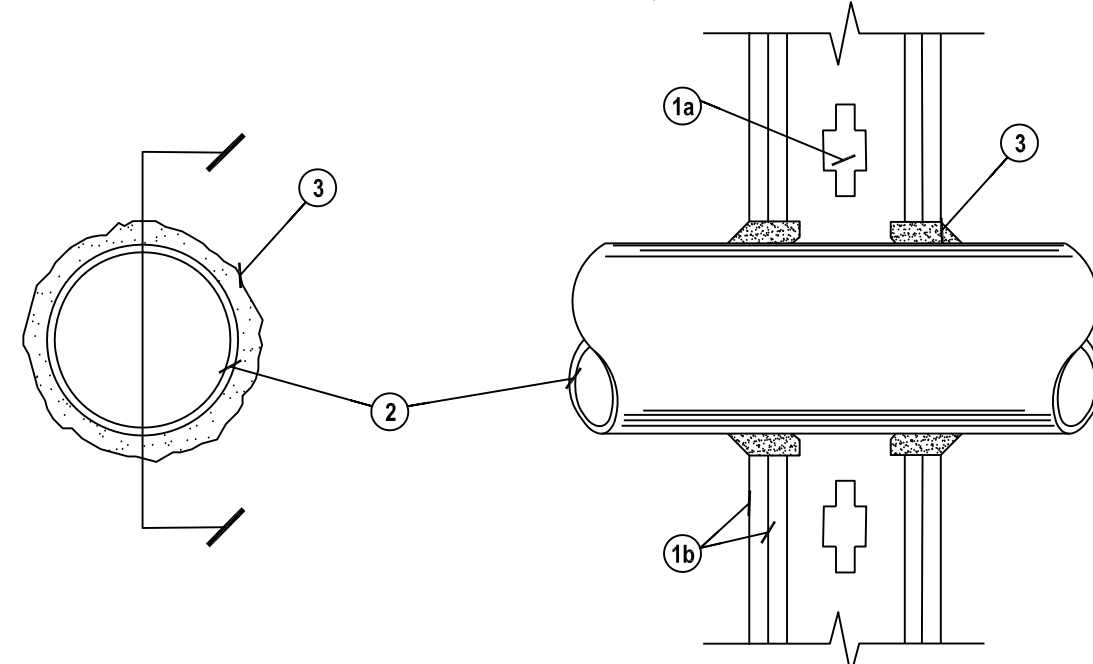


SYSTEM NO. WL-1001
JUNE 15, 2005

F RATINGS - 1,2,3 AND 4 HR (SEE ITEMS 2 & 3)
T RATINGS - 0,1,2,3 AND 4 HR(SEE ITEM 3)
L RATING AT AMBIENT - LESS THAN 1 CFMSQ. FT.
L RATING AT 400F - LESS THAN 1 CFMSQ. FT.



- Wall Assembly** - The 1,2,3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs - Wall framing may consist of either wood framing (max 2 hr fire rated assemblies) or steel channel studs. Wood studs to consist of braces. Steel studs to be min 3-1/2 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) o.c.
 - Gypsum Board - Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft (122 cm) wide with square or lapped edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Maximum diameter of opening is 26 in. (660 mm).
- Through Penetrant** - One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in. (0 mm)(point contact) to max 2 in. (51 mm). Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - Steel Pipe - Nom 24 in. (610 mm) diameter (or smaller) Schedule 10 (or heavier) steel pipe.
 - Iron Pipe - Nom 24 in. (610 mm) diameter (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. (305 mm) diameter (or smaller) or class 50 (or heavier) ductile iron pressure pipe.
 - Conduit - Nom 6 in (152 mm) diameter (or smaller) steel conduit or nom 4 in. (102 mm) diameter (or smaller) steel electrical metallic tubing.
 - Copper Tubing - Nom 6 in (152 mm) diameter (or smaller) Type L (or heavier) copper tubing.
 - Copper Pipe - Nom 6 in. (152 mm) diameter (or smaller) Regular (or heavier) copper pipe.
 - Through Penetrating Product** - Flexible Metal Piping - The following types of steel flexible metal gas piping may be used:

