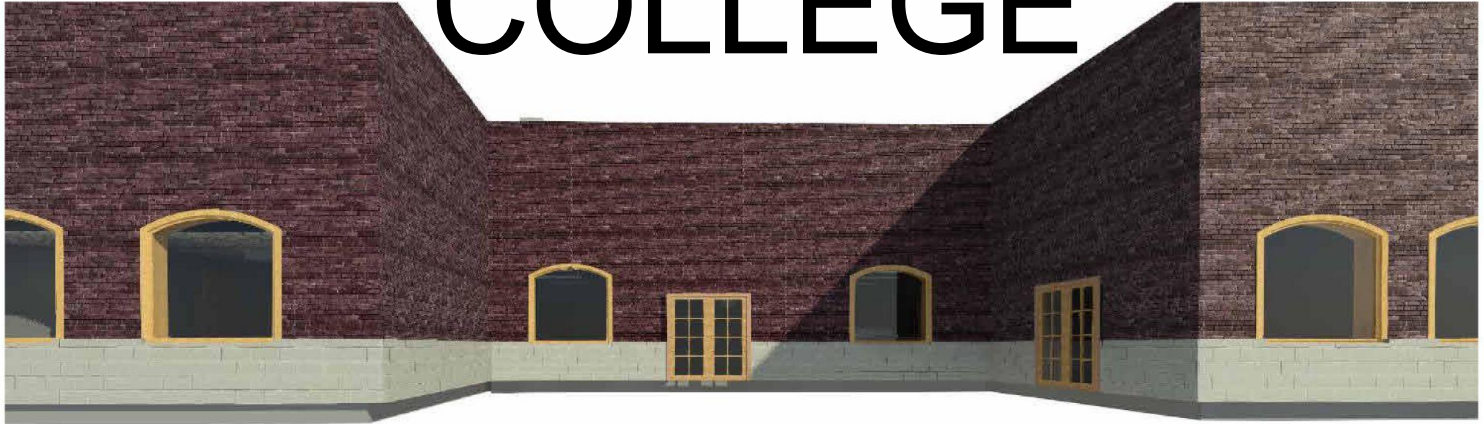


AMERICAN RIVER COLLEGE



MECHANICAL, PLUMBING, & ELECTRICAL

SPRING 2022

ALEJANDRO RAYA

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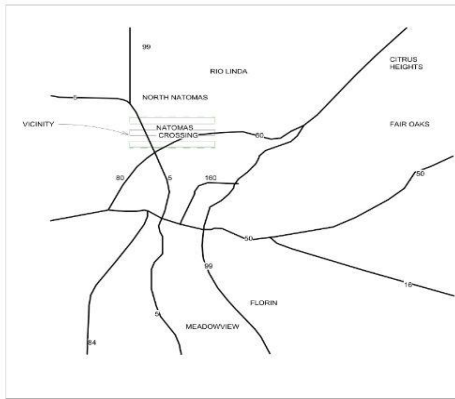


SITE MAP/VICINITY

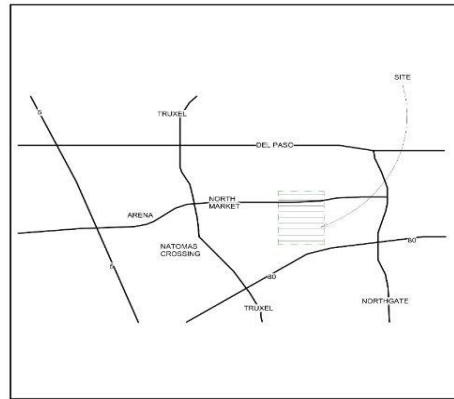
[A101](#)

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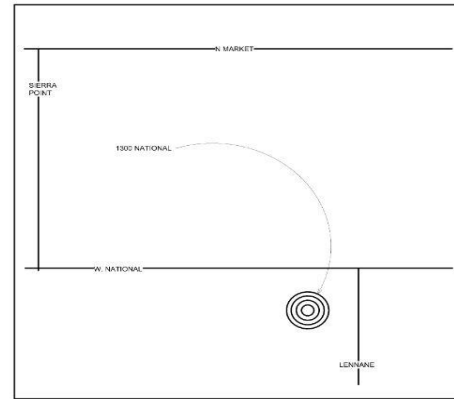
[A103](#)



