

ADDENDUM NO. 01

PROJECT: South Orangetown Central School District
PHASE 1: 2022 BOND

CPL PROJECT NO. 14457.20

DATE: October 27, 2023

Include this Addendum as part of the Contract Documents. It supplements portions of the original specifications and drawings, the extent of which shall remain, except as revised herein:

CHANGES TO THE SPECIFICATIONS

- 1.1 Section 004000: Replace with the attached revised 004000 Form of Proposal – General Construction
- 1.2 Section 004002: Replace with the attached revised 004002 Form of Proposal – Electrical Construction
- 1.3 Section 011000: Replace with the attached revised 011000 Summary.
- 1.4 Section 011200: Replace with the attached revised 011200 Multiple Contract Summary.
- 1.5 Section 012200 Unit Prices: Replace with the attached revised 012200 Unit Prices.
- 1.6 Section 012300 Alternates; Part 3.1.A: Revise Item 3.b to read as follows:
 - b. Alternate Bid: Provide wall base as specified to wrap casework. Casework provided and installed by others, as indicated on drawings and as specified.
- 1.7 Section 012900; Part 1.2.C: Revise item 5 to read as follows:

5. The following line items constitute General Conditions and must be included on the continuation sheet. Do not include a separate line item for General Conditions. Percentages given are of the total bid price.

 - a. Bonds & Insurances
 - b. Mobilization
 - c. Supervision – 1%
 - d. Submittals – 1%
 - e. Coordination Drawings- 2%
 - f. Safety
 - g. Project Meetings- \$13,000 (assume 40 meetings)
 - h. Daily Cleaning
 - i. Testing & Balancing 2% (Mechanical Contract Only)
 - j. Punch-List- 2%
 - k. Final Cleaning (GC to include commercial cleaning costs- 2X)
 - l. Demonstration and Training



- m. Demobilization
- n. Close-Out Documents- 1%

1.8 Section 015001: Replace with the attached revised 015001 Temp. Facilities Controls.

CHANGES TO THE DRAWINGS

- 2.1 Drawing WOS H101: Replace with attached revised WOS H101
- 2.2 Drawing WOS H102: Replace with attached revised WOS H102
- 2.3 Drawing WOS H200: Replace with attached revised WOS H200
- 2.4 Drawing WOS H202: Replace with attached revised WOS H202
- 2.5 Drawing WOS H204: Replace with attached revised WOS H204
- 2.6 Drawing WOS H205: Replace with attached revised WOS H205
- 2.7 Drawing WOS H300: Replace with attached revised WOS H300
- 2.8 Drawing WOS H301: Replace with attached revised WOS H301
- 2.9 Drawing WOS H302: Replace with attached revised WOS H302
- 2.10 Drawing WOS H304: Replace with attached revised WOS H304
- 2.11 Drawing WOS H305: Replace with attached revised WOS H305
- 2.12 Drawing WOS H902: Replace with attached revised WOS H902
- 2.13 Drawing CLE H203: Replace with attached revised CLE H203
- 2.14 Drawing CLE H302: Replace with attached revised CLE H302
- 2.15 Drawing CLE H303: Replace with attached revised CLE H303
- 2.16 Drawing CLE H304: Revise Keynote 3 to read as follows:
 - 3. PROVIDE 4" FIN TUBE AND ROUTE PIPING DOWN WALL. PROVIDE COVER AND PAINT TO MATCH WALLS. PROVIDE 18 GA. METAL PIPING COVER BETWEEN UNITS AND UP THE WALL TO THE CEILING. PAINT TO MATCH EXISTING WALLS.
- 2.17 Drawing CLE H305: Replace with attached revised CLE H305
- 2.18 Drawing CLE H901: Replace with attached revised CLE H901
- 2.19 Drawing CLE H902: Replace with attached revised CLE H902

END OF ADDENDUM NO. 01

SECTION 004000
FORM OF PROPOSAL - GENERAL CONSTRUCTION**DATED:** _____

Bid from: Name: _____
Address: _____

Phone No.: _____
Fax No.: _____

Bid to: South Orangetown Central School District
160 Van Wyck Road
Blauvelt, NY 10913

Bid for: 2022 BOND PROJECT - PHASE 1
GENERAL CONSTRUCTION (GC)

BASE BID

We have examined and fully understand the requirements and intent of the Bidding and Contract Documents and all subsequent addenda as listed below, and propose to provide all materials, plant, labor, supplies, equipment, transportation and other facilities necessary, or proper for, or incidental to the Work, to complete all Work in strict accord with the Contract Documents and as assigned in the Multiple Contract Summary for the base bid lump sum of:

Total Lump Sum Base Bid (in numbers): \$ _____

Total Lump Sum Base Bid (in words): _____

ADDENDA RECEIVED

Any addenda issued by the Architect, mailed or delivered, to the undersigned prior to the Bid opening date shall become part of the Contract Documents. The Bidder shall enter on this list any addenda issued after this Form of Proposal has been received and shall fill in the addenda number and date.

| | | | |
|---------------|-------|--------|-------|
| Addendum No.: | _____ | Dated: | _____ |
| Addendum No.: | _____ | Dated: | _____ |
| Addendum No.: | _____ | Dated: | _____ |
| Addendum No.: | _____ | Dated: | _____ |

BID GUARANTEE

The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within ten (10) days after a written Notice of Award, if offered within forty-five (45) days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5 %) of the Base Bid.

In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

TIME OF COMPLETION

It is agreed by the undersigned that after receipt of a Notice of Award and a consummation of a Contract Agreement in accord with the terms of the Contract Documents, he or she will start work within ten (10) consecutive calendar days of the notice to proceed and fully complete the work as indicated in the Contract Documents.

ALLOWANCES

The Bidder acknowledges that all Allowances, pursuant to their Contract, have been included in the Base Bid. Should the following allowance(s) exceed, or be less than, the cost of selected items, the difference in cost shall be added to, or credited to, the Owner's Contract. Refer to Specification Section 012100 "Allowances" for description of each allowance.

General Construction; GC-01

Allowance Amount:
\$200,000.00

ALTERNATE BIDS

Enter a whole dollar amount, even if it is zero (\$ 0), for each Alternate Bid. Circle either "ADD to" or "DEDUCT from" for each Alternate Bid. If neither is circled, "DEDUCT from" will be assumed. Do not leave any Alternate Bid amount blank. If any Alternate Bid amount is left blank, it will be assumed the Bidder will provide that Alternate Bid for no change, neither increase to nor decrease from, the Base Bid amount.

Alternate Bid No. GC-01: WOS Casework Infill.

ADD to | DEDUCT from the base bid a total sum of:

(in numbers) \$ _____

(in words) _____

Alternate Bid No. GC-02: CLE Casework Infill.

ADD to | DEDUCT from the base bid a total sum of:

(in numbers) \$ _____

(in words) _____

Alternate Bid No. GC-03: WOS Teaching Wall Casework.

ADD to | DEDUCT from the base bid a total sum of:

(in numbers) \$ _____

(in words) _____

Alternate Bid No. GC-04: WOS Window Wall Casework.

ADD to | DEDUCT from the base bid a total sum of:

(in numbers) \$ _____

(in words) _____

Alternate Bid No. GC-05: CLE Storage Closets.

ADD to | DEDUCT from the base bid a total sum of:

(in numbers) \$ _____

(in words) _____

Alternate Bid No. GC-06: Flooring.

ADD to | DEDUCT from the base bid a total sum of:

(in numbers) \$ _____

(in words) _____

UNIT PRICES

Refer to Specification Section 012200 - Unit Prices, for a description of each item. Should the value of the Work for this project be increased or decreased due to changes in design or based on field conditions, the Bidder agrees that the following unit prices will be used as the basis for an increase or decrease in the Contract amount. The difference between the "add" unit price and the "deduct" unit price for any item listed below shall not be greater than 20% of the "add" unit price.

1. GENERAL CONSTRUCTION (GC)

- a. GC- 1 : Labor to remove ceiling tile and install new from attic stock, purchased through base bid:

ADD \$ _____ **Per 4 SF / DEDUCT \$** _____ **Per 4 SF**

BID SECURITY

Bid Security in the form of a Certified or Cashier's Check or a Bid Bond in the form required by the Contract Documents is attached to, and made a part of, this Proposal.

IRAN DIVESTMENT ACT CERTIFICATION

Contractor to submit with the bid, Iran Divestment Act Certification which hereto is made a part of this Form of Proposal and is attached at the end of this Form of Proposal.

REPRESENTATIONS

By submitting this Proposal, the Bidder represents and certifies to the Owner and the Architect that:

2. It has examined the Contract Documents, the site of the proposed Work, is familiar with the local conditions at the place where the Work is to be performed and fully comprehends the requirements and intent of the plans and specifications for this Project in accordance with the drawings, specifications and other Contract Documents prepared by CPL, the Owners Consultant, for this Project.
3. It has examined and reviewed, where applicable, all information and data in the Contract Documents related to existing underground facilities at or contiguous to the site. Bidder shall require of the Owner or Architect no further investigations, explorations, tests or reports with respect to such underground facilities in order for the Bidder to perform the Work of the Proposal within the Contract Time and in accordance with the Contract Documents. It has given notice to the Architect, as required by the Contract Documents of any and all discrepancies it has discovered and accepts the resolution of those discrepancies offered by the Architect.
4. Pursuant to New York State General Municipal Law section 103-d, by submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
 - a. The prices in this bid have been arrived at independently without collusion, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
 - b. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not be knowingly disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or competitor; and

- c. No attempt has been made or will be made by bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.
5. The proposal is based upon the materials, equipment and systems required by the Contract Documents, without exception, unless otherwise set forth in this Proposal in detail.

CHANGE ORDERS

We propose and agree that the above lump sum shall be adjusted for changes in the Contract Work not included in unit prices by addition of the following costs:

6. Profit and overhead as permitted in the GENERAL CONDITIONS.

NON-COLLUSIVE BIDDING CERTIFICATION

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

7. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
8. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and
9. No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

ACCEPTANCE

When this Proposal is accepted, the undersigned agrees to enter into a Contract with the Owner as provided in the Form of Agreement.

AFFIRMS

The undersigned affirms and agrees that this Proposal is a firm one which remains in effect and will be irrevocable for a period of forty-five (45) days after opening of Bids.

TYPE OF BUSINESS

The undersigned hereby represents that it is a [] Corporation, [] Partnership, [] Individual. If a Corporation, then the undersigned further represents that it is duly qualified as a Corporation under the laws of New York State and it is authorized to do business in this State.

PLACE OF BUSINESS

The following is the name and address of the person to whom all notices required in connection with this Proposal may be telephoned, mailed, or delivered.

| | |
|--|------|
| Name of Contact Person: | |
| Name of Business or Firm: | |
| Address: | |
| Address: | |
| Telephone: | Fax: |
| Email Address: | |
| FEIN: Federal Employer Identification No.: | |

EXECUTION OF CONTRACT

When written Notice of Acceptance of the Proposal is mailed or delivered to the undersigned within forty-five (45) days after the opening of Bids, or anytime thereafter should the Proposal not be withdrawn, the undersigned, within ten (10) days, will execute the Form of Agreement with the Owner.

ASBESTOS

The bidder certifies that no asbestos or asbestos-containing materials will be incorporated into the Work of this Contract.

AUTHORIZED SIGNATURES FOR PROPOSALS

| | |
|------------|---|
| Signature: | |
| Name: | |
| | <i>(Typed or Printed)</i> |
| Title: | |
| Firm: | |
| | <i>(Legal Name of Person, Single Proprietorship, Partnership, or Corporation)</i> |
| Date: | |

(if Corporation, provide seal above)

IRAN DIVESTMENT ACT CERTIFICATION

By submission of this bid, (DL & AV Equip 1315), or by assuming the responsibility of a Contract awarded hereunder, each bidder and each person signing on behalf of any bidders, certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief:

That each bidder/contractor/assignee is not on the "Entities Determined To Be Non-Responsive Bidders/Offerers Pursuant to The New York State Iran Divestment Act of 2012" list created pursuant to paragraph (b) subdivision 3 of section 165-a of the New York State Finance Law and posted on the OGS website at www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf and further certifies that it will not utilize on such Contract any subcontractor that is identified on the Prohibited Entities List. Additionally, Bidder/Contractor is advised that should it seek to renew or extend a Contract awarded in response to the solicitation, it must provide the same certification at the time the Contract is renewed or extended. (See Article 10 in the Instructions to Bidders.)

NAME OF COMPANY: _____

(Individual or Legal Name of Firm or Corporation)

MAILING ADDRESS: _____

CITY/STATE/ZIP CODE: _____

BY: _____

(Signature of Representative of Firm or Corporation)

NAME: _____ TITLE: _____

Please Print

Please Print

DATED: _____

SWORN to before me this

_____ day of _____ 20 ____

Notary Public: _____

SEXUAL HARASSMENT POLICY/TRAINING AFFIRMATION

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all its employees.

Contractor Information:

Name of Contractor: _____

Address: _____

Phone Number: _____ Fax Number: _____

Email Address: _____

Contractor Website: _____

(Signature of Contractor)_____
(Title)_____
(Date)**END OF SECTION**

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SECTION 004002
FORM OF PROPOSAL - ELECTRICAL CONSTRUCTION**DATED:** _____

Bid from: Name: _____
Address: _____

Phone No.: _____
Fax No.: _____

Bid to: South Orangetown Central School District
160 Van Wyck Road
Blauvelt, NY 10913

Bid for: 2022 BOND PROJECT - PHASE 1
ELECTRICAL CONSTRUCTION (EC)

BASE BID

We have examined and fully understand the requirements and intent of the Bidding and Contract Documents and all subsequent addenda as listed below, and propose to provide all materials, plant, labor, supplies, equipment, transportation and other facilities necessary ,or proper for, or incidental to the Work, to complete all Work in strict accord with the Contract Documents and as assigned in the Multiple Contract Summary for the base bid lump sum of:

Total Lump Sum Base Bid (in numbers): \$ _____

Total Lump Sum Base Bid (in words): _____

ADDENDA RECEIVED

Any addenda issued by the Architect, mailed or delivered, to the undersigned prior to the Bid opening date shall become part of the Contract Documents. The Bidder shall enter on this list any addenda issued after this Form of Proposal has been received and shall fill in the addenda number and date.

| | | | |
|---------------|-------|--------|-------|
| Addendum No.: | _____ | Dated: | _____ |
| Addendum No.: | _____ | Dated: | _____ |
| Addendum No.: | _____ | Dated: | _____ |
| Addendum No.: | _____ | Dated: | _____ |

BID GUARANTEE

The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within ten (10) days after a written Notice of Award, if offered within forty-five (45) days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5 %) of the Base Bid.

In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

TIME OF COMPLETION

It is agreed by the undersigned that after receipt of a Notice of Award and a consummation of a Contract Agreement in accord with the terms of the Contract Documents, he or she will start work within ten (10) consecutive calendar days of the notice to proceed and fully complete the work as indicated in the Contract Documents.

ALLOWANCES

The Bidder acknowledges that all Allowances, pursuant to their Contract, have been included in the Base Bid. Should the following allowance(s) exceed, or be less than, the cost of selected items, the difference in cost shall be added to, or credited to, the Owner's Contract. Refer to Specification Section 012100 "Allowances" for description of each allowance.

Electrical Construction; EC-01

Allowance Amount:
\$160,000.00

ALTERNATE BIDS

Enter a whole dollar amount, even if it is zero (\$ 0), for each Alternate Bid. Circle either "ADD to" or "DEDUCT from" for each Alternate Bid. If neither is circled, "DEDUCT from" will be assumed. Do not leave any Alternate Bid amount blank. If any Alternate Bid amount is left blank, it will be assumed the Bidder will provide that Alternate Bid for no change, neither increase to nor decrease from, the Base Bid amount.

Alternate Bid No. EC-01: CLE Storage Closets.

ADD to | **DEDUCT from** the base bid a total sum of:

(in numbers) \$ _____

(in words) _____

Alternate Bid No. EC-02: CLE Data Cabling.

ADD to | **DEDUCT from** the base bid a total sum of:

(in numbers) \$ _____

(in words) _____

Alternate Bid No. EC-03: WOS Data Cabling.

ADD to | **DEDUCT from** the base bid a total sum of:

(in numbers) \$ _____

(in words) _____

UNIT PRICES

Refer to Specification Section 012200 - Unit Prices, for a description of each item. Should the value of the Work for this project be increased or decreased due to changes in design or based on field conditions, the Bidder agrees that the following unit prices will be used as the basis for an increase or decrease in the Contract amount. The difference between the "add" unit price and the "deduct" unit price for any item listed below shall not be greater than 20% of the "add" unit price.

1. ELECTRICAL WORK (EC)

- a. Unit Price No. EC- 1 : Cat 6 Cable (1-100ft.)
ADD \$ _____ EA/ DEDUCT \$ _____ EA
- b. Unit Price No. EC-2: Cat 6 Cable (101-200ft.)
ADD \$ _____ EA/ DEDUCT \$ _____ EA
- c. Unit Price No. EC-3: Cat 6 Cable (201-300ft.)
ADD \$ _____ EA/ DEDUCT \$ _____ EA
- d. Unit Price No. EC-4: Rauland 8 Inch Analog Recessed Ceiling Speaker
ADD \$ _____ EA/ DEDUCT \$ _____ EA
- e. Unit Price No. EC-5: Rauland 8 Inch Analog Surface Speaker Assembly
ADD \$ _____ EA/ DEDUCT \$ _____ EA
- f. Unit Price No. EC-6: Rauland 2x2 Ceiling Panel with 8 Inch Analog Ceiling Speaker
ADD \$ _____ EA/ DEDUCT \$ _____ EA
- g. Unit Price No. EC-7: Rauland Analog Exterior Horn
ADD \$ _____ EA/ DEDUCT \$ _____ EA
- h. Unit Price No. EC-8: Classroom/ Office IP Speaker & Display Assembly
ADD \$ _____ EA/ DEDUCT \$ _____ EA
- i. Unit Price No. EC-9: Rauland Small Message Board/ Display
ADD \$ _____ EA/ DEDUCT \$ _____ EA
- j. Unit Price No. EC-10: Rauland Large Message Board/ Display
ADD \$ _____ EA/ DEDUCT \$ _____ EA

BID SECURITY

Bid Security in the form of a Certified or Cashier's Check or a Bid Bond in the form required by the Contract Documents is attached to, and made a part of, this Proposal.

IRAN DIVESTMENT ACT CERTIFICATION

Contractor to submit with the bid, Iran Divestment Act Certification which hereto is made a part of this Form of Proposal and is attached at the end of this Form of Proposal.

REPRESENTATIONS

By submitting this Proposal, the Bidder represents and certifies to the Owner and the Architect that:

2. It has examined the Contract Documents, the site of the proposed Work, is familiar with the local conditions at the place where the Work is to be performed and fully comprehends the requirements and intent of the plans and specifications for this Project in accordance with the drawings, specifications and other Contract Documents prepared by CPL, the Owners Consultant, for this Project.
3. It has examined and reviewed, where applicable, all information and data in the Contract Documents related to existing underground facilities at or contiguous to the site. Bidder shall require of the Owner or Architect no further investigations, explorations, tests or reports with respect to such underground facilities in order for the Bidder to perform the Work of the Proposal within the Contract Time and in accordance with the Contract Documents.
4. It has given notice to the Architect, as required by the Contract Documents of any and all discrepancies it has discovered and accepts the resolution of those discrepancies offered by the Architect.

5. Pursuant to New York State General Municipal Law section 103-d, by submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
 - a. The prices in this bid have been arrived at independently without collusion, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
 - b. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not be knowingly disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or competitor; and
 - c. No attempt has been made or will be made by bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.
6. The proposal is based upon the materials, equipment and systems required by the Contract Documents, without exception, unless otherwise set forth in this Proposal in detail.

CHANGE ORDERS

We propose and agree that the above lump sum shall be adjusted for changes in the Contract Work not included in unit prices by addition of the following costs:

7. Profit and overhead as permitted in the GENERAL CONDITIONS.

NON-COLLUSIVE BIDDING CERTIFICATION

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

8. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
9. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and
10. No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

ACCEPTANCE

When this Proposal is accepted, the undersigned agrees to enter into a Contract with the Owner as provided in the Form of Agreement.

AFFIRMS

The undersigned affirms and agrees that this Proposal is a firm one which remains in effect and will be irrevocable for a period of forty-five (45) days after opening of Bids.

TYPE OF BUSINESS

The undersigned hereby represents that it is a [] Corporation, [] Partnership, [] Individual. If a Corporation, then the undersigned further represents that it is duly qualified as a Corporation under the laws of New York State and it is authorized to do business in this State.

PLACE OF BUSINESS

The following is the name and address of the person to whom all notices required in connection with this Proposal may be telephoned, mailed, or delivered.

| | |
|--|------|
| Name of Contact Person: | |
| Name of Business or Firm: | |
| Address: | |
| Address: | |
| Telephone: | Fax: |
| Email Address: | |
| FEIN: Federal Employer Identification No.: | |

EXECUTION OF CONTRACT

When written Notice of Acceptance of the Proposal is mailed or delivered to the undersigned within forty-five (45) days after the opening of Bids, or anytime thereafter should the Proposal not be withdrawn, the undersigned, within ten (10) days, will execute the Form of Agreement with the Owner.

ASBESTOS

The bidder certifies that no asbestos or asbestos-containing materials will be incorporated into the Work of this Contract.

AUTHORIZED SIGNATURES FOR PROPOSALS

| | |
|------------|---|
| Signature: | |
| Name: | |
| | <i>(Typed or Printed)</i> |
| Title: | |
| Firm: | |
| | <i>(Legal Name of Person, Single Proprietorship, Partnership, or Corporation)</i> |
| Date: | |

(if Corporation, provide seal above)

IRAN DIVESTMENT ACT CERTIFICATION

By submission of this bid, (DL & AV Equip 1315), or by assuming the responsibility of a Contract awarded hereunder, each bidder and each person signing on behalf of any bidders, certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief:

That each bidder/contractor/assignee is not on the "Entities Determined To Be Non-Responsive Bidders/Offerers Pursuant to The New York State Iran Divestment Act of 2012" list created pursuant to paragraph (b) subdivision 3 of section 165-a of the New York State Finance Law and posted on the OGS website at www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf and further certifies that it will not utilize on such Contract any subcontractor that is identified on the Prohibited Entities List. Additionally, Bidder/Contractor is advised that should it seek to renew or extend a Contract awarded in response to the solicitation, it must provide the same certification at the time the Contract is renewed or extended. (See Article 10 in the Instructions to Bidders.)

NAME OF COMPANY: _____

(Individual or Legal Name of Firm or Corporation)

MAILING ADDRESS: _____

CITY/STATE/ZIP CODE: _____

BY: _____

(Signature of Representative of Firm or Corporation)

NAME: _____ TITLE: _____

Please Print

Please Print

DATED: _____

SWORN to before me this

_____ day of _____ 20 ____

Notary Public: _____

SEXUAL HARASSMENT POLICY/TRAINING AFFIRMATION

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all its employees.

Contractor Information:

Name of Contractor: _____

Address: _____

Phone Number: _____ Fax Number: _____

Email Address: _____

Contractor Website: _____

(Signature of Contractor)_____
(Title)_____
(Date)**END OF SECTION**

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SECTION 01 1000
SUMMARY

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes:
 - 1. Project information.
 - 2. Work covered by Contract Documents.
 - 3. Multiple work packages.
 - 4. Access to site.
 - 5. Work restrictions.
 - 6. Coordination with occupants.
 - 7. Phased construction.
 - 8. Work under separate contracts.
 - 9. Work by Owner.
 - 10. Owner-furnished products.
 - 11. Miscellaneous provisions.
 - 12. Specification and drawing conventions.
- B. Related Sections:
 - 1. Division 00 Section "Preliminary Schedules" for anticipated project construction schedule.
 - 2. Division 01 Section "Multiple Contract Summary" for work under separate contracts.
 - 3. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.02 PROJECT INFORMATION

- A. Project Identification: **SOUTH ORANGETOWN CSD 2022 BOND PROJECT – PHASE 1**
 - 1. William O. Schaefer Elementary: SED#50-03-01-06-0-012-019
 - a. 140 Lester Drive, Tappan, NY 10983
 - 2. Cottage Lane Elementary: SED#50-03-01-06-0-010-022
 - a. 120 Cottage Lane, Blauvelt NY 10913
 - 3. Tappan Zee High School: SED#50-03-01-06-0-006-032
 - a. 15 Dutch Hill Road, Orangeburg, NY 10962
 - 4. William O. Schaefer Sound & Lockdown: SED#50-03-01-06-0-012-020
 - a. 140 Lester Drive, Tappan, NY 10983
 - 5. Cottage Lane Sound & Lockdown: SED#50-03-01-06-0-010-023
 - a. 120 Cottage Lane, Blauvelt NY 10913
 - 6. Cottage Lane Library Sound & Lockdown: SED#50-03-01-06-8-023-002
 - a. 120 Cottage Lane, Blauvelt NY 10913
 - 7. WOS Outdoor Classroom: SED#50-03-01-06-7-053-001
 - a. 140 Lester Drive, Tappan, NY 10983
 - 8. CLE Outdoor Classroom: SED#50-03-01-06-7-054-001
 - a. 120 Cottage Lane, Blauvelt NY 10913
 - 9. SOMS Outdoor Classroom: SED#50-03-01-06-7-056-001
 - a. 160 Van Wyck Road, Blauvelt NY 10913
 - 10. TZHS Outdoor Classroom: SED#50-03-01-06-7-055-001
 - a. 15 Dutch Hill Road, Orangeburg, NY 10962
- B. Owner: **South Orangetown Central School District**; 160 Van Wyck Road, Blauvelt, NY 10913
 - 1. Owner's Representative: Gregory Kern, Director of Finance and Operations; (845) 680-1005 gkern@socsd.org

- C. Architect: CPL, 26 IBM Rd, Poughkeepsie, NY 12601
 - 1. Contact Person: Lisa Fasciglione
 - 2. Telephone Number: (845)522-5796
 - 3. Email: LJFasciglione@cplteam.com
- D. Architect's Consultants: The Architect has retained the following design professionals who have prepared designated portions of the Contract Documents:
 - 1. **Technology Consultant:**
 - a. **ECC TECHNOLOGIES; Penfeild NY, , www.ecctechnologies.com**
 - b. **(585) 377-1850**
- E. Construction Manager: The Palombo Group, Inc, PO Box 4976, 22 Noxon St., Poughkeepsie, NY 12601
 - 1. Construction Manager has been engaged for this Project to serve as an advisor to Owner and to provide assistance in administering the Contract for Construction between Owner and each Contractor, according to a separate contract between Owner and Construction Manager.
- F. Submittal Web Site: The Architect requires the use of Newforma Info Exchange for delivery and return of submittals, shop drawings and requests for information. There are no exceptions to this requirement. See Section 013100 "Project Management and Coordination" for requirements for administering and using the Project Website.

1.03 DEFINITIONS

- A. Work Package: A group of specifications, drawings, and schedules prepared by the design team to describe a portion of the Project Work for pricing, permitting, and construction.

1.04 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of the Project is defined by the Contract Documents and consists of the following: Work consists of but is not limited to the upgrades to the HVAC and electrical systems, abatement work, ceiling and soffit work, door and hardware upgrades, interior and exterior finishes, sitework, the construction of four (4) new open exterior classrooms (one per school). as noted in the drawings and Specifications.
- B. Type of Contract:
 - 1. Project will be constructed under five (5) coordinated, concurrent multiple contracts. See Division 01 Section "Multiple Contract Summary" for a description of work included under each of the multiple contracts.
- C. Before commencing Work of each phase, submit an updated copy of the Contractor's Construction Schedule showing the sequence, commencement, and completion dates, (and move-out and -in dates of Owner's personnel) for all phases of the Work.
- D. Representation at all job progress meetings is a contractual requirement.

1.05 ACCESS TO SITE

- A. General: Contractors shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- B. Use of Site: Limit use of Project site to work areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated unless expressly indicated otherwise.
 - 1. Limits: Limit site disturbance, including earthwork and clearing of vegetation, to 10 feet beyond building perimeter; 10 feet beyond surface walkways, patios, surface parking, and utilities less than 12 inches in diameter; 15 feet beyond primary roadway curbs and main utility branch trenches; and 25 feet beyond constructed areas with permeable surfaces (such as pervious paving areas, stormwater detention facilities,

- and playing fields) that require additional staging areas in order to limit compaction in the constructed area.
2. Driveways, Walkways and Entrances: Keep driveways, parking garage, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
 - C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.06 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 1. Comply with limitations on use of public streets and other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:00 a.m. to 3:30 p.m., Monday through Saturday, except as otherwise indicated. This project requires a SIX-day work week MONDAY through SATURDAY, by all trades.
 1. School Vacations and Holidays: Work will occur as approved.
 2. Weekend Hours: Saturday is to be a regularly scheduled workday. Sunday and Holidays by arrangement with the district and the construction manager.
 3. Hours for Utility Shutdowns: Only on weekends, holidays, and school vacations as approved.
 4. Hours for Noisy Activity: For core drilling, powder-activated fasteners, and other disruptive activities, 3:30 p.m. to 11:00 p.m. or as otherwise approved.
 5. Special Events: The Owner will provide dates and times of special events that will restrict construction operations.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 1. Notify Palombo Group, Inc not less than five (5) days in advance of proposed utility interruptions.
 2. Obtain Construction Manager's written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 1. Notify Palombo Group, Inc not less than five (5) days in advance of proposed disruptive operations.
 2. Obtain Construction Manager's written permission before proceeding with disruptive operations.
- E. Nonsmoking Building: Smoking and other tobacco use, including chewing and vaping, is not permitted within any district building or grounds.

