

# Stewart Engineering & Construction

40680 STATE HWY 59  
BAY MINETTE, ALABAMA 36507

TELEPHONE  
OFFICE 251 937-6313  
FAX 251 937-1782

May 4, 2020

## City of Orange Beach – Public Works

4400 William Silvers Parkway  
Orange Beach, Alabama 36561

Re: **New Public Works Building – Engineering Changes**

Dear Mr. Tim Tucker:

The purpose of this document is to address field changes that have occurred since permit approval.

1. Change toilet exhaust method from roof mounted to individual space exhaust fans and wall cap or louver.
2. Change HVAC duct from metal to insulated duct-board.

We take no exception to these changes.

If you have any questions or concerns, please do not hesitate to contact me.

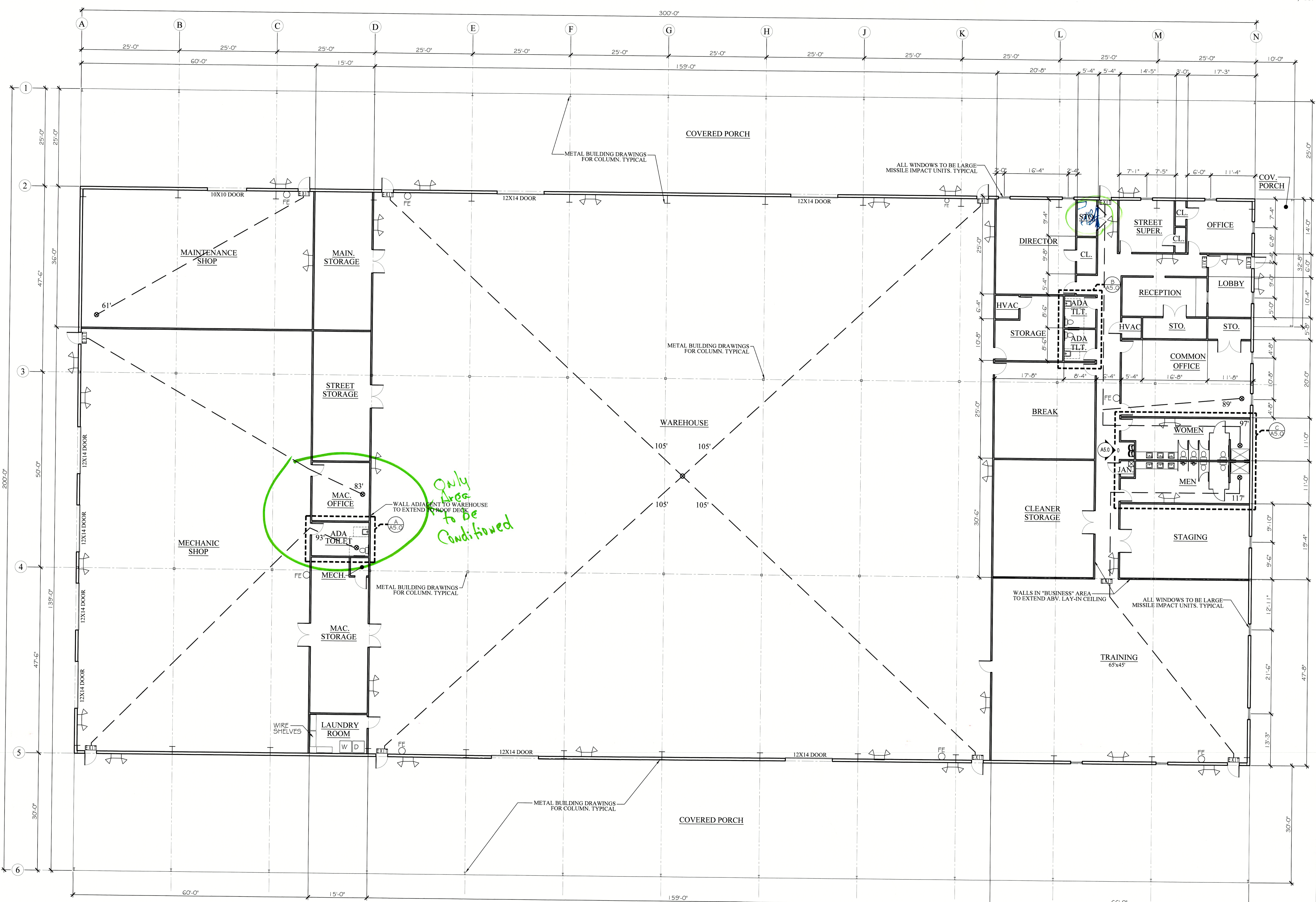
Sincerely,

Glen Wade Stewart, P.E.  
President





A NEW BUILDING FOR  
**ORANGE BEACH PUBLIC WORKS**  
 ORANGE BEACH  
 ALABAMA



NOTE:  
 PRE-ENGINEERED METAL BUILDING AND FOUNDATION DESIGN/ENGINEERING TO BE PROVIDED BY OTHERS. HVAC, PLUMBING, ELECTRICAL, SPRINKLER SYSTEMS TO BE DESIGNED AND/OR ENGINEERED BY OTHERS.  
 ALL EQUIPMENT, SYSTEMS, COMPONENTS, AND FINISHES SHALL COMPLY WITH APPLICABLE BUILDING CODES, INDUSTRY STANDARDS, AND MANUFACTURERS' SPECIFICATIONS.

**FLOOR/LIFE SAFETY PLAN**  
 SCALE: 1/8" = 1'-0"

LEGEND	
47'	DISTANCE IN FEET EXIT TRAVEL DISTANCE
EXIT	EXIT SIGN
→	DIRECTIONAL ARROW EXIT SIGN
FE	FIRE EXTINGUISHER (RECESS WHERE POSSIBLE)
⬆	EMERGENCY LIGHT W/ BATTERY BACKUP
DOORS	
3070 DOOR	PAIR 3070 DOORS
-ALL EXTERIOR DOORS TO BE METAL AND INSTALLED WITH PANIC HARDWARE DEVICES	
-ALL EXTERIOR DOORS TO BE LARGE MISSILE IMPACT RATED	
-ALL INTERIOR DOORS TO BE SOLID CORE PRE-HUNG UNITS	
WALLS	
MIN. 3-5/8" METAL STUD WALL (ORACE TO STRUCTURE AS REQUIRED)	METAL BUILDING STRUCTURE (ENGINEERED BY OTHERS)
INSULATE ALL WALLS	

BUILDING CODE SUMMARY	
PROJECT DATA	
-2018 INTERNATIONAL BUILDING CODE	-2018 INTERNATIONAL FIRE CODE
-2018 INTERNATIONAL PLUMBING CODE	-2018 NATIONAL ELECTRICAL CODE
-2018 INTERNATIONAL MECHANICAL CODE	-2018 INTERNATIONAL EXISTING BUILDING CODE
-CONSTRUCTION TYPE	II B (SPRINKLERED) <sup>1</sup>
-OCCUPANCY	NON-SEPARATED MIXED USE: BUSINESS(B) & STORAGE (S)
-STORIES/SQUARE FOOTAGE (ACTUAL)	1/60,000 <sup>2</sup>
-OCCUPANT LOAD	219 PEOPLE
BUSINESS: 6,435/100	64
STORAGE: 10,875/300	36
WAREHOUSE: 39,055/500	79
ASSEMBLY: 6,435/12	40
-FIRE RATED WALLS	NONE
-REQUIRED EXIT TRAVEL DISTANCE	<250'
-REQUIRED EXITS/PROVIDED EXITS	2/10
-PROVIDED FIRE EXTINGUISHER	0
FOOTNOTES:	
1) ALL CONSTRUCTION TO BE NON COMBUSTIBLE	
2) AREA COMPLIES WITH TABLE 503 (SI, 17,500 S.F.) FOR SPRINKLER AND FRONTAGE INCREASES	

