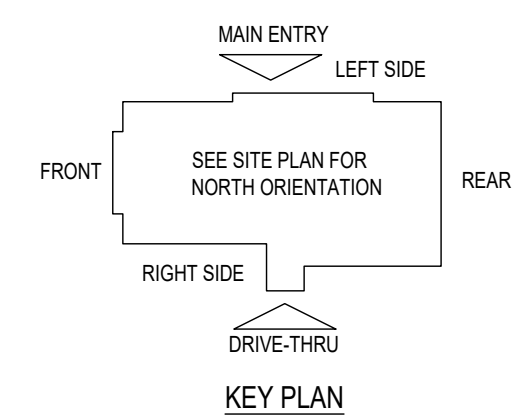


E5 HVAC PLAN
SCALE: 1/4" = 1'-0"



SUPPLY DUCTWORK SIZING TABLE*			
ROUND		RECTANGULAR	
SIZE	CFM RANGE	SIZE	CFM RANGE
8"	115 - 235	8"x8"	205 - 300
10"	240 - 435	10"x8"	305 - 400
12"	440 - 710	10"x10"	405 - 550
14"	715 - 1,070	12"x10"	555 - 700
16"	1,075 - 1,530	12"x12"	705 - 900
18"	1,535 - 2,090	14"x12"	905 - 1,105
20"	2,095 - 2,760	16"x12"	1,110 - 1,315
22"	2,765 - 3,550	18"x12"	1,320 - 1,520
24"	3,555 - 4,470	20"x12"	1,525 - 1,740
*CONTRACTOR MAY SUBSTITUTE RECTANGULAR FOR ROUND DUCTWORK ON MAIN RUNS AT THEIR DISCRETION. BRANCHES TO DIFFUSERS TO REMAIN ROUND.		22"x12"	1,745 - 1,950
		24"x12"	1,955 - 2,170
		26"x12"	2,175 - 2,400
		28"x12"	2,405 - 2,610
		30"x12"	2,615 - 2,840
		32"x12"	2,845 - 3,070
		34"x12"	3,075 - 3,290
		36"x12"	3,295 - 3,520
		36"x14"	3,525 - 4,420

DIFFUSER, REGISTER, AND GRILLE SCHEDULE									
TAG	SERVICE	TYPE	MATERIAL	THROW	FACE	NECK	MOUNTING	MANUFACTURER/MODEL	Notes
SD-1	SUPPLY	LOUVERED	STEEL	4-WAY	24X24	SEE PLAN	LAY-IN	RAYMON PRO2	2.4
SD-2 - NOT USED									
SD-3	SUPPLY	LOUVERED	STEEL	3-WAY	12X12	SEE PLAN	SURFACE	RAYMON PRO2/QMF/DAG	2.4
SD-4	SUPPLY	LOUVERED	STEEL	4-WAY	12X12	SEE PLAN	SURFACE	RAYMON PRO2/QMF	2.4
SD-5	SUPPLY	PERFORATED	STEEL	PERFORATED	24X24	SEE PLAN	LAY-IN	RAYMON RPR	2.4
RG-1	RETURN	SQUARE EGGRATE	ALUMINUM	N/A	24X24	22X22	LAY-IN	RAYMON FGEC-TB1	2.3.4
EG-1	RETURN	LOUVERED GRILLE	ALUMINUM	N/A	12X12	SEE PLAN	SURFACE	RAYMON RA-HVD	1.2.4
TG-1	TRANSFER	LOUVERED GRILLE	ALUMINUM	N/A	SEE PLAN	SEE PLAN	SURFACE	RAYMON RA-RH	2.4
DIFFUSER NOTES:									
1. PROVIDE w/ ADJUSTABLE OPPOSED BLADE DAMPER									
2. VERIFY ALL DIFFUSERS AND RETURN GRILLE COLORS WITH OWNER AND ARCHITECT									
3. PROVIDE w/ 22X22 PLENUM BOX.									
4. ALL DIFFUSERS AND RETURNS LOCATED IN BLACK CEILING SHALL BE FLAT BLACK FINISH.									

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LOWELL JOHN LASSON
REGISTERED PROFESSIONAL ENGINEER
STATE OF WISCONSIN
No. PE11400475
EXP. 7/31/2026

NEW CULVER'S RESTAURANT
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Valparaiso, IN 46385
County of PORTER

OWNER:
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2651 Kirling Court
Portage, WI 53901
Jeff Liegel, Realty Manager / Member
608-742-2893

OWNER:
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HVAC PLAN, DIFFUSER SCHEDULE

Date: 06-27-2025
Revision:

2024-166
M101

GENERAL NOTES

- DEVIATIONS FROM THE HVAC PLANS ARE THE RESPONSIBILITY OF THE HVAC CONTRACTOR & WILL NOT RESULT IN ADDITIONAL COSTS TO THE OWNER UNLESS WRITTEN CHANGE ORDERS ARE APPROVED BY THE OWNER.
- ALL WORK TO BE PERFORMED TO STATE CODE & SMACNA GUIDELINES.
- INSTALL UNITS ACCORDING TO MANUFACTURERS GUIDELINES.
- PROVIDE OWNER W/ OPERATION & MAINTENANCE MANUALS & SYSTEM SCHEMATICS.
- CONTRACTOR TO CONFIRM VOLTAGES & PHASES OF EQUIPMENT PRIOR TO INSTALLATION.
- VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION (DRAWINGS ARE DIAGRAMMATIC IN NATURE & DO NOT REFLECT EXACT LOCATIONS OF EQUIPMENT OR OTHER APPARATUS.)
- PROVIDE SHOP DRAWINGS TO THE ARCHITECT/DESIGNER FOR EQUIPMENT, FANS, REGISTERS, ETC. PRIOR TO PROCUREMENT.
- PROVIDE OWNER W/ COLOR CHOICES FOR SWITCHES & OTHER APPARATUS WHERE APPLICABLE.
- VENT OWNER WATER HEATER AS REQUIRED.
- VENT DRYER THRU SIDEWALL TO EXTERIOR AS REQUIRED. MAINTAIN CLEARANCE FROM INTAKES AS NOTED.
- HANG & SUPPORT MATERIALS SHALL BE INSTALLED THE LATEST EDITION OF THE ASHRAE HANDBOOK OF FUNDAMENTALS.
- MAINTAIN AT LEAST 10 FEET CLEARANCE FROM INTAKES OR WINDOWS ON ALL EXHAUST VENTS.
- TEST, ADJUST, & CALIBRATE CONTROL SYSTEMS AS REQUIRED. PROVIDE SCHEMATICS / DESCRIPTION TO THE OWNER PRIOR TO INSTALLATION.
- INSTALLER RESPONSIBLE FOR FINAL TEST & BALANCING DURING TRAINING WEEK. PROVIDE WRITTEN REPORT BY THIRD PARTY INDEPENDENT TAB CONTRACTOR.
- VERIFY W/ OWNER EXACT HEATER LOCATION TO AVOID BUILDING FUNCTION INTERFERENCE.
- REPLACE ALL AIR FILTERS PRIOR TO TURNING SYSTEM OPERATIONS OVER TO OWNER.
- HVAC CONTRACTOR IS RESPONSIBLE FOR A COMPLETE & FULLY WORKING SYSTEM.
- DUCT DIMENSIONS LISTED ARE NET FREE - CLEAR INSIDE DIMENSIONS.
- VERIFY DUCT LOCATIONS PRIOR TO FABRICATION. (VERIFY LIMITED AREA FOR DUCTWORK & OTHER APPARATUS.)
- INSULATE DUCT WORK TO SMACNA GUIDELINES & STATE CODES.
- INSTALL VOLUME CONTROL DAMPERS AS INDICATED ON PLANS.
- FLEXIBLE ROUND DUCT WORK NOT TO EXCEED 8 FEET IN LENGTH. AVOID UNNECESSARY TURNS & SLACK.
- RETURN AIR DUCT WORK TO BE LINED FOR SOUND ATTENUATION.
- DUCT WORK TO BE STANDARD GAUGE SHEET METAL (FIBROUS DUCT NOT ALLOWED.)
- INSULATE EXHAUST DUCT FOR EXHAUST FAN TO EXTERIOR TERMINATION.
- COORDINATE WORK W/ GENERAL CONTRACTOR & OWNER TO MAXIMIZE CEILING HEIGHT & AVOID CONFLICTS.
- S/S WALL PANELS FOR THE KITCHEN AREA ARE TO BE FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR. PANELS ARE TO BE 18 GA. TYPE 304 SIS. SEE DETAILS AND LOCATIONS ON THE A103 DRAWING.
- EXHAUST FANS AND FURNACE FANS TO RUN CONTINUOUSLY DURING OCCUPIED MODE.
- NIGHT SET BACK THERMOSTATS TO BE INSTALLED ON ALL HVAC EQUIPMENT.

NATIONAL ACCOUNT PROGRAM

- LENNOX INDUSTRIES, INC.** - ROOFTOP HVAC EQUIPMENT
SALES: LennoxNationalAccounts@Lennoxind.com copy to Dave.Ebner@Lennoxind.com
NATIONAL ACCOUNT TECHNICAL SUPPORT: (800) 367-6285 Option #2 lennoxind.com
- ACCUREX/ GREENHECK FAN CORPORATION** - KITCHEN HOODS, EXHAUST FANS, ROOF CURBS, ANSUL SYSTEMS, ACCESSORIES AND TEST AND BALANCE
CONTACT PHILIP KRAFT: 1-262-227-7865 philip.kraft@accurex.com
SECONDARY CONTACT BRAD BORCHARDT: 1-715-551-0809 brad.borchardt@accurex.com
SECONDARY CONTACT ANDY JACOBS: andy.jacobs@accurex.com
ACCUREX WILL PROVIDE BALANCED AIRFLOW AND FUNCTIONAL CHARACTERISTICS OF THE HVAC AS THEY RELATE TO AIRFLOW AND RESISTANCE ONLY. SERVICES TO BE PERFORMED BY A CERTIFIED NEBB FIRM AND ITS MANAGING GROUP - NATIONAL TAB
- RAYMON AIR DISTRIBUTION EQUIPMENT** - DIFFUSERS AND GRILLES
NATIONAL ACCOUNTS SALES: HUNZICKER LLC, MARIE WILSON - (608) 945-9551 marie@hunzickerc.com

2024-166 CULVER'S VALPARAISO, IN VALPARAISO, IN

UNIT No	AREA SERVED	SUPPLY FAN				COOLING						HEATING				ELECTRICAL (1)		ACCEPTABLE MANUFACTURERS			
		SUPLY FAN TYPE	SA FAN VFD	SUPLY CFM	MIN OA CFM	ESP	°FDB	°FWB	°FDB	°FWB	COIL LAT °FDB	COIL LAT °FWB	SENSIBLE MBH	LATENT MBH	GAS OR ELEC	OUTPUT MBH	OAT °FDB		HEATING STAGES	VOLTAGE	PHASE
RTU-1	DINING ROOM	VAV	YES	6,150	1,700	0.75"	88	76	78.59	66.98	55.00	54.59	155	76	GAS	229	-17	2	208	3	LENNOX, CAPTIVEAIRE
RTU-2	KITCHEN	VAV	YES	6,225	1,675	0.75"	88	76	78.50	66.88	55.00	54.73	157	74	GAS	172	-17	2	208	3	LENNOX, CAPTIVEAIRE

- ADDITIONAL FACTORY INSTALLED OPTIONS FOR BOTH UNITS:**
- WEATHERPROOF DISCONNECT
 - FACTORY INSTALLED/FIELD POWERED GFCI
 - RETURN SMOKE DETECTOR
 - DRAIN PAN OVERFLOW SWITCH
 - SINGLE ENTHALPY ECONOMIZER W/ FAULT DETECTION DIAGNOSTICS
 - BAROMETRIC RELIEF
 - HALL GUARDS
 - 2" MERV 13 FILTERS
 - SS HEAT EXCHANGER
 - HOT GAS REHEAT

- ADDITIONAL FIELD INSTALLED OPTIONS FOR BOTH UNITS:**
- 14" DOWNFLOW HYBRID CURB
 - PVC DRAIN TRAP KIT
 - REMOTE TEMPERATURE AND HUMIDITY SENSORS
 - PROGRAMMABLE THERMOSTAT
 - OUTDOOR AIR CFM CONTROL

- NOTES:**
- NOTIFY ELECTRICAL CONTRACTOR OF BREAKER REQUIREMENTS AFTER SELECTION

- PRV-1 RESTROOM EXHAUST FAN - REFER TO SHEET M204
- PRV-2 GRIDDLE EXHAUST FAN - REFER TO SHEET M202
- PRV-3 FRYER EXHAUST FAN - REFER TO SHEET M203
- EF-1A MOP ROOM EXHAUST FAN - REFER TO SHEET M204
- ITEM #48A GRIDDLE HOOD - REFER TO SHEET M202
- ITEM #58A FRYER HOOD - REFER TO SHEET M203
- ECH-1** ELECTRIC CEILING HEATER Q-MARK OR EQUAL CDF-648 ELECTRIC CEILING HEATER & CDF RECESSED MOUNTING FRAME, CDF-TR4 TRANSFORMER & WALL MOUNTED THERMOSTAT, 208/240 VOLT SINGLE PHASE = 19.2 AMPS (SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.)

CONTROL NOTES

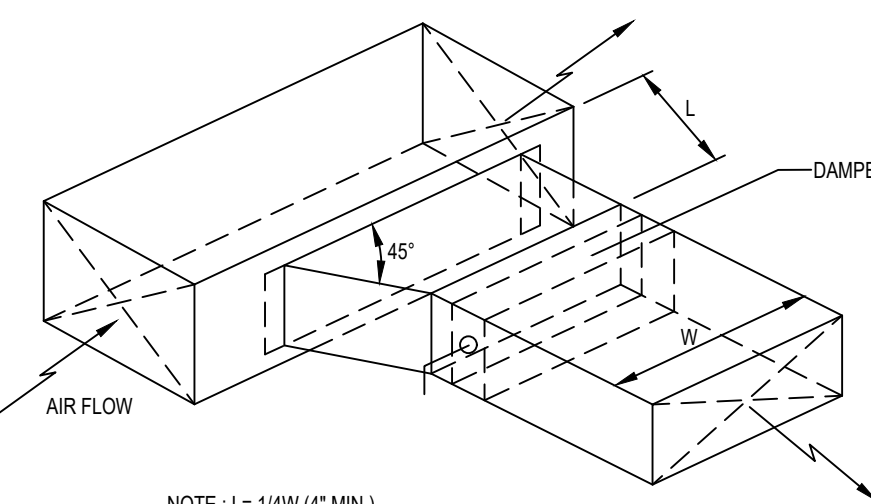
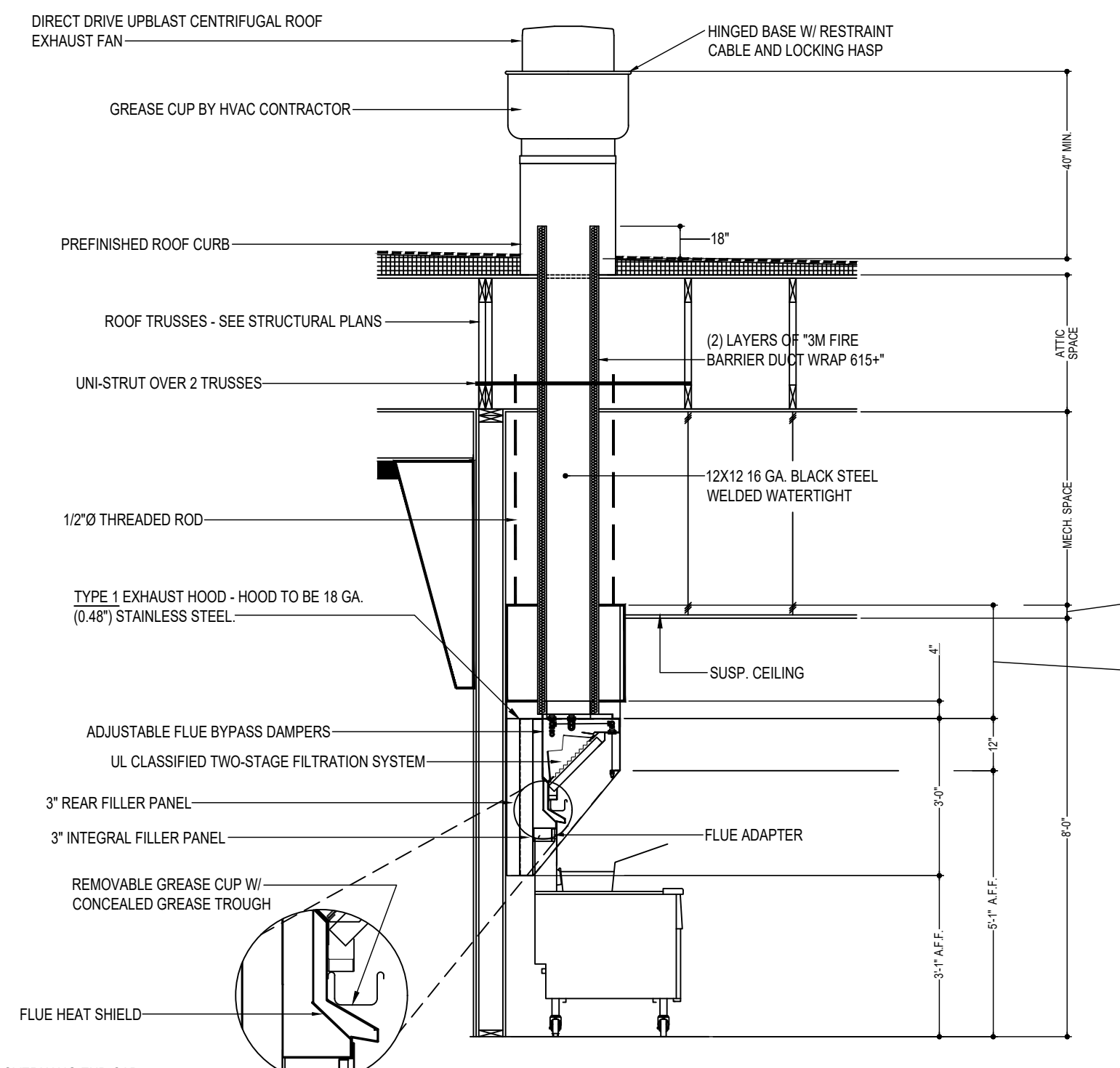
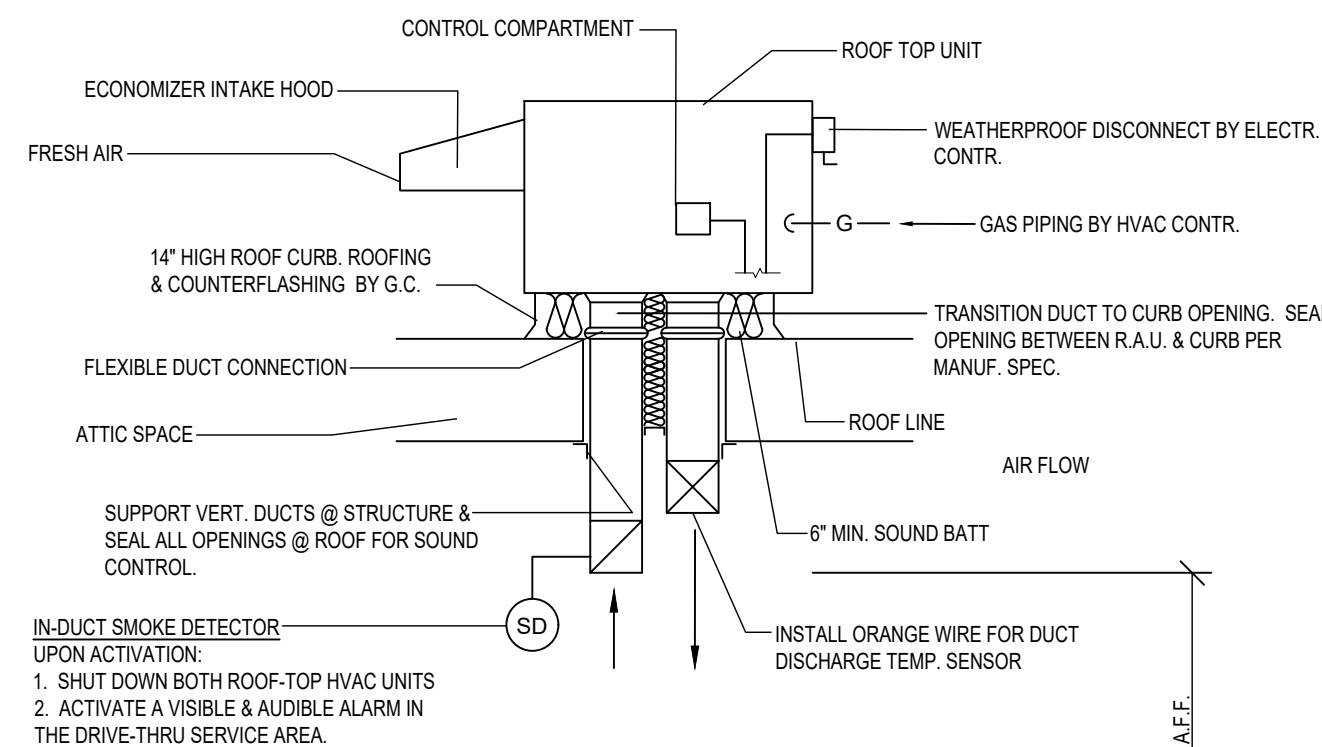
NOTE: KITCHEN HOODS SUPPLIED AND INSTALLED BY HVAC CONTRACTOR

- WIRE RTU-1, RTU-2 TO SHUT-DOWN & EXHAUST HOOD FANS TO CONTINUE TO RUN UPON ACTIVATION OF THE ANSUL SYSTEM.
- WIRE RTU-1 & RTU-2 TO SHUT-DOWN UPON ACTIVATION OF ANY IN-DUCT SMOKE DETECTOR.
- OCCUPIED MODE: FANS IN RTU-1 & RTU-2, EXHAUST FANS PRV-1, PRV-2, PRV-3 AND EF-1 TO RUN CONTINUOUSLY.
- UNOCCUPIED MODE: FANS IN RTU-1 & RTU-2 TO RUN ONLY WHEN COOLING OR HEATING IS CALLED FOR.

TEST & BALANCE NOTES

- ACCUREX WILL PROVIDE BALANCED AIRFLOW & FUNCTIONAL CHARACTERISTICS OF THE HVAC SYSTEM AS THEY RELATE TO AIRFLOW & AIR PRESSURE ONLY. SERVICES TO BE PERFORMED BY A CERTIFIED NEBB FIRM & ITS MANAGING GROUP - NATIONAL TAB.
- SERVICES NOT INCLUDED: PULLEY / SHEAVE CHANGES, MOTOR CHANGE OUTS, OR RETURN TRIPS DUE TO DELAYS CAUSED BY JOB INCOMPLETENESS.
- ESTABLISH MINIMUM OUTSIDE AIR FLOW INDICATED ON SCHEDULES AT ALL SUPPLY FAN SPEEDS.

AIR BALANCE TABLE				
EXHAUST AIR FLOW				
EQUIPMENT TAG	SERVICE	CFM		
PRV-1	RESTROOMS	300		
PRV-2	ITEM #49	1,500		
PRV-3	ITEM #59	1,500		
EF-1A	MOP ROOM	75		
TOTAL =		3,375		
VENTILATION REQUIRED PER 2012 INTERNATIONAL MECHANICAL CODE				
EQUIPMENT TAG	SERVICE	CFM		
RTU-1	DINING ROOM	1,775		
RTU-2	KITCHEN	110		
TOTAL =		1,885		
3,375 > 1,885 -> USE 3,375 CFM FOR OUTSIDE AIR CFM				
OVERALL AIRFLOW SUMMARY				
EQUIPMENT TAG	SERVICE	SUPPLY CFM	RETURN CFM	OUTSIDE AIR CFM
RTU-1	DINING ROOM	6,150	4,450	1,700
RTU-2	KITCHEN	6,225	4,550	1,675
TOTAL OUTSIDE AIR CFM =				3,375



LENNOX SETTINGS FOR CULVERS

IN ORDER TO SET UP THE RTUS YOU WILL NEED TO DOWNLOAD LENNOX CORE SERVICE APP AND PAIR YOUR DEVICE WITH THE CORE CONTROLLER. ONCE PAIRED YOU WILL SEE THE OPERATION OVERVIEW SCREEN. SEE INSTALLATION MANUAL FOR INSTRUCTIONS ON DOWNLOADING THE APP OR SCAN THE QR CODE ON THE FRONT COVER OF THE CONTROLLER.

HEAT DELAY ADJUSTMENT

- HEAT DELAY WILL BE PRESET IN THE CORE CONTROLLER AND CHANGED IN THE APP AS SHOWN IN THE MENU PATH BELOW. DEFAULT IS SET AT 3600 SECONDS.
- TAP THE MENU BUTTON (THREE LINES IN THE UPPER LEFT OF THE SCREEN) TO OPEN THE MENU.
 - TAP SETUP
 - TAP TEST AND BALANCE
 - TAP DAMPER

FRESH AIR TEMPERING (HEATING)

- THIS IS ADJUSTED THROUGH THE MENU FROM THE MAIN SCREEN
- TAP THE MENU BUTTON (THREE LINES IN THE UPPER LEFT OF THE SCREEN) TO OPEN THE MENU
 - TAP SETUP
 - TAP TEST AND BALANCE
 - TAP DAMPER
- THERE ARE SEVERAL SETTINGS TO SELECT IN THIS MENU PATH BEFORE REACHING THE DESIRED SETTING. FRESH AIR HEATING ENABLED = YES OR NO. AFTER ENABLING FAH THE NEXT SCREEN WILL ALLOW THE FAH SET POINT TO BE CONFIGURED. SUGGESTED FAH TEMPERATURE RANGES 65-67 DEGREES F. VERIFY WITH ENGINEER

GLOBAL ECONOMIZER MODE (KITCHEN UNIT ONLY)

- THIS IS SET BY CHANGING CONFIGURATION ID#1 CHARACTER 2 TO G
- FROM THE MAIN SCREEN (OPERATION OVERVIEW) TAP THE MENU BUTTON (THREE LINES IN THE UPPER LEFT OF THE SCREEN) TO OPEN THE MENU
 - TAP INSTALL
 - TAP NEXT ON DATE AND TIME
 - TAP NEXT ON RTU NAME, MODEL NUMBER, SERIAL NUMBER AND CATEGORY IF ALREADY ENTERED. IF NOT PLEASE ENTER
 - TAP CONFIGURATION ID 1 AND CHANGE 2ND CHARACTER TO G

ECONOMIZER MINIMUM POSITION SET-UP

- THIS IS ADJUSTED THROUGH THE MENU FROM THE MAIN SCREEN
- TAP THE MENU BUTTON (THREE LINES IN THE UPPER LEFT OF THE SCREEN)
 - SCROLL DOWN AND TAP RTU OPTIONS
 - TAP EDIT PARAMETERS
 - CHOOSE FROM THE CATEGORY OF PARAMETERS LISTED (AIRFLOW)
 - CHOOSE THE PARAMETER TO ADJUST (132) MINIMUM FRESH AIR DAMPER POSITION DURING OCCUPIED OPERATION

OCCUPIED AND UNOCCUPIED

- USING 24V THERMOSTAT CONTROL, OCCUPIED/ UNOCCUPIED WILL BE DETERMINED BY INPUT ON 297-8 ON THE IM BOARD
- FOR (KITCHEN UNIT ONLY) BOTH THE THERMOSTAT AND HOOD FANS MUST BE TIED INTO 297-8 ON THE IM CONTROL BOARD

FRESH AIR TEMPERING (COOLING)

- THIS IS ADJUSTED THROUGH THE MENU FROM THE MAIN SCREEN
- TAP THE MENU BUTTON (THREE LINES IN THE UPPER LEFT OF THE SCREEN) TO OPEN THE MENU
 - TAP SETUP
 - TAP TEST AND BALANCE
 - TAP DAMPER
- THERE ARE SEVERAL SETTINGS TO SELECT IN THIS MENU PATH BEFORE REACHING THE DESIRED SETTING. FRESH AIR HEATING ENABLED = YES OR NO. AFTER ENABLING FAH THE NEXT SCREEN WILL ALLOW THE FAH SET POINT TO BE CONFIGURED. SUGGESTED FAH TEMPERATURE RANGES 73-75 DEGREES F. VERIFY WITH ENGINEER

ENSURE THAT THE PROBE STYLE SENSOR GETS INSTALLED IN THE SUPPLY DUCTWORK FOR FAH/FAH TO OPERATE PROPERLY.