1 AREA MAP
12" = 1'-0"



2 VICINITY MAP
12" = 1'-0"



Name: _____
Affiliation: _____
Approved By: _____ Date: _____

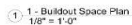
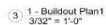
Name: _____
Affiliation: _____
Approved By: _____ Date: _____

Name: _____
 Affiliation: _____
 Approved By: _____ Date: _____

Name: _____
Affiliation: _____
Approved By: _____ Date: _____

A102

Scale 12" = 1'-0"



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SACRAMENTO CA
95841**

[illegible]

ARCD	DESIGN PUMPS
BUILD	OUT PLAN
RS-	PROJECT

Project number	Project Number
Date	Issue Date
Drawn by	A.R.
Checked by	Checke

A103

Scale	As indicated
-------	--------------



HVAC: AIR TERMINALS/ AIR
SUPPLY PLANS/ DETAILS &
BUILDOUT ZONES/DETAILS

[M101](#)

[M102](#)

[M401](#)

[M103](#)

[M402](#)



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[illegible]

ARCDESIGN PUMPS
BUILDOUT PLAN
HVAC Zone Plan

Project number	WEEK 11
Date	3/27/20
Drawn by	AP
Checked by	Checko

M101

[illegible]

HVAC Zone Schedule	
Name	
Zone-Lobby	
Zone-Admin	
Zone-MFG	



① 1 - Buildout Zones
 $3/32'' = 1'-0''$



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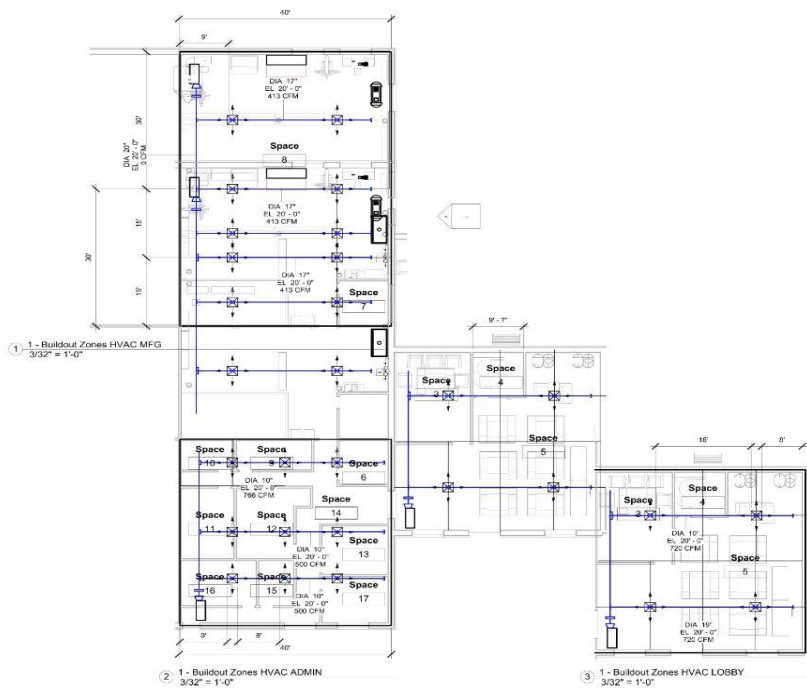
[illegible]

ARCDESIGN PUMPS BUILDOUT PLAN HVAC Supply Air Plan

Project number	WEEK 10
Date	3/27/22
Drawn by	Author
Checked by	Checker

M103

Scale $3/32" = 1'-0"$





Technical drawing of a boat hull cross-section showing the installation of a metal duct and lap insulation. The drawing includes labels: METAL DUCT, LAP INSULATION, and TWINE. The duct is shown as a rectangular structure with insulation applied to its exterior surface, secured with twine.

