
REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED
ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER OR REUSE IN ANY WAY, OF ANY KIND,
BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR LAND SURVEYOR, THE DESIGN,
DRAWING, MAP, SPECIFICATION, OR ANY OTHER DOCUMENT, OR ANY PART THEREOF, FOR THE
PREPARATION OF ANY OTHER DESIGN, DRAWING, MAP, SPECIFICATION, OR ANY OTHER DOCUMENT,
WITHOUT THE WRITTEN CONSENT OF THE ORIGINAL AUTHOR, AND A SPECIFIC DESCRIPTION OF THE
ALTERATION.

SHEET INFORMATION

Issued
10/18/2023
Scale
1/8" = 1'-0"
Project Status
BID DOCUMENTS
Drawn By
KCM
Checked By
JJM
Drawing Title
FIRST FLOOR HVAC PIPING PLAN-
AREA F

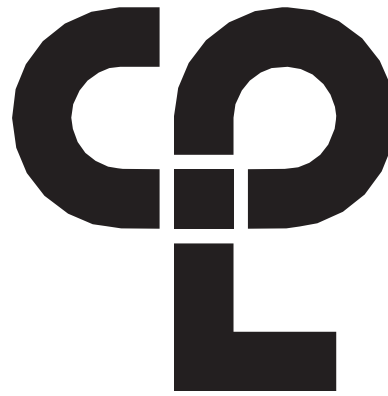
Drawing Number

WOS
H305

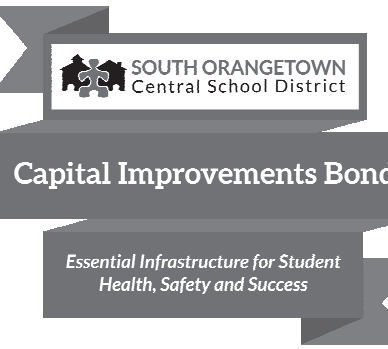
VENTILATION CALCULATIONS													
SPACE NAME		HVAC SYSTEM	SPACE MAXIMUM SUPPLY (CFM)	FLOOR AREA (SQ FT)	OCCUPANT DENSITY (PERSON/SQ FT)	TOTAL OCCUPANCY FOR VENTILATION (PEOPLE/1000 SQ FT)	PEOPLE OUTDOOR AIRFLOW RATE (CFM/PERSON)	AREA OUTDOOR AIRFLOW RATE (CFM/SQ FT)	EXHAUST AIRFLOW RATE (CFM/SQ FT)	AIR DISTRIBUTION EFFECTIVENESS	BREATHING OUTDOOR AIR (CFM)	ZONE OUTDOOR AIRFLOW (CFM)	ADJUSTED CFM
ROOM #	CLASSIFICATION		Vp2	Az	A		Rp	Ra		Ez	Vbz	Voz	
1	CLASSROOMS (5-8)	SSI-19.20	425	891 SF	25	23	10.0	0.12	-	0.8	337	422	425
2	CLASSROOMS (5-8)	SSI-34.35	425	891 SF	25	23	10.0	0.12	-	0.8	337	422	425
3	CLASSROOMS (5-8)	SSI-17.18	425	885 SF	25	23	10.0	0.12	-	0.8	336	421	425
4	CLASSROOMS (5-8)	SSI-36.37	425	888 SF	25	23	10.0	0.12	-	0.8	337	421	425
5	LIBRARY	SSI-11.12.13	240	1099 SF	10	11	5.0	0.12	-	0.8	187	234	240
5A	LIBRARY	SSI-14.15	190	882 SF	10	9	5.0	0.12	-	0.8	151	189	190
6	CLASSROOMS (5-8)	SSI-38.39	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
15	CLASSROOMS (5-8)	SSI-9.10	405	857 SF	25	22	10.0	0.12	-	0.8	323	404	405
16	OFFICE SPACES	SSI-7.7	55	464 SF	5	3	5.0	0.06	-	0.8	43	54	55
16B	SICKROOM	SSI-7.8	50	66 SF	25	2	10.0	0.18	-	0.8	32	40	50
17	CLASSROOMS (5-8)	SSI-7.8	405	857 SF	25	22	10.0	0.12	-	0.8	323	404	405
19	CLASSROOMS (5-8)	SSI-5.6	405	857 SF	25	22	10.0	0.12	-	0.8	323	404	405
20	OFFICE SPACES	SSI-8.4	250	228 SF	5	2	5.0	0.06	-	0.8	24	30	50
21	CLASSROOMS (5-8)	SSI-3.4	480	1025 SF	25	26	10.0	0.12	-	0.8	383	479	480
22	OFFICE SPACES	SSI-8.4	150	104 SF	5	1	5.0	0.06	-	0.8	11	15	50
23	OFFICE SPACES	SSI-8.4	240	266 SF	5	2	5.0	0.06	-	0.8	26	33	50
23A	OFFICE SPACES	SSI-8.4	200	142 SF	5	1	5.0	0.06	-	0.8	14	17	50
23B	OFFICE SPACES	SSI-8.4	200	142 SF	5	1	5.0	0.06	-	0.8	14	17	50
24	CLASSROOMS (5-8)	SSI-85.86	405	857 SF	25	22	10.0	0.12	-	0.8	323	404	405
26	CLASSROOMS (5-8)	SSI-87.88	405	857 SF	25	22	10.0	0.12	-	0.8	323	404	405
30	CLASSROOMS (5-8)	SSI-89.90	520	1105 SF	25	28	10.0	0.12	-	0.8	413	516	520
32	CLASSROOMS (5-8)	SSI-1.2	480	1025 SF	25	26	10.0	0.12	-	0.8	383	479	480
37A	CLASSROOMS (5-8)	SSI-79.80	280	600 SF	25	15	10.0	0.12	-	0.8	222	278	280
37B	CLASSROOMS (5-8)	SSI-81.82	170	356 SF	25	9	10.0	0.12	-	0.8	133	166	170
38	OFFICE SPACES	SSI-7.6	50	309 SF	5	2	5.0	0.06	-	0.8	29	36	50
39	OFFICE SPACES	SSI-7.5	50	261 SF	5	2	5.0	0.06	-	0.8	26	33	50
42	OFFICE SPACES	SSI-7.2	50	141 SF	5	1	5.0	0.06	-	0.8	13	17	50
44	CLASSROOMS (5-8)	SSI-7.1	185	377 SF	25	10	10.0	0.12	-	0.8	145	182	185
51	BREAK ROOMS	SSI-7.0	105	369 SF	30	12	5.0	0.06	-	0.8	82	103	105
57	CLASSROOMS (5-8)	SSI-88.69	425	898 SF	25	23	10.0	0.12	-	0.8	338	423	425
59	CLASSROOMS (5-8)	SSI-86.67	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
61	CLASSROOMS (5-8)	SSI-64.65	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
63	CLASSROOMS (5-8)	SSI-62.63	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
64	CLASSROOMS (5-8)	SSI-42.43	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
65	CLASSROOMS (5-8)	SSI-60.61	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
66	CLASSROOMS (5-8)	SSI-44.45	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
67	CLASSROOMS (5-8)	SSI-58.59	425	889 SF	25	23	10.0	0.12	-	0.8	337	421	425
68	CLASSROOMS (5-8)	SSI-46.47	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
69	CLASSROOMS (5-8)	SSI-56.57	425	891 SF	25	23	10.0	0.12	-	0.8	337	422	425
70	CLASSROOMS (5-8)	SSI-48.49	425	889 SF	25	23	10.0	0.12	-	0.8	337	421	425
71	CLASSROOMS (5-8)	SSI-54.55	425	891 SF	25	23	10.0	0.12	-	0.8	337	422	425
72	CLASSROOMS (5-8)	SSI-50.51	425	891 SF	25	23	10.0	0.12	-	0.8	337	422	425
74	ART CLASSROOM	SSI-52.53	715	891 SF	20	18	10.0	0.18	0.70	0.8	340	713	715
80C	OFFICE SPACES	SSI-7.3	50	186 SF	5	1	5.0	0.06	-	0.8	16	21	50
100	CLASSROOMS (5-8)	SSI-32.33	410	869 SF	25	22	10.0	0.12	-	0.8	324	406	410
101	CLASSROOMS (5-8)	SSI-30.31	410	870 SF	25	22	10.0	0.12	-	0.8	324	406	410
102	CLASSROOMS (5-8)	SSI-28.29	410	872 SF	25	22	10.0	0.12	-	0.8	325	406	410
103	CLASSROOMS (5-8)	SSI-26.27	410	872 SF	25	22	10.0	0.12	-	0.8	325	406	410
104	CLASSROOMS (5-8)	SSI-21.22	410	872 SF	25	22	10.0	0.12	-	0.8	325	406	410
105	HEALTH CLUB/WEIGHT ROOM	SSI-23.24	290	856 SF	10	9	20.0	0.06	-	0.8	231	290	290
106	CORRIDOR	RTU-3	50	172 SF	-	0	-	0.06	-	0.8	10	13	50
106A	OFFICE SPACES	RTU-3	50	181 SF	5	1	5.0	0.06	-	0.8	16	20	50
106B	OFFICE SPACES	RTU-3	50	132 SF	5	1	5.0	0.06	-	0.8	13	17	50
106C	OFFICE SPACES	RTU-3	50	124 SF	5	1	5.0	0.06	-	0.8	12	16	50
106D	OFFICE SPACES	RTU-3	50	245 SF	5	2	5.0	0.06	-	0.8	25	31	50
M1	OFFICE SPACES	SSI-25	175	113 SF	5	1	5.0	0.06	-	0.8	12	15	50
M2	OFFICE SPACES	SSI-25	225	150 SF	5	1	5.0	0.06	-	0.8	14	18	50
M3	OFFICE SPACES	SSI-25	365	241 SF	5	2	5.0	0.06	-	0.8	24	31	50
1	CORRIDOR	ERU-13	1,000	2472 SF	-	0	-	0.06	-	0.8	148	186	1000
2	CORRIDOR	ERU-13	1,000	1500 SF	-	0	-	0.06	-	0.8	90	113	1000
	CORRIDOR	SSI-16	600	3830 SF	-	0	-	0.06	-	0.8	230	288	600
3	CORRIDOR	SSI-7.4	600	3830 SF	-	0	-	0.06	-	0.8	230	288	600

