DOCUMENT 00 90 00 ADDENDUM

ADDENDUM NO. [1] Date: February 16, 2021

RE: WESTERN TECHNICAL COLLEGE

SPARTA PUBLIC SAFETY EXPANSION

11177 COUNTY HWY A SPARTA, WISCONSIN 54656 HSR PROJECT NO. 20028

FROM: HSR Associates, Inc

100 Milwaukee Street La Crosse, WI 54603 (608) 784-1830

To: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated February 2021. Acknowledge receipt of this Addendum in the space provided on the bid form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of [4] pages, [1] Revised Bid Form, [4] specification sections, Division 22 Specifications reissued (separate file) and [21] 30 x 42 drawings.

CHANGES TO BIDDING REQUIREMENTS AND CONDITIONS OF THE CONTRACT:

- 1. Pre-bid attendance attached hereto.
- 2. Section 00 41 00 BID FORM
 - a. Revised Bid Form attached hereto

GENERAL REQUIREMENTS:

- 3. Section 01 20 00 PRICE AND PAYMENT PROCEDURES
 - a. Clarification: A separate pay application for each Contract written with the Owner shall be required.
- 4. Section 01 23 00 ALTERNATES
 - a. Revised section attached hereto

CHANGES TO SPECIFICATIONS:

- 5. Section 03 30 00 CAST-IN-PLACE CONCRETE
 - a. 3.06: Add the following;
 - F. Where topping slab is to be poured over precast plank receiving heating tubing, attach WWF6x6xW1.4xW1.4 flat sheets to precast planks in at least two places minimum (one at each end/opposite corners) to prevent sheets from shifting while installing piping). Heating piping shall be attached to wire sheets by Division 23.

6. Section 08 36 13 SECTIONAL DOORS

- a. 2.03, B: Change interior pane of glass to tempered. System shall be 5/8 inch insulated with tempered glass inside and out.
- b. 2.05: Delete paragraph C.

7. Section 09 21 16 GYPSUM BOARD ASSEMBLIES

- a. 3.08, A: Change "Restroom" to "All".
- 8. Division 22: Entire Division of specifications attached hereto as a separate file replacing original issue.
- 9. Section 23 21 11 Valves and Cocks (Revised Section attached hereto)
 - a. Added 2.02, Gate Valves (for Well Water System).
 - b. Edited 2.03, H.
- 10. Section 23 21 16 Hydronic Specialties (Revised Section attached hereto)
 - a. Added 2.11 Pump Specialties and 3.07 Suction Diffusers.

11. Section 23 55 13 Fuel Fired Duct Heaters

a. New Section attached hereto as part of Contract Documents.

12. Section 23 83 16 RADIANT FLOOR SYSTEMS

- a. 2.03: Remove reference to Fast Trak system. Attach tubing to wire mesh attached to precast plank. Replace entire section.
- b. 3.06: Delete first sentence and replace with the following: Secure tubing to wire mesh attached to precast plank.
 - i. Delete paragraphs 1 and 2.

CHANGES TO DRAWINGS

13. Sheet A101 FIRST FLOOR PLAN AREA B 30 x 42 attached hereto

- a. Revisions clouded on Drawing
- b. North wall of Ambulance parking: The Work on the exterior side of this wall, under the canopy between Grids B1 and B4 shall be included in the Base Bid amount.

14. Sheet A102 SECOND FLOOR PLAN 30 x 42 attached hereto

- a. Revisions clouded on Drawing
- b. Work at north wall on DAAT 202 side shall be included in Base Bid amount.
- c. Work on the Weight Room 200 side of the wall shall be included in the Alternate Bid amount.

15. Sheet A312 WALL SECTIONS (No Drawing reissued)

a. 3, 4 and 5A312: Change wall type A2 to A9 over cold formed framing parapet wall.
 Refer to A600 in this addendum for Wall type A9.

16. Sheet A600 WALL TYPES 30 x 42 attached hereto

- a. Revisions clouded on Drawing
- b. Add Wall Type A9.

17. Sheet A601 DOOR SCHEDULE 30 x 42 attached hereto

a. Revisions clouded on Drawing.

18. Sheet ID101 FIRST FLOOR FINISH FLOOR PLAN – AREA A 30 x 42 attached hereto

a. Revisions clouded on Drawing.

19. Sheet ID102 FIRST FLOOR FINISH FLOOR PLAN – AREA B 30 x 42 attached hereto

a. Revisions clouded on Drawing.

20. Sheet ID600 MASTER COLOR SCHEDULE 30 x 42 attached hereto

a. Revisions clouded on Drawing

21. Sheet M090 FIRST FLOOR PIPING REMOVAL - A 30 x 42 attached hereto

- a. Revisions clouded on Drawing
- b. Added removal keyed notes.
- c. Added equipment tags.

22. Sheet M091 FIRST FLOOR PIPING REMOVAL – B 30 x 42 attached hereto

- a. Revisions clouded on Drawing
- b. Added removal keyed notes.
- c. Added equipment tags.

23. Sheet M092 SECOND FLOOR PIPING REMOVAL 30 x 42 attached hereto

- a. Revisions clouded on Drawing
- b. Added removal notes.
- c. Added Mechanical Room 2M3 & 2M4 3D View.

24. Sheet M100 FIRST FLOOR PIPING REMODEL - A 30 x 42 attached hereto

- a. Revisions clouded on Drawing
- b. Added room names.

25. Sheet M103 ENLARGED MECHANICAL ROOM 2M4 30 x 42 attached hereto

- a. Revisions clouded on Drawing
- b. Changed boiler venting to vertical.

26. Sheet M106 SECOND FLOOR DUCTWORK REMODEL 30 x 42 attached hereto

- a. Revisions clouded on Drawing
- b. Added return grille "T" to DH-1 return duct.
- c. Clarified location of ductwork exposed outdoors on AHU-4.

27. Sheet M600 HVAC SCHEDULES 30 x 42 attached hereto

- a. Revisions clouded on Drawing
- b. 23 07 13 Duct Insulation and Liner Schedule. Updated insulation for FC-1, DF-1 and MAU-1.
- c. 23 55 13 Gas-Fired Duct Heaters Schedule. Updated schedule.

28. Sheet M601 HVAC SCHEDULES 30 x 42 attached hereto

- a. Revisions clouded on Drawing
- b. 23 37 13 Air Distribution Devices Schedule. Added Type "T" return grille.
- c. 23 21 23 HVAC Pumps Schedule. Added suction diffusers to Inline CC Vertical pumps.

29. Sheet E201 FIRST FLOOR POWER PLAN – AREA A 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. In Corridor #1H8, added missing keyed notes #53 and #54 for Panelboard 'D' feeder. Refer to clouded changes dated 2-15-2021.

30. Sheet E301 FIRST FLOOR LOW VOLTAGE PLAN – AREA A 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. Existing Electronic Door Card Reader located at entrance door into Storage Room #1S3 has been deleted and will be erased from this plan. Refer to clouded change dated 2-15-2021.
- c. Refer to Electronic Door Card Reader located at exterior pedestal at Vestibule 1H9. Keyed Note #30 has been added addressing underground exterior communication cable to be installed. Refer to clouded change dated 2-15-2021.

d. Refer to Student Lounge #116, keyed note #31 has been added to the 6D Data Jack located on East Wall. Refer to clouded change dated 2-15-2021.

31. Sheet E302 FIRST FLOOR LOW VOLTAGE PLAN – AREA B 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. In Elevator Vestibule 1H13, keyed note #9 has been added. Refer to clouded change dated 2-15-2021.

32. Sheet E303 SECOND FLOOR LOW VOLTAGE PLAN – AREA B 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. In Corridor #2H2, add One (1) Electronic Door Access Control Card Reader at the door entering Mechanical Room #2M4. Refer to clouded changes dated 2-15-2021.
- c. Existing Electronic Door Card Reader located at entrance door into Storage Room #2S2 has been deleted and will be erased from this plan. Refer to clouded change dated 2-15-2021.
- d. In Mechanical Room #2M1, delete keyed note #13. Refer to clouded change dated 2-15-2021

33. Sheet E501 SCHEDULES 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. Refer to Lighting Fixture Schedule:
 - a. Added Lighting Fixture Type 'ALB' for ambulance simulation. Refer to clouded change dated 2-15-2021.
- c. Refer to Motor and Equipment Schedule:
 - a. Refer to Boilers BLR-1 & BLR-2, refer to clouded changes dated 2-15-2021.

34. Sheet E502 SCHEDULES 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. Refer to Panelboard Schedule H:
 - a. Added One (1) 30/3 circuit breaker to energize TVSS. Refer to clouded change dated 2-15-2021.
- c. Refer to Panelboard Schedule N:
 - a. Added shunt-trip circuit breakers for Boilers. Refer to clouded change dated 2-15-2021.
- d. Refer to Panelboard Schedule EM:
 - a. Added new panelboard schedule. Refer to clouded change dated 2-15-2021

PRIOR APPROVALS

- 1. Section 09 65 66 RESILIENT ATHLETIC FLOORING
 - a. Regupol: Aktiv
- 2. Section 10 56 26 MOBILE STORAGE SHELVING
 - a. Aurora Storage Products

END OF DOCUMENT 00 90 00



Pre-Bid Meeting Sign-In Sheet

February 11, 2021

PROJECT:

WESTERN TECHNICAL COLLEGE

SPARTA PUBLIC SAFETY EXPANSION

11177 COUNTY HWY A **SPARTA, WISCONSIN 54656 HSR PROJECT NO. 20028**

BID OPENING: 2:00 PM, March 2, 2021

Name	Company	_
1. Dovg Rumbly	HBR	
2. Michelle Maland		-
3. Pyan wilkanny		_
4. Pon Knypniker		-
5. Toku F.		_
6. Take Beran	\checkmark	_
7. Mile Hoisington	JUNN A Dalsin miveredalsmoon	SUB
8. Mike Rockle	Wolter Power Systems / General	
9. AUSTIN HOFFMAN	FOWLER + HAMMER - bids @ fowler ha	mmer.com
10. Alex Bluske	Five Star Telecom	_
11. Mike Prindle	Poellinger Inc (Subcontractor)	-
12. Zygn Tilek	Platt Const.	
13. Krs Gantach	Prime Source Plumbing	=
14. SCOTT STORY	Kish + Sons	
15. Brico Pinnow	Wieser Brothers	=
16. Brof Starek	Wieser Brothers	
17. Terry Stluka	American	_
18. Stephen Bish	American	7.2.
19 PAT PODOLICA	Galiles	

Name	Company
20. Brian Haun	Western Technical College
21. Ryan Kelnhafen	Myskel Electric
22. SHANE ADLER	Plat const.
23. Chul Smith	Plutt const.
24. Kevin Kuderer	BHB Elec
25. Mark Clough	Stanel Electric
26. Will Woode	Lax Backhere ser.
27. DALTON LONDE	M\$5
28. Michael Diehl	Brick/Bros.
29.	
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DOCUMENT 00 41 00

BID FORM (Revised)

BIDDER:			
BID FOR SING	GLE PRIME CONTRACT		
PROJECT:	WESTERN TECHNICAL COLLEGE SPARTA PUBLIC SAFETY EXPANSION 11177 COUNTY HWY A SPARTA, WISCONSIN 54656		
TO:	O: WESTERN TECHNICAL COLLEGE PHYSICAL PLANT OFFICE 505 9 th STREET NORTH LA CROSSE, WISCONSIN 54601 ATT: JAY MCHENRY – DIRECTOR OF FACILITIES		
BASE BID			
local condition Drawings, all of hereby agrees satisfactory ex	ed, having examined the site where the Work is to be executed and become familiar with s affecting the cost of the Work and carefully examined the Project Manual, the Project other Bidding Documents and Addenda thereto prepared by the AE, HSR Associates, Inc., to provide all labor, materials, equipment and services necessary for the complete and ecution of the ENTIRE WORK, in the time frame stipulated in these contract documents, id stipulated sum of:		
	Dollars (\$00)		
ALTERNATE	BIDS		
The undersigned further agrees to perform the alternative portions of the Work as described in the Project Manual, Section 01 23 00 Alternates, for the following additions to the Base Bid sum stipulated above:			
Alternate No.	1 Exterior Upgrades		
Add	Dollars (\$00)		
Alternate No. 2	2A Interior Renovation		
Add	Dollars (\$00)		
Alternate No. 2B Restroom Renovation			
Add	Dollars (\$00)		
20028 Western	Technical College		

00 41 00-1

Sparta Public Safety Expansion

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Alternate No. 3 HVAC Remodel	(For Base Bid & Alternates #	F1, #ZA, #ZB)	
Add	Dollars (\$	00)	
Alternate No. 3A HVAC Duct Cle	aning		
Deduct	Dollars (\$	00)	
Alternate No. 3B Plate Heat Excl	nanger		
Deduct	Dollars (\$.00)	
Alternate No. 3C Flow Meters			
Deduct	Dollars (\$.00)	
Alternate No. 3D Infrared Radian	nt Tube Heaters		
Deduct	Dollars (\$.00)	
Alternate No. 3E Well Water Pip	e Conversion		
Deduct	Dollars (\$.00)	
BIDDER'S CHOICE SUBSTITU	TIONS		
The following Bidder's Choice requirements set forth in Docur 3.3.4:		•	-
Substitution No. S1:			
For substituting			
Type Prend Catalog No.			
Type, Brand, Catalog No			
Manufacturer			
Deduct from BASE BID		Dollars (\$	00)

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In submitting this Bid, the undersigned agrees to:

- 1. Hold this Bid open for **30** days.
- 2. Accept the provisions of Instructions to Bidders regarding disposition of Bid Security.
- 3. Enter into and execute an Agreement, if awarded on the basis of this Bid, and to furnish Performance and Labor and Material Payment Bonds according to the Supplementary Conditions.
- 4. Accomplish work according to the Contract Documents.
- 5. Complete the work by the time stated in Section 01 10 00 Summary of the Work.

Receipt of the following Addenda and inclusion of their provisions in this Bid is hereby acknowledged:

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END OF DOCUMENT 00 41 00

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SECTION 01 23 00 ALTERNATES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Description of Alternates.

1.02 RELATED REQUIREMENTS

A. Document 00 21 13 - Instructions to Bidders: Instructions for preparation of pricing for Alternates.

1.03 DESCRIPTION

- A. Conditions of the Contract and pertinent portions of Sections in Division One of this Project Manual, apply to the Work of this Section as fully as though repeated herein.
- B. This Section describes the alternates to the project. Refer to the Product/Execution Articles of the Contract Documents for information pertaining to the work of each alternate.
- C. Each proposal under an alternate shall include all incidental work and all adjustments necessary to accommodate the changes. All work shall meet the requirements of the Contract Documents.
- D. Each alternate proposal shall be submitted as an individual cost for the particular alternate and shall be proposed under the premise that no other alternates have been accepted. Should the work of an alternate called for by the Bid Form not affect the cost of the work, "No Change" shall be stated.
- E. Owner may, at his option, vary the scope of the work by authorizing alternates which will add to the work, deduct from the work or substitute materials, equipment or methods.
- F. Immediately following Award of Contract, awarded Contractor shall prepare and distribute to each party involved, notification of the status of each alternate. Indicate whether alternates have been accepted, rejected, or deferred for consideration at a later date. Include a complete description of negotiated modifications to alternates, if any.

1.04 ACCEPTANCE OF ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.

1.05 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Exterior Upgrades

1. The following work shall be priced under Alternate No. 1: State the amount to be added to the base bid to complete the remodeling of approximately 18,360 SF of existing exterior wall surface. Work includes, but is not limited to creating new openings in exterior CMU wall, application of furring and foamed-in-place insulation; installation of (4) types of Owner purchased metal panel systems that include mineral wool insulation, sub-framing, panels and related trim; new storefront aluminum windows A, B, C and E, exterior aluminum storefront doors as scheduled, new overhead door 122D; new downspouts replacing existing and installation of salvaged heat tape; Alternate No. 1 Work is contingent upon Wisconsin Technical College State Board approval and will become a separate contract upon approval.

B. Alternate No. 2A: Interior Renovation

1. The following work shall be priced under Alternate No. 2A: State the amount to be added to the base bid to complete the remodeling of approximately 22,500 SF of space on the 1st floor and 5,400 SF of space on the 2nd floor, with exception of Restrooms in Alternate 2B. Work includes, but is not limited to demolition, wall furring on interior side of exterior walls with drywall returns at new window openings, window sills, interior HM windows, wood doors, casework, resilient, carpet and fluid applied flooring, painting, new wall coverings, suspended ceiling systems and linear metal ceilings, fire protection revisions, and required power, lighting and data revisions including coordination with owner's furniture vendor. Alternate No. 2A Work is contingent upon Wisconsin Technical College State Board approval and will become a separate contract upon approval.

C. Alternate No. 2B: Restroom Renovation (Mens 1R3 & Womens 1R4)

1. The following work shall be priced under Alternate No. 2B: State the amount to be added to the base bid to remodel approximately 415 SF of existing restroom space. Work includes, but not limited to new solid surface vanities, toilet partitions, tile floors, suspended ceiling system and painted walls.

D. Alternate No. 3: HVAC Remodel (For areas included in Base Bid & Alternates #1, #2A & #2B)

1. The following work shall be priced under Alternate No. 3: State the amount to be added to the base bid to complete the HVAC Remodel project and complete all related Work shown on the Drawings pertaining to the Base Bid and Alternates #1, #2A and #2B. Work includes, but is not limited to demolition, equipment and ductwork installation, in-floor heat system including under slab insulation, HVAC revisions, coordination with owner's furniture vendor and subcontractors; new generator. Refer to Section 01 10 00 for Owner direct purchases. Alternate No. 3 Work is contingent upon Wisconsin Technical College State Board approval and will become a separate contract upon approval.

E. Alternate No. 3A: HVAC Duct Cleaning

1. The following work shall be priced under Alternate No. 3A: State the amount to be deducted from the base bid to eliminate duct cleaning in entire building.

F. Alternate No. 3B: Plate Heat Exchanger

1. The following work shall be priced under Alternate No. 3B: State the amount to be deducted from the base bid to delete Plate Heat Exchanger HX-2. Related branch piping and isolation valves remain in place as shown.

G. Alternate No. 3C: Flow Meters

1. The following work shall be priced under Alternate No. 3C: State the amount to be deducted from the base bid to eliminate flow meters. Provide isolation valves for future meter installation.

H. Alternate No. 3D: Infrared Radiant Tube Heaters

1. The following work shall be priced under Alternate No. 3D: State the amount to be deducted from the base bid to remove Radiant Tube Heaters ITH-1 thru 4 from project. Work shall include boosting size of UH-1 & 2 to Model BDP-300.

I. Alternate No. 3E: Well Water Pipe Conversion

 The following work shall be priced under Alternate No. 3E: State the amount to be deducted from the base bid to eliminate steel well water pipe conversion to polypropylene.

J. <u>Alternate No. 4: Emergency</u> Generator

1. The following work shall be priced under Alternate No. 4: State the amount to be deducted from the base bid to eliminate the fire pump emergency generator and related equipment, switches and cabinets. Refer to 3E001, photos 4 and 5 and Emergency Generator Riser Diagram Keynotes for scope of work.

PART 2 PRODUCTS - NOT USED PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 23 21 11

VALVES AND COCKS: MANUAL

PART 1: GENERAL

1.01 RELATED DOCUMENTS

- A. Conditions of the Contract and portions of Division One of this Project Manual apply to this Section as though repeated herein.
- B. The requirements of Section 23 05 00 apply to this Section.

1.02 SUBMITTALS

- A. Submit in accord with Section 01 30 00.
- 1. Submit each Specifications Section under separate cover to streamline review process. See Section 23 05 00.
 - 2. Shop drawings and descriptive product data describing all material furnished under Part 2 of this Section.

PART 2: PRODUCTS

2.01 VALVES (GENERAL USE)

- A. Heating Water, Chilled Water, and Condenser Water:
 - 1. Check valves, 2 1/2" and smaller, Milwaukee #509/1509, Swing, bronze body and disc, 200# WOG. Suitable for installation in a horizontal or vertical line with flow upward.
 - 2. Check valves, 3" and larger, Crane Model Duo-Chek II, Wafer, Non-Slam, cast iron body, 316 stainless steel plates and springs with Buna-N insert seat, 200# WOG

2.02 GATE VALVES (4" - 10")

- A. Based on Watts Series 405-NRS-RW.
- B. The valve body is epoxy coated internally and externally. The valve is operated by a handwheel. The resilient wedge disc design offers both positive seating and resistance against high differential pressure. Valve is best suited for service in either the fully open or closed position but is suitable for use as a throttling valve. This series is recommended for irrigation, potable water, water distribution service, feed lines and sewage disposal facilities.
- C. ASTM A126 Class B Iron (Flanged x Flanged). ASTM A536 65-45-12 Ductile Iron (Flanged x Groove). Full port flow, low head loss. Epoxy coated, internal and external. Vulcanized encapsulated resilient wedge. In-line serviceable. Boss-tapped and plugged. MSS-SP-70 conformance.
- D. Flanged by flanged valve bodies shall comply with ASTM A126; flanged by grooved valve bodies shall comply with ASTM A536. Valve shall be pressure rated to 200psi (14 bars) CWP with an operating temperature up 140°F. Valve shall have a non-rising stem, full port flow and epoxy coated.

2.03 BALL VALVES (1/2"-2")

- A. Based on products by Jomar, Apollo.
- B. 1/2" 2" valves to have threaded or soldered ends.

- C. Jomar 100 series valves, 100% lead tested, lifetime leak-proof stem, dezincification resistant brass alloy, triple sealing stem with Viton o-rings and Teflon seal, 600 WOG, blow out proof stem, meets NSF 372, 61-8 and 61 annex G standards, ANSI B1.20.1, wetted surface contains less than .25 lead content, accessories available.
- D. Apollo 70 series valves; Adjustable stem packing gland, blow out proof stem design, chromium plated ball, 100% factory tested, maximum pressure 600 psi CWP, 150 psi SWP, max temperature 500F.
- E. Apollo international valves will not be acceptable.
- F. Provide 1-1/4" stem extensions on all hot water piping insulated with more than 1/2" thick insulation.
- G. Provide 1-1/4" stem extensions on all insulated cold water piping.
 - 1. Include a non-rotating sleeve with cap around the stem extensions on all insulated cold water piping to facilitate vapor barrier seal, similar to:
 - a) Apollo (-11) 2 1/4" "Thermal-Seal" insulating tee handle
- H. Contractor shall install ball valve stem extensions as specified.

2.04 BALL VALVES (WATER, AIR) 2-1/2" AND LARGER

A. Use Butterfly Valves as specified below.

2.05 CAST IRON BUTTERFLY VALVES (WATER)

- A. Based on product by Nibco.
 - 1. Anvil Gruvlok, Apollo, Bray, Crane, Grinnell, Hammond, Keystone, Milwaukee, Mueller Steam specialty (Muessco), Centerline, DeZurik, and Victaulic equals, as acceptable.
 - 2. Anvil Gruvlok Series 7700, Centerline series 200, DeZurik BOS-CL, Keystone Fig. 222, Nibco LD2000 (2-1/2"-12")/LC1000 (14" and above), Bray Series 31H, Victaulic 300 series (2-1/2"-12")/709 series (14"-24"), FNW Fig. 732.
- B. Lug-wafer butterfly valves, 2-1/2" and larger, cast iron body; extended neck; molded in EPDM rubber body seal/liner; Teflon, nylatron, or acetal bearings; aluminum bronze disc; stainless steel shaft; copper upper and lower bushings; brass collar bushing; EPDM rubber stem seal; lugs shall match number of holes in pipe flange.
 - 1. Disk to be bronze, aluminum-bronze, nickel plated ductile iron, cast iron with welded nickel edge, or 316 stainless steel.
 - 2. Nylon coated ductile iron discs are not acceptable. Polymid or polyamide coated valves are not acceptable.
- C. Valve assembly to be bi-directionally bubble tight to 150 psig with no downstream flange/pipe attached.
- D. Wafer type butterfly valves, are not acceptable.
- E. Provide ten (10) position lever-lock handle operator; valves 8" and larger, use worm gear operator with positive indicator, and adjustable stop.
- F. Maximum pressure to be 150 psi.
- G. Provide 1-3" stem extensions on all hot water piping insulated with more than 1/2" insulation thickness. Valve stem extensions shall allow operators to clear insulation without interference.
- H. Provide 1-3" stem extensions on all insulated cold water piping.
 - 1. Include a non-rotating sleeve with cap around the stem extensions on all insulated cold water piping to facilitate vapor barrier seal, similar to:
 - a) Nibco "NIB-SEAL" insulated-handle with equivalent ball valves or equal

2.06 BUTTERFLY VALVES (WATER, AIR) 2" AND SMALLER

A. Use Ball Valves as specified above.

2.07 DRAIN VALVES

- A. Use 3/4 inch ball valve (as specified above) with threaded hose adapter except strainer blowdown valves to be the same size as the blowdown connection.
 - 1. Provide pressure rated hose cap, 150 PSIG @ 180°F, at each drain valve location.
 - 2. Hose cap shall have a chain.

PART 3: EXECUTION

3.01 VALVES (GENERAL USE)

- A. Use globe valves where throttling is required and ball/butterfly valves for isolating equipment or main/branch piping. Install valves as indicated, full size of piping.
- B. Install all valves with the stem in the upright position. Valves may be installed with the stem in the horizontal position only where space limitations do not allow installation in an upright position or where large valves are provided with chain wheel operators. Where valves 2-1/2" and larger are located more than 12'-0" above mechanical room floors, install valve with stem in the horizontal position and provide a chain wheel operator. Valves installed with the stems down, will not be accepted.
- C. Install swing check valves in the horizontal position, unless otherwise shown on drawings, with hinge pin horizontally perpendicular to centerline of pipe. Install for proper direction of flow.
- D. Heating/Ventilating/Cooling:
 - 1. Install ball/butterfly valves on steam supply to all equipment, coils and radiation.
 - 2. Install ball/butterfly, or globe valves on water connections, to isolate all hydronic equipment, coils and radiation.
 - 3. Install valves on steam, water and refrigeration piping systems to isolate large zones or circuits and others as indicated on Drawings and Details.
- E. Install stem extensions when shipped loose from valve.
- F. Prior to flushing of piping systems, place all valves in the full-open position.

3.02 BALL VALVES

A. Piping and valve on cold water piping up to and including the non-rotating sleeve shall be insulated and sealed with vapor barrier mastic.

3.03 GATE VALVES

A. For use only as isolation valves on Well Water System.

3.04 DRAIN VALVES

A. Provide drain valves for complete drainage of all systems. Locations of drain valves include low points of piping systems, equipment locations specified or detailed including reheat coils and all strainer locations, other locations required for drainage of systems.

3.05 BUTTERFLY VALVES

- A. For balancing on larger mains; lug wafer type.
- B. To isolate equipment or larger mains; lug wafer or two-flange type.

3.06 VALVES (GROOVED PIPING)

- A. Install as recommended by manufacturer.
- B. Butterfly and ball valves: Compressed air, water, approved gas and process.

3.07 SILENT (NON-SLAM) CHECK VALVES

- A. Install in pump discharge, horizontal or vertical, as required.
- B. Do not use with sewage ejectors.

3.08 WHEEL CHAIN CONTROL

- A. All new valves, 2-1/2" and larger, connecting to boiler header (or in connection with chiller condenser and chilled water piping), located more than twelve (12) feet above floor, shall be fitted with wheel, guides and chain.
- B. Chain to extend to within 6 feet of floor.

END OF SECTION 23 21 11

SECTION 23 21 16

HYDRONIC SPECIALTIES - HOT / CHILLED

PART 1: GENERAL

1.01 RELATED DOCUMENTS

- A. Conditions of the Contract and portions of Division One of this Project Manual apply to this Section as though repeated herein.
- B. The requirements of Section 23 05 00 apply to this Section.

1.02 SUBMITTALS

- A. Submit in accord with Section 01 30 00.
 - Submit each Specifications Section under separate cover to streamline review process. See Section 23 05 00.
 - 2. Shop drawings and descriptive product data describing all material furnished under Part 2 of this Section.
 - 3. Include all the Products, including the following in the submittal:
 - a) Balancing Stations.
 - b) Coil Kits.
 - c) Hose Kits.
 - d) Flexible Connections.

PART 2: PRODUCTS

2.01 BALANCING STATIONS (CBV)

- A. Based on product by Tour & Andersson.
 - 1. Anvil Gruvlok, Armstrong, Caleffi, Nibco, and Nexus equals are acceptable.
- B. 2" and smaller: Bronze body construction with threaded or soldered connections. Valves shall be Y-globe style with a "fixed orifice" venturi, connections for portable differential pressure meter with integral seals and multi-turn (minimum 4, 1440°) hand wheel. Differential pressure ports shall be color-coded for high and low pressure. Valves to have adjustable, tamper proof memory stop feature to allow valve to be closed for service and then reopened to set point without disturbing balance position. Valves to have calibrated name plate to assure specific valve settings. Valves to be leak-tight at full rated working pressure.
 - 1. Variable area 90-degree turn ball valves with taps on each side are not acceptable.
- C. 2-1/2" and larger: Use butterfly valves as specified in Section 23 21 11 along with flow sensor specified in this section.
- D. Valves shall be provided with molded insulation to permit access for balance and read-out if available as an accessory.
- E. Valves shall be designed for a minimum 200 psig at 250 degrees F.

2.02 COIL HOOK-UP CONNECTIONS

- A. Victaulic Koil-Kits Series 799 or 79V may be used at coil connections. The kit shall include a Series 786/787/78K circuit balancing valve, Series 78Y Strainer-Ball, Series 78U Union-Port fitting, with Series 78T ball valve and required coil hoses. A Style 793 and/or 794 differential pressure controller shall be provided as required. A meter shall be provided by the valve manufacturer that shall remain with the building owner after commissioning.
 - 1. RWV and Nexus Valve coil kits with static balancing valve is an approved equal.

2.03 HOSE KITS

A. Stainless steel fire rated braided hose with reinforced EPDM core of diameter and length listed on plans. As manufactured by IMI Flow Design, Griswold Controls, or Nexus Valve.

2.04 FLOW SENSORS

- A. Based on product by B&G.
 - 1. Armstrong, Flow Design Inc., Nibco, Nexus, Taco and Tour & Andersson equals are acceptable.
- B. Flow sensor shall be a cast iron wafer type flow sensor designed for low-pressure drop operation. Pipe sizes 2 ½" to 12".
- C. Flow sensor shall be equipped with brass readout valves (with integral check valve for taking differential pressure readings across the orifice of the flow sensor.
- D. The flow sensor shall be designed to operate at a maximum working pressure of 300 psig at 250 degrees F. Flow meter shall be furnished with a calibrated nameplate for determining an accurate system flow rate.

2.05 SYSTEM AIR VENTS

- A. Based on products by American Tube and Controls, Armstrong, Bell and Gossett, Hoffman, Keeney, or Thrush.
- B. Manual Ball Valve Vents
 - 1. Provide 1/4" ball valves for manual venting of air handling unit coils and where indicated elsewhere on drawings and details. Reference specifications Section 23 21 11.
- C. Automatic Vents
 - 1. Cast iron body with nonferrous internal parts, designed to vent air automatically with float principle without allowing air to enter the system, rated at not less than 125 psig at 220°F.

2.06 EXPANSION LOOPS (PIPE BENDS)

A. Provide expansion loops and anchors as indicated on the drawings and details.

2.07 WATER FILTER (WF-1)

- A. Based on product by ClearBlue Filtration.
 - 1. Multi-Round Bag Filter Housing Model BH-1836-0073.
- B. ASME Section VIII, Div. 1 design code with U-Stamp manufactured and certified by LaGrange Products, Inc.
- C. 304 stainless steel housing with a glass bead blast exterior finish. Bottom inlet / opposite bottom outlet fanged connections. Formed support legs minimizes sharp edges for improved safety while servicing filters and provides for stronger paint adhesion. Closure hardware is SA193 B7 eye-bolts and SA194 2H eye nuts. Differential pressure gauge bracket. Hardware and davit system zinc plated black dichromate. Heavy service electropolished 316 Stainless Steel baskets with 9/64" perforations. Viton® O-ring cover and basket seals for higher temperatures and greater media compatibility. Swing bolt closure for fast bag replacement. 150 psi design operating pressure @ 300° F design operating temperature.
 - 1. 4" Inlet and outlet.
 - 2. 2" NPT clean drain, 1/2" NPT dirty drain and 1/2" NPT vent.
 - 3. 1/2" NPT differential pressure gauge ports.

- D. Compatible with commercially available standard size #2 liquid bag filters (7"Dia. x 32"L) with sewn in metal or plastic rings or perforated mesh lined baskets.
 - 1. Based on bag size #2 with a surface area of 4.4 ft² each.
- E. Furnish 50 disposable bag filters, three capable of removing 98% of all solids that are 5 microns or larger in size. Filter media to be suitable for filtering 220 GPM at less than 0.2 psig. Provide a positive seal on each bag to minimize bypass. Assembly to function properly with pressure differentials to 150 psi.

2.08 STRAINERS (GENERAL USE)

- A. Based on products by:
 - 1. Armstrong, Grinnell, Keckley, Metra-Flex, Mueller "Muessco", Nibco, Sarco, Titan FCI, Eaton, Gruvlok and Vitaulic equals are acceptable.
- B. Y type; cast iron body; stainless steel screens; bolted or threaded screen retainer tapped for a blow off valve; threaded body in sizes through 2 inch and rated at not less than 175 psi WOG; flanged body in sizes over 2 inch and rated at not less than 125 psi WOG at 240°F. Screen to be 20 mesh for line sizes 2 inch and less, 0.125 inch perforations for line sizes 2-1/2 inch through 4 inch, and 0.25 inch perforations for line sizes 5 inch and larger.
- C. Basket type: Cast iron body with clamped cover; stainless steel screens; body tapped for a blow off valve; 125 psig flanged body for 2 1/2" and larger; 0.125 inch perforations for line sizes 2-1/2 inch through 4 inch, and 0.25 inch perforations for line sizes 5 inch and larger.

2.09 CHILLED WATER BUFFER TANK

A. The chilled water buffer tank is existing and being reused.

2.10 BOILER BUFFER TANK

A. The boiler buffer tank is existing and being reused.

2.11 PUMP SPECIALTIES

- A. Suction Diffusers:
 - 1. Based on product by Bell and Gossett.
 - a) Anvil Gruvlok, Armstrong, Taco, Titan Flow Control, Victaulic equals are acceptable.
 - 2. Bell and Gossett Type X with cast iron body, steel orifice cylinder and inlet vanes, fine mesh bronze start-up strainer, stainless steel or galvanized steel normal strainer, bolted flange for strainer removal and cleaning, blowdown connection, inlet pressure gauge connection, rated not less than 125 psi working pressure at not less than 250°F.
 - 3. Include adjustable support foot.
 - 4. Unit outlet shall be sized to match pump inlet, unless pressure drop exceeds 1 psi.

PART 3: EXECUTION

3.01 EXPANSION LOOPS

A. Install where indicated on the drawings or details, locating anchors and guides as detailed.

3.02 BALANCING STATIONS

- A. Install where indicated on Working Drawings. Valve shall be tight shut-off balancing valve.
- B. Calibrated balancing valves are not to be used as equipment isolation valves.
- C. See Section 23 07 19 HVAC PIPE INSULATION for insulation over calibrated balancing valves.

3.03 FLOW SENSORS

A. Install where indicated on Working Drawings. Provide tight shut-off balancing valve in conjunction with balancing device.

3.04 SYSTEM AIR VENTS

A. MANUAL BALL VALVE VENTS:

- 1. For system mains, manual type installed at all high points, accessible with extension piping where required.
- 2. Install on air handling coils and where indicated elsewhere as shown on drawings and details.

B. AUTOMATIC VENTS:

- 1. Install on the top of air separators on systems using bladder type expansion tanks. Install at other locations as indicated on the drawings or details. All locations to have a ball valve installed upstream of the vent for maintenance purposes.
- 2. On systems with compression tanks with air control systems vs. air elimination systems, automatic air vents shall **NOT** be used.

3.05 WATER FILTERS

- A. Install water filter in a bypass arrangement on well water where indicated on the drawings.
- B. Allow sufficient clearance at the top of the unit for filter removal and replacement. Anchor filter support stand to a housekeeping pad.
- C. Install a shutoff valve upstream and downstream of the filter and a flow sensor in the return line. Install a pressure gauge with gauge valves, piped so the pressure differential across the filter can be read.
- D. Install the 50 micron filters after the piping system has been cleaned and flushed.
- E. Install one set of 5 micron filters when the 50 micron filters need replacing. Give the remaining 5 micron filters to the Owner.

3.06 MULTIPURPOSE VALVES (TRIPLE DUTY)

A. Pumps will not have Triple-Duty Valves, use check valves instead.

3.07 SUCTION DIFFUSERS

- A. Install suction diffusers on all floor-mounted heating water pumps, and at other pumps where indicated.
- B. Provide sufficient space for removal of the strainer.
- C. The Contractor shall remove the start-up strainer, after initial system cleaning, after 20 days of operation.
 - 1. Remove start-up screens and attach them to the diffuser with a metal tie or zip tie to verify they have been removed.
- D. Install adjustable support foot below the suction diffuser so the weight of the suction piping does not rest on the pump suction connection.
- E. Install a capped drain valve in the blowdown connection with pressure rated hose connection, see Sections 23 21 11 and 23 21 12.
- F. Install a pressure gauge across the suction diffuser, valved so that a single gauge can be used to read the inlet pressure and the outlet pressure across the strainer. Use gauge valves as specified with the gauges. This gauge can be the same one used to read pressures across the pump. Select gauge range appropriate to the system pressures.

G. Open the drain valve and blowdown the strainer after system cleaning and again after 30 days of operation. If the unit is furnished with a fine mesh startup strainer, remove this strainer after the system has been flushed and cleaned.

3.08 STRAINERS

- A. Install ahead of pumps, (not required if strainer is at air separator), pressure reducing stations, steam traps (except thermostatic), and other equipment (where indicated).
- B. Install all strainers where indicated on the project details, allowing sufficient space for the screens to be removed. Rotate screen retainer where required by the installation so blowdown can remove accumulated dirt from the strainer body.
- C. Provide extension leg with blowdown drain valve and pressure rated hose connection cap, as specified in Sections 23 21 11 and 23 21 12. Valve to be same size as the tapping.
- D. For hot water heating systems, use coarse mesh screen (approx. 1/8 inch). When pumps are provided with suction diffusers, strainers are not required.

END OF SECTION 23 21 16

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SECTION 23 55 13

FUEL FIRED DUCT HEATERS

PART 1: GENERAL

1.01 RELATED DOCUMENTS

- A. Conditions of the Contract and portions of Division One of this Project Manual apply to this Section as though repeated herein.
- B. The requirements of Section 23 05 00 apply to this Section.

1.02 SUBMITTALS

- A. Submit in accord with Section 01 30 00.
 - 1. Shop drawings and descriptive product data describing all material furnished under Part 2 of this Section.

1.03 WARRANTY

A. Gas fired duct heaters heat exchangers warranted for five years. Remainder of unit heater components warranted for 1 year from startup.

PART 2: PRODUCTS

2.01 GAS-FIRED POWER VENTED DUCT HEATERS

- A. Based on product by Modine.
 - 1. Hastings, Rapid, Reznor, Rupp, Sterling, Temprite, Trane, Weather-Rite equals are acceptable.
- B. Unit to be of model, type, size and capacities listed in schedule on Drawings.
- C. Mechanical Configuration.
 - 1. Furnace(s) section with 80% minimum efficiency provided by an indirect-fired heat exchanger with dimpled tube pattern for efficient heat.
 - 2. Blower section containing a supply blower and motor with bottom support to provide rigidity. The blower connection shall be flexible with 1/4" gasket to prevent sound transmission into the supply ductwork.
 - Electrical section isolated from the supply air stream including a hinged access door. Separate knock-outs shall be provided for both high and low voltage electrical connections. Provisions must be included for side access electrical connections for slab mounted units and bottom electrical connections for roof curb mounted or suspended units.
- D. Indoor Separated Combustion Venting Arrangements.
 - 1. The unit casing shall be designed for the venting/ combustion air arrangement to be separated from the room atmosphere. The unit shall have a factory mounted power exhauster enclosed in the unit casing to prevent the motor from being subjected to the room atmosphere. The unit shall also include a factory mounted differential pressure switch designed to prevent pilot and main burner ignition until positive venting has been proven. A removable gasketed door shall contain both the vent and combustion air connection collars to allow for servicing of the power exhauster.
 - The unit shall include a factory supplied horizontal concentric vent kit allowing for a single penetration of the wall for both the combustion air supply and flue product exhaust.

- 3. The unit shall include a factory supplied vertical concentric vent kit allowing for a single penetration of the roof for both the combustion air supply and flue product exhaust.
- 4. The unit shall include two factory supplied vent caps for both the combustion air supply and flue product exhaust.