1.07 COORDINATION WITH OCCUPANTS

- A. **Partial Owner Occupancy:** Owner will occupy the premises during the entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- B. **Owner Limited Occupancy** of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.
1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
 2. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
 3. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.
 4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

1.08 WORK PERFORMED BY THE OWNER

- A. General: Cooperate fully with Owner so work may be carried out smoothly, without interfering with or delaying work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.
- B. Concurrent Work: Owner will perform the following construction operations at Project site. Those operations will be conducted simultaneously with work under this Contract.
 1. The district will have work being performed by themselves and cooperative contractors. This includes but is not limited to a renovation of the nurse's suite at SOMS.

1.09 OWNER-FURNISHED/CONTRACTOR-INSTALLED (OFCI) PRODUCTS

- A. Owner's Responsibilities: Owner will furnish products indicated and perform the following, as applicable:
 1. Provide for delivery of Owner-furnished products to Project site.
 2. Upon delivery, inspect, with Contractor present, delivered items.
 - a. If Owner-furnished products are damaged, defective, or missing, arrange for replacement.
 3. Inform Contractor of earliest available delivery date for Owner-furnished products.
- B. Contractor's Responsibilities: The Work includes the following, as applicable:
 1. Receive, unload, handle, store, protect, and install Owner-furnished products.
 2. Repair or replace Owner-furnished products damaged following receipt.
- C. Owner-Furnished/Contractor-Installed (OFCI) Products:
 1. Prefabricated outdoor pavilions.
 2. Bathroom Accessories including soap, sanitary napkin, deodorizer, and toilet paper dispensers.
 3. Certain doors, frames and hardware as listed in the schedules.

1.10 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
 3. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
 4. Drawing Coordination: Requirements for materials and products identified on the Drawings are described in detail in the Specifications. One or more of the following are used on the Drawings to identify materials and products:
- B. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
1. Abbreviations: Materials and products are identified by abbreviations (published as part of the U.S. National CAD Standard) (and) scheduled on Drawings.
 2. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

1.11 SCOPE-PHASING

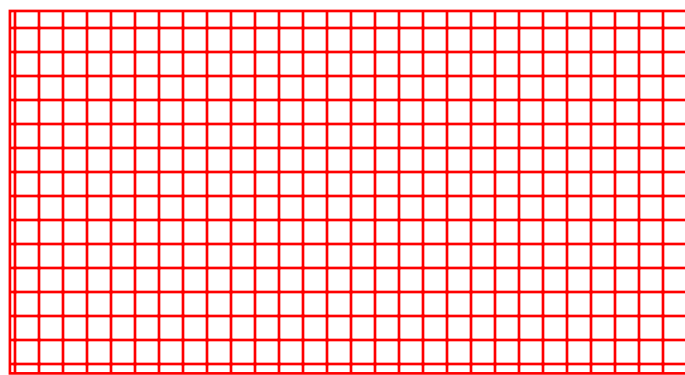
- A. WOS (Refer to attached Phasing Plans - Must be printed in color)
1. Spring 2024- roof curbs, and abatement in area shown.
 2. Summer 2024- nurses' office reconstruction. Areas A, B & C- abatement, new HVAC, new doors, sinks, casework, flooring, and ceilings. New Outdoor classroom, all Sound & Lockdown work.
 3. Summer 2025- Abatement Areas D, E, & F. New HVAC, doors, flooring, soffits, casework and ceilings
- B. TZHS- Summer 2024- New Outdoor Classroom, bleacher relocation work and gymnasium visual display board work.
- C. SOMS- Summer 2024- New Outdoor Classroom
- D. CLES (Refer to attached Phasing Plans - Must be printed in color)
1. Spring/Summer 2024- roof curbs, Areas A, B, F & E as shown- new HVAC, Main Office work, doors, casework, flooring, ceilings and soffits, sinks. New Outdoor classroom, Fitness Path and entry canopy. All Sound & Lockdown work.
 2. Summer 2025- abatement, Areas C, D, & E – new HVAC, doors, casework, soffits, ceilings.

PART 2 PRODUCTS (NOT APPLICABLE)

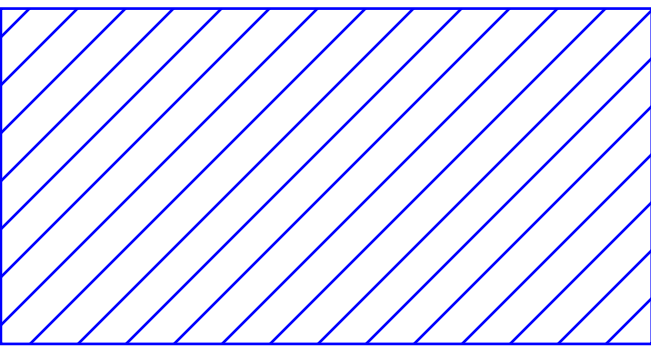
PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

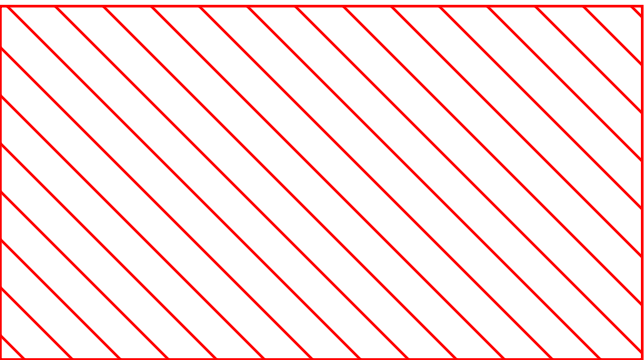
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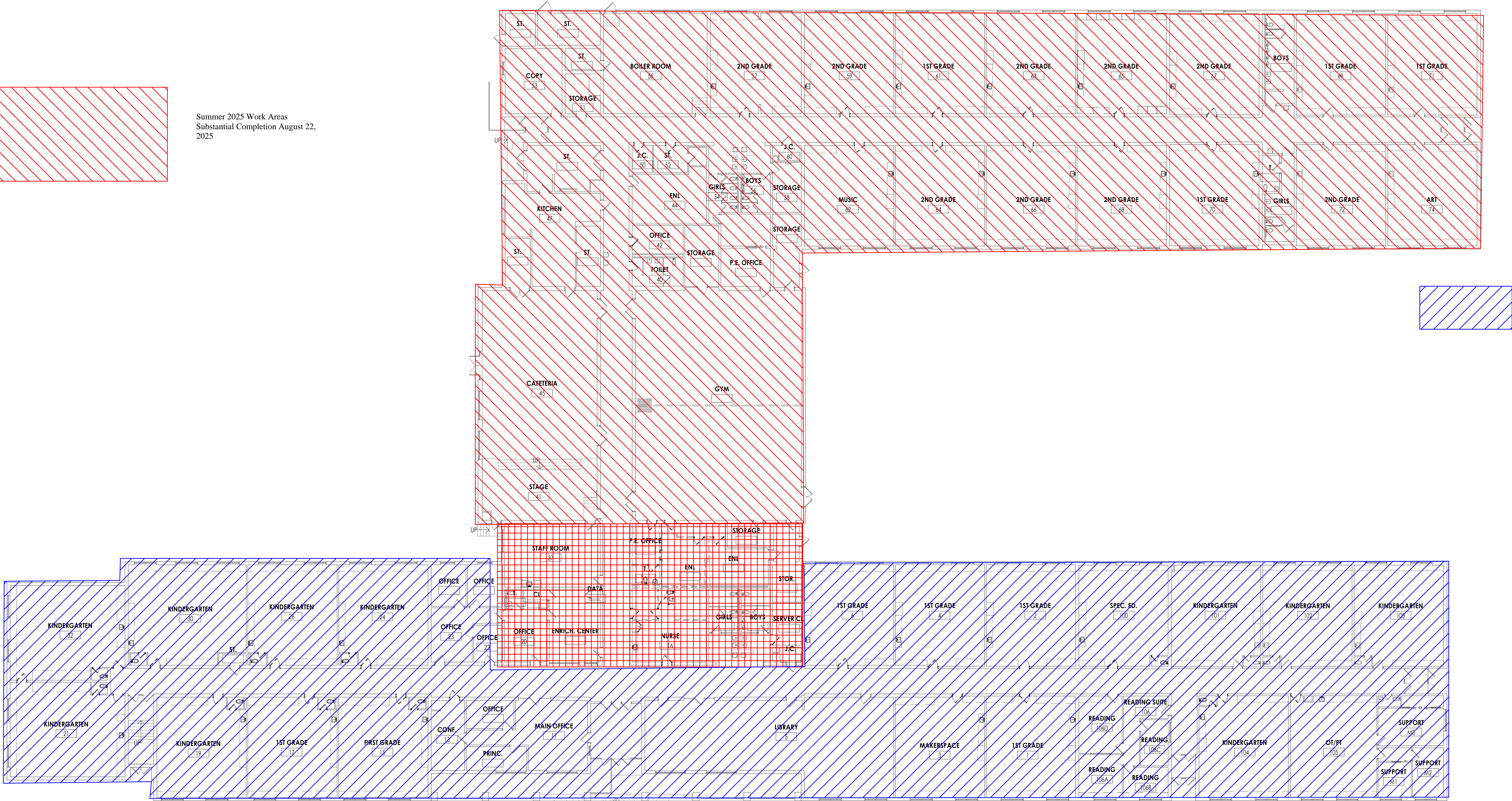
Abatement Work- April 2024
Renovation Work Summer 2024
Substantial Completion August 23, 2024



Summer 2024 Work Areas
Including Outdoor Classroom
Substantial Completion August 23,
2024



Summer 2025 Work Areas
Substantial Completion August 22,
2025



1

101

TRUE NORTH

Phasing Plan

1/16" = 1'-0"

CPL

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#50-03-01-06-001-001

COTTAGE LANE ELEMENTARY SED#50-03-01-06-010-002

TAPPAN ZEE HIGH SCHOOL SED#50-03-01-06-006-002

WILLIAM O. SCHAFER SAL SED#50-03-01-06-017-000

COTTAGE LANE SAL SED#50-03-01-06-010-003

COTTAGE LANE LIBRARY SAL SED#50-03-01-06-023-002

WOS OUTDOOR CLASSROOM SED#50-03-01-06-7-033-001

12H5 OUTDOOR CLASSROOM SED#50-03-01-06-7-034-001

CLE OUTDOOR CLASSROOM SED#50-03-01-06-7-034-001

12H5 OUTDOOR CLASSROOM SED#50-03-01-06-7-033-001

PROJECT ISSUE & REVISION SCHEDULE

No.

Date

Description

1

10/27/23

BID ADDENDUM #1

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION DEPARTMENT
It is a violation of the New York State Education Law and the Commissioner's Regulations for any person, under the direction of a licensed architect, engineer or land surveyor, to alter in any way, or allow, bearing the seal of an architect, engineer or land surveyor, the following: PART ONE: WITH THE NEW YORK SEAL AND THE WORDS "ALtered BY" FOLLOWED 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
CD
Drawing Title
Phasing Plan

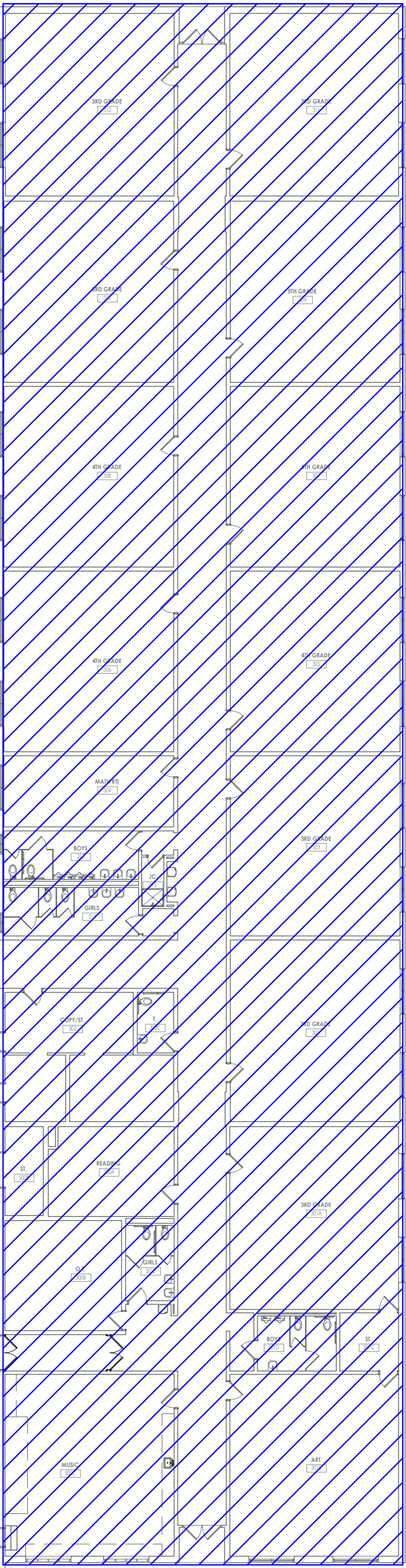
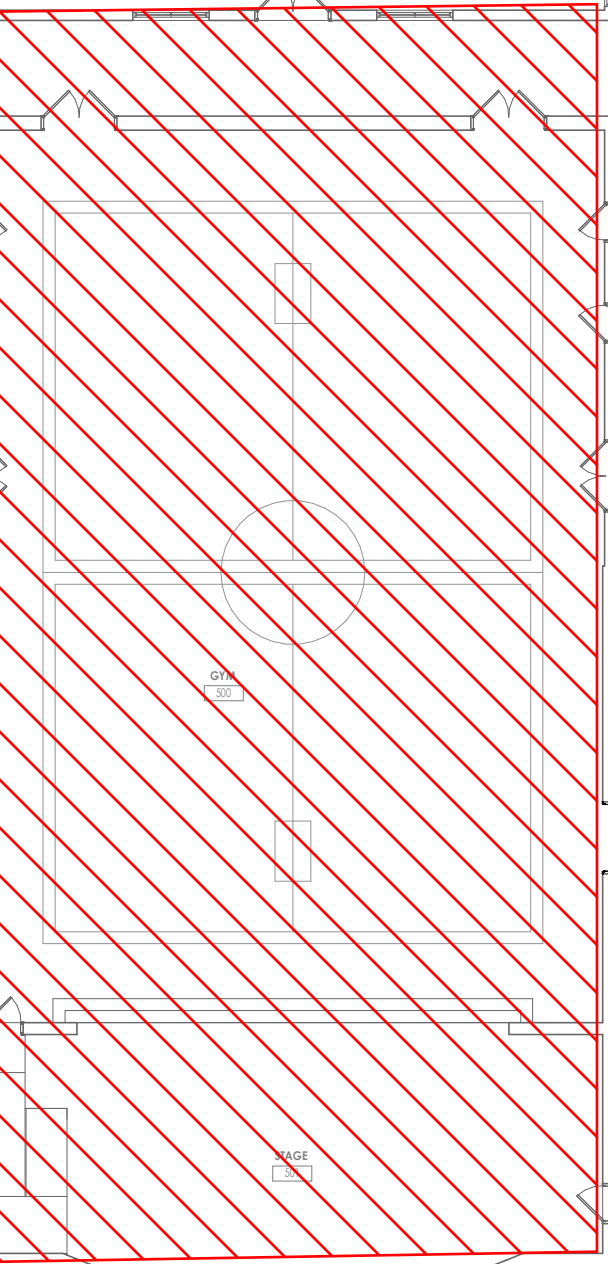
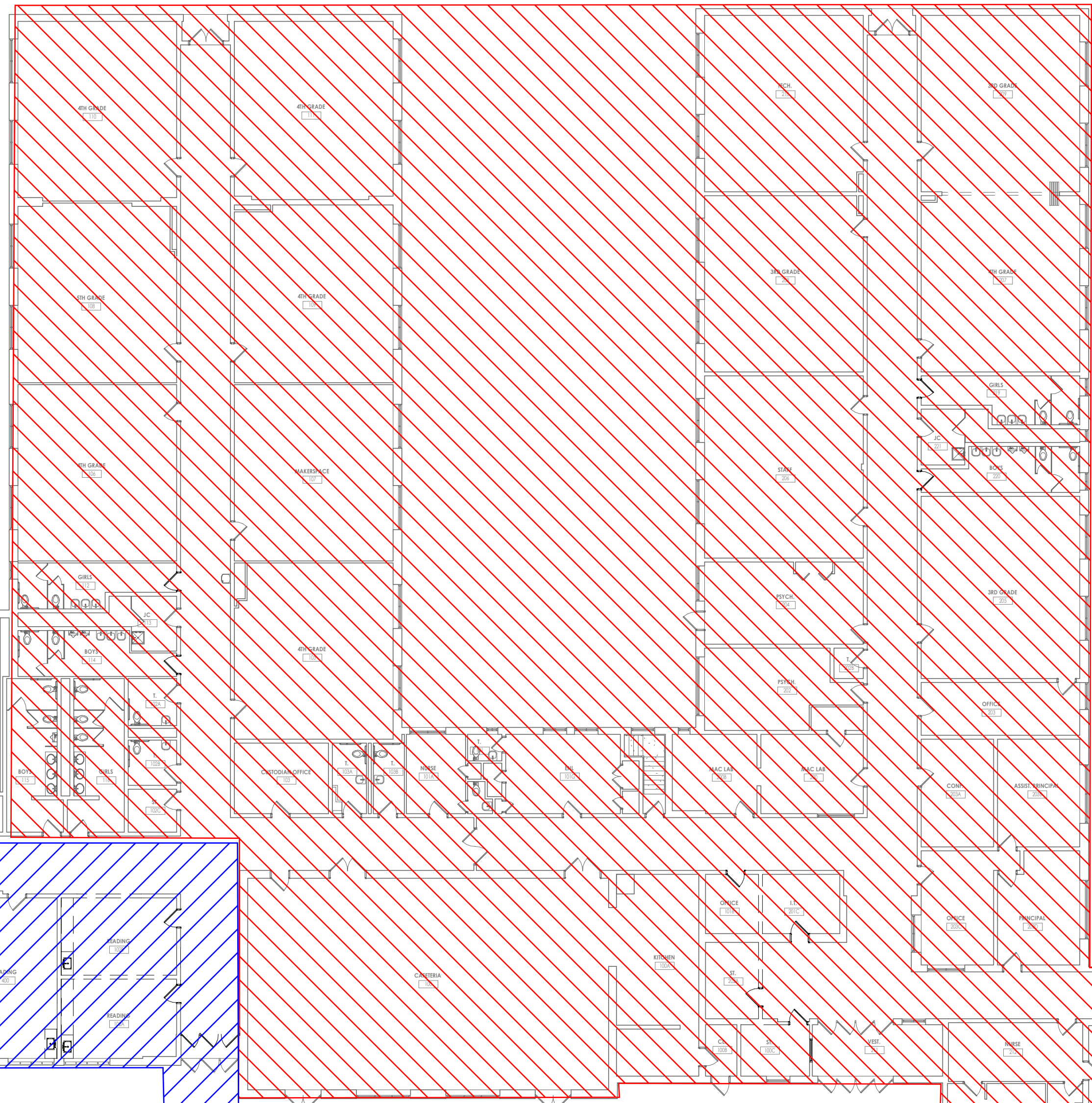
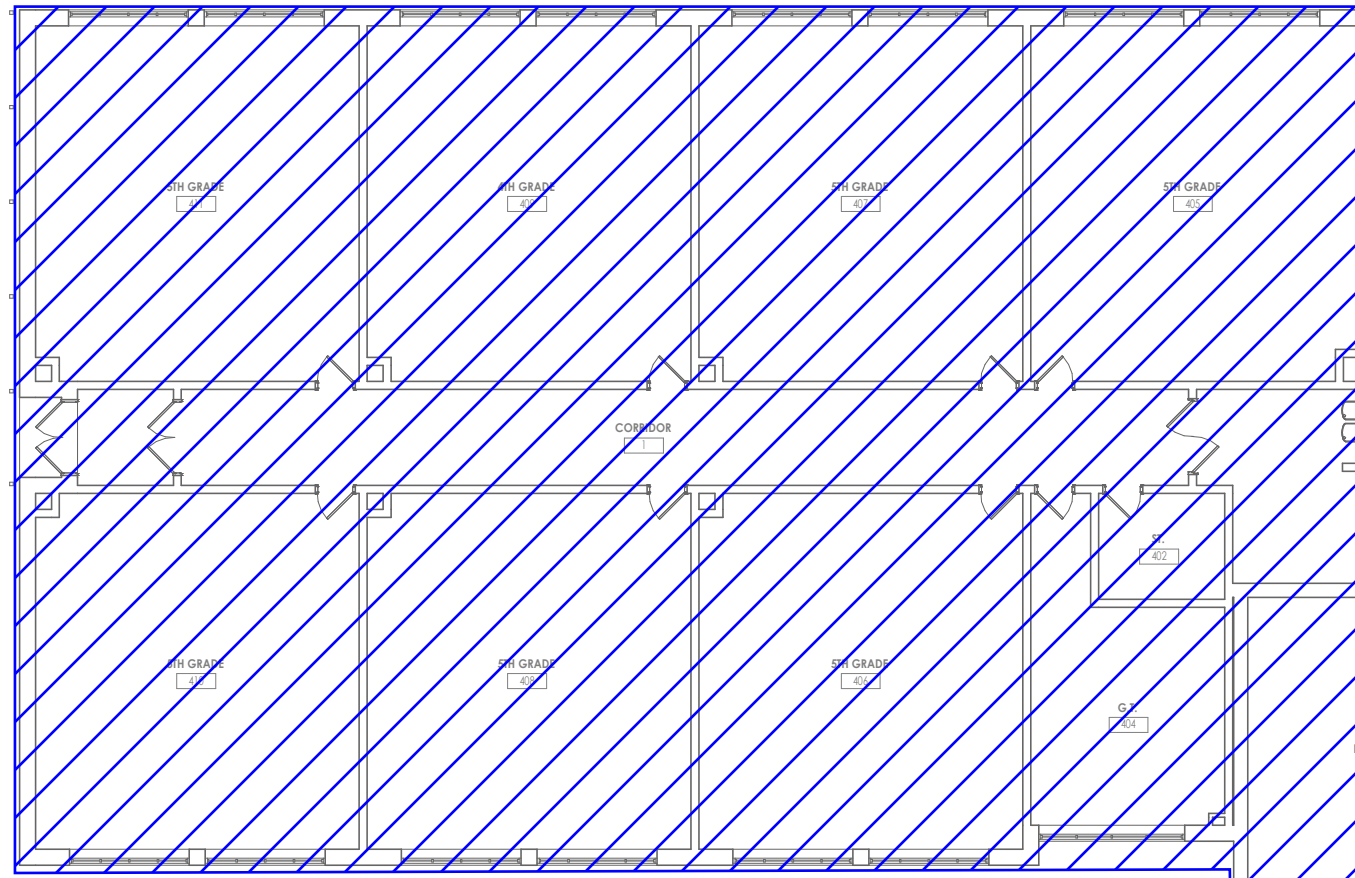
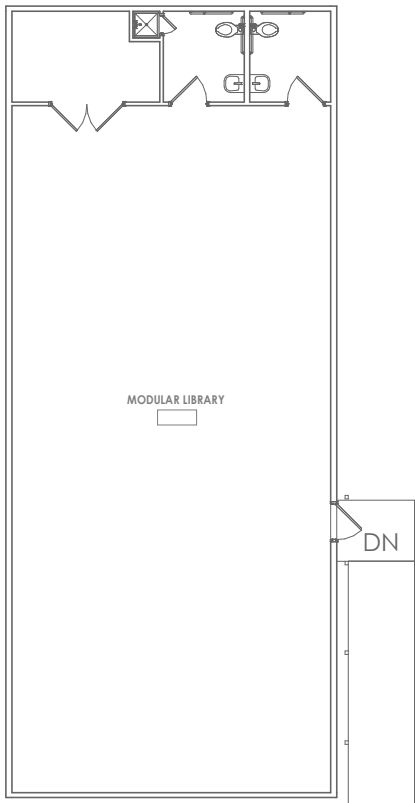
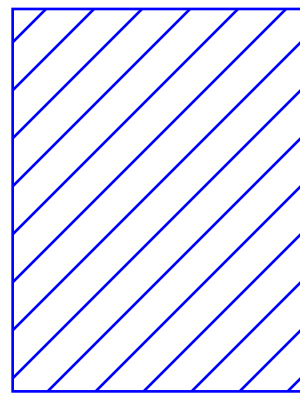
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1/16" = 1'-0"
Checked By
LT

Drawing Number

WOS
101

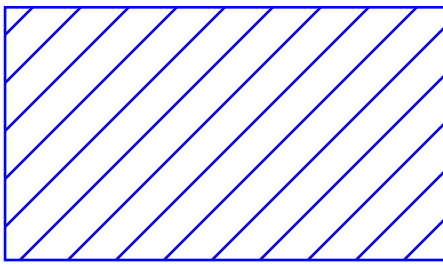
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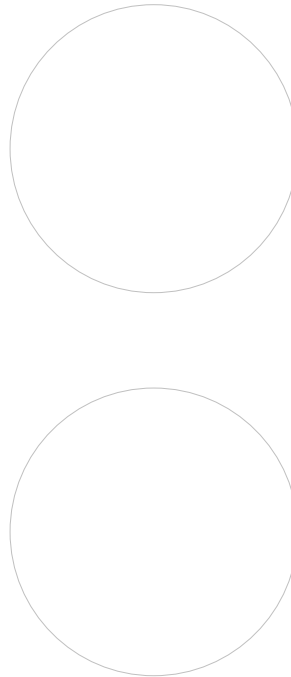
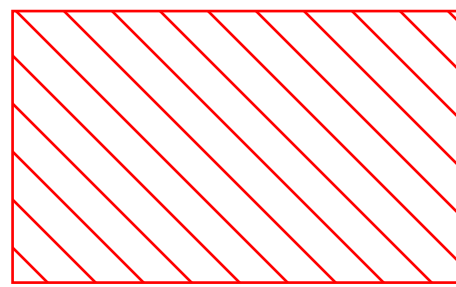


TRUE NORTH
1
101
1/16" = 1'-0"

Summer 2024 Work Areas- includes Outdoor Classroom, Fitness Path and canopy. Substantial Completion August 23, 2024



Summer 2025 Work Areas Substantial Completion August 22, 2025



SECTION 01 1200
MULTIPLE CONTRACT SUMMARY

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes a summary of each contract, including responsibilities for coordination and temporary facilities and controls.
- B. Specific requirements of each contract are also indicated in individual Specification Sections and on Drawings.
- C. Related Sections include the following:
 - 1. Division 01 Section "Summary" for the Work covered by the Contract Documents, restrictions on use of the premises, Owner-occupancy requirements, and work restrictions.
 - 2. Division 01 Section "Project Management and Coordination" for general coordination requirements.
 - 3. Division 01 Section "Temporary Facilities and Controls" for specific requirements for temporary facilities and controls.

1.02 DEFINITIONS

- A. Permanent Enclosure: As determined by Architect, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.03 PROJECT COORDINATOR

- A. Project Coordinator shall be responsible for coordination between the General Construction Contract, Plumbing Contract, Mechanical Contract, and Electrical Contract
 - 1. Construction Manager shall act as Project Coordinator.

1.04 GENERAL REQUIREMENTS OF CONTRACTS

- A. Extent of Contract: Unless the Agreement contains a more specific description of the Work, names and terminology on Drawings and in Specification Sections determine which contract includes a specific element of Project.
 - 1. Unless otherwise indicated, the Work described in this Section for each contract shall be complete systems and assemblies, including products, components, accessories, and installation required by the Contract Documents.
 - 2. This project requires all contractors to work a SIX-day week, Monday through Saturday.
 - 3. Local custom and trade-union jurisdictional settlements do not control the scope of the Work of each contract. When a potential jurisdictional dispute or similar interruption of work is first identified or threatened, affected contractors shall negotiate a reasonable settlement to avoid or minimize interruption and delays.
 - 4. All contractors are responsible for the removal and reinstallation of ceilings where work must be installed above a ceiling not scheduled for removal.
 - 5. Concrete floor cutting and removal is the work of the General Construction Contractor. Trenching and backfill for the Work of each contract shall be provided by each contract for its own Work unless otherwise called out.
 - 6. Cutting and Patching: Provided by each contract for its own Work, unless otherwise called out. Concrete floor patching is the work of the General Construction Contractor.
 - 7. Through-penetration firestopping for the Work of each contract shall be provided by each contract for its own Work.
 - 8. Roof-mounted equipment curbs shall be provided by each contract for its own work. The General Construction Contract shall install.