ROOFTOP AIR CONDITIONING UNIT SCHEDULE																		
TAG	LOCATION	SERVES	NOM. TONS	SUPPLY FAN				COOLING CAPACITY				ELECTRICAL			TYPICAL UNIT MFG & MODEL NO.	NOTES:		
				CFM	OA CFM	RPM	ESP (IN. W.C.)	BHP / HP	TOTAL MBH	SENS MBH	EAT°F		AMB °F	FLA			VOLT/Ø	MCA
RTU-3	ROOF	OFFICE AREA	8	3600	730	9142	1.25	2.7/3	121	95.6	78	64	95	46	208/3	54	AARON RN-010-S-0-EB09-EHN	1,2,3
NOTES:	1. 14" INSULATED CURB. EXTEND EXISTING CONTROLS TO NEW UNITS. 2. FACTORY MOUNTED AND WIRED DISCONNECT. 2" PREFILTER, 4" MERV 13 FILTER. 3. DOUBLE WAS, R-13 FOAM INSULATION.																	

FIN TUBE SCHEDULE												
TAG	LOCATION	BTU/FT.	GPM	TUBE SIZE (IN.)	FINS / FT.	EWTF (°F)	EAT (°F)	ENCLOSURE			TYPICAL UNIT MFG & MODEL NO.	NOTES:
FT-1	202A	1200	0.7	0.75	50	180	65	H (IN.)	D (IN.)	STYLE		
								28"	5-5/16"	BARE ELEMENT		
NOTES: 1. LOCATE ELEMENT BEHIND MILLWORK BY GC. 2. MC TO FIELD VERIFY ENCLOSURE LENGTH. ENCLOSURE TO BE FULL WIDTH WITHOUT GAPS. 3. COORDINATE HEIGHT WITH ELECTRICAL DEVICES.												



CPL | Architecture Engineering Planning
50 Front Street Suite 202,
Newburgh, NY 12550
CPLteam.com



PROJECT INFORMATION

Project Number
14457.20

Client Name

SOUTH ORANGETOWN CENTRAL
SCHOOL DISTRICT

Project Name

PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD. BLAUVELT, NY 10913

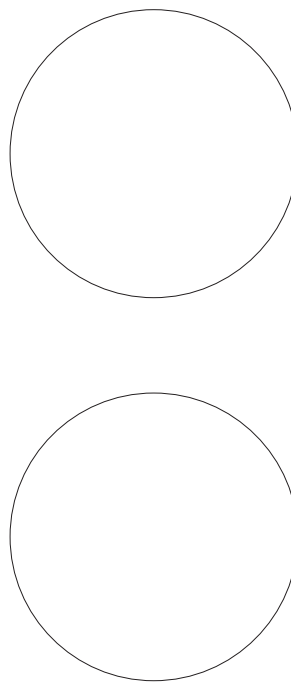
SOUTH ORANGETOWN CSD

- ☒ WILLIAM O. SCHAFER SEDF: 50-03-01-06-0-010-020
☐ COTTAGE LANE ELEMENTARY SEDF: 50-03-01-06-0-010-022
☐ TAPPAN ZEE HIGH SCHOOL SEDF: 50-03-01-06-0-006-002
☐ WILLIAM O. SCHAFER SAL SEDF: 50-03-01-06-0-010-020
☐ COTTAGE LANE SAL SEDF: 50-03-01-06-0-010-023
☐ COTTAGE LANE LIBRARY SAL SEDF: 50-03-01-06-8-023-002
☐ WOS OUTDOOR CLASSROOM SEDF: 50-03-01-06-7-035-001
☐ SCHWES OUTDOOR CLASSROOM SEDF: 50-03-01-06-7-036-001
☐ CLE OUTDOOR CLASSROOM SEDF: 50-03-01-06-7-034-001
☐ TMS OUTDOOR CLASSROOM SEDF: 50-03-01-06-7-035-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	10/27/2023	BID ADDENDUM #1

PROFESSIONAL STAMPS



NEW YORK STATE EDUCATION STATUTES
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ARTICLE 16 OF THE EDUCATION LAW, AND THE COMMISSIONER'S REGULATIONS, AND
THEIR SIGNATURE AND THE DATE OF SUCH SIGNATURE, AND A SPECIFIC DESCRIPTION OF THE
VIOLATION.

