



# PERMIT REVISION

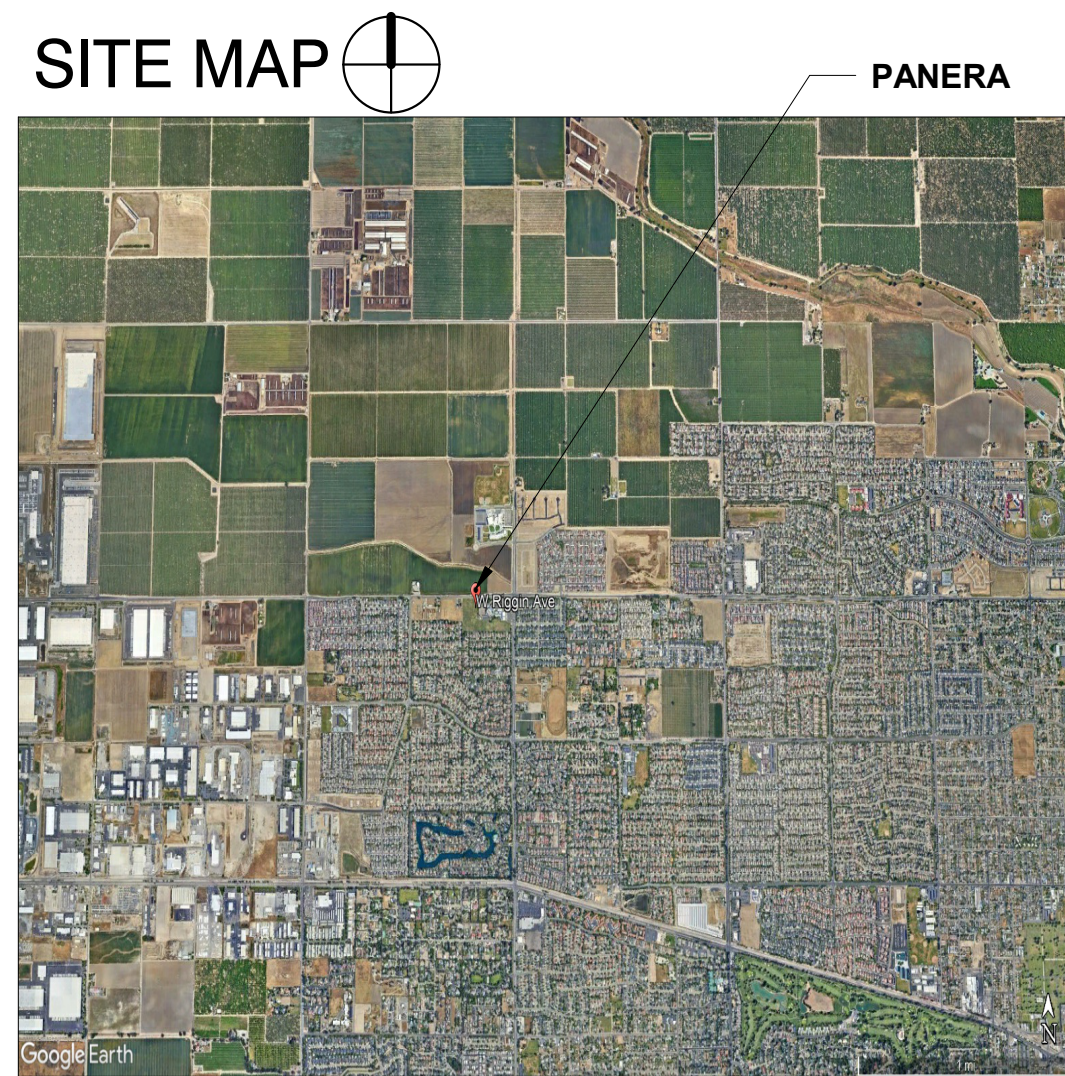
## PANERA BREAD BAKERY-CAFE #6359

806 W. RIGGIN AVE.  
VISALIA, CA 93291

SCOPE OF WORK: INTERIOR BUILD-OUT CONSTRUCTION OF AN EXISTING SHELL BUILDING. WORK TO INCLUDE NEW INTERIOR WALLS, INTERIOR FINISHES, HVAC, ELECTRICAL, PLUMBING SYSTEMS, AND INSTALLATION OF FOOD PREPARATION EQUIPMENT.

LANDLORD SHELL BUILDING PERMIT NUMBER: B234384

LANDLORD SITE IMPROVEMENT PERMIT NUMBER: B235032



### CODE INFORMATION

**APPLICABLE CODES & REGULATIONS:**  
 BUILDING CODE: 2022 CALIFORNIA BUILDING CODE  
 PLUMBING CODE: 2022 CALIFORNIA PLUMBING CODE  
 ELECTRICAL CODE: 2022 CALIFORNIA ELECTRICAL CODE  
 MECHANICAL CODE: 2022 CALIFORNIA MECHANICAL CODE  
 FIRE PROTECTION: 2022 CALIFORNIA FIRE CODE  
 ENERGY CODE: 2022 CALIFORNIA CODE  
 ACCESSIBILITY CODE: 2022 CALIFORNIA CH. 11B ACCESSIBILITY CODE

**CODE CLASSIFICATION:**  
 A. OCCUPANCY GROUP: A-2 ASSEMBLY  
 B. CONSTRUCTION CLASSIFICATION: TYPE V-B (EXISTING)  
 C. AUTOMATIC FIRE SUPPRESSION SYSTEM INSTALLED: NO (EXISTING)

**TRAVEL DISTANCE:**  
 ALLOWED TRAVEL DISTANCE: 250 FT  
 ACTUAL TRAVEL DISTANCE: 74' - 3" MAX

### PROTOTYPE INFORMATION

THIS SET OF DOCUMENTS INCORPORATES ALL REVISIONS THROUGH PROTOTYPE UPDATE #2023-04 V1

### DEFERRED SUBMITTALS

FIRE ALARM PLANS AND CUT SHEETS ARE DEFERRED. EXTERIOR BUILDING SIGNAGE SHALL BE SUBMITTED AND PERMITTED SEPARATELY.

### CONTACT INFORMATION

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 PHONE: (559)713-4026 (FIRE PREVENTION)  
 EMAIL: PREVENTION.DIVISION@VISALIA.CITY (FIRE ADMINISTRATION)

### SHEET INDEX

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A100	FLOOR PLAN - SHELL & SLAB	P302	PLUMBING DETAILS
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A131	LIGHTING SCHEDULE, DETAILS, & SECTIONS	E103	ELECTRICAL POWER PLAN
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		Sheet Count: 73	
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### SHEET INDEX

PROJECT DESIGN ATTRIBUTES		
NAME	NUMBER	
AREA		
FOH SQ.FT.	1925	
BOH SQ.FT.	1630	
TOTAL BUILDOUT SQ.FT.	3555	
MISC. SQ.FT.	N	
OUTDOOR GATHERING SQ.FT.	402	
PARKING		
NUMBER OF PARKING SPACES	33	
NUMBER OF DRIVE-THRU PULL FORWARD STALLS	2	
NUMBER OF CUSTOMER PICK-UP STALLS	3	
SEATING		
INTERIOR SEAT COUNT	52	
EXTERIOR SEAT COUNT	20	
INTERIOR TABLE COUNT	14	
EXTERIOR TABLE COUNT	6	
REGISTERS		
NUMBER OF REGISTERS	2	
NUMBER OF KIOSKS	3	
MISC.		
EXTERIOR COOLER-FREEZER BOXES	N	

PROJECT DESIGN ATTRIBUTES (CONT'D)				
SITE TYPE	BAKING TIER	CATERING TIER	FIREPLACE TYPE	
DT SIN - DT SINGLE LANE	TIER 2	TIER 2	N/A	
OPTIONS (DELETE AFTER SELECTION)				
DT SIN - DT SINGLE LANE	TIER 2	TIER 2	IN WALL, 1-SIDED	
RPUWI - RPU WINDOW			INTERIOR-EXTERIOR	

REVISION ISSUE LOG				
REVISION #	ISSUE DATE	DESCRIPTION	AFFECTED SHEETS	REMARKS
1	03/04/24	PERMIT REVISION		

### LANDLORD APPROVAL

NAME \_\_\_\_\_

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

Bakery-Cafe:

# #6359

SYSTEM: NEXT GEN

Project Team:

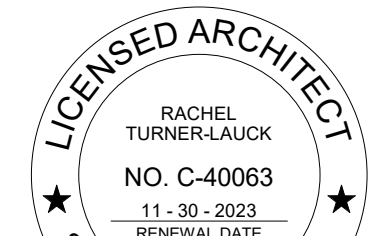
## NORR

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Professional Seal:



*Rachel Turner-Lauck*  
12/19/2023

Project Title:

**PERMIT REVISION**  
**Bakery Cafe #6359**  
**806 W. RIGGIN AVE.**  
**VISALIA, CA 93291**



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No.	Description	Date
	50% REVIEW DOCUMENTS	11/27/23
	100% REVIEW DOCUMENTS	12/07/23
	PERMIT DOCUMENTS	12/19/23
1	PERMIT REVISION	03/04/24

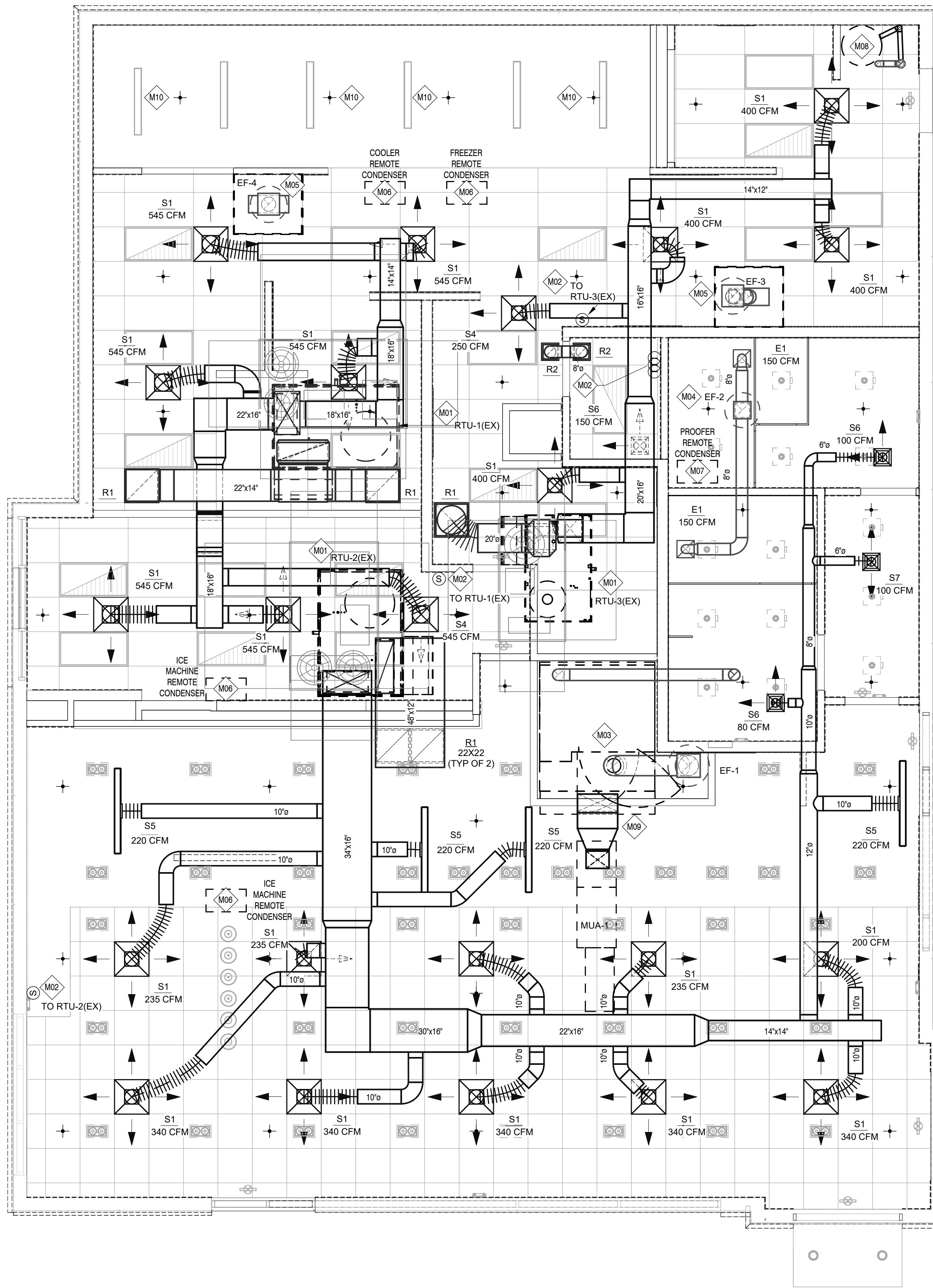
### COVER SHEET

Project Number: \_\_\_\_\_ Sheet Number: \_\_\_\_\_  
 Drawn By: NICH23-0181  
 Issue Date: 12/19/2023  
 Scale: \_\_\_\_\_  
 PM: JK DPM: JK DM: IA CPM: MB

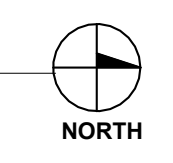
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15/2/2018



1 MECHANICAL FLOOR PLAN  
1/4" = 1'-0"



**GENERAL NOTES HVAC**

1. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES IN LOCATING DUCTWORK, PIPING AND EQUIPMENT TO AVOID ANY INTERFERENCE.
2. COORDINATE INSTALLATION OF NEW DUCT WITH STRUCTURE.
3. CONTRACTOR TO INSTALL ALL WORK IN STRICT COMPLIANCE WITH LOCAL CODES AND/OR ORDINANCES.
4. MECHANICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND EQUIPMENT SUBMITTAL PRIOR TO INSTALLING OR FABRICATING ANY DUCTWORK.
5. PAINT INSIDE OF DIFFUSERS BLACK TO MINIMIZE VIEWING OF DUST AND DIRT.
6. PROVIDE FIBERGLASS INSULATION BLANKET ABOVE TOPS OF ALL SUPPLY AIR DIFFUSERS.
7. PROVIDE ADJUSTABLE VOLUME DAMPER AT ALL BRANCH DUCTWORK.
8. PROVIDE TURNING VANES AT ALL ELBOWS (TYPICAL).
9. MECHANICAL CONTRACTOR TO REPLACE FILTERS UPON COMPLETION OF CONSTRUCTION.
10. REFER TO GENERAL CONDITIONS ON G-SHEETS FOR FIRE STOPPING REQUIREMENTS.
11. REFER TO THE OVEN HEAD DETAIL ON ARCHITECTURAL SHEETS FOR OVEN/PROOFER ACCESS PANEL AND STAINLESS STEEL ENCLOSURE INFORMATION.
12. ALL TYPE II EXHAUST DUCT MUST BE RIGID METALLIC (PER SMACNA HVAC DUCT CONSTRUCTIONS STANDARDS).
13. LOCATE ROOF MOUNTED EQUIPMENT 10' MINIMUM FROM ROOF EDGE IF PARAPET HEIGHT IS LOWER THAN MINIMUM REQUIRED PER LOCAL CODE AND ORDINANCE FOR SERVICE AND MAINTENANCE.
14. THE GENERAL CONTRACTOR SHALL CALL APPROVED AABC OR NEBB CERTIFIED AGENCIES FOR TESTING AND BALANCING. THE REPORT SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO FINAL INSPECTION.

