

PROJECT NAME: 20181028 -BL072 – CHEMISTRY HUMIDIFIERS 1, 2, 3, 4 AND 7
OWNER NAME: INDIANA UNIVERSITY BOARD OF TRUSTEES
CES PROJECT NO. 2024-003.HUM
ADDENDUM NO. 2
DATED: 3/18/2025

This Addendum consists of three (3) Addendum pages and nineteen (19) attachment pages totaling twenty-two (22) pages. This Addendum shall supplement, amend, and become part of the Bid Documents. All Bids shall be based on these modifications. Bidders shall acknowledge the receipt of this addendum on their Bid Form.

PART 1 - CHANGES TO THE PROJECT MANUAL

Modifications described herein shall be incorporated in the Project Manual. All other Work shall remain unchanged.

1.1 DIVISION 01 – GENERAL REQUIREMENTS

A. Section 011000 “SUMMARY”

1. DELETE AND REPLACE Subparagraph 1.4, A, 1, b as follows:
“b. Substantial Completion: May 8, 2026”
2. DELETE Subparagraph 1.4, D
3. DELETE AND REPLACE Subparagraph 1.4, E as follows:
“b. Phases 1, 2 and 3 must be substantially complete and AHU-1, 2 and 3 up and running by 9/16/2025.

1.2 DIVISION 23 - HEATING, VENTILATING, AND AIR-CONDITIONING(HVAC)

A. Section 230592 “HVAC INSTRUMENTATION AND CONTROLS”

1. INSERT Document
Siemens Drawings per the attached.

PART 2 - CHANGES TO THE DRAWINGS

Modifications described herein shall be incorporated in the Drawings. All other Work shall remain unchanged.

2.1 M-SERIES DRAWINGS

A. Drawing Number M701

1. DELETE AND REPLACE Drawing M701 Temperature Controls Schematics in its entirety.

PART 3 - AVAILABLE PROJECT INFORMATION

- 3.1** A dumpster will be permitted per the attached site plan (shown as a white rectangle) for the heavy demolition period, roughly from September 18 until December 31, 2025 – *Attachment A* (Site Photo) . Successful bidder will coordinate exact dumpster sizing and placement with Construction Manager and Building Manager. 6 FOOT temporary fence chain link fence and Pantone 201 privacy screen (per IU standard) - *Attachment B* - shall be provided around dumpster, and locked when not in use.

PART 4 - QUESTIONS AND ANSWERS

The following are questions submitted and answers provided. The questions and answers are to be considered as part of the Invitation to Bid.

Question Number	Question	Response
1	How should the contractor address the outdoor air plenum side connection on AHU-1,2 and 3 during the humidifier replacement. Should a blank-off panel be installed there as well?	There is an existing pneumatically actuated control damper in the OA duct between the OA plenum and each unit. That damper should be either controlled closed or actuator disabled and manually closed to minimize air from being drawing back into the OA plenum when a given AHU is off.

PRE-BID ATTENDANCE

The following Pre-Bid Sign-In Sheet is being made available to Bidders for informational purposes only and is not a part of the Addendum.

ATTACHMENTS

SIEMENS DRAWING

M701 TEMPERATURE CONTROLS SCHEMATICS

ATTACHMENT A - SITE PHOTO / DUMPSTER LOCATION

ATTACHMENT B - CONSTRUCTION FENCE ALL CAMPUSES

PRE BID MEEING SIGN IN SHEET

SIEMENS

SIEMENS INDUSTRY INC.
SMART INFRASTRUCTURE DIVISION

3502 WOODVIEW TRACE
SUITE 240
INDIANAPOLIS, IN 46268
UNITED STATES

PHONE: 317-293-8880
FAX: 317-293-0374

03/14/25

FOR INFORMATION CONTACT
ERIC HUGHES

ENGINEERING DATA FOR
BLO00B CHEM HUM-1,2,3,4 & 7
INDIANA UNIVERSITY BLOOMINGTON
800 E KIRKWOOD AVE.
IU PROJECT #20181028, IN 47405
USA

44OP-394390

ARCHITECT

CREATIVE ENGINEERING SOLUTION
ENGINEER

CONTRACTOR

DWG	DESCRIPTION
	GENERAL
	Cover Sheet
ABAC	Anixter Building Auto. Cables
TTRM1	TX-I/O Termination Spec.
TTRM2	TX-I/O Termination Spec. 2
TTRM3	TX-I/O Termination Spec. 3
	CONTROL DRAWINGS
201	HUD-1 THRU HUD-4 CONTROL
201A	HUD-1 THRU HUD-4 ELEC. WIRING 1
201B	HUD-1 THRU HUD-4 ELEC. WIRING 2
201C	HUD-1 THRU HUD-4 BOM & SOO
202	HUD-7 CONTROL
202A	HUD-7 ELEC. WIRING
202B	HUD-7 SOO
	DDC PANEL LAYOUTS
N07AB	PXCM-7 AHU3&4