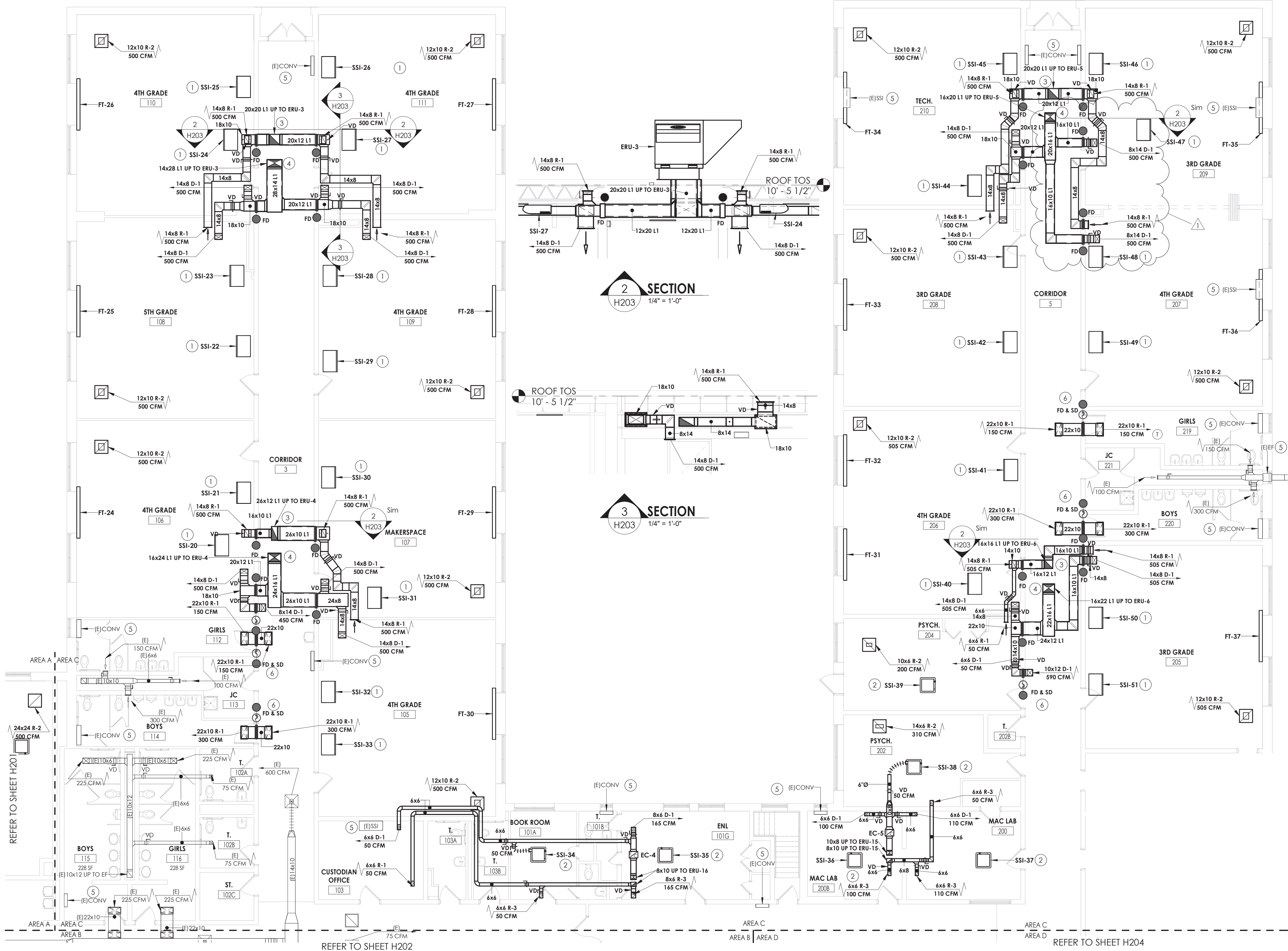
SHEET INFORMATION

Issued
10/18/2023
Scale
12" = 1'-0"
Project Status
BID DOCUMENTS
Drawn By
KCM
Checked By
JJM
Drawing Title
MECHANICAL SCHEDULES

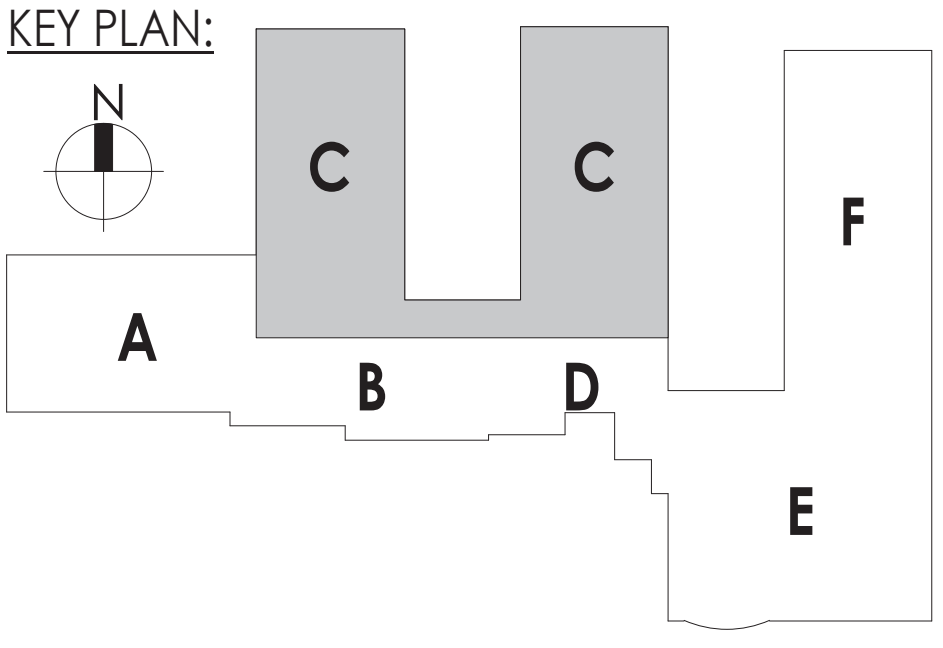
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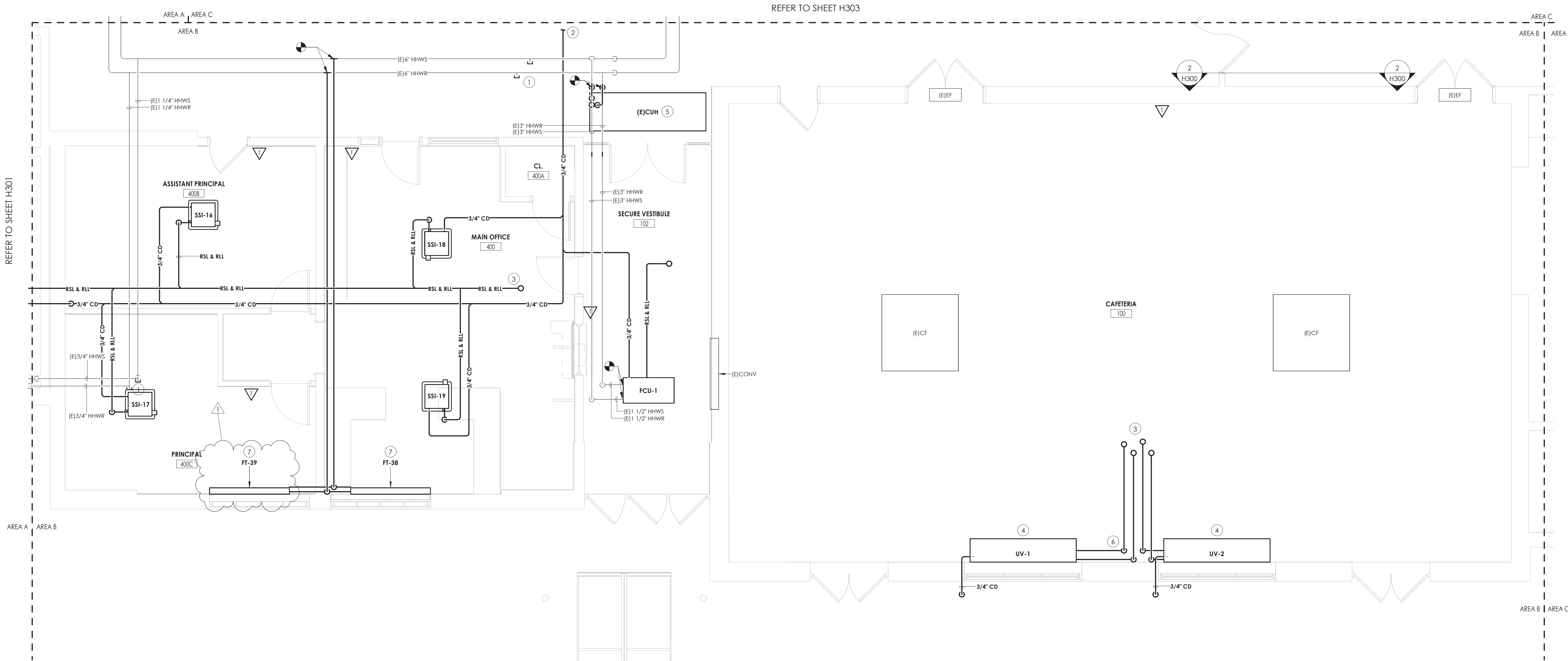
WOS
H902

