

**Bowie Tiglas**  
**Engineering Inc.**  
 Consulting Engineers  
 Justin@BowieTiglas.com  
 BTE # 23245

Phone: 602.992.2800  
 Fax: 602.992.1541  
 2820 N BIRLAKE STE 110  
 PHOENIX, AZ 85065

KDF JOB #: 24010

**QuikTrip No. 1422**  
 1956 E SOUTHERN AVE  
 MESA, AZ 85204



© QUIKTRIP CORPORATION 2011  
 ALL RIGHTS RESERVED. REPRODUCTION, PUBLICATION,  
 OR DISTRIBUTION OF THIS DOCUMENT IS PROHIBITED BY FEDERAL  
 LAWS.

PROTOTYPE	FRYER ADDITION
DIVISION	PHOENIX
VERSION	G35-L
DATE	06/25/25

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 03/28/25

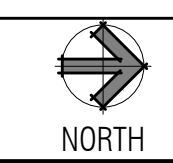
SHEET TITLE:  
 MECHANICAL  
 DUCTWORK  
 CEILING PLAN - DEMO

SHEET NUMBER:  
**M101**

- 1 REMOVE KITCHEN HOOD SYSTEM AND ALL ASSOCIATED GREASE DUCT BETWEEN HOOD AND EXHAUST FAN ON ROOF. REMOVE HOOD SUPPLY PLENUM DUCT BACK TO RTU SUPPLY MAIN AND CAP AND PATCH AS REQUIRED. RE: M102.
- 2 REMOVE ROOF MOUNTED EXHAUST FAN AND ALL ASSOCIATED DUCT WORK.
- 3 EXISTING TEMPERATURE SENSOR AND HUMIDITY SENSOR SERVING KITCHEN RTU TO REMAIN, SHOWN FOR REFERENCE.
- 4 EXISTING ROOF EQUIPMENT TO REMAIN, SHOWN FOR REFERENCE.
- 5 REMOVE DIFFUSER/GRILLE AND MAINTAIN EXISTING DUCT WORK FOR NEW WORK.

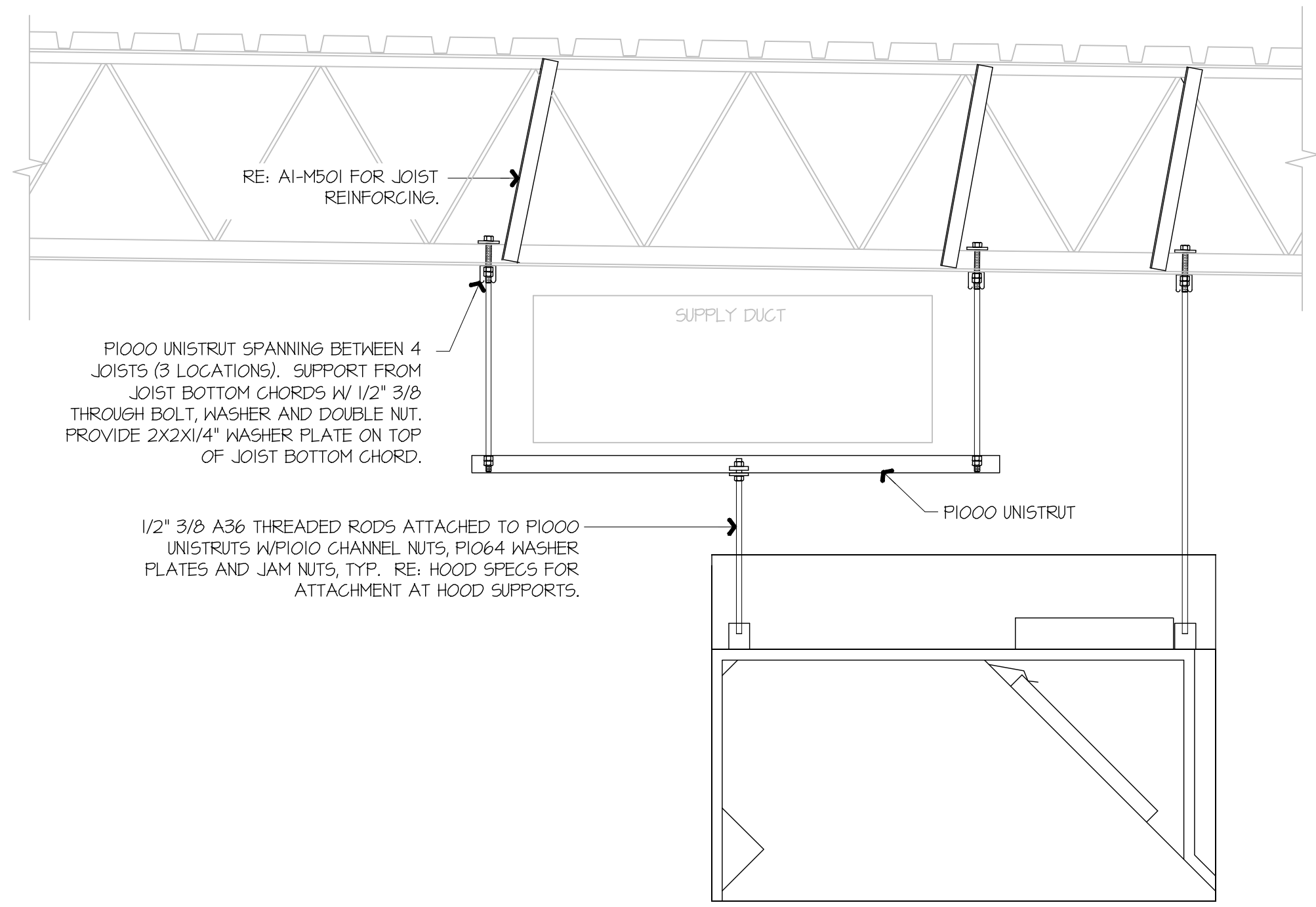
**A1** MECHANICAL DUCTWORK CEILING PLAN - DEMO