The diagram illustrates a hydronic system with a central pump and a bypass line. The main supply line passes through a pipe-heat coil and a heating coil before reaching a fan. The main return line passes through a cooling coil and a control valve before returning to the pump. Five zones (Core, South, East, North, and West) are connected to the main supply and return lines via their own sets of radiators.



**DESIGN
TECH LAB**
AMERICAN RIVER COLLEGE

**DESIGN 330
SYSTEM DESIGN
MEP**

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[illegible]

ARCDESIGN PUMPS
BUILDOUT PLAN
DETAILS

Project number	WEEK 10
Date	3/27/22
Drawn by	Author
Checked by	Checker

M402

Scale 12" = 1'-0"

[A104](#)

[M403](#)





www.autodesk.com/nowit

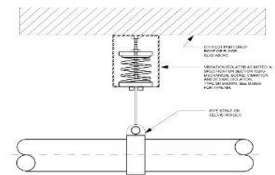
Consultant
Address
Address
Address
Phone

Scale $3/32" = 1'-0"$

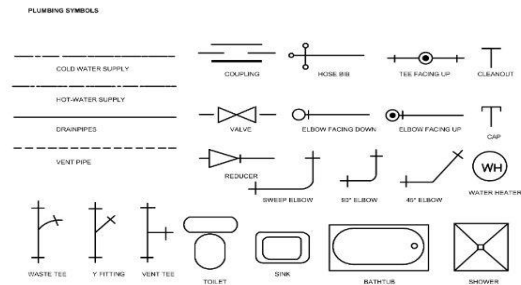


1. CAULK SHALL BE 3M FIRE BARRIER CP25 N/S, NO SAG CAULK FOR FILLING VERTICAL OR HORIZONTAL GAPS FROM BELOW OR APPROVED EQUAL.
2. MATERIAL USED FOR DAMMING SHALL EITHER BE FIBERGLASS INSULATION, BACKER ROD OR MINERAL WOOL.
3. MATERIALS SHALL BE INSTALLED PER MANUFACTURERS INSTALLATION INSTRUCTIONS.

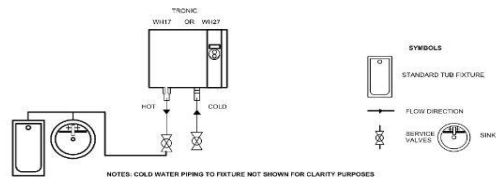
① Conduit Penetration
12" = 1'-0"



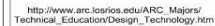
② Pipe Vibration Isolation Hanger
12" = 1'-0"



4 Plumbing Symbols
12" = 1'-0"



③ POU On Demand HW
12" = 1'-0"