REVISION HISTORY				
00	3/14/2025	HB	SUBMITTAL SET	

SIEMENS

SIEMENS INDUSTRY INC.
SMART INFRASTRUCTURE DIVISION

3502 WOODVIEW TRACE
SUITE 240
INDIANAPOLIS, IN 46268
UNITED STATES
PHONE: 317-293-8880
FAX: 317-293-0374

BL000B CHEM HUM-1,2,3,4 & 7
IU PROJECT #20181028, IN

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
HB	HB		03/14/25	03/14/25

Table of Contents

440P394390
0

TOCA

Anixter Building Automation Cables		
Non-Plenum		
SBT Part Number	Description	Print Legend
H-TP20-CM	20AWG,STR,1TP,CM,BLUE JACKET	NORTHFLEX ® H-TP20-CM “DI, DO, AI, AO” (Mfg E#) 20AWG 1P 75°C CM (UL) C(UL)
H-3C20-CM	20AWG,STR,3COND,CM,BLUE JACKET	NORTHFLEX ® H-3C20-CM “TEC V/D” (Mfg E#) 20 AWG 3C 75°C CM (UL) C(UL)
H-TP18-CMR	18AWG,STR,1TP,CMR,BLUE JACKET	NORTHFLEX ® H-TP18-CMR “DI, DO, AI, AO” (Mfg E#) 18AWG 1P 75°C CMR (UL) C(UL)
H-3C18-CMR	18AWG,STR,3COND,CMR,BLUE JACKET	NORTHFLEX ® H-3C18-CMR “TEC V/D” (Mfg E#) 18 AWG 3C 75°C CMR (UL) C(UL)
H-2C14-CL3R	14AWG,STR,2COND,CL3R,DARK BLUE JACKET	H-2C14-CL3R “LV POWER” (Mfg E#) 14 AWG 2C 75°C CL3R (UL) C(UL)
H-B-TSP24LC-CM	BLN24AWG,STR,TSP,LOCAP,CM,ORANGE JACKET	H-B-TSP24LC-CM “BLN” (Mfg E#) 24 AWG 1P 75°C CM (UL) C(UL)
H-F-TSP24LC-CM	FLN24AWG,STR,TSP,LOCAP,CM,ORANGE JACKET W/ BLUE STRIPE	NORTHFLEX ® H-F-TSP24LC-CM “FLN” (Mfg E#) 24 AWG 1P 75°C CM (UL) C(UL)
H-3P24-CMR	24AWG,SOL,3P,CMR,BLUE JACKET	NORTHFLEX ® H-3P24-CMR “TEC STAT” (Mfg E#) 24 AWG 3P 75°C CMR (UL) C(UL)
LON-1PS22-CM	22AWG,STR,1PAIR,OAS,CM,ORANGE JACKET W/ WHITE STRIPE	NORTHFLEX ® LON-1PS22-CM “LON FLN” (Mfg E#) 22AWG 1P 75O C CM (UL) C(UL)
LON-2PS22-CM	22AWG,STR,2PAIR,OAS,CM,ORANGE JACKET W/ WHITE STRIPE	NORTHFLEX ® LON-2PS22-CM “LON FLN” (Mfg E#) 22AWG 2P 75O C CM (UL) C(UL)
E-4TP24CAT5-CM	24AWG,SOL,4TP,CAT5,CM	NORTHFLEX ® E-4TP24CAT5-CM “ETHERNET” (Mfg E#) 24AWG 4P 75O C CM (UL C(UL)
H-A-1.5TSP24LC-CM	ALN485, 24AWG, STR, TP+1C, OAS, LOCAP, CM	NORTHFLEX ® H-A-1.5TSP24LC-CM “ALN485” 24 AWG 1P+1C 75°C CM (UL) C(UL) (Mfg E#)
H-F-1.5TSP24LC-CM	FLN485, 24AWG, STR, TP+1C, OAS, LOCAP, CM	NORTHFLEX ® H-A-1.5TSP24LC-CM “FLN485” 24 AWG 1P+1C 75°C CM (UL) C(UL) (Mfg E#)
Plenum		
SBT Part Number	Description	Print Legend
H-TP20-CMP	20AWG,STR,1TP,CMP,BLUE JACKET	NORTHFLEX ® H-TP20-CMP “DI, DO, AI, AO” (Mfg E#) 20 AWG 2C 75°C CMP (UL) C(UL)
H-3C20-CMP	20AWG,STR,3COND,CMP,BLUE JACKET	NORTHFLEX ® H-3C20-CMP “TEC V/D” (Mfg E#) 20 AWG 3C 75°C CMP (UL) C(UL)
H-TP18-CMP	18AWG,STR,1TP,CMP,BLUE JACKET	NORTHFLEX ® H-TP18-CMP “DI, DO, AI, AO” (Mfg E#) 18 AWG 2C 75°C CMP (UL) C(UL)
H-3C18-CMP	18AWG,STR,3COND,CMP,BLUE JACKET	NORTHFLEX ® H-3C18-CMP “TEC V/D” (Mfg E#) 18 AWG 3C 75°C CMP (UL) C(UL)
H-2C14-CL3P	14AWG,STR,2COND,CL3P,DARK BLUE JACKET	NORTHFLEX ® H-2C14-CL3P “LV POWER” (Mfg E#) 14 AWG 2C 75°C CL3P (UL) C(UL)
H-B-TSP24LC-CMP	BLN24AWG,STR,TSP,LOCAP,CMP,ORANGE JACKET	NORTHFLEX ® H-B-TSP24LC-CMP “BLN” (Mfg E#) 24 AWG TSP 75°C CMP (UL) C(UL)
H-F-TSP24LC-CMP	FLN24AWG,STR,TSP,LOCAP,CMP,ORANGE JACKET W/ BLUE STRIPE	NORTHFLEX ® H-F-TSP24LC-CMP “FLN” (Mfg E#) 24 AWG TSP 75°C CMP (UL) C(UL)
H-3P24-CMP	24AWG,SOL,3PAIR,CMP,BLUE JACKET	NORTHFLEX ® H-3P24-CMP “TEC STAT” (Mfg E#) 24 AWG 3P 75°C CMP (UL) C(UL)
KNX-TSP20LC-CMP	20AWG,SOL,1TSP,CMP,ORNGE/GRN STRIPE	NORTHFLEX ® KNX-TSP20LC-CMP “KNX PL-LINK” 20AWG SOL 1TSP 75° C CM (UL) C(UL) E179333
LON-1P22-CMP	22AWG,STR,1PAIR,CMP,ORANGE JACKET W/ WHITE STRIPE	NORTHFLEX ® LON-1P22-CMP “LON FLN” (Mfg E#) 22AWG 1P 75O C CMP (UL) C(UL)
LON-2P22-CMP	22AWG,STR,2PAIR,CMP,ORANGE JACKET W/ WHITE STRIPE	NORTHFLEX ® LON-2P22-CMP “LON FLN” (Mfg E#) 22AWG 2P 75O C CMP (UL) C(UL)
LON-1PS22-CMP	22AWG,STR,1PAIR,OAS,CMP,ORANGE JACKET W/ WHITE STRIPE	NORTHFLEX ® LON-1PS22-CMP “LON FLN” (Mfg E#) 22AWG 1P 75O C CMP (UL) C(UL)
LON-2PS22-CMP	22AWG,STR,2PAIR,OAS,CMP,ORANGE JACKET W/ WHITE STRIPE	NORTHFLEX ® LON-2PS22-CMP “LON FLN” (Mfg E#) 22AWG 2P 75O C CMP (UL) C(UL)
E-4TP24CAT5-CMP	24AWG,SOL,4TP,CAT5,CMP	NORTHFLEX ® E-4TP24CAT5-CMP “ETHERNET” (Mfg E#) 24AWG 4P 75O C CMP (UL
H-A-1.5TSP24LC-CMP	ALN485, 24AWG, STR, TP+1C, OAS, LOCAP, CMP	NORTHFLEX ® H-A-1.5TSP24LC-CM “ALN485” 24 AWG 1P+1C 75°C CM (UL) C(UL) (Mfg E#)
H-F-1.5TSP24LC-CMP	FLN485, 24AWG, STR, TP+1C, OAS, LOCAP, CMP	NORTHFLEX ® H-A-1.5TSP24LC-CM “FLN485” 24 AWG 1P+1C 75°C CM (UL) C(UL) (Mfg E#)
Assemblies		
Part Number	Description	Print Legend
550-827	CABLE ASSEMBLY TEC TO SSB 3 POS 10 FT	N
550-828	CABLE ASSEMBLY TEC TO SSC 3 POS 10 FT	N

REVISION HISTORY

00	3/14/2025	HB	SUBMITTAL SET

SIEMENS

SIEMENS INDUSTRY INC.
SMART INFRASTRUCTURE DIVISION

3502 WOODVIEW TRACE
SUITE 240
INDIANAPOLIS, IN 46268
UNITED STATES
PHONE: 317-293-8880
FAX: 317-293-0374

BL000B CHEM HUM-1,2,3,4 & 7
IU PROJECT #20181028, IN

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
HB	HB		03/14/25	03/14/25

Anixter Building Auto. Cables

440P394390
0

ABAC

© COPYRIGHT 1994-2025 SIEMENS INDUSTRY INC. ALL RIGHTS RESERVED



NOTE: REFER TO TERMINATION SHEET #1 FOR
INSTALLATION DETAILS.

REVISION HISTORY

00	3/14/2025	HB	SUBMITTAL SET
----	-----------	----	---------------

SIEMENS

SIEMENS INDUSTRY INC.
SMART INFRASTRUCTURE DIVISION

**3502 WOODVIEW TRACE
SUITE 240
INDIANAPOLIS, IN 46268
UNITED STATES
PHONE: 317-293-8880
FAX: 317-293-0374**

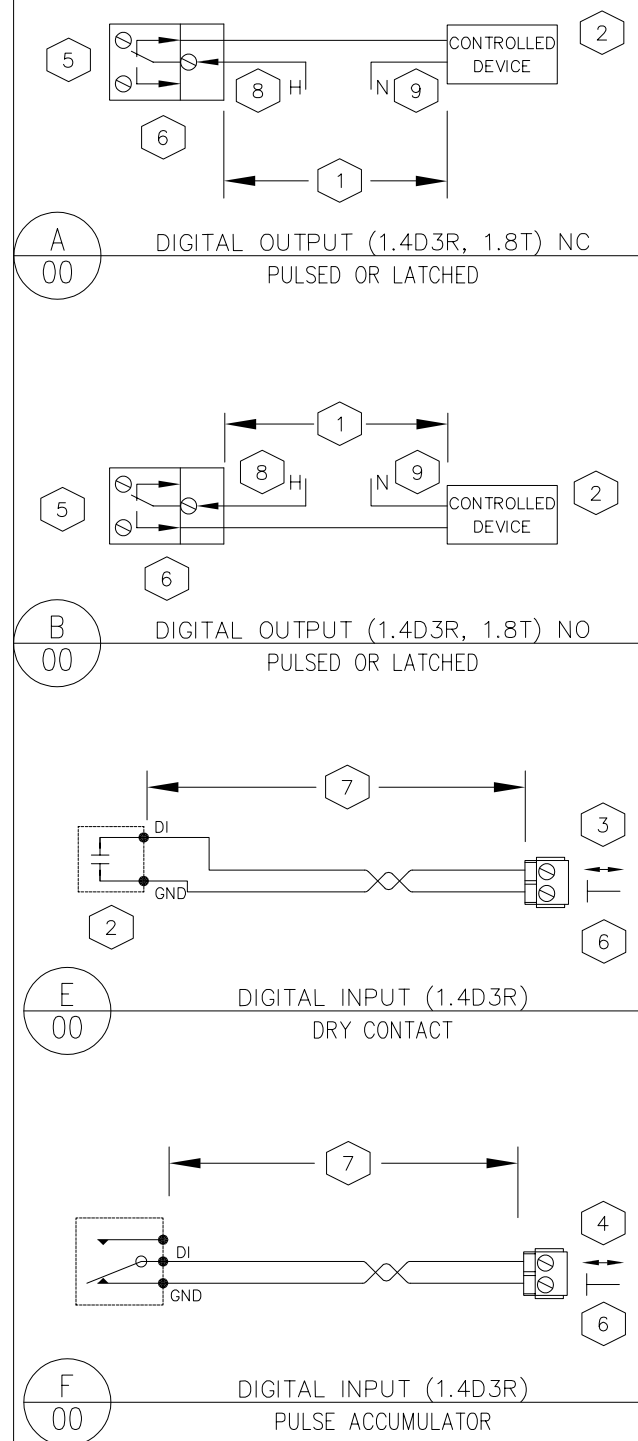
BL000B CHEM HUM-1,2,3,4 & 7
IU PROJECT #20181028, IN

