

MECHANICAL LEGEND

AFF	ABOVE FINISHED FLOOR	10" x 10" 450	SIZE, TYPE, CFM OF DIFFUSER, REGISTER OR GRILLE	ROOF MOUNTED EQUIPMENT
CFM	CUBIC FEET PER MINUTE	10" x 10" 450		EQUIPMENT IN CEILING CAVITY
EA	EXHAUST AIR	10" x 10" 450		ROOF MOUNTED EXHAUST FAN
MBH	1000 BTU PER HOUR			EXISTING DUCTWORK OR EQUIPMENT TO BE REMOVED
MC	MECHANICAL CONTRACTOR			EXISTING DUCTWORK OR EQUIPMENT TO REMAIN
OA	OUTSIDE AIR			BRANCH DUCT WITH 45° RECTANGLE-ROUND BRANCH FITTING AND MANUAL VOLUME DAMPER
RA	RETURN AIR			ELBOW WITH TURNING VANES
SA	SUPPLY AIR			MANUAL VOLUME DAMPER
RTU	HVAC ROOFTOP UNIT			RETURN, EXHAUST, OR OUTSIDE AIR DUCT UP
EF	EXHAUST FAN			RETURN, EXHAUST, OR OUTSIDE AIR DUCT DOWN
KEH	KITCHEN EXHAUST HOOD			SUPPLY AIR DUCT UP
+	AIRFLOW INDICATOR			SUPPLY AIR DUCT DOWN
⊙	CONNECT POINT OF NEW WORK TO EXISTING			
①	MECHANICAL NOTE DESIGNATION			
⓪	PROVIDE OPPOSED BLADE DAMPER			

GRILLE, REGISTER AND DIFFUSER SCHEDULE (NO ALTERNATES) *

MARK	SERVICE	MANUFACTURER	MODEL	TYPE	FRAME TYPE	NECK SIZE	FACE SIZE	NOTES
CS0	SUPPLY	METAL-AIRE	9000-6/1	LOUVERED FACE	LAY-IN / SURFACE	20x20	24x24	ABDEFJK
CS01	SUPPLY	METAL-AIRE	9000-6/1	LOUVERED FACE	LAY-IN / SURFACE	20x20	24x24	ABDEFJK
CS02	SUPPLY	METAL-AIRE	9000-6/1	LOUVERED FACE	LAY-IN / SURFACE	8x8	12x12	ABDEFJK
CS03	SUPPLY	METAL-AIRE	9000-6/1	LOUVERED FACE	LAY-IN / SURFACE	8x8	12x12	ABDEFJK
CS04	SUPPLY	METAL-AIRE	9000-6/1	LOUVERED FACE	LAY-IN / SURFACE	20x20	24x24	ABDEFJK
CS05	SUPPLY	METAL-AIRE	7900	PERFORATED FACE	LAY-IN / SURFACE	20x20	24x24	ABDEFJK
CS06	SUPPLY	METAL-AIRE	7900	PERFORATED FACE	LAY-IN / SURFACE	20x20	24x24	ABDEFJK
RSD	SUPPLY	METAL-AIRE	3000-1	ROUND DIFFUSER	SURFACE	SEE PLAN FOR NECK SIZE	-	ADF
CR6	RETURN	METAL-AIRE	RH	LOUVERED FACE	SURFACE	SEE PLAN FOR NECK SIZE	-	GEF6
CE6	EXHAUST	METAL-AIRE	RH	LOUVERED FACE	SURFACE	SEE PLAN FOR NECK SIZE	-	DEF6
LS0	SUPPLY	METAL-AIRE	6100	LINEAR	SURFACE	SEE PLAN FOR NECK SIZE	4'-0" LONG, (4) 1" SLOTS	DEFJ
WR	SUPPLY	METAL-AIRE	14004	LOUVERED FACE	SURFACE	SEE PLAN FOR NECK SIZE	-	DEFJ
KR6, KE6	RETURN / EXHAUST	METAL-AIRE	RH	LOUVERED FACE	SURFACE	SEE PLAN FOR NECK SIZE	-	DEF6

NOTES:
 A. BRANCH DUCT CONNECTION SIZE SHOWN ON DRAWINGS.
 B. SUPPLIER SHALL FURNISH WITH 4-WAY THROW PATTERN UNLESS OTHERWISE SHOWN ON DRAWINGS.
 C. SUPPLIER SHALL FURNISH WITH BAKED ENAMEL FINISH, OFF-WHITE.
 D. PROVIDE FACTORY PRIMED FOR FIELD PAINTING.
 E. SUPPLIER SHALL FURNISH WITH FRAME TYPE TO MATCH CEILING OR WALL CONSTRUCTION, COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLAN.
 F. SUPPLIER SHALL FURNISH WITH DIFFUSER OR GRILLE WITH NOMINAL NECK SIZE AS INDICATED.
 G. SUPPLIER SHALL FURNISH WITH ALL ALUMINUM CONSTRUCTION.
 H. SUPPLIER SHALL FURNISH WITH INTEGRAL OPPOSED BLADE VOLUME DAMPER IN NECK OPERABLE FROM DIFFUSER FACE.
 I. PROVIDE SQUARE TO ROUND NECK ADAPTER BETWEEN DIFFUSER NECK AND BRANCH DUCT AS REQUIRED.
 J. CONTRACTOR SHALL PROVIDE INSULATED SUPPLY PLENUM WITH NECK SIZE AS SHOWN ON DRAWINGS.
 K. PROVIDE 9000-1 STYLE FOR SURFACE MOUNT. PROVIDE 9000-6 STYLE FOR LAY-IN MOUNT.
 L. PROVIDE 7900-1 STYLE FOR SURFACE MOUNT. PROVIDE 7900-6 STYLE FOR LAY-IN MOUNT.
 * REFER TO FLOOR PLANS FOR EQUIPMENT AS APPLICABLE.

RADIANT HEATER SCHEDULE (NATURAL GAS) (NO ALTERNATES)

MARK	MANUFACTURER	MODEL	SERVE	MAX. INPUT (MBH)	MIN. EFF. (%)	V/FH	NOTES
RH-1-6	SUNSL0	PSA265V	PATIO	30	80	24/1	A-B

NOTES:
 A. UNIT SHALL BE TURNED OFF VIA A SWITCH AT THE SALES AREA. REFERENCE: ELECTRICAL DRAWINGS.
 B. PROVIDE ELECTRONIC OPERATED GAS CONTROL VALVE.
 C. DIVISION 16 SHALL PROVIDE LOW VOLTAGE TRANSFORMER. RE: ELECTRICAL DRAWINGS.

AIR BALANCE SCHEDULE

EXHAUST	SERVES	EXHAUST (CFM)	TOTALS (CFM)	
EF-1	KEH-1	COOKING HOOD	3,300	
EF-2	KEH-2	COOKING HOOD	3,375	
EF-3	KEH-3	COOKING HOOD	2,940	
EF-4	KEH-4	COOKING HOOD	4,000	
EF-5	KEH-5	DISHWASHER HOOD	1,050	
EF-6,7	RESTROOMS	PUBLIC & EMPLOYEE	525	
TOTAL EXHAUST			15,190	
MAKEUP AIR	SUPPLY AIR (CFM)	SERVES	DESIGN OA (CFM)	PERCENT O.A.V.S.
RTU-1	5,300	DINING	1,950	24.28
RTU-2	6,050	DINING	1,800	29.88
RTU-3	5,500	KITCHEN	1,400	25.56
RTU-4	5,500	KITCHEN	1,400	25.56
MAU-1	4,440	KITCHEN	4,440	100.00
TOTAL OUTSIDE AIR			5,640	
			TOTAL POSITIVE AIR FLOW	450
			PERCENT POSITIVE AIR FLOW	3%

KITCHEN EXHAUST HOOD SCHEDULE (HOODS FURNISHED BY OWNER)

MARK	EQUIPMENT SERVED	MANUFACTURER	MODEL	HOOD DIMENSIONS (IN) (L x W x H)	EXHAUST CFM	WEIGHT (LBS)	NOTES
KEH-1	COOK LINE	CAPTIVE-AIRE	5424 ND-BR	132 x 54 x 24	3,300	105	A-F
KEH-2	COOK LINE	CAPTIVE-AIRE	5424 ND-BR	136 x 54 x 24	3,375	114	A-F
KEH-3	COOK LINE	CAPTIVE-AIRE	5424 ND-BR	141 x 54 x 24	2,940	746	A-F
KEH-4	COOK LINE	CAPTIVE-AIRE	4824 ND-BR	142 x 48 x 24	4,000	480	A-F
KEH-5	DISHWASHER	CAPTIVE-AIRE	4224 VII-G	84 x 42 x 24	1,050	134	C

NOTES:
 A. SUPPLIER SHALL PROVIDE HOOD PRE-PIPED FOR WET-TYPE FIRE EXTINGUISHING SYSTEM MEETING REQUIREMENTS OF NFPA-96 AND LOCAL CODES.
 B. SUPPLIER SHALL FURNISH HOOD WITH UL LISTED BAFFLE-TYPE GREASE FILTERS, GREASE DRAIN WITH REMOVABLE CUP, AND UL LISTED VAPORPROOF INCANDESCENT LIGHT FIXTURES.
 C. REFER TO CAPTIVE AIRE DRAWINGS FOR KITCHEN EXHAUST HOOD DETAILS. REFER TO ARCHITECTURAL DRAWING FOR MOUNTING HEIGHT.
 D. SUPPLIER SHALL FURNISH STAINLESS STEEL ENCLOSURE PANELS FROM TOP OF HOOD TO FINISH CEILING AND 3" STANDOFF FROM WALL AS REQUIRED.
 E. HOOD FIRE SUPPRESSION SYSTEM SUPPLIER SHALL PROVIDE AUTOMATIC SOLENOID GAS SHUT-OFF VALVE. INSTALLED BY PLUMBING CONTRACTOR.
 F. PROVIDE HOOD FIRE SUPPRESSION SYSTEM MEETING NFPA-96 AND LOCAL CODES.

ELECTRIC DUCT HEATER SCHEDULE (NO ALTERNATES)

MARK	MANUFACTURER	MODEL	OUTPUT (KW)	INPUT (KW)	MIN. NO. STAGES	SIZE (IN" x H")	MAX. AFD (IN)	CFM	MAX. TEMP. RISE (°F)	V/FH	NOTES
EDH-1	INDECO	QUA	20.5	6	2	12x10	0.05	600	30	480/3	A-F
EDH-2	INDECO	QUA	47.8	14	2	14x16	0.05	1400	30	480/3	A-F

NOTES:
 A. UNIT AIR PRESSURE DROP SHALL NOT EXCEED SCHEDULED VALUE.
 B. SUPPORT UNIT FROM STRUCTURE WITH ALL-THREAD HANGING RODS.
 C. DIVISION 16 SHALL PROVIDE FUSED DISCONNECT SWITCH.
 D. PROVIDE AIRFLOW PROTECTIVE SWITCH AND THERMAL OVERLOAD PROTECTION.
 E. PROVIDE MERCURY CONTACTORS.
 F. PROVIDE WALL MOUNTED THERMOSTAT, MOUNT AT 48" AFF.

MAKEUP AIR UNIT SCHEDULE (NO ALTERNATES)

MARK	MANUFACTURER	MODEL	CFM	SUPPLY FAN EFF. (%)	HP	V/FH	HEIGHT (LBS)	NOTES
MAU-1	GREENHECK	KSF-118-H30	4,440	1.00	7.5	480/3	1,000	A-H

NOTES:
 A. PROVIDE 14" MIN. HIGH INSULATED ROOF CURB WITH SPRING ISOLATION.
 B. SUPPLIER SHALL PROVIDE ALL ACCESSORIES NECESSARY FOR PROPER OPERATION OF THE EQUIPMENT.
 C. DIVISION 16 SHALL PROVIDE FUSED DISCONNECT SWITCH.
 D. PROVIDE 2" ALUMINUM MESH WASHABLE FILTERS.
 E. SPECIFIED FAN ESP INCLUDES LOSSES FOR DIRTY FILTERS.
 F. REFERENCE NOTES ON MECHANICAL CONTROLS SHEET FOR SEQUENCE OF OPERATION.
 G. SUPPLIER SHALL FURNISH MOTORIZED OUTLET DAMPER.
 H. UNITS SHALL BE FIELD PAINTED (CI MP #3066 52/01) HAZE GREY. DO NOT PAINT OVER LABELS.