**DESIGN 330
SYSTEM DESIGN
MEP**

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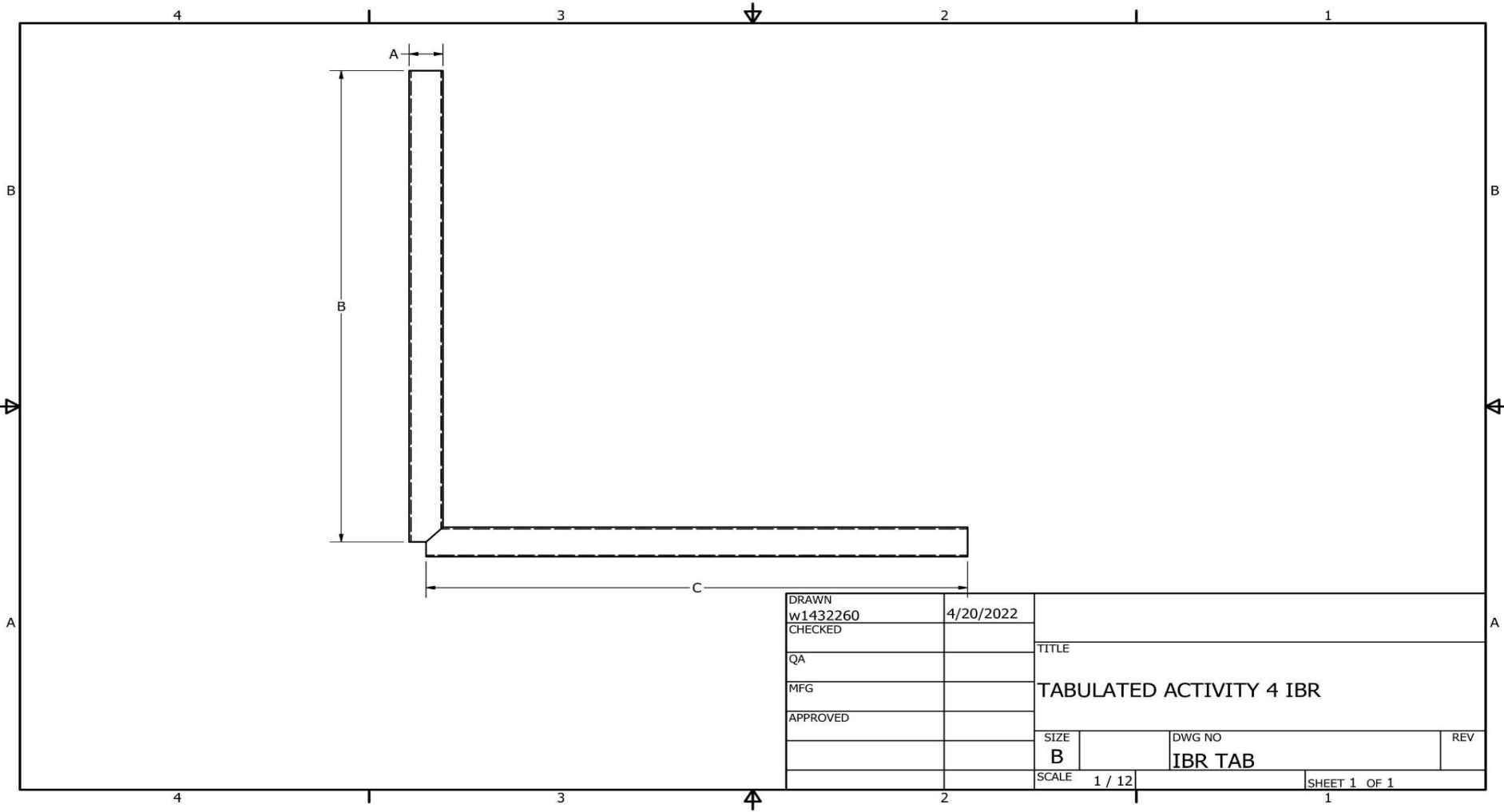
