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BID ADDENDUM #2

Nanuet Union Free School District 103 Church Street Nanuet, NY 10954

Nanuet Bond Projects Phase 4

Date: March 22, 2024

NOTICE TO CONTRACTORS

This Addendum issued prior to receipt of Bid shall and does hereby become a part of the Construction Documents for the above project.

All principal Contractors shall be responsible for seeing that their Subcontractors are properly apprised of the contents of this Addendum.

All information contained in this Addendum shall supersede and shall take precedence over any conflicting information in the original Bidding Documents dated **June 6, 2023**. and all previous addenda.

All Contractors shall acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may subject Bidder to disqualification.

CLARIFICATIONS:

- Chopping concrete going for which day schedule? And who will do the chopping and back filling? By Plumbing contractor or by GC?
 - Response: Plumbing contractor to do saw cutting and back filling pipe trenching
- 2. Water and waste removal by whom?
 - Response: Plumbing contractor to handle waist and water removal
- We are respectfully requesting for a bid date extension.
 Response: See updated Notice to Bidders for new bid due date & Milestone Schedule for extended bid duration.
- The GC bid form does not have a bid item for roofing in section 075600.13. Please advise.
 Response: Roofing spec added to GC-01 bid form. See updated specification 00 30 01 -GC-01 BID FORM.
- The GC bid form does not have a line item for roofing, section 075600.13. Please advise.
 Response: Roofing spec added to GC-01 bid form. See updated specification 00 30 01 -GC-01 BID FORM.
- 6. The allowances in the spec indicate there is a BE 01 contract. Please advise.
 - a. **Response:** BE 01 allowance was removed. See update specification 01 21 00 ALLOWANCES

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- 7. At Miller there are photo voltaic on the roof. Who resets these panels? The GC or the EC. Please advise.
 - a. **Response:** The photo voltaic panel removal and reinstallation is handled under a separate contract. It is neither a part of the GC or EC scope.
- 8. Drawing ME A601 does not show #8 door sill. Please advise.

Response: See revised sheet ME-A601 for updated door sill, jamb, and head detail numbering.

CHANGES TO SPECIFICATIONS:

00 03 00 - NOTICE TO BIDDERS

- a. Updated bid due date. See attached specification.
- 00 30 01 GC-01 BID FORM
- b. Updated. Added a spec for roofing. See attached specification.

00 30 03 - MC-01 BID FORM

a. Updated. Glazing and steel were added to SOV. See attached specification.

01 11 00 - MILESTONE SCHEDULE

a. Updated to reflect extended bid duration. See attached specification.

01 12 02 - CONTRACT SUMMARY - GC-01

b. Updated. See attached specification.

01 21 00 - ALLOWANCES

c. Updated. Removed BE-01. See attached specification.

REVISIONS TO DRAWINGS:

ARCHITECTURAL

1. Sheet HS-A201: EXTERIOR ELEVATIONS

A. Updated details A9 & A114. See attached drawing

2. Sheet ME-A601: DETAILS & DOOR SCHEDULE

A. Updated door schedule head, jamb and sill detail numbering

ABATEMENT

1. Sheet MS-ASB-2

d. Updated legend and hatch to indicate removal of second floor faculty bathroom flooring, ceiling, pipe fittings and pipe insulation. See attached drawing.

STRUCTURAL

None

MECHANICAL

1. Sheet HS-M002: HVAC SCHEDULES

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- 2. Sheet HS-M003: HVAC SCHEDULES
- 3. Sheet HS-M004: VRV SYSTEM PIPING AND WIRING DIAGRAMS
- 4. Sheet HS-M007: VRV SYSTEM PIPING AND WIRING DIAGRAMS (BID ALTERNATE #1)
- 5. Sheet HS-M101: OVERALL FIRST FLOOR PLAN
- 6. Sheet HS-M109: FIRST FLOOR REMOVALS ADMINISTRATION WING
- 7. Sheet HS-M121: FIRST FLOOR PIPING PLAN ADMINISTRATION WING
- 8. Sheet HS-M122: FIRST FLOOR DUCTWORK PLAN ADMINISTRATION WING
- 9. Sheet HS-M124: SECOND FLOOR PLAN WEST CLASSROOM WING
- 10. Sheet HS-M302: ENLARGED VIEWS
- 11. Sheet HS-M303: ENLARGED VIEWS
- 12. Sheet HS-M401: 1ST FLOOR & BASEMENT PLANS ADMIN WING (BID ALTERNATE #1)
 - a. All updated mechanical sheets include revisions to VRV systems HP-HS-9/-9A to include three more fan coil units within the superintendent's office as part of the base bid. See attached drawing.

ELECTRICAL

None

PLUMBING

- 1. Sheet BM-P101: SAW CUT PLAN
- 2. Sheet BM-P102: BOILER ROOM PLUMBING INSTALLATION PLAN
- 3. Sheet BM-PR101: BOILER ROOM PLUMBING REMOVALS PLAN
 - a. All updated plumbing sheets include revisions to Barr Middle School boiler room drainage work. See attached drawing.

ENCLOSURES:

00 03 00 - NOTICE TO BIDDERS - PH 4 - BID ADDENDUM 02 00 30 01 - GC-01 BID FORM-UPDATED - PH 4 - BID ADDENDUM 02 00 30 03 - MC-01 BID FORM-UPDATED - PH 4 - BID ADDENDUM 02 01 11 00 - MILESTONE SCHEDULE- PH 4 - BID ADDENDUM 02 01 12 02 - CONTRACT SUMMARY - GC-01 01 21 00 - ALLOWANCES - PH 4 - BID ADDENDUM 02

SHEETS

GENERAL	CIVIL	STRUCT	ARCH	MECH	ELEC	PLUMB	ABATEMENT
			HS-A201	HS-M002		BM-PR101	
			ME-A601	HS-M003		BM-P101	
				HS-M004		BM-P102	
				HS-M007			
				HS-M101			
				HS-M109			



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HS-M121	
HS-M122	
HS-M124	
HS-M302	
HS-M303	
HS-M401	

END OF BID ADDENDUM No. 2

SECTION 00 03 00 - NOTICE TO BIDDERS

PART 1 - GENERAL

1.1 The Nanuet Union Free School District, Rockland County, NY, invites bid proposals for the following:

NUFSD Phase 4 Capital Projects:

A. Nanuet High School

- 1. Doors and Window Treatments: (GC-01)
- 2. Admin Wing Renovations: (GC-01, MC-01, EC-01, PC-01)
- 3. HVAC & Hydronic Upgrades: (GC-01, MC-01, EC-01)
- 4. Electrical Panel Replacements: (EC-01)
- 5. Kitchen Fume Hood Replacements: (MC-01, EC-01)

B. Barr Middle School

- 1. Doors and Window Treatments: (GC-01)
- 2. Toilet Room Renovations: (GC-01, MC-01, EC-01, PC-01)
- 3. Fire Alarm Upgrades: (EC-01)

C. Miller Elementary School

- 1. Doors and Window Treatments: (GC-01)
- 2. Masonry Restoration, and Site work: (GC-01)
- 3. Security Vestibule Renovations: (GC-01, MC-01, EC-01)
- 4. HVAC Upgrades: (MC-01, EC-01)
- 5. Fire Alarm & Electrical Upgrades: (EC-01)

1.2 CONTRACTS:

A. Separate Prime Contracts will be let for:

- 1. General Construction #1 (GC-01)
- 2. Mechanical Construction #1 (MC-01)
- 3. Plumbing Construction #1 (PC-01)
- 4. Electrical Construction #1 (EC-01)

NOTICE TO BIDDERS

1.3 SCHEDULE:

A. Bidding Documents Available:

- 1. At **12:00 p.m. on March 5, 2024** Bidding Documents for the proposed project will be on file and publicly exhibited online at <u>http://revplans.biddyhq.com</u>
- 2. Copies of said Bidding Documents can be obtained from **Rev Plans, 28 Church** Street, Unit #7, Warwick, NY 10990 or <u>http://revplans.biddyhq.com</u>
- 3. Digital Download: Bid documents can be downloaded for **Forty Nine Dollars** (\$49.00). Non-refundable fee payable by credit card from<u>http://revplans.biddyhg.com</u>
- 4. Hard Copy Drawings: \$ 100 refundable upon return of set in good condition. Make checks or Money Orders payable to Nanuet Union Free School District.
- 5. Any bidder requiring documents to be shipped shall make arrangements with the printer and pay for all packaging and shipping costs.
- 6. All bid addenda will be transmitted to registered plan holders via email and will be available at <u>http://revplans.biddyhq.com</u>. Plan holders who have paid for hard copies of the Bidding Documents will need to make the determination if hard copies of the addenda are required for their use, and coordinate directly with the printer for hard copies of addenda to be issued. There will be no charge for registered plan holders to obtain hard copies of the bid addenda.

B. Pre-Bid Conference:

- 1. Date & Time: Thursday, March 14, 2024 @ 1:00 PM
- 2. Location: Nanuet Senior High School
- 3. Address: 103 Church street, Nanuet, NY 10954
- 4. Prospective bidders are strongly encouraged to attend.

(C.	Bid	Due Date:	5
(1
Z	1.	Sealed proposals will be received as indicated below, and at that time and place will be publicly opened and read aloud in the administrative conference room. All bidders shall comply with the General Municipal Law (103).	2
ک	2. 3.	Date: Wednesday, April 24, 2024 Time: 1:30 PM (local time)	کر

- 4. Location: Nanuet Union Free School District Business office
- 5. Address: 101 Church Street, Nanuet, NY, 10954

D. Request for Information:

NOTICE TO BIDDERS

1. All pre-bid "Request For Information" (RFI) or Clarification must be submitted NO LATER THAN Wednesday, March 27, 2024 by 12:00pm (noon)

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 **PROVISIONS**:

- A. Wages to workers, laborers and mechanics employed to work on this project, shall be paid in accordance with Section 220 of the Labor Law, and in accordance with the Prevailing Rate Schedules (PRC # found in the Project Manual) and proof of such payments will be required.
- B. Each bid for <u>each</u> Contract must be identified, in typed format, on the outside of a sealed manila envelope, with the name and address of the bidder and designated as bid for the Project titled above and appropriate Contract number and name titled above. The Nanuet Union Free School District is not responsible for bids opened prior to the bid opening if bid contract number and opening date do not appear on the envelope. Bids opened prior to date and time indicated are invalid. The bidder assumes the risk of any delay in the mail, or in the handling of the mail by employees of the Nanuet Union Free School District, as well as improper hand delivery.
- C. Each proposal must be accompanied by a certified check in the sum of five percent (5%) of the amount of the bid, drawn upon a National or State Bank or Trust Company, payable to the order of the Nanuet Union Free School District, or a bond from a surety licensed to practice business in the State of New York with sufficient sureties in a penal sum equal to five percent (5%) of the bid, conditioned that if this bid is accepted, successful bidder will enter into a contract for the same and that he will execute such further security as may be required for the performance of the contract.
- D. A separate Performance Bond, equal to one hundred percent (100%) of the contract amount will also be required of the successful bidders, and the bond shall be from a surety licensed to practice business in the State of New York, satisfactory to the School Board.
- E. A separate Payment Bond, equal to one hundred percent (100%) of the contract sum will also be required of the successful bidders, and the bond shall be from a surety licensed to practice business in the State of New York, satisfactory to the School Board.
- F. The bidders to whom the above referenced contracts may be awarded, shall within seven (7) days after the date of notification of the acceptance of their proposal, provide insurance and security as required by the above referenced contracts in a form acceptable by the Owner. In case of the bidders' failure to do so, or in case of the bidders' failure to give further security as herein prescribed, the bidders will be considered as having abandoned the same, and the certified check or other bid security accompanying the proposal shall be forfeited to the School District.
- G. Each bidder shall agree to hold his/her bid price for forty -five (45) days after the formal bid opening
- H. By Order of the Nanuet Union Free School District
 - 1. Dated: March 5, 2024

2. Mr. Mario Spagnuolo, Attorney/Asst. Superintendent of Business

END OF SECTION 00 0300

Nanuet Union Free School District Nanuet Bond Projects Phase 4 KSQ Design Project No. 2211003.00 Bid Set Issuance February 6, 2024 Bid Addendum #2

SECTION 00 30 01 - GC BID FORM

CONTRACT 1 – GENERAL CONSTRUCTION PROPOSAL (GC-01):

CLOSING: (signature)		
DATE:		
BY:		
TITLE:		
FIRM:		
ADDRESS:		
TELEPHONE NUMBER:		
FAX NUMBER:		
CONTACT PERSON:		
E-MAIL:		
BID TO (Owner): Atter Nanuet Union Free School D 101 Church Street Nanuet, New York 10954	ntion: Purchasing Agent vistrict	
SED Project Control No.	Nanuet High School	SED#50-01-08-03-0-003-036
	Barr Middle School	SED#50-01-08-03-0-004-021
	Miller Elementary School	SED#50-01-08-03-0-001-025

1. **Representations**: By making this Bid, the Bidder represents that:

The Bidder (identified above) hereby certifies that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manuals, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement.

To The Board of Education,

The undersigned hereby proposes to furnish all labor, materials, devices, appliances, supplies, equipment, services and other facilities necessary to complete all of the work of the above referenced Contract for the Nanuet Union Free School District, Nanuet, New York, as required by, and in accordance with, the provisions of the Instructions to Bidders, the Supplementary Instructions to Bidders, the Conditions of the Contract, the Drawings and Specifications, all as prepared by KSQ Design designated as Nanuet Union Free School District Phase 4 Projects, dated **February 6, 2024** and that, if this Proposal is accepted, the Undersigned agrees to enter into an Agreement with the owner to perform this work for the lump sum of:

Total Base Bid (All Schools):		(\$)
Nanuet High School:		(\$)
Barr Middle School:		(\$)
Miller Elementary School:		(\$)
	(Words)	(Figures)	

ALLOWANCES:

The undersigned Contractor has included the Allowance(s) as specified in Section 01 21 00 in their Base Bid.

UNIT PRICE:

- A. Unit Price GC-#1: \$_____ Dollars \$ No Cents
- B. Unit Price GC-#2: \$_____ Dollars \$ No Cents
- C. Unit Price GC-#3: \$_____ Dollars \$ No Cents
- D. Unit Price GC-#4: \$_____ Dollars \$ No Cents
- E. Unit Price GC-#5: \$ Dollars \$ No Cents
- F. Unit Price GC-#6: \$ Dollars \$ No Cents
- G. Unit Price GC-#7: \$_____ Dollars \$ No Cents
- H. Unit Price GC-#8: \$_____ Dollars \$ No Cents
- I. Unit Price GC-#9: \$_____ Dollars \$ No Cents

ALTERNATES:

Add Alternate GC-01 Alt #1: \$	Dollar \$ No Cents
Add Alternate GC-01 Alt #2: \$	Dollar \$ No Cents

ADDENDA:

The undersigned acknowledges the receipt of the following addenda:

Addendum Number	Date	Addendum Number	Date
	<u> </u>		
	<u></u>		

The Undersigned understands that the Owner reserves the right to accept or reject any or all proposals, but that if notice of the acceptance of the above Proposal is sent via United States Postal Service or any other overnight carrier, with signature required, to the Undersigned within sixty (60) days after the formal opening of Bids or anytime thereafter before this Proposal is withdrawn, the Undersigned will enter into, execute, and deliver a Contract within five (5) days after the date of said notification.

1. Time of Commencement and Completion:

The Undersigned agrees in the Base Bid to complete the work as per the Milestone Schedule provided in the Specifications.

2. Rejection of Bids:

The Bidder acknowledges that the Owner reserves the right to waive any informality in, or to reject any or all Bids.

3. Attachments:

Obtain and attach the following documents to each individual Bid.

- a. Corporate Resolutions
- b. Non-Collusive Bid Certification
- c. Iran Divestment Act Affidavit
- d. Bid Security
- e. Subcontractor List
- f. Substitution List
- 4. Work Cost Breakdown:

This form shall be filled out and submitted by the Contractor. The grand total must equal the BASE BID under Section I (A) "THE BID". UNIT PRICES are required for the items listed in the Unit Prices section of the work cost breakdown. Unit prices will be provided for use if the required quantities are more or less than the quantities indicated in the plans and specifications. Failure to complete the work cost breakdown may result in the disqualification of the bid. As itemized in the "Instructions to Bidders" for a complete Bid Form include the following which must be filled out completely, failure to comply with any listed below bid will be a rejected bid:

a. Bid Form, all costs must be shown in each CSI section and totaled, failure to breakdown these costs will be subject to disqualification of bid.

b. Unit costs

NANUET HIGH SCHOOL

Contract Number: Contract No. 01 – General Construction (GC-01)

Contract Titles: As noted in the Notec to Bidders 00 03 00

	Date:		
* Refer to specification Section 012900 Payment Procedure	<u>s for additi</u>	onal inforn	nation
Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	\$8,000.00
020800 Asbestos Abatement (Labor)			
024100 Selective Demolition (Labor)			
024100 Selective Demolition (Material)			
033400 Self-Leveling Toppings (Labor)			
033400 Self-Leveling Toppings (Material)			
061000 Rough Carpentry (Labor)			
061000 Rough Carpentry (Material)			
064023 Interior Architectural Woodwork (Labor)			
064023 Interior Architectural Woodwork (Material)			
072100 Thermal Insulation (Labor)			
072100 Thermal Insulation (Material)			
075600.13 Fluid-applied membrane roofing, insulated for new roofs (Labor)			
075600.13 Fluid-applied membrane roofing, insulated for new roofs (Material)			
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
079200 Joint Sealant (Labor)			
079200 Joint Sealant (Material)			
081113 Hollow Metal Frames (Labor)			
081113 Hollow Metal Frames (Material)			
081116 fire rated aluminum full vision doors and frames (Labor)			
081116 fire rated aluminum full vision doors and frames (Material)			

081416 flush wood door (Labor)	
081416 flush wood door (Material)	
084113 Aluminum Framed Entrances and Storefronts (Labor)	
084113 Aluminum Framed Entrances and Storefronts (Material)	
087100 Door Hardware (Labor)	
087100 Door Hardware (Material)	
092216 non-structural metal framing Labor)	
092216 non-structural metal framing (Material)	
092900 gypsum board (Labor)	
092900 gypsum board (Material)	
095123 acoustical ceiling tile (Labor)	
095123 acoustical ceiling tile (Material)	
096513 resilient base and accessories (Labor)	
096513 resilient base and accessories (Material)	
096519 resilient flooring (Labor)	
096519 resilient flooring (Material)	
096723 resinous flooring (Labor)	
096723 resinous flooring (Material)	
096813 tile carpeting (Labor)	
096813 tile carpeting (Material)	
099100 painting (Labor)	
099100 painting (Material)	
099720 wall coverings (Labor)	
099720 wall coverings (Material)	
101400 interior signage (labor)	
101400 interior signage (Material)	
122413 roller window shades (Labor)	
122413 roller window shades (Material)	

BARR MIDDLE SCHOOL

Contract Number: Contract No. 01 – General Construction (GC-01)

Contract Titles: As noted in the Notec to Bidders 00 03 00

	Date:		
* Refer to specification Section 012900 Payment Procedures for additional information			
Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	\$45,000.00
020800 Asbestos Abatement			
024100 Selective Demolition (Labor)			
024100 Selective Demolition (Material)			
037330 Concrete Repair Work (Labor)			
037330 Concrete Repair Work (Material)			
042200 Concrete Unit Masonry (Labor)			
042200 Concrete Unit Masonry (Material)			
055000 metal fabrications (Labor)			
055000 metal fabrications (Material)			
061000 Rough Carpentry (Labor)			
061000 Rough Carpentry (Material)			
072100 Thermal Insulation (Labor)			
072100 Thermal Insulation (Material)			
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
079200 Joint Sealant (Labor)			
079200 Joint Sealant (Material)			
081113 Hollow Frames (Labor)			
081113 Hollow Metal Frames (Material)			
081416 flush wood door (Labor)			
081416 flush wood door (Material)			
083113 access doors and frames (Labor)			
083113 access doors and frames (Material)			
087100 Door Hardware (Labor)			

	1
087100 Door Hardware (Material)	
090370 bonded terrazzo to match existing (Labor)	
090370 bonded terrazzo to match existing (Material)	
092216 non-structural metal framing Labor)	
092216 non-structural metal framing (Material)	
092900 gypsum board (Labor)	
092900 gypsum board (Material)	
093013 ceramic tile (Labor)	
093013 ceramic tile (Material)	
095123 acoustical ceiling tile (Labor)	
095123 acoustical ceiling tile (Material)	
096723 resinous flooring (Labor)	
096723 resinous flooring (Material)	
099100 painting (Labor)	
099100 painting (Material)	
099720 wall coverings (Labor)	
099720 wall coverings (Material)	
101400 interior signage (labor)	
101400 interior signage (Material)	
102100 toilet partitions (Labor)	
102100 toilet partitions (Material)	
102800 toilet and bath accessories (Labor)	
102800 toilet and bath accessories (Material)	
144200 wheelchair lift (Labor)	
144200 wheelchair lift (Material)	

MILLER ELEMENTARY SCHOOL

Contract Number: Contract No. 01 – General Construction (GC-01)

Contract Titles: As noted in the Notec to Bidders 00 03 00

	Date:			
* Refer to specification Section 012900 Payment Procedures for additional information				
Description	QTY	Unit	Total	
General Requirements (Submittals, Punchlist, etc.)				
012100 Allowances - Unforeseen Conditions	1	NA	\$22,000.00	
024100 Selective Demolition (Labor)				
024100 Selective Demolition (Material)				
033400 Self-Leveling Toppings (Labor)				
033400 Self-Leveling Toppings (Material)				
037330 Concrete Repair Work (Labor)				
037330 Concrete Repair Work (Material)				
040120 Maintenance and Restoration of Brick Masonry (Labor)				
040120 Maintenance and Restoration of Brick Masonry (Material)				
040305.13 Restoration Mortars (Labor)				
040305.13 Restoration Mortars (Material)				
040305.16 Restoration Masonry Repointing (Labor)				
040305.16 Restoration Masonry Repointing (Material)				
042200 Concrete Unit Masonry (Labor)				
042200 Concrete Unit Masonry (Material)				
051200 structural steel (Labor)				
051200 structural steel (Material)				
053100 steel decking (Labor)				
053100 steel decking (Material)				
055000 metal fabrications (Labor)				
055000 metal fabrications (Material)				
055213 pipe and tube railings (Labor)				
055213 pipe and tube railings (Material)				

061000 Rough Carpentry (Labor)			
061000 Rough Carpentry (Material)			
064023 Interior Architectural Woodwork (Labor)			
064023 Interior Architectural Woodwork (Material)			
072100 Thermal Insulation (Labor)			
072100 Thermal Insulation (Material)			
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
079200 Joint Sealant (Labor)			
079200 Joint Sealant (Material)			
081113 Frames (Labor)			
081113 Frames (Material)			
081116 fire rated aluminum full vision doors and frames (Labor)			
081116 fire rated aluminum full vision doors and frames (Material)			
081416 flush wood door (Labor)			
081416 flush wood door (Material)			
083113 access doors and frames (Labor)			
083113 access doors and frames (Material)			
084113 Aluminum Framed Entrances and Storefronts (Labor)			
084113 Aluminum Framed Entrances and Storefronts (Material)			
085671 Bullet-Resistant Steel Window (Labor)			
085671 Bullet-Resistant Steel Window (Material)			
087100 Door Hardware (Labor)			
087100 Door Hardware (Material)			
088717 safety and security glazing films (Labor)			
088717 safety and security glazing films (Material)			
090370 bonded terrazzo to match existing (Labor)			
090370 bonded terrazzo to match existing (Material)			
092216 non-structural metal framing Labor)			
092216 non-structural metal framing (Material)			
092900 gypsum board (Labor)			
092900 gypsum board (Material)			

095123 acoustical ceiling tile (Labor)	
095123 acoustical ceiling tile (Material)	
096513 resilient base and accessories (Labor)	
096513 resilient base and accessories (Material)	
096519 resilient flooring (Labor)	
096519 resilient flooring (Material)	
096813 tile carpeting (Labor)	
096813 tile carpeting (Material)	
099100 painting (Labor)	
099100 painting (Material)	
099720 wall coverings (Labor)	
099720 wall coverings (Material)	
101400 interior signage (labor)	
101400 interior signage (Material)	
111600 Bullet resistant fiberglass panels (labor)	
111600 Bullet resistant fiberglass panels (Material)	
122413 roller window shades (Labor)	
122413 roller window shades (Material)	
123661 simulated stone countertops (Labor)	
123661 simulated stone countertops (Material)	
124813 entrance mats and frames (Labor)	
124813 entrance mats and frames (Material)	

Submit Bid Form in duplicate.

END OF SECTION 00 30 01

Nanuet Union Free School District Nanuet Bond Projects Phase 4 KSQ Design Project No. 2211003.00 Bid Set Issuance February 6, 2024 Bid Addendum #2

SECTION 00 30 03 - MC BID FORM

CONTRACT 2 – MECHANICAL CONSTRUCTION PROPOSAL (MC-01):

CLOSING: (signature)		
DATE:		
ВҮ:		
····EE.		
FIRM:		
ADDRESS:		
TELEPHONE NUMBER:		
FAX NUMBER:		
CONTACT PERSON		
E-MAIL:		
BID TO (Owner): Atte	ntion: Purchasing Agent	
Nanuet Union Free School D	istrict	
101 Church Street		
Nanuet, New York 10954		
SED Project Control No.	Nanuet High School	SED#50-01-08-03-0-003-036
	Barr Middle School	SED#50-01-08-03-0-004-021
	Miller Elementary School	SED#50-01-08-03-0-001-025
1. Representations: By making	ng this Bid, the Bidder represents that:	

The Bidder (identified above) hereby certifies that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manuals, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement.

The undersigned hereby proposes to furnish all labor, materials, devices, appliances, supplies, equipment, services and other facilities necessary to complete all of the work of the above referenced Contract for the Nanuet Union Free School District, Nanuet, New York, as required by, and in accordance with, the provisions of the Instructions to Bidders, the Supplementary Instructions to Bidders, the Conditions of the Contract, the Drawings and Specifications, all as prepared by KSQ Design designated as Nanuet Union Free School District Phase 4 Projects, dated **February 6, 2024** and that, if this Proposal is accepted, the Undersigned agrees to enter into an Agreement with the owner to perform this work for the lump sum of:

Total Base Bid (All Schools):		(\$)
Nanuet High School:		(\$)
Barr Middle School:		(\$)
Miller Elementary School:		(\$)
	(Words)	(Figures)	

ALLOWANCES:

The undersigned Contractor has included the Allowance(s) as specified in Section 01 2100 in their Base Bid.