FOR HELP PLEASE CALL LENNOX NATIONAL ACCOUNT TECH SUPPORT AT 1-800-367-6285

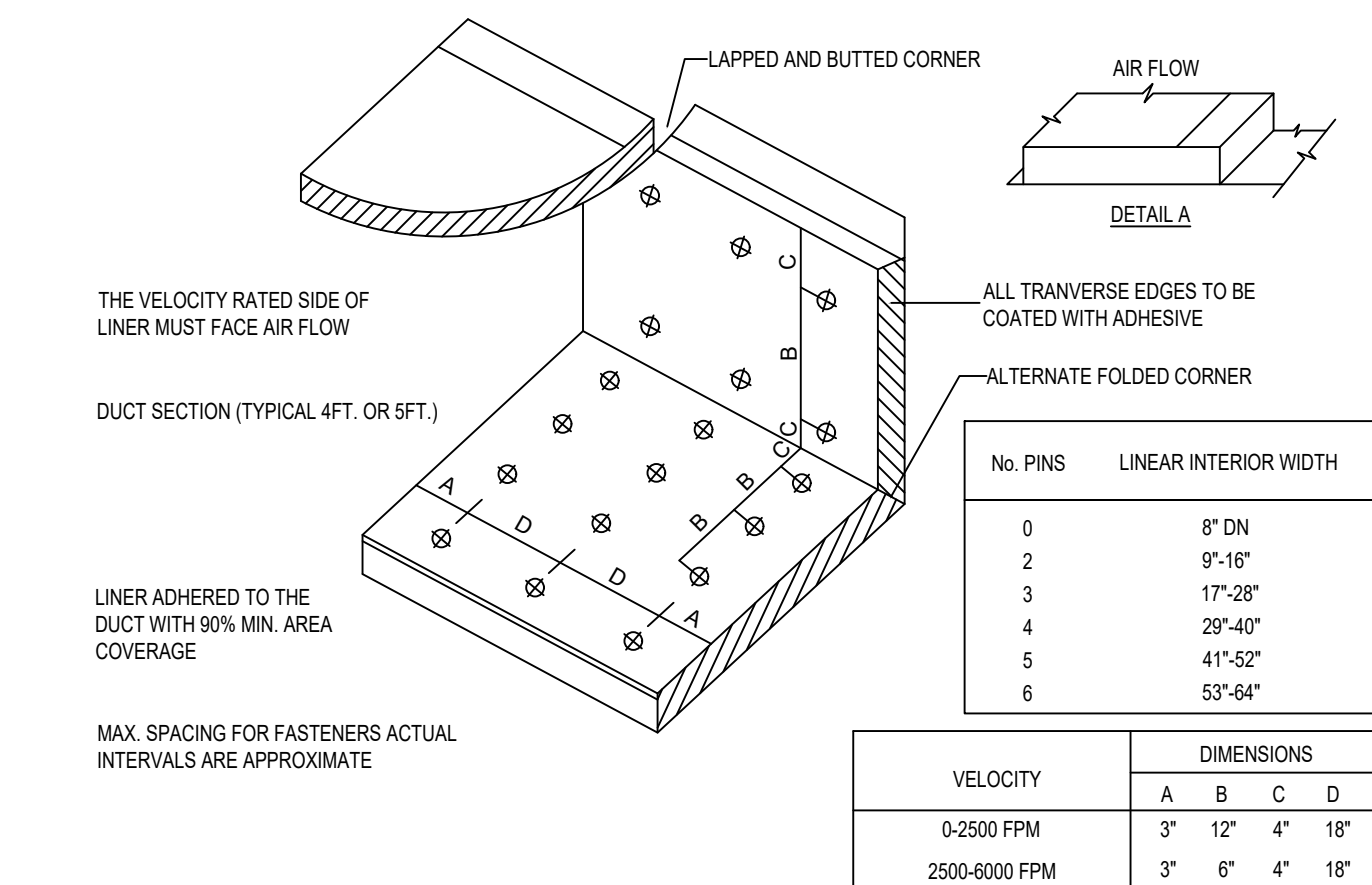
CHECK FOR CORRECT OPERATION AND WIRING OF ALL SENSORS

COOKING APPLIANCE / TYPE 1 HOOD INTERLOCK

- REMOTE SWITCH ON - POWER TO KITCHEN FAN CONTROL CENTER (KFCC)
- KFCC CONTROLS:
 - EXHAUST FANS PRV-2 (GRILLE) & PRV-3 (FRYERS) ARE STARTED.
 - OPENS OUTSIDE AIR INTAKE ON RTU-1 & RTU-2 TO MINIMUM FRESH AIR OPENING.
 - POWER TO OUTLETS #51 (GRILLE) & #60 (FRYERS).
- GRILLE & FRYER CAN BE STARTED.
- IN CASE OF FIRE:
 - SHUNT TRIP BREAK FOR GRILLE & FRYERS OUTLET TRIPS.
 - ANSUL SYSTEM IS ACTIVATED.
 - THE MECHANICAL GAS VALVES CLOSES.
 - SHUT DOWN RTU-1 & RTU-2 & CLOSE OUTSIDE AIR.
 - EXHAUST FANS PRV-2 & PRV-3 CONTINUE TO RUN.

GREASE HOOD FIRE SUPPRESSION SYSTEM

WET-CHEMICAL EXTINGUISHING SYSTEMS SHALL BE INSTALLED, MAINTAINED, PERIODICALLY INSPECTED AND TESTED IN ACCORDANCE WITH NFPA 17A AND THEIR LISTING.



DUCT LINER INSTALLATION DETAIL

SCALE: N.T.S.
NOTE: USE ONLY ON VERTICAL DROP FROM RTU TO WITHIN 9'-10" A.F.F.. DUCT LINER WILL NOT BE PERMITTED ON ANY HORIZ. RUNS.

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LOWELL JOHN LASKSON
REGISTERED
No. PE11400475
STATE OF
INDIANA
Professional Engineer
EXP. 7/31/2026

NEW CULVER'S RESTAURANT
852 Thornapple Way
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County of PORTER

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HVAC SCHEDULE & DETAILS
Date: 06-27-2025
Revision:

2024-166
M201

HOOD INFORMATION																	
HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.)			HOOD CONSTR.	COOKING LOAD / DUTY RATING	TOTAL CFM	EXHAUST COLLAR(S)				SUPPLY		TOTAL WEIGHT LBS.	SECTION LOCATION	
			LENGTH	WIDTH	HEIGHT				WIDTH	LENGTH	DIA.	CFM	S.P.	MUA CFM			AC CFM
1	GRIDDLE HOOD	XGEP-64-S	64	TOP 23 BOT 8	FRT 12 BACK 36	430 SS WHERE EXPOSED	MEDIUM	1500	12	12		1500	0.924			137	SINGLE

FIRE SYSTEM INFORMATION							
MARK	MODEL	LOCATION	FLOW POINTS		SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
			HOODS	PCU			
FIRE SUPPRESSION	AMEREX KP WET CHEMICAL	REMOTE MOUNTED	16 UTILIZED	22 AVAILABLE	CONTINUOUS	FUSIBLE LINK	GRIDDLE HOOD SECTION 1 FRYER HOOD SECTION 1

HOOD INFORMATION													
HOOD NO.	MARK	LIGHTING DETAILS			GREASE FILTRATION DETAILS			UTILITY CABINET(S)					
		FIXTURE TYPE	BULB / LAMP INFO	QTY	FOOT CANDLES	TYPE / MODEL MATERIAL	QTY	SIZE (IN.)	LOCATION	FIRE SYSTEM TYPE	SIZE	MODEL	CONTROLS INTERFACE
1	GRIDDLE HOOD					X-TRACTOR (SPARK ARRESTOR INCL.) STAINLESS STEEL	4	16	16				

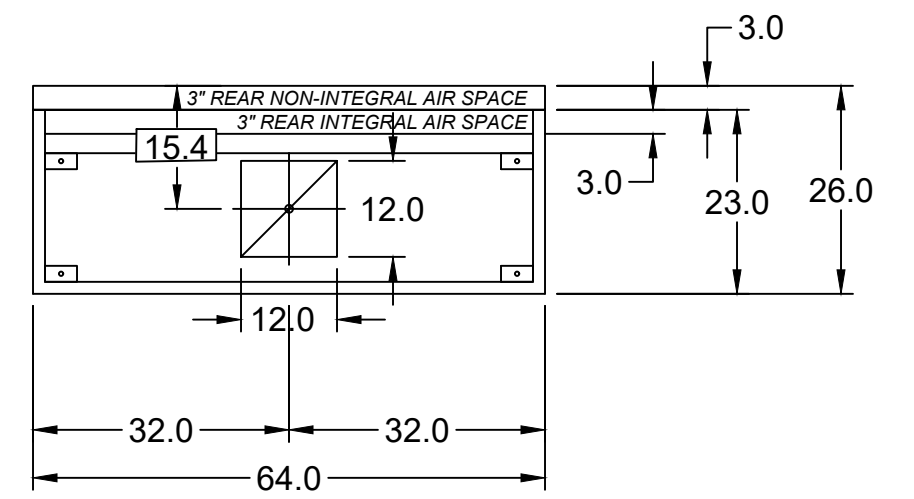
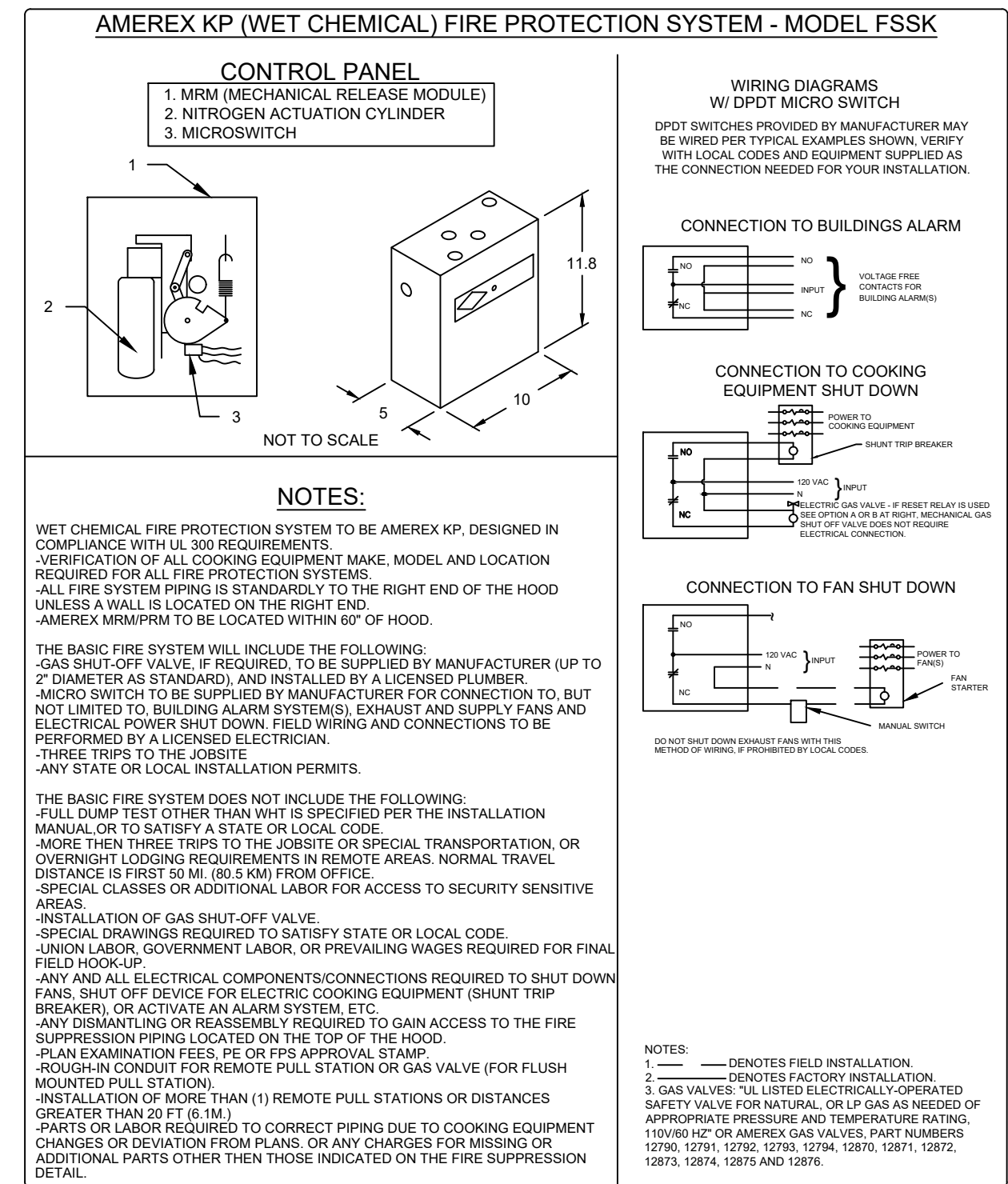
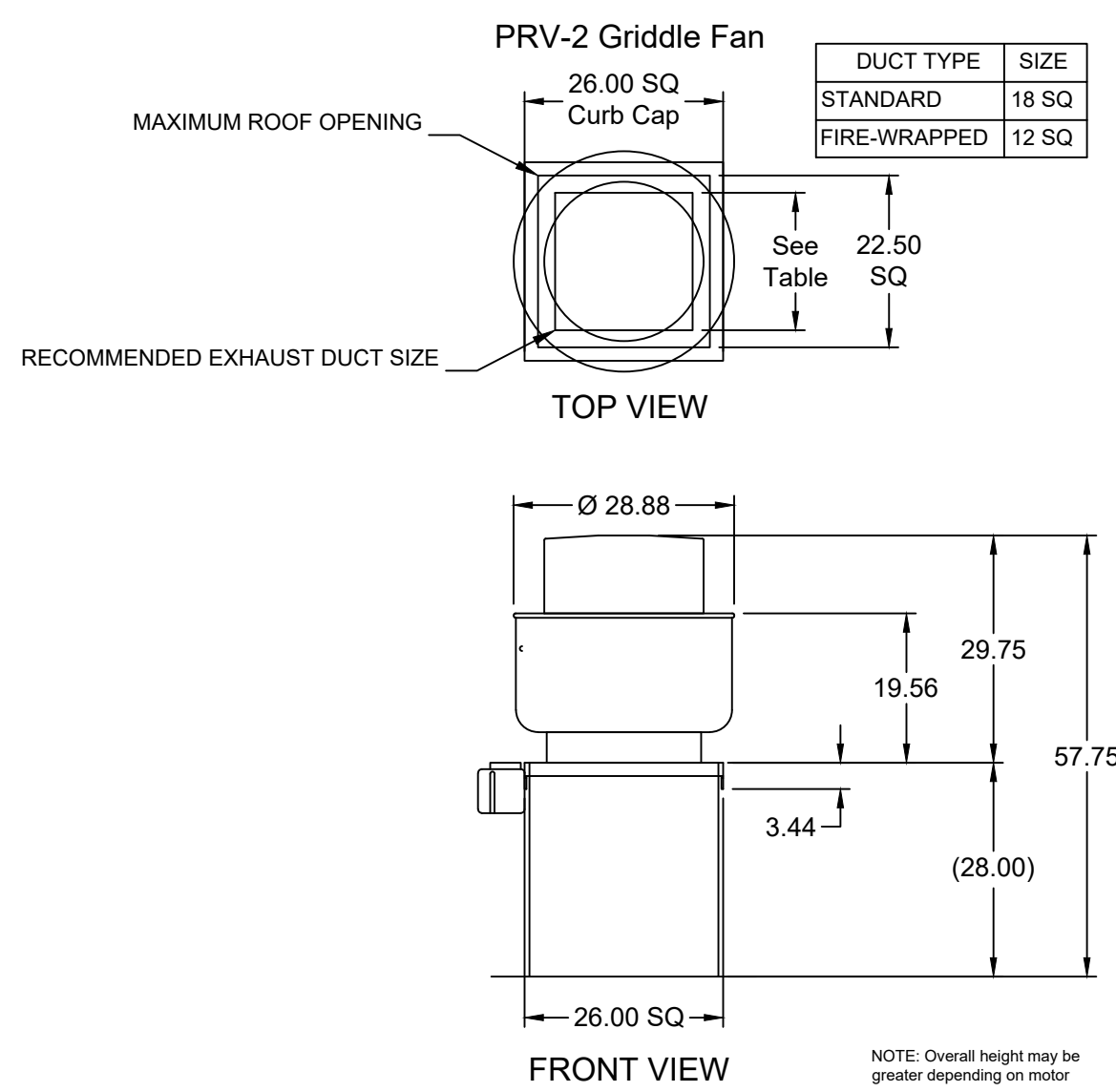
HOOD OPTIONS				SPECIAL DESIGN REQUESTS			
UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625 BACK NON-INTEGRAL AIR SPACE - 3 IN WIDE 26 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED FACTORY MOUNTED EXHAUST COLLAR(S) PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH				SDR #K1100145 - FLUE BYPASS HOOD SDR #K1700974 - CULVERS 4VAT 2FIRE PROCESS - FRYER HOOD SDR #K1800144 - CULVERS 4VAT 2FIRE PROCESS - GRIDDLE HOOD			

FIRE SYSTEM OPTIONS AND ACCESSORIES
 FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
 CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
 METAL BLOW-OFF CAPS - INCLUDED
 GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 1.50" (AMEREX) - PART# AMEREXMECHSHUTOFFVALVE150
 HOOD SUPPRESSION TANK - INCLUDED - 7.5 GAL. - ((2) 3.75 TANK(S))
 REMOTE PULL STATION - MULTIPLE - FIELD INSTALLATION AT TWO POINTS OF EGRESS
 SINGLE ENCLOSURE FOR RELEASE & FIRST TANK FOR REMOTE MOUNTING - INCLUDED
 TANK ENCLOSURES (STAINLESS STEEL) FOR REMOTE MOUNTING - INCLUDED

Direct Drive Upblast Centrifugal Roof Exhaust Fan													
MARK INFORMATION		FAN INFORMATION				MOTOR INFORMATION							
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	PRV-2 Griddle Fan	XCUE-140-VG	1,500	1.801	1,725	0.83	92	1	115/60/1	OP	1725	1	16

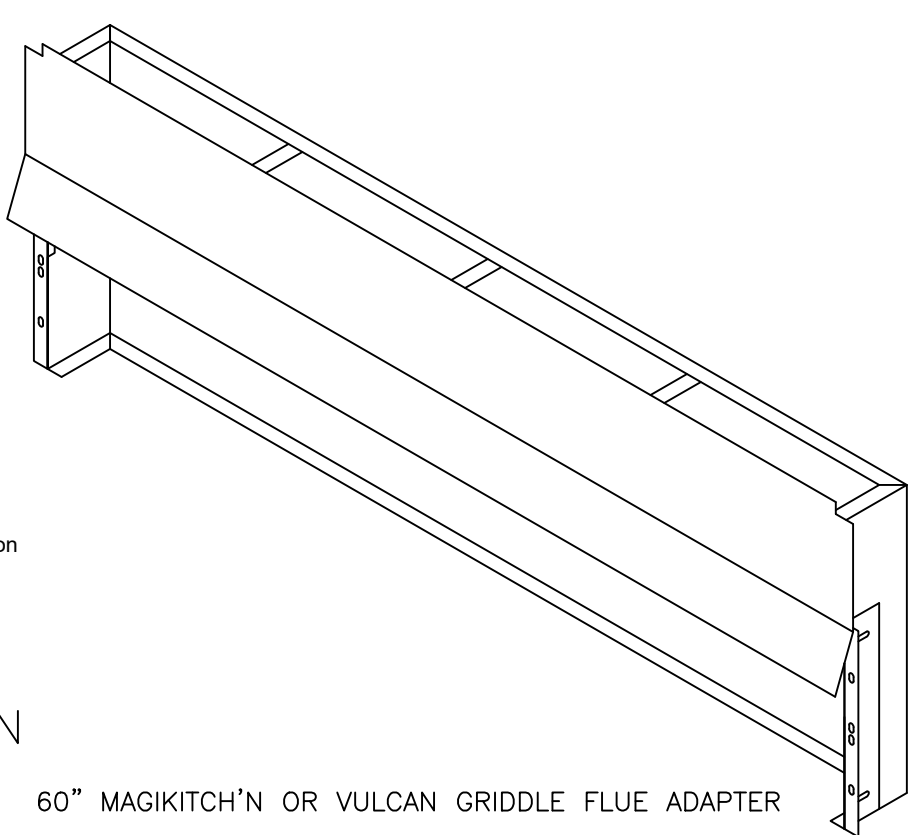
NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory

PRV-2 Griddle Fan : SELECTED OPTIONS AND ACCESSORIES
 One piece fully welded windband
 Tapered bushing wheel hub
 Breather tube outlet area min. 4.4 sq. in. (sizes 99-480), 2.0 sq. in. (sizes 60-95)
 Min. windband material thickness: 0.051" aluminum (060-240), 0.064" aluminum (240HP, 240XP), 0.080" aluminum (sizes 300-480)
 Larger Curb Cap Size - 26 Square
 UL/cUL 705 Listed - Supplement SC - "Power Ventilators for Restaurant Exh. Appliances" (Formerly UL 762)
 Switch, NEMA-3R, Toggle,
 Hinge, Factory Installed
 High Temp Curb Seal Rated for Continuous Duty at 1500 F (Factory Attached)
 Grease Trap (PN 475538)
 Clean-out Port - Factory Installed
 Conduit Chase Qty 1

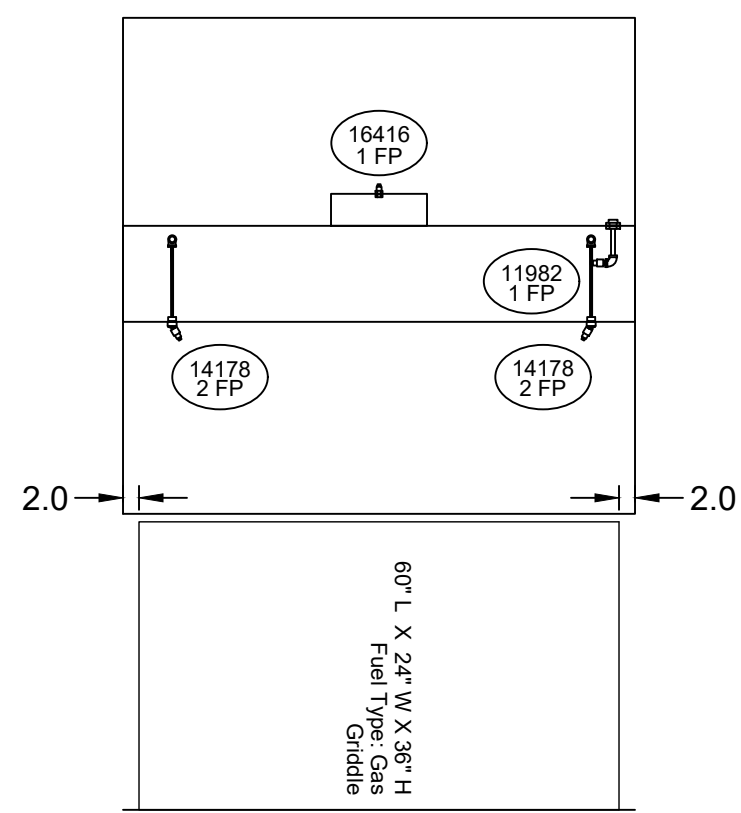


MARK: Griddle Hood - SECTION 1 PLAN VIEW

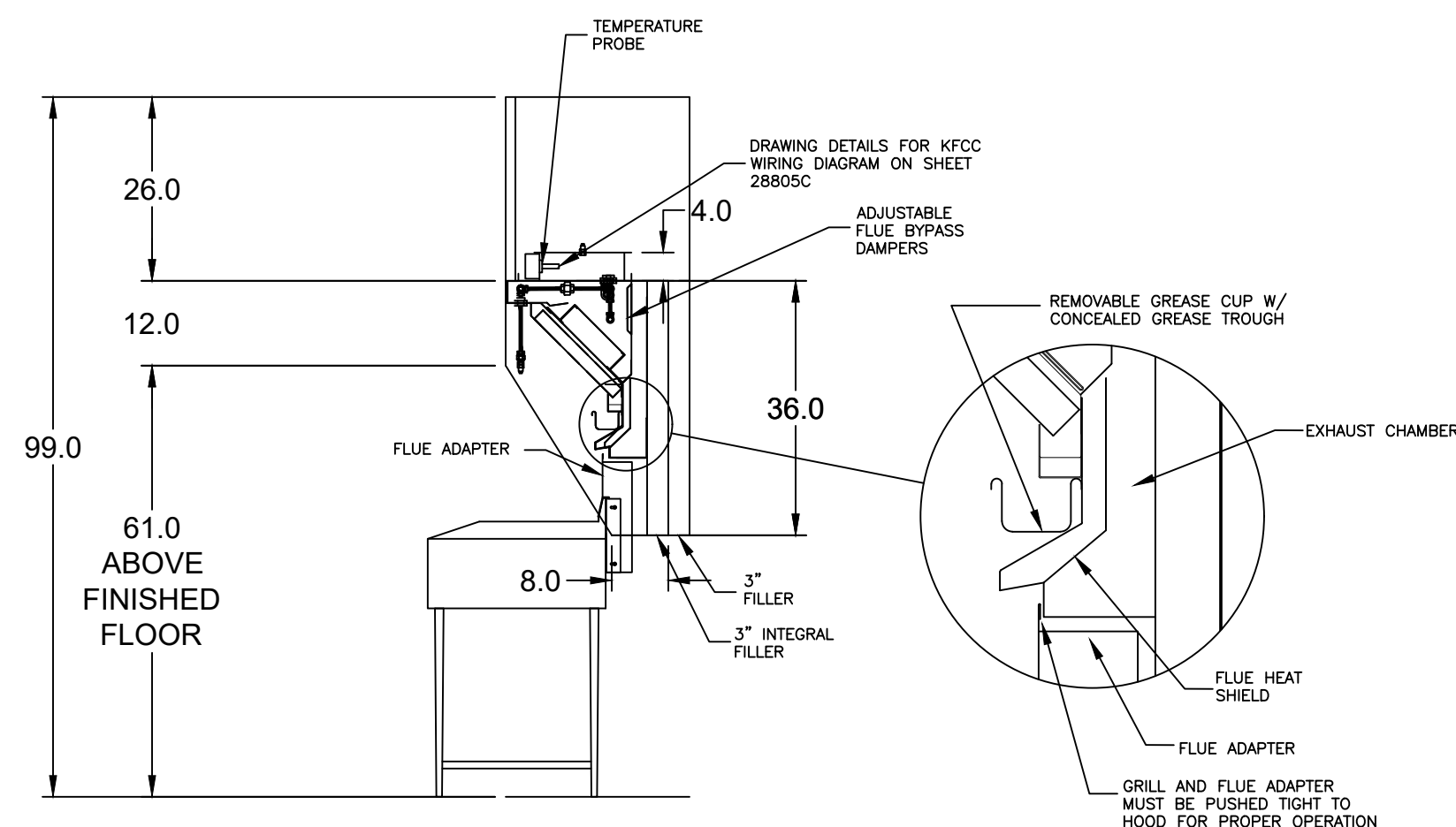
MUST USE WITH MAGIKITCH'N MODEL MKG-C-60 OR VULCAN MODEL VIG60-R3



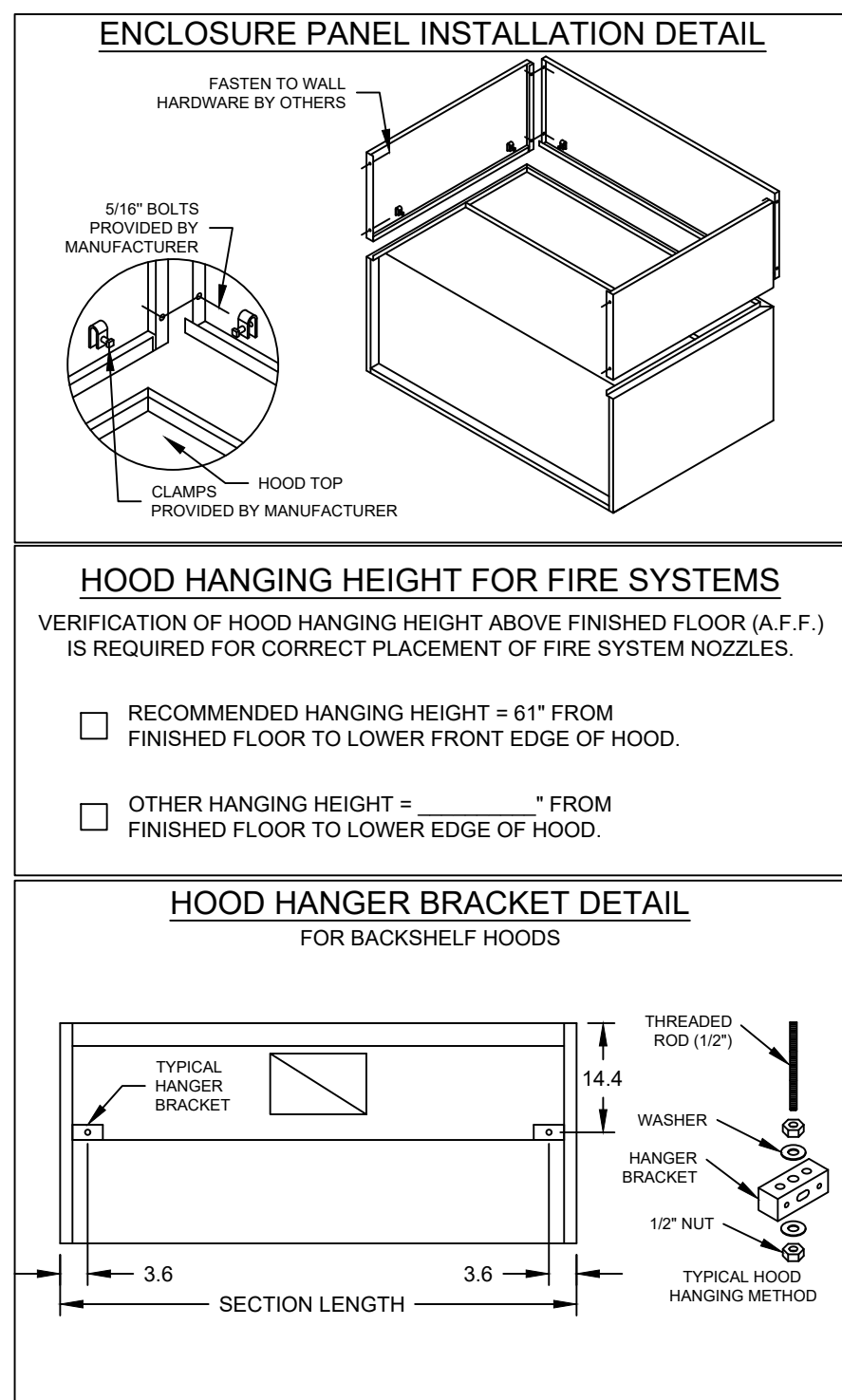
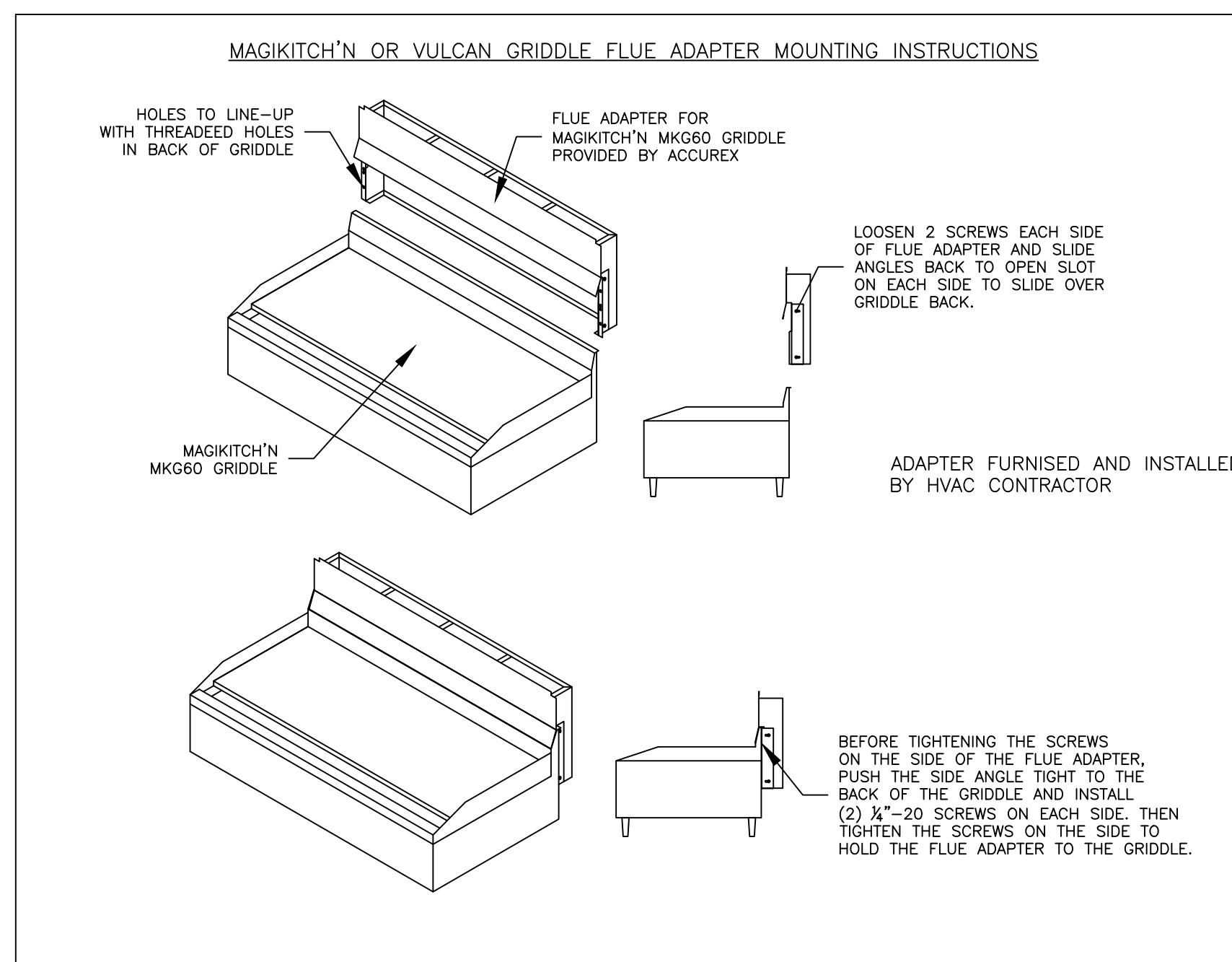
FOOD SERVICE EQUIPMENT #49
 FIRE SYSTEM MARK: Fire Suppression



