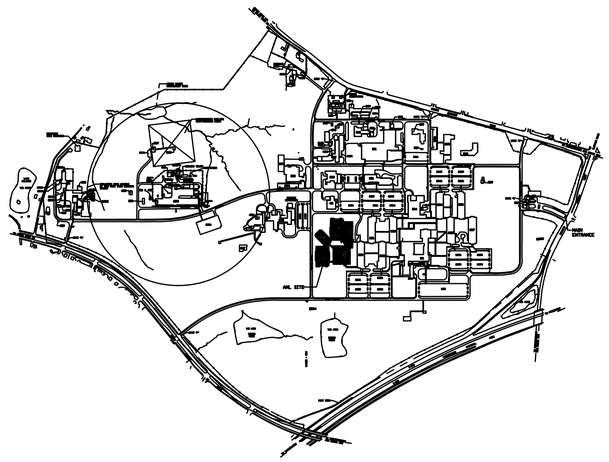
NIST

UNITED STATES DEPARTMENT OF COMMERCE
THE NATIONAL INSTITUTES OF STANDARDS AND TECHNOLOGY
GAITHERSBURG, MD

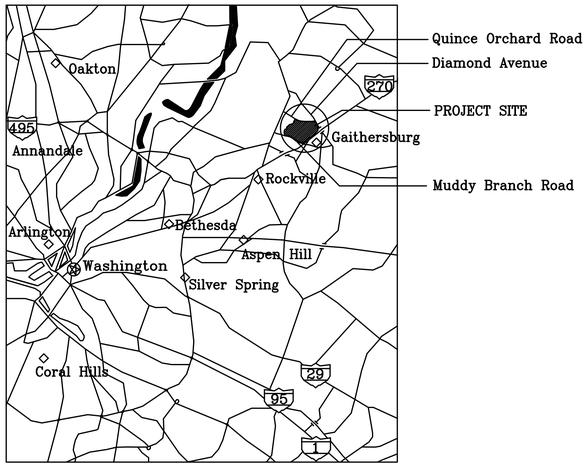
BUILDING 225 – FIRE ALARM REPLACEMENT
FIRE ALARM UPGRADES – BUILDINGS 220, 221, 223, & 225

AUGUST 29, 2025
FINAL DESIGN SUBMISSION

SITE PLAN



VICINITY MAP



DRAWING LIST

SHEET	DRAWING	SHEET TITLE
1	225-G001	COVER SHEET
2	225-E001	GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS – ELECTRICAL
3	225-ED101	PARTIAL FIRST, SECOND, AND ATTIC FLOOR PLAN – DEMOLITION – POWER
4	225-E101	PARTIAL FIRST AND ATTIC FLOOR PLAN – NEW WORK – POWER
5	225-E601	ONE-LINE DIAGRAM AND PANEL SCHEDULES
6	FA001	FIRE ALARM ABBREVIATIONS, LEGEND, AND GENERAL NOTES
7	FD15S	FIRE ALARM DEMOLITION SUB-BASEMENT PLAN
8	FA15S	FIRE ALARM SUB-BASEMENT PLAN
9	FD15BA	FIRE ALARM DEMOLITION BASEMENT LEVEL AREA A PLAN
10	FD15BB	FIRE ALARM DEMOLITION BASEMENT LEVEL AREA B PLAN
11	FA15BA	FIRE ALARM BASEMENT LEVEL AREA A PLAN
12	FA15BB	FIRE ALARM BASEMENT LEVEL AREA B PLAN
13	FD151A	FIRE ALARM DEMOLITION FIRST LEVEL AREA A PLAN
14	FD151B	FIRE ALARM DEMOLITION FIRST LEVEL AREA B PLAN
15	FA151A	FIRE ALARM FIRST LEVEL AREA A PLAN
16	FA151B	FIRE ALARM FIRST LEVEL AREA B PLAN
17	FD152A	FIRE ALARM DEMOLITION SECOND LEVEL AREA A PLAN
18	FD152B	FIRE ALARM DEMOLITION SECOND LEVEL AREA B PLAN
19	FA152A	FIRE ALARM FIRST SECOND LEVEL AREA A PLAN
20	FA152B	FIRE ALARM FIRST SECOND LEVEL AREA B PLAN
21	FD153A	FIRE ALARM DEMOLITION THIRD LEVEL AREA A PLAN
22	FD153B	FIRE ALARM DEMOLITION THIRD LEVEL AREA B PLAN
23	FA153A	FIRE ALARM FIRST THIRD LEVEL AREA A PLAN
24	FA153B	FIRE ALARM FIRST THIRD LEVEL AREA B PLAN
25	FD15A	FIRE ALARM DEMOLITION ATTIC LEVEL AREA A & B PLANS
26	FA15A	FIRE ALARM FIRST ATTIC LEVEL AREA A & B PLANS
27	FD15P	FIRE ALARM DEMOLITION PENTHOUSE LEVEL AREA PLAN
28	FA15P	FIRE ALARM FIRST PENTHOUSE LEVEL AREA PLAN
29	FA501	FIRE ALARM DETAILS
30	FA502	FIRE ALARM DETAILS
31	FA651	FIRE ALARM MATRIX & DIAGRAMS

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MARK	DESCRIPTION	DATE	APPR.
5	FINAL SUBMISSION	08/29/2025	S.B.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

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DESIGNED BY: EM
DWN BY: EM
CKD BY: MM
SUBMITTED BY: PS
PLOT SCALE: 1:100
ISSUE DATE: 05/16/2025
SIZE:
FILE NAME:
DATE: 08/29/2025
SOLICITATION NO.: 133ND24FNB190117
CONTRACT NO.: 133ND21DNB190025
FILE NUMBER:

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NIST - BLDG 225
FIRE ALARM REPLACEMENT

COVER SHEET

SHEET IDENTIFICATION
225-G001

ELECTRICAL GENERAL NOTES

A. GENERAL

1. THE CONTRACTOR SHALL COMPLY WITH ALL THE LAWS, ORDINANCES, RULES AND REGULATIONS OF ALL LOCAL AND STATE GOVERNMENTAL AUTHORITIES, THE RULES OF THE NATIONAL FIRE PROTECTION ASSOCIATION AS INTERPRETED BY THE ENFORCING AUTHORITY HAVING JURISDICTION AND OF THE PUBLIC UTILITIES HAVING CONNECTION WITH ANY OF THE SYSTEMS HEREIN SPECIFIED.

2. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY ANY OF THE FOREGOING AUTHORITIES, AND PAY FOR ALL OTHER COSTS IN CONNECTION WITH THE WORK. ALL CERTIFICATES SHALL BE IN DUPLICATE AND SHALL BE DELIVERED TO THE CONTRACTING OFFICER'S REPRESENTATIVE (COR).

3. THE SITE, LOCATION AND ROUTING OF SYSTEMS INDICATED TO HAVE NEW CONNECTIONS MADE TO THEM ARE SHOWN AS ACCURATELY AS FIELD CONDITIONS WOULD PERMIT. ALL EXISTING CONDITIONS SHALL BE EXAMINED AND THEIR EXACT LOCATIONS VERIFIED.

4. THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT NOT INDICATED TO BE REUSED TO A DESIGNATED LOCATION AT THE PROJECT SITE. AFTER THE EQUIPMENT HAS BEEN ASSEMBLED FOR THE COR INSPECTION , ALL EQUIPMENT SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. ALL BUILDING SYSTEMS SHALL REMAIN IN SERVICE UNLESS INDICATED OTHERWISE. COORDINATE ALL OUTAGES OR INTERRUPTIONS ACCORDING TO NIST GUIDELINES FOR OFPM CONTRACTORS. NOTIFY THE COR AS DIRECTED UNDER UTILITY OUTAGES.

5. THE CONTRACTOR SHALL INSTALL AND CONNECT ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE BEST ENGINEERING PRACTICE AND, UNLESS OTHERWISE SHOWN OR SPECIFIED, FOLLOW THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS AND FURNISH AND INSTALL ALL REQUIRED AUXILIARY ITEMS COMPLETE.

6. DRAWINGS SHALL BE CONSIDERED DIAGRAMMATIC AND FOR BIDDING PURPOSES ONLY. WHILE THE DRAWINGS ARE GENERALLY TO SCALE AND ARE AS ACCURATE AS THE SCALE WILL PERMIT, ALL IMPORTANT DIMENSIONS SHALL BE DETERMINED IN THE FIELD.

7. COORDINATE WITH ALL TRADES TO AVOID INTERFERENCE AMONG MECHANICAL, ELECTRICAL, ARCHITECTURAL AND STRUCTURAL ITEMS. PROVIDE ALL NECESSARY OFFSETS AND FITTINGS IN CIRCUITRY AND OTHER ITEMS REQUIRED TO INSTALL THE WORK WITHOUT INTERFERENCES.

8. THE CONTRACTOR SHALL COMMISSION ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT AND DEMONSTRATE TO THE COR ITS PROPER OPERATIONS. ALL NEW EQUIPMENT SHALL BE MOUNTED VIBRATION FREE.

9. ALL EQUIPMENT AND WORKMANSHIP SHALL BE GUARANTEED IN FULL FROM ALL DEFECTS FOR AT LEAST ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THIS WORK.

10. ALL EQUIPMENT INSTALLED SHALL BE NEW AND SHALL CONFORM IN ALL RESPECTS TO THE LATEST APPROVED STANDARDS OF IEEE, ANSI, NEMA AND UNDERWRITERS LABORATORIES, INC., (UNLESS INDICATED OTHERWISE). SUBSTITUTIONS SHALL ONLY BE ACCOMPLISHED AT THE DISCRETION OF THE COR. SHOP DRAWINGS ARE TO BE SUBMITTED AND APPROVED BEFORE THE EQUIPMENT IS ORDERED.

11. THE CONTRACTOR SHALL REPAIR ALL WALL, CEILING, FLOOR, OR ROOF OPENINGS WHICH ARE CREATED BY DEMOLITION OR PENETRATION. THE REPAIRS SHALL BE WITH MATERIALS AND FINISHES TO MATCH EXISTING. ALL FIRE RATED PENETRATIONS SHALL BE SEALED WITH UL APPROVED SUITABLE MATERIALS TO PRESERVE FIRE RATED INTEGRITY AS REQUIRED BY EACH INSTANCE.

12. DEFINITIONS

    a. CONTRACTING OFFICER - CO
    b. CONTRACTING OFFICER REPRESENTATIVE - COR
    c. "PROVIDE" UNDER THIS CONTRACT IS DEFINED AS FURNISH AND INSTALL.
    d. "CONCEALED" UNDER THIS CONTRACT IS DEFINED AS HIDDEN BY ARCHITECTURAL WALLS AND CEILINGS.
    e. "EXPOSED" UNDER THIS CONTRACT IS DEFINED AS VISIBLE TO VIEW.
    f. "INDICATED" UNDER THIS CONTRACT IS DEFINED AS SHOWN IN THE CONTRACT DOCUMENTS.
    g. "SALVAGE" OR "SALVAGED" UNDER THIS CONTRACT IS DEFINED AS DISCONNECT, SAVE AND PROTECT FROM DEMOLITION FOR FUTURE USE AS ORIGINALLY INTENDED.

13. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE CONTRACT AREA AND ALL OTHER AREAS USED FOR STORAGE, STAGING, ETC.

14. THE CONTRACTOR SHALL NOTIFY THE COR WHEN THE PROJECT IS APPROXIMATELY 75% COMPLETED IN ORDER TO SCHEDULE A PRE-FINAL REVIEW OF CONSTRUCTION. NO WORK SHALL BE CONCEALED BY CEILINGS, WALLS, ETC, BEFORE BEING INSPECTED. FINAL REVIEW SHALL BE SCHEDULED AT 100% COMPLETION. ALL PUNCH LIST ITEMS MUST BE ACCOMPLISHED PRIOR TO FINAL ACCEPTANCE.

15. ALL WORK IS AS DEFINED IN THE CONTRACT AND AS NEEDED TO MEET THE PERFORMANCE PERIOD.

16. PROVIDE TEMPORARY SERVICE FOR LIGHTING AND POWER EQUIPMENT (DRILLS, SAW, ETC.). VERIFY TEMPORARY REQUIREMENTS WITH GENERAL CONTRACTOR. TEMPORARY LIGHTING AND POWER SHALL MEET OSHA REQUIREMENTS AND LOCAL CODE. TEMPORARY POWER SHALL BE 120 VOLTS.

17. UNLESS SPECIFICALLY NOTED ON THE PLANS, ALL CIRCUITRY, EQUIPMENT, DEVICES, ETC., NOT NOTED AS EXISTING TO REMAIN (E), OR TO BE RELOCATED (ER), SHALL BE NEW (N). THE CONTRACTOR MAY RE-USE ALL EXISTING CIRCUITRY AS FIELD CONDITIONS PERMIT. REMOVE ALL DEVICES AND CIRCUITRY NOT BEING RE-USED. CIRCUITRY TO BE REMOVED SHALL BE REMOVED BACK TO THE SOURCE AND ALL HOLES SHALL BE REPAIRED TO CONFORM TO FINISHED SURFACE. ALL (E) CIRCUITS ARE TO REMAIN IN SERVICE UPON COMPLETION OF THIS PROJECT WHICH SHALL BE COORDINATED WITH THE COR.

18. PROTECT ADJACENT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE BARRIERS TO KEEP DIRT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE PROTECTION AND BARRIERS AFTER DEMOLITION OPERATIONS ARE COMPLETE.

19. LOCATE, IDENTIFY AND PROTECT SERVICES PASSING THROUGH DEMOLITION AREA AND SERVING OTHER AREAS OUTSIDE THE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS.

20. FINAL TESTING: AT THE TIME OF FINAL INSPECTION AND TESTS, ALL CONNECTIONS AT DEVICES AND EQUIPMENT AND MUST BE COMPLETED. THE COR OR ACOR IS REQUIRED TO ATTEND FINAL INSPECTION AND TESTING. COORDINATION WITH AHJ WILL BE THROUGH THE COR. COORDINATE TESTING/COMMISSIONING WITH CONTRACT SPECIFICATIONS AND NIST's SUB-ORDERS.

ELECTRICAL ABBREVIATIONS

A	AMPS	FAAP	FIRE ALARM ANNUNCIATOR PANEL	NTS	NOT TO SCALE
AIC	AMPS INTERRUPTING CAPACITY	FACP	FIRE ALARM CONTROL PANEL	PBO	PROVIDED BY OTHERS
AFF	ABOVE FINISHED FLOOR	FLA	FULL LOAD AMPS	PH	PHASE
ATS	AUTOMATIC TRANSFER SWITCH	G	GROUND	(R)	EQUIPMENT TO BE RELOCATED
AWG	AMERICAN WIRE GAUGE	GFI	GROUND FAULT INTERRUPTER	T	TRANSFORMER
C	CONDUIT	HOA	HANDS OFF AUTOMATIC	TYP	TYPICAL
CB	CIRCUIT BREAKERS	HP	HORSEPOWER	TELE	TELEPHONE
CKT	CIRCUIT	KVA	KILOVOLT AMPERE	SW	SWITCH
CLG	CEILING	KW	KILOWATTS	UON	UNLESS OTHERWISE NOTED
CT	CURRENT TRANSFORMER	LTG	LIGHTING	UPS	UNINTERRUPTIBLE POWER SUPPLY
(E)	EXISTING TO REMAIN	MCB	MAIN CIRCUIT BREAKER	V	VOLTS
ELEC	ELECTRIC	MDP	MAIN DISTRIBUTION PANEL	VA	VOLT-AMPS
EM	EMERGENCY	MIN	MINIMUM	W	WATTS
(ER)	RELOCATED EQUIPMENT	MLO	MAIN LUGS ONLY	WP	WEATHERPROOF
FA	FIRE ALARM	(N)	NEW	(X)	REMOVE
		NEC	NATIONAL ELECTRICAL CODE	XFMR	TRANSFORMER

ELECTRICAL SYMBOLS

PLAN SYMBOLS

X X — PLAN REFERENCE NOTE SYMBOL

NOTE: ALL SYMBOLS LISTED MAY NOT APPEAR ON THE DRAWINGS

- EXISTING TO BE REMOVED
- EXISTING TO REMAIN
- NEW WORK

EQUIPMENT

- PANELBOARD, DISTRIBUTION
- PANELBOARD, BRANCH
- (J) JUNCTION BOX
- LP-10,12 — HOMERUN TO PANELBOARD. NUMERALS AND LETTERS ADJACENT TO ARROW HEAD(S) INDICATE ASSIGNED PANEL AND CIRCUIT(S) NUMBERS(S). SEE PANEL SCHEDULE(S) FOR CIRCUIT WIRE AND CONDUIT SIZES/QUANTITIES.

ONE-LINE DIAGRAM

- PANEL, SWITCHBOARD, OR BUSDUCT - SEE ONE-LINE DIAGRAM FOR EXACT SPECIFICATION
- EQUIPMENT ENCLOSURE - SEE ONE-LINE DIAGRAM FOR EXACT SPECIFICATION
- ELECTRICAL CONDUIT - SEE ONE-LINE DIAGRAM FOR EXACT SPECIFICATION
- CIRCUIT BREAKER
- FUSED DISCONNECT SAFETY SWITCH, 3 POLE UON

FIRE ALARM

- FAAP — FIRE ALARM ANNUNCIATOR PANEL.
- FACP — FIRE ALARM CONTROL PANEL.
- FAEP — FIRE ALARM EXTENDER PANEL.

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STATE OF MARYLAND — STEVEN T. SECHRIST — 53363 — PROFESSIONAL ENGINEER

MARK	DESCRIPTION	DATE	APPR.
1	35% SUBMISSION	06/27/2024	S.B.
2	65% SUBMISSION	09/10/2025	S.B.
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DESIGNED BY: TK
DRAWN BY: PS
SUBMITTED BY: PS
PLOT SCALE: 1:100
SIZE:
DATE: 10/29/2025
CHKD BY: PS
SOLICITATION NO.: 1333ND24NR0180617
CONTRACT NO.: 1333ND24CN0180025
ISSUE DATE: 09/15/2025
FILE NUMBER:
FILE NAME:

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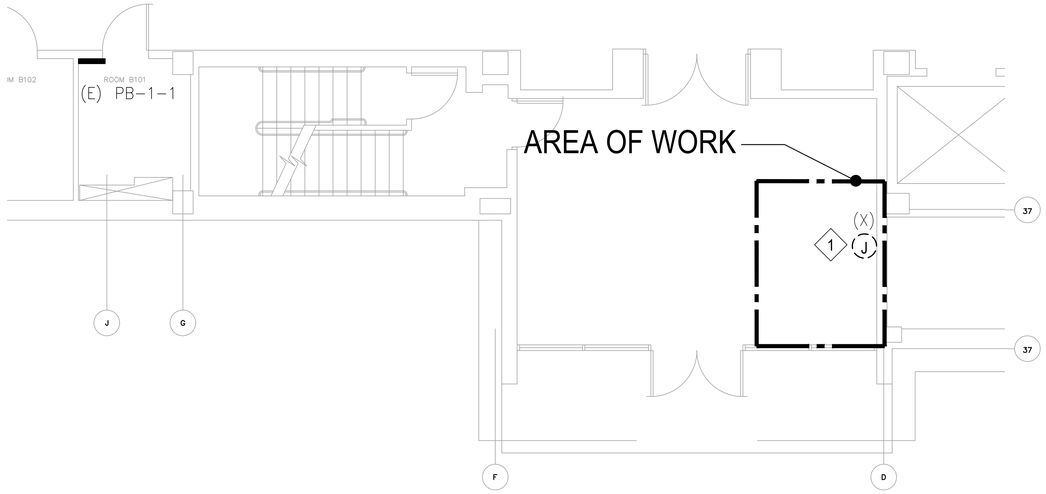
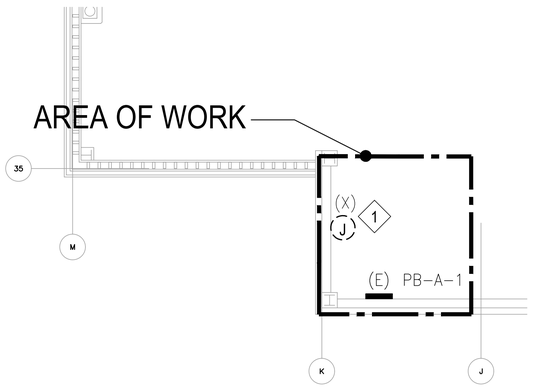
NIST- BLDG 225
FIRE ALARM REPLACEMENT

