

Dena Zwarich

From: Matt Morris <matt@morriseng.ca>
Sent: Friday, September 4, 2020 2:29 PM
To: gaines@bellnet.ca
Cc: Keith Oster; Annie Griffiths; Dena Zwarich
Subject: FW: Carleton Place Arena - Mechanical Shop Drawings
Attachments: 2 - CP Arena - G&D for Review - Aug 18, 2020.pdf; 3 - CP Arena - Wall Caps for Review - Aug 18, 2020.pdf; 4 - CP Arena - Kitchen Exhaust System for Review - Aug 18, 2020.pdf; 5 - CP Arena - Exhaust Fans for Review - Aug 18, 2020.pdf; 6 - CP Arena - Fire Dampers for Review - Aug 18, 2020.pdf

SUBMITTAL / SHOP DRAWING REVIEW

This submittal/shop drawing review is for general conformance with drawings and specifications only.
Contractor is completely responsible for all dimensions, details, quantities, supply, installation and construction.
This review does not in any way relieve the Contractor of responsibility for compliance with the Contract Documents.

Client:	Larry Gaines Architect
Project:	Carleton Place Arena
Submittal:	Mechanical
Notes:	<p>REGISTERS GRILLES & DIFFUSERS: - <i>Alternate product</i> - <i>No comment</i></p> <p>WALL CAPS: - <i>No comment</i></p> <p>KITCHEN EXHAUST SYSTEM: - <i>No comment</i></p> <p>EXHAUST FANS: - <i>No comment</i></p> <p>FIRE DAMPERS: - <i>No comment</i></p>

MORRIS ENGINEERING LTD.

68 William Street, Suite 200, Brockville, Ontario
(613)499-2077

SUBMITTAL

Job: Carleton Place Arena

Spec Section No:

Submittal No: 4

Revision No: 0

Sent Date: August 18, 2020

Spec Section Title: Mechanical

Submittal Title: Kitchen Exhaust System

Contractor:

Climate Works
Rosalyn Grusnick - 613-315-4009

Contractor's Stamp


Heating, Cooling & Plumbing
Reviewed
2020-08-18 10:18:50 AM

Architect:

Architect's Stamp

Engineer:

Engineer's Stamp



Project: Carleton Place Arena

Location: 75 Neelin Street

Engineer: Eastern Engineering

Contractor: Climate Works

Date: August 17, 2020

Submitted By: Heather Turcotte, C.E.T.

Specification Section: M001/M002

Product: CaptiveAire Kitchen Exhaust System

Revision: 0

HOOD INFORM V - Job#4420680

HOOD NO	TAG	MODL	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/ft	EXHAUST PLENUM RISERS(S)			TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG END TO END	PATENT NUMBERS				
								WIDTH	LENG	HEIGHT								
1	HOOD	5424 ND-2-PSP-F	5' 0"	600 Deg	I	Heavy	2-40	1200	10'	11'	4"	1200	1571	-0.614"	SP	430 SS Where Exposed	ALONE	AC-PSP (United States) - US Patent 7963830 B2 AC-PSP Wall (Canada) - CA Patent 2820509 AC-PSP Island (Canada) - CA Patent 2520330

HOOD INFORMATION

HOOD NO	TAG	TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	LIGHTS(S)		VIRE GUARD	LOCATION	SIZE	TYPE	UTILITY CABINET(S)		ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE HOOD SYSTEM HANGING PIPING WEIGHT
									TYPE	TYPE					SIZE	TYPE			
1	HOOD	Captrate Solo Filter	3	20'	16'	85% See Filter Spec	2	L55 Series E26	ND	Left	12'x34'x24'	Ansul R102	3.0	SC-21010FP	1 Light	1 Fan	YES	502 LBS	

HOOD OPTIONS

HOOD TAG	FIELD WRAPPER	17'00" High	Front, Left, Right	OPTION
1	BACKSPLASH	80'00" High X 72'00" Long	430 SS Vertical	
	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
	SENSOR-CV			

PERFORATED SUPPLY PLENUM(S)

HOOD TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	MUA	10"	28"	MUA	10"	28"	CFM	SP
1	Front	72'	16'	6'	MUA	540	0.137'	540	0.137'				

SPECIFICATION: CAPTRATE GREASE-STOP SOLO FILTER

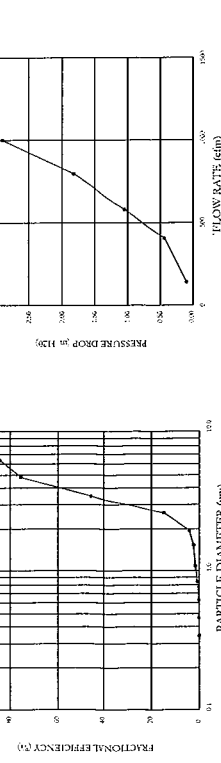
THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY. FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

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 10 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