SECTION 1 ELEVATION VIEW



MARK: Griddle Hood SECTION VIEW

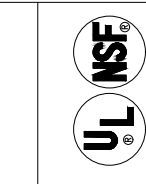


ACCUREX

CULVERS METRO L 2025 (S)

PROJECT 7/11/2024

ACCUREX - WI, IA
 PHILLIP KRAFT
 PHILLIP.KRAFT@ACCUREX.COM
 262-227-7865



GRIDDLE HOOD
 PRV-2 GRIDDLE FAN
 FIRE SUPPRESSION

© 2025
 JOHN L. LASKON
 REGISTERED ARCHITECT
 STATE OF ILLINOIS
 No. PE11400475
 EXP. 7/31/2026
 NEW CULVER'S RESTAURANT
 852 Thornapple Way
 Valparaiso, IN 46385
 County of PORTER

Valparaiso
 Culver Franchising System, Inc.
 1240 Water Street
 Prairie du Sac, WI 53578
 608-643-7880

OWNER:
 S & L Properties Valparaiso Thornapple LLC
 2651 Kirling Court
 Portage, WI 53901
 Jeff Liegel, Realty Manager / Member
 608-742-2853

OLLMANN ASSOCIATES ARCHITECTS, P.C.
 200 South State Street
 Belvidere, Illinois 61008
 815-544-7790 Phone
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GRIDDLE HOOD/EXHAUST
 SCHEDULE & DETAILS
 Date: 06-27-2025
 Revision:

2024-166
 M202

HOOD INFORMATION		MODEL	HOOD DIMENSIONS (IN.)			HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST					SUPPLY		TOTAL WEIGHT LBS.	SECTION LOCATION
HOOD NO.	MARK		LENGTH	WIDTH	HEIGHT			TOTAL CFM	COLLAR(S)		MUA CFM	AC CFM				
1	FRYER HOOD	XXEP-83-S	83	TOP 23 BOT 3	FRT 12 BACK 36	430 SS WHERE EXPOSED	MEDIUM	1500	12	12	1500	0.689			169	SINGLE

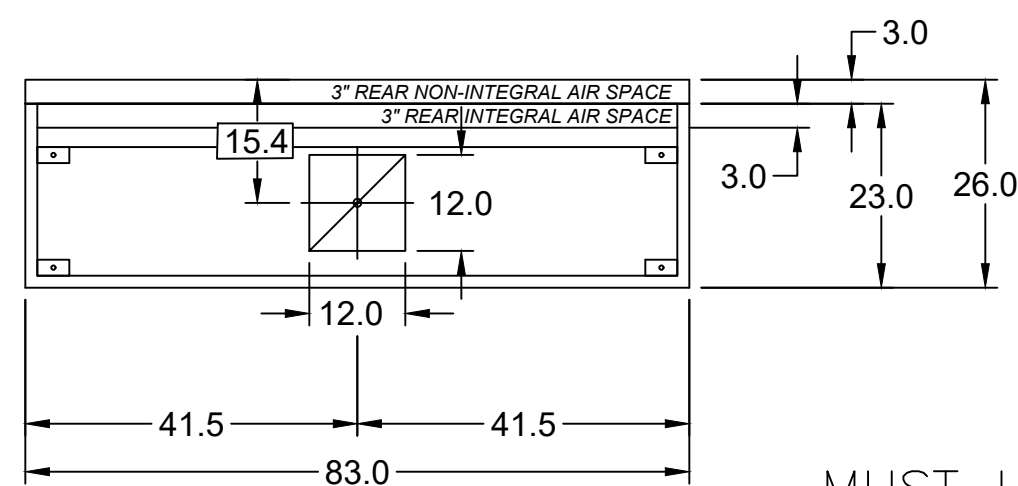
HOOD NO.	MARK	LIGHTING DETAILS			GREASE FILTRATION DETAILS			UTILITY CABINET(S)				
		FIXTURE TYPE	QTY	FOOT CANDLES	TYPE / MODEL MATERIAL	QTY	SIZE (IN.)	LOCATION	FIRE SYSTEM TYPE	SIZE	MODEL	CONTROLS INTERFACE
1	FRYER HOOD				X-TRACTOR (SPARK ARRESTOR INCL.)	5	16					
					STAINLESS STEEL	0	20	16				

HOOD OPTIONS	SPECIAL DESIGN REQUESTS
<ul style="list-style-type: none"> UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625 BACK NON-INTEGRAL AIR SPACE - 3 IN WIDE 26 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED FACTORY MOUNTED EXHAUST COLLAR(S) PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH 	<ul style="list-style-type: none"> SDR #K1100559 - NEW PITCO 4L FRYER FLUE BYPASS SYSTEM SDR #K1700974 - CULVERS 4VAT 2FIRE PROCESS - FRYER HOOD SDR #K2000140 - IF FRYMASTER FRYER FLUE BYPASS

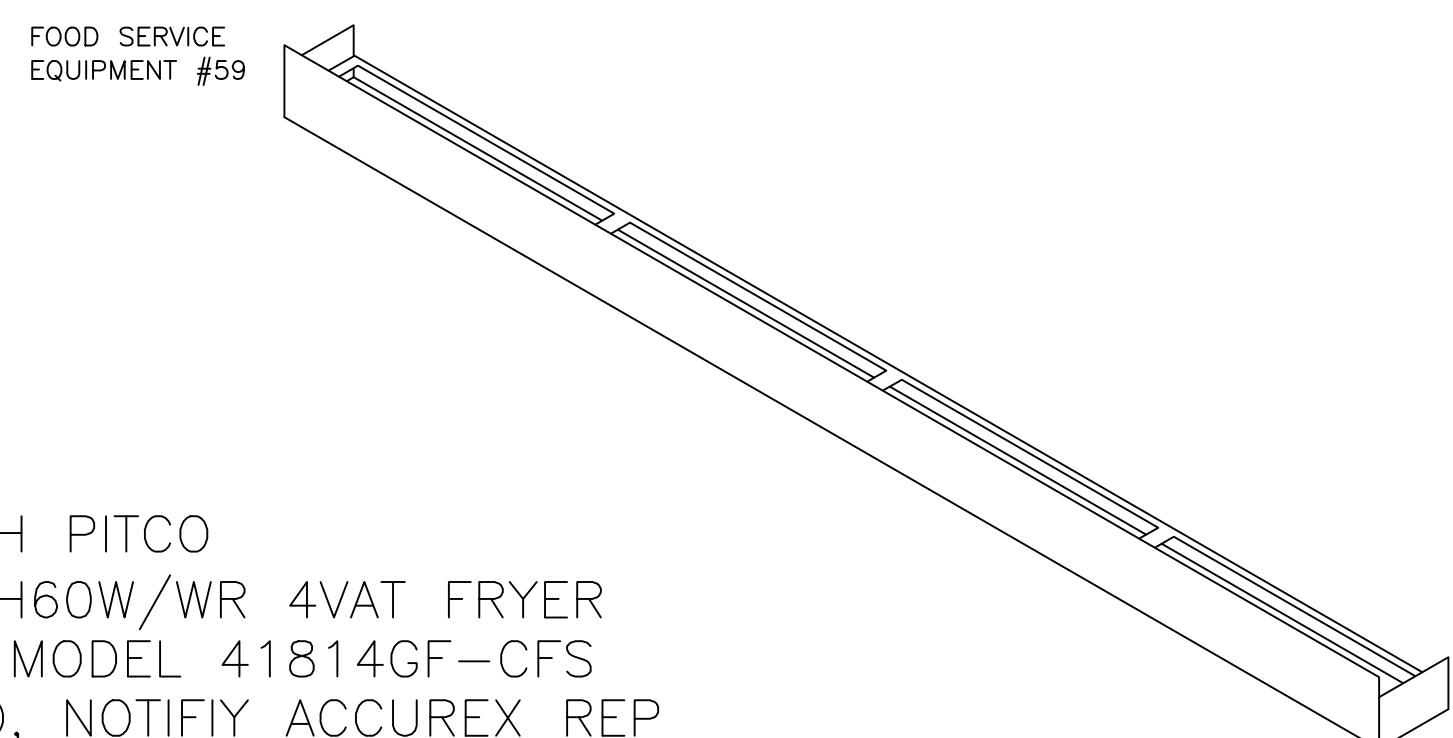
Direct Drive Upblast Centrifugal Roof Exhaust Fan			FAN INFORMATION					MOTOR INFORMATION					
MARK INFORMATION			VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
QTY	MARK	MODEL											
1	PRV-3 Fryer Fan	XCUE-140-VG	1,500	1	1,365	0.46	92	1	115/60/1	OP	1725	1	16

NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory

PRV-3 Fryer Fan : SELECTED OPTIONS AND ACCESSORIES
<ul style="list-style-type: none"> One piece fully welded windband Tapered bushing wheel hub Breather tube outlet area min. 4.4 sq. in. (sizes 99-480), 2.0 sq. in. (sizes 60-95) Min. windband material thickness: 0.051" aluminum (060-240), 0.064" aluminum (240HP, 240XP), 0.080" aluminum (sizes 300-480) Larger Curb Cap Size - 26 Square UL/CUL 705 Listed - Supplement SC - "Power Ventilators for Restaurant Exh. Appliances" (Formerly UL 762) Switch, NEMA-3R, Toggle, Hinge, Factory Installed High Temp Curb Seal Rated for Continuous Duty at 1500 F (Factory Attached) Grease Trap (PN 475538) Clean-out Port - Factory Installed Conduit Chase Qty 1

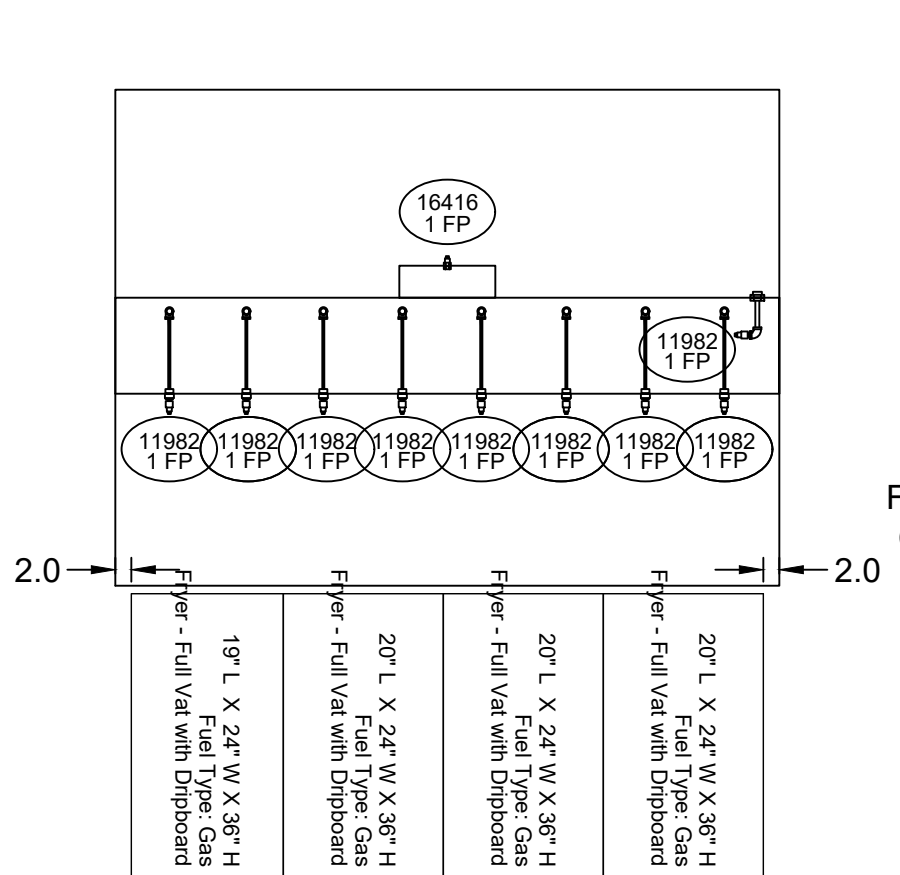


MARK: Fryer Hood PLAN VIEW

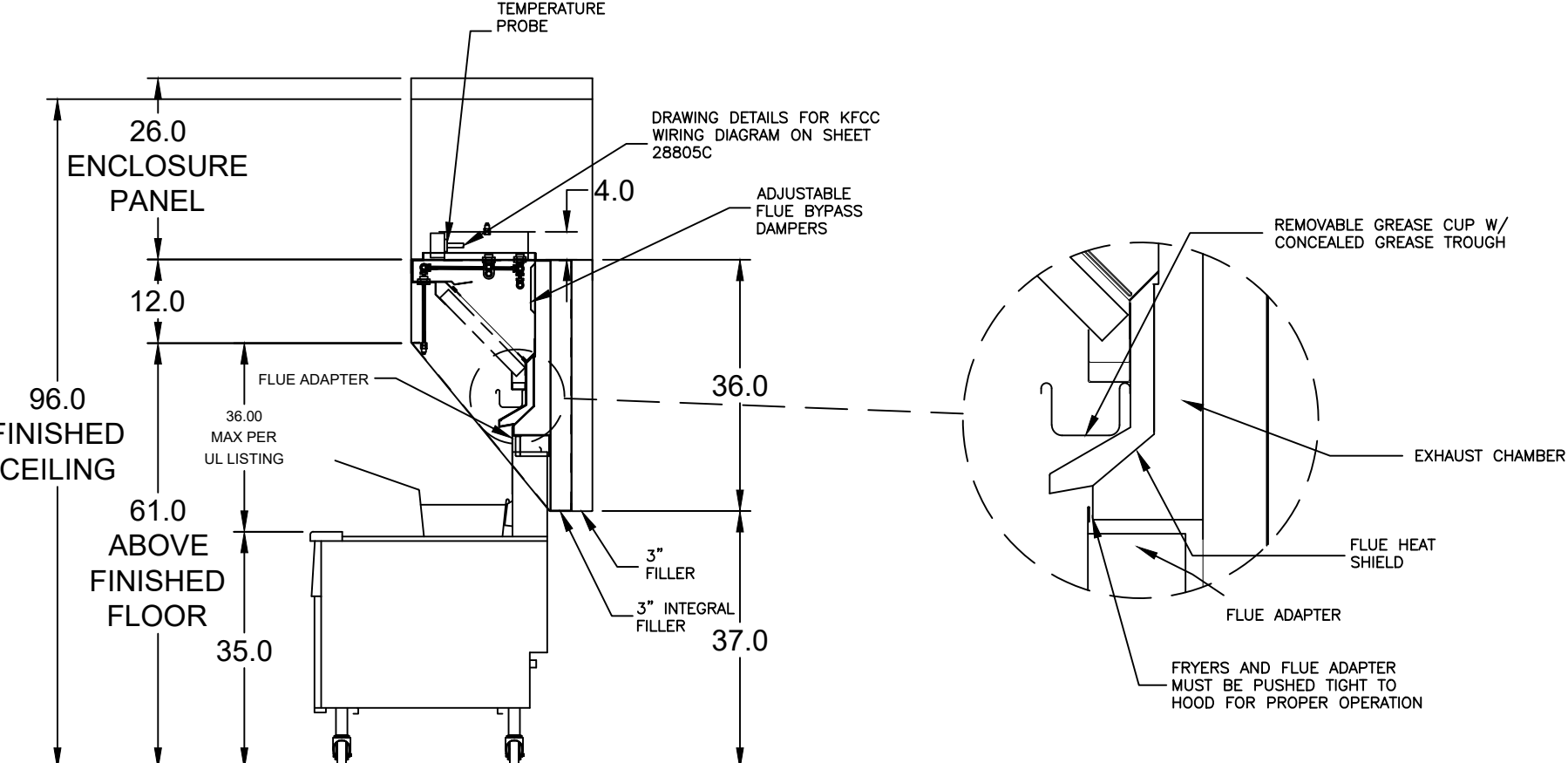


MUST USE WITH PITCO MODEL CU-SSH60W/WR 4VAT FRYER IF FRYMASTER MODEL 41814GF-CFS IS BEING USED, NOTIFY ACCUREX REP

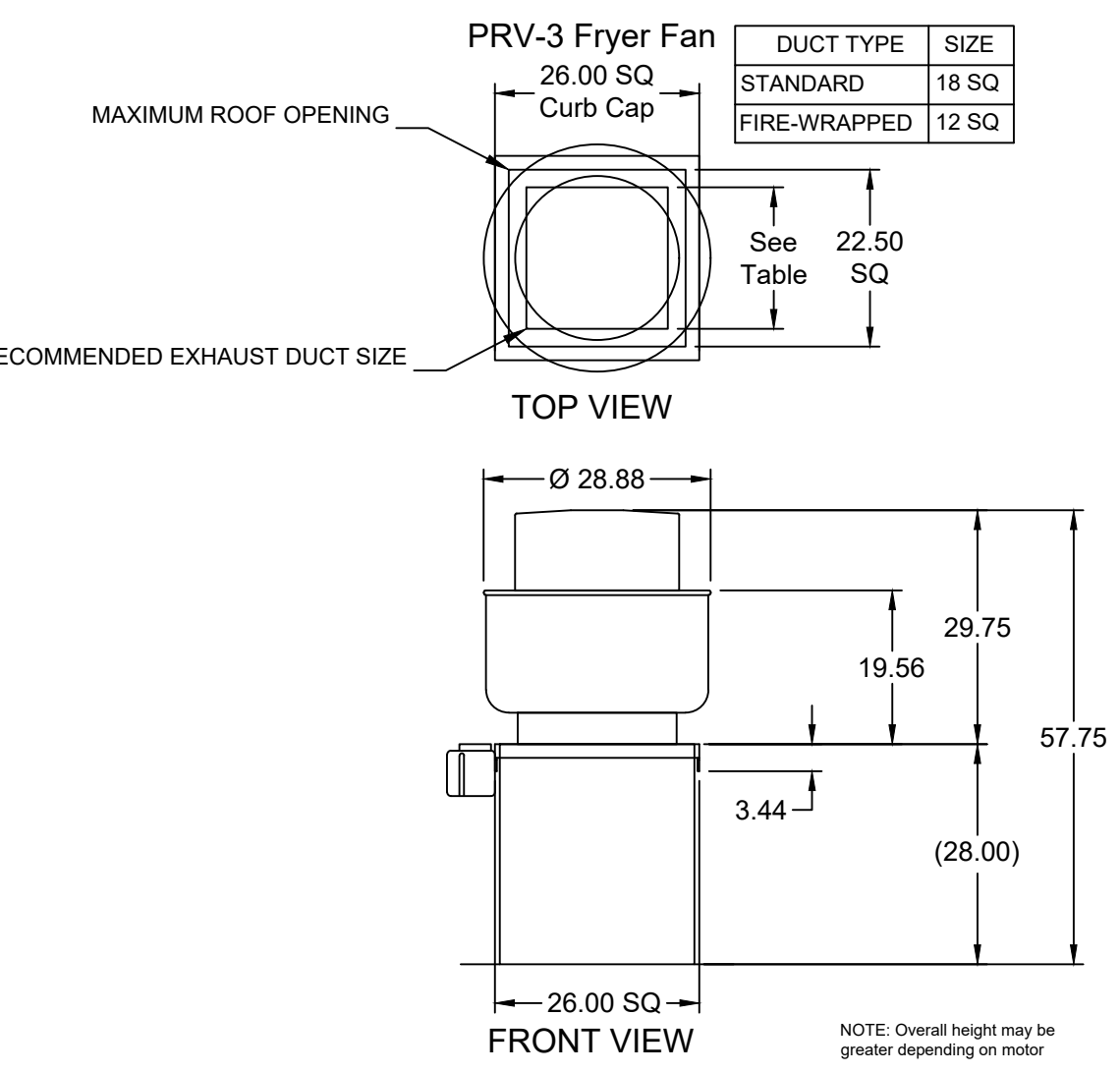
PITCO MODEL CU-SSH60W/WR 4-VAT FRYER FLUE ADAPTER OR FRYMASTER MODEL 41814GF-CFS



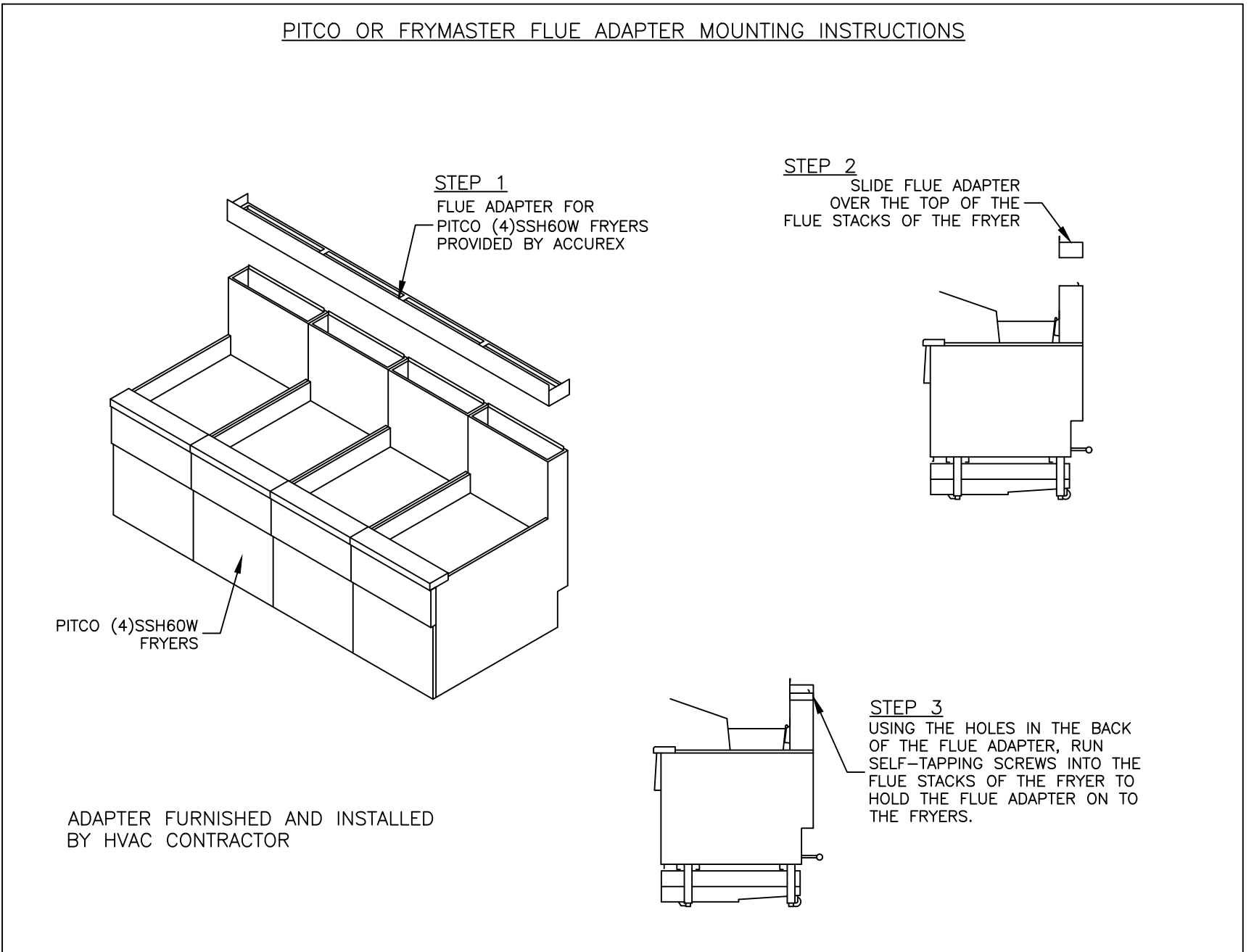
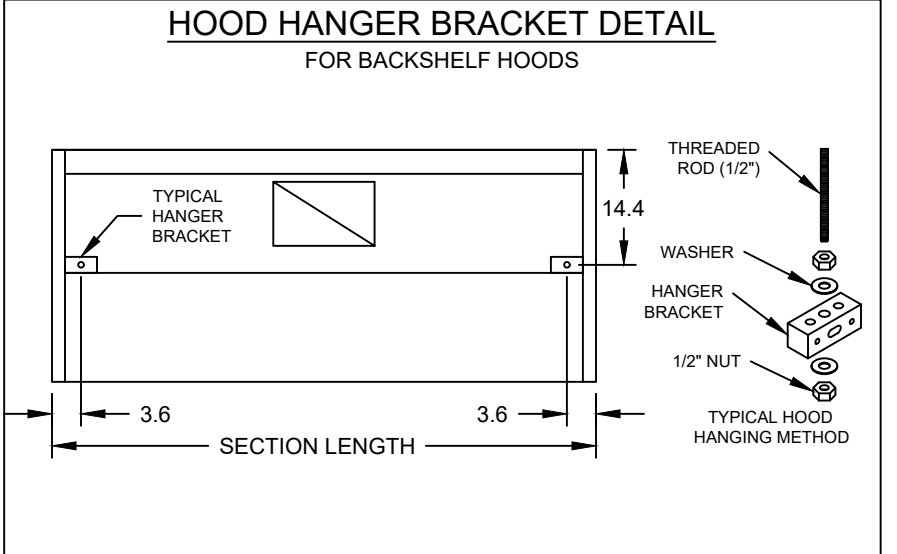
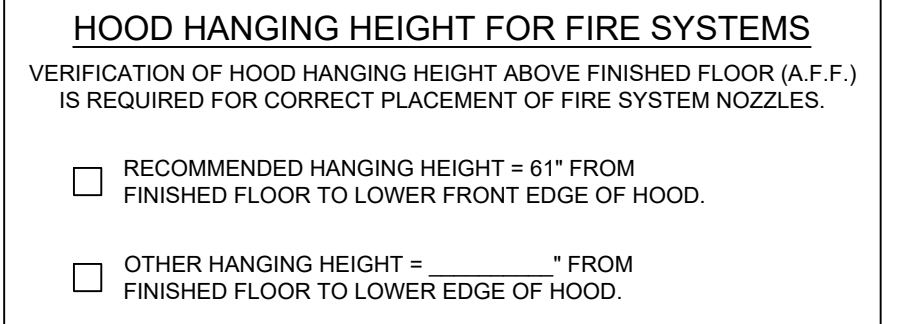
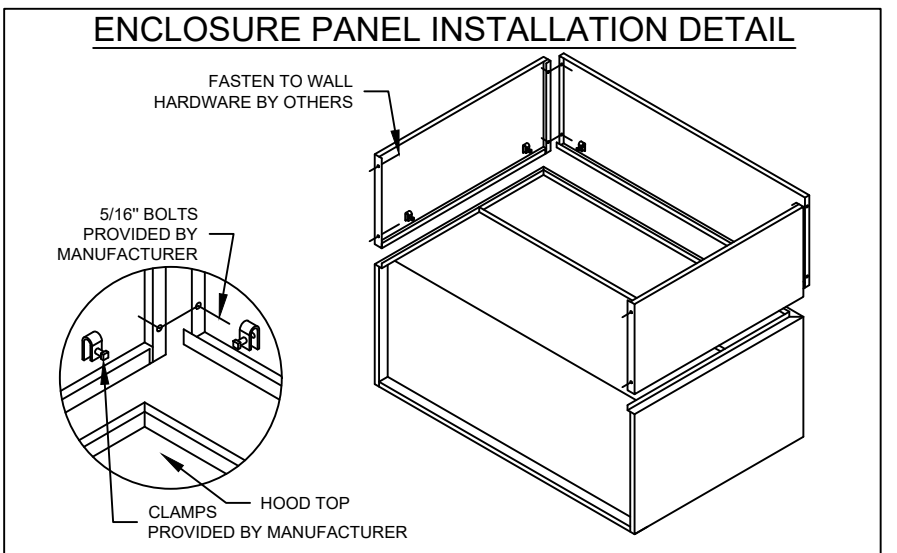
SECTION 1 ELEVATION VIEW



MARK: ITEM #59 SECTION VIEW



NOTE: Overall height may be greater depending on motor



ACCUREX

CULVERS METRO L 2025 (S)

FRYER HOOD
PRV-3 FRYER FAN

ACCUREX - WI, IA
PHILLIP KRAFT
PHILLIP.KRAFT@ACCUREX.COM
262-227-7865

PROJECT
7/11/2024

MARK

FRYER HOOD/EXHAUST
SCHEDULE & DETAILS

Date: 06-27-2025

Revision:

2024-166

M203

OWNER:
S & L Properties Valparaiso Thornapple LLC
2651 Kirling Court
Portage, WI 53901
Jeff Legel, Realty Manager / Member
608-742-2853

NEW CULVER'S RESTAURANT
852 Thornapple Way
Valparaiso, IN 46385
County of PORTER

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LOWELL JOHN LASKON
REGISTERED PROFESSIONAL ENGINEER
STATE OF INDIANA
No. PE1400475
EXP. 7/31/2026

FOR QUESTIONS, CALL THE
 Florida National Accounts
 REGION 60
 PHONE: (407) 682 - 3100
 EMAIL: reg60@captiveaire.com

HOOD INFORMATION - JOB#8200732

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)				HOOD CONSTRUCTION	HOOD CONFIG				
										WIDTH	LENG	HEIGHT	DIA		CFM	VEL	SP	END TO END	RDW
1	FRYER HOOD	3347 BD-2	CAPTIVEAIRE	7' 0"	600 DEG	I	HEAVY	214	1500			4'	12'	1500	1910	-1.090"	430 SS WHERE EXPOSED	ALONE	ALONE
2	GRIDDLE HOOD	3347 BD-2	CAPTIVEAIRE	5' 6"	600 DEG	I	HEAVY	273	1500			4'	12'	1500	1910	-1.412"	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WEIGHT	
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM	ELECTRICAL			SWITCHES
1	FRYER HOOD	CAPTRATE SOLO FILTER	5	16"	16"	85% SEE FILTER SPEC	3	L55 SERIES E26	NO						NO	282 LBS
2	GRIDDLE HOOD	CAPTRATE SOLO FILTER	4	16"	16"	85% SEE FILTER SPEC	3	L55 SERIES E26	NO						NO	235 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	FRYER HOOD	FIELD WRAPPER 14.00' HIGH FRONT, LEFT, RIGHT.
		RIGHT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.
		LEFT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.
2	GRIDDLE HOOD	FIELD WRAPPER 14.00' HIGH FRONT, LEFT, RIGHT.
		RIGHT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.
		LEFT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.