E. Indoor Unit Casing

- 1. The duct furnace(s) unit casing shall be constructed of not less than 20 gauge aluminized steel.
- 2. The blower and cooling sections shall be constructed of not less than 18 gauge aluminized steel.
- 3. All blower and cooling section exterior casing parts shall be painted with a baked-on gray-green polyester powder paint (7 mil thickness) for corrosion resistance.
- 4. All blower section access side doors shall have heavy duty, draw tight, quarter turn latches.
- 5. Blower section shall include 1 inch, 1-1/2 lb density acoustical and thermal insulation. The insulation shall be made of glass fibers bonded with a thermosetting resin and overlaid with a fire-resistant black acrylic coating for additional strength. The acrylic coating must meet the requirements of ASTM C 665 for fungi resistance.
- 6. The duct furnace(s) shall include separate access doors for the power exhauster, electrical controls, and gas train to allow for simplified service of the unit.
- 7. All duct furnace(s) doors shall be fully gasketed to prevent infiltration of the room air into the combustion process

F. Furnace Section

- 1. The heat exchanger(s) shall be made of 20 gauge 409 stainless steel tubes and headers. The thermal efficiency of the unit(s) shall be a minimum of 80% efficient for all air flow ranges. The restrictor shall be sized to maintain the unit(s) efficiency of 80% in the temperature range of 20°F-60°F or 20°F-100°F. Each heat exchanger tube shall be individually and directly flame-fired. The heat exchanger tube shall be contoured and dimpled to provide efficient heat transfer and crimped to allow for thermal expansion and contraction. The flue collector box shall be made of 20 gauge aluminized steel.
- 2. The heat exchanger(s) seams and duct connections shall be certified to withstand 3.0" W.C. external static pressure without burner flame disturbance.
- 3. The burner(s) shall be made of the same material as the heat exchanger with a thickness of not less than 28 gauge. Burner(s) shall have non-clogging, slotted ports with a stainless steel separator strip designed for good lighting characteristics without noise of extinction for both natural and propane gas. The burner(s) shall be located for service removal without disconnecting the main gas supply piping.
- 4. The bottom of the unit shall be angled for draining any condensation to the corners of the unit. The condensation shall be removed through openings in the bottom pan. The drain pan shall be constructed of 20 gauge aluminized steel.
- 5. The gas manifold(s) piping shall allow for gas piping connection on the side of the unit for slab mounted units and through the unit bottom for roof curb mounted or suspended units. The manifold(s) shall include a ground joint union for ease of servicing of the orifices without removing the burner assembly or main gas valve string.
- 6. The orifices shall be provided on both natural and propane gas with adjustable air shutters for controlling the primary air mixture. The ignition controller(s) shall be 100% shut-off with continuous retry for natural gas.
- 7. The solid state ignition system shall intermittently light the pilot each time the system is energized. Once the pilot is proven, the main gas valve shall open and allow gas flow to the main burner.

- 8. The unit gas controls shall be provided with the following: Electronic Modulation 4-20 mA External Input. Allows for control of the duct furnace firing rate by a Building Management System (BMS). Utilizes an electronic modulating/regulating gas control, combination gas valve, an ignition control, modulating signal conditioner, and an inverted 4-20 mA input signal provided by a BMS (4 mA being high fire and 20 mA being low fire). The gas controls can modulate the gas flow between 40% and 100% full fire. When the BMS thermostat (supplied by others) is satisfied, the BMS heat contact (supplied by others) opens to cut power to the combination gas valve which prevents gas flow to both the main and pilot burners.
- 9. A 1/8" manifold pressure tap shall be located after all valves to test the manifold pressure directly before the main burner orifices.
- 10. The unit shall be provided with a single gas control transformer to step down the supply voltage to 24V.
- 11. Separate line voltage and low voltage terminal strips shall be provided to prevent the unit from being miswired for premium unit and low voltage terminals for standard units.
- 12. Automatic reset high limit switch.
- 13. Provide the following factory installed options:
 - a) A low gas pressure switch(s) prevents the burner from firing if the inlet gas pressure is below the minimum gas pressure.
 - b) A high gas pressure switch(s) which prevents the burner from firing if the manifold gas pressure is above the maximum manifold gas pressure.
 - c) An air flow proving switch shall be an adjustable differential pressure switch to insure air flow across the heat exchanger before allowing the gas controls to be energized.
- 14. The gas pressure shall be between 6-7" W.C for natural gas. The unit shall be orificed for up to 2000' elevation above sea level.

G. Blower Section.

- 1. The blower motor type shall be Single-speed, ODP, high efficiency (ODP HE). The motor wiring shall be in flexible metal BX conduit. The motor shall be provided with an adjustable motor sheave to allow for minor adjustment of the blower RPM at the jobsite. The motor shall be controlled by a time delay relay and motor starter.
- The unit shall contain a single supply blower that is supported from the bottom to prevent the blower flanges supporting the weight of the motor. The blower shall be a double width, double inlet (DWDI), forward curved, belt driven, assembly with:
 - a) Heavy duty, pillow block ball bearings.
 - b) Motor and blower vibration isolation using rubber-in-shear grommets.
 - c) Extended grease lines which include external zerk fittings for applying grease.
- 3. The unit shall be provided with a filter rack with 2" MERV 8 filters.
- H. Mounting Base: The unit shall be provided with a 14 gauge, galvanized steel, rail type mounting base for slab installation with lifting and anchoring holes.
- Electrical.
 - 1. All electrical components shall carry UL, ETL, or CSA listing.
 - 2. The unit shall be supplied with a disconnect switch to disconnect power to the unit for servicing.
 - 3. A single step down transformer shall be provided for all unit controls.

PART 3: PART 3: EXECUTION

3.01 GENERAL

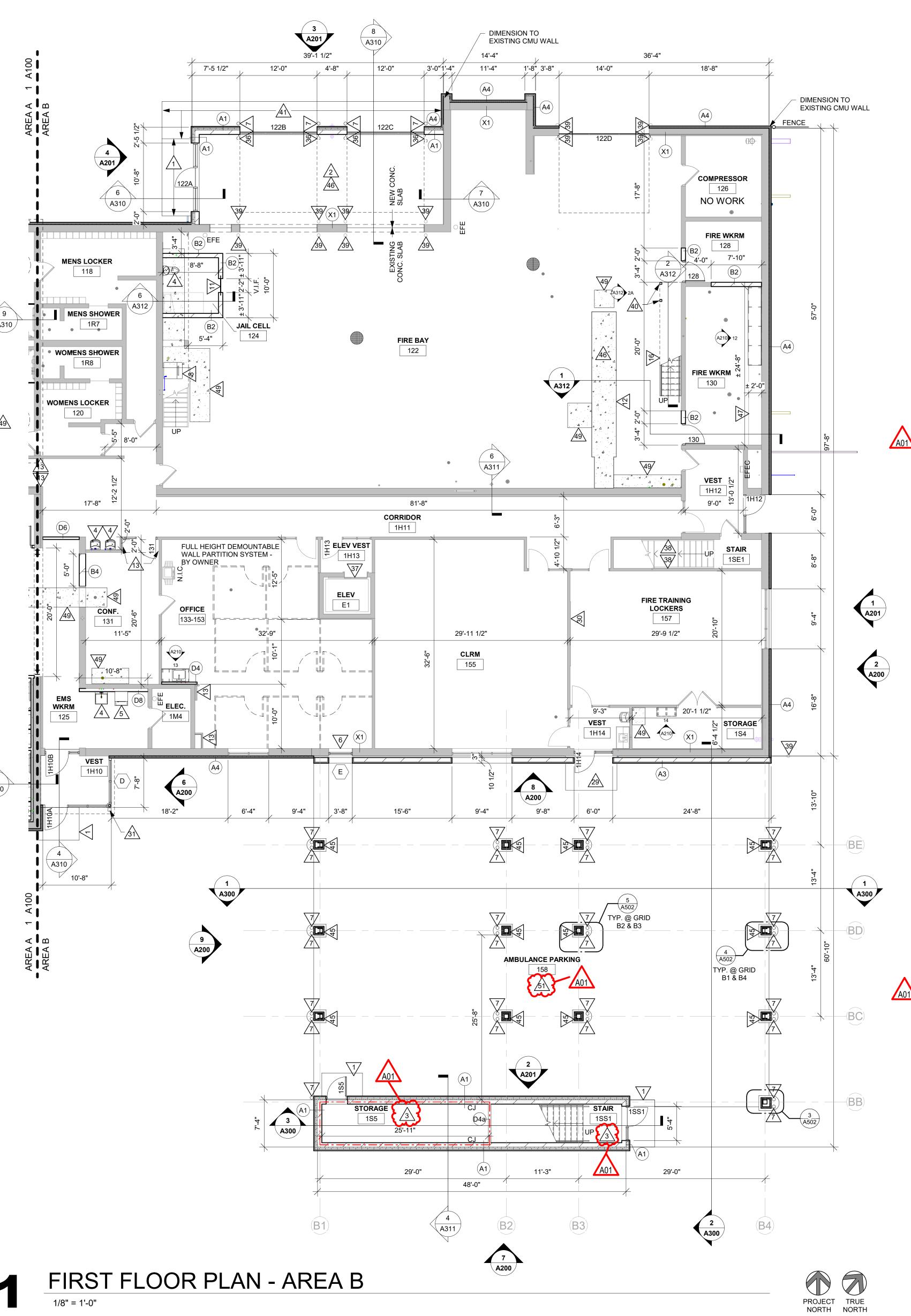
- A. Install units and connect gas, combustion air and vent piping as instructed by the manufacturer and in compliance with applicable code requirements.
- B. Mount unit off floor of mezzanine with vibration isolation. Level unit.
- C. Pipe all condensate drains full size to nearest floor drain.
- D. Connect combustion air and venting to outside of building as indicated on the drawings and terminate per the manufacturer's instructions.
- E. Wiring of unit under Division 26, Electrical.
- F. All wiring and electrical components required in conjunction with heater gas controls under this Section.
- G. Installation of control wiring shall be supervised by unit supplier.
- H. Gas piping to unit burner by plumbing trade. Provide gas regulators as required.

3.02 START-UP

A. Unit supplier shall provide check, test and start-up service.

END OF SECTION 23 55 13

NOTE: PAINT ALL EXISTING HM DOOR FRAMES



PLAN GENERAL NOTES:

- REFER TO OVERALL PLANS FOR FIRE RATING LOCATIONS AND ACCESSIBILITY ROUTES.
- SEE ID SHEETS FOR FLOOR AND WALL FINISH LAYOUTS.
- LOOSE FURNISHINGS EXCEPT AS NOTED SHALL BE PROVIDED AND INSTALLED BY THE OWNER.
- FIXED EQUIPMENT IS SHOWN ON THIS PLAN FOR COORDINATION. SEE SHEETS **A100** FOR ALL EQUIPMENT NOTES.
- UNLESS NOTED OTHERWISE RESTROOM FLOORS SHALL BE SLOPED A MIN. 1/16": 12" TO FLOOR DRAINS - TO "CENTER", IF NO FLOOR DRAINS. PAINT ALL EXPOSED STEEL LINTELS.
- EXTEND ALL WALLS TO DECK UNLESS NOTED OTHERWISE. SEE **A501** FOR TOP OF WALL DETAILS.
- INSTALL BULLNOSE CMU AT ALL OUTSIDE CORNERS W/O TILE AND AT DOOR JAMBS AS DETAILED. NO BULLNOSE AT WINDOW
 - SEE **A501** FOR WALL CONTROL JOINT DETAILS. SEE PLANS AND
- ELEVATIONS FOR CJ LOCATIONS. CJ = CONTROL JOINTS.
- SEE **A5XX** FOR TYPICAL HEAD FLASHING AND THROUGH-WALL FLASHING ISOMETRIC DETAILS.
- SEE STRUCTURAL FOR SLAB CONTROL JOINTS. GENERAL CONTRACTOR TO PROVIDE CONCRETE EQUIPMENT PADS/CURBS AS REQUIRED FOR MECHANICAL / ELECTRICAL EQUIPMENT- VERIFY SIZE, PROFILE & LOCATION WITH
- VERIFY EXACT SIZE AND LOCATION OF ALL MECHANICAL / PLUMB AND ELEC.OPENINGS - GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FINISH AT ALL VISIBLE AREAS. ALL OPENING SHALL BE SEALED AFTER UTILITY INSTALLATION

MECHANICAL / ELECTRICAL.

LEGEND:

LLGLIND.	
(A)—	SYMBOL INDICATES WALL TYPE - SEE SHEET A600 FOR WALL TYPE DETAILS.
A	SYMBOL INDICATES WINDOW TYPE. SEE SHEET A600 FOR WINDOW FRAME ELEVATIONS.
\triangle	SYMBOL INDICATES CONSTRUCTION NOTE THIS SHEET
	1 HOUR WALL

WALL SECTION

BUILDING SECTION CONCRETE IN-FILL - SEE PLUMBING / STRUCTURAL SHEETS

WOOD FRAMING IN-FILL - SEE STRUCTURAL SHEETS PRECAST CONCRETE IN-FILL - SEE STRUCTURAL SHEETS EXISTING FIRE EXTINGISHER

EXISTING FIRE EXTINGISHER CABINET

KEY NOTES PLAN INSTALL NEW CONCRETE FROST STOOP - SEE STRUCTURAL SHEETS. INSTALL NEW CONCRETE SLAB-ON-GRADE W/ RADIANT IN-FLOOR HEAT STACKABLE WASHER / DRYER (N.I.C.) - INSTALLATION BY G.C. - SEE ELECTRICAL & PLUMBING SHEETS. INSTALL NEW SOLID SURFACE WINDOW STOOL - SEE ID SHEETS. INSTALL NEW BOLLARD & CONC. CURB - SEE CIVIL SHEETS. ICE MACHINE (N.I.C.) - HOOK-UPS BY G.C. - SEE ELECTRICAL & PLUMBING INSTALL NEW HIGH DENSITY MOBILE STORAGE UNIT. EXISTING TEACHING STATION (N.I.C.) INSTALL SALVAGED JAIL CELL DOOR. INSTALL NEW SLAB-ON-GRADE OVER PIT INFILL - SEE STRUCUTRAL PATCH, PREP & PAINT WALL AT REMOVED WALL / CASEWORK. INSTALL HALF-WALL W/ PARTIAL HEIGHT WALL FRAMING SUPPORT - TOP @ 48" NOMINAL - CAP WALL W/ SOLID SURFACE TOP. MOBILE TEACHING STATION - BY OWNER (N.I.C.) INSTALL NEW METAL STAIR AND RAILING UP TO EXISTING MEZZANINE. PATCH CONCRETE SLAB. DOWEL NEW SLAB TO EXISTING SLAB W/ #4 X 1'-0" DOWELS @ 18" O.C. DRILL & EPOXY IN EXISTING SLAB W/ 4" AMBULANCE SIMULATOR (N.I.C.) - SEE ELECTRICAL SHEETS FOR HOOK-UPS. COORDINATE W/ OWNER FOR INSTALLATION.

INSTALL WALL MOUNTED HEAD UNIT - OWNER PROVIDED. COORDINATE W/ OWNER FOR FINAL INSTALL LOCATION. SEE ELECTRICAL SHEETS. TEACHING STATION (N.I.C.) INSTALL CUBICLE CURTAIN ATTACHED TO TRACK ON DROPPED CEILING NON-OPERABLE DEMONSTRATION FIXTURE - SEE PLUMBING SHEETS. INSTALL CAST STONE BENCH TOP/SEAT. SEE SHEET A501 FOR SLOPE

VENDING MACHINE (N.I.C.) - SEE ELECTRICAL SHEETS. INSTALL OPERABLE WALL PARTITION. PATCH CONCRETE SLAB - SEE STRUCTURAL SHEETS. EXISTING COLUMN TO REMAIN. INSTALL NEW CARD ACCESS ON NEW POST. SET POST IN CONCRETE.

EXISTING CONCRETE STOOP AND FOOTINGS TO REMAIN.

EXISTING BULLETIN / WHITE BOARD TO REMAIN. INSTALL NEW DOWNSPOUTS & SALVAGED HEAT TAPE AFTER METAL PANEL IS INSTALLED. SEE ELECTRICAL SHEETS FOR HEAT TAPE INSTALL NEW 8" THICK WITH REINFORCING CONCRETE EQUIPMENT PAD - SEE MECHANCIAL SHEETS. INSTALL NEW TACKSTRIP AT 9'-2". SEE NOTE ON PLAN FOR APPROX. LINEAR DIMENSION.

INSTALL STAINLESS STEEL HANRAIL SYSTEM W/ MESH INFILL PANEL -SEE ELEVATION 2A102 SEMI RECESSED FIRE EXTINGUISHER CABINET - SEE SPEC INSTALL NEW BOLLARD - SEE 20A502 FOR DETAIL. PAINT EXISTING ELEVATOR DOORS - SEE MASTER COLOR SCHEDULE. PAINT EXISTING HANDRAILS - SEE MASTER COLOR SCHEDULE. INSTALL NEW PLASTIC BOLLARD COVER TO EXISTING BOLLARDS. 4" TUBE STEEL COLUMN STAIR SUPPORT - PAINT.

INSTALL NEW PRECAST PLANK W/ CONCRETE TOPPING - SEE STRUCTURAL SHEETS. MODIFY AND INSTALL SALVAGED GUARDRAIL & TOEKICK. SEE PLAN FOR APPROX. DIMENSIONS - V.I.F. INSTALL NEW WOOD FRAMING SYSTEM - SEE STRUCTURAL SHEETS. THROUGH WALL MECH. LOUVER @ WALL INFILL - COORDINATE W/ MECHANICAL. INSTALL NEW METAL WALL PANEL COLUMN ENCLOUSURE - SEE DETAILS

APPLY REACTIVE HARDENER/SEALER TO NEW CONCRETE SLAB. PAINT TOP & FRONT FACE OF EXISTING 4" H CONCRETE BASE. WHITE BOARD INTEGRATED IN WALL PANELS - 3'-0" A.F.F. AND 4'-0" HIGH - BY PANEL SUPPLIER PATCH CONCRETE SLAB TO MATCH ADJACENT SLAB CONSTRUCTION & MATERIAL - SEE PLUMBING SHEETS. 50 INSTALL NEW PRECAST PLANK/TOPPING W/ RADIANT IN-FLOOR HEAT SEE MECHANICAL & STRUCTURAL SHEETS.
51 INSTALL NEW CONCRETE PAVEMENT - SEE CIVIL SHEETS. HSR ASSOCIATES INC. 100 MILWAUKEE STREET LA CROSSE, WISCONSIN PHONE: 608.784.1830 FAX: 608.782.5844 www.hsrassociates.com

Consultant:

ARCHITECTURE

INTERIOR DESIGN

HSR Project Number: 20028 Project Date: FEBRUARY 2021

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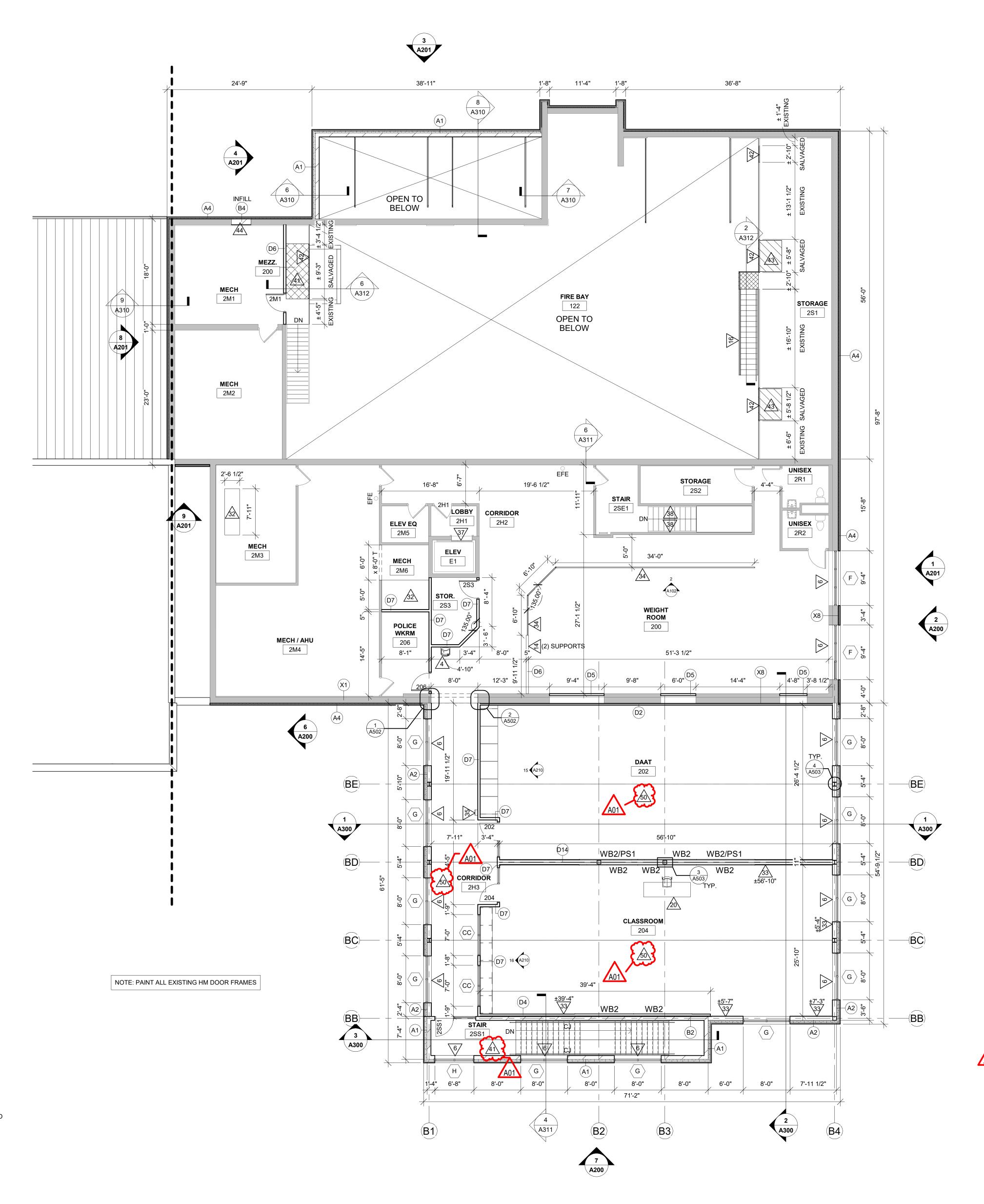
MM/RW/MPL

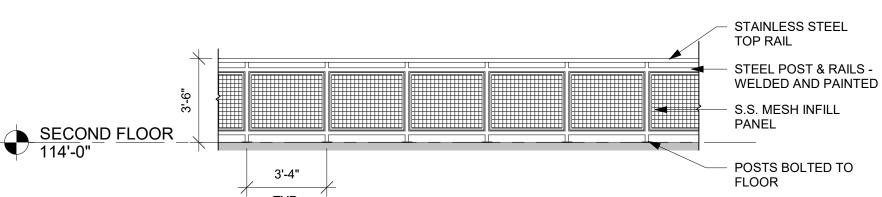
KEY PLAN

A01 ADDENDUM 1

VARIES

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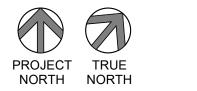




2 RAILING ELEVATION

SECOND FLOOR PLAN

1/8" = 1'-0"



PLAN GENERAL NOTES:

- A. REFER TO OVERALL PLANS FOR FIRE RATING LOCATIONS AND ACCESSIBILITY ROUTES.
- SEE ID SHEETS FOR FLOOR AND WALL FINISH LAYOUTS.LOOSE FURNISHINGS EXCEPT AS NOTED SHALL BE PROVIDED
- AND INSTALLED BY THE OWNER.

 D. FIXED EQUIPMENT IS SHOWN ON THIS PLAN FOR COORDINATION.
- SEE SHEETS A100 FOR ALL EQUIPMENT NOTES.

 E. UNLESS NOTED OTHERWISE RESTROOM FLOORS SHALL BE
- UNLESS NOTED OTHERWISE RESTROOM FLOORS SHALL BE SLOPED A MIN. 1/16" : 12" TO FLOOR DRAINS - TO "CENTER", IF NO FLOOR DRAINS. PAINT ALL EXPOSED STEEL LINTELS.
- F. EXTEND ALL WALLS TO DECK UNLESS NOTED OTHERWISE. SEE **A501** FOR TOP OF WALL DETAILS.
- . INSTALL BULLNOSE CMU AT ALL OUTSIDE CORNERS W/O TILE AND AT DOOR JAMBS AS DETAILED. NO BULLNOSE AT WINDOW
- JAMBS.

 SEE **A501** FOR WALL CONTROL JOINT DETAILS. SEE PLANS AND
- ELEVATIONS FOR CJ LOCATIONS. CJ = CONTROL JOINTS.

 SEE **A5XX** FOR TYPICAL HEAD FLASHING AND THROUGH-W
- SEE **A5XX** FOR TYPICAL HEAD FLASHING AND THROUGH-WALL FLASHING ISOMETRIC DETAILS.
- SEE STRUCTURAL FOR SLAB CONTROL JOINTS.

 GENERAL CONTRACTOR TO PROVIDE CONCRETI
- GENERAL CONTRACTOR TO PROVIDE CONCRETE EQUIPMENT PADS/CURBS AS REQUIRED FOR MECHANICAL / ELECTRICAL EQUIPMENT- VERIFY SIZE, PROFILE & LOCATION WITH MECHANICAL / ELECTRICAL.
- VERIFY EXACT SIZE AND LOCATION OF ALL MECHANICAL / PLUMB AND ELEC.OPENINGS - GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FINISH AT ALL VISIBLE AREAS. ALL OPENING SHALL BE SEALED AFTER UTILITY INSTALLATION

LEGEND:

(A)—	SYMBOL INDICATES WALL TYPE - SEE SHEET A600 FOR WALL TYPE DETAILS.
	SYMPOLINDICATES WINDOW TYPE SEE SI

SYMBOL INDICATES WINDOW TYPE. SEE SHEET A600 FOR WINDOW FRAME ELEVATIONS.

SYMBOL INDICATES CONSTRUCTION NOTE THIS SHEET

WALL SECTION

--- 1 HOUR WALL

BUILDING SECTION

CONCRETE IN-FILL - SEE PLUMBING / STRUCTURAL SHEETS

WOOD FRAMING IN-FILL - SEE STRUCTURAL SHEETS

PRECAST CONCRETE IN-FILL - SEE STRUCTURAL SHEETS

EFE EXISTING FIRE EXTINGISHER
EFEC EXISTING FIRE EXTINGISHER CABINET

KEY NOTES PLAN INSTALL NEW CONCRETE FROST STOOP - SEE STRUCTURAL SHEETS.

INSTALL NEW CONCRETE SLAB-ON-GRADE W/ RADIANT IN-FLOOR HEAT & INSULATION - SEE MECHANICAL & STRUCTURAL SHEETS.

INSTALL NEW CONCRETE SLAB-ON-GRADE - SEE STRUCTURAL SHEETS.

INSTALL NEW PLUMBING FIXTURE - SEE PLUMBING SHEETS.

STACKABLE WASHER / DRYER (N.I.C.) - INSTALLATION BY G.C. - SEE ELECTRICAL & PLUMBING SHEETS.

INSTALL NEW SOLID SURFACE WINDOW STOOL - SEE ID SHEETS.

INSTALL NEW BOLLARD & CONC. CURB - SEE CIVIL SHEETS.

ICE MACHINE (N.I.C.) - HOOK-UPS BY G.C. - SEE ELECTRICAL & PLUMBING SHEETS

INSTALL NEW BOLLARD & CONC. CURB - SEE CIVIL SHEETS.

ICE MACHINE (N.I.C.) - HOOK-UPS BY G.C. - SEE ELECTRICAL & PLUMBING SHEETS.

INSTALL NEW HIGH DENSITY MOBILE STORAGE UNIT.

EXISTING TEACHING STATION (N.I.C.)

EXISTING TEACHING STATION (N.I.C.)

INSTALL SALVAGED JAIL CELL DOOR.

INSTALL NEW SLAB-ON-GRADE OVER PIT INFILL - SEE STRUCUTRAL SHEETS.

PATCH, PREP & PAINT WALL AT REMOVED WALL / CASEWORK.

INSTALL HALF-WALL W/ PARTIAL HEIGHT WALL FRAMING SUPPORT - TOP @ 48" NOMINAL - CAP WALL W/ SOLID SURFACE TOP.

MOBILE TEACHING STATION - BY OWNER (N.I.C.)

INSTALL NEW METAL STAIR AND RAILING UP TO EXISTING MEZZANINE.

PATCH CONCRETE SLAB. DOWEL NEW SLAB TO EXISTING SLAB W/ #4 X 1'-0" DOWELS @ 18" O.C. DRILL & EPOXY IN EXISTING SLAB W/ 4" EMBEDMENT.

AMBULLANCE SIMULATOR (N.I.C.) - SEE ELECTRICAL SHEETS FOR

AMBULANCE SIMULATOR (N.I.C.) - SEE ELECTRICAL SHEETS FOR HOOK-UPS. COORDINATE W/ OWNER FOR INSTALLATION.

INSTALL WALL MOUNTED HEAD UNIT - OWNER PROVIDED. COORDINATE W/ OWNER FOR FINAL INSTALL LOCATION. SEE ELECTRICAL SHEETS.

TEACHING STATION (N.I.C.)

INSTALL CUBICLE CURTAIN ATTACHED TO TRACK ON DROPPED CEILING

NON-OPERABLE DEMONSTRATION FIXTURE - SEE PLUMBING SHEETS.

INSTALL CAST STONE BENCH TOP/SEAT. SEE SHEET A501 FOR SLOPE DIRECTION.

VENDING MACHINE (N.I.C.) - SEE ELECTRICAL SHEETS.

INSTALL OPERABLE WALL PARTITION.

PATCH CONCRETE SLAB - SEE STRUCTURAL SHEETS.

EXISTING COLUMN TO REMAIN.

INSTALL NEW CARD ACCESS ON NEW POST. SET POST IN CONCRETE.

EXISTING CONCRETE STOOP AND FOOTINGS TO REMAIN.

EXISTING BULLETIN / WHITE BOARD TO REMAIN.

INSTALL NEW DOWNSPOUTS & SALVAGED HEAT TAPE AFTER METAL

PANEL IS INSTALLED. SEE ELECTRICAL SHEETS FOR HEAT TAPE COORDINATION.

INSTALL NEW 8" THICK WITH REINFORCING CONCRETE EQUIPMENT PAD - SEE MECHANCIAL SHEETS.

INSTALL NEW TACKSTRIP AT 9'-2". SEE NOTE ON PLAN FOR APPROX. LINEAR DIMENSION.

INSTALL STAINLESS STEEL HANRAIL SYSTEM W/ MESH INFILL PANEL SEE ELEVATION 2A102

SEMI RECESSED FIRE EXTINGUISHER CABINET - SEE SPEC.
INSTALL NEW BOLLARD - SEE 20A502 FOR DETAIL.
PAINT EXISTING ELEVATOR DOORS - SEE MASTER COLOR SCHEDULE.

PAINT EXISTING ELEVATOR DOORS - SEE MASTER COLOR SCHEDULE.

PAINT EXISTING HANDRAILS - SEE MASTER COLOR SCHEDULE.

INSTALL NEW PLASTIC BOLLARD COVER TO EXISTING BOLLARDS.

4" TUBE STEEL COLUMN STAIR SUPPORT - PAINT.

INSTALL NEW PRECAST PLANK W/ CONCRETE TOPPING - SEE STRUCTURAL SHEETS.

42 MODIFY AND INSTALL SALVAGED GUARDRAIL & TOEKICK. SEE PLAN FOR APPROX. DIMENSIONS - V.I.F.
43 INSTALL NEW WOOD FRAMING SYSTEM - SEE STRUCTURAL SHEETS.
44 THROUGH WALL MECH. LOUVER @ WALL INFILL - COORDINATE W/MECHANICAL.
45 INSTALL NEW METAL WALL PANEL COLUMN ENCLOUSURE - SEE DETAILS

A502.

APPLY REACTIVE HARDENER/SEALER TO NEW CONCRETE SLAB.

PAINT TOP & FRONT FACE OF EXISTING 4" H CONCRETE BASE.

WHITE BOARD INTEGRATED IN WALL PANELS - 3'-0" A.F.F. AND 4'-0" HIGH - BY PANEL SUPPLIER

PATCH CONCRETE SLAB TO MATCH ADJACENT SLAB CONSTRUCTION &
MATERIAL, SEF PLIMBING SHEETS

INSTALL NEW PRECAST PLANK/TOPPING W/ RADIANT IN-FLOOR HEAT SEE MECHANICAL & STRUCTURAL SHEETS.

INSTALL NEW CONCRETE PAVEMENT - SEE CIVIL SHEETS.

KEY PLAN

ARCHITECTURE

ENGINEERING

INTERIOR DESIGN

HSR ASSOCIATES INC.

100 MILWAUKEE STREET

LA CROSSE, WISCONSIN PHONE: 608.784.1830

FAX: 608.782.5844

www.hsrassociates.com

Consultant:

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HSR Project Number:

Project Date:

Key Plan:

20028

FEBRUARY 2021

MM/RW/MPL

Revisions:

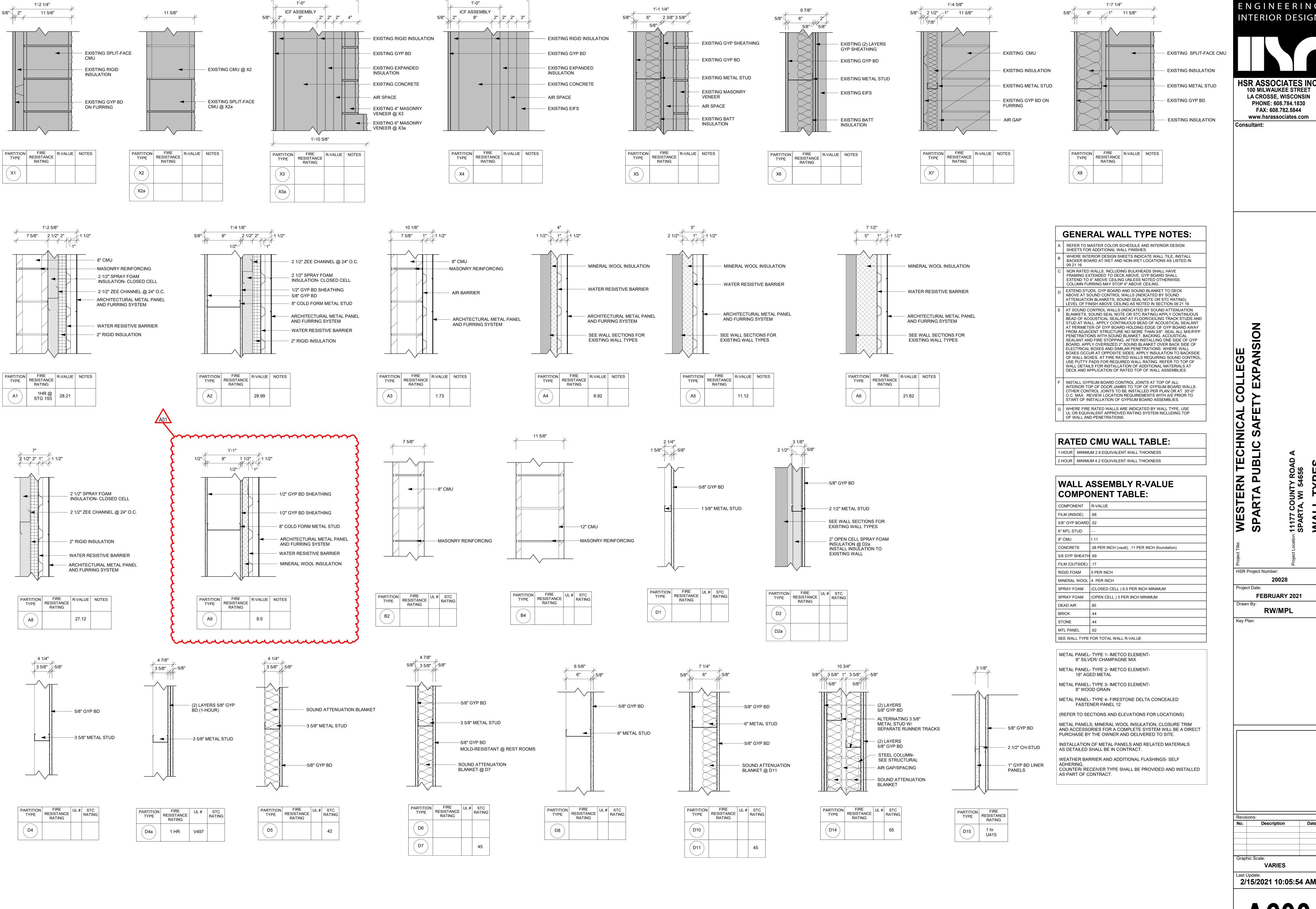
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1'-8 5/8"

1'-7 5/8"

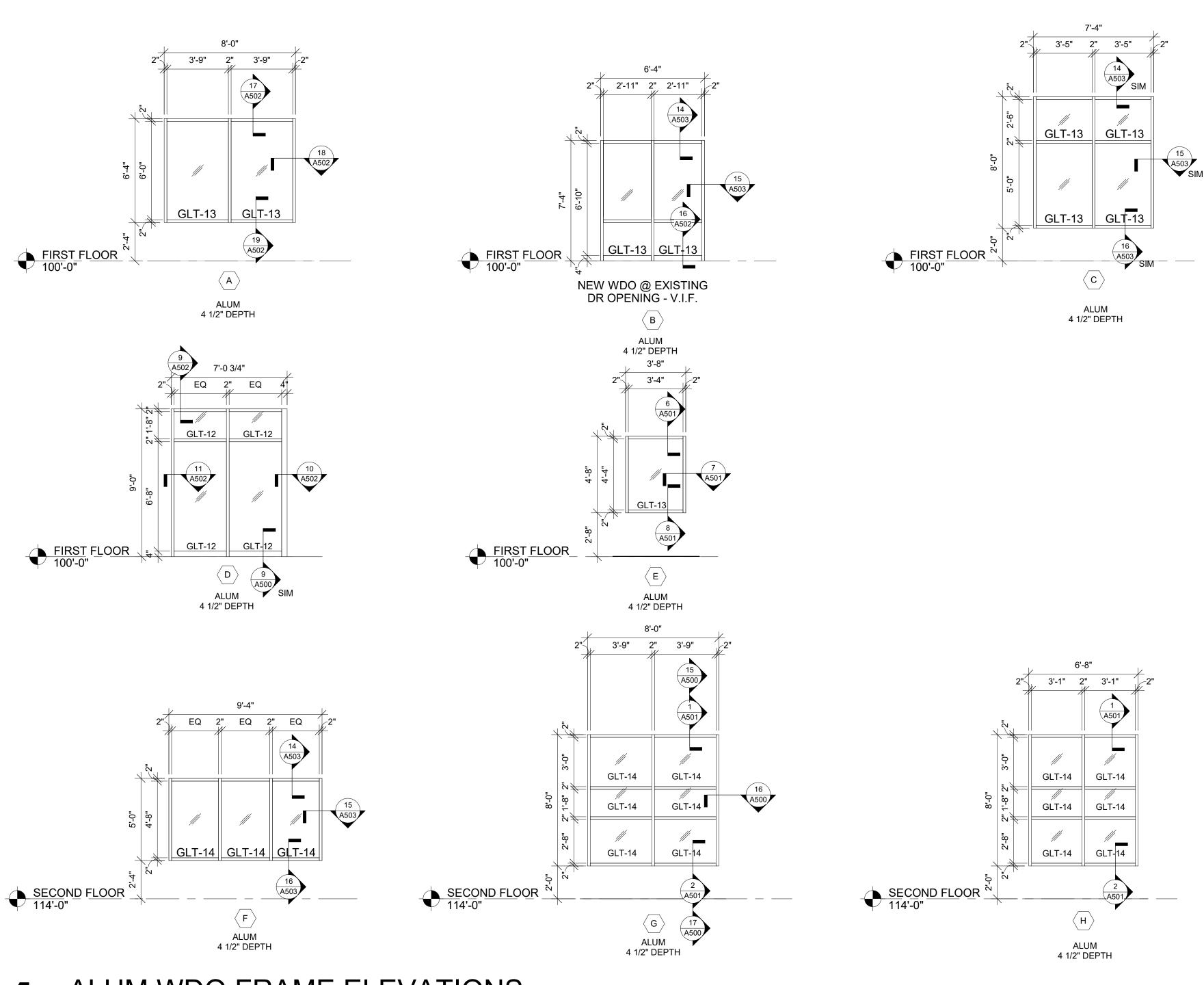
INTERIOR DESIGN

HSR ASSOCIATES INC. 100 MILWAUKEE STREET LA CROSSE, WISCONSIN PHONE: 608.784.1830 FAX: 608.782.5844 www.hsrassociates.com

