

# WP 12-FP0061

Revision 0

## Fire Barrier and Fire Door Annual Inspection

Technical Procedure

EFFECTIVE DATE: 06/09/10

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APPROVED FOR USE

**CONTINUOUS USE**

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## INTRODUCTION

This procedure provides the basic work instruction to safely perform periodic inspection of the Waste Isolation Pilot Plant (WIPP) site's fire-rated barriers and doors.

The location, fire rating, and associated drawing for each fire rated wall and the associated doors can be found in Attachment 1, Fire Rated Wall and door Location and Information. The site-specific drawings can be found in Attachment 2, Site-Specific Drawings.

Performance of this procedure generates the following record(s), as applicable. Any records generated are handled in accordance with departmental Records Inventory and disposition Schedules.

- EA12FP0061-1-0, Fire Barrier Inspection Checklist

This Fire Barrier Inspection Checklist will be used to perform inspections of the following locations:

- Waste Handling Building - 411
- TRUPACT Maintenance Facility - 412
- Exhaust Filter Building - 413
- Support Building - 451
- Safety and Emergency - 452
- Support Building – 459
- Engineering Building – 486
- Training Building – 489

## REFERENCES

### BASELINE DOCUMENTS

- Title 29, *Code of Federal Regulations* (CFR) 1910§ L, "Fire Protection"
- Hazardous Waste Facility Permit, Waste Isolation Pilot Plant, Permit #NM4890139088TSDF, Issued by New Mexico Environment Department
- NFPA 80, Standard for Fire Doors and Other Opening Protectives, 2010 Edition
- NFPA 101, Life Safety Code, 2009 Edition
- DOE/WIPP-07-3372, Waste Isolation Pilot Plant Documented Safety Analysis
- DOE/WIPP-07-3373, Waste Isolation Pilot Plant Technical Safety Requirements

- WP 10-2, Maintenance Operations Instruction Manual
- WP 10-WC3010, Maintenance PM/MWI Controlled Document Processing
- WP 10-WC3011, Maintenance Process
- WP 12-FP.01, WIPP Fire Protection Program
- WP 12-IS.01, Industrial Safety Program – Structure and Management

#### REFERENCED DOCUMENTS

- WP 12-IH.02-2, WIPP Industrial Hygiene Program – Confined Spaces
- WP 12-IS.01-1, Postings, Warnings, and Hazard Identification
- EA12FP0061-1-0, Fire Barrier Inspection Checklist

#### EQUIPMENT

- 6-foot ladder, as required
- 10-foot ladder, as required
- Measuring tape
- Flashlight

#### PRECAUTIONS AND LIMITATIONS

- The Job Hazards Analysis (JHA) that exists for performance of this procedure include: confined space hazards, height hazards, and radiological hazards.
- Troubleshooting or other activities outside the scope of this procedure may require the initiation of a work order as directed by the EM&H Manager.

#### **WARNING**

Working height hazards exist. The following precautions must be taken to prevent injury to personnel.

- Employees standing six feet or higher on a ladder will either secure the ladder to prevent tipping or have a second employee hold the ladder.
- Employees will use both hands for climbing. Tools will be carried in tool belts. Other materials will be raised or lowered using a hand line.

**PREREQUISITE ACTIONS**

- 1.0 A pre-job briefing shall occur to discuss and ensure all personnel involved in the performance of this task have read and understood confined space hazards, precautions, and any mitigating actions to be taken.
- 2.0 A pre-job briefing shall include the working height hazards, precautions, and any mitigating actions to be taken.
- 3.0 Personnel performing this work must review this procedure and appropriate reference prior to performing inspections.
- 4.0 Obtain all materials and equipment necessary to perform tasks prior to performing inspections.

**WARNING**

Confined space hazards exist. All postings must be followed to prevent injury to personnel or damage to equipment.

- 5.0 Contact Industrial Safety for location of spaces posted as PERMIT REQUIRED CONFINED SPACE.
- 6.0 Verify all personnel have read and understood WP 12-IS.01-1 for all spaces posted as NON-PERMIT CONFINED SPACE prior to entering space and WP 12-IH.02-2 for confined spaces.
- 7.0 Review the WIPP Confined Space Evaluation record for known hazards and minimum entry requirements.

**WARNING**

Possible radiological hazards exist. To prevent injury to personnel, a radiological work permit (RWP) should be performed, if necessary, prior to beginning tasks.

- 8.0 Contact RadCon before entering a radiological area and if needed, request a RWP.
- 9.0 All personnel must review and sign off on the RWP, as necessary, prior to entering a radiological area. All hazards, precautions, and any mitigating actions to be taken must be discussed.

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**NOTE**

Performance of this procedure will be documented on EA12FP0061-1-0.

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**PERFORMANCE****1.0 ANNUAL FIRE BARRIER AND ASSOCIATED DOOR INSPECTION****1.1 Fire Barrier Inspection**

- 1.1.1 Verify that any penetrations to the fire barrier have been properly sealed to retain the rating of the wall/barrier.
- 1.1.2 Verify that the fire barrier walls are continuous through all concealed spaces, such as those found above a ceiling, including interstitial spaces.
- 1.1.3 Verify that all ceiling tiles are intact and without holes.
- 1.1.4 Verify that all ceiling tiles are positioned correctly and sitting flush.

**1.2 Fire Door**

- 1.2.1 Verify that no open holes or breaks exist in surfaces of either the door or frame.
- 1.2.2 Verify that the glazing, vision light frames, and glazing beads are intact and securely fastened in place, if so equipped.
- 1.2.3 Verify that the door, frame, hinges, hardware, and noncombustible threshold are secured, aligned, and in working order with no visible signs of damage.
- 1.2.4 Verify that there are no parts missing or broken.
- 1.2.5 Verify that the door clearances at the door edge to the frame, on the pull side of the door, do not exceed the following criteria:
  - Clearance under the bottom of a door shall be a maximum of 3/4 in.
  - Where the bottom of the door is more than 38 in. above the finished floor, the maximum clearance shall not exceed 3/8 in. or as specified by the manufacturer's label or service procedure.