- Nom 2 in. (51 mm) diameter (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
OMEGA FLEX INC
 - Nom 1 in. (25 mm) diameter (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
TITIFLEX CORP
A BUNDY CO
 - Nom 1 in. (25mm) diameter (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
WARD MFG INC
3. **Fill, Void or Cavity Material** - **Caulk or Sealant** - Min 1/4", 1/2" and 2/2" (16,32,48 and 64 mm) thickness of caulk for 1,2,3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/2" (6 mm) diameter bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F rating of the firestop system is dependent upon the hourly fire rating of the wall assembly which it is install, as shown in the following table. The hourly T rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe/Conduit Diameter in. (mm)	F Rating Hr.	T Rating Hr.
1 (25)	1 or 2	0+, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

* When copper pipe is used, T Rating is 0 hr. *Bearing the UL Classification Marking

3M COMPANY - CP 25WB+ caulk or FB-3000 WT sealant,

HVAC TEST & BALANCE SPECIFICATIONS

ALL BALANCING IS CONTRACTED BY THE RESTAURANT OWNER AND PERFORMED BY OUR PREFERRED TAB FIRM - NATIONAL TAB. NATIONAL TAB ASSISTS THE OWNER IN THE BALANCING PROCESS FROM INITIAL PLANNING THRU DOCUMENTATION CLOSEOUT. ANY QUESTIONS, PLEASE CONTACT NATIONAL TAB AT (855)882-6822 EXT: 706 (JENNIFER) OR SUBMIT REQUEST TO BIDS@NATIONALTAB.COM

1.0 GENERAL REQUIREMENTS: TEST AND BALANCE (TAB) OVERVIEW IS A GENERAL GUIDELINE OF THE PROPER FLOW OF PLANNING & BALANCING OF THE SYSTEM. IT MANDATES ALL TRADES, OWNERS, CONSTRUCTION PERSONNEL, VENDORS & BALANCING FIRM PARTICIPANTS IN THE PROCESS. PLANNING ENSURES PREPAREDNESS, PROPER INSTALLATION, AND SYSTEM READINESS. BALANCING ENSURES FUNCTION & PERFORMANCE OF THE VENTILATION SYSTEM. THE SPECIFIC TRADE REQUIREMENTS ARE TO BE CARRIED OUT TO THEIR FULLEST EXTENT. EACH ASSIGNED TRADE WILL BE HELD ACCOUNTABLE. FINAL RETAINAGE (PAYMENT) IS NOT TO BE PAID BY THE OWNER UNTIL THE SPECIFIC TRADE REQUIREMENTS HAVE BEEN MET.

2.0 PHASE I (INITIAL PLANNING & REVIEW): PLANS & SUBMITTALS DISBURSED FOR REVIEW AND SCHEDULING. TAB PROCEDURES FINALIZED AND JOB READINESS CONFIRMED.

2.1 OWNER RESPONSIBILITIES: DISTRIBUTE ALL PLANS / SUBMITTALS TO NATIONAL TAB AND PROVIDE THE REQUIRED OPENING DATES FOR THE RESTAURANT.

2.2 GENERAL CONTRACTOR RESPONSIBILITIES: CONSTRUCT A JOB SCHEDULE BASED UPON OWNER REQUIREMENTS. DATA & SCHEDULES COLLECTED FROM ALL TRADES. COMMUNICATE THE INFORMATION TO NATIONAL TAB. OBTAIN THE PRELIMINARY FIELD CHECKLIST FROM THE BALANCING CO. MANAGE ALL TRADES TO ENSURE THEY COMPLETE & SIGN OFF ON THEIR REQUIREMENTS BEFORE THE BALANCER IS SCHEDULED TO PERFORM ON SITE WORK. ENSURE THE GENERAL CONDITION OF THE BUILDING IS SIGNED OFF BY THE JOB SUPERVISOR.