20028 **FEBRUARY 2021**

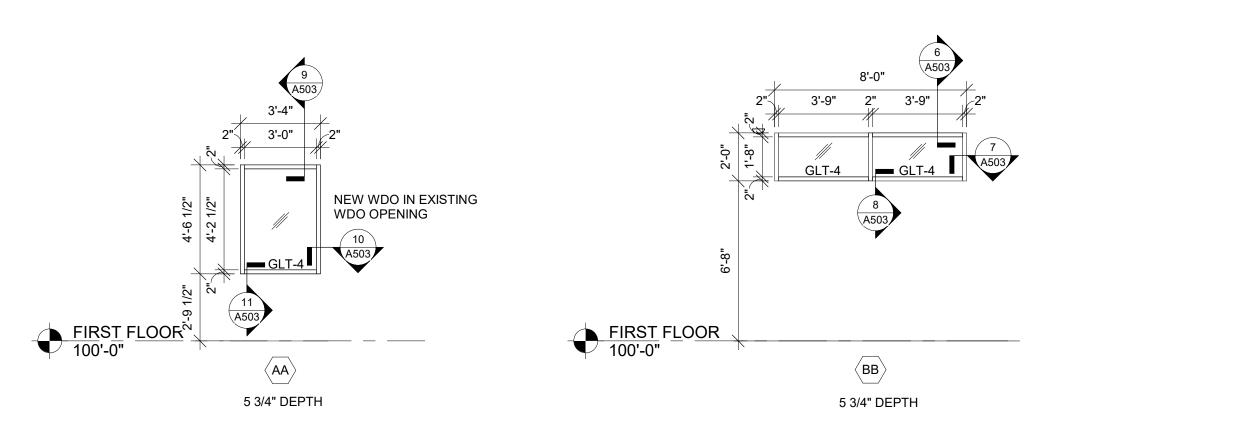
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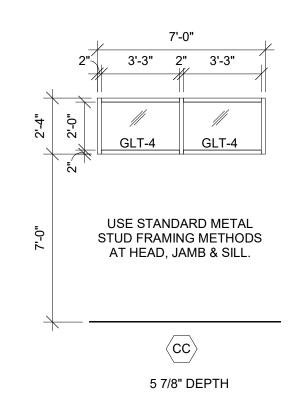
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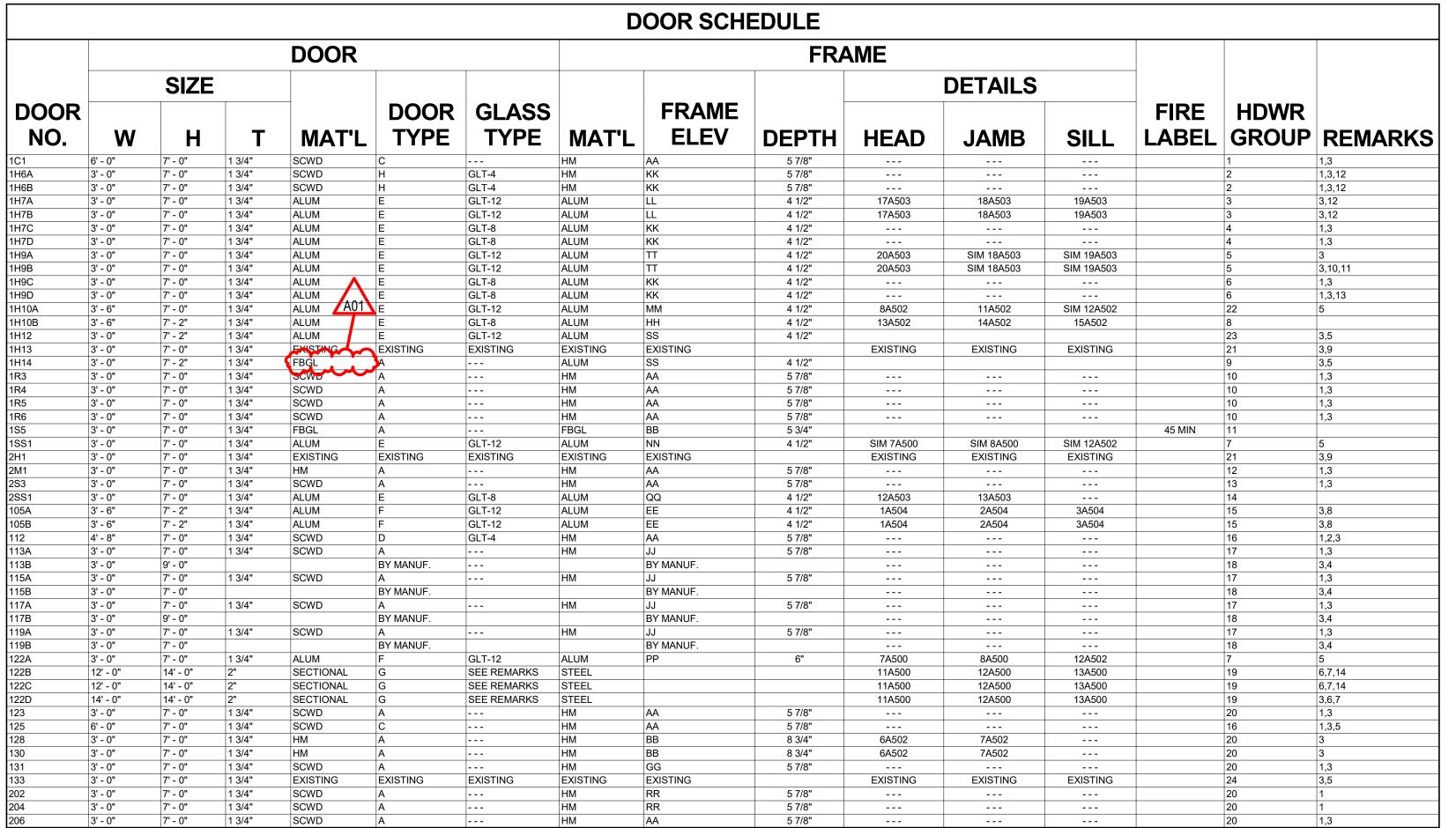
ALUM WDO FRAME ELEVATIONS

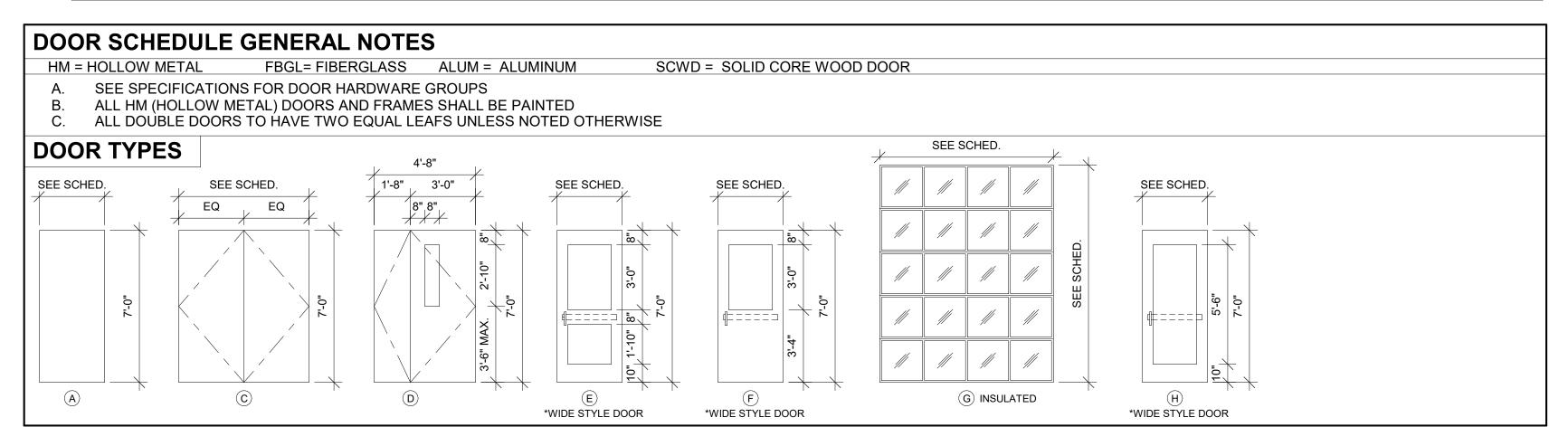
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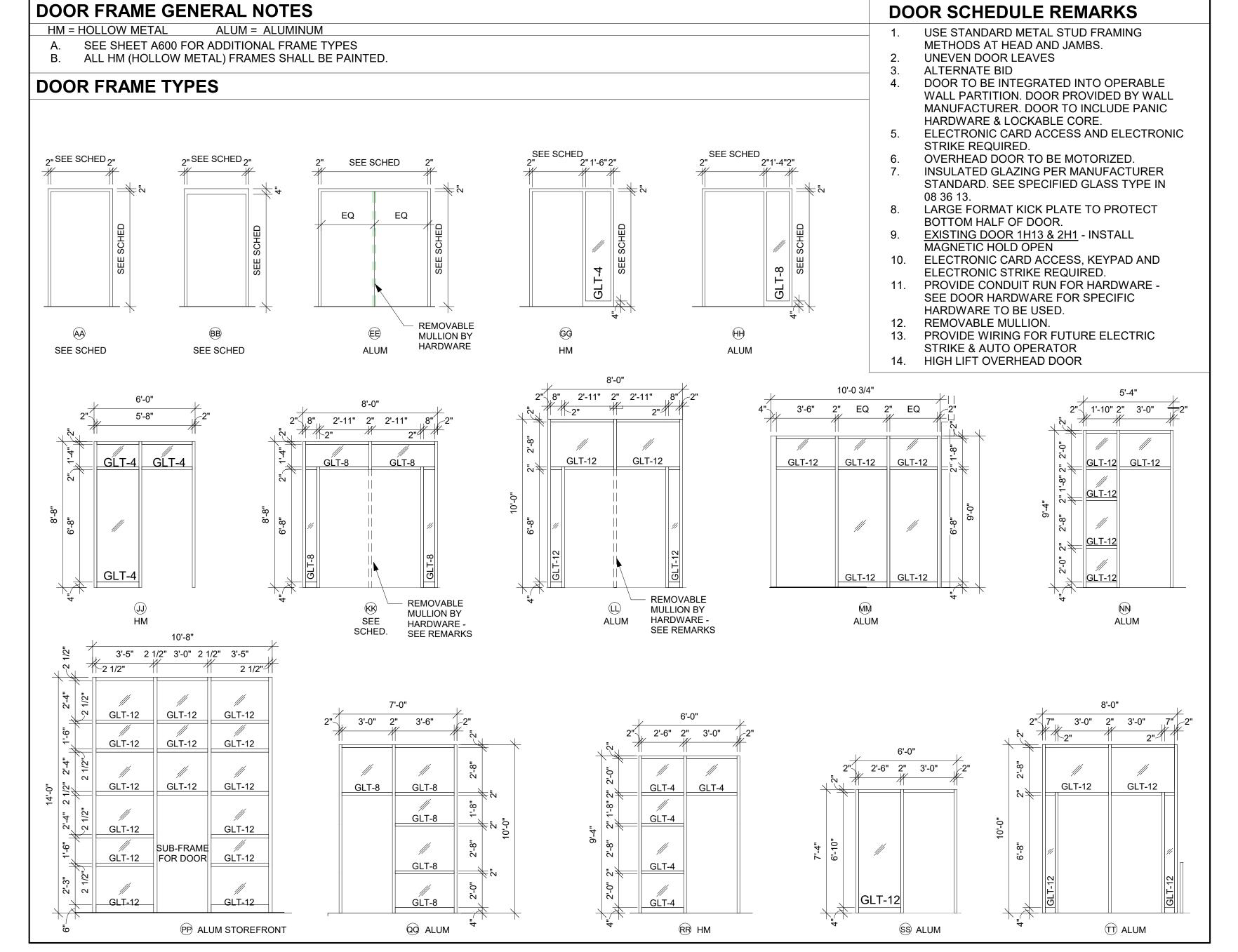




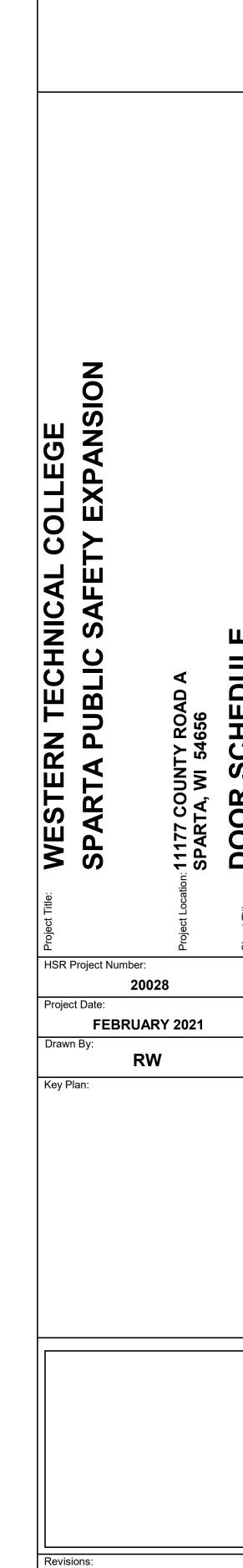
2 HM WDO FRAME ELEVATION









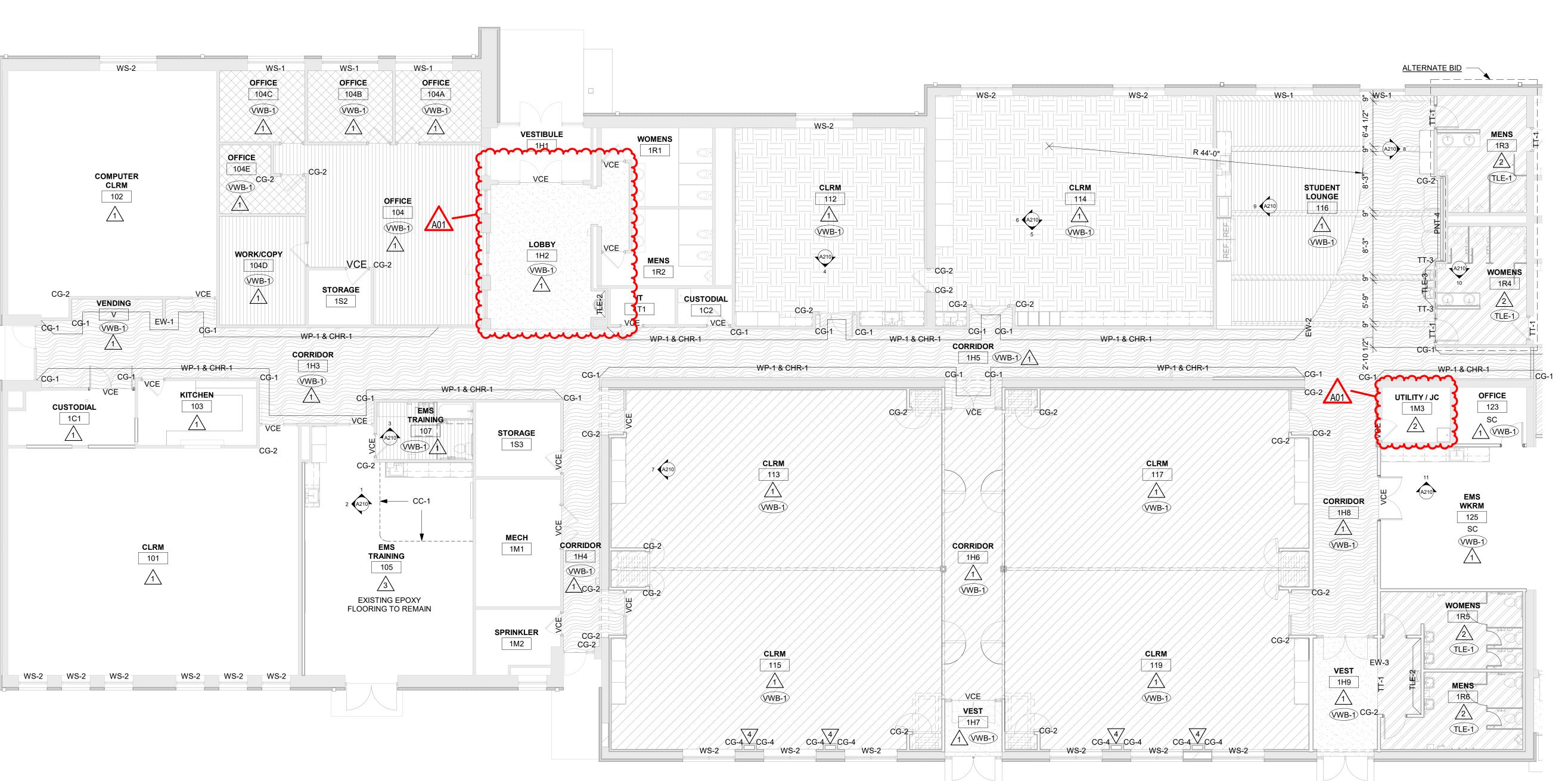


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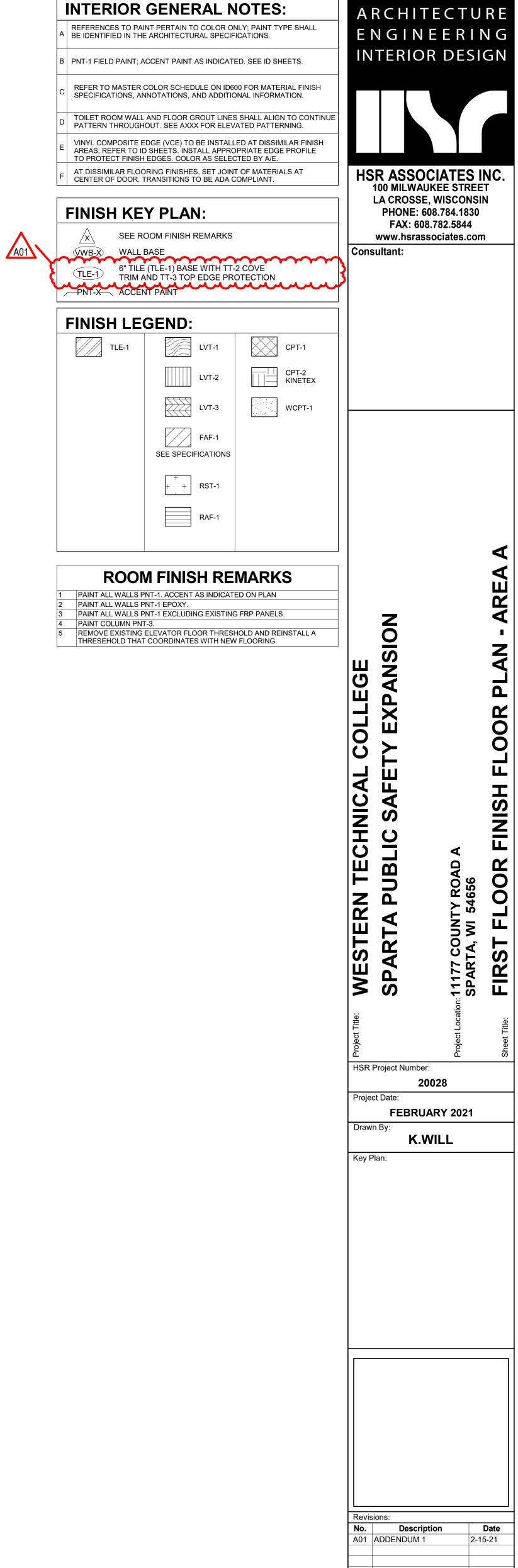
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FIRST FLOOR FINISH PLAN - AREA A

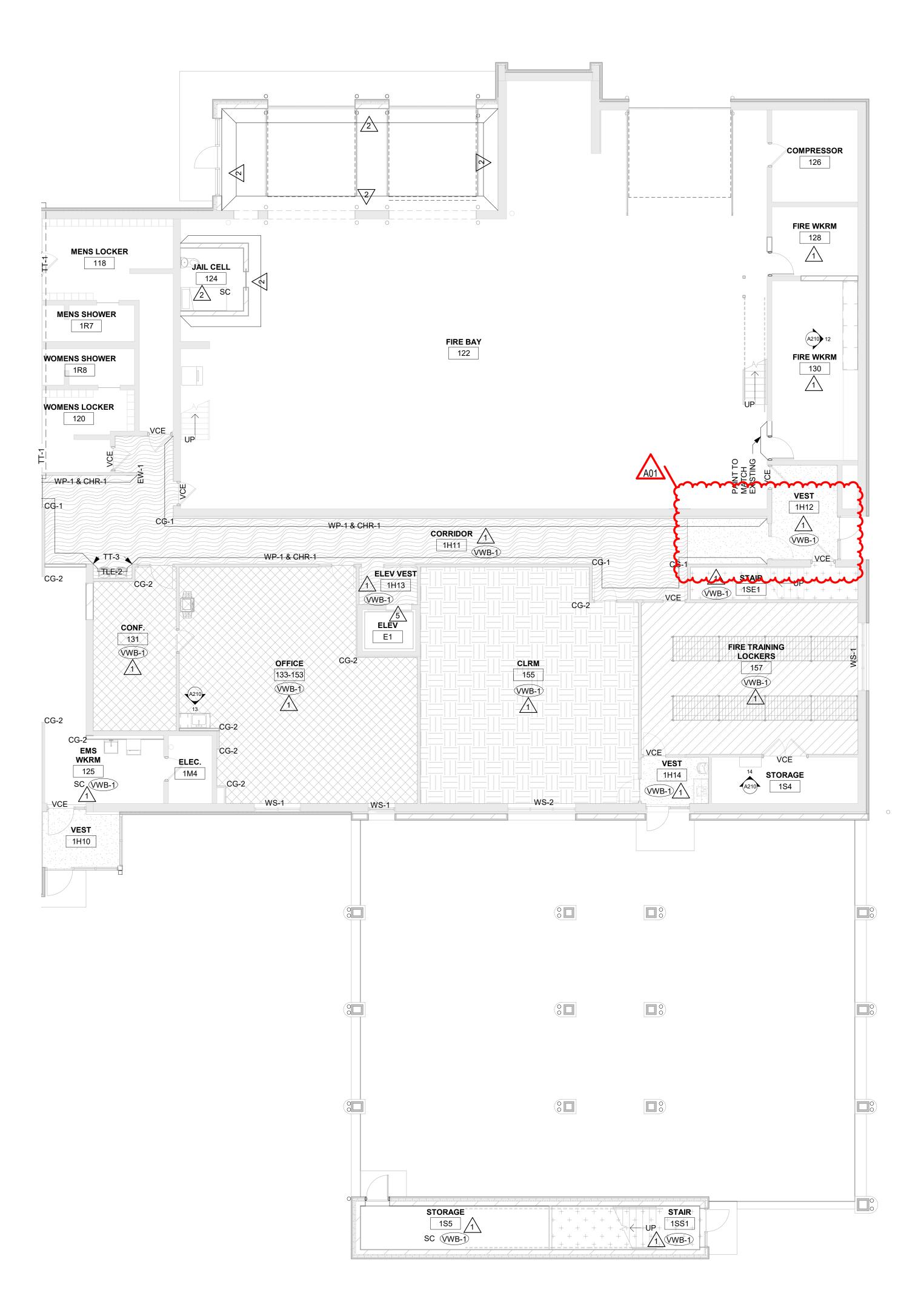
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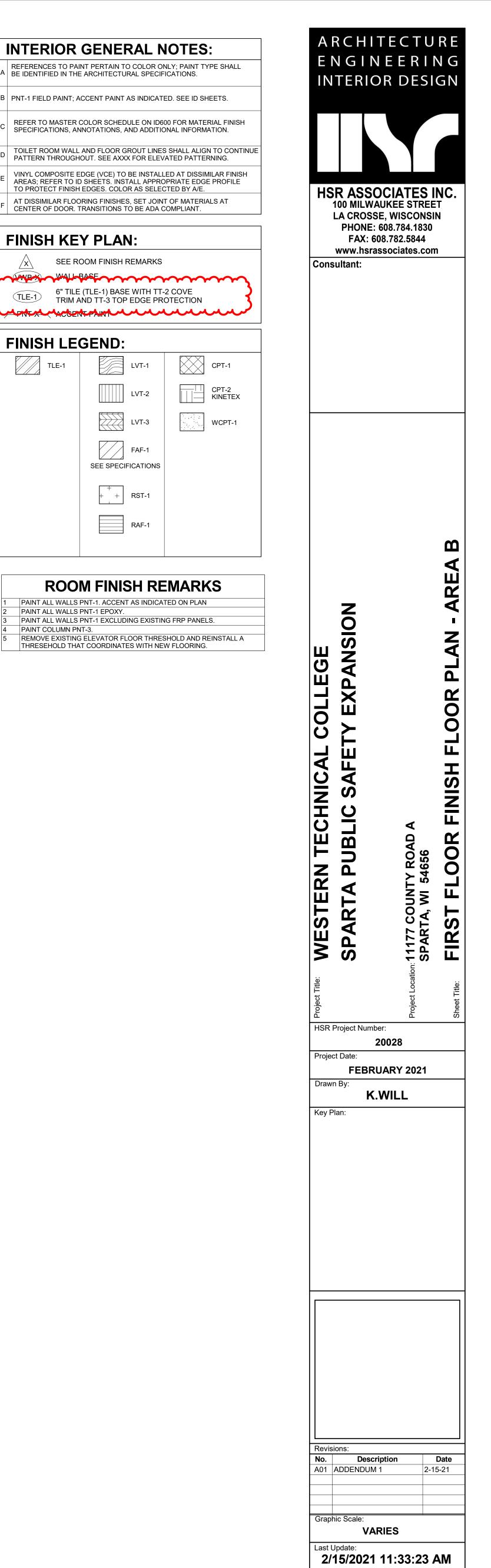
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FIRST FLOOR FINISH PLAN - AREA B





INTERIOR GENERAL NOTES:

B PNT-1 FIELD PAINT; ACCENT PAINT AS INDICATED. SEE ID SHEETS.

SPECIFICATIONS, ANNOTATIONS, AND ADDITIONAL INFORMATION.

TO PROTECT FINISH EDGES. COLOR AS SELECTED BY A/E.

SEE ROOM FINISH REMARKS

6" TILE (TLE-1) BASE WITH TT-2 COVE TRIM AND TT-3 TOP EDGE PROTECTION

SEE SPECIFICATIONS

+ + RST-1

RAF-1

ROOM FINISH REMARKS

PAINT ALL WALLS PNT-1. ACCENT AS INDICATED ON PLAN

PAINT ALL WALLS PNT-1 EXCLUDING EXISTING FRP PANELS.

THRESEHOLD THAT COORDINATES WITH NEW FLOORING.

PAINT ALL WALLS PNT-1 EPOXY.

PAINT COLUMN PNT-3.

CPT-2 KINETEX

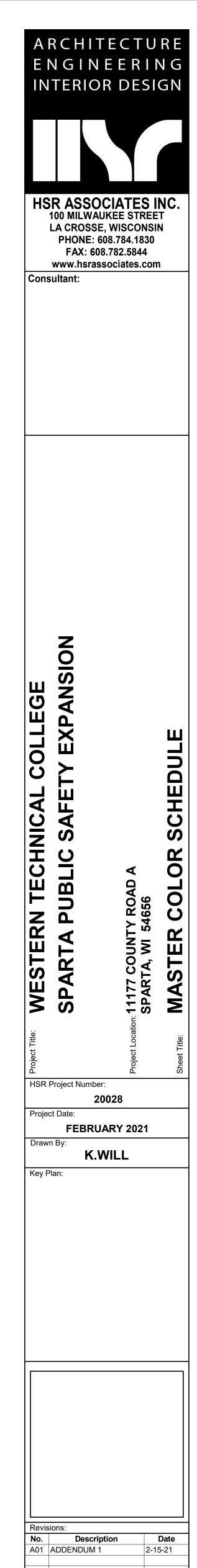
WCPT-1

FINISH KEY PLAN:

FINISH LEGEND:

AT DISSIMILAR FLOORING FINISHES, SET JOINT OF MATERIALS AT CENTER OF DOOR. TRANSITIONS TO BE ADA COMPLIANT.

						MASTER (COLOR SCHEDULE							
MANUFA	ACTURER / COLOR		GENERAL LOCATION	REMARKS		MANUFACTURER / COLOR		GENERAL LOCATION	REMARKS		MA	NUFACTURER / COLOR	GENERAL LOCATION	REMARKS
ARCHITECTURAL WOOD CASEWORK					09 65 66 RESILIENT ATHLETIC FLOORING					10 26 01 WALL AND	DOOR PROT	ECTION		
PLAM-1	<u>Manufacturer:</u>	Wilsonart		Comparable Products by	RAF-1	Manufacturer:	Ecore				Manufacturer:	Inpro	Vinyl Trim, Inside Corners, and	
(Plastic Laminate)	<u>Color:</u> <u>Finish:</u>	Monticello Maple Fine Velvet Finish	Field Casework	Prior Approval	(Resilient Athletic Flooring)	<u>Collection:</u> <u>Pattern:</u>	Basic Rolls 30 Percent Color	Weight Room 200 and			Product:	Palladium Rigid Vinyl Sheet 3'x8'	Dividers to be Provided. See ID Sheets	Comparable Products by Prior Approval
Lammate)	rinsii.	Tille velvet Fillion			r looning)	Color:	Blue Jays EL103	DAAT 202	Comparable Products by		<u>iize:</u> 'hickness:	.040	for General Wall Protection Location	Phot Approval
						<u>Size:</u>	48" Width Rolls		Prior Approval		Color:	Monsoon	Shop Drawings must be Provided	
PLAM-2	Manufacturer:	Nevamar		Comparable Products by		Thickness:	8mm							
	<u>Color:</u>	Veto Proof	Field Countertops	Prior Approval							lanufacturer:	Inpro		
					09 68 13 TILE CARPETING						Product:	160 Surface Mount	Install Above Vinyl Wall Base	Comparable Products by
										(Corner <u>C</u>	Color:	Monsoon		Prior Approval
CAST POLYMER					CPT-1	<u>Manufacturer:</u>	Interface				<u>Ving:</u>	2" 8'-0"		
					(Carpet	Style Name:	Ice Breaker	Office 133-135		<u> </u>	<u>leight:</u>	0.0		
SS-1	Manufacturer:	Staron Tempest	Window Sills	Comparable Products by	Tile)	Color Name:	Grayfox	104A, 104B, 104C, and	Comparable Products by					
(Solid Surface)	Color:	Horizon FH114	Wall Cap in Student Lounge 116 ADA Sink Apron	Prior Approval		Size:	50cm x 50cm GlasBac Tile	131	Prior Approval		Manufacturer:	Inpro 160 Surface Mount	Install Above Vinyl Wall Base	Comparable Products by
Surface)	<u>Number:</u>	111114	Alt. Bid Counter Mens 1R3 & Womens 1R4			Backing: Installation:	Nondirectional		VCE as Indicated on Plans		<u>Product:</u> Color <u>:</u>	Chino	ilistali Above Villyi Wali base	Prior Approval
									Color as Selected by A/E		Ving:	2"		
<u> </u>				<u> </u>						_	<u>leight:</u>	8'-0"		
			}	1	CPT-2	<u>Manufacturer:</u>	EF Contract							
TLE-1	Manufacturer:	Fiandre	Restroom Floor	3		Collection:	Kinetex				lanufacturer:	Inpro		
(Tile)	Product: Color:	French Clay Café	Tile	Comparable Products by Prior Approval		Style Name: Color Name:	Imprint Raven IMP56	112, 114, 155, 204	Comparable Products by Prior Approval		<u>Product:</u> Color:	130 Surface Mount 135 Degree Corner Monsoon	Corridor 2H2 Install Above Vinyl Wall Base	Comparable Products by Prior Approval
	Size:	12"x 24 A01	6" Tile Base	}		Construction:	100% Solution Dyed Polyester				<u>Vidth:</u>	3"		, , , , , , , , , , , , , , , , , , ,
	<u>Install:</u>	Third Offset	\(\)	3		<u>Size:</u>	18" x 36"		VCE as Indicated on Plans Color as Selected by A/E	Н Н	<u>leight:</u>	8'-0"		
			······································	3		Installation:	Ashlar		Color as Selected by A/E					
TLE-2	<u>Manufacturer:</u>	Ceramic Tilework's	Full Height								Manufacturer:	Inpro		
	Product:	Splash Glass & Stone	Tile Behind Drinking Fountains Finish Edge Where Tile Meets	Comparable Products by	WCPT-1 (Walk Off	Manufacturer:	Patcraft Walk Forward				Product:	160 Surface Mount	Install Above Vinyl Wall Base Classroom 115 and 119	Comparable Products by
	<u>Color:</u> <u>Size:</u>	Mica 12"x12" Sheet	Finish Edge Where Tile Meets Flooring	Prior Approval	(Walk Off Carpet)	<u>Collection:</u> <u>Style Name:</u>	Walk Forward Arrive		Comparable Products by		<u>Color:</u> Ving:	Brittany Blue 0135 2"	Ciassroom 115 and 119	Prior Approval
						Color Name:	Corridor	1H14, 1H12, 1H10, 1H9, and	Prior Approval		leight:	8'-0"		
						Construction:	Eco Solution Q Nylon Solution Dyed	1H7	VCE as Indicated on Plans					
TLE-3	<u>Manufacturer:</u>	Ceramic Tilework's	Tile Behind Drinking Fountain			<u>Size:</u> <u>Backing:</u>	24" x 24" EcoWorx Tile		Color as Selected by A/E		Manufacturer:	Inpro		
0	Product:	Vestige	Student Lounge 116	Comparable Products by		Installation:	Monolithic				Product:	160D Surface Mount End Wall	Install Above Vinyl Wall Base	Comparable Products by
	Color:	Gesso	Finish Edge Where Tile Meets	Prior Approval							Color:	Monsoon		Prior Approval
	<u>Size:</u> <u>Install:</u>	3"x8" Running Bond	Flooring		09 90 00 INTERIOR PAINTING						<u>Ving"</u> leight:	2" 8'-0"		
	mstan.	Raining Bond									icignt.			
ТТ-1	<u>Manufacturer:</u>	Schluter			PNT-1	Manufacturer:	Sherwin Williams	Field Paint Painted Ceiling and			Manufacturer:	Inpro		
(Tile	Style:	Reno-U	Tile Floor Transitions	Comparable Products by		Color:	Oyster Bar	Structure on Second Floor	*Or Equal		Product:	160D Surface Mount End Wall		Comparable Products by
Transition)	Color:	Brushed Nickel		Prior Approval		Color Code:	SW 7565	See Reflected Ceiling Plan for			color:	Monsoon	Student Lounge 116	Prior Approval
				}				Parameters			<u>Ving:</u> leight:	2" 4'-0"	Install Above Vinyl Wall Base	
TT-2	Manufacturer:	Schluter	Cove Trim	₹	PNT-2	Manufacturer:	Pittsburgh Paint	Hollow Metal Door and						
	Style:	DILEX-AHKA	Between Tile Base and Floor Tile	Comparable Products by		Color:	Oyster Shell	Window Frames	*Or Equal					
	<u>Color:</u>	Brushed Nickel A01		Prior Approval		Color Code:	PPG14-13	Handrails and Elevator Doors			Manufacturer:	Inpro 160D Surface Mount End Wall	Install Above Vinyl Wall Base	Comparable Products by
				₹							<u>Product:</u> Color:	Chino	Vestibule 1H9	Prior Approval
ТТ-3	Manufacturer:	Schluter	Edge Trim/Protection	3	PNT-3	Manufacturer:	Pittsburgh Paint				Ving"	2"		
	Style:	Jolly	Top Edge Trim of Tile Base	Comparable Products by		Color:	Blue Zephyr	Accent	*Or Equal	Н н	<u>leight:</u>	8'-0"		
	<u>Color:</u>	Brushed Nickel		Prior Approval		Color Code:	PPG1042-6						Center of Chair Rail to be	
			······································							<u> </u>	lanufacturer:	Inpro	Installed 3'-0" A.F.F.	
RESILIENT FLOORING/BASE					PNT-4	Manufacturer:	Sherwin Williams	A	*O- F		Product:	2600 Chair Rail	Find Come and Incide Comers Needed	Comparable Products by
						Color: Color Code:	Red Tomato SW6607	Accent	*Or Equal		<u>color:</u> .ength:	Monsoon 12'-0" Standard	End Caps and Inside Corners Needed	Prior Approval
LVT-1	Manufacturer:	Mohawk									leight:	0'-3"	See ID Sheets for General Location	
	Collection:	Hot and heavy											Shop Drawings must be Provided	
	Pattern: Color:	Lineate Parallel		Comparable Products by	PNT-5	Manufacturer: Color:	Sherwin Williams Black Magic	Ceiling and Structure Paint in Fire Training Lockers 157	*Or Equal	12 21 18 WINDOW S	SHADE SYSTE			
	Size:	9" x 59"	See ID Sheets	Prior Approval		Color Code:	SW6991	rraining Lookers for	Oi Equal		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	Thickness:	5mm		V05 1 11 1 1 5										
	Wear Layer:	20mil		VCE as Indicated on Plans Color as Selected by A/E	10 21 13.19 TOILET COMPARTMENTS						Manufacturer:	SWF Contract	4040 404D 404A 446 000	Community Bundants have
	<u>Install:</u>	Ashlar Full Spread Glue			10 21 13.19 TOILLI COMPARTMENTS						<u>Product:</u> Style:	Manual Roller Shade Double Take T300	104C, 104B, 104A, 116, 200 See ID Sheets	Comparable Products by Prior Approval
											Color:	Bone/Grey		
LVT 0	Manustrus	Mohawk			TP-1	Manufacturer:	Scranton Plactic Toilot Partition	Womens 1R5 and Mens 1R6	Composible Product)penness	3 Percent To Be Selected by A/F		
LVT-2	Manufacturer: Collection:	Mohawk Hot and Heavy			(Toilet Partitions)	Product: Color:	Plastic Toilet Partition Concrete	Alternate Bid for	Comparable Products by Prior Approval		ascia:	To Be Selected by A/E		
	Pattern:	Lineate			, i	Finish:	Orange Peel	1R3 and 1R4		WS-2 <u>M</u>	lanufacturer:	SWF Contract		
	Color:	Marker	See ID Sheets	Comparable Products by							Product:	Manual Roller Shade		
	Size: Thickness:	9" x 59" 5mm		Prior Approval	10.21.23 CUBICAL TRACK AND CURTAIN						<u>style:</u> Solor:	Enterprise Tan	Classrooms See ID Sheets	Comparable Products by Prior Approval
	Wear Layer:	20mil		VCE as Indicated on Plans		,)penness	Blackout Shade		
	<u>Install:</u>	Ashlar		Color as Selected by A/E							ascia:	To Be Selected by A/E		
		Full Spread Glue			CC-1 (Cubical	Manufacturer: Product:	Inpro Shield Fabric Cubical Curtain	EMS Training 105	Comparable Products by					1
					Curtain)	Style:	Framework	Emo Hailing 100	Prior Approval					
LVT-3	<u>Manufacturer:</u>	Mohawk				Color:	Silver Sand							
	Collection:	Hot and heavy				Fabric Width:	72" 12.6"H x 12.1"V							
	Pattern: Color:	Lineate Ridged 588	See ID Sheets	Comparable Products by		<u>Fabric Repeat:</u>	14.1 V							
	Size:	9" x 59"		Prior Approval										
	Thickness:	5mm		VCE as Indicated on Plans										
	Wear Layer: Install:	20mil Ashlar		Color as Selected by A/E										
		Full Spread Glue												
RST-1	Manufacturer:	Nora	Riser and Treads to Receive	_										
(Resilient Stair)	Product: Color:	Satura Grus 5102	Integral System Landings to Receive	Comparable Products by Prior Approval										
,	Install:	Integral Riser and Tread	Rolled Sheet w/ Heat Welded Seams											
	<u>Landings:</u>	Roll Good Heat Welded	1SS1, 1SE1, 2SE1, 2SS1											
VWB-1 (Vinyl	Manufacturer: Size:	Johnsonite 4"	Field Wall Base											
(Vinyi Wall Base)	Size: Color:	Toast 283		Comparable Products by										
				Prior Approval										
	Profile:	Cove												



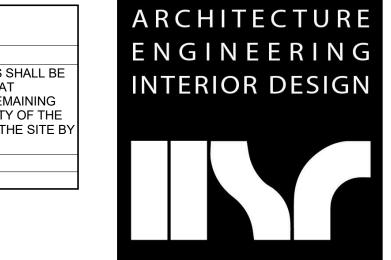
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VARIES

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KEYNOTES - PIPING DEMO Description

ALL REMOVED ITEMS THAT THE OWNER WANTS SHALL BE REMOVED AND TURNED OVER TO THE OWNER AT DESIGNATED STORAGE SPACE ON SITE. ALL REMAINING ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. Remove piping as indicated
Remove thermostat