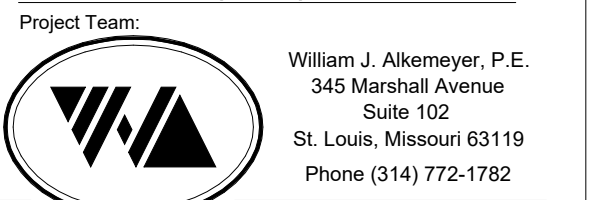
**M# MECHANICAL KEYED NOTES**

- M01 EXISTING ROOFTOP UNIT LANDLORD PROVIDED AND INSTALLED AS SHOWN IN SCHEDULE ON SHEET M201. VERIFY CONDENSATE LINE IS ROUTED TO NEAREST APPROVED RECEPTACLE. ENSURE A ILL LISTED IONIZATION TYPE SMOKE DETECTOR IS INSTALLED AND INTERLOCKED WITH RTU CONTROLS TO SHUT RTU DOWN UPON ACTIVATION OF DETECTOR. PROVIDE WITH ACCESS DOOR IF NOT EXISTING.
- M02 THIS CONTRACTOR TO PROVIDE TWO PIECE THERMOSTAT WITH WALL MOUNTED SENSOR AND CONTROLLER MOUNTED IN MANAGER'S OFFICE (REFER TO ELEVATIONS IN THE ELECTRICAL SET FOR EXACT LOCATION). COORDINATE LOCATIONS WITH OTHER ELEMENTS OF WALL / COLUMN. VERIFY EXACT LOCATIONS IN FIELD. T-STAT WIRING SHALL ROUTE THRU CPI PANELS COORDINATE EXACT REQUIREMENTS WITH CPI REPRESENTATIVE. DO NOT LOCATE SENSOR ON WALL TILE. PROVIDE AN INSULATED BACKING WHEN SENSOR IS LOCATED ON AN EXTERIOR WALL.
- M03 MANUFACTURER INSTALLED HOOD FOR RACK OVEN. PROVIDE AND INSTALL PERFORATED SUPPLY PLENUM. SEE DETAIL ON SHEET M301. PROVIDE AND INSTALL NEW 14" DIAMETER EXHAUST DUCT PER MANUFACTURER'S RECOMMENDATIONS UP TO EF-1 ON ROOF. FAN SHALL BE INTERLOCKED WITH OVEN SUCH THAT FAN ONLY RUNS WHEN OVEN IS ON. SEE FAN SCHEDULE ON SHEET M201. PERFORATED SUPPLY AIR PLENUM, FAN & MUA UNIT ARE PURCHASED FROM "CAPTIVE-AIRE" BY OWNER AND INSTALLED BY CONTRACTOR. SEE SHEET M201 FOR VENTILATION INFORMATION. BALANCE EF-1 TO 1472 CFM. RUN MAKE-UP AIR DUCT DOWN FROM MUA ON ROOF AND CONNECT TO PERFORATED SUPPLY AIR PLENUM. EXTEND FLUE FROM DRAFT INDUCTION FAN THRU ROOF PER MANUFACTURER'S INSTRUCTIONS AND TERMINATE WITH WIND PROOF CAP A MINIMUM OF 10 FT FROM ANY INTAKES. REFER TO ELECTRICAL DRAWINGS IN THIS SET FOR HOOD LIGHT SWITCH LOCATION. INSTALL ALL COMPONENTS IN STRICT COMPLIANCE WITH LOCAL CODES PER MANUFACTURER'S RECOMMENDATIONS.
- M04 EXTEND 10" DIAMETER EXHAUST DUCT DOWN FROM EXHAUST FAN EF-2 ON ROOF AND CONNECT TO EXHAUST GRILLES IN TOILET ROOM. BALANCE AS INDICATED. PROVIDE BACKDRAFT DAMPER AT EACH GRILLE. SEE SCHEDULE ON SHEET M201. AND ROOF MOUNTED EXHAUST DETAIL ON SHEET M401.
- M05 DISHWASHER / SOUP THERMALIZER TYPE II HOOD BY "CAPTIVE-AIRE". INSTALL NEW 10" DIAMETER EXHAUST DUCT (22 GA. STAINLESS STEEL OR ALUMINUM) FROM EXHAUST COLLAR ON HOOD TO ASSOCIATED EXHAUST FAN ON ROOF. SEE SHEET E109 FOR WIRING INTERCONNECTION DIAGRAM. DISH MACHINE SHALL BE INTERLOCKED FOR EF-3 TO ONLY RUN WHEN DISHWASHER IS ON. LOCATE FAN OUTLET A MINIMUM OF 10' FROM ANY AIR INTAKE. HOOD AND FAN ARE FURNISHED BY OWNER FROM "CAPTIVE-AIRE" AND INSTALLED BY CONTRACTOR. SEE SHEET M302 FOR INFORMATION.
- M06 REMOTE CONDENSERS ON ROOF FOR FREEZER, COOLER, AND ICE MACHINES (PART OF PANERA EQUIPMENT PACKAGE). TAKE OFF FOR PIPING RUNS TO BE COORDINATED WITH GENERAL CONTRACTOR. G.C. TO RUN WIRING FOR COOLERS AND FREEZER AND FOR REMOTE COMPRESSORS. MECHANICAL/ELECTRICAL SUBCONTRACTOR TO PERFORM FINAL CONNECTION FOR THESE UNITS. COORDINATE LOCATION WITH OWNER. FOR BIDDING PURPOSES REFRIGERATION PIPING COMES IN LENGTHS OF 25 FT AND 50 FT. (COOLER AND FREEZER ONLY). PROVIDE ALUMA STAND OR EQUAL FOR ALL CONDENSERS.
- M07 REMOTE CONDENSER ON ROOF FOR PROOFER/RETARDER. TEHA-006-HS2D 6,000 BTU/H PROVIDED AND INSTALLED BY CONTRACTOR. AS AN ALTERNATE, IF THE 6,000 BTU/H IS NOT AVAILABLE, TEZA-007H8-HT3D 7,000 BTU/H CAN BE USED. CONDENSING UNIT TO BE PURCHASED FROM LOCAL UNITED REFRIGERATION DEALER. CONTRACTOR TO INSTALL REFRIGERANT LINES FROM CONDENSING UNIT TO PROOFER PER MANUFACTURER'S RECOMMENDATIONS.
- M08 DIRECT VENT CLOSED COMBUSTION FLUE FROM WATER HEATER UP THROUGH ROOF. TERMINATE WITH CONCENTRIC KIT PER MANUFACTURER'S RECOMMENDATIONS. MINIMUM 10 FEET FROM ANY AIR INTAKE. VERIFY LOCATION. SEE DETAIL SHEET M401.
- M09 ALL SPRINKLER HEADS LOCATED WITHIN 5'-0" FROM OVEN HOOD(S) SHALL HAVE A HIGH TEMPERATURE CLASSIFICATION.
- M10 PROVIDE AND INSTALL PROTECTIVE CAGES AT DRY SPRINKLER HEADS IN COOLERS AND FREEZER (SHALL BE EQUAL TO FIREHOUSE INTERNATIONAL, MODEL No. BRO-SPCAGE).

Bakery-Cafe:

#6359

SYSTEM: G4 (ARIA)



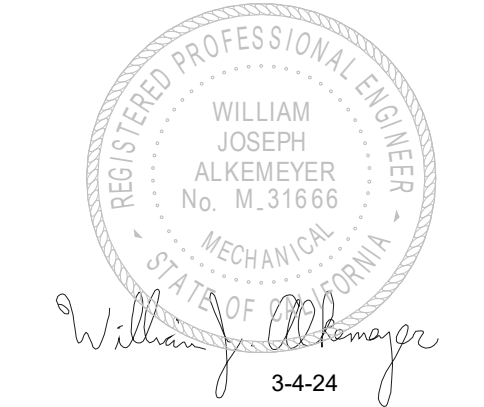
Engineering Consultant

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Professional Seal:



Project Title:

PERMIT DOCUMENTS

**Bakery Cafe #6359**  
806 W. RIGGIN AVE.  
VISALIA, CA 93291



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No.	Description	Date

**MECHANICAL PLAN**

Project Number: #6359 Sheet Number:

Drawn By: **M101**  
Author:  
Issue Date: 12.18.23

DPM:	DM:	CPM:
DPM:	DM:	CPM:

### VENTILATION SUMMARY

#### VENTILATION SUMMARY RTU-1

1. Summary	ASHRAE Std 62.1-2016
Ventilation Sizing Method	Heating operation
Design Condition	1,000
Occupant Diversity (D)	154 CFM
Uncorrected Outdoor Air Intake (Vou)	1,000
System Ventilation Efficiency (Ev)	205 CFM
Outdoor Air Intake (Vot)	

#### 2. Space Ventilation Analysis

Zone Name / Space Name	Space Floor Area (ft²) (Az)	Area Outdoor Air Rate (CFM/ft²) (Ra)	Time Averaged Occupancy (Occupants) (Pz)	People Outdoor Air Rate (CFM/person) (Rp)	Air Distribution Effectiveness (Ez)	Space Outdoor Air (CFM) (Voz)	Breathing Zone Outdoor Air (CFM) (Vbz)	Space Ventilation Efficiency (Evz)
009_010 D.T. CONSOLIDAT	660.0	0.18	6.0	7.50	0.8	205	164	1.000
<b>Total</b>							<b>164</b>	<b>1.000</b>

#### VENTILATION SUMMARY RTU-2

1. Summary	ASHRAE Std 62.1-2016
Ventilation Sizing Method	Heating operation
Design Condition	1,000
Occupant Diversity (D)	651 CFM
Uncorrected Outdoor Air Intake (Vou)	0.893
System Ventilation Efficiency (Ev)	729 CFM
Outdoor Air Intake (Vot)	

#### 2. Space Ventilation Analysis

Zone Name / Space Name	Space Floor Area (ft²) (Az)	Area Outdoor Air Rate (CFM/ft²) (Ra)	Time Averaged Occupancy (Occupants) (Pz)	People Outdoor Air Rate (CFM/person) (Rp)	Air Distribution Effectiveness (Ez)	Space Outdoor Air (CFM) (Voz)	Breathing Zone Outdoor Air (CFM) (Vbz)	Space Ventilation Efficiency (Evz)
003 CORRIDOR	138.0	0.06	0.0	0.00	0.8	10	8	1.105
004 MENS	124.0	0.00	0.0	0.00	0.8	0	0	1.132
005 WOMENS	127.0	0.00	0.0	0.00	0.8	0	0	1.132
001 002 DINING QUEING	1151.0	0.18	48.0	7.50	0.8	709	567	0.893
006 BAKERY SERVICE	295.0	0.18	3.0	7.50	0.8	95	76	1.068
<b>Total</b>							<b>651</b>	<b>0.893</b>

#### VENTILATION SUMMARY RTU-3

1. Summary	ASHRAE Std 62.1-2016
Ventilation Sizing Method	Heating operation
Design Condition	1,000
Occupant Diversity (D)	135 CFM
Uncorrected Outdoor Air Intake (Vou)	0.829
System Ventilation Efficiency (Ev)	163 CFM
Outdoor Air Intake (Vot)	

#### 2. Space Ventilation Analysis

Zone Name / Space Name	Space Floor Area (ft²) (Az)	Area Outdoor Air Rate (CFM/ft²) (Ra)	Time Averaged Occupancy (Occupants) (Pz)	People Outdoor Air Rate (CFM/person) (Rp)	Air Distribution Effectiveness (Ez)	Space Outdoor Air (CFM) (Voz)	Breathing Zone Outdoor Air (CFM) (Vbz)	Space Ventilation Efficiency (Evz)
007 BAKERY	237.0	0.18	3.0	7.50	0.8	81	65	0.829
008_001 KITCHEN UTILITY	308.0	0.18	1.0	7.50	0.8	79	63	0.992
011 OFFICE	38.0	0.06	1.0	5.00	0.8	9	7	1.089
<b>Total</b>							<b>135</b>	<b>0.829</b>

### HVAC LOAD SUMMARY

#### LOAD SUMMARY FOR PANERA BREAD - VISALIA

ZONE LOADS	DESIGN COOLING			DESIGN HEATING		
	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads	372 ft²	13624	-	372 ft²	-	-
Wall Transmission	2657 ft²	4644	-	2657 ft²	4649	-
Roof Transmission	3014 ft²	5454	-	3014 ft²	4373	-
Window Transmission	372 ft²	5771	-	372 ft²	9389	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	120 ft²	4772	-	120 ft²	2246	-
Floor Transmission	3078 ft²	0	-	3078 ft²	2895	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	3848 W	13127	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	1600 W	5459	-	0	0	-
People	62	13619	16645	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	78670	24350	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	143152	40995	-	23752	0
Zone Conditioning	-	145111	40995	-	23125	0
Plenum Wall Load	0%	0	0	0	0	-
Plenum Roof Load	0%	0	0	0	0	-
Plenum Lighting Load	0%	0	0	0	0	-
Return Fan Load	9677 CFM	0	-	9677 CFM	0	-
Ventilation Load	1500 CFM	45525	-9683	1500 CFM	64201	0
Supply Fan Load	9677 CFM	0	-	9677 CFM	0	-
Space Fan Coil Fans	0%	0	-	0%	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	190636	31312	-	87326	0
Central Cooling Coil	-	202234	31312	-	0	0
Central Heating Coil	-	-13633	-	-	87002	-
>> Total Conditioning	-	188601	31312	-	87002	0

### AIR BALANCE SCHEDULE

PLAN MARK	EXHAUST	SUPPLY
EF-1	-1472	-
EF-2	-300	-
EF-3	-400	-
EF-4	-400	-
RTU-1(EX)	-	+305
RTU-2(EX)	-	+725
RTU-3(EX)	-	+470
MUA-1	-	+1072
NET EXHAUST	-2572	
NET SUPPLY		+2572
GROSS SPACE PRESSURE		+0
* DISH MACHINE OPERATES INTERMITTENTLY, THE STORE SHALL BE POSITIVE 400 CFM WHEN NOT IN USE.		
NOTES: INTER-CONNECT RTU-2 WITH EF-4. INTER-CONNECT RTU-3 WITH EF-3.		

### BRANCH DUCT SIZE

SUPPLY AIR (CFM)	ROUND DUCT DIAMETER
0 TO 100	6
101 TO 200	8
201 TO 400	10
401 TO 600	12
601 TO 700	14

### EXHAUST FAN SCHEDULE

PLAN MARK	MANUFACTURER	MODEL	TYPE	SP	CFM	ELECTRICAL	WEIGHT	OPTIONS	REMARKS
EF-1	CAPTIVEAIRE	DU50 HFA	UPBLAST	0.7"	1472	120/1/60 1/2 HP	71 LB	ROOF CURB	F.O.I.C.
EF-2	GREENHECK	GB-081-6	ROOF	0.375"	300	120/1/60 1/8 HP	54 LB	ROOF CURB, BACKDRAFT DAMPER	F.C.I.C.
EF-3, -4	CAPTIVEAIRE	DU30 HFA	UPBLAST	0.5"	400	120/1/60 1/4 HP	55 LB	ROOF CURB	F.O.I.C.

### MAKE UP AIR SCHEDULE

PLAN MARK	MANUFACTURER	MODEL	BLOWER	SP	CFM	NAT GAS IN/OUT (MBH)	ELECTRICAL	WEIGHT	OPTIONS	REMARKS
MUA-1	CAPTIVEAIRE	A1-D.250-15D	15MF-1-MOD	0.7"	1072	68.46/62.98	120/1/60/16.1/25	476 LB	ROOF CURB	F.O.I.C.

### HVAC LEGEND

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	TOILET ROOM EXHAUST GRILLE
	SPRINKLER HEAD
	DUCT MOUNTED SMOKE DETECTOR
	DIRECTION OF AIR FLOW
	THERMOSTAT (CONTROLLER)
	TEMPERATURE SENSOR
F.O.I.C.	FURNISH BY OWNER INSTALL BY CONTRACTOR
F.C.I.C.	FURNISH BY CONTRACTOR INSTALL BY CONTRACTOR

### LANDLORD PROVIDED ROOFTOP UNIT SCHEDULE (EXCERPTED FROM LANDLORD SHELL DRAWINGS UNDER SEPERATE PERMIT)

PLAN MARK	MANUFACTURER	UNIT SIZE (TONS)	SUPPLY AIR (CFM)	OUTSIDE AIR (CFM) MIN.	E.S.P. IN (W.C.)	MOTOR B.H.P.	COOLING CAPACITY		HEATING CAPACITY			DRY BULB ENTERING AIR DEGREES F	WET BULB AIR (DEG F)	AFUE %	COOLING STAGE(S)	T-STAT TYPE	VOLTS	PH	HZ	MCA/MOCP	OPERATING WEIGHT LBS.	NOTES	
							TT/SENS (MBH)	EER/SEER	NG INPUT (MBH)	NG OUTPUT (MBH)	ELEC. KW												
RTU-1(EX)	CARRIER 48GCDM12A2AM5	10	3815	305	0.8"	2.25	114.31/86.35	11.4/17.2	180	147.6	-	75.7	64.5	103°	82	ONE	TWO PIECE PROGRAM.	208	3	60	52/60	1268	1,2,3,4,5,6
RTU-2(EX)	CARRIER 48GCDM12A2AM5	10	4000	725	0.8"	2.25	114.31/86.35	11.4/17.2	180	147.6	-	80.8	65.1	103°	82	ONE	TWO PIECE PROGRAM.	208	3	60	52/60	1268	1,2,3,4,5,6
RTU-3(EX)	CARRIER 48GCGJ06A2AM5	5	2000	470	0.8"	1.05	57.83/44.87	16.5/17.4	60	49	-	79.6	65.2	103°	81	ONE	TWO PIECE PROGRAM.	208	3	60	32/45	1268	1,2,3,4,5,6

NOTES:  
1. EXISTING BY LANDLORD, VERIFY UNITS FURNISHED WITH THE FOLLOWING.  
2. ULTRA LOW LEAK ECONOMIZER.  
3. FREEZE PROTECTION, HIGH-LO PRESSURE SWITCH, CRANKCASE HEATER & HIGH LIMIT SWITCH.  
4. MERV 13 FILTERS (CHANGE UPON COMPLETION OF CONSTRUCTION).  
5. AUTOMATIC SMOKE DETECTOR PER CMC SECTION 609.1  
6. 14" CURB.

