

**HOOD INFORMATION - Job#3005522**

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST PLENUM RISER(S)								HOOD CONSTRUCTION	HOOD CONFIG.	
					TOTAL EXH. CFM	WIDTH	LENG.	HEIGHT	DIA.	CFM	VEL.	S.P.		END TO END	ROW
1		5424 ND-2	11' 8.00"	600 Deg.	2625			4'	16'	2625	1880	-0.981"	430 SS Where Exposed	ALONE	ALONE

**PATENT NUMBERS**

Exhaust Hoods ND-2/BD-2/SND-2 (Canada) - CA Patent 2520435 C

**HOOD INFORMATION**

HOOD NO.	TAG	FILTER(S)					LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WGHT			
		TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY.	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM		ELECTRICAL			SWITCHES		
1		Captrate Solo Filter	8	20"	16'	85% See Filter Spec.	4	Screw In Compact	NO									NO	522 LBS

**HOOD OPTIONS**

HOOD NO.	TAG	OPTION
1		FIELD WRAPPER 24.00' High Front, Right
		LEFT END STANDOFF (FINISHED) 1' Wide 54' Long Insulated
		RIGHT QUARTER END PANEL 23' Top Width, 0' Bottom Width, 23' High 430 SS
		INSULATION FOR BACK OF HOOD
		LEFT WALL AS END PANEL

**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.

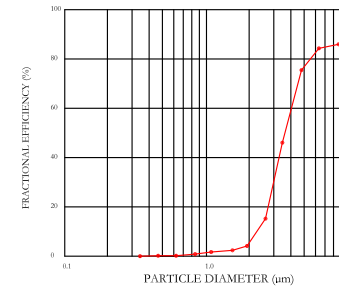
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

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

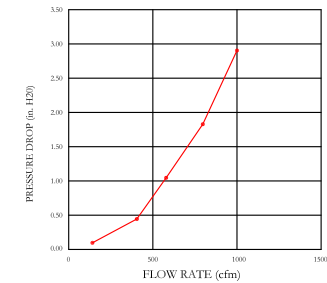
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05.