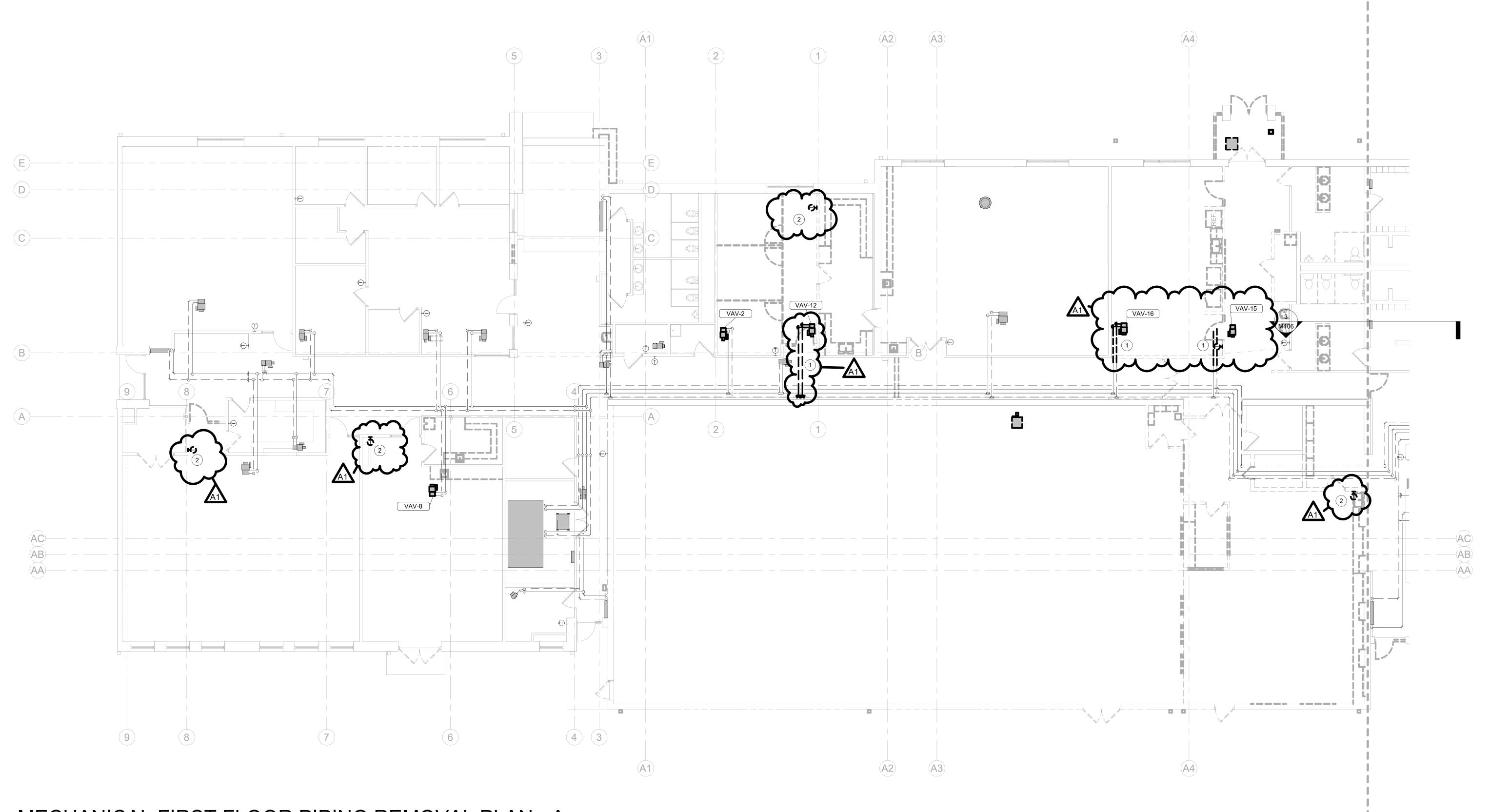
HSR ASSOCIATES INC.
100 MILWAUKEE STREET
LA CROSSE, WISCONSIN
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Consultant:

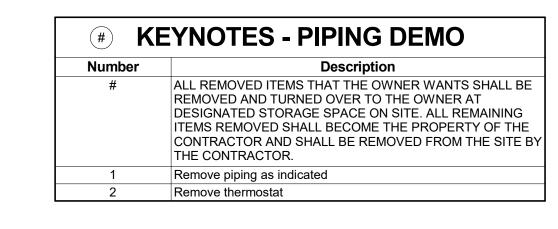
FEBRUARY 2021

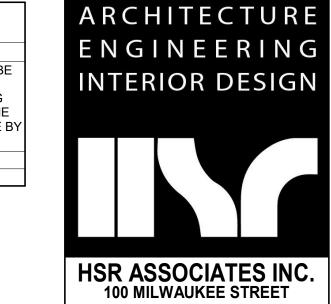
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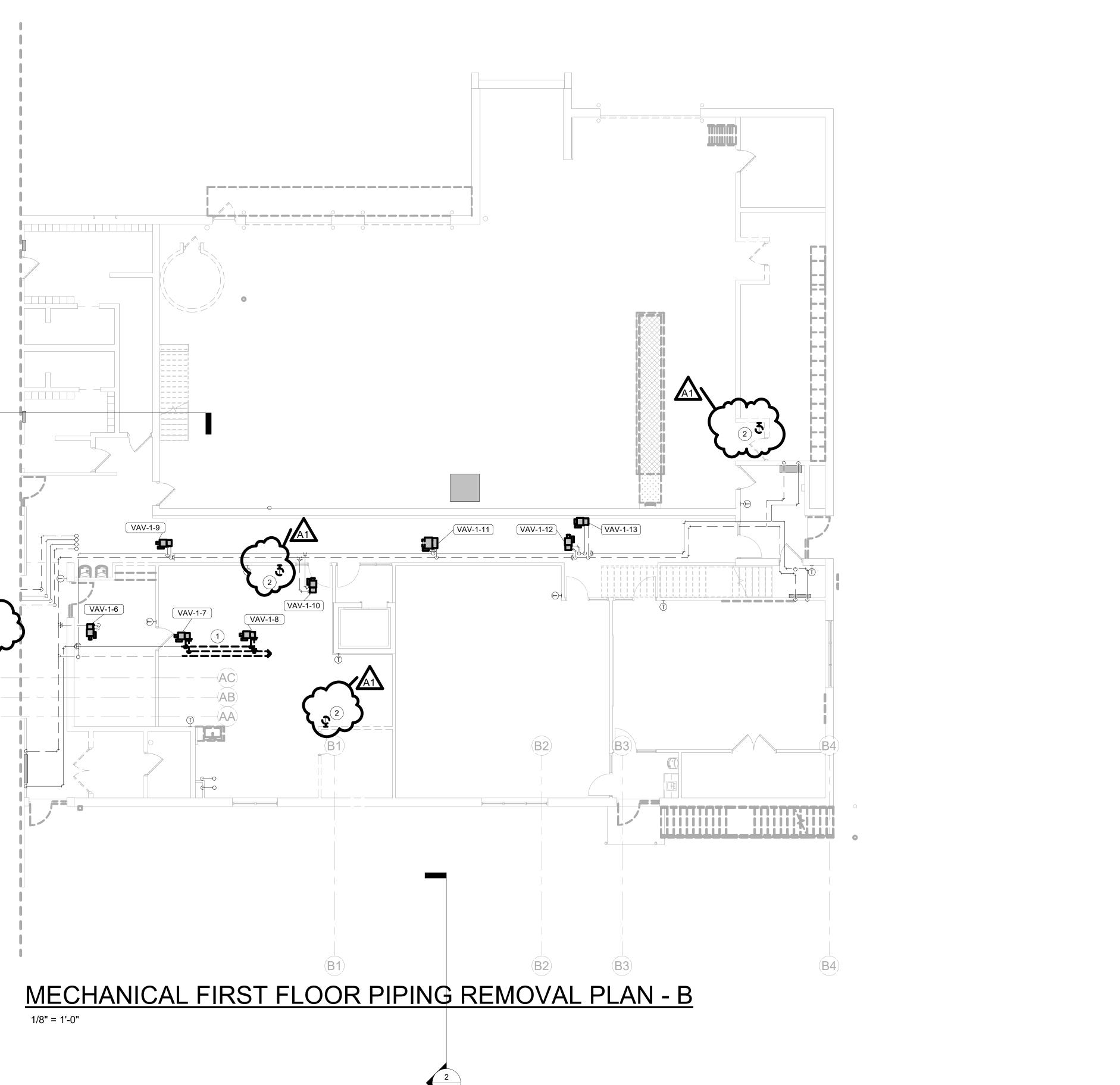






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Consultant:



HSR Project Number:
HSR # 20028

Project Date:
FEBRUARY 2021

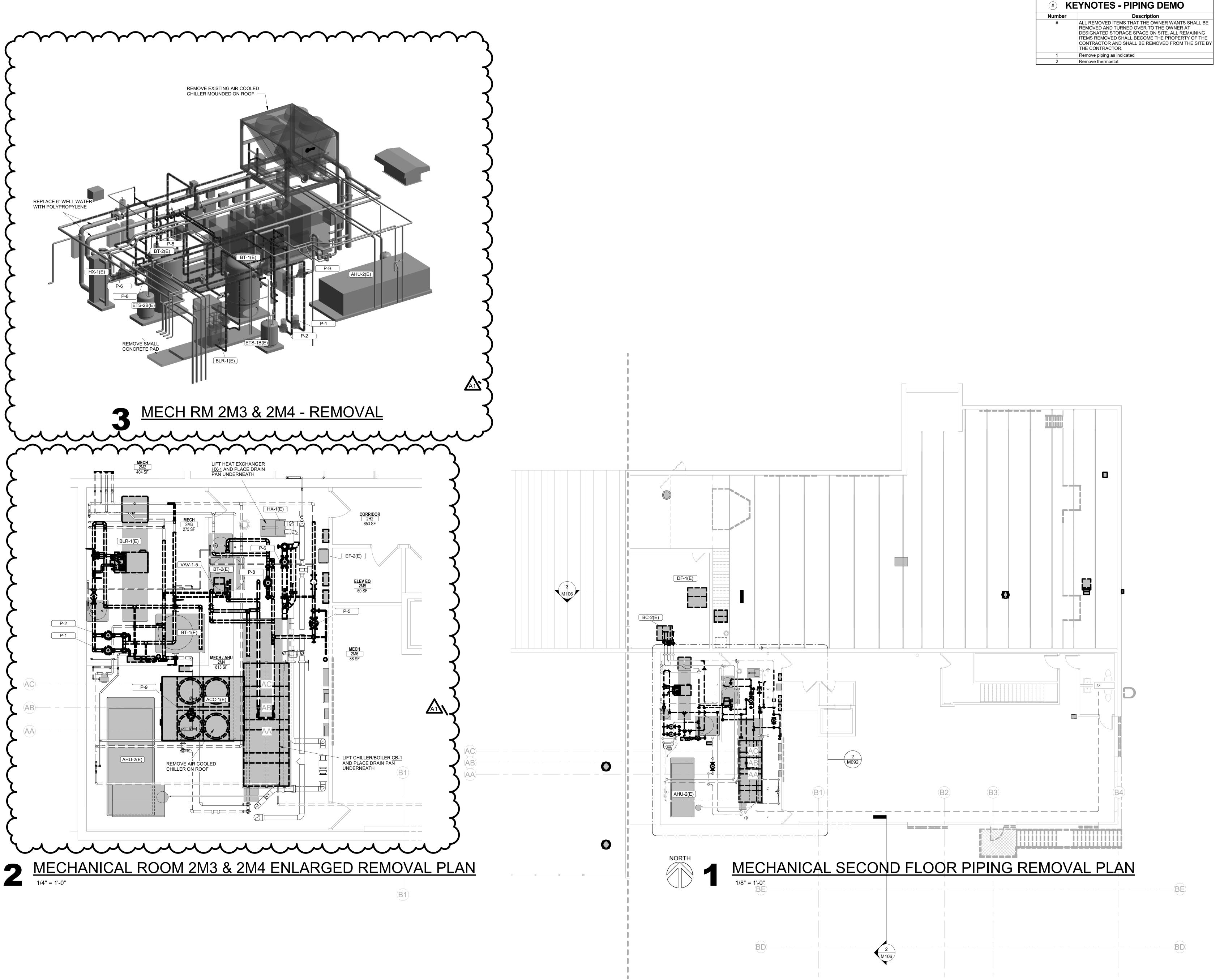
Drawn By:
JB/SK

Key Plan:

Revisions:
No. Description Date
A1 Addendum 1 2/15/21

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2/15/2021 11:03:03 AM



ARCHITECTURE
ENGINEERING
INTERIOR DESIGN

HSR ASSOCIATES INC.

100 MILWAUKEE STREET LA CROSSE, WISCONSIN PHONE: 608.784.1830 FAX: 608.782.5844 www.hsrassociates.com

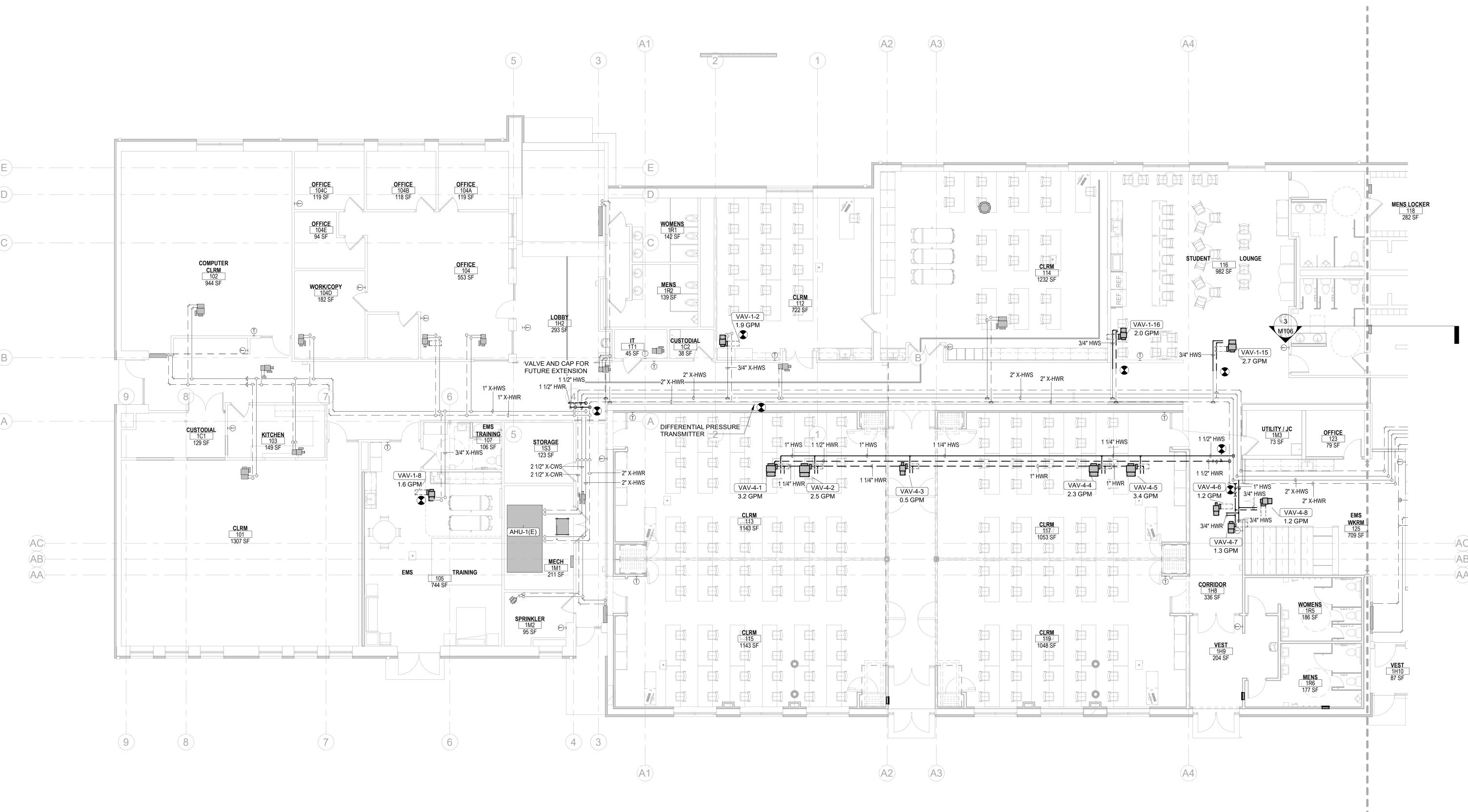
FEBRUARY 2021

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Consultant:



MECHANICAL FIRST FLOOR PIPING REMODEL PLAN - A

1/8" = 1'-0"



ARCHITECTURE ENGINEERING INTERIOR DESIGN HSR ASSOCIATES INC.
100 MILWAUKEE STREET
LA CROSSE, WISCONSIN
PHONE: 608.784.1830
FAX: 608.782.5844
www.hsrassociates.com HSR # 20028 FEBRUARY 2021 JB/SK

Revisions:

Revisions:

No. Description Date

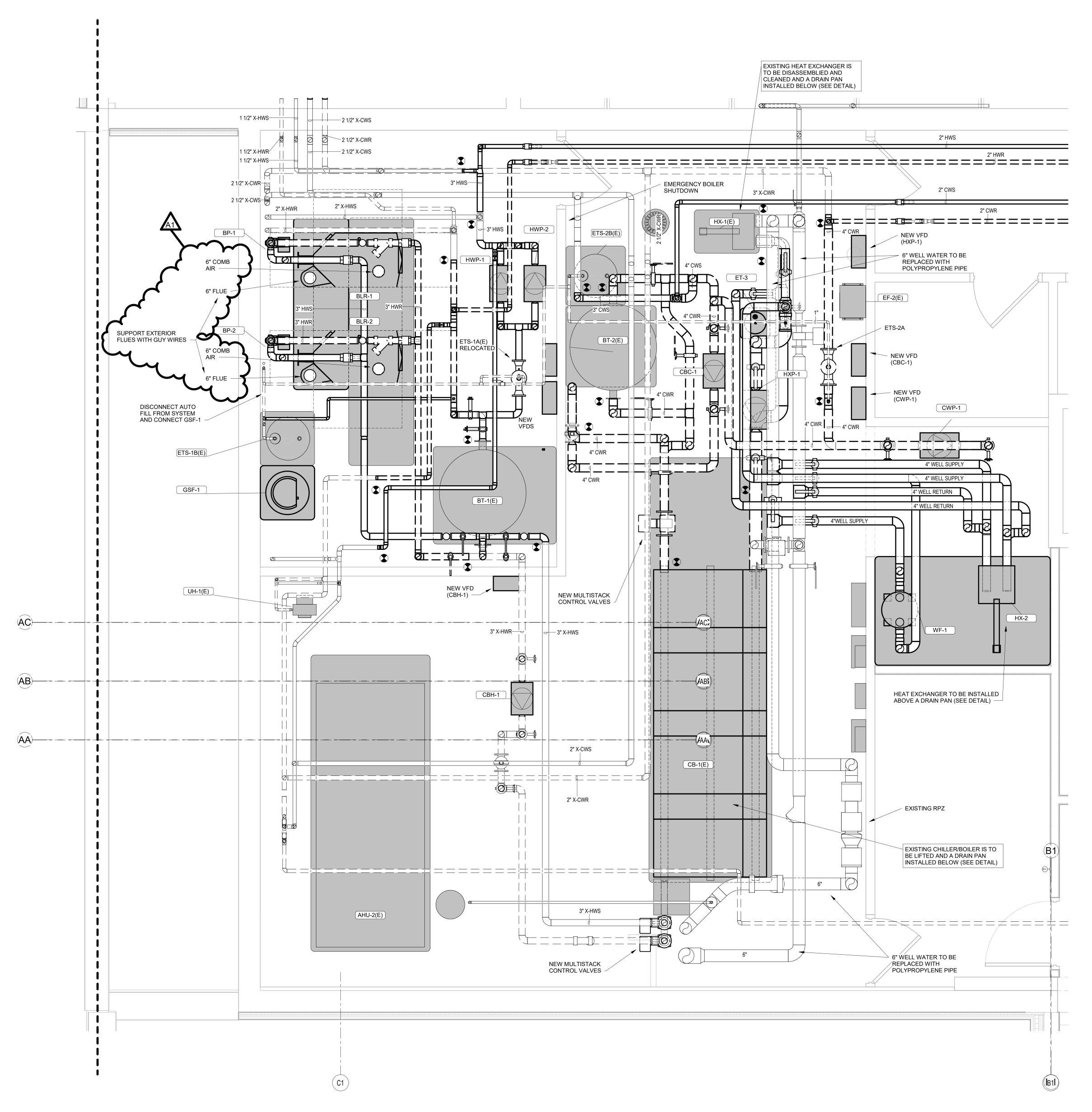
A1 Addendum 1 2/15/21

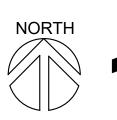
Graphic Scale:

VARIES

Last Update:

2/15/2021 11:03:16 AM





MECHANICAL ROOM 2M3 & 2M4 ENLARGED REMODEL PLAN

1/2" = 1'-0"

HSR ASSOCIATES INC.

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Consultant:

ARCHITECTURE

WESTERN TECHNICAL COLLEG

HSR # 20028

Project Date:
FEBRUARY 2021

Drawn By:
JB/SK

Key Plan:

HSR Project Number:

Revisions:

No. Description Date

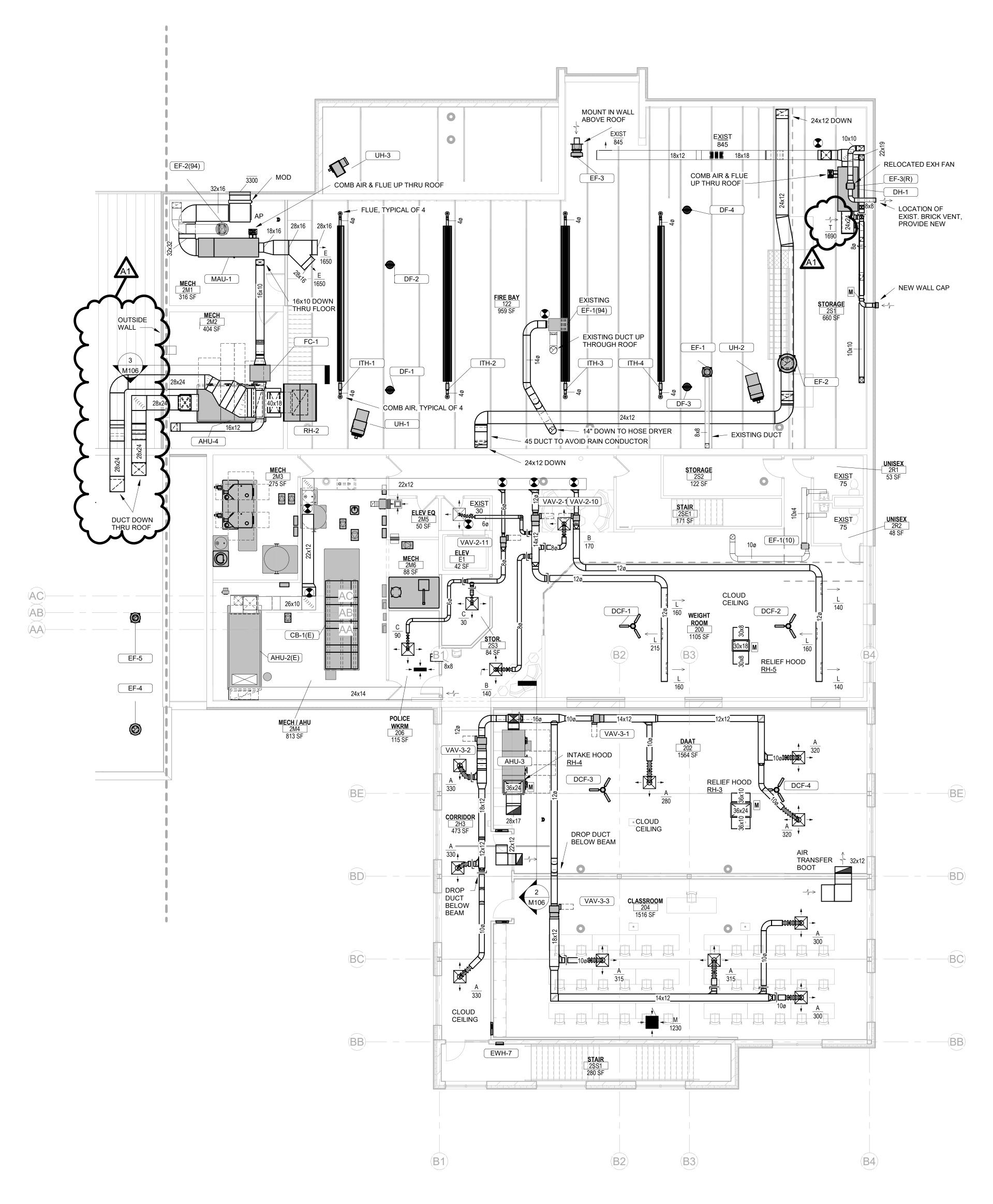
A1 Addendum 1 2/15/21

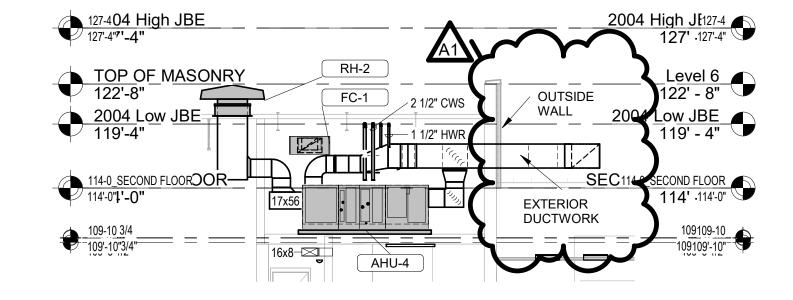
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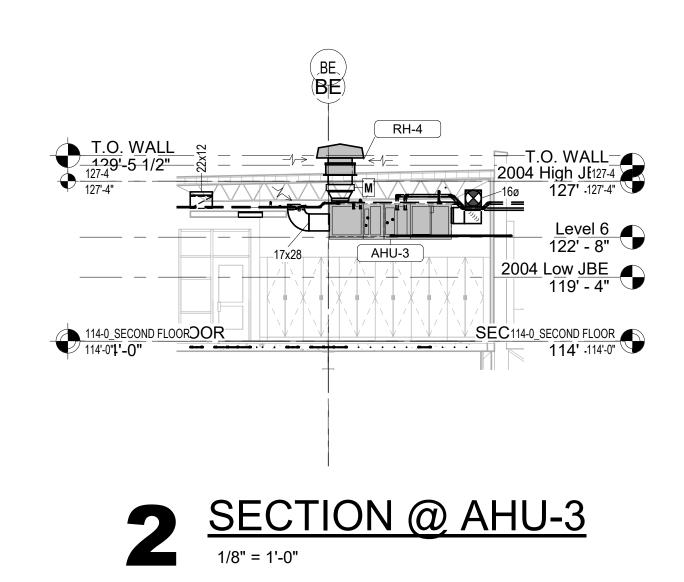
A1 Addendum 1 2/15/2

Last Update: 2/15/2021 11:03:21 AM

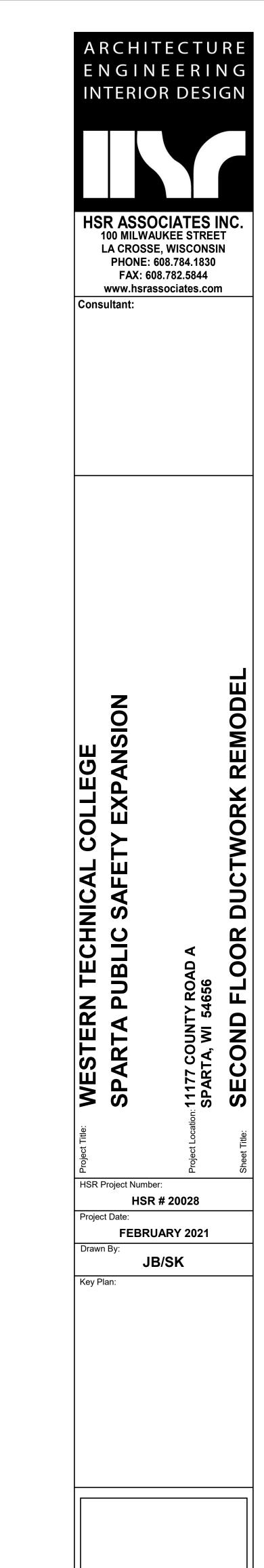




3 <u>SECTION @ AHU-4</u>
1/8" = 1'-0"







1		
		·
	sions:	
No.	Description	Date
Λ 1	Addandum 1	0/45/04

Revisions:

No. Description Date

A1 Addendum 1 2/15/21

VARIES

Last Update:
2/15/2021 11:03:28 AM

SYSTEM	DUCTWORK INVOLVED	INSULATION					REMARKS
No.		TYPE		THICKNESS	DENSITY pcf	INSTALLED "R"	
Louvers	Blank-off Panels	Fiberglass Board	W3	2"	3	8.7	
	Return Air in ceiling Plenum	None		None	None		
	Supply and Return to Unit (Fan discharge and Suction)	Acoustical Fiberglass Liner	L1	1"	1.5	4.2	First 10 feet of straight duct up to and including first elbow
AHU-3 & 4	Outside Air	Fiberglass Board	W3	2"	3	8.7	
	Concealed Relief Air to roof hoods above ceilings	Fiberglass Batt Wrap	W1	3"	0.75	8.3	Between motorized damper and air discharge to outside
	Relief Air in Mechanical Room	Fiberglass Board	W3	2"	1.5	8.3	
	Supply air in Mechanical Room	Fiberglass Board	W3	2"	3	8.7	
	Supply Air Fan to VAV boxes	Fiberglass Batt Wrap	W1	1 1/2"	1	4.5	
	VAV boxes to outlets	Fiberglass Batt Wrap	W1	1 1/2"	1	4.5	Ductwork that is not lined
	VAV boxes	Acoustical Fiberglass Liner	L1	1 1/2"	1.5	6.3	5'-0" downstream of box
	Transfer Air Boots	Acoustical Fiberglass Liner	L1	1"	1.5	4.2	
oosed Outdoors	Supply and Return air Outdoors exposed to weather	Polyisocyanurate Foam Board w/ glass mat facer on both sides	W6 W6a	3"	2	18.0	Tapered on top of duct, Weatherproof Jacket or Pre-insulated duct system
Plenum	Visible Relief Air	Fiberglass Board	W5	2"	3	8.7	Hoods not directly connected to AHUs
Relief Hoods	Concealed Relief Air above ceilings	Fiberglass Batt Wrap	W1	3"	0.75	8.3	
Visible	Round - Exposed in occupied spaces	Semi-Rigid Fiberglass Wrap	W4	2"	2.5	9.0	White AP Jacket
Ductwork	Rectang - Exposed in occupied spaces	Fiberglass Board	W5	2"	3	8.7	White ASJ vapor barrier jacket
CE	Grille to Fan in conditioned space	None		None	None		
Fans	Discharge	Fiberglass Batt Wrap	W1	1 1/2"	1	4.5	Within 10 feet of building discharge
FC-1	Supply air in Mechanical Room	Fiberglass Board	W3	2"	3	8.7	
	Return/Transfer Air	None		None	None		
PRVs	Horizontal Exhaust Air	None		None	None		
	Vertical Duct to Fan	Fiberglass Batt Wrap	W1	1 1/2"	1	4.5	
DF-1	Supply Air and Return Air	None		None	None		
	Outside Air	Fiberglass Batt Wrap	W1	3"	0.75	8.3	Exposed wall cap to Duct Furnace
MAU-1	Outside Air to garage Make-up Air Units	Fiberglass Board	W3	2"	3	8.7	Exposed Louver to MAU
	Supply Air	None		None	None		

Concealed Indoors: Not visible above ceilings, etc.

B. Controller located in Fire Bay 122.

Space, in single gang box.

Exposed Indoors: Exposed in mechanical spaces and other locations listed.

Visible Indoors: Exposed in occupied spaces such as office spaces, classrooms, etc.

C. (1) Wall Mount Control, (2) Sensor (In Truss & 12" AFF), Controller In Secured

See the specifications for detailed product and installation requirements.

Intake and exhaust safety grilles.

4. AVS-7.5A-BAS speed controller.

1. 8" Downrod, 9'-0" ceiling height.

3. Solid State Speed Controller.

3. Motor Starter.

4. Gravity backdraft damper.

2. Dual wall with 1" insulation.

5. Motorized gravity backdraft damper.

2. 14" Downrod, 10'-4" ceiling height.

3. 6' Cord, 3-Prong Plug.

MARK	MANUFACTURER'S			SERVING	MOUNT	AREA		FAN		DUCT		ELECT.	ı	ACCESSORIES/	REMARKS
DF-	MODEL NO.	CEILING	ZONE	ROOM	HEIGHT	SQ FT	CFM	dBA	DRIVE	SIZE	WATTS	AMPS	VOLT/PH	OPTIONS	
1	H25 AC High EFF				17'-0"	935	588	38.3	Direct	n/a	55	0.48	115/1		
2	H25 AC High EFF	Open	1	Fire Bay 122	17'-0"	935	588	38.3	Direct	n/a	55	0.48	115/1	1, 2, 3, 4	A, B, C
3	H25 AC High EFF				17'-0"	935	588	38.3	Direct	n/a	55	0.48	115/1		
4	H25 AC High EFF				17'-0"	935	588	38.3	Direct	n/a	55	0.48	115/1		
Based on p	products by ZOO FANS.														#N//
See the sp	ecifications for detailed prod	luct requirements													1/24/21 13:3
ACCESSO	RIES/OPTIONS:							REMARKS:							
1. Suspen	sion cable(s), stabilization c	able and attachm	ent hardware.					A. Size, 15	lbs, 18" dia. X	(21" long.					

MARK	MANUFACTURER'S	SERVING	MOUNT	AREA		FAN PERFORM	ANCE			ELECT.		ACCESSORIES/	REMARKS
DCF-	MODEL NO.	ROOM	HEIGHT	EACH	CFM	DIAMETER	LBS	CFM / W	WATTS	AMPS	VOLT/PH	OPTIONS	
1	36201	Weight Room 207	8'-6"	1000	3,610	36"	20	45	80	0.65	115/1	1, 3	A, B
2	36201	Weight Room 207	8'-6"	1000	3,610	36"	20	45	80	0.65	115/1		A, B
3	36201	DAAT 214	9'-0"	775	3,610	36"	20	45	80	0.65	115/1	2, 3	A, B
4	36201	DAAT 214	9'-0"	775	3,610	36"	20	45	80	0.65	115/1		A, B
	products by LEADING EDGE. ecifications for detailed products	ct requirements											12/22/2

A. Color: White.

B. To be installed by the Electrical Contractor.

			F	ANS	- POWE	R VEN	ITIL	ATO	RS (23 34	23)				
	MANUFACTURER'S	SERVING/	CFM	TOT.		OPENING			ı	FAN		E	LECT.	ACCESSORIES/	
MARK	MODEL NO.	LOCATION		S.P.	TYPE	SIZE	LBS	SONES	RPM	DIA. "	DRIVE	H.P.	VOLT/PH	OPTIONS	REMARKS
EF-1	CUE-070-VG	Fire Bay 122	225	0.375	Cent. Roof UP	10.5" SQ	38	5.3	1684	8.125"	Direct	1/15	115/1	1, 2, 3, 4	Α
EF-2	CUE-180-VG-2	Fire Bay 122	3,300	0.75	Cent. Roof UP	20.5" SQ	128	15.3	1070	18.5"	Direct	2	208/1	1, 2, 3, 5	В
EF-3	CUE-080-VG	Hose Tower	375	0.25	Cent. Wall	12.5" SQ	35	7.3	1550	10.875"	Direct	1/10	115/1	2, 3, 4	
EF-4	G-090-VG	Toilets 1R5,1R6	450	0.375	Cent. Roof DN	12.5" SQ	54	6.3	1413	10.875"	Direct	1/10	115/1	1, 2, 3, 4	С
EF-5	G-070-VG	EMS Work 125	250	0.375	Cent. Roof DN	10.5" SQ	36	5.6	1704	8.125"	Direct	1/15	115/1	1, 2, 3, 4	С
EF-6	G-090-VG	Toilets 1R3,1R4	500	0.375	Cent. Roof DN	12.5" SQ	44	6.8	1480	10.875"	Direct	1/10	115/1	1, 2, 3, 4	C, D
Based on	products by GREENHECK.														 #N//
See the sp	pecifications for detailed pro-	duct and installation re	quirements												1/19/21 12:0
ACCESSO	ORIES/OPTIONS:					REMARKS:									
1. Pitched	l roof curb.				•	A. Replaces	existing	RX-1, reus	e curb, 0.0	5 CFM/sf m	nimum exha	aust.			-
2. Disconi	nect switch.					B. Located w	here der	no'd GUH-	1 flue pene	trated roof.					

C. Reuse existing roof opening.

D. Alternate.

VAV-	AREA	PLAN	DUCT		TE	RMINAL U	NIT			CC	DIL DATA	(based o	n PLAN CF	·M)		PIF	PING	ZONE	ACCESS./
	SERVED	CFM	RUNOUT	INLET	INLET	COOLIN	G CFM *	MAX.	МВН		1	00% WAT	ER	E.A.T.	L.A.T.	RUNOUT	CONTROL	LOSS	REMARKS
		(a)	SIZE	SIZE	S.P.	MAX	MIN	PD" **	(b)	ROWS	GPM	PD'	E.W.T.		REQ.	SIZE	VALVE	МВН	
2-1	Wt. Rm 200 Int	875	New 12"	10	0.91	875	350	0.66	39.3	4	2.48	1.88	130	55	97	New 3/4"		25.08	Α
2-2	Conf 131	200	Exist 6"	6	0.33	200	80	0.08	3.3	1	0.21	0.12	130	55	70	Exist 1/2"		0.00	Α
2-3	Office 133 Int	225	Exist 6"	5	0.45	225	90	0.2	5.2	1	0.5	0.54	130	55	76	Exist 1/2"		1.50	Α
2-4	Office 133 Ext	445	New 10"	8	0.59	475	180	0.34	16.9	3	1.45	0.21	130	55	90	Exist 1/2"		9.61	Α
2-5	Office 133 Int	275	Exist 6"	6	0.39	275	110	0.14	5.5	1	0.53	0.58	130	55	73	Exist 1/2"		1.00	Α
2-6	Corridor 1H11	280	Exist 8"	6	0.57	280	110	0.32	13.1	3	1.11	1.09	130	55	98	Exist 1/2"		8.58	Α
2-7	Fire Class 155	780	Exist 12"	10	0.66	780	310	0.41	26.9	3	1.56	0.59	130	55	87	Exist 3/4"		14.24	Α
2-8	Vest 1H14	165	Exist 8"	4	0.33	165	65	0.08	2.7	2	0.53	0.2	130	55	70	Exist 3/4"		0.06	Α
2-9	Fire Train 157	500	Exist 12"	8	0.8	500	200	0.55	23.8	4	2.08	0.51	130	55	99	Exist 3/4"		15.64	А
2-10	Wt. Rm 200 Ext	495	New 8"	8	0.66	495	200	0.41	17.8	3	1.49	0.23	130	55	88	New 3/4"		9.74	Α
2-11	Wk. Rm 206, 2S3	120	New 6"	5	0.28	120	50	0.03	4.6	1	1.53	3.68	130	55	90	New 3/4"		2.60	Α
3-1	DAAT 202	920	12	10	0.78	920	370	0.53	34.3	3	2.47	1.36	130	55	89	3/4"		29.32	B,E
3-2	Corridor 2H3	1000	12	12	0.48	1000	400	0.23	30.5	2	2.83	0.46	130	55	83	3/4"		18.19	B,E
3-3	Classroom 204	1230	14	12	0.73	1230	490	0.48	42.1	3	3.11	0.7	130	55	87	3/4"		32.09	B,E
4-1	Lecture 113	1220	14	12	0.57	1220	490	0.32	34.1	2	3.15	0.56	130	2	28	1"		14.23	С
4-2	Lecture 115	1440	14	14	0.71	1440	575	0.46	52.9	4	2.53	0.45	130	55	89	3/4"		29.51	С
4-3	Corridor 1H6	125	6	5	0.3	125	50	0.05	5.6	2	0.52	0.2	130	55	96	1/2"		3.54	С
4-4	Lecture 117	1030	14	12	0.49	1030	410	0.24	28.2	2	2.3	0.31	130	55	80	3/4"		11.46	С
4-5	Lecture 119	1100	14	12	0.66	1100	440	0.41	41.7	3	3.4	0.83	130	55	90	1"		23.83	С
4-6	Corridor 1H8	85	4	4	0.27	85	35	0.02	3.8	1	1.23	2.53	130	55	96	3/4"		2.40	С
4-7	1H9,1R5,1R6	490	10	8	0.65	490	195	0.4	16.6	3	1.3	0.18	130	55	86	3/4"		18.80	C,E
4-8	EMS Work Rm 125	510	10	8	0.68	510	205	0.43	16.0	3	1.18	0.39	130	55	84	3/4"		12.79	C,E
1-2	Classroom 112	540	Exist 8"	8	0.72	540	215	0.47	20.3	3	1.91	0.35	130	55	90	Exist 3/4"		11.47	D
1-8	EMS Train 105	440	Exist 10"	8	0.59	440	175	0.34	17.4	3	1.58	0.25	130	55	92	Exist 3/4"		10.29	D
1-15	Corr & Tits	600	Exist 10"	10	0.43	600	240	0.18	22.9	2	2.74	1.18	130	55	90	Exist 3/4"		13.18	D
1-16	Lounge 115	560	Exist 10"	8	0.7	560	225	0.45	21.0	3	2.01	0.38	130	55	90	Exist 3/4"		11.85	D
A	HU-2 System Totals =	4360			0.91	4390	1745		159.0		13.5	3.68							#N
А	HU-3 System Totals =	3150			0.78	3150	1260		106.9		8.4	1.36							1/21/21 7:
Α	HU-4 System Totals =	6000			0.71	6000	2400		198.9		15.6	2.53							
Based or	TRANE Model VCWF							_					•	23.6	deg. Aver	. delta T.			
See the s	pecifications for detailed	product an	d installation r	equiremer	nts.									70	deg. Roor	m Temp			
ACCESS	ORIES:					REMARKS	:						* 100% M	ax. and 40°	% Min.of pl	an CFM = coo	ling CFM.		