Bakery-Cafe:

# #6359

SYSTEM: G4 (ARIA)

Project Team  
  
 William J. Alkomeyer, P.E.  
 345 Marshall Avenue  
 Suite 102  
 St. Louis, Missouri 63119  
 Phone (314) 772-1782

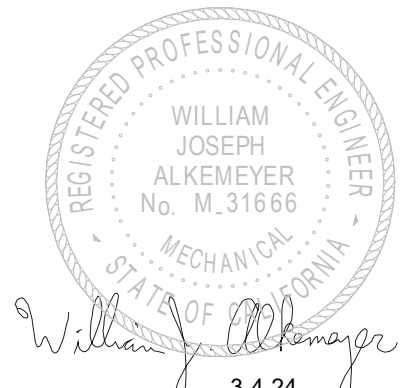
Engineering Consultant

(MECHANICAL AND PLUMBING)

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 EL MACERO, CA 95618-5072  
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(ELECTRICAL)

Professional Seal:



Project Title:

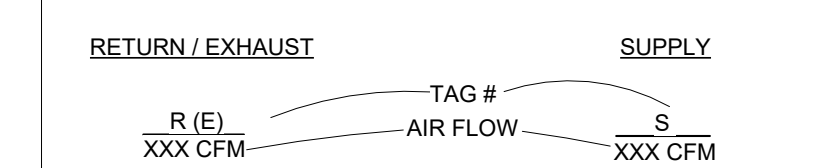
### AIR DEVICE SCHEDULE

PLAN MARK	MANUFACTURER/ MODEL NUMBER	MODULE	AIR FLOW DIRECTION	FRAME	NOTES
S1	TITUSI TMSA-AA	24x24	4-WAY	LAY-IN or GYPSUM	2
S2	TITUSI TMSA-AA	24x24	2-WAY	LAY-IN or GYPSUM	1, 2
S3	TITUSI TMSA-AA	24x24	2-WAY	LAY-IN or GYPSUM	1, 2
S4	TITUSI TMSA-AA	24x24	3-WAY	LAY-IN or GYPSUM	1, 2
S5	PRICE SDS 150	60X6 3 SLOT	2-WAY	LAY-IN or GYPSUM	3, 4
S6	TITUSI TMSA-AA	12x12	2-WAY	LAY-IN or GYPSUM	1, 2
S7	TITUSI TMSA-AA	12x12	2-WAY	LAY-IN or GYPSUM	1, 2
R1	TITUSI PAR-AA	24x24	-	LAY-IN or GYPSUM	-
R2	TITUSI PAR-AA	12x12	-	LAY-IN or GYPSUM	-
R3	TITUSI PAR-AA	24x12	-	LAY-IN or GYPSUM	-
E1	TITUSI PAR-AA	12x12	-	LAY-IN or GYPSUM	-

#### NOTES

- PROVIDE WITH SECTORIZING BAFFLE TO MATCH AIRFLOW DIRECTION.
- PROVIDE WITH INSULATED BLANKET.
- PROVIDE WITH SDBI- INSULATED PLENUM.
- PROVIDE CABLE OPERATED DAMPER CONTROL.

### AIR DEVICE LEGEND



No.	Description	Date

### MECHANICAL SCHEDULES

Project Number: #6359  
 Sheet Number: M201  
 Drawn By: Author  
 Issue Date: 12.18.23  
 DPM: DM CPM: DM CPM

3/4/2024 8:49:50 AM

P:2/18/8

3/4/2024 8:49:51 AM

Revent Type II Rack Oven Hood with Make Up Air - TOP VIEW

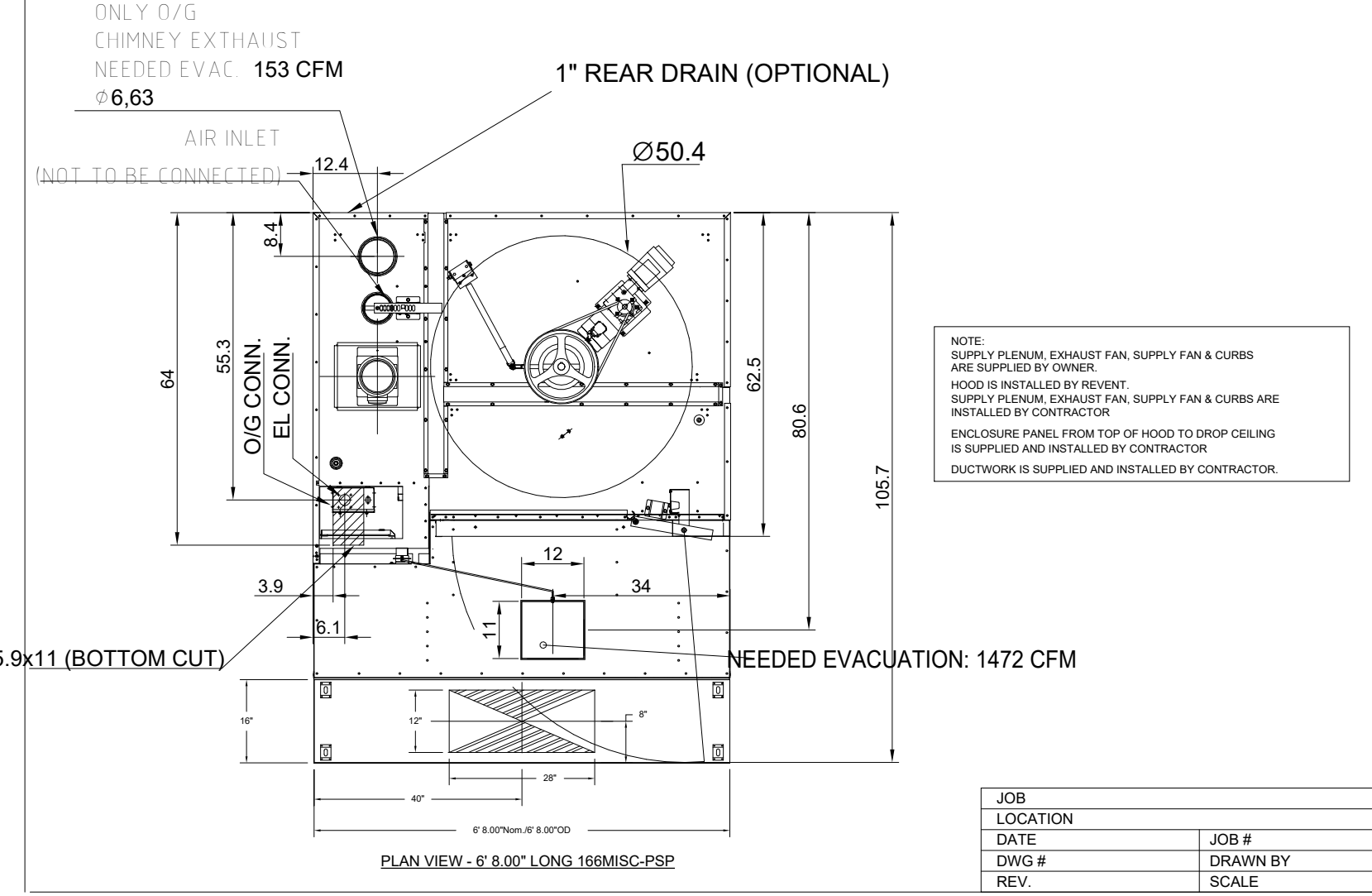
HOOD INFORMATION TABLE																
HOOD NO.	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST RISER					SUPPLY RISER					HOOD CONST.	HOOD CONFIGURATION	
				QTY.	SIZE	CFM	S.P.	TOTAL SQ. FT.	QTY.	SIZE	CFM	S.P.	TOTAL SQ. FT.			
1	Revent	8' 0"	NA	11"	12"	1472	0.0'	1472	-	-	-	-	-	-	100%	END TO END, BACK TO BACK

PERFORATED SUPPLY PLENUM(S)							
HOOD NO.	POS.	LENGTH	WIDTH	HEIGHT	WIDTH	LEN. DA.	CFM
1	Front	8'	18"	6"	12"	28"	1072 @ 0.325"

NOTE: MAKE-UP AIR PLENUM IS CONSTRUCTED OF TYPE 430 SS.

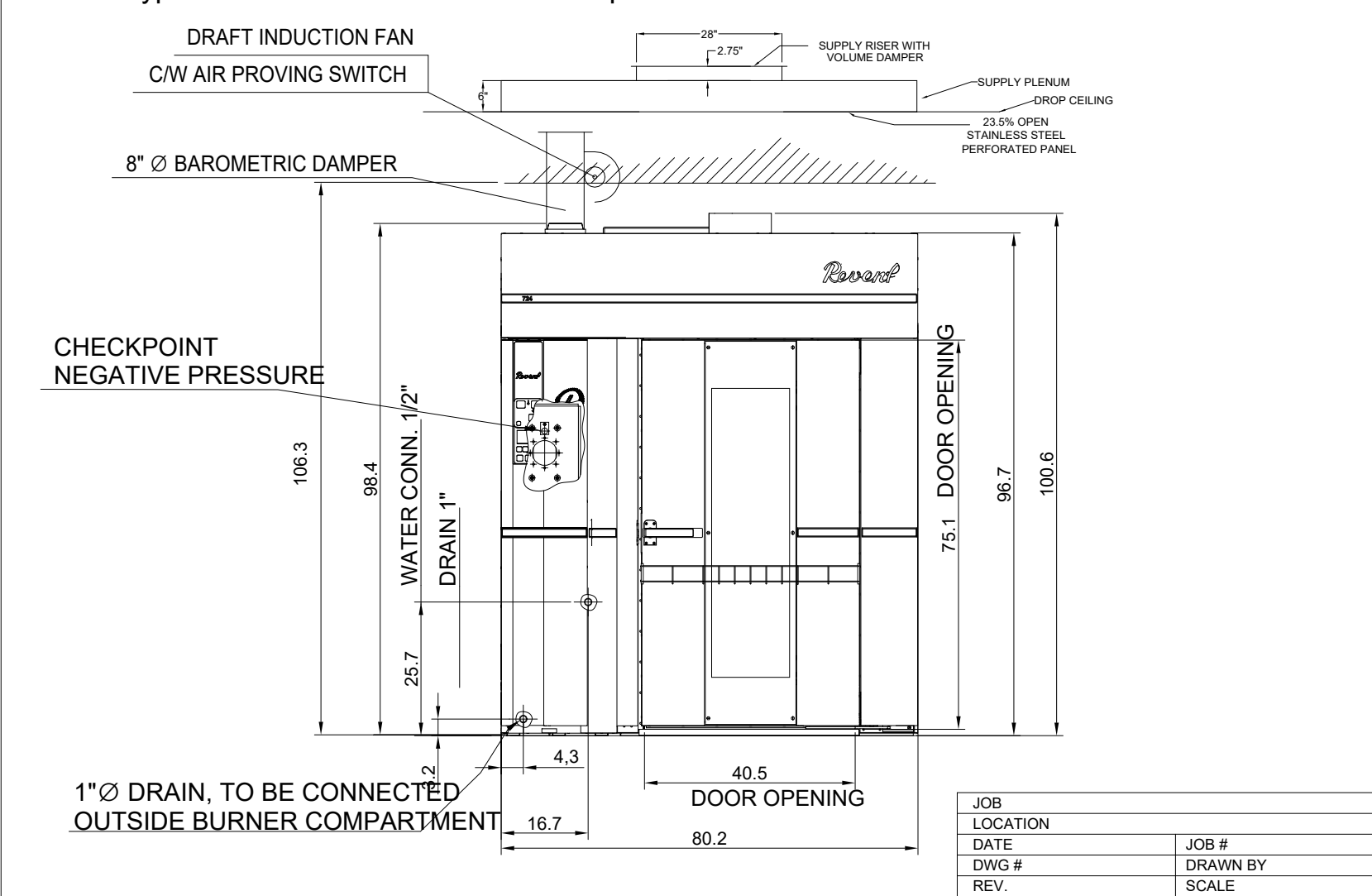
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DWG #	DRAWN BY	SCALE
REV.	SCALE	

Revent Type II Rack Oven Hood with Make Up Air - TOP VIEW



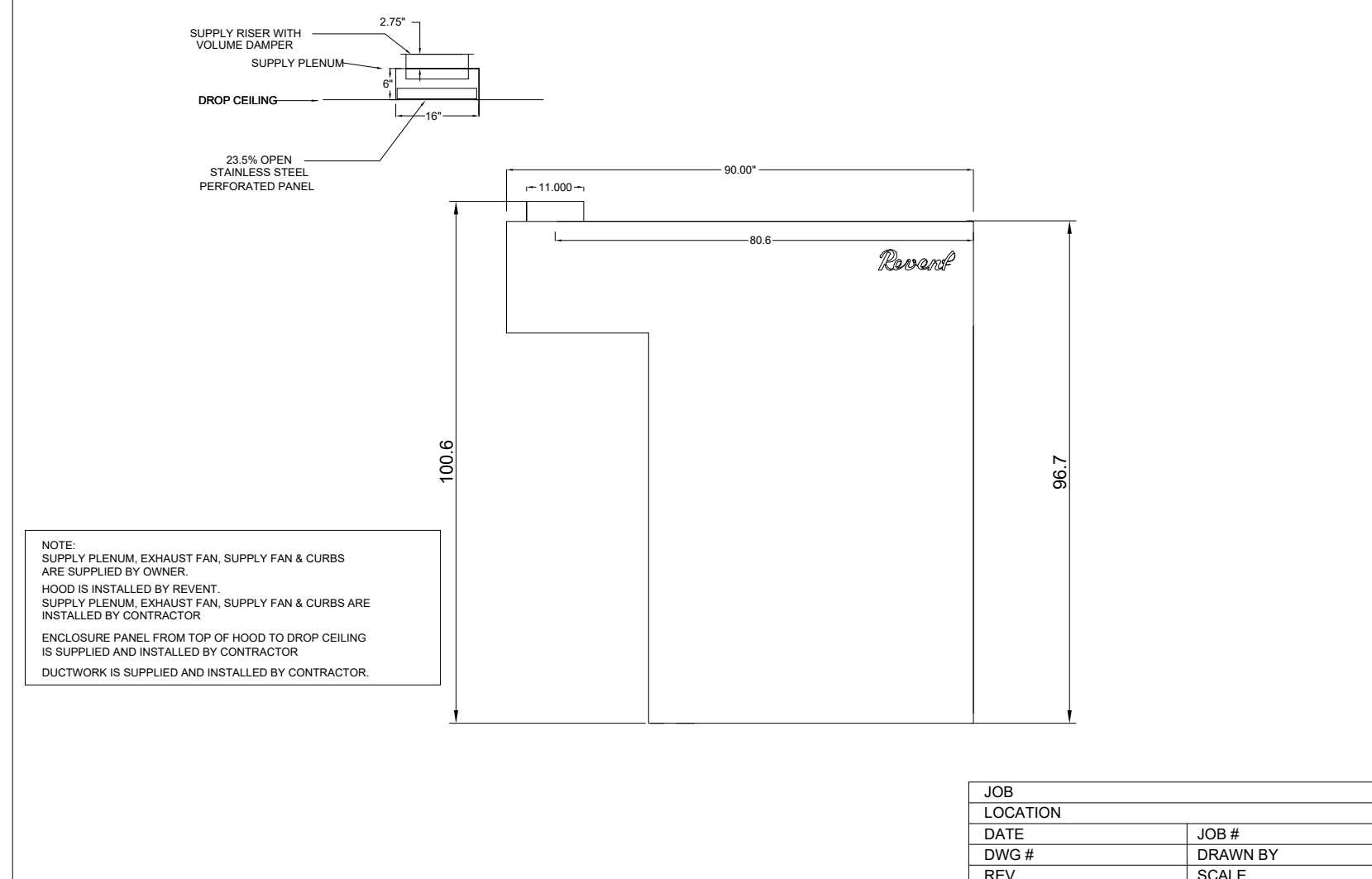
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DWG #	DRAWN BY	SCALE
REV.	SCALE	