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



**CUSTOMER APPROVAL TO MANUFACTURE:**

Approved as Noted

Approved with NO Exception Taken

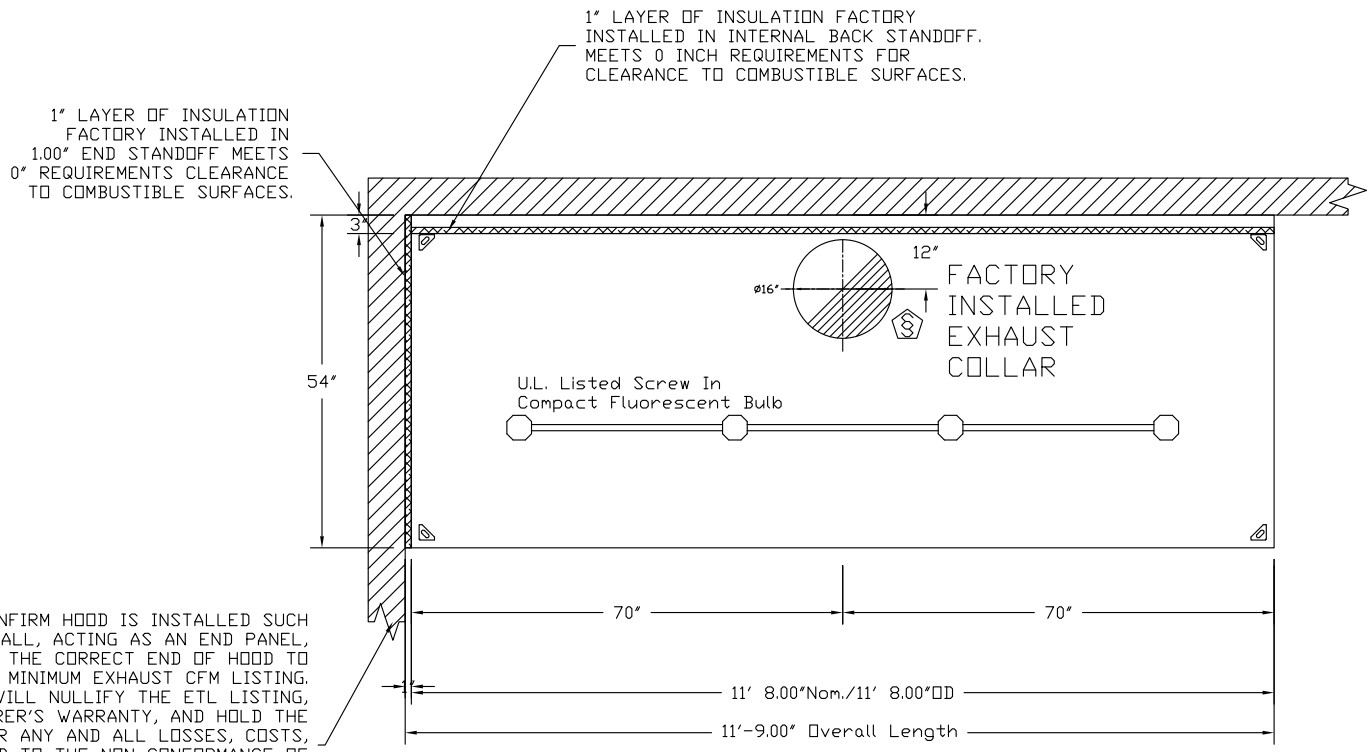
Revise and Resubmit

SIGNATURE \_\_\_\_\_

Your Title \_\_\_\_\_ Date \_\_\_\_\_



JOB St Peters Church r1	
LOCATION PORTLAND, ME, 04101	
DATE 5/8/2017	JOB # 3005522
DWG # 1	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"



INSTALLER MUST CONFIRM HOOD IS INSTALLED SUCH THAT THE SPECIFIED WALL, ACTING AS AN END PANEL, IS MATED TIGHT TO THE CORRECT END OF HOOD TO ACHIEVE A REDUCED MINIMUM EXHAUST CFM LISTING. NON-COMPLIANCE WILL NULLIFY THE ETL LISTING, VOID THE MANUFACTURER'S WARRANTY, AND HOLD THE CONTRACTOR LIABLE FOR ANY AND ALL LOSSES, COSTS, AND EXPENSES RELATED TO THE NON-CONFORMANCE OF THE MANUFACTURER'S SPECIFIED INSTRUCTION. THE WALL ACTING AS AN END PANEL MUST EXTEND NO LESS THAN 20" FROM THE INTERSECTING WALL ON WHICH HOOD IS MOUNTED AND MUST EXTEND NO LESS THAN 20" UNDER BOTTOM OF HOOD TO BE ELIGIBLE FOR REDUCED MINIMUM EXHAUST CFM LISTING.

PLAN VIEW - Hood #1  
11' 8.00" LONG 5424ND-2

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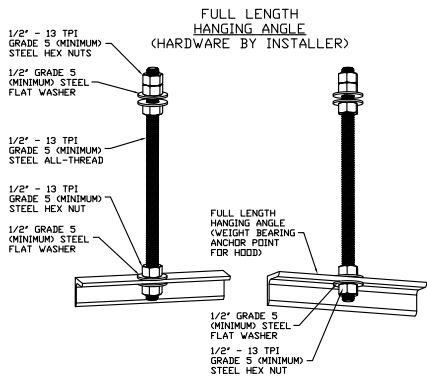
Your Title \_\_\_\_\_ Date \_\_\_\_\_

ETL LISTED Intertek

BUILT TO ACCURACY WITH NFPA No. 96

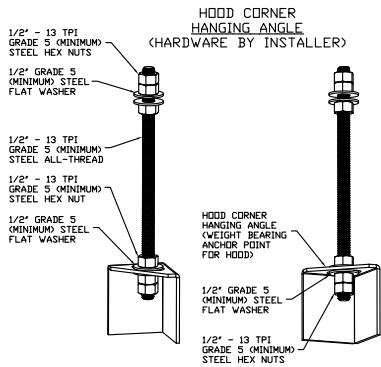
**CAPTIVEAIRE**

JOB St Peters Church r1	
LOCATION PORTLAND, ME, 04101	
DATE 5/8/2017	JOB # 3005522
DWG # 2	DRAWN BY BFC-21
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**