EFFICIENCY VS. FLOW RATE

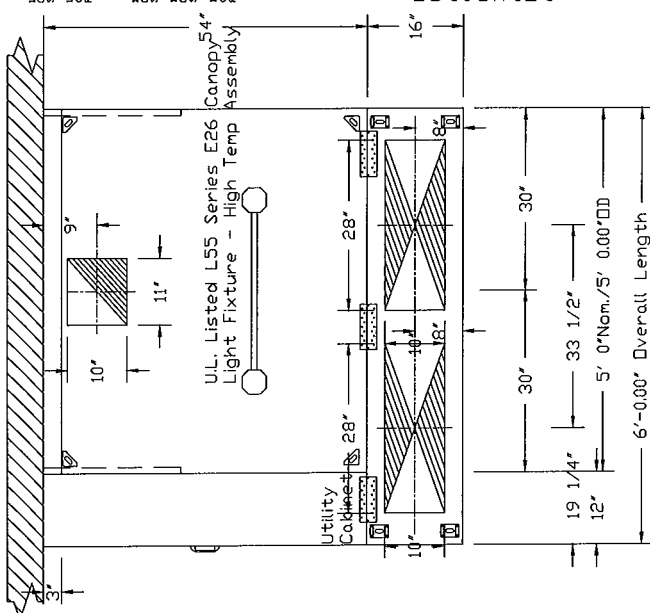


NSF

UL LISTED

ULC-5649

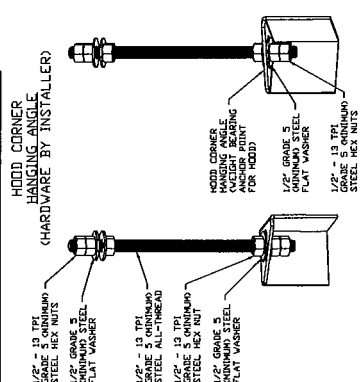
CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
 NFPA #96
 NSF STANDARD #2
 UL STANDARD #1046
 UL LISTED CODE (LIC)
 ULC-5649



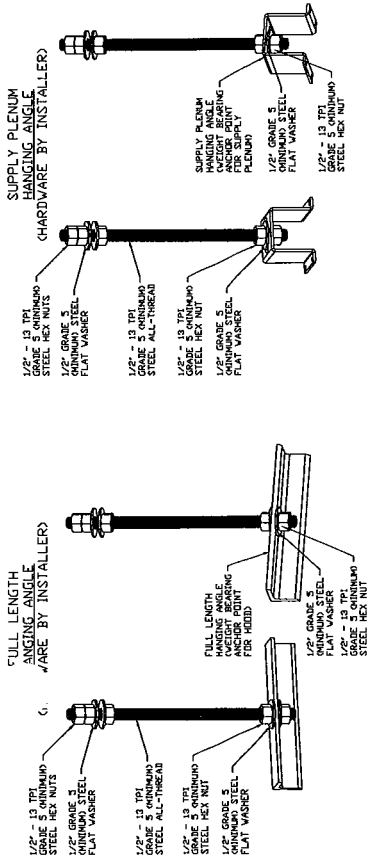
PLAN VIEW - Hood #1 (HOOD)
 5' 0.00" LONG 5424ND-2-PSP-F

ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD, SANDWICH HANGING ANGLE 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 DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLE AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

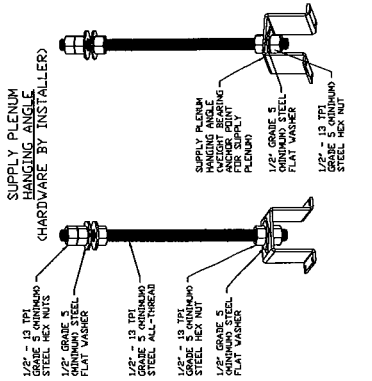


JOB Carleton Place Arena
 LOCATION Carleton Place, ON, K7C 2V8
 DATE 7/2/2020 JOB # 4420680
 DWG # 1 DRAWN BY Phil Mozer
 REV. SCALE 3/8" = 1'-0"



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 DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR FULL LENGTH HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