2.3 NATIONAL TAB (BALANCING) RESPONSIBILITIES: REVIEW ANY PLANS & SUBMITTALS FOR ANY POSSIBLE DEFICIENCIES AND DISCREPANCIES IN DATA OR DRAWINGS. FINALIZE TAB START DATE WITH THE GENERAL CONTRACTOR AND THE PRELIMINARY CHECKLIST IS COMPLETED OR ACTION STEPS DOCUMENTED FOR ITEMS ON THE CHECKLIST THAT ARE NOT COMPLETED BEFORE EXECUTION OF BALANCING.

3.0 PHASE II (PRELIMINARY FIELD PROCEDURE): VERIFICATION OF SITE AND EQUIPMENT CONDITIONS. ANALYSIS OF PROPER INSTALLATION AND PERFORMANCE OF OPERATIONAL AND FUNCTIONAL TESTS.

3.1 GENERAL CONTRACTOR RESPONSIBILITIES: ENSURE ALL REQUIRED TRADES ARE PRESENT OR READILY AVAILABLE FOR THE BALANCER'S INITIAL "WALK-THRU" & START-UP VERIFICATION. ENSURE ALL TRADES IMMEDIATELY FIX ANY ISSUE THAT THE BALANCER MAY UNCOVER DURING THE INITIAL "WALK-THRU" THAT MAY AFFECT EQUIPMENT PERFORMANCE.

3.2 NATIONAL TAB (BALANCING) RESPONSIBILITIES: BALANCER TO PERFORM A "WALK-THRU" IMMEDIATELY UPON ARRIVAL. ALL REQUIRED TRADES ARE TO BE PRESENT DURING THIS PROCESS OR READILY AVAILABLE. THE BALANCER MUST INFORM THE REGIONAL MANAGER AND OWNER OF ANY DEFICIENCIES THAT THE BALANCER AND TRADES NEED RESOLVED BEFORE THE BALANCING IS COMPLETED. THE FOLLOWING GENERAL TASKS ARE TO BE PERFORMED:

3.2.1. VERIFICATION OF PROPER EQUIPMENT INSTALLED ON SITE.
3.2.2. VERIFICATION OF PROPER INSTALLATION OF MECHANICAL SYSTEMS.
3.2.3. START UP ALL EQUIPMENT TO ENSURE THAT IT WAS PROPERLY STARTED UP BY TRADES.

3.2.4. COORDINATE WITH SPECIFIC TRADES ANY DEFICIENCIES THAT NEED TO BE RESOLVED BEFORE INITIATING ANY BALANCING ON EACH SPECIFIC SYSTEM.

3.3 BALANCING AND TESTING PROCEDURE: INITIATE & COMPLETE ALL REQUIRED BALANCING PROCEDURES AS STIPULATED FOR THE ACCOUNT.

3.3.1 NATIONAL TAB (BALANCING) RESPONSIBILITIES: INITIATE BALANCING OF THE SYSTEMS AS REQUIRED UNDER STRICT GUIDELINES SET FORTH UNDER NATIONAL TAB PROCEDURES & NEBB STANDARDS & PROCEDURES. ANY ISSUES THAT ARISE DURING THE BALANCING SHALL BE DISCUSSED EXCLUSIVELY OR INCLUSIVELY WITH THE GENERAL CONTRACTOR, OWNER / CONSTRUCTION MANAGER, AND THE NATIONAL TAB BALANCING MANAGER.

3.4 FINAL ON-SITE ANALYSIS & PERFORMANCE TEST: ENSURES PERFORMANCE AND COMFORT.

3.4.1 OWNER/ GENERAL CONTRACTOR RESPONSIBILITIES: PROVIDE REPRESENTATIVE TO BE PRESENT FOR ALL FINAL TESTS (SMOKE, BUILDING, ETC.) THAT THE BALANCER WILL PERFORM. SIGN OFF ON TEST IF IT MEETS REQUIREMENTS. IF ANY DEFICIENCIES STILL REMAIN UPON THE COMPLETION OF THE BALANCING, COORDINATE WITH THE REQUIRED TRADE(S) AND OWNER TO RESOLVE THE ISSUE. IF THE BALANCER IS REQUIRED TO RETURN DUE TO THE DEFICIENCY, A FEE MAY BE ASSESSED. THE FEE SHOULD BE PASSED ON TO THE TRADE THAT WAS DEFICIENT DURING THE BALANCING OF THE SYSTEM.