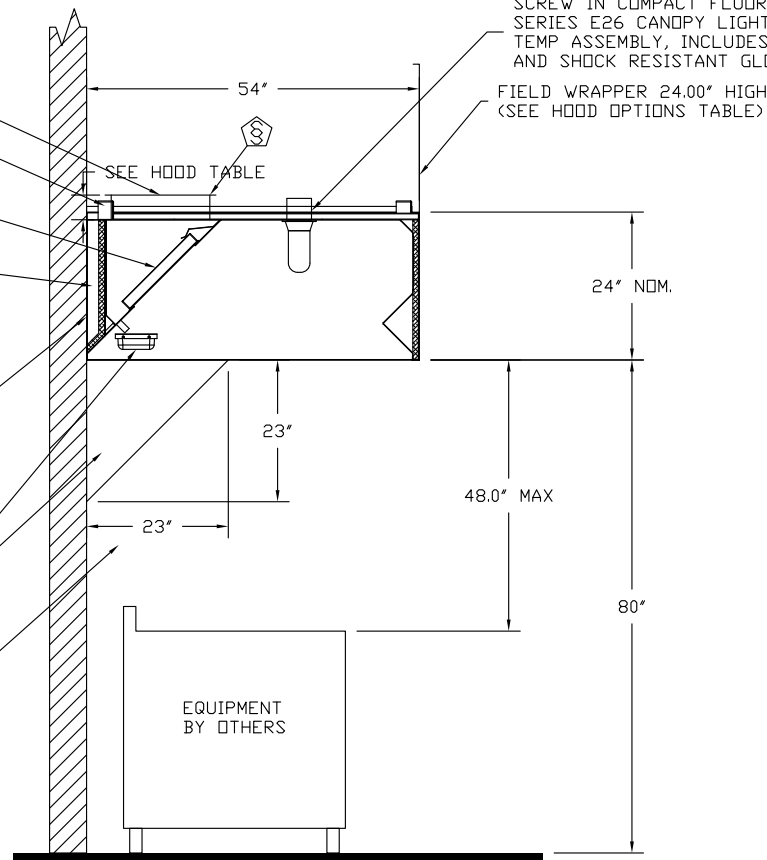
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20" CAPRATE SOLD FILTER WITH HOOK  
1' LAYER OF INSULATION FACTORY  
INSTALLED IN 3" INTERNAL STANDOFF.  
MEETS 0 INCH REQUIREMENTS FOR  
CLEARANCE TO COMBUSTIBLE SURFACES.

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  
RIGHT QUARTER END PANEL

LEFT WALL AS END PANEL



SCREW IN COMPACT FLUORESCENT BULB, L55  
SERIES E26 CANOPY LIGHT FIXTURE - HIGH  
TEMP ASSEMBLY, INCLUDES CLEAR THERMAL  
AND SHOCK RESISTANT GLOBE

FIELD WRAPPER 24.00" HIGH  
(SEE HOOD OPTIONS TABLE)

**SECTION VIEW - MODEL 5424ND-2  
HOOD - #1**

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Revise and Resubmit

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JOB St Peters Church r1	
LOCATION PORTLAND, ME, 04101	
DATE 5/8/2017	JOB # 3005522
DWG # 3	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

**EXHAUST FAN INFORMATION - Job#3005522**

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	FLA	WEIGHT (LBS.)	SONES
1		NCA16FA	2625	1,250	1122	1,500	1.0720	1	230	6.8	204	13.6

**FAN OPTIONS**

FAN UNIT NO.	TAG	OPTION (Qty. - Descr.)
1		1 - Grease Box
		1 - Full Crating For Exhaust Fans
		1 - 3 Year Extended Motor Warranty
		1 - Extra Set of Belts
		1 - Fan Base Ceramic Seal - Installed At Plant - For Grease Ducts