9. Within five working days after preliminary horizontal bar-chart-type construction schedule submittal has been received from Project Coordinator, submit a matching preliminary horizontal bar-chart schedule showing construction operations sequenced and coordinated with overall construction.
 10. Project closeout requirements.
 11. Each Contractor shall review the facility asbestos report to become familiar with any materials that may contain asbestos. If the contractor encounters materials that have not been tested for asbestos, he shall cease work and contact the Palombo Group, Inc. The Contractor will be held responsible for clean-up costs if they continue to remove materials that have not been tested for asbestos.
 12. The Owner has implemented an employee verification program. All contractors are required to submit a photo along with the name and address of each employee that will work on district property at least 3 days prior to commencing work.
- B. Substitutions: Each contractor shall cooperate with other contractors involved to coordinate approved substitutions with remainder of the Work.
1. Project Coordinator shall coordinate substitutions.
- C. Temporary Facilities and Controls: In addition to specific responsibilities for temporary facilities and controls indicated in this Section and in Division 01 Section "Temporary Facilities and Controls," each contractor is responsible for the following:
1. Installation, operation, maintenance, and removal of each temporary facility usually considered as its own normal construction activity, and costs and use charges associated with each facility.
 2. Plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
 3. Its own field office, complete with necessary furniture, utilities, and telephone service.
 4. Its own storage and fabrication sheds.
 5. Its own dust protection to control dust where dust partitions are not scheduled or shown on the drawings but are necessary to protect the building from dust contamination.
 6. Temporary enclosures for its own construction activities.
 7. Staging and scaffolding for its own construction activities.
 8. General hoisting facilities for its own construction activities, up to 2 tons.
 9. Waste disposal, including collection and legal disposal of its own hazardous, dangerous, unsanitary, or other harmful waste materials.
 10. Daily Progress Cleaning of its own areas and dust/debris daily. This includes daily sweeping.
 11. Secure lockup of its own tools, materials, and equipment.
 12. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.
 13. Temporary heat to protect to install and protect the work is place where scheduled temporary heat is not in place or not called for in the contract documents.
 14. Provide temporary electric generators where scheduled permanent power or temporary power is not in place.
- D. Temporary Heating, Cooling, and Ventilation: The General Construction Contract is responsible for temporary heating, cooling, and ventilation, including utility-use charges, temporary meters, and temporary connections.
- E. Temporary ventilation: Each Contractor is to control fumes from construction operations including interior painting and "off gassing" of new finish materials.

1.05 GENERAL CONSTRUCTION CONTRACT

- A. Work in the General Construction Contract includes, but is not limited to, the following:
1. Remaining work not identified as work under other contracts.

2. Site preparation, including clearing, building demolition and relocations, and earthwork. This includes excavation backfill and compaction for structures.
 3. Site improvements, including roadways, parking lots, pedestrian paving, seeding, and landscaping.
 4. Foundations, including footings, foundation and retaining walls for Site related components. All concrete walks, ramps, stairs including earthwork.
 5. Selective demolition as shown on the drawings.
 6. Shoring bracing and underpinning related to the General Construction work.
 7. Slabs-on-grade, including earthwork, subdrainage systems, and insulation.
 8. Below-grade building construction, including excavation, backfill, and thermal and moisture protection.
 9. Roofing, including blocking, insulation, coverings, portals, and flashings.
 10. Interior construction, including partitions, doors, hardware, interior glazed openings, and fittings. Acoustic ceilings, soffits, and ceiling modifications as shown on "A" series Drawings. Provide an additional 10% by area of new acoustic ceiling tile to match.
 11. Exterior construction, including pavilions, walks, ramps, stairs, and railings.
 12. Fire-protection specialties.
 13. Interior finishes, finish carpentry and built-in casework.
 14. Professional cleaning upon substantial completion includes furniture cleaning/dusting, window washing, vacuuming of carpeting, stripping and waxing of flooring in all areas affected by this Capital Project. Substantial completion dates are shown in the Milestone Schedule.
- B. Temporary facilities and controls in the General Construction Contract include, but are not limited to, the following:
1. Temporary facilities and controls that are not otherwise specifically assigned to the Plumbing Contract, Mechanical Contract or Electrical Contract.
 2. Sediment and erosion control.
 3. Unpiped sewers and drainage, including drainage ditches, dry wells, stabilization ponds, and containers.
 4. Storm water control.
 5. Unpiped temporary toilet fixtures, wash facilities, including disposable supplies.
 6. Temporary enclosure for building exterior, except as indicated.
 7. Temporary roads and paved areas.
 8. Dewatering facilities and drains.
 9. Excavation support and protection, unless required solely for the Work of another contract.
 10. Special or unusual hoisting requirements for construction activities, including hoisting loads in excess of 2 tons, hoisting material or equipment into spaces below grade, and hoisting requirements outside building enclosure.
 11. General waste disposal facilities.
 12. Temporary stairs.
 13. Temporary fire-protection equipment.
 14. Site enclosure fence, barricades, warning signs.
 15. Covered walkways.
 16. Security enclosure and lockup.
 17. Environmental protection.
 18. Restoration of Owner's existing facilities used as temporary facilities.
- C. Work in the General Construction Contract includes, but is not limited to, the work included in each of the following:
1. Division 00 "Procurement and Contracting Requirements" as it pertains to Work of this Contract.

2. Division 01 "General Requirements" as it pertains to Work of this Contract.
 3. Division 2 "Existing Conditions"
 4. Division 3 "Concrete."
 5. Division 4 "Masonry."
 6. Division 5 "Metals."
 7. Division 6 "Wood, Plastics, and Composites."
 8. Division 7 "Thermal and Moisture Protection"
 9. Division 8 "Openings"
 10. Division 9 "Finishes,"
 11. Division 10 "Specialties."
 12. Division 11 "Equipment."
 13. Division 12 "Furnishings."
 14. Division 31 "Earthwork."
 15. Division 32 "Exterior Improvements."
- D. Work in the General Construction Contract includes, but is not limited to, the work included in each of the following Drawings.
1. **All Prefix "U" Drawings**
 2. **All Prefix "C" Drawings**
 3. **All Prefix "S" Drawings**
 4. **All Prefix "A" Drawings**
 5. All references to other drawings from drawings listed above.

1.06 MECHANICAL CONTRACT

- A. Work of the HVAC Contract includes, but is not limited to, the following:
1. Removal and salvage of existing acoustic ceilings not otherwise shown on "A" Drawings, but required for Mechanical work. Replacement of salvaged ceiling tiles in affected areas. Provide an additional 10 % by area of new acoustic ceiling tile to match.
 2. Demolition of existing systems as shown in the drawings.
 3. Site hydronic distribution.
 4. HVAC systems and equipment.
 5. HVAC instrumentation and controls.
 6. HVAC testing, adjusting, and balancing.
- B. Work in the Mechanical Contract includes, but is not limited to, the following:
1. Division 00 "Procurement and Contracting Requirements" as it pertains to Work of this Contract.
 2. Division 01 "General Requirements" as it pertains to Work of this Contract.
 3. Section 024119 "Selective Structure Demolition" for shutoff of utilities or removal of equipment and fixtures where indicated.
 4. Section 078413 "Penetration Firestopping."
 5. Section 083113 "Access Doors and Frames" for furnishing of access doors where required for installation by others.
 6. Section 099123 "Interior Painting" for painting of pipes and ducts for identification where indicated.
 7. Division 23 "Heating Ventilating and Air Conditioning" except for the following Sections:
- C. Work in the Mechanical Construction Contract includes, but is not limited to, the work included in each of the following Drawings.
1. **All Prefix "A" Drawings**
 2. **All Prefix "U" Drawings**
 3. **All Prefix "H" Drawings**

1.07 PLUMBING CONTRACT

- A. Work of the Plumbing Contract includes, but is not limited to, the following:
 - 1. Demolition of the existing systems as shown in the drawings.
 - 2. Domestic water supply and distribution.
 - 3. Piped sanitary sewerage.
 - 4. Plumbing fixtures and drinking fountains
 - 5. Plumbing connections to existing systems and temporary facilities and controls furnished by the General Construction Contract.
- B. Work in the Plumbing Contract includes, but is not limited to, the following:
 - 1. Division 00 "Procurement and Contracting Requirements" as it pertains to Work of this Contract.
 - 2. Division 01 "General Requirements" as it pertains to Work of this Contract.
 - 3. Section 024119 "Selective Structure Demolition" for shutoff of utilities where indicated.
 - 4. Section 078413 "Penetration Firestopping."
 - 5. Section 083113 "Access Doors and Frames" for furnishing of access doors where required for installation by others.
 - 6. Section 099123 "Interior Painting" for painting of pipes for identification where indicated.
 - 7. Division 22 "Plumbing."
- C. Temporary facilities and controls in the Plumbing Contract include, but are not limited to, the following:
 - 1. Piped sewerage and drainage.
 - 2. Piped gas service.
 - 3. Piped water service.
 - 4. Piped temporary toilet fixtures, wash facilities, and drinking water facilities.
 - 5. Plumbing connections to existing systems and temporary facilities and controls furnished by the General Construction Contract.
- D. Work in the Plumbing Construction Contract includes, but is not limited to, the work included in each of the following Drawings.
 - 1. **All Prefix "A" Drawings**
 - 2. **All Prefix "P" Drawings**
 - 3. All references to other drawings from drawings listed above.

1.08 HAZARDOUS MATERIALS CONTRACT

- A. Work in the Hazardous Materials Contract includes, but is not limited to :
 - 1. Division 00 "Procurement and Contracting Requirements as it pertains to the Work of this contract.
 - 2. Division 01 General Requirements" as it pertains to the work of this contract.
 - 3. Division 02 "Existing Conditions" as it pertains to the work of this contract.
- B. Temporary facilities and controls in the Hazardous Materials contract include, but are not limited to:
 - 1. Temporary hard wall and soft wall barriers required by AHJ. Multiple barriers and containment walls are to be installed and moved per the Phasing Plans
 - 2. Temporary flooring in areas abated during the school breaks, (nurses office e.g.)
- C. Work in the Hazardous Materials Contract includes, but is not limited to the work included in each of the following Drawings:
 - 1. **All Prefix "U" Drawings**
 - 2. **All Prefix HZ Drawings**

1.09 ELECTRICAL CONTRACT

- A. Work in the Electrical Contract includes, but is not limited to, the following:

1. Removal and salvage of existing acoustic ceilings not otherwise shown on "A" Drawings, but required for Electrical work. Reinstall all salvaged tiles upon completion of work.
 2. Demolition of existing systems as shown in the drawings.
 3. All Sound and Lockdown work as shown in the drawings.
 4. All power, data, and fire alarm work as shown in the drawings.
 5. Powering all devices and equipment supplied by other Primes requiring power.
- B. Work in the Electrical Contract includes, but is not limited to the following:
1. Division 00 "Procurement and Contracting Requirements" as it pertains to Work of this Contract.
 2. Division 01 "General Requirements" as it pertains to Work of this Contract.
 3. Section 024119 "Selective Structure Demolition" for shutoff of utilities or removal of equipment and fixtures where indicated.
 4. Division 3 "Concrete." as it pertains to Work of this Contract.
 5. Division 9 specifically exterior painting as it pertains to this work.
 6. Division 26 "Electrical."
 7. Division 28 Conductors and Cables for Electronic Safety & Security
 8. Division 33 "Utilities" Sections as pertain to this work.
- C. Temporary facilities and controls in the Electrical Contract include, but are not limited to, the following:
1. Electric power service and distribution.
 2. Lighting, including site lighting.
 3. Electrical connections to existing systems and temporary facilities and controls furnished by the General Construction, Mechanical, or Plumbing Contractor(s).
 4. Energizing and de-energizing temporary panels for the Hazardous Materials contractor, as needed.
- D. Work in the Electrical Construction Contract includes, but is not limited to, the work included in each of the following Drawings.
1. **All Prefix "A" Drawings**
 2. **All Prefix "U" Drawings**
 3. **All Prefix "E" Drawings**
 4. All references to other drawings from drawings listed above.

1.10

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 012200
UNIT PRICES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Sections:
 - 1. Section 012600 - Contract Modification Procedures: Procedures for submitting and handling Change Orders.
 - 2. Section 012100 - Allowances: Procedures for using Unit Prices with Allowances.

1.2 DEFINITIONS

- A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections indicated in the "Schedule of Unit Prices" for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 SCHEDULE OF UNIT PRICES

- A. GENERAL CONSTRUCTION
 - 1. Unit Price No. GC-1: Ceiling Tile
 - a. Description: Labor to remove ceiling tile and install new from attic stock, purchased through base bid.
 - b. Unit of Measurement: Per 4 Square Feet of ceiling tile
- B. MECHANICAL CONSTRUCTION
 - 1. Unit Price No. MC-1: Ceiling Tile
 - a. Description: Labor to remove ceiling tile and install new from attic stock, purchased through base bid.
 - b. Unit of Measurement: Per 4 Square Feet of ceiling tile
- C. HAZARDOUS MATERIALS ABATEMENT

1. Unit Price No. HZ-1: Abatement of Asbestos containing Pipe Fittings
 - a. Description: Provide all labor, materials and equipment necessary, including tents to remove pipe fittings.
 - b. Unit of Measurement: Per fitting
 2. Unit Price No. HZ-2: Abatement of Asbestos containing Pipe Insulation
 - a. Description: Provide all labor, materials and equipment necessary, including tents to remove linear pipe insulation.
 - b. Unit of Measurement: Per Linear Foot
 3. Unit Price No. HZ-3: Abatement of VAT flooring
 - a. Description: Provide all labor, materials and equipment necessary, including tents to remove VAT flooring.
 - b. Unit of Measurement: Per Square Foot
- D. ELECTRIC CONSTRUCTION
1. Unit Price EC-1: Cat 6 Cable (1 - 100ft.)
 - a. Description: 100 Ft of Category 6 cable - includes providing and installation and testing of (1) network station location consisting of : 1' to 100', 4 pair, 23 AWG, Category 6 station cable , plenum jacket, (1) 1 port surface mounted box, (1) RJ45 Cat 6 Jack and labeling on both ends.
 - b. Unit Of Measurement: Each
 2. Unit Price EC-2: Cat 6 Cable (101 - 200ft.)
 - a. Description: 100 Ft of Category 6 cable - includes providing and installation and testing of (1) network station location consisting of : 101' to 200', 4 pair, 23 AWG, Category 6 station cable , plenum jacket, (1) 1 port surface mounted box, (1) RJ45 Cat 6 Jack and labeling on both ends.
 - b. Unit Of Measurement: Each
 3. Unit Price EC-3: Cat 6 Cable (201 - 300ft.)
 - a. Description: 100 Ft of Category 6 cable - includes providing and installation and testing of (1) network station location consisting of : 201' to 300', 4 pair, 23 AWG, Category 6 station cable , plenum jacket, (1) 1 port surface mounted box, (1) RJ45 Cat 6 Jack and labeling on both ends.
 - b. Unit Of Measurement: Each
 4. Unit Price EC-4: Rauland 8 Inch Analog Recessed Ceiling Speaker
 - a. Description: All Material and labor to install an Rauland 8 Inch Analog Ceiling Speaker, mounting accessories, and 100 ft of speaker wiring.
 - b. Unit Of Measurement: Each
 5. Unit Price EC-5: Rauland 8 Inch Analog Surface Speaker Assembly
 - a. Description: All Material and labor to install an Rauland 8 Inch Analog surface speaker assembly with backbox and baffle, mounting accessories, and 100 ft of speaker wiring.
 - b. Unit Of Measurement: Each
 6. Unit Price EC-6: Rauland 2x2 Ceiling Panel with 8 Inch Analog Ceiling Speaker
 - a. Description: All Material and labor to install an Rauland 2x2 ceiling panel with 8 Inch Analog Ceiling Speaker (BAFKIT2X2L), mounting accessories, and 100ft of speaker wiring. Also, include all cost for ceiling T-bar modifications.
 - b. Unit Of Measurement: Each
 7. Unit Price EC-7: Rauland Analog Exterior Horn
 - a. Description: All Material and labor to install an Rauland Analog exterior horn (3602), mounting accessories, and 100 ft of speaker wiring.
 - b. Unit Of Measurement: Each
 8. Unit Price EC-8: Classroom / Office IP Speaker & Display Assembly

- a. Description: All Material and labor to install Rauland Classroom & Office IP Speaker and Electronic Display with associated Back box and baffle. Installation shall include all integration services to program the new speaker and electronic display on the Rauland Telecenter System.
 - b. Unit Of Measurement: Each
9. Unit Price EC-9: Rauland Small Message Board / Display
- a. Description: All Material and labor to install Rauland Small Message Board / Display (TCC3011S) with associated mounting hardware. Installation shall include all integration services to program the electronic display on the Rauland Telecenter System.
 - b. Unit Of Measurement: Each
10. Unit Price EC-10: Rauland Large Message Board / Display
- a. Description: All Material and labor to install Rauland Small Message Board / Display (TCC3012L) with associated mounting hardware. Installation shall include all integration services to program the electronic display on the Rauland Telecenter System.
 - b. Unit Of Measurement: Each

END OF SECTION

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SECTION 01 5001**TEMPORARY FACILITIES & CONTROLS-MULTIPLE PRIME CONTRACTS****PART 1 GENERAL****1.01 SUMMARY**

- A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection for Multiple Prime Contract projects.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. Water service and distribution.
 - 2. Temporary electric power and light.
 - 3. Temporary heat.
 - 4. Ventilation and Humidity Control
 - 5. Telephone service.
 - 6. Sanitary facilities, including drinking water.
 - 7. Storm and sanitary sewer.
- C. Support facilities include, but are not limited to, the following:
 - 1. Field offices and storage containers.
 - 2. Temporary roads and paving.
 - 3. Dewatering facilities and drains.
 - 4. Temporary partitions and enclosures.
 - 5. Hoists and temporary elevator use.
 - 6. Temporary project identification sign and project signage.
 - 7. Waste disposal services and dumpsters.
 - 8. Construction aids and miscellaneous services and facilities.
- D. Security and protection facilities include, but are not limited to, the following:
 - 1. Temporary fire protection.
 - 2. Barricades, warning signs, and lights.
 - 3. Environmental protection.
 - 4. Tree and plant protection.
 - 5. Security enclosure and lockup.
 - 6. Temporary enclosures.
 - 7. Temporary partitions.
 - 8. Sidewalk Bridge for maintaining legal exits.
 - 9. Enclosure fence for the work site.
 - 10. Environmental Protection
- E. Related Sections:
 - 1. Division 01 Section "Summary" for work restrictions and limitations on utility interruptions.

1.02 INFORMATIONAL SUBMITTALS

- A. Temporary Utilities: Each prime contractor shall submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- B. Implementation and Termination Schedule: Within 15 days of the date established for submittal of the Contractor's Construction Schedule, each prime contractor shall submit a schedule indicating implementation and termination of each temporary utility for which the Contractor is responsible.
- C. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

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- D. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent
 - E. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
 - F. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage, including delivery, handling, and storage provisions for materials subject to water absorption or water damage, discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water damaged Work.
 - 1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
 - 2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
 - 3. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
 - G. Dust-Control and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust-control and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
 - 1. Locations of dust-control partitions at each phase of the work.
 - 2. HVAC system isolation schematic drawing.
 - 3. Location of proposed air filtration system discharge.
 - 4. Other dust-control measures.
 - 5. Waste management plan.
 - H. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.03 DEFINITIONS

- A. Temporary Enclosure: As determined by Architect, temporary roofing is complete, insulated, all exterior wall openings are closed with temporary closures.
- B. Permanent Enclosure: As determined by Architect, permanent roofing is complete, insulated, and weather tight; exterior walls are insulated and weather tight; and all openings are closed with permanent construction or substantial temporary closures.
- C. Temporary Facilities: Construction, fixtures, fittings, and other built items required to accomplish the work but which are not incorporated into the finished work.
- D. Temporary Utilities: A type of temporary facility, primary sources of electric power, water, natural gas supply, etc., obtained from public utilities, other main distribution systems, or temporary sources constructed for the project, but not including the fixtures and equipment served.
- E. Temporary Services: Activities required during construction, which do not directly accomplish the work.

1.04 QUALITY ASSURANCE

- A. Regulations: The contractor shall comply with industry standards and with applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 - 1. Building code requirements.

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2. Health and safety regulations.
 3. Utility company regulations.
 4. Police, fire department and rescue squad rules.
 5. Environmental protection regulations.
- B. Standards: The Contractor shall comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."
- C. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with the normal application of trade regulations and union jurisdictions.
- D. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.05 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Architect, testing agencies, and authorities having jurisdiction.
1. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
 2. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
 3. Gas Service from Existing System: Gas Service from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- B. Cost or use charges for temporary facilities are not chargeable to the Owner or the Architect. The Architect will not accept a prime contractor's cost or use charges for temporary services or facilities as a basis of claim for an adjustment in the Contract Sum or the Contract Time.
- C. Other entities using temporary services and facilities include, but are not limited to, the following:
1. Other nonprime contractors.
 2. The Owner's work forces.
 3. Occupants of the Project.
 4. The Architect.
 5. The Construction Manager.
 6. Testing agencies.
 7. Personnel of government agencies.

1.06 PROJECT CONDITIONS

- A. Temporary Utilities: Each prime contractor shall prepare a schedule indicating dates for implementation and termination of each temporary utility for which the Contractor is responsible. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of permanent service.

- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.
- C. Temporary Use of Permanent Facilities: If the Owner permits temporary use of the permanent facilities the Installer of each permanent service shall assume responsibility for its operation, maintenance, and protection during use as a construction facility prior to the Owner's acceptance, regardless of previously assigned responsibilities.

1.07 DIVISION OF RESPONSIBILITIES

- A. General: These Specifications assign each prime contractor specific responsibilities for providing certain temporary facilities used by other prime contractors and other entities at the site. The Contractor for General Construction is responsible for providing temporary facilities and controls that are not normal construction activities of other prime contractors and are not specifically assigned otherwise by this specification.
- B. EACH PRIME CONTRACTOR is responsible for the following:
 - 1. Installation, operation, maintenance, and removal of each temporary facility usually considered as its own normal construction activity, as well as the costs and use charges associated with each facility.
 - 2. Plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
 - 3. Its own field office complete with necessary furniture, utilities, and telephone service.
 - 4. Its own storage containers for tools and storage of materials not incorporated into the building construction.
 - 5. Dewatering for their own construction operations.
 - 6. Temporary heat, ventilation, humidity control, and enclosure of the building prior to "Permanent Enclosure" where these facilities are necessary for its construction activity to protect the work but have not yet been completed by the responsible prime contractor.
 - a. Temporary ventilation to control temperature and humidity is required by the Contractor responsible for installing the specified finish and equipment as these finishes may be damaged by excessive humidity or promote the growth of mold. The permanent HVAC system shall not be relied upon to provide the necessary ventilation or conditioning of the humidity in the building. Each Contractor is required to protect their work in place and provide the necessary ventilation and or humidity control.
 - 7. Temporary Generator if electrical power is not installed to the site.
 - 8. Collection and disposal of its own hazardous, dangerous, unsanitary, or other harmful waste material.
 - 9. Daily cleaning includes collection of its waste material and transporting to a dumpster and daily sweeping.
 - 10. Secure lockup of its own tools, materials, and equipment.
 - 11. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.
- C. The General Construction Contractor is responsible for the following:
 - 1. Temporary Sewers
 - 2. Temporary water service
 - 3. Erosion control
 - 4. Temporary roads and Parking areas unless otherwise noted.

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5. Barricades, warning signs, and lights.
 6. Dumpsters for the use by all trades on this project.
 7. Dust control for site work
 8. Snow and ice removal from all site construction areas.
 9. Containerized tap dispenser drinking-water with paper cup supply for their workers.
 10. Barricades, warning signs, and lights related to the building work.
 11. Temporary security fencing.
 12. Temporary safety railings and stairs.
 13. Temporary toilets, including disposable supplies.
 14. Temporary enclosure of the building's roof windows and doors. Prior to "Permanent Enclosure"
 15. Temporary Ventilation and Humidity Control: Provide temporary ventilation in areas of confined space. Provide Dehumidification units where required upon building enclosure to protect installed finishes and moisture sensitive building materials.
 16. Temporary partitions indicated on drawings or specifically called for in specifications, required for project phasing or necessary to perform the work.
 17. Project safety signage.
- D. The Plumbing Contractor is responsible for the following:
1. Piped temporary water service from 5" ft. outside the building to a point inside the building.
 2. Temporary gas service.
 3. Temporary gas service to building heating units after temporary or permanent enclosure.
 4. Temporary piping for roof drains not permanently connected.
 5. Temporary sewers and drainage from 5" ft. outside the building to a point inside the building
- E. The Mechanical/ HVAC Contractor is responsible for the following:
1. Temporary Heat after "Permanent Enclosure" where the permanent heating system is not ready for use or cannot be used including fuel costs.
 2. Temporary heat, upon "Permanent Enclosure" of the building, including fuel costs.
 3. Temporary Ventilation and Humidity Control: Provide temporary ventilation in areas of confined space. Provide Dehumidification units where required upon building enclosure to protect installed finishes and moisture sensitive building materials.
- F. The Electrical Contractor is responsible for the following:
1. Temporary electric power service and branch distribution.
 2. Temporary generator.
 3. Temporary site lighting.
 4. Temporary lighting.
 5. Energizing and de-energizing of temporary panels for the abatement contractor(s).
 6. Electric Power Service: Use electric power from the Owner's existing system without metering and without payment of use charges.
 7. Electric Power Service: The Electrical Contractor shall pay electric power service use charges, whether metered or otherwise, for electricity used by the project office trailers at the Project Site.
- G. The Hazardous Materials Contractor is responsible for the following:
1. Temporary Flooring for the Spring abatement areas.
 2. All partitions to isolate their work from the other trades,
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PART 2 PRODUCTS**2.01 MATERIALS**

- A. General: Each prime contractor shall provide new materials, unless noted otherwise on drawings. If acceptable to the Architect, undamaged, previously used materials in serviceable condition may be used. Provide materials suitable for use intended.
- B. Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry."
 - 1. For job-built sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding.
 - 2. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch-thick exterior plywood.
- C. Gypsum Wallboard: Provide 5/8 type x gypsum wallboard on interior walls of temporary offices or temporary partitions.
- D. Roofing Materials: Provide UL Class A standard-weight asphalt shingles or UL Class C mineral-surfaced roll roofing on roofs of job-built temporary offices, shops, and sheds.
- E. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- F. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.
- G. Dust-Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches.
- H. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.
- I. Water: Provide potable water approved by local health authorities.
- J. Portable Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide concrete or galvanized steel bases for supporting posts.
- K. Open-Mesh Fencing: Provide 0.12-inch- thick, galvanized 2-inch chain link fabric fencing 6 feet high and galvanized steel pipe posts, 1-1/2 inches I.D. for line posts and 2-1/2 inches I.D. for corner posts.

2.02 EQUIPMENT

- A. General: Each prime contractor shall provide new equipment. If acceptable to the Architect, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.
- B. Water Hoses: Provide 3/4-inch heavy-duty, abrasion-resistant, flexible rubber hoses 100 feet long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- C. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-V plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- D. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.

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- E. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.
 - F. Heating and ventilating units: Provide temporary heating and ventilating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.
 - 1. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - a. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - b. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
 - c. Retain MERV of 8 for LEED-NC or LEED-CI Credit EQ 3.1.
 - 2. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return air grille in system and remove at end of construction and clean HVAC system as required in Division 01 Section "Closeout Procedures".
 - 3. Air Filtration Units: HEPA primary and secondary filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.
 - G. Temporary Toilet Units: The General Contractor shall provide self-contained, single-occupant toilet units of the chemical, aerated recirculation type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
 - H. Fire Extinguishers: Each prime contractor will provide hand-carried, portable, UL-rated; Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

2.03 TEMPORARY SUPPORT FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Temporary Field Offices: Each prime contractor shall provide its own prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

2.04 TEMPORARY UTILITIES

- A. Temporary Sewer Service: The Contract for General Construction Contractor work is responsible for temporary sewer service until the permanent services are installed.
 - 1. This work includes but is not limited to excavation and backfill, holding tanks, freeze protection, disinfection and coordination with the sewer purveyor.]
- B. Temporary Water Service: The Contract for Plumbing Contractor work is responsible for temporary water service to the building until the permanent services are installed.