- The clearances between the top and vertical edges of the door and the frame and the meeting edges of doors swinging in pairs shall be 1/8 in.  $\pm$  1/16 in. for steel doors and shall not exceed 1/8 in. for wood doors.
- 1.2.6 Verify that the self-closing device is operational, i.e., the active door completely closes when operated from the full open position.
- 1.2.7 Verify if a coordinator is installed, the inactive leaf closes before active leaf.
- 1.2.8 Verify that the latching hardware operates and secures the door when it is in the closed position.
- 1.2.9 Verify that the auxiliary hardware items that interfere or prohibit operation are not installed on the door or frame.
- 1.2.10 Verify that no field modifications to the door assembly have been performed that void the label.
- 1.2.11 Verify that the gasketing and edge seals, where required, are inspected for presence and integrity.

## Attachment 1 – Fire Rated Wall and Door Locations and Information

Work Order No.:						
Location			Fire Rating	Drawing #	Associated Fire Door	Fire Rating
Bldg. No.	Rm. No.	Titles				
411	113	Air lock perimeter	2 hr.	41-E-003-014 Rev. 4	136, 137	1 1/2 hr.
411	105	Stair No. 1 enclosure	1 hr.	41-E-003-014 Rev. 4	121	3/4 hr.
411	106	Air lock perimeter	2 hr.	41-E-003-014 Rev. 4	123	1 1/2 hr.
411	107	S. & E. walls of air lock	2 hr.	41-E-003-014 Rev. 4	124	1 1/2 hr.
411	103	N. wall of CH area	2 hr.	41-E-003-014 Rev. 4	n/a	n/a
411	114	W. wall of Corridor	2 hr.	41-E-003-014 Rev. 4	n/a	n/a
411	n/a	Elevator shaft enclosure	1 hr.	41-E-003-014 Rev. 4	n/a	n/a
411	119	Stair No. 2 enclosure	1 hr.	41-E-018-014 Rev. 4	214	3/4 hr.
411	119	Stair No. 2 enclosure	1 hr.	41-E-005-014 Rev. 4	143	1 1/2 hr.
411	204	N. & W. walls of room	1 hr.	41-E-006-014 Rev. 4	207	3/4 hr.
411	105	Stair No. 1 enclosure	1 hr.	41-E-006-014 Rev. 4	201	3/4 hr.
412	102	N. wall Maintenance Stations	2 hr.	41-E-600-021 Rev. K	n/a	n/a
413	105	N, E, & W. walls of filter chamber	1 hr.	41-E-008-019 Rev. 3	6, 7, 8	3/4 hr.
451	160	N. wall of corridor	1 hr.	45-E-201-014 Rev. 4	11, 12, 13	3/4 hr.
451	103	Stair No. 1 enclosure	1 hr.	45-E-205-014 Rev. 3	29	1 hr.
451	116	N. & W. walls of room	1 hr.	45-E-205-014 Rev. 3	44	1 hr.
451	n/a	Elevator shaft enclosure	1 hr.	45-E-205-014 Rev. 3	n/a	n/a
451	115	Stair No. 2 enclosure	1 hr.	45-E-205-014 Rev. 3	n/a	n/a
451	103	Stair No. 1 enclosure	1 hr.	45-E-205-014 Rev. 3	101	3/4 hr.
451	n/a	Elevator shaft enclosure	1 hr.	45-E-206-014 Rev. 3	n/a	n/a

## Attachment 1 – Fire Rated Wall and Door Locations and Information

Work Order No.:						
Location			Fire Rating	Drawing #	Associated Fire Door	Fire Rating
Bldg. No.	Rm. No.	Titles				
451	240	S. & W. walls of room	2 hr.	45-E-206-014 Rev. 3	161	3/4 hr.
451	231	Perimeter of room	2 hr.	45-E-206-014 Rev. 3	n/a	n/a
451	230	W. wall of room	2 hr.	45-E-206-014 Rev. 3	135	1 1/2 hr.
451	229	S. & W. wall of room	2 hr.	45-E-206-014 Rev. 3	127	1 1/2 hr.
451	234	Perimeter of room	2 hr.	45-E-206-014 Rev. 3	133, 159	1 1/2 hr.
451	115	Stair No. 2 enclosure	1 hr.	45-E-206-014 Rev. 3	126	3/4 hr.
451	226	N. & W. walls of room	1 hr.	45-E-206-014 Rev. 3	125, 160	3/4 hr, 1 1/2 hr.
452	115	Stair No. 2 enclosure	1 hr.	CMA A-1	3, 31, 32	1 1/2 hr, 1 1/2 hr, 3/4 hr.
452	202	Perimeter of room	1 hr.	CMA A-1	36	1 1/2 hr.
459		Center Dividing Wall	2 hr.	45-D-010-W		2 hr.
486	116	Perimeter of room	2 hr.	A-1	24	1 1/2 hr.
486	124	Perimeter of room	2 hr.	A-1	30	1 1/2 hr.
486	125	Perimeter of room	2 hr.	A-1	29, 40	1 1/2 hr, 3/4 hr.
486	135	Support beams	1 hr.	A-1	n/a	n/a
489	102	S. wall of room	1 hr.	ACA 9492-A-1	7, 8, 9	20 min.
489	108	Perimeter of corridor	1 hr.	ACA 9492-A-1	10, 11, 12, 13, 14, 15, 17, 18	20 min.
489	120	Perimeter of corridor	1 hr.	ACA 9492-A-2	24, 25	20 min.
489	121	Perimeter of corridor	1 hr.	ACA 9492-A-3	26, 27, 28, 29, 30	20 min.