UNIT PRICE:

A.	Unit Price MC-#1: \$	Dollars \$ No Cents
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B. Unit Price MC-#2: \$_____ Dollars \$ No Cents

ALTERNATES:

Deduct Alternate MC-01 Alt #1: \$	Dollar \$ No Cents
Add Alternate MC-01 Alt #2: \$	Dollar \$ No Cents
Add Alternate MC-01 Alt #3: \$	Dollar \$ No Cents

ADDENDA:

The undersigned acknowledges the receipt of the following addenda:

Addendum Number	Date	Addendum Number	Date	
<u></u>				

The Undersigned understands that the Owner reserves the right to accept or reject any or all proposals, but that if notice of the acceptance of the above Proposal is sent via United States Postal Service or any other overnight carrier, with signature required, to the Undersigned within sixty (60) days after the formal opening of Bids or anytime thereafter before this Proposal is withdrawn, the Undersigned will enter into, execute, and deliver a Contract within five (5) days after the date of said notification.

1. Time of Commencement and Completion:

The Undersigned agrees in the Base Bid to complete the work as per the Milestone Schedule provided in the Specifications.

2. Rejection of Bids:

The Bidder acknowledges that the Owner reserves the right to waive any informality in, or to reject any or all Bids.

3. Attachments:

Obtain and attach the following documents to each individual Bid.

- a. Corporate Resolutions
- b. Non-Collusive Bid Certification
- c. Iran Divestment Act Affidavit
- d. Bid Security
- e. Subcontractor List
- f. Substitution List

4. Work Cost Breakdown:

This form shall be filled out and submitted by the Contractor. The grand total must equal the BASE BID under Section I (A) "THE BID". UNIT PRICES are required for the items listed in the Unit Prices section of the work cost breakdown. Unit prices will be provided for use if the required quantities are more or less than the quantities indicated in the plans and specifications. Failure to complete the work cost breakdown may result in the disqualification of the bid. As itemized in the "Instructions to Bidders" for a complete Bid Form include the following which must be filled out completely, failure to comply with any listed below bid will be a rejected bid:

a. Bid Form, all costs must be shown in each CSI section and totaled, failure to breakdown these costs will be subject to disqualification of bid.

b. Unit costs

NANUET HIGH SCHOOL

Contract Number: Contract No. 02 – Mechanical Construction (MC-01)

Contract Titles: As noted in the Notice to Bidders 00 03 00

		Date:		
	* Refer to specification Section 012900 Payment Procedures	for addit	ional infor	mation
	Description	QTY	Unit	Total
	General Requirements (Submittals, Punchlist, etc.)			
	012100 Allowances - Unforeseen Conditions	1	NA	\$285,000.00
	024100 Selective Demolition (Labor)			
	024100 Selective Demolition (Material)			
\subset	028200 Asbestos Abatement	Y Y Y		
6	051200 Structural Steel (Labor)			
8	051200 Structural Steel (Material)			
	061000 Rough Carpentry (Labor)			
	061000 Rough Carpentry (Material			
	078413 Penetration Firestopping (Labor)			
	078413 Penetration Firestopping (Material)			
	079200 Joint Sealant (Labor)			
	079200 Joint Sealant (Material)			
	083113 access doors and frames (Labor)			
\sim	083113 access doors and frames (Material)			
	088000 Glazing (Labor)		X X X	
$\left\{ \right\}$	088000 Glazing (Material)			
	095123 acoustical ceiling tile (Labor)			
	095123 acoustical ceiling tile (Material)			
	096513 resilient base and accessories (Labor)			
	096513 resilient base and accessories (Material)			
	096519 resilient flooring (Labor)			
	096519 resilient flooring (Material)			
	096813 tile carpeting (Material)			
	096813 tile carpeting (Labor)			
	230501 basic hvac materials and methods (Material)			
	230501 basic hvac materials and methods (Labor)			
	230516 expansion fittings and loops for hvac piping			

(Material)	
230516 expansion fittings and loops for hvac piping (Labor)	
230519 meters and gauges for hvac piping (Material)	
230519 meters and gauges for hvac piping (Labor)	
230548 vibration controls for hvac piping and equipment (Material)	
230548 vibration controls for hvac piping and equipment (Labor)	
230553 identification for hvac piping and equipment (Material)	
230553 identification for hvac piping and equipment (Labor)	
230593 testing, adjusting, and balancing for hvac (Material)	
230593 testing, adjusting, and balancing for hvac (Labor)	
230713 Duct Insulation (Labor)	
230713 Duct Insulation (Material)	
230716 hvac equipment insulation (Material)	
230716 hvac equipment insulation (Labor)	
230719 hvac piping insulation (Material)	
230719 hvac piping insulation (Labor)	
230800 commissioning of hvac (Material)	
230800 commissioning of hvac (Labor)	
230923 direct-digital control system for hvac (Material)	
230923 direct-digital control system for hvac (Labor)	
232113 hydronic piping (Material)	
232113 hydronic piping (Labor)	
232114 hydronic specialties (Material)	
232114 hydronic specialties (Labor)	
232123 Hydronic Pumps (Labor)	
232123 Hydronic Pumps (Material)	
232213 steam and condensate heating piping (Material)	
232213 steam and condensate heating piping (Labor)	
232300 refrigerant piping (Material)	
232300 refrigerant piping (Labor)	

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232500 hvac water treatment (Material)		
232500 hvac water treatment (Labor)		
233100 hvac ducts and casings (Material)		
233100 hvac ducts and casings (Labor)		
233300 air duct accessories (Material)		
233300 air duct accessories (Labor)		
233319 duct silencers (Material)		
233319 duct silencers (Labor)		
233423 hvac power ventilator (Material)		
233423 hvac power ventilator (Labor)		
233600 air terminal units (Material)		
233600 air terminal units (Labor)		
233700 air outlets and inlets (Material)		
233700 air outlets and inlets (Labor)		
233813 Kitchen ventilation hoods (Material)		
233813 Kitchen ventilation hoods (Labor)		
237223 packaged air to air energy recovery units _(Material)		
237223 packaged air to air energy recovery units (Labor)		
238126 Small Capacity Split System Air conditioner (Labor)		
238126 Small Capacity Split System Air conditioner (Material)		
238129 variable refrigerant flow hvac systems (Material)		
238129 variable refrigerant flow hvac systems (Labor)		
238200 convection heating and cooling units (Material)		
238200 convection heating and cooling units (Labor)		

BARR MIDDLE SCHOOL

Contract Number: Contract No. 02 – Mechanical Construction (MC-01)

Contract Titles: As noted in the Notice to Bidders 00 03 00

	Date:			
* Refer to specification Section 012900 Payment Procedures for additional information				
Description	QTY	Unit	Total	
General Requirements (Submittals, Punchlist, etc.)				
012100 Allowances - Unforeseen Conditions	1	NA	\$33,000.00	
024100 Selective Demolition (Labor)				
024100 Selective Demolition (Material)				
078413 Penetration Firestopping (Labor)				
078413 Penetration Firestopping (Material)				
079200 Joint Sealant (Labor)				
079200 Joint Sealant (Material)				
083113 access doors and frames (Labor)				
083113 access doors and frames (Material)				
096723 resinous flooring (Labor)				
096723 resinous flooring (Material)				
230501 basic hvac materials and methods (Material)				
230501 basic hvac materials and methods (Labor)				
230516 expansion fittings and loops for hvac piping (Material)				
230516 expansion fittings and loops for hvac piping (Labor)				
230519 meters and gauges for hvac piping (Material)				
230519 meters and gauges for hvac piping (Labor)				
230553 identification for hvac piping and equipment (Material)				
230553 identification for hvac piping and equipment (Labor)				

	1 1	1
230593testing, adjusting, and balancing for hvac (Material)		
230593 testing, adjusting, and balancing for hvac (Labor)		
230713 Duct Insulation (Labor)		
230713 Duct Insulation (Material)		
230719 hvac piping insulation (Material)		
230719 hvac piping insulation (Labor)		
230800 commissioning of hvac (Material)		
230800 commissioning of hvac (Labor)		
230923 direct-digital control system for hvac (Material)		
230923 direct-digital control system for hvac (Labor)		
232113 hydronic piping (Material)		
232113 hydronic piping (Labor)		
233100 hvac ducts and casings (Material)		
233100 hvac ducts and casings (Labor)		
233300 air duct accessories (Material)		
233300 air duct accessories (Labor)		
233700 air outlets and inlets (Material)		
233700 air outlets and inlets (Labor)		
238200 convection heating and cooling units (Material)		
238200 convection heating and cooling units (Labor)		

MILLER ELEMENTARY SCHOOL

Contract Number: Contract No. 02 – Mechanical Construction (MC-01)

Contract Titles: As noted in the Notice to Bidders 00 03 00

	Date:			
* Refer to specification Section 012900 Payment Procedures for additional information				
Description	QTY	Unit	Total	
General Requirements (Submittals, Punchlist, etc.)				
012100 Allowances - Unforeseen Conditions	1	NA	\$33,000.00	
024100 Selective Demolition (Labor)				
024100 Selective Demolition (Material)				
028200 Asbestos Abatement				
078413 Penetration Firestopping (Labor)				
078413 Penetration Firestopping (Material)				
079200 Joint Sealant (Labor)				
079200 Joint Sealant (Material)				
083113 access doors and frames (Labor)				
083113 access doors and frames (Material)				
095123 acoustical ceiling tile (Labor)				
095123 acoustical ceiling tile (Material)				
230501 basic hvac materials and methods (Material)				
230501 basic hvac materials and methods (Labor)				
230553 identification for hvac piping and equipment (Material)				
230553 identification for hvac piping and equipment (Labor)				
230593testing, adjusting, and balancing for hvac (Material)				
230593 testing, adjusting, and balancing for hvac (Labor)				
230713 Duct Insulation (Labor)				
230713 Duct Insulation (Material)				
230719 hvac piping insulation (Material)				
230719 hvac piping insulation (Labor)				

220200 commissioning of hype (Material)	
230800 commissioning of hvac (Labor)	
230923 direct-digital control system for hvac (Material)	
230923 direct-digital control system for hvac (Labor)	
232113 hydronic piping (Material)	
232113 hydronic piping (Labor)	
232114 hydronic specialties (Material)	
232114 hydronic specialties (Labor)	
232300 refrigerant piping (Material)	
232300 refrigerant piping (Labor)	
233100 hvac ducts and casings (Material)	
233100 hvac ducts and casings (Labor)	
233600 air terminal units (Material)	
233600 air terminal units (Labor)	
233700 air outlets and inlets (Material)	
233700 air outlets and inlets (Labor)	
238126 Small Capacity Split System Air conditioner (Labor)	
238126 Small Capacity Split System Air conditioner (Material)	
238300 Radiant Heating and Cooling Units (Labor)	
238300 Radiant Heating and Cooling Units (Material)	

Submit Bid Form in duplicate.

END OF SECTION 00 30 03

SECTION 01 11 00 - MILESTONE SCHEDULE

PART 1 - GENERAL

1.1 Milestone

The following milestone schedule serves as a basis for bidding. A Master Schedule will be developed at a general meeting of all successful bidders within 21 days of Letter of Intent to Award the Contracts. This sequence and time frame has been coordinated with the school program, no acceleration or changes will be permitted. Each prime contractor will coordinate activities, forward submittals, deliver materials and provide necessary manpower to meet the milestones listed below.

** = Lead time dependent for doors. If work falls outside substantial completion date due to lead times. Work may continue second shift. It is the contractor's responsibility to verify lead times and project this schedule. All door work must be complete by June 2025. ***= HVAC scope related to HS second floor west wing only. Summer 2024 Scope shall be cutting of floor slab and install of duct risers in the chase teaching walls in classrooms. Install of exhaust fan ducting, dampers, and transfer duct in corridors and classrooms. NOTE: HVAC piping, Liquid & suction line sets shall be installed starting fall 2024 second shift. UVS shall be installed summer 2025. All electrical associated with these HVAC components shall be summer 2025. 1.2 Milestone Schedule - Building Envelope Projects Miller Elementary School (Roofing): BE-01, EC-01 This contract has been awarded and is included for reference. Anticipated start date is Summer 2024. Milestone Schedule - Miller Elementary School Projects: GC-01, MC-01, EC-01, PC-01 1.2 Start of Construction Exterior Site Work and Masonry (GC): June 26, 2024 Start of Construction Doors and Window Shades (GC): June 26, 2024 Start of Construction Roof Fans & FA (MC &EC): April 14, 2025 Start of Construction Security Vestibule (GC,MC,EC): June 26, 2025 Start of Construction Fire Alarm Upgrades (EC): June 26, 2025 Equipment Submittals & Approvals: April-June 2024 Substantial Completion Exterior Site Work and Masonry (GC): July 29th, 2024 Substantial Completion Doors and Window Shades (GC): July 29th, 2024 ** Substantial Completion Roof Fans & FA (MC &EC): July 30th, 2025 Substantial Completion Security Vestibule (GC, MC, EC): August 28th, 2025 Substantial Completion Fire Alarm Upgrades (EC): August 28th, 2025 1.4 Milestone Schedule - High School Projects: GC-01, MC-01, EC-01, PC-01 Start of Construction Door and Window Shades (GC): June 26th, 2024 Start of Construction Admin Wing Renovations (GC,MC,EC): June 26th, 2025 Start of Construction Hydronics & AC Ceiling Projects (2nd floor west wing only) (MC,EC) July 5th, 2024 *** Start of Construction HVAC, Hydronics, & AC Building-Wide Projects: November 5th. 2024 Start of Construction Electrical Panel Replacements (EC): July 27th, 2024 Start of Construction Fume Hood (GC,MC,EC): June 26th, 2025 MILESTONE SCHEDULE

01 11 00 - 1 of 2

Equipment Submittals & Approvals: April-June 2024	
Substantial Completion Door and Window Shades: August 28th, 2024 **	~
Substantial Completion Admin Wing Renovations: August 22 nd , 2025	~
Substantial Completion Hydronics & AC Ceiling Projects:	
((2 nd floor west wing only) (MC,EC) August 25 th , 2024 ***	
Substantial Completion HVAC, Hydronics, & AC Building-Wide Projects: August 28th, 2025	~
Substantial Completion Electrical Panel Replacements (EC): August 12 th , 2025	~
Substantial Completion Fume Hood Replacement (GC,MC,EC): August 5 th , 2025	~
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	H
1.4 Milestone Schedule - Barr Middle School Projects: GC-01, MC-01, PC-01, EC-01	3
Equipment Submittals & Approvals: April-June 2024	$\gamma$
Start of Construction Door and Window Shades GC): July 29 th . 2024	$\boldsymbol{\mathcal{A}}$
Start of Construction Fire Alarm Upgrades (EC): June 25 th , 2025	$\prec$
Start of Construction Toilet Room Renovations (GC,MC,EC,PC): June 25 th , 2025	$\downarrow$
Substantial Completion Door and Window Shades (GC): August 21st, 2024 **	2
Substantial Completion Fire Alarm Upgrades (EC): August 27 th , 2025	)
Substantial Completion Toilet Room Renovations (GC,MC,EC,PC): August 26 th , 2025	
	$\overline{)}$

Note: Second shift/double shift work will be required to meet substantial completion dates. Second shift/ double shift work is expected to take place as required to meet the milestone schedule if necessary. The contractor will have blackout dates during school days where work may not take place. It is the contractor's responsibility to request in writing any blackout dates prior to commencement of work to coordinate schedule.

Second shift hours are before 6AM or after 3:30 pm.

Failure to meet the milestone schedule will result in a per day financial penalty as indicated in the AIA A232/A132

All work required by any of the Owner's representatives and consultants, including the Architect, Construction Manager and their consultants, Owner's Attorneys, etc., to execute final close-out of contract after 60 days beyond Milestone dates if determined to be caused by contractor, shall result in payment(s) to the Owner's representatives and consultants, including the Architect, Architect's consultants, Owner's Attorneys, etc., in the form of a change order deduct to the base contract.

#### PART 2 - PRODUCTS (Not Applicable)

#### PART 3 - EXECUTION (Not Applicable)

#### END OF SECTION 011100

BID SET ISSUANCE FEBRUARY 6, 2024 Bid Addendum #2 NANUET UNION FREE SCHOOL DISTRICT NANUET BOND PROJECTS PHASE 4 KSQ DESIGN PROJECT NO. 2211003.00

#### SECTION 01 12 02 – CONTRACT SUMMARY – GC-01

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

This Section includes a summary of each Prime Contract, including responsibilities for coordination and temporary facilities and controls. One set of Construction Documents is issued covering the Work of multiple Prime Contracts. Each Prime Contract is responsible to review all drawings and specifications for specific requirements indicated, and for a general understanding and knowledge of the work of other Prime Contracts. All Prime Contracts are responsible for all Work of their Contract no matter what drawing on which the Work appears. All Prime Contracts are responsible to coordinate their work related to the complete set of drawings and specifications, not limited to each prime contractor scope. All Bidders should acknowledge that for each contract listed below, each contractor is their own General Contractor and subject to all General Contractor requirements.

**General Contract:** The Interior Contractor shall be selected based on the bid procedure as described in the Bid Documents. Contract Bidders are responsible for (a) trade work coordination, (b) the scope contained in drawings listed below and (c) any and all additional scope specifically identified to be performed by the Interior Contractor in other Bid Packages in the Contract.

- a. <u>Interior & Exterior Contract</u>: All work related to Interior and exterior construction includes but is not limited to the following items: (Refer to the Contract Documents for full scope of work.
  - 1) Abatement, Demolition, ACT, GWB, Plaster Ceiling, Painting, Patching, tiling, epoxy flooring, Flooring, interior steel framing, exterior site work, and Casework.
  - 2) Work related to drawings: (*In addition to these drawings, the contractor is required to review all specifications included in the overall*

contract that may contain related scope or detail for this specific contract.)

- a) Nanuet Senior High School
  - Door Replacements and window treatments
  - Admin wing renovations
  - New Ceilings
- b) Barr Middle School
  - Door Replacements and window treatments
  - Toilet Room Renovations
- c) Miller Elementary School
  - Door Replacements and window treatments
  - Security Vestibule Renovations
  - Masonry restoration and sitework
- B. Applicable Drawings : All drawings itemized below are to be provided complete by this Prime Contract, unless noted otherwise. In addition to these drawings, the contractor is required to review all drawings included in the overall contract that may contain related scope or detail for this specific contract.
  - 1. All "G" drawings All Schools
  - 2. Nanuet High School
    - a. All HS-ASB drawings
    - b. All demo "HS-AD" drawings & demo alternates HS-AD112.1 HS-AD401.1
    - c, All "HS-A" drawings & alternates HS-A112.1 HS-A401.1
    - d. HS-A-201 (Detail A14 only)
  - All new ACT ceilings "HS-A drawings"
  - 3. Barr Middle School:
    - a. All abatement "MS-ASB" drawings
    - b. All demo "BM-AD" drawings
    - c. All new work "BM-A" drawings
  - 4. Miller Elementary School:
    - a. All structural drawings ME-S001, ME-S101, ME-S102
    - b. All demo "ME-AD" drawings
    - c. All new work "ME-A" drawings
- 1.3 This GC-01 contract requires the awarded entity to self-perform the largest scope of work shown in the contract documents. There are no provisions within this contract to solely subcontractor ALL trade scope required to complete the project and its design intent. All other work in this contract is allowed to be subcontracted other than as stated herein. It is further

### required to clearly present what scope your own forces will be doing with your bid submission. Failure to present this at time of bid will be subject to disqualification.

- 1.4 It is the GC's responsibility to review the MEP drawings to coordinate the GC's portion of the work with MEP.
- 1.5 Related Sections include, but are not limited to, the following:
  - A. Division 01 Section "Work Restrictions" for use of the Project site and for requirements for continued Owner occupancy of premises.
  - B. Division 01 Section "Project Management and Coordination" for general coordination requirements.
  - C. Division 01 Section "Project Forms" for documents required for Testing and Coordination.
  - D. Division 01 Section "Temporary Facilities and Controls" for specific requirements for temporary facilities and controls
  - E. Applicable Specification Sections: All specification Sections itemized below are to be provided complete by this Prime Contract, unless noted otherwise. In addition to these specifications, the contractor is required to review all specifications included in the overall contract that may contain related scope or detail for this specific contract.
    - 1. <u>Divisions 00 and 01 Procurement and Contracting Requirements & General</u> <u>Requirements.</u>
    - 2. <u>Division 02- Existing Conditions</u>
    - 3. <u>Division 03 Concrete</u>
    - 4. <u>Division 04 Masonry</u>
    - 5. <u>Division 05 Metals</u>
    - 6. Division 06 Wood and Plastics
    - 7. Division 07 Thermal and Moisture Protection
    - 8. <u>Division 08 Openings</u>
    - 9. <u>Division 09 Finishes</u>
    - 10. Division 10 Specialties
    - 11. <u>Division 11 Equipment</u>
    - 12. Division 12 Furnishings
    - 13. Division 14 Elevators and lifts

- 1.6 DEFINITIONS
- 1.7 MANAGEMENT AND COORDINATION
  - A. The Owner shall provide a Construction Manager.
    - 1. The Construction Manager shall provide a full time construction site representative recognized as the Construction Manager.
- 1.8 CONSTRUCTION MANAGER
  - A. The construction manager shall provide on-site administration of the Contracts for Construction in cooperation with the Architect as set in AIA Document A232 [™] – 2009, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition, as modified.
  - B. The Construction Manager shall provide administrative, management and related services to coordinate scheduled activities and responsibilities of the Multiple Prime Contractors with each other and with those of the Construction Manager, the Owner and the Architect. The Construction Manager shall coordinate the activities of the Multiple Prime Contractors in accordance with the latest approved Project Schedule and the Contract Documents.
  - C. Utilizing the construction schedules provided by the Prime Contractors, the Construction Manager shall update the Project schedule, incorporating the activities of the Owner, Architect, and Multiple Prime Contractors on the Projects, including activity sequences and durations, allocation of labor and materials, processing of Shop Drawings, Product Data and Samples, and delivery and procurement of products, including those that must be ordered will in advance of construction. The Project schedule shall include the Owner's occupancy requirements showing portions of the Project having occupancy priority.
  - D. Utilizing information from the Multiple Prime Contractors, the Construction Manager shall schedule and coordinate the sequence of construction and assignment of space in areas where the Multiple Prime Contractors are performing Work, in accordance with the Contract Documents and the latest approved Project Schedule.

#### 1.9 GENERAL REQUIREMENTS OF PRIME CONTRACTS

A. Prime Contracts: The context used in this Section are separate Prime Contracts that represent significant elements of work that is to be performed concurrently and in close
coordination with the work of other Prime Contracts for the benefits of the Owner. Each Prime Contract is recognized to be a major part of the Work.

- B. Assignment of Work: Should a conflict be indicated, Section 011200 shall take precedence over all scope of work assignments that may be indicated elsewhere within the Construction Documents.
- C. Layout and Installation: Each Prime Contractor shall schedule, layout and install their Work in such manner as not to delay or interfere with, but to compliment the execution of the work of other Prime Contracts, utility companies and Owner's operations.
- D. Extent of Contract: The Contract Documents, drawings and specifications each contain more specific descriptions of the Work facilitating which Prime Contract includes specific elements of the Project.
  - 1. Work provided by each Prime Contract shall mean complete and operable systems and assemblies, including products, components, accessories and installations required by the Construction Documents or indicated otherwise.
  - 2. Prime Contractors shall exercise good judgment and perform all work according to related industry standards.
  - 3. The Owner is exempt from payment of Federal, State and local taxes, including sales and compensating use taxes on all materials and supplies incorporated in completing the Work; these taxes are not to be included in the Bid. This exemption does not apply to tools, machinery, equipment or other property leased by, or to, the Contractor or sub-contractor, or to supplies and materials, which even though consumed are not incorporated into the completed work. Prime Contractors, and their sub-contractors, shall be responsible for paying any and all applicable taxes on said tools, machinery, equipment or property, and upon all said unincorporated supplies and materials, whether purchased or leased.
  - 4. Prime Contracts shall understand that time is of the essence, and will adequately staff the Project by employing the appropriate trade's people to perform the Work; these people shall be experienced in their respective trades. A shortage of labor in the industry shall not be accepted as an excuse for not properly staffing the Project; all efforts shall be made to meet or exceed the schedule, including additional staff and/or labor hours necessary. All cost associated with this item shall be included within the Bid.
  - 5. Local custom and trade union jurisdictional settlements will not control the scope of the Work of each Prime Contract.
    - a. When a potential jurisdictional dispute or similar interruption of Work is first identified, or threatened, the affected Prime Contracts shall promptly negotiate a reasonable settlement to avoid or minimize the pending interruption and delays.

- b. Contractor's trade-related issues shall not be grounds for modification or extension of scheduled completion date(s).
- 6. The Work of all Prime Contracts requires close coordination with other Prime Contracts and construction personnel. Maintain flexibility and cooperation through the Project. "Out of Sequence" and "Delay" claims will only be considered when requirements of Division 01 "Administrative Requirements" have been adhered to. Delay claims must be in writing and forwarded to the Architect, per the requirements of the General Conditions of the Contract. Claims not submitted per these requirements will be rejected and/or denied.
- 7. The intention of the Work is to follow a logical sequence, however, a Prime Contractor may be required by the Architect or Construction Manager, to temporarily install, omit or leave out a section(s) of Work, out of sequence. All such out of sequence work, and come back time, at these areas shall be performed at no additional cost to the Owner.
- E. Substitutions: Per Division 01 Section "Substitution Procedures", each Prime Contractor shall cooperate with the other Prime Contractors involved, to coordinate approved substitutions with remainder of the Work. Contractors shall submit all "Substitutions" at least ten (10) days prior to the date for receipt of Bids as specified in the Instructions to Bidders 002113 Section 3.3 Equivalents or bid will be considered per "basis of design".
- F. Construction Schedules: Refer to Divisions 01 Section "Construction Progress Documentation", "Preliminary Schedule" and "Project Management and Coordination" for requirements related to meetings and schedules.
- G. Construction Sequencing and Phasing: Prime Contractor shall understand that Sequencing and/or Phasing Plans are contingent upon the work areas being complete/occupied, prior to the next area of Work beginning. Should an area of construction not be complete per the Project Preliminary Schedule, the Project Master Construction Schedule/Sequencing Plans will be adjusted accordingly. The Owner will not be responsible for delay claims due to adjustments being no fault of their own.
  - 1. Prime Contracts may be required to re-sequence the phasing of the project as a result of changes to the schedule. Prime Contracts shall provide these adjustments at no additional cost to the Owner.
- H. Existing Conditions: Each Prime Contract shall verify existing conditions in the field prior to work commencing in that area and immediately report conditions to the Architect that are not represented correctly by the Construction Documents.
  - 1. Each Prime Contract is responsible for familiarizing himself with Project Site Logistics and provide a "site logistics plan locating storage area, scaffolds, rubbish

areas, stock piles and egress related to all work, included phased construction within 30 days of award.