**A13** PLAN NOTES



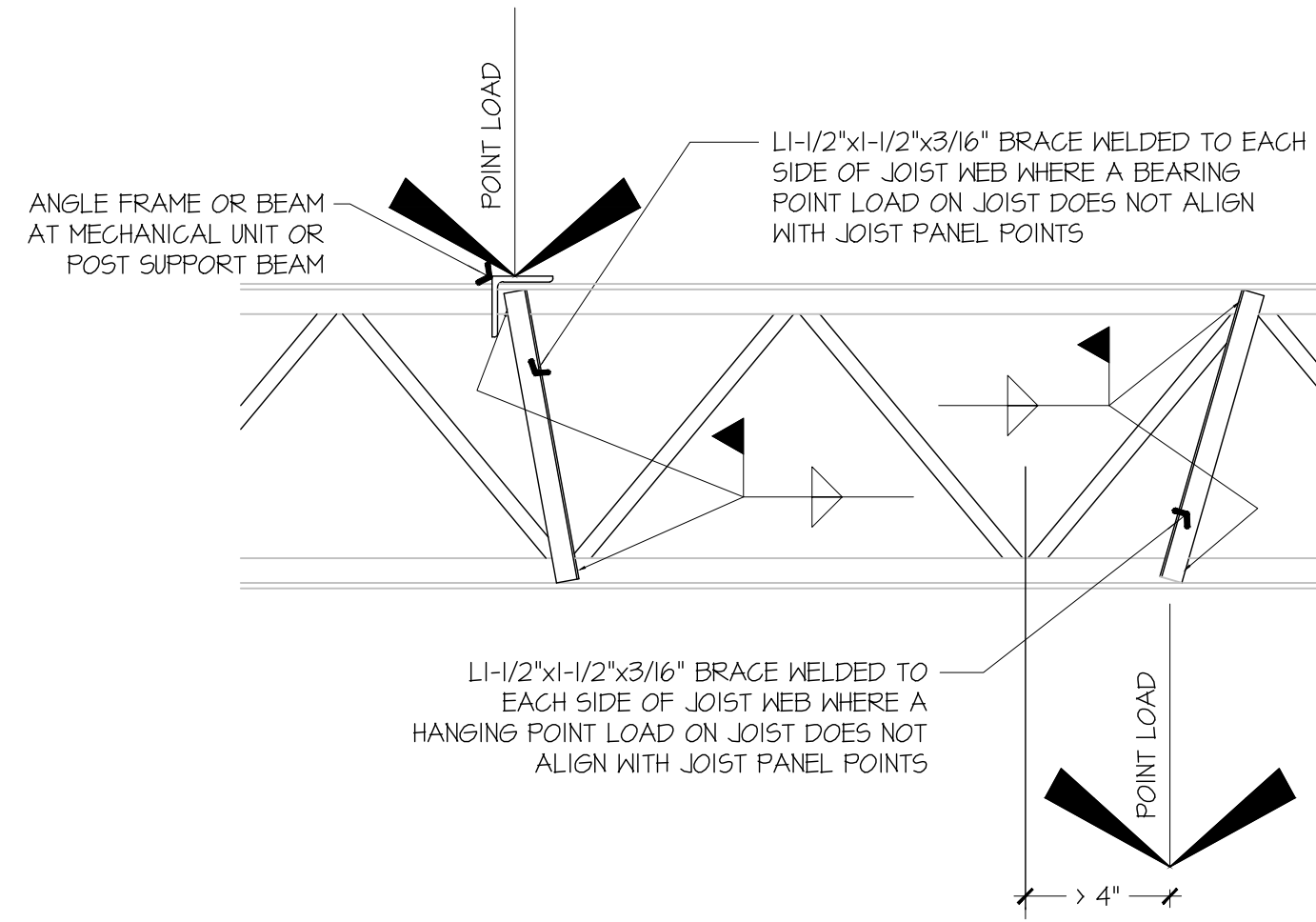
1/4" = 1'-0"