FIRE SYSTEM INFORMATION - JOB#6346059

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		ANSUL R102	3.0/3.0	22	14	WALL MOUNT LEFT	N/A
2		ANSUL R102	3.0	11	6	WALL MOUNT LEFT	N/A

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLO FILTER

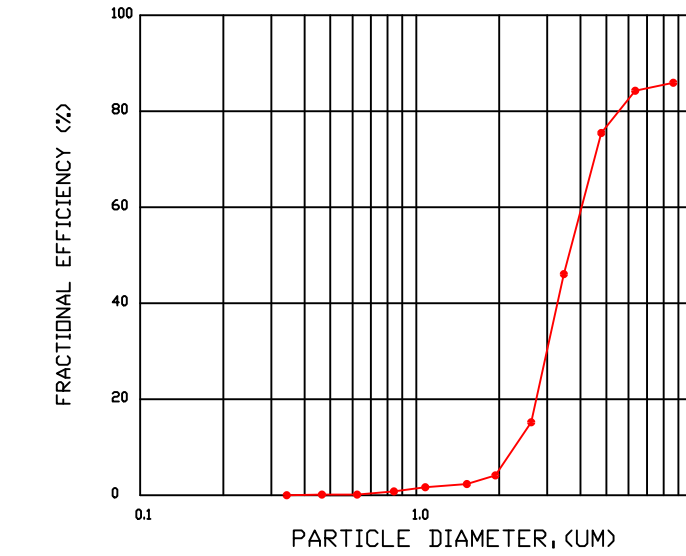
THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

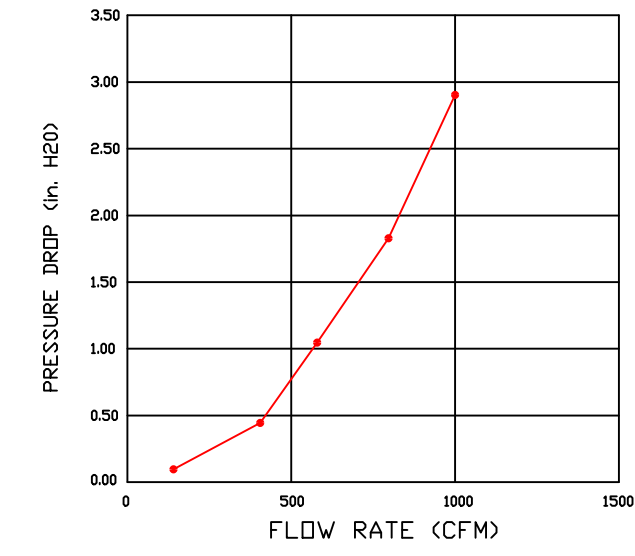
UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES' OF WATER GAUGE. THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

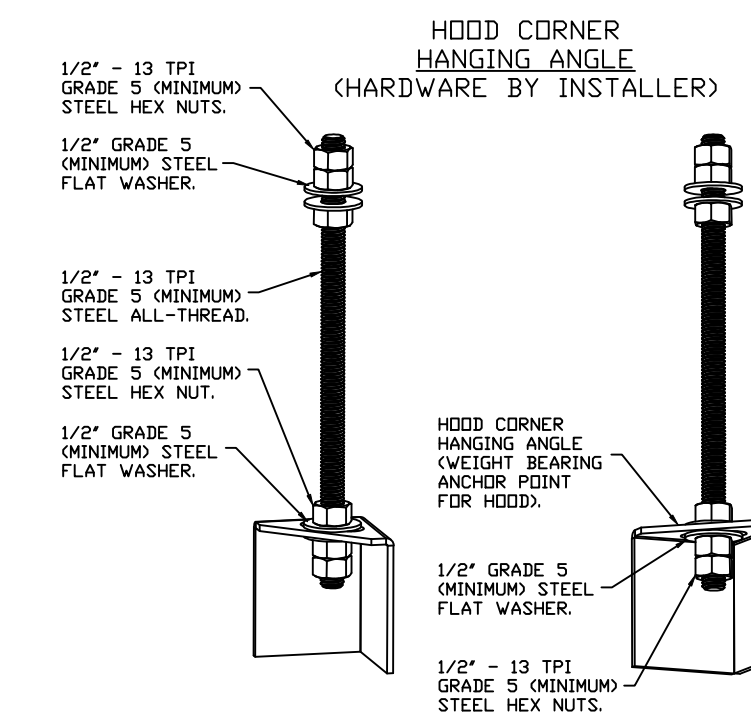
EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE

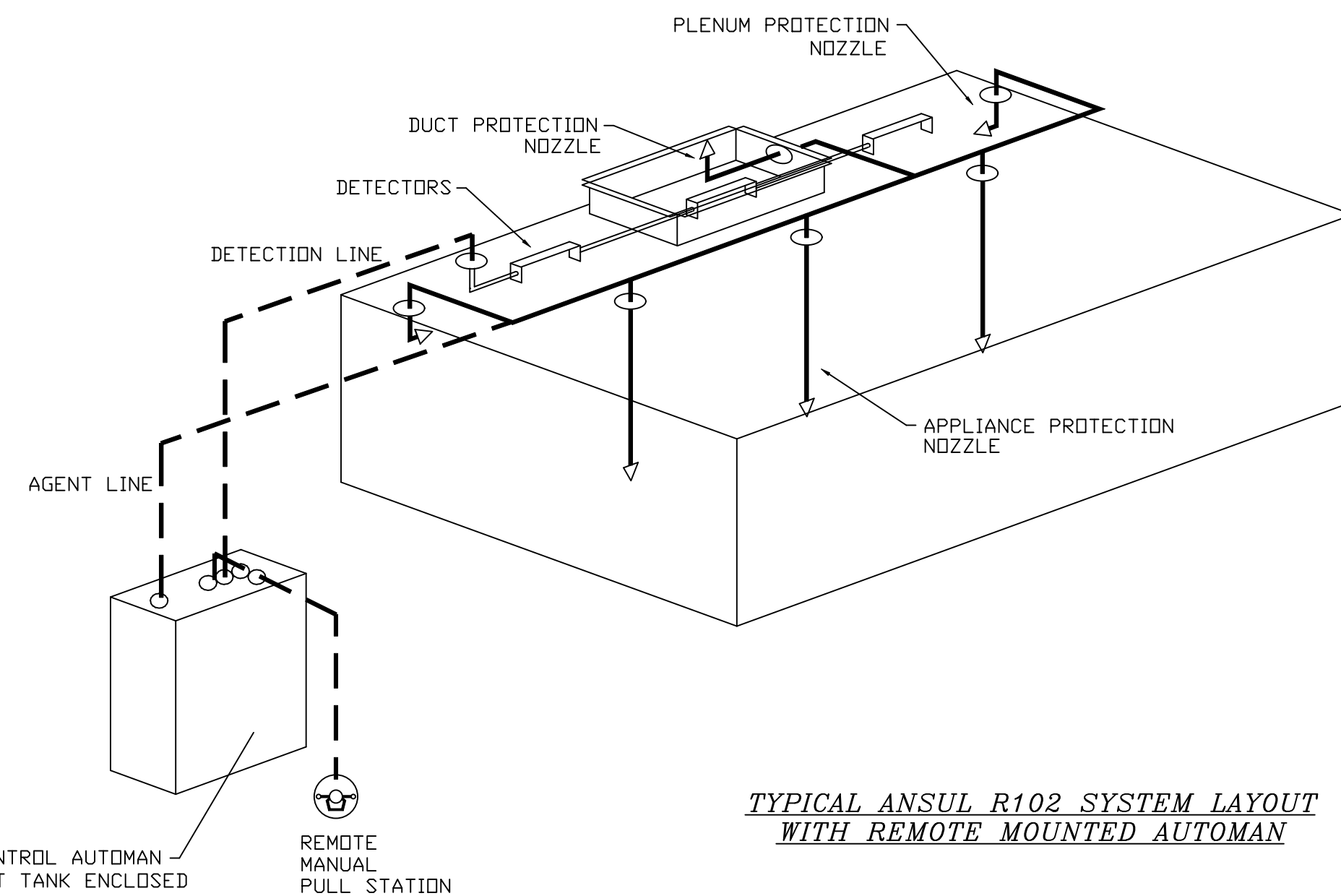


CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
 NFPA #96.
 NSF STANDARD #2.
 UL STANDARD #1046.
 INT. MECH. CODE (IMC).
 ULC-S649.



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLE HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



TYPICAL ANSUL R102 SYSTEM LAYOUT WITH REMOTE MOUNTED AUTOMAN

REVISIONS

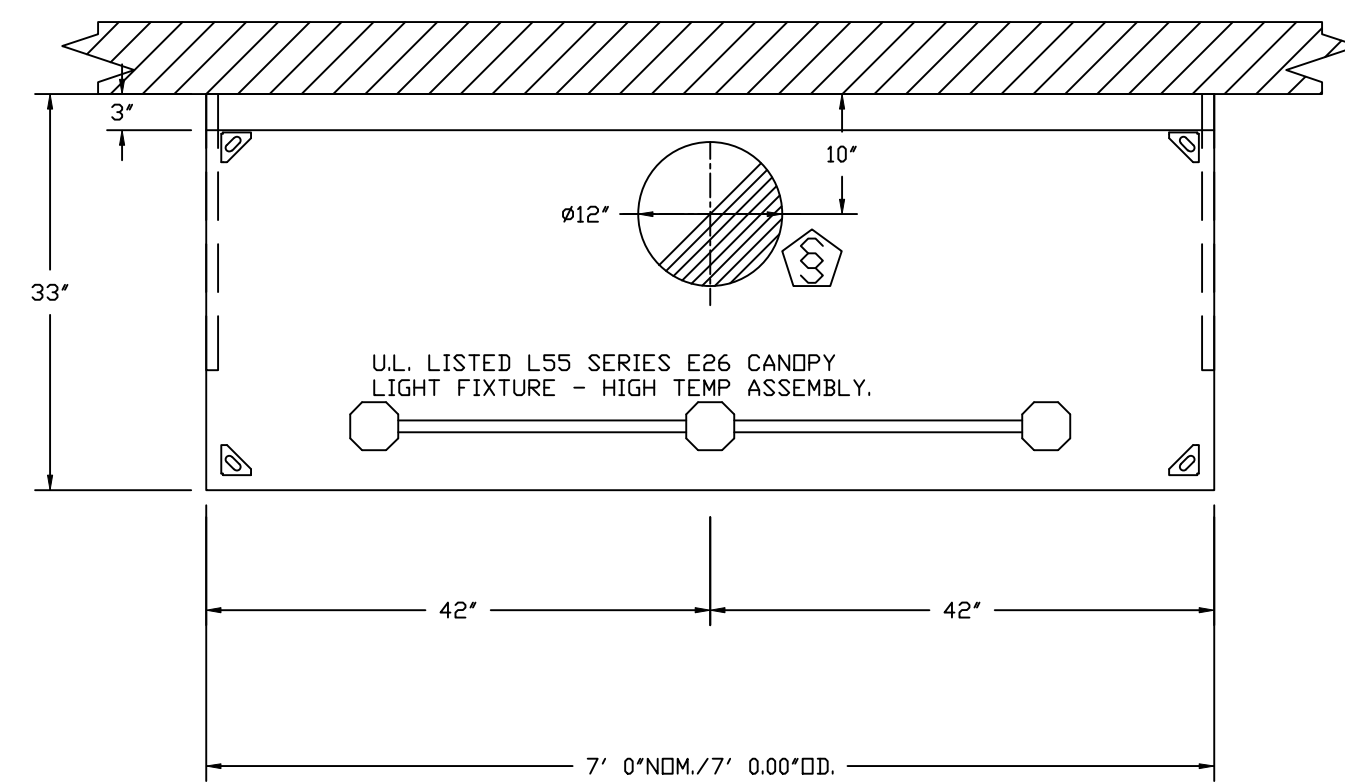
DESCRIPTION	DATE

CAPTIVEAIRE
 Florida National Accounts
 239 N Hunt Club Blvd., STE 201, Longwood, FL 32779
 PHONE: (407) 682 - 3100 FAX: 9192275913 EMAIL: reg60@captiveaire.com
 www.captiveaire.com

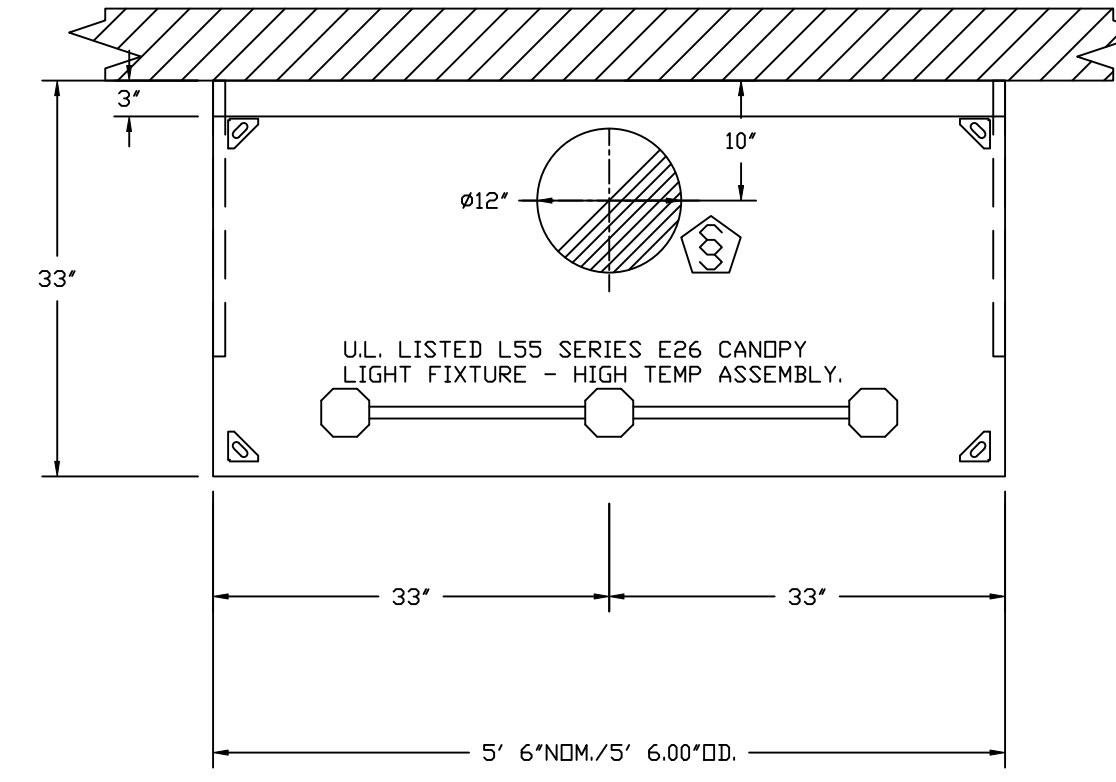
CULVERS VALPARAISO IN
 Valparaiso, IN, 46385

DATE: 8/29/2025
 DWG.#: 8200732
 DRAWN BY: sluddy jr
 SCALE: 3/4" = 1'-0"
 MASTER DRAWING

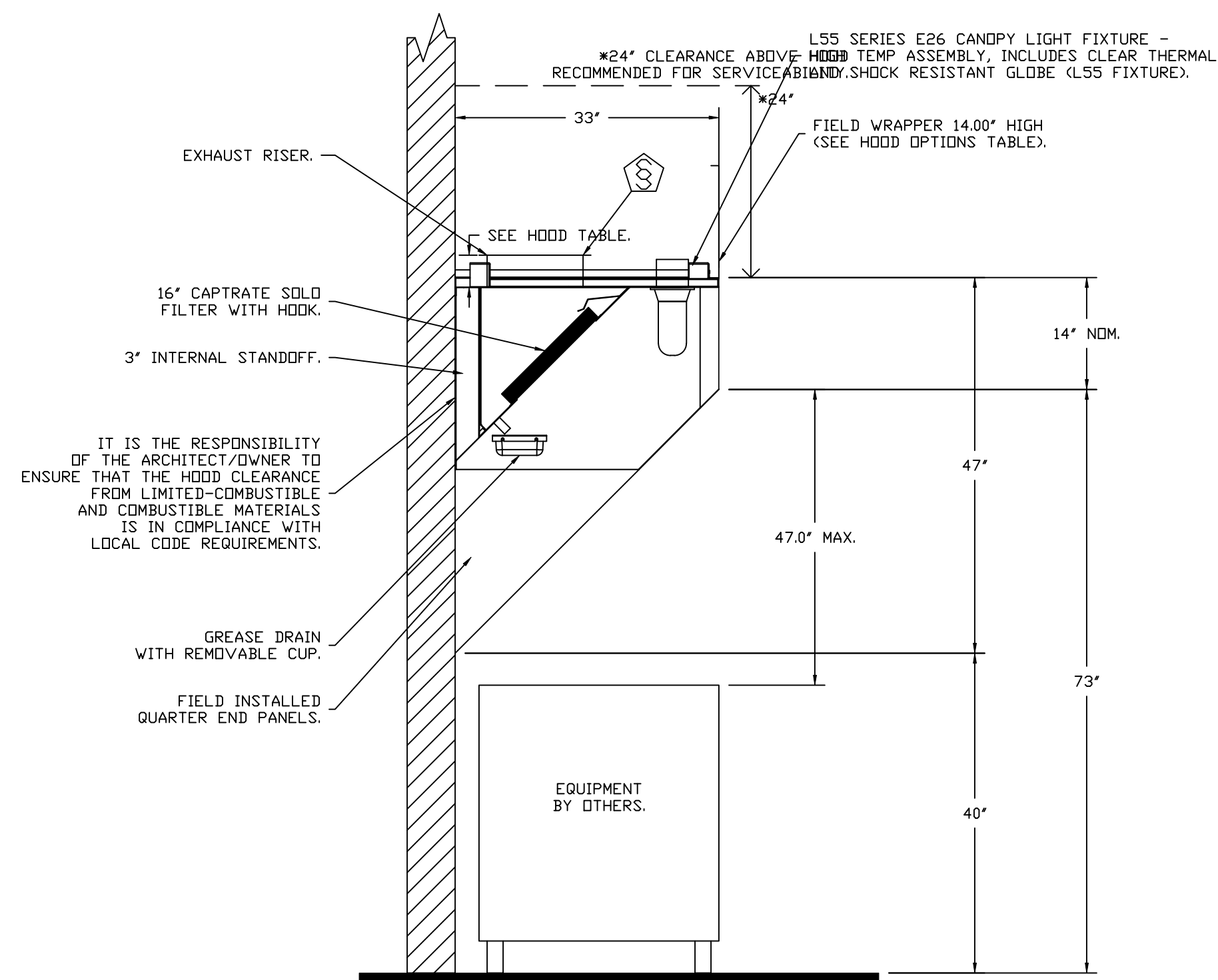
SHEET NO.
 1



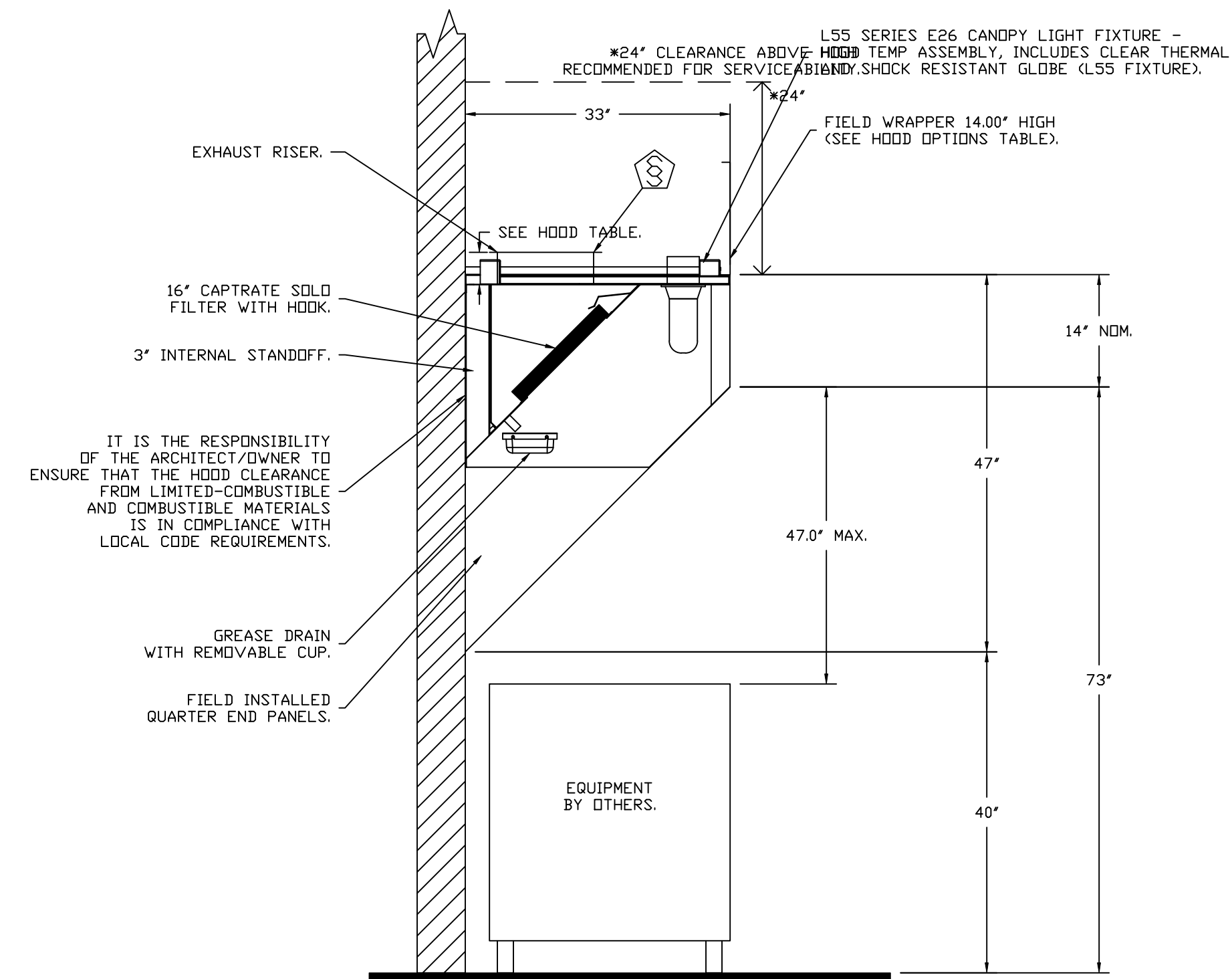
PLAN VIEW - HOOD #1 (FRYER HOOD)
7' 0.00" LONG 3347BD-2



PLAN VIEW - HOOD #2 (GRIDDLE HOOD)
5' 6.00" LONG 3347BD-2



SECTION VIEW - MODEL 3347BD-2
HOOD - #1 (FRYER HOOD)



SECTION VIEW - MODEL 3347BD-2
HOOD - #2 (GRIDDLE HOOD)

REVISIONS

DESCRIPTION	DATE

CAPTIVE

Florida National Accounts
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239 N Hunt Club Blvd., STE 201, Longwood, FL 32779 PHONE: (407) 682-3100 FAX: 9192275913 EMAIL: reg60@captiveaire.com

CULVERS VALPARAISO IN
Valparaiso, IN, 46385

DATE: 8/29/2025
DWG.#: 8200732
DRAWN BY: sluddy jr
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO.
2

EXHAUST FAN INFORMATION -- JOB#8200732

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SDNES
1	PRV-1 RESTROOM	1	DR12HFA	CAPTIVEAIRE	300	0.500	1288	TEAO-ECM	0.250	0.0920	1	115	2.9		85	6.1
2	PRV-2	1	DUB5HFA	CAPTIVEAIRE	1500	1.412	1406	TEAO-ECM	1.000	0.5330	1	115	11.6	475 FPM	130	12.3
3	PRV-3	1	DUB5HFA	CAPTIVEAIRE	1500	1.250	1348	TEAO-ECM	1.000	0.4700	1	115	11.6	475 FPM	130	11.3
4	EF-1	1	CFA 100CA	CAPTIVEAIRE	75	0.125	493	GENERALPURPOSE	0.116	0.0510	1	115	1.1		26	N/A

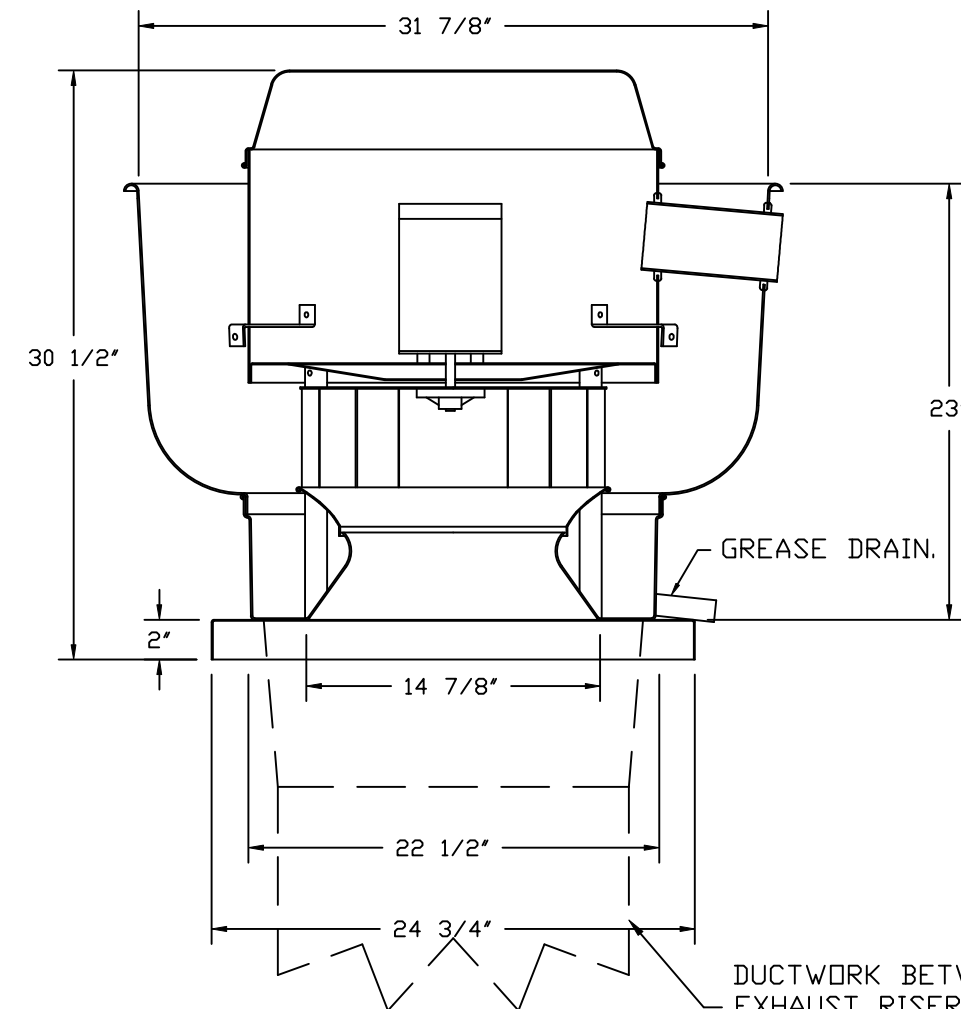
REVISIONS

NO.	DESCRIPTION	DATE

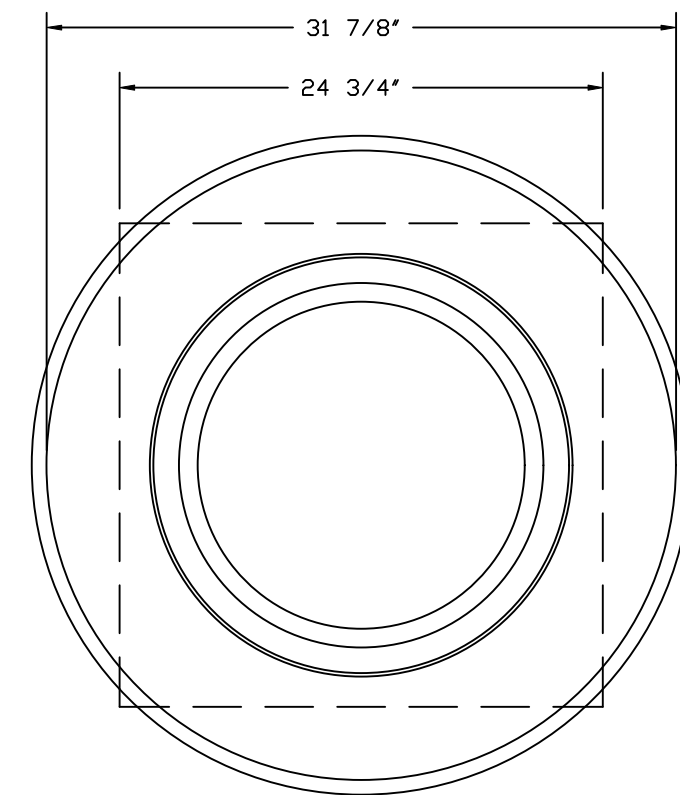
CAPTIVEAIRE
www.captiveaire.com

Florida National Accounts
239 N Hunt Club Blvd., STE 201, Longwood, FL 32779 PHONE: (407) 882-3100 FAX: 9192275913 EMAIL: reg60@captiveaire.com

FANS #2 (PRV-2), #3 (PRV-3) - DUB5HFA EXHAUST FAN



DUCTWORK BETWEEN EXHAUST RISER ON HOOD AND FAN (BY OTHERS).