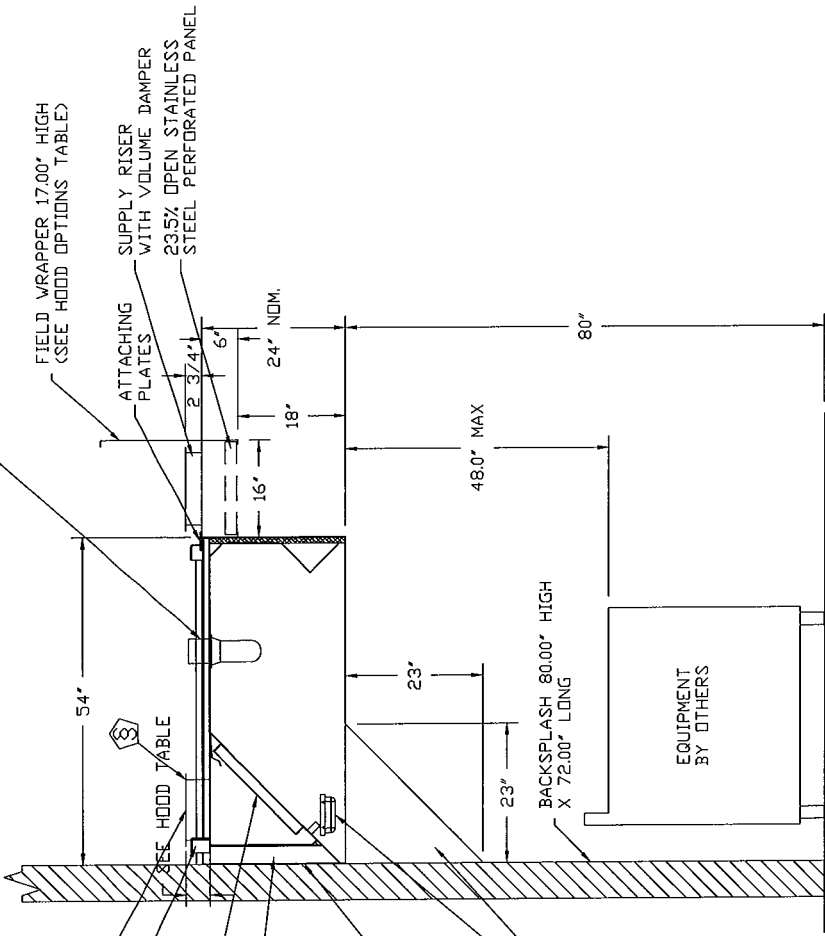


ASSEMBLY INSTRUCTIONS

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 DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

JOB Carleton Place Arena	
LOCATION	Carleton Place, ON, K7C 2V8
DATE	7/2/2020
DWG #	2
REV.	
JOB #	4420680
DRAWN BY Phil Mazer	
SCALE 3/8" = 1'-0"	

L^F TRIES E26 CANOPY LIGHT FIXTURE -
 HI ZMP ASSEMBLY, INCLUDES CLEAR THERMAL
 ANL, SHOCK RESISTANT GLOBE (CLASS FIXTURE)



EXHAUST RISER
 HANGING ANGLE
 20" CAPRATE SOLID
 FILTER WITH HOOK
 3" INTERNAL STANDOFF
 IT IS THE RESPONSIBILITY
 OF THE ARCHITECT/OWNER TO
 ENSURE THAT THE HOOD CLEARANCE
 FROM LIMITED-COMBUSTIBLE
 AND COMBUSTIBLE MATERIALS
 IS IN COMPLIANCE WITH
 LOCAL CODE REQUIREMENTS.
 GREASE DRAIN
 WITH REMOVABLE CUP
 LEFT AND RIGHT
 QUARTER END PANELS

SECTION VIEW - MODEL 5424ND-2-PSP-F
 HOOD - #1 (HOOD)

JOB	Carleton Place Arena
LOCATION	Carleton Place, ON, K7C 2V8
DATE	7/2/2020
DWG #	3
REV.	
JOB #	4420680
DRAWN BY	Phil Mozer
SCALE	3/8" = 1'-0"

CAPTIVE





Fire System - *mation - Job#4420680*

FIRE SYSTEM NO	Tag	TYPE	SIZE	FLOW POINTS	INSTALLATION SYSTEM	LOCATION ON HOOD
1	Ansul R102		3.0	2	Fire Cabinet Left	Left, Hood 1

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		Mechanical	1.250	CaptiveAir Systems

Fire System Parts List Key

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
		0 - 0 - 43-15733 AIR CYLINDER ASSEMBLY - Air Cylinder and Tubing for Mechanical Gas Valves (Ansul Part #15733)	1	0
		0 - 0 - Tank Strap Tank Strap - used for ANSUL Tanks	1	0
		0 - 0 - UCTANKBRACKET Tank Bracket for fire system tank installation in utility cabinets	1	0
		1 - 1 - AT - 3.0 TANK(H1B) - 3.0 Gallon SS Tank (for use with Automan Release, Actuator, or SS Enclosure (UL/ULC)) Macola # 01-429862	1	0
		3 - 3 - ANS-DEM REGULATED RELEASE - Ansul Regulated Mechanical Release/Bracket Assembly, DEM, R-102, Cartridge Detection Included, Ansul Part # 79493	1	0
		5 - 5 - LIQ-3.0 AGENT - Ansulex Low PH Wet Chemical Agent, 3 Gallon (UL) 79372	0	1
		7 - 7 - 101-20 CARTRIDGE - Carbon Dioxide 101-20, 3 Gallon Cartridge (R-102)	0	1
		10 - 10 - TLINK LINK - Test Link (UL) Ansul Part # 24916, Macola # 20-24916	0	1
1		11 - 11 - MICRO-SDA MICROSWITCH KIT - Includes 2 switches and Mounting Hardware, Single Dual Electric Switch, One Standard Switch, One Alarm Duty Switch Ansul Part # 437155, Macola # 08-437155	1	0
		27 - 27 - GPSA-1/2 PULLEY SEAL - 1/2" Hood Seal (UL) Ansul Part # 423253, Macola # 32-79768	1	0
		34 - 34 - RPS-A REMOTE PULL STATION - Red composite (without wire rope) 434618 (UL) Macola #06-4835)	1	0
		35 - 35 - PE-LT PULLEY ELBOW - Low Temp. Pulley Elbow, Set Screw Type Ansul Part # 415670, Macola # 11-415671	2	0
		36 - 36 - PE-HT PULLEY ELBOW - High Temp Pulley Elbow, Compression Type, Ansul Part # 423251, Macola # 10-45771	1	0
		ADDITIONAL PARTS TO BE DETERMINED...		