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1. This work includes but is not limited to excavation and backfill, tapping sleeves, temporary metering, freeze protection, disinfection and coordination with the water purveyor.
 - C. Temporary Gas Service: The Contract for Plumbing work is responsible for temporary gas service to the building until the permanent services are installed.
 1. This work includes but is not limited to excavation and backfill, temporary metering, and coordination with the gas purveyor.
 - D. Temporary Electric Service: The Contract for Electric work is responsible for temporary electric service to the building until the permanent services are installed.
 1. This work includes but is not limited to temporary utility poles, temporary metering, weather protected temporary panel with disconnect and coordination with the electric purveyor.
 - E. Telephone Service: Each contractor is responsible for his or her own telephone service.
 1. Provide at least one telephone at each site with answering machine.
 - a. Display construction-related phone numbers at each phone.
 - 1) Fire emergency number.
 - 2) Rescue emergency number.
 - 3) Physician.
 - 4) Prime Contractors' home offices.
 - 5) Owner's representative.
 - 6) Architect's representative
 2. Equip each project superintendent/ foremen with a cellular telephone. This person shall be able to receive emergency calls 24 hrs. a day, 7 days a week.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Each prime contractor shall provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.02 TEMPORARY UTILITY INSTALLATION

- A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.
 1. Arrange with the company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
 2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
 3. Obtain easements to bring temporary utilities to the site where the Owner's easements cannot be used for that purpose.
 - B. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
 - C. The contractor shall provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
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- D. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- E. Sewers and Drainage: If sewers are available, provide temporary connections to remove effluent that can be discharged.
1. Filter out excessive amounts of soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.
 2. Connect temporary sewers to the municipal system as directed by sewer department officials.
 3. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.
- F. Sanitary Facilities: The General Contractor will provide temporary toilets for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
1. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.
 2. Provide toilet tissue, paper towels, and similar disposable materials for each facility. Provide covered waste containers for used material.
- G. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to the Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- H. Drinking-Water Facilities: Each Contractor shall provide containerized, tap-dispenser, drinking-water units, including paper cup supply.
- I. Temporary Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
1. Connect temporary service to Owner's existing power source, as directed by Owner.
- J. Temporary Electric Power Service: The Electrical Contractor will provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics at each building addition and maintain them during construction period. Include overload-protected disconnects, automatic ground-fault interrupters.
1. Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations. Provide electric power for all other trades special equipment requiring power.
 2. Install electric power service underground, except where overhead service must be used.
 3. Power Distribution System: Install wiring overhead and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 V, ac 20 ampere rating, and lighting circuits may be nonmetallic-sheathed cable where overhead and exposed for surveillance.
 4. The Electrical Contractor will provide temporary power in the areas of renovation where the existing receptacles have been removed and the proximity to power source exceeds 50'.
 5. The Electrical Contractor will provide temporary engine generator sufficient to meet the demands of the construction work in progress when power has been temporarily disconnected or is required to keep existing building in operation during main electrical survive work.
 6. The Electrical Contractor will provide temporary power to the office trailers at the Project Site. All costs associated with providing utility poles, metering and utility company charges are included in the cost. Monthly costs for electric are the responsibility of the Electrical Contractor.
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7. Temporary Lighting: The Electrical Contractor will install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.
- When an overhead floor or roof deck has been installed, The Electrical Contractor will provide temporary lighting with local switching.
 - Security lighting for building exteriors shall be continuously operational and maintained.
 - Temporary lighting shall be maintained in accordance with OSHA standards for power and foot candle levels in all areas while workers occupy the space
 - The Electrical Contractor will provide temporary lighting in the areas of renovation where the existing fixtures have been removed and the new lighting has not been installed.
- K. Temporary Heat: Each prime contractor will provide temporary heat required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize energy consumption. Direct fired propane or Kerosene salamanders will not be permitted.
- L. Upon "Permanent Enclosure" of the building as determined by Article 1.3 the General Construction Contractor shall provide temporary heat until the permanent heating system can be utilized.
- Temporary Heat: Provide temporary heat in all existing areas that are under construction and/or have their permanent heat temporarily or permanently shut off for construction reasons.
 - Provide temporary heat in all new construction areas as soon as each area of new construction is fully enclosed: walls, roofs, insulation, and either windows and doors or temporary windows and doors.
 - Temporary heat provided shall be sufficient to maintain all areas of new, fully enclosed construction (and renovated areas of existing construction that, due to construction, are temporarily without permanent heat), including concealed ceiling or chase spaces, to a minimum 50 degrees F, 24 hours a day, in winter weather as cold as 15 degrees F outside.
 - Temporary heat must not damage any materials, new or existing, within or without the Project limits, on school property, nor shall it cause noxious odors or fumes or some other nuisance.
 - Temporary heat must be installed, operated, maintained, and dismantled in a safe, legal manner.
 - Provide adequate ventilation as required by Codes and labor laws in all areas of Project limits as part of the work of this Section.
- M. Heating Facilities: Except where the Owner authorizes use of the permanent system, the General Construction Contractor will provide vented, indirect fired, self-contained, LP-gas or fuel oil heaters with individual space thermostatic control.
- Use of direct-fired Kerosene-burning space heaters, open flame, or salamander-type heating units is prohibited.
 - Protect all permanent equipment put into services from dust, dust infiltration and soiling by installing filtering media at each supply and return outlet. Filters shall be changed in all air handling equipment including unit vents prior to owner occupancy. Failure to provide the necessary protection to the equipment may result in the contractor to be charged to clean the equipment and associated ductwork.
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- N. Ventilation and Humidity Control: The General Construction Contractor will provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.
- O. Temporary Telephones: Each prime contractor will require Project Superintendents / Foreman to carry cellular phones. The telephones shall be provided throughout the construction period for all personnel engaged in construction activities.
- P. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
1. Prior to commencing work, The Mechanical/ HVAC Contractor will isolate the HVAC system in area where work is to be performed in accordance with approved coordination drawings.
 - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
 - b. The General Contractor will maintain negative air pressure within work area using HEPA-equipped air filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
 2. The General Contractor will maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust containment devices.
 3. Each Contractor will perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

3.03 SUPPORT FACILITIES INSTALLATION

- A. Each prime contractor will locate field offices, storage trailers, sanitary facilities, and other temporary construction and support facilities for easy access.
1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
 2. Refer to the Construction Manager for locations of storage trailers.
- B. Field Offices: Each prime contractor shall provide their own field office, as needed.
- C. Storage trailers/ containers: Each prime contractor will install storage containers equipped to accommodate materials and equipment involved. Storage trailers are to be located at each site in the designated staging areas located on the phasing plans.
- D. Temporary Roads and Parking areas: Unless otherwise noted on the drawings or phasing plans the General Construction Contractor will construct and maintain temporary roads and parking areas to support the indicated loading adequately and to withstand exposure to traffic during the construction period. Locate temporary roads, storage areas, as indicated on the Phasing Plans.
1. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas in same location as permanent roads and paved areas. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
 2. Temporary Roads and Parking areas: Use granular materials that will support the intended loading and traffic and maintain the areas throughout the construction period.
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3. Install temporary paving to minimize the need to rework the installations and result in permanent roads and paved areas without damage or deterioration when occupied by the Owner.
 4. Extend temporary roads in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration, and supervision.
- E. Traffic Controls: Comply with requirements of authorities having jurisdiction.
1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- F. Temporary Parking: Parking areas will be as directed by the Construction Manager. Parking on the street or in owners designated lots is prohibited.
- G. Temporary Parking/Staging and Access Roads
1. Construction parking will not be allowed adjacent to the buildings or project.
 - a. Construction Manager will provide a site plan for construction parking.
 2. The General Construction Contractor will provide access for suitable parking areas. Re-grade and re-seed store any areas disturbed by parking/ staging.
 - a. Parking Areas: Includes contractors' employees and construction vehicle parking. Minimum of 6-inch reference Item. #304.3 course.
 - b. Access Roads: Includes access roads for delivery through staging area to building work areas, and to equipment and storage areas and sheds. Minimum of 10-feet wide, 9-inch reference Item. #304.3 course.
 - c. Temporary parking by construction personnel shall be allowed only in areas so designated. Owner does not have space for construction parking in existing parking lots or roadways and will subsequently have vehicles in violation of parking prohibitions towed from site and back-charged with all fees to the Contractor.
3. Traffic Regulations:
- a. Access through Owner's entrances shall be limited
 - b. Utilize only entrances/temporary roads as designated
 - c. Maintain all site traffic regulations.
- H. Dewatering Facilities and Drains: Each Contractor will comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
1. The General Construction Contractor will dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
 2. The General Construction Contractor will remove snow and ice as required to minimize accumulations.
- I. Collection and Disposal of Waste: Each prime contractor will collect waste from their construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. The owner will enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly.
- J. The General Construction Contractor will provide waste-collection containers in sizes adequate to handle waste from construction operations. The General Construction Contractor will provide dumpsters at each site for use by all other prime and subcontractors.
1. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.
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- K. Stairs: General Construction Contractor will provide temporary stairs in areas of new construction until permanent stairs are available. Provide temporary stairs where ladders are not adequate. Cover finished permanent stairs with a protective covering of plywood or similar material so finishes will be undamaged at the time of acceptance.
 - L. Existing Stair Usage: Use of Owner's existing stairs will be permitted, as long as stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.
 - 1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If, despite such protection, stairs become damaged, restore damaged areas so no evidence remains of correction work.
 - M. Temporary Lifts and Hoists: Each prime contractor will provide facilities for hoisting materials.
 - N. Temporary Elevator Use: Use of the owner's existing elevators will not be permitted.

3.04 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Temporary Facility Changeover: Except for using permanent fire protection as soon as available, do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Architect.
 - B. Protection of Existing Facilities: Each contractor will protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
 - C. Environmental Protection: Each contractor will provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects. Avoid using tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.
 - 1. Comply with work restrictions specified in Division 01 Section "Summary."
 - D. Temporary Erosion and Sedimentation Control: The General Construction Contractor will provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion and sedimentation-control Drawings and requirements of EPA Construction General Permit or authorities having jurisdiction ,whichever is more stringent.
 - 1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant- protection zones.
 - 2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
 - 3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from the project site during the course of the project.
 - 4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
 - E. Stormwater Control: The General Construction Contractor will comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
 - F. Temporary Site Lighting: The Electrical Contractor Install exterior yard and sign lights so signs are visible when Work is being performed.
 - G. Tree and Plant Protection: The General Construction Contractor will install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
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- H. Enclosure Fence: The General Construction Contractor when excavation begins will install an enclosure fence with lockable entrance gates. Install in a manner that will prevent the public and animals from easily entering the site, except by the entrance gates.
1. Provide open-mesh, 6' high chain link fence with posts.
 2. Extent of Fence: As required to enclose entire Project sites.
 3. Provide min. 2 double swing access gates and man gates. Each gate is to have a chain and padlock.
 4. Provide (2) keys for each lock to the Construction Manager.
 5. Remove fence upon completion of all exterior activities or sooner if directed by Construction Manager.
- I. Pest Control: The General Construction Contractor shall engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Obtain extended warranty for Owner. Perform control operations lawfully, using environmentally safe materials.
- J. Barricades, Warning Signs, and Lights: The General Construction Contractor will comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- K. Temporary Signs: The General Construction Contractor will prepare signs to provide directional information to construction personnel and visitors for each site. Unauthorized signs are not permitted.
1. For construction traffic control/flow at entrances/exits, as designated by the Owner.
 2. For warning signs as required
 3. Per OSHA standards as necessary
 4. For trailer identification
 5. For "No Smoking" safe work site at multiple locations
- L. Temporary Egress: The General Construction Contractor will maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- M. Covered Walkway: Where required during the progress of the work the General Construction Contractor will erect a structurally adequate, protective covered walkway for safe passage required at legal exits. Coordinate with entrance doors, access to construction areas, excavations and obstructions. Comply with regulations of authorities having jurisdiction.
1. Construct covered walkways using scaffold or shoring framing. Provide wood plank overhead decking, protective plywood enclosure walls, handrails, barricades, warning signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage. Extend the back wall beyond the structure to complete the enclosure fence. Paint and maintain in a manner acceptable to the Owner and the Architect.
 2. Provide overhead decking, protective enclosure walls, handrails, barricades, warning signs, exit signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage.
 3. Paint and maintain appearance of walkway for duration of the Work.
- N. Temporary Enclosures: Each prime contractor will provide temporary enclosure for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
1. Where heat is needed and the "Permanent Enclosure" is not complete, the contractor responsible for the work will provide temporary enclosures where there is no other
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- provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
2. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 sq. ft. or less with plywood or similar materials.
 3. Close openings through floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.
 4. Where temporary wood or plywood enclosure exceeds 100 sq. ft. in area, use UL labeled, fire-retardant-treated material for framing and main sheathing.
 5. Temporary closures for specific openings for the contractor to perform their work are the responsibility of Contractor creating the opening and shall be installed to protect building from exterior elements.
- O. Temporary Partitions: General Construction Contractor will provide floor-to-ceiling dustproof partitions to limit dust, dirt migration, fumes and noise to separate areas occupied by the Owner.
1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant plywood on construction operations side.
 2. Construct dustproof partitions with 2 layers of 3-mil polyethylene sheet on each side. Cover floor with 2 layers of 3-mil polyethylene sheet, extending sheets 18 inches up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant plywood.
 - a. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches between doors. Maintain water-dampened foot mats in vestibule.
 3. Insulate partitions to provide noise protection to occupied areas.
 4. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.
 5. Protect air-handling equipment.
 6. Weather strip openings.
 7. Provide walk-off mats at each entrance through temporary partition.
- P. Temporary Fire Protection: Each prime contractor until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10, "Standard for Portable Fire Extinguishers," and NFPA 241, "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
1. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
 2. Prohibit smoking in construction areas.
 3. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
 4. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
 5. Store combustible materials in containers in fire-safe locations
 6. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
- Q. Permanent Fire Protection: At the earliest feasible date in each area of the Project, complete installation of the permanent fire-protection system, including connected services, and place into operation and use. Instruct key personnel on use of facilities.
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- R. Security Enclosure and Lockup: The General Construction Contractor will install substantial temporary enclosure of partially completed areas of construction. Provide temporary doors and locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.
1. Storage: Each prime contractor is responsible for their materials and equipment to be stored, and are of value or attractive for theft, provide a secure lockup. Coordinate work in connection with the installation and control release of material to minimize the opportunity for theft and vandalism.

3.05 MOISTURE AND MOLD CONTROL

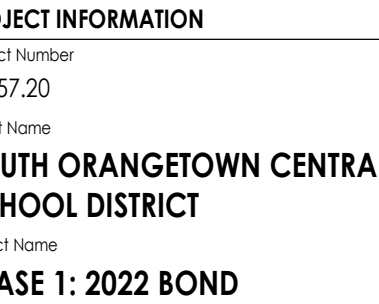
- A. Contractor's Moisture-Protection Plan: Each Contractor is to avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
 1. Protect porous materials from water damage.
 2. Protect stored and installed material from flowing or standing water.
 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 4. Remove standing water from decks.
 5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before Permanent Enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
 1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 2. Keep interior spaces reasonably clean and protected from water damage.
 3. Periodically collect and remove waste containing cellulose or other organic matter.
 4. Discard or replace water-damaged material.
 5. Do not install material that is wet.
 6. Discard, replace or clean stored or installed material that begins to grow mold.
 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the permanent building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
 1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 2. Use permanent HVAC system to control humidity.
 3. HVAC/Mechanical Contractor is to provide temporary dehumidification and ventilation until the building systems are operational and the spaces are substantially completed.
 4. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
 - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
 - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record daily readings over a forty-eight hour period. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
 - c. Remove materials that can not be completely restored to their manufactured moisture level in 48 hours.

3.06 OPERATION, TERMINATION, AND REMOVAL

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- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
 - B. Maintenance: Maintain facilities and good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
 - 2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
 - C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
 - D. Termination and Removal: Unless the Architect requests that it be maintained longer each prime contractor will remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are the property of each prime contractor.
 - 2. The General Construction Contractor will remove temporary paving not intended for or acceptable for integration into permanent paving. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at the temporary entrances, as required by the governing authority. The General Construction Contractor will remove any temporary paving that was noted as General Contractor on the phasing drawings or installed to execute the work.
 - E. At Substantial Completion: Each prime contractor shall repair, renovate, and clean permanent facilities related to their contract used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION

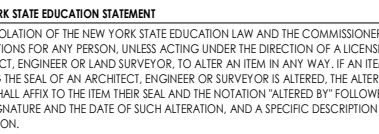
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H ORANGETOWN CSD
 ILLIAM C. SCHAEFER SED#: 50-03-01-06-0-012-019
 OTTAGE LANE ELEMENTARY SED#: 50-03-01-06-0-010-010
 APPAN ZEE HIGH SCHOOL SED#: 50-03-01-06-0-006-032
 ILLIAM C. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
 OTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
 OTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-0-023-006
 OS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-030
 MS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-030
 ILE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-010
 HS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-030

| JECT ISSUE & REVISION SCHEDULE | |
|--------------------------------|-----------------|
| Date | Description |
| 10/27/2023 | BID ADDENDUM #1 |

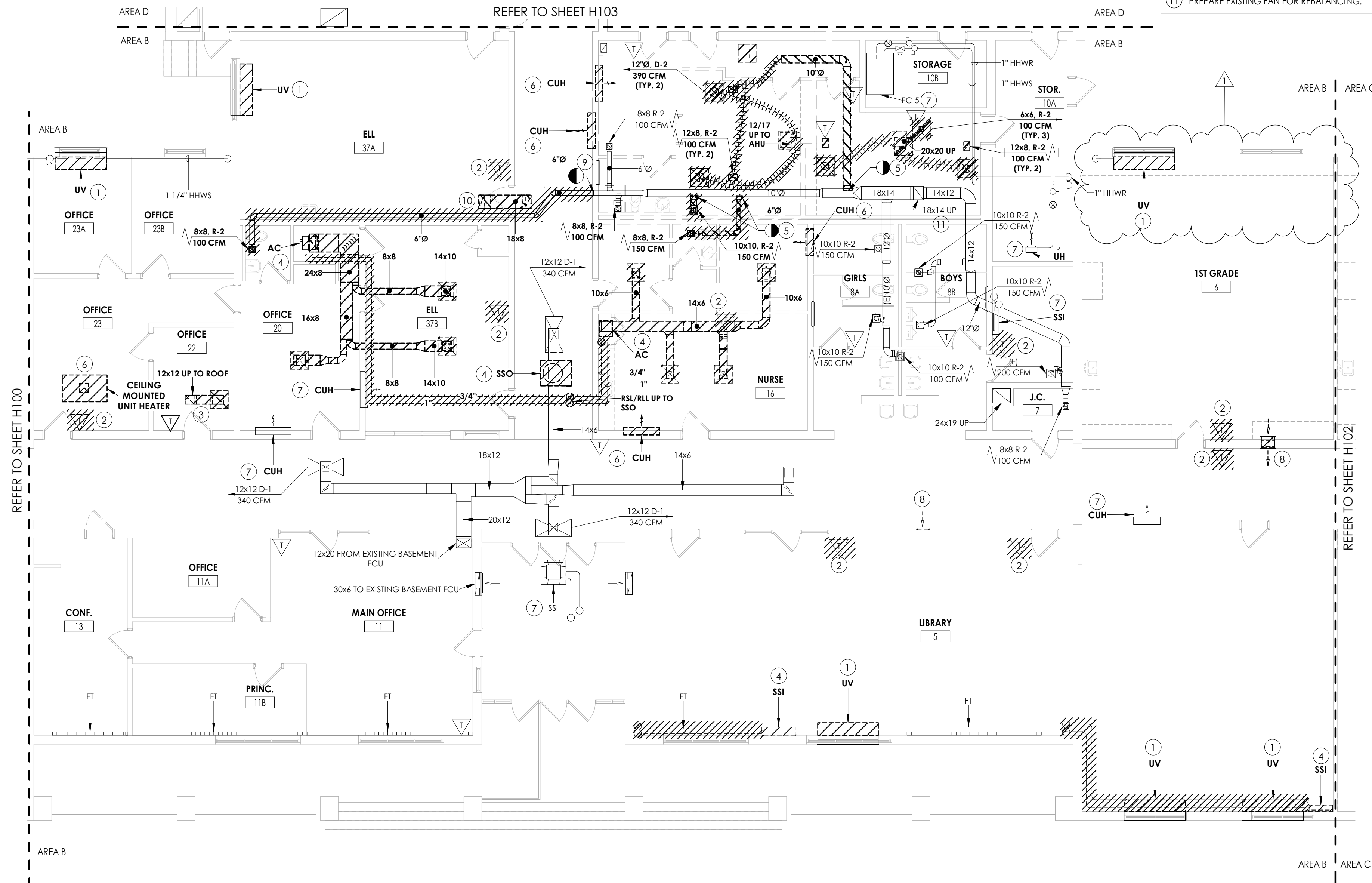
PROFESSIONAL STAMPS



| | |
|-----------------------------|--------------|
| PROJECT INFORMATION | |
| Date | Scale |
| 8/2023 | 1/8" = 1'-0" |
| Sheet Status | |
| DOCUMENTS | |
| Drawn By | Checked By |
| AM | JJM |
| Drawing Title | |
| FIRST FLOOR DEMOLITION PLAN | |
| EAB | |

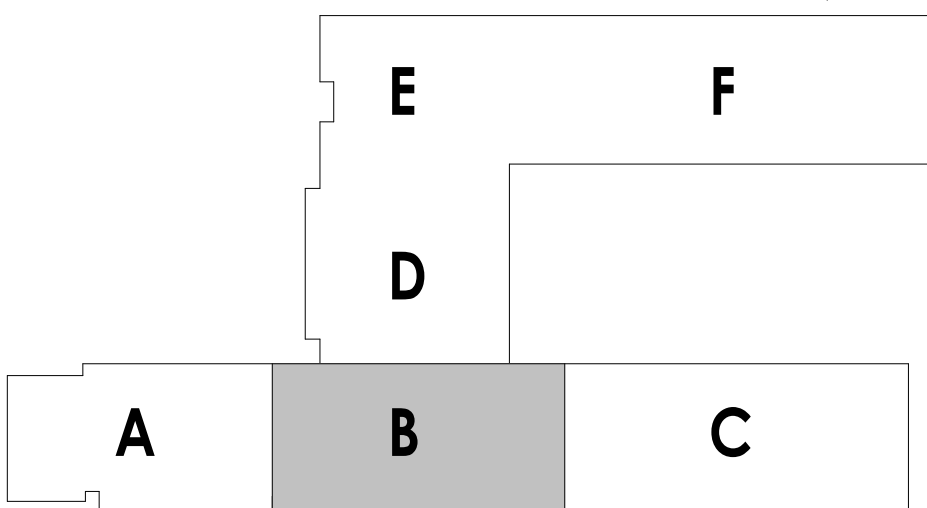
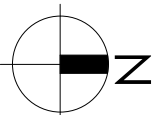
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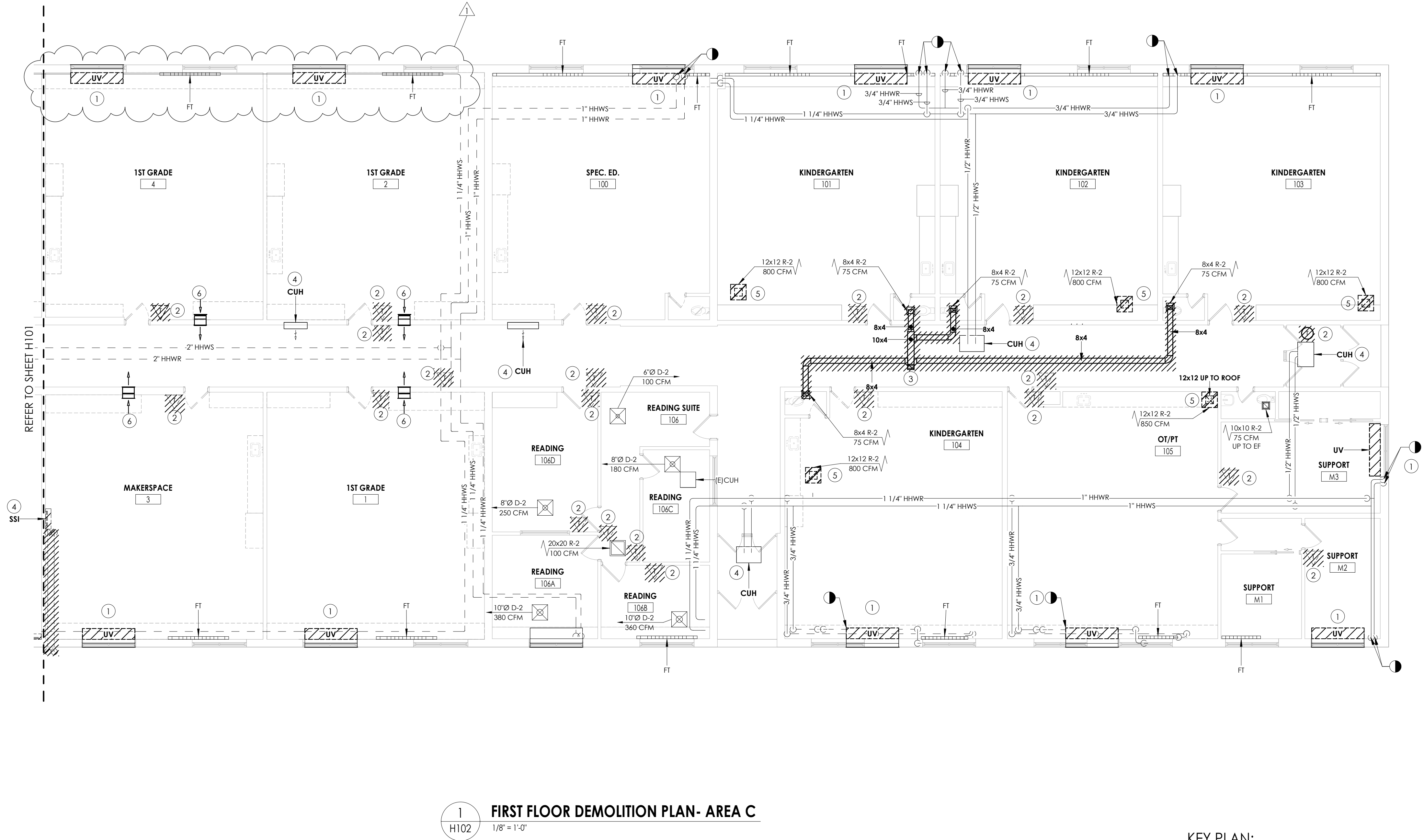
- 1 REMOVE EXISTING UNIT VENTILATOR. LOUVER AND SLEEVE TO REMAIN. CUT AND CAP PIPING AT FINITE. REFER TO ARCHITECTURAL PLAN. MAINTAIN THE PIPING LOOP. PREPARE FOR NEW WORK.
- 2 REMOVE EXISTING ROOM TEMPERATURE SENSOR AND WIRING BACK TO CONTROL HEAD END.
- 3 REMOVE EXISTING GRILLE AND DUCTWORK UP TO ROOF.
- 4 REMOVE EXISTING HEATING/COOLING UNIT. REMOVE ALL ASSOCIATED PIPING, DUCTWORK, AND CONTROLS. REMOVE ALL RL/RL PIPING FROM UNIT TO CONDENSING UNIT ON ROOF. PRIOR REMOVAL, DRAIN ALL PIPING AND DISPOSE OF ALL REFRIGERANT PER THE LATEST ADAPTED RULES AND REGULATIONS BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA). CONTRACTOR OR TECHNICIAN PERFORMING THE WORK SHALL BE AN EPA APPROVED AGENT OR ORGANIZATION.
- 5 REMOVE EXISTING EXHAUST BRANCH DUCTWORK TO POINT INDICATED AND CAP.
- 6 REMOVE EXISTING CABINET UNIT HEATER, INCLUDING CONTROLS AND WIRING. CUT AND CAP ASSOCIATED PIPING.
- 7 PREPARE EXISTING EQUIPMENT FOR NEW CONTROLS. **BID ALTERNATE MC-01.**
- 8 REMOVE EXISTING LOW RELIEF AIR GRILLE IN ROOM AND HIGH RELIEF AIR GRILLE IN CORRIDOR. ABANDON DUCTWORK WITHIN WALL. G.C. TO PATCH WALL OPENINGS.
- 9 CAP DUCT AT THIS POINT.
- 10 REMOVE TRANSFER DUCT AND GRILLES.
- 11 PREPARE EXISTING FAN FOR REBALANCING.