JOB NO.:  
 DRAWN:  
 CHECKED: SBM  
 DATE:  
 REVISION:  $\Delta$  2019.05.28  
 $\Delta$  2019.06.05  
 $\Delta$  2019.06.10  
 SCALE: 1/8"=1'-0"  
 SHEET NO.:  
**A1.1**  
 LIFE SAFETY PLAN





**STEWART ENGINEERING  
AND CONSTRUCTION**  
40680 STATE HWY 59  
BAY MINETTE, ALABAMA 36507  
(251)-937-6313 (251)-937-1782 Fax  
wstewart@stewartengineering.net



Revisions:

No.	Date	Description
A	9/20/19	ARC CODE REVIEW/PRE-PERMIT

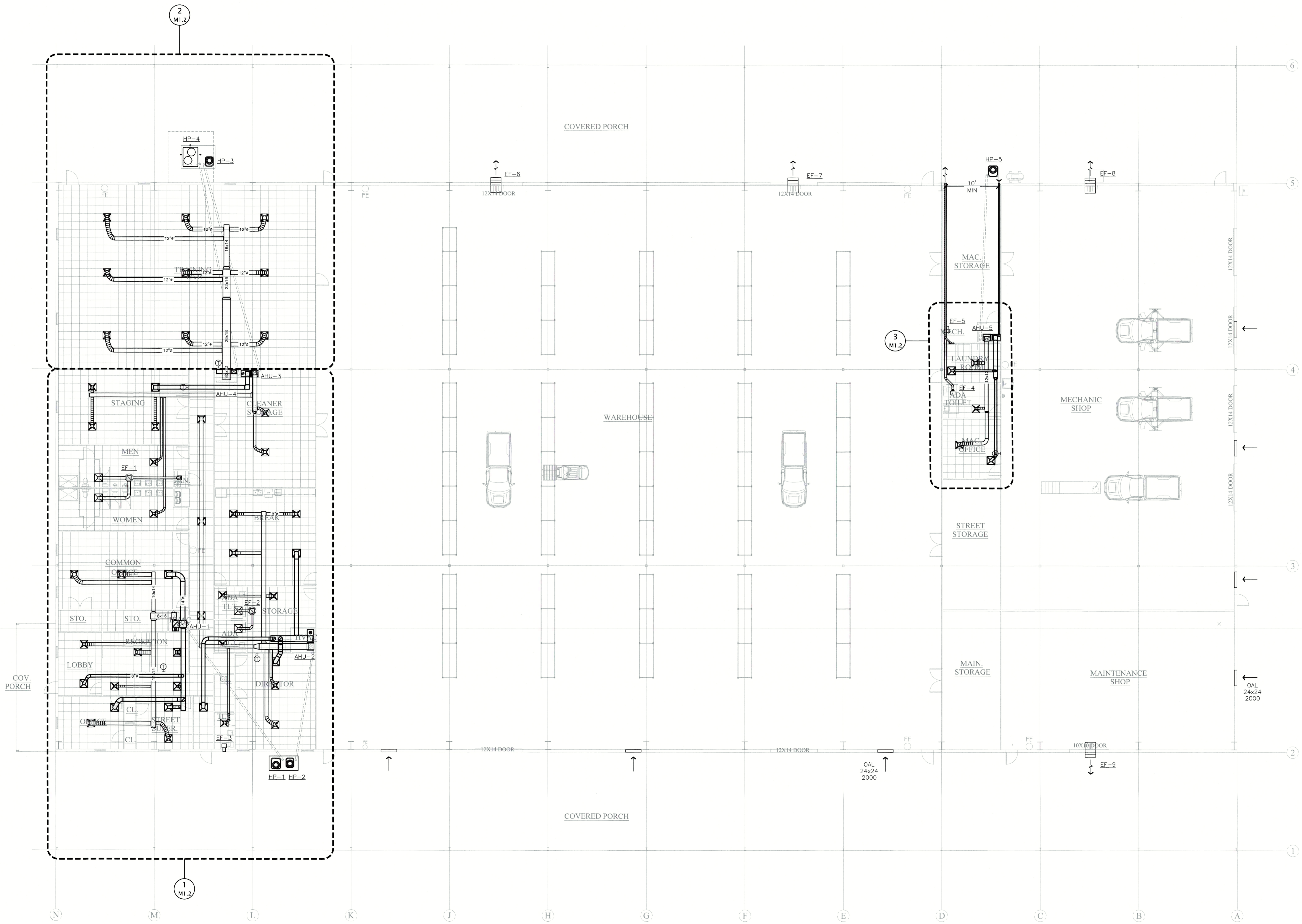
**Orange Beach Public Works**  
Roscoe Road  
Orange Beach, Alabama

**OVERALL  
HVAC  
PLAN**

Project No.: -----  
Drawn By: Wade Stewart, PE  
Checked: CWS, JHC  
Date: September 30, 2019