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- KEY NOTES**
- 1 MOUNT SPLIT UNIT BELOW CEILING AS TIGHT TO CORRIDOR WALLS AS POSSIBLE. IN ROOMS WITH SOFFITS, MOUNT TIGHT TO SOFFIT.
 - 2 MOUNT SPLIT UNIT IN ALT CEILING GRID. COORDINATE WITH ARCHITECTURAL, STRUCTURAL, AND LIGHTING PLANS.
 - 3 RETURN DUCTWORK TO BE ROUTED IN HALLWAY CEILING. COORDINATE WITH EXISTING UTILITIES AND REFRIGERANT PIPING.
 - 4 SUPPLY DUCTWORK TO BE ROUTED IN HALLWAY CEILING. COORDINATE WITH EXISTING UTILITIES AND REFRIGERANT PIPING.
 - 5 CONNECT EXISTING EQUIPMENT TO NEW BAS, PROVIDE NEW CONTROL VALVE OR BACNET CARD DEPENDING UPON THE TYPE OF EQUIPMENT. **BID ALTERNATE MC-01.**
 - 6 ALL FIRE/SMOKE DAMPERS ARE 120V.





KEY NOTES

- CAP EXISTING HYDRONIC PIPING AT MAIN.
- ROUTE CONDENSATE TO ROOM 102C ON H303.
- RSL/RL UP TO CONDENSING UNIT ON ROOF.
- INSTALL NEW UNIT VENTILATOR. ROUTE CONDENSATE PIPING OUTSIDE.
- RE-INSTALL EXISTING UNIT IN NEW LOCATION, AND RECONNECT TO PIPING AT INDICATED POINT.
- PROVIDE 18 GA. METAL PIPING COVER BETWEEN UNITS AND UP THE WALL TO THE CEILING. PAINT TO MATCH THE EXISTING WALLS.
- EXTEND PIPING FROM EXISTING MAIN TO NEW FIN TUBE. PROVIDE WITH COVER AND PAINT TO MATCH WALL. PROVIDE 18 GA. METAL PIPING COVER BETWEEN UNITS AND UP THE WALL TO THE CEILING. PAINT TO MATCH THE EXISTING WALLS.

REFER TO SHEET H303

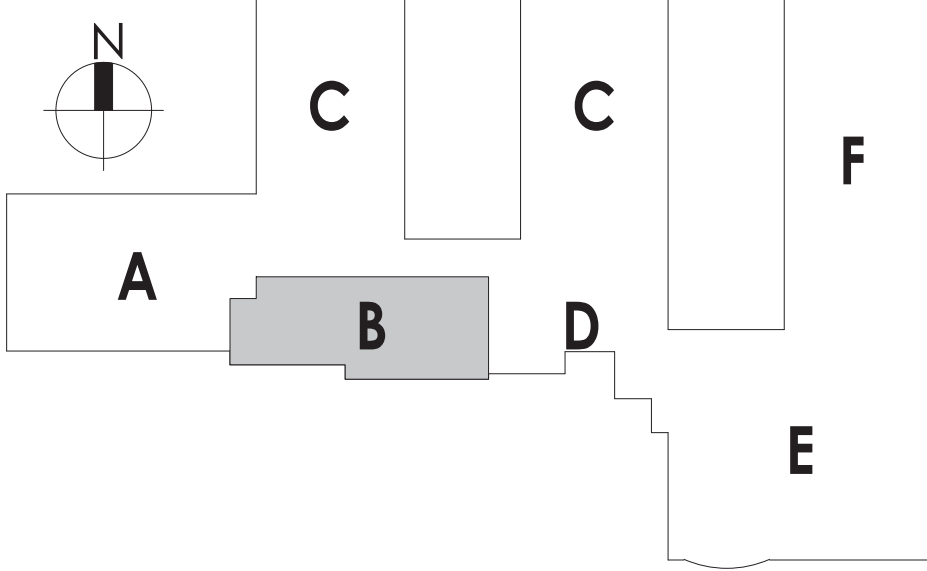
REFER TO SHEET H301

REFER TO SHEET H304

1
H302
1/4" = 1'-0"

FIRST FLOOR PIPING NEW WORK PLAN - AREA B

KEY PLAN:



PROJECT INFORMATION

Project Number
14457.20
Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT
Project Name
PHASE 1: 2022 BOND
District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD

- WILLIAM O. SCHAEFER SED#:50-03-01-06-0-010-019
- COTTAGE LAKE ELEMENTARY SED#: 50-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- WILLIAM O. SCHAEFER SAL SED#: 50-03-01-06-0-010-020
- COTTAGE LAKE SAL SED#: 50-03-01-06-0-010-023
- COTTAGE LAKE LIBRARY SAL SED#: 50-03-01-06-0-023-002
- WCS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-033-001
- LCWS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-036-001
- CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-034-001
- THS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-035-001

PROJECT ISSUE & REVISION SCHEDULE

vv	Date	Description
1	10/27/2023	BID ADDENDUM #1

PROFESSIONAL STAMPS

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BRING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR, INTO BEARING, THE ALLEGED
PRINT AND SIGNATURE OF THE SEAL AND THE SIGNATURE, NUMBERED BY FOLLOWING BY
THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE
ALTERATION.