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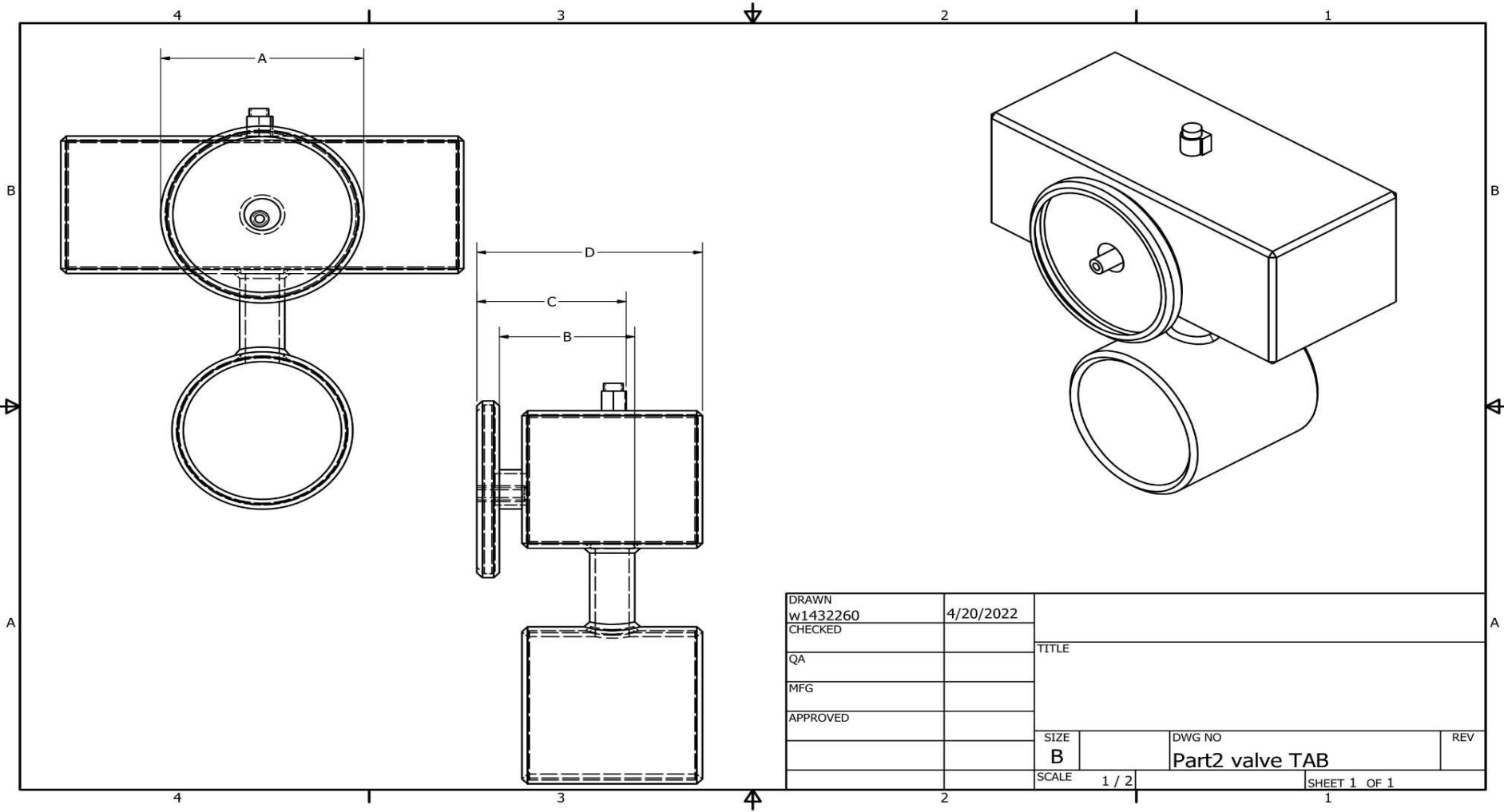
ARCDESIGN PUMPS BUILDOUT PLAN DETAILS