ELECTRICAL COVER SHEET

SHEET IDENTIFICATION
225-E001



1 BUILDING 225 - FIRST FLOOR - DEMOLITION - POWER
SCALE: 1/4" = 1'-0"



4 BUILDING 225 - ATTIC - DEMOLITION - POWER
SCALE: 1/4" = 1'-0"

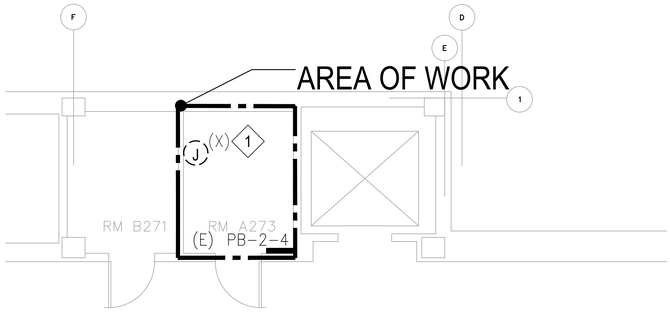
GENERAL NOTES

1. EXISTING CONDITIONS SHOWN ON THIS DRAWING HAVE BEEN OBTAINED FROM RECORD DRAWINGS WHEN AVAILABLE AND GENERAL FIELD SURVEY AND MAY NOT INDICATE ACTUAL EXISTING CONDITIONS IN DETAIL AND DIMENSION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT EXISTING CONDITIONS PRIOR TO THE FABRICATION OR ORDER OF EQUIPMENT OR PERFORMANCE OF ANY WORK. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OR ENGINEER IN WRITING IF EXISTING CONDITIONS ARE DISCOVERED THAT PREVENT THE EXECUTION OF WORK. THE CONTRACTOR SHALL NOT PROCEED WITH WORK UNTIL DIRECTION IS PROVIDED.
2. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND SHOW INTENT OF DEMOLITION WORK TO BE DONE. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED FOR A COMPLETE DEMOLITION.
3. UNLESS SPECIFICALLY INDICATED OTHERWISE, REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING FIXTURES, DEVICES, FEEDERS AND BRANCH CIRCUITRY WHERE EQUIPMENT IS INDICATED TO BE REMOVED. REMOVE WIRING AND CONDUIT/CABLE BACK TO NEXT REMAINING ACTIVE OUTLET OR BACK TO SOURCE.
4. ANY SHUTDOWN OF POWER SERVICES SHALL BE COMPLETED AT TIMES OUTSIDE OF NORMAL WORKING HOURS AS APPROVED BY THE OWNER. PROVIDE A MINIMUM OF 15 BUSINESS DAYS ADVANCED NOTICE PRIOR TO ANY SHUTDOWN.
5. EXISTING EQUIPMENT INDICATED TO REMAIN ARE TO REMAIN ACTIVE THROUGHOUT CONSTRUCTION. PROVIDE TEMPORARY FEEDERS IF REQUIRED TO MAINTAIN SERVICE.
6. PROVIDE TEMPORARY SERVICE AS DIRECTED FOR LIGHTING AND POWER EQUIPMENT (DRILLS, SAWS, ETC.). VERIFY TEMPORARY REQUIREMENTS WITH GENERAL CONTRACTOR. TEMPORARY LIGHTING AND POWER SHALL MEET OSHA REQUIREMENTS AND LOCAL CODES.
7. LOCATE, IDENTIFY AND PROTECT ELECTRICAL SERVICES PASSING THROUGH DEMOLITION AREA AND SERVING OTHER AREAS OUTSIDE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS.
8. ADVANCE NOTICE SHALL BE GIVEN TO OWNER BEFORE COMMENCEMENT OF WORK ON ANY ELECTRICAL CIRCUITRY, WHETHER OR NOT AN OUTAGE IS REQUIRED.
9. PROTECT ADJACENT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE BARRIERS TO KEEP DIRT, DUST AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE PROTECTION AND BARRIERS AFTER DEMOLITION OPERATIONS ARE COMPLETE.
10. UPDATE PANEL SCHEDULES TO SHOW THE DEMOLISHED CIRCUITS RESTORED TO SPARE.

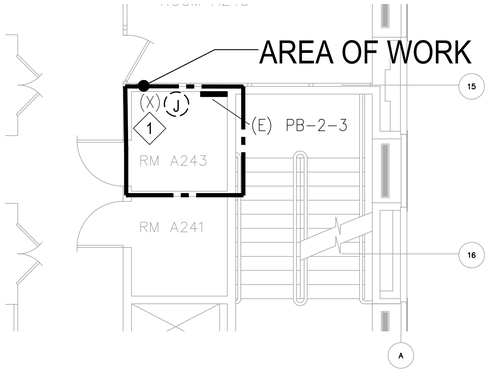
PLAN NOTES (X)

1. DISCONNECT AND REMOVE EXISTING FIRE ALARM CONTROL PANEL. REMOVE CONDUIT AND CONDUCTORS BACK TO SOURCE.

2 BUILDING 225 - SECOND FLOOR RM B201 - DEMOLITION - POWER
SCALE: 1/4" = 1'-0"



5 BUILDING 225 - SECOND FLOOR RM A273 - DEMOLITION - POWER
SCALE: 1/4" = 1'-0"



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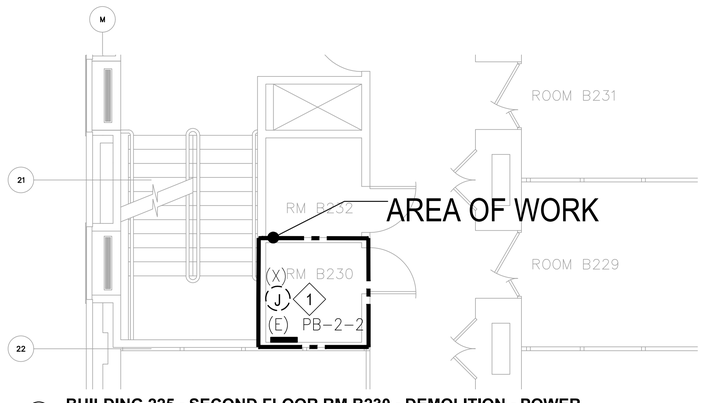
SCALE: 1/4" = 1'-0"



6 BUILDING 225 - SECOND FLOOR RM B230 - DEMOLITION - POWER
SCALE: 1/4" = 1'-0"

KEYPLAN

NORTH

4 2 0 4 8
SCALE: 1/4" = 1'-0"

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PATRICK T. SECHRIST
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DESIGNED BY: M.K.
DRAWN BY: P.S.
CKD BY: P.S.
SUBMITTED BY:
PLOT SCALE: 1:100
ISSUE DATE: 05/19/2025
SIZE:
FILE NAME:
DATE: 08/20/2025
SOLICITATION NO.: 1333NZ24NB0160117
CONTRACT NO.: DB10NB922400525
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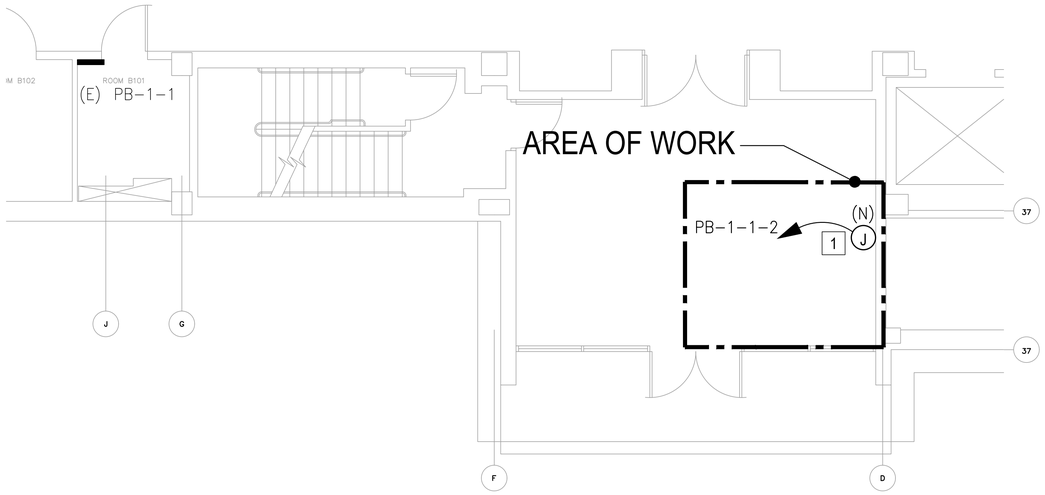
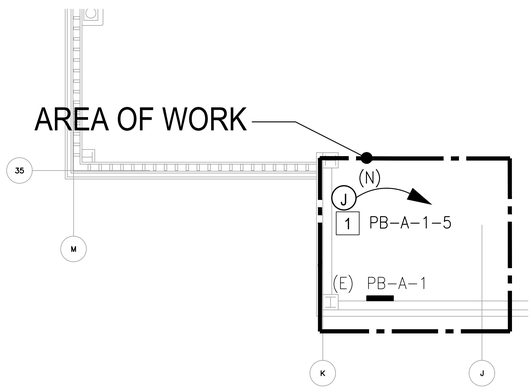
NIST BLDG 225
FIRE ALARM REPLACEMENT

BUILDING 225 - FIRST, SECOND, & ATTIC FLOOR - DEMOLITION - POWER

SHEET IDENTIFICATION
225-ED101



1 **BUILDING 225 - FIRST FLOOR - NEW WORK - POWER**
SCALE: 1/4" = 1'-0"



2 **BUILDING 225 - ATTIC - NEW WORK - POWER**
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. EXISTING CONDITIONS SHOWN ON THIS DRAWING HAVE BEEN OBTAINED FROM RECORD DRAWINGS WHEN AVAILABLE AND GENERAL FIELD SURVEY AND MAY NOT INDICATE ACTUAL EXISTING CONDITIONS IN DETAIL AND DIMENSION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT EXISTING CONDITIONS PRIOR TO THE FABRICATION OR ORDER OF EQUIPMENT OR PERFORMANCE OF ANY WORK. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OR ENGINEER IN WRITING IF EXISTING CONDITIONS ARE DISCOVERED THAT PREVENT THE EXECUTION OF WORK. THE CONTRACTOR SHALL NOT PROCEED WITH WORK UNTIL DIRECTION IS PROVIDED.
2. ALL EQUIPMENT SHOWN SHALL BE NEW UON.
3. REFERENCE SHEET E601 FOR PANEL SCHEDULES AND ONE LINE DIAGRAM.

PLAN NOTES X

1. PROVIDE ELECTRICAL CONNECTION FOR FIRE ALARM PANEL.

KEYPLAN

SCALE: 1/4" = 1'-0"

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5	FINAL SUBMISSION	08/29/2025	S.B.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: TK
DWN BY: PS
CKD BY: PS
SUBMITTED BY: PS
PLOT SCALE: 1:100
ISSUE DATE: 05/16/2025
SIZE:
FILE NAME:
DATE: 08/29/2025
SOLICITATION NO.: 133ND24RNB190117
CONTRACT NO.: 133ND21DNB190025
FILE NUMBER:

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GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BLDG 225
FIRE ALARM REPLACEMENT

BUILDING 225 - FIRST & ATTIC FLOOR - NEW WORK - POWER

SHEET IDENTIFICATION
225-E101

(E) PANEL PB-A-1

POLES 32 **VOLTS** 208/120 VOLTS **MOUNTING** SURFACE **NOTES:** ITE CIRCUIT BREAKER PANELBOARD NO 38
SECT 1 **PHWIRE** 3 PHASE/4 WIRE (A, B, C, N, EG) **LOCATION** ATTIC
AIC * **MAIN** 100 AMPS MCB **FED FROM** TRANSFORMER DT-1
NEUTRAL 100%