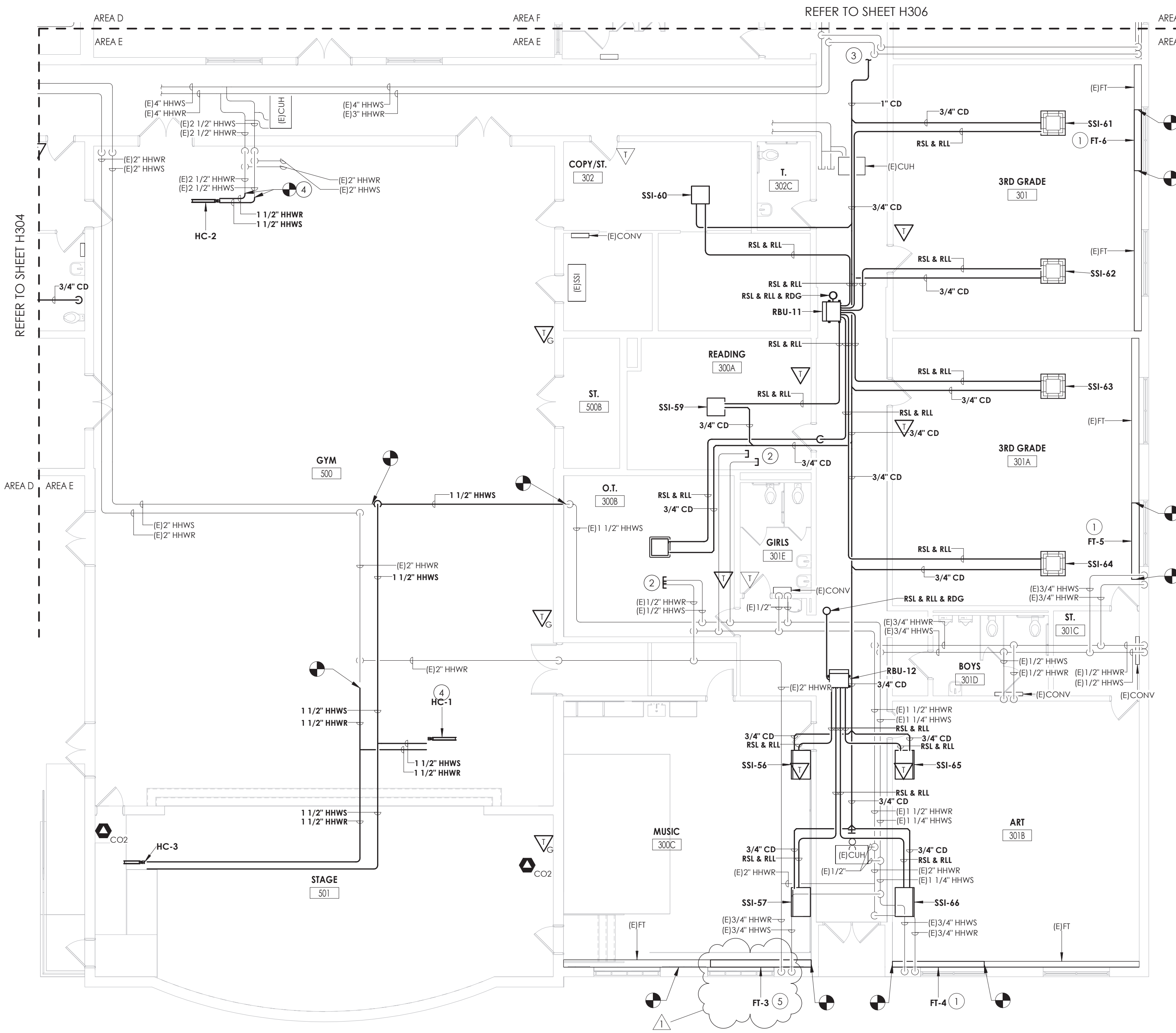
SHEET INFORMATION

Issued
10/18/23
Project Status
BID DOCUMENTS
Drawn By
KCM
Checked By
JJM
Drawing Title
FIRST FLOOR PIPING NEW WORK
PLAN - AREA B

Drawing Number

CLE
H302

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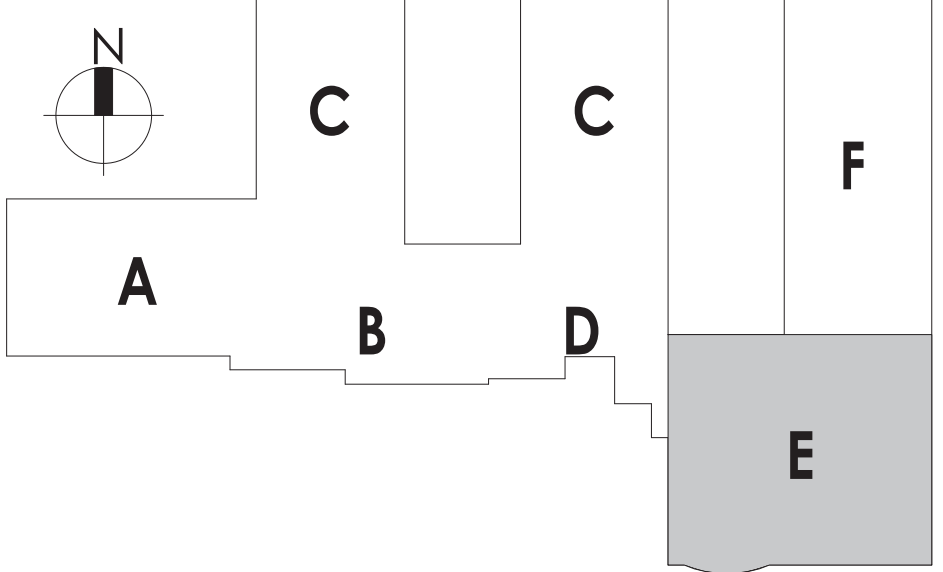


1
H305
FIRST FLOOR PIPING NEW WORK PLAN - AREA E
1/8" = 1'-0"

KEY NOTES

- 1 PROVIDE 4" FINTUBE WITH DRAFT STOP WHERE INDICATED AND CONNECT TO EXISTING FINTUBE. PROVIDE COVER AND PAINT TO MATCH WALL. CONNECT TO EXISTING PIPING AS NEEDED.
- 2 CAP EXISTING HYDRONIC PIPING AT MAIN.
- 3 ROUTE CONDENSATE TO ROOM 215 ON H306.
- 4 ROUTE PIPING TO NEW HOT WATER REHEAT COIL.
- 5 PROVIDE 4" FINTUBE WITH DRAFT STOP WHERE INDICATED AND CONNECT TO EXISTING FINTUBE. CONNECT TO EXISTING PIPING AS NEEDED.

KEY PLAN:



CPL | Architecture Engineering Planning
50 Front Street Suite 202,
Newburgh, NY 12550
CPLearn.com

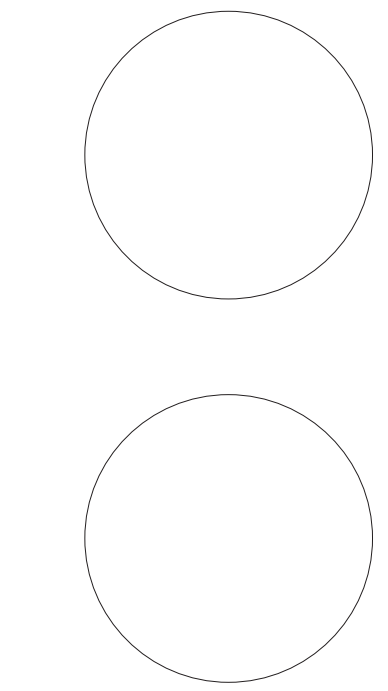
SOUTH ORANGETOWN
Central School District
Capital Improvements Bond
*Essential Infrastructure for Student
Health, Safety and Success*

PROJECT INFORMATION
Project Number
14457.20
Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT
Project Name
PHASE 1: 2022 BOND
District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