Revent Type II Rack Oven Hood with Make Up Air - FRONT VIEW



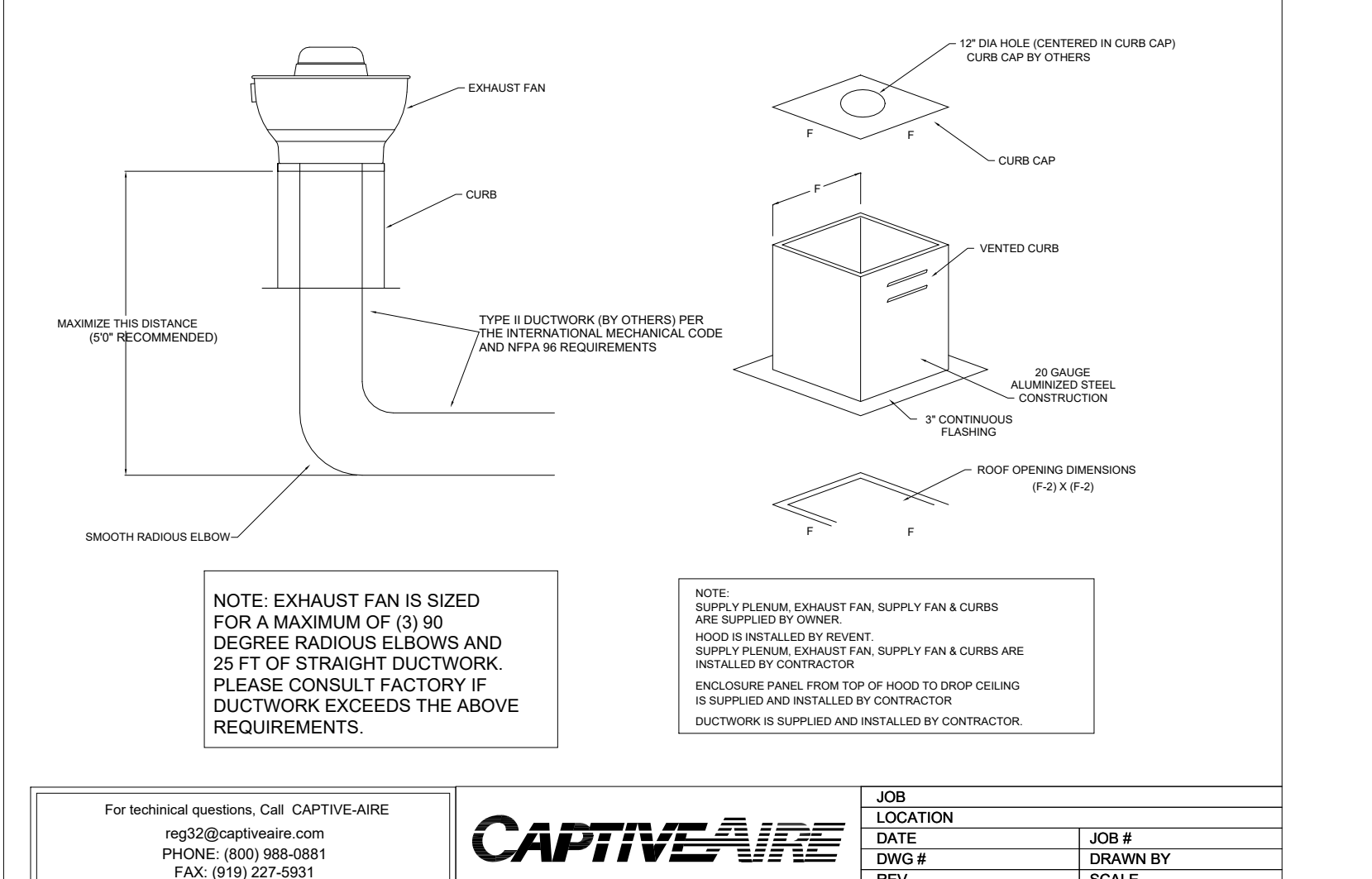
JOB LOCATION	DATE	JOB #
DWG #	DRAWN BY	SCALE
REV.	SCALE	

Revent Type II Rack Oven Hood with Make Up Air - SIDE VIEW



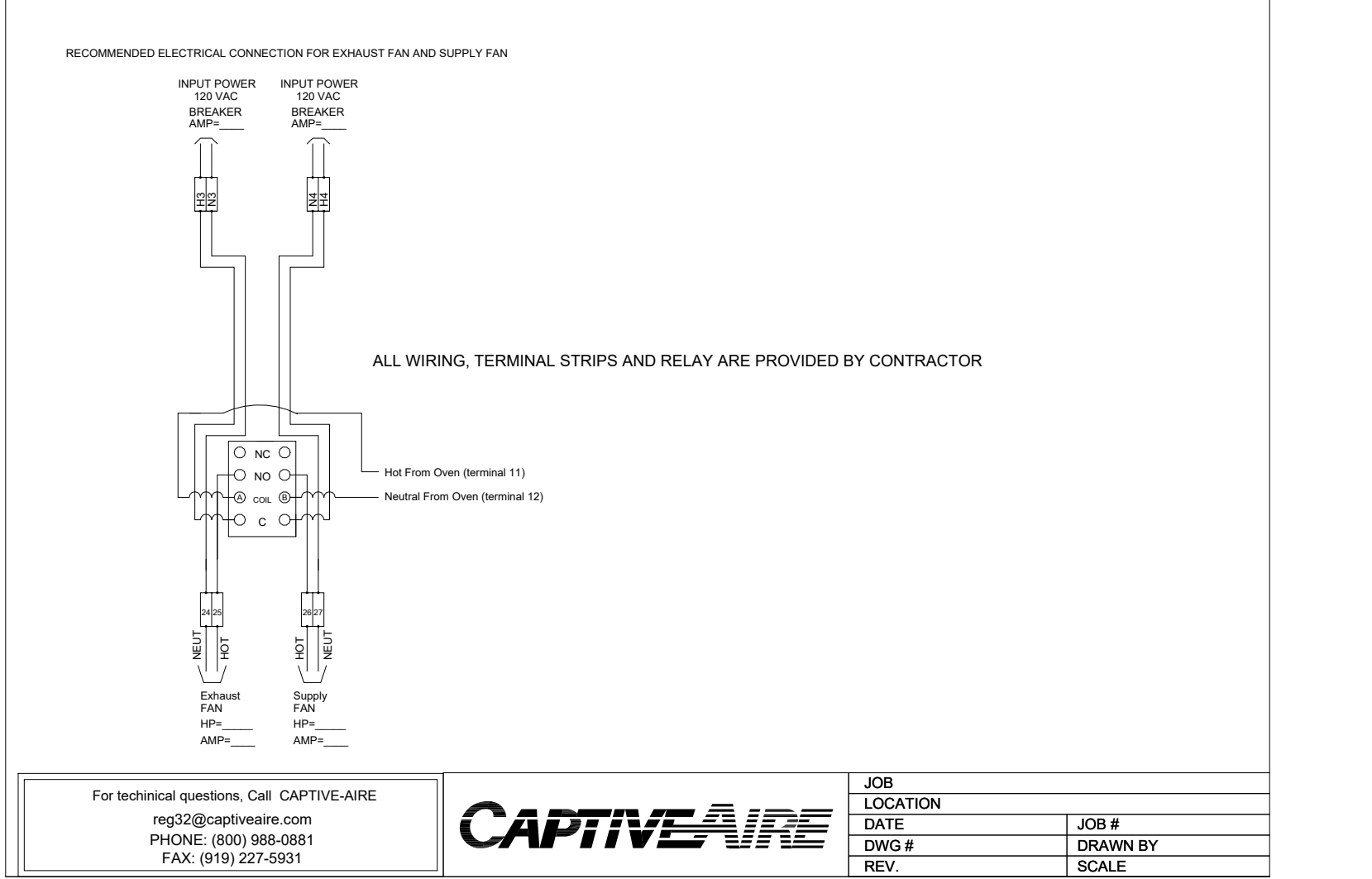
JOB LOCATION	DATE	JOB #
DWG #	DRAWN BY	SCALE
REV.	SCALE	

Revent Type II Rack Oven Hood with MUA - FAN DUCT WORK CONNECTION



JOB LOCATION	DATE	JOB #
DWG #	DRAWN BY	SCALE
REV.	SCALE	

Revent Type II Rack Oven Hood with MUA - RECOMMENDED ELECTRICAL CONNECTION



JOB LOCATION	DATE	JOB #
DWG #	DRAWN BY	SCALE
REV.	SCALE	

Revent Type II Rack Oven Hood with Make Up Air - FAN SCHEDULE

EXHAUST FAN INFORMATION																
FAN UNIT NO.	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	HP	MOTOR ENCL.	HP	BHP	PHASE	VOLT	DISCHARGE VELOCITY	WEIGHT (LBS)	ZONE	
1	REVENT RACK EP	1	DULHFA	CAPTIVE-AIRE	1472	0.708	104	TEACHED	0.500	0.4160	1	115	8.3	580 FPM	71	103

MUA FAN INFORMATION - J05857744																		
FAN UNIT NO.	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN. CFM	DESIGN CFM	ESP	HP	BHP	PHASE	VOLT	FLA	MOCP	WEIGHT (LBS)	ZONE		
1	REVENT RACK MUA	1	A10-230-103	10M-1A0C	A10-230	1000	1072	0.700	1025	TEACHED	1.000	0.5214	1	115	11.64	254	478	11.7

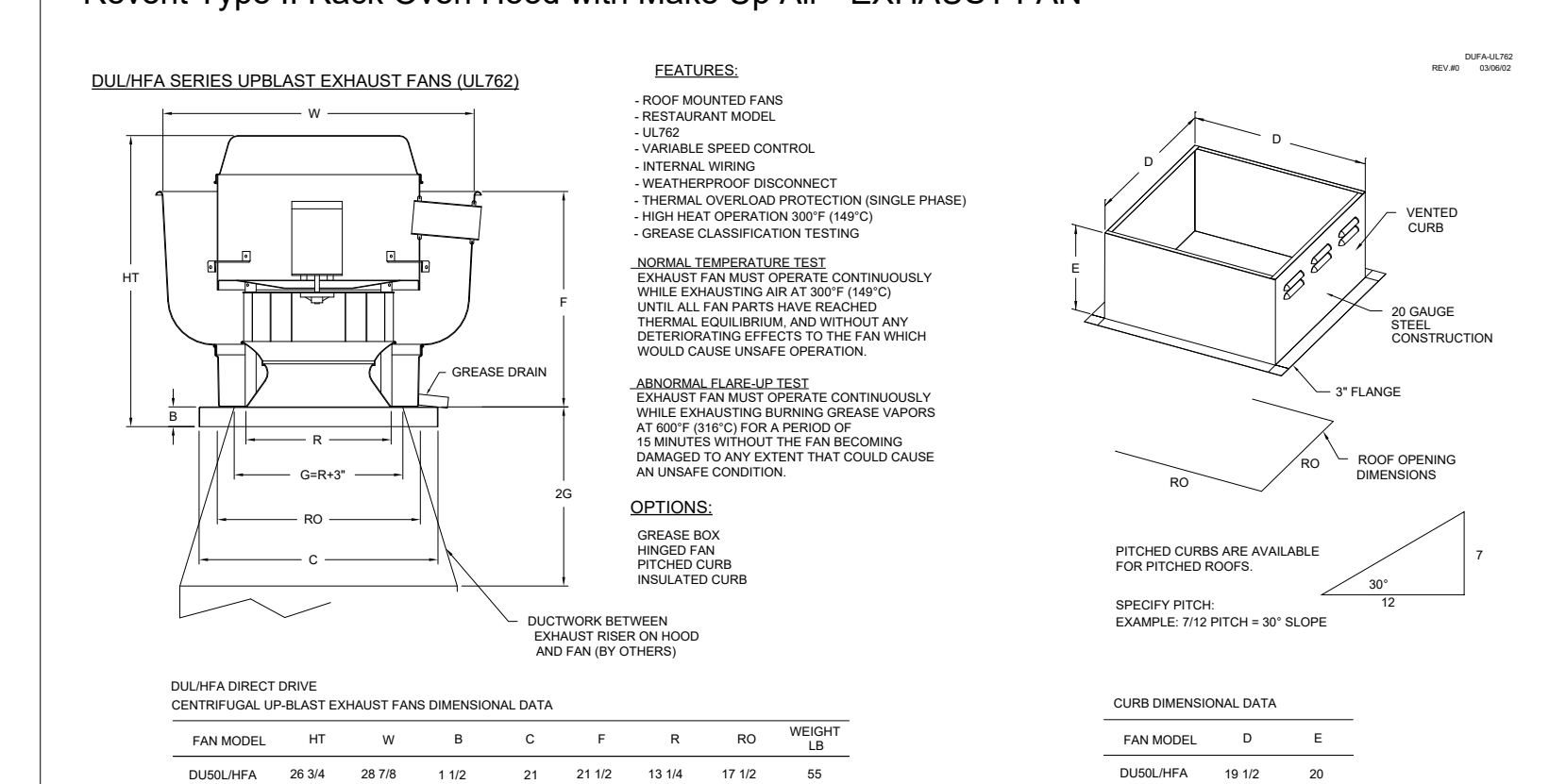
GAS FIRED MAKE-UP AIR UNIT(S)													
FAN UNIT NO.	TAG	INPUT BTU/H	OUTPUT BTU/H	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)						
1	REVENT RACK MUA	9848	9285	50°	7.7N.W.C. - 14" W.C.	NATURAL	92						

NOTE: SUPPLY PLENUM, EXHAUST FAN, SUPPLY FAN & CURBS ARE SUPPLIED BY OWNER. HOOD IS INSTALLED BY REVENT. SUPPLY PLENUM, EXHAUST FAN, SUPPLY FAN & CURBS ARE INSTALLED BY CONTRACTOR. ENCLOSURE PANEL FROM TOP OF HOOD TO DROP CEILING IS SUPPLIED AND INSTALLED BY CONTRACTOR. DUCTWORK IS SUPPLIED AND INSTALLED BY CONTRACTOR.

MECHANICAL CONTRACTOR IS RESPONSIBLE FOR STARTING UP THE EXHAUST FAN & THE MAKE-UP AIR UNIT PER THE INSTRUCTIONS IN THE OWNERS MANUAL.

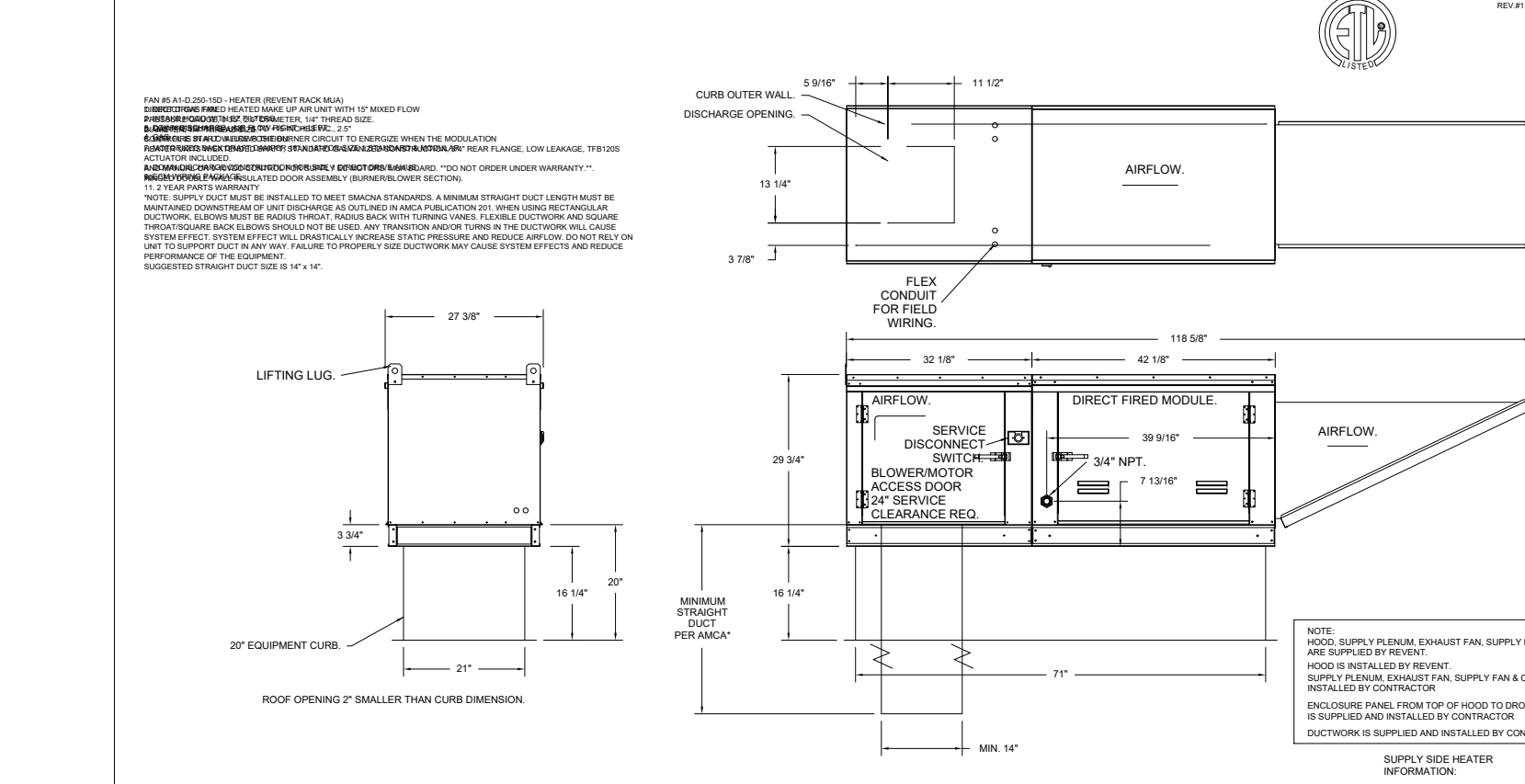
JOB LOCATION	DATE	JOB #
DWG #	DRAWN BY	SCALE
REV.	SCALE	