ENGINEER HB	DRAFTER HB	CHECKED BY	INITIAL RELEASE 03/14/25	LAST EDIT DATE 03/14/25
-----------------------	----------------------	------------	------------------------------------	-----------------------------------

TX-I/O Termination Spec. 2

440P394390
0

TTRM2



NOTES:

- 1 MAXIMUM WIRE RUN LENGTHS ARE BASED ON THE CURRENT DRAW AND WIRE GAUGE. SEE DRAWING P7WIR.
- 2 SEE CONTROL DRAWINGS FOR NORMAL DE-ENERGIZED CONTACT STATE
- 3 MAXIMUM CONTACT CLOSURE RATE IS 10 PER SECOND
- 4 1.4D3R MAXIMUM PULSE RATE UP TO 10Hz
- 5 DO CONTACT RATINGS
AC OPERATION:
4A @ 250VAC (RESISTIVE)
3A @ 250VAC (INDUCTIVE)

DC OPERATION:
4A @ 30VDC (RESISTIVE), UL APPLICATIONS
3A @ 30VDC GENERAL PURPOSE
3A @ 30VDC (RESISTIVE)
- 6 REFER TO PXC7 PANEL FOR ACTUAL POINT ADDRESSES. REFER TO TXM TERMINATION TABLES FOR ACTUAL TERMINALS FOR EACH PANEL ADDRESS. COMMON TERMINAL MAY BE SHARED BY 2 POINTS.

50mA OR LESS – 750ft/230m
50mA TO 100mA – 375ft/115m
- 7
- 8 WHERE H TERMINAL IS NOT A NEC CLASS 2 CIRCUIT, RELAY COMMON TERMINAL BRANCH CURRENT MUST BE EXTERNALLY LIMITED TO 10A MAXIMUM BY AN NEC APPROVED MEANS. NOT A FUSE.
- 9 WHERE REQUIRED, N TERMINAL BRANCH CURRENT MUST BE EXTERNALLY LIMITED BY AN NEC APPROVED MEANS.

		TXM1.4D3R		
I/O POINT		(1)	(2)	(3)
SUPPLY		3	9	15
NORMALLY OPEN	↓ (NO)	2	8	14
NORMALLY CLOSED	↱ (NC)	4	10	16

		TXM1.4D3R			
I/O POINT		(5)	(6)	(7)	(8)
SYSTEM NEUTRAL ¹	$\perp$ (-)	26	28	30	32
DIGITAL INPUT	$\uparrow$ (+)	27	29	31	33

1. TERMINALS 26, 28, 30, 32 ARE SYSTEM NEUTRAL TERMINALS.

THEY ARE INTERCONNECTED, NOT IN THE TERMINAL BASE BUT IN THE PLUG-IN I/O MODULE. WHEN I/O MODULE IS REMOVED, THERE IS NO CONNECTION.

THE SYSTEM NEUTRAL OF A DIGITAL INPUT CAN BE CONNECTED TO ANY SYSTEM NEUTRAL TERMINAL.

		TXM1.8T							
I/O POINT		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SUPPLY ¹	~	2	6	10	14	19	23	27	31
DIGITAL OUTPUT ²	↑ (+)	4	8	12	16	21	25	29	33

1.THE LOAD CAN BE CONNECTED DIRECTLY TO THE CORRESPONDING OUTPUT TERMINALS. NO SEPARATE 24VAC SUPPLY IS REQUIRED.

2. THE TRIAC CLOSES THE CONTACT TO $\perp$ (SYSTEM NEUTRAL).

REVISION HISTORY

00	3/14/2025	HB	SUBMITTAL SET
----	-----------	----	---------------

SIEMENS

SIEMENS INDUSTRY INC.
SMART INFRASTRUCTURE DIVISION

**3502 WOODVIEW TRACE
SUITE 240
INDIANAPOLIS, IN 46268
UNITED STATES
PHONE: 317-293-8880
FAX: 317-293-0374**

BL000B CHEM HUM-1,2,3,4 & 7
IU PROJECT #20181028, IN

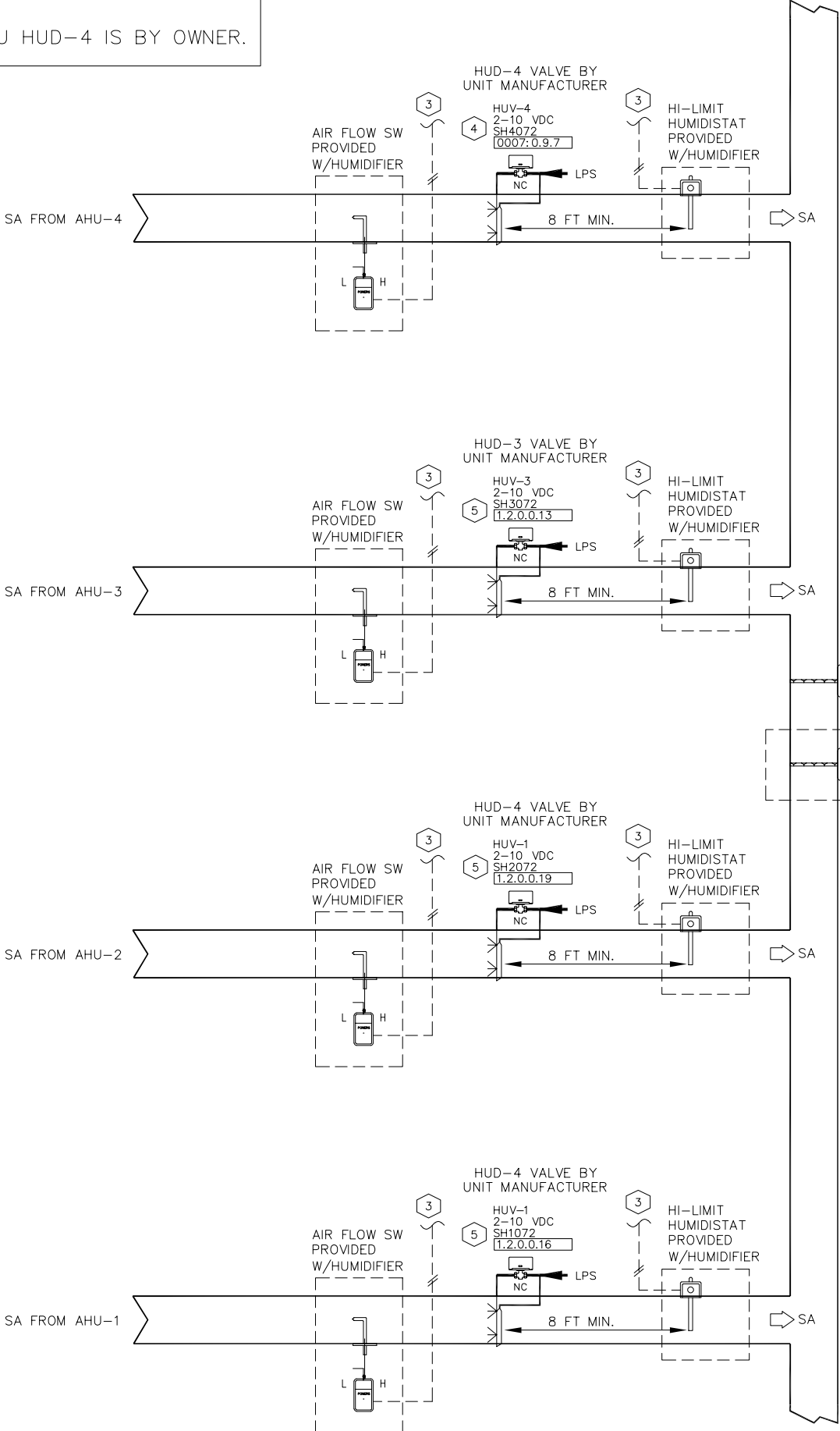
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
HB	HB		03/14/25	03/14/25

TX-I/O Termination Spec. 3

44OP394390
0

TTRM3

NOTE:
ALL WORK FOR HUD-1 THRU HUD-4 IS BY OWNER.