EXHAUST FAN SCHEDULE (NO ALTERNATES)

MARK	SERVICE	MANUFACTURER	MOUNTING	MODEL	CFM	ESP (IN)	HP	DRIVE	BPM	V/FH	HEIGHT (LBS.)	NOTES
EF-1	KEH-1	CAPTIVE-AIRE	ROOF	HRE-20	3,300	1.50	2.0	BELT	1200	480/3	450	AB,C,D,H
EF-2	KEH-2	CAPTIVE-AIRE	ROOF	HRE-20	3,375	1.50	2.0	BELT	1200	480/3	450	AB,C,D,H
EF-3	KEH-3	CAPTIVE-AIRE	ROOF	HRE-20	2,940	1.50	1.5	BELT	1150	480/3	450	AB,C,D,H
EF-4	KEH-4	CAPTIVE-AIRE	ROOF	CUBE-180-20	4,000	1.50	2.0	BELT	1435	480/3	200	AB,C,D,H
EF-5	KEH-5 (DISHWASHER)	GREENHECK	ROOF	CUE-101-A	1,050	0.75	1/4	DIRECT	1725	120/1	100	AB,EF,H
EF-6	RESTROOMS	GREENHECK	ROOF	G-045-D	450	0.50	1/8	DIRECT	1550	120/1	75	AB,EF,H
EF-7	EMPLOYEE TOILET	GREENHECK	ROOF	G-060-D	75	0.25	1/60	DIRECT	1550	120/1	75	AB,EF,H

NOTES:
 A. REFERENCE NOTES ON MECHANICAL CONTROLS SHEET FOR FAN CONTROL AND SEQUENCE OF OPERATION.
 B. DIVISION 16 SHALL PROVIDE DISCONNECT SWITCH.
 C. SUPPLIER SHALL PROVIDE VENTED ROOF CURB INSTALLED BY CONTRACTOR MINIMUM 40" ABOVE THE ROOF SURFACE. IF ROOF IS WOOD, CURB SHALL HAVE OPENING LARGE ENOUGH TO ACCEPT RATED GREASE TRAP OR 9" TYPED SHIRT EXTENDED 6" ABOVE ROOF SURFACE.
 D. MECHANICAL CONTRACTOR SHALL INSTALL EQUIPMENT AND ACCESSORIES IN COMPLETE COMPLIANCE WITH NFPA-96 AND ALL LOCAL CODES.
 E. PROVIDE MINIMUM 14" HIGH ROOF CURB.
 F. SUPPLIER SHALL PROVIDE SPEED CONTROLLER. MOUNT INSIDE CURB AT FAN.
 G. FURNISHED BY DIVISION 15. TYPICAL UNLESS NOTED OTHERWISE.
 H. UNITS SHALL BE FIELD PAINTED (CI MP #3066 52/01) HAZE GREY. DO NOT PAINT OVER LABELS.

ROOFTOP UNIT SCHEDULE (NATURAL GAS) (NO ALTERNATES)

MARK	MANUF.	MODEL	TON	CFM	ESP (IN)	HP	TH (MBH)	SH (MBH)	EAT (DB/MBH)	MAX. INPUT (MBH)	GAS HEATING MIN. OUTPUT (MBH)	MIN. NO. STAGES	MIN. O/A CFM	HCA	MOCP	V/FH	BEER (SEER)	HEIGHT (LBS.)	NOTES
RTU-1	LENNOX	L6C210	17.5	5,300	1.00	3	203.6	148.7	71/166.3	260	208	2	1550	41	45	480/3	11.5	2600	A-L
RTU-2	LENNOX	L6A240	20	6,050	1.00	5	234.0	168.2	71/166.3	260	208	2	1800	52	60	480/3	11.0	3000	A-L
RTU-3,4	LENNOX	L6C180	15	5,500	0.85	3	185.1	137.6	84/169.2	169	135	2	1400	40	45	480/3	11.8	2650	A-L

NOTES:
 A. EQUIPMENT SIZED FOR 105°F AMBIENT TEMPERATURE.
 B. PROVIDE 2 SETS OF DISPOSABLE PLEATED 2" THICK FILTERS (MARR 30/30 OR APPROVED EQUAL). PRIOR TO STORE OPENING, MECHANICAL CONTRACTOR SHALL REMOVE SUPPLIER'S FILTERS AND INSTALL CLEAN SET.
 C. FURNISH EQUIPMENT WITH 14" HIGH INSULATED ROOF CURB.
 D. PROVIDE TEMPERATURE SENSOR MOUNTED PER PLAN WITH REMOTE CONTROL IN HVAC CONTROL PANEL NCP-1.
 E. PROVIDE FACTORY INSTALLED SMOKE DETECTORS IN SUPPLY AND RETURN DUCTWORK OF UNIT. SMOKE DETECTORS SHALL SHUT DOWN UNIT UPON DETECTION OF SMOKE.
 F. DIVISION 16 SHALL PROVIDE FUSED DISCONNECT AND W/P/FCI.
 G. DIVISION 16 SHALL PROVIDE LOW VOLTAGE CONTROL WIRING FOR REMOTE CONTROL OF UNIT.
 H. HEIGHT IS BASED ON UNIT WITH ALL ACCESSORIES INCLUDING ROOF CURB.
 I. PROVIDE FLEXIBLE DUCT CONNECTORS AT ALL CONNECTIONS.
 J. FURNISH WITH MOTORIZED OUTSIDE AIR DAMPER.
 K. FURNISH WITH HUMIDITROL HOT GAS REHEAT OPTION.
 L. UNITS SHALL BE FIELD PAINTED (CI MP #3066 52/01) HAZE GREY. DO NOT PAINT OVER LABELS.
 CONTACT LENNOX NATIONAL ACCOUNTS (800-367-6285 FAX 912-491-512) FOR PRICING AND INFORMATION REGARDING THE ABOVE SCHEDULE.

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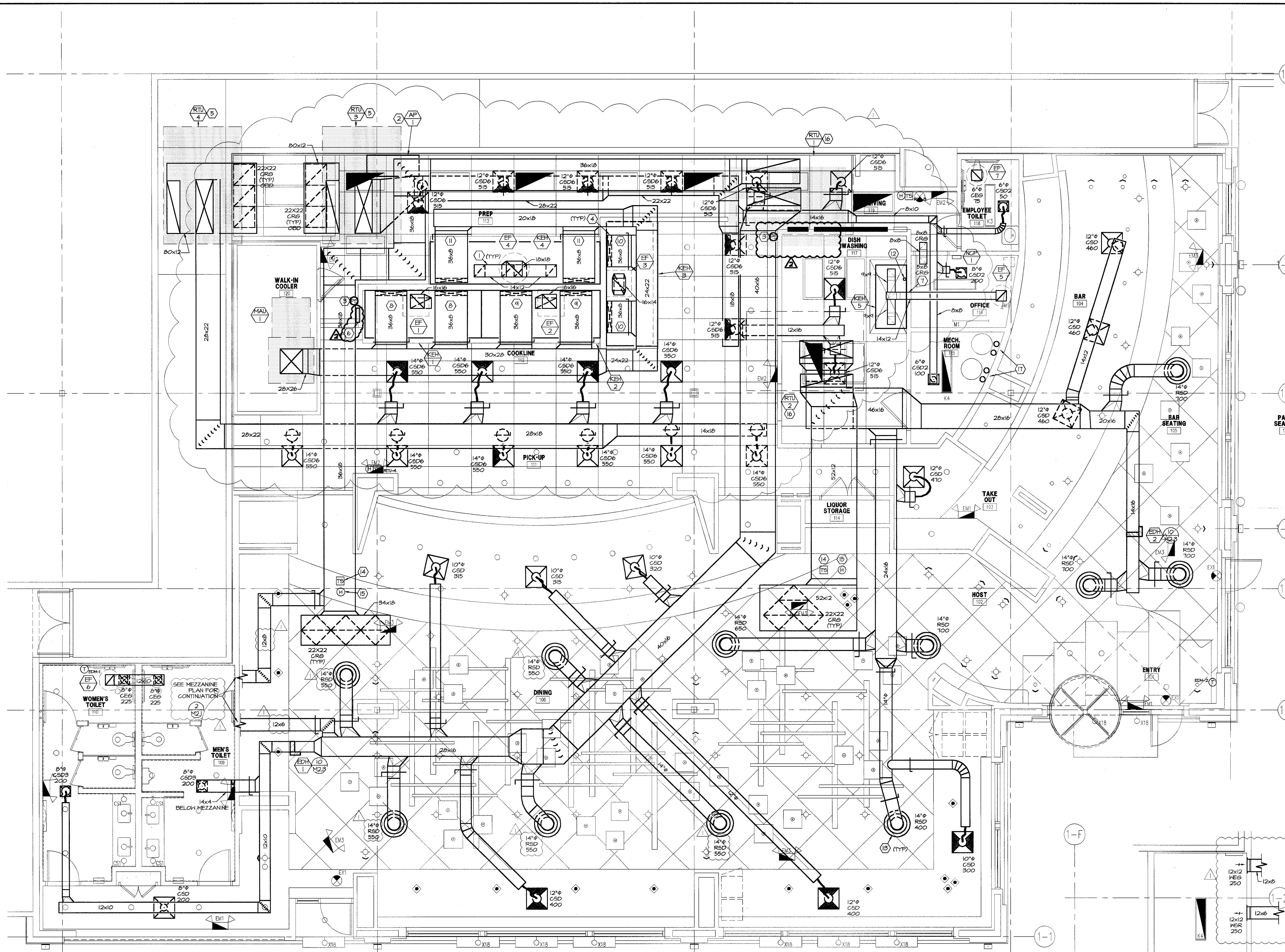
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 SAN ANTONIO, TEXAS 78256
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 BUILDING NO. 5501