Attachment 2 – Site-Specific Drawings

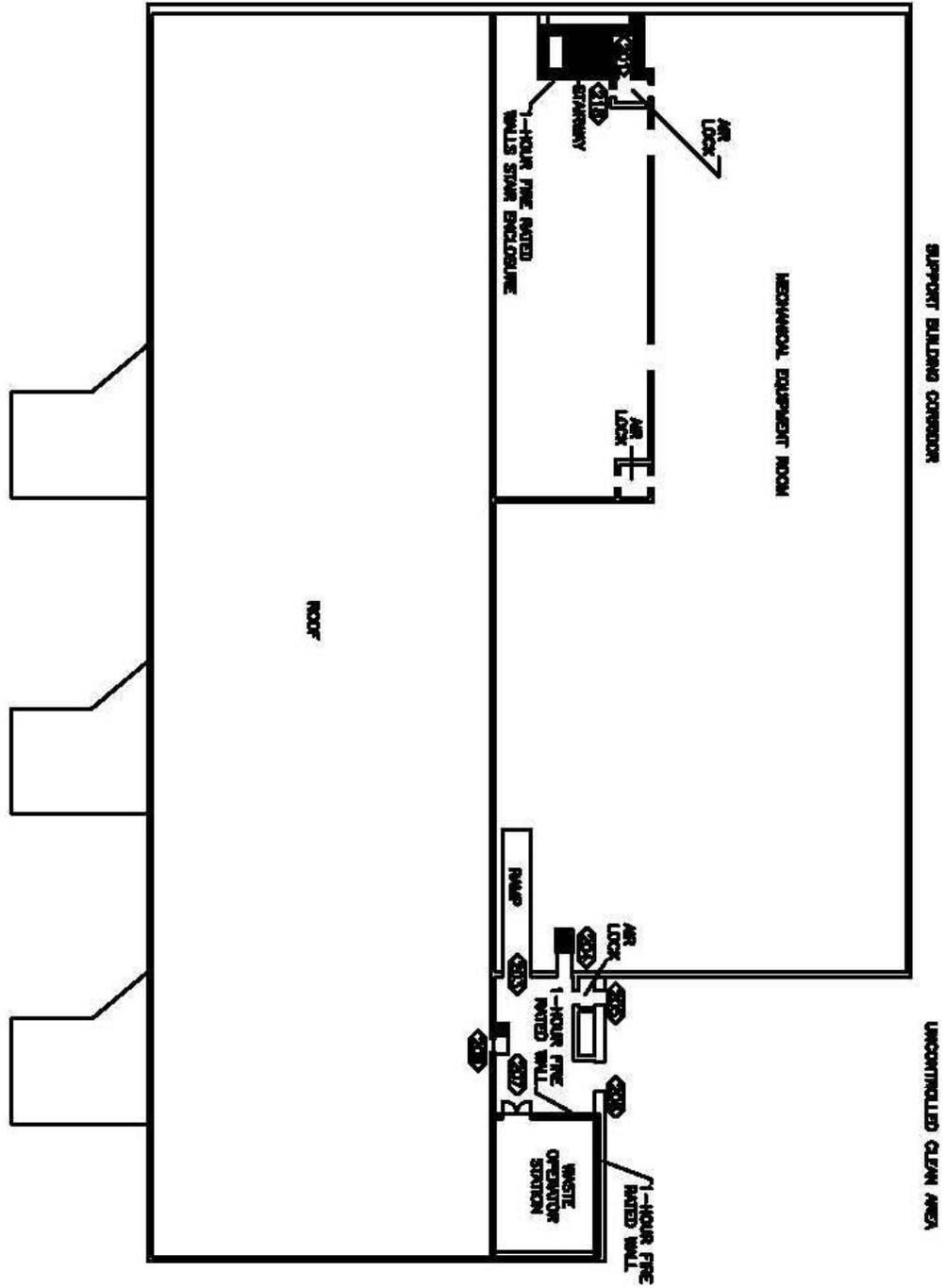


FIGURE  
ENG-09-05

Waste Handling Building (411) - Second Floor

Attachment 2 – Site-Specific Drawings

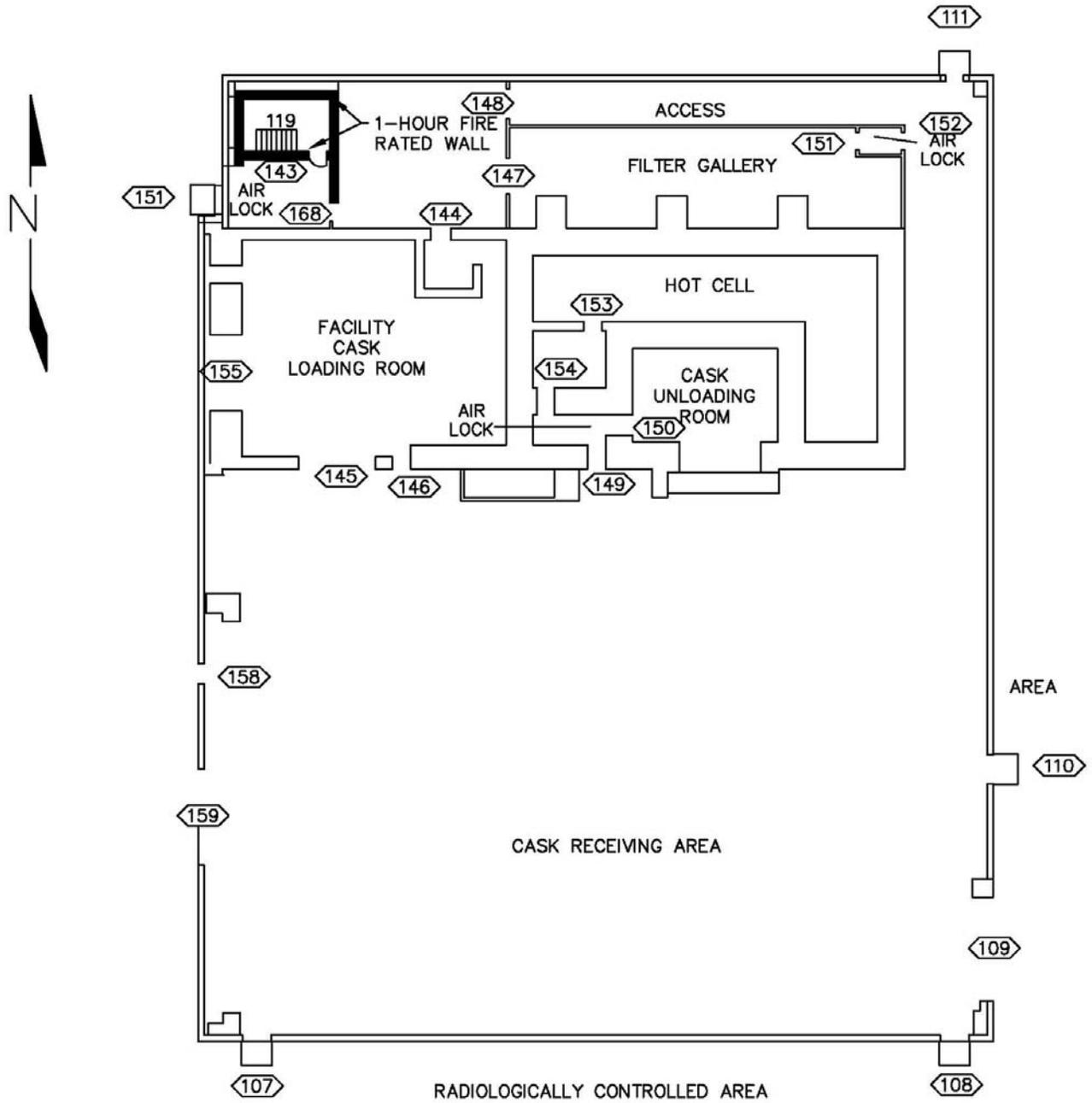