- 2. Each Prime Contract has been given ample opportunity to review Existing Conditions related to the Project. Existing Conditions not noted in the Construction Documents that could be easily recognized during pre-bid review that interfere with the respective Prime Contract's work, shall be the responsibility of the respective Prime Contract. This includes all costs associated with removal, patching, relocation or re-fabrication of installations.
- I. Hazardous Materials: Each Prime Contract shall familiarize themselves with the Hazardous Materials Sections/Drawings of the Construction Documents and follow DOL/OSHA/EPA/SED regulations while performing their respective Work in these areas. Discovery of non-identified or concealed hazardous materials shall be reported to the Construction Manager immediately and followed up with written documentation of the event.
- J. Protection of Installations: Each Prime Contract is responsible for protecting their installations at all times. All costs incurred to repair, replace or clean insufficiently protected materials/installations shall be the responsibility of the installing Prime Contract.
  - 1. Architect shall be notified, in writing, immediately upon material/installation being damaged; notification shall indicate responsible party.
  - 2. Owner will not be liable for damaged materials and/or installations by "others", when "others" cannot be identified.
  - 3. Repair damaged work, clean exposed surfaces or replace construction installations that cannot be repaired.
  - 4. Each Prime Contract shall be responsible for removing all labels not required to remain from their installations.
  - 5. Installations shall be wiped clean and proper protection then installed.
  - 6. Each Prime Contract is responsible to protect another primes work in the event that prime has to work over or on top of that other primes work being complete. The prime working over the completed work takes full responsibility of that other primes completed work both in condition and operation.
  - 7. Gc shall install hevy duty "Ram Board" or equivalent to protect new floor surfaces from damage until final cleaning and acceptance by owner.
- K. Daily Cleaning: All Prime Contracts are responsible for any and all debris caused by their Work, including the Work of their subcontractors. A daily clean up and disposal is required by each Prime Contract for the periods which that Prime Contract, or its sub-contractors, are performing Work on site.

- 1. Assign at least one person for a daily clean and sweep of the work area(s). Prime Contractor shall allot sufficient manpower and time for this to be completed by the end of each shift. Submit name of this person(s) to Construction Manager.
  - a. Construction Manager shall have the authority to give direction to person(s) on the Project Site identified by the Prime Contract as designated for cleanup tasks. This shall include the safety review/securing of the site-work zone after each shift.
  - b. This person has check that no construction debris was dumped in any district dumpers during this end of shift site review, if found the contractor must remove immediately the next morning to avoid back charges costs of \$1500 per day not removed.
- 2. Any Prime Contract not providing personnel for Daily Cleaning will be Back Charged for labor provided by the Owner to complete this task.
- 3. Contractor working solely in an area shall be responsible for clean/sweep of that area.
- 4. Daily cleaning will not mean any one Prime Contract is responsible for assisting another Prime Contract with removing major quantities of debris created by a particular Prime Contract's Work.
- 5. Daily cleaning will be mandated to remove from the building any debris created by day-to-day activities. All Prime shall assist in sweeping shared work areas and shared corridors while working on site. Each Prime shall assist in mopping of shared corridors while working on site or as required by the Owner.
- 6. All prime contractors and subcontractors are required to provide sweeping compound for daily cleaning in their respective exterior and interior work areas. Each Prime Contract shall provide a sufficient number of brooms or other necessary tools, for use by their personnel to adequately fulfill their obligations.
- 7. All prime contractors shall provide and maintain garbage cans/refuse containers with liners for each construction area of their respective contracts as directed by the Construction Manager and shall be responsible for disposing of these materials to a dumpster.
- 8. All prime contractors provide the necessary equipment/containers (lull/skip-box) to move daily clean/sweep debris from the building to a dumpster on a daily basis, for each construction area of their respective contracts. Skip-box shall be emptied to a dumpster by 9:00 a.m. the following day.
- 9. Cleaning shall be deemed a Safety & Health issue, with Prime Contracts being held accountable for fulfilling their contractual obligations.
- L. Final Cleaning: At Substantial Completion of each area of construction, each Prime Contract shall wipe/vacuum clean all of their respective installations; All interior contracts performing work inside the buildings shall mop clean all building surrounding areas and

finish flooring and remove all marks/blemishes to the finish, for each construction area of their respective contracts. Each area of construction shall be wiped clean of all construction dust and debris prior to turnover to the Owner.

- M. Cutting and Patching: All Primes are responsible for cutting and patching required to complete their Work. All repair of existing finish Work (including finish floors) shall be performed by contract requiring work, meeting or exceeding minimum contract requirements for that particular section, specification, or type of work. All concealed openings (piping, ductwork, conduit, etc.) must be repaired to comply with specified wall or deck conditions as well as required fire and sound ratings. All corridor penetrations require fire safing. If contractor elects to install their new work in an existing unrated wall or floor opening, whereas the wall/floor is a fire rated condition, that contractor is responsible to fire rate that opening to match the wall/floor fire rating with new and all other existing wire, piping, ducts etc. Other areas are noted in drawings and specifications.
- 1.10 Project Schedule. The nature of this project is to complete all the work listed as Phase 1A in the schedule by **the Project Closeout Dates specific to each Prime Contract as listed below**. Each Prime Contractor shall include in their bid proper allowances for foul weather.
  - A. Bids Received: 4/3/2024
  - B. Notice to Proceed: 4/16/2024
  - C. Submittals: The following items are to be submitted within 60 business days after Notice to Proceed:
    - 1. Submittal List and Submission Schedule <u>15 days after NTP</u>
    - 2. Field Investigations
    - 3. Shop Drawings
    - 4. Long Lead Items <u>30 days after NTP</u>
    - 5. Schedule of Values and Key Submittal List **<u>15 days after NTP</u>**
  - D. Mobilization: 6/26/2024
  - E. Substantial Completion and Project Closeout:

# 1. General Contract 01

- a. Substantial Completion: See Milestone Schedule
- b. Project Closeout: See milestone Schedule

# 1.11 TEMPORARY FACILITIES AND CONTROLS OF PRIME CONTRACTS

- A. Conditions of Use: Keep temporary services or conditions clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary facilities as required as 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 to develop or persist on the Project site.
  - 1. Installation, operation, maintenance, and removal of each temporary service or condition are considered part of the respective Prime Contract's own construction activity, as are costs and use charges associated with each facility.
  - 2. Locate service or condition where they will serve the Project adequately and with minimum interference of the Work, coordinate with the Construction Manager and the other Prime Contracts prior to installation.
- B. Temporary Use of Permanent Facilities: Prime Contract, as installer of each permanent service or condition, 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 temporary facilities and controls responsibility.
- C. Owner's Facilities: Contractors are not allowed to use the Owner's facilities (toilets, telephones, food service, etc.) for their own benefit or convenience. Prime Contract Superintendents shall enforce this policy with their respective work forces.
  - 1. Construction personnel parking will be restricted to area as directed and agreed to by the Owner, and to facilitate the completion of the work. Owner reserves the right to remove from their property, unauthorized vehicles occupying unauthorized areas, at respective vehicle owner's expense.
- D. Storage on the Project Site: Each Prime Contract shall provide sufficient secure weathertight storage facilities for their materials and equipment. These storage containers are required to be located on the "site logistics plan." The Owner's facilities and the Project's building areas shall <u>not</u> be used for storage unless agreed upon, in writing, with the Owner via the Construction Manager.
  - 1. Until permanently incorporated into the Work, all materials on the Project site are considered to be the Prime Contract's responsibility for security and protection.
  - 2. Prime contractor is required to check on their onsite stored material periodically to ensure that all material continues to be located in the stored location and that it remains protected from all damage, theft, and endangerment to others and ready to be used on notice for coordination with other contractors. Failure to arrange for materials to be on site to complete coordinated work with other Prime Contractors will result in back charges for delays resulting therefrom.

- 3. Temporary long-term storage facilities are not available to Prime Contracts by the Owner.
- 4. Prime Contractors and their subcontractors, shall coordinate deliveries with the Construction Manager to ensure that disruptions and Owner inconvenience are avoided.
- E. Tools and Equipment: Each Prime Contractor shall provide all tools and equipment necessary for its own activities; this includes secure lock-up and storage for all items on the Project Site.
  - 1. Provide all construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities; this shall include any additional supplementary power, ventilation, lighting requirements and weather protection.
- F. Project Site Communication: Each Prime Contractor shall provide their Project a full time on site at all times Superintendent with a mobile phone for the duration of the Project, as indicated in their Scope of Work. Construction Manager shall be furnished with contact numbers associated with each phone.
- G. Safety: Prime Contracts, not the Architect or Construction Manager, are responsible for Project Site Safety, as related to their operations (refer to Section 013150 "Special Procedures" for further requirements).
  - 1. Each Prime Contract shall correct safety hazards and violations immediately. If safety issues are not immediately rectified, the Owner shall secure outside sources to correct the deficiency and back charge the responsible Prime Contract.
  - 2. Maintain unobstructed access/egress to fire extinguishers, fire hydrants, stairways, corridors, ladders and other safety routes/devices.
- H. Fire Extinguishers: All Prime Contracts provide and maintain "general use" fire extinguishers for each construction area of their respective contracts; comply with applicable codes for quantities required. Use of the Owner's fire extinguishers to meet this requirement is not permitted. Comply with NFPA for recommended classes for exposure; extinguishers shall be inspected and appropriately tagged prior to being brought on site. Provide stands, painted bright orange, sturdy enough to carry the extinguisher, and built as not to create a tipping hazard.
  - 1. Each Prime Contract shall supplement this requirement by providing additional fire extinguishers specifically related to their work activity (e.g., welding, soldering, abrasive cutting, etc.).
  - 2. Each Prime Contract shall provide and maintain proper fire extinguishers at/in their respective on site office and storage facilities.
  - 3. Store combustible materials in approved containers in fire-safe locations.

- I. Welding: Any Prime Contract performing welding, cutting or other activities with open flames or producing sparks shall at a minimum:
  - 1. Coordinate interruption/shutdown of detection system(s) to avoid creating false alarms.
  - 2. Protect the area and surrounding areas from fire and damage.
  - 3. Maintain fire extinguishers, compatible with activity, at the location of the activity.
  - 4. Provide a continuous Fire Watch during the activity and one-half hour beyond the completion of the activity.
  - 5. Provide all necessary fans and ventilation required for the activity.
  - 6. Any welding, burning and or use of flame the contractor is required to provide all required "hot work permit" to use such equipment prior to start of work. Its mandatory that no "hot work" shall start without these permits issued to the CM and Owner. Failure to this requirement will result to the removal of the project super of that company from all district projects.
- J. Remove each temporary facility when it can be replaced by the authorized permanent facility no later than Substantial Completion, or as directed by the Architect and/or Construction Manager. Complete or restore permanent facilities that may have been delayed due to interim use of a temporary barrier or condition.
- K. Temporary Power: Each Prime Contractor shall provide for their own temporary power needs for any scheduled electrical utility shut downs. Each Prime Contractor shall provide for their own temporary generators, power cords and temporary lighting as needed during these periods to continue to perform their work and maintain adherence to the Preliminary Schedule and approved Project Master Schedules. All temporary power equipment shall comply with all applicable codes and regulations.
- L. Waste Disposal Facilities:
  - 1. General debris/refuse/construction waste containers (dumpsters) shall be provided by each prime contractor and secured as specified herein this contract.
  - 2. It shall be the responsibility/requirement of each Prime Contract to bring their waste to the dumpsters, including but not limited to all equipment, demolition debris, discarded materials with further identification including the following; construction and demolition debris refers to discarded materials generally considered non-hazardous in nature, including but not limited to steel, glass, brick, concrete, asphalt material, pipe, gypsum wallboard, and lumber, from the construction or destruction of a structure as part of a construction or demolition project or from the renovation of a structure, including such debris from construction of structures at a site remote from the construction or demolition project site.

- 3. It shall be the responsibility and requirement of each Prime Contract to recycle metals generated by its Work, and the Work of its subcontracts.
- 4. Joint-effort recycling by all Prime Contracts is encouraged.
- M. Temporary Sanitary Facilities: Provide temporary self-contained toilets units for duration of the project.
  - 1. Temporary Sanitary Facilities:
    - a. Each prime contractor is required to provide their own Temporary Sanitary Facilities and secured behind fencing and/or locked after work hours and weekends.
  - 2. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
  - 3. Provide separate facilities (minimum of one ea.) for male and female personnel in proportion required by OSHA.
  - 4. Shield toilets to ensure privacy.
  - 5. Coordinate mobilization and demobilization of units with Construction Manager.
  - 6. Toilets shall be cleaned at least once per week, with additional facilities or cleanings provided if requested by Construction Manager.
  - 7. Provide and maintain adequate supply of toilet tissue and hand sanitizer for each facility.

# 1.12 WORK HOURS & SEQUENCE

- A. Unless otherwise approved by the Construction Manager, During the school days, Work is to be performed in this contract during the hours of 3:30pm to 10:00pm on weekdays, and Saturdays and Sundays from 7:00am to 3:30pm. During School breaks, work is to be performed from 7:00am to 10:00pm. There is no additional cost to the owner for working the hours of 3:30pm through 10:00pm, or weekend work during the school year. Any work done during these times MUST BE COMPLETED, CLEANED, AND TESTED AS NECESSARY FOR STUDENT OCCUPANCY BEFORE THE START OF THE NEXT SCHOOL DAY. Contractors are required to schedule work during school breaks, school days off, and school holidays.
- B. Summer work starts June 28th through August 23rd for 2024. The Summer working hours are from 7:00am to 9:30pm. There is no additional cost to the owner for working the hours of 3:30pm through 9:30pm or on weekends and holidays during the Summer.
- C. As approved by the CM. Woring hours during the school day will be 7:00am-3:30pm
- D. Contractors are required to start working on site within 30 days of execution of contract, to the extent permitted by contract. Contractors are required to coordinate

and perform work simultaneously with other Contractors. Contractors are required to complete their contract work by the designated Substantial Completion and Final Completion end dates as indicated on the Invitation to Bid.

- E. Mandatory clean up periods From August 24th, 2024 to August 31st, 2024 and August 30th, 2024 to September 6th, 2024, contractors shall clean up all interior and exterior areas.
- F. Contractors are required per contract to fully staff the project during the work shifts stated above with the required manpower to complete their work within the allowed scheduled time frame. Contractors are required to provide a 72-hour advanced request to the Owner via the Construction Manager for any Saturday and Sunday work. If a project schedule delay has been caused by the fault of the contractor, the contractor is required to provide 3rd shift work from 9pm to 6am to make up the project schedule. All costs for CM, Architect and district personal related to this 3rd shift request will be charged to the contractor at a combined rate for all at \$3,000 per 8hr shift.
- G. The shifts noted above are not considered overtime or premium time hours.
- H. Contract summaries will provide start and end dates for each contractor.
- I. Additional requirements:
  - 1. Multiple Crews: Each Prime Contract shall provide multiple crews, supervision, cranes, scaffold and other means necessary to perform the Work, and maintain the Project Master Schedules.
  - 2. Interruption of any utility and/or power must be coordinated with the Owner, via the Construction Manager.
  - 3. Any and all overtime, weekend and/or holiday work required to meet the Project Master Schedules shall be incorporated in the respective Prime Contract's bid.
  - 4. Should a Contractor's progress fall behind, as to schedule, Prime Contractor shall employ additional 3rd shift and/or overtime and/or weekend workforce until situation is rectified, to the satisfaction of the Architect and Construction Manager, at no additional cost to the Owner, however subject to charges as stated in section 1.10 E for lack of maintaining schedule
  - 5. Should a Prime Contract feel another Prime Contract is delaying them sufficient time to complete their installations, per the schedule, the Architect and Construction Manager shall be notified in writing immediately of the situation (refer to Conditions of the Contract for protocol). A Prime Contract creating such a delay, that causes a proven burden upon another Prime Contract to maintain schedule, shall bear all costs incurred by the delayed Prime Contract to maintain the schedule.
  - 6. The Architect and Construction Manager shall not be overburdened as to

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> overtime cost, to monitor the work, due to no cause of his or her own. Owner will compensate the Architect and Construction Manager for all additional cost related to the issue of a Prime Contractor's failing to execute the Contract by fully staffing per the work hours and days noted herein. The Owner reserves the right to back charge the responsible Prime Contract for these fees if incurred.

- 7. All Asbestos and/or Lead Abatement shall take place to meet the requirements of the Preliminary Schedule and Project Master Schedules and shall be coordinated with the other Prime Contractors prior to commencement.
- J. The Work shall be conducted to provide the least possible interference to the activities of the Owner's personnel and the surrounding property owners (neighbors).
  - 1. Prime Contracts are hereby notified that: All Prime Contractors and their subcontractors shall limit excessive noise during 2nd shift known as work extending to 10PM weekdays upon approval by owner and city work hour restrictions. These operations shall not create a disturbance to neighboring properties.
- K. Construction access to the site shall be limited to personnel, equipment and deliveries by suppliers relative to the Work of Prime Contractors and their subcontractors. Prime Contracts shall keep the Construction Manager advised of persons accessing the site and shall seek assistance with coordinating parking and storage facility locations for all Prime Contracts.
  - 1. Where applicable, Contractors shall provide Building Site perimeter barricades as described herein the project and all temporary exit doors/lockable gates on the Project, securing these doors, fencing and/or gates at the end of each work shift.
  - 2. When a Prime Contract engages in overtime, weekend or 2nd shift work, during the summer months and or during the normal school year, the respective Prime Contract shall notify Construction Manager of such and be responsible for securing the Project Site at the end of that work shift and perform site walk around the outside of construction area/work zone ensuring all debris is pickup up and there are no construction related hazards of any kind present once the responsible person leaves the site for the evening or weekend. This includes that all materials and equipment are fenced in and keys are removed. All interior projects have the same requirement to ensure that outside the work zone is clean from dust-dirt and that no materials are left outside the work area at any time.

## 1.11 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

# 1.12 DRAWINGS AND SPECIFICATIONS

- A. Construction Documents indicate the sum total of the Contract that make up the complete work for the Project. Through this Section "Summary of Work", the intent of the Contractor's scope of Work and responsibility is generally described. Related requirements and conditions that are indicated in the Contract Documents include but are not limited to the following:
  - 1. General Conditions and Requirements.
  - 2. Referenced and applicable Codes, Regulations and Standards.
  - 3. Scheduling and phasing requirements.
  - 4. Existing conditions and restrictions on use of the site and facilities.
- B. Drawings and Specifications are cooperative and supplementary. Portions of the Work, which can best be illustrated by Drawings, are not included in the Specifications and portions best described by Specifications are not depicted on Drawings.
  - 1. All items necessary to complete the work shall be furnished whether written or illustrated.
  - 2. All primes shall exercise good judgment and perform all work according to related industry standards.

## PART 2 - SCOPE OF WORK

## 2.1 PRIME CONTRACTS

- A. Scope of Work: Work includes but is not limited to, the following:
  - 1. Provide all work identified in the Contract Documents.
  - 2. All Specification Sections provided.
  - 3. All abatement drawings provided for reference.
  - 4. GC is responsible to install all required access hatches. GC to coordinate with MEP trades for locations and hatches.
  - 5. GC is responsible to install sleeves in foundation walls for penetrations by other prime contractors, MEP contractors to provide GC a written sketch showing exact height/locations with distance from column line and depth below finished slab within sufficient time for GC to install. If information is not

provided in a timely manner by MEP, then core drilling is the responsibility of the affected contractor.

- 6. GC will coordinate MEP opening sizes and locations (HVAC units, louvers, vents, etc) with MEP trades. Lintels for these openings are provided and installed by the GC.
- 7. Fire alarm mag holds furnished and wired by EC, and will be installed on doors by GC.

# PART 3 - EXECUTION

## 3.1 WORK SEQUENCE

- A. The Work shall be conducted to provide the least possible interference to the activities of the Owner's personnel, per the Project Preliminary Schedule.
- B. Work required during overtime, extended shifts or holidays due to failure of contractor to maintain schedule, will be monitored by Architect/Construction Site representative, and may be monitored by Owners' personnel. Additional costs for Architect/Construction Site Representative and/or Owner personnel will be borne by the Contractor.
- C. Coordination of any utility and power interruption must be done with approval of the Architect/Construction Site Representative. Shutdowns must occur during non-occupied timeframes only.
- D. Construction access to the site shall be limited to those designated for personnel, equipment and deliveries by the Owner. All contractor staging, parking and storage shall be coordinated with the Construction Site Representative and subject to change.
- E. Payments: Each bid that covers more than one school (i.e. one SED project) shall provide completed AIA G732 & G703 by building (for each SED project).
- F. No work shall be installed without approved shop drawings. Any work in place without approved shop drawings will be rejected and removed by that contractor at their expense and backed charge all other costs related to.
- G. Any work deemed by CM, Architect and District not properly installed by a contractor per the contract drawings and specifications shall be removed immediately and corrected, with all associated costs to be borne solely by that contractor.

- H. All prime contractors shall coordinate their contract work with other primes to meet the project schedule and for a complete operational system or area or work.
- All contractors are to provide within 3 weeks of award a "base line" construction schedule for their work from commencement to completion including all phasing. This schedule is to be updated monthly to show percentage progress of each item listed. This schedule shall be revised to provide a recovery schedule in the event of a delay for any reason. The recovery schedule shall include the "base line" item and the recovery to show how the delay is affecting the overall project schedule. This schedule is to be provided in MS Project or Primavera. Excel schedules are not accepted.
- J. Prime contractor "base line" schedules are to be reviewed by each prime contractor and coordinated where work is related and that each prime's work shall be included in each "base line" contractor's schedule as necessary for coordination.
- K. All contractors are to provide 2-week look ahead schedules showing work related to the base line and shall be coordinated with other prime 2-week look ahead schedules. These schedules will be Excel format. Format will be provided by the CM.
- L. Contractors to provide a full-time supervisor on site 100% of the time. This is not a working foreman. Supervisors are not working with tools they are supervising their workers and coordinating with other contractors and district/ CM. Failure to provide will be default of your contract and subject costs related to and termination.
- M. All prime contractors are the provide a project manpower structure showing names and telephone numbers of each responsible person on the project. This shall be updated as needed if personal changes are made.
- N. All site equipment and dumpsters are to be behind temporary chain link fence when stored on site and or within the construction work zone where temporary chain link fence has been providing and installed by the prime. Each prime contractor is responsible to provide and install temporary chain link fence around their own stored equipment and dumpsters on site.
- O. No equipment, panels or any services shall be turned off for any reason without written request and approval by the district. Project form shall be used for all shutdowns and required a 3-day notice. Other shutdowns may require more time.

**3.5 CONTRACT No. 2 GENERAL CONTRACT (GC-01)**– GENERAL CONSTRUCTION PRIME CONTRACT FOR INTERIOR WORKS AT CONTRACT AT NANUET SENIOR HIGH SCHOOL & BARR MIDDLE SCHOOL & MILLER ELEMENTARY SCHOOL

A. Project Site Superintendent: GC shall provide one (1) full time, non-working Project Site Superintendent while any work related to this Contract is being NANUET UNION FREE SCHOOL DISTRICT NANUET BOND PROJECTS PHASE 4 KSQ DESIGN PROJECT NO. 2211003.00

> performed. Superintendent shall be responsible for the daily activities of this Contract and work closely with the Construction Manager and the other Prime Contract Superintendents/Foremen, in a manner that best promotes the objectives of the Project.

- B. Superintendent shall be on-site while Contractor's own forces, and/or subcontractors are performing work on the Project Site; also while other Prime Contracts are installing work, or require the coordination of work related to this Prime Contract, and/or as requested by the Construction Manager.
- 1. Superintendent shall be the same individual throughout the duration of the Project.
- 2. Project Site Superintendent shall be an individual with minimum of five (5) years' experience in this field of work.
- 3. Refer to Section 013100 "Project Management and Coordination" for further requirements.
- B. Project Foreman: GC shall provide at least one (1) full time Project Foreman during each shift of work at each school; Foreman shall be able to make binding decisions, as they relate to the daily activities of their crew, as related to achieving the goals of the Project.
- C. Site Communications: GC shall provide Project Superintendent with a mobile phone; all costs and service charges shall be paid for by GC; provide Construction Manager with contact number(s).
- D. Project Site Field Office: Provide site office facilities for this Contract's Project Superintendent. Site Office shall be equipped with telephone with answering machine, fax and e-mail. Contact information shall be provided to the Construction Manager.
  - 1. The Owner reserves the right to seek reimbursement for temporary facilities not provided by this Prime Contract.
- E. Scope of Work: Work of the GC includes, but is not limited to, the following:
  - 1. Coordination with other Prime Contracts, Owner and Construction Manager as required to adhere to and maintain approved Project Master Schedules. Prior to first payment, this includes developing and submitting the Project Master Schedule for Interior works
  - 2. Provide all interior demolition as indicated in the Construction Documents, or required for Work of this Prime Contract:
    - a. Coordinate all demolition with Hazardous Materials documents. Coordinate with all other Prime Contracts regarding removals required for the Project. Demolition of a system shall mean any and all components removed in their entirety, to the point of origin, source or substrate.

- 3. GC is to provide temporary panels as required for abatement work. All connections of temporary panels is by the GC own electrician. The district is not responsible for providing temporary power or connecting temporary power/panels.
- 4. Provide all new ceiling systems and patching of existing ceilings, complete where indicated in Contract Documents.
- 5. Contractor access doors furnished by the prime trade requiring access; installation of all access doors will be by contract GC. General contractor is to coordinate with other primes as to location and quantity of access doors to be installed at the appropriate time. Framing for all access doors is by GC.
- 6. The GC shall provide and install flooring protection at all schools prior to demolition to protect the owner's property, and to accommodate storage of Owner property Flooring protection shall be 6 Mil plastic sheeting covered by Masonite hardboard of 1/8" thickness installed so as to cover entire floor area of designated spaces, with joints abutting one another and each joint fully taped with duct tape. At the conclusion of interior work, all interior work areas shall be cleaned and Masonite hardboard and plastic sheeting removed in order for the district to restore the classroom(s) and/or corridors. After the removal of Masonite and plastic sheeting, the exposed existing flooring shall be swept clean by the GC.
- 7. The GC shall provide one (1) 45' storage containers for the Owner's use, to be placed as directed by the Owner. GC shall provide a Schedule of Values line item in the base bid for storage trailers. If Owner chooses not to utilize this provision, the value of the storage trailers shall be credited back to the Owner at the end of the project.
- 8. This prime contractor shall provide ALL demolition and new construction of housekeeping pads for MEP contractors for all schools as shown on the contract documents.
- 9. GC shall conform to phasing and sequencing of interior work as coordinated with the Owner. See Milestone Schedule
  - 10. Environmental Protection: Provide protection, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
  - a. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms on or near the Project site.
- 11. Provide dust control within delineated building site while the Work of this Contract is being performed. Limit situations that may create dust contamination while Work of this Contract is idle.
- 12. Provide all Control Lines and Elevations as required. GC shall transfer lines and elevations to other locations as necessary.