Sheet Number:  
**M1.1**

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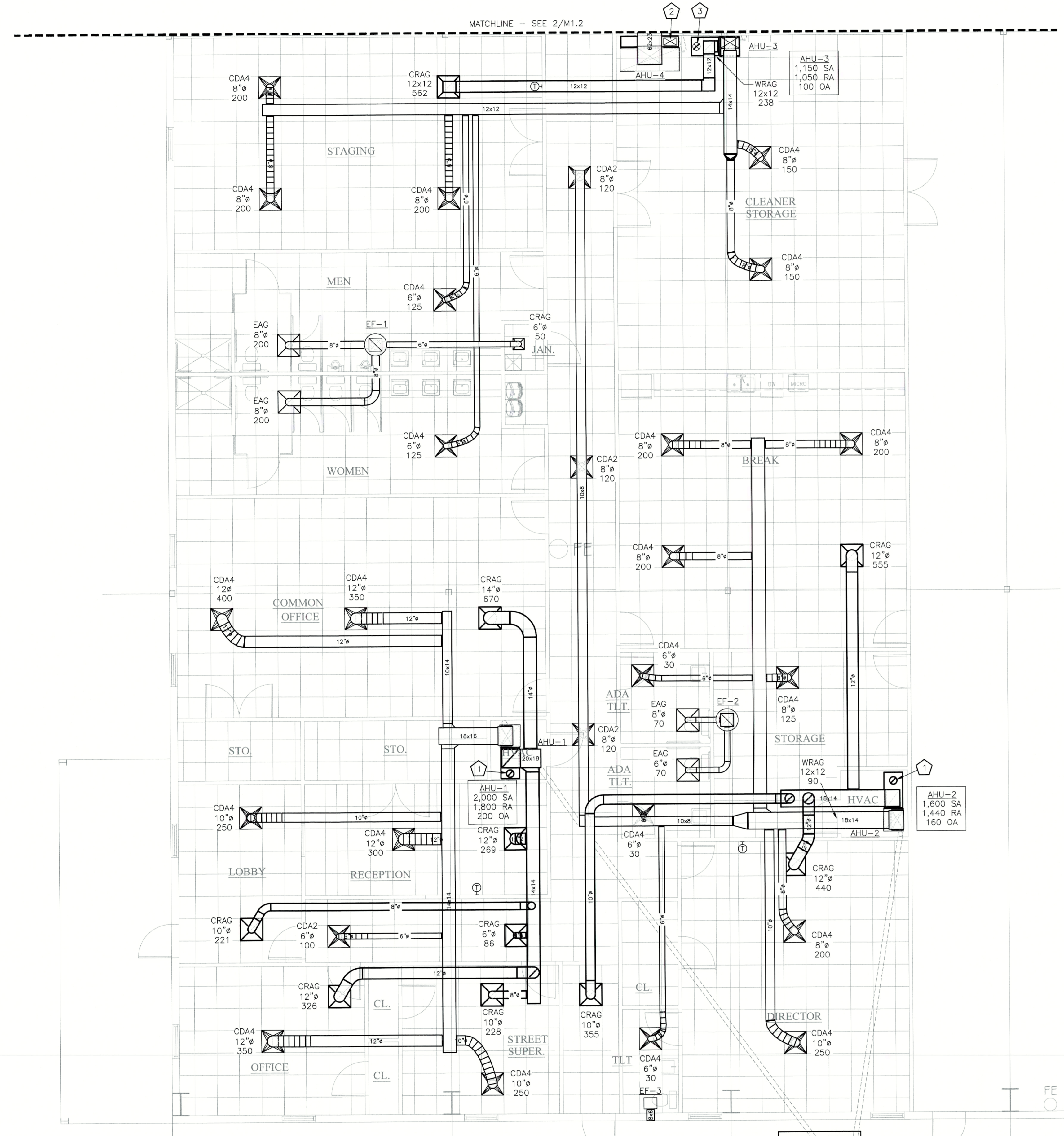
**1**  
M1.1  
OVERALL HVAC PLAN  
SCALE: 3/32" = 1'-0"



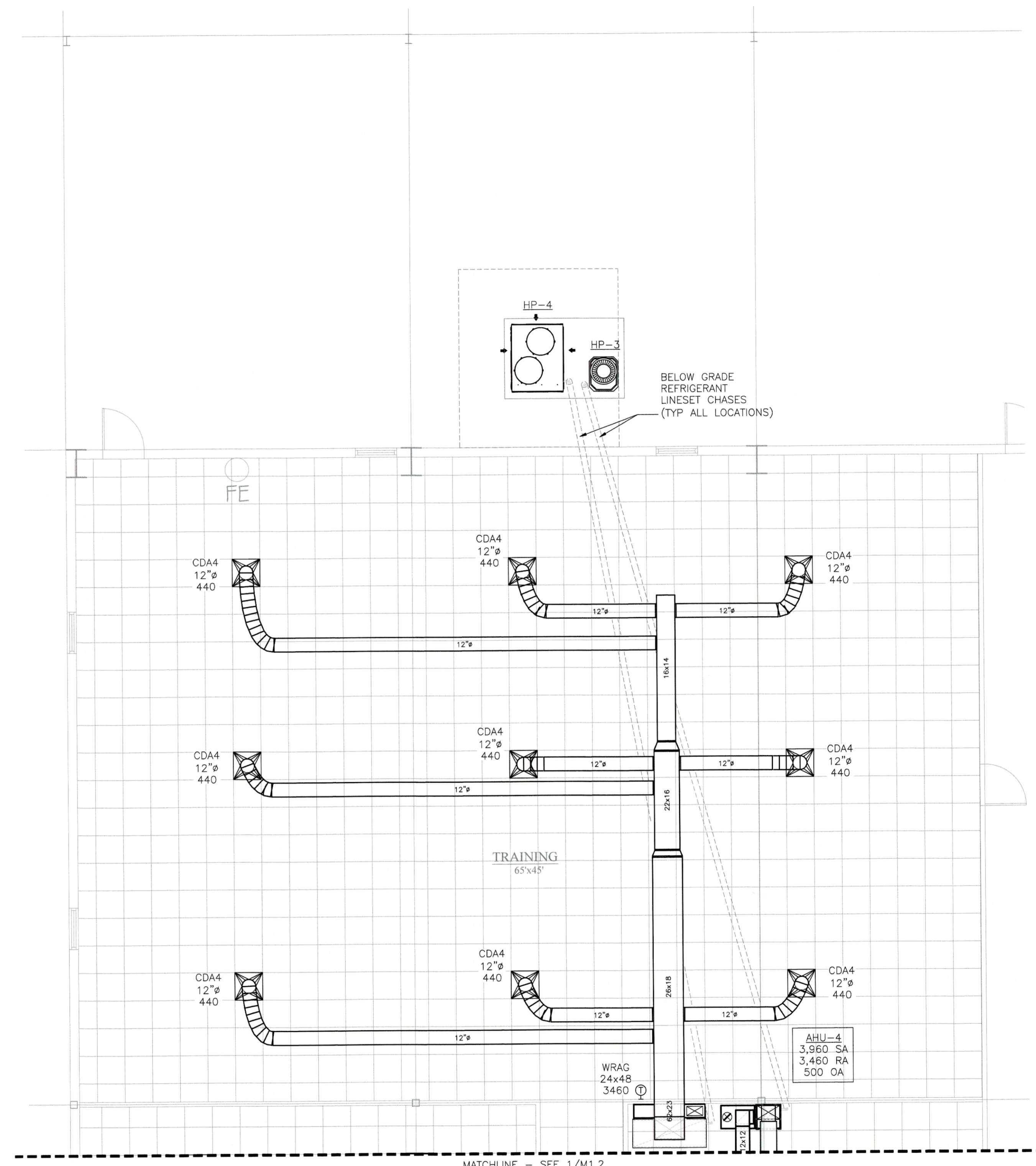
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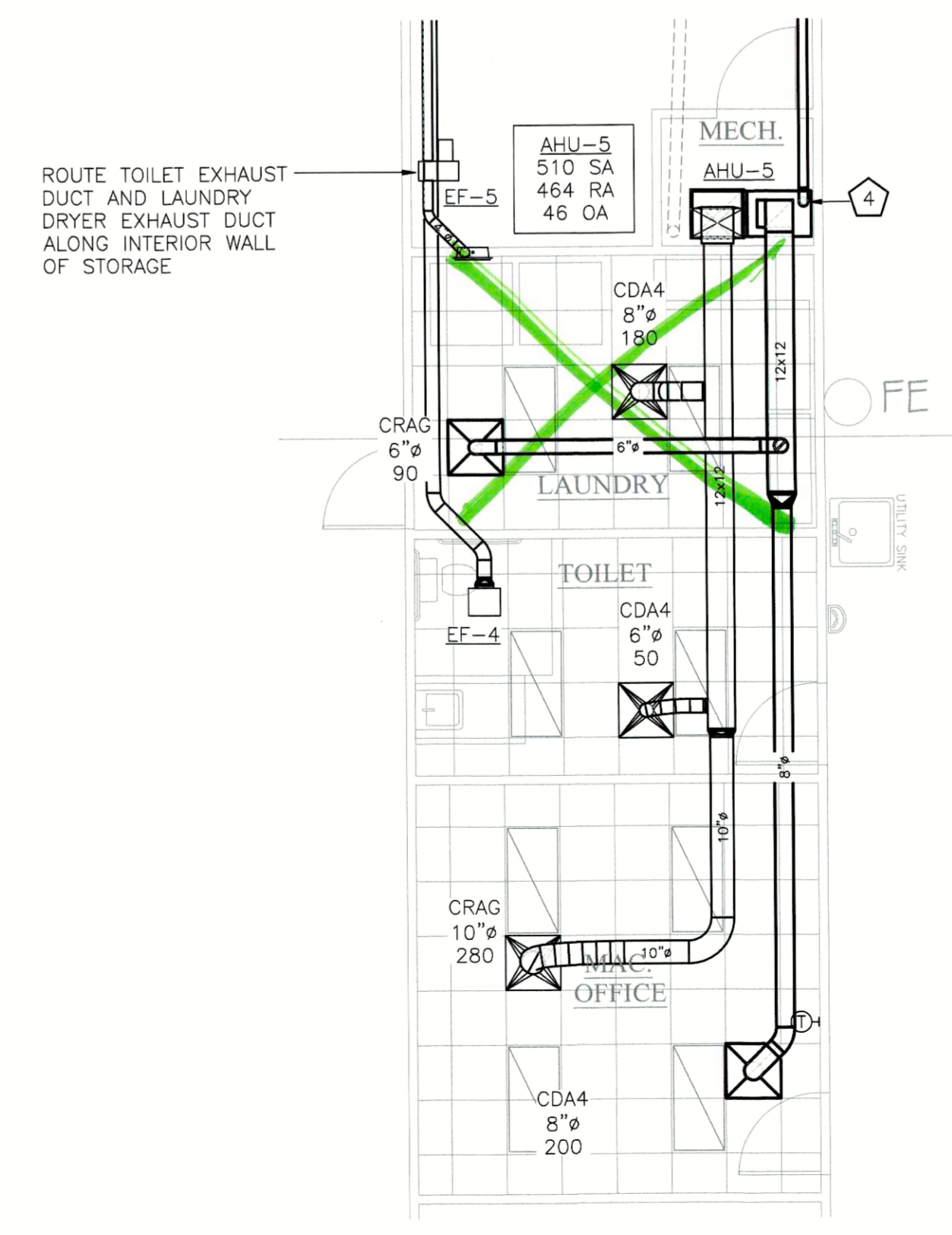
No.	Date	Description
A	9/20/19	ABC CODE REVIEW/PRE-PERMIT