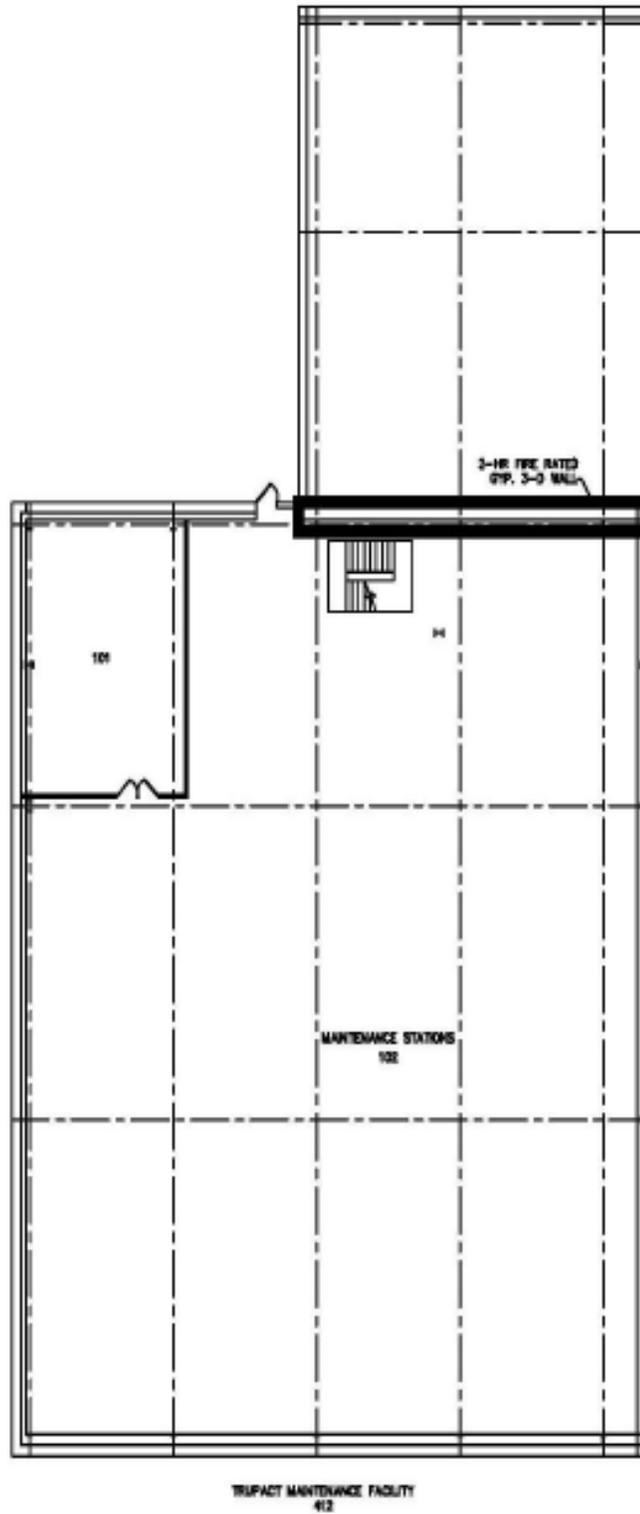


FIGURE  
ENG-09-03

Waste Handling Building (411) – Remote Handle Bay

Attachment 2 – Site-Specific Drawings



TRUPACT Maintenance Facility (412)