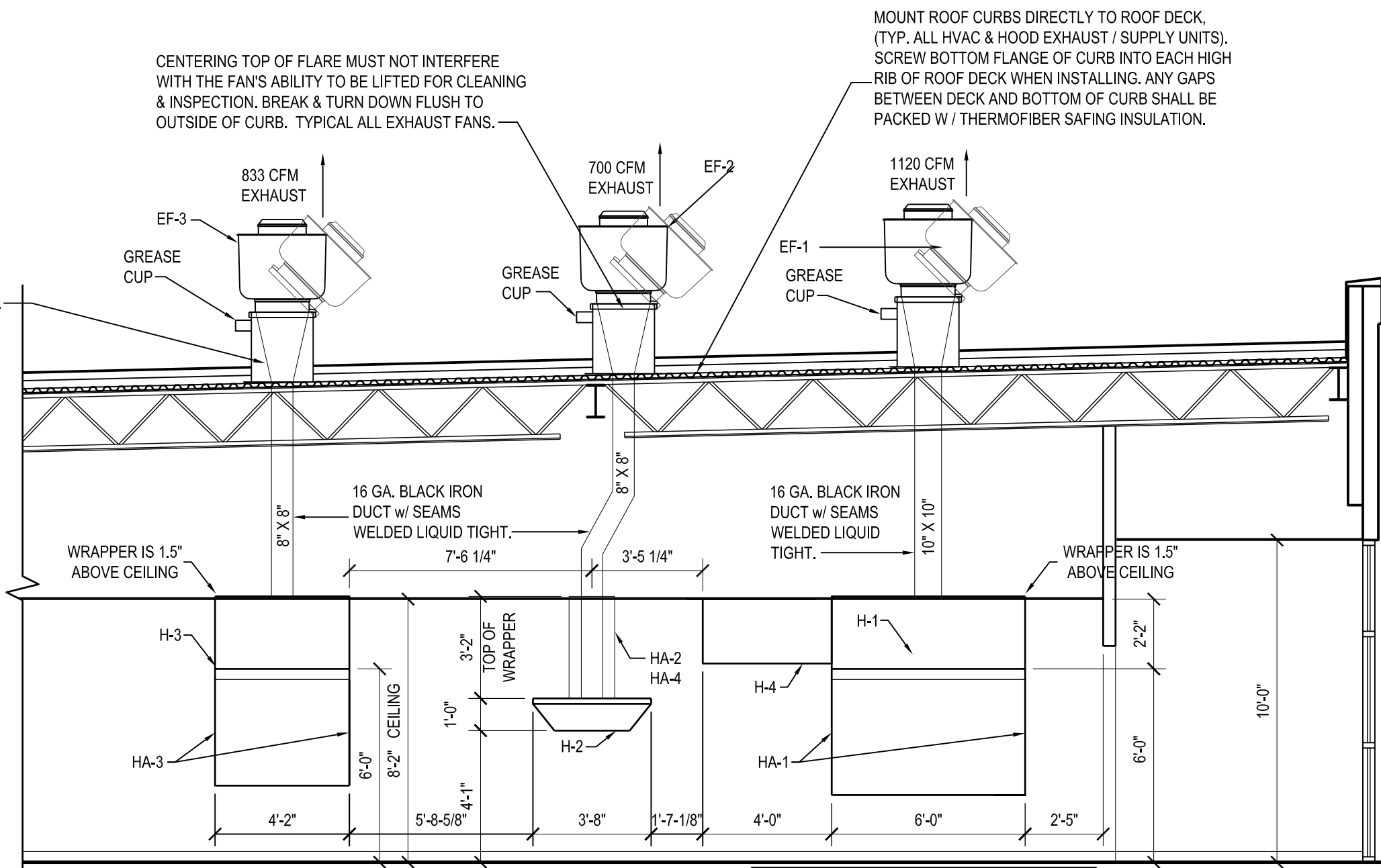
3.4.2 NATIONAL TAB (BALANCING) RESPONSIBILITIES: PERFORM A KITCHEN HOOD SMOKE TEST AND BUILDING PRESSURE TEST WITNESSED BY THE OWNER AND/OR GENERAL CONTRACTOR. PERFORM A FINAL WALK-THRU TO ENSURE NO EXTREME CONDITIONS OCCUR DUE TO AIRFLOW MOVEMENTS. ANY DEFICIENCIES OR UNSATISFACTORY CONDITIONS NOTED BY PERSONNEL WITNESSING THE TEST SHALL BE RESOLVED & RETESTED. IF FINAL ADJUSTMENTS ARE REQUIRED THAT ARE NOT WITHIN 10% OF DESIGN CRITERIA TO ENSURE EFFECTIVENESS OR COMFORT, CONTACT OWNER AND/OR MANAGING MEMBER FOR FURTHER EXECUTION. FINALIZE & SUBMIT FINAL DOCUMENTS FOR FINAL TAB SUPERVISOR REVIEW.