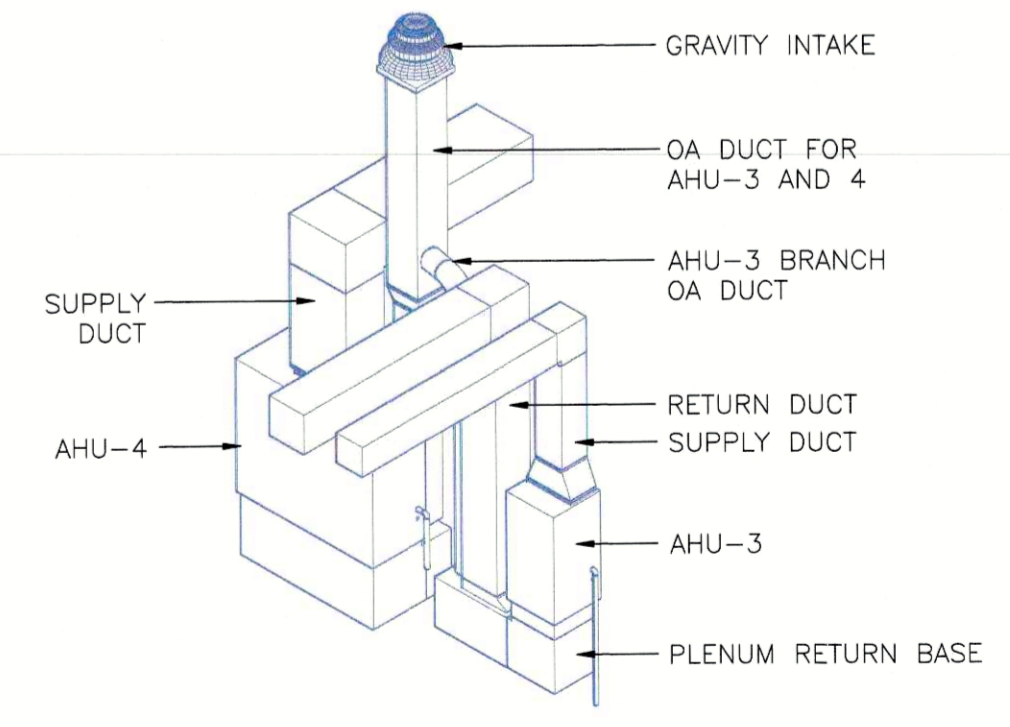
**1 ENLARGED HVAC PLAN**  
 SCALE: 3/16" = 1'-0"