- 13. Provide cut and patch work related to that of this Prime Contract, and at those areas specifically identified in the Construction Documents, regardless of trade creating the area to be patched.
  - a. Each Prime Contract is responsible for all other respective cutting and patching required of their installations (refer to Section 01 73 29 for further information).
- 14. Provide all access panels indicated, and those not indicated whereas inaccessible installations have been provided by this Prime Contract, located above hard ceilings or in walls. Access panels required for MEP equipment accessibility are to be provided by the MEP contractors and installed by the interior contractor. Coordinate locations for panels with MEP contracts.
- 15. Provide all prep/paint finishes as indicated in the Construction Documents.
- 16. Provide finishes including, but not limited to; CMU, gypsum board assemblies, plaster, suspended ceiling systems, and all paint and finish systems including those on all surfaces adjacent to and damaged by renovation work during the Project.
  - a. Provide all associated surface preparation for each finish included in this Prime Contract.
  - b. Provide all plaster wall patch at all removal locations and any locations shown on the contract documents
- 17. Provide all miscellaneous wood blocking, shimming and supports for items or equipment installed under this Prime Contract, and as coordinated with other Prime Contracts for metal strapping and/or wood blocking for installation of MEP for interior Work.
- 18. Provide through-penetration fire stop systems in unit masonry assemblies, gypsum wall construction, floor penetrations, and at all structural member penetrations as per contract documents. Contractor shall coordinate with all MEP contractors to complete the scope of work.
- 19. GC is specifically reminded that there may be miscellaneous asbestos pipe insulation/fittings above some ceilings and inside wall areas. Contractor will investigate above the ceiling and walls prior to demolition and carefully perform the work as necessary to not disturb any insulation/fittings.
- 20. GC will provide all necessary patching/self-leveling/grinding of flooring substrate to insure a smooth flat floor finish prior to installation of new VCT or urethane flooring.
- 21. Substantial Completion: Clean all GC installations and provided equipment at the time of Substantial Completion or as directed by Construction Manager.
- 22. GC to provide negative air machines to properly exhaust all work areas of any odors, dust, fumes.
- 23. Refer to Division 00 Section "Project Forms" and make use of these forms for the installation and coordination of the Work. These forms are included to assist this Prime Contract with coordinating the installation of Work by others prior to enclosing and/or finishing work. Owner will not compensate Prime Contract for

work not properly coordinated that result in added work, or removal of work. Secure the proper signatures or acknowledgements, as indicated, prior to installing/completing the Work.

- 24. Coordinate all the preceding requirements, accordingly, with all applicable Alternates indicated in Section 01 23 00 "Alternates".
- F. Supplemental Temporary Facilities and Controls by GC include, but are not limited to:
  - 1. Waste Disposal Facilities: Provided by each contractor.
  - 2. Temporary Interior Barricades: Provide, maintain and eventually remove all temporary barricades per OSHA Regulations, Industry Standards, or as indicated in the Construction Documents. These include, but are not limited to, the following areas:
    - a. To isolate new construction areas.
    - b. To isolate renovation areas.
    - c. Floor openings/penetrations, including stairwells.
      - 1) Horizontal Openings: close openings in floors and horizontal surfaces with load bearing, wood and/or steel framed construction per applicable regulations.
  - 3. Temporary Doors, Frames & Wall Assemblies: Provide, maintain and eventually remove all temporary installations per OSHA Regulations, Industry Standards, or as indicated in the Construction Documents. Provide fire rated assemblies as required. Provide exit (panic bar/crash bar) devices at locations of egress. Coordinate locations with Construction Exiting Plan, Sequencing/Phasing Plans, and the Construction Manager. Temporary doors shall be constructed using ½" plywood and 2x construction, equipped with hasps, locks, handle and latch mechanism, and spring or counter weight installed to allow door to close after opening. Permanent doors will <u>not</u> be used in temporary conditions.
  - 4. Temporary Sanitary Facilities: Provided by each contractor.
  - 5. Existing Stair Usage: Use of Owner's existing stairs in unoccupied areas will be permitted, provided that at Substantial Completion, stairs are restored to conditions existing before initial use.
    - a. Provide photo documentation of existing stair conditions prior to use by all Prime Contracts. Document during use, and at completion of the Renovation Project in order to document any and all damage to the Owner's property.
    - b. 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.

- 6. Indoor air quality management at all areas of Construction, once building is enclosed.
  - a. Provide all necessary dust partitions, fans, temporary ducts, and barricades to properly contain and ventilate all work area fumes and odors, created by demolition and new construction or alterations, directly to the outside. Ventilate to an area outside the building, sufficiently away from the building, as not to contaminate other areas. There will be no additional claims honored if the Construction Manager requests additional ventilation or requirements.
  - b. Provide and exhaust air system for the project indoor areas that could produce fumes, VOC's, off gasses, dusts, mists, or other emissions.
  - c. System Operation:
    - 1) A sufficient quantity of exhaust fans in existing window openings or other approved locations shall be operated.
    - 2) Exhaust air system shall operate for a minimum of 72 hours after work is completed or until all materials have cured sufficiently so as to stop out – gassing of fumes or odors and area has been ventilated to remove all detectable traces of odors and fumes.
    - 3) Maintain 25 feet clearance from all temporary exhaust outlets to all active building outdoor air intakes.
    - 4) Refer to Division 01 Section "Work Restrictions" for further information.
- 7. Provide all shoring required for Work of this Prime Contract, including but not limited to;
  - a. Cutting or altering of existing construction.
  - b. Provide protection of all new and existing surfaces during the Work. Do not stand, walk, or work off of any unprotected finished surface above the floor.
- 8. Maintain temporary fencing and barricading to keep unauthorized persons away from dangerous and hazardous areas for which this Prime Contract is responsible.
- 9. Traffic Controls: Provide flagman while any operation of this Prime Contract interferes with traffic flow on adjacent roadways.

END OF SECTION 01 12 02

### SECTION 01 21 00 – ALLOWANCES

### PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances.
  - Selected materials and equipment are specified in the Contract Documents by allowances. In some cases, these allowances include installation. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
  - 1. Lump-sum allowances.
  - 2. Contingency allowances.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
  - 1. Division 1 Section "Modification Procedures" specifies procedures for submitting and handling Change Orders.
  - 2. Division 1 Section "Quality Control Services" specifies procedures governing the use of allowances for inspection and testing.

### 1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise the Architect of the date when the final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At the Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by the Architect from the designated supplier

### 1.4 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.
- B. Submit invoices or delivery slips to show the actual quantities of materials delivered to the site for use in fulfillment of each allowance.

### 1.5 CONTINGENCY ALLOWANCES

A. Use the contingency allowance only as directed for the Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

- B. The Contractor's overhead and profit, including costs for bonds and insurance, delivery, equipment rental and similar costs, for these allowances shall be included in the values of the general requirements of contract sum and are not chargeable under allowance disbursement.
- C. At Project closeout, credit unused amounts remaining in the contingency allowance to the Owner by Change Order.

### 1.6 UNUSED MATERIALS

- A. Return unused materials to the manufacturer or supplier for credit to the Owner, after installation has been completed and accepted.
  - 1. When requested by the Architect, prepare unused material for storage by Owner where it is not economically practical to return the material for credit. When directed by the Architect, deliver unused material to the Owner's storage space. Otherwise, disposal of unused material is the Contractor's responsibility.

### PART 2 - PRODUCTS (Not Used)

### PART 3 - EXECUTION

- 3.1 EXAMINATION
  - A. Examine products covered by an allowance promptly upon delivery for damage or defects.

### 3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

### 3.3 SCHEDULE OF ALLOWANCES

A. Include a contingency allowance for each Base Bid according to the following schedule:

Contract BE-01 – General Contract Work: Provide a Contingency Allowance of:

 N/A – BE-01 contract removed from bid package. This work was solely new roofing at Miller Elementary School.

# . Contract GC-01 – General Contract Work: Provide a Contingency Allowance of:

- a. \$8,000 for use at Nanuet High School according to Owner's instructions.
- b. \$45,000 for use at **Barr Middle School** according to Owner's instructions.
- c. \$22,000 for use at Miller Elementary School according to Owner's instructions.
- 3. Contract EC-01 General Contract Work: Provide a Contingency Allowance of:
  - a. \$32,000 for use at **Nanuet High School** according to Owner's instructions.
  - b. \$55,000 for use at **Barr Middle School** according to Owner's instructions.
  - c. \$53,000 for use at **Miller Elementary School** according to Owner's instructions.
- 4. Contract MC-01 General Contract Work: Provide a Contingency Allowance of:
  - a. \$285,000 for use at **Nanuet High School** according to Owner's instructions.
  - b. \$33,000 for use at **Barr Middle School** according to Owner's instructions.
  - c. \$27,000 for use at **Miller Elementary School** according to Owner's instructions.

- Contract PC-01 General Contract Work: Provide a Contingency Allowance of: a. \$13,000 for use at **Barr Middle School** according to Owner's instructions 5.

END OF SECTION 012100



# **DEMOLITION KEYNOTES**

KEYNOTE

VERIFY ALL AC UNITS TO BE REMOVED IN FIELD VERIFY ALL GLAZING SIZES IN FILED

VERIFY ALL PANEL SIZES IN FIELD

1

D7 TYP.

# NO.

4

- DOORS AND WINDOWS: D1 REMOVE EXISTING DOOR & FRAME, PROTECT EXISTING/ADJACENT SURFACES TO REMAIN
- D2 REMOVE EXISTING DOOR, BARROWED LITES & FRAME IN THEIR ENTIRETY, PROTECT EXISTING/ADJACENT SURFACES
- D3 CREATE 2 OPENINGS AND PROVIDE TEMPORARY SHORING INSIDE BOOTH AND ABOVE FOR MECH WORK, RE MECHANICAL DWGS 4 REMOVE PARTITION
- D5 MODIFY EXISTING FRAME & REMOVE EXISTING TRANSOM GLAZING, APPROX. 2'H X 3'W, SEE PHOTO 30/HS-AD000 FOR TYPICAL CONDITION
- D6 REMOVE INTERIOR INTERIOR CORRIDOR WINDOW APPROX. 2'H X 6'W, V.I.F., SEE PHOTO 31/HS-AD000 FOR TYPICAL CONDITION
- D7 REMOVE WINDOW AC UNIT, COORD. WITH MECH D8 REMOVE EXISTING DOOR ONLY (ALTERNATE)

# **FLOOR PLAN KEYNOTES** KEYNOTE

- INSTALL NEW FIRE RATED FRAME & DOOR, REPAIR, PATCH &/OR PAINT ADJACENT WALL, FLOOR & CEILING AS REQUIRED TO MATCH EXISTING FINISH INSTALL NEW FIRE RATED DOORS FRAMES & BARROWED LITES, REPAIR, PATCH AND PAINT WALL, FLOOR AND CEILING AS REQUIRED TO MATCH EXISITING FINISH PROVIDE EXIT SIGNAGE, COORDINATE WITH ELECTRICAL
- PROVIDE ADA CLEARANCE; REPAIR, PATCH & REPAINT WALLS, DOOR FRAME & FLOOR AS REQUIRED TO MATCH EXISTING FINISHES INFILL CORRIDOR DOOR TRANSOM WITH 1 HOUR RATED WALL ASSEMBLY,
- APPROXIMATELY 3' W X 2' H, SEE DETAIL J13/HS-A601 INFILL CORRIDOR OPENING WITH 1 HOUR RATED WALL ASSEMBLY, APPROXIMATELY 6' W X 2' H, SEE DETAIL H13/HS-A601
- INSTALL CODE COMPLIANT ADA GRAB BARS INFILL GLAZING WHERE AC UNIT HAS BEEN REMOVED WITH INSULATED CLEAR LAMINATED GLASS, APPROX. 3'-6" WIDE X 2' HIGH, SEE SPEC
- INFILL SPANDREL PANEL WHERE AC UNIT HAS BEEN REMOVED WITH INSULATED METAL PANEL, APPROX. 3'-6" WIDE X 2'-6" HIGH, SEE SPEC
- TOUCH UP WALL PAINT/FINISH AS REQUIRED WHERE MECH UNIT/FIXTURE/PIPING HAS BEEN REMOVED. MATCH EXISTING. RE MECH DWGS. PATCH EXISTING FLOOR FINISH AS REQUIRED WHERE MECH UNIT HAS BEEN
- REMOVED. MATCH EXISTING, RE FINISH SCHED. RE MECH DWGS.
- 12 MODIFY CASEWORK TO ACCOMMODATE NEW MECH UNIT. RE MECH DWGS. 13 INSTALL NEW ACT CEILING TILE AND GRID WHERE MECHANICAL CEILING UNIT HAS
- BEEN REMOVED. MATCH EXISTING. RE MECH DRAWINGS 4 INFILL MASONRY WALL WHERE AC UNIT WAS REMOVED
- 15 INSTALL NEW FIRE RATED DOOR ONLY (ALTERNATE)