3.4.2.1 NATIONAL TAB TO ENSURE THERMOSTATS ARE PROGRAMMED AS FOLLOWS:
OCCUPIED TIME: 8:00AM TO 10:00PM UNOCCUPIED TIME: 10:00PM TO 8:00AM
OCCUPIED MODE: FANS ON, HEATING TEMP SET POINT: 68, COOLING TEMP SET POINT: 70
UNOCCUPIED MODE: FANS AUTO, HEATING TEMP SET POINT: 62, COOLING TEMP SET POINT: 73

4.0 PHASE III (FINAL DOCUMENTATION & CLOSEOUT): SUBMISSION AND APPROVAL OF BALANCE WORK.

4.1 OWNER RESPONSIBILITIES: ASSIST ON THE EXECUTION OF RESOLUTION OF ITEMS NOT RESOLVED DURING BALANCING.
4.2 NATIONAL TAB (BALANCING) RESPONSIBILITIES: ENSURE BALANCER DOCUMENTATION HAS BEEN SUBMITTED FOR MANAGEMENT & OWNER REVIEW IN A TIMELY FASHION. VERIFY COMPLETENESS OF BALANCING REPORT & DEFICIENCIES. IF ANY BALANCING ISSUES ARE UNCOVERED BY THE MANAGEMENT TEAM DURING REVIEW, IT WILL REQUIRE THE BALANCER TO PROVIDE RESOLUTION.

FLARE WELDED DUCTWORK SHAFT FROM BOTTOM OF ROOF CURB TO TOP OF CURB & CENTER WITHIN CURB. TYPICAL ALL EXHAUST FANS.



EXHAUST DETAIL
NO SCALE

NOTE:
SEE CAPTIVEAIRE SHOP DWGS (H - SHEETS) FOR DETAILED INSTALLATION INFORMATION REGARDING HOODS AND EXHAUST FANS.