- SOUTH ORANGETOWN CSD
- ☒ WILLIAM O. SCHAEFER SED#30-03-01-06-0-010-019
 - ☒ COTTAGE LANE ELEMENTARY SED# 30-03-01-06-0-010-022
 - ☐ TAPPAN ZEE HIGH SCHOOL SED#30-03-01-06-0-004-032
 - ☐ WILLIAM O. SCHAEFER SAL SED# 30-03-01-06-0-012-020
 - ☐ COTTAGE LANE SAL SED# 30-03-01-06-0-010-033
 - ☐ COTTAGE LANE LIBRARY SAL SED# 30-03-01-06-0-023-002
 - ☐ WOODS OUTDOOR CLASSROOM SED# 30-03-01-06-7-033-001
 - ☐ LEWIS OUTDOOR CLASSROOM SED# 30-03-01-06-7-036-001
 - ☐ CLE OUTDOOR CLASSROOM SED# 30-03-01-06-7-034-001
 - ☐ THRS OUTDOOR CLASSROOM SED# 30-03-01-06-7-035-001

REV	DATE	DESCRIPTION
1	10/27/2023	BID ADDENDUM #1

PROFESSIONAL STAMPS



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NATURE, TO ANY OF HIS ARCHITECT, ENGINEER OR LAND SURVEYOR, OR ANYTHING
PARTIAL, ANY TO THE FIRM SEAL AND THE SIGNATURE, MUST BE FOLLOWED BY
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ATTENTION.

SHEET INFORMATION
Issued
10/18/23
Scale
1/8" = 1'-0"
Project Status
BID DOCUMENTS
Drawn By
KCM
Checked By
JJM
Drawing Title
FIRST FLOOR PIPING NEW WORK
PLAN - AREA E

Drawing Number
**CLE
H305**

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FAN COIL UNIT SCHEDULE																																	
TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	TYPE	FAN					HOT WATER HEATING COIL										FILTER	ELECTRICAL						WEIGHT (LBS)	NOTES				
						AIR FLOW (CFM)	ESP (IN.WG.)	MOTOR BHP	MOTOR HP	DRIVE	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	CAPACITY (MBH)	FLUID TYPE	GPM	WPD (FT.WG)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)		AMBIENT (°F)	FACE VELOCITY (FPM)	CIRCUITS	REFRIGERANT	V	PH			HZ	MCA	FLA	MOCP
FCU-1	VEST	102 VEST	AIR THERM	SRBB	DUCTED	500	100	-	2	DIRECT	50	90	180	150	21.6	WATER	1.44	-	19.3	13.5	85	400	1	R410A	MERV 8	120	1	60	-	-	15	-	1.2
NOTES: 1. PROVIDE DISCONNECT. 2. CEILING RECESSED																																	

UNIT VENTILATOR SCHEDULE

TAG	ROOM SERVES	SA	OA	UNIT TYPE	ELECTRICAL		WINTER		HW COIL CAPACITY										DX COIL CAPACITY				TYPICAL UNIT MFG & MODEL NO.	NOTES:	
					MCA	VOLT/Ø	OA °F	RA °F	EWT °F	LWT °F	EAT °F	LAT °F	MBH	WPD	GPM	REF.	EAT °F	LAT °F	MBH						
UV-1	CAFÉ	1500	975	VERT	5.9	120/1	2	65	180	133	23.0	101	136.0	5.0	6.0	410A	85/70	62/59	54.0	MAGIC AIRE MAUV5	1,2,3,4,5				
UV-2	CAFÉ	1500	975	VERT	5.9	120/1	2	65	180	133	23.0	101	136.0	5.0	6.0	410A	85/70	62/59	54.0	MAGIC AIRE MAUV5	1,2,3,4,5				
NOTES:																						1. FACTORY MOUNTED AND WIRED DISCONNECT. 2. CONDENSATE PUMP, DRAIN PAN ALARM. 3. FULL ADAPTER WITH ENCLOSED PIPE TUNNEL, FINISHED ENDS. 4. ECM MOTORS. 5. MERV 16 FILTERS.			

PUMP SCHEDULE

TAG	LOCATION	SERVICE	MANUF.	MODEL	TYPE	FLUID	GPM	HEAD (FT.WG.)	RPM	HP	STARTER	ELECTRICAL						NOTES
												V	PH	HZ	MCA	FLA	MOCP	
P-1	BOILER ROOM	HHW	B&G	1510	BASE-MOUNTED SPLIT COUPLE	WATER	90	50	1750	10	VFD	460	3	60	-	-	-	1
P-2	BOILER ROOM	HHW	B&G	1510	BASE-MOUNTED SPLIT COUPLE	WATER	90	50	1750	10	VFD	460	3	60	-	-	-	1
P-3	GYM	HHW	B&G	ECOCIRC XL - 36-45	INLINE	WATER	22	12.5	2919	0.16	N	208	1	60	-	-	-	1.2
P-4	GYM	HHW	B&G	ECOCIRC XL - 36-45	INLINE	WATER	22	12.5	2919	0.16	N	208	1	60	-	-	-	1.2
P-5	STAGE	HHW	B&G	ECOCIRC XL - 36-45	INLINE	WATER	11	13	2727	0.16	N	208	1	60	-	-	-	1.2
NOTES: 1. PROVIDE DISCONNECT 2. ECM MOTOR.																		

ENERGY RECOVERY UNIT

MARK	LOCATION	AREA SERVED	SA/OA (CFM)	EA (CFM)	RA (CFM)	SUPPLY FAN					EXHAUST FAN					HEATING TYPE	FROST CONTROL	OPERATING WEIGHT (LBS)	FILTERS	UNIT ELECTRICAL REQUIREMENTS	
						FAN TYPE	E.S.P. (IN. WC)	RPM	BHP	HP	FAN TYPE	E.S.P. (IN. WC)	RPM	BHP	HP					V/Ø/HZ	MCA
ERU-1	ROOF	CLASSROOMS	2000	2000	2000	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	460/3/60	54
ERU-2	ROOF	CLASSROOMS	1500	1500	1500	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	460/3/60	54
ERU-3	ROOF	CLASSROOMS	2000	2000	2000	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	460/3/60	54
ERU-4	ROOF	CLASSROOMS	1500	1500	1500	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	460/3/60	54
ERU-5	ROOF	CLASSROOMS	2000	2000	2000	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	460/3/60	54
ERU-6	ROOF	CLASSROOMS	1060	1060	1060	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	460/3/60	54
ERU-7	ROOF	CLASSROOMS	2000	2000	2000	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	460/3/60	54
ERU-8	ROOF	CLASSROOMS	2000	2000	2000	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	460/3/60	54
ERU-9	ROOF	CLASSROOMS	700	700	700	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	460/3/60	54
ERU-10	ROOF	CLASSROOMS	1660	1660	1660	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	460/3/60	54
ERU-11	ROOF	CLASSROOMS	1040	1040	1040	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	460/3/60	54

ENERGY RECOVERY UNIT (CONT.)