Attachment 2 – Site-Specific Drawings

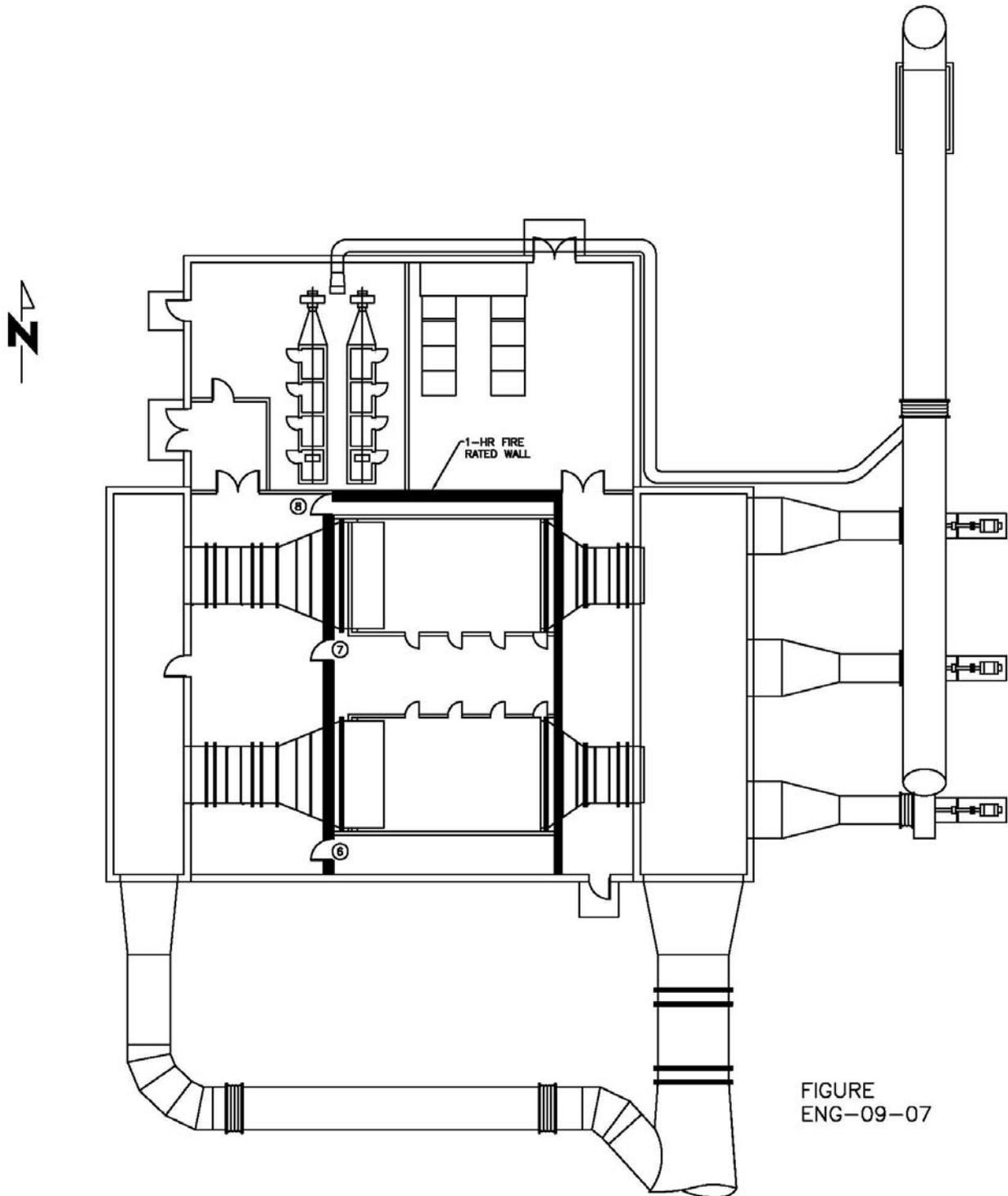
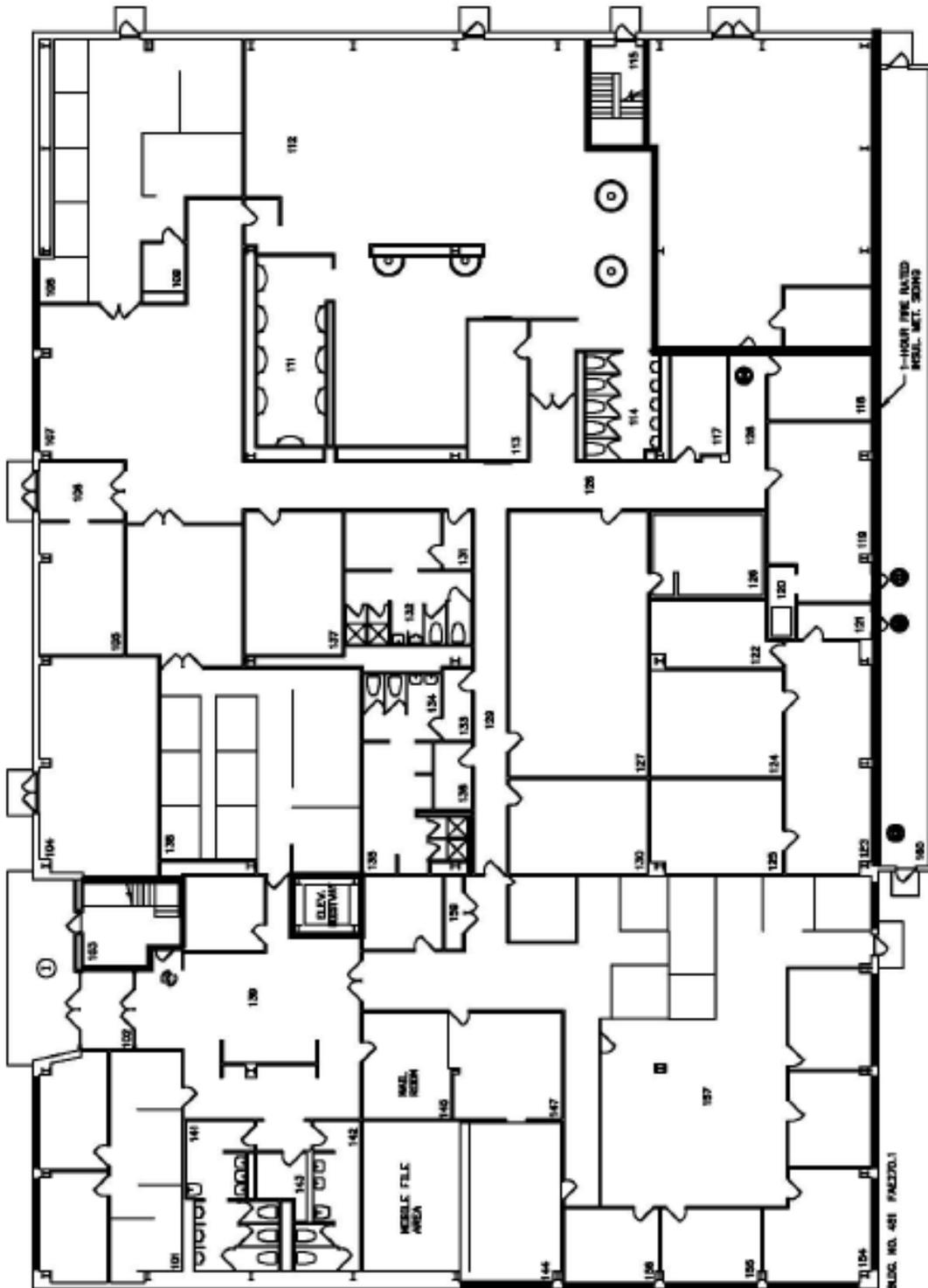