No.	Date	Remarks
2/1/05	ISSUED FOR PERMIT	
7/16/04	ISSUED FOR PERMIT	

REVISIONS

Drawing Title
 MECHANICAL LEGEND & SCHEDULES

Job No. 031101 Drawn
 Scale Date 7/16/04
 Sheet No. M1.1



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

2 MEZZANINE PLAN
1/4"=1'-0"

- GENERAL NOTES:**
- PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
 - COORDINATE NEW WORK WITH OTHER DISCIPLINES PRIOR TO CONSTRUCTION.
 - COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. COORDINATE INSTALLATION OF DUCTWORK TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC.
 - AVOID DAMAGING SURFACES AND EQUIPMENT DURING WORK. REPAIR DAMAGE CAUSED DURING CONSTRUCTION AT NO EXTRA COST TO THE OWNER.
 - ALL MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
 - NEW MECHANICAL EQUIPMENT AND DUCTWORK ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK WITHIN THE AVAILABLE SPACE. VERIFY THE FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
 - REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. VERIFY CHASES AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR DUCTWORK MEET REQUIREMENTS.
 - COORDINATE LOCATION OF ROOF MOUNTED HVAC EQUIPMENT AND ROOF PENETRATIONS WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
 - INSTALL DUCTWORK PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE NOTED OR NOTED.
 - SEAL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
 - COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, HALL, AND DUCT INSTALLATION REQUIREMENTS.
 - ADJUST LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES AS REQUIRED TO ACCOMMODATE FINAL CEILING GRID AND LIGHTING LOCATIONS.
 - LOCATE AND SET THERMOSTATS AND HUMIDISTATS FOR MIXING IN CONSULT WITH ARCHITECT. VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. INSTALL DEVICES AS APF TO MEET ADA REQUIREMENTS UNLESS NOTED OTHERWISE. GLANS.
 - COORDINATE THE LOCATION AND ELEVATION OF HALL-MOUNTED DEVICES WITH CABINETS, SHELVES OR OTHER COMPONENTS SHOWN ON THE ARCHITECTURAL DRAWINGS THAT ARE TO BE INSTALLED UNDER OTHER DIVISIONS. CONTRACTOR WILL NOT BE REIMBURSED FOR RELOCATION OF HALL-MOUNTED DEVICES CAUSED BY A LACK OF COORDINATION.
 - PROVIDE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS AND GRILLES.
 - BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
 - RIGID DUCTWORK INSULATION PROVIDE 2" THICK, 3/4 LB DENSITY INSULATION AROUND RIGID CONCEALED SUPPLY, RETURN AND OUTSIDE AIR DUCTS.
 - PROVIDE THERMAFLEX TYPE 6-434, FLEXMASTER TYPE 8, OR APPROVED EQUAL FLEXIBLE DUCTWORK. FLEXIBLE DUCTWORK SHALL BE LISTED UNDER 3L 181 AS CLASS 1 AIR DUCT AND BE PROVIDED WITH INTEGRAL 1/2" THICK, 3/4 LB DENSITY FIBERGLASS INSULATION. FLEXIBLE DUCTWORK SHALL NOT EXCEED 3'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORTED TO AVOID SHARP BENDS AND SAGGING.
 - PROVIDE EQUIPMENT VENTS AND FLUES PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND EQUIPMENT SPECIFICATIONS. KEEP PENETRATIONS THROUGH ROOF A MINIMUM OF 10'-0" FROM HVAC EQUIPMENT FRESH AIR INLETS AND 10'-0" FROM ROOF PARAPETS.
 - PROVIDE A NEW SET OF AIR FILTERS IN UNITS VENT BEFORE TURNING SYSTEMS OVER TO OWNER.
 - INDOOR AIR QUALITY MEASURES: PROTECT INSIDE OF (INSTALLED AND DELIVERED) DUCTWORK AND HVAC UNITS FROM EXPOSURE TO DUST, DIRT, PAINT AND MOISTURE. REPLACE INSULATION THAT HAS SOFTENED AT ANY TIME DURING CONSTRUCTION. DRYING THE INSULATION IS NOT ACCEPTABLE. SEAL ANY TEARS OR JOINTS OF INTERNAL FIBERGLASS INSULATION. REMOVE DEBRIS FROM CEILING AIR PLENUM INCLUDING DUST. AN INDEPENDENT PROFESSIONAL DUCT CLEANING COMPANY SHALL VACUUM CLEAN ANY DUCTWORK CONNECTED TO HVAC UNITS THAT WERE OPERATED DURING THE CONSTRUCTION PERIOD AFTER NEW FILTERS ARE INSTALLED AND PRIOR TO TURNING SYSTEM OVER TO THE OWNER.
 - PAINT DUCTWORK IN EXPOSED CEILING AREA PER ARCHITECT'S COLORS.
 - DO NOT ROUTE DUCTWORK OVER ELECTRICAL PANELS OR TRANSFORMERS.

- HVAC PLAN NOTES:**
- TYPE I GREASE HOOD EXHAUST DUCTWORK SHALL BE MINIMUM 16 GAUGE BLACK IRON WITH LIQUID TIGHT WELDS. INSTALL ACCESS PANELS FOR CLEANING AS REQUIRED BY NFPA 96 AND LOCAL CODES. TRANSITION GREASE DUCTWORK AS REQUIRED TO HOOD AND FAN CONNECTIONS. PROVIDE 45° MAX OFFSETS AS REQUIRED TO COORDINATE WITH STRUCTURE. PROVIDE RADIIUS ELBOWS WITHOUT TURNING VANES. SLOPE HORIZONTAL GREASE DUCT BACK TOWARDS HOOD AT MINIMUM OF 1/4" PER LINEAL FOOT MAINTAINING 18" CLEARANCE TO COMBUSTIBLE MATERIALS. GREASE DUCTS SHALL BE CONTAINED IN A UL APPROVED GREASE DUCT WRAP SYSTEM.
 - FIRE SUPPRESSION SYSTEM TANKS LOCATED ON WALL AS SHOWN FURNISHED BY HOOD SUPPLIER. VERIFY EXACT LOCATION WITH ARCHITECT.
 - INSTALL HOOD FIRE SUPPRESSION MANUAL FULL-STATION, FURNISHED BY HOOD SUPPLIER, IN LOCATION SHOWN PER NFPA 96 REQUIREMENTS.
 - PROVIDE 90° VANE ELBOW TURN DOWN, AND TRANSITION TO MAKE-UP AIR PLENUM COLLAR SIZE.
 - ROUTE FULL-SIZE SUPPLY AND RETURN AIR DUCTWORK UP TO UNIT ON ROOF.
 - CONTROL BOARD (CDB) BY DIVISION 16 WITH PRE-WIRED HOOD CONTROLS. RE: ELECTRICAL DRAWINGS.
 - STAINLESS STEEL EXHAUST DUCT DOWN TO DISHWASHER HOOD AND UP TO ROOF. SLOPE EXHAUST DUCT 1/4" PER FOOT TOWARD DISHWASHER HOOD.
 - BALANCE SUPPLY AIR TO 1170 CFM.
 - BALANCE SUPPLY AIR TO 1180 CFM.
 - BALANCE SUPPLY AIR TO 1015 CFM.
 - BALANCE SUPPLY AIR TO 1380 CFM.
 - 3" ROUND BOOSTER HEATER VENT (TYPE 'B'), VENT INTO HOOD.
 - DIFFUSER TO BE 13'-6" APF. VERIFY WITH ARCHITECT BEFORE FLAGING.
 - MOUNT TEMPERATURE SENSOR IN RETURN AIR DUCT.
 - MOUNT HUMIDISTAT IN RETURN AIR DUCT.
 - ROUTE SUPPLY AND RETURN AIR DUCTWORK UP TO UNIT ON ROOF. PROVIDE TRANSITIONS AS REQUIRED TO FIT DUCTWORK BETWEEN JOISTS.
 - WATER HEATER FLUES AND COMBUSTION AIR PIPING FROM WATER HEATERS UP TO ROOF. FLUES SHALL BE 6" TYPE 'B' DOUBLE WALL. COMBUSTION AIR PIPING SHALL BE 3" TYPE 'B' DOUBLE WALL. TERMINATE WITH VENT CAP AT ROOF PER MANUFACTURER'S REQUIREMENTS. RE: PLUMBING DRAWINGS.

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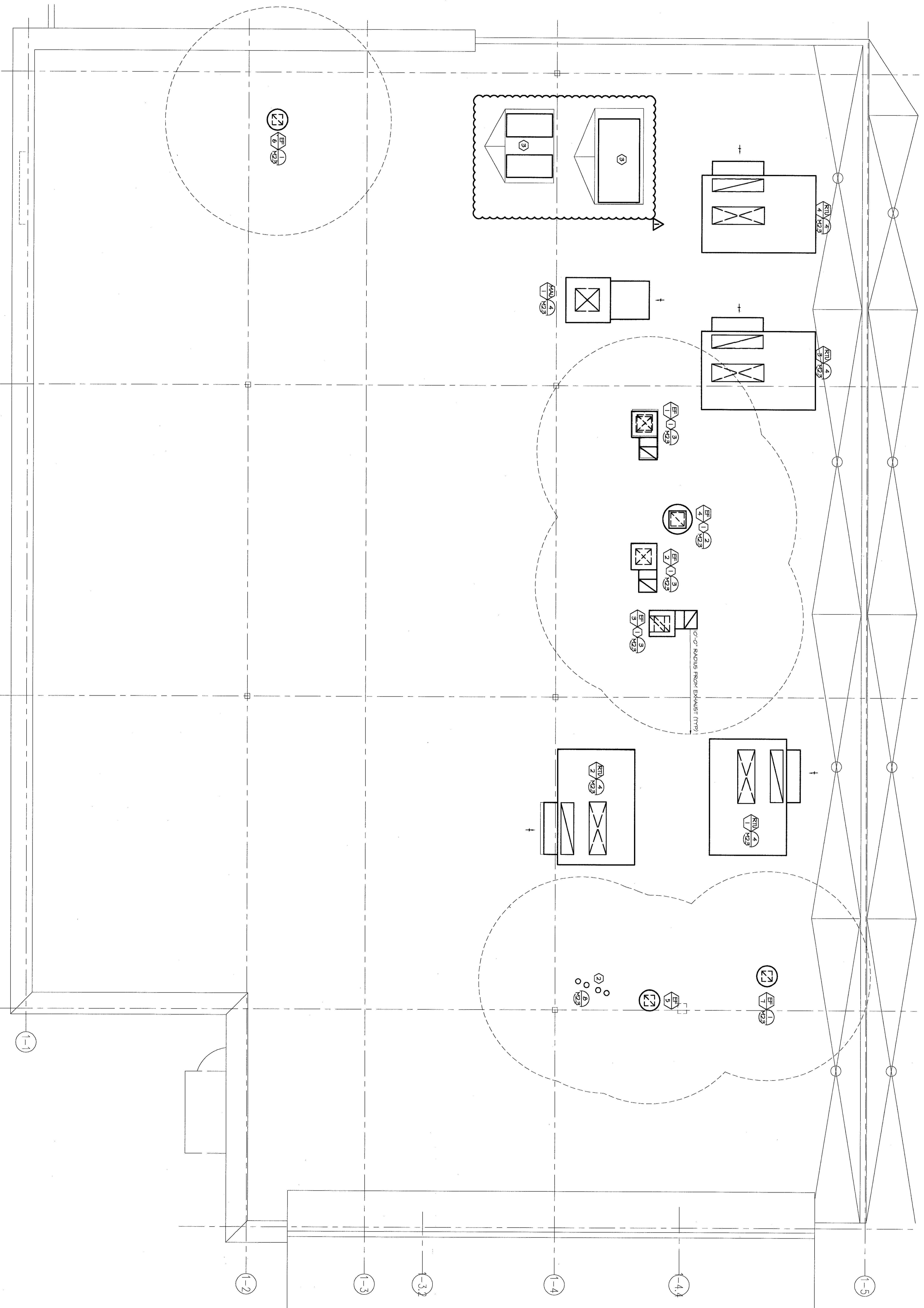
SPF CHANGSD
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No	Date	Remarks
1	3/8/05	ADDENDUM #1
2	2/1/05	REVISED FOR
3	7/16/04	ISSUED FOR