1 FIRST FLOOR DEMOLITION PLAN- AREA B
H101 1/8" = 1'-0"

KEY PLAN:





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

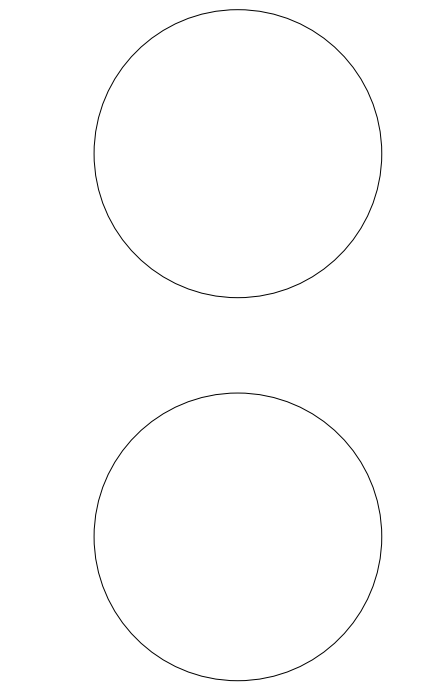
SOUTH ORANGETOWN CSD

- WILLIAM O. SCHAFER SED#35-03-01-06-0-010-019
- 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#35-03-01-06-8-023-002
- WOS OUTDOOR CLASSROOM SED#35-03-01-06-7-054-001
- WOS OUTDOOR CLASSROOM SED#35-03-01-06-7-054-001
- CLE OUTDOOR CLASSROOM SED#35-03-01-06-7-054-001
- 12H5 OUTDOOR CLASSROOM SED#35-03-01-06-7-054-001

PROJECT ISSUE & REVISION SCHEDULE

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

PROFESSIONAL STAMPS



NEW YORK STATE EDUCATION DEPARTMENT
If it is a violation of the NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S
REGULATIONS FOR ANY PERSON, UNDER ACTING UNDER THE SUPERVISION OF A LICENSED
ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ACT AS AN ARCHITECT, ENGINEER OR LAND SURVEYOR
BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR LAND SURVEYOR, THE FOLLOWING
PARTY SHALL BE HELD RESPONSIBLE AND THE SIGNATURE OF THE ARCHITECT, ENGINEER OR LAND SURVEYOR
THEIR SIGNATURE AND THE DATE OF SUCH ABANDON, AND A SPECIFIC DESCRIPTION OF THE
ABANDON.

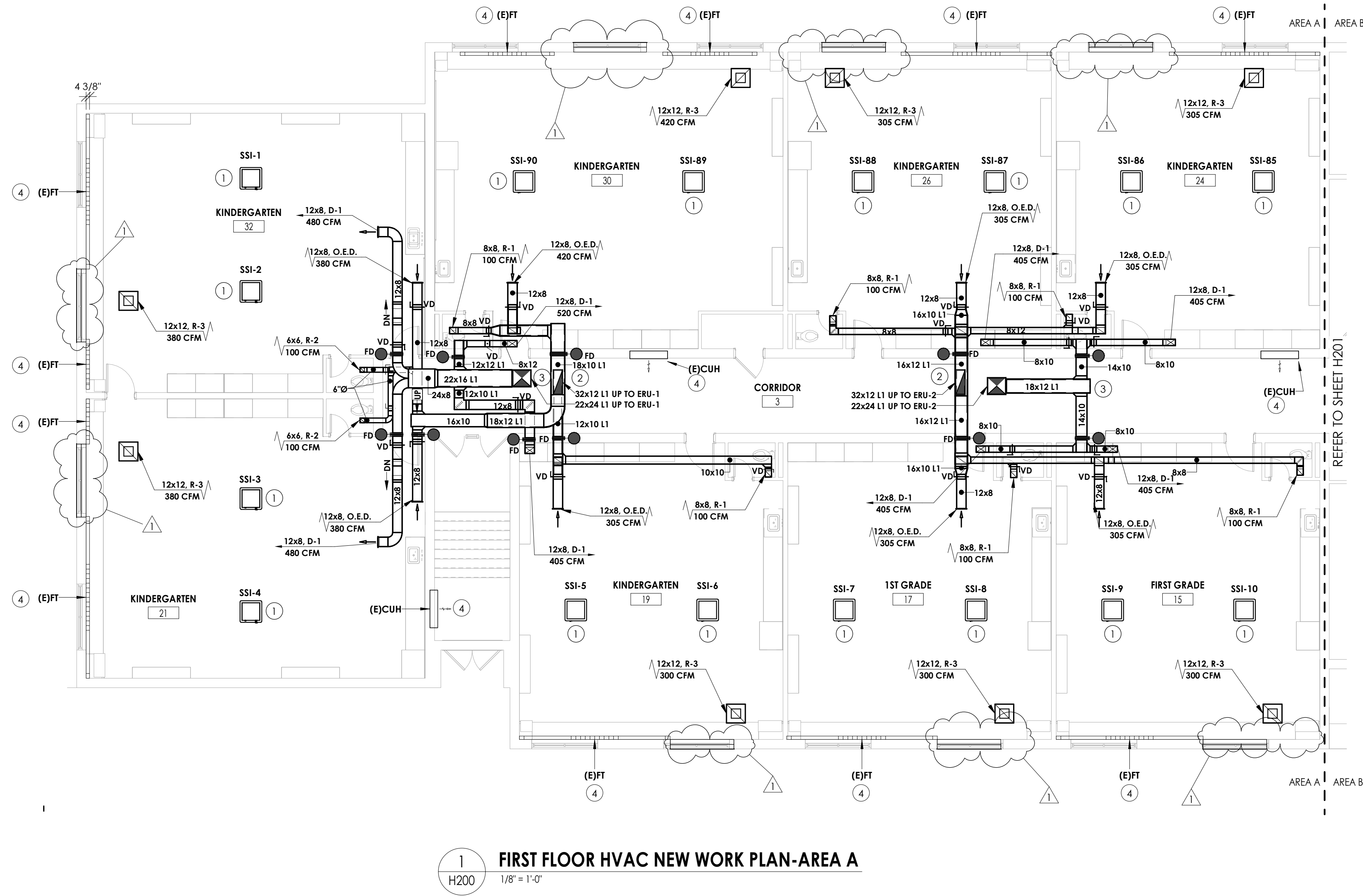
SHEET INFORMATION

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

Drawing Number

WOS
H102

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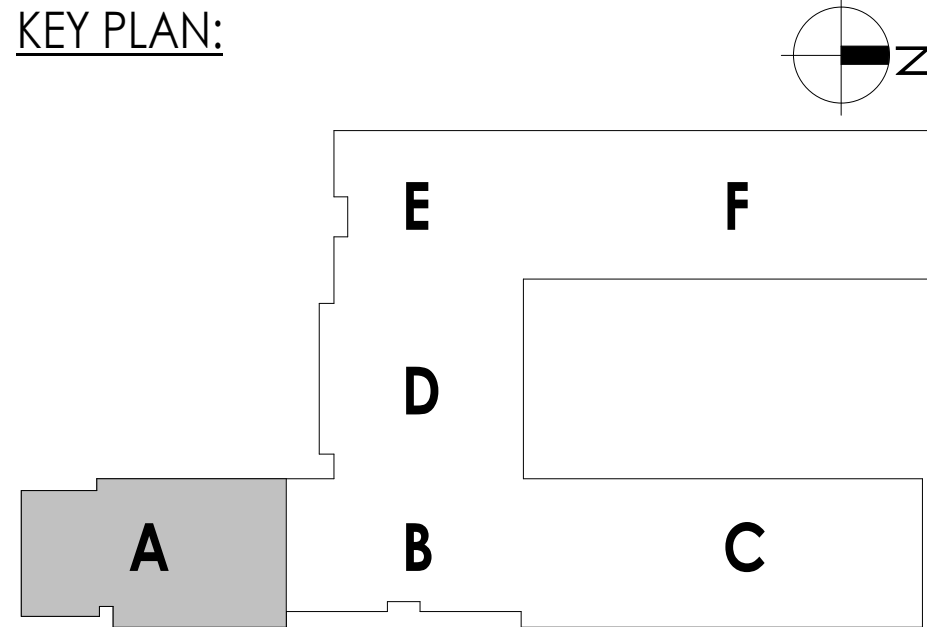


1
H200
1/8" = 1'-0"

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 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

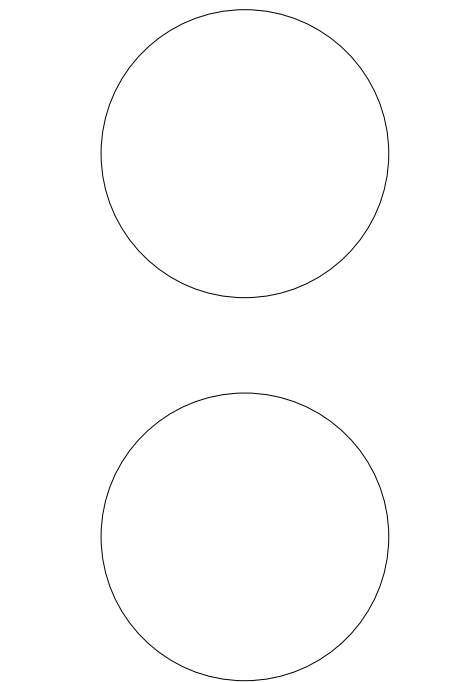
SOUTH ORANGETOWN CSD

- WILLIAM O. SCHAFER SED# 50-03-01-06-0-010-019
- COTTAGE LANE ELEMENTARY SED# 50-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED# 50-03-01-06-0-004-002
- WILLIAM O. SCHAFER SAL SED# 50-03-01-06-0-010-020
- COTTAGE LANE SAL SED# 50-03-01-06-0-010-023
- COTTAGE LANE LIBRARY SAL SED# 50-03-01-06-0-023-002
- WOS OUTDOOR CLASSROOM SED# 50-03-01-06-7-035-001
- SCONE OUTDOOR CLASSROOM SED# 50-03-01-06-7-036-001
- CLE OUTDOOR CLASSROOM SED# 50-03-01-06-7-034-001
- 1245 OUTDOOR CLASSROOM SED# 50-03-01-06-7-035-001

PROJECT ISSUE & REVISION SCHEDULE

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

PROFESSIONAL STAMPS



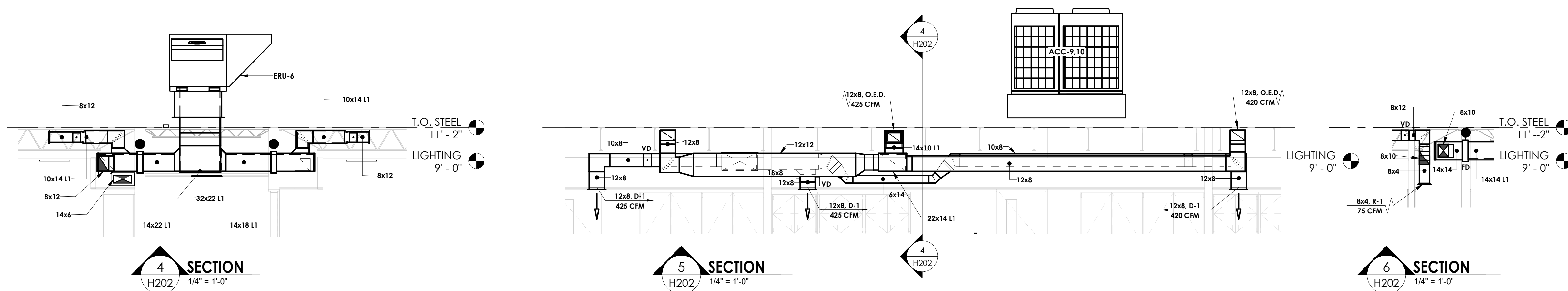
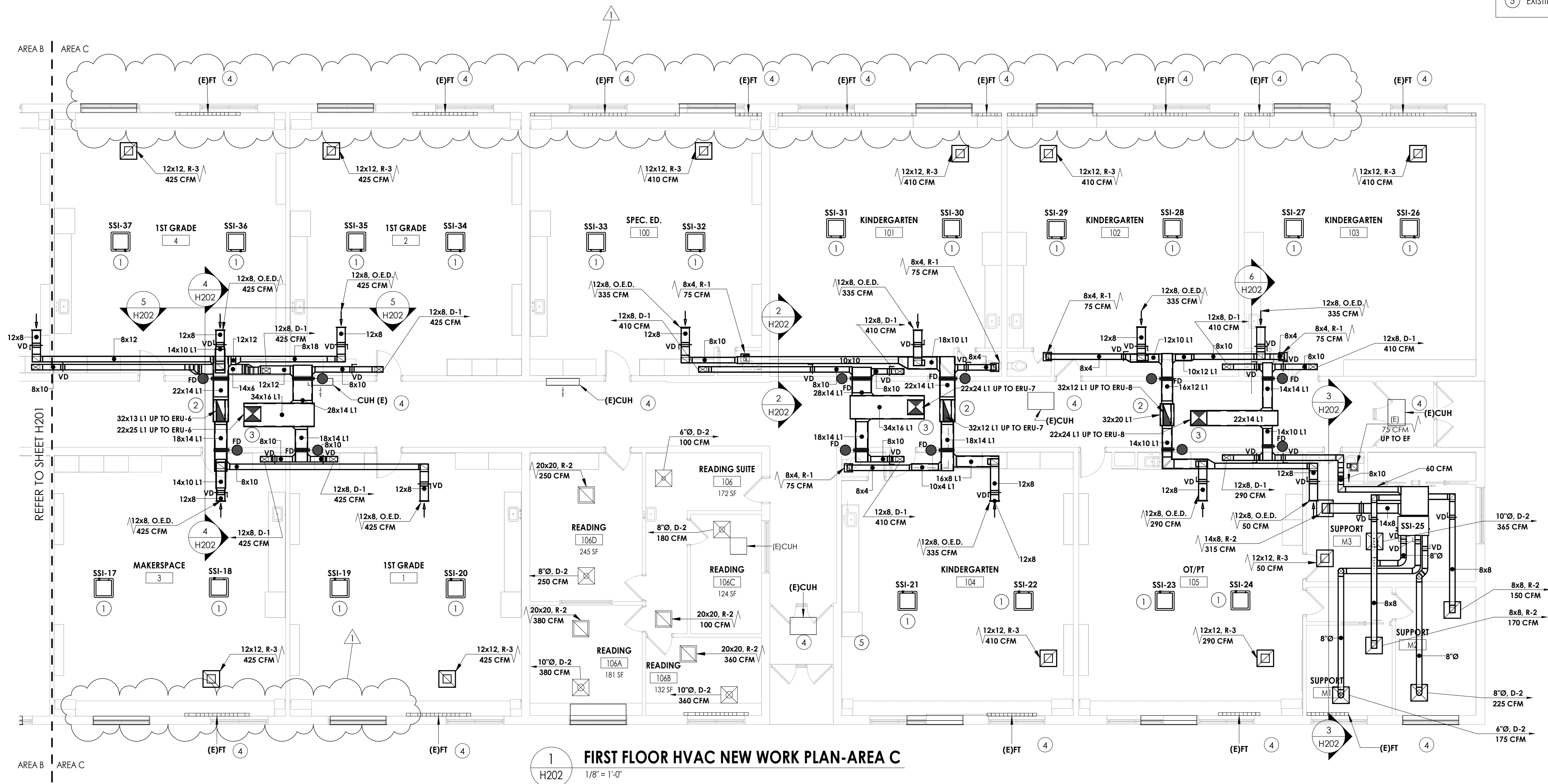
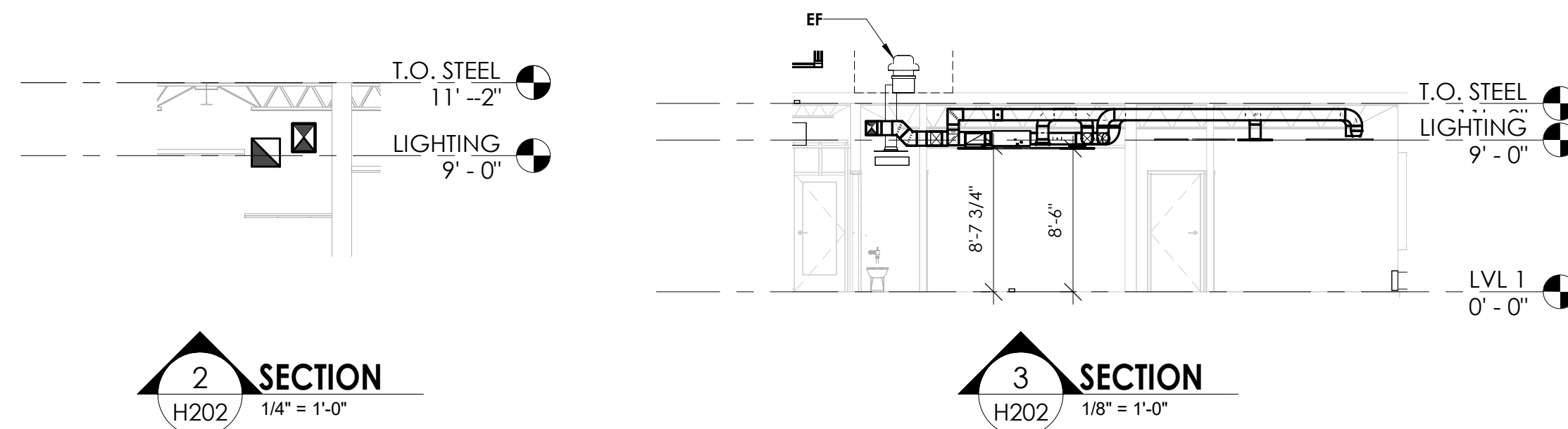
NEW YORK STATE EDUCATION STATEMENT
I, A VENDOR OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONERS
REGULATIONS FOR ANY PERSON, UNDER THE SUPERVISION OF A LICENSED
ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ACT AS AN ITM IN ANY WAY, IF AN ITM
BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR LAND SURVEYOR, HAS BEEN
PAID, SHALL NOT BE IN THE NEW YORK STATE AND THE CONTRACTOR SHALL BE FOLLOWED BY
THEIR SIGNATURE AND THE DATE OF SUCH ADOPTION, 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 NEW WORK
PLAN- AREA A

Drawing Number

WOS
H200

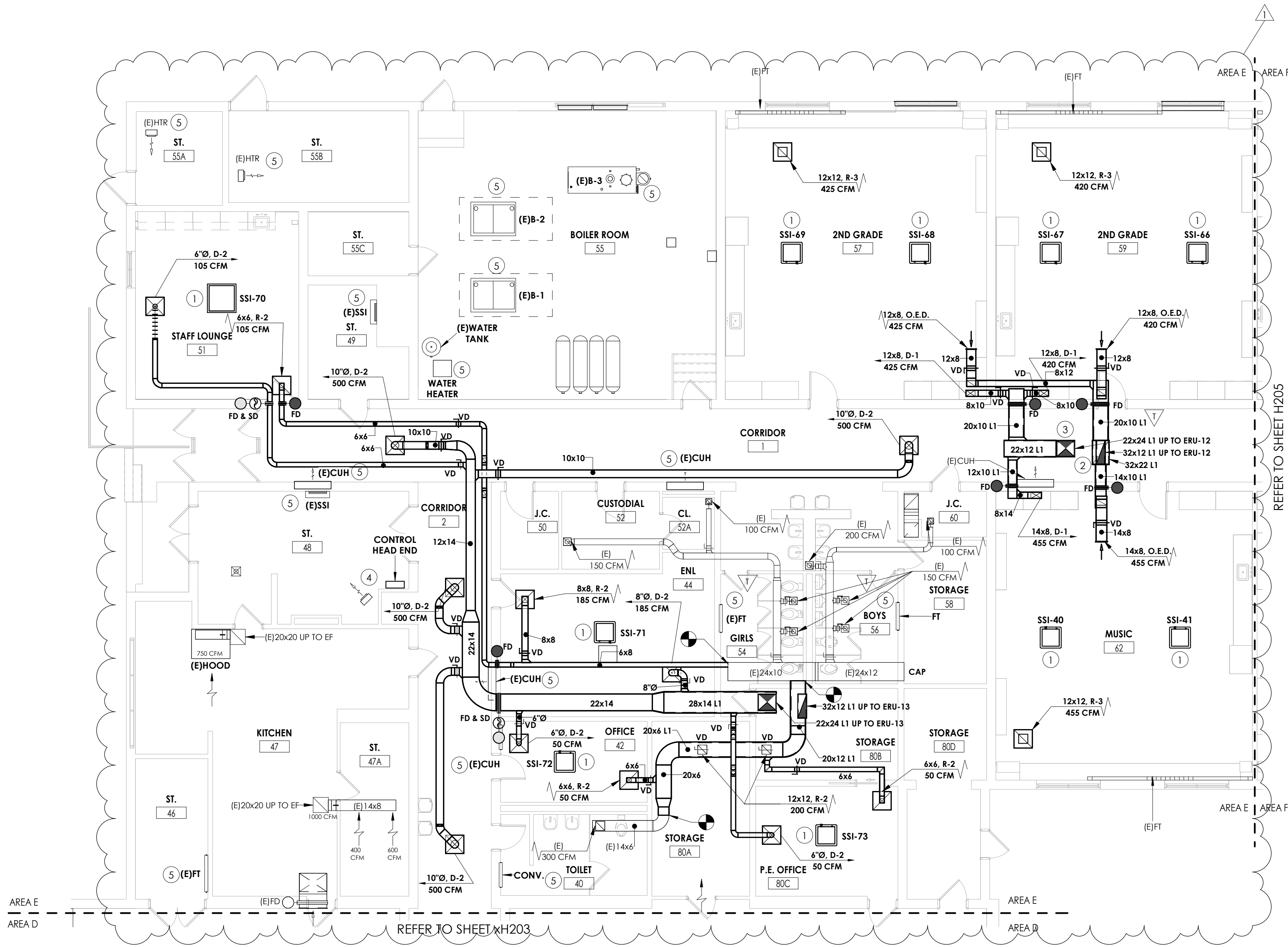


Drawing Number

WOS
H202

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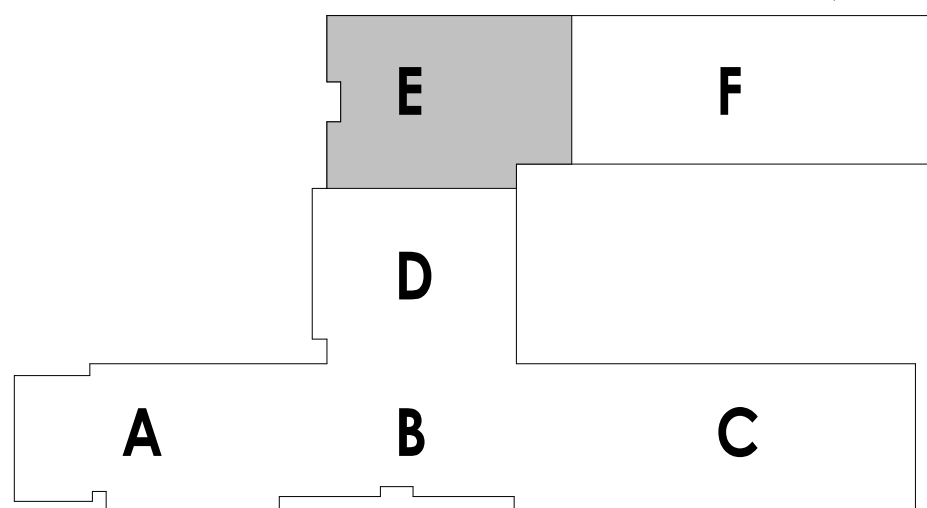


1
H204
FIRST FLOOR HVAC NEW WORK PLAN-AREA E
1/8" = 1'-0"

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.**

KEY PLAN:



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

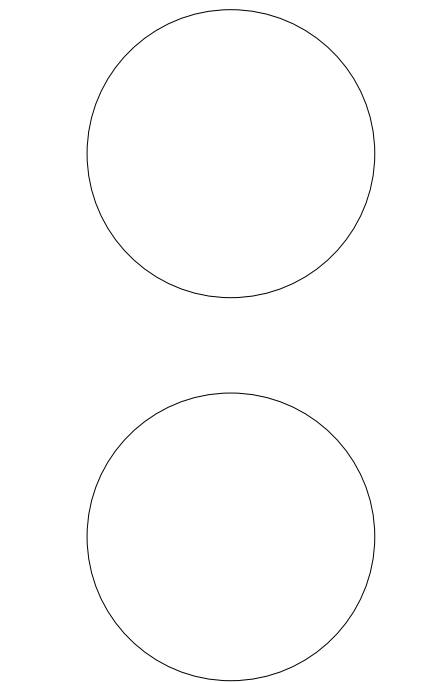
PROJECT INFORMATION
Project Number
14457.20
Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT
Project Name
PHASE 1: 2022 BOND

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

- SOUTH ORANGETOWN CSD
- WILLIAM O. SCHAFER SED#35-03-01-06-010-010
 - COTTAGE 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#35-03-01-06-010-010-022
 - COTTAGE LANE SAL SED#35-03-01-06-010-010-022
 - COTTAGE LANE LIBRARY SAL SED#35-03-01-06-010-010-022
 - WOS OUTDOOR CLASSROOM SED#35-03-01-06-010-010-022
 - SCONE OUTDOOR CLASSROOM SED#35-03-01-06-010-010-022
 - CLE OUTDOOR CLASSROOM SED#35-03-01-06-010-010-022
 - TMS OUTDOOR CLASSROOM SED#35-03-01-06-010-010-022

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

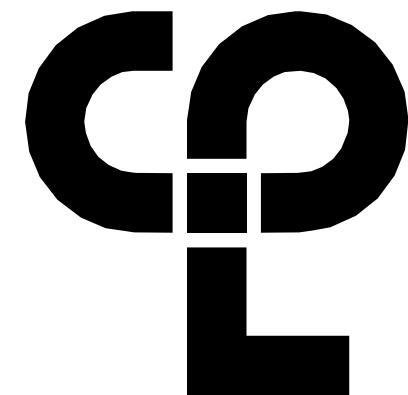
PROFESSIONAL STAMPS



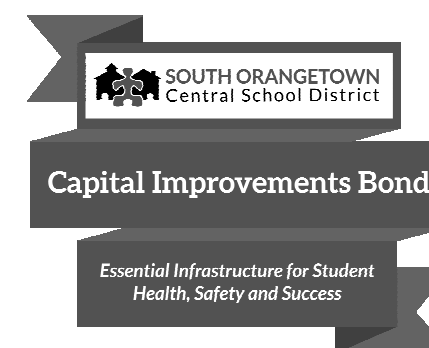
NEW YORK STATE REGISTRATION STATEMENT
I, the undersigned, being a duly licensed Architect under the laws of the State of New York, do hereby certify that I am the author of the design and content of the above-mentioned plan, specification and contract documents, and that I am a duly licensed Architect under the laws of the State of New York, and that I am not providing any professional services to the client of the above-mentioned project, and that I am not providing any professional services to the client of the above-mentioned project, and that I am not providing any professional services to the client of the above-mentioned 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 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

District Office Address

160 VAN WYCK RD. BLAUVELT, NY 10913

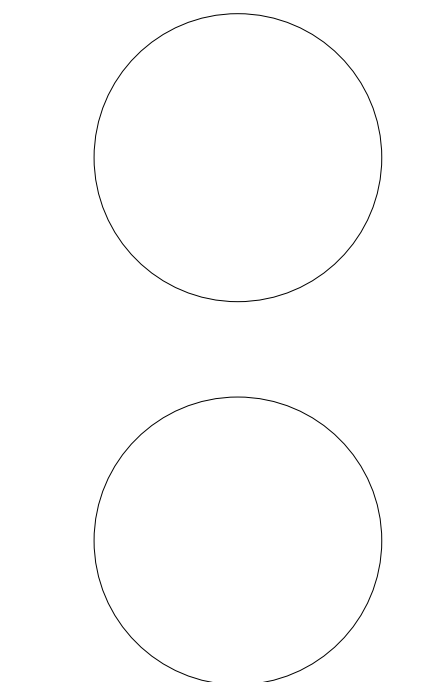
SOUTH ORANGETOWN CSD

- WILLIAM O. SCHAFER SED#35-03-01-06-001-010
- COTTAGE LAKE ELEMENTARY SED#35-03-01-06-001-010-002
- TAPPAN ZEE HIGH SCHOOL SED#35-03-01-06-004-002
- WILLIAM O. SCHAFER SAL SED#35-03-01-06-010-002
- COTTAGE LAKE SAL SED#35-03-01-06-010-002
- COTTAGE LAKE LIBRARY SAL SED#35-03-01-06-023-002
- WOS OUTDOOR CLASSROOM SED#35-03-01-06-7-035-001
- WOS OUTDOOR CLASSROOM SED#35-03-01-06-7-035-001
- CLE OUTDOOR CLASSROOM SED#35-03-01-06-7-035-001
- 1795 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 REGISTRATION

IF A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONERS' REGULATIONS FOR ANY PROVISION, THESE ACTS SHALL BE THE SUBJECT OF A CRIMINAL ARREST, ENGINEER OR LAND SURVEYOR TO ACT AS A TRUST IN ANY WAY OF ANY TRUST. BEARING THE SIGN OF AN ARCHITECT, ENGINEER OR LAND SURVEYOR, THESE ACTS SHALL BE THE SUBJECT OF A CRIMINAL ARREST, ENGINEER OR LAND SURVEYOR TO ACT AS A TRUST IN ANY WAY OF ANY TRUST.