FIGURE  
ENG-09-07

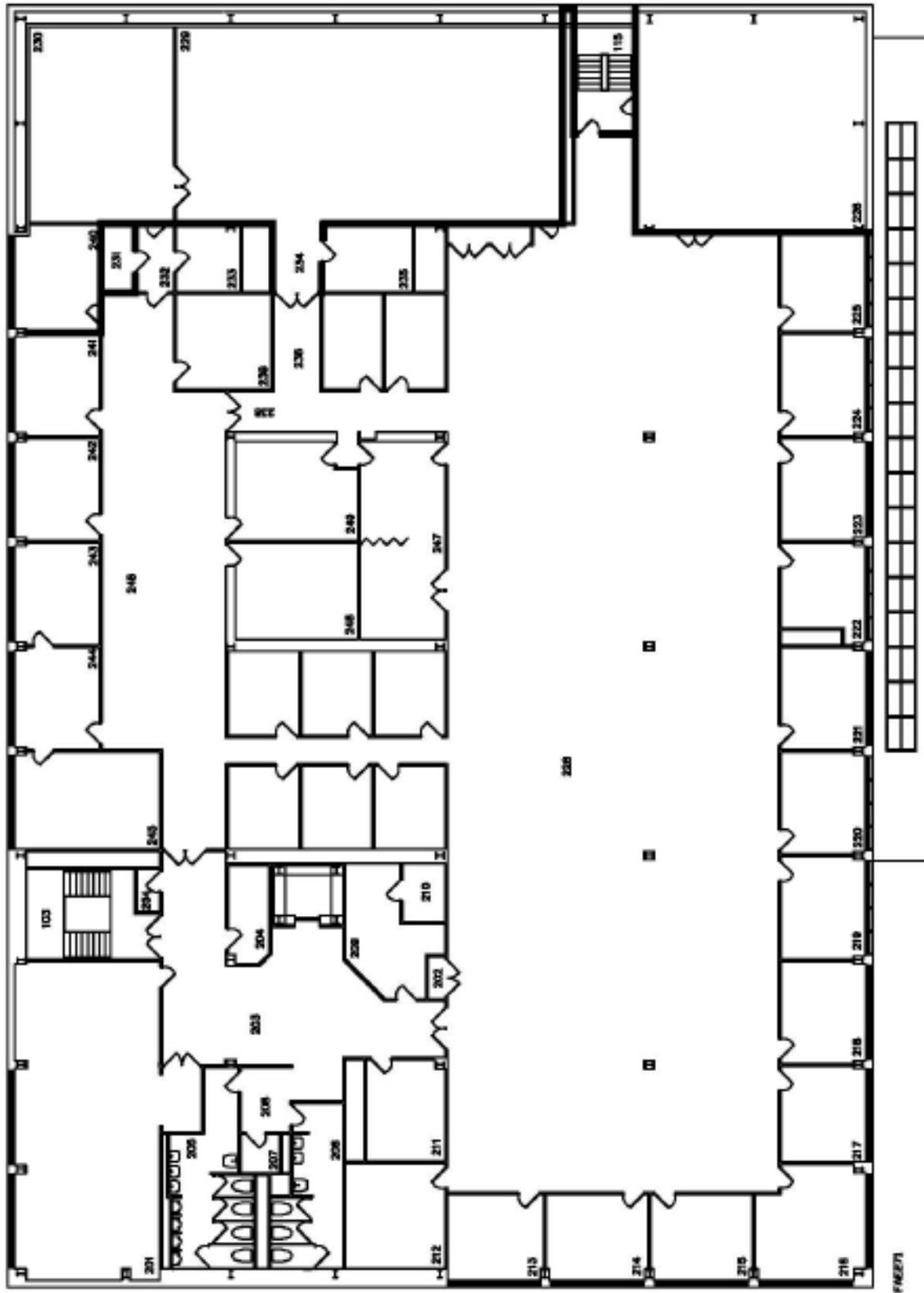
Exhaust Filter Building (413)