**F1** KITCHEN EXHAUST HOOD SUPPORT DETAIL

NOT TO SCALE



**A1** JOIST REINFORCING DETAIL

NOT TO SCALE

**GENERAL NOTES:**  
 KITCHEN EXHAUST HOOD SHALL BE TYPE-I RATED FOR MEDIUM DUTY COOKING APPLIANCES THAT PRODUCE GREASE OR SMOKE AS A RESULT OF THE COOKING PROCESS. HOOD SHALL BE PROVIDED WITH AUTOMATIC FIRE SUPPRESSION SYSTEM INTERLOCKED WITH EQUIPMENT SHUTDOWN CONTROLS. HOOD SHALL BE PROVIDED WITH UL1046 GREASE FILTERS. HOOD SHALL BE LISTED IN ACCORDANCE WITH UL1010. HOOD SHALL BE LISTED AND LABELED FOR 0" CLEARANCE REQUIREMENTS TO COMBUSTIBLES.

HEAT AND MOISTURE LOADS FOR APPLIANCES THAT DO NOT PRODUCE GREASE OR SMOKE AS A RESULT OF THE COOKING PROCESS AND ARE NOT LOCATED UNDER THE HOOD, HAVE BEEN INCORPORATED INTO THE HVAC SYSTEM CAPACITY SERVING THE KITCHEN.