(a) Use PLAN CFM for heating CFM.

(b) Includes zone loss and heat required to bring inlet air up

to room temp, minus auxilary heat in zone.

B. Served by AHU-3.

C. Served by AHU-4.

D. Served by Existing AHU-1.

E. Axillary Heat in zone.

	MANUFACTURER'S		THR	OAT		HOOD				VELOCI	TY (FPM)	MAX		ACCESSORIES/	
MARK	MODEL NO.	SERVING	WID.	LEN.	WID.	LEN.	SF	APPL	CFM	HOOD	THROAT	P.D. "	CONSTR.	OPTIONS	REMARKS
RH-1	Fabra Hood - FGR	AHU-4	36	48	62	63	15.13	RELIEF	5,800	383	483	0.04	Aluminum	2, 3, 4	A, B
RH-2	Fabra Hood - FGI	AHU-4	30	48	64	75	23.33	INTAKE	5,800	249	580	0.04	Aluminum	1, 3, 4	A, C
RH-3	Fabra Hood - FGR	AHU-3	24	36	40	51	8.17	RELIEF	3,100	380	517	0.06	Aluminum	2, 3, 4	A,D
RH-4	Fabra Hood - FGI	AHU-3	24	36	47	63	14.56	INTAKE	3,100	213	517	0.04	Aluminum	1, 3, 4	A,E
RH-5	Fabra Hood - FGR	AHU-2 [E]	18	30	32	51	7.58	RELIEF	2,100	277	560	0.05	Aluminum	2, 3, 4	A,F
	products by GREENHECK.		ation requi	rements.											#N/ <i>i</i> 1/18/21 13:3
ACCESSO	ORIES/OPTIONS:											REMARKS):		
1. Extende	ed 12" base, Bird Screen.											A. Ducted.			
2. 5" base	e, Bird Screen and 0.5" inte	rnal insulation.										B. Approxi	mately 130 lbs.		
3. 18" Ro	of Curb.											C. Approxi	mately 143 lbs.		
4. Motoriz	ed damper in throat.											D. Approxi	mately lbs.		
												F Annroyi	mately lbs.		

				W	ALL L	OUV	ERS	(23 37	7 50)			
	MANUFACTURER'S		DIMEN	SIONS IN	NCHES	F. A.			MAX		ACCESSORIES/	
MARK	MODEL NO.	SERVING	WIDTH	HGT.	DEPTH	SQ FT	APPL.	CFM	P.D. "	CONSTR.	OPTIONS	REMARKS
L-1	ESD-635	MAU-1	40	48	6	7.70	Intake	3,300	0.05	ALUM.	1, 3, 4, 5, 6	A
L-2	ESD-635	AHU-2(04)	60	24	6	4.64	Relief	2,645	0.05	ALUM.	1, 3, 4, 5, 6	А
Based on p	roducts by GREENHECK.						'					#N/A
See the spe	ecifications for detailed produc	ct and installation red	uirements.									1/25/21 6:57
ACCESSOI	RIES/OPTIONS:							REMARKS:				
1. Bird Scre	een.							A. Color sel	ected by Ow	ner/Architect.		
2. (not use	d)											
3. Channel	Frame.											
4. Finish to	be 2-coat 70% Kynar 500 in a	a standard color.										
5. Weather	proof with downspouts and g	utters.										

. Parallel blade MOD with blade and edge seals, two position.

				GAS-	FIRI	=D L	DUCT	HEA	TERS	5 (23	55 13	3)					
MARK	MANUFACTURER	SERVING/	TYPE		FAN		ı	HEATING ME	ВН	GAS	AIR	MA	O.A.	Е	LECT.	ACCESSORIES/	REMARKS
DH-	MODEL NO.	LOCATION		CFM	S.P.	HP	INPUT	OUTPUT	FUEL	PRESS.	T. R.	TEMP	CFM	AMP	VOLT/PH	OPTIONS	
1	DBS-175	Fire Bay & Storage	Separ. Comb.	2,000	1	1.5	175.0	140.0	Nat. Gas	6"W.C.	64.8	65.5	100	5	208/3	1 thru 8	Α
ased on	n products by MODINE																#N/A
	n products by MODINE. specifications for detailed p	product and installation rec	ujrements														#N/A 2/3/21 9:27
	SORIES/OPTIONS:	oroduct and installation rec	juliements.				REMARKS	S:									2/3/21 9.27
	ess Steel Heat Exchanger	& Burners.						unit off floor v	vith stand.								
Insula	ted casing.																
Ignitio	n Controls for Natural Gas	3															
Electro	onic Modulation																
. Vertica	al Combination Vent Term	inal															
5. Vertica		inal															

1 1 2 3 3	MODEL NO. TA-80 TA-80	LOCATION Fire Bay 122 Fire Bay 122	MBH 80	STAGES 2	LENGTH 30	SHAPE Straight	TYPE Aluminum	ANGLE	HEIGHT	/PH	OPTIONS	
2 3	TA-80	,		2	30	Straight	Aluminum					
3		Fire Bay 122	00			U	Aluminum	Yes	14'-0"	120/1	1,2,3,8	A, B, C
-		•	80	2	30	Straight	Aluminum	Yes	14'-0"	120/1	1,2,3,8	A, B, C
	TA-80	Fire Bay 122	80	2	30	Straight	Aluminum	Yes	14'-0"	120/1	1,2,3,8	A, B, C
4	TA-80	Fire Bay 122	80	2	30	Straight	Aluminum	Yes	14'-0"	120/1	1,2,3,8	A, B, C
•	cts by Superior Radiant.			1								#N/#
See the specification	ations for detailed produc	t and installation require	ments.									12/22/20 12:04
	urner, with direct spark igr	niter					8 1 amn now	er sunnly with (cord and plug, 24v t	hermostat		
•	teel tube radiant exchang						9. Horizontal	,		normootat.		
	ed aluminum reflector.	J. J.					o. Honzontal					
0 7.	el tube radiant exchanger	S.					REMARKS:					
5. Stainless stee	el reflector for harsh envir	onments.					A. Ducted cor	mbustion air inl	et from outside.			
6. Sealed burne	er housing for harsh enviro	onments.					B. Vent vertica	ally through roo	of.			
7. Side reflector	r.						C. Tilt reflecto	or.				

MARK	MANUFACTURER	SERVING/		FA	N		HEATIN	IG MBH	CFM	GAS		MTG.	E	LECT.	ACCESSORIES/	REMARKS
UH-	MODEL NO.	LOCATION	TYPE	CFM	RPM	HP	IN	OUT	OA	PRESS.	L.A.T.	HGT.	AMPS	VOLT/PH	OPTIONS	
1	BDP-200	Fire Bay	Blower	2,690	365	1/3	200.0	164.0	0	6" W.C.	106.5	12'	7.2	115/1	1 - 5, 6, 9	Α
2	BDP-200	Fire Bay	Blower	2,690	365	1/3	200.0	164.0	0	6" W.C.	106.5	12'	7.2	115/1	1 - 5, 6, 9	Α
3	HDB-60	Fire Bay Ext.	Blower	890	Medium	1/4	60.0	49.2	0	6" W.C.	101.2	9'	3.7	115/1	1 - 5, 6, 9	Α
	products by MODINE.									<u> </u>						#N
	pecifications for detailed pro ORIES/OPTIONS:	duct and installation re	quirements.				REMARK	S:								12/22/20 12:
1. Alumin	nized Steel Heat Exchanger.						A. Contro	lled through	BAS.							
2. Solid s	stste ignition.															
3. Automa	atic reset high limit switch.															
4. A time	delay relay that delays the f	an after a call for heat.														
5. Single	stage gas controls.															
6. 60° no	n-velocity generating downw	ard air deflector hood.														
7. 30° no	n-velocity generating downw	ard air deflector hood.														
8. 40° vel	locity generating nozzle.															
	nterface, RS485 interface to	huilding DAC with DAC	\4													

F-----

		AIR		MAX.	MAX.	EAT	1	AT .	MBH	CAPACITY		0% PC	/ WATER	₹		COIL		ACCESSORIES
MARK	COIL SIZE	UNIT	CFM	PD "	FV	DB	WB	DB WE	TOTAL	SENS	. GPN	ENT	LVG	PD. FT	TYPE	FPF	ROWS	REMARKS
CC-3	26" x 34"	AHU-3	3,100	0.74	508	76.6	64.3 5	3.0 52.	105.94	80.48	19.2	44	55	3.2	UW	119	6	Α
CC-4	32' x 55"	AHU-4	5,800	0.71	472	77.7	65.1 5	3.0 52.	212.11	157.6	38.4	44	55	4.1	UW	131	6	В
Based on	products by TRA	NE.																#N/
See the s	pecifications for d	etailed produ	ct and inst	allation r	equireme	nts.									Ente	ering Air T	Гетрѕ.	1/12/21 7:4
ACCESSO	ORIES/OPTIONS:						R	MARKS:							;	are based	l on	
							A.	6.11 Sq F	, 141.3 lbs, f	uid volume	4.1 gal.					DB	WB	
							В.	12.3 Sq Ft	267.6 lbs, fl	id volume	3.06 gal.				RAT	75	63	
								•			-				OAT	00	1	
					AH	U W	ATE	R HE	ATIN	G CC	OILS	(23 7	3 13)	OAI	89	74	
										G CC		•	3 13	•				-Q (
MARK	COIL SIZE	UNIT	г	CFM	AH MAX. PD "	U W	ATE	R HE	ATIN	G CC	0% PG / V	/ATER		C	OIL		ACCESSORIE OPTIONS	ES/ REMARKS
MARK HC-3	COIL SIZE 24" x 32"	UNI T AHU-		CFM 3,100	MAX.	MAX.			тот.		0% PG / V	/ATER	D. FT T	C YPE F	OIL PF RO		ACCESSORIE	
			-3 3		MAX. PD "	MAX. FV	EAT	LAT	TOT.	GPM	0% PG / V	/ATER LVG F	D. FT T 0.62	C YPE F 5W 1	OIL PF RG	ows /	ACCESSORIE	REMARKS
HC-3 HC-4	24" x 32" 30" x 54"	AHU-	-3 3	3,100	MAX. PD " 0.18	MAX. FV 581	EAT 59.6	LAT 80.0	TOT. MBH 68.6	GPM 6.87	0% PG / V ENT 130	/ATER LVG F	D. FT T 0.62	C YPE F 5W 1	OIL PF RG	DWS 1	ACCESSORIE	REMARKS A
HC-3 HC-4 Based on	24" x 32"	AHU-	3 3	3,100 5,800	MAX. PD " 0.18 0.15	MAX. FV 581 516	EAT 59.6	LAT 80.0	TOT. MBH 68.6	GPM 6.87	0% PG / V ENT 130	/ATER LVG F	D. FT T 0.62	C YPE F 5W 1	OIL PF RO 50 50	DWS 1 1 1	ACCESSORIE	REMARKS A B
HC-3 HC-4 Based on	24" x 32" 30" x 54" products by TRA	AHU-	3 3	3,100 5,800	MAX. PD " 0.18 0.15	MAX. FV 581 516	EAT 59.6	LAT 80.0	TOT. MBH 68.6 208.7	GPM 6.87	0% PG / V ENT 130	/ATER LVG F	D. FT T 0.62	CTYPE F 5W 1 5W 1 Entering	OIL PF RO 50 50	DWS 1 1 1	ACCESSORIE	REMARKS A B
HC-3 HC-4 Based on	24" x 32" 30" x 54" products by TRA pecifications for d	AHU-	3 3	3,100 5,800	MAX. PD " 0.18 0.15	MAX. FV 581 516	EAT 59.6	80.0 80.0	TOT. MBH 68.6 208.7	GPM 6.87 17.09	0% PG / V ENT 130 130	/ATER LVG F 110 110	D. FT T 0.62	C YPE F 5W 1 5W 1	OIL PF RC 50 50 Air Temps ased on	DWS 1 1 1	ACCESSORIE	REMARKS A B
HC-3 HC-4 Based on	24" x 32" 30" x 54" products by TRA pecifications for d	AHU-	3 3	3,100 5,800	MAX. PD " 0.18 0.15	MAX. FV 581 516	EAT 59.6	80.0 80.0 REMARK A. 5.33 S	TOT. MBH 68.6 208.7	GPM 6.87 17.09 , fluid volur	0% PG / V ENT 130 130	/ATER LVG F 110 110	D. FT T 0.62 0.15	CTYPE F 5W 1 5W 1 Entering are ba	DIL PF RO 50 Air Temps assed on DB V	DWS 1 1 1 5.	ACCESSORIE	REMARKS A B

	MANUFACTURER'S	SERVING/		EXT	CFM		FAN	1			COILS		МС	OTOR	ACCESSORIES/	
MARK	MODEL NO.	LOCATION	CFM	S.P.	O.A.	RPM	TYPE	DF	RIVE	HEAT	COOL	ACCESS	HP	VOLT/PH	OPTIONS	REMARK
AHU-1	Existing (2010)	2010 Addition	7,200													
AHU-2	Existing (2004)	2004 Addition	4,200													
AHU-3	CSAA-006	Law Academy	3,100	1.5	360	2,540	Plenur	n Di	irect	HC-3	CC-3	Left	5	208/3	1,2,3,6,7,8,9,10	A, a
AHU-4	CSAA-012	Lecture Area	5,800	1.75	1100	1,960	Plenur	m Di	irect	HC-4	CC-4	Left	7.5	208/3	1,2,3,6,7,8,9,10	B, b
See the s	products by TRANE. pecifications for detailed p DRIES/OPTIONS	product and install	ation requi	rements.			REMA	RKS:								2/2/2021
1. Angled	filter/mixing with 2" pleated	MERV 8 filters.					A. Hor	izontal	Unit, To	p Front Fa	an discharge	27.5 MCA, M	OCP 45 A.			
2. Heating	Coil Section, Position 2.						We	eight 14	18 lbs, 1	122.2" L x	44" W x 35.3	" H. Suspende	ed from roo	f structure.		
3. Cooling	g coil section, Position 3.						B. Hor	izontal	Unit, To	p Front Fa	an discharge	35 MCA, MO	CP 60 A.			
4. (not Use	ed)										66.5" W x45"					
5. (not use	ed)						Mou	unted or	n stand	above floo	or.					
6. Plenum	n fan section.															
7. VAV fa	n with VFD.															
8. Discon	nect.															
9. 6" Base	e Rail.															
10. Disco	nnect.								U	NIT ACO	USTICS: dB	@ Supply Di	scharge, C	Octive Band (F	łz)	
							6	63	125	250	500 100	00 2000	4000	8000		_
							a. 8	33	79	77	82 7	1 69	68	57		_
							b. 7	78	79	87	80 7	4 72	67	60		

			DIF	RECT	FIRI	ED	MAK	(E-U	P A	R UN	IIT (2	23 73	39)				
	MANUFACTURER			FA	N			-		HEATING		GAS	%	Е	LECT.	ACCESSORIES/	
MARK	MODEL NO.	SERVING	CFM	E.S.P.	SPEEDS	HP	E.A.T.	L.A.T.	IN	OUT	MOD.	PRESS.	R.A.	MCA	VOLT/PH	OPTIONS	REMARKS
MAU-1	DG-115-H20	Fire Bay 122	3,300	1.5"	Single	3	-20	83	400	368.0	25:1	2	0.0	13.9	208/3	1 thru 13	A, B, C
Based on	products by GREENHECK.																#1
See the sp	pecifications for detailed product and installation requirements. Concept C															12/21/20 10	
ACCESSO	ORIES/OPTIONS:									REMARK	S:						
1. Double	wall construction, 1" fibergl	ass insulation.				-				A. 71 dB/	A, 761 Lbs	s, 116.4"L x	36.5"W x	33.7"H			-
2. Hinged	Access doors, Motorized L	ow Leakage Dampers.								B. MOCP	20 Amps	-					
3. Angled	filer box and MERV 8 filters	S.								C. Room	pressure	control to m	aintain a r	negative pr	essure in space	9.	
4. Belt dri	ve forward-curved supply fa	ın.															
5. Microp	rocessor Control, with Remo	ote Display.								CONTRO	L ACCES	SORIES:					
6. BMS C	communication - monitoring	& control.								Remote d	isplay with	75 ft cord.					-
7. Tempe	rature Control, discharge te	mperature with room o	verride.							Inlet Air S	ensor, Dir	ty Filter Swit	ch, Inlet D	Damper En	d Switch.		
8. Consta	int volume VFD.									Freeze Pr	otection (Supply Air Lo	ow Limit)				
9. Starter	and disconect.									Airflow Pro	oving Mon	itoring Cont	act				
10. Cast a	aluminum burner manifold w	vith stainless steel mixi	ng plates.														
11. Electr	onic burner modulation. Lo	w fire start.															
	esota Code approved.																

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EQUIPMENT WITHIN DASHED LINES HAS BEEN PRE-PURCHASED BY OWNER

SITE UNLOADING, COMPLETE INSTALLATION, & START-UP WILL BE THE RESPONSIBILITY OF THE CONTRACTOR BIDDING THESE CONSTRUCTION

DOCUMENTS

	MANUFACTURER'S									HEATING	G COIL		FAN	I ELECT.	ACCESSORIES/	
MARK	MODEL NO.	LOCATION	STYLE	CFM	ESP	MBH	EAT	LAT	EWT	GPM	ROWS	PD	HP	VOLT/PH	OPTIONS	REMARKS
FC-1	HPE-10	Mech 2M2	Ceiling Exposed	900	0.5	20.00	70	91	130	2	4		1/3	208/1	1,2,3,4,5	Α
Based on p	roducts by ENVIRO-TEC.			1		•										#N/A
See the spe	ecifications for detailed prod	duct and installation	requirements.													1/19/21 14:13
ACCESSO	RIES/OPTIONS:								REMARK	S :						
1. Double	deflection supply grille, retu	rn air collar.							A. Sized	at HIGH far	speed.					
	cell foam insulation.															
3. Disconn	ect Switch.															
4. 1" throw	away filters.															
5. ECM mo	otor.															

	MANUFACTURER'S	LOCATION		WALL	MIN.	I	AN	ŀ	HEAT ELEM	ENT		ACCESSORIES/	
MARK	MODEL NO.		STYLE	RECESS	втин	CFM	SONES	AMPS	WATTS	VOLT/PH	CONTROL	OPTIONS	REMARKS
EWH-1	AWH4404F	Comp 126	Heavy-Duty	No	10,235	100		14.4	3,000	208/1	Integral	1, 3	A, B
EWH-2	AWH3150F	Vest 1H7	Heavy-Duty	Yes	5,118	100		12.5	1,500	120/1	Integral	1, 2, 3	В
EWH-3	AWH3150F	Mens 1R6	Heavy-Duty	Yes	5,118	100		12.5	1,500	120/1	Integral	1, 2, 3	A, B
EWH-4	AWH3150F	Vest 1H9	Heavy-Duty	Yes	5,118	100		12.5	1,500	120/1	Integral	1, 2, 3	В
EWH-5	AWH4404F	Storage 1S5	Heavy-Duty	No	10,235	100		14.4	3,000	208/1	Integral	1, 3	A, B
EWH-6	AWH4404F	Stair 2SS1	Heavy-Duty	No	10,235	100		14.4	3,000	208/1	Integral	1, 3	A, B
EWH-7	AWH3150F	Stair 2SS1	Heavy-Duty	No	5,118	100		12.5	1,500	120/1	Integral	1, 3	В
See the sp	products by Q-Mark. pecifications for detailed propertions:	roduct and installatio	on requirements.				REMARKS:						#N/. 1/18/21 13:3
1. Heavy d	luty tamper resistant bar gri	lle.					A. Located	on existing	exterior wall				
2. AWHS1	semi-recessed mounting fr	rame.					B. To be ins	talled by th	e Electrical (Contractor.			
2. AWHS1	, ,	rame.						·					

LO	OP DE	SIGN @	15	DEGREE	D.T. &	30	% PROI	PYLENE GI	LYCOL/W	ATER MIX		FLO	OOR		ROOM / AREA	LOOP	LOOP
MANIFOLD	Т	UBE	LOOP	APRROX.	ADJU	STED LO	OP ***	FLOOR	BTUH	TUBE	MIN. **	TEMP.	COVER	TEMP.	LOCATION	ACCESS.	REMARKS
RHM-	#	SIZE	втин	LENGTH	GPM	D.T.	P.D.	AREA*	/ SF	SPACING	EWT	DEG. F	Rv	DEG. F			
	1	5/8	7,000	253	0.93	15.0	3.87	175	40	9	112.5	88	0.2	68	Fire Bay		ST, S
1	2	5/8	7,000	245	0.93	15.0	3.75	175	40	9	112.5	88	0.2	68	Extension		CT, S
	3	5/8	7,200	244	0.96	15.0	3.91	180	40	9	112.5	88	0.2	68			CT, S
	1	1/2	5,000	504	0.58	17.1	9.38	500	10	12	98.5	75	1.25	70	Classroom		CT, T
2	2	1/2	5,000	520	0.58	17.1	9.68	500	10	12	98.5	75	1.25	70	204		CT, T
	3	1/2	5,000	536	0.58	17.1	9.98	500	10	12	98.5	75	1.25	70			CT, T
	4	1/2	5,000	554	0.58	17.1	10.31	500	10	12	98.5	75	1.25	70			CT, T
3	5	1/2	5,000	572	0.58	17.1	10.65	500	10	12	98.5	75	1.25	70	DAAT 202		CT, T
	6	1/2	5,000	588	0.58	17.1	10.95	500	10	12	98.5	75	1.25	70			CT, T
	1	1/2	3,900	262	0.46	17.1	3.31	260	15	12	98.5	78	0.6	70	Corridor		CT, T
4	2	1/2	3,900	278	0.46	17.1	3.51	260	15	12	98.5	78	0.6	70	2H3		ST, T
		Totals	59,000	4,557	7.2			4,050				•	* Floor ar	ea availab	le for tubes.		#N/A
	Maxir	mum ==>					16				112.5	-	** Minimu	ım EWT a	t design conditions.		1/29/21 9:53
	Ave	rage ==>				16.3			14.6				*** At ma	ximum wa	ter temperature.		
Based on pro	ducts	bv UPON	OR			ΔΡΡΡΟΣ	(IMATE 1	TOTAL TUE	RE LENGT	rhs					MANIFOLDS AND RIS	ERS	
See Specificat		,			1/2"	3,814	-	3/4"		Feet	S	JPPLY an	d RETUR	N	MANIFOLD	ACCESS.	REMARKS
ystems that a			,		5/8"	•	Feet	1"		Feet	I.D.	GPM	SIZE	LOOPS	LOCATION		
,		•			0/0	740	1 001		Ü	1 001	1	2.8	1"	3	Fire Bay Extension	1,2,3,4	5, MWC
OOP ACCES	SSORII	ES & REN	MARKS:		MANIFO	LD ACCE	SSORIE	S & REMAI	RKS:		2	1.8	3/4"	3	Corridor 2H3	1,2,3,4	6, CV, MWC
L = Valved L	.oop (co	ontrol valv	e).		1. Valve	d Return i	manifold	with drain a	nd vent.		3	1.8	3/4"	3	Corridor 2H3	1,2,3,4	6, CV, MWC
L = Pumped			,		2. Valvle	ess Supply	/ manifol	d with drain	and vent.		4	0.9	3/4"	2	Corridor 2H3	1,2,3,4	6, CV, MWC
T = Counterf	· flow Tu	be Lavout	•			cing valve						7.2					, ,
T = Serpentii		,	-			Ü		and return	risers.								
= Tubing in		,				old Pump		,									
= Tubing in t		1.				old Pump											
		,.				•		to manifold	l.								
					M\A/C -	Manifold V	Vall Cabi	not									



PHONE: 608.784.1830 FAX: 608.782.5844 www.hsrassociates.com Consultant: SION HSR Project Number: **HSR # 20028** Project Date:

FEBRUARY 2021 Drawn By: JB/SK Key Plan:

A1 Addendum 1 Graphic Scale:

2/15/2021 11:03:36 AM

VARIES

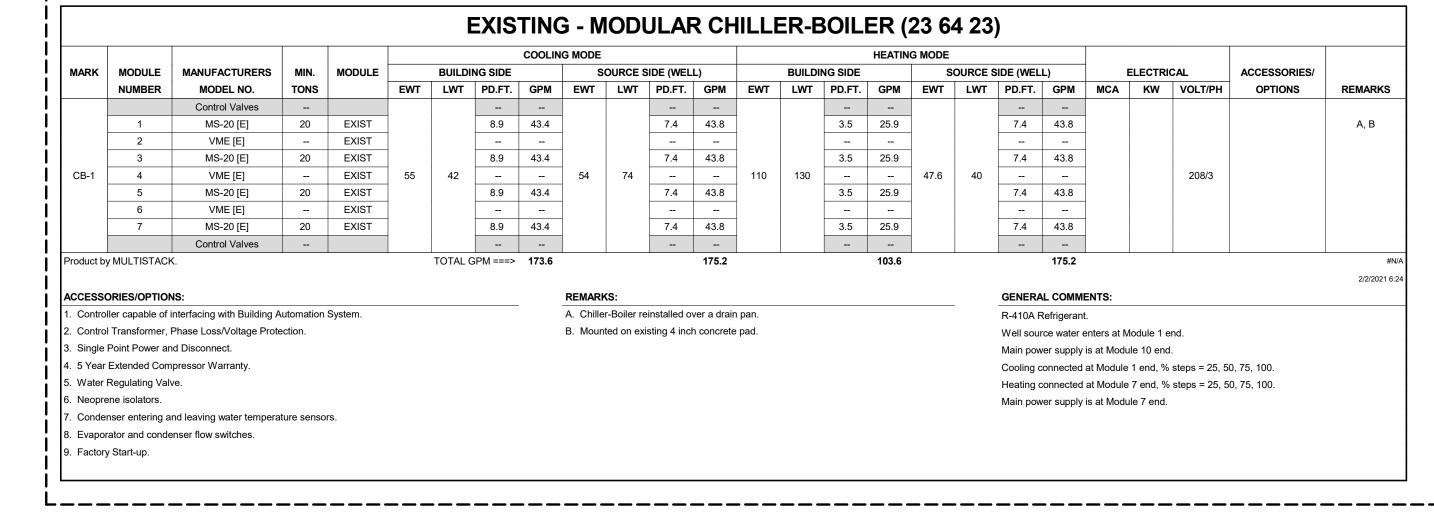
				Alf	R DIS	TRI	BUT	ION I	DEVICE	S (23 37 13	3)			
	MANUFACTURER'S	APPL'N	SIZE (V	V" x H")	ı	MAXIMUM		Т	HROW *	-	<u> </u>		ACCESSORIES/	
IARK	MODEL NO.		DUCT	FACE	CFM	PD" *	NC*	FT **	DIRECT.	TYPE	CONSTR.	DAMPER	OPTIONS	REMARKS
Α	SPD	Supply	10"	24x24	435	0.12	22	6	4-Way	Arch. Ceiling Diff.	Steel	No	1	В
В	SPD	Supply	8"	24x24	280	0.08	19	5	4-Way	Arch. Ceiling Diff.	Steel	No	1	В
С	SPD	Supply	6"	24x24	175	0.06	19	4	4-Way	Arch. Ceiling Diff.	Steel	No	1	В
D	SDS100	Supply	8"	6 x 48	160	0.04	<15	10	2-Way Horiz.	4 @ 1/2" Linear Slot	Aluminum	No	10	С
E	22	Supply	28x16	30x18	1670	0.05	21	40	3/4" 22 deg.	Airfoil Double Def.	Aluminum	Yes	1	С
F	620	Supply	10x10	12x12	300	0.07	<15	10	45 deg. def.	3/4" Double Deflect.	Aluminum	No	1	Α
G	620	Supply	8x8	10x10	195	0.07	<15	8	45 deg. def.	3/4" Double Deflect.	Aluminum	No	1	А
Н	620	Supply	8x4	10x6	90	0.07	<15	5	45 deg. def.	3/4" Double Deflect.	Aluminum	No	1	Α
I	620	Supply	16x8	18x10	485	0.1	18	14	45 deg. def.	3/4" Double Deflect.	Aluminum	No	1	Α
J	620	Supply	10x8	12x10	230	0.07	<15	9	45 deg. def.	3/4" Double Deflect.	Aluminum	No	1	Α
K	RCDE	Supply	8"	15"	175	0.05	15	4	360 deg.	3 Cone, adjustable	Steel	No	1	С
L	SDGE - 12" Duct	Supply	4x18	6x19	230	0.13	<15	9	3/4" 45 deg.	Spiral Duct - Curved	Aluminum	Scoop	1	A
M (p)	81	Plen. Ret.	22x22	24x24	1100	0.02	<10			Eggcrate	Aluminum	No	1, 3	B, D
N	81	Ret/Tran	22x10	24x12	800	0.05	<15			Eggcrate	Aluminum	No	1, 3	B, F
N (p)	81	Plen. Ret.	22x10	24x12	535	0.02	<10			Eggcrate	Aluminum	No	1, 3	B, D
0	81	Ret/Exh	8x8	10x10	260	0.07	19			Eggcrate	Aluminum	No	1, 3	Α
Р	81	Ret/Exh	10x10	12x12	350	0.05	16			Eggcrate	Aluminum	No	1, 3	A
Q	81	Exhaust	6x6	8x8	130	0.07	16			Eggcrate	Aluminum	No	1, 3	A
R	81	Ret/Exh	22x4	24x6	300	0.05	<15			Eggcrate	Aluminum	No	1, 3	B, F
S T	630 630	Sup/Ret	12x12	14x14	270	0.03	<15			3/4" Single Deflect.	Aluminum	No	1	A A
	products by PRICE.	Return	38x22	40x24	1800 *at Maximi	0.03	20	** Distance	 Se in ET at 100 FE	3/4" Single Deflect. PM with direction pattern in	Aluminum	Yes	I	#N/
	pecifications for detailed pr	roduct and in	stallation re	quirements.	at Waxiiii	uiii Oi ivi.		Distant	20 III 1 at 100 1 1	with direction pattern in	idicated.			2/3/21 8:4
CESS	ORIES/OPTIONS:							REMARK	(S:					
Standa	ard White Finish.							A. Surfac	ce Mounted.					
Alumir	num Finish.							B. T-bar	lay-in.					
1/2" op	penings x 1" deep.							C. Duct	Mounted.					
Square	e to round adapter.							D. Non-d	lucted grille locate	ed in ceiling below return a	air plenum, ma	x. 400 FPM co	ore velocity.	
24"x24	I" panel frame.							E. Add a	a black painted vis	sion screen panel above g	ırille, see detai	l.		
1/2" bl	ade spacing.									takeoff, see detail.				
#3 Sat	in polish finish.								•	at wall behind grille, with s	steel mounting	frame and gri	lle mounting angles,	
Filter o	clips.							Ruski	n Style "G".					
Plaste	r frame.													

HVAC			MOTOR		VOLTA	GE / PH	CONTROL	ENCLOSURE		PROV	IDED		ELECTRICAL	BASIS OF	ACCESS. & OPTIONS
MARK	LOCATION	ВНР	HP	FLA	INPUT	OUTPUT	INTERFACE	TYPE	w/ EQUIP	by MC	by TCC	by EC	MARK#	DESIGN	REMARKS
AHU-3	Weight Rm 200	3.12	5		208/3	208/3		NEMA 1	Х						1, A, C
AHU-4	Mech Rm 2M2	5.37	7.5		208/3	208/3		NEMA 1	Х						1, A, C
HWP-1	Mech Rm 2M3	2.71	5		208/3	208/3		NEMA 1		Х				Toshiba	1, A, C
HWP-2	Mech Rm 2M3	2.71	5		208/3	208/3		NEMA 1		Х				Toshiba	1, A, C
CWP-1	Mech Rm 2M4	4.92	7.5		208/3	208/3		NEMA 1		Х				Toshiba	1, A, C
CBH-1	Mech Rm 2M4	1.62	2		208/3	208/3		NEMA 1		Х				Toshiba	1, A, C
CBC-1	Mech Rm 2M4	2.38	3		208/3	208/3		NEMA 1		Х				Toshiba	1, A, C
HXP-1	Mech Rm 2M4	5.92	7.5		208/3	208/3		NEMA 1		Х				Toshiba	1, A, C
•	fications for detailed prod	duct and ins	l tallation re	equirements.						REMAR					# 1/24/21 1
Input Disco	onnect.									A. Variabl	e torque load	i .			
Line reacto	ors.									B. Consta	nt torque loa	d.			
Integral By	-pass.									C. Shippe	d loose for fi	eld mountir	ng.		
Output line	filter.														

MARK	MANUFACT.					LOA	AD SIDE (MULTIST	ACK) HXP	-1	PLATE		SOURC	E SIDE (\	NELL)		ACCESSORIES/	REMARKS
НХ-	MODEL NO.	LOCATION	SERVING	MODE	MIN.	FLUID	GPM	EWT	LWT	PSI	AREA	FLUID	GPM	EWT	LWT	PSI	OPTIONS	
					MBH						S.F.							
				COOLING	1,315.5		132	74	54.0	4.28			135	55	70.0	4.54	1, 2, 3	A, B
2	PF 50-63-4-NH	Mech 2M4	CB-1			WATER					328.3	WATER			1			
				HEATING	843.2		215	40	48.0	10.7			215	50	42.2	11.1		
	pecifications for deta ORIES/OPTIONS: S plates	iled product and	installation req	uirements.						REMARK A. Opera	(S: ating Weigh	t 1639 lbs.						1/27/2021 7:10
2. 4" inlet	t and outlet connection	ons.								B. 72.5"	total heigh	t, 18.5" total	width, 47.	3" total le	ngth.			
8. 63 plat	tes.																	

EQUIPMENT WITHIN DASHED LINES HAS BEEN PRE-PURCHASED BY OWNER SITE UNLOADING, COMPLETE INSTALLATION, & START-UP WILL BE THE

RESPONSIBILITY OF THE CONTRACTOR BIDDING THESE CONSTRUCTION



	MANUFACTURER	TOTA	AL MBH	N	IINIMUM	%	PIPE CO	NN. SIZE	VEN	T SIZE	GAS PR	ESSURE		ACCESS./	
MARK	MODEL NO.	INPUT	OUTPUT	GPM *	RET. TEMP.	EFF	SUP.	RET.	Intake	Exhaust	Min.	Max.	TYPE	OPTIONS	REMARKS
BLR-1	FBN-0751	750.0	722.0	36	n/a	96	3"	3"	6"	6"	4"	14"	Stainless	1,2,3,4,5	A, B
BLR-2	FBN-0751	750.0	722.0	36	n/a	96	3"	3"	6"	6"	4"	14"	Stainless	1,2,3,4,5	A, B
2. 15:1 Tu					A. 73 gallon wa B. 208/3 electric	cal powe	er required, o	contol voltage							
 Flow S Tempe 	witch erature/Pressure gauge.				C. 1768 LBS, 3	0"W x 5	5.5"L x /8"H								
•	t Interface.														

				CI	RCULAT	ING FLUID		MAX.	%	%	IMP.		ľ	MOTOR			
MARK	MODEL No.	SYSTEM	TYPE	FLUID	GPM	FT HD	сР	HD. **	PLEV	EFF	DIA.	ВНР	HP	RPM	VOLT/PH	ACCESS.	REMARKS
HWP-1	Taco	Heating	Inline CC	30% PG	100	65		71		69	8.00	2.35	5	1760	208/3	1, 2, 3	New VFD
& 2	KV2009D-4P-PM	Water	Vertical	130 F												4, 5, 6	A, B
BP-1	Taco	Boiler	Wet Rotor	30% PG	46	15									110-230/1		ECM
& 2	Viridian VR15-3	Circ	Circ	130 F													А
CWP-1	Taco	Chilled	Inline CC	30% PG	175	70		74		75	8.30	4.26	7.5	1760	208/3	1, 2, 3	New VFD
	KV3009D-4P-PM	Water	Vertical	45 F												4, 5, 6	Α
CBH-1	Taco	CB-1	Inline CC	30% PG	130	35		40		82	6.25	1.39	2	1760	208/3	1, 2, 3	New VFD
	KV3006D-4P-PM	Heating	Vertical	130 F												4, 5, 6	Α
CBC-1	Taco	CB-1	Inline CC	30% PG	175	30		33		79	6.10	2.02	3	1760	208/3	1, 2, 3	New VFD
	KV3007D-4P-PM	Cooling	Vertical	45												4, 5, 6	А
HXP-1	Taco	CB-1	Inline CC	Water	220	70		77		78	8.50	4.99	7.5	1760	208/3	1, 2, 3	New VFD
	KV3009D-4P-PM	HX-1	Vertical	50												4, 5, 6	А
RHP-1	Taco	In-Floor	Wet Rotor	30% PG	2.8	10									115/1		ECM
	0015e	RHM-1	Circ	115													А
RHP-2	Taco	In-Floor	Wet Rotor	30% PG	4.5	15									115/1		ECM
	0015e	RHM-2-4	Circ	115													Α
Based on	products by TACO.							** Maxim	um head ii	n feet @ s	hutoff.						#N/A
See the s	pecifications for detailed p	roduct and insta	llation requirem	ents.													2/9/2021 8:57
ACCESS	ORIES:							REMARK	KS:								
1. Differe	ential Pressure Gauge.							A. Motor	selected a	as non-ov	erloading.						
2. Balan	ce for Variable Frequency	Drive, drive prov	ided by others.					B. Stand	lby (alterna	ating) opei	ration.						
3. Provid	e non-slam check valve ar	nd isolation valve	es.					C.									
4. Ventu	ri with measurement ports.																
5. Provid	e shaft grounding on all m	otors with VFDs.															
6. Provid	e suction diffuser.																

		APPROX.	SYS	TEM	PS	IG	MAX. P	RESS.	MIN	. VOL.		AIR-DIR	T SEPAR	ATOR	PIF	PE SIZE	
		SYS. VOL.	TEI	MP.	INITAL	SYS.	RELIEF	TANK	TANK	ACCEPT				BUILT-IN	то	GLYCOL	
MARK	SYSTEM	GAL.	MIN.	MAX.	TANK	FILL	VALVE		GAL.	GAL.	SIZE	GPM	Cv	STRAINER	TANK	FILL	REMARKS
ETS-1	Heating		60	140	15.5	12	30		53	53	3"			-	1"	3/4"	1
ETS-2	Cooling		40	90	15.5	12	30		53	53	4"	220	361	YES	1"	3/4"	2
ET-3	Condenser		40	90	15.5	12			8	2.4	-				1/2"		3
			D - 11	14	D 000												
REMARK	S:																
	g Bladder Type E	•															
	g Inline air-dirt se					ıın valve.											
2. Existin	g Bladder Type E	xpansion Tank,	Believed	I to be a	B-200.												
DOC C	RS-4F Inline air-o	lirt separator. A	utomatic	air relea	ase valve a	nd drain va	alve.										
Dag C																	

			CIRC	GPM (@	MAX		ELEC	TRICAL	OPTIONS/	
MARK	MODEL No.	SYSTEM	FLUID	FREE FLOW	50 PSI	TEMP	TANK SIZE	WATTS	VOLT/PH	ACCESSORIES	REMARKS
GSF-1	SF100	Heating Water	30% P.G.	1.4	1	170	55 Gallon	50	115/1	1 thru 7	A, B
OPTIONS/F	ACCESSORIES:					REMARKS:	et polystyrene mixi	ing and store	age tank and lid		
1. Pump su	uction hose with strainer.					A. High impac	c polystyrene mix	ing and store	ige tarik and ild.		
•	uction hose with strainer. e pump with thermal cut-or	ut.				B. 3-prong pl		ing and store	ige tarik and ild.		
2. Pressure								ing and store	ige tank and iid.		
2. Pressure 3. Integral p	e pump with thermal cut-or	c valve.						ing and store	ge tank and nd.		