INSTALLATION NOTES:

- 1 SEE WIRING DETAIL ON ELECTRICAL DRAWING FOR WIRING TERMINATIONS.
- 2 REPLACED THE EXISTING SENSOR WITH NEW SENSOR.
- 3 WIRE INTO VALVE SAFETY CIRCUIT.
REFER TO WIRING DETAIL ON ELECTRICAL DRAWING.
- 4 WIRE HUD-4 VALVE AND HTE-1 TO THE AHU-4 UPGRADED PANEL (BACNET PXCML).
- 5 WIRE TO THE EXISTING PANEL. RE-USE THE EXISTING WIRING WHERE APPLICABLE.

- INSTALLATION NOTES:
- 1 SEE WIRING DETAIL ON ELECTRICAL DRAWING FOR WIRING TERMINATIONS.
 - 2 REPLACED THE EXISTING SENSOR WITH NEW SENSOR.
 - 3 WIRE INTO VALVE SAFETY CIRCUIT.
REFER TO WIRING DETAIL ON ELECTRICAL DRAWING.
 - 4 WIRE HUD-4 VALVE AND HTE-1 TO THE AHU-4 UPGRADED PANEL (BACNET PXCML).
 - 5 WIRE TO THE EXISTING PANEL. RE-USE THE EXISTING WIRING WHERE APPLICABLE.

REF#	FIELD PANEL NAME	FIELD PANEL NODE NAME
0007	PXCM-7	PXCM-7

000 /	PACM- /	PACM- /
REVISION HISTORY		

00	3/14/2025	HB	SUBMITTAL SET

SIEMENS
3502 WOODVIEW TRACE
SUITE 240
INDIANAPOLIS, IN 46288
UNITED STATES
PHONE: 317-293-8880
FAX: 317-293-0374

SIEMENS INDUSTRY INC.
SMART INFRASTRUCTURE DIVISION

SIEMENS INDUSTRY INC.
SMART INFRASTRUCTURE DIVISION

BLO00B CHEM HUM-1,2,3,4 & 7	440P394390
-----------------------------	------------

44-38861-1010
0
201

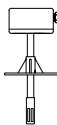
IU PROJECT #20181028, IN			
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE
HB	HB		03/14/25
HUID-1 THRU HUID-4 CONTROL			

44-38861-1010
0
201

HB	HB	03/14/26	03/14/26
HUD-1 THRU HUD-4 CONTROL			

REVISION HISTORY				FIELD PANEL	COMPONENT PANEL / POWER	FIELD WIRING	STARTER / VFD
00	3/14/2025	HB	SUBMITTAL SET	0007	PXCM-7		
SIEMENS				SIEMENS INDUSTRY INC. SMART INFRASTRUCTURE DIVISIONFAX: 317-293-0374			
BL000B CHEM HUM-1,2,3,4 & 7 IU PROJECT #20181028, IN				HUD-1 THRU HUD-4 ELEC. WIRING 1			
440P394390 0				201A			
ENGINEER HB				DRAFTER HB			
CHECKED BY HB				INITIAL RELEASE 03/14/25			
LAST EDIT DATE 03/14/25							
FIELD PANEL NAME				FIELD PANEL NODE NAME			
PXC-7				PXC-7			
NOTE: ALL WORK FOR HUD-1 THRU HUD-4 IS BY OWNER.							
EXISTING PANEL: BL071 node 2							
UTILIZE EXISTING 24VAC POWER							
SH1072 1.2.0.0.16 EXISTING POINT							
AIR FLOW SW PROVIDED W/HUMIDIFIER							
HI-LIMIT HUMIDISTAT PROVIDED W/HUMIDIFIER							
DPS-1							
HE-1							
2-10V							
G0 G Y M							
NC							
HUD-1 VALVE BY UNIT MANUFACTURER ELECTRIC MODULATING ACTUATOR 24VAC, 2-10VDC WITH FAIL SAFE VA Consumption:10VA							
1 201A							
HUD-1 ELEC. WIRING							
EXISTING PANEL: BL071 node 2							
UTILIZE EXISTING 24VAC POWER							
SH2072 1.2.0.0.19 EXISTING POINT							
AIR FLOW SW PROVIDED W/HUMIDIFIER							
HI-LIMIT HUMIDISTAT PROVIDED W/HUMIDIFIER							
DPS-2							
HE-2							
2-10V							
G0 G Y M							
NC							
HUD-2 VALVE BY UNIT MANUFACTURER ELECTRIC MODULATING ACTUATOR 24VAC, 2-10VDC WITH FAIL SAFE VA Consumption:10VA							
2 201A							
HUD-2 ELEC. WIRING							
EXISTING PANEL: BL071 node 2							
UTILIZE EXISTING 24VAC POWER							
SH3072 1.2.0.0.13 EXISTING POINT							
AIR FLOW SW PROVIDED W/HUMIDIFIER							
HI-LIMIT HUMIDISTAT PROVIDED W/HUMIDIFIER							
DPS-3							
HE-3							
2-10V							
G0 G Y M							
NC							
HUD-3 VALVE BY UNIT MANUFACTURER ELECTRIC MODULATING ACTUATOR 24VAC, 2-10VDC WITH FAIL SAFE VA Consumption:10VA							
3 201A							
HUD-3 ELEC. WIRING							
NEW PANEL(AHU UPGRADED PANEL): PXC-7							
24V POWER FROM PWR-7A CIRCUIT 3							
SH4072 0007:0.9.7 29 27							
AIR FLOW SW PROVIDED W/HUMIDIFIER							
HI-LIMIT HUMIDISTAT PROVIDED W/HUMIDIFIER							
DPS-4							
HE-4							
2-10V							
G0 G Y M							
NC							
HUD-4 VALVE BY UNIT MANUFACTURER ELECTRIC MODULATING ACTUATOR 24VAC, 2-10VDC WITH FAIL SAFE VA Consumption:10VA							
4 201A							
HUD-4 ELEC. WIRING							
GENERAL NOTES:							
1. ALL WIRING TO MEET REQUIREMENTS OF STANDARD WIRING SPECIFICATIONS DRAWINGS.							
2. 120VAC POWER BY ELECTRICAL CONTRACTOR.							
3. EXACT LOCATIONS OF FIELD DEVICES TO BE COORDINATED WITH IUPUI/SIEMENS.							

REVISION HISTORY				SIEMENS			
00	3/14/2025	HB	SUBMITTAL SET	3502 WOODVIEW TRACE SUITE 240 INDIANAPOLIS, IN 46268 UNITED STATES PHONE: 317-293-8880 SMART INFRASTRUCTURE DIVISIONFAX: 317-293-0374			
007				BL000B CHEM HUM-1,2,3,4 & 7 IU PROJECT #20181028, IN			
007				HUD-1 THRU HUD-4 ELEC. WIRING 2			

FIELD PANEL	COMPONENT PANEL / POWER	FIELD WIRING	STARTER / VFD
NOTE: ALL WORK FOR HUD-1 THRU HUD-4 IS BY OWNER. NEW PANEL(AHU UPGRADED PANEL): PXCM-7 SEH4072 0007:0.2.8 (HUM) 28 33 WHT BLK 13.5 to 35 VDC 4-20 mA		G1 I1 1 2 WHT BLK  HTE-1 0/100 rh SIEMENS DUCT HUMIDITY QFM-SERIES LOOP POWERED 4-20mA	
EXISTING PANEL: BL071 node 2 SEH072 1.2.0.0.3 EXISTING POINT 46 33 WHT BLK 13.5 to 35 VDC 4-20 mA		G1 I1 1 2 WHT BLK  HTE-2 0/100 rh SIEMENS DUCT HUMIDITY QFM-SERIES LOOP POWERED 4-20mA	

440P394390 0 201B			
GENERAL NOTES: 1. ALL WIRING TO MEET REQUIREMENTS OF STANDARD WIRING SPECIFICATIONS DRAWINGS. 2. 120VAC POWER BY ELECTRICAL CONTRACTOR. 3. EXACT LOCATIONS OF FIELD DEVICES TO BE COORDINATED WITH IUPUI/SIEMENS.			