Attachment 2 – Site-Specific Drawings



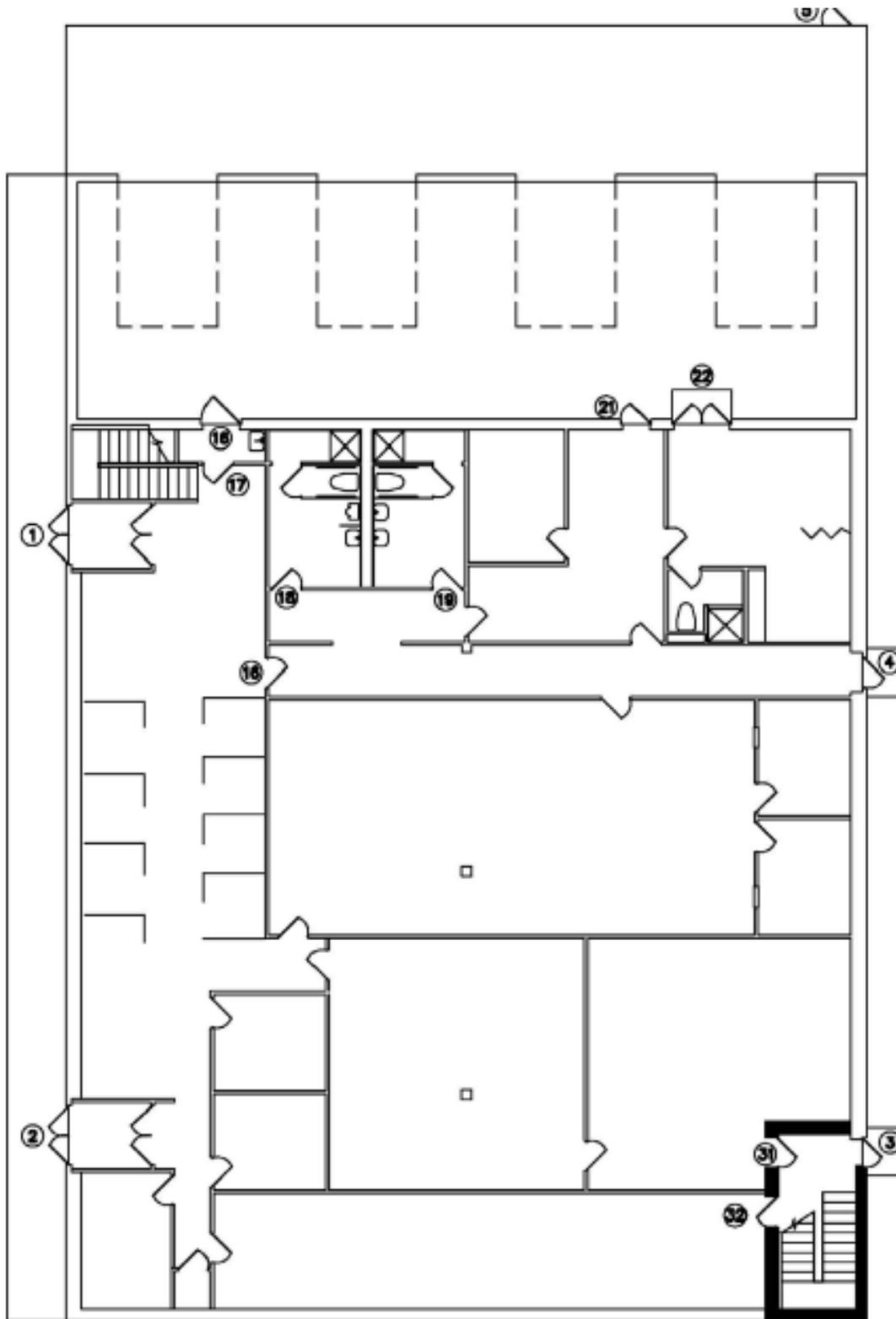
Support Building (451) – Ground Floor

Attachment 2 – Site-Specific Drawings



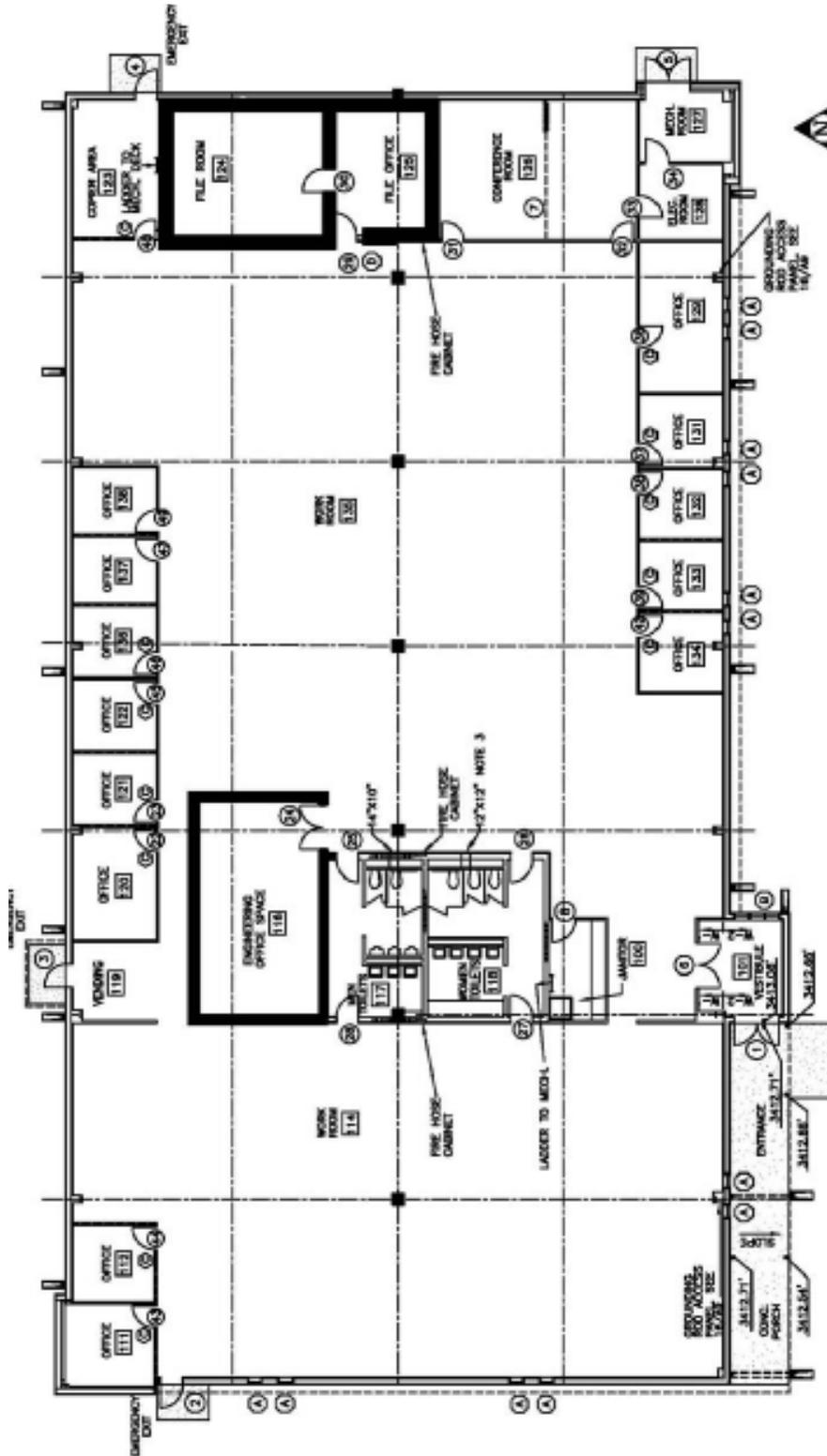
Support Building (451) – Second Floor