MARK	WINTER CONDITIONS									SUMMER CONDITIONS										TYPICAL UNIT MFG & MODEL NO.	NOTES
	WHEEL ENTERING CONDITIONS				WHEEL LEAVING CONDITIONS				EFFECTIVENESS @ WINTER DESIGN	WHEEL ENTERING CONDITIONS				WHEEL LEAVING CONDITIONS				EFFECTIVENESS @ SUMMER DESIGN			
	OUTSIDE AIR		RETURN AIR		SUPPLY AIR		EXHAUST AIR			OUTSIDE AIR		RETURN AIR		SUPPLY AIR		EXHAUST AIR					
	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)		TOTAL %	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)		WB (°F)		
ERU-1	-7	-8	68	50	40	32	18.5	16.9	64.8	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-8-0-E609-13A	1,2,3,4	
ERU-2	-7	-8	68	50	40	32	18.5	16.9	64.8	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-8-0-E609-13A	1,2,3,4	
ERU-3	-7	-8	68	50	40	32	18.5	16.9	64.8	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-8-0-E609-13A	1,2,3,4	
ERU-4	-7	-8	68	50	40	32	18.5	16.9	64.8	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-8-0-E609-13A	1,2,3,4	
ERU-5	-7	-8	68	50	40	32	18.5	16.9	64.8	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-8-0-E609-13A	1,2,3,4	
ERU-6	-7	-8	68	50	40	32	18.5	16.9	64.8	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-8-0-E609-13A	1,2,3,4	
ERU-7	-7	-8	68	50	40	32	18.5	16.9	64.8	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-8-0-E609-13A	1,2,3,4	
ERU-8	-7	-8	68	50	40	32	18.5	16.9	64.8	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-8-0-E609-13A	1,2,3,4	
ERU-9	-7	-8	68	50	40	32	18.5	16.9	64.8	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-8-0-E609-13A	1,2,3,4	
ERU-10	-7	-8	68	50	40	32	18.5	16.9	64.8	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-8-0-E609-13A	1,2,3,4	
ERU-11	-7	-8	68	50	40	32	18.5	16.9	64.8	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-8-0-E609-13A	1,2,3,4	
NOTES:	1. FACTORY MOUNTED AND WIRED DISCONNECT. 2. FRESH AIR AND EXHAUST DAMPERS. 3. TERMINAL STRIP FOR BMS CONTROL OF FAN AND DAMPERS. 4. DIRTY FILTER SENSORS.																				

ENERGY RECOVERY UNIT (CONT.)

MARK	TYPE	FINS PER INCH	ROWS	FACE VEL	COIL PD	REF.	COMP QTY	COOLING				REHEAT		HEATING				
								TOTAL CAPACITY (MBH)	SENSIBLE (MBH)	EAT(F)	LAT(F)	CAPACITY (MBH)	LAT(F)	INPUT (MBH)	OUTPUT (MBH)	AMBIENT (F)	EAT(F)	LAT(F)
ERU-1	AIR TO AIR	14	3	235	0.12	410A	1	69.2	54.7	80.0/65.3	54.2/53.3	34	70.0/59.5	8.6	47	27/24.3	53.4/41.7	72.1/50.6
ERU-2	AIR TO AIR	14	3	235	0.12	410A	1	69.2	54.7	80.0/65.3	54.2/53.3	34	70.0/59.5	8.6	47	27/24.3	53.4/41.7	72.1/50.6
ERU-3	AIR TO AIR	14	3	235	0.12	410A	1	69.2	54.7	80.0/65.3	54.2/53.3	34	70.0/59.5	8.6	47	27/24.3	53.4/41.7	72.1/50.6
ERU-4	AIR TO AIR	14	3	235	0.12	410A	1	69.2	54.7	80.0/65.3	54.2/53.3	34	70.0/59.5	8.6	47	27/24.3	53.4/41.7	72.1/50.6
ERU-5	AIR TO AIR	14	3	235	0.12	410A	1	69.2	54.7	80.0/65.3	54.2/53.3	34	70.0/59.5	8.6	47	27/24.3	53.4/41.7	72.1/50.6
ERU-6	AIR TO AIR	14	3	235	0.12	410A	1	69.2	54.7	80.0/65.3	54.2/53.3	34	70.0/59.5	8.6	47	27/24.3	53.4/41.7	72.1/50.6
ERU-7	AIR TO AIR	14	3	235	0.12	410A	1	69.2	54.7	80.0/65.3	54.2/53.3	34	70.0/59.5	8.6	47	27/24.3	53.4/41.7	72.1/50.6
ERU-8	AIR TO AIR	14	3	235	0.12	410A	1	69.2	54.7	80.0/65.3	54.2/53.3	34	70.0/59.5	8.6	47	27/24.3	53.4/41.7	72.1/50.6
ERU-9	AIR TO AIR	14	3	235	0.12	410A	1	69.2	54.7	80.0/65.3	54.2/53.3	34	70.0/59.5	8.6	47	27/24.3	53.4/41.7	72.1/50.6
ERU-10	AIR TO AIR	14	3	235	0.12	410A	1	69.2	54.7	80.0/65.3	54.2/53.3	34	70.0/59.5	8.6	47	27/24.3	53.4/41.7	72.1/50.6
ERU-11	AIR TO AIR	14	3	235	0.12	410A	1	69.2	54.7	80.0/65.3	54.2/53.3	34	70.0/59.5	8.6	47	27/24.3	53.4/41.7	72.1/50.6

FINNED TUBE RADIATION SCHEDULE																			
TAG	LOCATION	TUBE SIZE (IN.)	FIN SIZE	FINS/FT.	FIN TYPE	TIERS	BTU/H (L/F)	ACTIVE LENGTH (FT.)	HOT WATER				ENCLOSURE			STYLE	TYPICAL UNIT MFG & MODEL NO.	NOTES	
									FLOW (GPM)	BTU/H	EWTF (°F)	AWTF (°F)	H (IN.)	D (IN.)	MOUNT HEIGHT (IN.)				APPROX LENGTH (FT)
FT-1	202A	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	7.5	0.9	9,000	180	170	28"	5-5/16"	28"	9	FLAT TOP	STERLING JVB-T-C3/4-435	2.3.4
FT-2	212A	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	9	1.08	10,800	180	170	28"	5-5/16"	28"	10	FLAT TOP	STERLING JVB-T-C3/4-435	2.3.4
FT-3	300C	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	10	1.2	12,000	180	170	28"	5-5/16"	28"	11	BARE ELEMENT	STERLING JVB-B-C3/4-435	2.3.4.5
FT-4	301B	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	9	1.08	10,800	180	170	28"	5-5/16"	28"	10	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-5	301A	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	7.5	0.9	9,000	180	170	28"	5-5/16"	28"	9	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-6	301	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	6	0.72	7,200	180	170	28"	5-5/16"	28"	7	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-7	312	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	6	0.72	7,200	180	170	28"	5-5/16"	28"	7	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-8	310	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	6	0.72	7,200	180	170	28"	5-5/16"	28"	7	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-9	308	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	6	0.72	7,200	180	170	28"	5-5/16"	28"	7	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-10	306	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	6	0.72	7,200	180	170	28"	5-5/16"	28"	7	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-11	311	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	6	0.72	7,200	180	170	28"	5-5/16"	28"	11	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-12	309	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	6	0.72	7,200	180	170	28"	5-5/16"	28"	7	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-13	307	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	6	0.72	7,200	180	170	28"	5-5/16"	28"	7	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-14	305	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	6	0.72	7,200	180	170	28"	5-5/16"	28"	7	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-15	303	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	6	0.72	7,200	180	170	28"	5-5/16"	28"	7	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-16	411	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	7	0.84	8,400	180	170	28"	5-5/16"	28"	8	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-17	409	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	7	0.84	8,400	180	170	28"	5-5/16"	28"	8	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-18	407	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	7	0.84	8,400	180	170	28"	5-5/16"	28"	8	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-19	405	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	7	0.84	8,400	180	170	28"	5-5/16"	28"	8	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-20	410	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	7	0.84	8,400	180	170	28"	5-5/16"	28"	8	FLAT TOP	STERLING JVB-B-C3/4-435	2.3.4.5
FT-21	408	3/4"	4-1/4" X 3-5/8"	50	CO./AL.	1	1200	7	0.84										