Control Device	Qty	Product Number	Manufacturer	Document Number	Description
Field Mounted Devices					
HTE 1	1	QFM3101	SIEMENS	149991	DUCT RH SENSOR, 4–20mA, 2%
HTE 2	1	QFM3101	SIEMENS	149991	DUCT RH SENSOR, 4–20mA, 2%

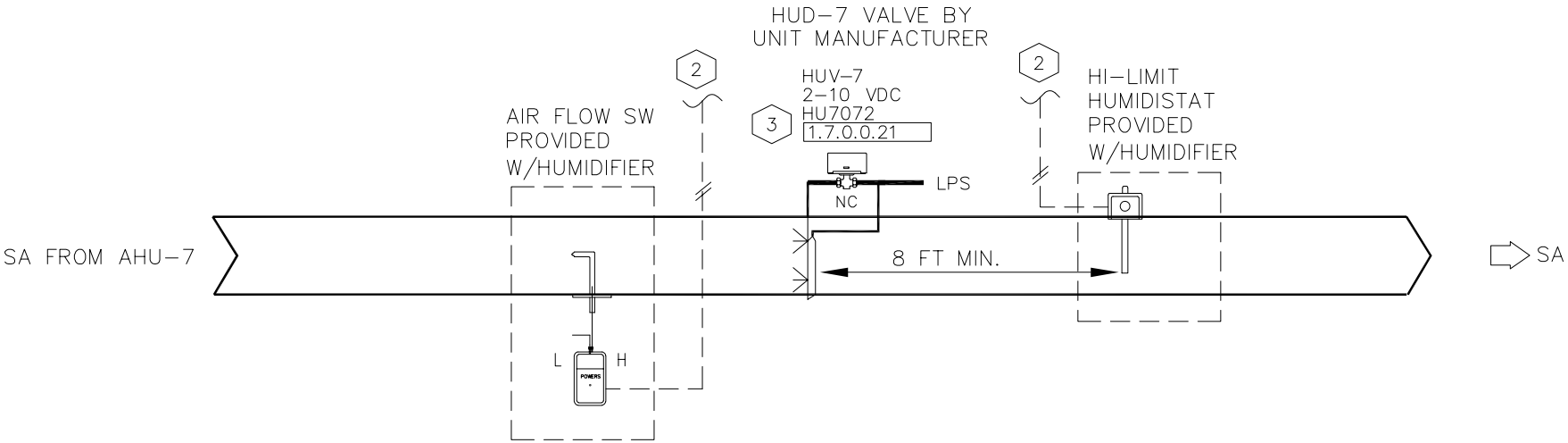
ULITLIZE ESTABLISHED IU STANDARDS IN POINT NAMING, PROGRAMMING AND SEQUENCES OF OPERATION.

REVISION HISTORY				SIEMENS	3502 WOODVIEW TRACE SUITE 240 INDIANAPOLIS, IN 46268 UNITED STATES PHONE: 317-293-8880 FAX: 317-293-0374	BL000B CHEM HUM-1,2,3,4 & 7 IU PROJECT *20181028, IN					440P394390 0	
00	3/14/2025	HB	SUBMITTAL SET			ENGINEER HB	DRAFTER HB	CHECKED BY	INITIAL RELEASE 03/14/25	LAST EDIT DATE 03/14/25	201C	
						HUD-1 THRU HUD-4 BOM & SOO						
				SIEMENS INDUSTRY INC. SMART INFRASTRUCTURE DIVISION								

WORK ALTERNATIVE

NOTE:
ALL WORK FOR HUD-7 IS BY OWNER.

- INSTALLATION NOTES:
- 1 SEE WIRING DETAIL ON ELECTRICAL DRAWING FOR WIRING TERMINATIONS.
 - 2 WIRE INTO VALVE SAFETY CIRCUIT.
REFER TO WIRING DETAIL ON ELECTRICAL DRAWING.
 - 3 WIRE TO THE EXISTING PANEL. RE-USE THE EXISTING WIRING WHERE APPLICABLE.



1
202 HUD-7 CONTROL DIAGRAM
LOCATION: MECH ROOM

REVISION HISTORY				SIEMENS 3502 WOODVIEW TRACE SUITE 240 INDIANAPOLIS, IN 46268 UNITED STATES PHONE: 317-293-8880 FAX: 317-293-0374 SIEMENS INDUSTRY INC. SMART INFRASTRUCTURE DIVISION	BL000B CHEM HUM-1,2,3,4 & 7 IU PROJECT #20181028, IN <table><tr><td>ENGINEER</td><td>DRAFTER</td><td>CHECKED BY</td><td>INITIAL RELEASE</td><td>LAST EDIT DATE</td></tr><tr><td>HB</td><td>HB</td><td></td><td>03/14/25</td><td>03/14/25</td></tr></table> HUD-7 CONTROL					ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE	HB	HB		03/14/25	03/14/25	440P394390 0 202
ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE		LAST EDIT DATE															
HB	HB		03/14/25		03/14/25															
00	3/14/2025	HB	SUBMITTAL SET																	

FIELD PANEL		COMPONENT PANEL / POWER		FIELD WIRING		STARTER / VFD	
REF #	FIELD PANEL NAME	FIELD PANEL NODE NAME		NOTE: ALL WORK FOR HUD-7 IS BY OWNER. UTILIZE EXISTING 24VAC POWER AIR FLOW SW PROVIDED W/HUMIDIFIER HI-LIMIT HUMIDISTAT PROVIDED W/HUMIDIFIER EXISTING PANEL: BL071 node 7 HUD-7 VALVE BY UNIT MANUFACTURER ELECTRIC MODULATING ACTUATOR 24VAC, 2-10VDC WITH FAIL SAFE VA Consumption: 10VA HUD-7 ELEC. WIRING			
0001	SG01.PXCM	SG01PXCM					
REVISION HISTORY				SIEMENS			
00	3/14/2025	HB	SUBMITTAL SET	SIEMENS INDUSTRY INC. SMART INFRASTRUCTURE DIVISION FAX: 317-293-0374			
				3502 WOODVIEW TRACE SUITE 240 INDIANAPOLIS, IN 46268 UNITED STATES PHONE: 317-293-8880			
				BL000B CHEM HUM-1,2,3,4 & 7 IU PROJECT #20181028, IN			
				ENGINEER HB DRAFTER HB CHECKED BY INITIAL RELEASE 03/14/25 LAST EDIT DATE 03/14/25			
				HUD-7 ELEC. WIRING			
				440P394390 0 202A			

ULITLIZE ESTABLISHED IU STANDARDS IN POINT NAMING, PROGRAMMING AND SEQUENCES OF OPERATION.

REVISION HISTORY				SIEMENS SIEMENS INDUSTRY INC. SMART INFRASTRUCTURE DIVISION	3502 WOODVIEW TRACE SUITE 240 INDIANAPOLIS, IN 46268 UNITED STATES PHONE: 317-293-8880 FAX: 317-293-0374	BL000B CHEM HUM-1,2,3,4 & 7 IU PROJECT *20181028, IN					440P394390 0 202B
00	3/14/2025	HB	SUBMITTAL SET			ENGINEER HB	DRAFTER HB	CHECKED BY	INITIAL RELEASE 03/14/25	LAST EDIT DATE 03/14/25	
						HUD-7 SOO					

REVISION HISTORY

00	3/14/2025	HB	SUBMITTAL SET
----	-----------	----	---------------

SIEMENS

3502 WOODVIEW TRACE
SUITE 240
INDIANAPOLIS, IN 46268
UNITED STATES
PHONE: 317-293-8880
SMART INFRASTRUCTURE DIVISION FAX: 317-293-0374