Revent Type II Rack Oven Hood with Make Up Air - EXHAUST FAN



JOB LOCATION	DATE	JOB #
DWG #	DRAWN BY	SCALE
REV.	SCALE	

Revent Type II Rack Oven Hood with Make Up Air - MUA



JOB LOCATION	DATE	JOB #
DWG #	DRAWN BY	SCALE
REV.	SCALE	

Bakery-Cafe:  
**#6359**  
SYSTEM: G4 (ARIA)  
Project Team  
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(ELECTRICAL)

Professional Seal  
REGISTERED PROFESSIONAL ENGINEER  
WILLIAM JOSEPH ALKEMEYER  
No. M. 31665  
MECHANICAL  
STATE OF MISSOURI  
3-4-24

Project Title:  
PERMIT DOCUMENTS  
**Bakery Cafe #6359**  
806 W. RIGGIN AVE.  
VISALIA, CA 93291  
Panera BREAD®  
Consultant Copyright Placeholder

No.	Description	Date

DETAILS - RACK OVEN  
Project Number: 6359  
Sheet Number: M301  
Author: Y.V. Kulkarni  
Issue Date: 12.18.23  
DPM: DM CPM: DM CPM

12/18/23

3/4/2024 8:49:52 AM

PS 2/18/24

**HOOD INFORMATION - Job#1855987**

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	TOTAL EXH. CFM	EXHAUST PLENUM RISER(S)				HOOD CONSTRUCTION	HOOD CONFIG.	
						WIDTH	LENG.	DIA.	CFM		S.P.	END TO END
1		4224 VHB-G	4' 0.00"	700 Deg.	400		10"	400	-0.040"	304 SS 100%	ALONE	ALONE

**HOOD INFORMATION**

HOOD NO.	TAG	FILTER(S)			LIGHT(S)			WIRE GUARD	LOCATION	UTILITY CABINET(S)		FIRE SYSTEM PIPING	HOOD HANGING WGT
		TYPE	QTY.	HEIGHT	LENGTH	QTY.	TYPE			FIRE SYSTEM	ELECTRICAL		
1												NO	169 LBS

**HOOD OPTIONS**

HOOD NO.	TAG	OPTION
1		FIELD WRAPPER 16.00" High Front, Left, Right

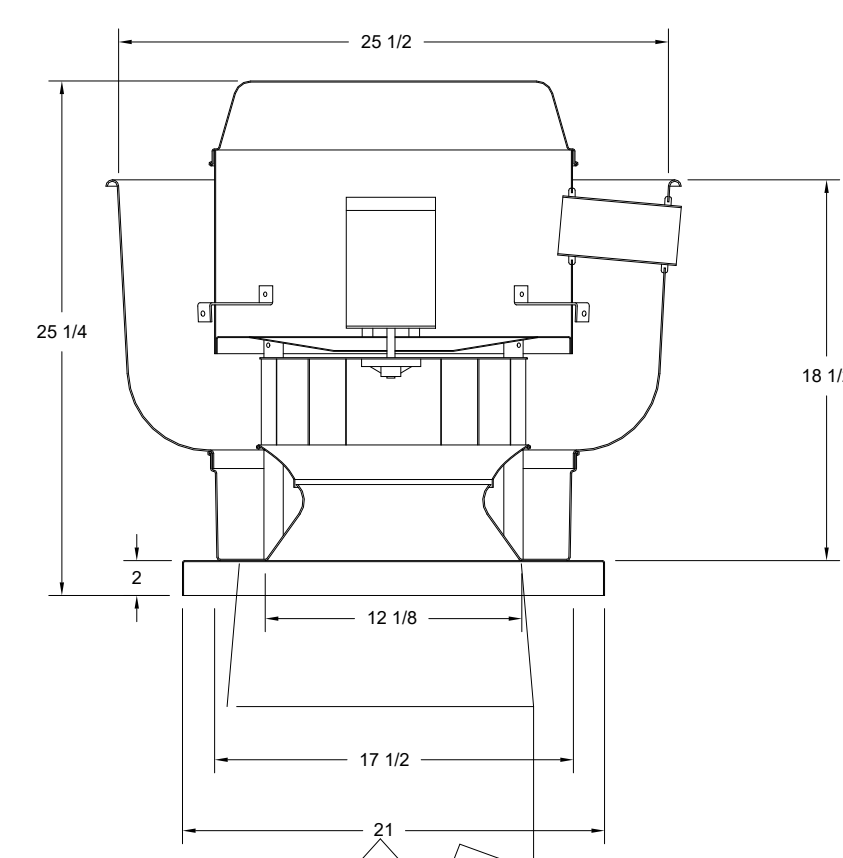
**EXHAUST FAN INFORMATION - Job#1855987**

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	∅	VOLT	FLA	WEIGHT (LBS.)	SONES
1		DU30HFA	400	0.500	1124	0.250	1	115	4.0	59	6.8

**CURB ASSEMBLIES**

NO.	ON FAN	WEIGHT	ITEM	SIZE
1	# 1	30 LBS	Curb	19.500"W x 19.500"L x 22.000"H Vented

**FAN #1 DU30HFA - EXHAUST FAN**



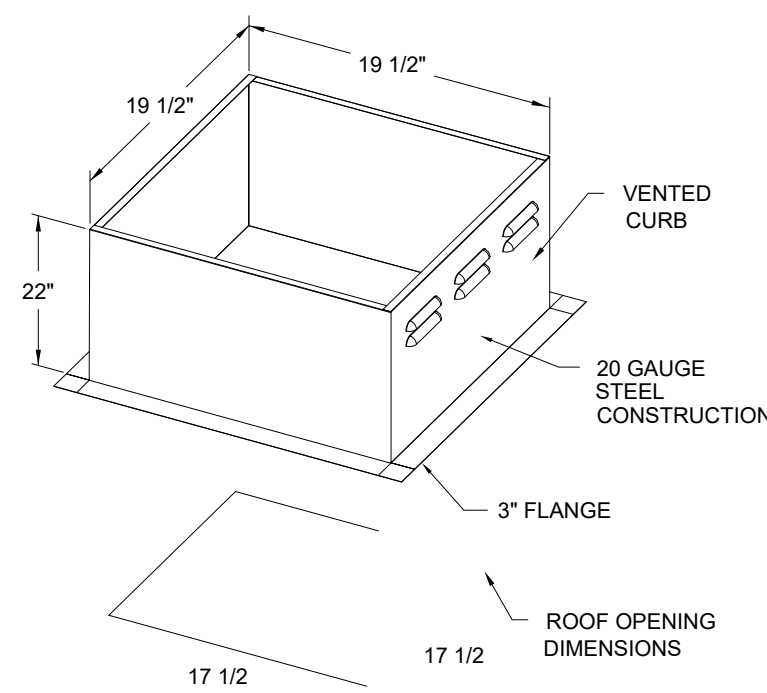
DUCTWORK BETWEEN EXHAUST RISER ON HOOD AND FAN (BY OTHERS)

**FEATURES:**

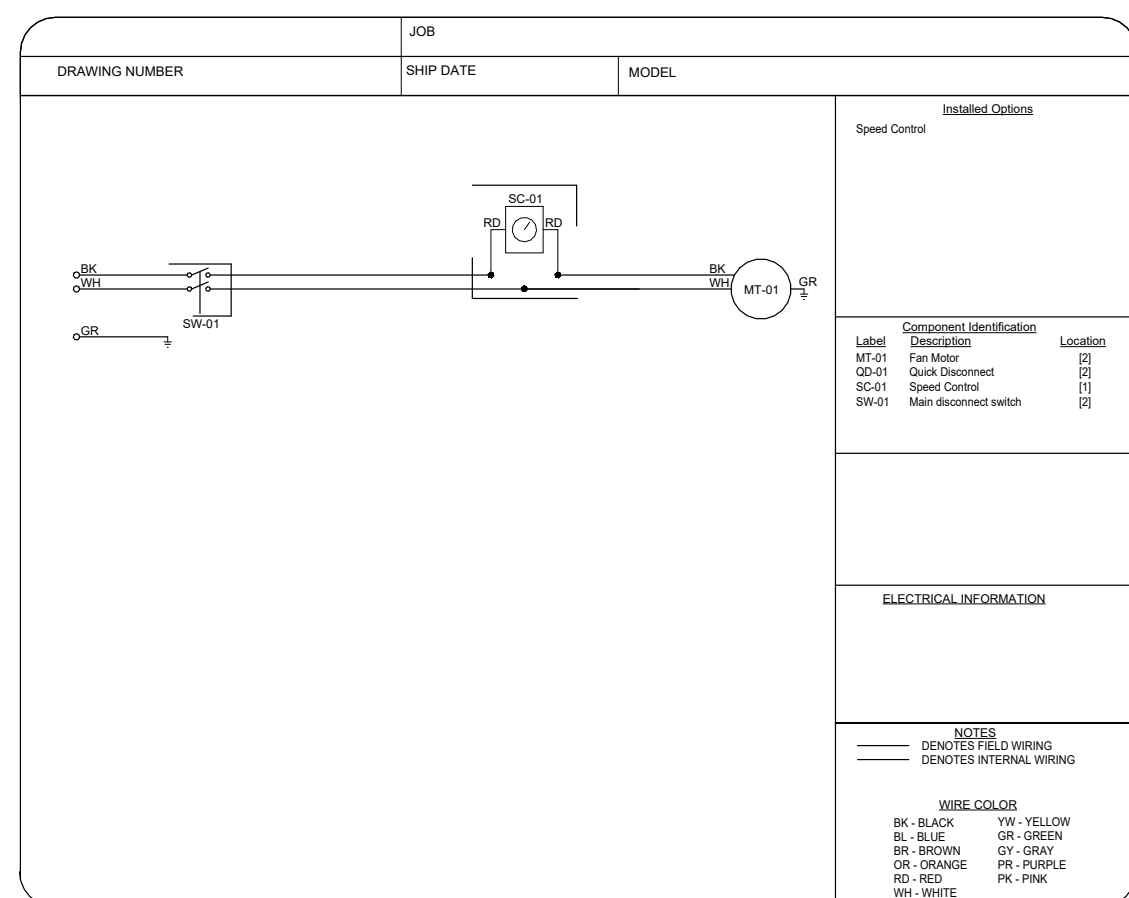
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

**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.

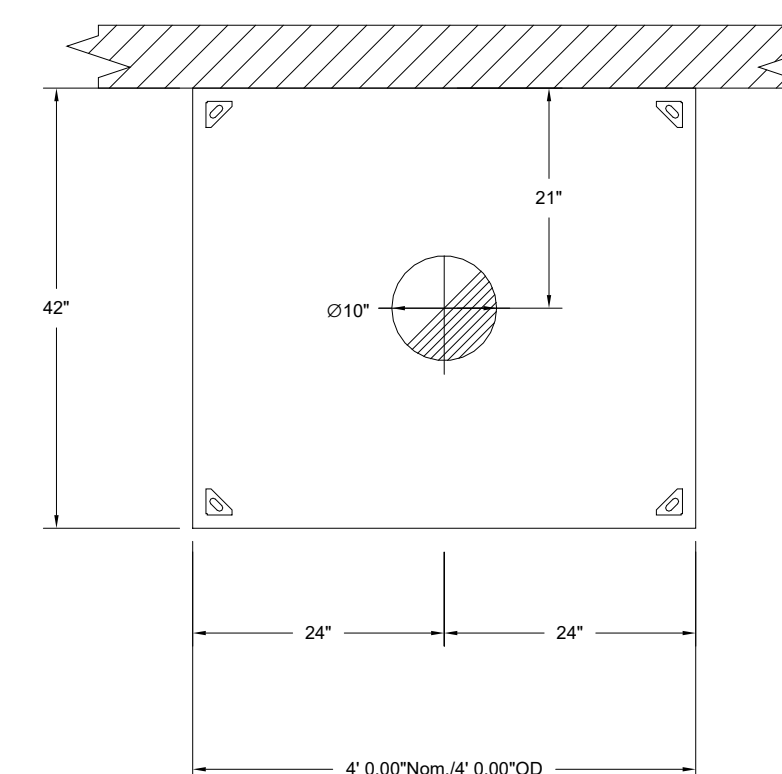


**NOTE:**  
HOOD, EXHAUST FAN & CURB ARE SUPPLIED BY OWNER AND INSTALLED BY CONTRACTOR.  
DUCT WORK IS SUPPLIED AND INSTALLED BY CONTRACTOR

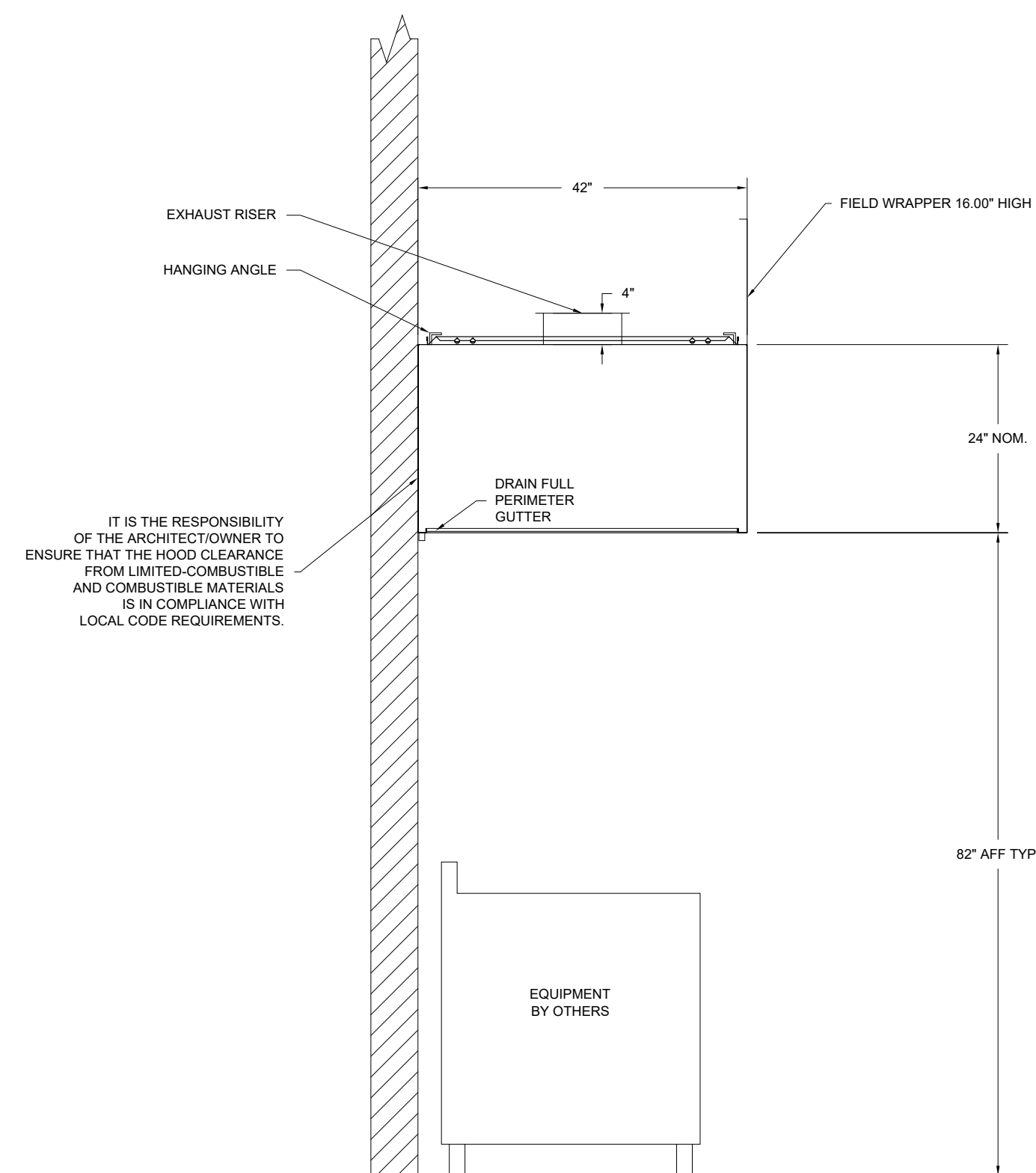


FOR QUESTIONS, CALL  
CAPTIVE-AIRE  
2221 KANSAS AVENUE  
SILVER SPRING, MD 20910  
PHONE: (800) 988-0881  
FAX: (919) 227-5931

**DISH/THERM**



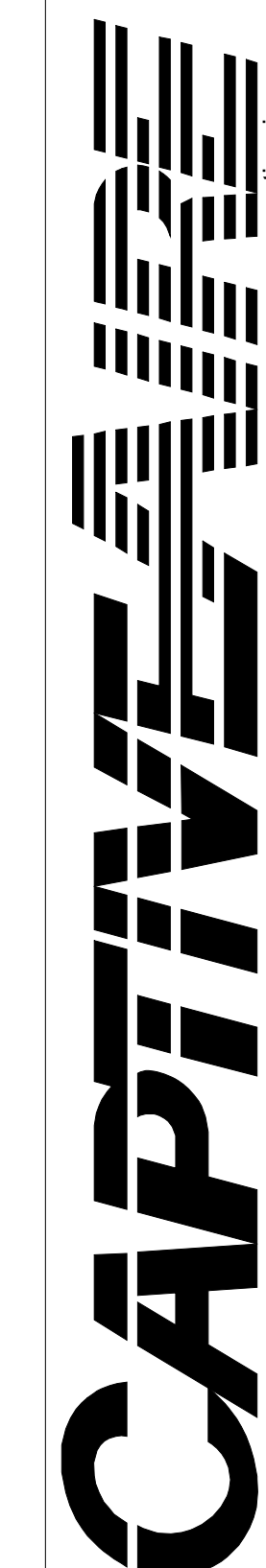
**PLAN VIEW - Hood #1**  
4' 0.00" LONG 4224VHB-G