REVISIONS



Drawing Title
MECHANICAL PLAN

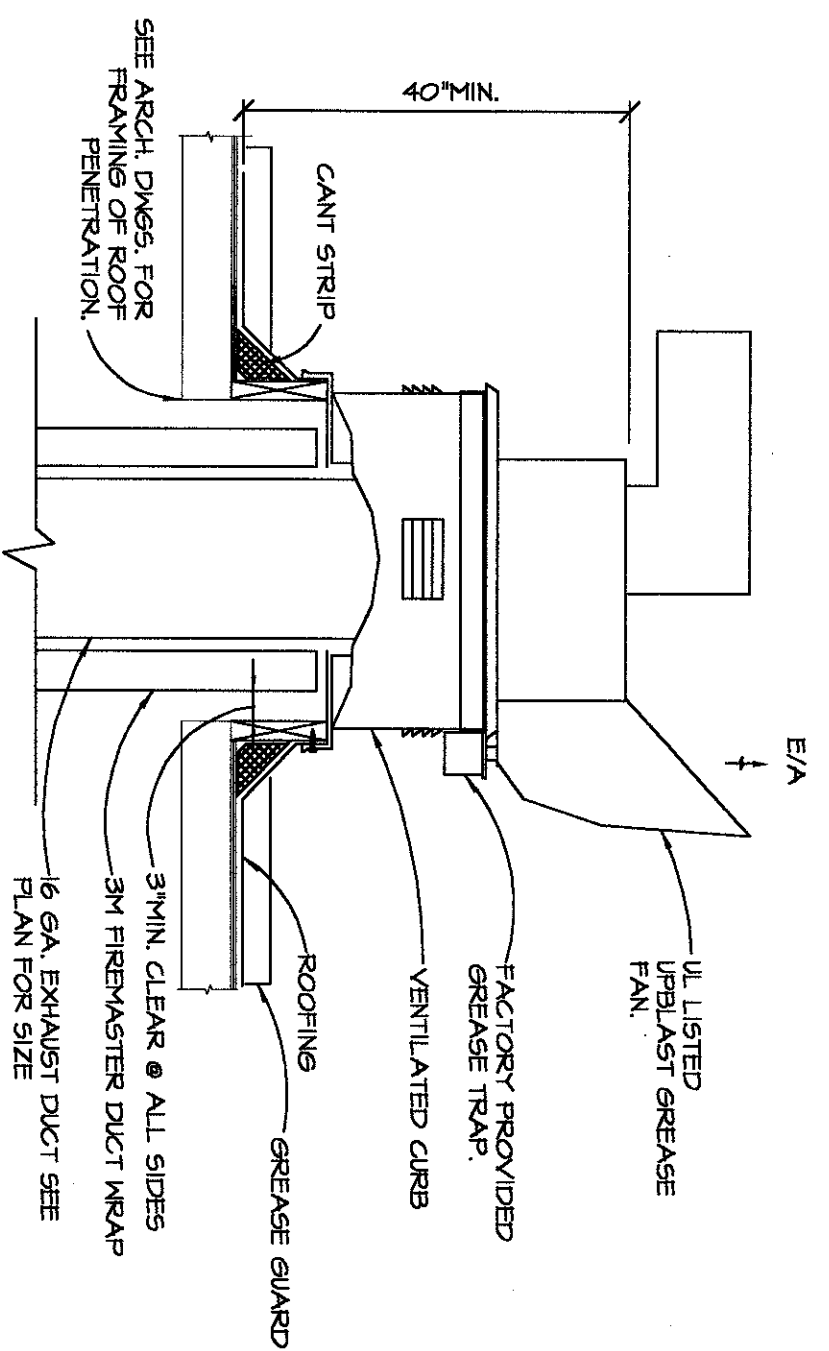
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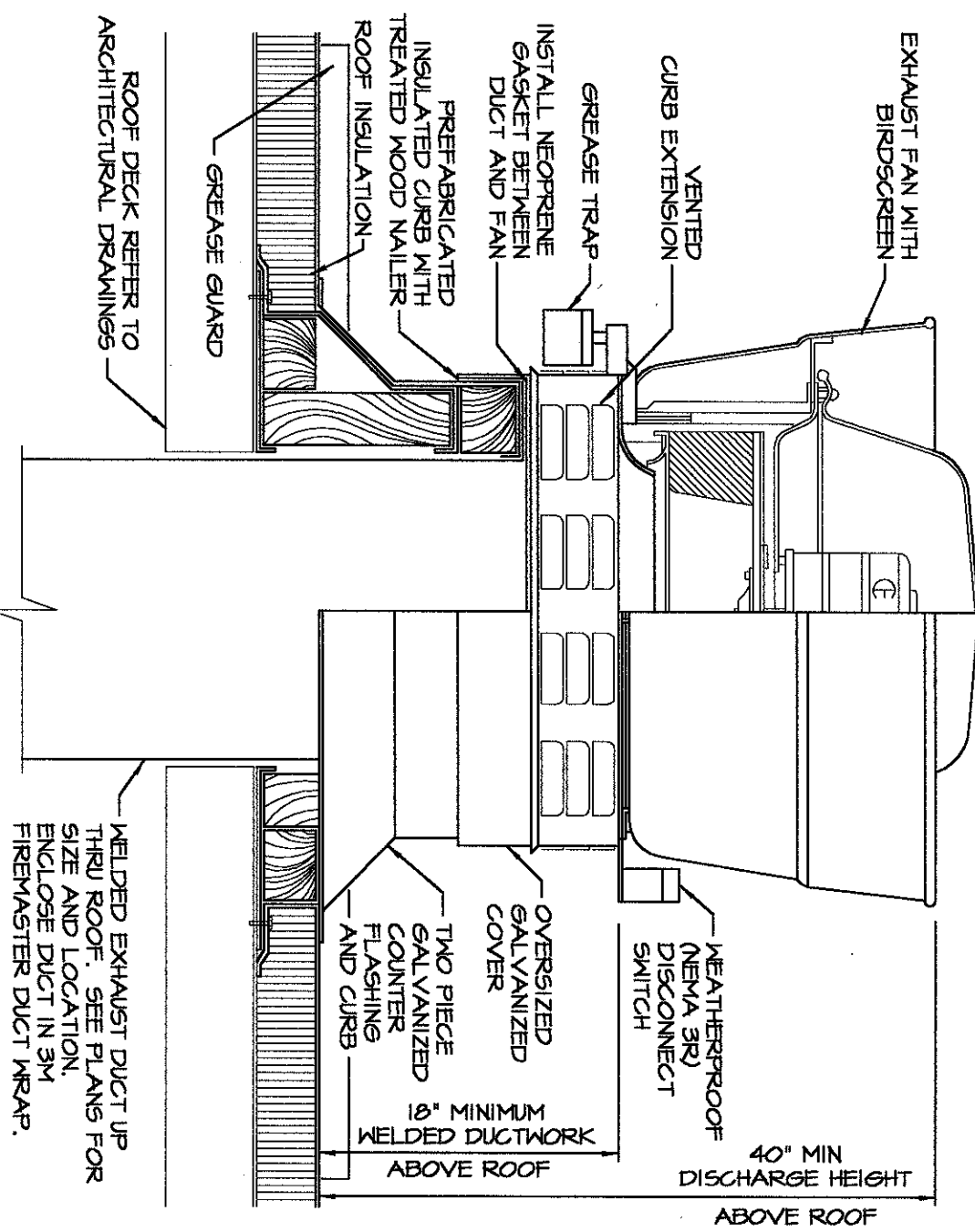
- HVAC ROOF PLAN NOTES:**
- ① GREASE EXHAUST FAN WITH GREASE DUCT DOWN TO TYPE I KITCHEN EXHAUST HOOD. MAKE FINAL TRANSITION AND CONNECTION TO HOOD.
 - ② WATER HEATER FLUES AND COMBUSTION AIR INTAKES.
 - ③ CONDENSING UNITS FOR KITCHEN EQUIPMENT.

① MECHANICAL ROOF PLAN

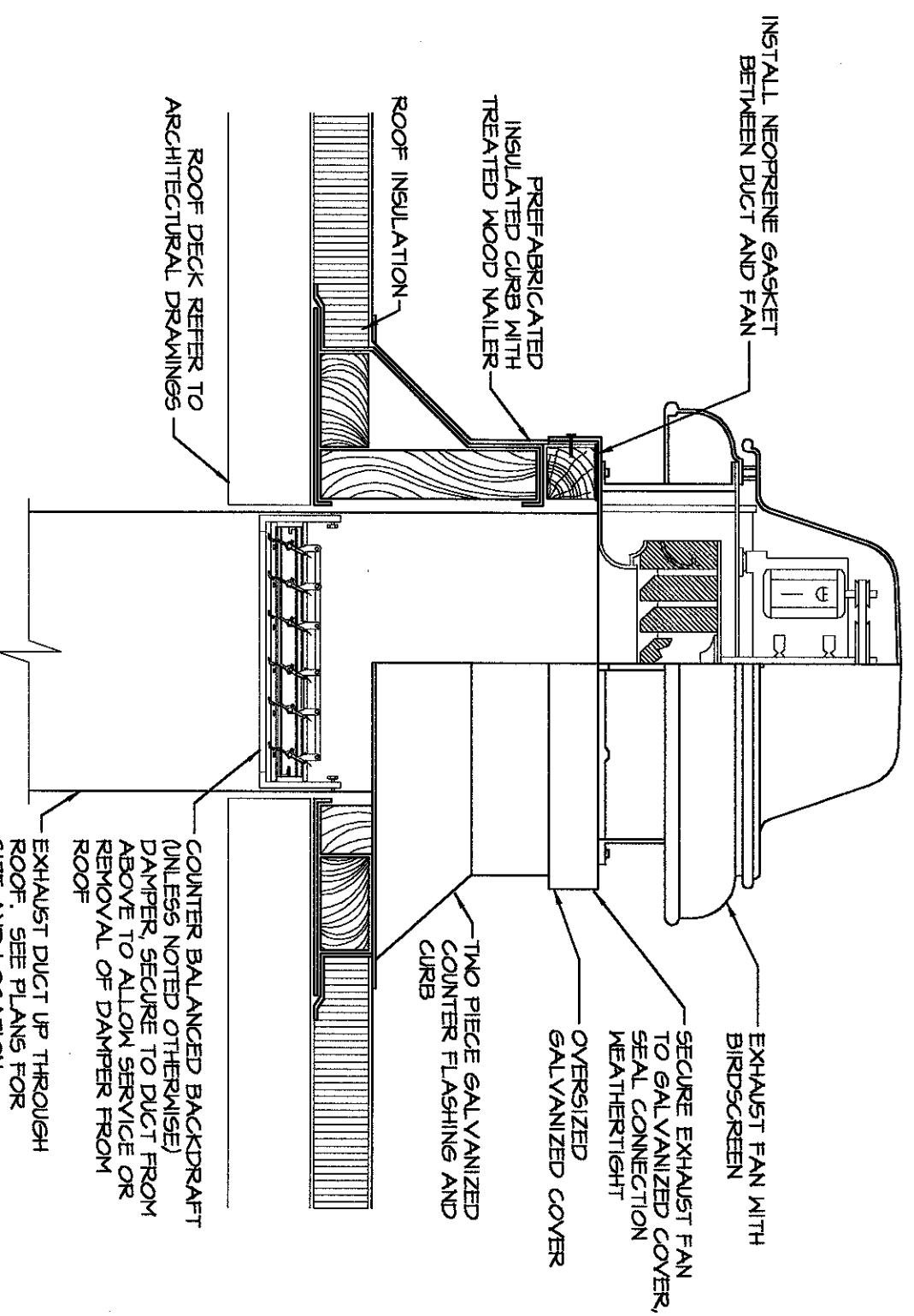
 <p>G.P.F. CHANG'S CHINA BISTRO</p>	<p>16401 LA CANTERA PARKWAY BUILDING NO. SS01</p>	<p>SAN ANTONIO, TEXAS 78256</p>	 <p>HENDERSON ENGINEERS INCORPORATED 8325 LENEVA DRIVE SUITE 400 LENEVA, KS 66214-1695 TEL: 913-307-5300 FAX: 913-307-5400 WEB: WWW.HENDERSONENGINEERS.COM 045000470</p>												
<p>Job No. 031101</p> <p>Scale 1/4"=1'-0"</p> <p>Sheet No. M2.2</p>	<p>Drawing Title: MECHANICAL ROOF PLAN</p> <p>Drawn: [Blank]</p> <p>Date: 7/18/04</p>	<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Date</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7/18/04</td> <td>ISSUED FOR PERMIT</td> </tr> <tr> <td>2</td> <td>7/19/04</td> <td>ISSUED FOR PERMIT</td> </tr> <tr> <td>3</td> <td>7/19/04</td> <td>REVISIONS</td> </tr> </tbody> </table>	No.	Date	Remarks	1	7/18/04	ISSUED FOR PERMIT	2	7/19/04	ISSUED FOR PERMIT	3	7/19/04	REVISIONS	
No.	Date	Remarks													
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2	7/19/04	ISSUED FOR PERMIT													
3	7/19/04	REVISIONS													