TOP VIEW

FEATURES:

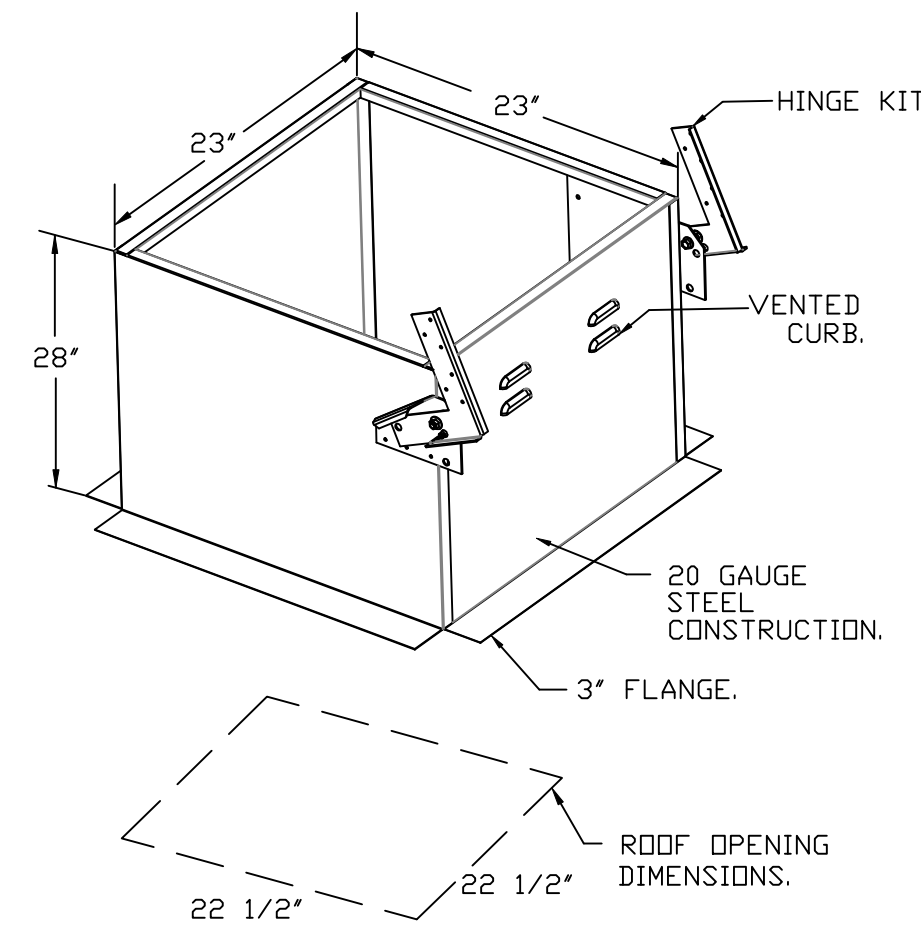
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

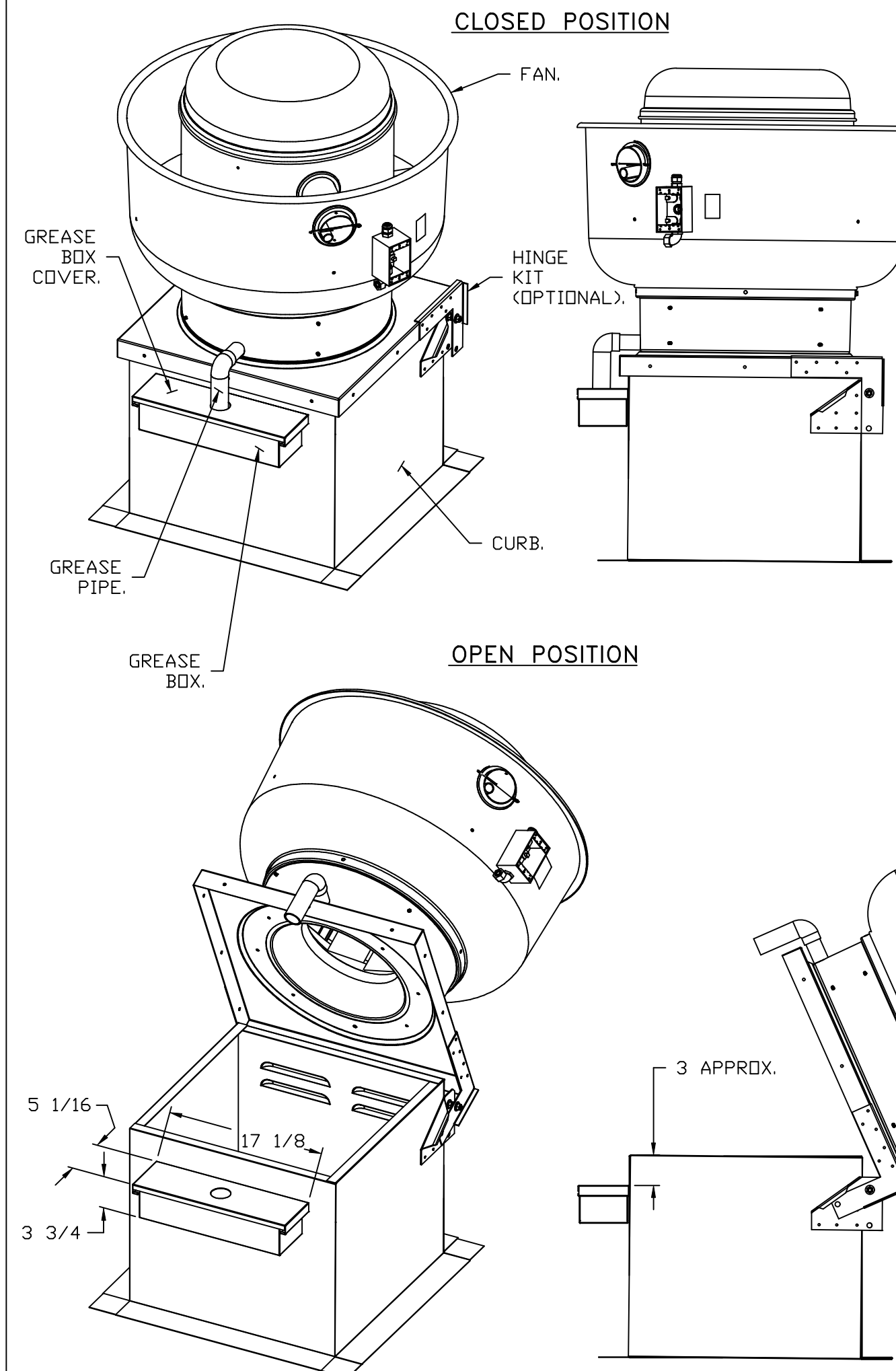
ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

- GREASE BOX.
- ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL.
- RTC- (TELCO MOTOR), CCW ROTATION.
- FAN BASE CERAMIC SEAL - DU/DRB5HFA
- SHIP LOOSE - FOR GREASE DUCTS.
- UPBLAST FAN WHEEL ACCESS PORT.
- FULL CRATING FOR EXHAUST FANS.
- 2 YEAR PARTS WARRANTY.



GREASE BOX INSTALLATION



*NOTE: UL 705 INSTALL.

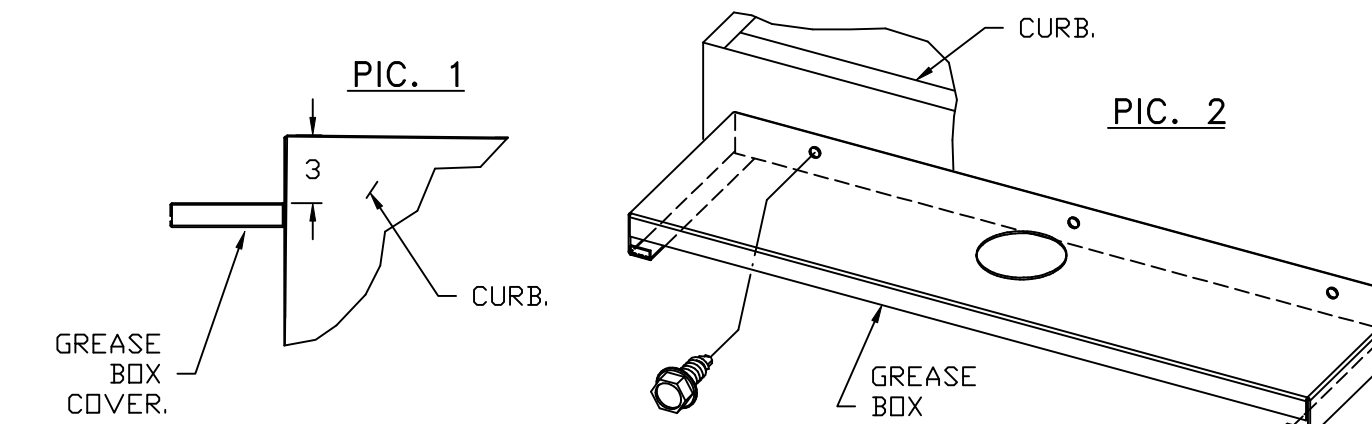
PARTS INCLUDED

- GREASE BOX.
- GREASE BOX COVER.
- GREASE PIPE.
- SHEET METAL SCREWS 3 - LONG (3/4" LG.).

GREASE BOX FIELD INSTALLATION

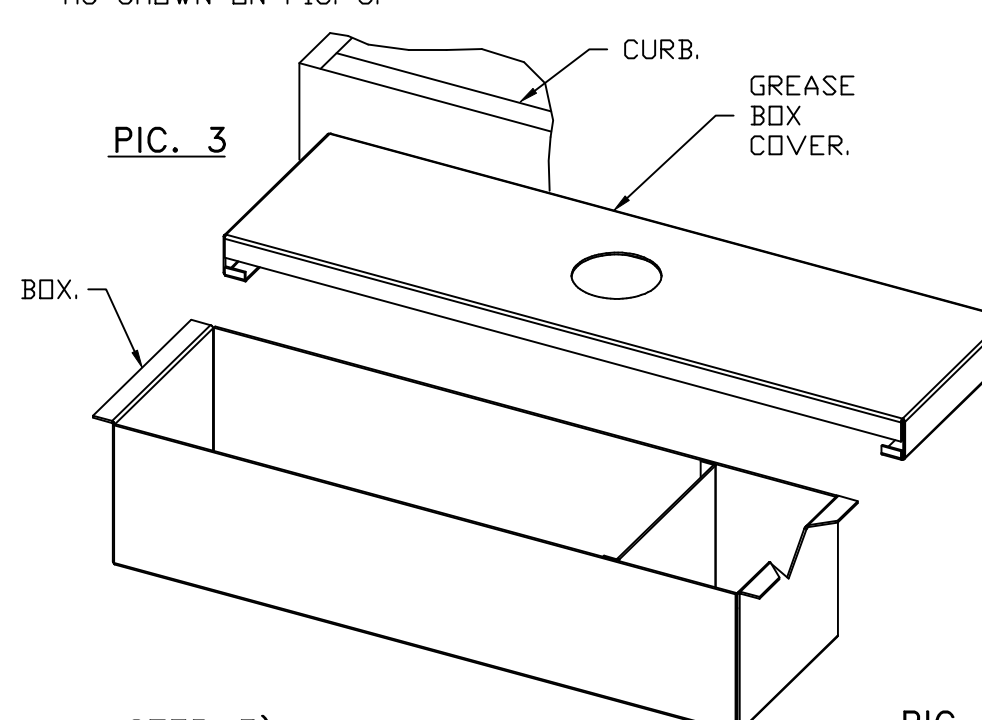
STEP 1)

ATTACH GREASE BOX COVER TO THE CURB, HOLD 3" DIMENSION AS SHOWN ON PIC. 1. SCREW GREASE BOX COVER TO CURB USING (3) LONG (3/4" LG.) SCREWS AS SHOWN ON PIC. 2.



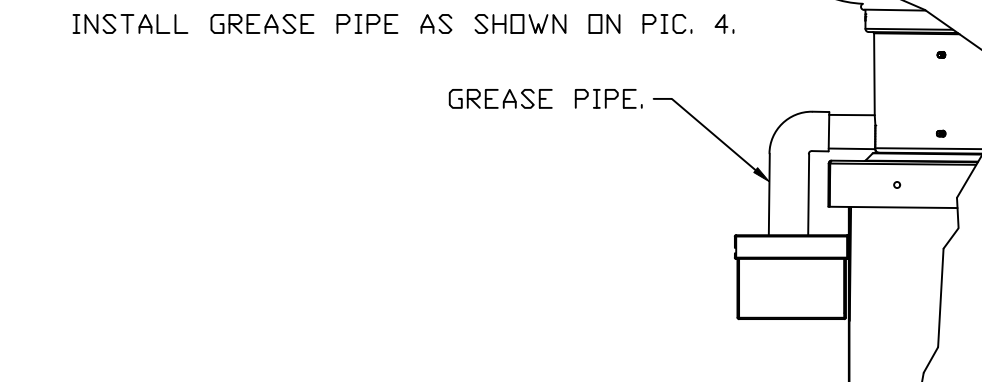
STEP 2)

ATTACH GREASE BOX TO GREASE BOX COVER, SLIDE AND DROP AS SHOWN ON PIC. 3.



STEP 3)

INSTALL GREASE PIPE AS SHOWN ON PIC. 4.



CULVERS VALPARAISO IN
Valparaiso, IN, 46385

DATE: 8/29/2025
DWG.#: 8200732
DRAWN BY: studdy jr
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 3

DOAS/RTU FAN SCHEDULE -- JOB#8200732

FAN UNIT NO	TAG	QTY	FAN INFORMATION										ELECTRICAL INFORMATION										COOLING INFORMATION										REHEAT INFORMATION										GAS HEAT INFORMATION										A2L MINIMUM ROOM VOLUME			NOTES
			DOAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOLTS	MCA	MDCP	DB	WB	MIXED AIR DB	MIXED AIR WB	LEAVING AIR DB	LEAVING AIR WB	CAPACITY TOTAL	SENS.	IEER	ISMRE2	DISCHARGE DB	DISCHARGE WB	CAPACITY DESIRED	CAPACITY MAX	MOISTURE REMOVAL RATE	GAS TYPE	INPUT BTU/H	OUTPUT BTU/H	TEMP RISE	REQUIRED INPUT GAS PRESSURE	ROOM AREA (FT ²)	AIRFLOW (CFM)	HEIGHT (FT)																		
5	RTU-1 DINING	1	CAS-HVAC3-1.400-24-20T	CAPTIVEAIRE	24MF-3-RTU	4450	1700	6150	2818	0.750	10.00	3	208	103.1A	125A	86.5°F	77.5°F	78.2°F	66.9°F	53.2°F	53.2°F	53.2°F	247.8 MBH	160.6 MBH	18.2	7.9	70.0°F	59.6°F	112.6 MBH	129.6 MBH	80.3 LBS/HR	NATURAL	2882716	289000	35°F	7 IN. W.C. - 14 IN. W.C.	572.7	1031	7.2	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20																
6	RTU-2 KITCHEN	1	CAS-HVAC3-1.300-24-20T	CAPTIVEAIRE	24MF-3-RTU	4550	1675	6225	2775	0.750	10.00	3	208	103.1A	125A	86.5°F	77.3°F	78.1°F	66.7°F	53.2°F	53.2°F	53.2°F	245.9 MBH	161.1 MBH	18.2	7.9	70.0°F	59.6°F	113.4 MBH	129.6 MBH	78.0 LBS/HR	NATURAL	212346	172000	26°F	7 IN. W.C. - 14 IN. W.C.	595.6	1031	7.2	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20																

NOTES:
 1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
 2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
 3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
 4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
 5. EC MOTOR CONDENSING FANS
 6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
 7. SUCTION LINE ACCUMULATOR
 8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
 9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
 10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE
 11. 81% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 6:1 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP
 12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
 13. FULLY MODULATING HOT GAS REHEAT
 14. 15 DEGREE LDW AMBIENT OPERATION
 15. HAIL GUARD FOR CONDENSING COIL
 16. RTU ECONDMIZER WITH FIXED ENTHALPY CONTROL
 17. BAROMETRIC RELIEF DAMPER
 18. DOWN DISCHARGE/DOWN RETURN
 19. MINIMUM ROOM AREA ASSUMED 7.2" SUPPLY DIFFUSER HEIGHT AND IS CALCULATED PER UL60335-2-40 4TH ED. VALUES BASED ON FACTORY CHARGE. ACTUAL SITE CHARGE MAY DIFFER.
 20. SCOR RATING OF 10KAMP

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST				SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT	
1	PRV-1 RESTROOM		YES						
2	PRV-2	YES							
3	PRV-3	YES							
4	EF-1								

CURB ASSEMBLIES

NO	DN FAN	TAG	R-VALUE	WEIGHT	ITEM	SIZE
1	# 1	PRV-1 RESTROOM		22 LBS	CURB	17.500"W X 17.500"L X 20.000"H
2	# 2	PRV-2		49 LBS	CURB	23.000"W X 23.000"L X 28.000"H VENTED HINGED.
3	# 3	PRV-3		49 LBS	CURB	23.000"W X 23.000"L X 28.000"H VENTED HINGED.
5	# 5	RTU-1 DINING	4.3	104 LBS	CURB	59.500"W X 91.000"L X 14.000"H 0.25012.000 PITCH ALONG WIDTH, RIGHT INSULATED.
6	# 6	RTU-2 KITCHEN	4.3	173 LBS	CURB	59.500"W X 91.000"L X 14.000"H 0.25012.000 PITCH ALONG WIDTH, RIGHT INSULATED 16 GAUGE.

* R4.3 FOL FACED FIBERGLASS INSULATION. COMPLIES WITH UL/ULC/ASTM, & ASHRAE STANDARDS.

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	PRV-1 RESTROOM	1	ECH WIRING PACKAGE - EXHAUST - MANUAL DR 0-10VDC REFERENCE SPEED CONTROL -MSC- (TELCD), CCW ROTATION
			1 12-BDD DAMPER
			1 FULL CRATING FOR EXHAUST FANS
			1 2 YEAR PARTS WARRANTY
			1 GREASE BOX
			1 ECH WIRING PACKAGE - MANUAL DR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCD MOTOR), CCW ROTATION
			1 FAN BASE CERAMIC SEAL - DU/DRBSHFA - SHIP LOOSE - FDR GREASE DUCTS
			1 UPBLAST FAN WHEEL ACCESS PORT
			1 FULL CRATING FOR EXHAUST FANS
			1 2 YEAR PARTS WARRANTY
2	PRV-2	1	GREASE BOX
			1 ECH WIRING PACKAGE - MANUAL DR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCD MOTOR), CCW ROTATION
			1 FAN BASE CERAMIC SEAL - DU/DRBSHFA - SHIP LOOSE - FDR GREASE DUCTS
			1 UPBLAST FAN WHEEL ACCESS PORT
			1 FULL CRATING FOR EXHAUST FANS
			1 2 YEAR PARTS WARRANTY
			1 GREASE BOX
			1 ECH WIRING PACKAGE - MANUAL DR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCD MOTOR), CCW ROTATION
			1 FAN BASE CERAMIC SEAL - DU/DRBSHFA - SHIP LOOSE - FDR GREASE DUCTS
			1 UPBLAST FAN WHEEL ACCESS PORT
3	PRV-3	1	UPBLAST FAN WHEEL ACCESS PORT
			1 FULL CRATING FOR EXHAUST FANS
			1 2 YEAR PARTS WARRANTY
			1 GREASE BOX
			1 ECH WIRING PACKAGE - MANUAL DR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCD MOTOR), CCW ROTATION
			1 FAN BASE CERAMIC SEAL - DU/DRBSHFA - SHIP LOOSE - FDR GREASE DUCTS
			1 UPBLAST FAN WHEEL ACCESS PORT
			1 FULL CRATING FOR EXHAUST FANS
			1 2 YEAR PARTS WARRANTY
			1 MGI - METAL GRILLE KIT
4	EF-1	1	FAN CONTROL - 3 AMP WHITE SPEED CONTROL FOR CFA CEILING FAN
			2 YEAR PARTS WARRANTY
			1 INLET PRESSURE GAUGE, 0-35"
			1 MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
			1 COOLING OVERRIDE
			1 SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE.
			1 RTU BLOWER DOOR SWITCH
			1 RTU3 DOWN DISCHARGE, 400, 500 MBH
			1 2" MERV 13 FILTERS FOR RTU3 (QTY. 4)
			1 2" MERV 8 FILTERS FOR RTU3 (QTY. 4)
5	RTU-1 DINING	1	OVERHEAT STAT
			1 TOTAL CFM MONITORING
			1 VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
			1 OCCUPIED SCHEDULING
			1 INTAKE FIRESTAT SET TO 135°F
			1 FREEZESTAT
			1 DISCHARGE FIRESTAT SET TO 240°F
			1 CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
			1 RTU3 CURB DUCT HANGER
			1 24VAC FIRE INPUT
6	RTU-2 KITCHEN	1	RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED
			1 RTU3 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
			1 RTU ECONDMIZER - FIXED ENTHALPY CONTROL
			1 RTU3 ECONDMIZER BAROMETRIC RELIEF
			1 RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI
			1 RTU3 HAIL GUARD
			1 RTU3 DOWN RETURN
			1 2" METAL MESH FILTERS FOR RTU3 OUTDOOR INTAKE
			1 VAV PACKAGE W/ MANUAL/DDC CONTROL (S71 VFD INCLUDED)
			1 20 TON MODULATING COOLING OPTION, 208/230V. R454B REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
7	RTU-1 DINING	1	LDW AMBIENT COOLING OPERATION - DOWN TO 0F AMBIENT
			1 R454B LEAK DETECTOR OPTION FOR RTU3
			1 20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL - R454B
			5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)
			1 EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	RTU-1 DINING	1	INLET PRESSURE GAUGE, 0-35"
			1 MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
			1 TOTAL CFM MONITORING
			1 INTAKE FIRESTAT SET TO 135°F
			1 FREEZESTAT
			1 DISCHARGE FIRESTAT SET TO 240°F
			1 CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
			1 RTU3 CURB DUCT HANGER
			1 24VAC FIRE INPUT
			1 RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED
2	RTU-2 KITCHEN	1	RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI
			1 RTU3 HAIL GUARD
			1 RTU3 DOWN RETURN
			1 RTU BLOWER DOOR SWITCH
			1 2" METAL MESH FILTERS FOR RTU3 OUTDOOR INTAKE
			1 VAV PACKAGE W/ 0-10VDC INPUT CONTROL (S71 VFD INCLUDED)
			1 24VAC FIRE INPUT
			1 VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
			1 COOLING OVERRIDE
			1 SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE.

HMI SCHEDULE				
UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS
FAN #5	HMI #1 - UNIT	IN UNIT	NOT AVERAGED	55
FAN #5	HMI #2 - SPACE		AVERAGED	56
FAN #5	HMI #3 - SPACE		AVERAGED	57
FAN #6	HMI #1 - UNIT	IN UNIT	NOT AVERAGED	55
FAN #6	HMI #2 - SPACE	MANAGER OFFICE	AVERAGED	56
FAN #6	HMI #3 - SPACE		AVERAGED	57

REVISIONS

DESCRIPTION	DATE:

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 239 N Hunt Club Blvd., STE 201, Longwood, FL 32779 PHONE: (407) 682-3100 FAX: 9192275913 EMAIL: reg60@captiveaire.com

CULVERS VALPARAISO IN
 Valparaiso, IN, 46385

DATE: 8/29/2025

DWG.#:
8200732

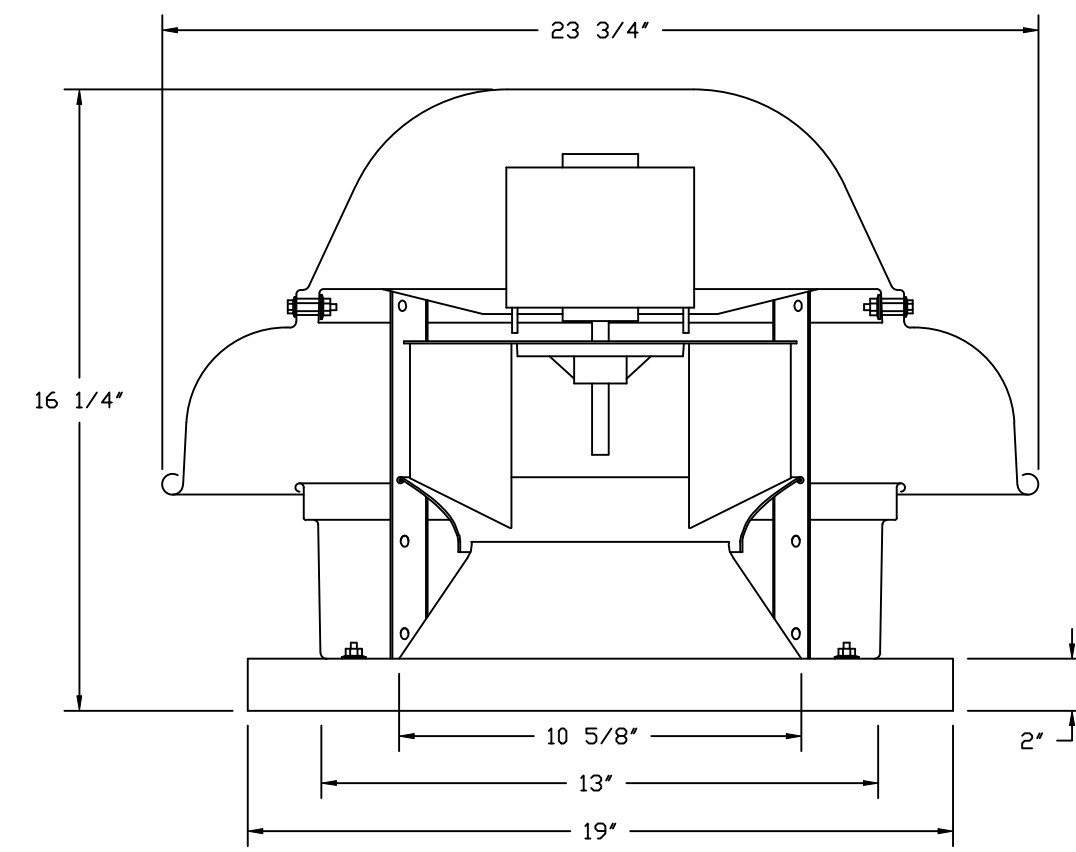
DRAWN BY: studdy jr

SCALE:
1/2" = 1'-0"

MASTER DRAWING

SHEET NO.
4

FAN #1_DR12HFA - EXHAUST FAN (PRV-1 RESTROOM)

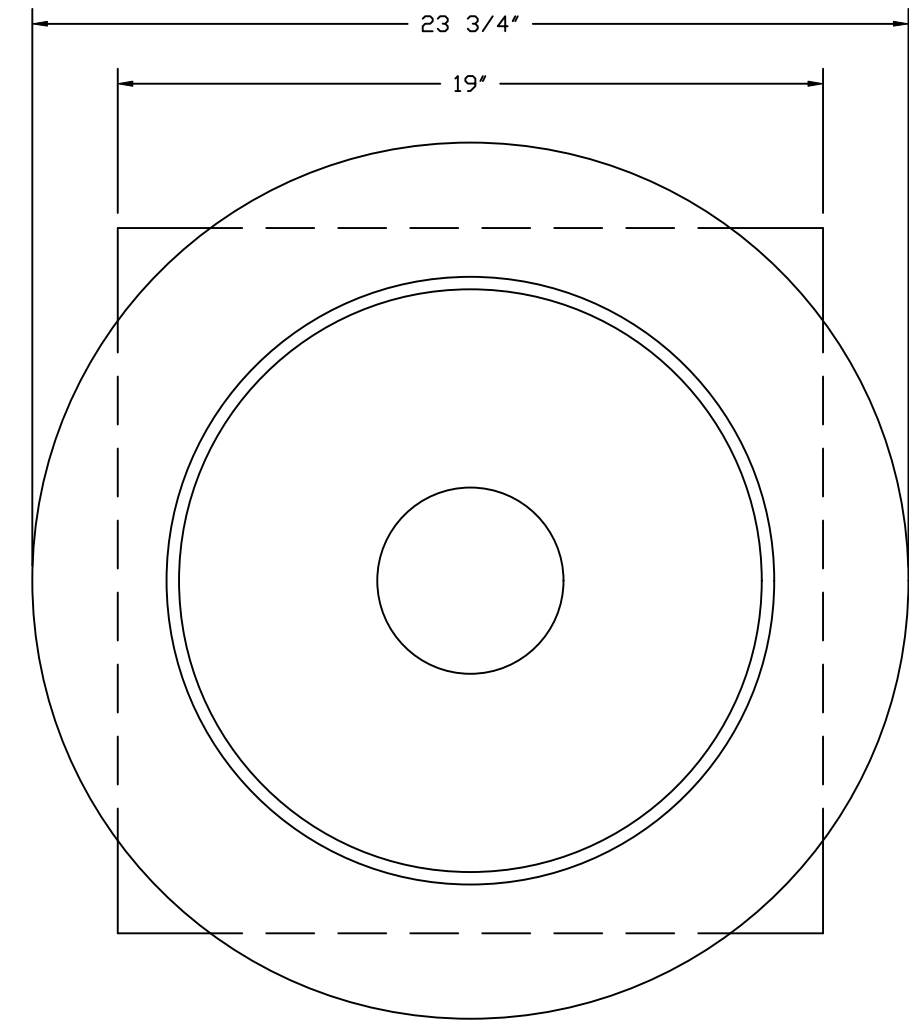
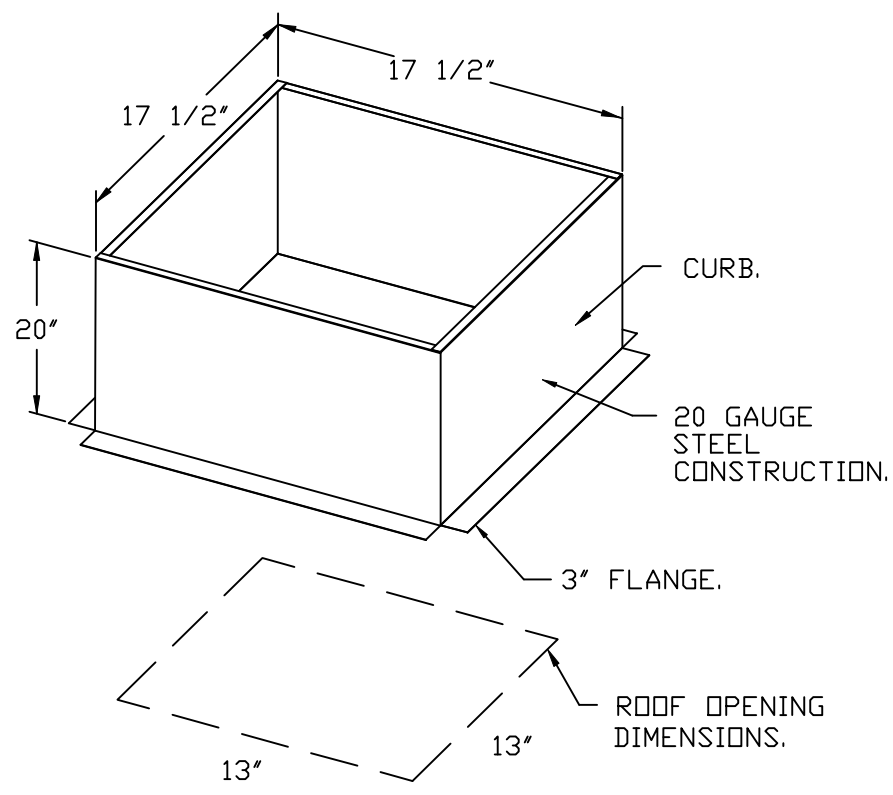


FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- SAFETY DISCONNECT.
- STANDARD BIRD SCREEN.
- SPEED CONTROL.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).