SHEET INFORMATION

Issued 10/18/2023 Scale As indicated

Project Status

BID DOCUMENTS

Drawn By

KCM

Checked By

JJM

Drawing Title

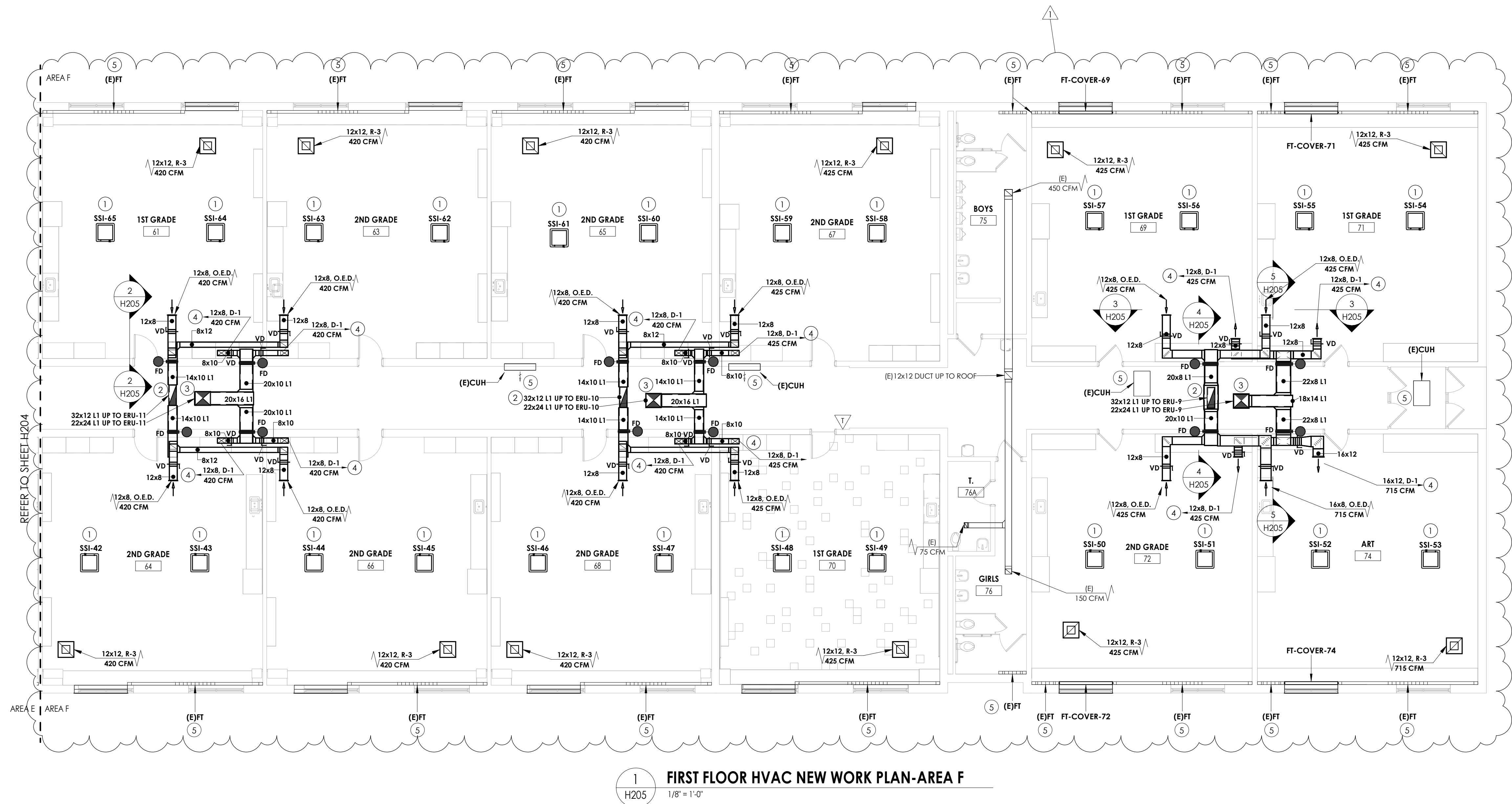
FIRST FLOOR HVAC NEW WORK PLAN- AREA F

Drawing Number

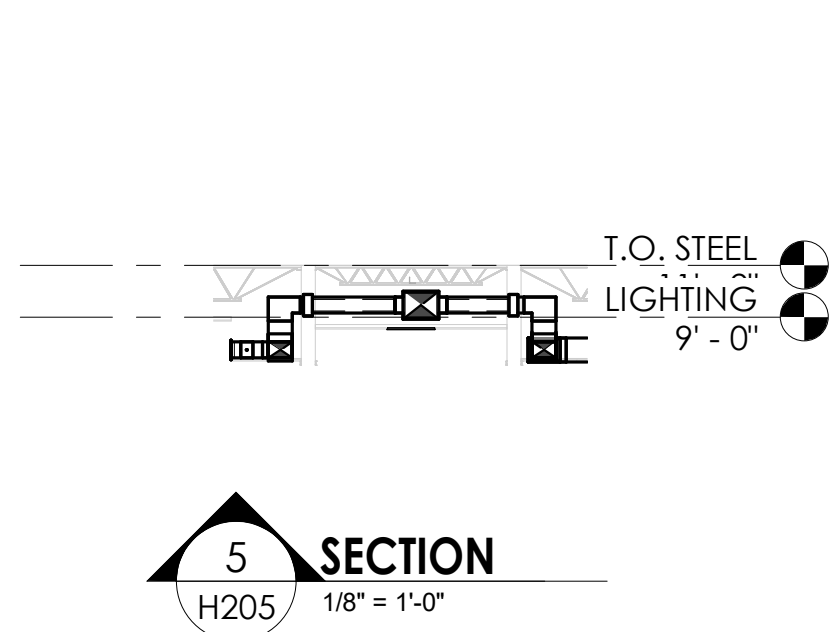
**WOS
H205**

KEY NOTES:

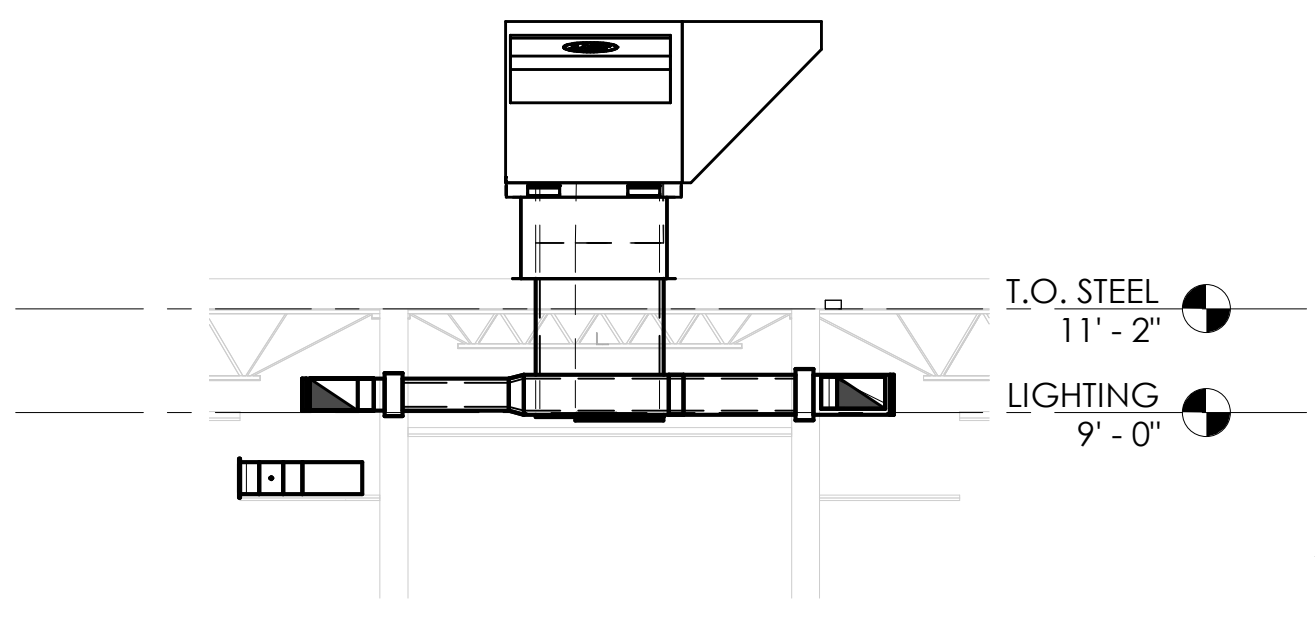
- SSI TO BE INSTALLED IN JOIST SPACE. REMOVE BRACING AS NEEDED FOR INSTALLATION. PROVIDE NEW PROVIDE NEW BRACING IN NEW LOCATION IF EXISTING BRACING IS REMOVED.
- RETURN DUCTWORK TO BE ROUTED IN HALLWAY CEILING. COORDINATE WITH EXISTING UTILITIES AND REFRIGERANT PIPING.
- SUPPLY DUCTWORK TO BE ROUTED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



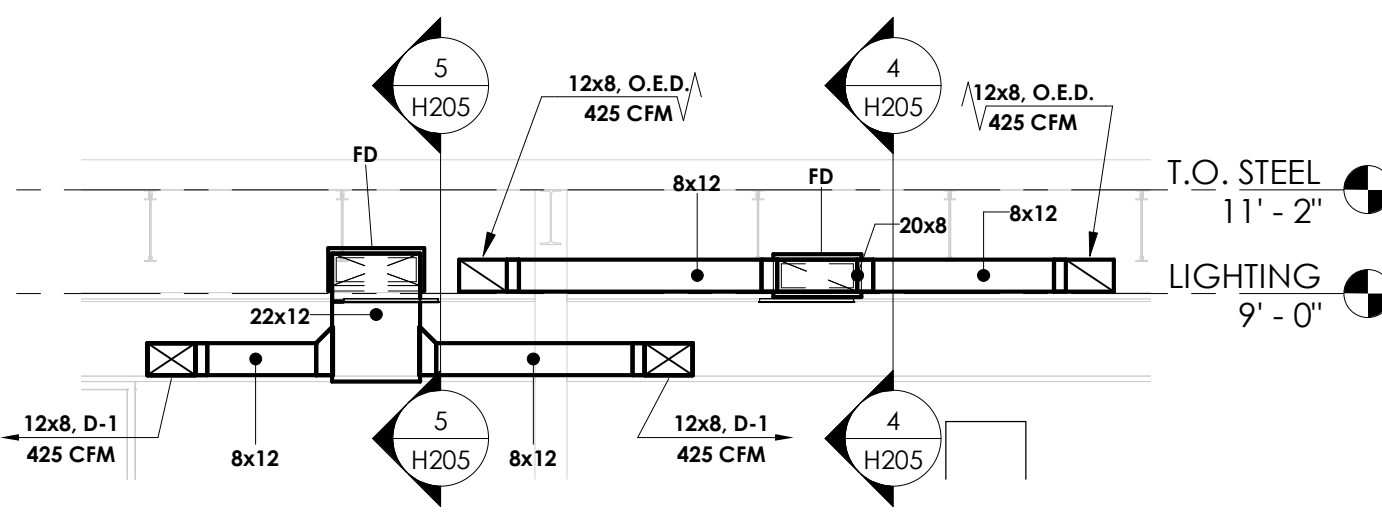
1 FIRST FLOOR HVAC NEW WORK PLAN-AREA F
1/8" = 1'-0"



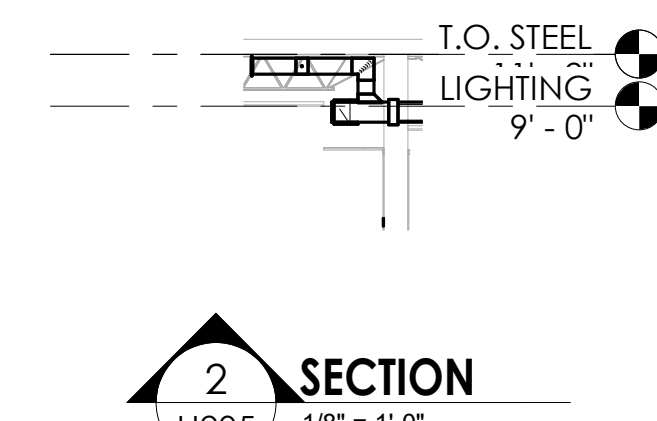
5 SECTION
1/8" = 1'-0"



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

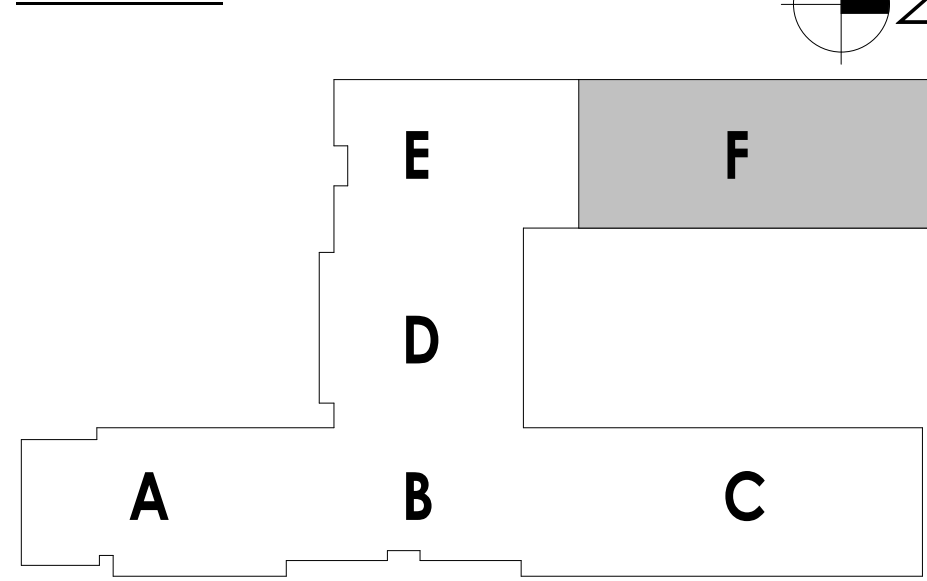


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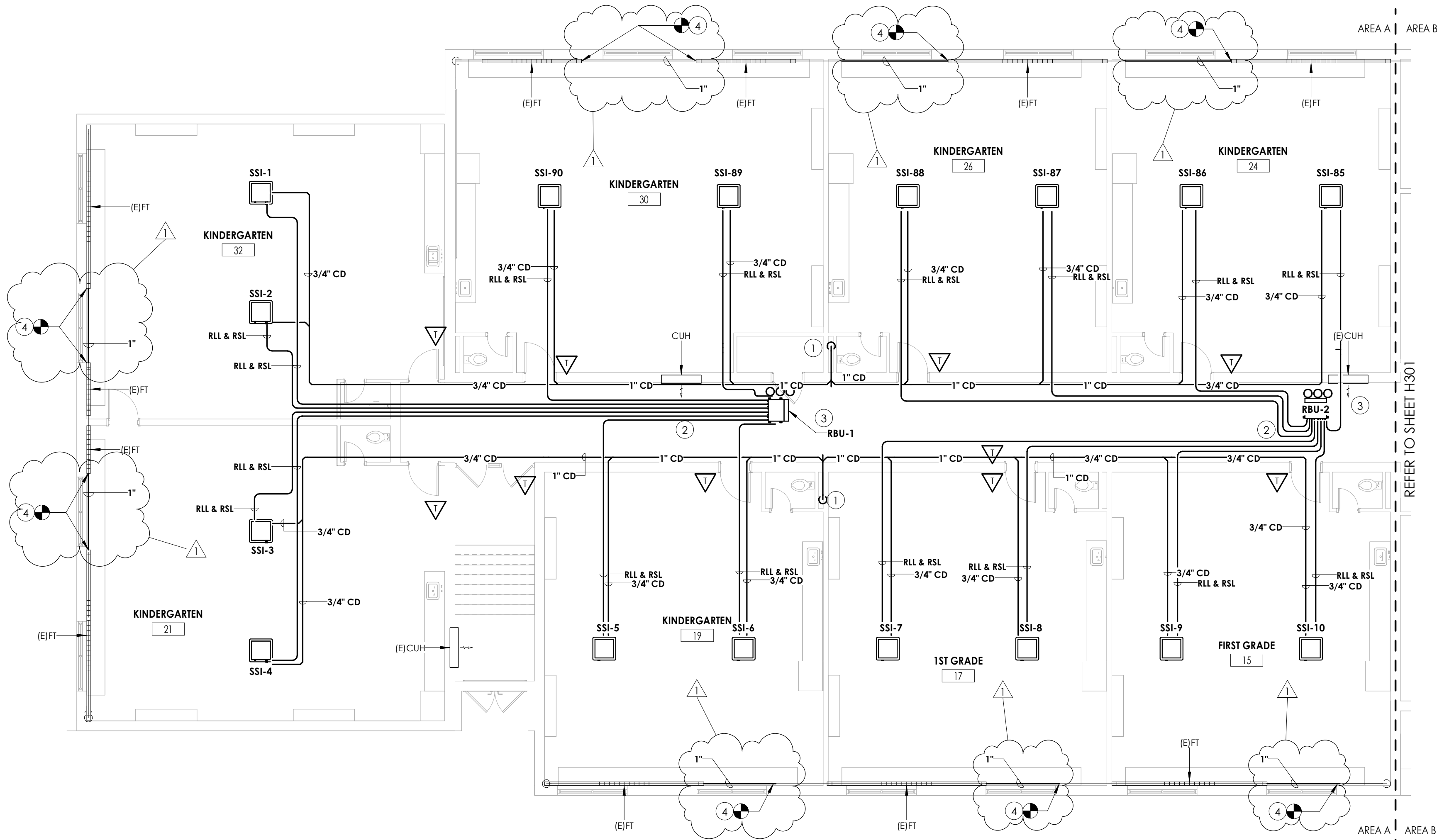


2 SECTION
1/8" = 1'-0"

KEY PLAN:

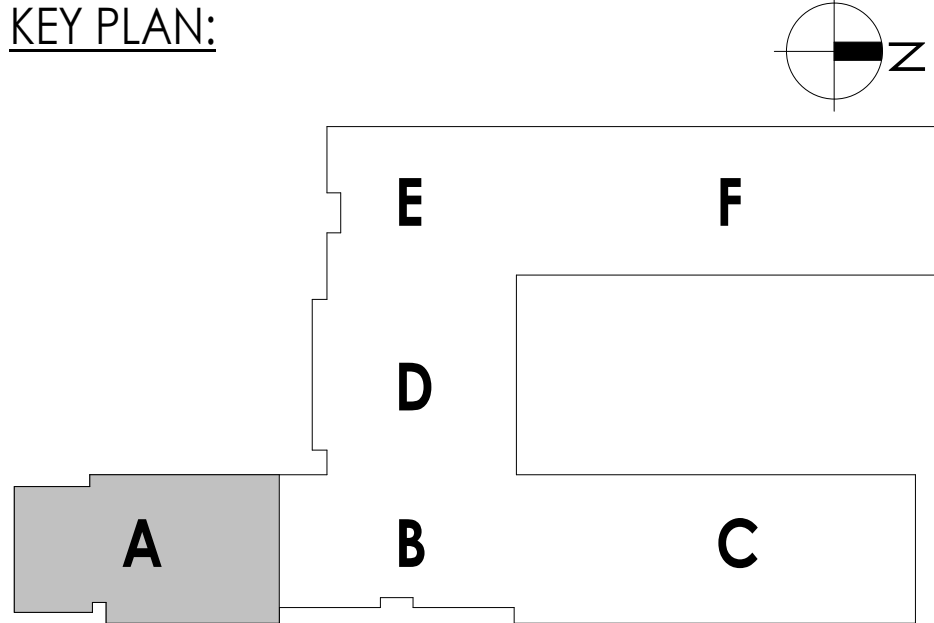


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1 HVAC PIPING PLAN-AREA A
1/8" = 1'-0"

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.

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

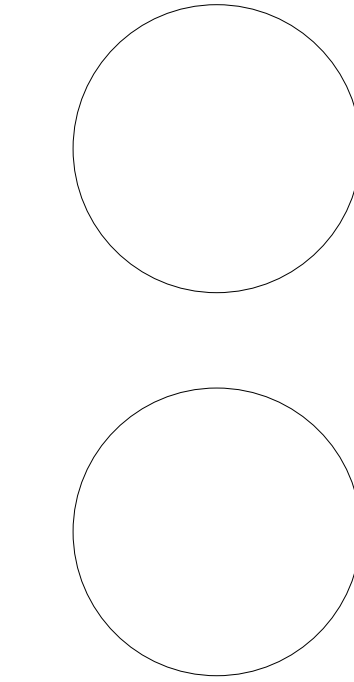
PROJECT INFORMATION
Project Number
14457.20
Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT
Project Name
PHASE 1: 2022 BOND

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

- SOUTH ORANGETOWN CSD**
- WILLIAM O. SCHAFER SED# 35-03-01-06-0-010-0219
 - 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# 35-03-01-06-0-010-0200
 - 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 |

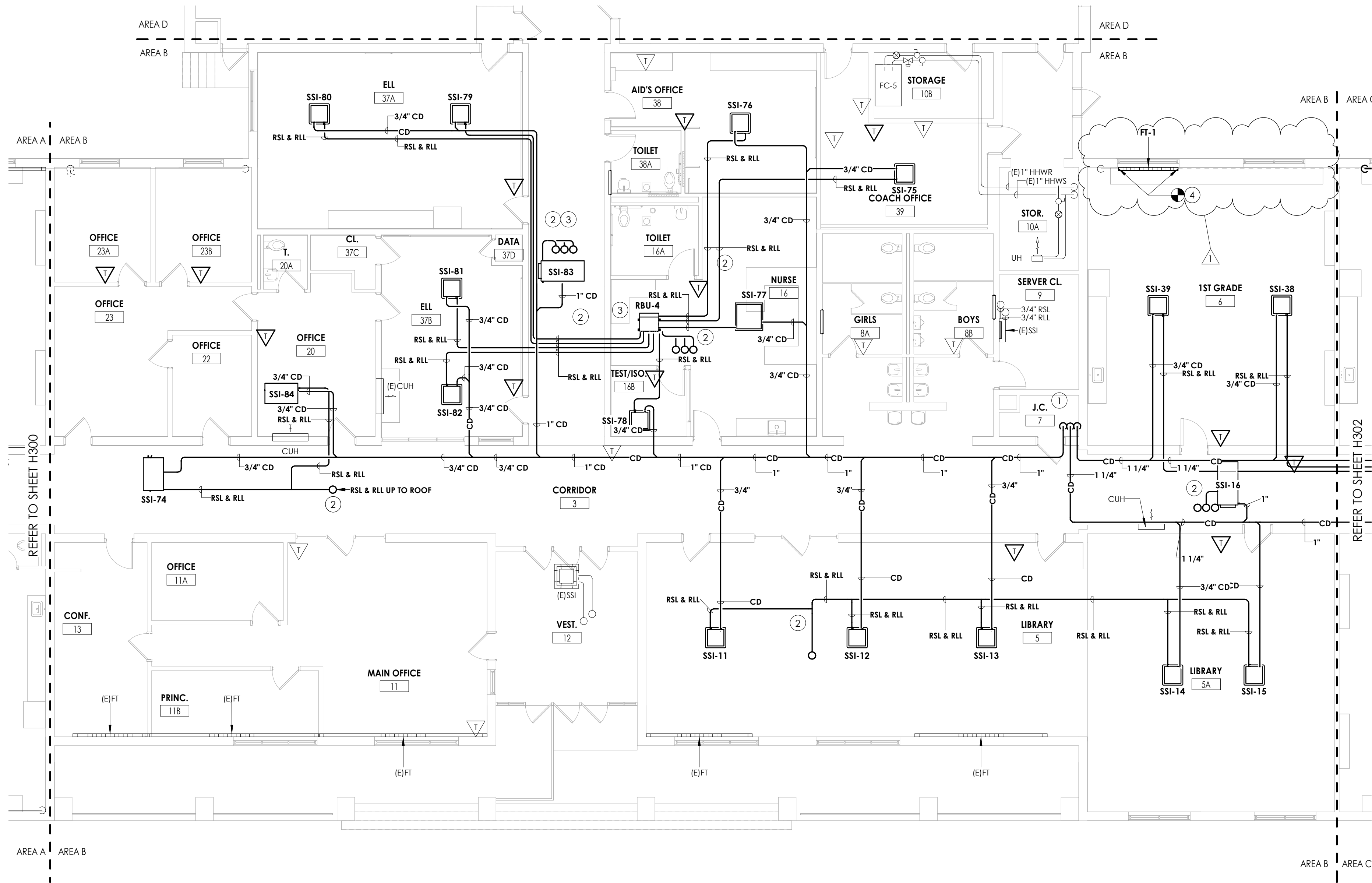
PROFESSIONAL STAMPS



NEW YORK STATE REGISTRATION STATEMENT
I, the undersigned, being a duly licensed Professional Engineer in the State of New York, do hereby certify that I am the author of the design and specification of the above described project, and that I am a duly licensed Professional 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 A
Drawing Number

WOS
H300



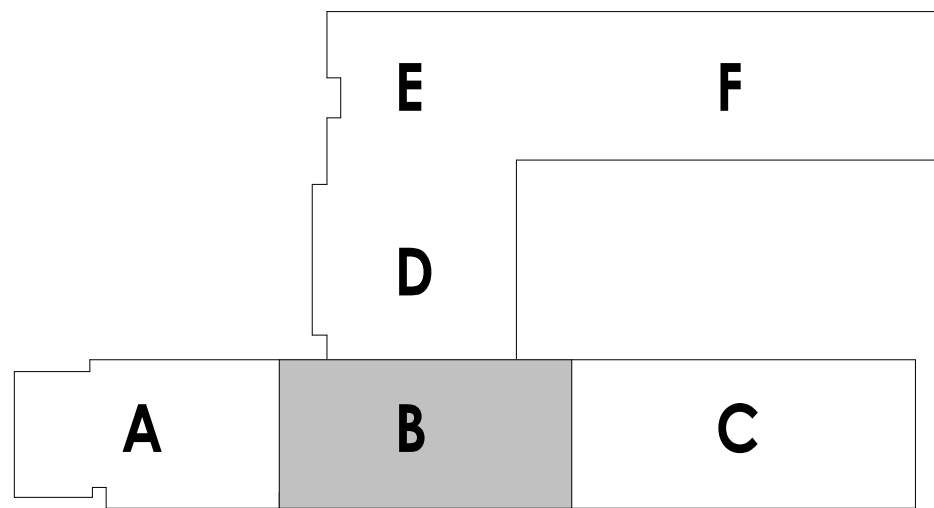
1 HVAC PIPING PLAN-AREA B
1/8" = 1'-0"

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 4" FIN TUBE WITH DRAFT STOP WHERE INDICATED AND CONNECT TO EXISTING PIPING.