ENGINEER	DRAFTER	CHECKED BY	INITIAL RELEASE	LAST EDIT DATE
HB	HB		03/14/25	03/14/25

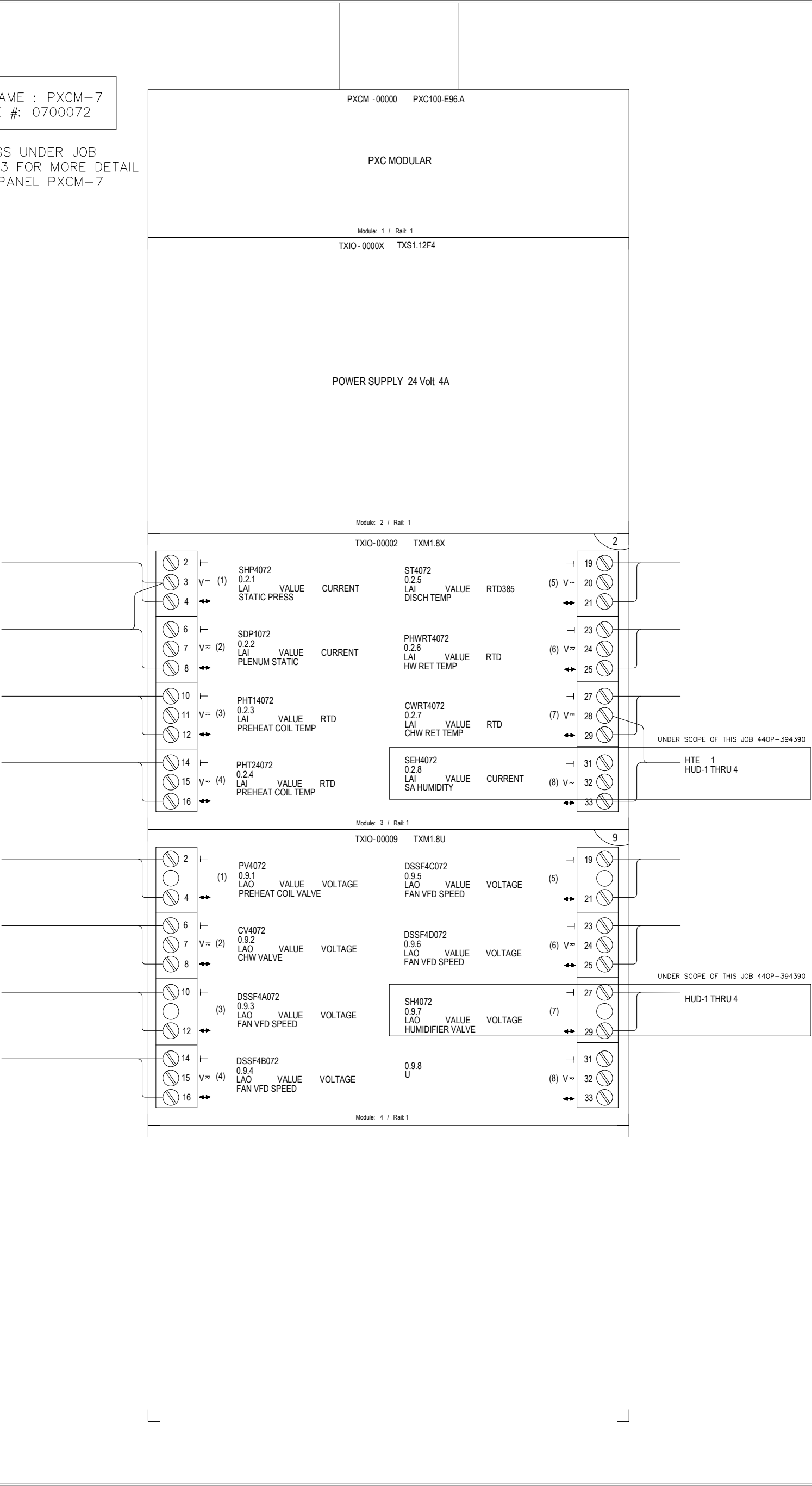
PXCM-7 AHU3&4

440P394390
0

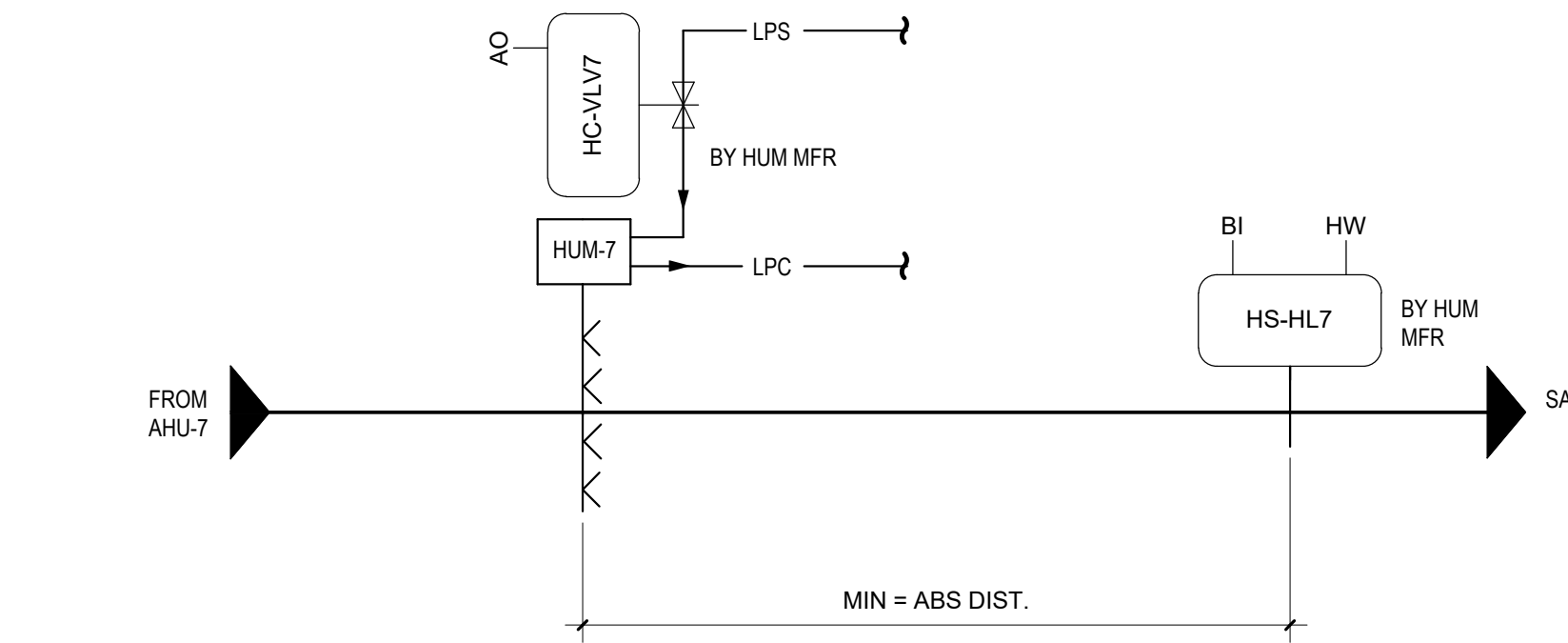
NO7AB

PANEL NAME : PXCM-7
INSTANCE #: 0700072

SEE DRAWINGS UNDER JOB
440P-394493 FOR MORE DETAIL
ABOUT THE PANEL PXCM-7



NOTES: 1. TEMPERATURE CONTROLS SCHEMATICS
2. THESE DRAWINGS ARE THE PROPERTY OF CREATIVE ENGINEERING SOLUTIONS AND ARE NOT TO BE ON ANY OTHER PROJECT. DRAWINGS SHALL BE RETURNED UPON REQUEST. NOT VALID UNLESS SIGNED AND SEALED.
3. 2/18/2025 10:00 AM