OUTDOOR AIR VENTILATION													
SPACE NAME		HVAC SYSTEM	SPACE MAXIMUM SUPPLY (CFM)	FLOOR AREA (SQ FT)	OCCUPANT DENSITY (PERSON/SQ FT)	TOTAL OCCUPANCY FOR VENTILATION (PEOPLE/1000 SQ FT)	PEOPLE OUTDOOR AIRFLOW RATE (CFM/PERSON)	AREA OUTDOOR AIRFLOW RATE (CFM/SQ FT)	EXHAUST AIRFLOW RATE (CFM/SQ FT)	AIR DISTRIBUTION EFFECTIVENESS	BREATHING ZONE OUTDOOR AIR	ZONE OUTDOOR AIRFLOW (CFM)	ADJUSTED CFM
ROOM #	CLASSIFICATION		Vpz	Az	a		Rp	Ra		Ez	Vbz	Voz	
100	CAFETERIA	RTU-3	4,130	2211 SF	100	222	7.5	0.18	-	0.8	2063	2579	3200
101A	LIBRARY	SSI-34	211	196 SF	10	2	5.0	0.12	-	0.8	34	42	50
101G	CLASSROOMS (5-8)	SSI-35	360	263 SF	25	7	10.0	0.12	-	0.8	102	127	165
102	MAIN ENTRY LOBBIES	FC-1	306	278 SF	10	3	5.0	0.06	-	0.8	32	40	50
103	OFFICE SPACES	SSI-39	160	192 SF	5	1	5.0	0.06	-	0.8	17	21	50
105	CLASSROOMS (9+)	SSI-32,33	1,350	810 SF	35	29	10.0	0.12	-	0.8	387	484	500
106	CLASSROOMS (9+)	SSI-20,21	1,350	810 SF	35	29	10.0	0.12	-	0.8	387	484	500
107	CLASSROOMS (9+)	SSI-30,31	1,350	810 SF	35	29	10.0	0.12	-	0.8	387	484	500
108	CLASSROOMS (9+)	SSI-22,23	1,350	810 SF	35	29	10.0	0.12	-	0.8	387	484	500
109	CLASSROOMS (9+)	SSI-28,29	1,350	810 SF	35	29	10.0	0.12	-	0.8	387	484	500
110	CLASSROOMS (9+)	SSI-24,25	1,350	810 SF	35	29	10.0	0.12	-	0.8	387	484	500
111	CLASSROOMS (9+)	SSI-26,27	1,350	810 SF	35	29	10.0	0.12	-	0.8	387	484	500
200	COMPUTER LAB	SSI-37	306	235 SF	25	6	10.0	0.12	-	0.8	88	110	110
200B	COMPUTER LAB	SSI-36	292	192 SF	25	5	10.0	0.12	-	0.8	73	91	100
201B	TELEPHONE/DATA ENTRY	SSI-52	131	231 SF	60	14	5.0	0.06	-	0.8	84	105	110
202	OFFICE SPACES	SSI-38	358	305 SF	5	2	5.0	0.06	-	0.8	28	35	50
202A	OFFICE SPACES	SSI-53	310	343 SF	5	2	5.0	0.06	-	0.8	31	38	50
204	OFFICE SPACES	SSI-39	395	364 SF	5	2	5.0	0.06	-	0.8	32	40	50
205	CLASSROOMS (5-8)	SSI-50,51	1,350	837 SF	25	21	10.0	0.12	-	0.8	310	388	505
206	CLASSROOMS (9+)	SSI-40,41	1,350	837 SF	35	30	10.0	0.12	-	0.8	400	501	505
207	CLASSROOMS (9+)	SSI-48,49	1,350	810 SF	35	29	10.0	0.12	-	0.8	387	484	500
208	CLASSROOMS (5-8)	SSI-42,43	1,350	810 SF	25	21	10.0	0.12	-	0.8	307	384	500
209	CLASSROOMS (5-8)	SSI-46,47	1,350	810 SF	25	21	10.0	0.12	-	0.8	307	384	500
210	CLASSROOMS (9+)	SSI-44,45	1,350	810 SF	35	29	10.0	0.12	-	0.8	387	484	500
212	OFFICE SPACES	SSI-54	182	229 SF	5	2	5.0	0.06	-	0.8	24	30	50
212A	OFFICE SPACES	SSI-55	147	184 SF	5	1	5.0	0.06	-	0.8	16	20	50
300A	CLASSROOMS (5-8)	SSI-59	305	296 SF	25	8	10.0	0.12	-	0.8	116	144	200
300B	OFFICE SPACES	SSI-58	251	350 SF	5	2	5.0	0.06	-	0.8	31	39	50
300C	MUSIC/THEATER/DANCE	SSI-56,57	1,350	838 SF	35	30	10.0	0.06	-	0.8	350	438	450
301	CLASSROOMS (5-8)	SSI-61,62	1,350	840 SF	25	21	10.0	0.12	-	0.8	311	389	500
301A	CLASSROOMS (5-8)	SSI-63,64	1,350	840 SF	25	21	10.0	0.12	-	0.8	311	389	500
301B	ART CLASSROOM	SSI-65,66	1,115	835 SF	20	17	10.0	0.18	0.70	0.8	320	668	670
302													

Project Num
14457.20

Client Name

**SOUTH ORANGETOWN CENTRAL
SCHOOL DISTRICT**

Project Name:

PHASE 1: 2022 BOND

District Office Address

160 VAN WYCK RD.
BLAUVELT, NY 10913

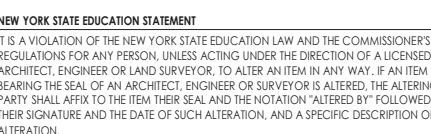
SOUTH ORANGETOWN CSD

- | | | |
|--------------------------|--------------------------------|-----------------------|
| ☐ | WILLIAM O. SCHAEFER SED#: | 50-03-01-06-0-012-019 |
| ☐ | COTTAGE LANE ELEMENTARY SED#: | 50-03-01-06-0-010-000 |
| ☐ | TAPPAN ZEE HIGH SCHOOL SED#: | 50-03-01-06-0-006-032 |
| ☐ | WILLIAM O. SCHAEFER S&L SED#: | 50-03-01-06-0-012-020 |
| ☐ | COTTAGE LANE S&L SED#: | 50-03-01-06-0-010-023 |
| ☐ | COTTAGE LANE LIBRARY S&L SED#: | 50-03-01-06-0-023-022 |
| ☐ | WOS OUTDOOR CLASSROOM SED#: | 50-03-01-06-7-053-000 |
| ☐ | SOWS OUTDOOR CLASSROOM SED#: | 50-03-01-06-7-056-000 |
| ☐ | CLE OUTDOOR CLASSROOM SED#: | 50-03-01-06-7-054-001 |
| ☐ | THS OUTDOOR CLASSROOM SED#: | 50-03-01-06-7-055-000 |

PROJECT ISSUE & REVISION SCHEDULE

iv	Date	Description
1	10/27/2023	BID ADDENDUM #

PROFESSIONAL STAMPS



SHEET INFORMATION

Issued

10/18/23

Project Status

BID DOCUMENTS

Drawn By

KCM

SED CALCS

Drawing Number

CLE
H902