MARK				AIRF	LOW		DUCT		CAPACITY	SOUND	CON	NECTIONS	CONTROL	ELECTRIC		ACCESS/OPTIONS
RDH-	MODEL NO.	SERVING	CFM	S.P.	CFM	S.P.	SIZE	PPD	PINTS / kWh	dBA	DRAIN	DISCHARGE	MOUNTING	VOLT/PH	AMPS	& REMARKS
1	Model 1850	Fire Training Locker 157	265	0.0"	200	0.4"	10"	95	4.46	54	3/4"	End	Front	120/1	8	1 thru 7, A
Based on	products by APRILA	AIRE.														#N/A
Equal pro	ducts by Concepts a	and Design are acceptable.														1/14/21 7:25
ACCESSO	ORIES / OPTIONS:										REMARK	(S:				
1. 8' Pow	er Cord With Plug.									-	A. 70 lbs	s, 12.5" W x 14.5"	H x 36"L with due	ct collars.		
2. 1/2" EF	PS Cabinet Insulatio	n.														
3. Duct C	ollars.															
4. R410A	Refrigerant.															
5. MERV	8 Washable Filter.															
6. Built-in	Digital Control and	Display.														
		n for BAS through .														



HSR ASSOCIATES INC 100 MILWAUKEE STREET LA CROSSE, WISCONSIN PHONE: 608.784.1830 FAX: 608.782.5844 www.bsrassociates.com

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www.hsrassociates.com
Consultant:

Project Title: WESTERN TECHNICAL COLLEGE

BRANSION

SPARTA PUBLIC SAFETY EXPANSION

Broject Location: 11177 COUNTY ROAD A

SPARTA, WI 54656

Keh blau:

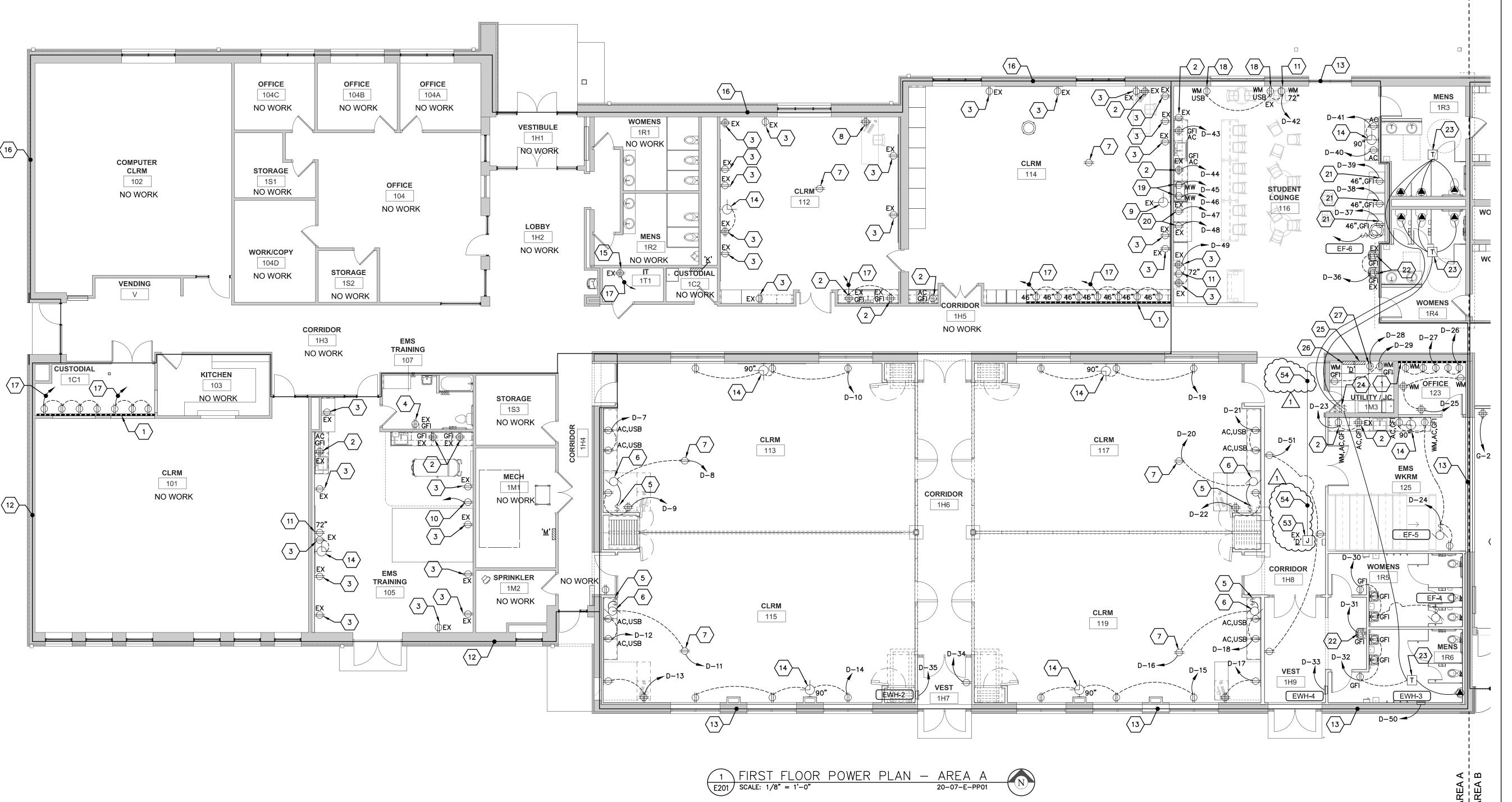
Revisions:

No. Description Date
A1 Addendum 1 2/15/21

Graphic Scale:

VARIES

Last Update: 2/15/2021 11:03:41 AM



KEYED ELECTRIC RISER DIAGRAM NOTES:

PROVIDE SUB-FEED LUGS WITH THIS PANELBOARD.

19. EXISTING FEEDER TAP CONDUCTORS TO REMAIN AS IS.

PANELBOARD WITH NEW SQUARE 'D' IN SAME LOCATION.

PANELBOARD WITH NEW SQUARE 'D' IN SAME LOCATION.

22. PROVIDE A TVSS 'SURGE SUPPRESSOR' DEVICE AS SPECIFIED.

23. EXISTING 600/3 DISCONNECT FOR 'OLD SERVICE' TO REMAIN AS IS.

1. EXISTING 1,200 AMP, 120/208VAC, 3-PHASE, 4-WIRE MAIN DISTRIBUTION PANEL 'MDP1' TO REMAIN AS IS.

2. EXISTING 800 AMP, 120/208VAC, 3-PHASE, 4-WIRE MAIN DISTRIBUTION PANEL 'MDP2' TO REMAIN AS IS.

5. PROVIDE A NEW 225 AMP., 120/208VAC, 3-PHASE, 4-WIRE, 42-SPACE, MAIN-LUG-ONLY SQUARE 'D' PANELBOARD 'H'.

9. RELOCATE EXISTING 225 AMP., 120/208VAC, 3-PHASE, 4-WIRE SQUARE 'D' PANELBOARD TO UTILITY ROOM #1M3.

6. EXISTING 200 AMP., 120/208VAC, 3-POLE WITH SOLID NEUTRAL DISCONNECT SWITCH FOR PANELBOARD 'D' TO REMAIN AS IS.

10. EXTEND EXISTING 200 AMP., 120/208VAC, 3-PHASE, 4-WIRE COPPER FEEDER TO REINSTALLED LOCATION ON UTILITY ROOM '1M3'.

11. INSTALL A NEW SQUARE 'D', 225 AMP., 120/208VAC, 3-PHASE, 4-WIRE, 42-SPACE, MAIN LUG ONLY PANELBOARD IN UTILITY ROOM #1M3.

13. EXISTING 225 AMP. 120/208VAC, 3-PHASE, 4-WIRE COPPER FEEDER TO REMAIN AS IS FEEDING EXISTING PANELBOARD 'N'.

12. REINSTALL A PREVIOUSLY REMOVED EXISTING SQUARE 'D', 225 AMP., 120/208VAC, 3-PHASE, 4-WIRE PANELBOARD IN UTILITY ROOM #1M3.

20. EXISTING 225 AMP., 'GENERAL ELECTRIC', 120/208VAC, 4-WIRE, MAIN CKT. BRK. PANELBOARD 'A' SHALL BE DISCONNECTED AND REMOVED.
REPLACE EXISTING PANELBOARD WITH A NEW SQUARE 'D', 225 AMP., 120/208VAC, 3-PHASE, 4-WIRE, MAIN CKT. BRK., 52-SPACE (MINIMUM)

21. EXISTING 225 AMP., 'GENERAL ELECTRIC', 120/208VAC, 4-WIRE, MAIN CKT. BRK. PANELBOARD 'C' SHALL BE DISCONNECTED AND REMOVED.
REPLACE EXISTING PANELBOARD WITH A NEW SQUARE 'D', 225 AMP., 120/208VAC, 3-PHASE, 4-WIRE, MAIN CKT. BRK., 52-SPACE (MINIMUM)
PANELBOARD. REFER TO PANELBOARD SCHEDULE FOR CIRCUIT BREAKER INFORMATION. THE INTENT IS TO REPLACE THE EXISTING GE

PANELBOARD. REFER TO PANELBOARD SCHEDULE FOR CIRCUIT BREAKER INFORMATION. THE INTENT IS TO REPLACE THE EXISTING GE

7. INTERRUPT EXISTING 200 AMP., FEEDER TO PANELBOARD 'D' FOR RELOCATION OF PANELBOARD. PROVIDE A 18"X18"X6" JUNCTION BOX ABOVE SUSPENDED CEILING FOR TERMINATING EXISTING EMT CONDUIT AND FOR SPLICING EXISTING FEEDER CONDUCTORS. RELOCATE EXISTING PANELBOARD 'D' TO UTILITY ROOM #1M3, EXTEND EXISTING 200 AMP. COPPER FEEDER AS REQUIRED. REFER TO POWER SHEET E201..

3. USE EXISTING 200/3 CIRCUIT BREAKER IN 'MDP2' TO FEED NEW PANELBOARD 'H'.

4. PROVIDE 4-#3/0 THWN-2 AND 1-#6 THWN-2 (GRD) IN 2" EMT CONDUIT FOR 200 AMP FEEDER.

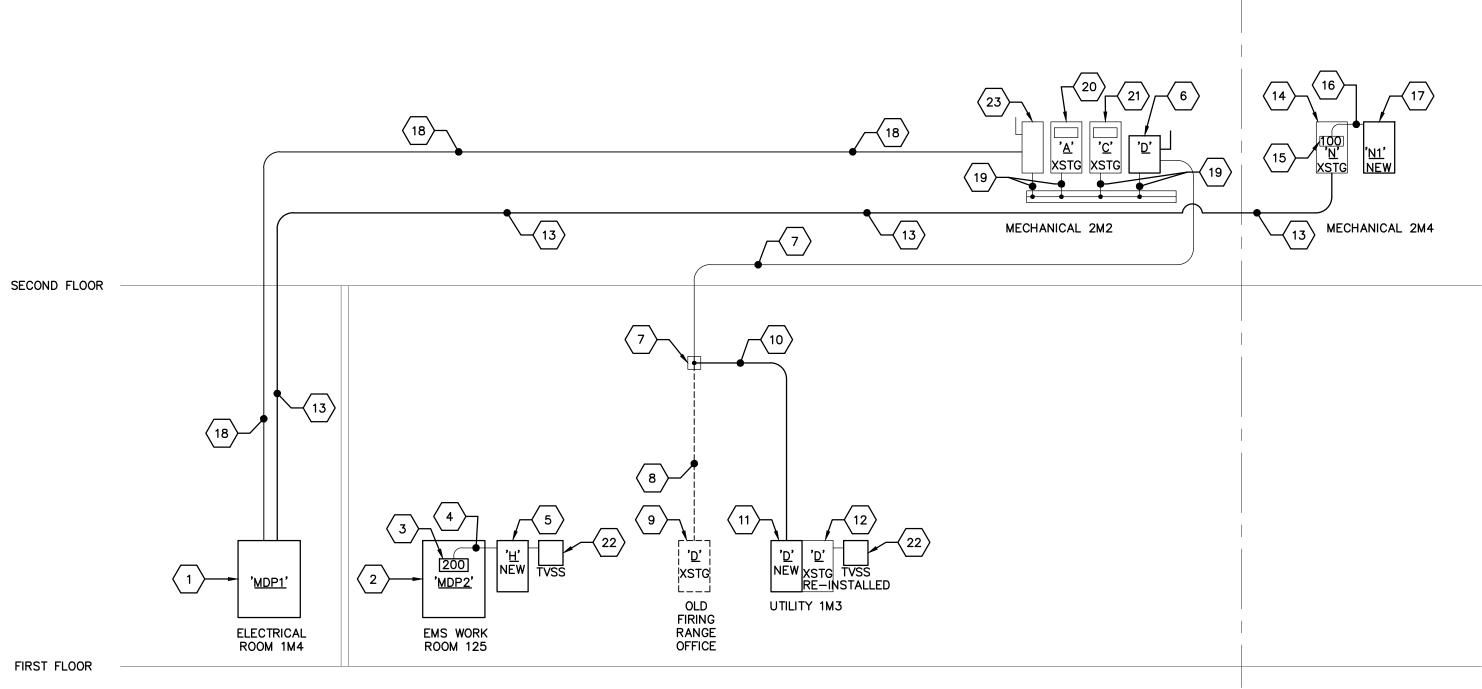
8. DISCONNECT AND REMOVE PARTIAL 200 AMP COPPER FEEDER TO ABOVE SUSPENDED CEILING.

14. EXISTING 225 AMP., 120/208 VAC, 3-PHASE, 4-WIRE, SQUARE 'D' PANELBOARD 'N' TO REMAIN AS IS.

16. PROVIDE 4-#3 THWN-2 AND 1-#8 THWN-2 (GRD) IN 1-1/4" EMT CONDUIT FOR 100 AMP. FEEDER.

17. PROVIDE A NEW 125 AMP., 120/208VAC, 3-PHASE, 4-WIRE, 42-SPACE, MAIN LUG ONLY PANELBOARD 'N1'.
18. EXISTING 600 AMP., 120/208VAC, 4-WIRE COPPER FEEDER TO REMAIN AS IS, LABELED 'OLD SERVICE' IN MDP1.

15. PROVIDE A 100/3 CIRCUIT BREAKER IN PANELBOARD TO FEED SUBPANEL 'N1'.



PARTIAL ELECTRICAL RISER DIAGRAM
E201) SCALE: 1/8" = 1'-0"
20-07-E-RISER-DIA

KEYED POWER PLAN NOTES:

9. EXISTING CLOCK TO REMAIN AS IS.

- PROVIDE A WIREMOLD 3000 SERIES SURFACE RACEWAY.
 PROVIDE A GFI DUPLEX OR DOUBLE/DUPLEX RECEPTACLE AS NOTED AND INSTALL ABOVE COUNTER, REUSE EXISTING JUNCTION BOX AND BRANCH-CIRCUIT WIRING TO THE EXTENT POSSIBLE. RAISE EXISTING JUNCTION BOX TO ABOVE COUNTER AS REQUIRED.
- 3. PROVIDE A NEW 20 AMP., 120VAC DUPLEX RECEPTACLE TO REPLACE EXISTING, INSTALL IN EXISTING JUNCTION BOX. REUSE EXISTING BRANCH-CIRCUIT WIRING TO THE EXTENT POSSIBLE. PROVIDE A NEW STAINLESS STEEL COVER PLATE.
- 4. PROVIDE A NEW 20 AMP., 120VAC, GFI DUPLEX RECEPTACLE TO REPLACE EXISTING, INSTALL IN EXISTING JUNCTION BOX. REUSE EXISTING BRANCH-CIRCUIT WIRING. PROVIDE A NEW STAINLESS STEEL COVER PLATE.
 5. ELECTRICAL CONTRACTOR SHALL INSTALL UP/DOWN SWITCH PROVIDED BY GENERAL CONTRACTOR FOR MOTORIZED VIDEO PROJECTION SCREEN AND MAKE FINAL
- 5. ELECTRICAL CONTRACTOR SHALL INSTALL UP/DOWN SWITCH PROVIDED BY GENERAL CONTRACTOR FOR MOTORIZED VIDEO PROJECTION SCREEN AND MAKE CONNECTION. COORDINATE WITH GENERAL CONTRACTOR.
 6. MAKE FINAL CONNECTION TO MOTORIZED CEILING MOUNTED VIDEO PROJECTION SCREEN.
- 7. PROVIDE A CEILING MOUNTED 20 AMP., 120VAC DUPLEX RECEPTALCE FOR OVERHEAD VIDEO PROJECTOR CORD AND PLUG CONNECTION. COORDINATE EXACT LOCATION WITH WTC IT DEPARTMENT.
- 8. PROVIDE A DOUBLE DUPLEX RECEPTACLE IN THIS APPROXIMATE LOCATION FOR TEACHER'S STATION, REWORK EXISTING JUNCTION BOX AS REQUIRED TO ACCOMMODATE DOUBLE DUPLEX RECEPTACLE. REUSE EXISTING JUNCTION BOX, CONDUIT, BRANCH-CIRCUIT WIRING, ETC. TO THE EXTENT POSSIBLE.
- PROVIDE A DUPLEX RECEPTACLE IN THIS LOCATION FOR AMBULANCE SIMULATOR CORD AND PLUG CONNECTION. FISH INTO EXISTING GYP BOARD TYPE WALL CONSTRUCTION. PROVIDE A DEDICATED 20 AMP., 120VAC BRANCH CIRCUIT.
 PROVIDE A DUPLEX RECEPTACLE FOR WALL-MOUNTED MONITOR, COORDINATE EXACT LOCATION WITH WTC IT DEPARTMENT. FISH INTO EXISTING GYP. BOARD
- 1. PROVIDE A DUPLEX RECEPTACLE FOR WALL-MOUNTED MONITOR, COORDINATE EXACT LOCATION WITH WTC IT DEPARTMENT. FISH INTO EXISTING GYP. BOARD TYPE WALL CONSTRUCTION OR PROVIDE SURFACE WIREMOLD 500 IF ALLOWED BY WTC FACILITY MAINTENANCE DEPARTMENT. REUSE/EXTEND EXISTING BRANCH-CIRCUIT WIRING IN THIS ROOM TO THE EXTENT POSSIBLE.

12. REUSE EXISTING BRANCH-CIRCUIT WIRNG TO ENERGIZE NEW DUPLEX RECEPTACLES FED FROM EXISTING PANELBOARD 'M' LOCATED IN MECHANICAL ROOM 1M1

- TO THE EXTENT POSSIBLE FOR THIS AREA. PROVIDE ADDITIONAL 20 AMP., 120VAC BRANCH-CIRCUITS AS REQUIRED PER NEC CODE.

 13. BRANCH-CIRCUIT WIRNG TO ENERGIZE NEW DUPLEX RECEPTACLES, ETC. SHALL BE FED FROM PANELBOARD 'D' LOCATED IN UTILITY ROOM 1M3 FOR THIS AREA. PROVIDE BRANCH-CIRCUITS AS NOTED.

 14. ELECTRICAL CONTRACTOR SHALL INSTALL A WTC 'STANDARDIZED' LATHEM AIRTIME CLOCK AND BACKBOX AT THIS LOCATION PROVIDED BY WTC FACILITY
- MAINTENANCE DEPARTMENT (OWNER). INSTALL A LATHEM AIRTIME BACKBOX WITH 120VAC RECEPTACLE PROVIDED BY OWNER. INSTALL A 120VAC LATHEM AIRTIME WIRELESS CLOCK PROVIDED BY OWNER. PROVIDE A 120VAC BRANCH-CIRCUIT WIRING AND MAKE FINAL CONNECTION AS REQUIRED.

 15. PROVIDE A DOUBLE DUPLEX RECEPTACLE FOR NEW A/V EQUIPMENT RACK. COORDINATE WITH WTC IT DEPARTMENT. PROVIDE A 20 AMP., 120VAC BRANCH-CIRCUIT TO PANELBOARD 'K'.
- 16. REUSE EXISTING BRANCH-CIRCUIT WIRNG TO ENERGIZE NEW DUPLEX RECEPTACLES FED FROM EXISTING PANELBOARD 'K' LOCATED IN CUSTODIAL ROOM 1C2 TO THE EXTENT POSSIBLE FOR THIS AREA. PROVIDE ADDITIONAL 20 AMP., 120VAC BRANCH-CIRCUITS AS REQUIRED PER NEC CODE.

 17. PROVIDE A 20 AMP., BRANCH-CIRCUIT TO THE NEAREST AVAILABLE PANELBOARD SERVING THIS AREA.
- PROVIDE A COMBINATION DUPLEX RECEPTACLE/USB CHARGER.
 PROVIDE A DUPLEX RECEPTACLE FOR MICROWAVE OVEN, LOCATE RECEPTACLE AS DIRECTED BY WTC FACILITY MAINTENANCE DEPARTMENT. RECEPTACLE SHALL BE LOCATED FOR EASY ACCESS TO CORD AND PLUG CONNECTION.
 PROVIDE A DUPLEX RECEPTACLE FOR REFRIGERATOR, REUSE EXISTING JUNCTION BOX TO THE EXTENT POSSIBLE. RAISE EXISTING JUNCTION BOX IF REQUIRED.
 PROVIDE A DUPLEX RECEPTACLE FOR VENDING MACHINE, FEED BRANCH-CIRCUIT FROM A GFI CIRCUIT BREAKER FOR EASY ACCESS TO RESET GFI PROTECTION.
- 22. INSTALL GFI RECEPTACLE FOR ELECTRIC WATER COOLER 'OUTSIDE' OF COOLER FOR EASY ACCESS TO RE-SET GFI PROTECTION.23. ELECTRICAL CONTRACTOR SHALL INSTALL 40VA TYPE OF TRANSFORMER FOR PLUMBING VALVE CONTROL. COORDINATE WITH PLUMBING CONTRACTOR. THIS WORK SHALL BE AN 'ADD' ALTERNATE BID, SEE BID FORMS.
- 24. PROVIDE A SINGLE-POLE SWITCH TO CONTROL AUTOMATIC FLUSH VALVE TRANSFORMERS, CLEARLY LABEL AS DIRECTED BY WTC FACILITY MAINTENANCE DEPARTMENT.
- 25. INSTALL A NEW 225 AMP., 120/208VAC, 3-PHASE, 4-WIRE, 42 SPACE, SQUARE 'D' PANELBOARD 'D' IN THIS ROOM. PROVIDE DOUBLE LUGS TO SUB-FEED REINSTALLED EXISTING PANELBOARD 'D'.
- 26. REINSTALL EXISTING PANELBOARD 'D' IN THIS LOCATION FEED FROM NEW PANELBOARD 'D' WITH DOUBLE SUB-FEED LUGS.
- 27. PROVIDE A DUPLEX RECEPTACLE FOR EXISTING RELOCATED SEPTIC ALARM CORD AND PLUG CONNECTION. REFER TO PHOTO #35/E401.

 28. REUSE EXISTING BRANCH-CIRCUIT WIRNG TO ENERGIZE NEW DUPLEX RECEPTACLES FED FROM EXISTING PANELBOARD 'A' LOCATED IN MEZZANINE MECHANICAL ROOM 2M2 TO THE EXTENT POSSIBLE FOR THIS AREA. PROVIDE ADDITIONAL 20 AMP., 120VAC BRANCH-CIRCUITS AS REQUIRED PER NEC CODE.

 29. REUSE EXISTING BRANCH-CIRCUIT WIRNG TO ENERGIZE NEW DUPLEX RECEPTACLES AND MOTORS/EQUIPMENT FED FROM EXISTING PANELBOARDS 'A'. 'C'. 'C1'
- LOCATED IN MEZZANINE MECHANICAL ROOM 2M2 TO THE EXTENT POSSIBLE FOR THIS AREA. ALSO REUSE EXISTING BRANCH-CIRCUIT WIRING FED FROM EXISTING PANEBOARD 'F' LOCATED IN ELECTRICAL ROOM 1M4. PROVIDE ADDITIONAL BRANCH-CIRCUITS AS REQUIRED PER NEC CODE FROM THESE PANELBOARDS.

 30. REUSE EXISTING BRANCH-CIRCUITS FED FROM EXISTING PANELBOARDS 'F' & 'G' LOCATED IN ELECTRICAL ROOM 1M4 TO THE EXTENT POSSIBLE FOR THIS AREA. PROVIDE ADDITIONAL BRANCH-CIRCUITS AS REQUIRED PER NEC CODE. IN ADDITION, NEW PANELBOARD 'H' LOCATED IN EMS WORK ROOM #125 IS AVAILBLE FOR BEMODEL WORK
- 31. PROVIDE FOUR (4) 20 AMP., 120VAC, BRANCH-CIRCUITS TO PANELBOARDS 'F' OR 'G' TO FEED MODULAR FURNITURE. COORDINATE WITH WTC FACILITY MAINTENANCE DEPARTMENT.32. PROVIDE A JUNCTION BOX IN THIS APPROXIMATE LOCATION TO FEED MODULAR FURNITURE. MAKE DIRECT CONNECTION WITH LIQUID TIGHT FLEXIBLE METAL
- 33. PROVIDE A 30 AMP., 120/208VAC, SINGLE-PHASE 'DRYER' RECEPTACLE FOR STACKED WASHER/DRYER.
 34. INSTALL A SPEED CONTROL SWITCH PROVIDED BY HVAC CONTRACTOR TO CONTROL DESTRATIFICATION FANS DF-1, DF-2, DF-3 AND DF-4. PROVIDE A 20 AMP.,

CONDUIT. COORDINATE WITH WTC FACILITY MAINTENANCE DEPARTMENT.

- 120VAC BRANCH-CIRCUIT TO EITHER PANELBOARD 'A', 'C', 'C1', 'F' OR 'G'. ELECTRICAL CONTRACTOR SHALL CHOOSE BEST PANELBOARD TO USE.

 35. INSTALL A DUPLEX RECEPTACLE FOR ICE MACHINE. PROVIDE A 20 AMP., 120VAC BRANCH-CIRCUIT TO EITHER PANELBOARD 'A', 'C', 'C1', 'F' OR 'G'. ELECTRICAL CONTRACTOR SHALL CHOOSE BEST PANELBOARD TO USE.
- 36. PROVIDE A 20 AMP., 120VAC BRANCH-CIRCUIT TO PANELBOARD 'A', 'C', OR 'C1' LOCATED ON MEZZANINE MECHANICAL ROOM 2M2.

 37. REUSE EXISTING BRANCH-CIRCUIT WIRING FROM PREVIOUSLY REMOVED OVERHEAD DOORS TO FEED NEW OVERHEAD DOORS IN NEW ADDITION IF COMPATIBLE. FIELD VERIFY VOLTAGE AMPERAGE AVAILABLE. OTHERWISE CONNECT OVERHEAD DOORS TO PANELBOARD 'A', 'C', OR 'C1' LOCATED ON MEZZANINE MECHANICAL
- FIELD VERIFY VOLTAGE AMPERAGE AVAILABLE. OTHERWISE CONNECT OVERHEAD DOORS TO PANELBOARD 'A', 'C', OR 'C1' LOCATED ON MEZZANINE MECHANICAL ROOM 2M2.
- 38. PROVIDE A 30 AMP., 208VAC BRANCH-CIRCUIT TO PANELBOARD 'A', 'C', OR 'C1' LOCATED ON MEZZANINE MECHANICAL ROOM 2M2.

 39. INSTALL EXISTING WEATHER-PROOF COVER PLATES PREVIOUSLY REMOVED FROM FITNESS ROOM #105 (REFER TO REMOVAL SHEET E002) IN THIS LOCATION.
- REFER TO PHOTO **#24/E401**.

 40. TO SPEED CONTROL SWITCH, REFER TO SHEET E202.
- 41. REUSE EXISTING BRANCH-CIRCUIT WIRNG TO ENERGIZE NEW DUPLEX RECEPTACLES AND MOTORS/EQUIPMENT FED FROM EXISTING PANELBOARD 'N' LOCATED IN MECHANICAL ROOM 2M4 TO THE EXTENT POSSIBLE FOR THIS AREA. PROVIDE ADDITIONAL BRANCH-CIRCUITS AS REQUIRED PER NEC CODE FROM THIS PANELBOARD.
- 42. PROVIDE NEW BRANCH-CIRCUIT WIRNG TO ENERGIZE NEW DUPLEX RECEPTACLES AND MOTORS/EQUIPMENT FED FROM PANELBOARD 'N1' LOCATED IN MECHANICAL ROOM 2M4 FOR THIS AREA. PROVIDE ADDITIONAL BRANCH-CIRCUITS AS REQUIRED PER NEC CODE FROM THIS PANELBOARD.
- 43. IT SHALL BE REQUIRED TO DISCONNECT THE 450 AMP. 208VAC, 3-PHASE, MULTI-STACK CHILLER FOR THE MECHANICAL CONTRACTOR TO INSTALL A NEW DRIP PAN UNDERNEATH. RECONNECT AFTER NEW DRIP PAN INSTALLED. COORDINATE THOROUGHLY WITH MECHANICAL CONTRACTOR.
- 44. REUSE EXISTING BRANCH-CIRCUIT AT THIS LOCATION TO FEED NEW MOTOR/EQUIPMENT.

 45. PROVIDE A NEW SQUARE 'D', 125 AMP., MAIN LUG ONLY, 42-SPACE, 208VAC, 3-PHASE, 4-WIRE SUB-PANELBOARD IN THIS APPROXIMATE LOCATION. FEED FROM PANELBOARD 'N' WITH A 100/3 CIRCUIT BREAKER. LABEL PANELBOARD 'N1'.
- 46. INSTALL A SPEED CONTROL SWITCH PROVIDED BY HVAC CONTRACTOR TO CONTROL CEILING DESTRATIFICATION FANS DFC-1, DFC-2, DFC-3 AND DFC-4.

 47. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A 'CONNECT TRAC' FLOOR SYSTEM. PROVIDE SURFACE MOUNTED COMBINATION POWER AND LOW VOLTAGE MODULES AND SURFACE RACEWAY. PROVIDE MODULES WITH COMBINATION DUPLEX RECEPTACLES AND DATA JACKS AS NOTED ON DRAWINGS AND AS DECLURED BY WITH CONNECT PAGE SALES PERPESENTATIVE FOR MODEL NUMBERS.
- VOLTAGE MODULES AND SORFACE RACEWAY. PROVIDE MODULES WITH COMBINATION DOPLEX RECEPTACLES AND DATA JACKS AS NOTED ON DRAWINGS AND AS REQUIRED BY WTC. CONTACT A CONNECTRAC SALES REPRESENTATIVE FOR MODEL NUMBERS, ETC. THE INTENT IS PROVIDE SURFACE MOUNT CONNECTRAC ON EXISTING AND/OR NEW CONCRETE FLOOR TO PROVIDE POWER AND LOW VOLTAGE CABLES BETWEEN THE WALL TO A FLOOR MOUNTED COMBINATION POWER/LOW VOLTAGE MODULES.

 48. DISCONNECT, REMOVE AND DISPOSE OF EXISTING 225 AMP., 120/208VAC, 3-PHASE, 42 SPACE, MAIN-LUG-ONLY 'GE' PANELBOARD AND REPLACE WITH A 225
- AMP., 120/208VAC, 3-PHASE, 52 SPACE, MLO SQUARE 'D' PANELBOARD. REFER TO PANELBOARD SCHEDULE FOR EXISTING CIRCUIT BREAKER INFORMATION.

 49. PROVIDE A NEW 225 AMP., 120/208VAC, 3-PHASE, 4-WIRE, 42 SPACE, MAIN-LUG-ONLY SQUARE 'D' PANELBOARD 'H' FED FROM 'MDP2' DISTRIBUTION
 PANELBOARD, USE AN EXISTING 200/3 CIRCUIT BREAKER IN 'MDP2' TO ENERGIZE NEW PANELBOARD.
- PANELBOARD. USE AN EXISTING 200/3 CIRCUIT BREAKER IN 'MDP2' TO ENERGIZE NEW PANELBOARD.

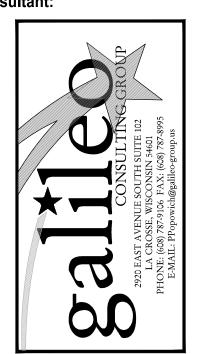
 50. PROVIDE A CEILING MOUNTED DUPLEX RECEPTACLE TO MATCH CORD AND PLUG CONNECTION OF MOTOR/EQUIPMENT.
- 51. EF-3 HAS BEEN RELOCATED, REUSE EXISTING BRANCH-CIRCUIT FROM PREVIOUS LOCATION AND EXTEND TO RELOCATED POSITION.
- 52. PROVIDE AN EMERGENCY MUSHROOM TYPE SHUT-OFF SWITCH TO DE-ENERGIZE ALL EXISTING BOILERS AND BOILER PUMPS IN THIS ROOM. CONNECT TO SHUNT-TRIP CIRCUIT BREAKER IN EXISTING PANELBOARD 'J' IF REQUIRED FOR EXISTING BOILERS TO REMAIN, FIELD VERIFY. COORDINATE WITH HVAC CONTRACTOR.
- 53. APPROXIMATE LOCATION OF PREVIOUSLY REMOVED PANELBOARD 'D'. PROVIDE A JUNCTION BOX ABOVE SUSPENDED CEILING TO INTERRUPT 200 AMP FEEDER. EXTEND EXISTING 200 AMP FEEDER TO RELOCATED PANELBOARD 'D' IN UTILITY ROOM 1M3. REFER TO ELECTRIC RISER DIAGRAM **2/E201**.
- 54. EXTEND EXISTING 200 AMP FEEDER FOR RELOCATED EXISTING PANELBOARD 'D' AS INDICATED.

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AFETY EXPANSION

1177 COUNTY ROAD PARTA, WI 54656

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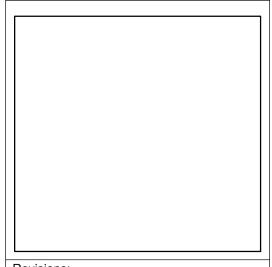
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KEY PLAN



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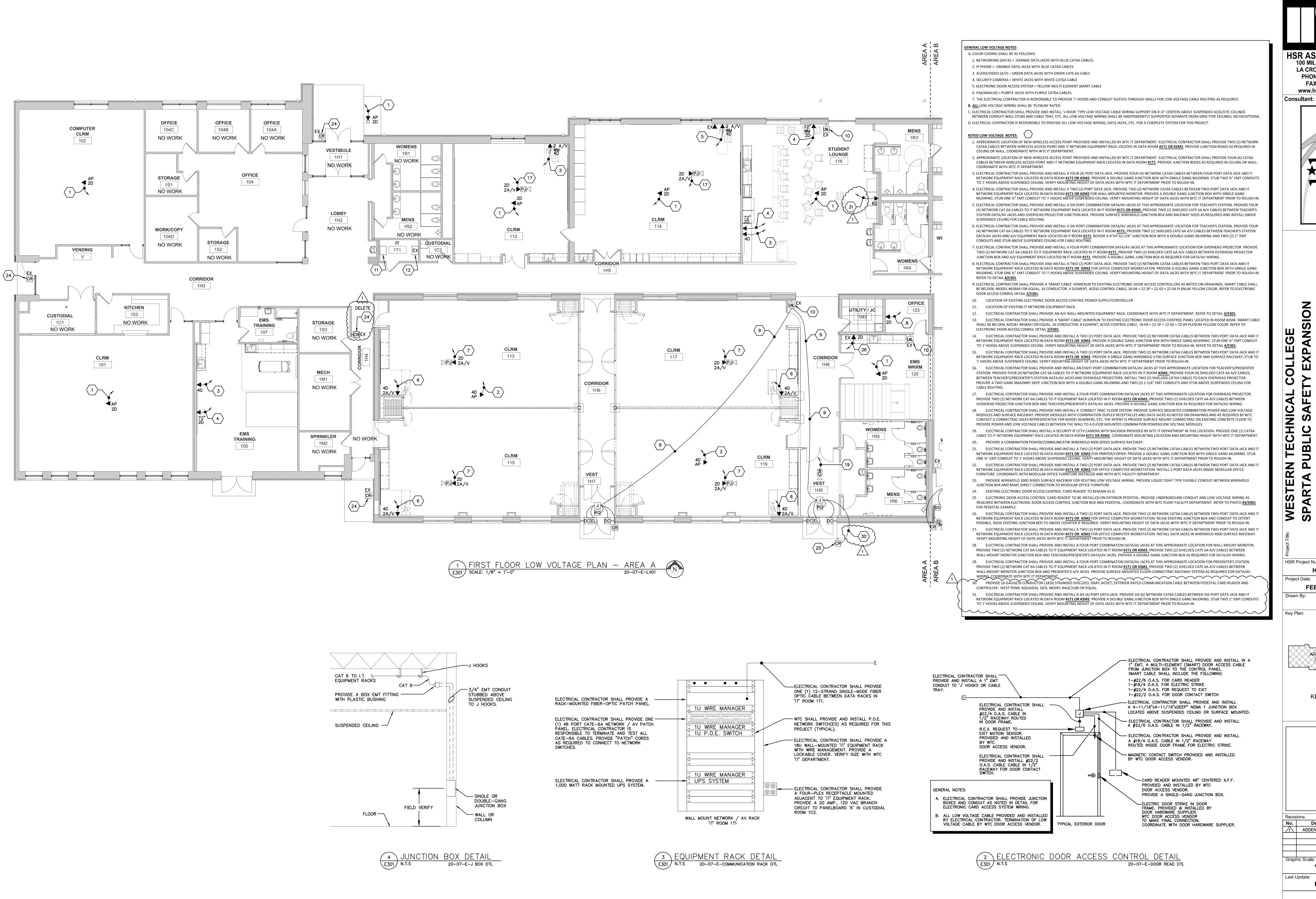
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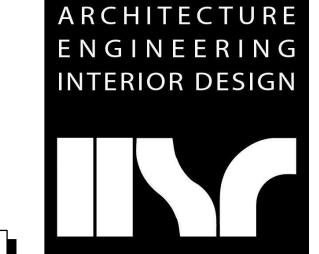
ADDENDUM # 1 2-15

Graphic Scale:

Last Update: **02/15/21**

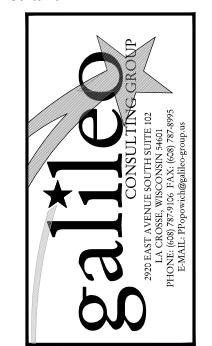
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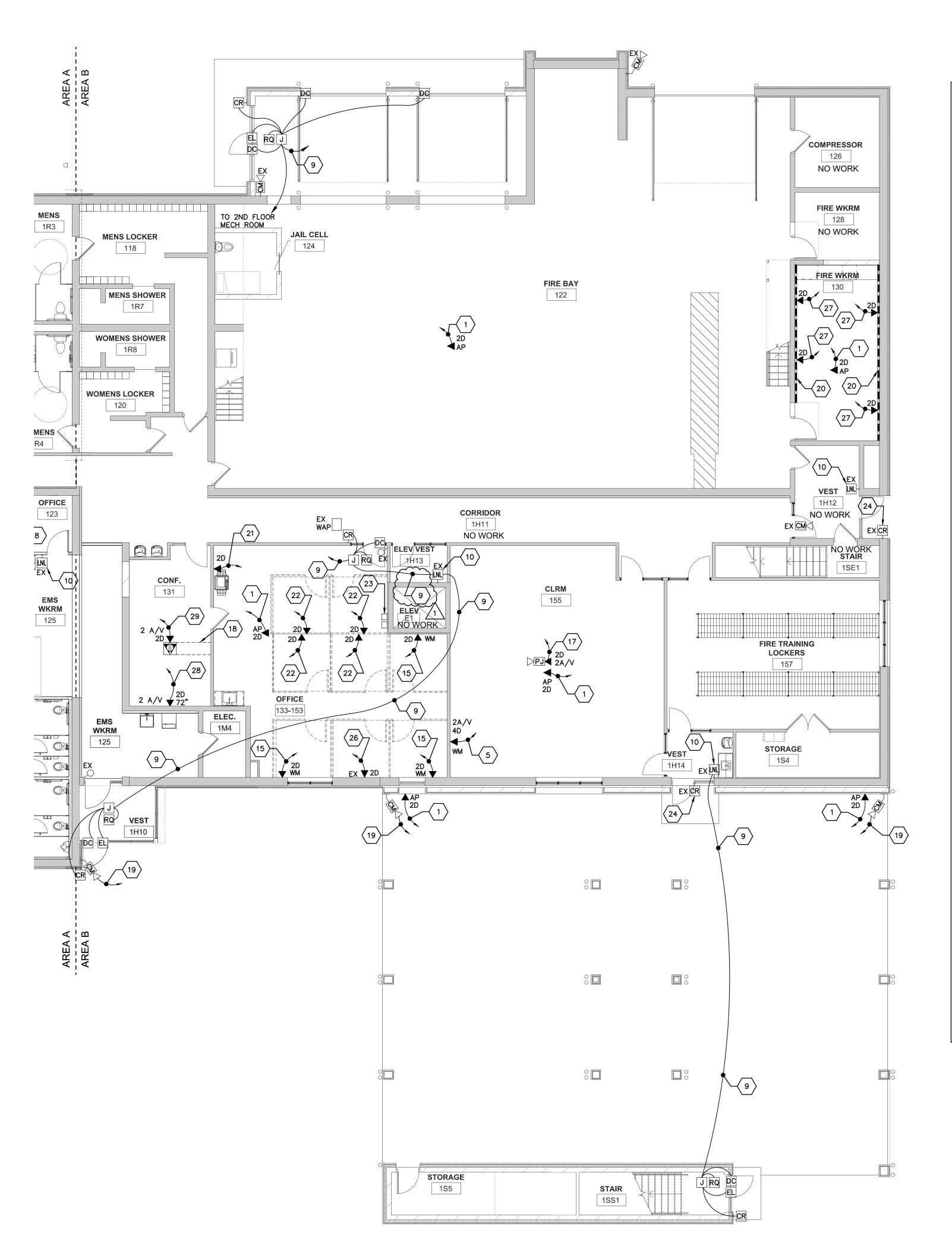


HSR Project Number: **HSR # 20028** Project Date: **FEBRUARY 2021**

KEY PLAN

Description ADDENDUM # 1 **VARIES**

Last Update: 02/15/21



1 FIRST FLOOR LOW VOLTAGE PLAN — AREA B
E302 SCALE: 1/8" = 1'-0"

20-07-E-LV01

GENERAL LOW VOLTAGE NOTES:

A. COLOR CODING SHALL BE AS FOLLOWS:

1. NETWORKING (DATA) = ORANGE DATA JACKS WITH BLUE CAT6A CABLES.

2. IP PHONE = ORANGE DATA JACKS WITH BLUE CAT6A CABLES3. AUDIO/VIDEO (A/V) = GREEN DATA JACKS WITH GREEN CATE 6A CABLE

3. AUDIO/VIDEO (A/V) = GREEN DATA JACKS WITH GREEN CATE 6A CABLE

4. SECURITY CAMERAS = WHITE JACKS WITH WHITE CAT6A CABLE

4. SECURITY CAMERAS = WHITE JACKS WITH WHITE CAT6A CABLE

5. ELECTRONIC DOOR ACCESS SYSTEM = YELLOW MULTI-ELEMENT SMART CABLE

6. FAX/ANALOG = PURPLE JACKS WITH PURPLE CAT6A CABLES.
7. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE 'J' HOOKS AND CONDUIT SLEEVES THROUGH WALLS FOR LOW VOLTAGE CABLE ROUTING AS REQUIRED.