**2 ENLARGED HVAC PLAN**  
 SCALE: 3/16" = 1'-0"



**3 ENLARGED HVAC PLAN**  
 SCALE: 3/16" = 1'-0"



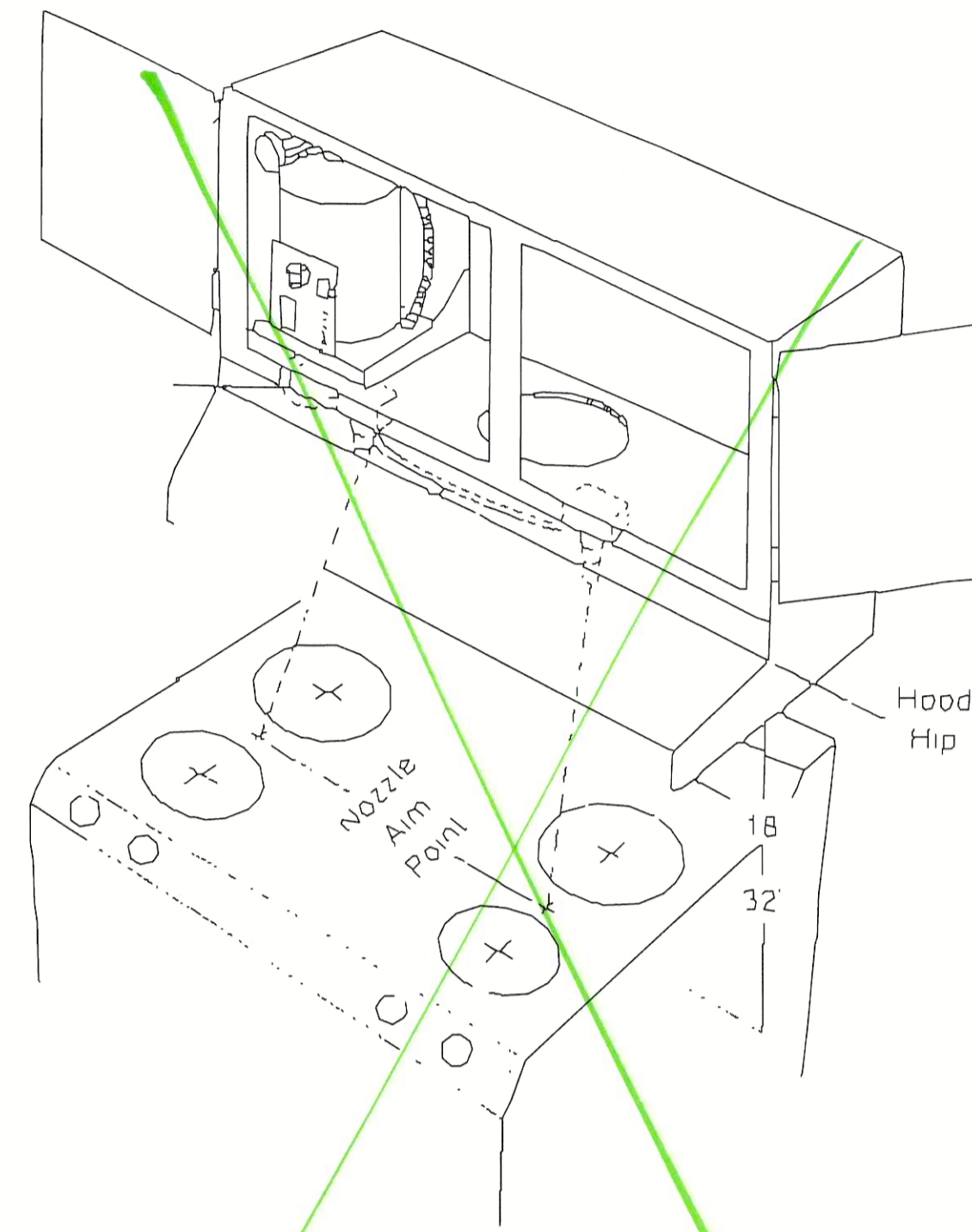
**4 AHU 3 & 4 ISOMETRIC DETAIL**  
 SCALE: NONE

**KEY NOTES (THIS SHEET ONLY)**

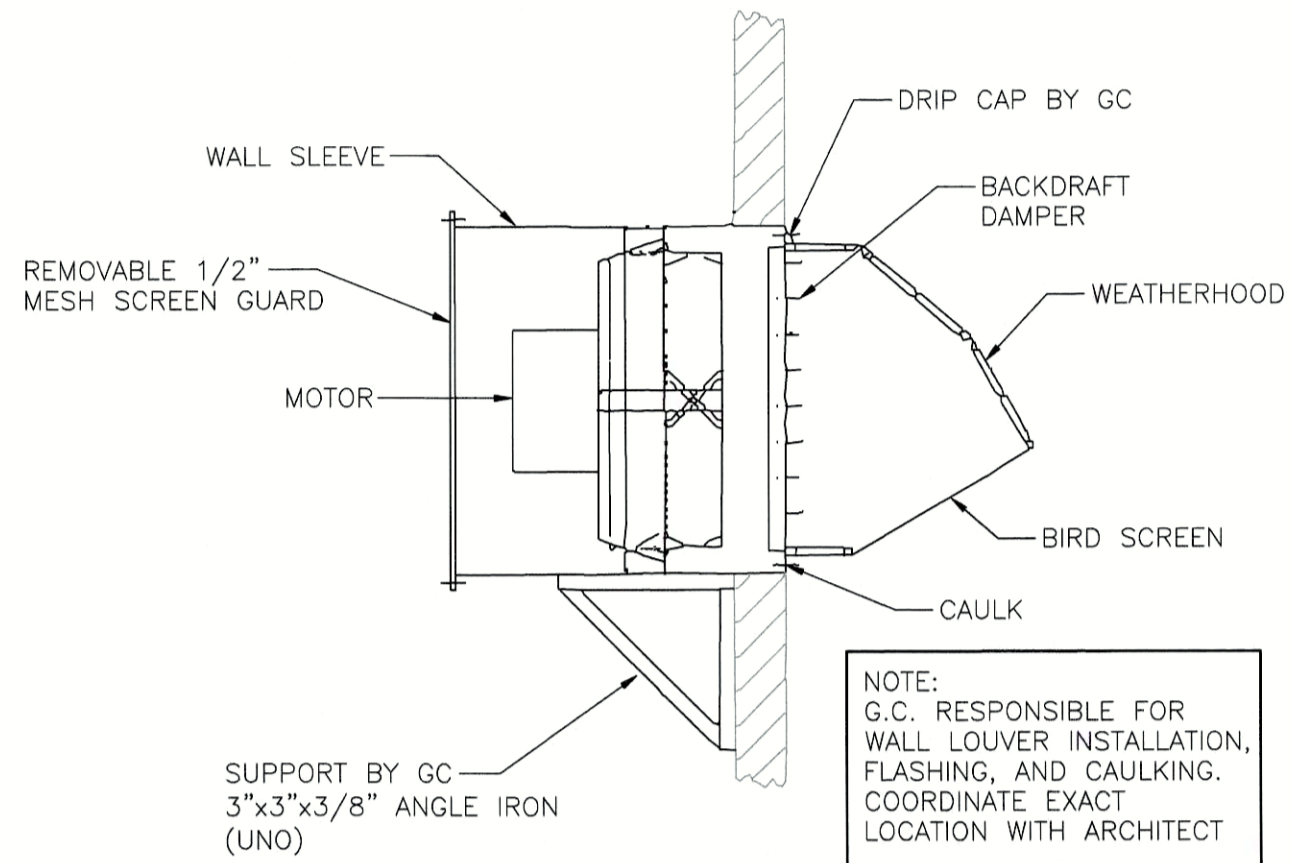
- 1 8" OA DUCT ROUTED TO ROOF MOUNTED, HIGH-WIND RATED, GRAVITY INTAKE VENTILATOR EQUAL TO GREENHECK FGI-Bx8 COMPLETE WITH ROOF CURB AND INSECT SCREEN. INSTALL MANUAL VOLUME DAMPER AT AHU IN ACCESSIBLE LOCATION.
- 2 8x14 OA DUCT ROUTED ABOVE AHU-4 AND TRANSITION TO 14x14 OA DUCT WITH CONTINUATION ROOF MOUNTED, HIGH-WIND RATED, GRAVITY INTAKE VENTILATOR EQUAL TO GREENHECK FGI-12x12 COMPLETE WITH ROOF CURB AND INSECT SCREEN. INSTALL MANUAL VOLUME DAMPER AT AHU IN ACCESSIBLE LOCATION.
- 3 6" OA DUCT ROUTED FROM AHU-4 TO 14x14 OA DUCT ABOVE AHU-3. INSTALL MANUAL VOLUME DAMPER AT AHU IN ACCESSIBLE LOCATION.
- 4 6" OA DUCT ROUTED THROUGH STORAGE TO WALL CAP WITH INSECT SCREEN.