LOAD DESCRIPTION	LOAD KVA	FEEDER	TRIP	CKT #	PHASE KVA A	PHASE KVA B	PHASE KVA C	CKT #	TRIP	FEEDER	LOAD KVA	LOAD DESCRIPTION
SPACE	-	-	-	1				2	-	-	-	SPACE
EXISTING	0.50	EXISTING	20	3		1.00		4	20	EXISTING	0.50	EX FAN 502
FACP (N)	0.48	**2 #12, #12GND, 3/4"C.**	**20****	5			0.98	6	20	EXISTING	0.50	FW 502
LTS. N CORR	0.50	EXISTING	20	7	1.00			8	20	EXISTING	0.50	EXISTING
LTS. S CORR	0.50	EXISTING	20	9		1.00		10	20	EXISTING	0.50	EXISTING
LTS. S SIDE	0.50	EXISTING	20	11			1.00	12	20	EXISTING	0.50	EXISTING
LTS. S SIDE	0.50	EXISTING	20	13	1.00			14	20	EXISTING	0.50	EXISTING
LTS. ELEV RM	0.50	EXISTING	20	15		1.00		16	20	EXISTING	0.50	EXISTING
STAIR REC	0.18	EXISTING	20	17			0.68	18	20	EXISTING	0.50	EXISTING
REC ELEV. RM	0.18	EXISTING	20	19	0.18			20	-	-	-	SPARE
FILTER MF	0.50	EXISTING	20	21		0.50		22	-	-	-	SPARE
ATTIC LT CONT	0.50	EXISTING	20	23			1.00	24	20	EXISTING	0.50	EXISTING
PH UNIT HTR	0.50	EXISTING	20	25	1.00			26	20	EXISTING	0.50	EXISTING
EXISTING	0.50	EXISTING	20	27		1.00		28	20	EXISTING	0.50	EXISTING
	0.50			29			1.00	30	20	EXISTING	0.50	EXISTING
FACP	0.50	EXISTING	20	31	1.00			32	20	EXISTING	0.50	TEMP CONT. 502
TOTAL CONNECTED KVA PER PHASE					4.2	4.5	4.7					

LOAD COMPUTATIONS AND MINIMUM FEEDER AMPACITY

CATEGORY	CONNECTED KVA	DMD FACTOR	DMD KVA	DEMAND AMPS	MULTIPLIER	MIN AMPACITY
LIGHTING	3.0	1.00	3.0	8	1.00	8
RECEPTACLES	0.4	NEC TABLE 220-13	0.4	1	1.00	1
KITCHEN EQUIPMENT	-	0.65	-	-	1.00	-
LARGEST MOTOR	-	1.25	-	-	1.00	-
OTHER LOADS	10.0	1.00	10.0	28	1.00	28
	-		-	-		
	-		-	-		
	-		-	-		
	-		-	-		
	-		-	-		
	-		-	-		
DEMAND AMPS 37						

NOTES
*CONTRACTOR TO CONFIRM PANEL AIC RATING. ENGINEER WAS UNABLE TO CONFIRM DUE TO NON INVASIVE SURVEY
**PROVIDE CB IN EXISTING SPACE. MATCH CB TYPE AND AIC RATING.

(E) PANEL PB-1-1

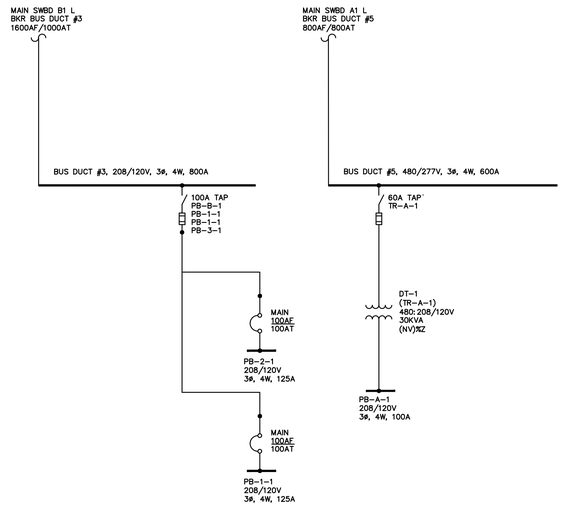
POLES 24 **VOLTS** 208/120 VOLTS **MOUNTING** SURFACE **NOTES:** ITE CIRCUIT BREAKER PANELBOARD NO 44
SECT 1 **PHWIRE** 3 PHASE/4 WIRE (A, B, C, N, EG) **LOCATION** ROOM B101
AIC * **MAIN** 100 AMPS MCB **FED FROM** BUS DUCT #3
NEUTRAL 100%

LOAD DESCRIPTION	LOAD KVA	FEEDER	TRIP	CKT #	PHASE KVA A	PHASE KVA B	PHASE KVA C	CKT #	TRIP	FEEDER	LOAD KVA	LOAD DESCRIPTION
SPACE	-	-	-	1	0.48			2	**20****	**2 #12, #12GND, 3/4"C.**	0.48	**FACP (N)**
EXISTING	0.50	EXISTING	20	3		1.00		4	20	EXISTING	0.50	EXISTING
EXISTING	0.50	EXISTING	20	5			0.50	6	20	-	-	SPARE
LAB REC B115, 17, 19	0.54	EXISTING	20	7	1.44			8	20	EXISTING	0.90	REC B112, 14, 06, 08, 10
REC	0.18	EXISTING	20	9		0.68		10	20	EXISTING	0.50	EXISTING
EXPANDER PANEL (FIRE ALARM)	0.50	EXISTING	20	11			1.00	12	20	EXISTING	0.50	AUTOMATIC DOORS
SIDE CANOPY LTS.	0.50	EXISTING	20	13	0.68			14	20	EXISTING	0.18	STORAGE RM RECEPT
CLOCK PANEL	0.50	EXISTING	20	15		1.00		16	20	EXISTING	0.50	VESTIBULE UNIT HEATER
FRONT CANOPY LTS.	0.50	EXISTING	20	17			1.22	18	20	EXISTING	0.72	TEL. BOOTH AND FLR REC B120, 14, 16, 18
COVERED WALK LTS.	0.50	EXISTING	20	19	0.68			20	20	EXISTING	0.18	DELIVERY RM REC
LOBBY REC	0.18	EXISTING	20	21		0.54		22	20	EXISTING	0.36	WATER COOLER AND LAB REC B109, 11
LOBBY REC	0.18	EXISTING	20	23			0.54	24	20	EXISTING	0.36	LAB REC A105, 07
TOTAL CONNECTED KVA PER PHASE					3.3	3.2	3.3					

LOAD COMPUTATIONS AND MINIMUM FEEDER AMPACITY

CATEGORY	CONNECTED KVA	DMD FACTOR	DMD KVA	DEMAND AMPS	MULTIPLIER	MIN AMPACITY
LIGHTING	1.5	1.00	1.5	4	1.00	4
RECEPTACLES	3.8	NEC TABLE 220-13	3.8	11	1.00	11
KITCHEN EQUIPMENT	-	0.65	-	-	1.00	-
LARGEST MOTOR	-	1.25	-	-	1.00	-
OTHER LOADS	4.5	1.00	4.5	12	1.00	12
	-		-	-		
	-		-	-		
	-		-	-		
	-		-	-		
	-		-	-		
DEMAND AMPS 27						

NOTES
*CONTRACTOR TO CONFIRM PANEL AIC RATING. ENGINEER WAS UNABLE TO CONFIRM DUE TO NON INVASIVE SURVEY
**PROVIDE CB IN EXISTING SPACE. MATCH CB TYPE AND AIC RATING.



1 **PARTIAL ONE-LINE DIAGRAMS**
NOTE: ALL EQUIPMENT SHOWN IS EXISTING UON

GENERAL NOTES

1. PROVIDE MARKINGS FOR POWER SUPPLIES AS REQUIRED BY NFPA SECTION 10.6.5.2.

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STATE OF MARYLAND
PHILIP T. SECHLER
52362
PROFESSIONAL ENGINEER

MARK	DESCRIPTION	DATE	APPR.
5	FINAL SUBMISSION	09/25/2025	S.B.
4	100% SUBMISSION	07/23/2025	S.B.
3	90% SUBMISSION	05/19/2025	S.B.
2	65% SUBMISSION	03/10/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: M.K.
DRAWN BY: PS
CKD BY: PS
SUBMITTED BY:
PLOT SCALE: 1:100
ISSUE DATE: 10/16/2025
FILE NAME:
SIZE:
DATE: 09/25/2025
SOLICITATION NO.: 1333ND24NB19017
CONTRACT NO.: 1333ND24CN0000025
FILE NUMBER:

NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST BLDG 225
FIRE ALARM REPLACEMENT

PANEL SCHEDULES AND ONE-LINE DIAGRAMS

SHEET IDENTIFICATION
225-E601

FIRE ALARM ABBREVIATIONS

AAR	AUTOMATIC AIR RELEASE
AFF	ABOVE FINISHED FLOOR
AHD	ACOUSTIC HAILING DEVICE
AHU	AIR HANDLING UNIT SHUTDOWN
CB	CIRCUIT BREAKER
CDHL	CONDENSATE PUMP HIGH LEVEL
CIS	COMMON INTELLIGIBILITY SCORE
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CP	COND PUMP HIGH LEVEL
CTR	CENTER
CV	CONTROL VALVE
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER
DBA	DECIBEL A-WEIGHTED
DEMO	DEMOLISH, DEMOLITION
DD	DUCT SMOKE DETECTOR
DH	DOOR HOLD
DIA	DIAMETER
DN	DOWN/DROP NIPPLE
DOA	DOOR OPEN ALARM
E	ELEVATOR PRIMARY RECALL
EA	EACH
EAR	ELEVATOR ALTERNATE FLOOR RECALL
EB	ELECTRIC BELL
EF	EXHAUST FAN
EFF	ELEVATOR FIRE HAT FLASHING
EFS	ELEVATOR FIRE HAT SOLID
EH	EXTRA HAZARD
EJ	EXPANSION JOINT
EL	ELEVATION
ELEV	ELEVATOR
EMER	EMERGENCY
ESD	ELEVATOR SHAFT DAMPER
ETR	EXISTING TO REMAIN
EXIST	EXISTING
FA	FIRE ALARM
FAN	FAN
FMCP	FIRE ALARM/MASS NOTIFICATION CONTROL PANEL
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDDS	FLAME DETECTOR DISABLE SWITCH
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HAT
FHV	FIRE HOSE VALVE
FLD	FLAME DETECTOR
FLR	FLOOR
FM	FACTORY MUTUAL
FS	FLOW SWITCH
FT	FEET
GA	GAUGE
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
HGPL	HAZARDOUS GAS POWER LOSS
HGDA	HAZARDOUS GAS DETECTOR ALARM
HTA	HIGH TEMP ALARM
KH	KITCHEN HOOD SUPPRESSION SYSTEM
LFA	LOW AIR FLOW
LOC	LOCAL OPERATING CONSOLE
LPA	CHILLED WATER LOW PRESSURE
LTA	LOW TEMPERATURE HOTWATER REHEAT
MCC	MCC FAN SHUTDOWN
MNS	MASS NOTIFICATION SYSTEM
NP	NETWORK PROTECTOR
OH	ORDINARY HAZARD
OPA	LOW OXYGEN CONDITION PANEL ALARM
OPL	LOW OXYGEN CONDITION PANEL POWER LOSS
OPT	LOW OXYGEN CONDITION PANEL TROUBLE
PM	POWER MONITORING
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
RCV	RISER CONTROL VALVE
SCHED	SCHEDULE
SD	SMOKE DETECTOR
SDC	SMOKE DAMPER CONTROL
SO	SOUND SYSTEM OVERRIDE
SP	SUMP PUMP HIGH LEVEL
SPEC	SPECIFICATION
SPKR	SPRINKLER
SP/ST	SPEAKER/ STROBE
SSI	SECURITY SYSTEM INTERFACE
ST	STROBE
STOR	STORAGE
SYST	SYSTEM
SWS	AUTO TRANS SW
TEMP	TEMPERATURE
TS	TAMPER SWITCH
TT	TRANSFORMER
TTFC	TAPE TUNNEL FAN CONTROL
TYP	TYPICAL
UL	UNDERWRITERS' LABORATORY
VP	VACUUM PUMP LOW PRESSURE
VPA	VESDA PANEL ALARM
VPT	VESDA PANEL TROUBLE
W/	WITH
WD	WATER DETECTION ALARM
WMG	WATER MOTOR GONG
W/O	WITHOUT
WP	WEATHERPROOF
WS	WET SYSTEM
WVL	WAX VAT LID
ZCA	ZONE CONTROL ASSEMBLY