E	TAGERV-HS-11SUPPIEAT EJDB W9.0 °F6.1FINNED-1. CAPACIT2. PROVIDE3. ENCLOS4. LENGTH5. CAPACIT6.1TAGFTR-1FTR-2FTR-3FTR-4FTR-5FTR-3FTR-4FTR-5FTR-6FTR-7FTR-8HORIZO1. PROVIDE2. PROVIDE2. PROVIDE	ADMINISTRAT	ERVICE TION VENTI PERFORM LAT WB RE 41.9 °F 4 X VENTI ERVICE TION VENTI ERVICE TION VENTI ERVICE TION VENTI ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU ENCLOSU	ILATION RO IANCE ENERGY ECOVERED 5,375 Btu/h ILATION RO ENERGY ECOVERED PERS FOR BO PERS FOR BO ILATION RO ILATION RO PERS FOR BO ILATION RO ILATION	OOFTOP ERV W         STATH         EXHAUST /         PERFOI         CHEDULE (I         OFTOP ERV W         STATH         OFTOP ERV W         STATH         OFTOP ERV W         STATH         OFTOP ERV W         STATH         DOFTOP ERV W         STATH<	UNIT TYPE TH FLATE PLATI C PLATE ENERG AR WINTER MANCE LAT LAT DB WB D D D D D D D D D D D D D	E HEAT EXCHANG Y RECOVERY VEN EAT EAT DB WB 89.9 °F 75.0 °F ATE #1) FRIP FOR EACH EC E HEAT EXCHANG Y RECOVERY VEN SU EAT EAT OB Y RECOVERY VEN SU SU EAT EAT WB 89.9 °F 73.9 °F ARWINGS. ACTIVE FIN ELEM RAWINGS. ACTIVE FIN ELEM TUBE SIZ 1" 1" 1" 1" 1" 1" 1" 1" 1" 1"	OUT         ER       776         TILATOR PI         JPPLY AIR S         JPPLY AIR S         LAT DB       V         78.7 °F       67.         OUT       0         Z       MOTOR, D         ER       866         TILATOR PI         JPPLY AIR S         INTILATOR PI         AIR OPENIN	DOOOR AIR     SUI       GCFM     7:       GRFORMANC       SUMMER PER MECOV 4 °F     TO AIR       OUBLE WALL       OUBLE WALL       OUBLE WALL       GOOR AIR     SUI       SUMMER PER NG. PROVIDE       NG. PROVIDE       NG. PROVIDE       NG. PROVIDE	PPLY AIR 50 CFM E FORMAN A RGY VERED 4 Btu/h 4 Btu/h 4 Btu/h 5 CONSTR PPLY AIR 40 CFM E FORMAN 40 CFM E FORMAN 40 CFM E FORMAN 5 5 5 5 5 5 5 5 5 5 5 5 5	SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 2 2 SENSIBLE ENERGY RECOVERED 9,100 Btu/h UCTION, HORIZ SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 1 2 2 SENSIBLE ENERGY RECOVERED 9,994 Btu/h 9,994 Btu/h 2 2 1 1 2 2 1 1 2 2 1 3 3	Supp         IN       Supp         IN       Supp         EXHA       PE         DB       N         75°F       62         CONTAL INLET       Supp         IN       SUP         IN       SUP      <	UPPLY AII LA W/ UST AIR S ERFORMAN AT LA MB DI .5 °F T AND OUT UPPLY AII UST AIR S ERFORMAN AT LA MB DI .5 °F	R DATA PPLY ATTS H ATTS H UMMER NCE T LAT B VB T LAT R DATA PPLY ATTS H T LAT R DATA PPLY ATTS H T LAT R DATA NCE T LAT WB T LAT WB T LAT WB T LAT NCE T COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI COPPI	P ECONNECT CONNECT CONNECT P ECM- STREAMS RTUBE // RTUBE //
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OUT       A         CMOTOR, D       A         COUT       A </td <td>DOOOR AIR     SUI       GCFM     7:       ERFORMANC       SUMMER PER MECOV 4 °F     18,814       OUBLE WALL       OUBLE WALL       OUBLE WALL       GOOR AIR     SUI       GUMMER PER NB     RECOV       GUMMER PER NB     TO       AIR     TO       SUMMER PER     FIN       VB     RECOV       7 °F     20,240       H.     FIN       SIZE     FIN       I/4"     I       I/4"     I       I/4"     I</td> <td>PPLY AIR         50 CFM         E         FORMAN         TAL         RGY         VERED         4 Btu/h         4 Btu/h         CONSTR         PPLY AIR         40 CFM         E         FORMAN         40 CFM         E         FORMAN         AD CFM         Btu/h         IS PER         OOT         32         50         50         50         50         50         50         50</td> <td>SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 2 2 SENSIBLE ENERGY RECOVERED 9,100 Btu/h 0 UCTION, HORIZ SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 1 2 2 5 5 SENSIBLE ENERGY RECOVERED 9,994 Btu/h 0 1 2 2 1 1 2 2 1 1 2 1 2 1 1 2 1 2 1 1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td>Supp         IN       Supp         IN       Supp         EAT       E         EAT       E         75°F       62         CONTAL INLET       S         IN       SUPP         FAN F       8         CONTAL INLET       S         IN       SUPP         FAN F       8         IN       SUPP         IN       SUPP         IN       SUPP         IN       SUPP         IN       SUP         IN       SUP</td> <td>UPPLY AII LA W/ UST AIR S ERFORMAI AT LA MB DI .5 °F T AND OUT UPPLY AII UPPLY AII UST AIR S ERFORMAI A S C UST AIR S ERFORMAI C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S</td> <td>R DATA PPLY ATTS H 39 W 7 UMMER NCE T LAT B WB T LAT R DATA PPLY ATTS H T LAT R DATA PPLY ATTS H T LAT R DATA T LAT WB T LAT WB T LAT WB T LAT PPLY ATTS H COPPI COPPI COPPI COPPI COPPI COPPI COPPI</td> <td>P ECM WII SEN 75 CONNEC1 P ECM TO P ECM TO TO TO TO TO TO TO TO TO TO</td>	DOOOR AIR     SUI       GCFM     7:       ERFORMANC       SUMMER PER MECOV 4 °F     18,814       OUBLE WALL       OUBLE WALL       OUBLE WALL       GOOR AIR     SUI       GUMMER PER NB     RECOV       GUMMER PER NB     TO       AIR     TO       SUMMER PER     FIN       VB     RECOV       7 °F     20,240       H.     FIN       SIZE     FIN       I/4"     I       I/4"     I       I/4"     I	PPLY AIR         50 CFM         E         FORMAN         TAL         RGY         VERED         4 Btu/h         4 Btu/h         CONSTR         PPLY AIR         40 CFM         E         FORMAN         40 CFM         E         FORMAN         AD CFM         Btu/h         IS PER         OOT         32         50         50         50         50         50         50         50	SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 2 2 SENSIBLE ENERGY RECOVERED 9,100 Btu/h 0 UCTION, HORIZ SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 1 2 2 5 5 SENSIBLE ENERGY RECOVERED 9,994 Btu/h 0 1 2 2 1 1 2 2 1 1 2 1 2 1 1 2 1 2 1 1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Supp         IN       Supp         IN       Supp         EAT       E         EAT       E         75°F       62         CONTAL INLET       S         IN       SUPP         FAN F       8         CONTAL INLET       S         IN       SUPP         FAN F       8         IN       SUPP         IN       SUPP         IN       SUPP         IN       SUPP         IN       SUP	UPPLY AII LA W/ UST AIR S ERFORMAI AT LA MB DI .5 °F T AND OUT UPPLY AII UPPLY AII UST AIR S ERFORMAI A S C UST AIR S ERFORMAI C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S C S	R DATA PPLY ATTS H 39 W 7 UMMER NCE T LAT B WB T LAT R DATA PPLY ATTS H T LAT R DATA PPLY ATTS H T LAT R DATA T LAT WB T LAT WB T LAT WB T LAT PPLY ATTS H COPPI COPPI COPPI COPPI COPPI COPPI COPPI	P ECM WII SEN 75 CONNEC1 P ECM TO P ECM TO TO TO TO TO TO TO TO TO TO
E	TAGERV-HS-1SUPPIEAT EAT EADB W9.0 °F 6.1FINNED-EAT EAT EADB W9.0 °F 6.1FINNED-1. CAPACIT2. PROVIDE3. ENCLOS4. LENGTH5. CAPACIT6. CAPACITCAPACIT6. CAPACIT7. FTR-3FTR-4FTR-5	ADMINISTRAT	ERVICE TION VENTI PERFORM LAT WB RE 41.9 °F 4: XY VENTI ERVICE TION VENTI ERVICE ERVICE	ILATION RO IANCE ENERGY ECOVERED 5,375 Btu/h ILATOR S PERS FOR BO PERS FOR BO PERS FOR BO ILATION RO ILATION R	DOFTOP ERV W         STATIL         EXHAUST /         PERFOI         EAT BAT WB         70 °F       51.4 °F         OFTOP ERV W         STATIL         OFTOP ERV W         STATIL         OFTOP ERV W         STATIL         OFTOP ERV W         STATIL         EXHAUST /         DOFTOP ERV W         STATIL         EXHAUST /         DOFTOP ERV W         STATIL         FOR FIN FUSE         OFTOP ERV W         STATIL         DOFTOP ERV W         STATIL         EAT EAT WB         TO °F 51.4 °F         E         N ALL ROOMS /         FOR FIN TUBE         PERFOI         STATIL         FOR FIN TUBE         OO         810         1,260	UNIT TYPE TH FLATE PLATI C PLATE ENERG AIR WINTER MANCE LAT LAT DB WB BID AL TERN MS, TERMINAL ST UNIT TYPE TH FLATE PLATI C PLATE ENERG AIR WINTER MANCE LAT LAT DB WB C PLATE ENERG AIR WINTER MANCE LAT LAT DB WB C PLATE STO THE C PLATE CONTACT C PLATE CONTACT C PLATE TEMPERA DROI 15 °F 20	E HEAT EXCHANG Y RECOVERY VEN EAT EAT DB WB 89.9 °F 75.0 °F ATE #1) FRIP FOR EACH EC FRIP FOR EACH EC E HEAT EXCHANG Y RECOVERY VEN SU EAT EAT WB 89.9 °F 73.9 °F RAWINGS. ACTIVE FIN ELEM RAWINGS. ACTIVE FIN ELEM TUBE SIZ 1" 1" 1" 1" 1"	OUT         ER       776         TILATOR PI         JPPLY AIR S         LAT DB       V         78.7 °F       67.         OUTOR, D         OUT         ER       866         TILATOR PI         JPPLY AIR S         ILAT DB       V         OUT       A         ER       866         TILATOR PI       L         JPPLY AIR S       L         IPPLY AIR S       L         IPPLY AIR S       A         IPPLY AIR S       L         IPPLY AIR S       L         IPPLY AIR S       A	DOOOR AIR     SUI       GCFM     7:       GEFORMANC       SUMMER PER VB     TO RECOV 4 °F       0UBLE WALL       OUBLE WALL       COUBLE WALL       OUBLE WALL       COUBLE WALL       COUBLE WALL       OUBLE WALL       COUBLE WALL       BINNER PER       SUMMER PER       VB       RECOV       7 °F       20,240       H.       SIZE       FIN       I/4"       /4"       /4"	PPLY AIR 50 CFM E FORMAN TAL RGY VERED 4 Btu/h 4 Btu/h 4 Btu/h 5 CONSTR PPLY AIR 40 CFM E FORMAN FORMAN 40 CFM E FORMAN 40 CFM E 50 50 50 50	SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 2 2 SENSIBLE ENERGY RECOVERED 9,100 Btu/h 0 UCTION, HORIZ SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 1 2 2 SENSIBLE ENERGY RECOVERED 9,994 Btu/h 0 3,994 Btu/h 2 2	Supp         IN       Supp         IN       SUPP         EAT       E         EAT       E         IN       75 °F         CONTAL INLET         SUPP         FAN F         IN         SUPP         IN         IN         SUPP         IN         IN         SUPP         IN	UPPLY AII LA WA SU UST AIR S ERFORMAI AT LA MB DI .5 °F 	R DATA PPLY ATTS H 39 W 7 UMMER NCE T LAT B WB T LAT R DATA PPLY ATTS H T LAT R DATA PPLY ATTS H T LAT R DATA UMMER NCE T LAT B WB T LAT B WB T LAT B WB T LAT COPPI COPPI COPPI COPPI COPPI	P ECOM SEN 75 CONNEC CO
E	TAG         ERV-HS-1         SUPPI         EAT EAT EAT         DB       W         9.0 °F       6.1         TAG         ENERGY         1. PROVIDE         EAT EAT         DB       W         9.0 °F       6.1         FINNED-         1. CAPACIT       2. PROVIDE         I. CAPACIT         2. PROVIDE       3. ENCLOS         4. LENGTH       5. CAPACIT         6. CAPACIT       6. CAPACIT	ADMINISTRAT	ERVICE TION VENTI PERFORM LAT WB RE 41.9 °F 44 RY VENTI ZZED DAMF	ILATION RO IANCE ENERGY ECOVERED 5,375 Btu/h ILATION RO ILATION RO	DOFTOP ERV W STATI EXHAUST / PERFOI EAT EAT DB VB 70 °F 51.4 °F CHEDULE ( OTH AIRSTREAN DOFTOP ERV W STATI EXHAUST / PERFOI EAT EAT DB VB 70 °F 51.4 °F E N ALL ROOMS / EAT EAT N ALL ROOMS / EAT EAT N ALL ROOMS /	UNIT TYPE TH FLATE PLATI C PLATE ENERG AIR WINTER MANCE LAT LAT DB WB BID AL TERN MS, TERMINAL ST UNIT TYPE TH FLATE PLATI C PLATE ENERG AIR WINTER MANCE LAT LAT DB WB LAT LAT AS SHOWN ON D REFERS TO THE	E HEAT EXCHANG Y RECOVERY VEN BATE HEAT EAT BB WB 89.9 °F 75.0 °F ATE #1) RIP FOR EACH EC Y RECOVERY VEN E HEAT EXCHANG Y RECOVERY VEN SU EAT EAT BB WB 89.9 °F 73.9 °F RAWINGS. ACTIVE FIN ELEM	OUT ER 776 IPPLY AIR S LAT DB V 78.7 °F 67. OUT C MOTOR, D C MOTOR, D	DOOR AIR SUI GCFM 75 ERFORMANC SUMMER PER VB RECOV 4 °F 18,814 OUBLE WALL OUBLE WALL OUBLE WALL OUBLE WALL CFM 84 ERFORMANC SUMMER PER TO AIR SUI GCFM 84 ERFORMANC SUMMER PER TO AT ENE VB RECOV 7 °F 20,240	PPLY AIR 50 CFM E FORMAN TAL RGY VERED 4 Btu/h CONSTR PPLY AIR 40 CFM E FORMAN FORMAN AU CONSTR 0 DELY AIR 40 CFM E FORMAN 0 DELY 1 Btu/h	SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 2 2 2 3 2 2 3 2 3 2 3 5 2 5 3 5 2 5 3 5 3	Supp         IN       Supp         IN       Supp         EAT       E         EAT       E         IN       75 °F         CONTAL INLET         SUPP         IN       SUP         IN       SUP         IN       SUP         IN       SUP         IN <t< td=""><td>UPPLY AII LY F LA W/ UST AIR S ERFORMAI ANB DI .5 °F UST AIR S UST AIR S ERFORMAI UST AIR S ERFORMAI .5 °F</td><td>R DATA PPLY ATTS H ATTS H UMMER NCE T LAT B VB T CLET DUCT R DATA PPLY ATTS H T5 W UMMER NCE T UMMER NCE T LAT B VB UMMER NCE T LAT B VB</td><td></td></t<>	UPPLY AII LY F LA W/ UST AIR S ERFORMAI ANB DI .5 °F UST AIR S UST AIR S ERFORMAI UST AIR S ERFORMAI .5 °F	R DATA PPLY ATTS H ATTS H UMMER NCE T LAT B VB T CLET DUCT R DATA PPLY ATTS H T5 W UMMER NCE T UMMER NCE T LAT B VB UMMER NCE T LAT B VB	
E	TAG ERV-HS-1 SUPPI EAT EL DB W 9.0 °F 6.1 I. PROVIDE TAG ERV-HS-1A SUPPI EAT EL DB W 9.0 °F 6.1	ADMINISTRAT	ERVICE TION VENTI PERFORM LAT WB RE 41.9 °F 44 RY VENTI RZED DAMF	ILATION RO IANCE ENERGY ECOVERED 5,375 Btu/h ILATION RO ILATION RO ILATION RO ILATION RO ILATION RO ILATION RO ILATION RO ILATION RO ILATION RO	DOFTOP ERV W STATI EXHAUST / PERFOI EAT EAT MB 70 °F 51.4 °F CHEDULE (1 DTH AIRSTREAN DOFTOP ERV W STATI EXHAUST / PERFOI EAT EAT DB WB 70 °F 51.4 °F 51.4 °F	UNIT TYPE TH FLATE PLATI C PLATE ENERG AIR WINTER MANCE LAT LAT DB WB BID ALTERN MS, TERMINAL ST UNIT TYPE TH FLATE PLATI C PLATE ENERG AIR WINTER MANCE LAT LAT DB WB LAT LAT DB WB	E HEAT EXCHANG Y RECOVERY VEN B BATE EAT DB WB 89.9 °F 75.0 °F ATE #1) TRIP FOR EACH EC E HEAT EXCHANG Y RECOVERY VEN SL EAT EAT DB WB 89.9 °F 73.9 °F	OUT A ER 776 IPPLY AIR S LAT DB V 78.7 °F 67. OUT A CMOTOR, D CMOTOR, D CMOTOR	DOOR AIR SUI GCFM 7: ERFORMANC GUMMER PER TO AT ENE VB RECOV 4 °F 18,814 OUBLE WALL OUBLE WALL OUBLE WALL GOOR AIR SUI GCFM 84 ERFORMANC GUMMER PER TO AT ENE VB RECOV 7 °F 20,240	PPLY AIR 50 CFM E FORMAN TAL RGY VERED 4 Btu/h CONSTR PPLY AIR 40 CFM E FORMAN FORMAN CONSTR PDLY AIR 40 CFM E FORMAN CONSTR 0 CFM E	SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 2 2 2 3 3 5 2 5 2 5 2 5 2 2 3 3 100 Btu/h 2 3 3 100 Btu/h 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Supp         (IN       SUPP         FAN F       8         EXHA       PE         EAT       E         DB       V         75 °F       62         (IN       SUPP         ZONTAL INLET       S         (IN       SUPP         FAN F       8         CONTAL INLET       S         EAT       B         V       75 °F         B       V         75 °F       62	UPPLY AII UPPLY AII SU LY F LA W/ UST AIR S ERFORMAL AMB DI .5 °F CAND OUT UPPLY AII UST AIR S ERFORMAL AMB DI .5 °F UST AIR S ERFORMAL AMB DI .5 °F	R DATA PPLY ATTS H 39 W UMMER NCE T LAT B WB T CET DUCT R DATA PPLY ATTS H ATTS H ATTS H T UMMER NCE T UMMER NCE T UMMER NCE T UMMER NCE	P ECM- WIN SEN 75 CONNECT CONNECT
E	TAG ERV-HS-1 SUPPI EAT EA DB W 9.0 °F 6.1 ENERGY 1. PROVIDE TAG ERV-HS-1A	ADMINISTRAT	ERVICE TION VENTI PERFORM LAT WB RE 41.9 °F 4	ILATION RO IANCE ENERGY ECOVERED 5,375 Btu/h ILATOR S PERS FOR BO	DOFTOP ERV W STATI EXHAUST PERFOI EAT EAT DB WB 70 °F 51.4 °F CHEDULE ( DTH AIRSTREAN DOFTOP ERV W STATI EXHAUST PERFOI	UNIT TYPE TH FLATE PLATI C PLATE ENERG AIR WINTER MANCE LAT LAT DB WB BID ALTERN MS, TERMINAL ST UNIT TYPE TH FLATE PLATI C PLATE ENERG AIR WINTER MANCE	E HEAT EXCHANG Y RECOVERY VEN BATE EAT DB WB 89.9 °F 75.0 °F ATE #1) RIP FOR EACH EC E HEAT EXCHANG Y RECOVERY VEN	OUT A ER 776 TILATOR PI JPPLY AIR S LAT DB V 78.7 °F 67. MOTOR, D C MOTOR, D C MO	DOOR AIR SUI CFM 75 ERFORMANC SUMMER PER TO AT ENE VB RECOV 4 °F 18,814	PPLY AIR 50 CFM E FORMANG TAL RGY VERED 4 Btu/h CONSTR PPLY AIR 40 CFM E FORMANG	SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 2 2 2 3 2 2 3 2 5 2 5 5 5 8 1 2 2 5 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	IN SUPP FAN F BAT E BAT E DB V 75 °F 62	UPPLY AII LY F LA W/ UST AIR S ERFORMA AMB DI 5°F T AND OUT UPPLY AII UPPLY AII UST AIR S ERFORMA UST AIR S ERFORMA	R DATA PPLY ATTS H ATTS H UMMER NCE TLET DUCT R DATA PPLY AN ATTS H T5 W UMMER NCE	P ECM- WIN SEN 75 CONNECT
E	TAG ERV-HS-1 SUPPI EAT EA DB W 9.0 °F 6.1 1. PROVIDE	ADMINISTRAT	ERVICE TION VENTI PERFORM LAT WB RE 41.9 °F 4 RY VENTI	ILATION RO IANCE ENERGY ECOVERED 5,375 Btu/h	DOFTOP ERV W STATI EXHAUST PERFOI EAT EAT DB WB 70 °F 51.4 °F CHEDULE (	UNIT TYPE ITH FLATE PLATI C PLATE ENERG AIR WINTER MANCE LAT LAT DB WB BID ALTERN	E HEAT EXCHANG Y RECOVERY VEN SL EAT EAT DB WB 89.9 °F 75.0 °F ATE #1)	OUT A ER 776 TILATOR PI JPPLY AIR S LAT DB V 78.7 °F 67.	DOOR AIR SUI 5 CFM 75 ERFORMANC SUMMER PER TO AT ENE VB RECO 4 °F 18,814	PPLY AIR 50 CFM E FORMAN( TAL RGY VERED 4 Btu/h	SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 2 2 2 2 2 3 2 2 2 3 3 100 Btu/h 9,100 Btu/h 9,100 Btu/h	(IN SUPP FAN F FAN F EAT E DB V 75 °F 62	UPPLY AII LY F LA W/ UST AIR S ERFORMAL AMB DI .5 °F	R DATA PPLY ATTS H ATTS H UMMER NCE TLET LAT R DATA	P ECM -
	TAG ERV-HS-1 SUPPI EAT EJ DB W 9.0 °F 6.1	ADMINISTRAT	ERVICE TION VENTI PERFORM LAT WB RE 41.9 °F 4	ILATION RO IANCE ENERGY ECOVERED 5,375 Btu/h	DOFTOP ERV W STATI EXHAUST PERFOI EAT EAT DB WB 70 °F 51.4 °F	UNIT TYPE ITH FLATE PLATI C PLATE ENERG AIR WINTER MANCE LAT LAT DB WB	E HEAT EXCHANG Y RECOVERY VEN SL EAT EAT DB WB 89.9 °F 75.0 °F	OUT A ER 776 TILATOR PI IPPLY AIR S LAT DB V 78.7 °F 67.	DOOR AIR SUI CFM 75 ERFORMANC SUMMER PER SUMMER PER TO AT ENE VB RECO 4 °F 18,814	PPLY AIR 50 CFM E FORMAN FORMAN FORMAN I FORMAN I BLU/h	SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1 2 2 2 2 2 2 2 2 2 2 3 3 100 Btu/h	S - (IN SUPP FAN F 8 EAT E DB V 75 °F 62	UPPLY AII SU LY F LA W/ UST AIR S ERFORMAL EAT LA WB DI	R DATA PPLY ATTS H 39 W UMMER NCE ST LAT B WB	P ECM -
F	TAG ERV-HS-1	ADMINISTRA	ERVICE	ILATION RO	DOFTOP ERV W STATI EXHAUSED	UNIT TYPE ITH FLATE PLATI C PLATE ENERG AIR WINTER	E HEAT EXCHANG Y RECOVERY VEN	OUT A ER 776 TILATOR PI	DOOR AIR SUI CFM 75 ERFORMANC	PPLY AIR 50 CFM E	SUPPLY EXTERNAL STATIC PRESSURE ( WC) 1	(IN SUPP FAN F 8 EXHA	UPPLY AII SU LY F LA W/ UST AIR S	R DATA PPLY AN ATTS H 39 W	P ECM-
												S		R DATA	
G	1. PROVIDE 2. BASE BIT	<b>Y RECOVER</b> E WITH MOTOR D ONLY. IF ALTE	RY VENTI	PERS FOR BO ACCEPTED	CHEDULE ( DTH AIRSTREAN THEN ENERGY	BASE BID) //S, TERMINAL ST RECOVERY VEN	TRIP FOR EACH EC	) Motor, d' Rovided.	OUBLE WALL	CONSTR	UCTION, HORIZ	ONTAL INLET	r and out	LET DUCT	CONNECT
Н	SD-HS-14 SD-HS-15 TG-HS-1 TG-HS-2 TG-HS-3	SPIRAL DI SQUARE F FIXED LOI FIXED LOI FIXED LOI	UCT MOUN PLAQUE DII UVERS, 45° UVERS, 45° UVERS, 45°	TED, DOUBL FFUSER ² DEFLECTIO ² DEFLECTIO ² DEFLECTIO	e deflection n and 3/4 in. B n and 3/4 in. B n and 3/4 in. B	, 3/4" BLADE SPA LADE SPACING LADE SPACING LADE SPACING	CING SUPPLY REC	DISTER	12"X12" 10"x6" 6"x12"		20"x6" 5"ø 10"x6" 6"x12" 42"x20"	SPIRAL DUC SURFACE SURFACE SURFACE WALL		EXTRUDE S S S S	D ALUMINU TEEL TEEL TEEL TEEL
	ER-HS-8 RR-HS-10 BR-HS-11 RR-HS-12 SD-HS-11 SD-HS-12	FIXED LOI FIXED LOI FIXED LOI FIXED LOI FIXED LOI MODULAR MODULAR	UVERS, 45° UVERS, 45° UVERS, 45° UVERS, 45° CORE DIR R CORE DIR	² DEFLECTIO ² DEFLECTIO ² DEFLECTIO ² DEFLECTIO RECTIONAL D RECTIONAL D	N AND 3/4 IN. B N AND 3/4 IN. B N AND 3/4 IN. B N AND 3/4 IN. B N AND 3/4 IN. B NIFFUSER	LADE SPACING LADE SPACING LADE SPACING LADE SPACING			10"x6"		12"x4"       16"x16"       8"x8"       24"x8"       8"x8"       12"x12"	WALL SURFACE SURFACE SURFACE SURFACE SURFACE		S S S S ALU ALU	TEEL TEEL TEEL TEEL TEEL MINUM
J	1. PROVID Mark ER-HS-3 ER-HS-5 ER-HS-6	E WITH OPPOS FIXED LOI FIXED LOI	SED BLADE UVERS, 45° UVERS, 45°	DAMPER	DESCRIPTION/ N AND 3/4 IN. B N AND 3/4 IN. B N AND 3/4 IN. B	PATTERN LADE SPACING LADE SPACING			OVERALL SI	ZE CO	DUCT NNECTION SIZE 12"x12" 12"x12" 8"x8"	MOUNTING SURFACE SURFACE	3	MA1 S ⁻ ALU	ERIAL EEL MINUM
К	UV-HS-35 UV-HS-36 UV-HS-37 UV-HS-38 DIFFUSE	DAIKIN UA DAIKIN UA DAIKIN UA DAIKIN UA DAIKIN UA	VS9H07 VS9H07 VS9H07 VS9H10 ER AND	FLOOR MO FLOOR MO FLOOR MO FLOOR MO	OUNTED UNIT VI OUNTED UNIT VI OUNTED UNIT VI OUNTED UNIT VI	Entilator Entilator Entilator Entilator	BUSINESS ASST. SUP OFFICE SU DRIVER'S E	OFFICE T. OFFICE ITE ED CLASSRO	DOM 006	3.8 A 3.8 A 3.8 A 6.3 A	15.0 A 15.0 A 15.0 A 15.0 A	208 V 208 V 208 V 208 V 115 V	1 1 1 1	747 CFM 591 CFM 747 CFM 999 CFM	100 ( 75 C 125 ( 400 (
	UV-HS-28 UV-HS-29 UV-HS-30 UV-HS-31 UV-HS-32 UV-HS-33 UV-HS-34	DAIKIN UAY DAIKIN UAY DAIKIN UAY DAIKIN UAY DAIKIN UAY DAIKIN UAY	VS9H10 VS9H10 VS9H13 VS9H10 VS9H10 VS9H07 VS9H07	FLOOR MO FLOOR MO FLOOR MO FLOOR MO FLOOR MO FLOOR MO	UNTED UNIT VI DUNTED UNIT VI DUNTED UNIT VI DUNTED UNIT VI DUNTED UNIT VI DUNTED UNIT VI	ENTILATOR ENTILATOR ENTILATOR ENTILATOR ENTILATOR ENTILATOR ENTILATOR	MUSIC ROO MUSIC ROO TECH CLAS BAND ROO BAND ROO PRINCIPAL OFFICE SU	DM 105 DM 105 SSROOM 108 M 107 M 107 ITE	3	3.8 A 3.8 A 3.8 A 3.8 A 3.8 A 3.8 A 3.8 A 3.8 A	15.0 A 15.0 A 15.0 A 15.0 A 15.0 A 15.0 A 15.0 A	208 V 208 V 208 V 208 V 208 V 208 V 208 V 208 V	1 1 1 1 1 1 1 1 1	1,014 CFM 1,014 CFM 1,256 CFM 1,014 CFM 1,014 CFM 591 CFM 747 CFM	375 ( 375 ( 525 ( 450 ( 450 ( 50 C 75 (
L	UV-HS-22 UV-HS-23 UV-HS-24 UV-HS-25 UV-HS-26 UV-HS-27	DAIKIN UA DAIKIN UA DAIKIN UA DAIKIN UA DAIKIN UA DAIKIN UA	VS9H10 VS9H13 VS9H10 VS9H13 VS9H13 VS9H13	FLOOR MO FLOOR MO FLOOR MO FLOOR MO FLOOR MO FLOOR MO	UNTED UNIT VI DUNTED UNIT VI DUNTED UNIT VI DUNTED UNIT VI DUNTED UNIT VI DUNTED UNIT VI	ENTILATOR ENTILATOR ENTILATOR ENTILATOR ENTILATOR ENTILATOR	CLASSROC CLASSROC PE DEPT O CLASSROC CLASSROC CLASSROC	DM 225 DM 224 FFICE 101 DM 103 DM 102 DM 104		3.8 A 3.8 A 3.8 A 3.8 A 3.8 A 3.8 A	15.0 A 15.0 A 15.0 A 15.0 A 15.0 A 15.0 A 15.0 A	208 V 208 V 208 V 208 V 208 V 208 V 208 V	1 1 1 1 1 1	1,014 CFM 1,256 CFM 1,014 CFM 1,256 CFM 1,256 CFM 1,256 CFM	425 ( 400 ( 150 ( 475 ( 450 ( 450 (
	UV-HS-16 UV-HS-17 UV-HS-18 UV-HS-19 UV-HS-20 UV-HS-21	DAIKIN UA DAIKIN UA DAIKIN UA DAIKIN UA DAIKIN UA	VS9H13 VS9H13 VS9H13 VS9H13 VS9H13 VS9H10 VS9H10	FLOOR MO FLOOR MO FLOOR MO FLOOR MO FLOOR MO	UNTED UNIT VI UNTED UNIT VI UNTED UNIT VI UNTED UNIT VI UNTED UNIT VI	ENTILATOR ENTILATOR ENTILATOR ENTILATOR ENTILATOR ENTILATOR	TECH LAB 2 CLASSROC CLASSROC CLASSROC CLASSROC CLASSROC	219 DM 218 DM 221 DM 220 DM 223 D. CLASSEC	DOM 222	3.8 A 3.8 A 3.8 A 3.8 A 3.8 A 3.8 A 3.8 A	15.0 A 15.0 A 15.0 A 15.0 A 15.0 A 15.0 A 15.0 A	208 V 208 V 208 V 208 V 208 V 208 V 208 V	1 1 1 1 1 1 1	1,256 CFW 1,256 CFW 1,256 CFW 1,256 CFW 1,256 CFW 1,014 CFW 1,014 CFW	300 ( 375 ( 500 ( 375 ( 450 ( 325 (
M	UV-HS-10 UV-HS-11 UV-HS-12 UV-HS-13 UV-HS-14	DAIKIN UAY DAIKIN UAY DAIKIN UAY DAIKIN UAY DAIKIN UAY	VS9H13 VS9H10 VS9H10 VS9H13 VS9H13 VS9H13	FLOOR MO FLOOR MO FLOOR MO FLOOR MO FLOOR MO	UNTED UNIT VI UNTED UNIT VI UNTED UNIT VI UNTED UNIT VI UNTED UNIT VI	ENTILATOR ENTILATOR ENTILATOR ENTILATOR ENTILATOR ENTILATOR	CLASSROC CLASSROC SCIENCE C CLASSROC CLASSROC	DM 209 DM 210 ELASSROOM DM 214 DM 216 210	1212	3.8 A 3.8 A 3.8 A 3.8 A 3.8 A 3.8 A	15.0 A 15.0 A 15.0 A 15.0 A 15.0 A 15.0 A	208 V 208 V 208 V 208 V 208 V 208 V 208 V	1 1 1 1 1 1 1	1,256 CFM 1,014 CFM 1,014 CFM 1,256 CFM 1,256 CFM 1,256 CFM	475 ( 450 ( 325 ( 425 ( 450 ( 450 ( 425 ( 300 (
N	UV-HS-3 UV-HS-4 UV-HS-5 UV-HS-6 UV-HS-7 UV-HS-8	DAIKIN UAY DAIKIN UAY DAIKIN UAY DAIKIN UAY DAIKIN UAY	VS9H13 VS9H10 VS9H13 VS9H10 VS9H13 VS9H10	FLOOR MO FLOOR MO FLOOR MO FLOOR MO FLOOR MO	UNTED UNIT VI UNTED UNIT VI UNTED UNIT VI UNTED UNIT VI UNTED UNIT VI	ENTILATOR ENTILATOR ENTILATOR ENTILATOR ENTILATOR ENTILATOR	CLASSROC CLASSROC CLASSROC CLASSROC CLASSROC CLASSROC	0M 202 0M 203 0M 204 0M 205 0M 205 0M 206 0M 207 1 ASSEQUENT	1208	3.8 A 3.8 A 3.8 A 3.8 A 3.8 A 3.8 A 3.8 A	15.0 A 15.0 A 15.0 A 15.0 A 15.0 A 15.0 A	208 V 208 V 208 V 208 V 208 V 208 V 208 V	1 1 1 1 1 1 1	1,256 CFW 1,014 CFW 1,256 CFW 1,014 CFW 1,256 CFW 1,014 CFW	450 ( 450 ( 450 ( 450 ( 450 ( 450 ( 450 ( 450 (
	Mark UV-HS-1 UV-HS-2	BASIS OI MFG. AN DAIKIN UA DAIKIN UA	F DESIGN D MODEL VS9H13 VS9H13	FLOOR MO	TYP OUNTED UNIT VI OUNTED UNIT VI	E ENTILATOR ENTILATOR	CLASSROC CLASSROC	LOCATION 0M 200 0M 201		MCA 3.8 A 3.8 A	MAX FUSE SIZE 15.0 A 15.0 A	VOLTS 208 V 208 V	<b>PHASE</b> 1 1	SUPPLY AIRFLOW 1,256 CFN 1,256 CFN	OUTS AIRFI 450 ( 450 (
Ρ	1. PROVI 2. PROVI 3. PROVI 4. BASE E 5. PROVI	DE WITH ELE DE EACH UN DE EACH UN BID ONLY. IF DE WITH ELE	ECTRICAL IIT WITH I IIT WITH ⁻ BID ALTE ECTRICAL	LY COMM REAR FULI TOP OA INI ERNATE #1 LY COMM	UTATED FAN _ ADAPTER E LET DUCT CC IS ACCEPTE UTATED FAN	I MOTOR. OU BACK THAT ING DLLAR (NO RE ED THEN UNIT I MOTOR. OU	TSIDE AIRFLOW CLUDES PIPING AR OA INTAKE VENTILATOR S TSIDE AIRFLOW	V RATES L G TUNNEL OPENING HALL NO V RATES L	ISTED IS N AND REAR ). PROVIDE T BE PROV ISTED IS N	ION-ECC COA INT EEACH ( IDED. ION-ECC	DNOMIZER M AKE. THE ME JV WITH 1" T DNOMIZER M	ODE/MININ ECHANICAL HICK MER IODE/MININ	/UM OCC . CONTR/ V-13 FILT /UM OCC	CUPIED C ACTOR S TERS. CUPIED C	)A RATE. HALL PR )A RATE.

13	12	11	10	9	8	7	6	5	4	3	2	1
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# . THE TESTING AND BALANCING AGENCY SHALL BALANCE THE OA THROUGH THE UV IN NON-ECONOMIZER MODE TO THE SCHEDULED VALUE. DX COIL SHALL BE CONNECTED TO VARIABLE REFRIGERANT VOLUME HEAT PUMP SYSTEM. ROVIDE ADDITIONAL GASKETING TO ENSURE A PROPER SEAL OF THE OA PLENUM TO THE INTERIOR OF THE PERIMETER WALL. PROVIDE EACH UV WITH 1" THICK MERV-13 FILTERS.

THE TESTING AND BALANCING AGENCY SHALL BALANCE THE OA THROUGH THE UV IN NON-ECONOMIZER MODE TO THE SCHEDULED VALUE. DX COIL SHALL BE CONNECTED TO DEDICATED ONE-TO-ONE CONDENSING UNIT.