CAPTIVEAIR

JOB Carleton Place Arena
 LOCATION Carleton Place, ON, K7C 2V8
 DATE 7/2/2020 JOB # 4420680
 DWG # 4 DRAWN BY Phil Mozer
 REV. SCALE 3/8" = 1'-0"

EXHAUST FAN INFORMATION - Job#4420680

FAN UNIT NO	TAG	UNIT MODEL #	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	Ø	VOLT	FLA	DISCH. VELOCITY	WEIGHT (LBS)	SDNES
1	EF-1	DUBSHFA	1200	1.000	1200	TEAD-ECM	0.750	0.3080	1	230	S.0	380 FPM	88	12.5

FAN OPTIONS

FAN UNIT NO	TAG	OPTION (Qty - Descr)
1	EF-1	1 - Grease Box 1 - ECM Viping Package - Manual or 0-10VDC Reference Speed Control (TELCO Motor), CCW Rotation

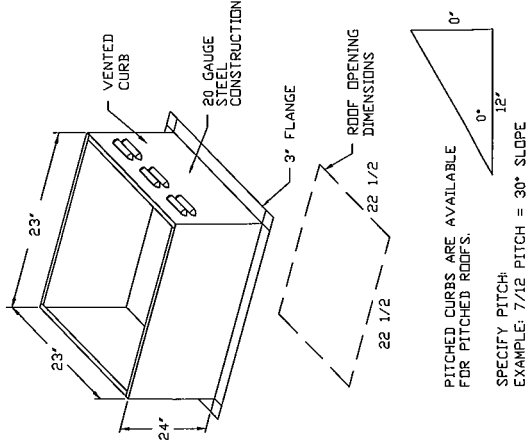
FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST	SUPPLY
1	EF-1	GREASE CUP GRAVITY DAMPER WALL MOUNT	SIDE DISCHARGE GRAVITY DAMPER MOTORIZED WALL MOUNT

CURB ASSEMBLIES

DN FAN NO	#	TAG	WEIGHT	ITEM	SIZE
1	1	EF-1	41 LBS	Curb	23.000"W x 24.000"H Right Vented Hinged

FAN #1 DUBSHFA - EXHAUST FAN (EF-1)



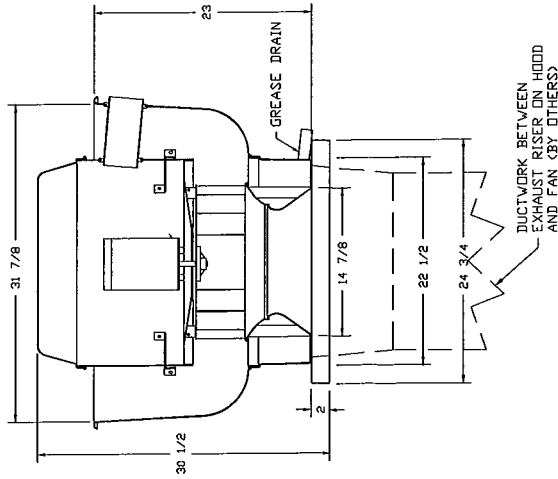
PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.
SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE

FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
 - ROOF MOUNTED FANS
 - RESTAURANT MODEL
 - UL705 AND UL762 AND ULC-S645
 - VARIABLE SPEED CONTROL
 - INTERNAL WIRING
 - WEATHERPROOF DISCONNECT
 - THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
 - HIGH HEAT OPERATION 300°F (149°C)
 - GREASE CLASSIFICATION TESTING
- 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 (TELCO MOTOR), CCW ROTATION.