FIRE ALARM LEGEND

EXISTING	DEMO	NEW	
S YY	S YY	S YY	SMOKE DETECTOR (YY - SEE ABBREVIATIONS)
S	S	S	DUCT SMOKE DETECTOR
H	H	H	HEAT DETECTOR
IR	IR	IR	FLAME DETECTOR
YY XX C	YY XX C	YY XX C	SPEAKER /STROBE (CLEAR) (C - CEILING MOUNTED) (XX - CANDELA RATING) (YY - SEE ABBREVIATIONS)
YY S C	YY S C	YY S C	SPEAKER (C - CEILING MOUNTED) (YY - SEE ABBREVIATIONS)
YY XX	YY XX	YY XX	STROBE (CLEAR) (CEILING MOUNTED) (XX - CANDELA RATING) (YY - SEE ABBREVIATIONS)
YY XX	YY XX	YY XX	STROBE (CLEAR) (WALL MOUNTED) (XX - CANDELA RATING) (YY - SEE ABBREVIATIONS)
F	F	F	MANUAL PULL STATION
FS	FS	FS	FIRE STAT
FZ	FZ	FZ	FREEZE STAT
FATC	FATC	FATC	FIRE ALARM TERMINAL CABINET
FACP	FACP	FACP	FIRE ALARM/MASS NOTIFICATION CONTROL PANEL
FATP	FATP	FATP	FIRE ALARM/MASS NOTIFICATION TRANSPONDER PANEL
ADM	ADM	ADM	ADDRESSABLE CONTROL MODULE
AIM	AIM	AIM	ADDRESSALBE MONITOR MODULE

FIRE ALARM GENERAL NOTES

1. THE FIRE ALARM SCOPE FOR THIS PROJECT INCLUDES DEMOLITION OF ALL EXISTING FIRE ALARM CONDUIT, WIRES, DEVICES, APPLIANCES, ETC... AND THE INTALLATION OF A NEW FIRE ALARM SYSTEM WITH SPEAKER AND STROBE NOTIFICATION DEVICES AND ADDRESSABLE INITIATING DEVICES.
2. THE FIRE ALARM SYSTEM SHALL BE DESIGNED, INSTALLED, AND TESTED IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS:
   A. NFPA 72, 2022 EDITION
   B. NFPA 70, 2020 EDITION
   C. NIST P 7400.00
   D. NIST O 7401.00
   E. NIST S 7401.01
   F. NIST S 7401.02
   G. NIST S 7401.03
   H. NIST S 7401.04
   I. THE ARCHITECTURAL BARRIERS ACT
3. A NEW SIMPLEX 4100ES FACP SHALL BE INSTALLED.
4. FOR COMPLETE SYSTEM CONTROL, SEE MATRIX OF OPERATIONS ON SHEET FA601.
5. FINAL FIRE ALARM SYSTEM TESTING SHALL BE WITNESSED BY COR AND THE NIST AHJ OR DELEGATED AHJ.
6. FILE A "RECORD OF COMPLETION" PREPARED IN ACCORDANCE WITH NFPA 72, AND THE FIRE ALARM TEST REPORT, WITH THE COR.
7. OBTAIN APPROVALS AND PERMITS FROM THE COR PRIOR TO COMMENCING WORK. OFPM/COR SHALL SUBMIT WORK PERMIT TO THE NIST AHJ FOR REVIEW IN ACCORANCE WITH NIST S 7401.01 PRIOR TO COMMENCING WORK.
8. DEVICES SHOWN ON THE DRAWINGS ARE THE REQUIRED TYPE IN APPROXIMATE LOCATIONS. AUDIO/VISUAL DEVICES ARE REQUIRED IN ALL NORMALLY OCCUPIED, PUBLIC AND COMMON USE AREAS (INCLUDING ALL OFFICES) AS SHOWN ON THE DRAWINGS HEREIN. CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE FIRE ALARM DEVICES IN ACCORDANCE WITH NFPA 72.
9. FOR EACH INDICATED VISUAL DEVICE LOCATION, PROVIDE ONE CLEAR LENS STROBE MARKED "ALERT".
10. AUDIBLE FIRE ALARM SOUND LEVEL SHALL BE AT LEAST 15 DBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 DBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, MEASURING 5 FEET ABOVE THE FLOOR IN THE OCCUPIABLE AREA, BUT NOT GREATER THAN 120 DBA AT THE MINIMUM HEARING DISTANCE FROM THE AUDIBLE APPLIANCE. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL SPEAKER QUANTITY IN ORDER TO COMPLY WITH NFPA 72 AUDIBILITY REQUIREMENTS.
11. SPEAKER SYSTEM INTELLIGIBILITY SHALL HAVE CIS VALUE 0.7 CIS MINIMUM (POINT MEASUREMENTS OF 0.65 MAY BE ROUNDED TO 0.7). AREAS OF THE BUILDING WHERE OCCUPANTS ARE NOT EXPECTED TO BE NORMALLY PRESENT, MECHANICAL, ELECTRICAL, COMMUNICATION ROOMS, STORAGE ROOMS, AND ELEVATOR MACHINE ROOMS ARE PERMITTED TO HAVE A CIS SCORE LESS THAN 0.7 IF PERSONNEL CAN DETERMINE THAT A VOICE SIGNAL IS BEING BROADCAST AND THEY MUST WALK NO MORE THAN 50 FT TO A LOCATION WITH AT LEAST THE MINIMUM REQUIRED CIS VALUE WITHIN THE SAME AREA. INTELLIGIBILITY BY MEASUREMENT AFTER INSTALLATION. MEASUREMENTS SHOULD BE TAKEN NEAR THE HEAD LEVEL APPLICABLE FOR MOST PERSONNEL IN THE SPACE UNDER NORMAL CONDITIONS (E.G., STANDING IN CORRIDORS, SITTING IN CLASSROOMS AND OFFICES, AS APPROPRIATE).
12. ALL NOTIFICATION APPLIANCE CIRCUITS SHALL BE CLASS A. INITIATING DEVICE CIRCUITS (IDC) SERVING MORE THAN ONE DEVICE MUST BE CLASS A; HOWEVER, IDC'S SERVING A MONITOR MODULE AND AN ADJACENT DEVICE MAY BE CLASS B CONDUIT WITH CLASS A WIRING. ALL SIGNALING LINE CIRCUITS SHALL BE CLASS A. ALL INITIATING DEVICE CIRCUITS SHALL BE CLASS A. ALL SIGNALING LINE CIRCUITS FOR PANEL-TO-PANEL CIRCUITS SHALL BE CLASS X. ALL CIRCUITS THAT PASS THROUGH FLOOR LEVELS SHALL HAVE A SURVIVABILITY OF LEVEL 2. THOSE CIRCUITS THAT SERVE A SINGLE FLOOR OR ARE DEDICATED TO THE SPINE SHALL HAVE A SURVIVABILITY OF LEVEL 0.
13. WIRING SHALL NOT BE LOOPED THROUGH DEVICES. WIRE MUST BE CUT FOR IN AND OUT CONNECTIONS. POINT COMMON ANNUNCIATION AND T-TAPPING IS PROHIBTED. ALL WIRING TO INITIATING DEVICES AND NOTIFICATION DEVICES SHALL BE SUPERVISED.
14. FIRE ALARM CIRCUIT ZONING FOR EACH BUILDING SHALL BE AS FOLLOWS:
   A. INDEPENDENT STROBE CIRCUITS FOR EACH LEVEL;
   B. INDEPENDENT STROBE CIRCUITS FOR EACH INDIVIDUAL SPINE: NORTHEAST, NORTHWEST, SOUTHEAST, SOUTHWEST;
   C. INDEPENDENT SPEAKER CIRCUITS FOR EACH LEVEL;
   D. INDEPENDENT SPEAKER CIRCUITS FOR EACH INDIVIDUAL SPINE: NORTHEAST, NORTHWEST, SOUTHEAST, SOUTHWEST;
   E. INDEPENDENT SLC CIRCUIT FOR EACH LEVEL;
   F. INDEPENDENT SLC CIRCUIT FOR EACH INDIVIDUAL SPINE: NORTHEAST, NORTHWEST, SOUTHEAST, SOUTHWEST;
   G. INDEPENDENT EXTERIOR SPEAKER CIRCUITS FOR EACH 1ST LEVEL AND PENTHOUSE LEVEL;
   H. INDEPENDENT ACOUSTIC HAILING DEVICE CIRCUIT FOR EACH PENTHOUSE LEVEL;
   I. INDEPENDENT M&E CIRCUIT FOR EACH PANEL.
15. EACH NOTIFICATION APPLIANCE CIRCUIT AND SIGNALING LINE CIRCUIT MUST INCLUDE 25% SPARE CAPACITY.
16. CIRCUITS FOR AIR HANDLER UNIT SHUTDOWN AND DOOR HOLD OPEN DEVICES SHALL BE CONNECTED TO ADDRESSABLE INPUT/OUTPUT MODULES.
17. TAMPER SWITCHES AND FLOW SWITCHES SHALL BE INSTALLED, BUT SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM BY THE FIRE ALARM CONTRACTOR.
18. ALL DUCT DETECTORS SHALL BE EQUIPPED WITH REMOTE INDICATOR AND TEST SWITCH. INDICATOR AND TEST SWITCH SHALL BE LOCATED 4'-0" ABOVE THE FLOOR AND ADJACENT TO EACH DUCT DETECTOR.
19. PROVIDE "LOCK ON" DEVICE FOR CIRCUIT BREAKERS SUPPLYING FIRE ALARM EQUIPMENT. IDENTIFY BREAKER WITH COLOR RED.
20. ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT, EMT MINIMUM. PAINTING AND LABELING OF CONDUIT SHALL BE AS OUTLINED IN SPECIFICATION 284621.11.
21. MAIN CONTROL PANEL SHALL HAVE ABILITY TO DELIVER PRE-RECORDED MESSAGES AND MANUALLY PAGE.
22. ALL PANELS LOCATED IN CORRIDORS SHALL BE FLUSH OR RECESSED MOUNTED TO INTERIOR PARTITIONS.
23. FIRE AND SMOKE STOP ALL PENETRATIONS THROUGH RATED ASSEMBLIES. PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEM PER UL 1479 AND SPECIFICATIONS.
24. FIRE ALARM CONDUCTORS FOR NEW INSTALLATIONS SHALL BE AS RECOMMENDED BY THE MANUFACTURER AND APPROVED BY FFSG. MINIMUM SIZES ARE AS FOLLOWS:
   a. SIGNALING LINE CIRCUITS (SLC) AND INITIATING DEVICE CIRCUITS (IDC): #18 AWG
   b. NOTIFICATION APPLIANCE CIRCUITS (NAC), SPEAKER: #16 AWG
   c. NOTIFICATION APPLIANCE CIRCUITS (NAC), STROBE: #14 AWG
25. AUDIO/VISUAL DEVICES SHALL BE FIELD SELECTABLE FOR 15/30/75/110 CANDELA.
26. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.
27. FIRE ALARM TERMINAL CABINETS SHALL BE REMOVED IF NOT REUSED.