	SUPPLY FA	N DATA				D	X COOLING C	OIL						HOT WATE	R HEATING COIL									
ISIDE FLOW	FAN TYPE	Supply External Static Pressure	FAN SPEED	HP	CAPACITY TOTAL	CAPACITY SENS	EAT DB	EAT WB	LAT DB	LAT WB	CAPACITY	TEMPERATURE EAT	TEMPERATURE LAT	COIL ROWS	HEATING COIL VOLUME (GALLONS)	EWT	LWT	GPM	PRESSURE DROP (FEET)	LENGTH	WIDTH	HEIGHT	WEIGHT	REMARKS
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	22,275 Btu/h	81.0 °F	67.5 °F	57.5 °F	57.0 °F	91,814 Btu/h	44.0 °F	111.4 °F	2	0.69 gal	180.0 °F	139.2 °F	4.5	2.91	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	22,275 Btu/h	81.0 °F	67.5 °F	57.5 °F	57.0 °F	91,814 Btu/h	44.0 °F	111.4 °F	2	0.69 gal	180.0 °F	139.2 °F	4.5	3.79	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	22,275 Btu/h	81.0 °F	67.5 °F	57.5 °F	57.0 °F	91,814 Btu/h	44.0 °F	111.4 °F	2	0.69 gal	180.0 °F	139.2 °F	4.5	3.79	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	16,632 Btu/h	82.3 °F	68.5 °F	58.6 °F	58.1 °F	79,441 Btu/h	37.6 °F	109.8 °F	2	0.57 gal	180.0 °F	139.3 °F	3.9	3.79	74"	21 7/8"	30 1/8"	445 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	22,275 Btu/h	81.0 °F	67.5 °F	57.5 °F	57.0 °F	91,814 Btu/h	44.0 °F	111.4 °F	2	0.69 gal	180.0 °F	139.2 °F	4.5	3.79	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	16,632 Btu/h	82.3 °F	68.5 °F	58.6 °F	58.1 °F	79,441 Btu/h	37.6 °F	109.8 °F	2	0.57 gal	180.0 °F	139.3 °F	3.9	3.79	74"	21 7/8"	30 1/8"	445 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	22,275 Btu/h	81.0 °F	67.5 °F	57.5 °F	57.0 °F	91,814 Btu/h	44.0 °F	111.4 °F	2	0.69 gal	180.0 °F	139.2 °F	4.5	3.79	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	16,632 Btu/h	82.3 °F	68.5 °F	58.6 °F	58.1 °F	79,441 Btu/h	37.6 °F	109.8 °F	2	0.57 gal	180.0 °F	139.3 °F	3.9	3.79	74"	21 7/8"	30 1/8"	445 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	22,005 Btu/h	81.3 °F	67.7 °F	57.7 °F	57.2 °F	93,354 Btu/h	42.6 °F	111.1 °F	2	0.69 gal	180.0 °F	139.4 °F	4.6	3.45	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	16,632 Btu/h	82.3 °F	68.5 °F	58.6 °F	58.1 °F	79,441 Btu/h	37.6 °F	109.8 °F	2	0.57 gal	180.0 °F	139.3 °F	3.9	3.79	74"	21 7/8"	30 1/8"	445 lb	1, 3
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	18,468 Btu/h	80.5 °F	67.1 °F	56.9 °F	56.4 °F	69,827 Btu/h	46.6 °F	110.1 °F	2	0.57 gal	180.0 °F	138.2 °F	3.4	2.94	74"	21 7/8"	30 1/8"	445 lb	1, 3
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	22,680 Btu/h	80.7 °F	67.3 °F	57.2 °F	56.6 °F	89,637 Btu/h	45.5 °F	111.3 °F	2	0.69 gal	180.0 °F	138.3 °F	4.3	3.61	86"	21 7/8"	30 1/8"	525 lb	1, 3
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	22,275 Btu/h	81.0 °F	67.5 °F	57.5 °F	57.0 °F	91,814 Btu/h	37.6 °F	111.5 °F	2	0.69 gal	180.0 °F	141.3 °F	4.5	3.79	86"	21 7/8"	30 1/8"	525 lb	1, 3
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	22,680 Btu/h	80.7 °F	67.3 °F	57.2 °F	56.6 °F	89,637 Btu/h	45.5 °F	111.3 °F	2	0.69 gal	180.0 °F	138.3 °F	4.3	3.61	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	24,570 Btu/h	79.3 °F	66.2 °F	55.8 °F	55.3 °F	82,030 Btu/h	52.7 °F	112.9 °F	2	0.69 gal	180.0 °F	137.9 °F	3.9	2.78	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	24,570 Btu/h	79.3 °F	66.2 °F	55.8 °F	55.3 °F	82,030 Btu/h	52.7 °F	112.9 °F	2	0.69 gal	180.0 °F	137.9 °F	3.9	2.78	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	23,490 Btu/h	80.2 °F	66.8 °F	56.6 °F	56.6 °F	86,565 Btu/h	48.4 °F	111.9 °F	2	0.69 gal	180.0 °F	137.8 °F	4.1	3.27	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	15,876 Btu/h	83.0 °F	69.0 °F	59.3 °F	58.8 °F	94,305 Btu/h	41.2 °F	110.4 °F	2	0.69 gal	180.0 °F	139.0 °F	4.6	3.59	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	23,490 Btu/h	80.2 °F	66.8 °F	56.1 °F	56.1 °F	86,565 Btu/h	48.4 °F	111.9 °F	2	0.69 gal	180.0 °F	137.8 °F	4.1	3.27	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	16,632 Btu/h	82.3 °F	68.5 °F	58.6 °F	58.1 °F	79,441 Btu/h	37.6 °F	109.8 °F	2	0.57 gal	180.0 °F	139.3 °F	3.9	3.79	74"	21 7/8"	30 1/8"	445 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	18,468 Btu/h	80.5 °F	67.1 °F	56.9 °F	56.4 °F	69,827 Btu/h	46.6 °F	110.1 °F	2	0.57 gal	180.0 °F	138.9 °F	3.4	2.94	74"	21 7/8"	30 1/8"	445 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	16,956 Btu/h	81.9 °F	68.2 °F	58.3 °F	57.8 °F	77,468 Btu/h	39.4 °F	112.0 °F	2	0.57 gal	180.0 °F	139.2 °F	3.8	3.61	74"	21 7/8"	30 1/8"	445 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	23,085 Btu/h	80.4 °F	67.0 °F	56.9 °F	56.4 °F	88,637 Btu/h	47.0 °F	112.0 °F	2	0.69 gal	180.0 °F	138.8 °F	4.3	3.43	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	21,060 Btu/h	78.1 °F	65.1 °F	54.5 °F	54.0 °F	58,240 Btu/h	59.2 °F	112.1 °F	2	0.57 gal	180.0 °F	138.4 °F	2.8	1.93	74"	21 7/8"	30 1/4"	445 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	22,005 Btu/h	81.3 °F	67.7 °F	57.7 °F	57.2 °F	93,354 Btu/h	42.6 °F	111.1 °F	2	0.69 gal	180.0 °F	139.4 °F	4.6	3.45	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	22,275 Btu/h	81.0 °F	67.5 °F	57.5 °F	57.0 °F	91,814 Btu/h	44.0 °F	111.4 °F	2	0.69 gal	180.0 °F	139.2 °F	4.5	3.79	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	22,275 Btu/h	81.0 °F	67.5 °F	57.5 °F	57.0 °F	91,814 Btu/h	44.0 °F	111.4 °F	2	0.69 gal	180.0 °F	139.2 °F	4.5	3.79	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	17,712 Btu/h	81.2 °F	67.7 °F	57.6 °F	57.1 °F	73,598 Btu/h	43.0 °F	109.9 °F	2	0.57 gal	180.0 °F	139.1 °F	3.6	3.27	74"	21 7/8"	30 1/8"	445 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	17,712 Btu/h	81.2 °F	67.7 °F	57.6 °F	57.1 °F	73,598 Btu/h	43.0 °F	109.9 °F	2	0.57 gal	180.0 °F	139.1 °F	3.6	3.27	74"	21 7/8"	30 1/8"	445 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	41,969 Btu/h	21,195 Btu/h	81.8 °F	68.2 °F	58.3 °F	57.8 °F	95,863 Btu/h	39.8 °F	110.1 °F	2	0.69 gal	180.0 °F	139.2 °F	4.7	4.09	86"	21 7/8"	30 1/8"	525 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	16,632 Btu/h	82.3 °F	68.5 °F	58.6 °F	58.1 °F	79,441 Btu/h	37.6 °F	109.8 °F	2	0.57 gal	180.0 °F	139.3 °F	3.9	3.79	74"	21 7/8"	30 1/8"	445 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,780 Btu/h	16,632 Btu/h	82.3 °F	68.5 °F	58.6 °F	58.1 °F	79,441 Btu/h	37.6 °F	109.8 °F	2	0.57 gal	180.0 °F	139.3 °F	3.9	3.79	74"	21 7/8"	30 1/8"	445 lb	1, 2
CFM	ECM	0.00 in-wg	LOW	0.333	26,615 Btu/h	15,797 Btu/h	77.8 °F	63.3 °F	53.2 °F	45.9 °F	37,354 Btu/h	60.6 °F	118.7 °F	2	0.45 gal	180.0 °F	142.7 °F	2.0	1.21	62"	21 7/8"	30 1/8"	370 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	26,615 Btu/h	19,591 Btu/h	81.6 °F	62.8 °F	57.5 °F	51.1 °F	49,516 Btu/h	41.2 °F	102.3 °F	2	0.45 gal	180.0 °F	130.5 °F	2.0	1.21	62"	21 7/8"	30 1/8"	370 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	26,615 Btu/h	19,591 Btu/h	81.6 °F	62.8 °F	57.5 °F	51.1 °F	49,516 Btu/h	41.2 °F	102.3 °F	2	0.45 gal	180.0 °F	130.5 °F	2.0	1.21	62"	21 7/8"	30 1/8"	370 lb	1, 2, 4
CFM	ECM	0.00 in-wg	LOW	0.333	26,615 Btu/h	15,797 Btu/h	77.8 °F	63.3 °F	53.2 °F	45.9 °F	37,354 Btu/h	60.6 °F	118.7 °F	2	0.45 gal	180.0 °F	142.7 °F	2.0	1.21	62"	21 7/8"	30 1/8"	370 lb	1, 2, 4
CFM	ECM	0.00 in-wg	HIGH	0.333	26,615 Btu/h	19,591 Btu/h	81.6 °F	62.8 °F	57.5 °F	51.1 °F	49,516 Btu/h	41.2 °F	102.3 °F	2	0.45 gal	180.0 °F	130.5 °F	2.0	1.21	62"	21 7/8"	30 1/8"	370 lb	1, 2
CFM	ECM	0.00 in-wg	HIGH	0.333	33,166 Btu/h	24,875 Btu/h	80.0 °F	67.0 °F	57.1 °F	56.3 °F	52,079 Btu/h	42.0 °F	90.0 °F	1	0.57 gal	180.0 °F	136.6 °F	2.4	0.91	74"	21 7/8"	30 1/8"	445 lb	2, 5

	BASIS OF DESIGN MANUFACTURER AND MODEL	REMARKS
	PRICE 530	
	PRICE 630	
	PRICE 530	
	PRICE AMCD	
	PRICE AMCD	
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	PRICE SPD	
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	PRICE 530	

HEATING	COIL	SCHEDULE	
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IONS, AND CONTROL TRANSFORMER	WITH ISOLATION RELAY	TO ALLOW FULL C	ONTROL OF E	ERV BY DDC \$	System. Mo	DUNT ERV ON 14" HIGH ROOF CURB.															
	- i		EVU						CONVECTOR	SCHEDULE											
		EXHAUST AIR EXTERNAL	EXH					-	1.CAPACITY BAS 2. PROVIDE CON	ED ON EWT = 180 DEG F, 68 DEG E VECTOR HEATING ELEMENTS WIT	INTERING AIR	TEMP IN-WALL CONVECT	OR UNIT CAVITY	CONVECTOR CAVIT	Y AND FRONT, R	EMOVABLE LOU	/ERED INLET/OUTLET F	PANEL TO BE REUS	ED.		
	RETURN EXHAUST	STATIC PRESSURE (IN	EXHAUST FAN	EXHAUST					Mark	ТҮРЕ	CAPACITY	FLUID TYPE	DEPTH	LENGTH	HEIGHT	AWT	WTD	FLUID FLOW	WATER PRESSURE DRO	BASIS OF DESIGN MFG. AN MODEL	ND REMARKS
		WC)	WATTS	FANFLA	HP		VOLTS PHASE MCA MOP	P WEIGHT	CV-HS-12 FU	JLLY EXPOSED WALL MOUNTED	1,913 Btu/h	WATER	4"	20"	14"	175 °F	10 °F	0.383 GPM	0.106 in-wg	STERLING SW-A	1
DIRECT DRIVE MOTORIZED IMPELLER	R 750 CFM 750 CFM	0.85	293	8	1 ECM	- DIRECT DRIVE MOTORIZED IMPELLER	R 120 V 1 18.0 A 20	548 lb	CV-HS-14 FL	JLLY EXPOSED WALL MOUNTED	1,913 Btu/h	WATER	4"	20"	14"	175 °F	10 °F	0.383 GPM	0.106 in-wg	STERLING SW-A	1
ENERGY RECOVERY EFFECT	IVENESS	OA FILTE	ER	RA FIL	TER	BASIS OF DESIGN MANUFACTURER	AND MODEL NUMBER		CV-HS-15 FU	LLY RECESSED WALL MOUNTED	6,876 Btu/h	WATER	4"	56"	32"	175 °F	10 °F	1.375 GPM	1.206 in-wg	STERLING	1, 2
									CV-HS-16 FU	LLY RECESSED WALL MOUNTED	5,852 Btu/h	WATER	4"	56"	32"	170 °F	20 °F	0.585 GPM	0.235 in-wg	STERLING	1, 2
									CV-HS-17 FU	LLY RECESSED WALL MOUNTED	5,852 Btu/h	WATER	4"	56"	32"	170 °F	20 °F	0.585 GPM	0.235 in-wg	STERLING	1, 2
TER TOTAL WINTER SUM					FII TFR				CV-HS-18 FU	LLY RECESSED WALL MOUNTED	6,876 Btu/h	WATER	4"	56"	32"	175 °F	10 °F	1.375 GPM	1.206 in-wg	STERLING	1, 2
SIBLE EFFECTIVENESS SENSI	BLE EFFECTIVENESS	RATING	DEPTH	RATING	DEPTH				CV-HS-19 FU	LLY RECESSED WALL MOUNTED	6,876 Btu/h	WATER	4"	56"	32"	175 °F	10 °F	1.375 GPM	1.206 in-wg	STERLING	1, 2
.4% 73.2% 75.4	% 59.5%	MERV-13	2"	MERV-8	2"	RENEWAIRE HE1.5X RTH			CV-HS-25 FU	LLY RECESSED WALL MOUNTED	6,876 Btu/h	WATER	4"	56"	32"	175 °F	10 °F	1.375 GPM	1.206 in-wg	STERLING	1, 2
		•				•			CV-HS-26 FU	LLY RECESSED WALL MOUNTED	6,876 Btu/h	WATER	4"	56"	32"	175 °F	10 °F	1.375 GPM	1.206 in-wg	STERLING	1, 2
									CV-HS-27 FU	LLY RECESSED WALL MOUNTED	5,852 Btu/h	WATER	4"	56"	32"	170 °F	20 °F	0.585 GPM	0.235 in-wg	STERLING	1, 2
									CV-HS-28 FU	LLY RECESSED WALL MOUNTED	5,562 Btu/h	WATER	4"	32"	32"	175 °F	10 °F	1.112 GPM	0.357 in-wg	STERLING	1, 2
									CV-HS-37 FU	LLY RECESSED WALL MOUNTED	5,562 Btu/h	WATER	4"	32"	32"	175 °F	10 °F	1.112 GPM	0.357 in-wg	STERLING	1, 2
									CV-HS-38 FU	JLLY EXPOSED WALL MOUNTED	6,459 Btu/h	WATER	6"	36"	32"	170 °F	20 °F	0.646 GPM	0.128 in-wg	STERLING SW-A	1
IONS, AND CONTROL TRANSFORMER	WITH ISOLATION RELAY	TO ALLOW FULL C	CONTROL OF E	ERV BY DDC S	SYSTEM. MO	DUNT ERV ON 14" HIGH ROOF CURB.	- 1		CV-HS-39	FREE STANDING ENCLOSURE	6,471 Btu/h	WATER	6"	36"	24"	175 °F	10 °F	1.294 GPM	0.499 in-wg	STERLING SF-A	1
			EXH	IAUST AIR DA			ELECTRICAL DATA	_	CV-HS-40 FU	JLLY EXPOSED WALL MOUNTED	2,665 Btu/h	WATER	4"	24"	20"	175 °F	10 °F	0.533 GPM	0.189 in-wg	STERLING SW-A	1
FAN TYPE	RETURN EXHAUST AIR AIR	EXHAUST AIR EXTERNAL STATIC PRESSURE (IN WC)	EXHAUST FAN WATTS	EXHAUST FAN FLA	HP	FAN TYPE	VOLTS PHASE MCA MOP	P WEIGHT	CABINE	T UNIT HEATER SCHEDUL	E					·					
DIRECT DRIVE MOTORIZED IMPELLER	R 840 CFM 840 CFM	0.85	327	8	1 ECM	- DIRECT DRIVE MOTORIZED IMPELLEF	R 120 V 1 18.0 A 20	548 lb													
ENERGY RECOVERY EFFECT	IVENESS	OA FILTE	ER	RA FIL	TER	BASIS OF DESIGN MANUFACTURER	AND MODEL NUMBER					<u> </u>									
									Mark	LOCATION	CFM	FAN MOTORS RPM VOLTS PH		Y (MBH) TEMP EWT	TEMP LWT	WPD (FT) GPM		TYPE	Ν	BASIS OF DESIGN IANUFACTURER AND MODEL	REMARKS
									CUH-HS-4	FIRST FLOOR CORRIDOR	422	1,050 115 1	1/10 23.	2 180 °F	160 °F	0.45 2.32	FLOOF	R STANDING SLOPE	D ST	ERLING FS-1025-04	1, 2
				FILTER	FILTER				CUH-HS-5	BOYS' TOILET	412 1	1,050 115 1	1/10 36.	.0 180 °F	160 °F	1.32 3.60	FULLY RECESSED \	VITH BOTTOM INLE	T AND OUTLET ST	ERLING RC-1200-04	1, 2
SIBLE EFFECTIVENESS SENSI									CUH-HS-6	GIRLS' TOILET	412 <i>1</i>	1,050 115 1	1/10 36.	.0 180 °F	160 °F	1.32 3.60	FULLY RECESSED \	VITH BOTTOM INLE	T AND OUTLET ST	ERLING RC-1200-04	1, 2
.9% /1.0% /3.9	1% 57.2%	IVIERV-13	Z	IVIERV-0	Z	KENEWAIKE HE1.5X KIH			CUH-HS-7	SECOND FLOOR CORRIDOR	430	1,050 115 1	1/15 23.	2 180 °F	157 °F	0.41 2.50	FULLY RECESSED \	VITH BOTTOM INLE	T AND OUTLET ST	ERLING RC-1200-04	1
									CUH-HS-8	FIRST FLOOR CORRIDOR	430 2	1,050 115 1	1/15 23.	2 180 °F	157 °F	0.41 2.50	FULLY RECESSED \	VITH BOTTOM INLE	T AND OUTLET ST	ERLING RC-1200-04	1

	E	NCLOSUR	E / MOUNT	ING			
rerial	TYPE	HEIGHT	SIZE DEPTH	Bottom Mounting Height Aff	BASIS OF DESIGN MFG. AND ENCLOSURE MODEL	ELEMENT MODEL	REMARKS
/ ALUMINUM FINS	SLOPE TOP	24"	5 5/16"	4"	STERLING VERSALINE JVB-T	C43	2,3,4,5
/ ALUMINUM FINS	FLAT TOP	8"	3 9/16"	25"	STERLING VERSALINE JVK-T8	C35	1,2,3,4
/ ALUMINUM FINS	SLOPE TOP	20"	5 5/16"	4"	STERLING VERSALINE JVB-S20	C43	1,2,3,4
/ ALUMINUM FINS	SLOPE TOP	14"	5 5/16"	4"	STERLING VERSALINE JVB-S14	C45	1,2,3,4
/ ALUMINUM FINS	SLOPE TOP	20"	5 5/16"	4"	STERLING VERSALINE JVB-S20	C45	1,2,3,4
/ ALUMINUM FINS	SLOPE TOP	24"	5 5/16"	4"	STERLING VERSALINE JVB-S24	C45	1,2,3,4
/ ALUMINUM FINS	SLOPE TOP	24"	5 5/16"	4"	STERLING VERSALINE JVB-S24	C45	2,3,4,6
/ ALUMINUM FINS	SLOPE TOP	24"	5 5/16"	4"	STERLING VERSALINE JVB-S24	C45	2.3.4.5