**FAN SOUND INFORMATION**

FAN UNIT NO.	MOTOR	RPM	LWA	SONES	DBA	DISTANCE FT	OCTAVE 1	OCTAVE 2	OCTAVE 3	OCTAVE 4	OCTAVE 5	OCTAVE 6	OCTAVE 7	OCTAVE 8
1	Exhaust	1122	76.7	13.6	65.2	5	73.4	78.8	82.3	71.7	66.8	64.7	59	53.5

**CURB ASSEMBLIES**

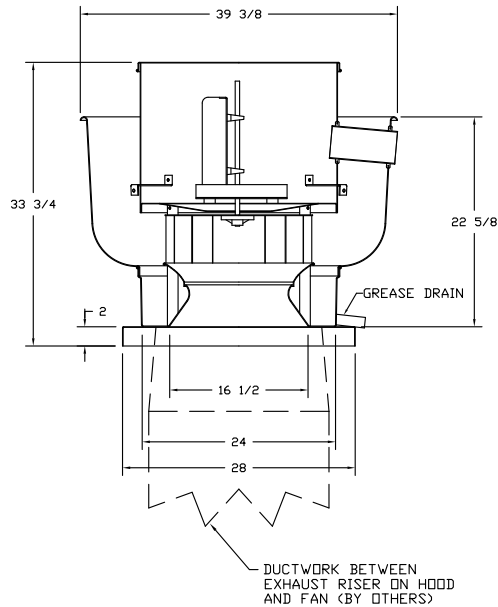
NO.	DN FAN	WEIGHT	ITEM	SIZE
1	# 1	34 LBS	Curb	26.500"W x 26.500"L x 24.000"H SPECIFY Pitch Vented Hinged

**FAN ACCESSORIES**

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

ROOF PITCH FOR CURB(S) MUST BE SPECIFIED PRIOR TO RELEASING ORDER  
 \_\_\_:12

FAN #1 NCA16FA - EXHAUST FAN



**FEATURES:**

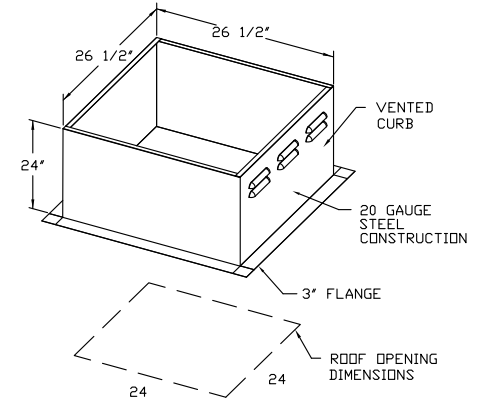
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762
- AMCA SOUND AND AIR CERTIFIED
- WIRING FROM MOTOR TO DISCONNECT SWITCH
- WEATHERPROOF DISCONNECT
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

**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.

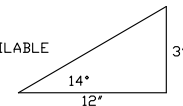
**OPTIONS**

- GREASE BOX
- FULL CRATING FOR EXHAUST FANS
- 3 YEAR EXTENDED MOTOR WARRANTY
- EXTRA SET OF BELTS
- FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:  
 EXAMPLE: 7/12 PITCH = 30° SLOPE