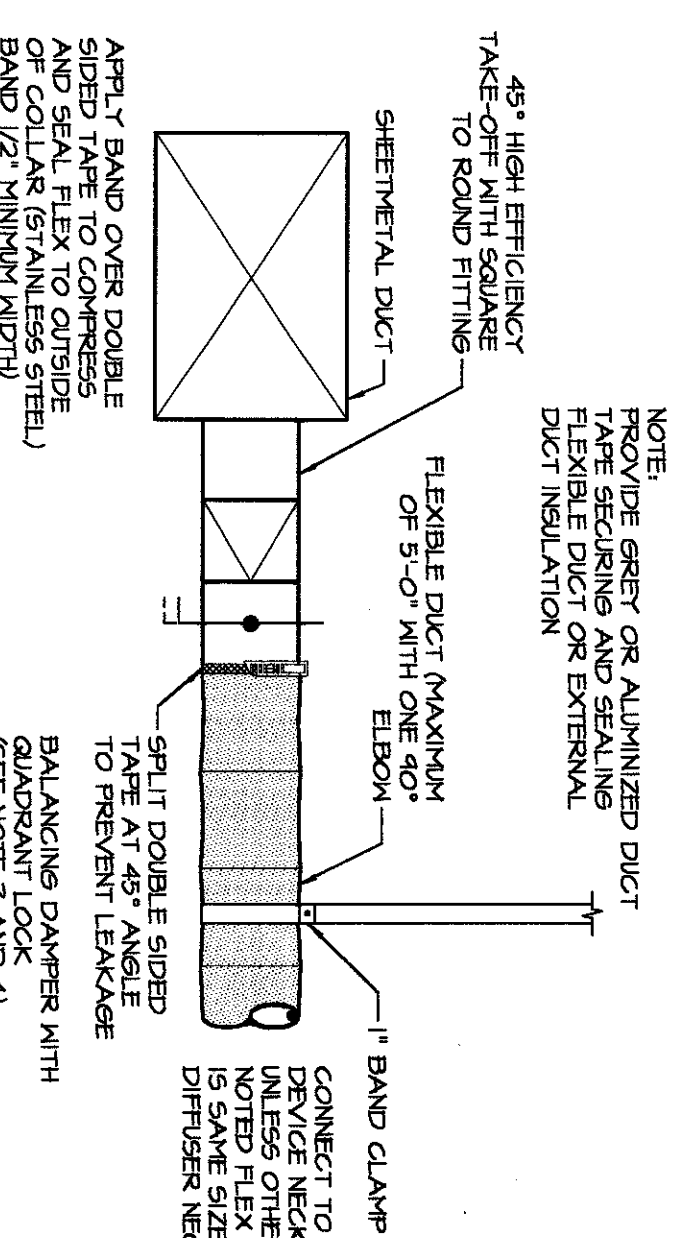
3 GREASE EXHAUST FAN DETAIL - EF-1, 2 & 3
NO SCALE



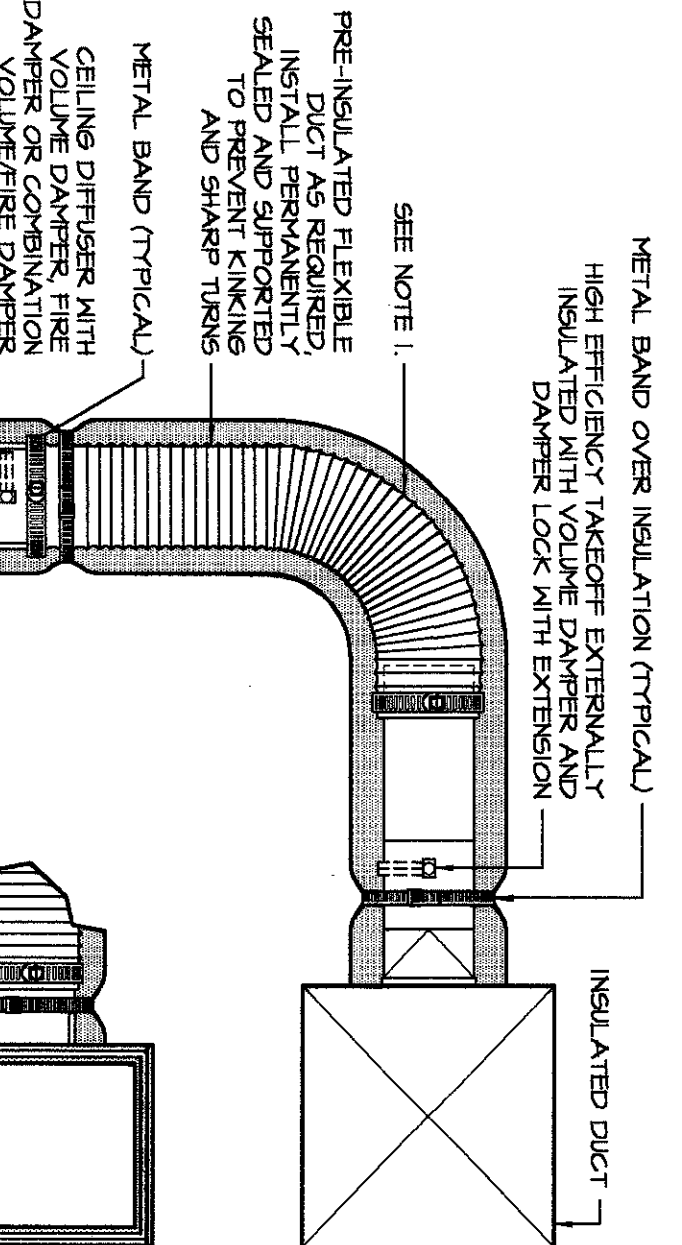
2 UPBLAST GREASE EXHAUST FAN DETAIL - EF-4
NO SCALE



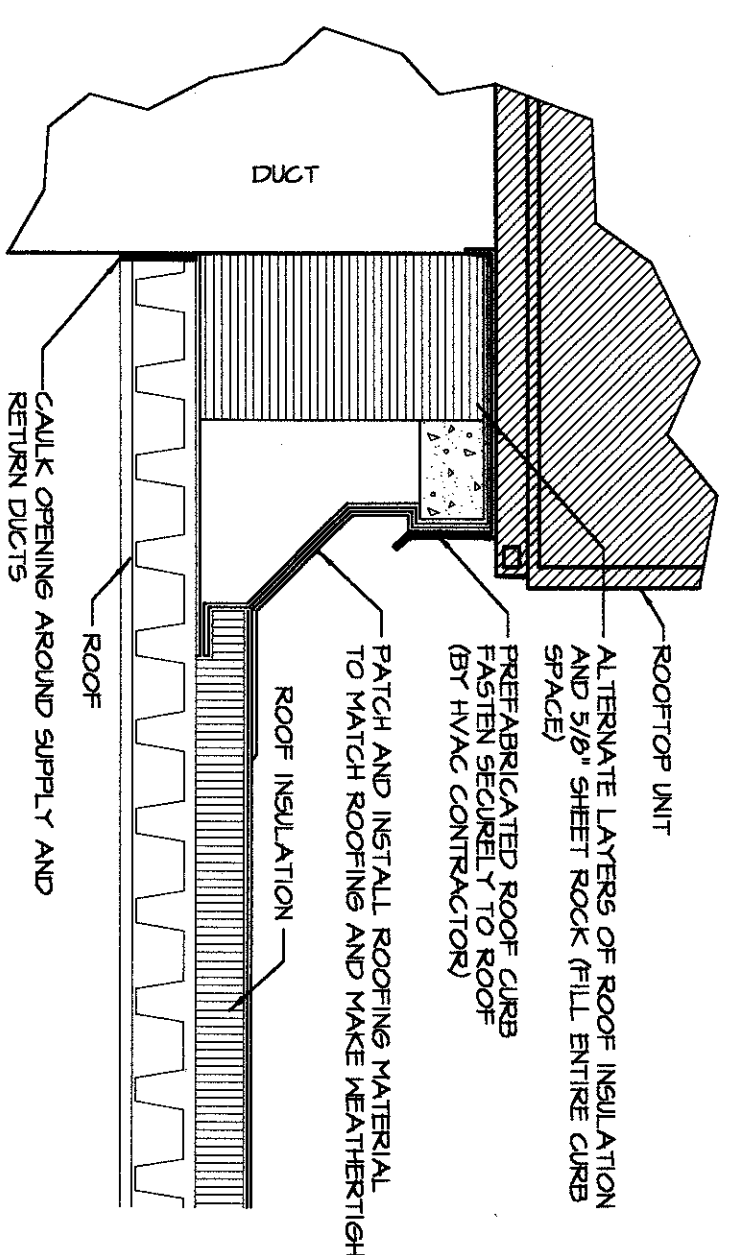
1 EXHAUST FAN DETAIL
NO SCALE



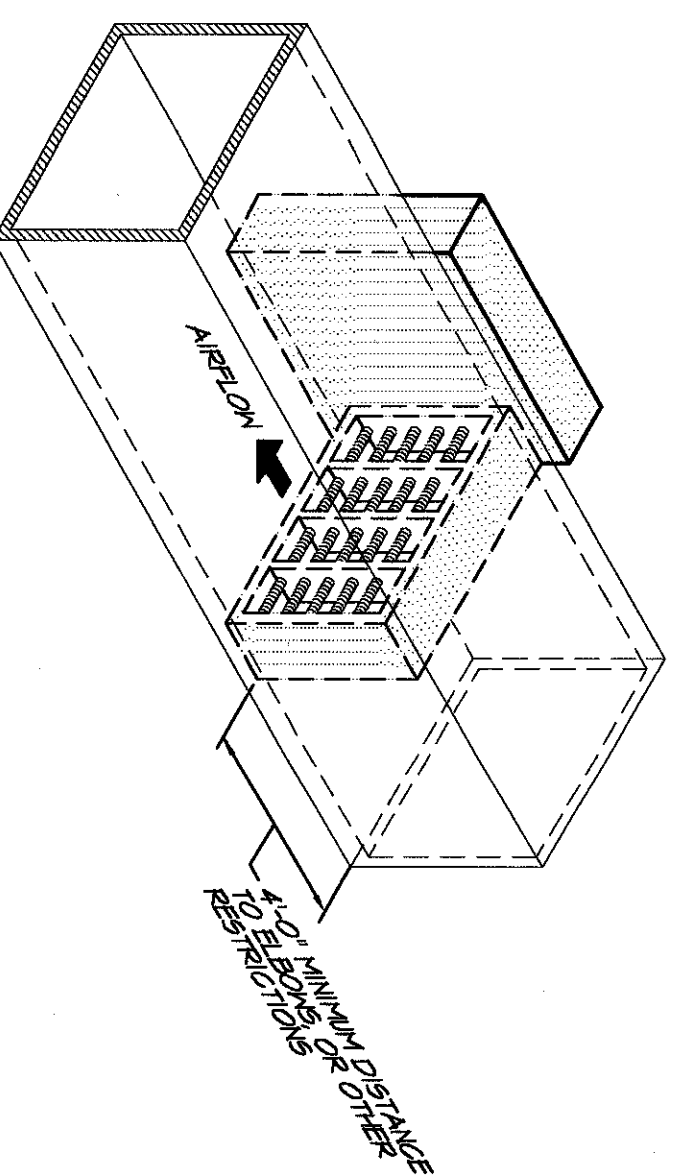
6 45° LATERAL FLEXIBLE DUCT TAKE OFF DETAIL
NO SCALE