# AIR COOLED CONDENSING UNIT SCHEDULE

1. RATED AMBIENT COOLING CONDITIONS: 90 F DB/67 F WB 2. COOLING OPERATION RANGE: 55-125F DB

	RAIED			ELEU	
Mark	COOLING CAPACITY	VOLTS	PH	MCA	
ACCU-HS-1	34,200 Btu/h	208	1	18.6	
		-			

ALLAMPAIL PISE         SUPPER DP         21         SUPPER DP         22         SUPPE DP         24			8" 39/1	6"	25"	STERLING VER		<b>V 1 1 1</b>																		
ALUMENTARYS         SOPE TOP         1/T         SOPE TOP		S SLOPE TOP	20" 5 5/1	6"	4"	STERLING VER	ALINE JVB-S20	C43	1,2,3,4	Ī		RATED		ELECTRICAL DATA			HOLDING							ESIGN MEG		
ALUMPANIE/NES         SOPE TOP         21'         5/5/6         4'         STERLING VERSAULIE DAS 20         C/45         1/2.4         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2	LUMINUM FINS	S SLOPE TOP	14" 5 5/1	6"	4"	STERLING VER	ALINE JVB-S14	C45	1,2,3,4		Mark	COOLING	VOLTS PH MC	A MOP	RLA	REFRIGERANT	REFRIGERANT	CHARGE (OZ/FT)	COMPRESSOR STAGE	EER	SEER	WEIGHT (LE	S) AND M	MODEL	(HxWxD)	REMA
ALLUMALININS         SLOPE TOP         24*         5518         4*         STERLING VERSALINE IN-S24         C.45         23.45           ALLUMALININS         SLOPE TOP         24*         5518         4*         STERLING VERSALINE IN-S24         C.45         23.45           ALLUMALININS         SLOPE TOP         24*         5518         4*         STERLING VERSALINE IN-S24         C.45         23.45           Improvement         SLOPE TOP         24*         5518         4*         STERLING VERSALINE IN-S24         C.45         23.45           Improvement         SLOPE TOP         24*         5518         4*         STERLING VERSALINE IN-S24         C.45         23.45           Improvement         SLOPE TOP         24*         5518         4*         STERLING VERSALINE IN-S24         C.45         23.45           Improvement         SLOPE TOP         24*         SSIRE TUMP VERSALINE IN-S24         C.45         23.45           Improvement         Improvement         SLOPE TOP         24*         SSIRE TUMP VERSALINE IN-S24         C.45         23.45           Improvement         Improvement         Improvement         Improvement         Improvement         Improvement         Improvement         Improvement	LUMINUM FINS	S SLOPE TOP	20" 5 5/1	6"	4"	STERLING VER	ALINE JVB-S20	C45	1,2,3,4	+	ACCU-HS-1	34 200 Btu/b	208 1 18	6 30	14 1	R410A	71	0.6	SINGLE STAGE	11.2	13.4	169		X3SEN3610	32 5"x29"x29"	1
ALLUMENUM FINS       SLOPE TOP       24'       Strip       4'       STERLING VERSALINE JNB-S24       C45       23.45         ALLUMENUM FINS       SLOPE TOP       24'       55/16'       4'       STERLING VERSALINE JNB-S24       C45       23.45         ILLIMINUM FINS       SLOPE TOP       24'       55/16'       4'       STERLING VERSALINE JNB-S24       C45       23.45         ILLIMINUM FINS       SLOPE TOP       24'       55/16'       4'       STERLING VERSALINE JNB-S24       C45       23.45         ILLIMINUM FINS       SLOPE TOP       24'       55/16'       4'       STERLING VERSALINE JNB-S24       C45       23.45         INFORME ALL COMPONENTS TO PAR THE BLOWER COLL WITH SCHEDULED DX COOLING COLL, BUT COLL SHALL BE UN CONNECTED TO CONDENSING UNIT AT THIS TIME.       HEATING COLL DATA       HEATING COLL DATA       FLEERRAL       FLEERRAL       FLEERRAL       FLEERRAL       FLEERRAL       SEC       SEC       SEC       SEC       SEC       SEC       SEC       OPERATING       WEIGHT       WEIGHT       WEIGHT       WEIGHT       FLEERRAL       FLEERRAL       FLEERRAL       FLEERRAL       SEC	LUMINUM FINS	S SLOPE TOP	24" 5 5/1	6"	4"	STERLING VER	ALINE JVB-S24	C45	1,2,3,4	Ľ	A000-110-1	04,200 Bld/II	200 1 10.	0 00	1.1	IN TUR	11	0.0	OINGLE OTAGE	11.2	10.4	103	DAIRINDA	NOOENOO TO	52.5 22 22	1
ALUMINUMENTS SLOPE TOP 24° 5516° 4° STERLING VERSALINE JVB-S24 C45 2.3,4.5 I PROVIDE ALUMINUMENTS SLOPE TOP 24° 5516° 4° STERLING VERSALINE JVB-S24 C45 2.3,4.5 I PROVIDE ALU COMPONENTS TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENTS TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENTS TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENTS TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENTS TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENTS TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENTS TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENTS TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENTS TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENTS TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENTS TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENTS TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENT TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENT TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENT TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENT TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENT TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENT TO PAIR THE BLOWEC COLUMITATING SAPANSON VALVE KIT AND ZONE CONTROLLER KIT. I PROVIDE ALU COMPONENT TO PAIR THE BLOWEC COLUMITATIN		S SLOPE TOP	24" 5 5/1	6"	4"	STERLING VER	ALINE JVB-S24	C45	2,3,4,6																	
PROVIDE BLOWER COLL WITH SCHEDULED DX COOLING COLL BUT COLL SHALL BE UNCONNECTED TO COMDENSION UNIT AT THIS TIME     PROVIDE ALL COMPONENTS TO PART THE BLOWER COLL WITH THE ASSOCIATED VRY SYSTEM, INCLUDING EXPANSION VALVE KIT AND ZONE CONTROLLER KIT.     AND COLL REFRIGERANT R410A	LUMINUM FINS	S SLOPE TOP	24" 5 5/1	6"	4"	STERLING VER	ALINE JVB-S24	C45	2,3,4,5																	
AANSION COOLING COLL- REFRIGERANT R10A       ENTERING AIR TEMPERATURE       ENTERING AIR TEMPERATURE       ELEAVING AIR TEMPERATURE       ELEAVING AIR TEMPERATURE       LEAVING AIR TEMPERATURE       ELAVING AIR TEMPERATURE       TEAVING AIR TEMPERATURE       TEAVING																										
Last       Entring and rows       Entring and (bb)       Entring and (bb) <thentring and<br="">(bb)       Entring and</thentring>	PROVIDE BLC PROVIDE ALL	OWER COIL WITH S COMPONENTS TO	SCHEDULED DX CO D PAIR THE BLOWI	DOLING COIL ER COIL WITH	oil, but coil si /ith the assoc	HALL BE UN-CON CIATED VRV SYS	NECTED TO CONDEN EM, INCLUDING EXP	ISING UNIT AT T ANSION VALVE F	HIS TIME. KIT AND ZONE C	ONTROLLER KIT.																
12       3       78.8 °F       66.0 °F       55.2 °F       54.2 °F       110.698 Btu/h       WATER       5.00 GPM       2.91       1       51.0 °F       91.5 °F       0.90 in-wg       180 °F       134.9 °F       208 V       3       60 Hz       1.50       1.40       25       1.23       4.42       4" MERV-13       0.64 in-wg       26 in       72 in       49.0 in       614.0 lb       1         12       3       78.8 °F       66.0 °F       55.2 °F       54.2 °F       110,698 Btu/h       WATER       5.00 GPM       2.91       1       51.0 °F       91.5 °F       0.90 in-wg       180 °F       134.9 °F       208 V       3       60 Hz       1.30       1.40       25       1.23       4.42       4" MERV-13       0.64 in-wg       26 in       72 in       49.0 in       614.0 lb       1         12       3       81.1 °F       67.5 °F       55.6 °F       54.8 °F       63.353 Btu/h       WATER       3.00 GPM       2.96       1       42.8 °F       0.90 in-wg       180 °F       136.7 °F       208 V       1       60 Hz       8.40       9.40       15       0.53       201/2       2" in-wg       18i n       7 in       24.0 in       223.0 lb       2       2 <th< th=""><th>PROVIDE BLC PROVIDE ALL</th><th>OWER COIL WITH S COMPONENTS TO ING COIL - REFRIG</th><th>CHEDULED DX CO D PAIR THE BLOW</th><th>DOLING COIL ER COIL WITH</th><th>oil, but coil si /ith the assoc</th><th>HALL BE UN-CON HATED VRV SYS</th><th>NECTED TO CONDEN EM, INCLUDING EXP</th><th>ISING UNIT AT T ANSION VALVE F</th><th>HIS TIME. KIT AND ZONE C</th><th>ONTROLLER KIT.</th><th>HEATING</th><th>G COIL DATA</th><th></th><th></th><th></th><th></th><th>E</th><th>ECTRICAL</th><th></th><th>FILTER</th><th>DATA</th><th>DIMEN</th><th>IONS AND WEIGHT</th><th>T</th><th></th><th>-</th></th<>	PROVIDE BLC PROVIDE ALL	OWER COIL WITH S COMPONENTS TO ING COIL - REFRIG	CHEDULED DX CO D PAIR THE BLOW	DOLING COIL ER COIL WITH	oil, but coil si /ith the assoc	HALL BE UN-CON HATED VRV SYS	NECTED TO CONDEN EM, INCLUDING EXP	ISING UNIT AT T ANSION VALVE F	HIS TIME. KIT AND ZONE C	ONTROLLER KIT.	HEATING	G COIL DATA					E	ECTRICAL		FILTER	DATA	DIMEN	IONS AND WEIGHT	T		-
12       3       78.8 °F       66.0 °F       55.2 °F       54.2 °F       110,698 Btu/h       WATER       5.00 GPM       2.91       1       51.0 °F       91.5 °F       0.090 in-wg       180 °F       134.9 °F       208 V       3       60 Hz       11.50       14.40       25       1.23       4.42       4"MERV-13       0.64 in-wg       26 in       72 in       49.0 in       614.0 lb       1         12       3       78.8 °F       66.0 °F       55.2 °F       54.2 °F       110,698 Btu/h       WATER       5.00 GPM       2.91       1       51.0 °F       91.5 °F       0.090 in-wg       180 °F       134.9 °F       208 V       3       60 Hz       11.30       14.40       25       1.23       4.42       4"MERV-13       0.64 in-wg       26 in       72 in       49.0 in       614.0 lb       1         12       3       78.8 °F       66.0 °F       55.2 °F       54.8 °F       63,353 Btu/h       WATER       3.00 GPM       2.96       1       42.8 °F       86.5 °F       0.090 in-wg       180 °F       133.1 °F       208 V       1       60 Hz       8.40       9.40       15       0.22       1/3       27 in wg       18 in       76 in       4.5 in       52.3 ° lb       23.0 l	PROVIDE BLC PROVIDE ALL ANSION COOL NS/IN COI	OWER COIL WITH S COMPONENTS TO ING COIL - REFRIG ENTERING / L TEMPERATI /S (DB)	CHEDULED DX CO D PAIR THE BLOWN ERANT R410A AIR JRE TEMPERAT (WB)	AIR LEA	dil, but coil si /ith the assoc <b>Leaving Air</b> Emperature (DB)	HALL BE UN-CON CIATED VRV SYS LEAVING AIR TEMPERATUR (WB)	NECTED TO CONDEN EM, INCLUDING EXP	ISING UNIT AT T ANSION VALVE F FLUID TYPE	HIS TIME. KIT AND ZONE C FLOW RATE (GPM)	ONTROLLER KIT. PRESSURE DROP (FEET OF WATER)	HEATING COIL TEI ROWS	G COIL DATA EMPERATURE TEM EAT	AIR IPERATURE PRESSU LAT DROP	RE TEMPERATURE EWT	TEMPERATURE LWT	VOLTAGE PHASE	E FREQUENCY F	ECTRICAL	ECM BRAKE HORSEPOWER HI	FILTER P FILTER TYPE	DATA FILTER PRESSURE DROP	DIMEN SIZE SIZE HEIGHT LENGT	IONS AND WEIGHT SIZE OF WIDTH	T DPERATING WEIGHT	REMARKS	
12       3       78.8 °F       66.0 °F       55.2 °F       54.2 °F       110,698 Btu/h       WATER       5.00 GPM       2.91       1       51.0 °F       91.5 °F       0.090 m-wg       180 °F       134.9 °F       208 V       3       60 Hz       11.3       14.40       25       1.23       4.42       4" MERV-13       0.64 m-wg       26 m       72 m       49.0 m       614.0 lb       1         12       3       81.1 °F       67.5 °F       55.6 °F       54.8 °F       63,353 Btu/h       WATER       3.00 GPM       2.96       1       42.8 °F       86.5 °F       0.090 m-wg       180 °F       136.7 °F       208 V       1       60 Hz       8.40       9.40       15       0.53       20/2 2 " MERV-13       0.27 m-wg       18 m       76 m       45.5 m       523.0 lb       2         12       3       81.5 °F       67.7 °F       55.3 °F       54.6 °F       29,244 Btu/h       WATER       1.50 GPM       0.77       2       33.1 °F       208 V       1       60 Hz       2.90       3.60       15       0.2       1/3       2"MERV-13       0.28 m-wg       18 m       73 m       24.0 m       23.0 lb       2         13       14       16       16 <t< td=""><td>PROVIDE BLC PROVIDE ALL ANSION COOL NS/IN COI</td><td>OWER COIL WITH S COMPONENTS TO ING COIL - REFRIG ENTERING L S (DB)</td><td>CHEDULED DX CO D PAIR THE BLOWN ERANT R410A AIR JRE ENTERING TEMPERAT (WB)</td><td></td><td>DIL, BUT COIL SH ITH THE ASSOC LEAVING AIR EMPERATURE (DB)</td><td>HALL BE UN-CON IATED VRV SYS LEAVING AIR TEMPERATUR (WB)</td><td>ECTED TO CONDEN EM, INCLUDING EXP</td><td>SING UNIT AT T ANSION VALVE F FLUID TYPE</td><td>HIS TIME. KIT AND ZONE C FLOW RATE (GPM)</td><td>ONTROLLER KIT. PRESSURE DROP (FEET OF WATER)</td><td>HEATING COIL TEI ROWS</td><td>S COIL DATA</td><td>IPERATURE PRESSUI LAT DROP</td><td>RE TEMPERATURE EWT</td><td>TEMPERATURE LWT</td><td>VOLTAGE PHASE</td><td>E FREQUENCY F</td><td>ECTRICAL</td><td>ECM BRAKE HORSEPOWER HI</td><td>FILTER P FILTER TYPE</td><td>DATA FILTER PRESSURE DROP</td><td>DIMENS SIZE SIZE HEIGHT LENGT</td><td>IONS AND WEIGHT SIZE OF WIDTH</td><td>T DPERATING WEIGHT</td><td>REMARKS</td><td>-</td></t<>	PROVIDE BLC PROVIDE ALL ANSION COOL NS/IN COI	OWER COIL WITH S COMPONENTS TO ING COIL - REFRIG ENTERING L S (DB)	CHEDULED DX CO D PAIR THE BLOWN ERANT R410A AIR JRE ENTERING TEMPERAT (WB)		DIL, BUT COIL SH ITH THE ASSOC LEAVING AIR EMPERATURE (DB)	HALL BE UN-CON IATED VRV SYS LEAVING AIR TEMPERATUR (WB)	ECTED TO CONDEN EM, INCLUDING EXP	SING UNIT AT T ANSION VALVE F FLUID TYPE	HIS TIME. KIT AND ZONE C FLOW RATE (GPM)	ONTROLLER KIT. PRESSURE DROP (FEET OF WATER)	HEATING COIL TEI ROWS	S COIL DATA	IPERATURE PRESSUI LAT DROP	RE TEMPERATURE EWT	TEMPERATURE LWT	VOLTAGE PHASE	E FREQUENCY F	ECTRICAL	ECM BRAKE HORSEPOWER HI	FILTER P FILTER TYPE	DATA FILTER PRESSURE DROP	DIMENS SIZE SIZE HEIGHT LENGT	IONS AND WEIGHT SIZE OF WIDTH	T DPERATING WEIGHT	REMARKS	-
12       3       81.1 °F       67.5 °F       55.6 °F       54.8 °F       63,353 Btu/h       WATER       3.00 GPM       2.96       1       42.8 °F       0.090 m·wg       180 °F       136.7 °F       208 V       1       60 Hz       8.40       9.40       15       0.53       2@1/2       2" MERV-13       0.27 in-wg       18 m       76 in       45.5 in       523.0 ib       2         12       3       81.5 °F       67.7 °F       55.3 °F       54.6 °F       29,244 Btu/h       WATER       1.50 GPM       0.77       2       33.4 °F       104.9 °F       133.1 °F       208 V       1       60 Hz       8.40       9.40       15       0.27 in-wg       18 in       73 in       24.0 in       223.0 ib       2         12       3       81.5 °F       67.7 °F       55.3 °F       54.6 °F       29,244 Btu/h       WATER       1.50 GPM       0.77       2       33.4 °F       133.1 °F       208 V       1       60 Hz       2.90       3.60       15       0.2       1/3       2" MERV-13       0.28 in-wg       18 in       73 in       24.0 in       223.0 lb       2       1       10       10       10       10       10       10       10       10       10       <	PROVIDE BLC PROVIDE ALL ANSION COOL NS/IN COI NS/IN ROW	OWER COIL WITH S COMPONENTS TO ING COIL - REFRIG ENTERING / L TEMPERATI /S (DB)	CHEDULED DX CO D PAIR THE BLOWN ERANT R410A AIR ENTERING JRE ENTERING TEMPERAT (WB)		DIL, BUT COIL SH /ITH THE ASSOC LEAVING AIR EMPERATURE (DB) 55.2 °F	HALL BE UN-CON LEAVING AIR TEMPERATUR (WB)	ECTED TO CONDEN EM, INCLUDING EXP TOTAL CAPACITY	SING UNIT AT T ANSION VALVE F FLUID TYPE WATER	HIS TIME. KIT AND ZONE C FLOW RATE (GPM)	ONTROLLER KIT. PRESSURE DROP (FEET OF WATER) 2.91	HEATING COIL TEI ROWS	EMPERATURE TEM EAT	IPERATURE AIR PRESSUI LAT DROP	RE TEMPERATURE EWT	TEMPERATURE LWT 134.9 °F	VOLTAGE         PHASE           208 ∨         3	E FREQUENCY F 60 Hz 11	ECTRICAL A MCA MROP	ECM BRAKE HORSEPOWER HI	FILTER P FILTER TYPE	DATA FILTER PRESSURE DROP	DIMENS SIZE SIZE HEIGHT LENGT	IONS AND WEIGHT SIZE OI WIDTH 49.0 in	T DPERATING WEIGHT 614.0 lb 1	REMARKS	-
12       3       81.5 °F       67.7 °F       55.3 °F       54.6 °F       29,244 Btu/h       WATER       1.50 GPM       0.77       2       33.4 °F       104.9 °F       0.130 m-wg       180 °F       133.1 °F       208 V       1       60 Hz       2.90       3.60       15       0.2       173       2" MERV-13       0.28 m-wg       18 in       73 in       24.0 in       223.0 lb       2         13       12       11       10       9       8       7       6       5       4       3       24.0 in       223.0 lb       2	PROVIDE BLC PROVIDE ALL ANSION COOL NS/IN COI 12 3 12 3	OWER COIL WITH S COMPONENTS TO ING COIL - REFRIG ENTERING S (DB) 78.8 °F 78.8 °F	CHEDULED DX CO D PAIR THE BLOWN ERANT R410A AIR ENTERING TEMPERAT (WB) 66.0 °F 66.0 °F		DIL, BUT COIL SH ITH THE ASSOC LEAVING AIR EMPERATURE (DB) 55.2 °F 55.2 °F	HALL BE UN-CON CIATED VRV SYS LEAVING AIR TEMPERATUR (WB) 54.2 °F 54.2 °F	TOTAL CAPACITY	SING UNIT AT T ANSION VALVE F FLUID TYPE WATER WATER	HIS TIME. KIT AND ZONE C FLOW RATE (GPM) 5.00 GPM 5.00 GPM	ONTROLLER KIT. PRESSURE DROP (FEET OF WATER) 2.91 2.91 2.91	HEATING COIL TEI ROWS	S COIL DATA       EMPERATURE EAT       51.0 °F       51.0 °F	IPERATURE         AIR           IAT         PRESSUI           91.5 °F         0.090 in-v           91.5 °F         0.090 in-v	TEMPERATURE EWT           /g         180 °F           /g         180 °F           /g         180 °F	<b>TEMPERATURE</b> <b>LWT</b> 134.9 °F 134.9 °F	VOLTAGE         PHASE           208 ∨         3           208 ∨         3	E FREQUENCY F 60 Hz 11 60 Hz 11	ECTRICAL A MCA MROP 50 14.40 25 50 14.40 25	ECM BRAKE HORSEPOWER HI 1.23 4.4 1.23 4.4	FILTER P FILTER TYPE 42 4" MERV-13 42 4" MERV-13	DATA FILTER PRESSURE DROP 0.64 in-wg 0.64 in-wg	DIMENS SIZE SIZE HEIGHT LENGT 26 in 72 in 26 in 72 in 26 in 72 in	IONS AND WEIGHT SIZE OF WIDTH 49.0 in 49.0 in	T DPERATING WEIGHT 614.0 lb 1 614.0 lb 1 500.0 ll 2	REMARKS	-
13 12 11 10 9 8 7 6 5 4 3 2	PROVIDE BLC PROVIDE ALL ANSION COOL NS/IN COI 12 3 12 3 12 3	OWER COIL WITH S COMPONENTS TO ING COIL - REFRIG ENTERING S (DB) 78.8 °F 78.8 °F 78.8 °F 81.1 °F	CHEDULED DX CO D PAIR THE BLOWN CO PAIR THE CO PAIR THE CO PAIR THE CO PAIR THE CO PAIR CO PAIR THE CO PAIR		DIL, BUT COIL SH ITH THE ASSOC LEAVING AIR EMPERATURE (DB) 55.2 °F 55.2 °F 55.6 °F	HALL BE UN-CON CIATED VRV SYS LEAVING AIR TEMPERATUR (WB) 54.2 °F 54.2 °F 54.8 °F	TOTAL CAPACITY	SING UNIT AT T ANSION VALVE F FLUID TYPE WATER WATER WATER	HIS TIME. KIT AND ZONE C FLOW RATE (GPM) 5.00 GPM 5.00 GPM 3.00 GPM	ONTROLLER KIT. PRESSURE DROP (FEET OF WATER) 2.91 2.91 2.91 2.96 0.77	HEATING COIL TEI ROWS	S COIL DATA         EMPERATURE EAT         51.0 °F         51.0 °F         42.8 °F	IPERATURE LAT         AIR PRESSUID DROP           91.5 °F         0.090 in-v           91.5 °F         0.090 in-v           86.5 °F         0.090 in-v	RE         TEMPERATURE EWT           /g         180 °F           /g         180 °F           /g         180 °F           /g         180 °F	<b>TEMPERATURE</b> <b>LWT</b> 134.9 °F 134.9 °F 136.7 °F	VOLTAGE         PHASE           208 V         3           208 V         3           208 V         1	E FREQUENCY F 60 Hz 11 60 Hz 11 60 Hz 8.	ECTRICAL A MCA MROP 50 14.40 25 50 14.40 25 40 9.40 15	ECM BRAKE HORSEPOWER HI 1.23 4.4 1.23 4.4 0.53 2@	FILTER P FILTER TYPE 42 4" MERV-13 42 4" MERV-13 1/2 2" MERV-13	DATA FILTER PRESSURE DROP 0.64 in-wg 0.64 in-wg 0.27 in-wg	DIMENS SIZE SIZE HEIGHT LENGT 26 in 72 in 26 in 72 in 18 in 76 in	SIZE OF H WIDTH 49.0 in 45.5 in	T DPERATING WEIGHT 614.0 lb 1 614.0 lb 1 523.0 lb 2 000 0 lb 2	<b>REMARKS</b>	-
	PROVIDE BLC PROVIDE ALL ANSION COOL NS/IN COI NS/IN ROW 12 3 12 3 12 3 12 3	OWER COIL WITH S COMPONENTS TO ING COIL - REFRIG ENTERING / TEMPERATI /S (DB) 78.8 °F 78.8 °F 78.8 °F 81.1 °F	CHEDULED DX CO D PAIR THE BLOWN CORAT R410A AIR ENTERING TEMPERAT (WB) 66.0 °F 66.0 °F 67.5 °F 67.7 °F		DIL, BUT COIL SF /ITH THE ASSOC LEAVING AIR EMPERATURE (DB) 55.2 °F 55.2 °F 55.6 °F 55.3 °F	HALL BE UN-CON LEAVING AIR TEMPERATUR (WB) 54.2 °F 54.2 °F 54.8 °F 54.6 °F	TOTAL CAPACITY 110,698 Btu/h 63,353 Btu/h 29,244 Btu/h	SING UNIT AT T ANSION VALVE F FLUID TYPE WATER WATER WATER WATER	HIS TIME. KIT AND ZONE C FLOW RATE (GPM) 5.00 GPM 5.00 GPM 3.00 GPM 1.50 GPM	ONTROLLER KIT. PRESSURE DROP (FEET OF WATER) 2.91 2.91 2.96 0.77	HEATING COIL ROWS 1 1 1 2	S COIL DATA           EMPERATURE EAT         TEM           51.0 °F         51.0 °F           42.8 °F         33.4 °F	IPERATURE LAT         AIR PRESSUI DROP           91.5 °F         0.090 in-v           91.5 °F         0.090 in-v           86.5 °F         0.090 in-v           104.9 °F         0.130 in-v	RE         TEMPERATURE EWT           /g         180 °F           /g         180 °F	TEMPERATURE LWT 134.9 °F 134.9 °F 136.7 °F 133.1 °F	VOLTAGE         PHASE           208 V         3           208 V         3           208 V         1           208 V         1	E FREQUENCY F 60 Hz 11 60 Hz 11 60 Hz 8. 60 Hz 2.	LECTRICAL A MCA MROP 50 14.40 25 50 14.40 25 40 9.40 15 90 3.60 15	ECM BRAKE HORSEPOWER         HI           1.23         4.4           1.23         4.4           0.53         2@           0.2         1/	FILTER           P         FILTER TYPE           42         4" MERV-13           42         4" MERV-13           1/2         2" MERV-13           3         2" MERV-13	DATA FILTER PRESSURE DROP 0.64 in-wg 0.64 in-wg 0.27 in-wg 0.28 in-wg	DIMEN:           SIZE         SIZE           HEIGHT         LENGT           26 in         72 in           26 in         72 in           18 in         76 in           18 in         73 in	SIZE     OI       H     WIDTH       49.0 in       49.0 in       49.0 in       24.0 in	T DPERATING WEIGHT 614.0 lb 1 614.0 lb 1 523.0 lb 2 223.0 lb 2	<b>REMARKS</b>	

						AIR SIDE					WATER SIDE				i
TAG	SIZE WIDTH	SIZE HEIGHT	CFM	HEATING CAPACITY (MBH)	EAT DB (DEG F)	LAT DB (DEG F)	APD	VELOCITY (FPM)	TEMPERATURE EWT	TEMPERATURE LWT	FLUID TYPE	FLOWRATE (GPM)	PRESSURE DROP HEATING	BASIS OF DESIGN MFG. AND MODEL	REMAR
HS-4	64"	5/1"	19 000	1 083 4	41.6 °F	94.3 °F	0.44 in-wg	792 FPM	180.0 °F	145.9 °F	WATER	65.0	4.5 Feet	GREENHECK HW58S02H10-54x64-RH	123
FFUSER,	REGISTER AND	GRILLE SCHEI		ALTERNATE	> E #1)		~~~~~				· · · · · · · ·			}	., _,
FFUSER,	REGISTER AND	GRILLE SCHEI	DULE (BID	ALTERNATE	> E #1)										, <u> </u> ,
FUSER,					÷÷÷÷	OVERALL SIZE		N MOUNTING	MAT	TERIAL	BASIS OF DESIGN	I MANUFACTURER	AND REMARKS		<u> </u>



	) F-HS-2.
	FAN VFD.
	BASIS OF DESIGN MANUFACTURER AND MODEL NUMBER
	SREENHECK XBEW-120-S1,SREENHECK XBEW-120-S1,
	ATA BASIS OF DESIG
	IS         AMPS         MFG. AND MODEI           N         0.56         DAIKIN FCVS103           N         0.56         DAIKIN FCVS103
	0.56         DAIKIN FCVS103
<section-header></section-header>	ASIS OF DESIGN MFG. AND MODEL REMARKS RASCH TFKU 1, 2
	ISCONNECT SWITCH POWER
	ASIS OF DESIGN MFG.
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	DATA BASIS OF DESIGN MFG. A
Normalization         Print         Normalization         Normalization <td>PH     MODEL       1     HARTELL KL-1DG       1     HARTELL KL-1DG       1     HARTELL KL-1DG</td>	PH     MODEL       1     HARTELL KL-1DG       1     HARTELL KL-1DG       1     HARTELL KL-1DG
4.1         NOP         NOP <td>1     HARTELL KL-1DG       1     HARTELL KL-1DG       1     HARTELL KL-1DG       1     HARTELL KL-1DG       1     HARTELL KL-1DG</td>	1     HARTELL KL-1DG
0 0 // 0 // 0 // 0 // 0 // 0 // 0 // 0	1         HARTELL KL-1DG           1         HARTELL KL-1DG           1         HARTELL KL-1DG           1         HARTELL KL-1DG           1         HARTELL KL-1DG
No.0         No.0 <th< td=""><td>1     HARTELL KL-1DG       1     HARTELL KL-1DG       1     HARTELL KL-1DG       1     HARTELL KL-1DG</td></th<>	1     HARTELL KL-1DG       1     HARTELL KL-1DG       1     HARTELL KL-1DG       1     HARTELL KL-1DG
SAL         PROC         PECEPTOPEC 101         ROCPEOPONENAST CONTINUEAL         DEECT         100         6.86         110         6.16         CONTINUE ADDROX         STATE         2.25 gai         1.4         101         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         111         1111	1         HARTELL KL-IDG           1         HARTELL KL-IDG           1         HARTELL KL-IDG           1         HARTELL KL-IDG
ROP       CONSISTORY       ROPORT POINT CENTREVIAL       DIRECT       1.20       0.0       1.1%       1.20       0.0       1.1%       1.20       0.0       1.1%       1.20       0.0       1.1%       0.20       0.0       1.1%       0.20       0.0       1.1%       0.20       0.0       1.1%       0.20       0.0       1.1%       0.20       0.0       1.1%       0.20       0.0       1.1%       0.20       0.0       1.1%       0.20       0.0       1.1%       0.20       0.0       1.1%       0.20       0.0       1.1%       0.20       0.0       1.1%       0.20       0.0       1.1%       0.20       0.0       1.1%       0.0       0.0       1.1%       0.0       0.0       1.1%       0.0       0.00       1.1%       0.0       0.00       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0	1         HARTELL KL-1DG           1         HARTELL KL-1DG           1         HARTELL KL-1DG           1         HARTELL KL-1DG           1         HARTELL KL-1DG
HAUE         CLASSHOUND         CROPTOP DOWNELAST CENTREIUGAL         DIFECT         1.00         0.8         12.0 in         1.439         0.209         1.3         1.9         60%         1.91         59         COCK 120 ACED         5.6           64-2         ROOF         CLASSHOUND         ROOFTOP DOWNELAST CENTREIUGAL         DIFECT         1.00         0.8         12.0 in         1.439         0.209         1.5         1         60%         1.91         59         COOK 120 ACED         5.6           64-3         ROOF         CLASSHOUND         ROOFTOP DOWNELAST CENTREIUGAL         DIFECT         1.00         0.8         12.0 in         1.439         0.209         1.3         1.5         1         60%         1.91         59         COOK 120 ACED         5.6           64-4         ROOF         CLASSHOUND         ROOFTOP DOWNELAST CENTREIUGAL         DIFECT         1.00         0.8         12.0 in         1.49         0.209 in         1.91         59         COOK 120 ACED         5.6           64-5         ROOF         CLASSHOUND         ROOFTOP DOWNELAST CENTREIUGAL         DIFECT         1.00         0.8         12.0 in         1.49         0.80%         1.91         59         COOK 120 ACED         5.6	1     HARTELL KL-1DG       1     REFCO COMBI
HS45       ROOF       CLASSROM 210       ROOFTOP DOWNBLAST CENTRIFUGAL       DIRECT       1.00       0.8       12.0 in       1.439       0.20       1.8       1.9       0.00       1.9       0.00       1.9       0.00       1.9       0.00       1.9       0.00       1.9       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00       0.00	
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DMBINED CONDENSATE DRAIN PIL UT THROUGH EXTERIOR WALL. T WALL PENETRATION AS REQUIRE	PING FROM FIRST FLOOR UV DRAIN F ERMINATE PIPING WITH MITER CUT E ED.	PAN OUTLET AND CONDENSATE FROM ELBOW FACING GRADE LEVEL AND PIT	A SECOND FLOOR UV (29) F TCH PIPING TOWARDS 7 6	PROGRAM THE EXISTING VERTICAL FU EMPERATURE SETPOINT SHALL BE RE AND THE FIN TUBE RADIATION WITHIN ( DEADBAND BETWEEN THE COOLING AN	RNACE UNIT W/ DX COOLIN ESTRICTED TO A MINIMUM V OFFICE 121 SHALL BE SET ND HEATING SYSTEM.
L- 5/8" RS-1-1/4" CONDENSATE DO	WN TO FLOOR LEVEL, THEN ROUTE 1	O UV-HS-37 PIPING TUNNEL WITHIN P	PIPING ENCLOSURE	COORDINATE ACCESS TO EXISTING VE ROUTING OF 3" HWS/R RISERS.	RTICAL CHASE WITH ARCH
SWEAT PIPING CONNECTION V-TY HER SIDE OF LOOP AT LOCATION: IG RUN WITHIN EXPANSION LOOP	YPE EXPANSION LOOP AT LOCATION S PER MANUFACTURER'S RECOMMEI P.	SHOWN CAPABLE OF +/-2" PIPING MO NDATIONS AND PROVIDE PIPE ANCHO	VEMENT. PROVIDE PIPE RS AT EACH END OF	PROVIDE 5" DEEPx14" HIGH FIN TUBE E ENCLOSURE. MOUNT TOP OF FIN TUB	NCLOSURE AND CONCEAL E COVER EVEN WITH TOP (
I" VERTICAL PIPE ENCLOSURE. R	OUTE HWS/R RISERS, CONDENSATE I	RISER AND REFRIGERANT RISERS WIT	THIN VERTICAL 32 F	PROVIDE 5" DEEPx12" HIGH FIN TUBE E ENCLOSURE. MOUNT TOP OF FIN TUB	NCLOSURE AND CONCEAL E COVER EVEN WITH TOP (
NDENSATE RISER UP TO UV DRAII	N PAN OUTLET ON 2ND FLOOR.		(33) ^F	ROUTE 1" CONDENSATE PIPING ABOVE	EXISTING SUSPENDED CE
GERANT SUCTION/LIQUID PIPING IPING TUNNEL. ROUTE 1-1/4" COI -1/4" COMBINED CONDENSATE PII	DOWN TO UV VRV DX COOLING CON NDENSATE WITHIN PIPING TUNNEL A PING MAIN.	NECTIONS AND PROVIDE 1-1/4" COND ND CONNECT TO CONDENSATE FROM	ENSATE RISER DOWN	RAP.	
S/R PIPING RISERS FROM PIPING	TUNNEL BELOW FLOOR AT LOCATION	N SHOWN AND ROUTE PIPING TO WITH	HIN FIN TUBE		