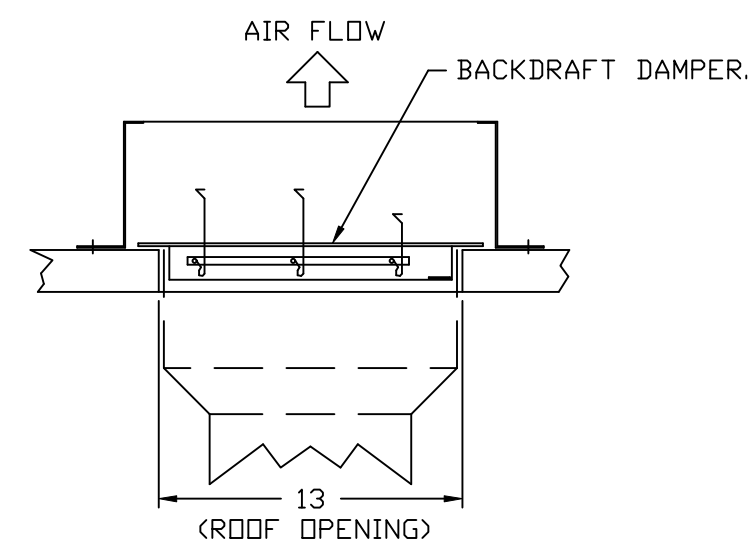
OPTIONS

- ECM WIRING PACKAGE - EXHAUST - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL - MSC - (TELCD), CCW ROTATION.
- 1 12-300 DAMPER.
- FULL CRATING FOR EXHAUST FANS.
- 2 YEAR PARTS WARRANTY.

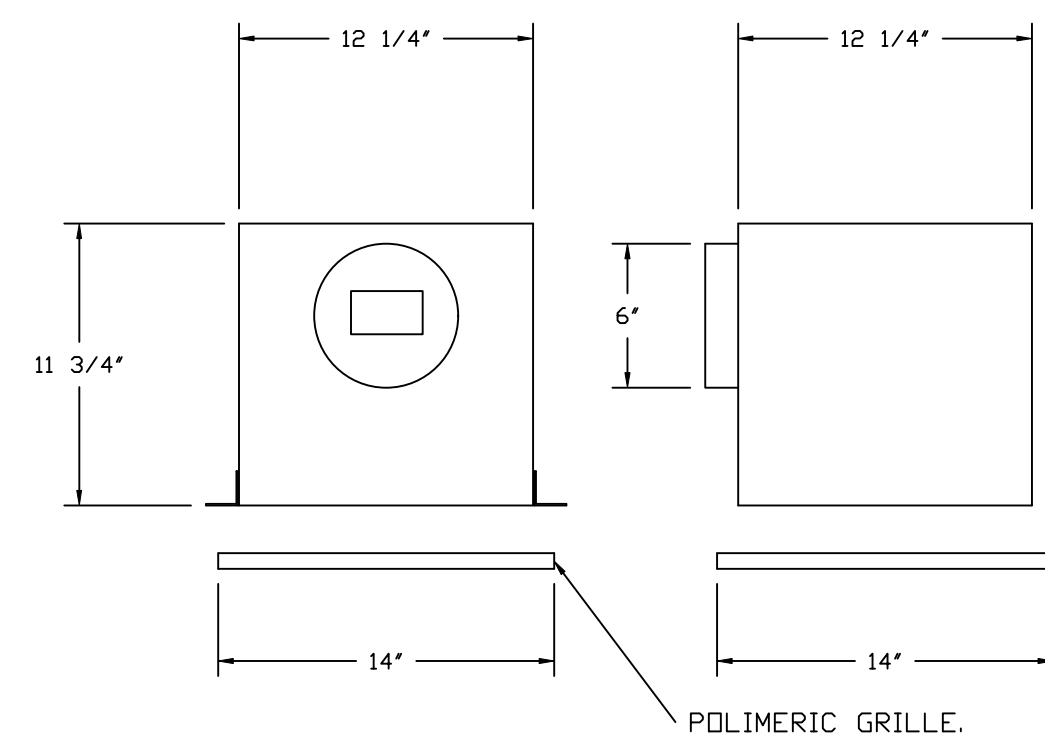


TOP VIEW

BACKDRAFT DAMPER INSTALLATION



FAN #4_CFA 100CA - EXHAUST FAN (CF-1)



FEATURES:

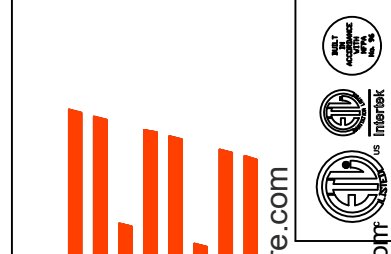
- 1/2" ACOUSTIC HOUSING INSULATION.
- 20 GA. GALVANIZED STEEL HOUSING.
- PLUG TYPE DISCONNECT.
- BUILD IN AUTOMATIC BACKDRAFT DAMPER.
- AMCA SOUND & AIR CERTIFIED.
- UL LISTED.
- CAN BE INSTALLED IN CEILING OR WALL.
- 8 POSITION MOUNTING BRACKETS.

OPTIONS

- MG1 - METAL GRILLE KIT.
- FAN CONTROL - 3 AMP WHITE SPEED CONTROL FOR CFA CEILING FAN.
- 2 YEAR PARTS WARRANTY.

REVISIONS

REVISIONS	DESCRIPTION	DATE:
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DWG.#: 8200732

DRAWN BY: studdy jr

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 5

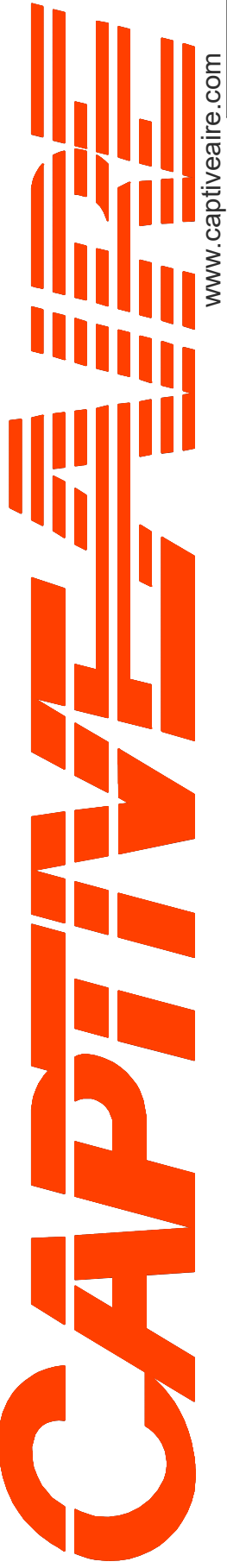
 GREASE DUCT & CHIMNEY SPECIFICATIONS:
 PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW"
 ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW"
 IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING
 CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW"
 DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER
 THE MANUFACTURES INSTALLATION GUIDE.
 PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER.
 PER MANUFACTURES LISTING MODEL "DW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE
 SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12".
 DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE
 ACCUMULATION IN HORIZONTAL RUNS.

 IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE
 UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY
 EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE
 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

CUSTOMER APPROVAL TO MANUFACTURE:

APPROVED AS NOTED	<input type="checkbox"/>
APPROVED WITH NO EXCEPTION TAKEN	<input type="checkbox"/>
REVISE AND RESUBMIT	<input type="checkbox"/>
SIGNATURE _____	
YOUR TITLE _____ DATE _____	

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 Valparaiso, IN, 46385

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DRAWN BY: sluddy jr

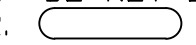
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MASTER DRAWING

SHEET NO.
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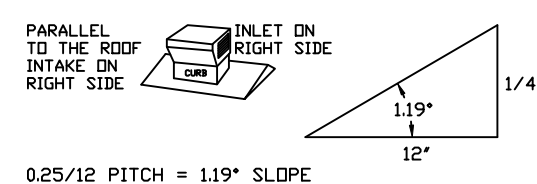
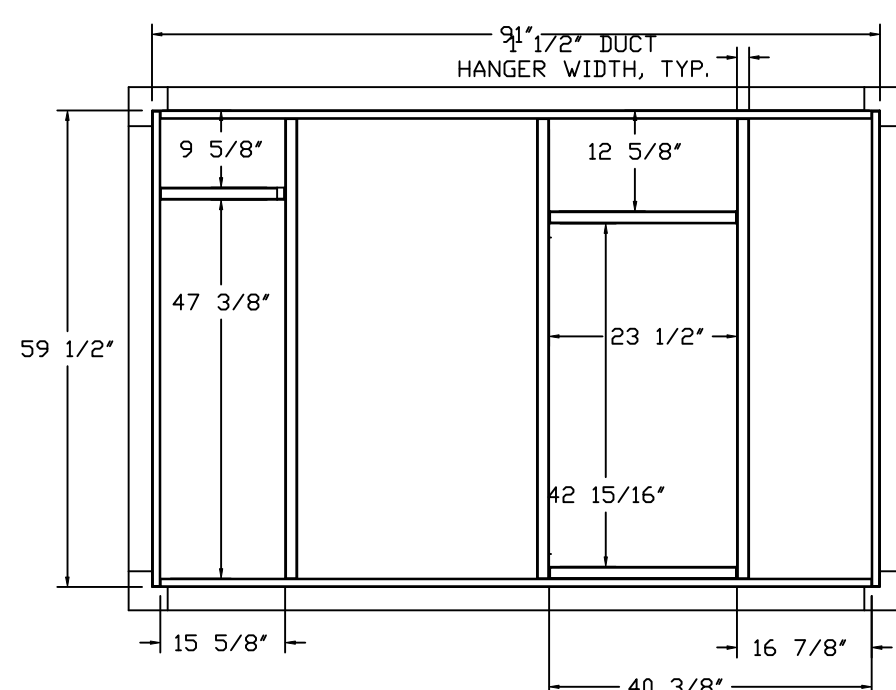
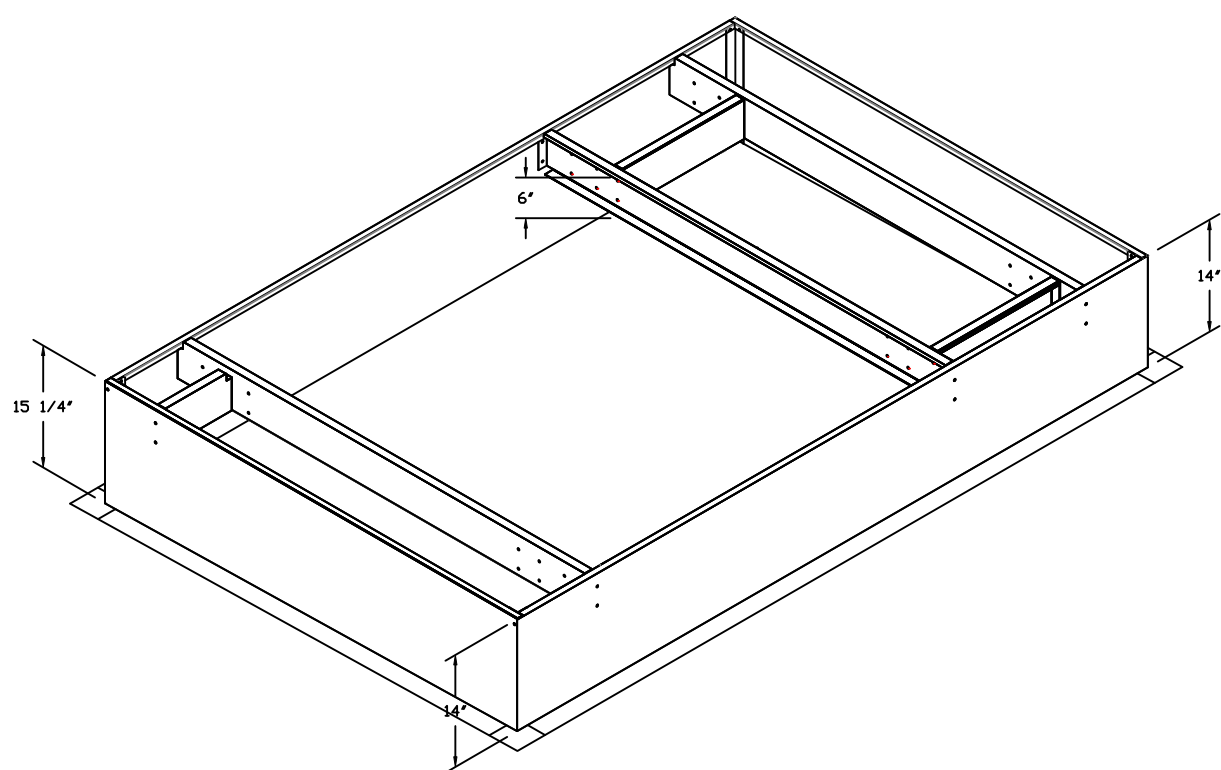
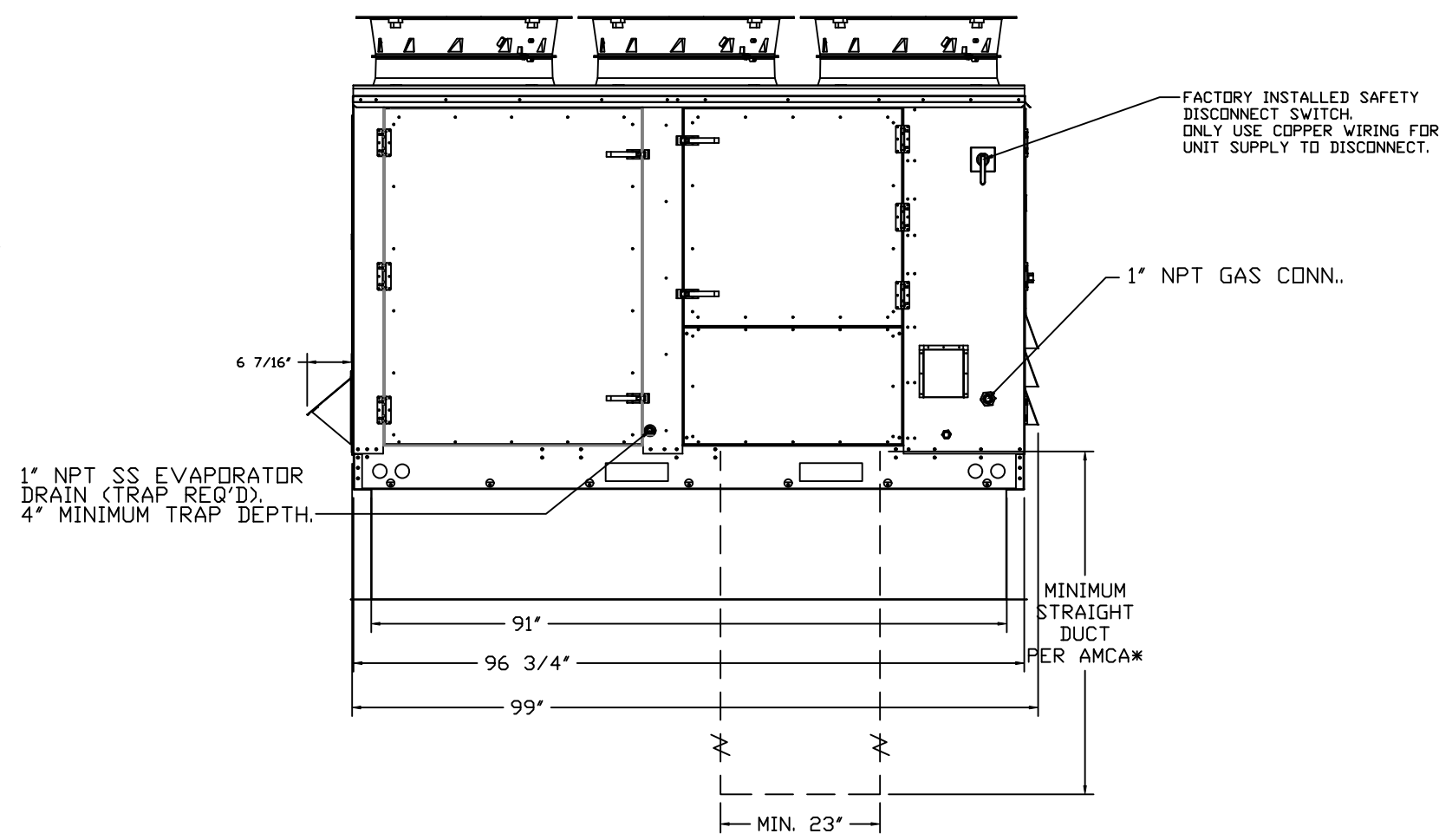
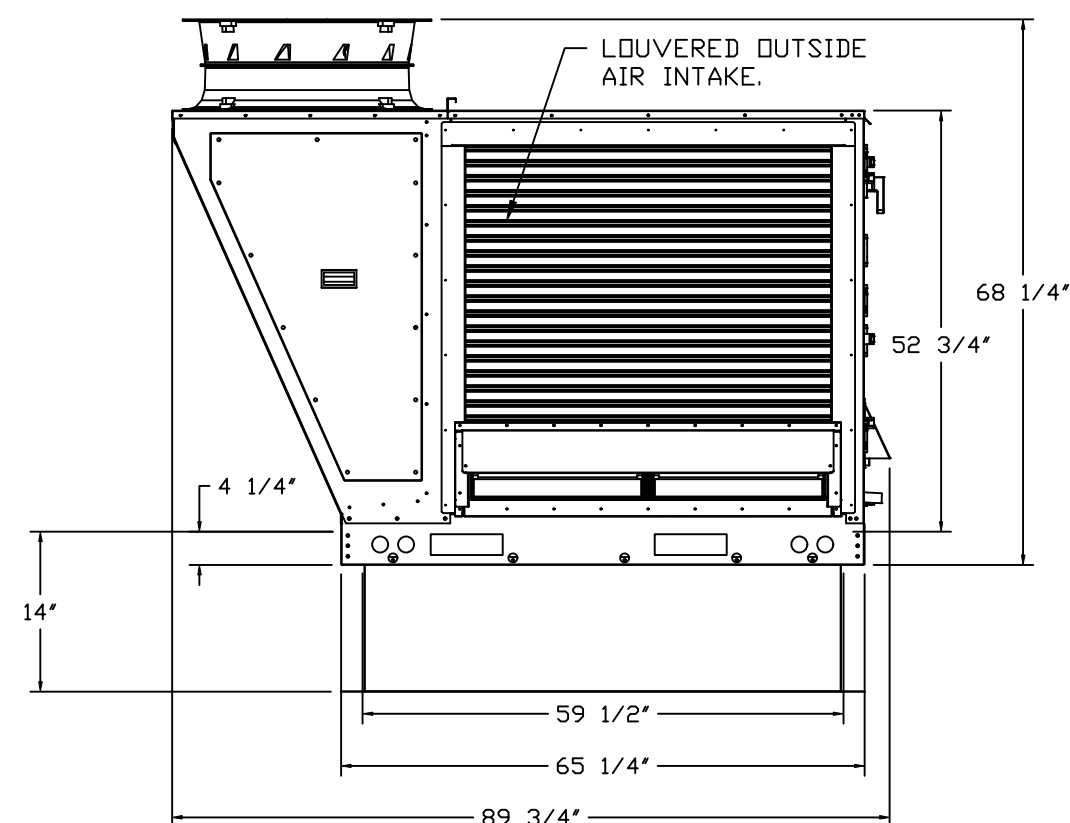
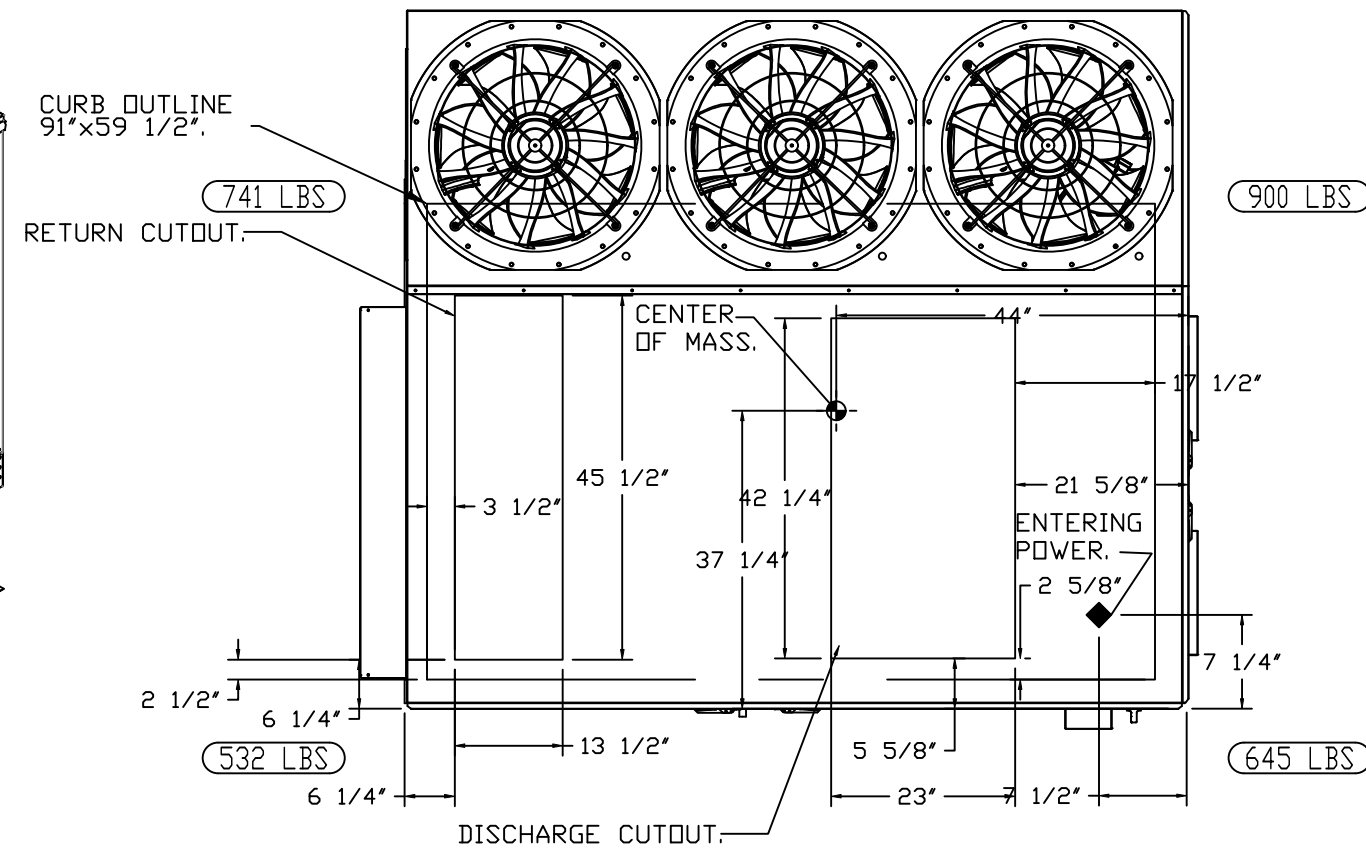
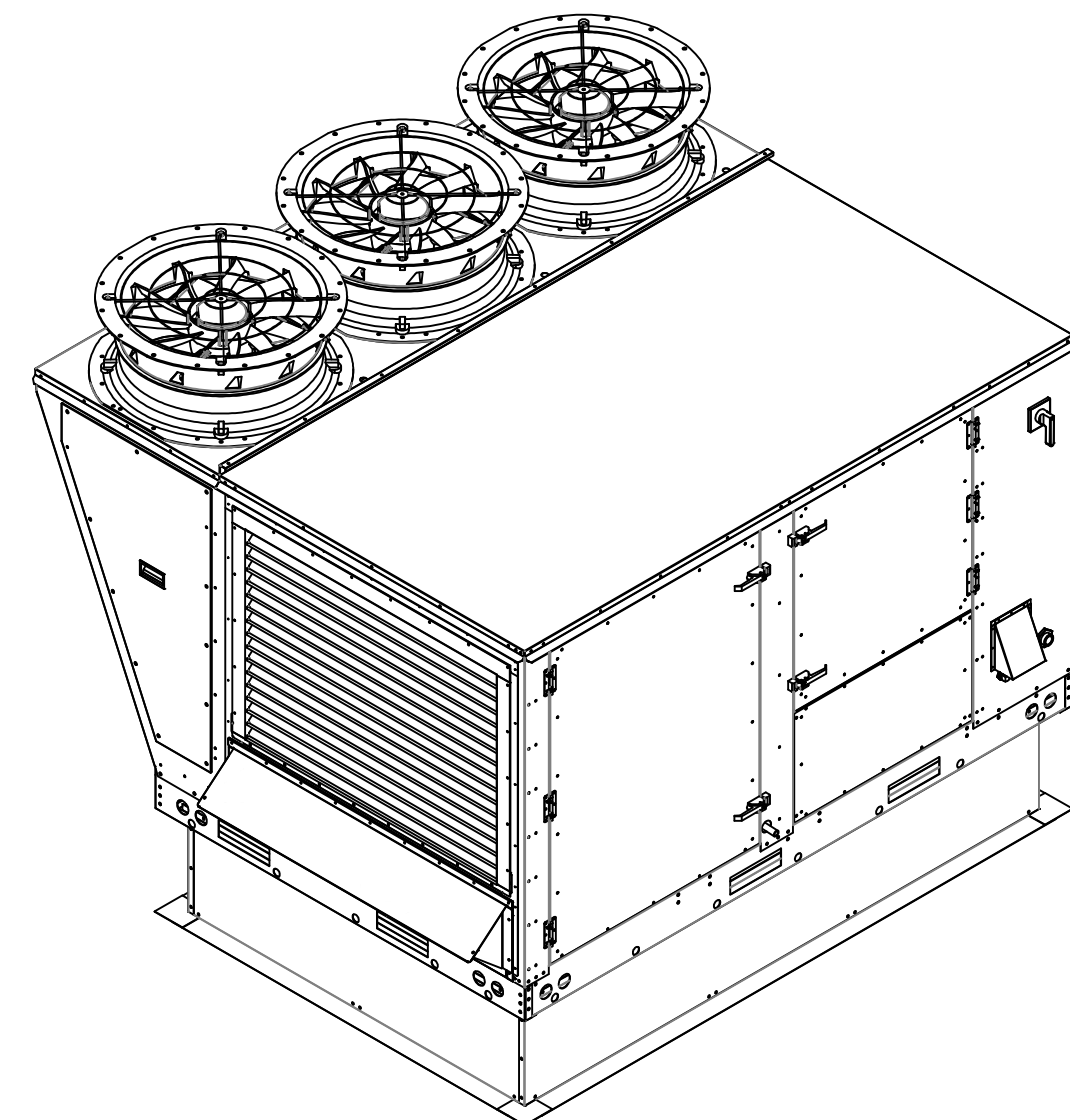
FAN #5 CAS-HVAC3-I.400-24MF-20T - HEATER (RTU-1 DINING)

NOTES:

- DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
-  DENOTES CORNER WEIGHT.
- ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
- CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.
- EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET.

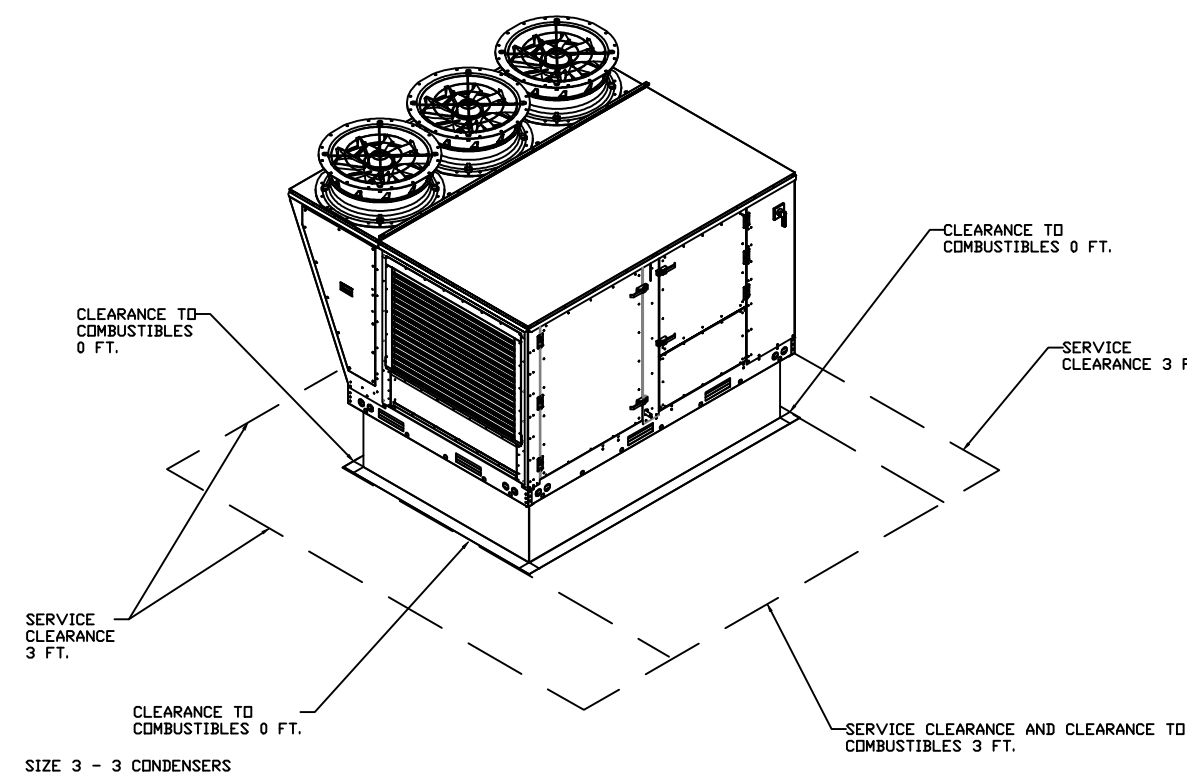
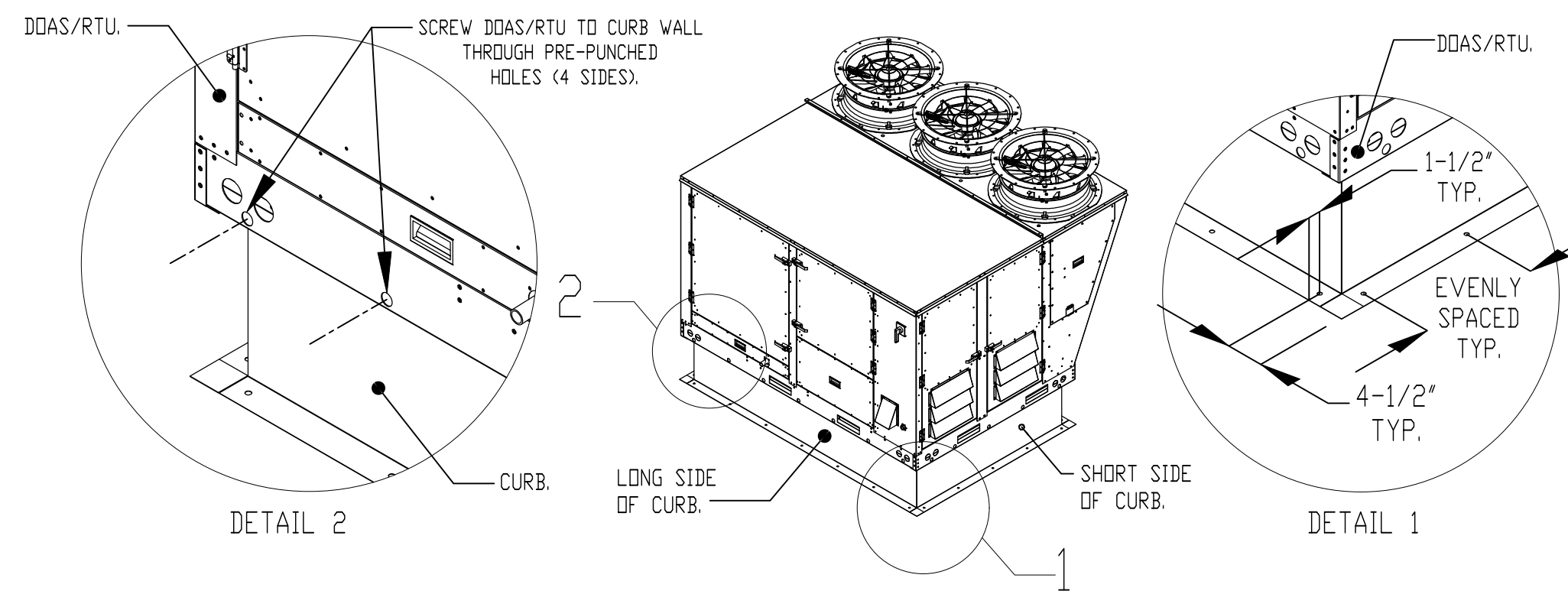
*NOTE: INTEGRAL CO2 MONITORING AND CONTROL CAPABILITIES FOR ALL SPACE MOUNTED THERMOSTATS.