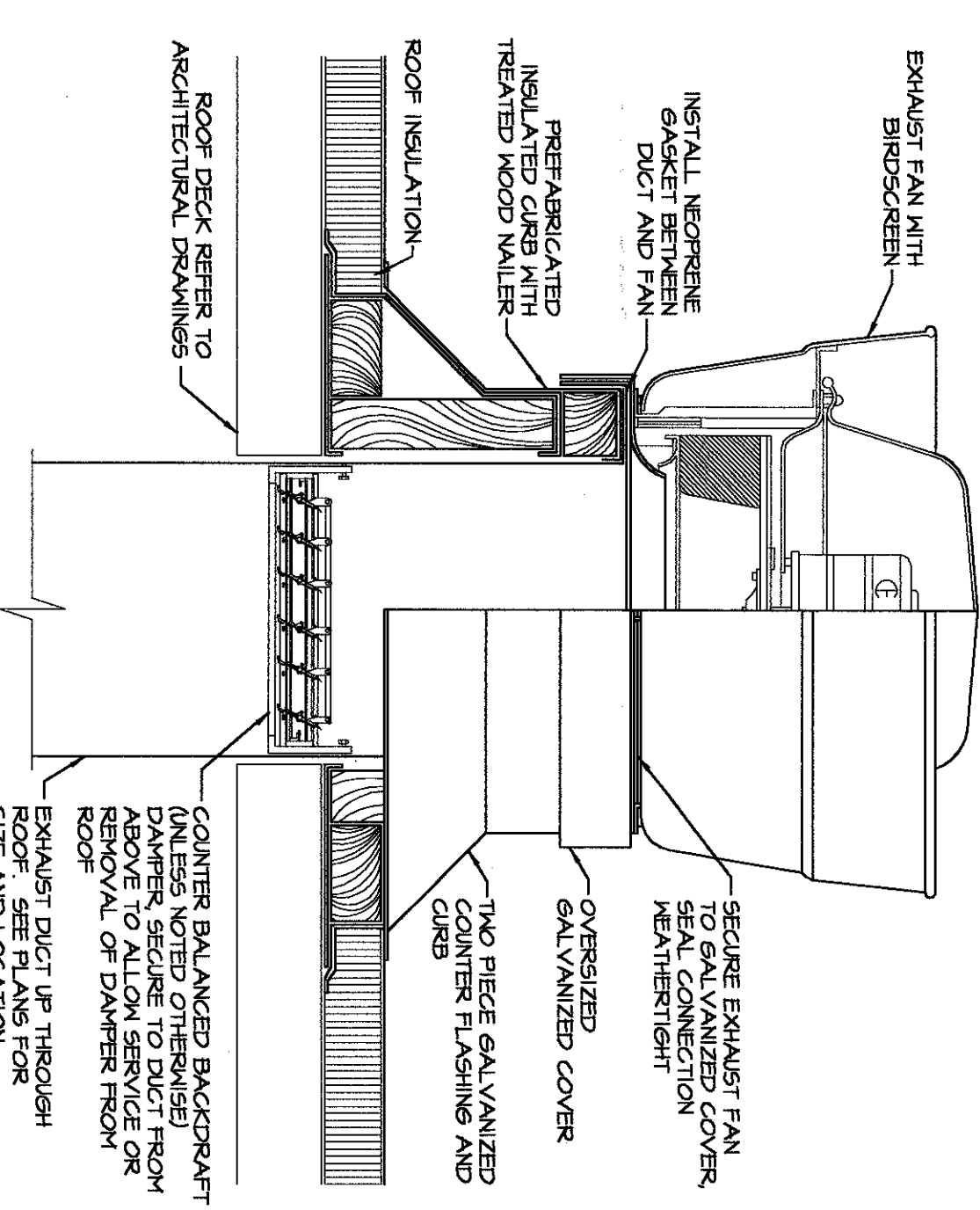
5 CEILING DIFFUSER DETAIL
NO SCALE



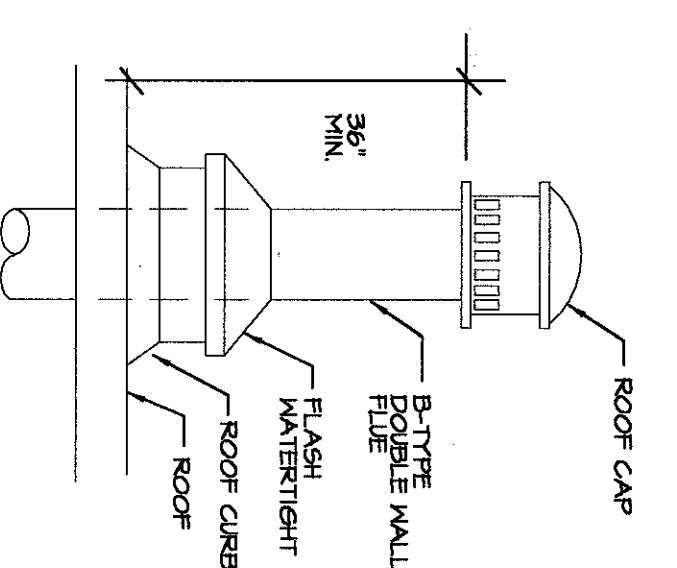
4 ROOF CURB DETAIL
NO SCALE



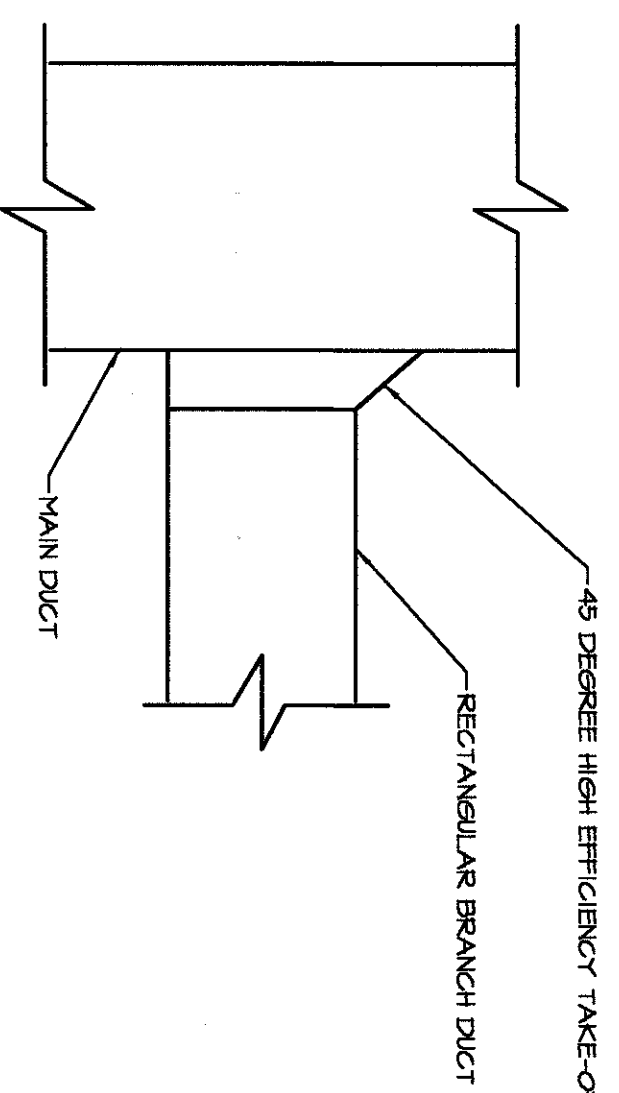
9 ELECTRIC DUCT HEATER DETAIL
NO SCALE



9 UPBLAST EXHAUST FAN DETAIL
NO SCALE



8 TYPE-B DOUBLE WALL GAS EQUIPMENT FLUE
NOT TO SCALE



7 45° LATERAL DUCT TAKE OFF DETAIL
NO SCALE

NOTES:
1. CUT OPENING IN SHEETMETAL DUCT ACCORDANTLY. INSTALL 45° LATERAL CLASS.

NO.	DATE	REVISIONS
1	7/16/04	ISSUED FOR PERMITS
2	7/16/04	ISSUED FOR PERMITS

Sheet No. **M2.3**

Job No. 031101

Scale

Date 7/16/04

Drawing Title: MECHANICAL DETAILS

Drawn

16401 LA CANTERA PARKWAY
BUILDING NO. SS01

8325 LENOXA BLVD SUITE 450
LENOXA, KS 66214-1695
TEL: 913-307-5300 FAX: 913-307-5400
WEB: WWW.HENDERSONENGINEERS.COM
0450000470

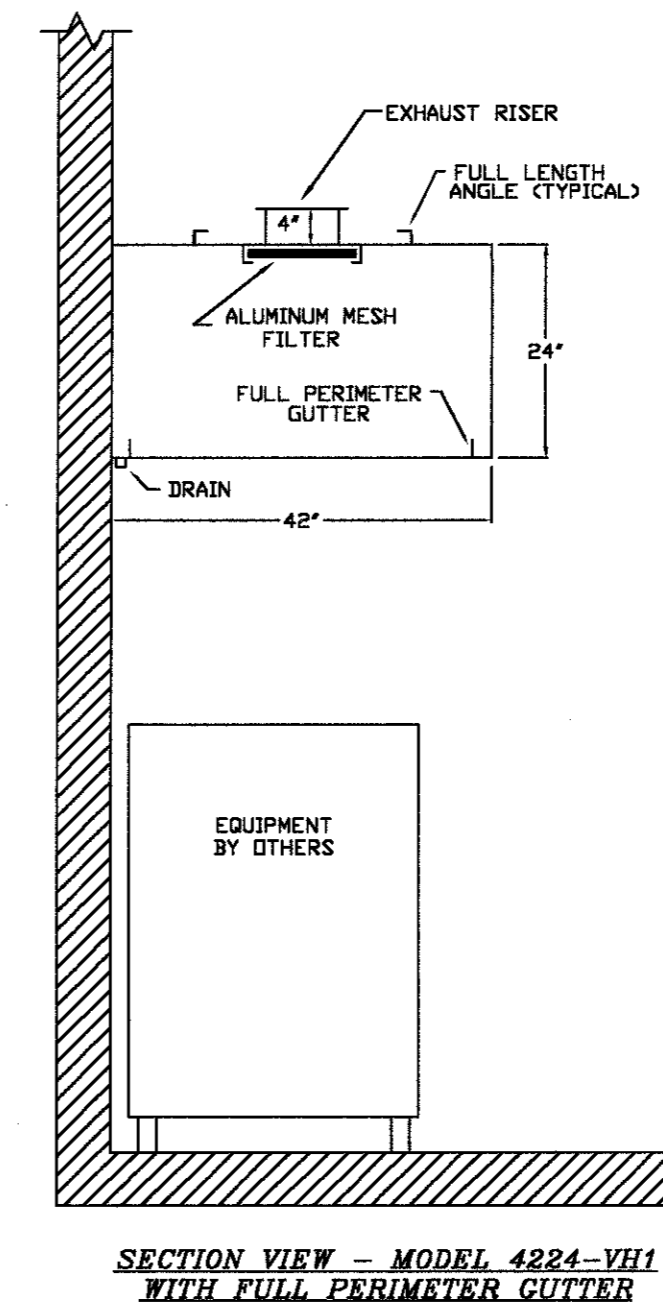
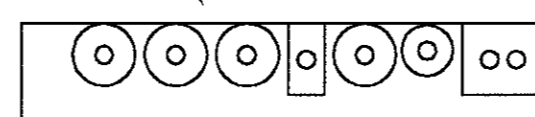
HOOD INFORMATION

HOOD NO.	MODEL	LENGTH	MAX. COOKING TOP DEPTH	EXHAUST PLENUM				SUPPLY PLENUM				HOOD CONSTRUCTION	HOOD END TO END ROW
				WIDTH	HEIGHT	AREA	CFM	WIDTH	HEIGHT	AREA	CFM		
1	5424 ND-BR	11' 0.00"	600	18"	24"	3300	0.714'	2340				430 SS Where Exposed	LEFT
2	5424 ND-BR	11' 3.00"	600	18"	24"	3378	0.747'	2360				430 SS Where Exposed	RIGHT
3	5424 ND-BR	11' 9.00"	600	18"	22"	2940	0.584'	2030				430 SS Where Exposed	
4	4824 ND-BR	16' 0.00"	600	18"	14"	2300	0.540'	2760				430 SS Where Exposed	
5	4224 VH-G	7' 0.00"	300	1000	9"	9"	325	0.227'	0			304 SS 100%	