**SECTION VIEW - MODEL 4224VHB-G**  
HOOD - #1

**REVISIONS**

NO.	DATE	DESCRIPTION



**Bakery-Cafe:**

**#6359**

**SYSTEM: G4 (ARIA)**

Project Team  
William J. Alkomeyer, P.E.  
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Phone (314) 772-1782

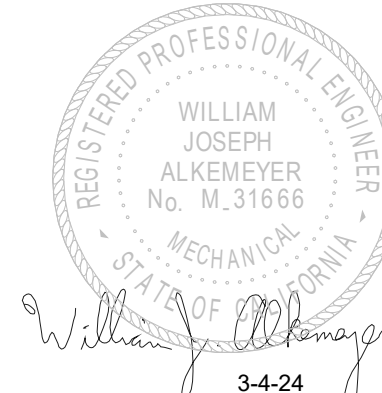
**Engineering Consultant**

(MECHANICAL AND PLUMBING)

Y.V. KULKARNI, PE  
EL MACERO, CA 95618-5072  
PHONE 602 432 9788  
EMAIL YASHAKECO@GMAIL.COM

(ELECTRICAL)

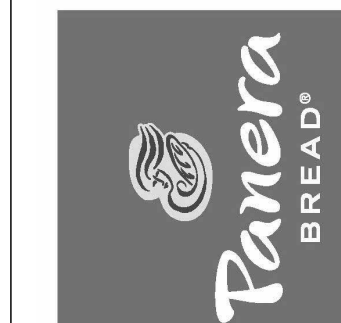
**Professional Seal:**



**Project Title:**

**Bakery Cafe #6359**  
806 W. RIGGIN AVE.  
VISALIA, CA 93291

PERMIT DOCUMENTS



Consultant Copyright Placeholder

**DATE:**

**DWG.#:**

**DRAWN BY:**

**SCALE:**

**SHEET NO.**

No.	Description	Date

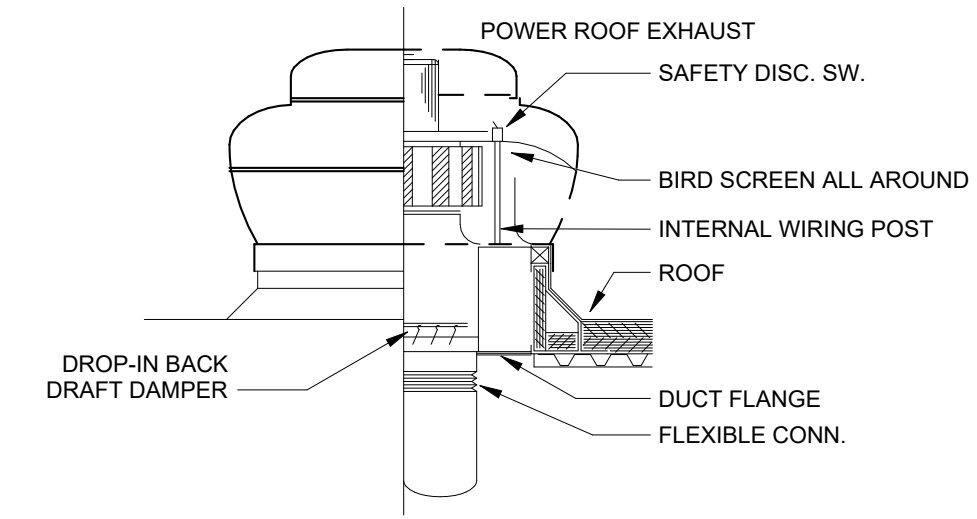
**DETAILS - DISH MACHINE & SOUP RETHERMALIZER**

Project Number: Sheet Number:

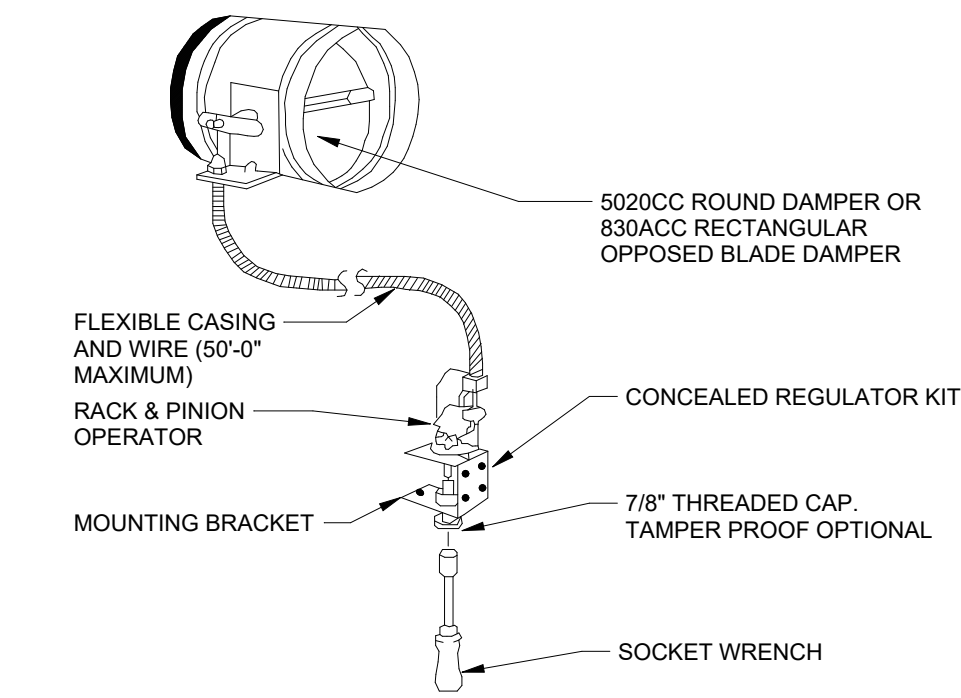
#6359  
Drawn By: **M302**  
Author:  
Issue Date: 12.18.23  
DPM: DM: CPM:  
DPM: DM: CPM:

3/4/2024 8:49:53 AM

18/2/2018



**3 ROOF MOUNTED EXHAUST DETAIL**  
NOT TO SCALE

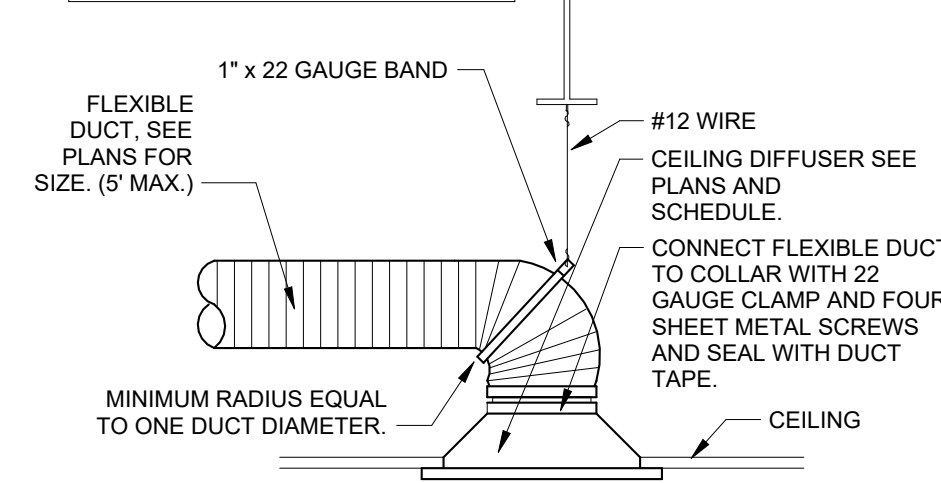


- COORDINATE EXACT LOCATION OF CEILING MOUNTED CONCEALED REGULATOR WITH ARCHITECT PRIOR TO INSTALLATION.
- THE 270-896 BOWDEN CABLE CONTROL SYSTEM IS DESIGNED TO BE IMBEDDED IN THE CEILING FLUSH WITH THE FINISHED SURFACE.
- CABLE SHALL CONSIST OF BOWDEN CABLE 0.054" STAINLESS STEEL CONTROL WIRE ENCAPSULATED IN 1/16" FLEXIBLE GALVANIZED WIRE SHEATH.
- LOCKING RACK AND PINION GEAR DRIVE SHALL BE CONSTRUCTED OF 14 GAUGE STEEL AND SHALL BE USED TO CONVERT ROTARY MOTION INTO PUSH-PULL MOTION.
- CONTROL SHAFT SHALL BE "D"-STYLE FLATTENED 1/4" DIAMETER WITH 285° ROTATION PROVIDING 1-1/2" LINEAR TRAVEL CAPABILITY.

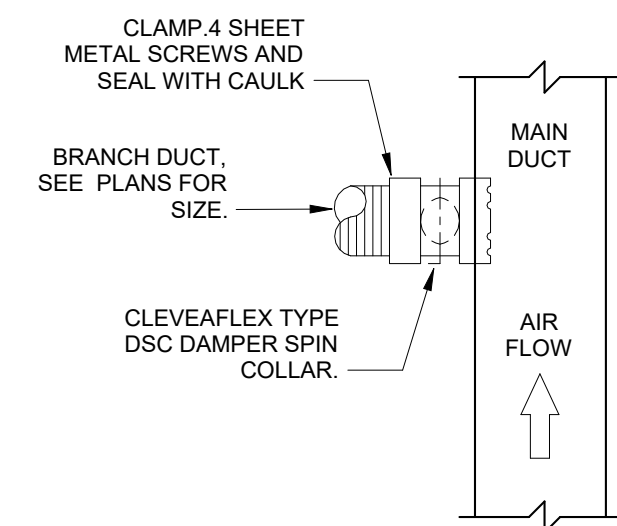
**YOUNG REGULATOR 270-896 BOWDEN CABLE CONTROL**

**2 CABLE REMOTE VOLUME DAMPER DETAIL**  
NOT TO SCALE

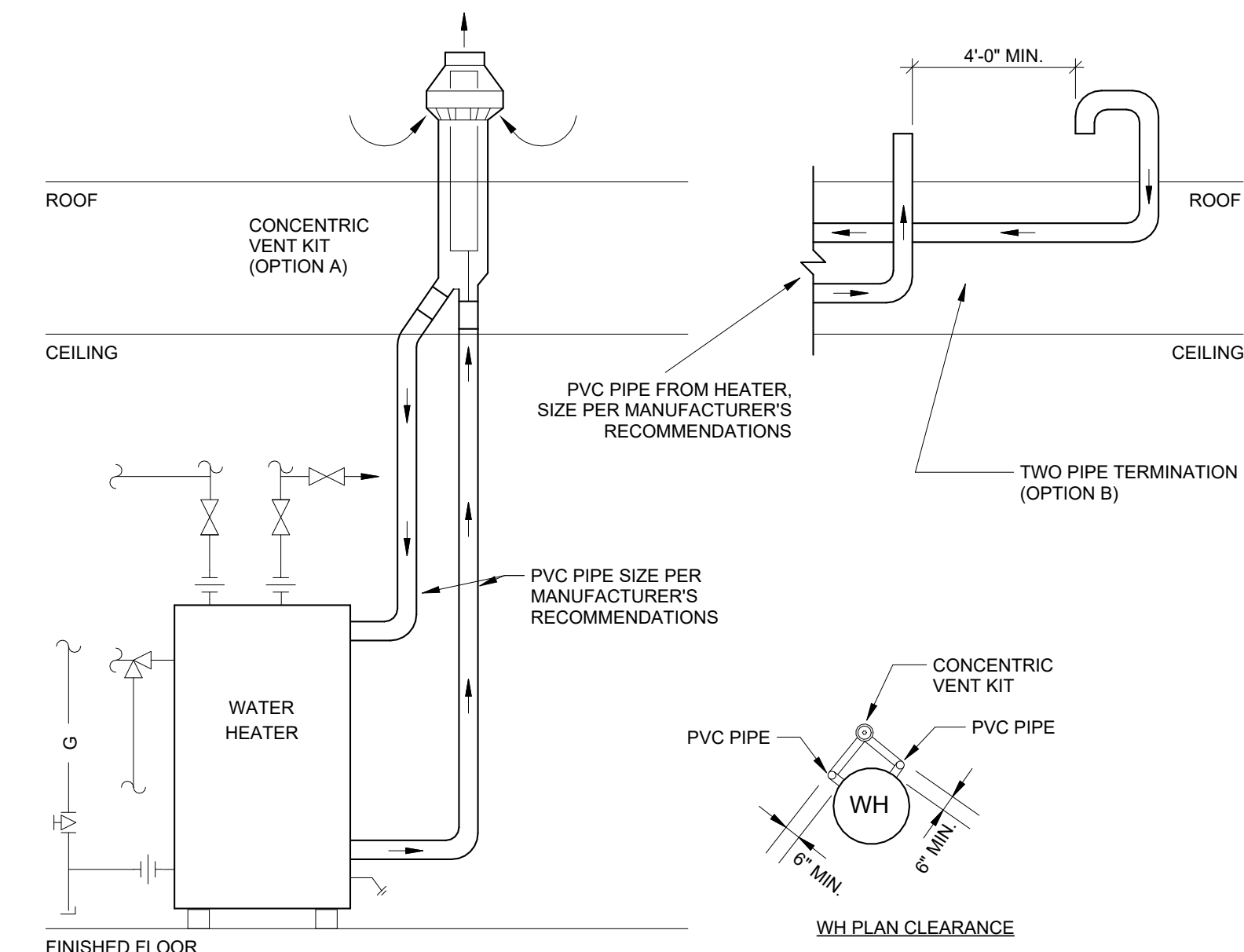
**NOTES:**  
DUCT INSULATION SHALL HAVE A FLAME SPREAD RATING NOT GREATER THAN 25 AND A SMOKE DEVELOPED RATIO OF NOT GREATER THAN 50.  
FLEXIBLE DUCT AND CONNECTORS SHALL BE UL 181 LISTED.