JOB Carleton Place Arena
LOCATION Carleton Place, ON, K7C 2V8
DATE 7/2/2020 JOB # 4420680
DWG # 5 DRAWN BY Phil Mazer
REV. SCALE 3/8" = 1'-0"



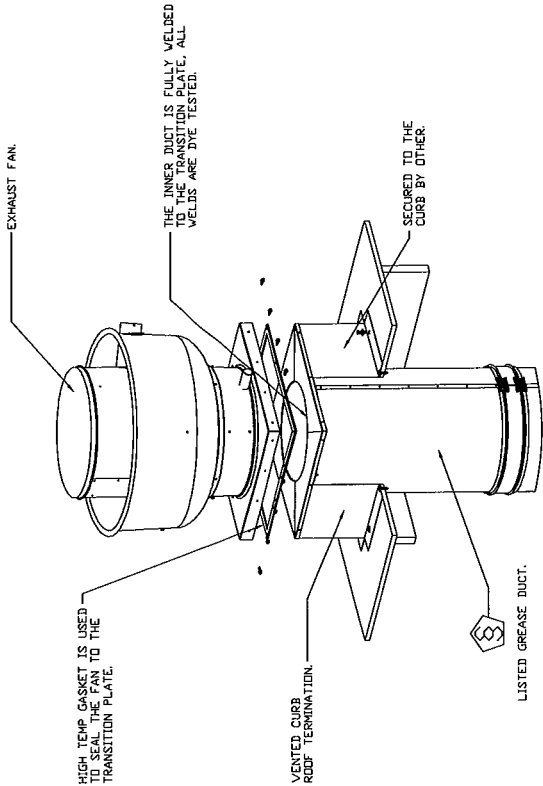
GREASE DUCT & CHIMNEY SPECIFICATIONS:
 PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW"
 ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW"
 IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING
 CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW"
 DOES NOT REQUIRE WELDING 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
- Approved with NO Exception Taken
- Revise and Resubmit

SIGNATURE _____
 Your Title _____
 Date _____



JOB Carleton Place Arena	
LOCATION	Carleton Place, ON, K7C 2V8
DATE	7/2/2020
DWG #	6
JOB #	4420680
DRAWN BY Phil Mazer	
REV.	
SCALE 3/8" = 1'-0"	

CAPTIVEAIRE



WIRE COLOR

BK - BLACK
 BL - BLUE
 BR - BROWN
 GR - GREEN
 GY - GRAY
 PR - PURPLE
 RD - RED
 VH - WHITE

NOTES

--- DENDTES FIELD WIRING
 - - - DENDTES INTERNAL WIRING

ELECTRICAL INFORMATION

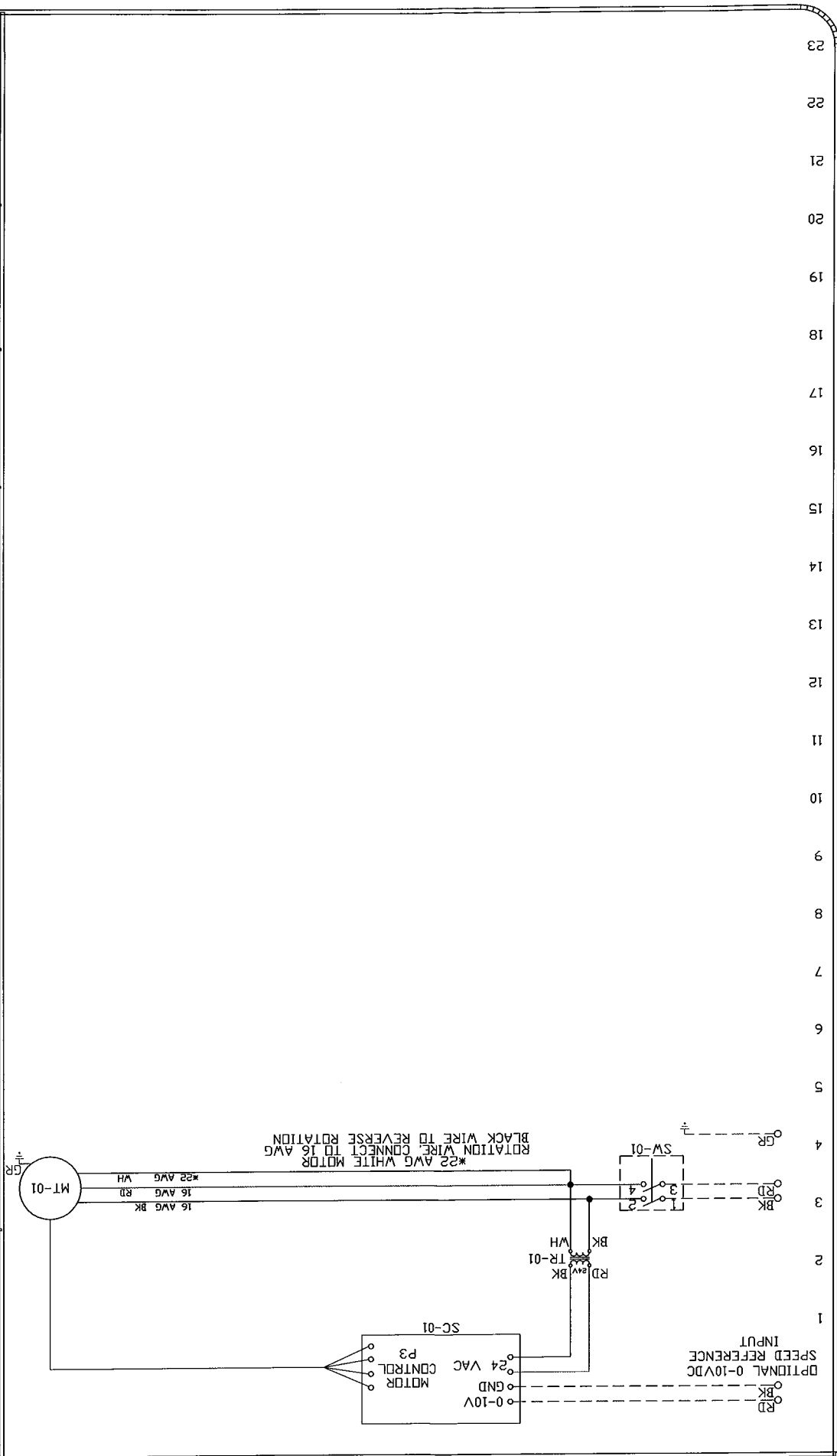
MOTOR/CTRL MCA: 6.3A
 MOTOR/CTRL MDP: 15A