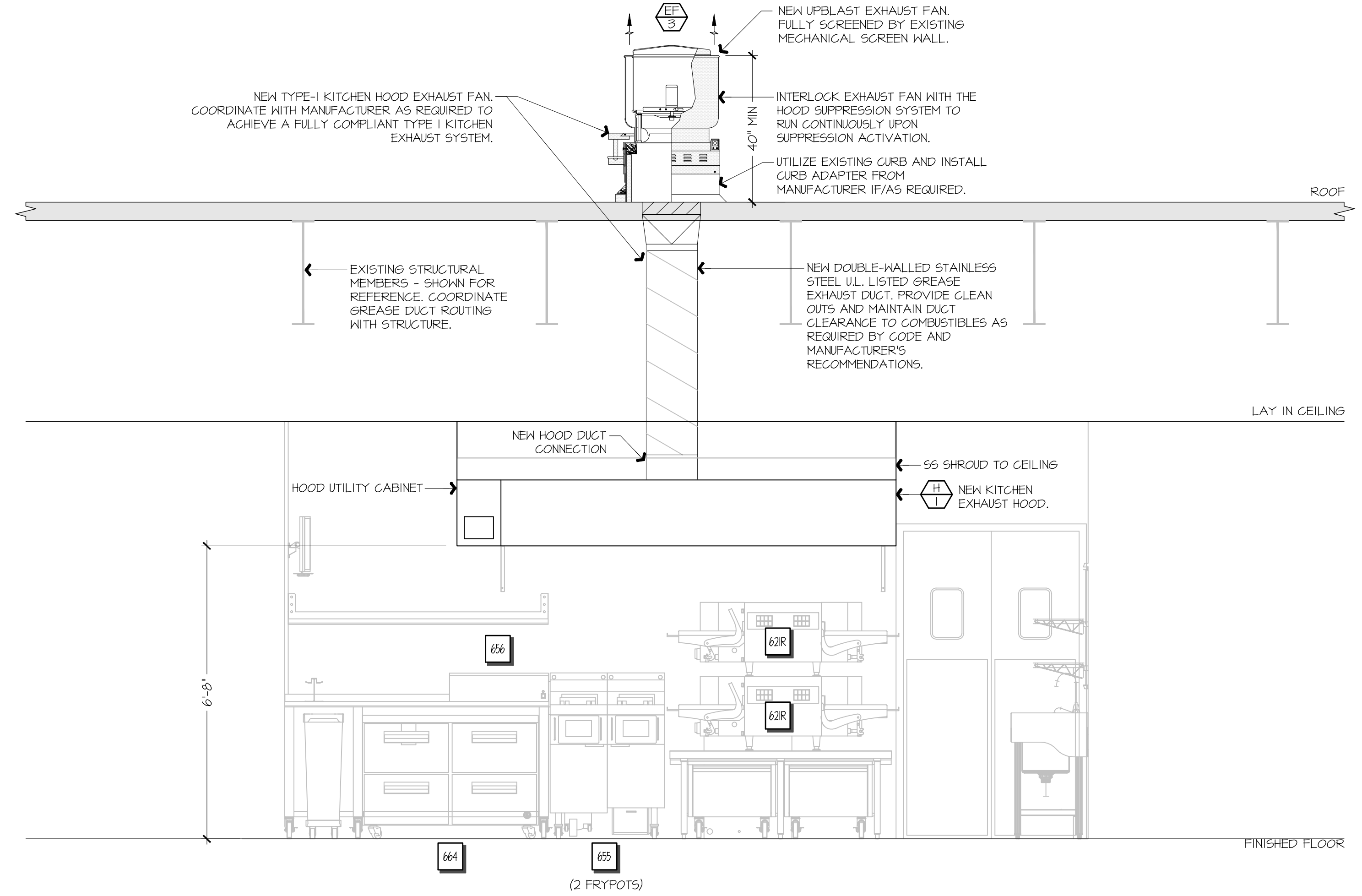
ALL OVENS NOT LOCATED UNDERNEATH A HOOD ARE UL1101B LISTED FOR VENTLESS OPERATION.

**SEQUENCE OF OPERATION:**  
 THE FOLLOWING KITCHEN EQUIPMENT SHALL BE INTERLOCKED WITH CURRENT TRANSFORMERS THAT AUTOMATICALLY ACTIVATE THE HOOD EXHAUST FAN UPON THE KITCHEN EQUIPMENT BEING ENERGIZED: [621] PIZZA OVENS, [648] COMBI OVENS, [641] STEAM DRAWER, [655] FRYER, [656] FRY HOLDING STATION.

AS HOOD EXHAUST FAN ENERGIZES, RTU'S SHALL MODULATE OUTSIDE AIR TO MAINTAIN BUILDING PRESSURIZATION. RE: M601.

HEAT SENSORS SHALL BE PROVIDED WITHIN HOOD CANOPY FOR TEMPERATURE AND HUMIDITY MONITORING. RE: MANUFACTURER DRAWINGS.