NIST
OFPM
Office of Facilities & Property Management

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PROJECT #24049

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STATE OF MARYLAND
DANIEL M. LEVY
PROFESSIONAL ENGINEER
28453
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RS
DRAWN BY: DML
SUBMITTED BY: RS
CHD BY: TRI
PLOT SCALE: 1:1
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
ISSUE DATE: 09/11/2024
FILE NUMBER:
SIZE:
FILE NAME:

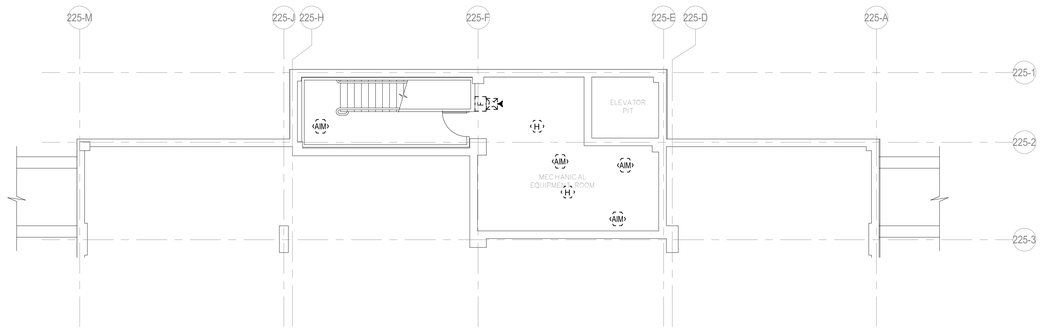
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST
FIRE ALARM REPLACEMENT

FIRE ALARM ABBREVIATIONS, LEGEND, AND GENERAL NOTES

SHEET IDENTIFICATION
FA001
SHEET X OF Y



1 FIRE ALARM DEMOLITION SUB-BASEMENT LEVEL PLAN - BLDG 225
1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
B. DEMOLISH ALL EXISTING FIRE ALARM CONDUIT, WIRES, APPLIANCES, DEVICES, AND OTHER ASSOCIATED FIRE ALARM COMPONENTS.

KEYED NOTES

KEYPLAN

0 4'-0" 8'-0" 16'-0"

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COLUMBIA, MD 21046

STATE OF MARYLAND
TRI C. NGUYEN
38457
PROFESSIONAL ENGINEER
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/19/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RS
DRAWN BY: DML
SUBMITTED BY: RS
CHD BY: TRI
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21D00B190025
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
FILE NUMBER:
SIZE:
FILE NAME:

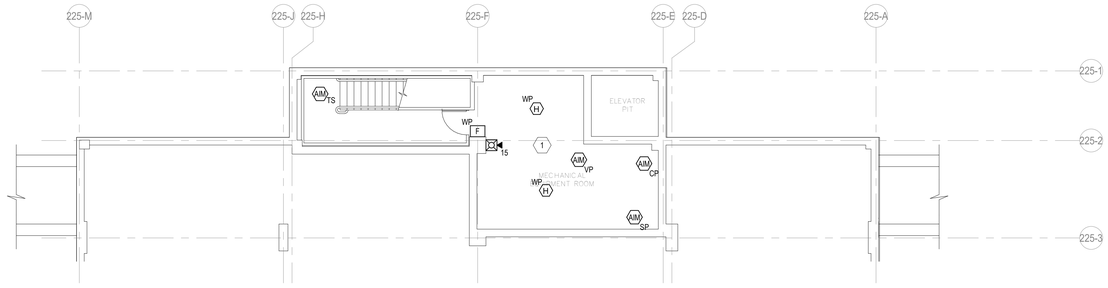
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM DEMOLITION SUB-BASEMENT LEVEL PLAN - BLDG 225

SHEET IDENTIFICATION
FD15S
SHEET X OF Y



FIRE ALARM SUB-BASEMENT LEVEL PLAN
- BLDG 225

1 — 1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
B. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.
C. DEVICES IN THE SUB-BASEMENT LEVEL SHALL BE WEATHERPROOF OR HIGH TEMPERATURE.

KEYED NOTES

1 PROVIDE WEATHERPROOF DEVICES AND CONDUIT IN THIS SPACE. PROVIDE THERMOTECH 302-ET-135 HEAT DETECTORS, SIMPLEX 49SVH-APPLC SPEAKER/STROBES, SIMPLEX 2099-9144 MANUAL PULL STATIONS, OR SIMILAR WEATHERPROOF DEVICES AS PRESCRIBED IN SPECIFICATION 284621.11.

KEYPLAN

NORTH

0 4'-0" 8'-0" 16'-0"

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT
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PROJECT #24049

STANTON ENGINEERING SERVICES, LLC
STANTON ENGINEERING SERVICES LLC
10280 OLD COLUMBIA RD. SUITE 275
COLUMBIA, MD 21046

STATE OF MARYLAND
JOSEPH T. RYAN
26437
PROFESSIONAL ENGINEER
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/19/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RS
DRAWN BY: DML
SUBMITTED BY: RS
CHKD BY: TRI
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SIZE:
FILE NAME:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21CNB190025
FILE NUMBER:

NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM SUB-BASEMENT LEVEL PLAN - BLDG 225

SHEET IDENTIFICATION
FA15S
SHEET X OF Y

1 FIRE ALARM DEMOLITION BASEMENT LEVEL AREA A PLAN- BLDG 225

1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.

B. DEMOLISH ALL EXISTING FIRE ALARM CONDUIT, WIRES, APPLIANCES, DEVICES, AND OTHER ASSOCIATED FIRE ALARM COMPONENTS.

KEYED NOTES

KEYPLAN

NORTH

0 4'-0" 8'-0" 16'-0"

NIST OFPM Office of Facilities & Property Management

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT

CFR ENGINEERING

MEP CONSULTANTS
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STANTON ENGINEERING SERVICES, LLC

STANTON ENGINEERING SERVICES LLC
10280 OLD COLUMBIA RD. SUITE 275
COLUMBIA, MD 21046

STATE OF MARYLAND
MARCHUS E. STANTON
No. 26452
PROFESSIONAL ENGINEER
4/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RS
DWN BY: DML
CKD BY: TRI
SUBMITTED BY: PS
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SIZE: -
FILE NAME:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
FILE NUMBER:

NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM DEMOLITION BASEMENT LEVEL AREA A PLAN - BLDG 225

SHEET IDENTIFICATION
FD15BA
SHEET X OF Y

1 FIRE ALARM DEMOLITION BASEMENT LEVEL AREA B PLAN - BLDG 225

1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.

B. DEMOLISH ALL EXISTING FIRE ALARM CONDUIT, WIRES, APPLIANCES, DEVICES, AND OTHER ASSOCIATED FIRE ALARM COMPONENTS.

KEYED NOTES

KEYPLAN

0 4'-0" 8'-0" 16'-0"

NIST OFPM Office of Facilities & Property Management

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT

CFR ENGINEERING

MEP CONSULTANTS
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STANTON ENGINEERING SERVICES, LLC

STANTON ENGINEERING SERVICES LLC
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STATE OF MARYLAND
ROBERT E. STANTON
24452
PROFESSIONAL ENGINEER
4/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: RS
DWN BY: DML
CKD BY: TRI
SUBMITTED BY: PS
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SIZE: -
FILE NAME:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
FILE NUMBER:

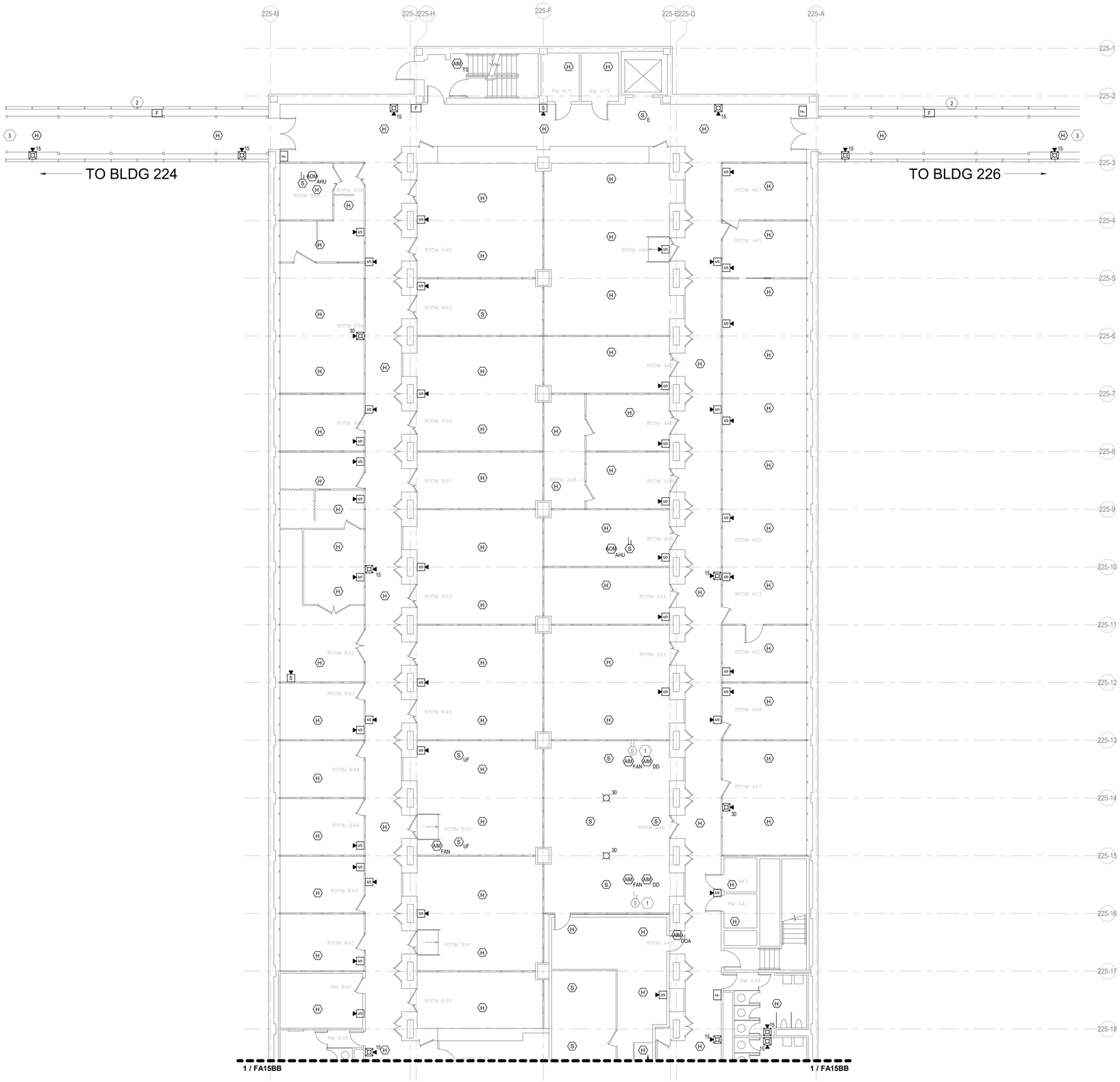
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM DEMOLITION BASEMENT LEVEL AREA B PLAN - BLDG 225

SHEET IDENTIFICATION
FD15BB
SHEET X OF Y



1 FIRE ALARM BASEMENT LEVEL AREA A PLAN - BLDG 225

1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
B. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.