Attachment 2 – Site-Specific Drawings



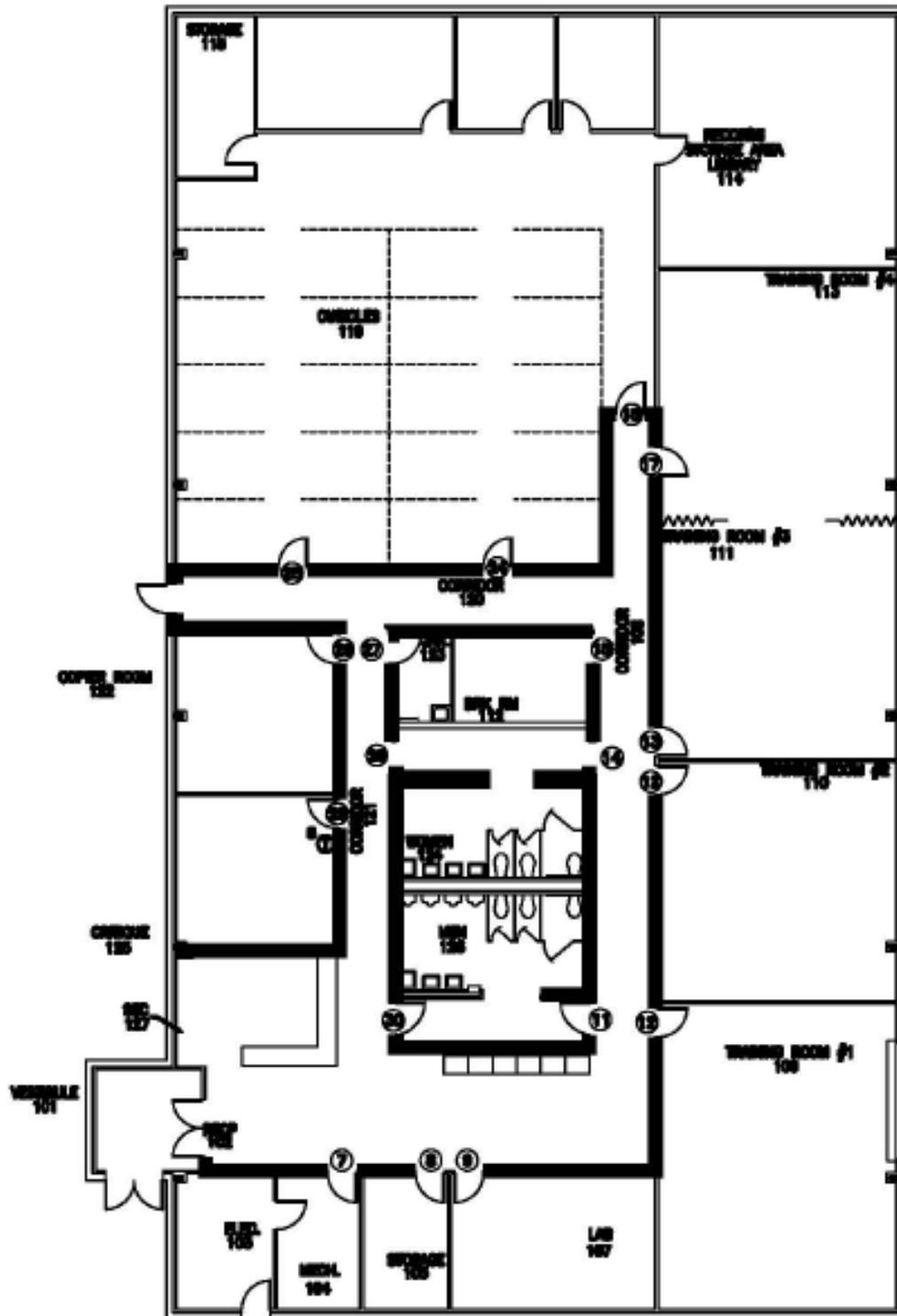
Safety & Emergency Services Building (452)

Attachment 2 – Site-Specific Drawings



Engineering Building (486)

Attachment 2 – Site-Specific Drawings



Training Building (489)