MOTOR INFO

EXHAUST 0.75HP-230V-1P-S0FLA

Label	Description	Location
MT-01	Fan Motor	[3]
SC-01	RTC-FSC-1	[1]
SW-01	Main disconnect switch	[3]
TR-01	24VAC 20VA Transformer[2]	

Installed Options



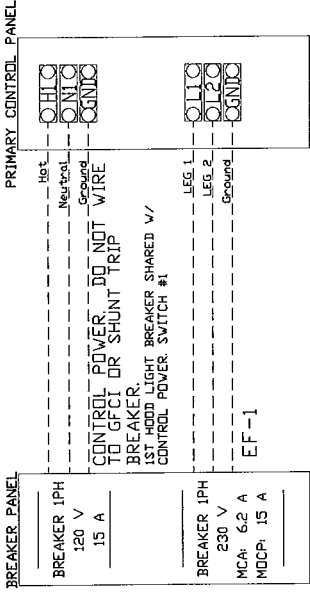
ELECTRICAL GE - Job#4420680

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	HP	VOLTI	FLA	
1		SC-210110FP	Utility Cabinet Left	03 - Utility Cabinet Left	1 Light	Smart Controls Thermostatic Control	EF-1	Exhaust	1	0.750	230	50
					1 Fan							

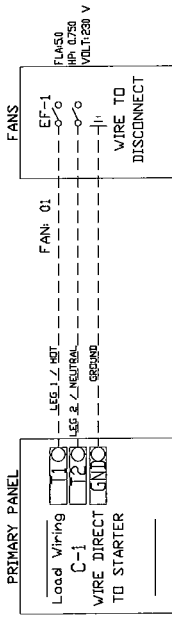
JOB Carleton Place Arena
 LOCATION Carleton Place, ON, K7C 2V8
 DATE 7/2/2020 JOB # 4420680
 DWG # 8 DRAWN BY Phil Mazer
 REV. SCALE 3/8" = 1'-0"