2 HUM-7 - ALTERNATE BID
NOT TO SCALE

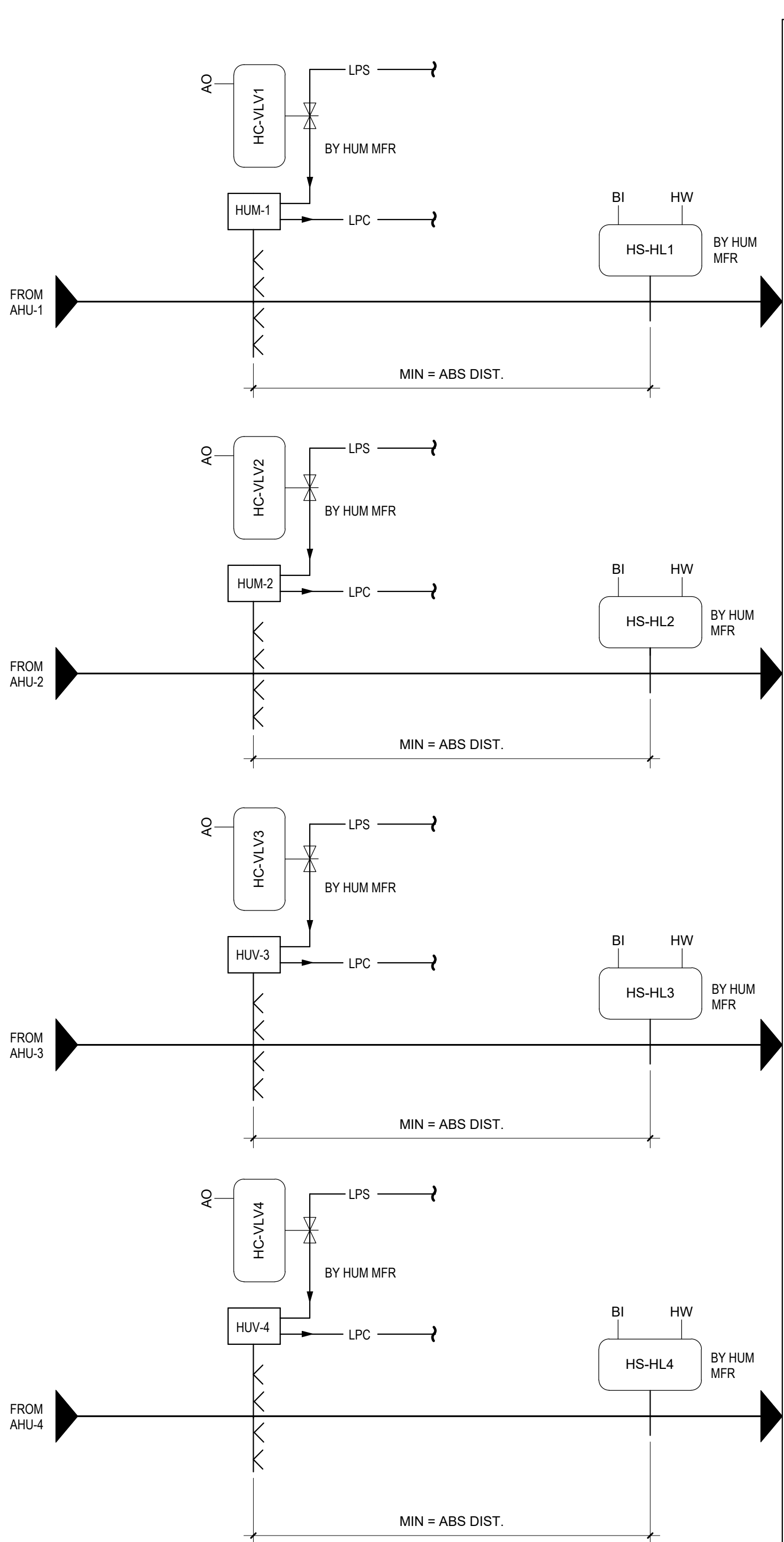
GENERAL TEMPERATURE CONTROL NOTES:

1. ALL CONDUITS, RACEWAYS, AND JUNCTION BOXES NECESSARY FOR TEMPERATURE CONTROL CABLING MUST BE PROVIDED BY DIV. 26. COORDINATE WITH OWNER. REFER TO DIV. 26 SPECIFICATIONS.

SUPPLY AIR HANDLING UNITS HUMIDIFIERS SEQUENCE OF OPERATION.

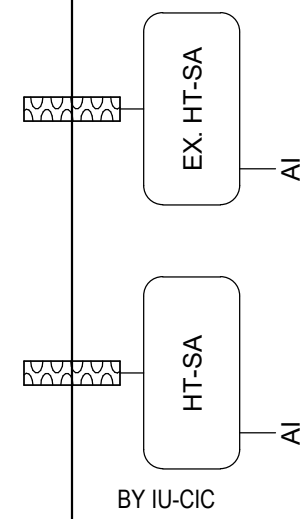
HUMIDIFIER CONTROL: HUMIDIFIER INSTALLATION AND CONTROLS PERFORMED UNDER SEPARATE CONTRACT. COORDINATE WITH ALL PARTIES TO PROVIDE THE INTENDED SEQUENCE OF OPERATION AND FULLY FUNCTIONAL SYSTEM. THE HUMIDIFIER STEAM SUPPLY CONTROL VALVE (HUM-VLV) SHALL MODULATE TO MAINTAIN A SUPPLY PLENUM HUMIDITY BETWEEN 45% (ADJ) MINIMUM AND 70% (ADJ) MAXIMUM.

SAFETIES: IF HUMIDITY IN THE SUPPLY AIR DUCT EXCEEDS THE HIGH LIMIT SETPOINT, AS SENSED BY HIGH HUMIDITY LIMIT SWITCH (HS-HL), THE HUMIDIFIER STEAM SUPPLY VALVE SHALL CLOSE, AND AN ALARM SHALL BE GENERATED AT THE OPERATOR TERMINAL.



1 HUM-1, HUM-2, HUM-3, AND HUM-4
NOT TO SCALE

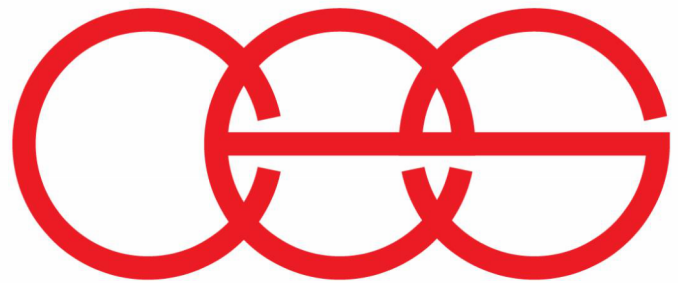
EXISTING HUMIDITY TRANSMITTER REMAINS TO CONTROL EXISTING HUMIDIFIERS. AFTER FINAL HUMIDIFIER IS INSTALLED, REMOVE EXISTING SUPPLY AIR HUMIDITY TRANSMITTER FROM SUPPLY AIR PLENUM.



SUPPLY AIR HANDLING UNITS HUMIDIFIERS SEQUENCE OF OPERATION.

HUMIDIFIER CONTROL: THE HUMIDIFIER STEAM SUPPLY CONTROL VALVE (HUM-VLV) SHALL MODULATE TO MAINTAIN A SUPPLY PLENUM HUMIDITY BETWEEN 45% (ADJ) MINIMUM AND 70% (ADJ) MAXIMUM, AS SENSED BY A NEW, COMMON SUPPLY AIR HUMIDITY TRANSMITTER (HT-SA) LOCATED IN THE COMMON SUPPLY AIR PLENUM.

SAFETIES: IF HUMIDITY IN THE SUPPLY AIR DUCT EXCEEDS THE HIGH LIMIT SETPOINT, AS SENSED BY HIGH HUMIDITY LIMIT SWITCH (HS-HL), THE HUMIDIFIER STEAM SUPPLY VALVE SHALL CLOSE, AND AN ALARM SHALL BE GENERATED AT THE OPERATOR TERMINAL.



creative engineering solutions
mechanical • electrical • plumbing
602 N. Capitol Ave., Suite 200
Indianapolis, IN 46204 • 463-777-8182
www.creativeeng.net



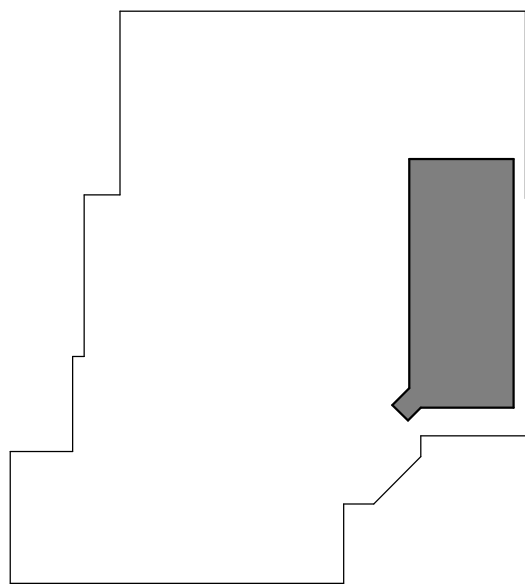
20181028 - BL072 CHEMISTRY HUMIDIFIERS
1, 2, 3, 4 AND 7

INDIANA UNIVERSITY BLOOMINGTON

800 E KIRKWOOD AVE.
BLOOMINGTON, IN 47405



@COPYRIGHT
THESE DRAWINGS ARE THE PROPERTY OF
CREATIVE ENGINEERING SOLUTIONS AND ARE
NOT TO BE ON ANY OTHER PROJECT. DRAWINGS
SHALL BE RETURNED UPON REQUEST. NOT VALID
UNLESS SIGNED AND SEALED.