B. ALL LOW VOLTAGE WIRING SHALL BE 'PLENUM' RATED.

C. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL 'J-HOOK' TYPE LOW VOLTAGE CABLE WIRING SUPPORT ON 4'-0" CENTERS ABOVE SUSPENDED ACOUSTIC CEILINGS BETWEEN CONDUIT WALL STUBS AND CABLE TRAY, ETC. ALL LOW VOLTAGE WIRING SHALL BE INDEPENDENTLY SUPPORTED SEPARATE FROM GRID TYPE CEILINGS, NO EXCEPTIONS.

D. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL LOW VOLTAGE WIRING, DATA JACKS, ETC. FOR A COMPLETE SYSTEM FOR THIS PROJECT.

KEYED LOW VOLTAGE NOTES:

1. APPROXIMATE LOCATION OF NEW WIRELESS ACCESS POINT PROVIDED AND INSTALLED BY WTC IT DEPARTMENT. ELECTRICAL CONTRACTOR SHALL PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN WIRELESS ACCESS POINT AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2. PROVIDE JUNCTION BOXES AS REQUIRED IN CEILING OR WALL. COORDINATE WITH WTC IT DEPARTMENT.

2. APPROXIMATE LOCATION OF NEW WIRELESS ACCESS POINT PROVIDED AND INSTALLED BY WTC IT DEPARTMENT. ELECTRICAL CONTRACTOR SHALL PROVIDE FOUR (4) CAT6A CABLES BETWEEN WIRELESS ACCESS POINT AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1. PROVIDE JUNCTION BOXES AS REQUIRED IN CEILING OR WALL. COORDINATE WITH WTC IT DEPARTMENT.

3. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR (4) PORT DATA JACK. PROVIDE FOUR (4) NETWORK CAT6A CABLES BETWEEN FOUR-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MUDRING. STUB TWO ¾" EMT CONDUITS TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.

4. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT

NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2 FOR WALL-MOUNTED MONITOR. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MUDRING. STUB ONE ¾" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.

5. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SIX-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #1T1 OR #2M2. PROVIDE TWO (2) SHIELDED CATE 6A A/V CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE SUSPENDED CEILING FOR CABLE ROLITING

6. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SIX-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #1T1. PROVIDE TWO (2) SHIELDED CATE 6A A/V CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND A/V EQUIPMENT RACK LOCATED IN IT ROOM #1T1. ROVIDE A 4"X4"X2-1/8" JUNCTION BOX WITH A DOUBLE-GANG MUDRING AND TWO (2) 1" EMT CONDUITS AND STUB ABOVE SUSPENDED CEILING FOR CABLE ROUTING.

7. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR OVERHEAD PROJECTOR. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN IT ROOM #1T1. PROVIDE TWO (2) SHIELDED CATE 6A A/V CABLES BETWEEN OVERHEAD PROJECTOR JUNCTION BOX AND A/V EQUIPMENT RACK LOCATED IN IT ROOM #1T1. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED FOR DATA/AV WIRING.

8. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT

NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #111 OR #2M2 FOR OFFICE COMPUTER WORKSTATION. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MUDRING. STUB ONE ¾" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN. REFER TO DETAIL 4/E301.

9. ELECTRICAL CONTRACTOR SHALL PROVIDE A 'SMART CABLE' HOMERUN TO EXISTING ELECTRONIC DOOR ACCESS CONTROLLERS AS NOTED ON DRAWINGS. SMART CABLE SHALL BE BELDEN, MODEL #658AFJ OR EQUAL, 16 CONDUCTOR, 4 ELEMENT, ACESS CONTROL CABLE, 18-04 + 22-3P + 22-02 + 22-04 PLENUM YELLOW COLOR. REFER TO ELECTRONIC

DOOR ACCESS CONROL DETAIL **2/E301**.

10. LOCATION OF EXISTING ELECTRONIC DOOR ACCESS CONTROL POWER SUPPLY/CONTROLLER.

11. LOCATION OF EXISTING ELECTRONIC BOOK ACCESS CONTROL PA

12. ELECTRICAL CONTRACTOR SHALL PROVIDE AN A/V WALL-MOUNTED EQUIPMENT RACK. COORDINATE WITH WTC IT DEPARTMENT. REFER TO DETAIL 3/E301.

13. ELECTRICAL CONTRACTOR SHALL PROVIDE A 'SMART CABLE' HOMERUN TO EXISTING ELECTRONIC DOOR ACCESS CONTROL PANEL LOCATED IN ROOM #2M4. SMART CABLE SHALL BE BELDEN, MODEL #658AFJ OR EQUAL, 16 CONDUCTOR, 4 ELEMENT, ACESS CONTROL CABLE, 18-04 + 22-3P + 22-02 + 22-04 PLENUM YELLOW COLOR. REFER TO ELECTRONIC DOOR ACCESS CONROL DETAIL 2/E301.

14. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MUDRING. STUB ONE ¾" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN. REFER TO DETAIL 4/E301.
 15. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2. PROVIDE A SINGLE GANG WIREMOLD V700 SURFACE JUNCTION BOX AND SURFACE RACEWAY, STUB TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.

16. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL AN EIGHT-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S/PRESENTER STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #2M2. PROVIDE FOUR (4) SHIELDED CATE 6A A/V CABLES, BETWEEN TEACHER'S/PRESENTER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTORS, INSTALL TWO (2) SHIELDED CAT6A CABLES TO EACH OVERHEAD PROJECTOR. PROVIDE A TWO GANG MASONRY DEEP JUNCTION BOX WITH A DOUBLE-GANG MUDRING AND TWO (2) 1-1/4" EMT CONDUITS AND STUB ABOVE SUSPENDED CEILING FOR CABLE POLITING.

ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR OVERHEAD PROJECTOR. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN IT ROOM #111 OR #2M2. PROVIDE TWO (2) SHIELDED CATE 6A A/V CABLES BETWEEN OVERHEAD PROJECTOR JUNCTION BOX AND TEACHERS/PRESENTER'S DATA/AV JACKS. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED FOR DATA/AV WIRING.
 ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A 'CONNECT TRAC' FLOOR SYSTEM. PROVIDE SURFACE MOUNTED COMBINATION POWER AND LOW VOLTAGE MODULES AND SURFACE RACEWAY. PROVIDE MODULES WITH COMBINATION DUPLEX RECEPTACLES AND DATA JACKS AS NOTED ON DRAWINGS AND AS REQUIRED BY WTC. CONTACT A CONNECTRAC SALES REPRESENTATIVE FOR MODEL NUMBERS, ETC. THE INTENT IS PROVIDE SURFACE MOUNT CONNECTRAC ON EXISTING CONCRETE FLOOR TO PROVIDE POWER AND LOW VOLTAGE CABLES BETWEEN THE WALL TO A FLOOR MOUNTED COMBINATION POWER/LOW VOLTAGE MODULES.

ELECTRICAL CONTRACTOR SHALL INSTALL A SECURITY IP CCTV CAMERA WITH BACKBOX PROVIDED BY WTC IT DEPARTMENT IN THIS LOCATION. PROVIDE ONE (1) CAT6A CABLE TO IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2. COORDINATE MOUNTING LOCATION AND MOUNTING HEIGHT WITH WTC IT DEPARTMENT.
 PROVIDE A COMBINATION POWER/COMMUNICATIN WIREMOLD 4000 SERIES SURFACE RACEWAY.

21. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2 FOR PRINTER/COPIER. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MUDRING. STUB ONE ¾" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.

22. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2 FOR OFFICE COMPUTER WORKSTATION. INSTALL 2-PORT DATA JACKS INSIDE MODULAR OFFICE

NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2 FOR OFFICE COMPUTER WORKSTATION. INSTALL 2-PORT DATA JACKS INSIDE MODULAR OFFICE FURNITURE. COORDINATE WITH MODULAR OFFICE FURNITURE INSTALLER AND WITH WTC FACILITY DEPARTMENT.

23. PROVIDE WIREMOLD 3000 SERIES SURFACE RACEWAY FOR ROUTING LOW VOLTAGE WIRING. PROVIDE LIQUID TIGHT TYPE FLEXIBLE CONDUIT BETWEEN WIREMOLD JUNCTION BOX AND MAKE DIRECT CONNECTION TO MODULAR OFFICE FURNITURE.

24. EXISTING ELECTRONIC DOOR ACCESS CONTROL 'CARD READER' TO REMAIN AS IS.
 25. ELECTRONIC DOOR ACCESS CONTROL 'CARD READER' TO BE INSTALLED ON EXTERIOR PEDESTAL. PROVIDE UNDERGROUND CONDUIT AND LOW VOLTAGE WIRING AS REQUIRED BETWEEN ELECTRONIC DOOR ACCESS CONTROL JUNCTION BOX AND PEDESTAL. COORDINATE WITH WTC PLANT FACILITY DEPARTMENT. REFER TO PHOTO #3/E001

FOR PEDESTAL EXAMPLE.

26. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2 FOR OFFICE COMPUTER WORKSTATION. REUSE EXISTING JUNCTION BOX AND CONDUIT TO EXTENT POSSIBLE, RAISE EXISTING JUNCTION BOX TO ABOVE COUNTER IF REQUIRED. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.

27. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2 FOR OFFICE COMPUTER WORKSTATION. INSTALL DATA JACKS IN WIREMOLD 4000 SURFACE RACEWAY.

VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.

28. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR WALL-MOUNT MONITOR. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN IT ROOM #1T1 OR #2M2. PROVIDE TWO (2) SHIELDED CATE 6A A/V CABLES BETWEEN WALL-MOUNT MONITOR JUNCTION BOX AND TEACHERS/PRESENTER'S DATA/AV JACKS. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED FOR DATA/AV WIRING.

29. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR PRESENTER'S STATION. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN IT ROOM #1T1 OR #2M2. PROVIDE TWO (2) SHIELDED CATE 6A A/V CABLES BETWEEN

WALL-MOUNT MONITOR JUNCTION BOX AND PRESENTER'S A/V JACKS. PROVIDE SURFACE MOUNTED FLOOR CONNECTRAC RACEWAY SYSTEM AS REQUIRED FOR DATA/AV WIRING. COORDINATE WITH WTC IT DEPARTMENT.

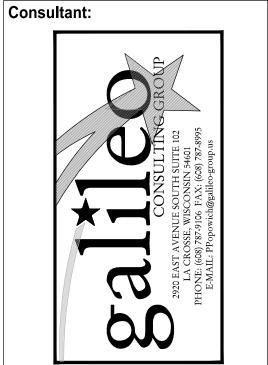
30. PROVIDE 18 GAUGE/6-CONDUCTOR (18/6) STRANDED SHIELDED, GRAY JACKET, EXTERIOR RATED COMMUNICATION CABLE BETWEEN PEDESTAL CARD READER AND CONTROLLER. WEST PENN, AQUASEAL 18/6, MODEL #AQC3186 OR EQUAL.

NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MUDRING. STUB TWO 1" EMT CONDUITS TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.

31. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SIX (6) PORT DATA JACK. PROVIDE SIX (6) NETWORK CAT6A CABLES BETWEEN SIX-PORT DATA JACK AND IT

ENGINEERING
INTERIOR DESIGN

HSR ASSOCIATES IN 100 MILWAUKEE STREET LA CROSSE, WISCONSIN PHONE: 608.784.1830 FAX: 608.782.5844 www.hsrassociates.com



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HSR Project Number:

HSR # 20028

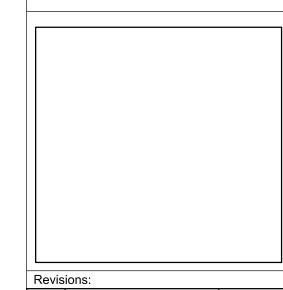
FEBRUARY 2021

Drawn By:

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AREA AREA A

KEY PLAN



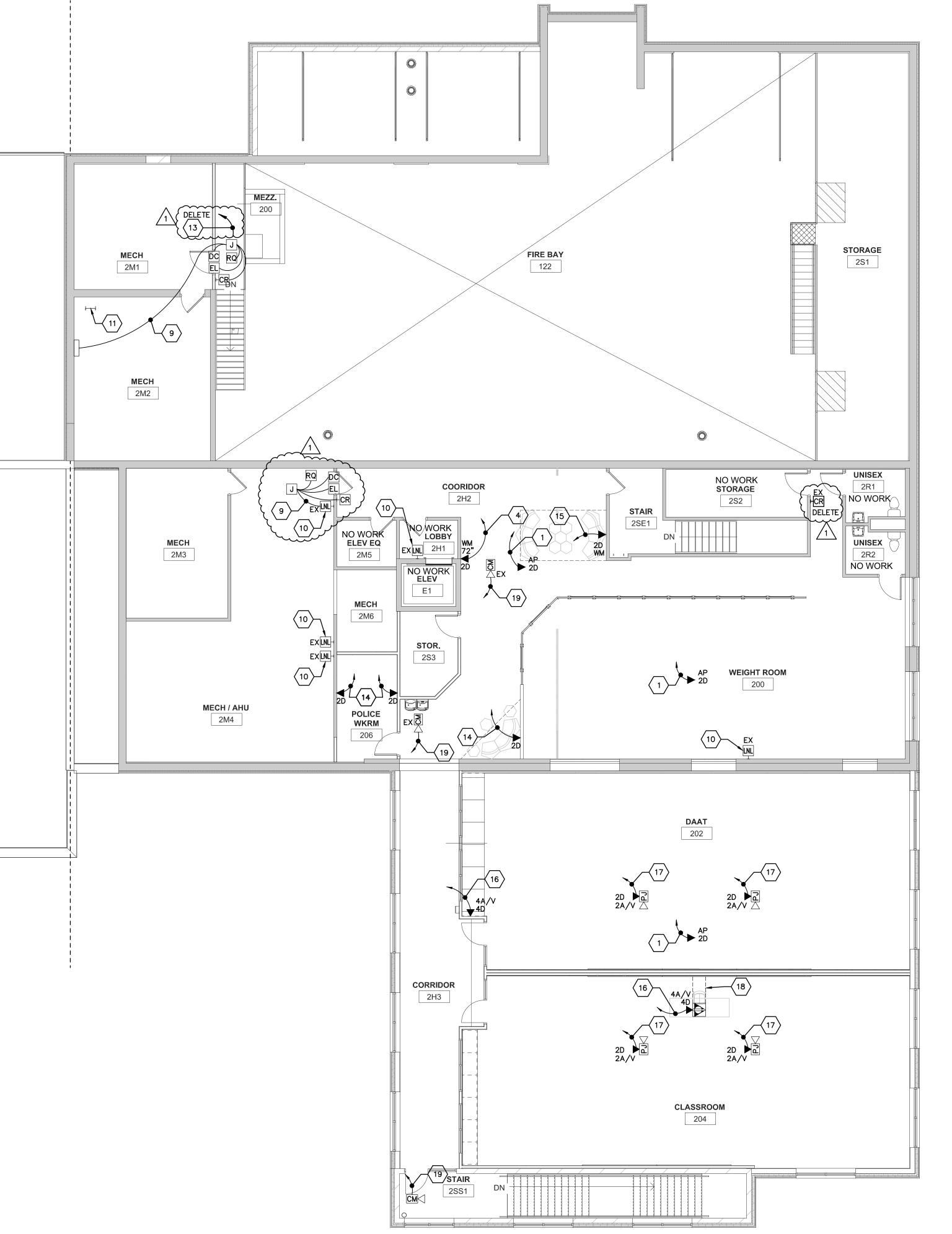
Revisions:

No. Description Date

ADDENDUM # 1 2-15
Graphic Scale:

ast Update: 02/02/21

E302



1 SECOND FLOOR LOW VOLTAGE PLAN — AREA B E303 SCALE: 1/8" = 1'-0" 20-07-E-LV02

GENERAL LOW VOLTAGE NOTES: A. COLOR CODING SHALL BE AS FOLLOWS: 1. NETWORKING (DATA) = ORANGE DATA JACKS WITH BLUE CAT6A CABLES. 2. IP PHONE = ORANGE DATA JACKS WITH BLUE CAT6A CABLES 3. AUDIO/VIDEO (A/V) = GREEN DATA JACKS WITH GREEN CATE 6A CABLE

4. SECURITY CAMERAS = WHITE JACKS WITH WHITE CAT6A CABLE 5. ELECTRONIC DOOR ACCESS SYSTEM = YELLOW MULTI-ELEMENT SMART CABLE

6. FAX/ANALOG = PURPLE JACKS WITH PURPLE CAT6A CABLES. 7. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE 'J' HOOKS AND CONDUIT SLEEVES THROUGH WALLS FOR LOW VOLTAGE CABLE ROUTING AS REQUIRED.

B. <u>ALL</u> LOW VOLTAGE WIRING SHALL BE 'PLENUM' RATED. C. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL 'J-HOOK' TYPE LOW VOLTAGE CABLE WIRING SUPPORT ON 4'-0" CENTERS ABOVE SUSPENDED ACOUSTIC CEILINGS BETWEEN CONDUIT WALL STUBS AND CABLE TRAY, ETC. ALL LOW VOLTAGE WIRING SHALL BE INDEPENDENTLY SUPPORTED SEPARATE FROM GRID TYPE CEILINGS, NO EXCEPTIONS.

D. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL LOW VOLTAGE WIRING, DATA JACKS, ETC. FOR A COMPLETE SYSTEM FOR THIS PROJECT.

KEYED LOW VOLTAGE NOTES:

1. APPROXIMATE LOCATION OF NEW WIRELESS ACCESS POINT PROVIDED AND INSTALLED BY WTC IT DEPARTMENT. ELECTRICAL CONTRACTOR SHALL PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN WIRELESS ACCESS POINT AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2. PROVIDE JUNCTION BOXES AS REQUIRED IN CEILING OR WALL. COORDINATE WITH WTC IT DEPARTMENT. 2. APPROXIMATE LOCATION OF NEW WIRELESS ACCESS POINT PROVIDED AND INSTALLED BY WTC IT DEPARTMENT. ELECTRICAL CONTRACTOR SHALL PROVIDE FOUR (4) CAT6A

CABLES BETWEEN WIRELESS ACCESS POINT AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1. PROVIDE JUNCTION BOXES AS REQUIRED IN CEILING OR WALL. COORDINATE WITH WTC IT DEPARTMENT. 3. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR (4) PORT DATA JACK. PROVIDE FOUR (4) NETWORK CAT6A CABLES BETWEEN FOUR-PORT DATA JACK AND IT

NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MUDRING. STUB TWO ¾" EMT CONDUITS TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN. 4. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT

NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2 FOR WALL-MOUNTED MONITOR. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MUDRING. STUB ONE ¾" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN. 5. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SIX-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #1T1 OR #2M2. PROVIDE TWO (2) SHIELDED CATE 6A A/V CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTOR JUNCTION BOX. PROVIDE SURFACE WIREMOLD JUNCTION BOX AND RACEWAY SIZED AS REQUIRED AND INSTALL ABOVE

SUSPENDED CEILING FOR CABLE ROUTING. 6. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SIX-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #1T1. PROVIDE TWO (2) SHIELDED CATE 6A A/V CABLES BETWEEN TEACHER'S STATION DATA/AV JACKS AND A/V EQUIPMENT RACK LOCATED IN IT ROOM #1T1. ROVIDE A 4"X4"X2-1/8" JUNCTION BOX WITH A DOUBLE-GANG MUDRING AND TWO (2) 1" EMT

CONDUITS AND STUB ABOVE SUSPENDED CEILING FOR CABLE ROUTING. 7. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR OVERHEAD PROJECTOR. PROVIDE

TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN IT ROOM #1T1. PROVIDE TWO (2) SHIELDED CATE 6A A/V CABLES BETWEEN OVERHEAD PROJECTOR JUNCTION BOX AND A/V EQUIPMENT RACK LOCATED IN IT ROOM #1T1. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED FOR DATA/AV WIRING. 8. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT

NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2 FOR OFFICE COMPUTER WORKSTATION. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MUDRING. STUB ONE 3/" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN. REFER TO DETAIL 4/E301. I. ELECTRICAL CONTRACTOR SHALL PROVIDE A 'SMART CABLE' HOMERUN TO EXISTING ELECTRONIC DOOR ACCESS CONTROLLERS AS NOTED ON DRAWINGS. SMART CABLE SHAL

BE BELDEN, MODEL #658AFJ OR EQUAL, 16 CONDUCTOR, 4 ELEMENT, ACESS CONTROL CABLE, 18-04 + 22-3P + 22-02 + 22-04 PLENUM YELLOW COLOR. REFER TO ELECTRONIC DOOR ACCESS CONROL DETAIL **2/E301**. 10. LOCATION OF EXISTING ELECTRONIC DOOR ACCESS CONTROL POWER SUPPLY/CONTROLLER.

11. LOCATION OF EXISTING IT NETWORK EQUIPMENT RACK. 12. ELECTRICAL CONTRACTOR SHALL PROVIDE AN A/V WALL-MOUNTED EQUIPMENT RACK. COORDINATE WITH WTC IT DEPARTMENT. REFER TO DETAIL 3/E301. 13. ELECTRICAL CONTRACTOR SHALL PROVIDE A 'SMART CABLE' HOMERUN TO EXISTING ELECTRONIC DOOR ACCESS CONTROL PANEL LOCATED IN ROOM #2M4. SMART CABLE

SHALL BE BELDEN, MODEL #658AFJ OR EQUAL, 16 CONDUCTOR, 4 ELEMENT, ACESS CONTROL CABLE, 18-04 + 22-3P + 22-02 + 22-04 PLENUM YELLOW COLOR. REFER TO ELECTRONIC DOOR ACCESS CONROL DETAIL **2/E301**. 14. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT

NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MUDRING. STUB ONE ¾" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN. REFER TO DETAIL 4/E301. 15. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2. PROVIDE A SINGLE GANG WIREMOLD V700 SURFACE JUNCTION BOX AND SURFACE RACEWAY, STUB TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.

16. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL AN EIGHT-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR TEACHER'S/PRESENTER STATION. PROVIDE FOUR (4) NETWORK CAT 6A CABLES TO IT NETWORK EQUIPMENT RACK LOCATED IN IT ROOM #2M2. PROVIDE FOUR (4) SHIELDED CATE 6A A/V CABLES, BETWEEN TEACHER'S/PRESENTER'S STATION DATA/AV JACKS AND OVERHEAD PROJECTORS, INSTALL TWO (2) SHIELDED CAT6A CABLES TO EACH OVERHEAD PROJECTOR. PROVIDE A TWO GANG MASONRY DEEP JUNCTION BOX WITH A DOUBLE-GANG MUDRING AND TWO (2) 1-1/4" EMT CONDUITS AND STUB ABOVE SUSPENDED CEILING FOR

CABLE ROUTING. 17. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR OVERHEAD PROJECTOR. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN IT ROOM #1T1 OR #2M2. PROVIDE TWO (2) SHIELDED CATE 6A A/V CABLES BETWEEN OVERHEAD PROJECTOR JUNCTION BOX AND TEACHERS/PRESENTER'S DATA/AV JACKS. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED FOR DATA/AV WIRING. 18. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A 'CONNECT TRAC' FLOOR SYSTEM. PROVIDE SURFACE MOUNTED COMBINATION POWER AND LOW VOLTAGE

MODULES AND SURFACE RACEWAY. PROVIDE MODULES WITH COMBINATION DUPLEX RECEPTACLES AND DATA JACKS AS NOTED ON DRAWINGS AND AS REQUIRED BY WTC. CONTACT A CONNECTRAC SALES REPRESENTATIVE FOR MODEL NUMBERS, ETC. THE INTENT IS PROVIDE SURFACE MOUNT CONNECTRAC ON EXISTING CONCRETE FLOOR TO PROVIDE POWER AND LOW VOLTAGE CABLES BETWEEN THE WALL TO A FLOOR MOUNTED COMBINATION POWER/LOW VOLTAGE MODULES. 19. ELECTRICAL CONTRACTOR SHALL INSTALL A SECURITY IP CCTV CAMERA WITH BACKBOX PROVIDED BY WTC IT DEPARTMENT IN THIS LOCATION. PROVIDE ONE (1) CAT6A

CABLE TO IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2. COORDINATE MOUNTING LOCATION AND MOUNTING HEIGHT WITH WTC IT DEPARTMENT. 20. PROVIDE A COMBINATION POWER/COMMUNICATIN WIREMOLD 4000 SERIES SURFACE RACEWAY. 21. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT

NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2 FOR PRINTER/COPIER. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MUDRING. STUB ONE ¾" EMT CONDUIT TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN. 22. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT

NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2 FOR OFFICE COMPUTER WORKSTATION. INSTALL 2-PORT DATA JACKS INSIDE MODULAR OFFICE FURNITURE. COORDINATE WITH MODULAR OFFICE FURNITURE INSTALLER AND WITH WTC FACILITY DEPARTMENT. 23. PROVIDE WIREMOLD 3000 SERIES SURFACE RACEWAY FOR ROUTING LOW VOLTAGE WIRING. PROVIDE LIQUID TIGHT TYPE FLEXIBLE CONDUIT BETWEEN WIREMOLD JUNCTION BOX AND MAKE DIRECT CONNECTION TO MODULAR OFFICE FURNITURE.

24. EXISTING ELECTRONIC DOOR ACCESS CONTROL 'CARD READER' TO REMAIN AS IS. 25. ELECTRONIC DOOR ACCESS CONTROL 'CARD READER' TO BE INSTALLED ON EXTERIOR PEDESTAL. PROVIDE UNDERGROUND CONDUIT AND LOW VOLTAGE WIRING AS

REQUIRED BETWEEN ELECTRONIC DOOR ACCESS CONTROL JUNCTION BOX AND PEDESTAL. COORDINATE WITH WTC PLANT FACILITY DEPARTMENT. REFER TO PHOTO #3/E001 26. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT

NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2 FOR OFFICE COMPUTER WORKSTATION. REUSE EXISTING JUNCTION BOX AND CONDUIT TO EXTENT POSSIBLE, RAISE EXISTING JUNCTION BOX TO ABOVE COUNTER IF REQUIRED. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN. 27. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A TWO (2) PORT DATA JACK. PROVIDE TWO (2) NETWORK CAT6A CABLES BETWEEN TWO-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2 FOR OFFICE COMPUTER WORKSTATION. INSTALL DATA JACKS IN WIREMOLD 4000 SURFACE RACEWAY. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.

28. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR WALL-MOUNT MONITOR. PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN IT ROOM #1T1 OR #2M2. PROVIDE TWO (2) SHIELDED CATE 6A A/V CABLES BETWEEN WALL-MOUNT MONITOR JUNCTION BOX AND TEACHERS/PRESENTER'S DATA/AV JACKS. PROVIDE A DOUBLE GANG JUNCTION BOX AS REQUIRED FOR DATA/AV WIRING. 29. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A FOUR-PORT COMBINATION DATA/AV JACKS AT THIS APPROXIMATE LOCATION FOR PRESENTER'S STATION.

PROVIDE TWO (2) NETWORK CAT 6A CABLES TO IT EQUIPMENT RACK LOCATED IN IT ROOM #1T1 OR #2M2. PROVIDE TWO (2) SHIELDED CATE 6A A/V CABLES BETWEEN WALL-MOUNT MONITOR JUNCTION BOX AND PRESENTER'S A/V JACKS. PROVIDE SURFACE MOUNTED FLOOR CONNECTRAC RACEWAY SYSTEM AS REQUIRED FOR DATA/AV 30. PROVIDE 18 GAUGE/6-CONDUCTOR (18/6) STRANDED SHIELDED, GRAY JACKET, EXTERIOR RATED COMMUNICATION CABLE BETWEEN PEDESTAL CARD READER AND CONTROLLER. WEST PENN, AQUASEAL 18/6, MODEL #AQC3186 OR EQUAL.

31. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A SIX (6) PORT DATA JACK. PROVIDE SIX (6) NETWORK CAT6A CABLES BETWEEN SIX-PORT DATA JACK AND IT NETWORK EQUIPMENT RACK LOCATED IN DATA ROOM #1T1 OR #2M2. PROVIDE A DOUBLE GANG JUNCTION BOX WITH SINGLE GANG MUDRING. STUB TWO 1" EMT CONDUITS TO 'J' HOOKS ABOVE SUSPENDED CEILING. VERIFY MOUNTING HEIGHT OF DATA JACKS WITH WTC IT DEPARTMENT PRIOR TO ROUGH-IN.



INTERIOR DESIGN

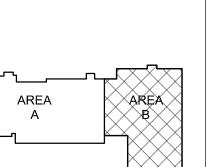
100 MILWAUKEE STREET LA CROSSE, WISCONSIN PHONE: 608.784.1830

FAX: 608.782.5844 www.hsrassociates.com Consultant:

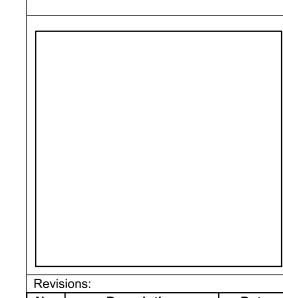
HSR Project Number:

HSR # 20028 FEBRUARY 2021 Drawn By:

Key Plan:



KEY PLAN



02/02/21

EQUIPMENT	EQUIPMENT DESCRIPTION	-	EQUIPMENT LOCATION		MOTOR OR	EQUIPMENT	REQUIRE	MENTS A	AND CH	IARACTER	RISTICS		MOTOR STA	RTERS			DIS	CONNECT SW	ITCHES			WIRIN		1	Branch Cir	ircuit or Feeder		ı
EFERENCE I.D.	EQUIPMENT DESCRIPTION	Room No.	Room Name	Elevation	Motor HP	Equipment Watts	VOLT	PH.	FLA	MCA	МОР	Starter Type	Provided By	Installed B	Starter Size	Disconnect Type	Provided By	Installed By	NEMA Enclo.	Fuse Size	Lockable?	MC	EC	N.C.	Conductor Size	Conduit Min. Size	Ground Size	REMAR
AHU-3	Air Handling Unit - 3	200	Weight Room	Ceiling	5.0	9,900	208	3	27.5	27.5	45.0	VFD	MC	MC	Included	INCLUDED	MC	MC	INCLUDED	INCL.	Yes	X		3	6	3/4"	10	1
AHU-4	Air Handling Unit - 4	2M2	Mechanical	Floor	7.5	12,600	208	~~(35	35	60	VED	MC	MC	Included	INCLUDED	MC	MC	INCLUDED	INCL.	Yes	Х		3	6	3/4"	120	
BLR-1	Boiler - 1	2M4	Mechanical	Floor (1	2,496	208	1	12.0	12.0	20	Included	Included	Included	Included	Manual	EC	EC	1	N/A	Yes	X		2	12	1/2"	12	2, 6
BLR-2	Boiler - 2	2M4	Mechanical	Floor		2,496	208	1	12.0	12.0	20	Included	Included	Included	Included	Manual	EC	EC	1	N/A	Yes	X		2	12	1/2"	. 12	2,6
BP-1	Boiler Pump - 1	2M4	Mechanical	Floor	5	7900	208	$\overline{}$	79.5	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	20	✓ manual ✓	_Ee\		THA	Manuar \			~~			TX.		12			12	2, 6
BP-2	Boiler Pump - 1	2M4	Mechanical	Floor	5	900	208	1	2.5	15	20	manual	EC	EC	NA	Manual	EC	EC	1	N/A	Yes	×		2	12	1/2"	12	2, 6
CBC-1	circulatin cooling pump-1	2M4	Mechanical	Floor	3.0	3,960	208	2	11.0		20	VFD	MC	EC	3.0 HP	w/VFD	MC	EC	1	w/VFD	Yes	X		3	12	1/2"	12	5
CBH-1	Circulating Heating Pump-1	2M4	Mechanical	Floor	2.0	2,808	208	2	7.8	15	20	VFD	MC	EC	2.0 HP	w/VFD	MC	EC	1	w/VFD	Yes	X	\longrightarrow	-3	12	1/2"	12	
		1770 p. 65 T				-		3						11500					1		2000	1985	\vdash					
CWP-1	Chilled Water Pump	2M4	Mechanical	Floor	7.5	9,108	208	3	25.3	1 37317	50	VFD	MC	EC	7.5 HP	w/VFD	MC	EC	1	w/VFD	Yes	X		3	ь	3/4"	10	5
DF-1	Destratification Fan - 1	122	Fire Bay	Ceiling		55	120	1	.35	15	20.0	NA	NA	NA	NA	Cord and Plug	Incl	Incl	N/A	N/A	N/A	+'	X	2	12	1/2"	12	9, 10
DF-2	Destratification Fan - 2	122	Fire Bay	Ceiling		55	120	1	.35	15	20.0	NA	NA	NA	NA	Cord and Plug	Incl	Incl	N/A	N/A	N/A	 	X	2	12	1/2"	12	9, 10
DF-3	Destratification Fan - 3	122	Fire Bay	Ceiling		55	120	1	.35	15	20.0	NA	NA	NA	NA	Cord and Plug	Incl	Incl	N/A	N/A	N/A	 '	X	2	12	1/2"	12	9, 10
DF-4	Destratification Fan - 4	122	Fire Bay	Ceiling		55	120	1	.35	15	20.0	NA	NA	NA	NA	Cord and Plug	Incl	Incl	N/A	N/A	N/A	'	X	2	12	1/2"	12	9, 10
DCF-1	Destratification Ceiling Fan - 1	200	Weight Room	Ceiling		80	120	1	.67	15	20.0	NA	NA	NA	NA	Manual Toggle	EC	EC	1	N/A	No	'	X	2	12	1/2"	12	10
DCF-2	Destratification Ceiling Fan - 2	200	Weight Room	Ceiling		80	120	1	.67	15	20.0	NA	NA	NA	NA	Manual Toggle	EC	EC	1	N/A	No		X	2	12	1/2"	12	10
DCF-3	Destratification Ceiling Fan - 3	202	DAAT	Wall		80	120	1	.67	15	20.0	NA	NA	NA	NA	Manual Toggle	EC	EC	1	N/A	No		X	2	12	1/2"	12	10
DCF-4	Destratification Ceiling Fan -4	202	DAAT	Wall		80	120	1	.67	15	20.0	NA	NA	NA	NA	Manual Toggle	EC	EC	1	N/A	No		X	2	12	1/2"	12	10
DH-1	Gas-Fired Duct Heater	2S1	Storage	Ceiling	1.5	1,800	208	3	5.0	5.0	20.0	NA	NA	NA	NA	INCLUDED	MC	MC	1	N/A	Yes	x		3	12	1/2"	12	1
EF-1	Exhaust Fan	122	Fire Bay	Roof	1/15	100	120	1	1.0	1.0	20.0	NA	NA	NA	NA	Included	Incl.	Incl.	1	N/A	Yes	Х		2	12	1/2"	12	
EF-2	Exhaust Fan	122	Fire Bay	Roof	2.0	2,496	208	1	12.0	12.0	20.0	Included	Included	Included	Included	INCLUDED	ind.	incl.	1	INCL.	Yes	X		2	12	1/2"	12	1
EF-3	Exhaust Fan		Hose Tower	Roof	1/10	100	120	1	1.0	1.0	20.0	Included	Included	Included	Included	INCLUDED	ind.	incl.	1	INCL.	Yes	X		2	12	1/2"	12	1
EF-4	Exhaust Fan	1R5,1R6	Toilet room	Roof	1/10	100	120	1	1.0	1.0	20.0	Included	Included	Included	Included	INCLUDED	ind.	incl.	1	INCL.	Yes	Х		2	12	1/2"	12	1
EF-5	Exhaust Fan	125	Ems Work Rm.	Roof	1/15	100	120	1	1.0	1.0	20.0	Included	Included	Included	Included	INCLUDED	ind.	incl.	1	INCL.	Yes	X	oxdot	2	12	1/2"	12	1
EF-6	Exhaust Fan	1R3,1R4	Toilet room	Roof	1/10	100	120	1	1.0	1000000	20.0	Included	Included	Included	Included	INCLUDED	ind.	incl.	1	INCL.	Yes	X	igsquare	2	12	1/2"	12	1
EWH-1	Electric Wall Heater	126	Compressor Room	Wall		3,000	208	1	14.4	_	20.0	NA	NA	NA	NA	Ckt. Brk.	EC	EC	1	N/A	Yes	Х	igwdown	2	12	1/2"	12	11
EWH-2	Electric Wall Heater	1H7	Vestibule	Wall		1,500	120	1		12.5		NA	NA	NA	NA	Ckt. Brk.	EC	EC	1	N/A	Yes	X	\vdash	2	12	1/2"	12	11
EWH-3	Electric Wall Heater	1R6	Mens	Wall		1,500	120	1		12.5 12.5		NA	NA	NA	NA	Ckt. Brk.	EC	EC	1	N/A	Yes	X	\vdash	2	12	1/2"	12	11
EWH-4 EWH-5	Electric Wall Heater Electric Wall Heater	1H9 1S5	Vesti bul e Storage	Wall Wall		1,500 3,000	120 208	1		14.4		NA NA	NA NA	NA NA	NA NA	Ckt. Brk. Ckt. Brk.	EC EC	EC	1	N/A N/A	Yes	X	\vdash	2	12 12	1/2"	12 12	11
EWH-6	Electric Wall Heater	2551	Stair	Wall	+	3,000	208	1		14.4	_	NA NA	NA NA	NA NA	NA	Ckt. Brk.	EC	EC EC	1	N/A	Yes	X	\vdash	2	12	1/2"	12	11
EWH-7	Electric Wall Heater	2551	Stair	Wall		1,500	120	1	-	12.5		NA	NA NA	NA	NA	Ckt. Brk.	EC	EC	1	N/A	Yes	X	\square	2	12	1/2"	12	11
FC-1	Fan Coil - 1	2M2	Mechanical	Ceiling	1/3	749	208	1		3.6			Included	Included	Included	INCLUDED	Incl.	Incl.	INCLUDED	_	Yes	X	$\overline{}$	2	12	1/2"	12	1
GSF-1	Glycol System Feeder Pump	B2A	Vesti bul e	Wall		50	120	1	.42		20.0	NA	NA	NA	NA	Cord and Plug	MC	MC	NA	N/A	Yes	х		2	12	1/2"	12	12
HWP-1	Hot Water Pump - 1	2M4	Mechanical	Floor	5.0	6,300	208	3		17.5	_	VFD	MC	EC	5.0 HP	w/VFD	MC	EC	1	w/VFD		Х		3	8	3/4"	10	5
HWP-2	Hot Water Pump -2	2M4	Mechanical	Floor	5.0	6,300	208	3	17.5	17.5	35.0	VFD	MC	EC	5.0 HP	w/VFD	MC	EC	1	w/VFD	Yes	Х		3	8	3/4"	10	5
HXP-1	Heat Exchange Pump - 1	2M4	Mechanical	Floor	7.5	9,108	208	3	25.3	25.3	50.0	VFD	MC	EC	7.5	w/VFD	MC	EC	1	w/VFD	Yes	Х		3	6	3/4"	10	5
ITH-1	Infrared Tube Heater - 1	122	Fire Bay	Ceiling		120	120	1	1.0	1.0	20.0	NA	NA	NA	NA	Cord and Plug	MC	MC	NA	N/A	Yes	X		2	12	1/2"	12	9
ITH-2	Infrared Tube Heater - 2	122	Fire Bay	Ceiling		120	120	1	_	1.0		NA	NA	NA	NA	Cord and Plug	MC	MC	NA	N/A	Yes	Х	igcup	2	12	1/2"	12	9
ITH-3	Infrared Tube Heater - 3	122	Fire Bay	Ceiling		120	120	1		1.0		NA	NA	NA	NA	Cord and Plug	MC	MC	NA	N/A	Yes	X	igsquare	2	12	1/2"	12	9
ITH-4	Infrared Tube Heater - 4	122	Fire Bay	Ceiling		120				1.0		NA	NA	NA	NA	Cord and Plug	MC	MC	NA		Yes	X	+	2	12	1/2"	12	9
MAU-1	Make Up Unit - 1	2M1	Mechanical	Ceiling	3.0	5,040	208			13.9			Included	Included	Included	INCLUDED	Incl.	Incl.	1	N/A	Yes	X	\vdash	3	12	1/2"	12	1
RDH-1	Room Dehumidifier - 1	157	Locker Room	Ceiling	- 1-	960	120	1	1	8.0		NA	NA	NA	NA	Cord and Plug	Ind.	Incl.	NA		Yes	X	\vdash	2	12	1/2"	12	9
UH-1	Gas Unit Heater - 1	122	Fire Bay	Ceiling	1/3	864	120	1	7.2		20.0	NA	NA	NA	NA	Manual	EC	EC	1	N/A	Yes	X	\vdash	2	12	1/2"	12	6
UH-2	Gas Unit Heater - 2	122	Fire Bay	Ceiling	1/3	864	120	1	7.2		20.0	NA	NA	NA	NA	Manual	EC	EC	1	N/A	Yes	Х	\sqcup	2	12	1/2"	12	6
UH-3	Gas Unit Heater - 3	122	Fire Bay	Ceiling	1/4	444	120	1	3.7	3.7	20.0	NA	NA	NA	NA	Manual	EC	EC	1	N/A	Yes	X		2	12	1/2"	12	6
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1. Make direct single point connection to unit-mounted disconnect switch and/or VFD motor starter provided as part of the Mechanical Equipment.