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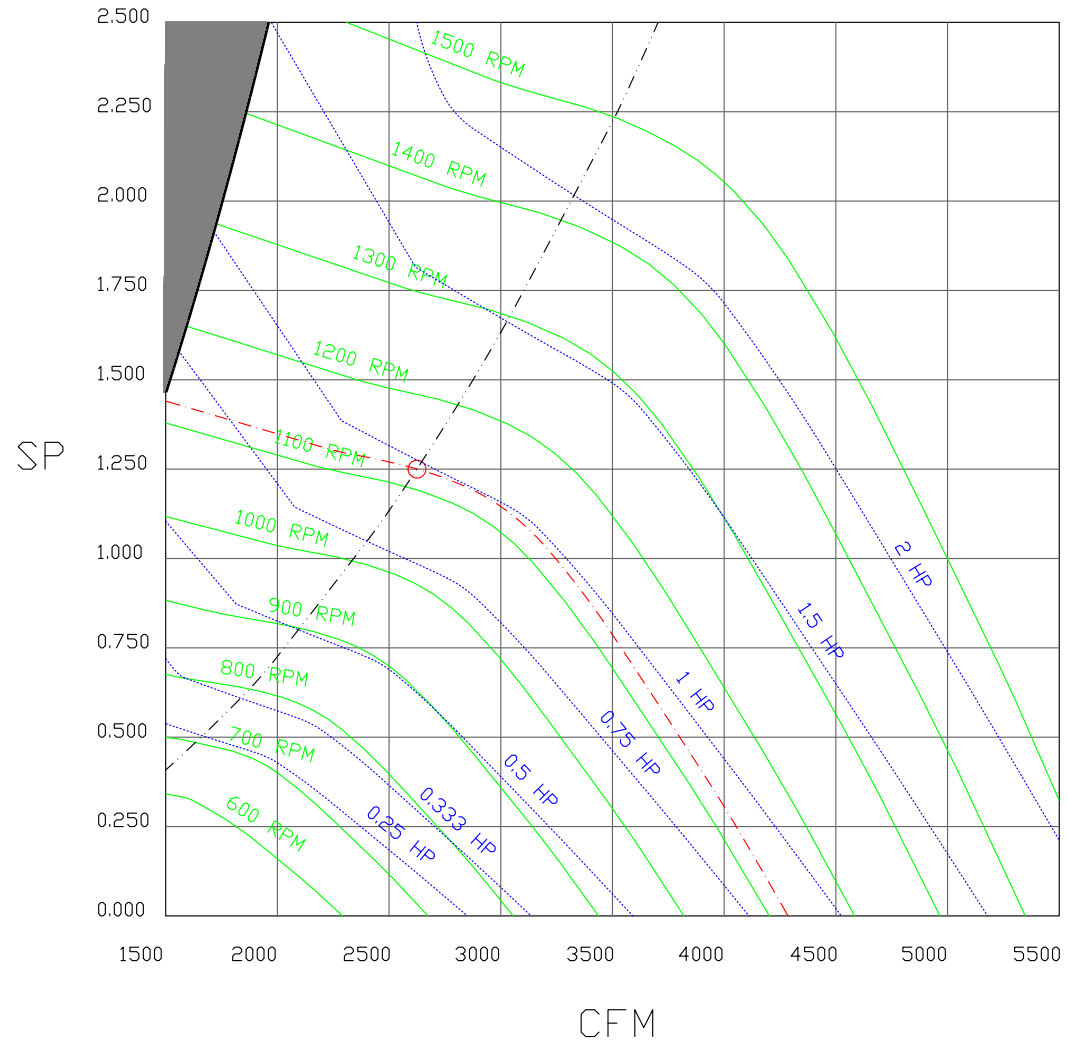
Your Title \_\_\_\_\_ Date \_\_\_\_\_



JOB St Peters Church r1	
LOCATION PORTLAND, ME, 04101	
DATE 5/8/2017	JOB # 3005522
DWG # 4	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

FAN#1 - EXHAUST PERFORMANCE CURVES.

2625 CFM, 1.25 SP @ 1122 RPM and 1.072 BHP at 25 feet and 70 deg F  
 \* Please note that these curves were adjusted for job specific temperature and altitude.



CUSTOMER APPROVAL TO MANUFACTURE:

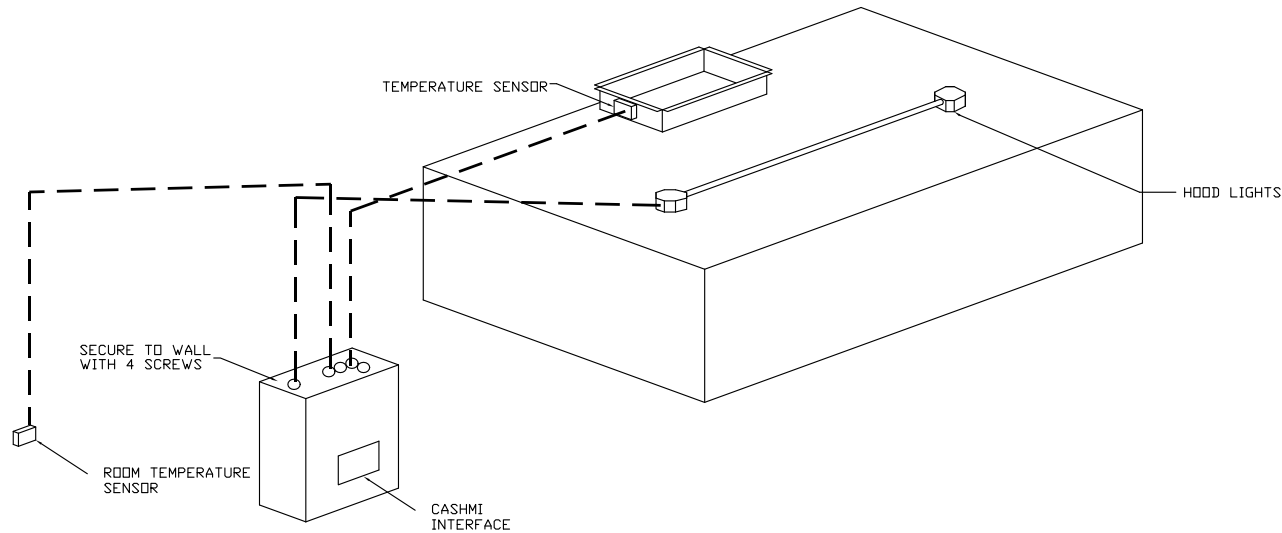
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 Approved with NO Exception Taken  
 Revise and Resubmit  
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 Your Title \_\_\_\_\_ Date \_\_\_\_\_



JOB St Peters Church r1	
LOCATION PORTLAND, ME, 04101	
DATE 5/8/2017	JOB # 3005522
DWG # 5	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

**ELECTRICAL PACKAGES - Job#3005522**

NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	?	H.P.	VOLT	FLA
1		SC-210110FP	Wall Mount In SS Box	05 - SS Wall Mount Box	1 Light 1 Fan	Smart Controls Thermostatic Control	Exhaust	1	1.500	230	6.8



**WALL MOUNTED CONTROL CENTER**

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 Your Title \_\_\_\_\_ Date \_\_\_\_\_



JOB St Peters Church r1	
LOCATION PORTLAND, ME, 04101	
DATE 5/8/2017	JOB # 3005522
DWG # 6	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"

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.

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SIGNATURE \_\_\_\_\_  
 Your Title \_\_\_\_\_ Date \_\_\_\_\_



<i>JOB</i> St Peters Church r1	
<i>LOCATION</i> PORTLAND, ME, 04101	
<i>DATE</i> 5/8/2017	<i>JOB #</i> 3005522
<i>DWG #</i> 7	<i>DRAWN BY</i> BFC-21
<i>REV.</i>	<i>SCALE</i> 3/8" = 1'-0"

Exhaust Fan Wiring

JOB 3005522 - St Peters Church r1

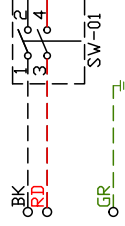
DRAWING NUMBER EXH3005522-1

SHIP DATE 5/8/2017

MODEL NCA18FA

Installed Options

1



Label	Component Description	Location
MT-01	Fan Motor	[20]
SW-01	Main disconnect switch	[20]

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23

EXHAUST

MOTOR\_INFO  
1.5HP-230V-1P-6.8FLA

ELECTRICAL INFORMATION  
MOTOR/CTRL MOP: 85A  
MOTOR/CTRL MOP: 15A

NOTES  
--- DENOTES FIELD WIRING  
\_\_\_ DENOTES INTERNAL WIRING

WIRE COLOR

BK - BLACK	YW - YELLOW
BL - BLUE	GR - GREEN
BR - BROWN	GY - GRAY
OR - ORANGE	PR - PURPLE
RD - RED	PK - PINK
WH - WHITE	



JOB NO  
3005522

MODEL NUMBER  
SC-210110FP

DRAWN BY  
INSTALL

DESCRIPTION OF OPERATION:  
220V 1 Phase w/ control for 1 Exhaust Fan, Exhaust on in Fire, Lights out in Fire, Fan(s) On/Off Thermostatically Controlled. Room temperature sensor shipped loose for field installation.