FAN SCHEDULE															
ITEM NO.	QTY	DESCRIPTION	MANUFACTURER	MODEL #	ELECTRICAL			EXHAUST CFM	SUPPLY CFM	GAS SIZE	AMT	SIZE (W x D x H)	NOTES	ITEM NO.	BY
					VOLT	PH	LOAD								
EF-1	1	GRIDDLE FAN	CAPTIVE-AIRE	DU85HFA	115	1Ø	8.8 AMP/ 3/4 hp	1120				33 3/4" DIA. x 30 1/2" x CURB	REFER TO H.2	EF-1	*
EF-2	1	OVEN FAN	CAPTIVE-AIRE	DU33HFA	115	1Ø	4.4 AMP/ 1/3 hp	700				33 3/4" DIA. x 30 1/2" x CURB	REFER TO H.2	EF-2	*
EF-3	1	FRYER FAN	CAPTIVE-AIRE	DU50HFA	115	1Ø	5.6 AMP/ 1/2 hp	833				33 3/4" DIA. x 30 1/2" x CURB	REFER TO H.2	EF-3	*
EF-4	0	GRIDDLE & OVEN FAN	CAPTIVE-AIRE	NEA4HFA	208	3Ø	4.0 AMP/ 1 hp	3650				33 3/4" DIA. x 30 1/2" x CURB	REFER TO H.2	EF-4	*
SF-1	1	HEATED MAKE-UP AIR UNIT	CAPTIVE-AIRE	A1-D.250 15D	208	3Ø	3.1 AMP/ 1.0 hp	1850	1850	1"	112,508 btu	27 3/8" x 74 7/16" x 27 3/8"	REFER TO H.2	SF-1	*

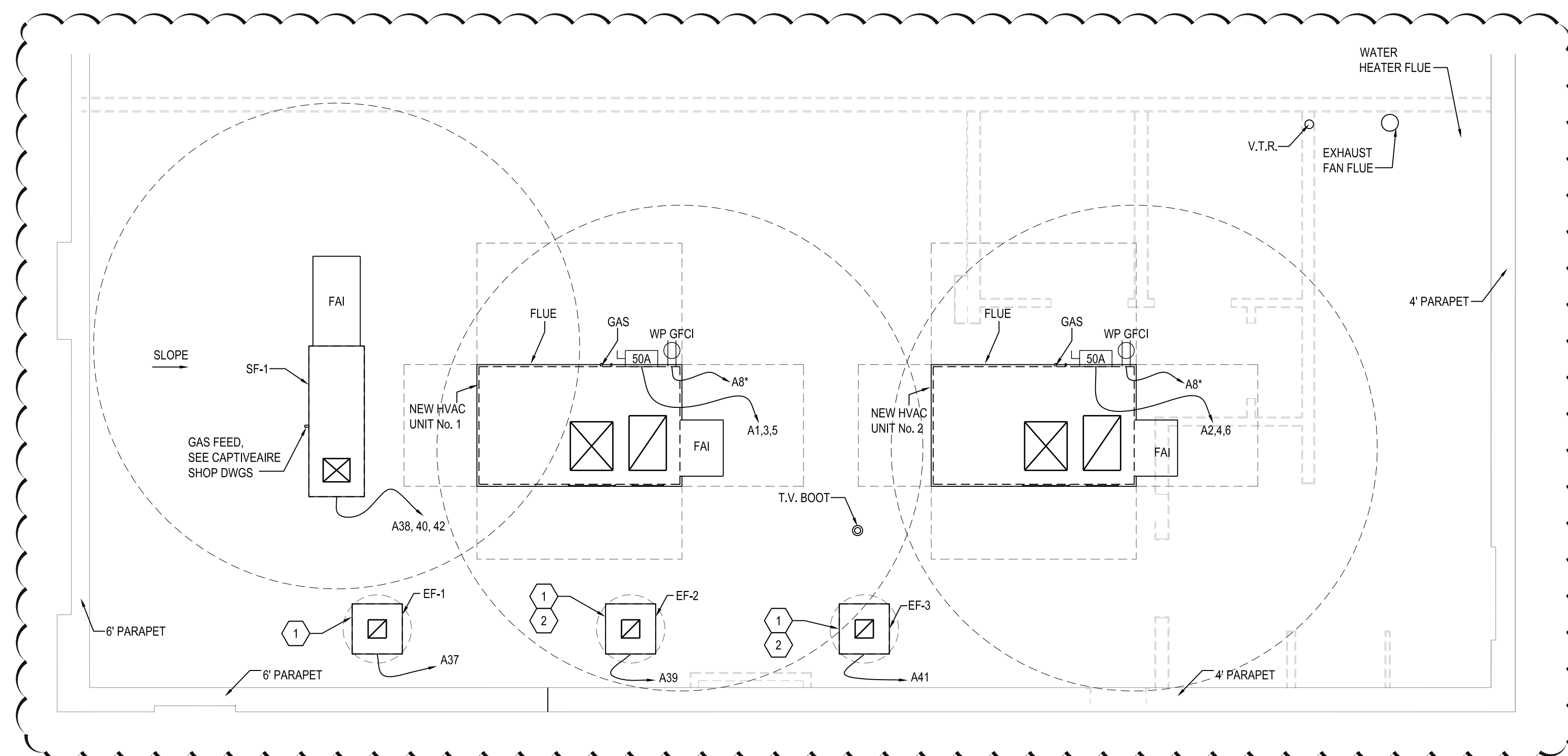
FAN SCHEDULE CODES:
* = PROVIDE BY EC / INSTALLED BY GC