**Orange Beach Public Works**  
 Roscoe Road  
 Orange Beach, Alabama

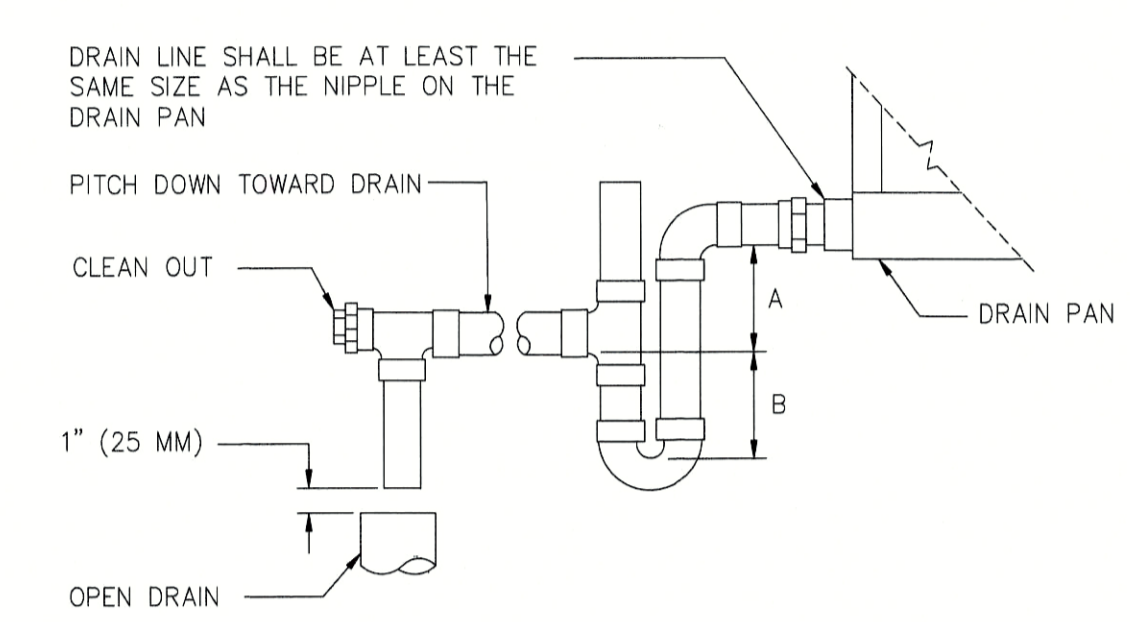
Title: **ENLARGED HVAC PLAN**  
 Project No.:  
 Drawn by: Wade Stewart, PE  
 Checked: CWS, JHC  
 Date: September 30, 2019  
 Sheet Number: **M1.2**



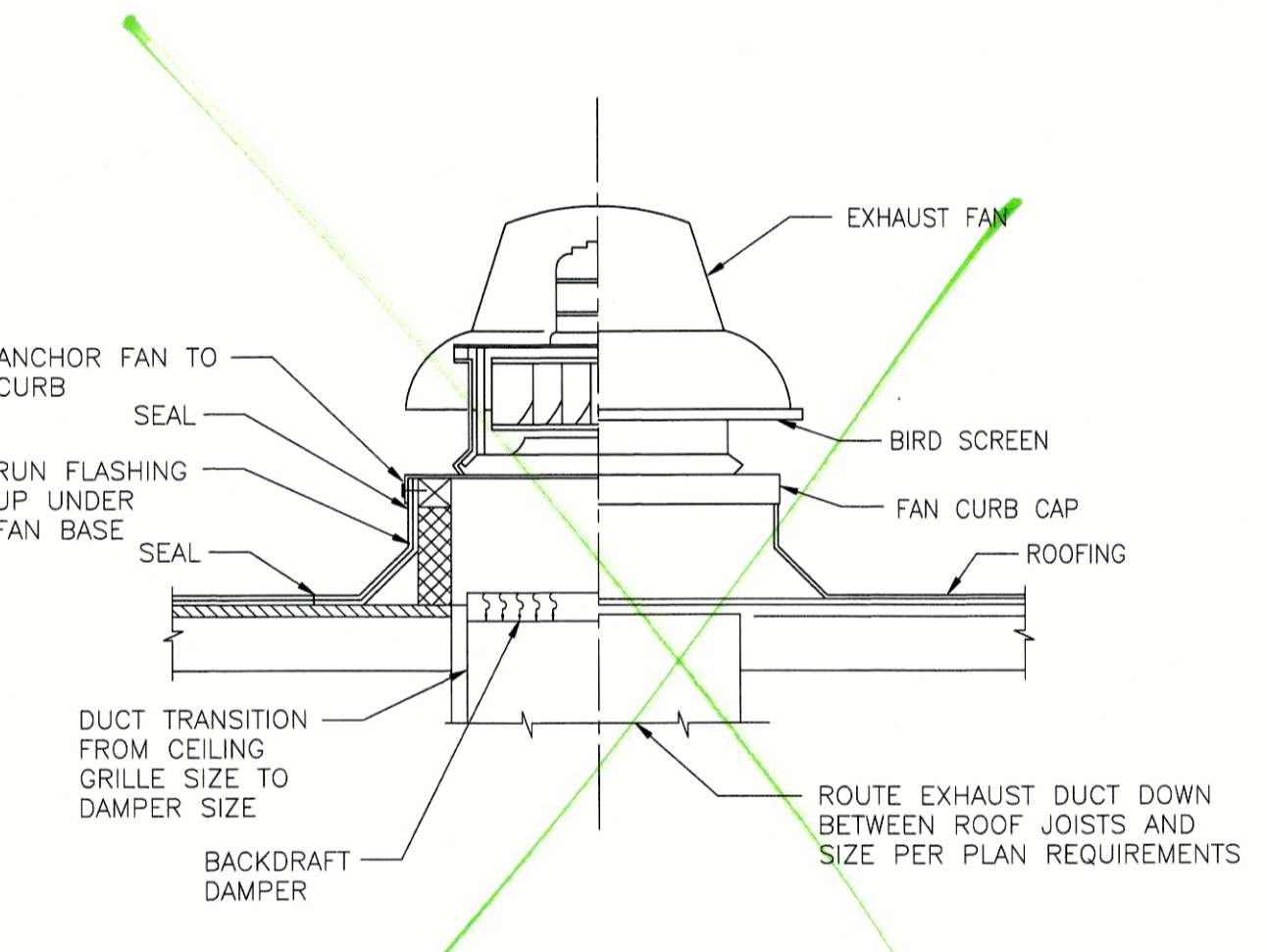
**7 STANDALONE KITCHEN HOOD DETAIL**  
 HOOD FIRE SUPPRESSION SYSTEM EQUAL TO GUARDIAN III SYSTEM. INSTALL AS PER MGR INSTALLATION INSTRUCTIONS.