KEY PLAN



#	REVISION	DATE
1	ADDENDUM #2	03/18/2025

JOB NO. 20181028
PRODUCED JR / AM
DATE 02/25/2025

TEMPERATURE
CONTROLS SCHEMATICS

M-701

Exhibit A

Exhibit A

20231351
Weddle

20240312
successful bidder

130

Kirkwood Hall

Kirkwood Hall

S Woodlawn Ave

S Woodlawn Ave

S Woodlawn Ave

S Woodlawn Ave

Google

chemistry building

Imagery

FRONT

CRITERIA:

- ≥ \$2M AWARDED CONSTRUCTION COST AS A DONOR SUPPORTED PROJECT: USE LETTERED FENCING WITH “PHILANTHROPY AT WORK”.
- ≥ \$2M AWARDED CONSTRUCTION COST AS A NON-DONOR SUPPORTED PROJECT: USE LETTERED FENCING
- < \$2M AWARDED CONSTRUCTION COST PROJECT: ONLY SOLID RED (#201) FENCING (NO LETTERING OR LOGOS).

NOTES:

1. ALL LETTERING & LOGO TO BE CENTERED VERTICALLY ON SCREEN FABRIC
2. PROVIDE HALF MOON VENTS 4' O.C. - MIN TWO ROWS VERTICALLY ABOVE AND BELOW LETTERING
3. SCREEN TO BE MINIMUM 80% PRIVACY, KNITTED HDPE UV POLYETHYLENE OR PVC CONSTRUCTION
4. FONTS AND IU LOGO MUST BE PER IU BRAND GUIDELINES/STANDARDS

— IU TRIDENT LOGO
HEIGHT = 52"
COLORS:
TRIDENT = WHITE

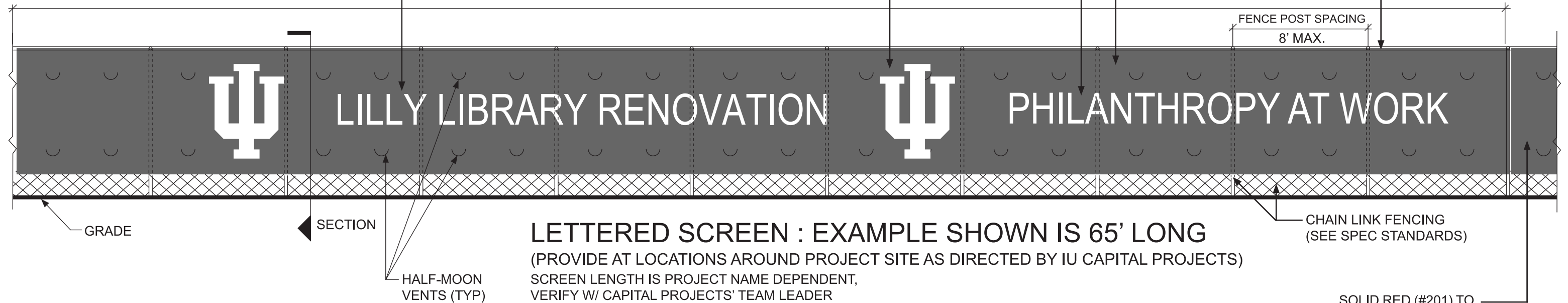
INDIANA UNIVERSITY CAPITAL PROJECTS CONSTRUCTION FENCING SCREEN STYLE GUIDE 05/04/2020

— “PHILANTHROPY AT WORK” IF APPLICABLE (SEE CRITERIA)
WILL IMMEDIATELY FOLLOW THE IU LOGO,
WHICH FOLLOWS PROJECT NAME

– SCREEN : SOLID
COLOR = PANTONE 201

- MOUNT EVEN WITH TOP
OF CHAIN LINK FENCE

TEXT
HEIGHT = 24"
FONT = BENTON SANS COMP MEDIUM
COLOR = WHITE
PROJECT NAME (TO BE PER IU CAPITAL PROJECTS)



SECTION

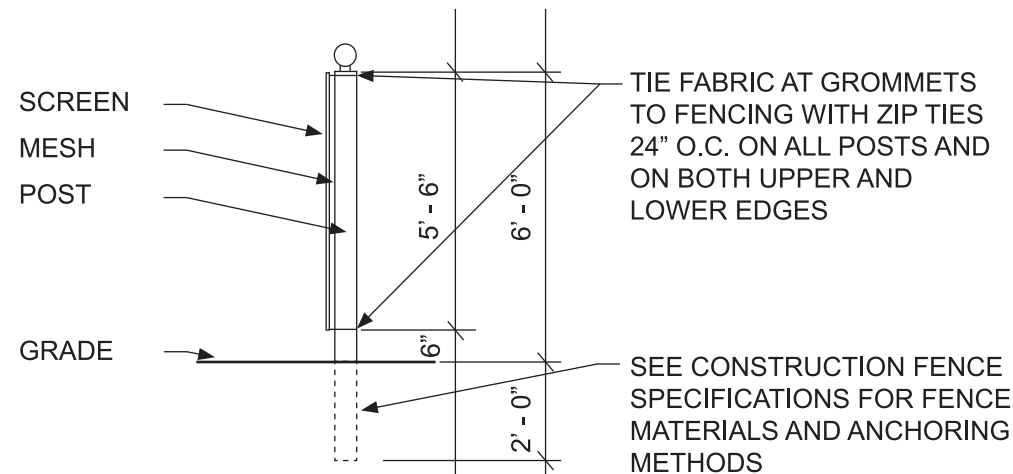


Exhibit B

CONTACT INFORMATION

PLEASE CONTACT IU STUDIOS FOR ANY BRAND, LOGO, FONT OR COLOR NEEDS: studios@iu.edu OR VISIT brand.iu.edu FOR DOWNLOADS

PLEASE CONTACT IU SIGN SHOP FOR ANY ADDITIONAL
CONSTRUCTION NEEDS: 812-856-0761

Meeting Sign-In Sheet

Project:	20240312 BL072 & 20181028 BL072	Meeting Date:	3/4/2025
Facilitator:	Creative Engineering Solutions, Inc.	Place/Room:	BL072 Chemistry

Name	Title	Company	Cell	E-Mail
Name 1	Title	Company	Phone	Email
Colin Hindman	ESTIMATOR	HFI	812 339-2579	chindman@harrell-fish.com
Curtis Cowden	P.E.	HFI	812 369-5131	CCowden@harrell-fish.com
Shawn McGee	P/M	HVIC	812-788-2860	Shawnmcgee@Hiltonventilation.com
Jeremy Boner	Acct. MGR	IRISH	317-294-9875	jboner@irishmechanicalservices.com
Tom Hall	Acct. MGR	IRISH	317-294-9875	THALL@irishmechanicalservices.com
Joe Townsend	CM	I. U.		
Ben Ollestad	P.C.	Poynter	812-603-7337	benollestad@poyntersheetmetal.com
Tyler Doades	PM	Commercial Service	812-339-9114	tdoades@commercial-service.com



Meeting Sign-In Sheet

Project:	20240312 BL072 & 20181028 BL072	Meeting Date:	3/12/2025
Facilitator:	Creative Engineering Solutions, Inc.	Place/Room:	BL072 Chemistry

Name	Title	Company	Cell	E-Mail
Name 1	Title	Company	Phone	Email
Colin Hindman	Estimator	HFI	812-339-2527	CHINDMAN@HARRELL-FISH.COM
MICHAEL GUINON	Sr. PM	CFI	314) 318-5727	michael@customfabricsall.com
Caleb Meadows	Estimator	Repp + Mundt	812-276-3897	CMeadows@repp-mundt.com
Reid Sills	Estimator	W.B.	812-320-7783	RSILLS@weddlebro.com
AL SNODDY	FOREMAN	HEFLIN IND	812-320-8653	ASNODDY@HEFLININD.COM
Tom Hall	Estimator	Irish	317 306 1357	THall@IrishMechanicalServices.com
Jason Beckit	Foreman	B5M	317 774 7147	D5Rtranspactegmit.com
BART ABRAM	Service Manager	Electric Plus	812 320-2396	BABRAM@electricplus.com Babram@electricplus.com
JOE TOWNSON	CM	IU	-	-
FRED BOULING	ELECT ENG.	IU	-	-
Aaron King	Regional Mgr	United Mobile Heating and Cooling	(317) 617-7652	aaron.king@unitedmhcc.com
DARBY SIMPSON	MECH. ENG. I.U.	CAPITAL PLANNING		darbsimp@iu.edu