ROOF PLAN NOTES

- SAND, PRIME AND PAINT EXISTING AND NEW EXPOSED GAS PIPING ON ROOF. (FEEDING PENN STATION ONLY) USE SAFETY YELLOW - OIL BASE.

ROOF PLAN KEYED NOTES

- HINGE SIDE OF EXHAUST CURB.
- COORDINATE WITH EXHAUST FAN SUPPLIER FOR A TALLER CURB IN THIS LOCATION. EXHAUST POINT OF FAN MUST BE TWO FEET ABOVE ANY FRESH AIR INTAKE WITHIN TEN FEET OF THE EXHAUST FAN.



NOTE:
COORDINATE ALL PENETRATIONS WITH OWNERS ROOFER SO AS NOT TO VOID WARRANTY.

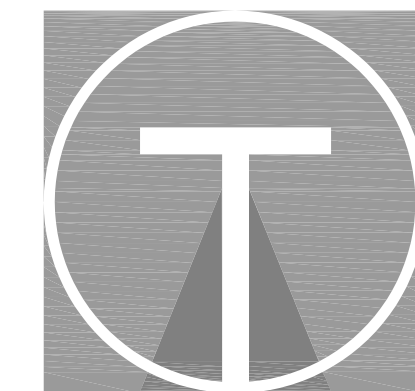
MOUNT UNITS LEVEL TO ENSURE PROPER CONDENSATE DRAINING.

ALL VENTING SHALL BE DONE THROUGH THE ROOF AND NOT THE BACK WALL.

ROOF PLAN
1/4"=1'-0" FAI = FRESH AIR INLET

NOTE:
ALL LEADERS LABELED WITH AN "*" (I.E. A9) INDICATES THAT THERE ARE MORE ITEMS ON THAT CIRCUIT. SEE PANEL NOTES.

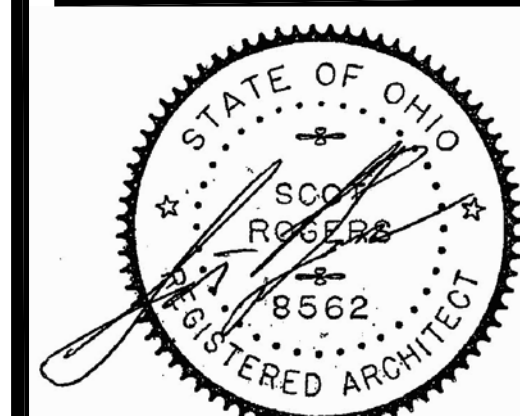
NOTE:
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TILSLEY ARCHITECTS

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WWW.TILSLEYARCHITECTS.COM

A New Penn Station Restaurant
2900 Cooper Foster Park Rd.
Suite 300
Loraine, OH 44053



SCOTT ROGERS
LICENSE # 8962
EXP. DATE 12/31/2023

Owner Revision 5-06-22

Sheet Title
Roof Plan & Details

Scale
As Noted

Drawn
S Rogers

21013 PS Amestor OH

M2.0

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