*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 23" x 39".

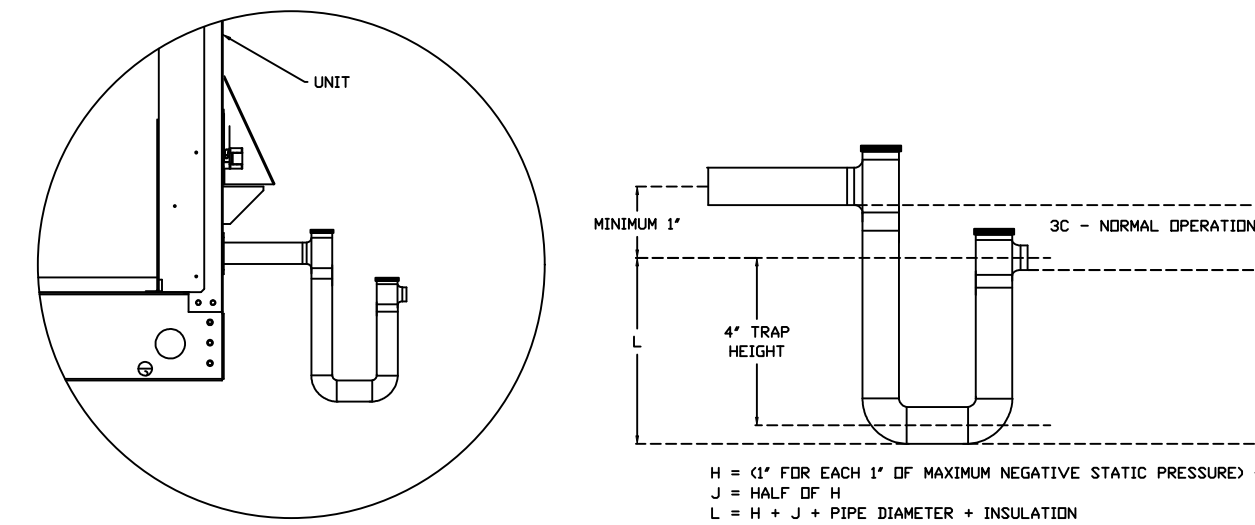


TYPICAL DOAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

- SECURE THE CURB TO THE ROOF FRAMING MEMBERS BY DRILLING 1/4" PILOT HOLES IN THE CURB FLANGES AT LOCATIONS SHOWN IN THE DIAGRAM BELOW. USING 3/8" X 2" ZINC PLATED STEEL LAG BOLTS, AND ZINC PLATED WASHERS, SCREW THROUGH THE CURB FLANGES AND INTO THE ROOF FRAMING MEMBERS. A MINIMUM OF (5) LAG BOLTS ON EACH SHORT SIDE, AND (7) LAG BOLTS ON EACH LONG SIDE IS REQUIRED.
- SECURE THE UNIT BASE TO THE SIDE WALLS OF THE CURB USING (24) 1/4"-14 X 2" SELF-DRILLING, STEEL ZINC PLATED SCREWS. PRE-PUNCHED HOLES HAVE BEEN PROVIDED FOR EACH SCREW LOCATION.



REIL CONDENSATE DRAIN TRAP DETAIL



REVISIONS

DESCRIPTION	DATE

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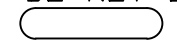
CULVERS VALPARAISO IN
 Valparaiso, IN, 46385

DATE: 8/29/2025
 DWG.#: 8200732
 DRAWN BY: studdy jr
 SCALE: 1/2" = 1'-0"
 MASTER DRAWING

SHEET NO.
 7

FAN #6 CAS-HVAC3-I.300-24MF-20T - HEATER (RTU-2 KITCHEN)

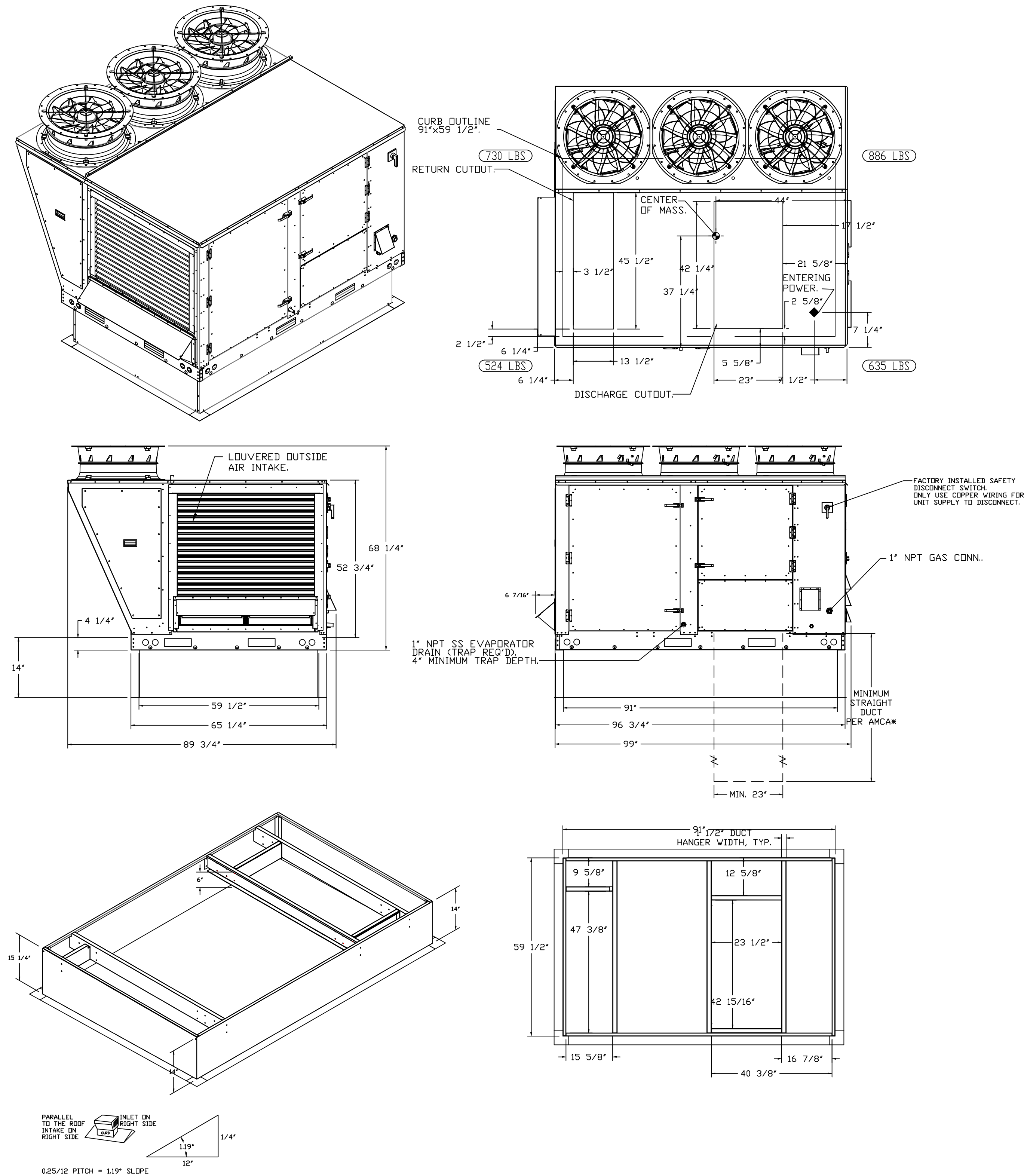
NOTES:

- DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
-  DENOTES CORNER WEIGHT.
- ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
- CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.
- EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET.

*NOTE: INTEGRAL CO2 MONITORING AND CONTROL CAPABILITIES FOR ALL SPACE MOUNTED THERMOSTATS.

***NOTE: THIS UNIT IS INTENDED TO SERVE IN PLACE OF THE KITCHEN HVAC ROOF TOP UNIT (RTU) IN ADDITION TO PROVIDING APPROPRIATE MAKE-UP AIR FOR THE KITCHEN HOOD(S). RTU AND ASSOCIATED DUCTWORK SHALL BE REMOVED FROM SCOPE UNLESS REQUIRED FOR INTERNAL LOAD ESTIMATES. FINAL DESIGN SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD.**

*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.
SUGGESTED STRAIGHT DUCT SIZE IS 23" x 39".



REVISIONS	
DESCRIPTION	DATE



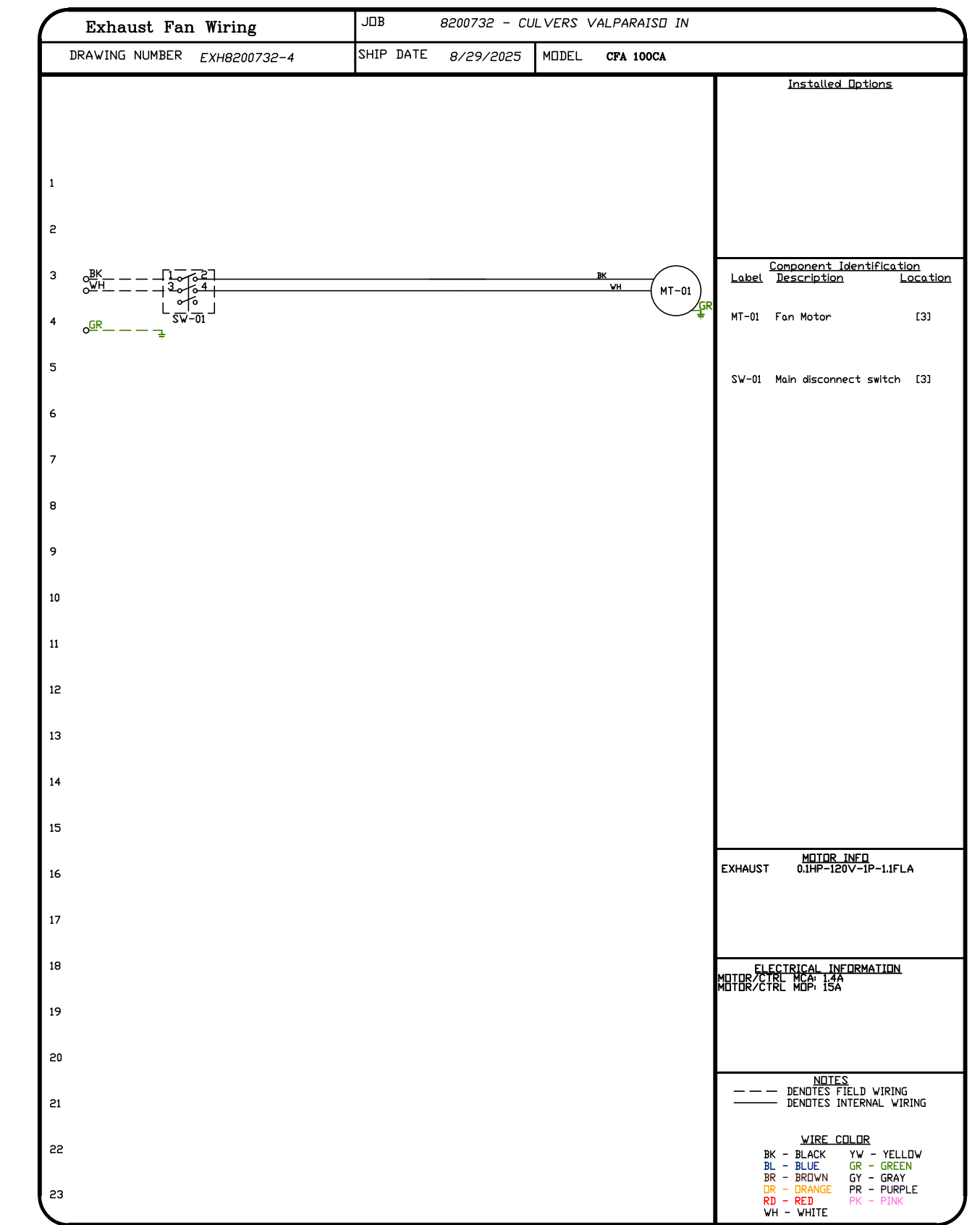
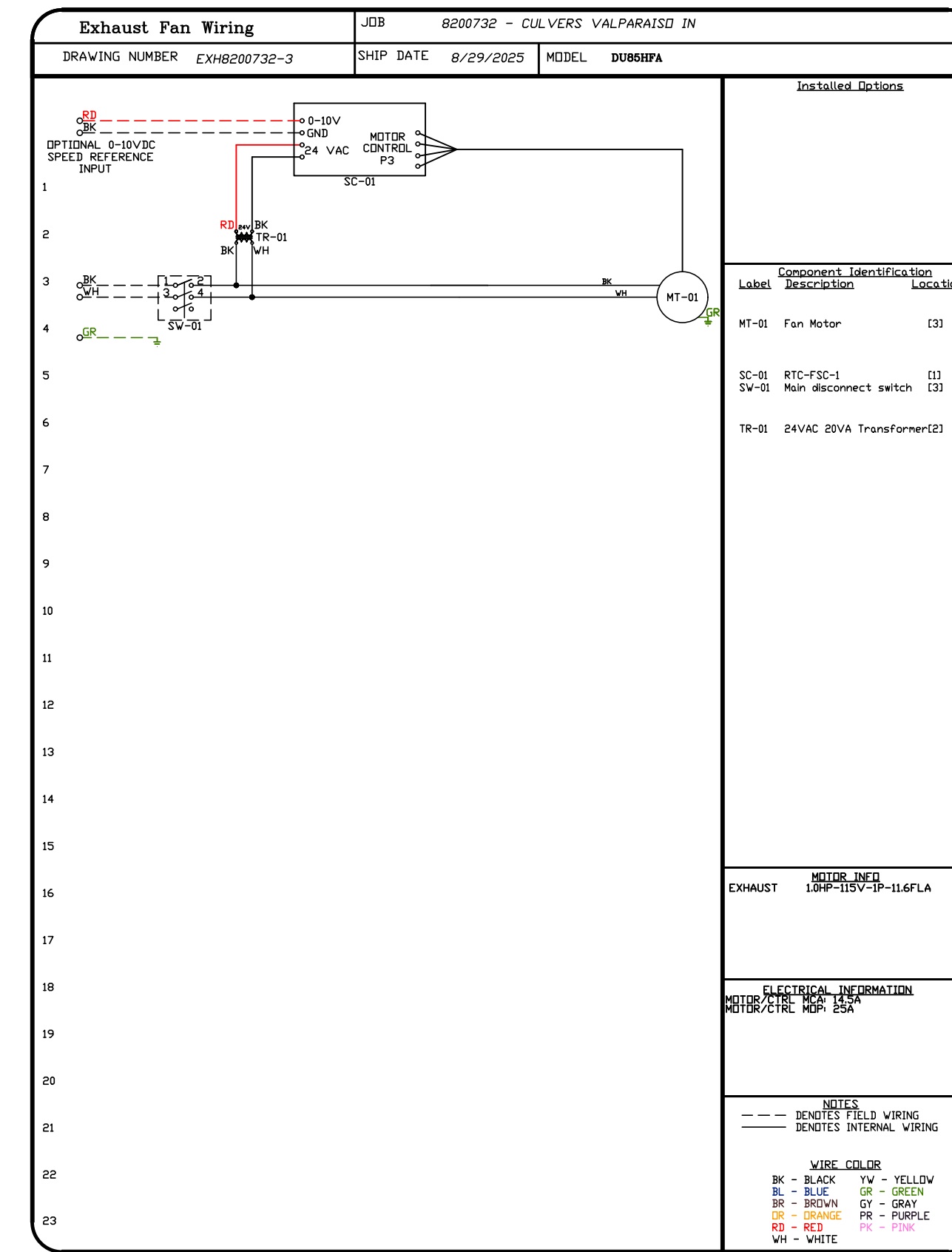
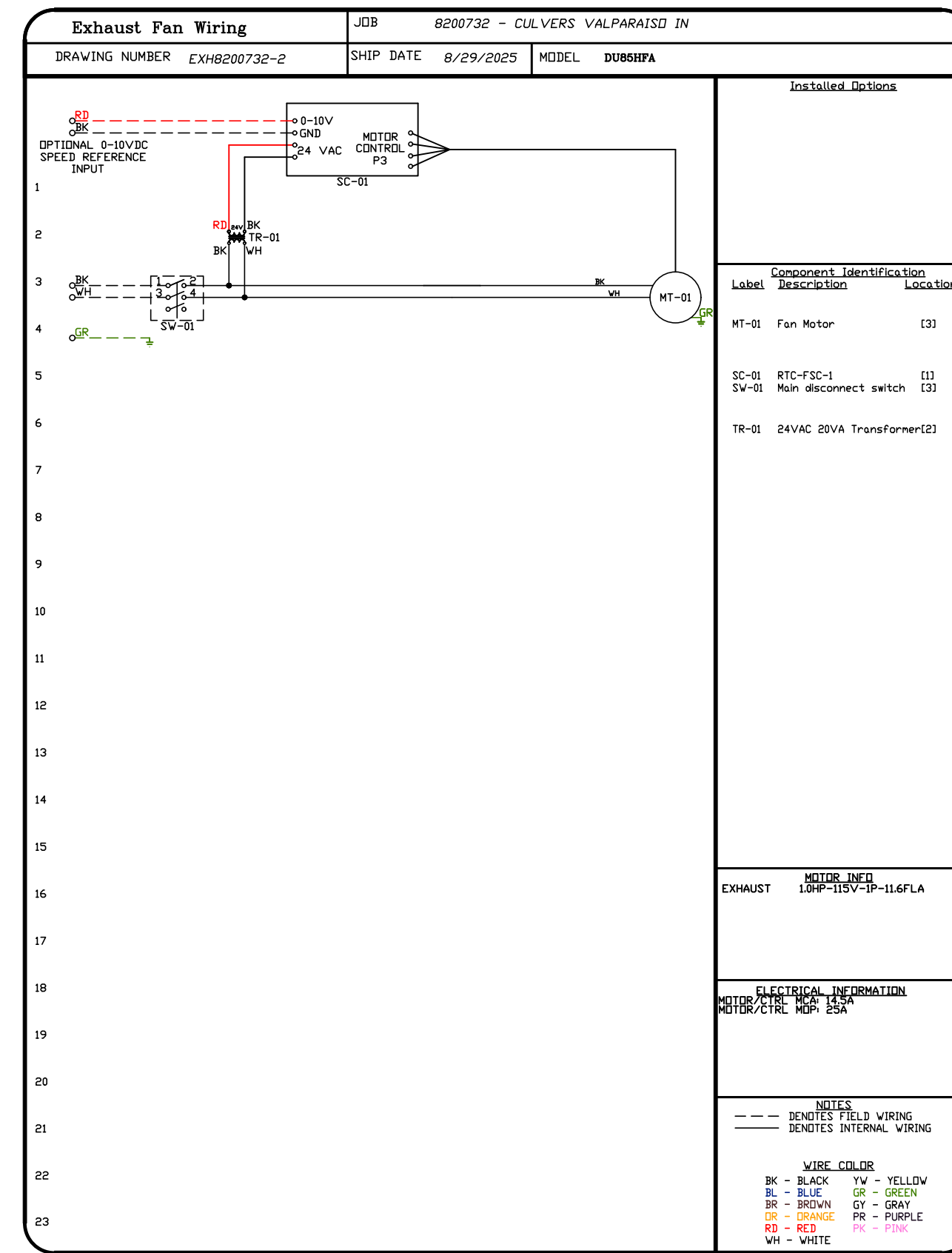
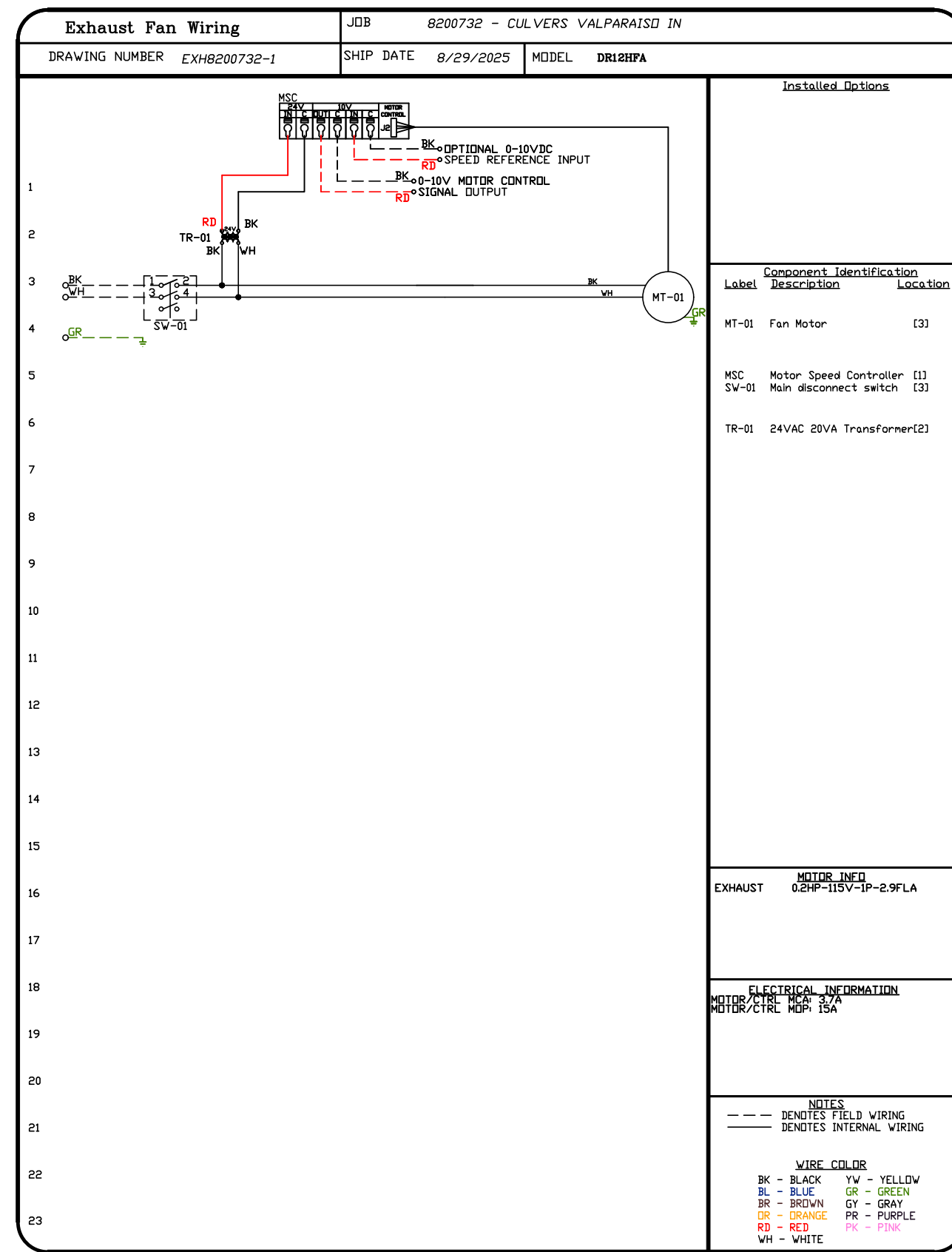
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CULVERS VALPARAISO IN
 Valparaiso, IN, 46385

DATE: 8/29/2025
 DWG.#: 8200732
 DRAWN BY: sluddy jr
 SCALE: 1/2" = 1'-0"
 MASTER DRAWING

SHEET NO.
 8



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DESCRIPTION	DATE

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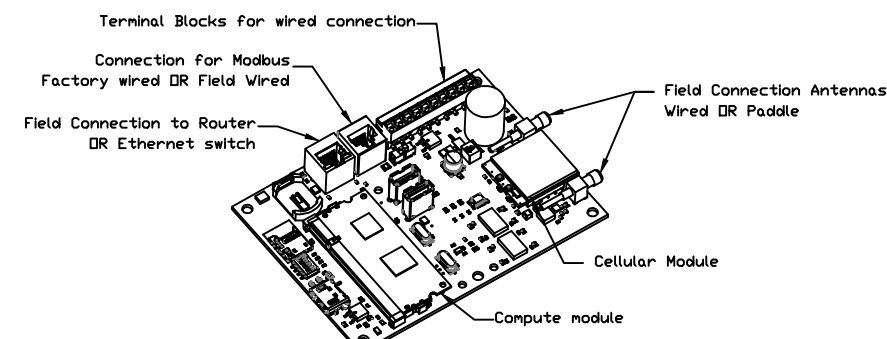
CULVERS VALPARAISO IN
Valparaiso, IN, 46385

DATE: 8/29/2025
DWG.#: 8200732
DRAWN BY: sluddy jr
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO.
9

ELECTRICAL PACKAGE - JOB#8200732

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	#	HP	VOLT	FLA
1		SC-E012011MA	WALL MOUNT IN SS BDX	SHIP LOOSE W/ PREWIRE	1 LIGHT	SMART CONTROLS THERMSTATIC CONTROL W/ RELAY DN/OFF WITH SUPPLY	PRV-2	EXHAUST	1	1.000	115	11.6
					1 FAN		RTU-2 Kitchen	SUPPLY	3	10.000	208	27.0