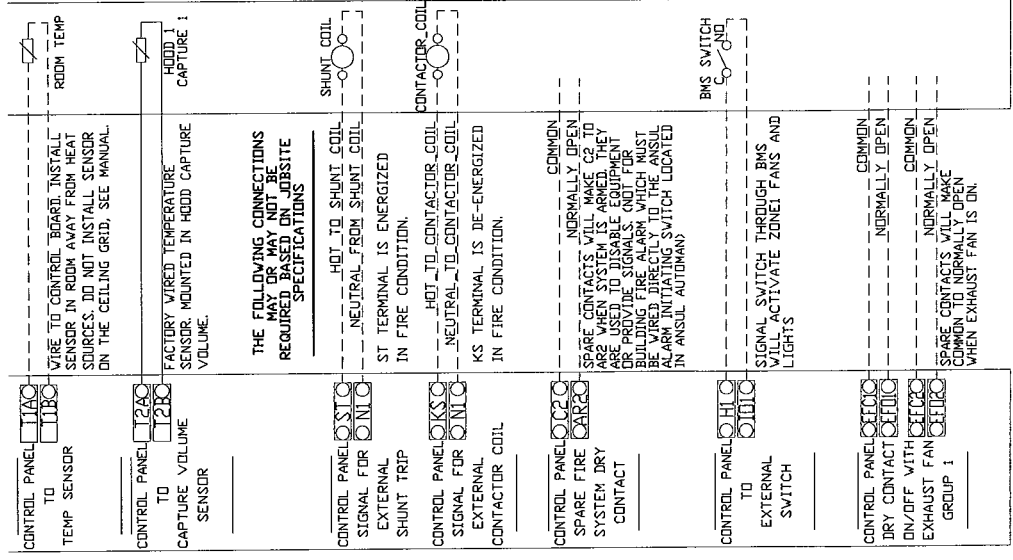
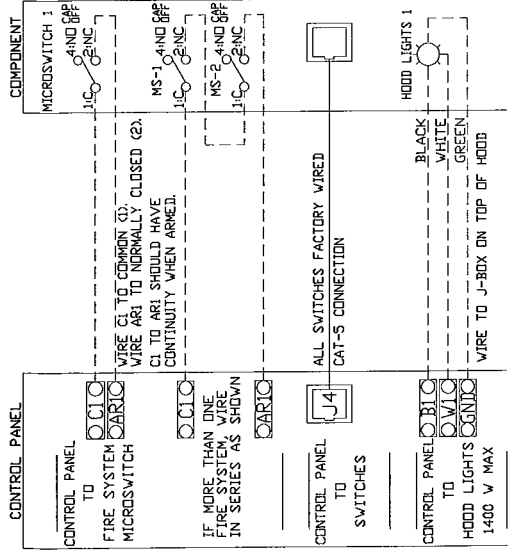
BREAKER PANEL TO PRIMARY CONTROL PANEL
 Responsibility: Electrician
 BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED