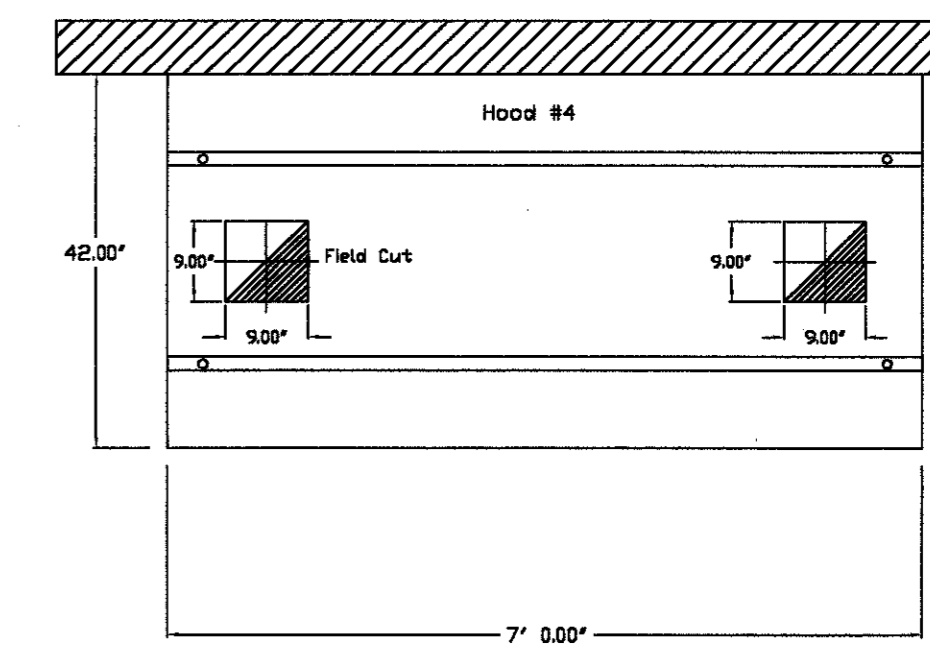
HOOD INFORMATION

HOOD NO.	TYPE	QTY	HEIGHT	LENGTH	QTY	LIGHT(S)		WIRE LOCATION		UTILITY CABINET(S)		FIRE SYSTEM	HOOD WEIGHT
						TYPE	QTY	TYPE	SIZE	ELECTRICAL	SWITCHES		
1	SS Baffle with Handles	2	16"	16"	4	Incandescent Light	ND					YES	703 LBS.
2	SS Baffle with Handles	1	16"	16"	4	Incandescent Light	ND					YES	719 LBS.
3	SS Baffle with Handles	7	16"	25"	4	Incandescent Light	ND					YES	746 LBS.
4	SS Baffle with Handles	2	16"	16"	0	Incandescent Light	ND	Wall Mount	ANSUL R-102 36/30/30/30/30/15			YES	980 LBS.
5	Aluminum Mesh	1	12"	12"	1	Light Type Code	ND					NO	134 LBS.

ANSUL R-102 WET CHEMICAL SUPPRESSION SYSTEM
CABINET/TANKS SUPPLIED BY CAPTIVE AIR
WALL MOUNTED BY MECHANICAL CONTRACTOR



SPECIFICATIONS: VH-1 MODEL
THE MODEL VH-1 IS A SINGLE WALL TYPE HOOD WITH NO BUILT-IN MAKE-UP AIR CAPABILITIES.
THE HOOD COMPONENTS SHALL BE FABRICATED OF TYPE 304 STAINLESS STEEL #3 OR #4 POLISH ON ALL EXPOSED SURFACES.
THE HOOD SHALL BE PROVIDED WITH HANGING ANGLES ON EACH END OF THE HOOD.
THE HOOD SHALL BE FITTED WITH A 1" THICK REMOVABLE MESH FILTER AT EACH BUILT LOCATION. FILTERS SHALL BE EASILY REMOVABLE FOR CLEANING PURPOSES.
NOMINAL HOOD DIMENSIONS SHALL BE AS SHOWN ON DRAWINGS.

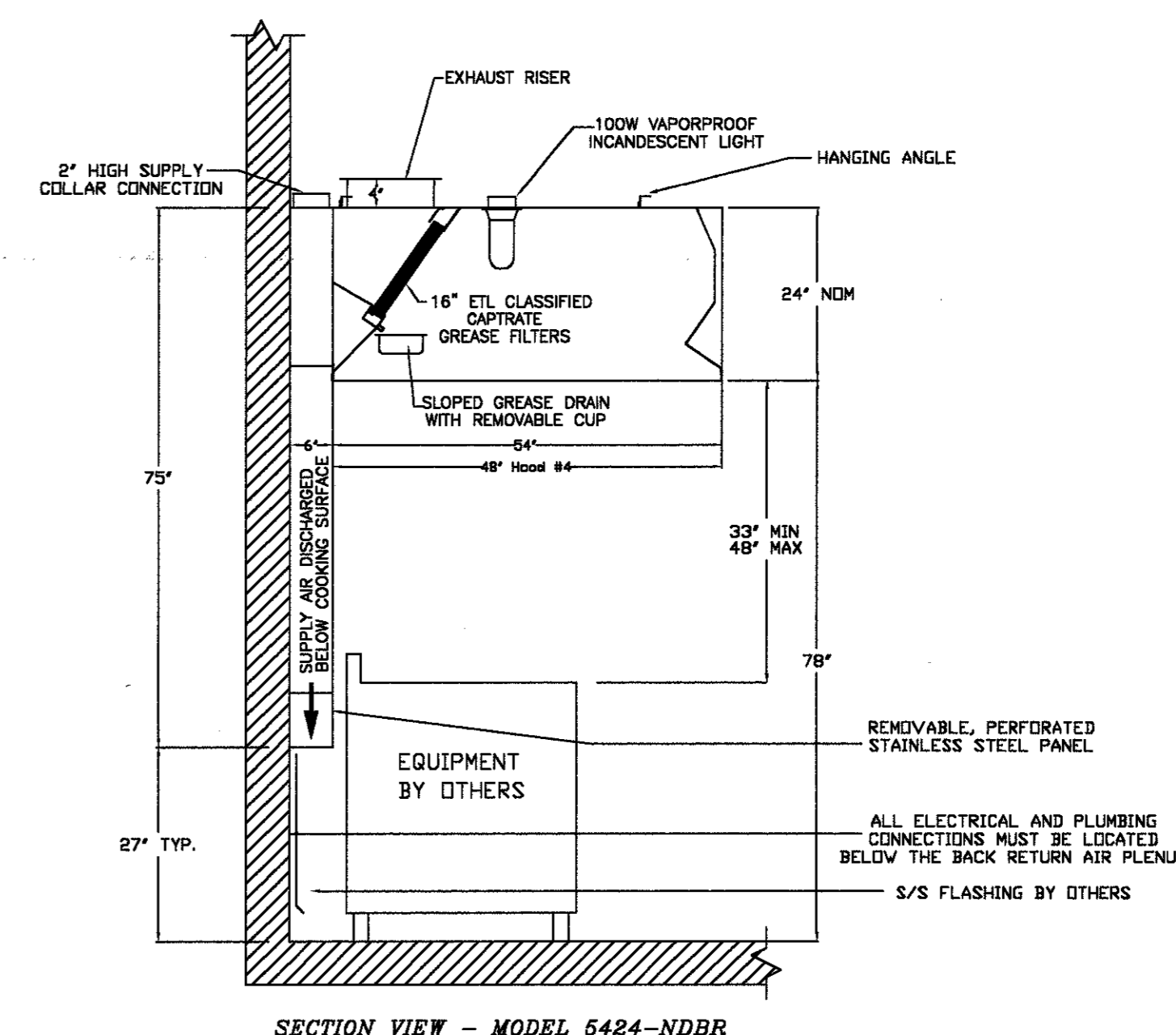


SECTION VIEW - MODEL 4224-VH1 WITH FULL PERIMETER GUTTER

PLAN VIEW - 7' 0.00" LONG 4224VH1-G

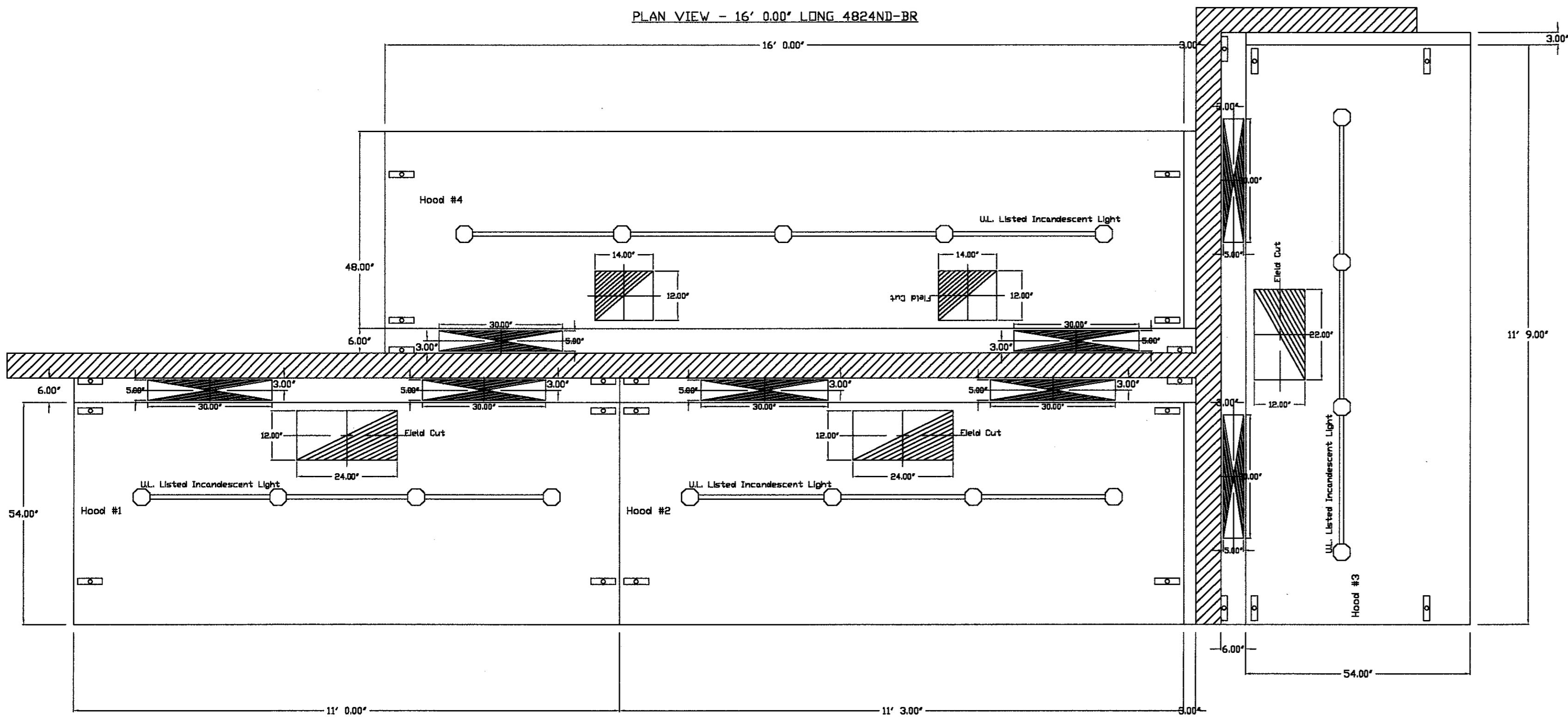
SPECIFICATIONS: ND MODEL

THE MODEL ND IS A CANOPY HOOD WITH OPTIONAL REAR DISCHARGE MAKE-UP AIR THROUGH A REAR PLENUM (NDRD).
THE HOOD COMPONENTS SHALL BE FABRICATED OF TYPE 430 STAINLESS STEEL #3 OR #4 POLISH ON ALL EXPOSED SURFACES. CONSTRUCTION SHALL BE IN ACCORDANCE WITH NFPA 96.
THE HOOD SHALL BE PROVIDED WITH HANGING ANGLES ON EACH END OF THE HOOD. AN ADDITIONAL SET OF HANGING ANGLES WILL BE PROVIDED FOR HOODS GREATER THAN 12' IN LENGTH.
THE HOOD SHALL BE FITTED WITH UL CLASSIFIED BAFFLE TYPE FILTERS OR S/STEEL HIGH VELOCITY CARTRIDGE FILTERS. EACH FILTER SHALL BE EASILY REMOVABLE FOR CLEANING. THE FILTERS WILL DRAIN THE GREASE INTO A SLOPED GREASE DRAIN SYSTEM WITH REMOVABLE 1/2 PINT CLIP FOR EASY CLEANING.
HOOD LIGHTS SHALL BE UL LISTED SUITABLE FOR GREASE. HOODS AND SHALL BE SUPPLIED WITH PLASTIC COATED SLIDES. EACH LIGHT WILL ACCOMMODATE UP TO A STANDARD 100 WATT BULB. ALL LIGHTS WILL BE PRE-WIRED TO JUNCTION BOXES ON TOP OF THE HOOD.
HOOD DIMENSIONS SHALL BE AS SHOWN ON DRAWINGS.