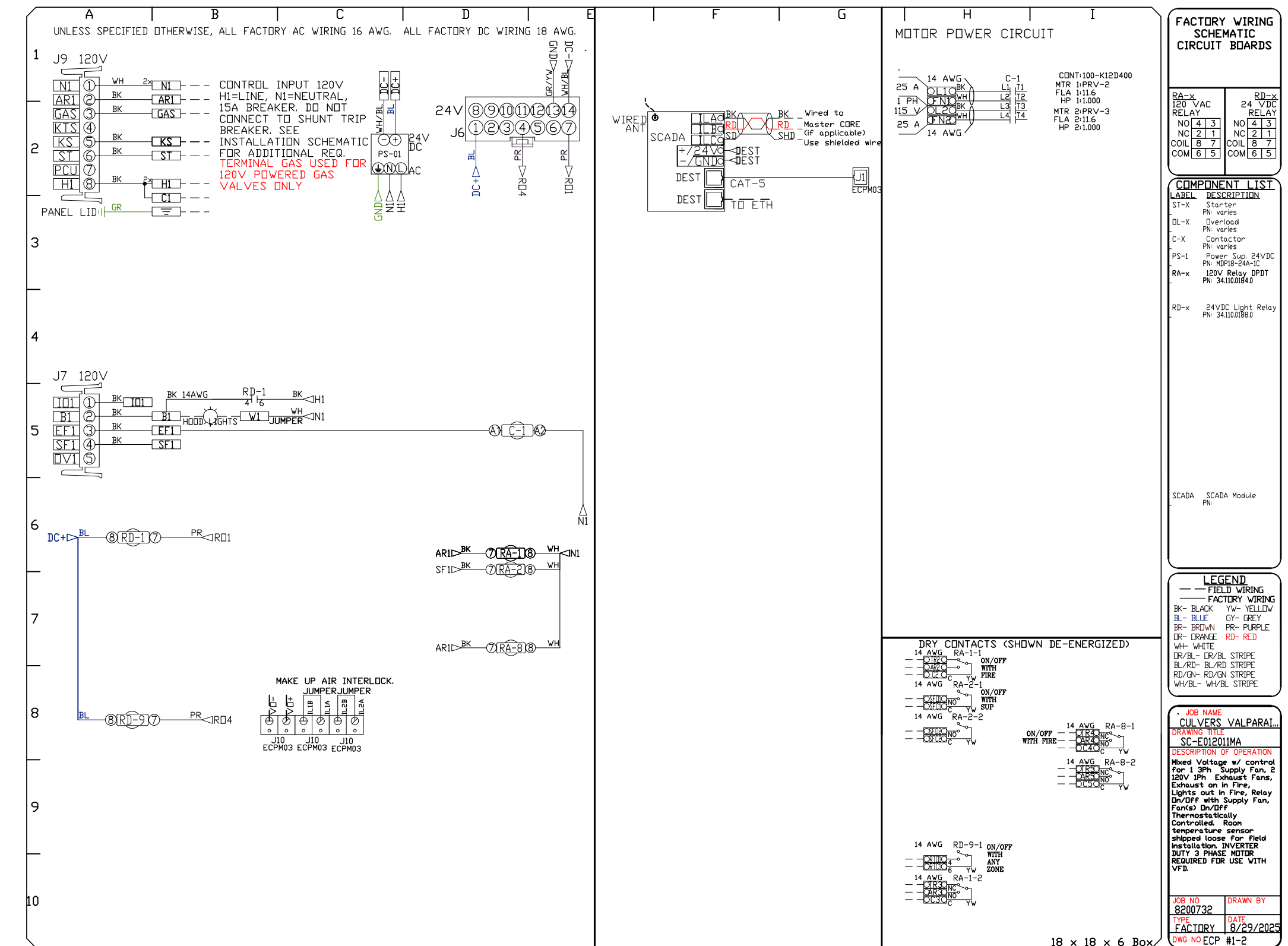
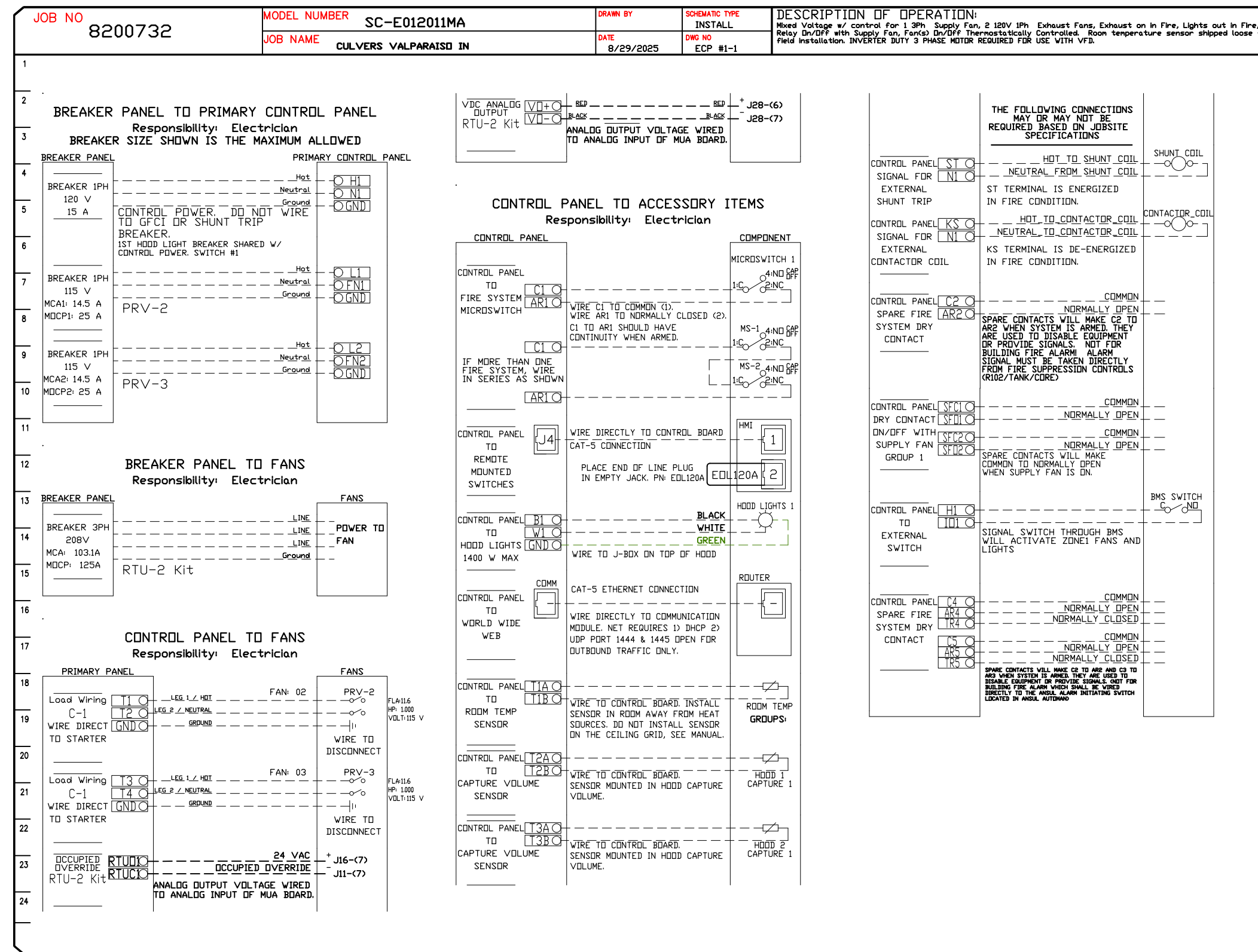


CASlink Monitor and Control

- Hood control panel to support communications to cloud-based Building Management System.
- Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
- Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.
- Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

MONITORING AND CONTROL POINTS LIST

DCV Packages	Function	SC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR	Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR	MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR	Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controller Faults	MONITOR
Fan Amperage	MONITOR	Fan Faults	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
VFD Faults	MONITOR	PCU Faults	MONITOR
Controller Faults	MONITOR	PCU Filter Clog Percentages	MONITOR
Fan Faults	MONITOR	Fan Condition	MONITOR
Fan Status	MONITOR	CORE Fire System	MONITOR
PCU Faults	MONITOR	Building Pressures	MONITOR
PCU Filter Clog Percentages	MONITOR	Fans Buttons(s)	MONITOR & CONTROL
Fire Condition	MONITOR	Lights Button(s)	MONITOR & CONTROL
CORE Fire System	MONITOR	Wash Button	MONITOR & CONTROL
Building Pressures	MONITOR		
Prep Time Button	MONITOR & CONTROL		
Fans Button	MONITOR & CONTROL		
Lights Button	MONITOR & CONTROL		
Wash Button	MONITOR & CONTROL		



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CULVERS VALPARAISO IN

Valparaiso, IN, 46385

DATE: 8/29/2025

DWG.#: 8200732

DRAWN BY: studdy jr

SCALE: 3/4" = 1'-0"

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DUCTWORK #1 PARTS - JOB#8200732 DOUBLE WALL GREASE DUCT

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1247DWLT-2R-S						54.71		1	DOUBLE WALL DUCT - 12" INNER DUCT, 47" LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
P2	DW1247DWLT-2R-S						54.71		1	DOUBLE WALL DUCT - 12" INNER DUCT, 47" LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
P3	DW1235DWLT-2R-S						40.86		1	DOUBLE WALL DUCT - 12" INNER DUCT, 35" LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
P4 ASSEMBLED W/P5	DW1247DWAJDP-2R-S						82.74		1	DOUBLE WALL ADJUSTABLE DUCT TRANSITION PLATE - 12" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11" / MAX LENGTH = 48.5" / ADJUSTMENT = 30.5" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL *V* CLAMPS.
P5 ASSEMBLED W/P4 D=B	DW2312TPDBEX						8.00		1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 23" CURB TO 12" DUCT, 16 GA ALUMINIZED. USED ON NCA14FA & NCA14HPFA. TRANSITION PLATE OD IS 23.5" DESIGNED FOR USE WITH EXHAUST FAN.
P6	DW1247DWLT-2R-S						54.71		1	DOUBLE WALL DUCT - 12" INNER DUCT, 47" LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
P7	DW1247DWLT-2R-S						54.71		1	DOUBLE WALL DUCT - 12" INNER DUCT, 47" LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
P8	DW1235DWLT-2R-S						40.86		1	DOUBLE WALL DUCT - 12" INNER DUCT, 35" LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
P9 ASSEMBLED W/P10	DW1247DWAJDP-2R-S						82.74		1	DOUBLE WALL ADJUSTABLE DUCT TRANSITION PLATE - 12" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11" / MAX LENGTH = 48.5" / ADJUSTMENT = 30.5" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL *V* CLAMPS.
P10 ASSEMBLED W/P9 D=B	DW2312TPDBEX						8.00		1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 23" CURB TO 12" DUCT, 16 GA ALUMINIZED. USED ON NCA14FA & NCA14HPFA. TRANSITION PLATE OD IS 23.5" DESIGNED FOR USE WITH EXHAUST FAN.
	3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW12DWCLASY-2R-S						6.44		6	DUCT - 12" DUCT - 16" DOUBLE *V* CLAMP - 2R INSULATION & SINGLE *V* CLAMP INCLUDED - REDUCED CLEARANCE.
TOTAL WEIGHT							522.28			

DOUBLE WALL FACTORY BUILT DUCTWORK

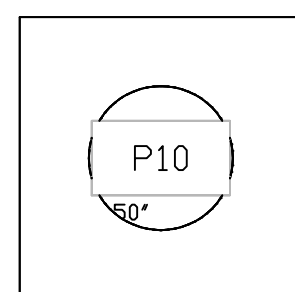
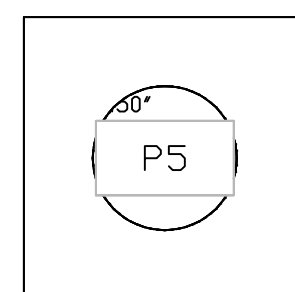
- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5'	7'
6'	7'
7'	7'
8'	7'
10'	7'
12'	7'
14'	7'
16'	7'
18'	5'
20'	5'
22'	5'
24'	5'
26'	5'
28'	5'
30'	5'
32'	5'
34'	5'
36'	5'

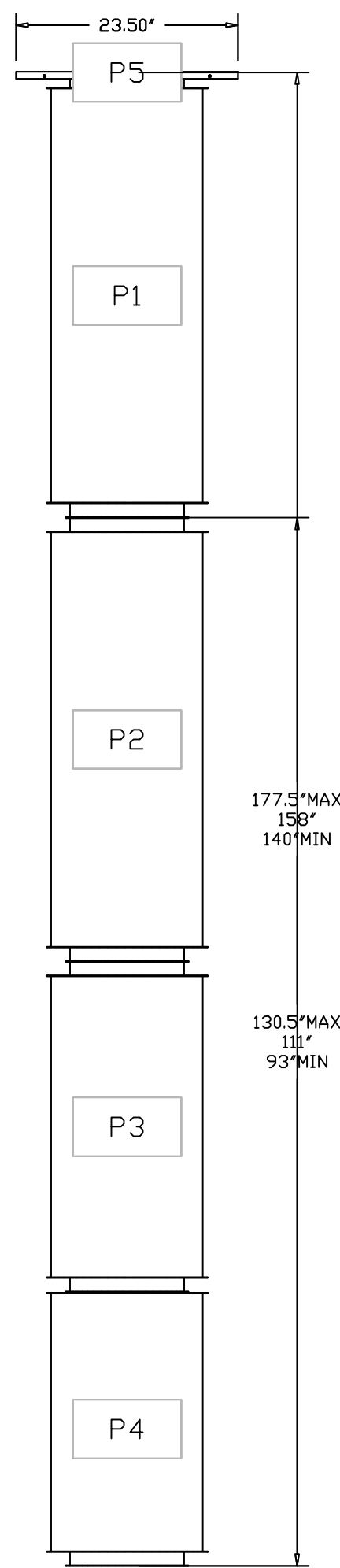
VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
2R & 2R HT (5'-16')	20'	24'	24'
2R (18')	18'	24'	24'
3R & 3Z (5'-24')	10'	24'	24'
3Z (26' -36')	10'	20'	20'

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

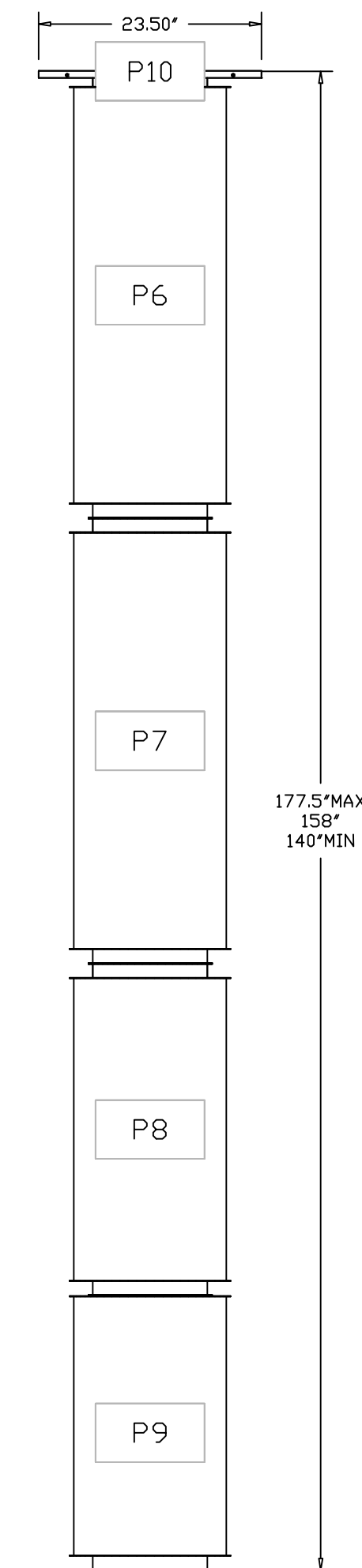
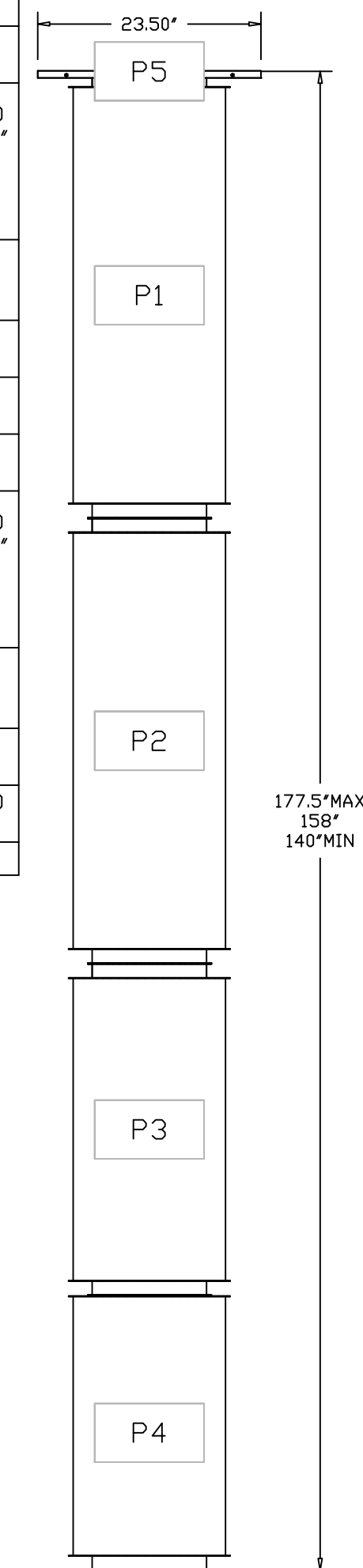
DUCTWORK #1 TOP VIEW GREASE DUCT



DUCTWORK #1 SIDE VIEW GREASE DUCT



DUCTWORK #1 FRONT VIEW GREASE DUCT



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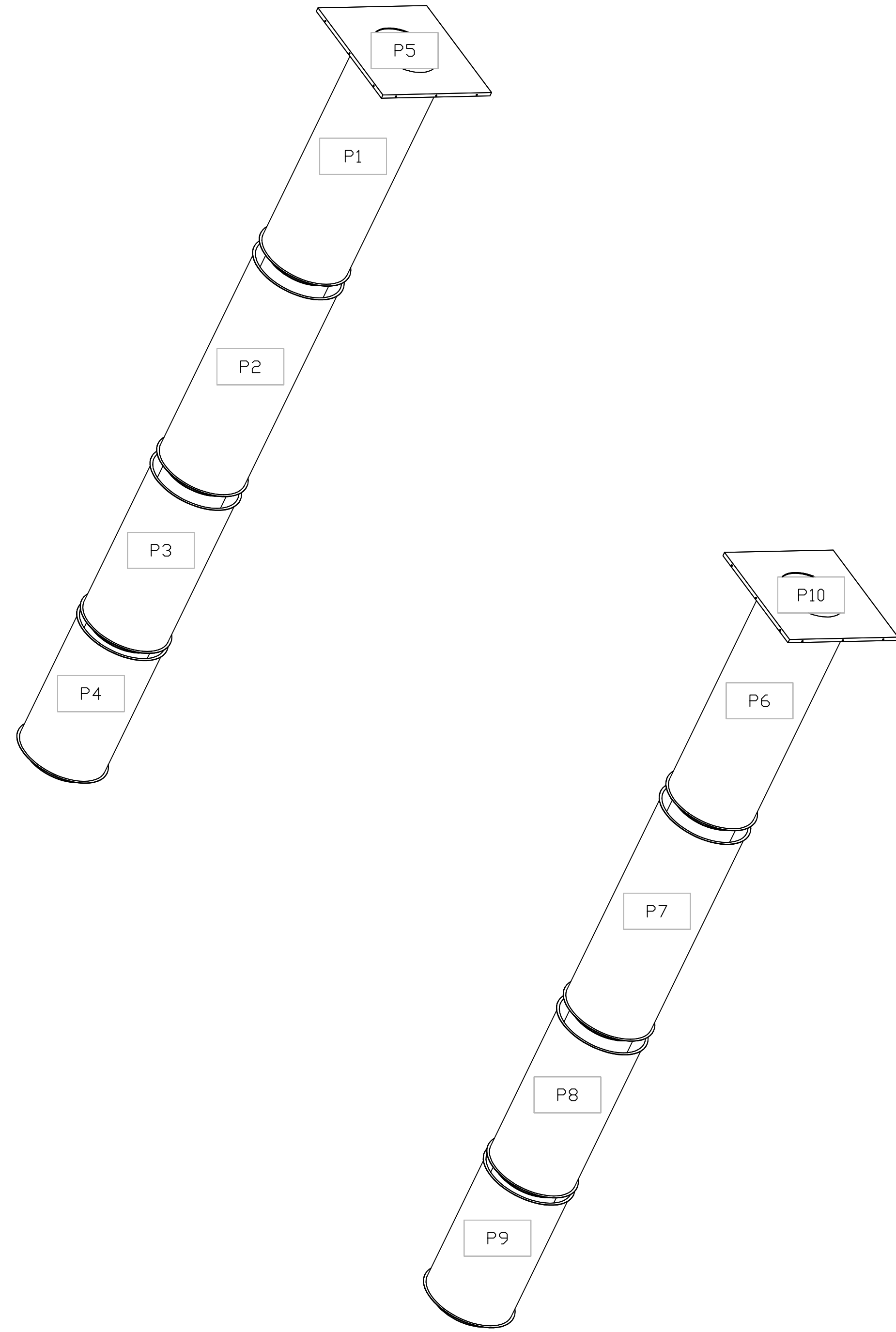
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CULVERS VALPARAISO IN
Valparaiso, IN, 46385

DATE: 8/29/2025
DWG #: 8200732
DRAWN BY: sluddy jr
SCALE: 3/4" = 1'-0"
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SHEET NO.
12

DUCTWORK #1 SE VIEW
GREASE DUCT



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CULVERS VALPARAISO IN Valparaiso, IN, 46385
DATE: 8/29/2025
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SHEET NO. 13

SYSTEM DESIGN VERIFICATION (SDV)

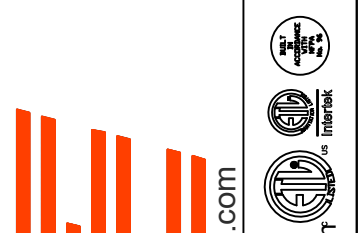
IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF CAS SERVICE HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP CHARGES.

DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES OFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

REVISIONS

DESCRIPTION	DATE:
Δ	
Δ	
Δ	
Δ	



CAPTIVE AIR
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CULVERS VALPARAISO IN
Valparaiso, IN, 46385

DATE: 8/29/2025

DWG.#:
8200732

DRAWN BY: sluddy jr

SCALE:
3/4" = 1'-0"

MASTER DRAWING

SHEET NO.
14

Direct Drive Centrifugal Roof Exhaust Fan

MARK INFORMATION			FAN INFORMATION					MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	PRV-1 Restroom	XRED-090-VG	300	0.5	1,466	0.06	31	0.1	115/60/1	TN	1725	1	NA

*NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory"

PRV-1 Restroom : SELECTED OPTIONS AND ACCESSORIES	
Standard Curb Cap Size - 17 Square	
UL/cUL 705 Listed - "Power Ventilators"	
Switch, NEMA-1, Toggle, Shipped with Unit	
Damper Shipped Loose, BD-100-PB-10X10, Gravity Operated, Not Coated, Nominal Size	
Birdscreen: Galvanized, nom. 84% Free Area	
Composite Wheel Material	

Ceiling Exhaust Fan

MARK INFORMATION			FAN INFORMATION					MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	
1	EF-1A	XCR-B80	75	0.125	881	0.01	10	0	115/60/1	OP	900	1	

EF-1A : SELECTED OPTIONS AND ACCESSORIES	
UL/cUL 507 Listed - Electric Fan	
Solid State Speed Control, 6 Amp, Mounted and Wired Internally	
Round Hooded Wall Cap, (PN: WC-6) Shipped Loose	
Round Duct Connection	
Adjustable easy installation mounting bracket	
Standard Grille	
Polypropylene Wheel Material	
Can Be Used to Comply with: ASHRAE 62.2 and Washington State Energy Code	

CONTROL INFORMATION

MARK	ELECTRICAL CONTROL PACKAGE			USER INTERFACE		
	MODEL	LOCATION	TYPE	FULL COLOR TOUCHSCREEN	LOCATION	
CONTROLS	XKC-CV-S-22-2-1-0	SHIP LOOSE ENCLOSURE	SHIP LOOSE			

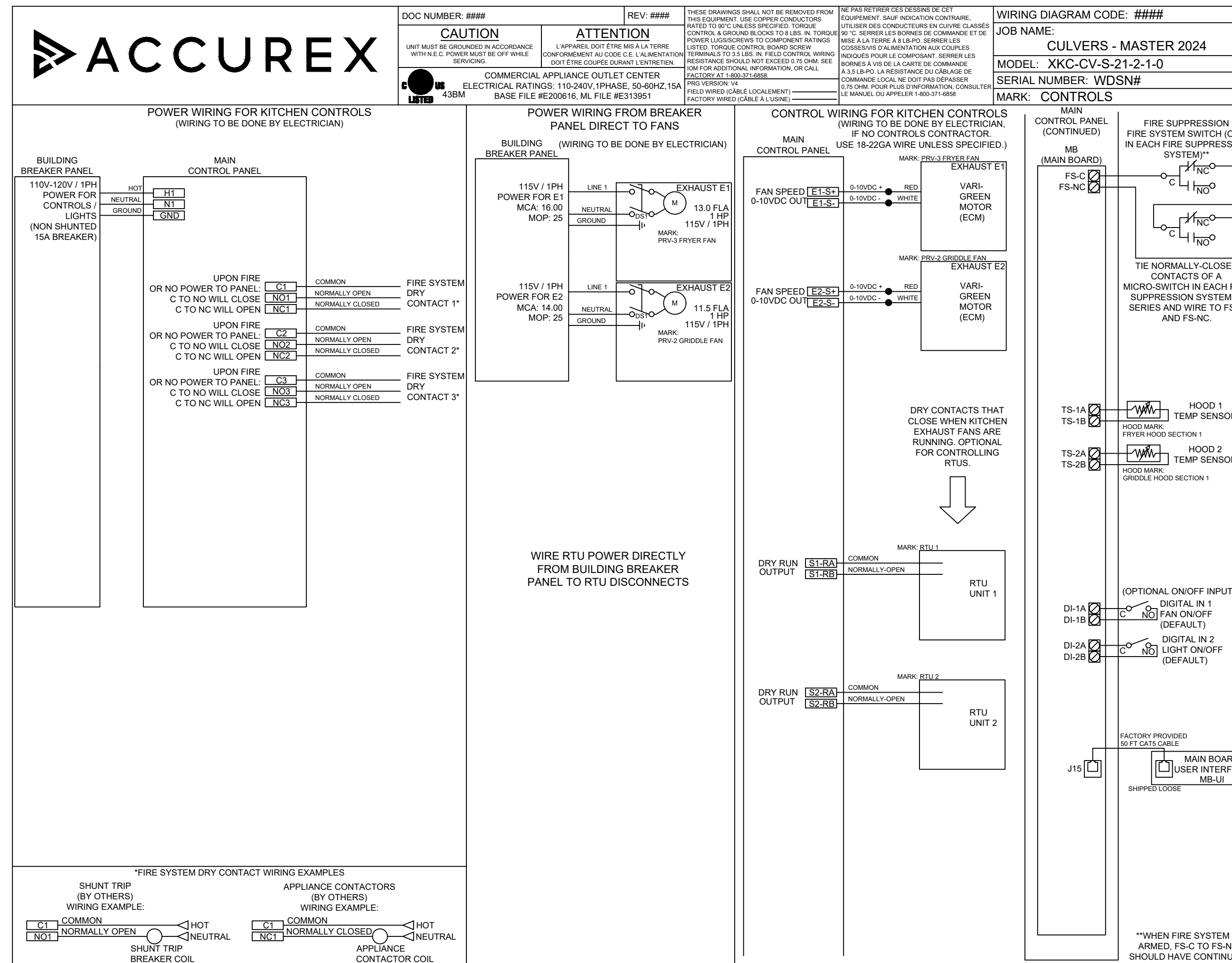
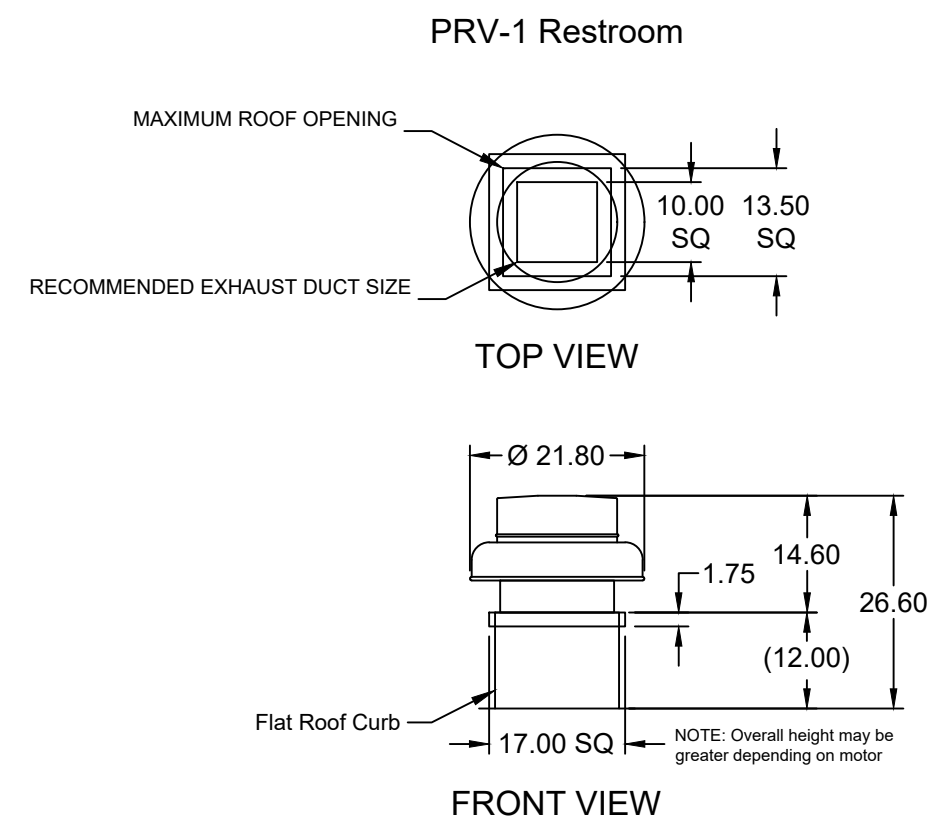
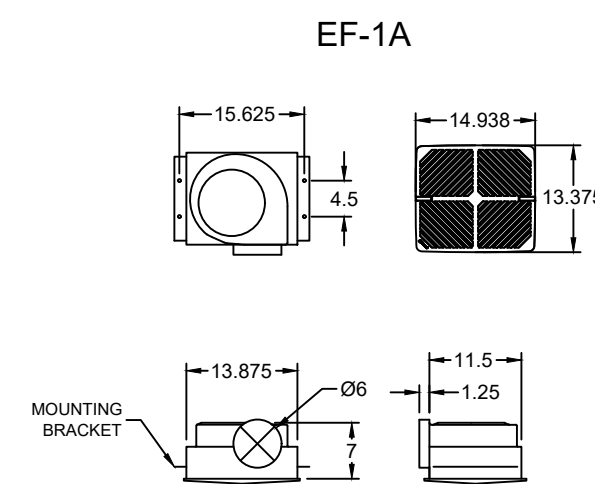
FANS CONTROLLED											
FAN #	TYPE	FAN	FAN MARK	ZONE	CFM	MOTOR HP	MOTOR VOLT	CYCLE	MOTOR PHASE	MOTOR STARTER IN PANEL	VFD IN PANEL
1	SUPPLY	S1	RTU-1	1	1500	1	208	60	3	NO	NO
2	SUPPLY	S2	RTU-2	2	1500	1	208	60	3	NO	NO
3	EXHAUST	E1	PRV-2 GRIDDLE FAN	2	1500	1	115	60	1	NO	NO
4	EXHAUST	E2	PRV-3 FRYER FAN	1	1500	1	115	60	1	NO	NO

CONTROL FEATURES

TEMP SENSORS (FACTORY INSTALLED) - QTY. 2
 DRY FIRE CONTACTS - QTY. 2
 EXHAUST MAX DURING FIRE
 SUPPLY OFF DURING FIRE

SPECIAL DESIGN REQUESTS

SDR #K2000462 - CULVERS CONTROL PANEL - EXTRA SET OF FIRE CONTACTS - REVISE WIRING DIAGRAMS



ACCUREX

PROJECT 7/11/2024
 ACCUREX - WI, IA
 PHILLIP KRAFT
 PHILLIP.KRAFT@ACCUREX.COM
 262-227-7865
 CULVERS METRO L 2025 (S)
 MARK EF-1A
 CONDENSATE HOOD
 PRV-2 CONDENSATE FAN
 PRV-1 RESTROOM FAN
 UL NSF
 CONTROL INFORMATION
 EXP. 7/31/2026

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LOWELL JOHN LASKOWSKI
REGISTERED ELECTRICIAN
No. PE1400475
STATE OF IOWA
INDIANAPOLIS, INDIANA

NEW CULVER'S RESTAURANT
852 Thornapple Way
Valparaiso, IN 46385
County of PORTER

EXP. 7/31/2026

OWNER:
S & L Properties Valparaiso Thornapple LLC
2651 Kirling Court
Portage, WI 53901
Jeff Liegel, Realty Manager / Member
608-742-2853

FAN SCHEDULE & DETAILS

Date: 06-27-2025
Revision:

2024-166
M204