CONTROL PANEL TO FANS
 Responsibility: Electrician



CONTROL PANEL TO ACCESSORY ITEMS
 Responsibility: Electrician



FACTORY WIRING SCHEMATIC
CIRCUIT BOARDS
DCV Rev. 2.12.00
HMI Rev. 2.12.00

RA-X	RELAY	RD-X	24 VDC
NO 1	4	NO 1	4
NC 2	3	NC 2	3
COM 6	5	COM 6	5

COMPONENT LIST

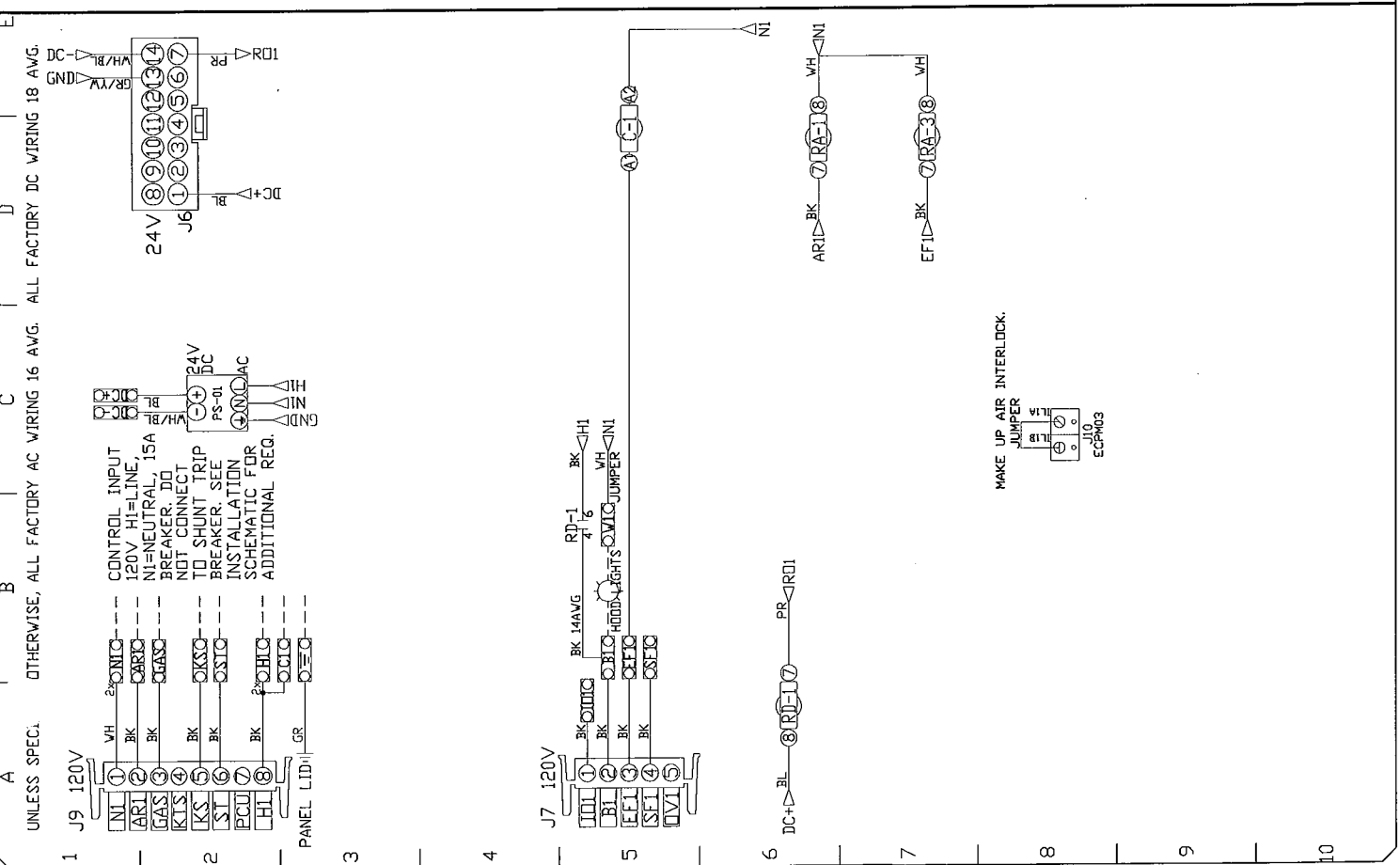
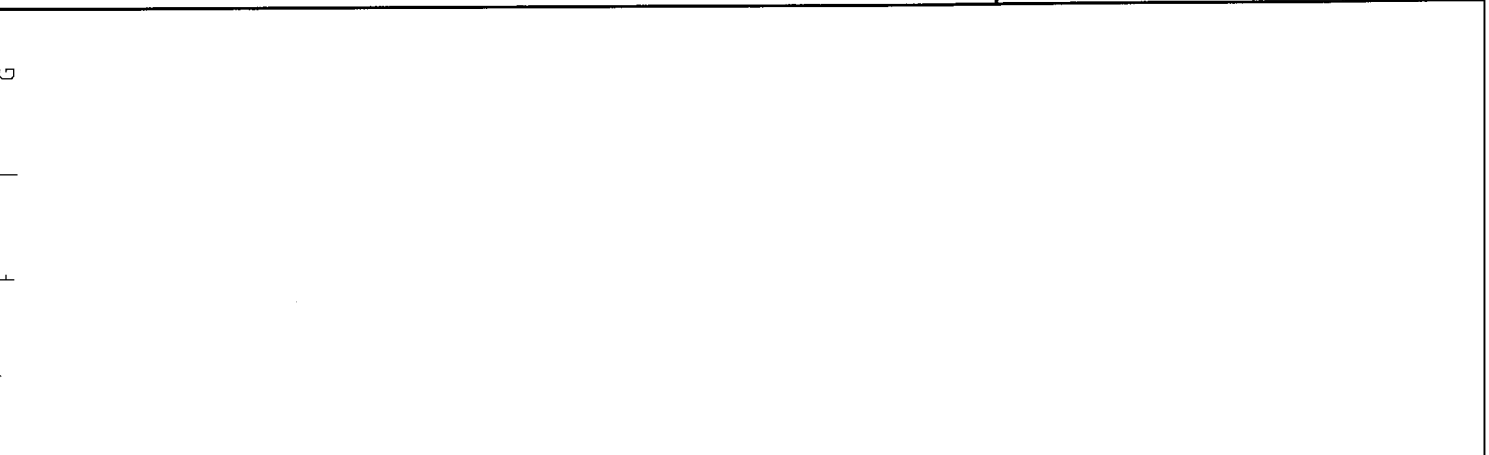
LABEL	DESCRIPTION
ST-X	Starter
DL-X	Diodes
C-X	Capacitor
PS-1	Power Sup. 24VDC
RA-x	Relay
RD-x	24VDC Light Relay
TS-x	Thermistor

LEGEND

FIELD WIRING	FACTORY WIRING
---	---
BK	BLACK
BL	BLUE
BR	BROWN
BU	BUFF
BY	YELLOW
GR	GREEN
GY	GREY
OR	ORANGE
PR	PURPLE
RD	RED
RD/GR	RED/GREEN
RD/BL	RED/BLACK
RD/WH	RED/WHITE
RD/BU	RED/BUFF
RD/YL	RED/YELLOW
RD/NI	RED/NEUTRAL
RD/GR/WH	RED/GREEN/WHITE
RD/GR/BU	RED/GREEN/BUFF
RD/GR/YL	RED/GREEN/YELLOW
RD/GR/NI	RED/GREEN/NEUTRAL
RD/GR/BU/NI	RED/GREEN/BUFF/NEUTRAL
RD/GR/YL/NI	RED/GREEN/YELLOW/NEUTRAL

JOB NAME
Completion Place A...
DRAWING TITLE
SC-210110FP
DESCRIPTION OF OPERATION
 240V 1 Phase w/ control
 Fan, 1 Exhaust Fan,
 1 Lights out in Fire, Fan
 Controlled Room
 Shipped loose for field
 installation.

JOB NO	4420680	DRAWN BY	
TYPE	FACTORY	DATE	7/2/2020
DWG NO.	ECP #1-2		



14 x 18 x 6 Box