JOB NAME  
St Peters Church r1

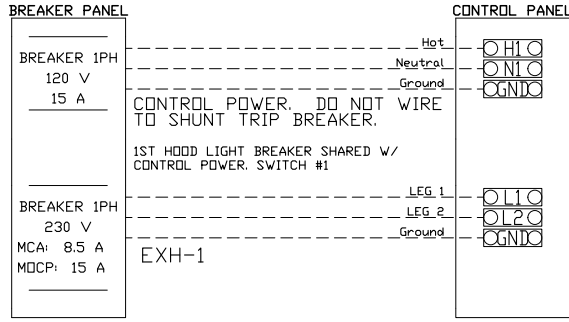
DATE  
5/8/2017

DWG NO  
ECP #1-1

**BREAKER PANEL TO CONTROL PANEL**

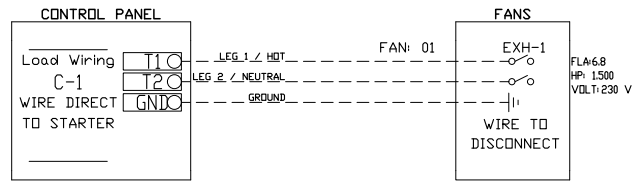
Responsibility: Electrician

BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED



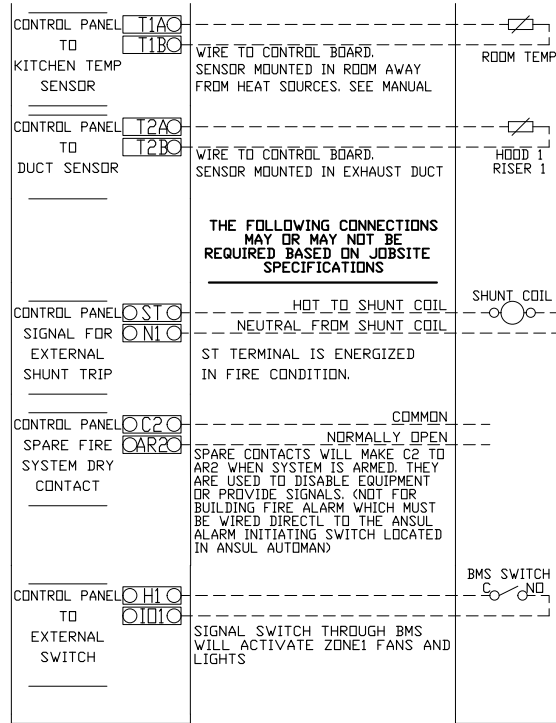
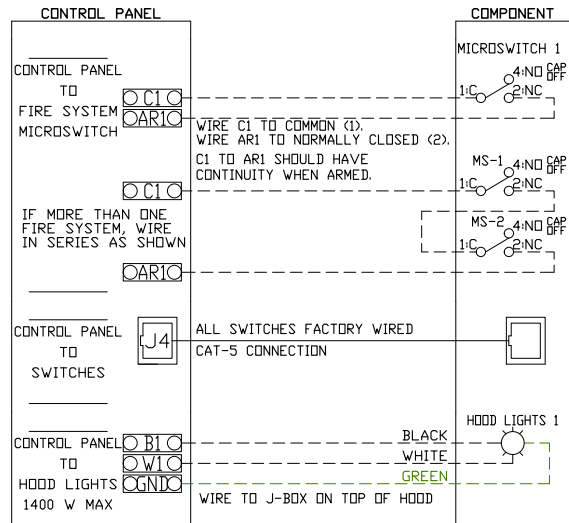
**CONTROL PANEL TO FANS**