1

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

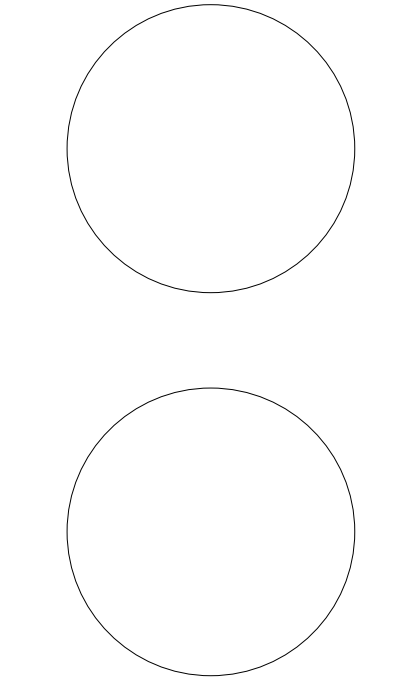
SOUTH ORANGETOWN CSD

- WILLIAM O. SCHAFER SED# 35-03-01-06-0-010-0219
- COTTAGE LAKE 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 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
- SCANS OUTDOOR CLASSROOM SED# 35-03-01-06-7-036-001
- CLE OUTDOOR CLASSROOM SED# 35-03-01-06-7-034-001
- 1245 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



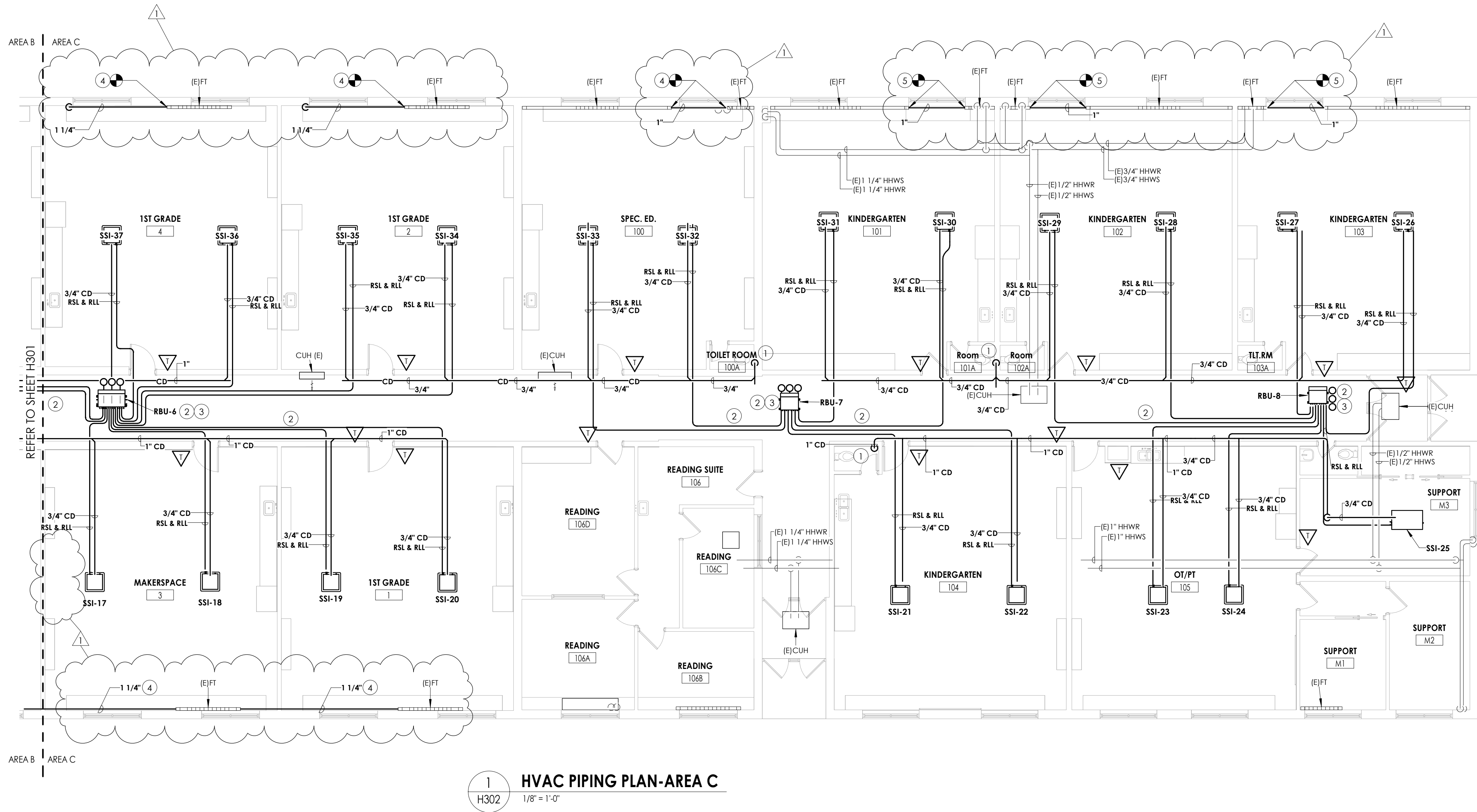
NEW YORK STATE REGULATION STATEMENT
IF IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATION FOR ANY PERSON, UNDER ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ACT AS SUCH IN ANY WAY, IF AN INDIVIDUAL BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR LAND SURVEYOR, THE SIGNATURE, PRINT NAME AND THE NEW YORK SEAL AND THE SIGNATURE AND THE NEW YORK SEAL OF THE ARCHITECT, ENGINEER OR LAND SURVEYOR, AND A SPECIFIC DESCRIPTION OF THE VIOLATION.

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 B

Drawing Number

WOS
H301

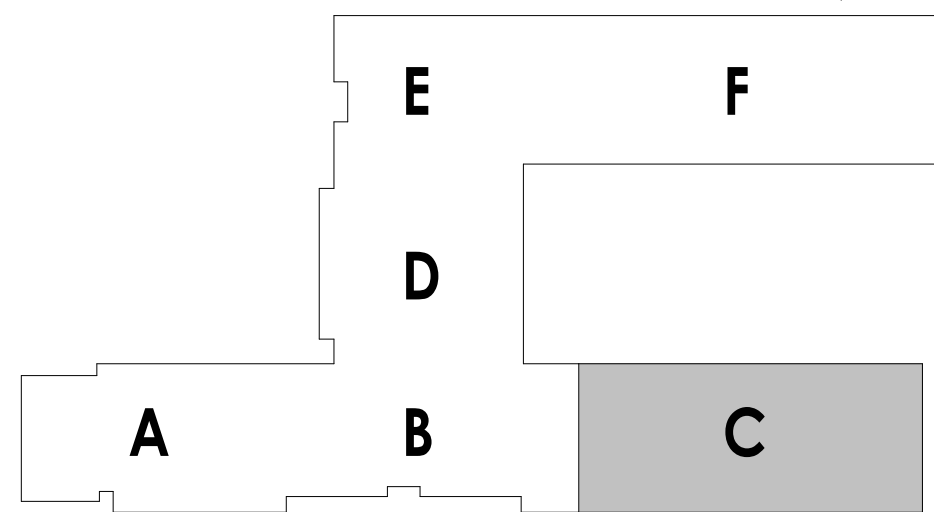


1
H302
HVAC PIPING PLAN-AREA C
1/8" = 1'-0"

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

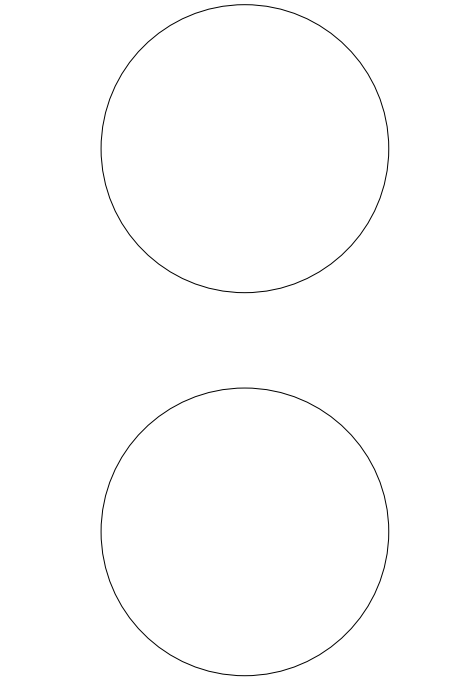
SOUTH ORANGETOWN CSD

- 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#35-03-01-06-7-055-001
- SCANS OUTDOOR CLASSROOM SED#35-03-01-06-7-056-001
- CLE OUTDOOR CLASSROOM SED#35-03-01-06-7-054-001
- 1245 OUTDOOR CLASSROOM SED#35-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

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

PROFESSIONAL STAMPS



NEW YORK STATE EDUCATION STATEMENT:
I, as a member of the NEW YORK STATE EDUCATION LAW AND THE COMMISSIONERS
REGULATIONS FOR ANY PERSON, UNDER THE SUPERVISION OF A LICENSED
ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ASSIST IN ANY WAY, IN ANY
MANNER, THE DESIGN OF ANY PROJECT, INCLUDING THE DESIGN OF ANY
BUILDING, SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE
PROJECT, AND I SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE
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PROJECT.

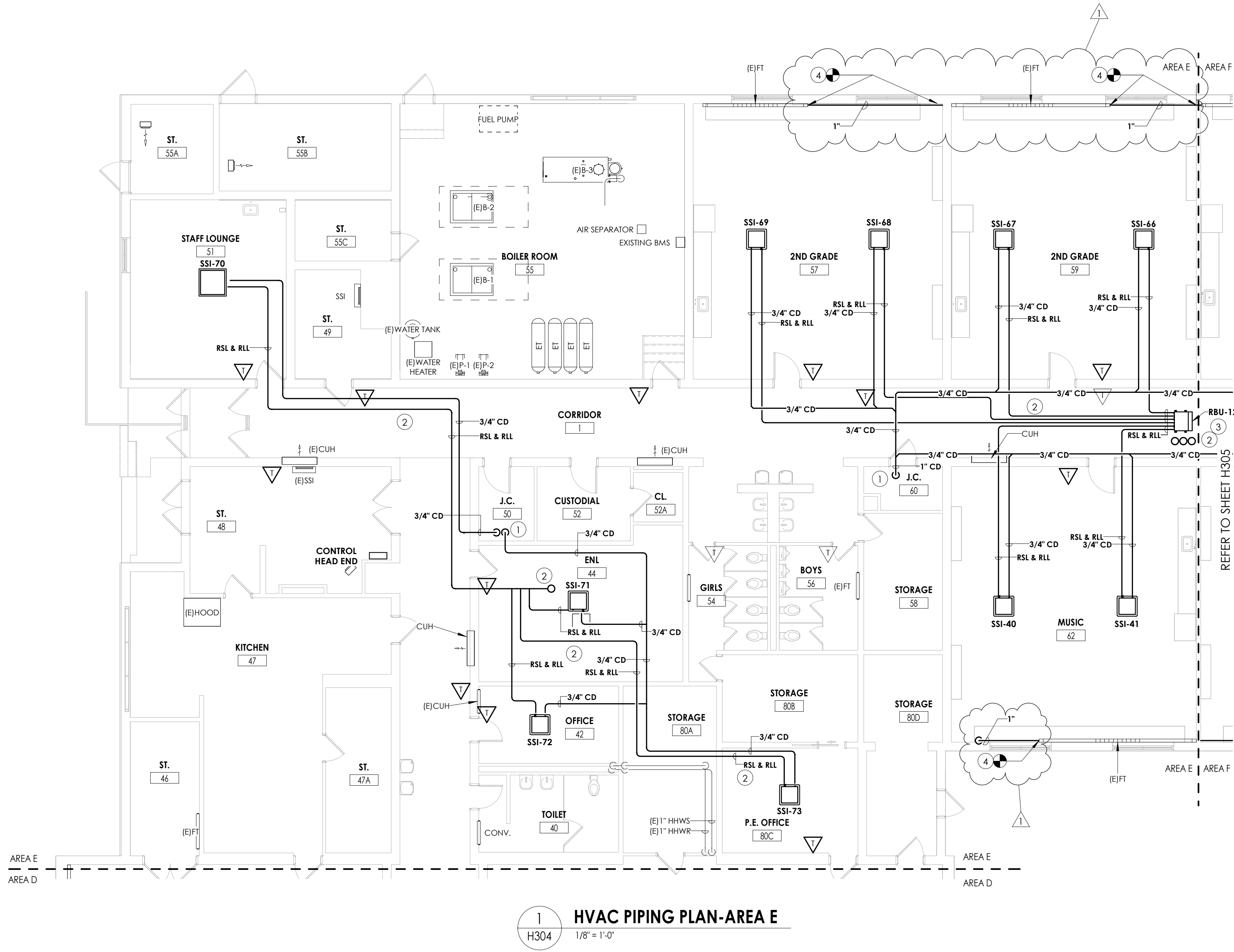
SHEET INFORMATION

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

Drawing Number

WOS
H302

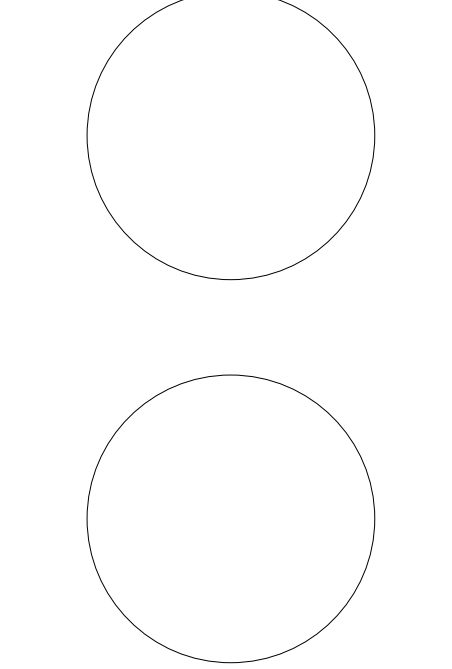
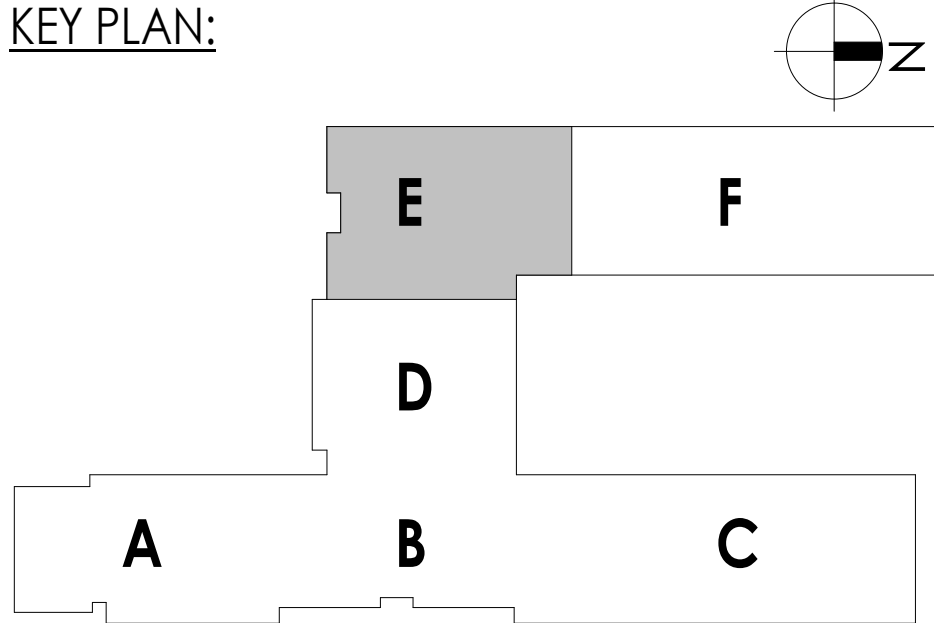
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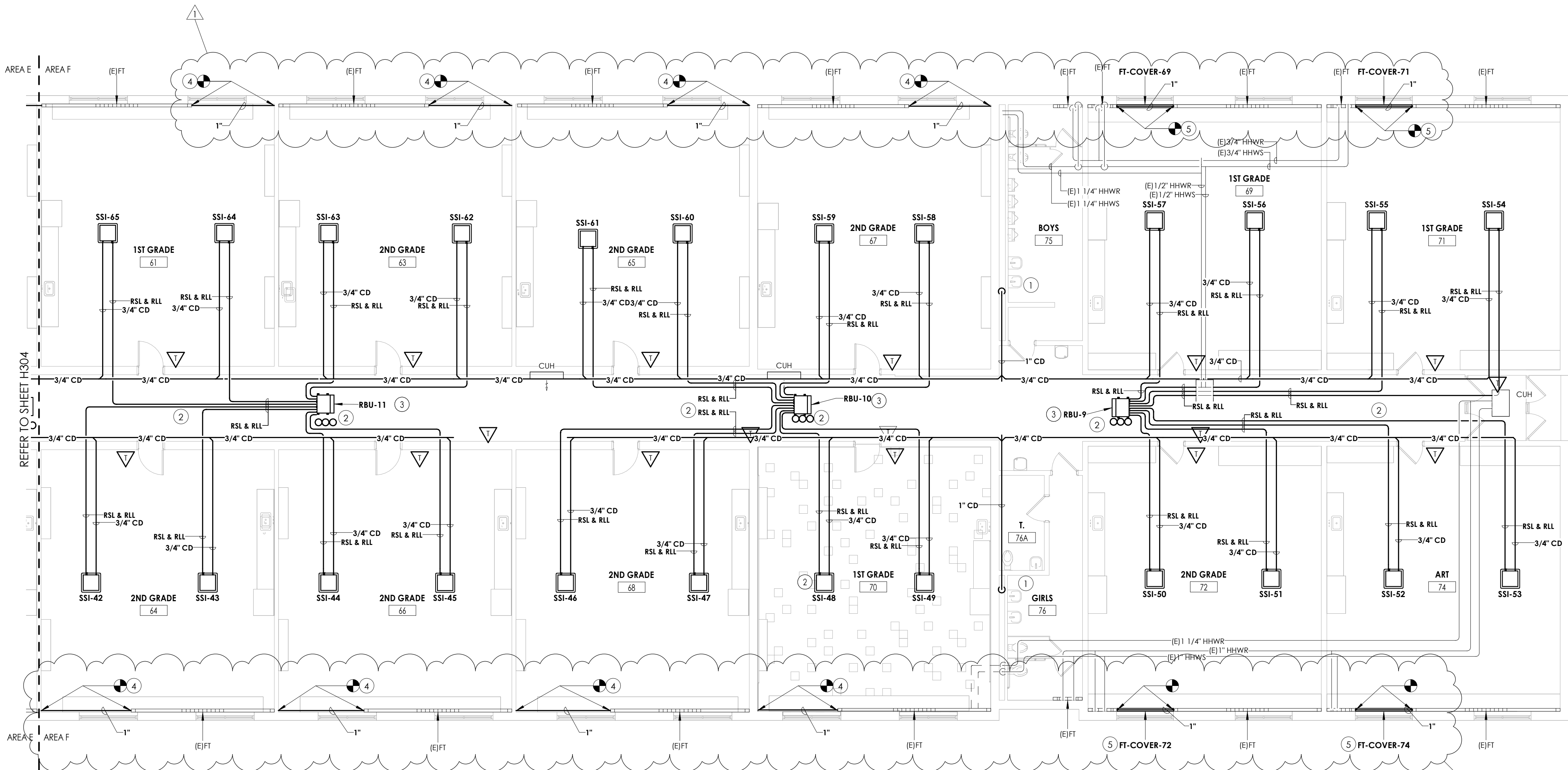
1
H304
1/8" = 1'-0"

HVAC PIPING PLAN-AREA E

- 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.



10/27/2023 9:56:41 AM <project location> REVIT PROJECT FILES ON BIM360

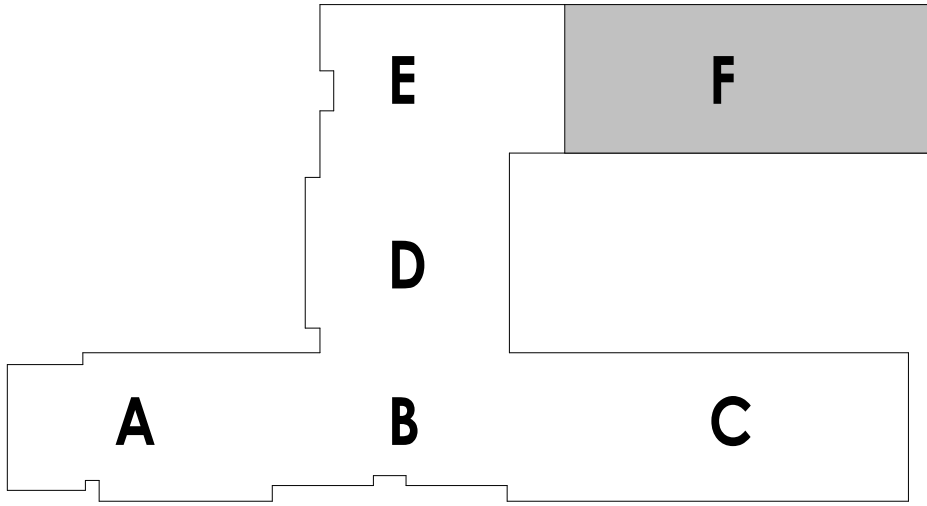


1 HVAC PIPING PLAN-AREA F
H305 1/8" = 1'-0"

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

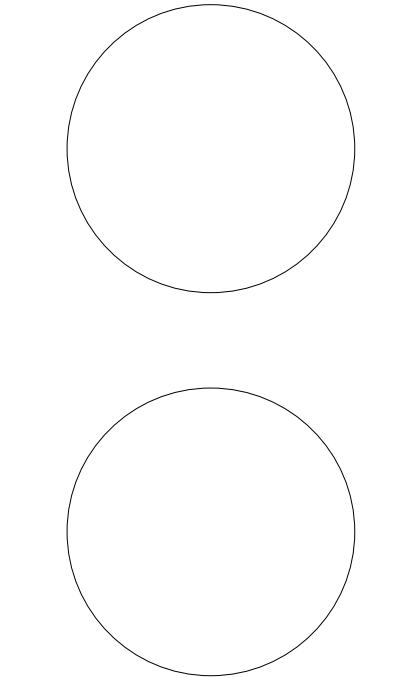
SOUTH ORANGETOWN CSD

- WILLIAM G. SCHAFER SED#15-03-01-06-0-010-2019
- COTTAGE LANE ELEMENTARY SED#15-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED#15-03-01-06-0-004-002
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- SCONE OUTDOOR CLASSROOM SED#15-03-01-06-7-036-001
- CLE OUTDOOR CLASSROOM SED#15-03-01-06-7-034-001
- 12HS OUTDOOR CLASSROOM SED#15-03-01-06-7-035-001

PROJECT ISSUE & REVISION SCHEDULE

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

PROFESSIONAL STAMPS



NEW YORK STATE EDUCATION DEPARTMENT
If it is a violation of the NEW YORK STATE EDUCATION LAW and the COMMISSIONER'S
REGULATIONS FOR ANY PERSON, UNDER ACTING UNDER THE DIRECTION OF A LICENSED
ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER OR REUSE IN ANY WAY, OF ANY
DRAWING THE SEAL OF AN ARCHITECT, ENGINEER OR LAND SURVEYOR, THE ALLEGED
PARTY SHALL FILE WITH THE NEW YORK STATE AND THE COMMISSIONER, BY FILING BY FOLLOWING BY
THEIR SIGNATURE AND THE DATE OF SUCH ABANDON, AND A SPECIFIC DESCRIPTION OF THE
ALTERATION.

SHEET INFORMATION

Issued
10/18/2023
Scale
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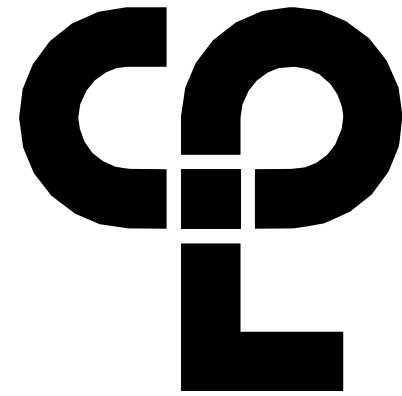
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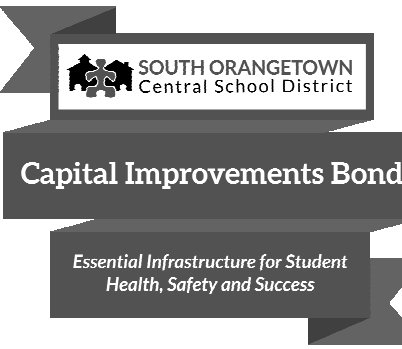
| VENTILATION CALCULATIONS | | | | | | | | | | | | | |
|--------------------------|-------------------------|--------------|----------------------------|--------------------|---------------------------------|---|--|---------------------------------------|----------------------------------|--------------------------------|----------------------------------|----------------------------|--------------|
| 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 ZONE 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-010-8-0-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 | | STYLE | TYPICAL UNIT MFG & MODEL NO. | NOTES: |
| FT-1 | 202A | 1200 | 0.7 | 0.75 | 50 | 180 | 65 | 28" | 5-5/16" | BARE ELEMENT | STERLING JVB-T-C3/4-435 | 1,2,3 |
| <div>NOTES:</div> <div><div>1. LOCATE ELEMENT BEHIND MILLWORK BY GC.</div><div>2. MC TO FIELD VERIFY ENCLOSURE LENTGH. ENCLOSURE TO BE FULL WIDTH WITHOUT GAPS.</div><div>3. COORDINATE HEIGHT WITH ELECTRICAL DEVICES.</div></div> | | | | | | | | | | | | |



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

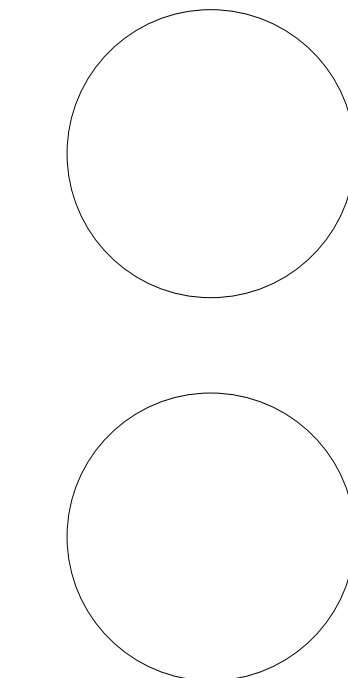
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PROJECT ISSUE & REVISION SCHEDULE

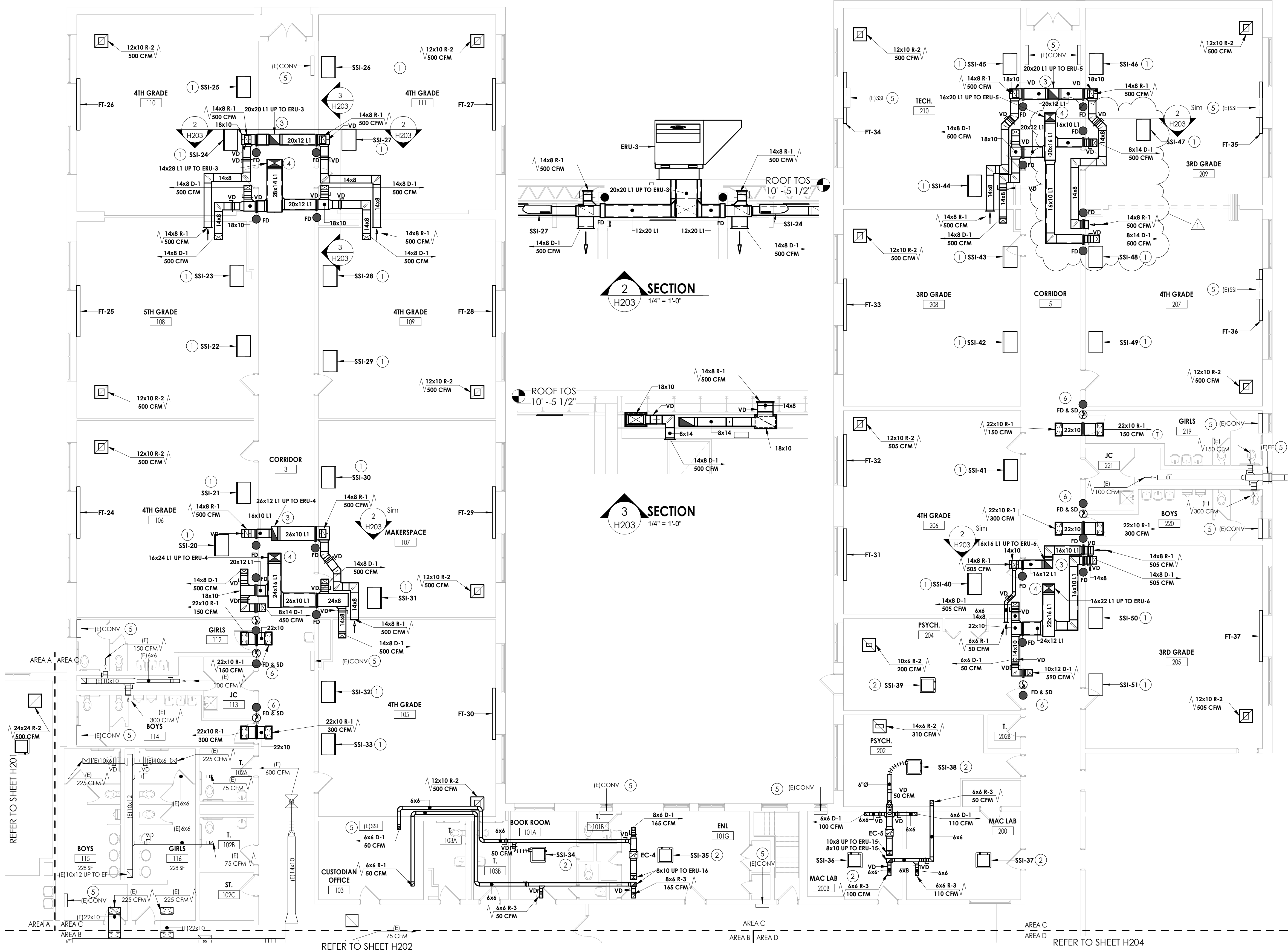
| No. | Date | Description |
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| 1 | 10/27/2023 | BID ADDENDUM #1 |

PROFESSIONAL STAMPS



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1 H203 FIRST FLOOR DUCTWORK NEW WORK PLAN - AREA C
1/8" = 1'-0"