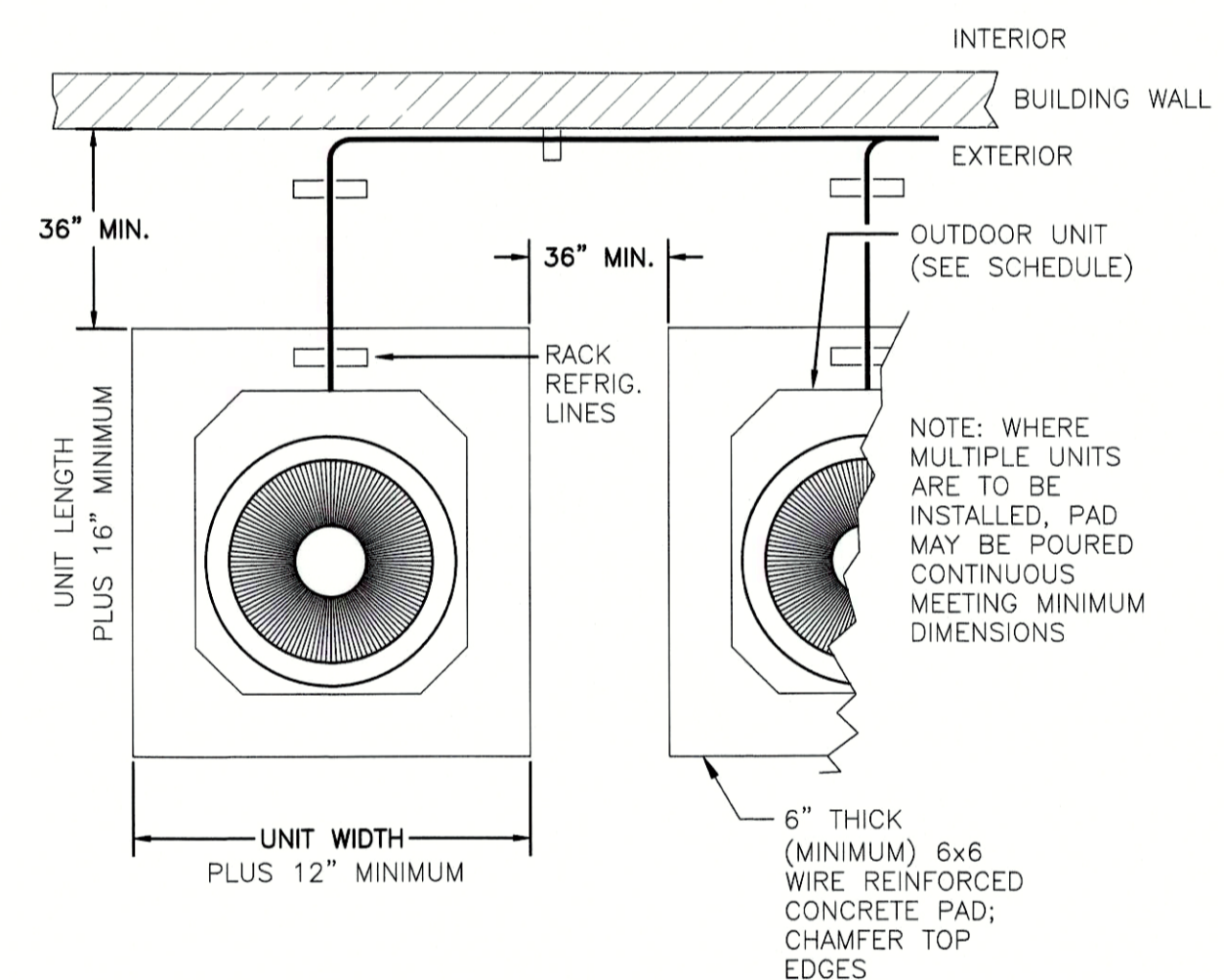
**6 WALL FAN DETAIL**  
 SCALE: NONE



**1 AHU DRAIN TRAP DETAIL**  
 SCALE: NONE



**5 ROOF MOUNTED DOWN BLAST EXHAUST FAN DETAIL**  
 SCALE: N.T.S.



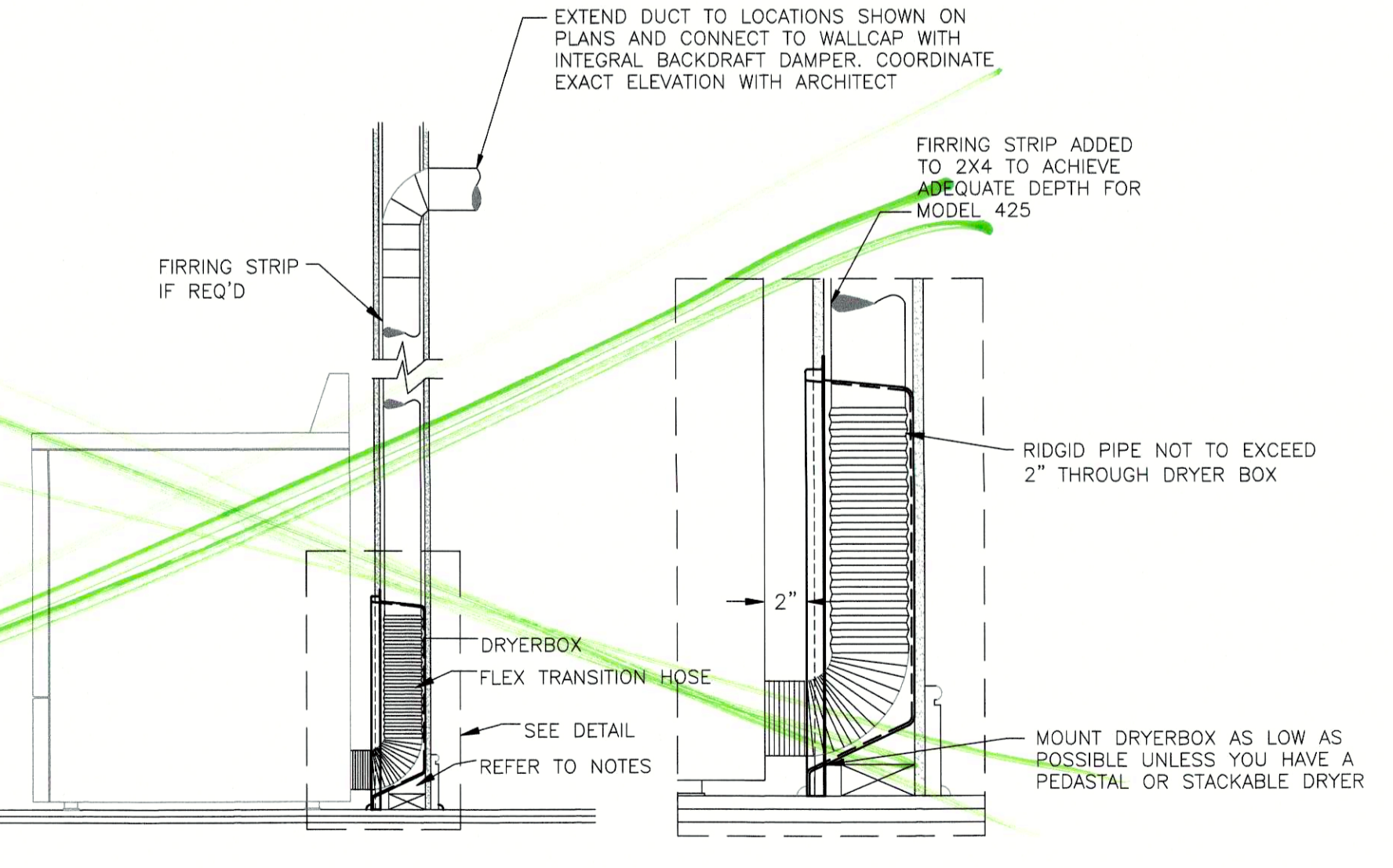
**2 OUTDOOR UNIT INSTALLATION DETAIL**  
 SCALE: NONE