Project number	WEEK 10
Date	4/8/22
Drawn by	AR
Checked by	Checker

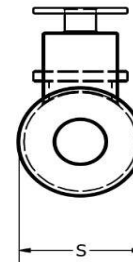
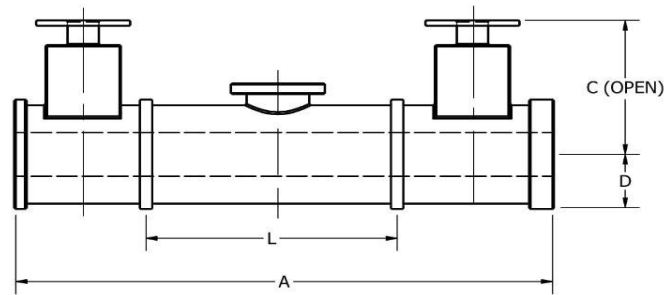
M403

Scale 12" = 1'-0"





DRAWN w1432260		4/20/2022		TITLE	
CHECKED					
QA					
MFG					
APPROVED				DWG NO Part2 valve TAB	
		SIZE B		REV	
		SCALE 1 / 2		SHEET 1 OF 1	

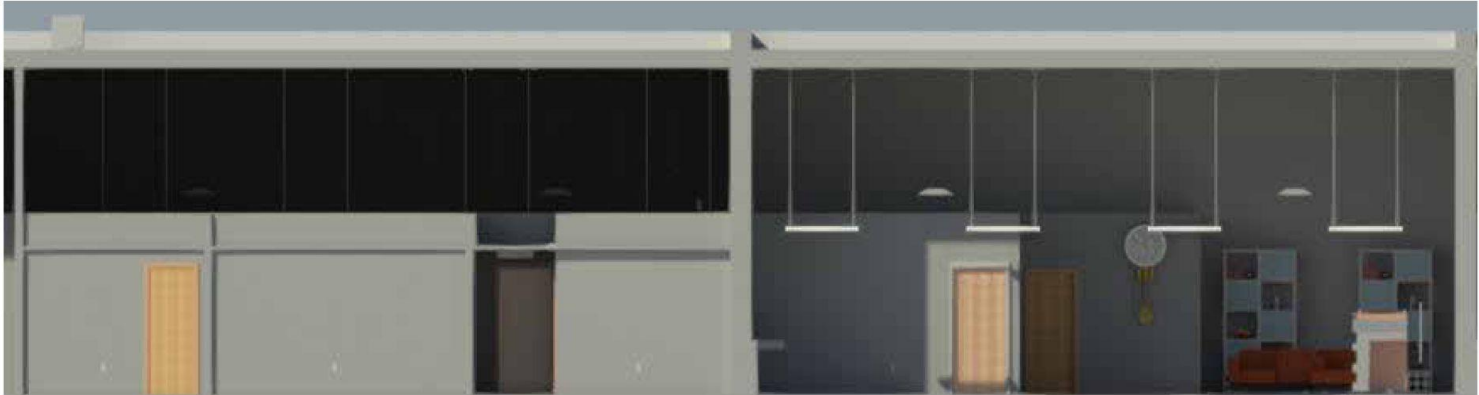


DRAWN W1432260	4/20/2022			
CHECKED				
QA		TITLE		
MFG		TABULATED ACTIVITY 4 Double Check Valve		
APPROVED				
		SIZE B	DWG NO	REV
			Part3 Double Check Valve TAB	
		SCALE 1 / 9	SHEET 1 OF 1	

MECHANICAL: POWER
DISTRIBUTION & LIGHTING

E200

E101

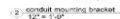


Consultant	
Address	
Address	
Address	
Phone	

Project Number	WEEK 14
Date	5/8/22
Drawn By	AR
Checked By	Checker

Scale 12" = 1'-0"

① 3 phase starter schematics
120° = 140°



② conduit mo
12" = 1' 0"

Electrical Equipment Schedule			
Panel Name	Family and Type		Power Connected Current
OTL MAIN	Lighting and Appliance Panelboard - 208V MLO, 225 A		39 A
MFG-1	Lighting and Appliance Panelboard - 208V MLO, 225 A		11 A
MFG-1	Lighting and Appliance Panelboard - 208V MLO, 225 A		22 A
MFG-2	Lighting and Appliance Panelboard - 208V MLO, 225 A		6 A

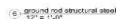
Figure 1 shows the pin connections for the 74VHC04. The package is a 14-pin DIP. Pin 1 is connected to VCC (5V), pin 14 to GND, and pin 10 to VCC (5V). The input/output pins are: Pin 2 (A) to 5V, Pin 3 (B) to 5V, Pin 4 (C) to 5V, Pin 5 (D) to 5V, Pin 6 (E) to 5V, Pin 7 (F) to 5V, Pin 8 (G) to 5V, Pin 9 (H) to 5V, Pin 11 (I) to 5V, Pin 12 (J) to 5V, Pin 13 (K) to 5V, and Pin 14 (L) to 5V. The output pins are: Pin 1 (A) to 5V, Pin 2 (B) to 5V, Pin 3 (C) to 5V, Pin 4 (D) to 5V, Pin 5 (E) to 5V, Pin 6 (F) to 5V, Pin 7 (G) to 5V, Pin 8 (H) to 5V, Pin 9 (I) to 5V, Pin 10 (J) to 5V, Pin 11 (K) to 5V, and Pin 12 (L) to 5V. The output pins are also connected to a 5V supply and a 10k pull-up resistor.

FIGURE 1. SINGLE STAGE HEATING/COOLING

(3) heating and cooling
 $12^\circ = 1.0^\circ$



⑤ motion sensor light wiring diagrams
42' = 1' 0"



Consultant	Address	Address	Address	Phone
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No.	Description	Date
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LIGHTING PLAN

Checked By	Checker
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E101

Scale As indicated