KEYED NOTES

1 EXISTING DUCT SMOKE DETECTOR BUILT INTO COMPUTER ROOM AIR CONDITIONER UNIT.
2 LOCATION OF SPINE DOOR TO EXTERIOR.
3 END OF SPINE; ENTRANCE TO BUILDING.

KEYPLAN

0 4'-0" 8'-0" 16'-0"

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STANTON ENGINEERING SERVICES LLC
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STATE OF MARYLAND — JOSEPH A. DIGIOVANNI — 28453 — PROFESSIONAL ENGINEER — 9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: DIG
DRAWN BY: DML
SUBMITTED BY: RJS
CHKD BY: TRI
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24ENB190117
CONTRACT NO.: 1333ND19D0B190025
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
FILE NUMBER:
SIZE:
FILE NAME:

NIST
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CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM BASEMENT LEVEL AREA A PLAN - BLDG 225

SHEET IDENTIFICATION
FA15BA
SHEET X OF Y

FIRE ALARM BASEMENT LEVEL AREA B PLAN - BLDG 225

1 1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
B. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.

KEYED NOTES

1 ROOM PROTECTED BY SPRINKLER SYSTEM.
2 EXISTING DUCT SMOKE DETECTOR BUILT INTO COMPUTER ROOM AIR CONDITIONER UNIT.
3 UPDATE GRAPHIC ANNUNCIATOR TO SHOW ALL FIRE ALARM DEVICES AND UNDERFLOOR VESDA PIPING LAYOUT.

KEYPLAN

0 4'-0" 8'-0" 16'-0"

NIST
OFPM
Office of Facilities & Property Management

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STATE OF MARYLAND
ANTHONY J. KOLAT
26457
PROFESSIONAL ENGINEER
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RR
DRAWN BY: DML
SUBMITTED BY: RR
CHKD BY: TRI
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21D0B190025
FILE NUMBER:
SIZE: -
FILE NAME:

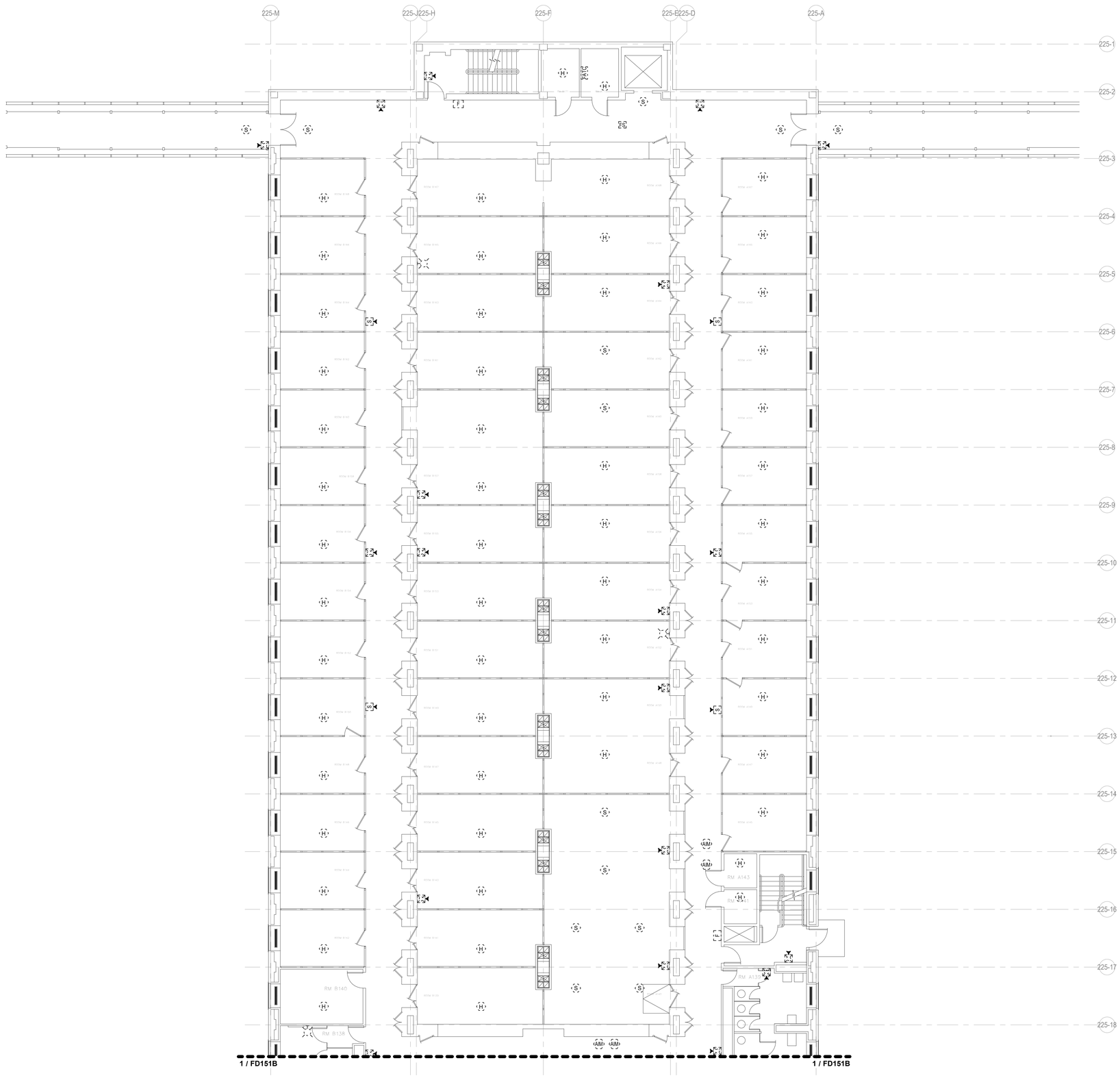
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM BASEMENT LEVEL AREA B PLAN - BLDG 225

SHEET IDENTIFICATION
FA15BB
SHEET X OF Y



1 FIRE ALARM DEMOLITION FIRST LEVEL AREA A PLAN - BLDG 225

1/8" = 1'-0"

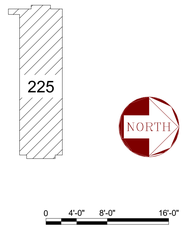
GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.

B. DEMOLISH ALL EXISTING FIRE ALARM CONDUIT, WIRES, APPLIANCES, DEVICES, AND OTHER ASSOCIATED FIRE ALARM COMPONENTS.

KEYED NOTES

KEYPLAN



NIST
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STANTON ENGINEERING SERVICES, LLC
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10280 OLD COLUMBIA RD, SUITE 275
COLUMBIA, MD 21046

STATE OF MARYLAND
ROBERT X. DAVIS
24452
PROFESSIONAL ENGINEER
4/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RS
DWN BY: DML
CKD BY: TRI
SUBMITTED BY: PS
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SIZE: -
FILE NAME:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
FILE NUMBER:

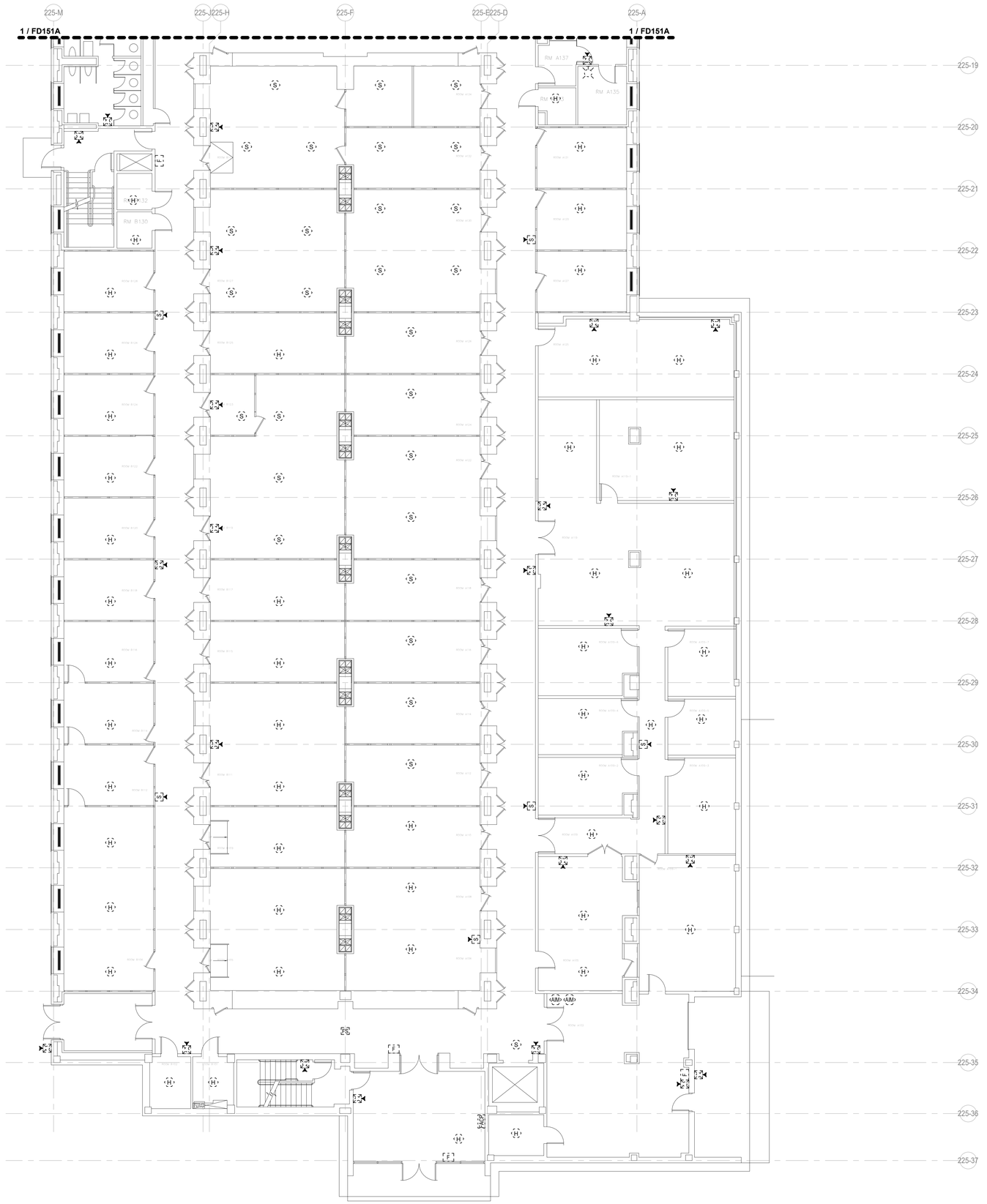
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM DEMOLITION
FIRST LEVEL AREA A PLAN -
BLDG 225

SHEET IDENTIFICATION
FD151A
SHEET X OF Y



1 FIRE ALARM DEMOLITION FIRST LEVEL AREA B PLAN - BLDG 225
1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
B. DEMOLISH ALL EXISTING FIRE ALARM CONDUIT, WIRES, APPLIANCES, DEVICES, AND OTHER ASSOCIATED FIRE ALARM COMPONENTS.