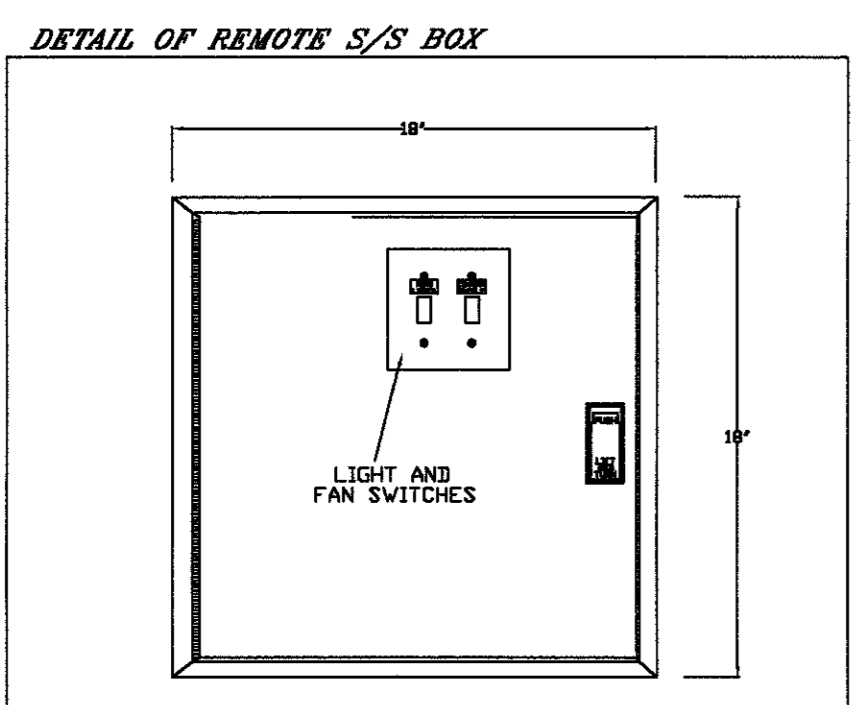
SECTION VIEW - MODEL 5424-ND-BR

PLAN VIEW - 16' 0.00" LONG 4824ND-BR



PLAN VIEW - 11' 0.00" LONG 5424ND-BR

PLAN VIEW - 11' 3.00" LONG 5424ND-BR



CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH
UL LISTED
NSF
NFPA #96
B.O.C.A. #93-16
UL LISTED #MH12106

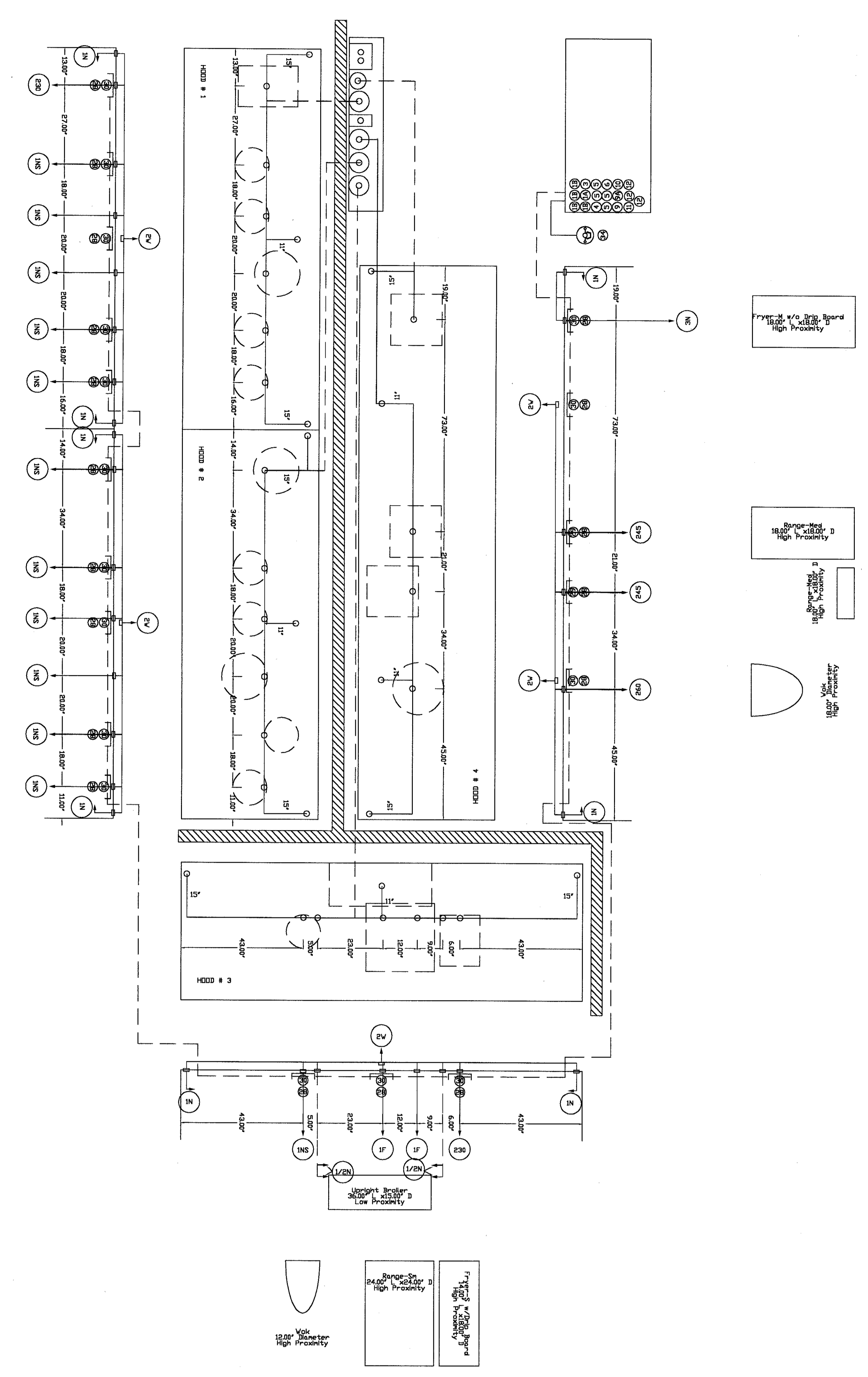
CAPTIVE-AIRE	JOB	PF CHANGS LA CANTERA
	LOCATION	
	DATE	01/10/2005
	REV	2.0
	SCALE	1/2"

SPF. CHANGS
CHINA BISTRO
SAN ANTONIO, TEXAS 78256
16401 LA CANTERA PARKWAY
BUILDING NO. 5501

THIS VENDOR SUPPLIED SHEET IS PROVIDED FOR REFERENCE ONLY REGARDING THE EXHAUST HOODS.

No.	Date	REVISIONS
2/1/05		ISSUED FOR REVIEW
7/16/04		ISSUED FOR REVIEW

FOR REFERENCE ONLY	
Drawing Title	CAPTIVE-AIRE KITCHEN HOODS
Job No.	031101
Scale	
Date	7/16/04
Sheet No.	M3.1



LEGEND - FIRE CABINET ANSUL SYSTEM

- 15 15 GALLON TANK
- 16 DEM AUTOMATIC RELEASE
- 17 DEM REGULATED ACTUATOR
- 18 ANSUL EX LIQUID AGENT (3 GAL)
- 19 CARTRIDGE (Q1-20)
- 20 CARTRIDGE (Q1-10)
- 21 DOUBLE TANK CARTRIDGE
- 22 DOUBLE MICROSWITCH
- 23 DICT NOZZLE (419337)
- 24 NOZZLE ASSEMBLY (419338)
- 25 IN NOZZLE ASSEMBLY (419335)
- 26 IN NOZZLE ASSEMBLY (419336)
- 27 IN NOZZLE ASSEMBLY (419339)
- 28 IN NOZZLE ASSEMBLY (419340)
- 29 IN NOZZLE ASSEMBLY (419341)
- 30 IN NOZZLE ASSEMBLY (419342)
- 31 IN NOZZLE ASSEMBLY (419343)
- 32 IN NOZZLE ASSEMBLY (419344)
- 33 IN NOZZLE ASSEMBLY (419345)
- 34 DETECTOR BRACKET
- 35 LOW TEMP FUSIBLE LINK
- 36 MEV
- 37 MECHANICAL GAS VALVE
- 38 ELECTRIC GAS VALVE
- 39 REMOTE MANUAL PULL STATION
- 40 SIGNAL MANIFOLD

NOTES

- FIELD PIPE WORK AS SHOWN
- RELIEF VALVES AND NOZZLES SUPPLIED BY GAS
- RELIEF VALVES IF FLOW PATTERNS IS BLOCKED BY SHELVING,
- MAXIMUM 9' ELEVATION IN SUPPLY LINE.
- MINIMUM 2' CLEARANCE FROM TANK TO FIRST NOZZLE
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE
- THIS FIRE SYSTEM COMPLIES WITH UL 300 REQUIREMENTS

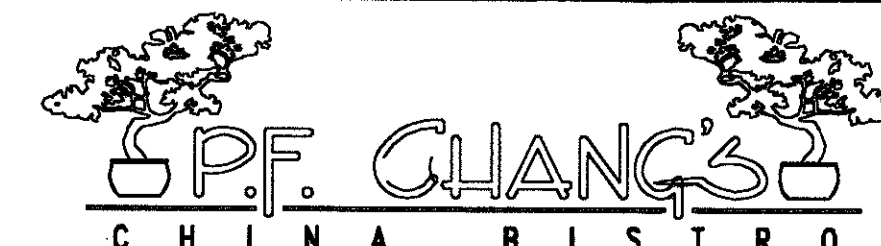
REVISIONS

No.	Date	Remarks
1	7/16/04	ISSUED FOR PERMIT

CAPTIVE FIRE

JOB: FT CHANGS LA CANTERA
 LOCATION: SAN ANTONIO, TX
 DATE: 06/07/2004
 DWG: FIRE LA CANTERA HOOD BY JCS
 JOB # 0
 SCALE: 1/2" = 1'-0"

THIS VENDOR SUPPLIED SHEET IS PROVIDED FOR REFERENCE ONLY REGARDING THE HOOD FIRE SUPPRESSION SYSTEM.

 CAPTIVE FIRE CHINA BISTRO	16401 LA CANTERA PARKWAY BUILDING NO. 5501 SAN ANTONIO, TEXAS 78256	
Drawing Title CAPTIVE-FIRE KITCHEN HOOD SUPPRESSION	Job No. 031101	Scale 1/2" = 1'-0"
Date 7/16/04	Job No. 031101	Scale 1/2" = 1'-0"
Sheet No. M3.2	Date 7/16/04	Scale 1/2" = 1'-0"