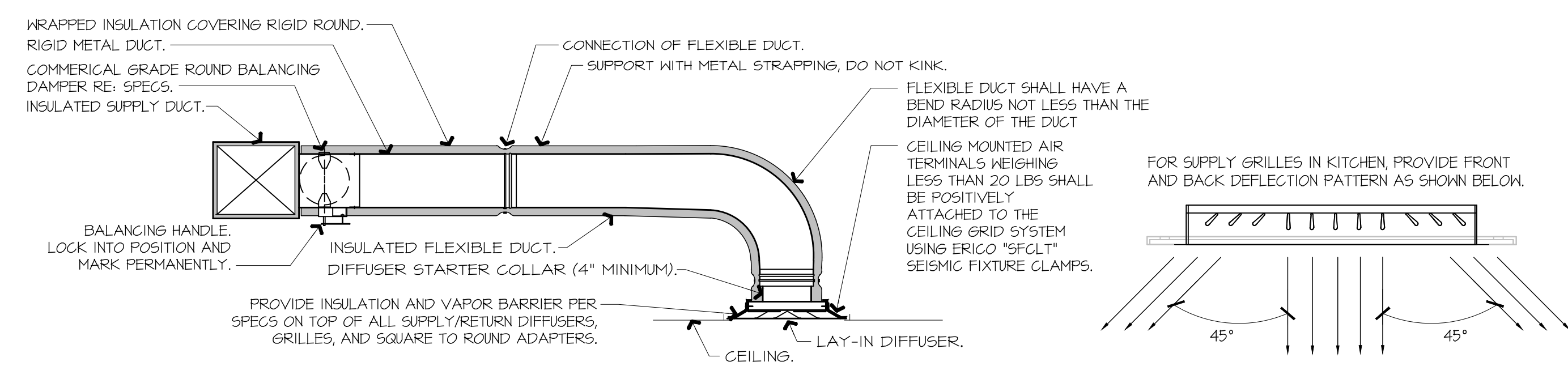
UPON ACTIVATION OF THE FIRE SUPPRESSION SYSTEM, ALL EQUIPMENT LOCATED UNDER THE HOOD SHALL BE SHUTDOWN VIA CONTACTORS LOCATED WITHIN THE HOOD UTILITY CABINET, AND RTU SERVING KITCHEN SPACE SHALL BE AUTOMATICALLY SHUTDOWN. RE: A13-E601.



**F9** FSC REAR WALL ELEVATION - NEW

1/8" = 1'-0"

A1-M102



**NOTES:**

- PROVIDE AT FLEXIBLE DUCT CONNECTION METAL OR "PANUIT" DRAWBAND ON THE INTERIOR FLEXIBLE DUCT HELIX. SECURE THE INSULATION OVER THE DRAWBAND WITH AN ADDITIONAL DRAWBAND.
- PROVIDE BEADING ON ROUND METAL DUCT 12" OR LARGER IN DIAMETER.
- PROVIDE MINIMUM 4" COLLARS FOR ATTACHMENT OF THE FLEX DUCT TO ROUND DUCT, DAMPERS AND DIFFUSERS.
- BAND RIGID ROUND DUCT INSULATION TO DUCT AND PROVIDE FIBER REINFORCED FOIL BACKED TAPE FOR INSULATION OVERLAP.

**A9** DIFFUSER CONNECTION DETAIL

NOT TO SCALE

**Bowie Tiglas Engineering Inc.**  
 Consulting Engineers  
 Justin@BowieTiglas.com  
 BTE # 29345

Phone: 907.992.2900  
 Fax: 907.992.1541  
 2420 N GOLF LINKS STE 110  
 PHOENIX, AZ 85065

KDF JOB #: 24010

**QuikTrip No. 1422**  
 1956 E SOUTHERN AVE  
 MESA, AZ 85204

**QT**

© QUIKTRIP CORPORATION 2011. ALL RIGHTS RESERVED. REPRODUCTION, PUBLICATION, OR DISTRIBUTION OF THIS DOCUMENT IN ANY MANNER IS PROHIBITED WITHOUT THE WRITTEN PERMISSION OF QUIKTRIP CORPORATION.

PROTOTYPE	FRYER ADDITION
DIVISION	PHOENIX
VERSION	G35-L
DATE	06/25/25

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 03/28/25

SHEET TITLE:  
 MECHANICAL SECTIONS & DETAILS

SHEET NUMBER:  
**M501**