**DRYERBOX INSTALLATION**

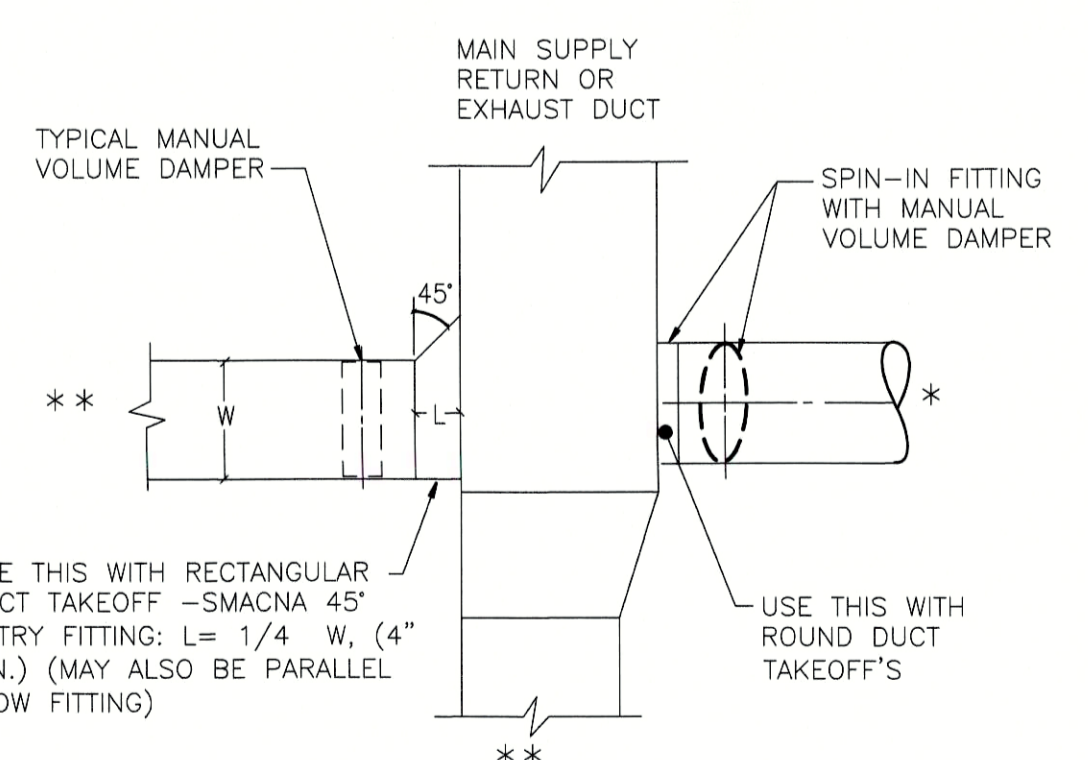
DRYER VENTING: MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL DUCTWORK FOR THE DRYER EXHAUST SYSTEM. ALL CONCEALED DRYER DUCTING MUST BE RIGID METAL (GALVANIZED OR ALUMINUM) MINIMUM OF 4" IN DIAMETER, SMOOTH 30 GA. CLEAN, UNOBSTRUCTED, FRICTIONLESS DUCTS (NO FLEXIBLE DUCT ALLOWED IN CONCEALED AREAS). SEAL ALL JOINTS WITH FOIL BACKED PRESSURE SENSITIVE DUCT TAPE MEETING THE REQUIREMENTS OF UL 181. DUCT JOINTS SHALL BE INSTALLED SO THAT THE MALE END OF THE DUCT POINTS IN THE DIRECTION OF THE AIRFLOW. DO NOT USE RIVETS OR SCREWS IN THE JOINTS OR ANYWHERE ELSE IN THE DUCT AS THESE WILL ENCOURAGE LINT COLLECTION.

DRYERBOX RECEPTACLE (WWW.DRYERBOX.COM) SHALL BE METAL AND BE INSTALLED AS LOW AS POSSIBLE AS TO PERMIT THE PROPER AND SAFE COLLECTION OF THE DRYER TRANSITION HOSE. DRYERBOX SHOULD BE RESTING ON THE BOTTOM PLATE AND BE LOCATED AT OR NEAR THE CENTERLINE OF THE PROPOSED DRYER APPLIANCE. RIGID DUCT SHOULD PENETRATE DRYERBOX PORT 2 INCHES TO PROVIDE FOR FUTURE CONNECTION AND STORAGE OF TRANSITION HOSE. BASEBOARD SHALL BE "BUTTED" UP TO THE FIXED EXTENSION RIM AND SLIGHTLY BACK-OUT. DRYERBOX SHOULD BE CAULKED AND THEN PAINTED WITH THE TRIM PAINT FOR USAGE IN A ONE-HOUR WALL ASSEMBLY. UL REQUIRES THAT BATT INSULATION BE STUFFED AROUND THE DRYERBOX AND IN THE ENTIRE WALL CAVITY CELL.

LENGTH OF CONCEALED RIGID METAL DUCTING SHALL NOT EXCEED 35 FEET DEDUCT 5 FEET FROM THE ALLOWABLE LENGTH FOR EVERY 3.5" RADIUS 90 DEGREE ELBOW AND TWO AND A HALF FEET FOR EVERY 45-DEGREE FITTING. DRYER VENTING SHALL BE INDEPENDENT OF ANY OTHER SYSTEMS (CHIMNEYS OR EXHAUST VENTS). TERMINATION OF DRYER VENTING MUST BE TO THE EXTERIOR WITH A PROPER HOOD OR ROOFHOOK EQUIPPED WITH A BACK-DRAFT DAMPER. SMALL ORIFICE METAL SCREENING SHOULD NOT BE PART OF THE HOOD OR ROOFHOOK AS THIS WILL ACCELERATE LINT ACCUMULATION AND BLOCKAGE. THE HOOD OPENING SHOULD POINT DOWN AND EXHIBIT 12 INCHES-OF CLEARANCE BETWEEN THE BOTTOM OF THE HOOD AND THE GROUND OR OTHER OBSTRUCTION. VERIFY APPLIANCE MANUFACTURER'S RECOMMENDATIONS FOR ANY OTHER FACTORS.



**4 DRYERBOX 350 DETAIL**  
 SCALE: NONE



**3 LOW PRESSURE DUCT VOLUME DAMPER REQUIREMENTS**  
 SCALE: NONE



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**Orange Beach Public Works**  
 Roscoe Road  
 Orange Beach, Alabama

Title: **HVAC DETAILS**

Project No.: -----  
 Drawn By: Wade Stewart, PE  
 Checked: GWS, JHC  
 Date: September 30, 2019  
 Sheet Number: **M2.0**