**5 DIFFUSER INSTALLATION DETAIL**  
NOT TO SCALE



**4 DUCT TAKEOFF DETAIL**  
NOT TO SCALE




**1 WATER HEATER VENT DETAIL**  
NOT TO SCALE

Bakery-Cafe:

**#6359**

SYSTEM: G4 (ARIA)

Project Team  
  
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 Phone (314) 772-1782

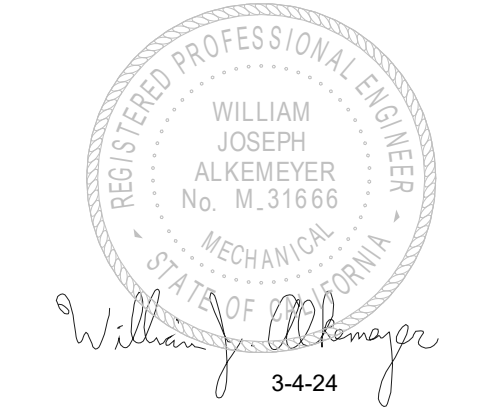
Engineering Consultant

(MECHANICAL AND PLUMBING)

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Professional Seal:



Project Title:

PERMIT DOCUMENTS

**Bakery Cafe #6359**  
**806 W. RIGGIN AVE.**  
**VISALIA, CA 93291**



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No.	Description	Date

**DETAILS**

Project Number: #6359 Sheet Number: M401  
 Drawn By: \_\_\_\_\_  
 Author: \_\_\_\_\_  
 Issue Date: 12.18.23  
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**MECHANICAL SPECIFICATIONS**

- I. GENERAL PROVISIONS
- A. GENERAL CONDITIONS, CODES AND STANDARDS:
  - 1. THIS CONTRACTOR SHALL REVIEW THE ENTIRE SET OF THE CONTRACT DOCUMENTS, INCLUDING, BUT NOT LIMITED TO ELECTRICAL, PLUMBING AND MECHANICAL DRAWINGS, AS WELL AS ALL SPECIFICATIONS AND INSTRUCTIONS TO BIDDERS.
  - 2. THIS CONTRACTOR SHALL VISIT THE SITE AND MAKE DETAILED INSPECTIONS OF THE SPECIFIED WORK TO DEVELOP KNOWLEDGE OF ALL CONDITIONS PERTINENT TO HIS/HER WORK. SHOULD THE CONTRACTOR FIND DISCREPANCIES, OR OMISSIONS FROM THE DRAWINGS, SPECIFICATIONS, OR DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS RESULTING IN CHANGES TO HIS/HER WORK OR ANY OTHER DISCIPLINES, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND/OR ENGINEER. ALL WORK SHALL BE PERFORMED AS INDICATED ON DRAWINGS UNLESS FIELD CONDITIONS REQUIRE MINOR CHANGES BE MADE. MINOR CHANGES SHALL BE MADE WITH NO ADDITIONAL COST.
  - 3. ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH ALL NATIONAL AND LOCAL GOVERNING CODES. ALL WORK SHALL BE MADE PER THE OWNER'S REQUIREMENTS AS STATED HEREIN OR OTHERWISE INDICATED BY THE OWNER.
  - 4. ALL WORK SHALL BE PERFORMED UNDER APPLICABLE STANDARDS AS SET FORTH BY THE NATIONAL FIRE PROTECTION (NFPA), UNDERWRITER LABORATORIES (UL), THE AMERICAN GAS ASSOCIATION (AGA), THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME), THE AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE), SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC (SMACNA) AND OTHER NATIONAL STANDARDS WHERE APPLICABLE.
  - 5. THE MANUFACTURERS' NAMES ON WHICH THIS SPECIFICATION IS BASED INDICATE THE MINIMUM QUALITY OF PRODUCT REQUIRED. SUBSTITUTION MAY BE MADE TO THOSE SPECIFIED IF DEEMED EQUIVALENT BY THE OWNER'S REPRESENTATIVE. ALL WORK AND PRODUCTS SHALL MEET THE REQUIREMENTS OF THE OWNER AND GOVERNING CODES. NOT SUBSTITUTED EQUIPMENT SHALL BE ANY ADDED COSTS TO THE OWNER.
  - 6. ALL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE WORK BY THE OWNER.
  - 7. CONTRACTOR SHALL PREPARE AND SUBMIT AS-BUILT DRAWINGS TO THE OWNER OR AUTHORITY HAVING JURISDICTION IF REQUESTED. AS-BUILT DRAWINGS SHALL INDICATE THE ACTUAL MANUFACTURER OF THE EQUIPMENT THAT WAS INSTALLED, THE EXACT LOCATION OF THE EQUIPMENT AND PERTINENT CAPACITIES FOR HEATING, COOLING, ETC.
  - 8. EQUIPMENT, FIXTURES, AND ACCESSORIES SHALL NOT BE SUPPORTED FROM CEILING, SOFFIT, NEUTRAL PIERS, PIPING, DUCTWORK, METAL ROOF DECK, LATERAL BRACING, BRIDGING OR CONDUIT. ITEMS SHALL ONLY BE SUPPORTED FROM STRUCTURE WHICH HAS BEEN APPROVED BY THE ARCHITECT FOR SUPPORT.
  - 9. ALL ROOF WORK PENETRATIONS AND REPAIRS SHALL BE TOTALLY PERFORMED BY ONLY THOSE ROOFING CONTRACTORS APPROVED BY THE OWNER/LANDLORD.
  - 10. INSTALLATION OF ROOF MOUNTED EQUIPMENT SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND OTHER TRADES.
  - 11. DEFICIENCIES AND NON-CONFORMING ITEMS SHALL BE CORRECTED BY THE CONTRACTOR. FAILURE TO CORRECT SUCH ITEMS SHALL PERMIT THE LANDLORD TO CORRECT SAME AT A COST TO THE CONTRACTOR.
  - 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL PERMITS AND PAYING FOR SAME. HE SHALL INCLUDE IN HIS BID CHARGES FOR ALL FEES ASSOCIATED WITH THE CONSTRUCTION OF THE SPACE INCLUDING BUT NOT LIMITED TO LOCAL, COUNTY, OR STATE SERVICE CHARGES AND PERMIT FEES, AND UTILITY AND/OR EQUIPMENT CHARGES.
- B. SCOPE OF WORK:
  - 1. THIS CONTRACT SHALL INCLUDE THE FURNISHINGS, INSTALLING, CONNECTING, AND OPERATION OF ALL EQUIPMENT WHICH IS A PART OF THE MECHANICAL SYSTEMS AS SHOWN ON THE DRAWINGS AND AS REQUIRED BY SIMILAR INSTALLATIONS. ANY MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK AND WHICH IS USUALLY INCLUDED IN WORK OF A SIMILAR CHARACTER SHALL BE FURNISHED AND INSTALLED UNDER THIS CONTRACT AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS REQUIRED TO PROVIDE THE OWNER A COMPLETE, CODE APPROVED AND OPERATIONAL MECHANICAL SYSTEM.
  - 2. ALL EXISTING UTILITY AND MECHANICAL SERVICES SHALL BE FIELD VERIFIED. CORRECTIONS TO THE DESIGN AND INSTALLATION SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
  - 3. PROVIDE AND INSTALL ALL:
    - a. EQUIPMENT, APPLIANCES, CONTROL DEVICES, ACCESSORIES, MATERIAL AND LABOR.
    - b. ALL DUCTWORK, INSULATION, AIR DEVICES, DUCT ACCESSORIES, MATERIAL AND LABOR.
    - c. ALL PIPING, FITTINGS, VALVES, INSULATION, ACCESSORIES, MATERIAL AND LABOR.
    - d. ALL EXHAUST SYSTEM(S) INDICATED.
    - e. ALL ROOF WORK, INCLUDING EQUIPMENT SUPPORTS, ROOF PENETRATIONS, PATCHING AND WATERPROOFING OF ROOF.
    - f. ALL EQUIPMENT SUPPORTS AND HANGERS INCLUDING ANY AUXILIARY STEEL REQUIRED. ANY STRUCTURAL MODIFICATION TO THE BUILDING STRUCTURE SHALL BE MADE ONLY WITH THE WRITTEN APPROVAL OF THE LANDLORD.
  - 4. CLEAN, TEST AND PUT INTO SERVICE ALL SYSTEMS SPECIFIED.
  - 5. PROVIDE A BALANCE REPORT PREPARED BY AN INDEPENDENT AABC OR NEBB CERTIFIED AIR BALANCE CONTRACTOR.
  - 6. WARRANTY ALL WORK AND MATERIALS HEREIN SPECIFIED FOR A PERIOD OF NOT LESS THAN ONE YEAR.
  - 7. ALL MATERIALS SHALL BE NEW AND RECOGNIZED COMMERCIAL QUALITY. USED MATERIALS WILL NOT BE PERMITTED.
- C. DOCUMENTS:
  - 1. THE DRAWINGS ARE DIAGRAMMATIC. ALL WORK SHALL BE PERFORMED AND INDICATED ON THE DRAWINGS UNLESS EXISTING CONDITIONS OR COORDINATION ISSUES REQUIRE CHANGES. THESE CHANGES SHALL BE MADE WITH NO ADDITIONAL COST TO THE OWNER.
  - 2. ANY INCIDENTAL ITEMS OR LABOR, ETC. NOT INCLUDED IN THE SPECIFICATIONS OR THE DRAWINGS BUT REASONABLY IMPLIED AS NECESSARY FOR THE COMPLETE INSTALLATION OF ALL APPARATUS SHALL BE INCLUDED IN BID.
  - 3. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER AND ANY MATERIAL AND OR LABOR CALLED FOR IN ONE SHALL BE FURNISHED EVEN THOUGH NOT MENTIONED IN BOTH.
  - 4. IF ERRORS ARE FOUND IN THE DRAWINGS OR SPECIFICATIONS OR DISCREPANCIES OCCUR BETWEEN THE SAME, OR BETWEEN THE FIGURES ON THE DRAWINGS, AND THE SCALE OF SAME OR BETWEEN THE LARGER AND SMALLER DRAWING, OR IN THE DESCRIPTIVE MATTER ON THE DRAWINGS SHALL BE REFERRED TO THE OWNER OR ENGINEER FOR REVIEW AND FINAL DECISION PRIOR TO THE BID DUE DATE.
  - 5. THE BIDDING OF THIS WORK WILL CONTEMPLATE THE USE OF EQUIPMENT AND MATERIALS EXACTLY AS SPECIFIED HEREIN. WHERE MORE THAN ONE MANUFACTURE IS MENTIONED ANY ONE MAY BE UTILIZED. SUBSTITUTE MANUFACTURES MAY BE OFFERED ONLY AS AN ALTERNATE TO THE SPECIFIED EQUIPMENT AND MATERIAL MUST BE SUBMITTED AS SPECIFIED IN THE ARCHITECTURAL DOCUMENTS.
  - 6. MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THE SYSTEMS CAN BE OF ANY RECOGNIZED MANUFACTURE PROVIDED THESE ITEMS MEET MINIMUM STANDARDS AS SET IN THESE SPECIFICATIONS. REFER TO EACH SECTION FOR ANY SPECIFIC REQUIREMENTS.

**MECHANICAL SPECIFICATIONS**

- II. INSULATION
- A. GENERAL
  - 1. INSTALLATION SHALL CONFORM TO MANUFACTURE'S RECOMMENDATIONS, AND IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES.
  - 2. CLEAN AND DRY SURFACES PRIOR TO INSULATING.
  - 3. EXTEND INSULATION WITHOUT INTERRUPTIONS THROUGH WALLS, FLOORS, HANGERS AND SIMILAR PENETRATIONS.
  - 4. INSULATION JACKET AND FITTING COVER MUST BE PLENUM RATED.
  - 5. THE INTEGRITY OF THE VAPOR-BARRIER MUST BE MAINTAINED. SEAL ALL PENETRATIONS OF THE VAPOR-BARRIER BY STAPLES, HANGERS OR WHERE OTHERWISE DAMAGED.
  - 6. MAINTAIN ACCESS TO BALANCING DAMPERS AND VALVES.
  - 7. INSULATION SHALL BE BY CERTAIN TEED, OWENS-CORNING, KNAUF OR MANVILLE.
- B. DUCTWORK
  - 1. ALL SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHEN LOCATED IN UNCONDITIONED SPACES AND A MINIMUM OF R-8 INSULATION WHEN LOCATED OUTSIDE THE BUILDING. ADDITIONAL INSULATION REQUIREMENTS MAY BE LISTED ON THE PLANS.
  - 2. DUCT LINERS SHALL BE PRE-MANUFACTURED AND APPROVED AS HVAC DUCT LINER. DUCT LINERS INSTALLED IN RESTAURANTS AND FOOD PREPARATION AREAS SHALL HAVE A PROTECTIVE COVERING AND BE LISTED BY AN APPROVED TESTING LABORATORY FOR SAID PURPOSE.
  - 3. ALL DUCT INSULATION SHALL BE UL LABELED FOR FIRE AND SMOKE RATINGS.
  - 4. ALL RESTAURANTS WHICH USE YEAST FOR BAKING PRODUCTS, OR UTILIZE OVENS WHICH COULD RESULT IN MOLD FROM YEAST CONTAINING PRODUCT OR AIR BORN YEAST SHALL HAVE EXTERNALLY WRAPPED INSULATION (NO INTERNAL LINERS ALLOWED).
  - 5. FIRE-RATED BLANKETS SHALL BE HIGH-TEMPERATURE, FLEXIBLE, BLANKET INSULATION WITH FSK JACKET THAT IS TESTED AND CERTIFIED TO PROVIDE THE REQUIRED RATING BY AN NRTL ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
- III. HVAC
  - A. DUCTWORK AND AIR DISTRIBUTION
    - 1. DUCTWORK (ROUND, RECTANGULAR OR SPIRAL) SHALL BE OF GALVANIZED STEEL CONSTRUCTION AND SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA MANUAL - "HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE."
    - 2. ROUND DUCT AND ELBOWS SHALL BE LONG SWEEP, 1.5 TIMES THE CENTERLINE RADIUS UNLESS CLEARANCE IS NOT AVAILABLE AT WHICH TIME MITERED ELBOWS WITH TURNING VANES SHALL BE UTILIZED.
    - 3. SPIRAL DUCT FITTINGS SHALL BE MANUFACTURED FROM G-60 GALVANIZED STEEL MEETING ASTM-A924 AND A653 REQUIREMENTS.
  - a. CONSTRUCTION
    - (1) BRANCH CONNECTIONS SHALL BE MADE WITH 90° CONICAL AND 45° STRAIGHT TAPS. BRANCH CONNECTIONS SHALL BE MADE AS A SEPARATE FITTING. FACTORY OR FIELD INSTALLATION OF TAPS INTO SPIRAL SHALL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
    - (2) ELBOWS SHALL BE FABRICATED WITH A CENTERLINE RADIUS OF 1.5 TIMES THE DIAMETER. 90 AND 45 DEGREE ELBOWS IN DIAMETERS 3" ROUND THROUGH 12" ROUND SHALL BE STAMPED OR PLEATED ELBOWS. OTHER ELBOWS SHALL BE OF GORED TYPE. CIRCUMFERENTIAL AND LONGITUDINAL SEAMS OF ALL FITTINGS SHALL BE CONTINUOUS WELD OR SPOT WELDED AND SEALED WITH MASTIC. ALL WELDS SHALL BE PAINTED TO PREVENT CORROSION.
    - (3) FIELD JOINTS FOR ROUND DUCTS UP TO AND INCLUDING 36" DIAMETER AND OVAL DUCTS UP TO AND INCLUDING 41" MAJOR AXIS SHALL BE MADE WITH 2" SLIP-FIT OR SLIP COUPLING. 36" ROUND AND LARGER SHALL BE PROVIDED WITH A FLANGED CONNECTION. FLANGED CONNECTIONS MAY, AT THE CONTRACTORS OPTION, BE USED ON SMALLER SIZES. ACCESS DOORS SHALL BE SUPPLIED BY THE DUCT MANUFACTURER AT ALL FIRE AND/OR SMOKE DAMPERS.
    - (4) DUCTWORK 18" WIDTH AND LARGER SHALL BE CROSS-BROKEN OR RIBBED AND STIFFENED SO THAT IT WILL NOT "BREATHE", RATTLE, VIBRATE OR SAG.
  - 4. RECTANGULAR ELBOWS SHALL BE FURNISHED WITH DOUBLE THICKNESS TURNING VANES. TURNING VANES SHALL BE FASTENED WITH DOUBLE ROW SCREWS.
  - 5. MITERED OFFSETS GREATER THAN 30 DEGREES IN EITHER DIRECTION SHALL NOT BE PERMITTED.
  - 6. CHANGES IN DUCT SIZES SHALL BE MADE BY UNIFORM TAPER SECTION WITH A MAXIMUM INCLUDE ANGLE IF DIVERGENCE OF 15 DEGREES.
  - 7. RECTANGULAR BALANCING DAMPERS SHALL BE (OR EQUAL TO) RUSKIN MD25 SINGLE BLADE UP TO 6" IN HEIGHT AND 36" IN WIDTH, AND RUSKIN MD35 MULTI-BLADE FOR LARGER SIZES. ALL ROUND BALANCING DAMPERS SHALL BE COMMERCIAL GRADE SINGLE BLADE UP 16" DIAMETER AND SHALL INCORPORATE A LOCKING TYPE INDICATING ADJUSTMENT. BALANCING DAMPERS SHALL BE INSTALLED IN ALL BRANCH DUCTS OFF MAIN AND ON ALL TAPS OFF DUCTS TO DIFFUSERS UNLESS OTHERWISE NOTED ON THE DRAWINGS.
  - 8. FIRE DAMPERS SHALL BE RUSKIN AND SHALL BE INSTALLED PER MANUFACTURES INSTRUCTIONS AND SMACNA REQUIREMENTS FOR A UL APPROVED INSTALLATION. FIRE DAMPERS SHALL BE TYPE "B" (BLADES AND FRAME COMPLETELY OUR OF AIRSTREAM) FOR ALL WALL ASSEMBLIES AND SHALL BE INSTALLED PER UL 555. FIRE DAMPERS SHALL BE INSTALLED IN FIRE RATED WALLS. VERIFY FIRE RATED WALL LOCATIONS AND RATINGS ON THE ARCHITECTURAL DOCUMENTS. FOR ALL FLOOR PENETRATIONS USE TYPE "LR" FIRE DAMPERS.
  - 9. DOUBLE THICKNESS INSULATED ACCESS DOORS SHALL BE PROVIDED AS ALL FIRE DAMPERS FOR ACCESS TO FUSIBLE LINK. DOOR SHALL BE SIZED TO ALLOW FOR EASY SERVICE AND ACCESSIBILITY. ACCESS DOORS SHALL BE A MINIMUM OF 24" IN THE LONGEST DIMENSION.
  - 10. PROVIDE 3" x 3" 1/4" ANGLED FRAMING AROUND THE ROOF OPENING FOR THE SUPPLY AND RETURN DUCTWORK.
  - 11. SUPPORT ALL SHEET METAL AND EQUIPMENT FROM STRUCTURAL STEEL. DO NOT SUSPEND FROM METAL DECK OR JOIST BRIDGING.
  - 12. FIBERGLASS DUCTWORK WILL ONLY BE PERMITTED WITH THE APPROVAL OF THE OWNER, ARCHITECT, AND ENGINEER. NONMETALLIC DUCTS SHALL BE CONSTRUCTED WITH CLASS 0 OR CLASS 1 DUCT MATERIAL AND SHALL COMPLY WITH UL 181. FIBROUS DUCT CONSTRUCTION SHALL CONFORM TO THE SMACNA FIBROUS GLASS DUCT CONSTRUCTION STANDARDS OR NAIMA FIBROUS GLASS DUCT CONSTRUCTION STANDARDS. THE AIR TEMPERATURE WITHIN NONMETALLIC DUCTS SHALL NOT EXCEED 250°F (121°C).
  - 13. FLEXIBLE DUCTWORK SHALL CONFORM TO THE FOLLOWING:
    - a. SHALL HAVE AN IMPERVIOUS INNER CORE WITH WIRE REINFORCEMENT. THE INNER DUCT SHALL BE R-6 FIBERGLASS DUCT INSULATION WITH A POLYETHYLENE VAPOR-PROOF JACKET. FLEXIBLE DUCT SHALL BE UL-181 LISTED, CLASS 1, AND SHALL MEET ALL APPLICABLE CODES AND THE REQUIREMENTS OF THE LANDLORD.
    - b. FITTINGS TO CONNECT THE FLEX DUCT TO THE TRUNK DUCT SHALL BE OF THE 45° LEAD-IN TYPE PER THE LATEST OF SMACNA STANDARDS AND SHALL HAVE AN OPPOSED BLADE VOLUME DAMPER, SQUARE-TO-ROUND TRANSITION AND SHALL HAVE THE SAME FREE AREA AS THE SPECIFIED FLEX DUCT.
    - c. FLEX DUCT SHALL BE THE PRODUCT OF AN ESTABLISHED MANUFACTURER OF SUCH PRODUCTS AND EQUIVALENT TO CERTAINTED MODEL G-25, WIREMOLD WGC, OR PPG GOSSFLEX.