. Make final connection to motor/equipment with short length of flexible metal conduit for vibration isolation. Liquid-tight, flexible metal conduit for exterior application or wet locations.

Provide a size 0, 208VAC, 3-Phase, Combination Disconnec/Motor Starter as specified. Include H-O-As witch and Green/Red running indicator lights in cover. Provide motor over-load protection as recommended. . Provide and install a 30 amp, 250 Volt, 2-pole, Nema 1, non-fusible disconnect switch with equipment grounding kit for this unit. Install disconnect on wall in close proximity to unit and make all line voltage connections.

. Electrical Contractor shall install and make final connection to VFD provided by HVAC Contractor. 5. Provide and install a 20 amp, SPST or DPST, manual motor control switch without thermal overload protection. Motor control switch shall be mounted in a NEMA 1 or NEMA 3R enclosure, as required,

Mount disconnect on structure in close proximity to motor or equipment.

. Provide and install a 20 amp., DPST, "Motor-rated" Non-Fused toggle switch mounted in surface mounted junciton box adjacent to equipment. . Provide and install a 20 amp, SPST, "Motor-rated" toggle switch mounted in a flush single gang outlet box within the fan motor dome.

Provide a ceiling mounted duplex receptacle to match cord and plug included with motor.

O. Electrical Contractor shall install speed control switch provided by HVAC Contractor. . Make direct single point connection to electric wall heater, ckt. Brk. Shall serve as disconnect. Please note a 24VAC relay included with heater for connection to BAS. Coordinate with HVAC Contractor.

2. Provide a 20 Amp., 120VAC, duplex receptacle for cord and plug disconnect.

LAMPS/LIGHT SOURCE WATTS/ VOLT F S * COLOR LUMENS TYPE FIXTURE REMARKS TYPE | QTY | MANUFACTURER CATALOG NUMBER DESCRIPTION 30" RAZOR LIGHTBAR TIR AMBULANCE LIGHT BAR and the first th 2'X4' LED LAYIN TROFFER, CURVED RIBBED CENTER BASKET, LED 0-10VDC 2BLT4 40L ADP GZ10 LP840 UNIVERSAL VOLTAGE, DIMMING DIMMING 2'X4' LED LAYIN TROFFER, CURVED RIBBED CENTER BASKET, LED 0-10VDC AD4E LITHONIA 2BLT4 40L ADP GZ10 LP840 EL14L UNIVERSAL VOLTAGE, DIMMING (SAME AS AD4 WITH 1400 LUMEN | EMERGENCY BATTERY BACKUP) 2'X4' LED LAYIN TROFFER, CURVED RIBBED CENTER BASKET, LED 0-10VDC AD6 LITHONIA 2BLT4 60L ADP GZ10 LP840 UNIVERSAL VOLTAGE, DIMMING DIMMING 2'X2' LED LAYIN TROFFER, CURVED RIBBED CENTER BASKET, LED 0-10VDC 16.7 LITHONIA 2BLT2 33L ADP GZ10 LP840 UNIVERSAL VOLTAGE SAME AS TYPE 'BD3' EXPECT ADD 1,400 LUMEN EMERGENCY 2BLT2 33L ADP GZ10 LP840 LED 0-10VDC BD3E LITHONIA BATTERY BACKUP | 4000K | 4105 | LED 0-10VDC | 2'X2' LED LAYIN TROFFER, CURVED RIBBED CENTER BASKET, 31.8 BD4 LITHONIA 2BLT2 R 40L ADP GZ10 LP840 UNIVERSAL VOLTAGE SAME AS TYPE 'BD4' EXPECT ADD 1,400 LUMEN EMERGENCY 2BLT2 R 40L ADP GZ10 LP840 LED 0-10VDC BD4E LITHONIA 4000K 4105 BATTERY BACKUP EL14L LDN6 40/15 LO6 AR LSS MVOLT LED 0-10VDC C6 6" DIAMETER LED RECESSED DOWN LIGHT LITHONIA LDN6 40/15 LO6 AR LSS MVOLT 6" DIAMETER LED DOWNLIGHT, EMERGENCY BATTERY BACKUP LED 0-10VDC C6E LITHONIA LDN4-40/15-L04 AR-LSS-MVOLT-LED 0-10VDC 4" DIAMETER LED DOWNLIGHT C4 LITHONIA GZ10 FEM L48 8000LM IMAFL MD LITHONIA 4' VAPORTIGHT LED LED 50.5 MVOLT GZ10 40K 80CRI ELU LITHONIA LED ELM4L LED EMERGENCY LIGHTING UNIT 8200 36 90W120 RDP AC60 RC LED 0-10VDC EUREKA 36" DIAMETER, CIRCULAR RING DESIGN, LED, WHITE FINISH WHE CPHB 24000LM SEF GCL MD 208 | LED HIGHBAY, ACRYLIC LENS, GENERAL DISTRIBUTION, WHITE LED 0-10VDC LITHONIA 174 GZ10 40K 80CRI DWH IBG 48000LM SEF AFL GND LED 0-10VDC LITHONIA MVOLT GZ10 40K 80CRI WGX SAME TYPE 'HB' EXPECT ADD 20W EMERGENCY BACKUP CPTLW DWH IE20 WCPHE S4LD LCB 16FT MSLX 80CRI 40K LED 0-10VDC P16 MARK LIGHTING 4" PENDANT WHITE SLOT LED 1000LMF MIN1 MVOLT WHT DIMMING S4LD LCB 24FT MSLX 80CRI 40K LED 0-10VDC P24 MARK LIGHTING 4" PENDANT WHITE SLOT LED 1000LMF MIN1 MVOLT WHT S4LD LCB 28FT MSLX 80CRI 40K LED 0-10VDC P28 MARK LIGHTING 4" PENDANT WHITE SLOT LED X 4000K 110/FT 1000LMF MIN1 MVOLT WHT DIMMING S4LD LCB 32FT MSLX 80CRI 40K LED 0-10VDC P32 MARK LIGHTING 4" PENDANT WHITE SLOT LED 1000LMF MIN1 MVOLT WHT DIMMING CLX L48 5000LM SEF RDL MVOLT LED 0-10VDC 4'-0 LED STRIP LIGHT WITH LENS LITHONIA GZ10 40K 80CRI WH CLX L48 5000LM SEF RDL MVOLT 4'-0 LED STRIP LIGHT WITH LENS, SAME AS S4 EXCEPT ADD LED 0-10VDC GZ10 40K 80CRI WH PS1050 EMERGENCY BATTERY BACK UP CLX L48 5000LM SEF RDL MVOLT LED 0-10VDC GZ10 40K 80CRI WH NLTAIR2 | 4'-0 LED STRIP LIGHT WITH LENS, INCLUDE OCCUPANCY SENSOR | LITHONIA CLX L48 5000LM SEF RDL MVOLT 4'-0 LED STRIP LIGHT WITH LENS, INCLUDE OCCUPANCY SENSOR, 120/27 LED 0-10VDC LITHONIA ADD EMERGENCY BATTERY BACKUP RES7 PS1050 CLX L96 10000LM SEF RDL LED 0-10VDC S8 8' LED STRIP, ROUNDED DIFFUSE LENSE, WHITE FINISH, DIMMING LITHONIA MVOLT GZ10 40K 80CRI WH CLX L96 10000LM SEF RDL 8'-0 LED STRIP LIGHT WITH LENS, INCLUDE OCCUPANCY SENSOR, LED 0-10VDC LITHONIA MVOLT GZ10 40K 80CRI WH ADD EMERGENCY BATTERY BACKUP CLX L96 10000LM SEF RDL 8' LED STRIP, ROUNDED DIFFUSE LENSE, WHITE FINISH, DIMMING, LED 0-10VDC S8NLT LITHONIA MVOLT GZ10 40K 80CRI WH | **X** | | 4000K | 10000 ADD OCCUPANCY SENSOR NLTAIR2 RES7 SL4L LOP 4FT FLP TG 80CRI 40K LED 0-10VDC SL4 MARK LIGHTING 4'-0 RECESSED LINEAR LED SLOT, WHITE 1000LMF MIN1 120 WH SL4L LOP 4FT FLP TG 80CRI 40K | 4'-0 RECESSED LINEAR LED SLOT, ADD EMERGENCY BATTERY LED 0-10VDC SL4E MARK LIGHTING 4000K 4000 1000LMF MIN1 120 WH E10WLCP SL4L LOP 6FT FLP TG 80CRI 40K LED 0-10VDC SL6 MARK LIGHTING 6'-0 RECESSED LINEAR LED SLOT, WHITE 1000LMF MIN1 120 WH SL4L LOP 6FT FLP TG 80CRI 40K | 6'-0 RECESSED LINEAR LED SLOT, ADD EMERGENCY BATTERY LED 0-10VDC SL6E |4000K| 6000 | MARK LIGHTING SL4L LOP 8FT FLP TG 80CRI 40K LED 0-10VDC SL8 MARK LIGHTING 8'-0 RECESSED LINEAR LED SLOT, WHITE 4000K 8000 1000LMF MIN1 120 WH SL4L LOP 8FT FLP TG 80CRI 40K 8'-0 RECESSED LINEAR LED SLOT, WHITE, ADD EMERGENCY LED 0-10VDC SL8E MARK LIGHTING 1000LMF MIN1 120 WH E10WLCP BATTERY BACKUP SL4L LOP 10FT FLP TG 80CRI LED 0-10VDC SL10 MARK LIGHTING 10'-0 RECESSED LINEAR LED SLOT, WHITE 40K 1000LMF MIN1 120 WH SL4L LOP 12FT FLP TG 80CRI LED 0-10VDC SL12 MARK LIGHTING 12'-0 RECESSED LINEAR LED SLOT, WHITE |4000K| 12000 I 120 40K 1000LMF MIN1 120 WH DIMMING SL4L LOP 14FT FLP TG 80CRI LED 0-10VDC SL14 140 MARK LIGHTING 14'-0 RECESSED LINEAR LED SLOT, WHITE 40K 1000LMF MIN1 120 WH DIMMING B6DLED 1000 80 B40 SO 10 W 10'-0" LENGTH, 5" SQUARE SUSPENDED LINEAR LED, INSTALL IN LED 0-10VDC SSL10 **AXIS LIGHTING** UNV DP 1 XX CUSTOM CEILING B6DLED 1000 80 B40 SO 10 W | 14'-0" LENGTH, 5" SQUARE SUSPENDED LINEAR LED, INSTALL IN LED 0-10VDC AXIS LIGHTING SSL14 X 4000K 14000 | UNV DP 1 XX CUSTOM CEILING B6DLED 1000 80 B40 SO 10 W 16'-0" LENGTH, 5" SQUARE SUSPENDED LINEAR LED, INSTALL IN LED 0-10VDC AXIS LIGHTING 144 CUSTOM CEILING UNV DP 1 XX DIMMING FMVCAL 24IN MVOLT 30K35K40K 24" VANITY LIGHT "COMTEMPORY ARROW". BRUSHED NICKEL LITHONIA LED S4LWID LCB 4FT MSLX 80CRI LED 0-10VDC 4-0" LENGTH, 4" SQUARE WALL MOUNT LINEAR WALL SCONCE WS4 MARK LIGHTING 40K 600LMF NODIM SCT S4LWID LCB 8FT MSLX 80CRI LED 0-10VDC WS8 MARK LIGHTING 8'-0" LENGTH, 4" SQUARE WALL MOUNT LINEAR WALL SCONCE 40K 600LMF NODIM SCT AEL 48IN NODIM 35W 40K MVOLT 4'-0" EXTERIOR LED WALL SCONCE, DARK BRONZE LUMINAIRE LED, INC. 4000K 3682 NO DIM 35 LED EXTERIOR WALL MOUNT, DOWN ONLY, WET LOCATION, UNV. ОВ RAB SLIM 26 N /PC LED VOLT, BRONZE LED EXTERIOR WALL MOUNT, DOWN ONLY, WET LOCATION, UNV. OC RAB WPLED-80-N X 4000K 9588 LED 80 VOLT, BRONZE LED EXIT LIGHT, RED LETTERS, WHITE HOUSING, THERMO-PLASTIC, X1/X2 LITHONIA LHQM LED R BATTERY BACKUP, TWO 1.5 WATT EGRESS LIGHTS, UNIVERSAL <5 1 MONTING. SAME AS X1 EXCEPT PROVIDE HIGH OUTPUT BATTERY TO POWER | 120/ Х3 LHQM LED R HO LED <5 1, 2 LITHONIA EXTERIOR 'OBE' FIXTURE ADJACENT TO THE X3

1. All fuses - both size and type - shall be verified with the equipment being supplied.

2. For Bidding purposes, assume maximum fuse size based on disconnect size.

3. For Bidding purposes, assume Type RK1 fuses for all applications.

EQUALS WILL BE ACCEPTED FOR THIS LIGHTING FIXTURE.

LIGHTING FIXTURE SCHEDULE



HSR ASSOCIATES INC. 100 MILWAUKEE STREET LA CROSSE, WISCONSIN PHONE: 608.784.1830

FAX: 608.782.5844

www.hsrassociates.com

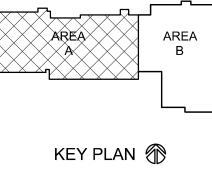
Consultant:

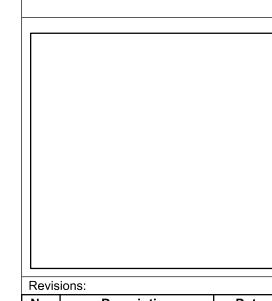
GEANS

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WE SP HSR Project Number: **HSR # 20028**

Project Date: FEBRUARY 2021 Drawn By: Key Plan:





No. Description 1 ADDENDUM # 1

Last Update: 02/15/21

Space No.	Serves	C/B Size/Type	Load (KVA)	Load (KVA)	C/B Size/Type	Serves	Spac No.
1	XSTG	20/1 (N)	XSTG	XSTG	20/1 (N)	XSTG	2
3	XSTG	20/ (N)	XSTG	XSTG	20/1 (N)	XSTG	4
5	XSTG	20/2 (N)	XSTG	XSTG	20/2 (N)	XSTG	6
7	"	20/2 (N)	XSTG	XSTG	20/2 (N)	п	8
9	XSTG	20/2 (N)	XSTG	XSTG	20/1(N)	XSTG	10
11	"	20/2 (N)	XSTG	XSTG	20/1(N)	XSTG	12
13	XSTG	20/2 (N)	XSTG	XSTG	20/1(N)	XSTG	14
15	n	20/2 (N)	XSTG	XSTG	20/1(N)	XSTG	16
17	XSTG	20/1(N)	XSTG	XSTG	20/1(N)	XSTG	18
19	XSTG	20/1(N)	XSTG	XSTG	20/1(N)	XSTG	20
21	XSTG	20/1(N)	XSTG	XSTG	20/1(N)	XSTG	22
23	XSTG	20/1(N)	XSTG	XSTG	20/1(N)	XSTG	24
25	XSTG	20/1(N)	XSTG	XSTG	20/1(N)	XSTG	26
27	XSTG	20/1(N)	XSTG	XSTG	20/1(N)	XSTG	28
29	XSTG	20/1(N)	XSTG	XSTG	20/1(N)	XSTG- GFI BRK.	30
31	XSTG	20/1(N)	XSTG	XSTG	20/1(N)	XSTG - GFI BRK.	32
33	XSTG	20/1(N)	XSTG	XSTG	20/1(N)	XSTG - GFI BRK.	34
35	XSTG	20/1(N)	XSTG	XSTG	20/1(N)	XSTG - GFI BRK.	36
37	XSTG	30/3 (N)	XSTG	XSTG	20/1(N)	XSTG	38
39	XSTG	30/3 (N)	XSTG	XSTG	20/1(N)	XSTG	40
41	XSTG	30/3 (N)	XSTG	XSTG	20/1(N)	XSTG	42
43	SPARE	20/1(N)		4.20	60/3 (N)	MOTOR (AHU-4)	44
45	SPARE	20/1(N)		4.20	60/3 (N)	н	46
47	SPARE	20/1(N)		4.20	60/3 (N)	n	48
49	SPARE	20/1(N)			20/1(N)	SPARE	50
51	SPARE	20/1(N)			20/1(N)	SPARE	52
	LIGHTING (KVA):						
	RECEPTACLES (KVA):						
	MOTOR/EQUIPMENT (KVA):				TOTAL AND		
	TOTAL (KVA):				TOTAL AMP	TOTAL (KVA):	
	Notes:						

Space No.	Serves	C/B Size/Type	Load (KVA)	Load (KVA)	C/B Size/Type	Serves	Space No.
1	XSTG	25/3 (N)	XSTG	XSTG	30/3 (N)	XSTG	2
3	II .	25/3 (N)	XSTG	XSTG	30/3 (N)	н	4
5	II.	25/3 (N)	XSTG	XSTG	30/3 (N)	п	6
7	XSTG	20/1 (N)	XSTG	XSTG	20/1 (N)	XSTG	8
9	XSTG	20/1 (N)	XSTG	XSTG	20/1 (N)	XSTG	10
11	XSTG	20/1 (N)	XSTG	XSTG	20/1 (N)	XSTG	12
13	XSTG	20/1 (N)	XSTG	XSTG	20/3 (N)	XSTG	14
15	XSTG	30/2 (N)	XSTG	XSTG	20/3 (N)	и.	16
17	п	30/2 (N)	XSTG	XSTG	20/3 (N)	n.	18
19	XSTG	30/2 (N)	XSTG	XSTG	20/1 (N)	XSTG	20
21	II .	30/2 (N)	XSTG	XSTG	20/1 (N)	XSTG	22
23	XSTG	30/2 (N)	XSTG	XSTG	90/3 (N)	XSTG	24
25	"	30/2 (N)	XSTG	XSTG	90/3 (N)	W.	26
27	XSTG	30/2 (N)	XSTG	XSTG	90/3 (N)	u.	28
29	W .	30/2 (N)	XSTG	XSTG	30/3 (N)	XSTG	30
31	XSTG	20/2 (N)	XSTG	XSTG	30/3 (N)	n	32
33	II.	20/2 (N)	XSTG	XSTG	30/3 (N)	n .	34
35	XSTG	20/1 (N)	XSTG	XSTG	20/1 (N)	XSTG	36
37	XSTG	20/1 (N)	XSTG	XSTG	30/3 (N)	XSTG	38
39	XSTG	20/1 (N)	XSTG	XSTG	30/3 (N)	н	40
41	XSTG	20/1 (N)	XSTG	XSTG	30/3 (N)	n.	42
43	SPARE	20/1 (N)			20/1 (N)	SPARE	44
45	SPARE	20/1 (N)			20/1 (N)	SPARE	46
47	SPARE	20/1 (N)			20/1 (N)	SPARE	48
49	SPARE	20/1 (N)			20/1 (N)	SPARE	50
51	SPARE	20/1 (N)			20/1 (N)	SPARE	52
LIG	HTING (KVA):						
	CEPTACLES (KVA):						

	,								
	RECEPTACLES (KVA):								
	MOTOR/EQUIPMENT (KVA):								
						TOTAL AI	MP.:		
	TOTAL (KVA):					(DIVERSI		TOTAL (KVA):	
	Notes:								
1	Provide a 52 space replacement	nt panelboa	ard.						
2	Provide a Main Breaker to mate	ch Panelbo	oard 'C' rep	olacer	nent				

Space No.	Serves	C/B Size/Type	Load (KVA)	Load (KVA)	C/B Size/Type	Serves	Space No.
1	Receptacle	20/1 (N)	0.18	0.18	20/1 (N)	Receptacle	2
3	Receptacle	20/1 (N)	0.18	0.18	20/1 (N)	Receptacle	4
5	Receptacle	20/1 (N)	0.18	0.18	20/1 (N)	Receptacle	6
7	Receptacle	20/1 (N)	0.18	0.18	20/1 (N)	Receptacle	8
9	Receptacle	20/1 (N)	0.18	1.50	20/2 (N)	EWH-5	10
11	EWH-6	20/2 (N)	1.50	1.50	20/2 (N)	n	12
13		20/2 (N)	1.50		20/1 (N)	Spare	14
15	TVSS	30/3 (N)	1		20/1 (N)	Spare	16
17	п	30/3 (N)	7		20/1 (N)	Spare	18
19	"	30/3 (N)	7		20/1 (N)	Spare	20
21	Spare	2071 (11)			20/1 (N)	Spare	22
23	Spare	20/1 (N)			20/1 (N)	Spare	24
25	Spare	20/1 (N)			20/1 (N)	Spare	26
27	Spare	20/1 (N)			20/1 (N)	Spare	28
29	Spare	20/1 (N)			20/1 (N)	Spare	30
31	Spare	20/1 (N)			20/1 (N)	Spare	32
33	Spare	20/1 (N)			20/1 (N)	Spare	34
35	Spare	20/1 (N)			20/1 (N)	Spare	36
37	Spare	20/1 (N)			20/1 (N)	Spare	38
39	Spare	20/1 (N)			20/1 (N)	Spare	40
41	Spare	20/1 (N)			20/1 (N)	Spare	42
	LIGHTING (KVA):						
	RECEPTACLES (KVA):	2					
	MOTOR/EQUIPMENT (KVA):	6					
					TOTAL AMP.		22.
	TOTAL (KVA):	8			(DIVERSITY F	ACTOR) X 1.25 =	

Space No.	Serves	C/B Size/Type	Load (KVA)		Load (KVA)	C/B Size/Type	Serves	Space No.
1	Motor (CWP-1)	50/3 (N)	3.04		2.10	35/3 (N)	Motor (HWP-2	2
3	n n	50/3 (N)	3.04		2.10	35/3 (N)	"	4
5	n n	50/3 (N)	3.04		2.10	35/3 (N)	n .	6
7	Motor (HWP-1)	35/3 (N)	2.10		XSTG	20/3 (E)	Motor (P-3) Xstg	8
9	ii	35/3 (N)	2.10		XSTG	20/3 (E)	п	10
11	п	35/3 (N)	2.10		XSTG	20/3 (E)	п	12
13	Motor (HXP-1)	50/3 (E)	3.04		1.00	20/3 (E)	Motor (CBH-1)	14
15	п	50/3 (E)	3.04		1.00	20/3 (E)	п	16
17	"	50/3 (E)	3.04		1.00	20/3 (E)	TI TI	18
19	Motor (CBC-1)	20/3 (E)	1.32			20/1 (E)	Spare	20
21	"	20/3 (E)	1.32		3.30	45/3 (N)	Motor (AHU-3)	22
23	"	20/3 (E)	132		3.30	45/3 (N)	"	24
25	Wotor (Boller) XStg. SHUNT-	20/1 (N)	Xstg	$ \uparrow $	3.30	4573 (N)	~~~~~	26
27	TRIP Motor (BIr-1 & BP-1) SHUNT- TRIP	20/2 (N)	1.04	130	1.04	20/2 (N)	Motor (BLR-2 & BP-2) SHUNT- TRIP	28
29	"	20/2 (N)	1.04		1.04	20/2 (N)	"	30
31	Motor (GSF-1)	20/1 (E)	€ 1.0		1.50	20/2 (N)	EWH!?	32
33	Receptacle	20/1 (E)	1.30		1.50	20/2 (N)	"	34
35	Receptacle	20/1 (E)	0.90		3.00	100/3 (N)	Sub-Panel 'N1'	36
37	Receptacle	20/1 (E)	0.54		3.00	100/3 (N)	п	38
39	Receptacle	20/1 (E)	0.50		3.00	100/3 (N)	п	40
41	Spare	20/1 (E)				20/1 (E)	Spare	42
	LIGHTING (KVA):							
	RECEPTACLES (KVA):							
	MOTOR/EQUIPMENT (KVA):							
						TOTAL AI	MP. :	
	TOTAL (KVA):					(DIVERSI	TY FACTOR) X 1.25 =	
	Notes:							

pace No.	Serves	C/B Size/Type	Load (KVA)	Load (KVA)	C/B Size/Type	Serves	Space No.
1	Driveway lights (Exstg)	20/2 (E)	XSTG	XSTG	20/1 (E)	Unknown (Xstg)	2
3	п	20/2 (E)	XSTG	XSTG	20/1 (E)	Main Gate Control (Xstg)	4
5	WTC Sign (Xstg)	20/2 (E)	XSTG	XSTG	20/2 (E)	Lot Lights (Xstg)	6
7	п	20/2 (E)	XSTG	XSTG	20/2 (E)	п	8
9	Dryer (Xstg)	25/3 (E)	XSTG	XSTG	30/2 (E)	Electric Vehicle Charger (Xstg)	10
11	n n	25/3 (E)	XSTG	XSTG	30/2 (E)	n	12
13	n	25/3 (E)	XSTG	0.50	20/1 (N)	Motor (ITH-1,2,3,4)	14
15	Washer (Xstg)	20/2 (E)	XSTG	0.75	20/1 (N)	Motor (EF-3 & UH-3)	16
17	n n	20/2 (E)	XSTG	1.25	20/2 (N)	Motor (EF-2)	18
19	Motor (EF-1 & UH-2)	20/1 (N)	1.00	1.25	20/2 (N)	"	20
21	Motor (UH-1)	20/1 (N)	0.90	0.40	15/2 (N)	Motor (FC-1)	22
23	Motor (MAU-1)	20/3 (N)	1.70	0.40	15/2 (N)	"	24
25	п	20/3 (N)	1.70	0.60	15/3 (N)	Motor (DH-1)	26
27	"	20/3 (N)	1.70	0.60	15/3 (N)	"	28
29	Space			0.60	15/3 (N)	11	30
31	Space					Space	32
33	Space					Space	34
35	Space					Space	36
37	Space					Space	38
39	Space					Space	40
41	Space					Space	42
	LIGHTING (KVA):						
	RECEPTACLES (KVA):						
	MOTOR/EQUIPMENT (KVA):						
					TOTAL AI	MP.:	
	TOTAL (KVA):					TY FACTOR) X 1.25 =	
	Notes:						

Receptacle Ceiling Fans Receptacle Receptacle Receptacle EWH-7 " Spare Spare Spare Spare Spare Spare Spare Spare	20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N) 20/2 20/2 20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N)	0.54 0.20 0.36 0.36 0.90 1.50		0.72 0.82 0.72 0.36 0.72	20/1 (N)	Receptacle Receptacle Receptacle Receptacle Receptacle Spare Spare Spare Spare Spare	2 4 6 8 10 12 14 16 18
Receptacle Receptacle Receptacle EWH-7 " Spare Spare Spare Spare Spare Spare Spare	20/1 (N) 20/1 (N) 20/1 (N) 20/2 20/2 20/1 (N) 20/1 (N) 20/1 (N)	0.36 0.36 0.90 1.50		0.72	20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N)	Receptacle Receptacle Receptacle Spare Spare Spare	6 8 10 12 14 16
Receptacle Receptacle EWH-7 " Spare Spare Spare Spare Spare Spare Spare	20/1 (N) 20/1 (N) 20/2 20/2 20/1 (N) 20/1 (N) 20/1 (N)	0.36 0.90 1.50		0.36	20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N)	Receptacle Receptacle Spare Spare Spare	8 10 12 14 16
Receptacle EWH-7 " Spare Spare Spare Spare Spare Spare Spare	20/1 (N) 20/2 20/2 20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N)	0.90 1.50		1	20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N)	Receptacle Spare Spare Spare	10 12 14 16
Spare Spare Spare Spare Spare Spare Spare	20/2 20/2 20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N)	1.50		0.72	20/1 (N) 20/1 (N) 20/1 (N)	Spare Spare Spare	12 14 16
Spare Spare Spare Spare Spare Spare	20/2 20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N)				20/1 (N) 20/1 (N)	Spare Spare	14 16
Spare Spare Spare Spare Spare Spare	20/1 (N) 20/1 (N) 20/1 (N) 20/1 (N)	1.50			20/1 (N)	Spare	16
Spare Spare Spare Spare	20/1 (N) 20/1 (N) 20/1 (N)						
Spare Spare Spare	20/1 (N) 20/1 (N)				20/1 (N)	Spare	18
Spare Spare	20/1 (N)						
Spare				II	20/1 (N)	Spare	20
-	20/1 (N)				20/1 (N)	Spare	22
Spare					20/1 (N)	Spare	24
	20/1 (N)				20/1 (N)	Spare	26
Spare	20/1 (N)				20/1 (N)	Spare	28
Spare	20/1 (N)				20/1 (N)	Spare	30
Spare	20/1 (N)				20/1 (N)	Spare	32
Spare	20/1 (N)				20/1 (N)	Spare	34
Spare	20/1 (N)				20/1 (N)	Spare	36
Spare	20/1 (N)				20/1 (N)	Spare	38
Spare	20/1 (N)				20/1 (N)	Spare	40
Spare	20/1 (N)				20/1 (N)	Spare	42
HTING (KVA):							
CEPTACLES (KVA):	5.5						
TOR/EQUIPMENT (KVA):	3						
					TOTAL AMP.	:	23.6
TAL (KVA):	8.5				(DIVERSITY F	ACTOR) X 1.25 =	
es:							
	Spare Spare Spare Spare Spare Spare HTING (KVA): CEPTACLES (KVA): TOR/EQUIPMENT (KVA):	Spare 20/1 (N) HTING (KVA): 5.5 TOR/EQUIPMENT (KVA): 3 FAL (KVA): 8.5	Spare 20/1 (N) HTING (KVA): 5.5 TOR/EQUIPMENT (KVA): 3 FAL (KVA): 8.5	Spare 20/1 (N) HTING (KVA): 5.5 TOR/EQUIPMENT (KVA): 3 FAL (KVA): 8.5	Spare 20/1 (N) HTING (KVA): 5.5 TOR/EQUIPMENT (KVA): 3 FAL (KVA): 8.5	Spare 20/1 (N) 20/1 (N) HTING (KVA): 20/1 (N) 20/1 (N) CEPTACLES (KVA): 5.5 5.5 TOR/EQUIPMENT (KVA): 3 TOTAL AMP. TAL (KVA): 8.5 (DIVERSITY F	Spare 20/1 (N) 20/1 (N) Spare Spare 20/1 (N) Spare HTING (KVA): 20/1 (N) Spare HTING (KVA): 5.5 TOR/EQUIPMENT (KVA): TOTAL AMP. : (DIVERSITY FACTOR) X 1.25 =

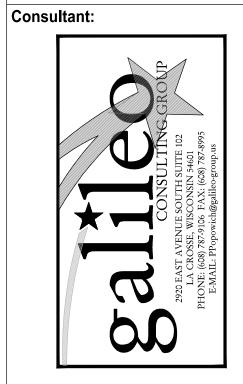
Space No.	Serves	C/B Size/Type	Load (KVA)	Load (KVA)	C/B Size/Type	Serves	Space No.
1	FIRE PUMP	250/3	22.80	0.50	15/3	JOCKEY PUMP	2
3	"	250/3	22.80	0.50	15/3	ш	4
5	"	250/3	22.80	0.50	15/3	II	6
7	GENERATOR RECEPTACLE	20/1	0.18	0.50	20/1	GENERATOR LIGHTING, ETC.	8
9	BATTERY CHARGER	20/1	1.20				10
11	BLOCK HEATER	20/1	1.50				12
13							14
15							16
17							18
19							20
21							22
23							24
25							26
27							28
29							30
31							32 34
35							36
37							38
39							40
41							42
	LIGHTING (KVA):						
	RECEPTACLES (KVA):	3.4					
	MOTOR/EQUIPMENT (KVA):	70					
					TOTAL AI	MP. :	20
	TOTAL (KVA):	73.4			(DIVERSI	TY FACTOR) X 1.25 =	
	Notes:						

Space No.	Serves	C/B Size/Type	Load (KVA)	Load (KVA)	C/B Size/Type	Serves	Space No.
1	LIGHTING (KVA):	20/1 (N)	0.70	0.70	20/1 (N)	LIGHTING	2
3	LIGHTING (KVA):	20/1 (N)	0.70	0.70	20/1 (N)	LIGHTING	4
5	LIGHTING (KVA):	20/1 (N)	0.70	1.20	20/1 (N)	LIGHTING	6
7	RECEPTACLE	20/1 (N)	0.36	0.50	30/2 (E)	RECEPTACLE	8
9	RECEPTACLE	20/1 (N)	0.54	0.70	30/2 (E)	RECEPTACLE	10
11	RECEPTACLE	20/1 (N)	0.50	0.36	20/1 (E)	RECEPTACLE	12
13	RECEPTACLE	20/1 (E)	0.54	0.90	20/1 (E)	RECEPTACLE	14
15	RECEPTACLE	20/1 (E)	0.70	0.50	20/1 (E)	RECEPTACLE	16
17	RECEPTACLE	20/1 (E)	0.54	0.36	20/1 (E)	RECEPTACLE	18
19	RECEPTACLE	20/1 (E)	0.70	0.50	20/1 (E)	RECEPTACLE	20
21	RECEPTACLE	20/1 (E)	0.36	0.54	20/1 (E)	RECEPTACLE	22
23	RECEPTACLE	20/1 (E)	0.54	0.70	20/1 (E)	RECEPTACLE	24
25	RECEPTACLE	20/1 (E)	0.90	0.36	20/1 (E)	RECEPTACLE	26
27	RECEPTACLE	20/1 (E)	0.54	0.18	20/1 (E)	RECEPTACLE	28
29	RECEPTACLE	20/1 (E)	0.36	0.50	20/1 (E)	RECEPTACLE	30
31	RECEPTACLE	20/1 (E)	0.50	0.50	20/1 (E)	RECEPTACLE	32
33	EWH-4	20/1 (E)	1.50	0.18	20/1 (E)	RECEPTACLE	34
35	EWH-2	20/1 (E)	1.50	0.50	20/1 (N)	RECEPTACLE	36
37	VENDING (GFI BRK.)	20/1 (N)	0.75	0.75	20/1 (N)	VENDING (GFI BRK.)	38
39	VENDING (GFI BRK.)	20/1 (N)	0.75	0.18	20/1 (E)	RECEPTACLE	40
41	RECEPTACLE	20/1 (N)	0.30	0.54	20/1 (N)	RECEPTACLE	42
	LICHTING (KVA)-	4.7					
	LIGHTING (KVA):						
	RECEPTACLES (KVA):	18					
	MOTOR/EQUIPMENT (KVA):	3					
					TOTAL AME		71.
	TOTAL (KVA):	25.7			(DIVERSITY	FACTOR) X 1.25 =	
	Notes:						
1							

Space No.	Serves	C/B Size/Type	Load (KVA)	Load (KVA)	C/B Size/Type	Serves	Space No.
43	RECEPTACLE	20/1 (N)	0.36	0.36	20/1 (N)	LIGHTING	44
45	MICROWAVE	20/1 (N)	1.50	1.50	20/1 (N)	MICROWAVE	46
47	REFRIG.	20/1 (N)	0.80	0.80	20/1 (N)	REFRIG.	48
49	RECEPTACLE	20/1 (N)	0.90		20/1 (N)	SPARE	50
51	TVSS	30/3 (N)			20/1 (N)	SPARE	52
53	"	30/3 (N)			20/1 (N)	SPARE	54
55	n	30/3 (N)			20/1 (N)	SPARE	56
57	SPARE	20/1 (N)			20/1 (N)	SPARE	58
59	SPARE	20/1 (N)			20/1 (N)	SPARE	60
61	SPARE	20/1 (N)			20/1 (N)	SPARE	62
63	SPARE	20/1 (N)			20/1 (N)	SPARE	64
65	SPARE	20/1 (N)			20/1 (N)	SPARE	66
67	SPARE	20/1 (N)			20/1 (N)	SPARE	68
69	SPARE	20/1 (N)			20/1 (N)	SPARE	70
71	SPARE	20/1 (N)			20/1 (N)	SPARE	72
73	SPARE	20/1 (N)			20/1 (N)	SPARE	74
75	SPARE	20/1 (N)			20/1 (N)	SPARE	76
77	SPARE	20/1 (N)			20/1 (N)	SPARE	78
79	SPARE	20/1 (N)			20/1 (N)	SPARE	80
81	SPARE	20/1 (N)			20/1 (N)	SPARE	82
83	SPARE	20/1 (N)			20/1 (N)	SPARE	84
	LIGHTING (KVA):						
	RECEPTACLES (KVA):	6.2					
	MOTOR/EQUIPMENT (KVA):						
					TOTAL AMP. :		17.2
	TOTAL (KVA):	6.2			(DIVERSITY FACTOR) X 1.25 =		
	Notes:						
1							

Space No.	Serves	C/B Size/Type	Load (KVA)	Load (KVA)	C/B Size/Type	Serves	Space No.
1	XSTG	20/1 (E)	XSTG	XSTG	20/1 (E)	XSTG	2
3	XSTG	20/1 (E)	XSTG	XSTG	20/1 (E)	XSTG	4
5	XSTG	20/1 (E)	XSTG	XSTG	20/1 (E)	XSTG	6
7	XSTG	20/1 (E)	XSTG	XSTG	30/3 (E)	XSTG	8
9	XSTG	20/1 (E)	XSTG	XSTG	30/3 (E)	н	10
11	XSTG	20/1 (E)	XSTG	XSTG	30/3 (E)	п	12
13	XSTG	20/1 (E)	XSTG	XSTG	40/3 (E)	XSTG	14
15	XSTG	20/1 (E)	XSTG	XSTG	40/3 (E)	п	16
17	XSTG	20/1 (E)	XSTG	XSTG	40/3 (E)	н	18
19	RECEPTACLE	20/1 (E)	0.36	1.00	20/1 (E)	MOTOR (RDH-1)	20
21	RECEPTACLE	20/1 (E)	0.36		20/1 (E)	SPARE (XSTG)	22
23	STACKED WASHER/DRYER	30/2 (N)	2.50		20/1 (E)	SPARE (XSTG)	24
25	(NEW BRK.)	30/2 (N)	2.50		20/1 (E)	SPARE (XSTG)	26
27	RECEPTACLE	20/1 (E)	0.18		20/1 (E)	SPARE (XSTG)	28
29	SPARE (XSTG)	20/1 (E)			20/1 (E)	SPARE (XSTG)	30
	LIGHTING (KVA):						
	RECEPTACLES (KVA):						
	MOTOR/EQUIPMENT (KVA):						
					TOTAL AM	TOTAL AMP. :	
	TOTAL (KVA):				(DIVERSIT	(DIVERSITY FACTOR) X 1.25 =	
	Notes:						
1							





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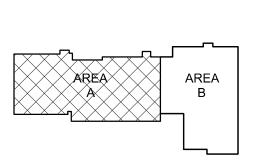
HSR # 20028

Project Date:

FEBRUARY 2021

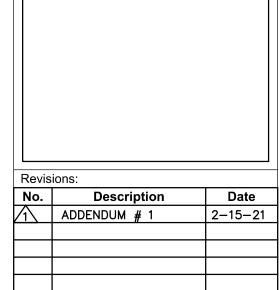
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Last Update:

02/02/21

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