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		GEN	ERAL NOTES:				
RMOSTAT SO THAT THE COOLING MODE HEATING SETPOINT FOR THE THERMOSTAT		1.	REFRIGERANT PIPING NOTE: 90 D SHALL BE A MINIMUM OF 40" FROM	EGREE ELBOWS SHALL BE KEPT A M M ANOTHER BRANCH 'Y' CONNECTO	IINIMUM OF 20" FROM BRANCH CONNE R JOINT.	CTOR 'Y' JOINTS. IN ADDITION, BRAN	ICH CONNECTOR 'Y' JOINTS
		2.	REFRIGERANT PIPING NOTE: THE	HEAT PUMP SYSTEM MANUFACTUR	ER SHALL INSPECT ALL FIELD INSTALL	ED REFRIGERANT PIPING PRIOR TO	INSULATION INSTALLATION.
UIRED TO GAIN A	ACCESS TO CHASE FOR	3.	THE EXISTING SUSPENDED CEILIN DISCONNECTED AND REMOVED TO SUSPENDED CEILING CEID SYSTE	NG SYSTEMS LOCATED WITHIN THE O ALLOW FOR THE INSTALLATION W	SCOPE OF WORK AREA OUTSIDE OF AI ORK AND REINSTALLED FOLLOWING C	REAS BEING RENOVATED BY THE GE OMPLETION OF THE WORK BY THE I	ENERAL CONTRACTOR SHALL MECHANICAL CONTRACTOR.
NT-CONDENSATE PIPING WITHIN FIN TUBE			TILES SHALL BE REMOVED AS REC DAMAGED DURING THE INSTALLA	QUIRED TO COMPLETE THE WORK A TION WORK SHALL BE REPLACED B	ND REINSTALLED FOLLOWING THE CO THE MECHANICAL CONTRACTOR TO N	MPLETION OF THE INSTALLATION W MATCH THE EXISTING CEILING TILES	ORK. ANY CEILING TILES
NT-CONDENSATE PIPING WITHIN FIN TUBE		4.	ALL CUTTING, PATCHING, AND FIR MATCH EXISTING CONDITIONS. AL SECTION 078400.	REPROOFING ASSOCIATED WITH THE LL REFRIGERANT PIPING AND COND	E INSTALLATION WORK SHALL BE COMI ENSATE PIPING PENETRATIONS THROU	PLETED BY THE MECHANICAL CONTI JGH CORRIDOR WALLS SHALL BE FII	RACTOR. PATCHED AREAS SI REPROOFED PER SPECIFICA
NK VENT RISER. F AIN OPEN-ENDED	ROVIDE AN OPEN-ENDED ABOVE THE INLET TO THE P-	5.	ROUTE REFRIGERANT SUCTION A CONNECTOR 'Y' JOINTS PER THE I	ND LIQUID PIPING FROM THE UNIT V DRAWING. CONFIRM PIPING SIZES A	YENTILATOR DX COIL CONNECTIONS TO ND BRANCH CONNECTOR 'Y' JOINT LO	O THE HEAT PUMP UNITS. SIZE PIPIN CATIONS REQUIRED WITH HEAT PUN	G AND PROVIDE BRANCH IP SYSTEM MANUFACTURER
		6.	THE SMALLEST VOLUME ROOM TH REFRIGERANT CONCENTRATION I DUCT AS SHOWN ON DRAWING HS MAXIMUM CONCENTRATION LIMIT	HAT THE REFRIGERANT PIPING SYS LIMIT OF 26 POUNDS PER 1,000 CUB S-M302 . TRANSFER DUCTS HAVE BE REQUIRED	TEMS ROUTE THROUGH FOR EACH OF C FEET OF ROOM VOLUME FOR OCCU EN ADDED BETWEEN THESE SPACES T	THE HEAT PUMP SYSTEMS IS BELOV PIED SPACES, EXCEPT FOR THE SPA TO ALLOW FOR THE VOLUME OF REF	V THE ASHRAE STANDARD 1 ACES PROVIDED WITH TRANS RIGERANT TO BE BELOW TH
		7.	PROVIDE FIRESTOPPING PER SPE	ECIFICATION SECTION 078400 AT ALL	. PIPING PENETRATIONS THROUGH CO	RRIDOR WALLS AND STORAGE ROO	M WALLS.
		8.	THE UV UTILITY COMPARTMENT S	HALL INCLUDE A REMOVABLE FROM	T PANEL, STANDARD #1/4-20 HEX FAST	ENER, STEEL TOP AND BACK WALL	F-CHANNEL.
		9.	ROUTE REFRIGERANT SUCTION-L CONNECTIONS AND UV EXPANSIO	IQUID PIPING WITHIN UNIT VENTILAT ON VALVE KITS PER THE MANUFACTI	FOR PIPING TUNNELS AND UNIT VENTIL JRER'S RECOMMENDATIONS.	ATOR SHELVING SYSTEM TUNNELS	TO DX COOLING COIL
		10.	REFER TO HAZARDOUS MATERIAL	L DRAWINGS FOR ALL LOCATIONS O	F CORE DRILL PENETRATIONS THROUG	GH HAZARDOUS MATERIAL CONTAIN	ING FLOORS. THE HAZARDO

![](_page_66_Figure_0.jpeg)

![](_page_66_Picture_8.jpeg)

![](_page_67_Figure_0.jpeg)

13 12 11 10	9	8	7	6	5	4	3	2	1
)]:	KEYED NOTES (CONTINUED):				GENERAL NOTES:				
ROUGH ROOF/6"x14" EA DOWN TO FIRST FLOOR CEILING. RST FLOOR CEILING WITH FIRE DAMPER AT FLOOR PENETRATION. M 30/AUDITORIUM WALL JUST ABOVE FLOOR LEVEL OF FAN ROOM 30, THEN PROVIDE 3" HWS/R RISER UP TO IG COIL HC-HS-4 APPROXIMATELY 12-9" ABOVE FAN ROOM FLOOR LEVEL. COORDINATE ACCESS INTO AUDITORIUM 4 ARCHITECTURAL DRAWINGS. . CONDENSATE PUMP WITHIN UV DRAIN PAN OUTLET AREA WITHIN UV COMPARTMENT, THEN ROUTE CONDENSATE NLET OF PUMP, THEN ROUTE 1" CONDENSATE FROM OUTLET OF PUMP, THROUGH UV COMPARTMENT TO WITHIN FIN STEM, THEN PROVIDE DROP DOWN TO FIRST FLOOR CEILING AT LOCATION SHOWN. DE ZPANSION LOOP FOR THE 1/2" REFRIGERANT LIQUID AND 1" REFRIGERANT SUCTION LINES AT LOCATION SHOWN. BE 28-1/2" LONG x 17-1/2" HIGH. THE 1" LOOP SHALL BE 28-3/4" LONG x 21" WIDE. PROVIDE PIPE GUIDES ON EITHER SIDE ICHORS AT END OF PIPING RUNS PER MANUFACTURER'S RECOMMENDATIONS. INSTALL REFRIGERANT MAINS AT NS TO ALLOW LOOPS TO AVOID CONFLICT WITHIN CEILING PLENUM. RST FLOOR CEILING WITH FIRE DAMPER AT FLOOR PENETRATION. OF EXISTING 16"x6" EA MAIN AND TERMINATE DUCT OPEN-ENDED ABOVE SUSPENDED CEILING SYSTEM WITH 1/4" SH SCREEN. G 10"x10" EA RISER UP THROUGH ROOF AND TRANSITION WITHIN ROOF CURB TO ROOFTOP EXHAUST FAN F-HS-47 IROUGH ROOF/6"x14" SA DOWN TO FIRST FLOOR CEILING. NTED, SLOPE TOP, FAN COIL UNIT AT LOCATION SHOWN. PROVIDE 3/4" HWS/R PIPING FROM FIRST FLOOR BELOW TO ROVIDE FAN COIL UNIT WITH MOTORIZED FRESH AIR DAMPER OPTION, MIXING BOX INTAKE LOUVER AND OUTSIDE AIR EA 16" WIDE x 4" HIGH ALUMINUM SHEETMETAL SLEEVE FROM THE OUTSIDE AIR INTAKE BOX AND CONNECT TO THE AIG UVER. PROVIDE AN OPENING IN THE EXISTING EXTERIOR WALL AS REQUIRED. OUTSIDE AIR TO FCU SHALL BE FCU LAN IS OPFRATING ADD MOTORIZED FRENEN IS DOFN	(35) PROVIDE OPENING IN REAR ADAPTER B CONNECTED TO OA LOUVER AT OA INTA OA DUCT SLEEVE SO THAT THERE IS NO AI INTO THE REAR OF THE UV.	ACK OF UNIT VENTILATOR AND P AKE OPENING LOCATION ON EACH E OF THE UV ADAPTER BACK ARE R LEAKAGE INTO THE UNIT VENTI	ROVIDE OPENING IN EXISTING OA DUG H UNIT VENTILATOR ONLY. AT LOCATI A, PROVIDE SHEETMETAL SAFING ARG LATOR CABINET OUTSIDE OF THE OA	CT SLEEVE IONS WHERE THE OUND THE OA INTAKE OPENING	<ol> <li>REFRIGERANT PIPING NOTE: 90 DEGREE EL SHALL BE A MINIMUM OF 40" FROM ANOTHE</li> <li>REFRIGERANT PIPING NOTE: THE HEAT PUI</li> <li>THE EXISTING SUSPENDED CEILING SYSTE DISCONNECTED AND REMOVED TO ALLOW SUSPENDED CEILING GRID SYSTEMS SHAL TILES SHALL BE REMOVED AS REQUIRED T DAMAGED DURING THE INSTALLATION WOF</li> <li>ALL CUTTING, PATCHING, AND FIREPROOFI MATCH EXISTING CONDITIONS. ALL REFRIG SECTION 078400.</li> <li>ROUTE REFRIGERANT SUCTION AND LIQUIE CONNECTOR 'Y' JOINTS PER THE DRAWING</li> <li>THE SMALLEST VOLUME ROOM THAT THE F REFRIGERANT CONCENTRATION LIMIT OF 2</li> <li>PROVIDE FIRESTOPPING PER SPECIFICATION</li> <li>THE UV UTILITY COMPARTMENT SHALL INC</li> <li>ROUTE REFRIGERANT SUCTION-LIQUID PIP CONNECTIONS AND UV EXPANSION VALVE</li> <li>REFER TO HAZARDOUS MATERIAL DRAWIN MATERIAL CONTRACTOR SHALL PROVIDE T</li> </ol>	LBOWS SHALL BE KEPT A MINIMUM ER BRANCH 'Y' CONNECTOR JOINT. MP SYSTEM MANUFACTURER SHAL MS LOCATED WITHIN THE SCOPE C FOR THE INSTALLATION WORK AND L BE REMOVED AND MODIFIED TO C O COMPLETE THE WORK AND REINS RK SHALL BE REPLACED BY THE ME NG ASSOCIATED WITH THE INSTALL SERANT PIPING AND CONDENSATE I D PIPING FROM THE UNIT VENTILAT . CONFIRM PIPING SIZES AND BRAN REFRIGERANT PIPING SYSTEMS RO 26 POUNDS PER 1,000 CUBIC FEET C ON SECTION 078400 AT ALL PIPING I LUDE A REMOVABLE FRONT PANEL ING WITHIN UNIT VENTILATOR PIPIN KITS PER THE MANUFACTURER'S R GS FOR ALL LOCATIONS OF CORE I	OF 20" FROM BRANCH CONNECTOR 'N L INSPECT ALL FIELD INSTALLED REFI OF WORK AREA OUTSIDE OF AREAS BI D REINSTALLED FOLLOWING COMPLE COMPLETE THE WORK AND REINSTAL STALLED FOLLOWING THE COMPLETI CHANICAL CONTRACTOR TO MATCH ' LATION WORK SHALL BE COMPLETED PIPING PENETRATIONS THROUGH CO OR DX COIL CONNECTIONS TO THE H ICH CONNECTOR 'Y' JOINT LOCATION UTE THROUGH FOR EACH OF THE HE DF ROOM VOLUME FOR OCCUPIED SP PENETRATIONS THROUGH CORRIDOF , STANDARD #1/4-20 HEX FASTENER, S NG TUNNELS AND UNIT VENTILATOR S ECOMMENDATIONS. DRILL PENETRATIONS THROUGH HAZZ	Y' JOINTS. IN ADDITION, BRANCH CONN RIGERANT PIPING PRIOR TO INSULATION EING RENOVATED BY THE GENERAL CO TION OF THE WORK BY THE MECHANIC LED FOLLOWING THE COMPLETION OF ON OF THE INSTALLATION WORK. ANY THE EXISTING CEILING TILES. BY THE MECHANICAL CONTRACTOR. FOR RIDOR WALLS SHALL BE FIREPROOF REAT PUMP UNITS. SIZE PIPING AND PR S REQUIRED WITH HEAT PUMP SYSTEM FAT PUMP SYSTEMS IS BELOW THE ASP PACES. R WALLS AND STORAGE ROOM WALLS. STEEL TOP AND BACK WALL F-CHANNE SHELVING SYSTEM TUNNELS TO DX CO ARDOUS MATERIAL CONTAINING FLOO	ECTOR 'Y' JOINTS ON INSTALLATION. ONTRACTOR SHALL BE CAL CONTRACTOR. THE 'WORK. THE CEILING CEILING TILES PATCHED AREAS SHALL ED PER SPECIFICATION ROVIDE BRANCH MANUFACTURER. HRAE STANDARD 15 EL. OOLING COIL

![](_page_67_Figure_25.jpeg)

![](_page_68_Figure_0.jpeg)

13 12 11	10	9	8		7
ECTION TO REAR MIXING BOX INLET ON BLOWER COIL BC-HS-5. A INLET ON BLOWER COIL BC-HS-5 MIXING BOX AND PROVIDE A TRANSITION ELBOW TO A 30"x6" R/ SCREEN OVER THE OPEN-ENDED RA INLET MOUNTED ABOVE THE BLOWER COIL.	A DUCT	<u>ES (CONTINUED):</u> DE TOP TAP OFF HORIZONTAL SA BRANC CAVITY SPACE. ANCE RETURN AIRFLOW THROUGH EXIS [®] RETURN AIR MODE (OUTSIDE AIR DAMPEF	H AT LOCATION SHOWN AND ROUT TING RA REGISTERS TO AIRFLOW A R CLOSED). UTILIZE EXISTING IN-D	TE 6" ROUND SA DI AMOUNT LISTED W UCT VOLUME DAM	UCTWORH
ANSOR LOCATED IN RA INLET OF EXISTING RECESS CABINET UNIT HEATER AT LOCATION SHOWN TO THERMOSTAT. TIE CONTROL OF SENSOR TO DDC SYSTEM FORDABINET UNIT HEATER FAN ON/OF A RISER UP TO F-HS-32. STAGE TO ROOF HEIGHT IS APPROXIMATELY 30-FEET. PAINT ALL NEW, EX - FLAT BLACK. REFER TO SPECIFICATION SECTION 099100 FOR PAINT REQUIREMENTS. A RISER LOCATED AT REAR AUDITORIUM STAGE AND TRANSITION TO A 10"x8" OA RISER IN THE VEI "x8" OA DUCT PENETRATION THROUGH THE REAR STAGE WALL AND CONNECT TO THE REAR, OA IN X FOR BLOWER COIL BC-HS-6. PAINT ALL NEW, EXPOSED DUCTWORK AT THE STAGE LEVEL FLAT E DN 099100 FOR PAINT REQUIREMENTS. WITHIN JOIST CAVITY SPACING, THEN ROUTE TO TOP RA INLET ON BLOWER COIL BC-HS-6 MIXING E "ITHIN 31"x10" EA DUCT BRANCH SERVING BAND ROOM 107. DAMPER SHALL BE TIED TO DDC SYSTE JV-HS-32 OA DAMPERS ARE OPEN IN MINIMUM POSITION OR ECONOMIZER POSITION. EA MOTORIZ N UV-HS-31/UV-HS-32 OA DAMPERS ARE CLOSED. "ITHIN 24"x10" EA DUCT BRANCH SERVING MUSIC ROOM 105. DAMPER SHALL BE TIED TO DDC SYSTE JV-HS-29 OA DAMPERS ARE OPEN IN MINIMUM POSITION OR ECONOMIZER POSITION. EA MOTORIZ N UV-HS-28/UV-HS-29 OA DAMPERS ARE CLOSED.	OREQUIF(22)PROVIIOSS (POSED(23)PROVIIRTICAL(24)PROVIIRTICAL(24)PROVIIRTICAL(25)ROUTEBLACK.(25)ROUTEBLACK.(26)PROVIIBOX.(26)PROVIICOL(27)PROVIIEM AND(28)PROVIICH(28)PROVII	RED TO BALANCE AIRFLOW. DE TOP TAP OFF HORIZONTAL SA BRANC CAVITY SPACE BELOW FLOOR DECK ABO DE 8" WIDE x 8" DEEP x 10-FEET HIGH VEF DE 5" DEEPx18" HIGH FIN TUBE COVER AN WITH TOP OF UNIT VENTILATOR. E 1-1/4" COMBINED CONDENSATE DRAIN F PAN(S) OUT THROUGH EXTERIOR WALL. (TERIOR WALL PENETRATION AS REQUIR DE 1" THICK INTERNAL DUCT LINER ON SU ND END POINT TAGGED AT LOCATION SH DE 28"x12" SUPPLY AIR PLENUM AT OUTLI FR COIL TO SUPPLY PLENUM, THEN TRAN YORK DOWN TO BELOW THE CEILING AND DE SURFACE MOUNTED RA REGISTER MO T AREA AND TERMINATE DUCTS OPEN-EN	H AT LOCATION SHOWN AND ROUT VE. RTICAL PIPE ENCLOSURE AT LOCAT ND CONCEAL CONDENSATE PIPING PIPING FROM FIRST FLOOR UV DRA TERMINATE PIPING WITH MITER CO ED. JPPLY DUCTWORK AT OUTLET OF IOWN. ET OF BLOWER COIL BC-HS-5. PRO ISITION TO ROUND SPIRAL DUCTWO NOUTE THE SA DUCTWORK EXPO DUNTED TO VERTICAL FACE OF BLO IDED WITH 1/4" GALVANIZED WIRE	IE 6"x5" SA DUCTW ION SHOWN TO C WITHIN FIN TUBE IN PAN OUTLET AN JT ELBOW FACING BLOWER COIL BC-I OVIDE CONNECTIO ORK AS SHOWN. T SED BELOW THE S OWER COIL SOFFI MESH SCREEN.	/ORK OVE ONCEAL - COVER. D CONDI GRADE L HS-6 BET NS FROM TRANSITIC SUSPEND T. EXTEN
1-1/8" RS UP TO SECOND FLOOR N TO PIPING TUNNEL BELOW 1" HWS 1" HWS CP-HS-26 24"x10" OA UP	UNNEL 30 31 ROUTE PROVI	DE CONDENSATE CLEANOUT PLUG AT LC DE PVC JACKETING OVER EXPOSED, INSI NG BLOWER COIL BC-HS-6. E 1-1/4" CONDENSATE PIPING EXPOSED D DE A DISHWASHER TAILPIECE WITHIN TH ECT THE 1-1/4" CONDENSATE DRAIN PIPIN	OCATION SHOWN. JLATED HWS/R, RS-RL AND CONDE OWN TO EXISTING SINK P-TRAP LE E SINK VERTICAL DRAIN PIPING. PF IG TO THE ELBOW INLET OPENING	NSATE DRAIN PIPI	NG LOCA 7 AND REM 7 FACING 1 7 WITH AN
BC-HS-6 1 1/2" HWS RR-HS-11 30"x10" RA 30"x10" RA 8"x4" RA 30"x10" RA 52"x10" RA	52"x10" EA				
RR-HS-11 50 CFM 50 CFM R UP TO UV	└── 24"x24" EA UP TO	F-HS-32			

![](_page_68_Figure_5.jpeg)

![](_page_69_Figure_0.jpeg)

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13	12	11	10	9	8	

![](_page_69_Figure_5.jpeg)

![](_page_69_Picture_7.jpeg)

![](_page_70_Figure_0.jpeg)

![](_page_70_Figure_1.jpeg)

![](_page_70_Figure_2.jpeg)

![](_page_70_Picture_3.jpeg)

![](_page_70_Figure_7.jpeg)

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![](_page_71_Figure_1.jpeg)

BOILER ROOM PLUMBING REMOVALS PLAN

![](_page_71_Picture_5.jpeg)




A7 BOILER ROOM SAW CUTTING PLAN 1/4" = 1'-0"



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Author Y: \\Documents\NANUET-BM-PLUM PHASE 4_JCSage.r	A						
DRAWN BY CHECKED E Checker\Jim	3/18/20	18 024 10:19:25 AM	17	16	15	14	

13	12	11	10	9	8	

A8 BOILER ROOM PLUMBING INSTALLATION PLAN 1/4" = 1'-0"







		8				
MARK		ROOM NAME	PAIR	HARDWAR E	т	
100	KIT	CHEN	NO	05	2	
101	CA	FETORIUM 1	NO	05	2	
102	CO	RRIDOR	YES	03-1	2	
103	EX	IT VESTIBULE	NO	06	3	
104	ΕX	IT VESTIBULE	NO	06	3	
105	VE	STIBULE	NO	06	3	
106	BR	IDGE CORRIDOR	NO	03-2	2	
107	BR	IDGE CORRIDOR	NO	03-2	2	
108	VE	STIBULE	YES	02	2	
109	CO	RRIDOR	NO	03-2	2	
110	ΕX	IT VESTIBULE	NO	02	3	
111	CO	RRIDOR	YES	03-1	2	
112	EN	TRY VESTIBULE	YES	CR01	3	
113	SE	CURED VESTIBULE	NO	CR02	3	
114	EN	TRY VESTIBULE	YES	CR01-1	1	
115	SE	CURED VESTIBULE	NO	CR02-1	1	
116	AD	MIN. ASST.	NO	05	2	



		THICK		GLASS								/ FIRE	
DTH	HEIGHT	NESS	MATERIAL	TYPE	FINISH	TYPE	MATERIAL	FINISH	HEAD	JAMB		RATING	COMMENTS
								(			2		
	7'-0"	1 3/4"	WD	G1	STAIN	А	НМ	PT-3	H13	H13	E13	45	EXIST. CONDITION PHOTO 21 / ME-AD000
	7'-0"	1 3/4"	WD	G1	STAIN	А	НМ	PT-3 (	H13	H13	E13	45	
	7'-0"	1 3/4"	WD	G1	STAIN	А	НМ	PT-3	H13	H13	E13	45	EXIST. CONDITION PHOTO 20 / ME-AD000
	7'-0"	1 3/4"	WD	G5	STAIN	В	НМ	PT-3 (	H13	H13	E13		EXIST. CONDITION PHOTO 19 / ME-AD000
	7'-0"	1 3/4"	WD	G5	STAIN	В	НМ	PT-3	H13	H13	E13		EXIST. CONDITION PHOTO 18 / ME-AD000
	7'-0"	1 3/4"	WD	G5	STAIN	В	НМ	PT-3	H13	H13	E13	/	EXIST. CONDITION PHOTO 17 / ME-AD000
	7'-0"	1 3/4"	WD	G1	STAIN	С	НМ	PT-3	H13	H13	E13	45	EXIST. CONDITION PHOTO 16 / ME-AD000
	7'-0"	1 3/4"	WD	G1	STAIN	С	НМ	PT-3 (	H13	H13	E13	45	EXIST. CONDITION PHOTO 15 / ME-AD000
	7'-0"	1 3/4"	WD	G5	STAIN	A	НМ	PT-3	H13	H13	E13	)	EXIST. CONDITION PHOTO 14 / ME-AD000
	7'-0"	1 3/4"	WD	G1	STAIN	В	НМ	PT-3	H13	H13	E13	45	EXIST. CONDITION PHOTO 13 / ME-AD000
	7'-0"	1 3/4"	WD	G5	STAIN	В	НМ	PT-3	H13	H13	E13		EXIST. CONDITION PHOTO 12 / ME-AD000
	7'-0"	1 3/4"	WD	G1	STAIN	А	НМ	PT-3	H13	H13	E13	45	EXIST. CONDITION PHOTO 11/ ME-AD000
	7'-0"	1 3/4"	ALUM	G2	PRE-FIN.	S1	ALUM	PRE-FIN.	G5	F10	E5	)	BALLISTIC; EXIST. CONDITION PHOTO 23 / ME-AD00
I	7'-0"	1 3/4"	ALUM	G2	PRE-FIN.	S1	ALUM	PRE-FIN.	G5	F10	E5		BALLISTIC; EXIST. CONDITION PHOTO 23 / ME-AD00
•	7'-0"	1 3/4"	WD	-	STAIN	А	HM	PT-3	H13	H13	E13	45	EXIST. CONDITION PHOTO 22 / ME-AD000
1	7'-0"	1 3/4"	WD	-	STAIN	А	HM	PT-3	H13	H13	E13	45	EXIST. CONDITION PHOTO 22 / ME-AD000
•	7'-0"	1 3/4"	WD	G1	STAIN	А	НМ	PT-3	H13	H13	E13	45	
					_							/	
										$\$	$\mathcal{A}$		
DITIO	NS AND D	IMENSI	ONS FOR EXIST	FING FRAM	ES, I.E HIN	GES, STR	IKE LOCATION	AND OPE	NINGS PF	RÍOR TO F	ABRICAT	ION	
	H FIRE RA	ATED CA	AULK, STEEL SC	CREWS OR	RIVETS. H	OLES GR	EATER THAN '	1/8" TO BE	FILLED W	IIHSIEE	L SCREW	/S, RIVE I	S OR STEEL PLATING