**MECHANICAL SPECIFICATIONS**

- B. PIPING
  - 1. OUTDOOR CONDENSATE PIPING SHALL BE TYPE "L" COPPER CONDENSATE DRAIN FOR THE ROOFTOP MOUNTED AIR CONDITIONING UNIT, INSTALLED PER MANUFACTURES REQUIREMENTS AND DETAILS. DRAIN SHALL DISCHARGE TO A ROOF DRAIN (IF ALLOWED BY AHJ) OR APPROVED RECEPTACLE.
  - 2. WHEN MODIFICATIONS ARE BEING MADE TO AN EXISTING SYSTEM THE NEW MATERIAL SHALL MATCH THE EXISTING. IF THE MATERIAL DIFFERS FROM THAT SPECIFIED HEREIN, IT SHALL BE SPECIFIED IN THE BID PROPOSAL.
- IV. HVAC EQUIPMENT
  - A. GENERAL
    - 1. INSTALLATION OF ALL EQUIPMENT SHALL COMPLY WITH THE MANUFACTURER'S INSTALLATION INFORMATION AND INSTRUCTIONS, REQUIREMENTS AND ADDITIONAL GUIDELINES. THE CONTRACTOR SHALL PROVIDE ALL ADDITIONAL REQUIRED ACCESSORIES TO COMPLETE THE INSTALLATION.
    - 2. HVAC EQUIPMENT SHALL BE "STARTED UP" BY A FACTORY TRAINED AND AUTHORIZED SERVICE TECHNICIAN.
    - 3. ALL FACTORY STARTUP FORMS SHALL BE COMPLETED AND TURNED OVER TO THE OWNER WITH ALL COMPLETED WARRANTY CARDS PRIOR TO FINAL APPROVAL.
  - V. CONTROLS
    - A. CONTROL WIRING SHALL BE PLENUM RATED CABLE WITH COLOR CODED 18 AWG WIRES (MINIMUM).
    - B. CONTRACTOR SHALL PROVIDE ALL WIRING BETWEEN THERMOSTAT AND EQUIPMENT (AIR HANDLER, RTU, CONDENSING UNIT, ETC.).
    - C. CONTRACTOR SHALL FURNISH AND INSTALL A 120 VOLT DUCT MOUNTED IONIZATION SMOKE DETECTOR (UNLESS NOTED OTHERWISE ON THE DRAWINGS). DETECTOR SHALL BE WIRED BY THE ELECTRICAL CONTRACTOR, TO SHUT DOWN UNIT UPON ACTIVATION.
    - D. THERMOSTATS (UNLESS NOTED OTHERWISE ON THE DRAWINGS) SHALL BE FURNISHED AND AND BE A 7 DAY PROGRAMMABLE HEATING/COOLING THERMOSTAT WITH 50° OF CONTROL WIRING BETWEEN THE THERMOSTAT AND THE FURNACE/ RTU, COIL WIRE AND SUSPEND FROM STRUCTURE FOR FUTURE INSTALLATION. WIRING SHALL BE MINIMUM 18 AWG.
  - VI. TESTING AND BALANCING
    - A. TESTING AND BALANCING SHALL NOT BEGIN UNTIL THE SYSTEM HAS BEEN COMPLETED, IS FULL WORKING ORDER AND ALL EQUIPMENT START-UP HAS BEEN COMPLETED. ALL HVAC SYSTEMS AND EQUIPMENT SHALL BE PUT INTO FULL OPERATION.
    - B. AN INDEPENDENT "AABC" OR "NEBB" CERTIFIED AIR AND WATER BALANCE CONTRACTOR SHALL TEST AND BALANCE THE SYSTEM AND REPORT RESULTS TO THE OWNER.
      - 1. ALL WORK SHALL BE COMPLETED UNDER DIRECT SUPERVISION OF THE CERTIFIED BALANCING ENGINEER AND BY QUALIFIED BALANCING TECHNICIANS.
      - 2. METHODS AND FORMS SHALL BE IN ACCORDANCE WITH THE CERTIFICATIONS AGENCIES RECOMMENDATIONS AND REQUIREMENTS.
      - 3. COMPLY WITH ASHRAE RECOMMENDATIONS PERTAINING TO MEASUREMENTS, INSTRUMENTS, ADJUSTING AND BALANCING.
      - 4. ALL QUANTITIES SHALL BE WITHIN 10% OF THE DESIGN VALUES.
    - C. CONTRACTOR SHALL PROVIDE ANY SHEAVE CHANGES REQUIRED ON THE HVAC UNIT(S).
    - C. PERFORMANCE TEST
      - 1. AFTER ALL HVAC EQUIPMENT IS INSTALLED, TESTED AND BALANCED AS SPECIFIED THEY SHALL BE OPERATED AND OBSERVED FOR A PERIOD OF AT LEAST ONE DAY. THIS MAY INCLUDE STARTUP, TO VERIFY ALL EQUIPMENT IS PRODUCING THE REQUIRED CAPACITY. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR THE OPERATION OF THE EQUIPMENT DURING THE ENTIRE PERIOD.
      - 2. TESTING SHALL BE PERFORMED WITH ALL CONTROLS IN THE AUTOMATIC POSITION AND BUILDING LIGHTS, DAMPERS, ETC. POSITIONED IN SIMULATE NORMAL OPERATION OF THE SYSTEM.
      - 3. DURING THE TEST, CONTROL SETTINGS MAY REQUIRE ADDITIONAL ADJUSTMENTS TO PRODUCE THE BEST BALANCED OPERATION.
      - 4. SHOULD COMPLETION OF THE INSTALLATION OCCUR AT SUCH TIME THAT THE REQUIRED PERFORMANCE TEST MUST BE CONDUCTED DURING A SEASON WHEN THE FULL OPERATION OF EITHER THE HEATING OR COOLING SYSTEM CAN NOT BE CHECKED, THE CONTRACTOR SHALL PERFORM THE TEST AND RECORD ALL SUCH DATA AS IS AVAILABLE WITH THE SYSTEM OPERATING AUTOMATICALLY UNDER THE PREVAILING WEATHER CONDITIONS. THAT PART OF THE SYSTEM WHICH SHALL BE DELAYED UNTIL THE WEATHER IS APPROPRIATE, AT WHICH TIME THE REMAINING PART OF TESTS SHALL BE CONDUCTED.

**SPRINKLER SPECIFICATIONS**

- A. GENERAL
  - 1. THE ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF NFPA 13, THE BUILDING OWNER'S INSURANCE COMPANY, THE LOCALLY ENFORCED BUILDING CODE, LOCAL BUILDING AND FIRE OFFICIALS AND ALL OTHER LOCAL AUTHORITIES HAVING JURISDICTION.
  - 2. ALL WORK SHALL BE PERFORMED BY A LANDLORD AND STATE APPROVED LICENSED SPRINKLER CONTRACTOR.
  - 3. IF THE BUILDING HAS AN EXISTING SYSTEM, THE EXISTING SPRINKLER GRID SYSTEM SHALL BE REUSED AND MODIFIED TO ACCOMMODATE NEW PARTITION LOCATIONS AND NEW ELEMENTS OF THE REFLECTED CEILING PLAN.
  - 4. ANY PRINKLER HEAD SPACING AND LAYOUT SHOWN ON THE MECHANICAL PLANS ARE DIAGRAMMATIC BASED ON WALL AND ELEMENTS SHOWN ON THE ARCHITECTURAL PLANS. FINAL HEAD SPACING SHALL BE DETERMINED BY THE SPRINKLER CONTRACTOR BASED ON THE FINAL WALL / PARTITION LAYOUT, OCCUPANCY HAZARD AND THE SUBMITTING CONTRACTORS HYDRAULIC CALCULATIONS.
  - 5. UPON COMPLETION OF THE SYSTEM, THE INSTALLATION CONTRACTOR SHALL PROVIDE A MATERIAL TEST AND CLARIFICATION FORM TO THE BUILDING DEPARTMENT, THE FIRE MARSHALL, OWNER'S CONSTRUCTION COORDINATOR AND OWNER'S INSURANCE CARRIER (IF REQUIRED) CERTIFYING SATISFACTORY COMPLETION OF THE SPRINKLER SYSTEM INSTALLATION IN ACCORDANCE WITH APPROVED PLANS, CODES, PROCEDURES AND SPECIFICATIONS.
- B. SCOPE OF WORK
  - 1. THE SPRINKLER CONTRACTOR SHALL PROVIDE ALL HYDRAULIC CALCULATIONS, OBTAIN ALL PERMITS, FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT SERVICES AND SUPERVISION REQUIRED TO INSTALL, TEST AND PLACE IN SERVICE A COMPLETE FIRE PROTECTION SYSTEM IN STRICT ACCORDANCE WITH THIS SPECIFICATION AND APPLICABLE DRAWINGS.
  - 2. CONTRACTORS SHALL BE HELD RESPONSIBLE FOR EXAMINING THE PREMISES AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND BE AWARE OF OTHER DISCIPLINES SCOPE FOR COORDINATION. REPORT ANY CONFLICTS TO THE ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
  - 3. PROVIDE ALL REQUIRED CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF FIRE PROTECTION WORK. ALL CORE DRILLING OR CUTTING OF FIRE RATED FLOORS, SHAFTS, AND WALLS SHALL BE FIRESTOPPED PRIOR TO FINISH PATCHING. ALL PENETRATIONS SHALL BE FIRE SEALED TO MATCH THE FIRE RATING OF THE FLOORS, SHAFTS, OR WALLS PENETRATED.
  - 4. ALL EXISTING UTILITY AND FIRE SUPPRESSION SERVICES SHALL BE FIELD VERIFIED. CORRECTIONS TO THE DESIGN AND INSTALLATION AFTER BIDS SHALL BE MADE WITH NO ADDED COSTS TO THE OWNER.
  - 5. ANY REQUIRED DEMOLISHING OF THE SPRINKLER SYSTEM SHALL BE COORDINATED WITH THE ARCHITECT OR OWNER UNLESS NOTED OTHERWISE ON THESE DRAWINGS. REMOVE COMPLETELY FROM THE PREMISES AND DISPOSE OF IN A PROPER MANNER. DO NOT ABANDON IN PLACE.
  - 6. ALL WORK INCLUDING, BUT NOT LIMITED TO PARTS, MATERIAL, EQUIPMENT AND LABOR SHALL BE GUARANTEED FOR ONE YEAR AFTER ACCEPTANCE BY THE OWNER.
  - 7. ALL PIPING INSTALLED IN UNCONDITIONED SPACES SHALL BE PROTECTED FROM FREEZING. PROVIDE HEAVY INSULATION AND HEAT TRACE AS NECESSARY. COORDINATE HEAT TRACE WITH G.C. FOR THE ELECTRICAL CONTRACTOR TO PROVIDE POWER AS REQUIRED.
- C. INSTALLATION
  - 1. THE CONTRACTOR SHALL LOCATE, IDENTIFY AND PROTECT ANY EXISTING SERVICES WHICH ARE REQUIRED TO BE MAINTAIN OPERATIONAL. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE CAUSED BY HIS/HER WORK. ALL COSTS FOR REPAIRS OF DAMAGE FROM SUCH SERVICES SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
  - 2. ALL SPRINKLER PIPING SHALL BE CONCEALED UNLESS OTHERWISE INDICATED. ALL PIPING SHALL BE LOCATED TO AVOID INTERFERENCE WITH ALL OTHER ELEMENTS ABOVE CEILINGS, ETC.
  - 3. EQUIPMENT, PIPING, DUCTWORK, ETC SHALL NOT BE SUPPORTED FROM ANY CEILING. OTHER PIPING, CONDUIT OR DUCTWORK, ROOF DECK, OR JOIST BRIDGING. ITEMS SHALL BE SUPPORTED FROM ACCEPTABLE STRUCTURAL BUILDING COMPONENTS AS DETERMINED BY THE ARCHITECT AND STRUCTURAL ENGINEER.
  - 4. ALL SPRINKLER PIPING SHALL BE INSTALLED SO THAT IT CAN BE THOROUGHLY DRAINED, AND WHERE PRACTICAL, ARRANGED TO DRAIN TO THE MAIN VALVE.
- D. PIPING
  - 1. PIPING SHALL BE BLACK STEEL PER NFPA 12.
  - 2. PIPE HANGERS FOR THE SPRINKLER SYSTEM SHALL BE ADJUSTABLE CLEVIS HANGERS WITH APPROPRIATE CLAMP (DEPENDING ON STRUCTURE). ALL HORIZONTAL PIPING SHALL BE SUPPORTED AT NOT GREATER THAN 10' INTERVALS, EXCEPT PIPES OF SIZE 1-1/2" AND LARGER WHICH SHALL BE SUPPORTED AT NOT GREATER THAN 15 FOOT INTERVALS, WITH SWAY BRACES AT EVERY THIRD HANGER.
- E. SPRINKLER HEADS
  - 1. ALL SPRINKLER HEADS IN AREAS WITH FINISHED DRYWALL CEILINGS SHALL BE CONCEALED TYPE, 165° RATED, MATTE WHITE MODEL G1 AS MANUFACTURED BY RELIABLE AUTOMATIC SPRINKLER CO., INC OR APPROVED EQUAL.
  - 2. SPRINKLER HEADS IN AREAS WITH LAY-IN CEILINGS SHALL BE SEMI-RECESSED TYPE, 165° RATED, CHROME PLATED HEAD WITH ESCUTCHEON COLOR TO MATCH CEILING COLOR. MODEL G AS MANUFACTURED BY RELIABLE AUTOMATIC SPRINKLER CO., INC OR APPROVED EQUAL.
  - 3. SPRINKLER HEADS IN AREA OF NO CEILING SHALL BE MODEL G CHROME PLATED UPRIGHT AS MANUFACTURED BY RELIABLE AUTOMATIC SPRINKLER CO., INC. OR APPROVED EQUAL.
  - 4. ALL SPRINKLER HEADS SHALL BE 1/2" ORIFICE, RATED AT 165° WITH A "K-FACTOR" OF 5.6 UNLESS OTHERWISE NOTED.
  - 5. SPRINKLER HEADS LOCATED LESS THAN 5' FROM OVEN HOOD(S) SHALL HAVE A HIGH TEMPERATURE RATING OF 250° WITH A 1/2" ORIFICE. NO HEADS SHALL BE INSTALLED WITHIN 18" OF THE HOOD.

**Bakery-Cafe:**

**#6359**

**SYSTEM: G4 (ARIA)**

Project Team



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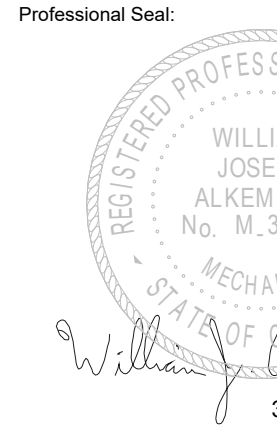
**Engineering Consultant**

(MECHANICAL AND PLUMBING)

(ELECTRICAL)

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3-4-24

Project Title:

PERMIT DOCUMENTS

**Bakery Cafe #6359**  
**806 W. RIGGIN AVE.**  
**VISALIA, CA 93291**



Consultant Copyright Placeholder

No.	Description	Date

**SPECIFICATIONS**

Project Number: #6359 Sheet Number: M501

Author: Y. V. Kulkarni, PE

Issue Date: 12.18.23

DPM: DM CPM: CPM

3/4/2024 8:46:53 AM

PE 2/18/18