Responsibility: Electrician

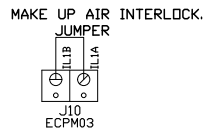
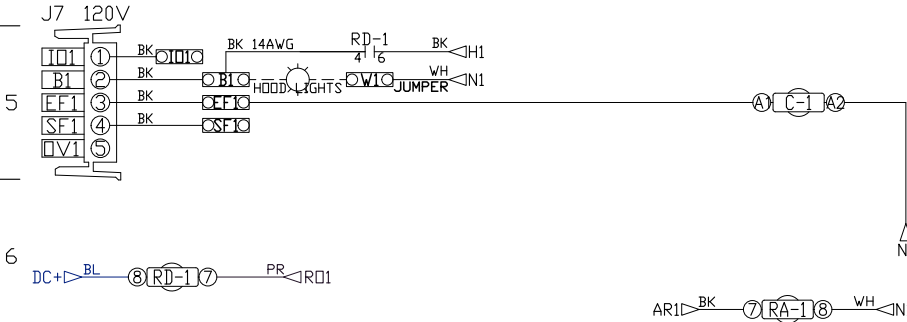
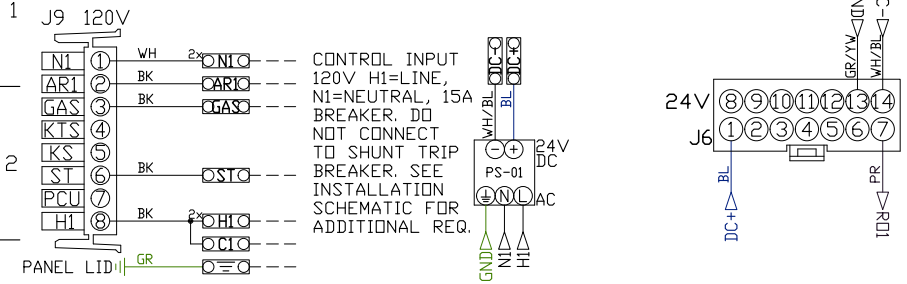


**CONTROL PANEL TO ACCESSORY ITEMS**

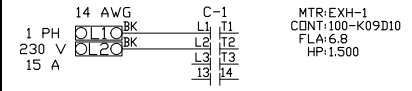
Responsibility: Electrician



UNLESS SPECIFIED OTHERWISE, ALL FACTORY AC WIRING 16 AWG. ALL FACTORY DC WIRING 18 AWG.



MOTOR POWER CIRCUIT



MTR:EXH-1  
CONT:100-K09D10  
FLA:6.8  
HP:1.500

FACTORY WIRING SCHEMATIC CIRCUIT BOARDS

DCV Rev. 2.06.00  
HMI Rev. 2.06.00

RA-x 120 VAC RELAY	RD-x 24 VDC RELAY
NO 4 3	NO 4 3
NC 2 1	NC 2 1
COIL 8 7	COIL 8 7
COM 6 5	COM 6 5

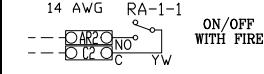
COMPONENT LIST

LABEL	DESCRIPTION
ST-X	Starter PN-varies
DL-X	Overload PN-varies
C-X	Contactors PN-varies
PS-1	Power Sup. 24VDC PN-MDP18-24A-1C
RA-x	120V Relay DPDT PN-34.110.0184.0
RD-x	24VDC Light Relay PN-34.110.0186.0

LEGEND

--- FIELD WIRING  
--- FACTORY WIRING  
BK- BLACK YW- YELLOW  
BL- BLUE GY- GREY  
BR- BROWN PR- PURPLE  
OR- ORANGE RD- RED  
WH- WHITE GR- GREEN  
OR/BL- OR/BL STRIPE  
BL/RD- BL/RD STRIPE  
RD/GN- RD/GN STRIPE  
WH/BL- WH/BL STRIPE

DRY CONTACTS (SHOWN DE-ENERGIZED)



JOB NAME

St Peters Church...

DRAWING TITLE

SC-210110FP

DESCRIPTION OF OPERATION

220V 1 Phase w/ control  
For 1 Exhaust Fan,  
Exhaust on in Fire,  
Lights out in Fire, Fan(s)  
On/Off Thermostatically  
Controlled. Room  
temperature sensor  
shipped loose for field  
installation.

JOB NO 3005522 DRAWN BY

TYPE FACTORY DATE 5/8/2017

DWG NO ECP #1-2