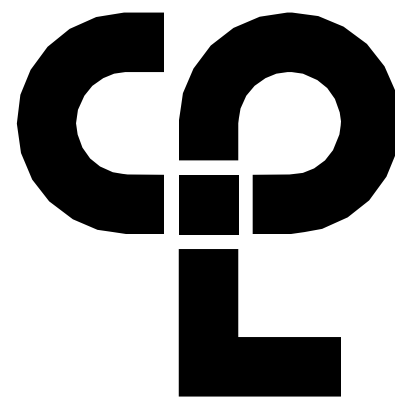
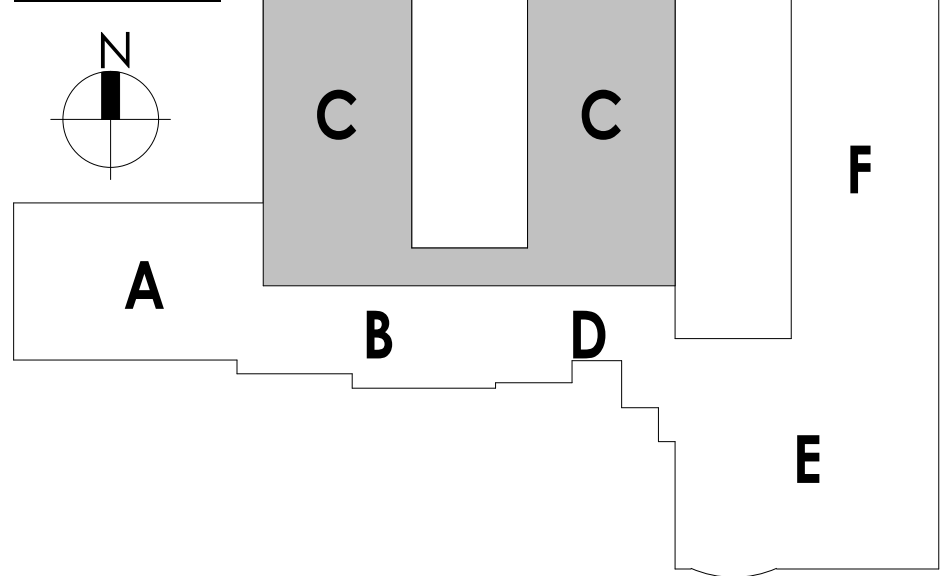
2 SECTION H203
1/4" = 1'-0"

3 SECTION H203
1/4" = 1'-0"

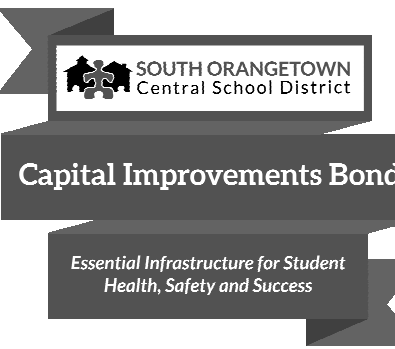
KEY NOTES

- 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 PLAN:



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

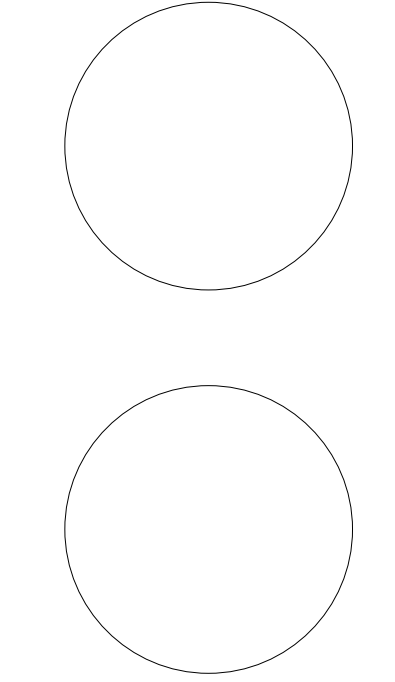
SOUTH ORANGETOWN CSD

- WILLIAM O. SCHAEFER SED#30-03-01-06-0-012-017
- COTTAGE LANE ELEMENTARY SED#30-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED#30-03-01-06-0-006-032
- WILLIAM O. SCHAEFER SAL SED#30-03-01-06-0-012-020
- COTTAGE LANE SAL SED#30-03-01-06-0-010-023
- COTTAGE LANE LIBRARY SAL SED#30-03-01-06-0-023-022
- WCS OUTDOOR CLASSROOM SED#30-03-01-06-7-033-001
- TCWS OUTDOOR CLASSROOM SED#30-03-01-06-7-036-001
- CLE OUTDOOR CLASSROOM SED#30-03-01-06-7-034-001
- THS OUTDOOR CLASSROOM SED#30-03-01-06-7-035-001

PROJECT ISSUE & REVISION SCHEDULE

| Rev | Date | Description |
|-----|------------|-----------------|
| 1 | 10/27/2023 | BID ADDENDUM #1 |

PROFESSIONAL STAMPS



NEW YORK STATE EDUCATION STATUTES

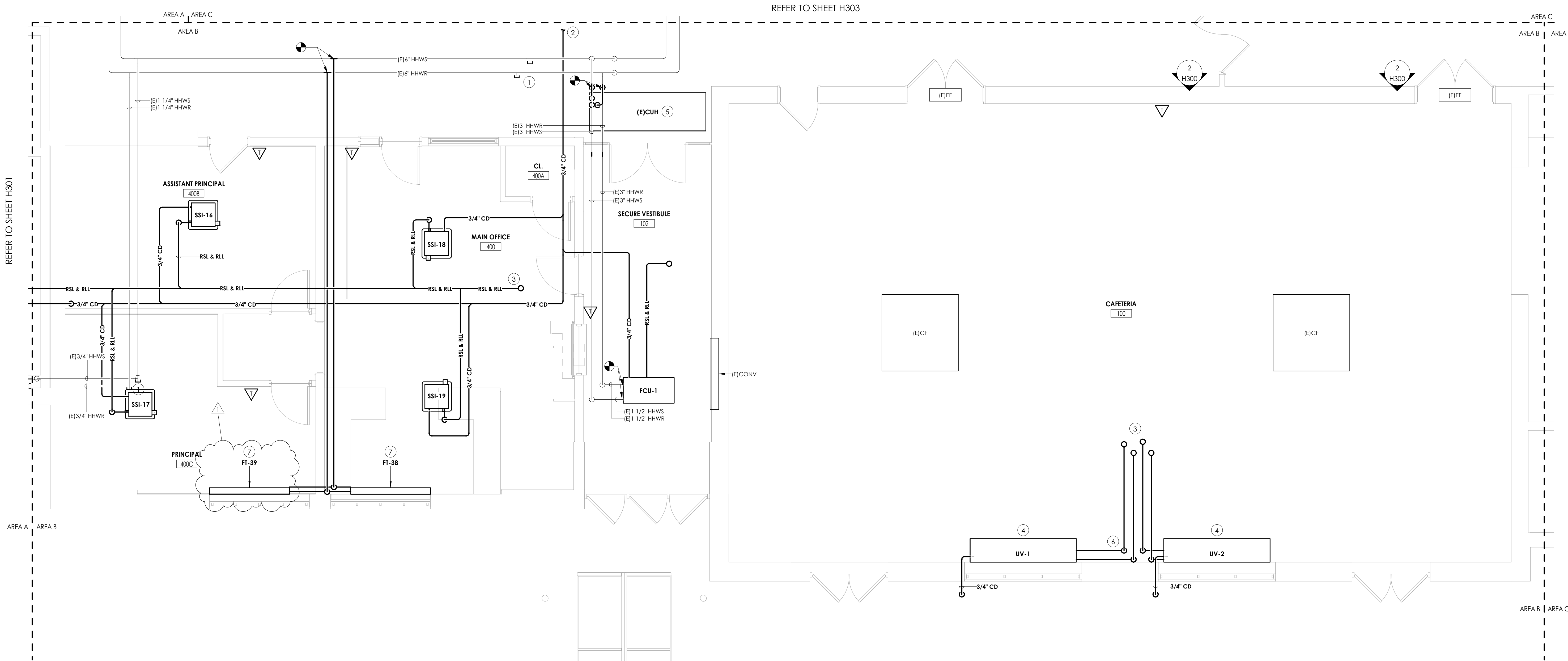
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONERS' REGULATIONS FOR ANY PERSON, FIRM OR CORPORATION TO CONTRACT FOR OR TO EXECUTE ARCHITECTURAL, ENGINEERING OR LAND SURVEYING WORK IN ANY MANNER THAT VIOLATES THE STATUTE OF THE STATE OF NEW YORK OR THE REGULATIONS OF THE COMMISSIONERS OF EDUCATION.

SHEET INFORMATION

Issued 10/18/23 Scale As Indicated
Project Status
BID DOCUMENTS
Drawn By KCM Checked By JJM
Drawing Title
FIRST FLOOR DUCTWORK NEW WORK PLAN - AREA C

Drawing Number

**CLE
H203**



KEY NOTES

- 1 CAP EXISTING HYDRONIC PIPING AT MAIN.
- 2 ROUTE CONDENSATE TO ROOM 102C ON H303.
- 3 RSL/RLL UP TO CONDENSING UNIT ON ROOF.
- 4 INSTALL NEW UNIT VENTILATOR. ROUTE CONDENSATE PIPING OUTSIDE.
- 5 RE-INSTALL EXISTING UNIT IN NEW LOCATION, AND RECONNECT TO PIPING AT INDICATED POINT.
- 6 PROVIDE 18 GA. METAL PIPING COVER BETWEEN UNITS AND UP THE WALL TO THE CEILING. PAINT TO MATCH THE EXISTING WALLS.
- 7 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.

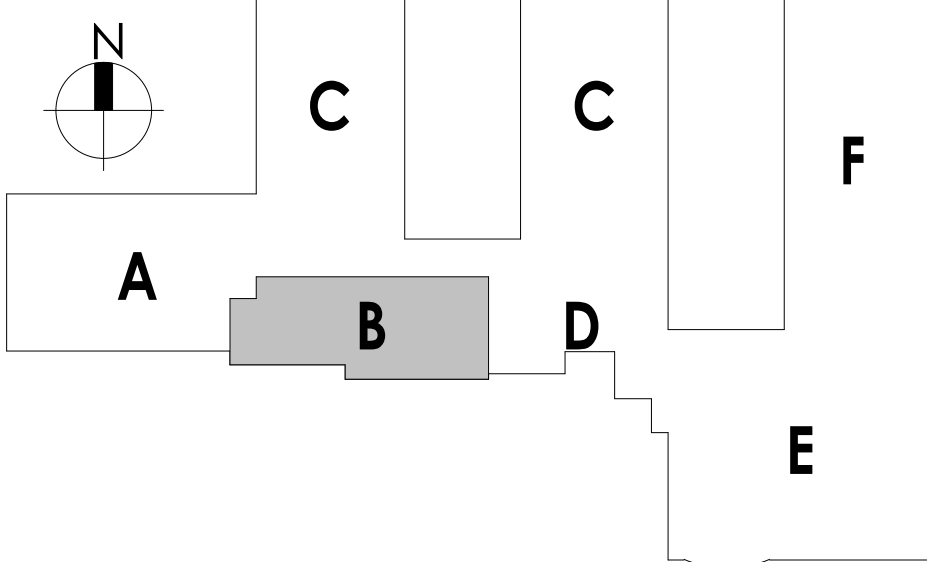
REFER TO SHEET H303

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

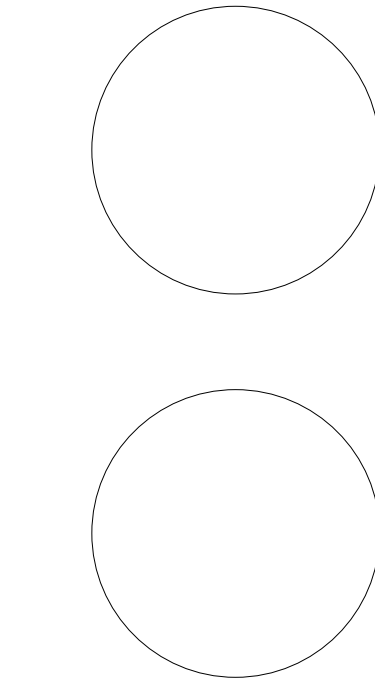
SOUTH ORANGETOWN CSD

- 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

| Rev | Date | Description |
|-----|------------|-----------------|
| 1 | 10/27/2023 | BID ADDENDUM #1 |

PROFESSIONAL STAMPS



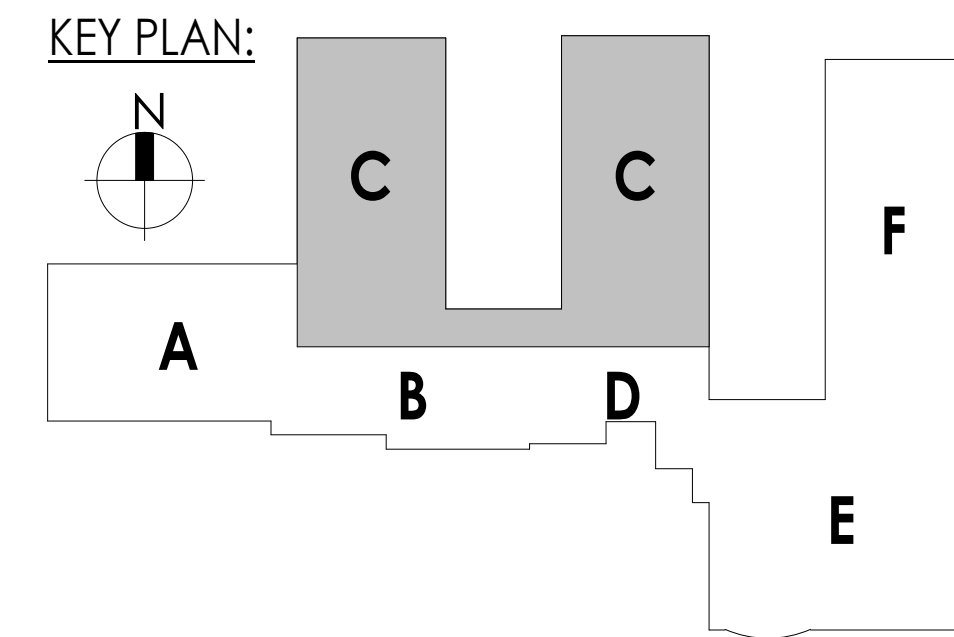
NEW YORK STATE EDUCATION STATUTE:
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONERS'
REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED
ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER OR REUSE IN ANY MANNER, OR
REPRODUCE THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR, IN ANY MANNER.
PRINT NAME WITH TITLE OVER SEAL AND THE LOCATION, NUMBERED BY FOLLOWED BY
THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE
ALTERATION.

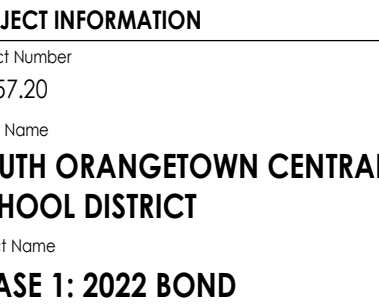
SHEET INFORMATION

Issued
10/18/23
Scale
1/4" = 1'-0"
Project Status
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Drawn By
KCM
Checked By
JJM
Drawing Title
FIRST FLOOR PIPING NEW WORK
PLAN - AREA B

Drawing Number

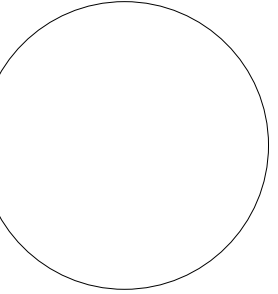
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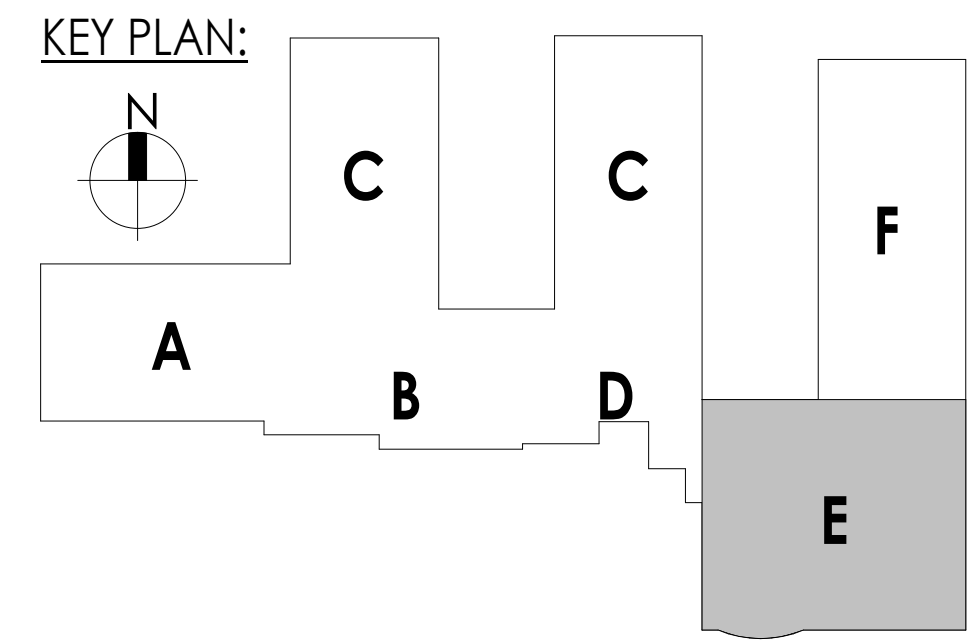
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 OTTAGE LANE ELEMENTARY SED#: 50-03-01-06-0-010-020
 APPAN ZEE HIGH SCHOOL SED#: 50-03-01-06-0-006-032
 ILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
 OTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
 OTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-0-023-005
 OS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-031
 MS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-034
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 HS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-030

PROFESSIONAL STAMPS



| | | |
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| <p>PROJECT INFORMATION</p> <p>8/23</p> <p>Status</p> <p>DOCUMENTS</p> <p>By</p> <p>1</p> <p>Drawing Title</p> | | <p>Scale</p> <p>1/8" = 1'-0"</p> <p>Checked By</p> <p>JJM</p> |
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H305



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| FAN COIL UNIT SCHEDULE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|----------|----------|--------------|-------|--------|----------------|--------------|-----------|----------|--------|------------------------|----------|----------|----------|----------------|------------|------|-------------|----------------------|-------------------------|--------|--------------|---------------------|----------|-------------|-----|----|-------|----|-----|-----|------|--------------|
| TAG | LOCATION | SERVICE | MANUFACTURER | MODEL | TYPE | FAN | | | | | HOT WATER HEATING COIL | | | | | | | | | | FILTER | ELECTRICAL | | | | | | 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 | WEIGHT (LBS) |
| 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/0/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 |

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\\project location> REVIT PROJECT FILES ON BMS60

| FINNED TUBE RADIATION SCHEDULE | | | | | | | | | | | | | | | | | | | | | |
|---|----------|-----------------|-----------------|----------|----------|-------|----------|---------------------|------------|--------|-----------|----------|-----------|---------|--------------------|--------------------|----------|------------------------------|---------|---|--|
| TAG | LOCATION | TUBE SIZE (IN.) | FIN SIZE | FINS/FT. | FIN TYPE | TIERS | BTUH /LF | ACTIVE LENGTH (FT.) | HOT WATER | | | | ENCLOSURE | | | | STYLE | TYPICAL UNIT MFG & MODEL NO. | NOTES | | |
| | | | | | | | | | FLOW (GPM) | BTUH | EWTF (°F) | AWT (°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-C34-435 | 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-C34-435 | 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 | FLAT TOP | STERLING JVB-B-C34-435 | 2,3,4,5 | 1 | |
| 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-C34-435 | 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-C34-435 | 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-C34-435 | 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-C34-435 | 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" | 12 | FLAT TOP | STERLING JVB-B-C34-435 | 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-C34-435 | 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-C34-435 | 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-C34-435 | 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-C34-435 | 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-C34-435 | 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-C34-435 | 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-C34-435 | 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-C34-435 | 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-C34-435 | 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-C34-435 | 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-C34-435 | 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-C34-435 | 2,3,4,5 | | |
| FT-21 | 408 | 3/4" | 4-1/4" X 3-5/8" | 50 | CO./AL. | 1 | 1200 | 7 | 0.84 | 8,400 | 180 | 170 | 28" | 5-5/16" | 28" | 8 | FLAT TOP | STERLING JVB-B-C34-435 | 2,3,4,5 | | |
| FT-22 | 406 | 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-C34-435 | 2,3,4,5 | | |
| FT-23 | 404 | 3/4" | 4-1/4" X 3-5/8" | 50 | CO./AL. | 1 | 1200 | 5 | 0.6 | 6,000 | 180 | 170 | 28" | 5-5/16" | 28" | 6 | FLAT TOP | STERLING JVB-B-C34-436 | 2,3,4,5 | | |
| FT-24 | 106 | 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-C34-435 | 2,3,4,5 | | |
| FT-25 | 108 | 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-C34-435 | 2,3,4,5 | | |
| FT-26 | 110 | 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-C34-435 | 2,3,4,5 | | |
| FT-27 | 111 | 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-C34-435 | 2,3,4,5 | | |
| FT-28 | 109 | 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-C34-435 | 2,3,4,5 | | |
| FT-29 | 107 | 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-C34-435 | 2,3,4,5 | | |
| FT-30 | 105 | 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-C34-435 | 2,3,4,5 | | |
| FT-31 | 206 | 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-C34-435 | 2,3,4,5 | | |
| FT-32 | 206 | 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-C34-435 | 2,3,4,5 | | |
| FT-33 | 208 | 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-C34-435 | 2,3,4,5 | | |
| FT-34 | 210 | 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-C34-435 | 2,3,4,5 | | |
| FT-35 | 209 | 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-C34-435 | 2,3,4,5 | | |
| FT-36 | 207 | 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-C34-435 | 2,3,4,5 | | |
| FT-37 | 205 | 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-C34-435 | 2,3,4,5 | | |
| FT-38 | 400 | 3/4" | 4-1/4" X 3-5/8" | 50 | CO./AL. | 1 | 1200 | 5.5 | 0.66 | 6,600 | 180 | 170 | 28" | 5-5/16" | 28" | 6 | FLAT TOP | STERLING JVB-B-C34-435 | 2,3,4 | | |
| FT-39 | 400C | 3/4" | 4-1/4" X 3-5/8" | 50 | CO./AL. | 1 | 1200 | 5.5 | 0.66 | 6,600 | 180 | 170 | 28" | 5-5/16" | 28" | 6 | FLAT TOP | STERLING JVB-B-C34-435 | 2,3,4 | | |
| NOTES: 1. LOCATE ELEMENT BEHIND MILLWORK BY GC. 2. COLOR BY ARCHITECT. 3. MC TO FIELD VERIFY ENCLOSURE LENGTH. ENCLOSURE TO BE FULL WIDTH WITHOUT GAPS. 4. COORDINATE HEIGHT WITH ELECTRICAL DEVICES. 5. BID ALTERNATE MC-0Y BARE ELEMENT ENCLOSURE TYPE. | | | | | | | | | | | | | | | | | | | | | |

| SPLIT SYSTEM OUTDOOR CONDENSING UNIT SCHEDULE | | | | | | | | | | | | | | | | | |
|---|---|----------------------------|--------------|-------------|-------------|-------------|-----------|-----------------|------------|------------|---------------|-----------------------------|---------|------|------------------------------|--------|--|
| TAG | LOCATION | SERVES | NOMINAL TONS | MBH COOLING | MBH HEATING | FAN DATA | | ELECTRICAL DATA | | | | DIMENSIONS (H X W X D) | WT (LB) | EER | TYPICAL UNIT MFG & MODEL NO. | NOTES: | |
| | | | | | | MOTOR WATTS | MOTOR FLA | COMPRESSOR RLA | SYSTEM MFA | SYSTEM MCA | POWER (ØV/Hz) | | | | | | |
| ACC-1,2 | ROOF | 408-411 | 10 | 120 | 135 | 740 | 3.2 | 31.5 | 60 | 43.9 | 3/208/60 | 66-9/16 X 48-13/16 X 30-1/8 | 622 | 11.3 | FUJITSU AOUA120ULBV5 | 1,2 | |
| ACC-3,4 | ROOF | 405-407 | 14 | 168 | 188 | 740 X 2 | 6.8 | 40.2 | 70 | 59.8 | 3/208/60 | 66-9/16 X 63 X 30-1/8 | 930 | 11.5 | FUJITSU AOUA168ULBV5 | 1,2 | |
| ACC-5,6 | ROOF | 108-111 | 10 | 120 | 135 | 740 | 3.2 | 31.5 | 60 | 43.9 | 3/208/60 | 66-9/16 X 48-13/16 X 30-1/8 | 622 | 11.3 | FUJITSU AOUA120ULBV5 | 1,2 | |
| ACC-7,8 | ROOF | 105-107 | 10 | 120 | 135 | 740 | 3.2 | 31.5 | 60 | 43.9 | 3/208/60 | 66-9/16 X 48-13/16 X 30-1/8 | 622 | 11.3 | FUJITSU AOUA120ULBV5 | 1,2 | |
| ACC-9,10 | ROOF | 207-210 | 10 | 120 | 135 | 740 | 3.2 | 31.5 | 60 | 43.9 | 3/208/60 | 66-9/16 X 48-13/16 X 30-1/8 | 622 | 11.3 | FUJITSU AOUA120ULBV5 | 1,2 | |
| ACC-11,12 | ROOF | 204-206 | 10 | 120 | 135 | 740 | 3.2 | 31.5 | 60 | 43.9 | 3/208/60 | 66-9/16 X 48-13/16 X 30-1/8 | 622 | 11.3 | FUJITSU AOUA120ULBV5 | 1,2 | |
| ACC-13,14 | ROOF | 309-312 | 10 | 120 | 135 | 740 | 3.2 | 31.5 | 60 | 43.9 | 3/208/60 | 66-9/16 X 48-13/16 X 30-1/8 | 622 | 11.3 | FUJITSU AOUA120ULBV5 | 1,2 | |
| ACC-15,16 | ROOF | 305-308 | 10 | 120 | 135 | 740 | 3.2 | 31.5 | 60 | 43.9 | 3/208/60 | 66-9/16 X 48-13/16 X 30-1/8 | 622 | 11.3 | FUJITSU AOUA120ULBV5 | 1,2 | |
| ACC-17 | ROOF | 303-304 | 10 | 120 | 135 | 740 | 3.2 | 31.5 | 60 | 43.9 | 3/208/60 | 66-9/16 X 48-13/16 X 30-1/8 | 622 | 11.3 | FUJITSU AOUA120ULBV5 | 1,2 | |
| ACC-18 | ROOF | 201B, 202A, 212, 212A | 10 | 120 | 135 | 740 | 3.2 | 31.5 | 60 | 43.9 | 3/208/60 | 66-9/16 X 48-13/16 X 30-1/8 | 622 | 11.3 | FUJITSU AOUA120ULBV5 | 1,2 | |
| ACC-19,20 | ROOF | 300A, 300B, 301, 301A, 302 | 10 | 120 | 135 | 740 | 3.2 | 31.5 | 60 | 43.9 | 3/208/60 | 66-9/16 X 48-13/16 X 30-1/8 | 622 | 11.3 | FUJITSU AOUA120ULBV5 | 1,2 | |
| ACC-21,22 | ROOF | 300C, 301B | 10 | 120 | 135 | 740 | 3.2 | 31.5 | 60 | 43.9 | 3/208/60 | 66-9/16 X 48-13/16 X 30-1/8 | 622 | 11.3 | FUJITSU AOUA120ULBV5 | 1,2 | |
| ACC-23 | ROOF | 400, 400B, 400C, 404 | 8 | 96 | 108 | 740 | 3.3 | 26.4 | 50 | 37.7 | 3/208/60 | 66-9/16 X 36-5/8 X 30-1/8 | 570 | 13.2 | FUJITSU AOUA96ULBV5 | 1,2 | |
| ACC-24 | ROOF | 101A, 101G | 3 | 36 | 42 | 200 | 1 | 14.2 | 30 | 29.8 | 3/208/60 | 52-1/2 X 38-3/16 X 14-9/16 | 262 | 10.6 | FUJITSU AOU36RLAVM4 | 1,2 | |
| ACC-25 | ROOF | 200, 200B, 202 | 6 | 72 | 81 | 740 | 3.3 | 19.7 | 40 | 29.3 | 3/208/60 | 66-9/16 X 36-5/8 X 30-1/8 | 569 | 14.9 | FUJITSU AOUA72ULBV5 | 1,2 | |
| ACC-26 | CAFETERIA | 100 | - | 34.5 | - | - | 14 | 11.6 | 25 | 17 | 3/208/60 | 56-1/4 X 61-1/2 X 29-1/4 | 397 | 13.7 | AAON CFA-003-A-A-8-BA00G | 1,2 | |
| ACC-27 | CAFETERIA | 100 | - | 34.5 | - | - | 14 | 11.6 | 25 | 17 | 3/208/60 | 56-1/4 X 61-1/2 X 29-1/4 | 397 | 13.7 | AAON CFA-003-A-A-8-BA00G | 1,2 | |
| SSO-1 | ROOF | 102 | 6 | 72 | 81 | 740 | 3.3 | 19.7 | 40 | 29.3 | 3/208/60 | 66-9/16 X 36-5/8 X 30-1/8 | 569 | 14.9 | FUJITSU AOUA72ULBV5 | 1,2 | |
| NOTES: | 1. FACTORY MOUNTED DISCONNECT 2. LOW AMBIENT TEMPERATURE KIT | | | | | | | | | | | | | | | | |