KEYED NOTES

KEYPLAN

NORTH

0 4'-0" 8'-0" 16'-0"

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT
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PROJECT #24049

STANTON ENGINEERING SERVICES LLC
10280 OLD COLUMBIA RD. SUITE 275
COLUMBIA, MD 21046

STATE OF MARYLAND — 26453 — PROFESSIONAL ENGINEER — 9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/19/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RS
DRAWN BY: DML
CHD BY: TRI
SUBMITTED BY: RS
DATE: 09/27/2024
QBL1 LOCATION NO.: RA-D1-225-01-01
CONTRACT NO.: 1333ND24FNB190117
TASK ORDER NO.: 1333ND24FNB190025
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SIZE:
FILE NUMBER:
FILE NAME:

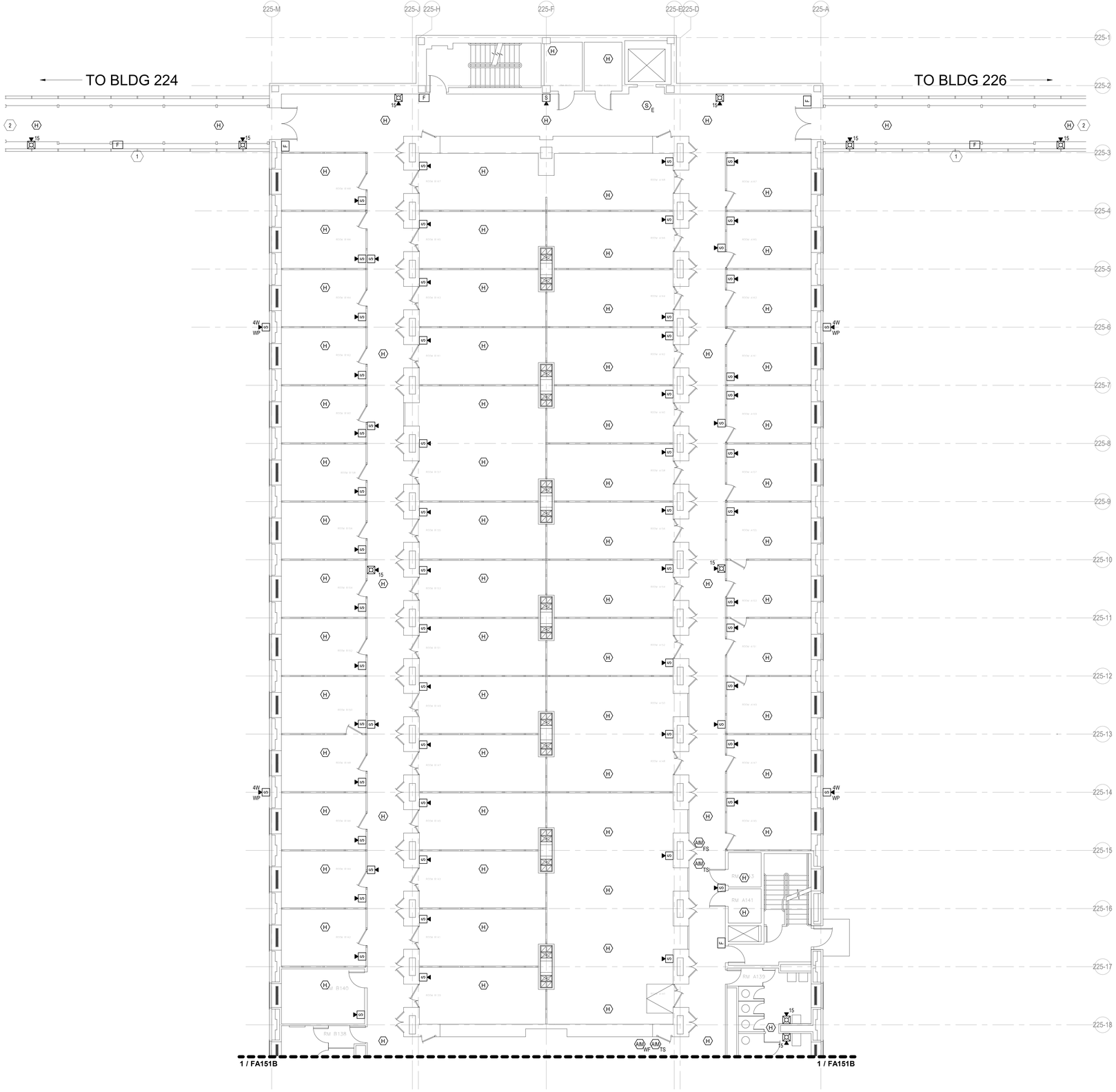
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
MEP CONSULTANTS
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM DEMOLITION FIRST LEVEL AREA B PLAN - BLDG 225

SHEET IDENTIFICATION
FD151B
SHEET X OF Y



1 FIRE ALARM FIRST LEVEL AREA A PLAN - BLDG 225

1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.

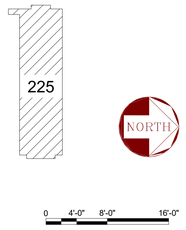
B. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.

KEYED NOTES

1 LOCATION OF SPINE DOOR TO EXTERIOR.

2 END OF SPINE; ENTRANCE TO BUILDING.

KEYPLAN



NIST
OFPM
Office of Facilities & Property Management

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT
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PROJECT #24049

STANTON ENGINEERING SERVICES, LLC
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STATE OF MARYLAND
ANTHONY E. DAVIS
26452
PROFESSIONAL ENGINEER
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RS
DWN BY: DML
CKD BY: TRI
SUBMITTED BY: PS
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SIZE: -
FILE NAME:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
FILE NUMBER:

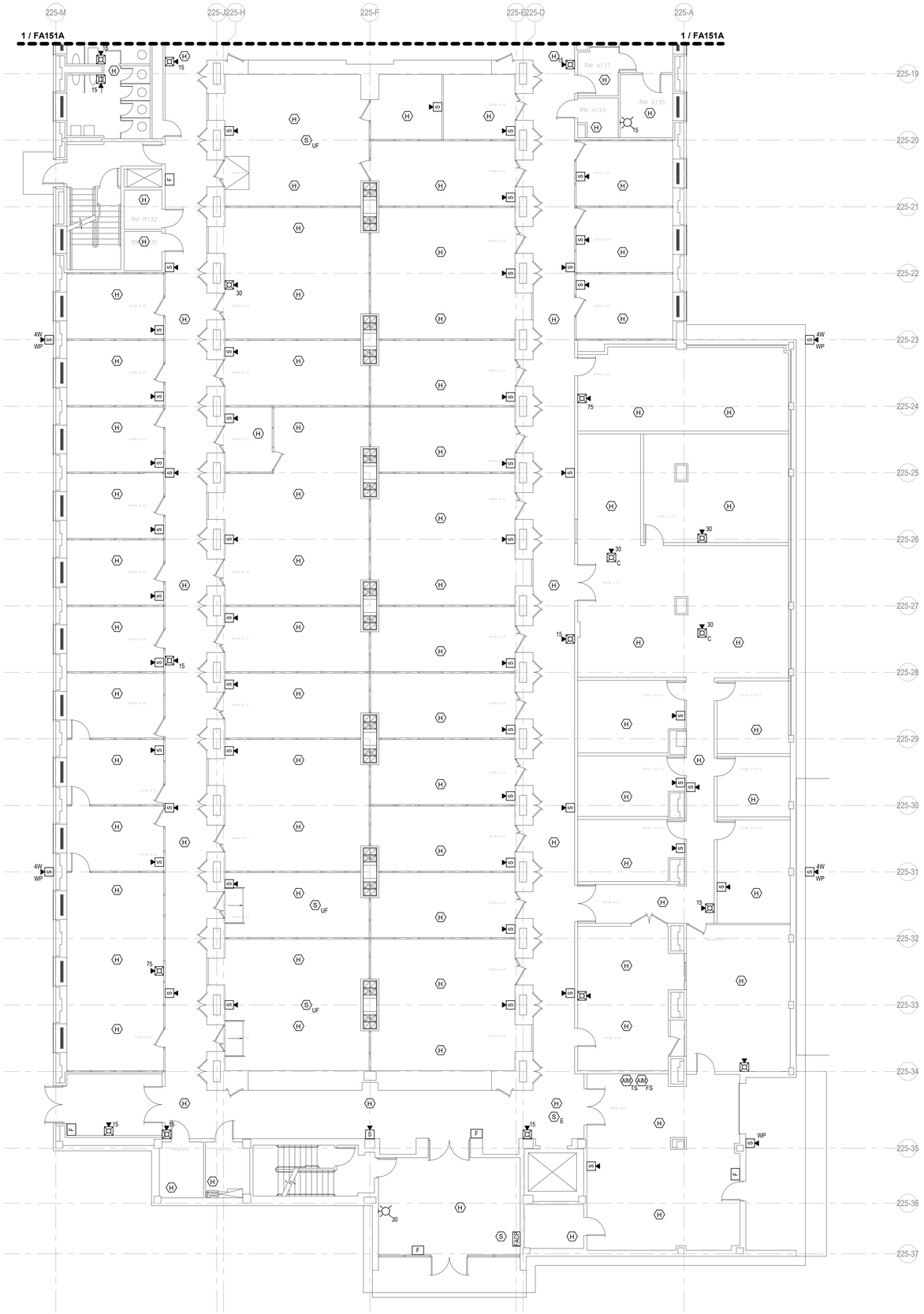
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM FIRST LEVEL AREA A PLAN - BLDG 225

SHEET IDENTIFICATION
FA151A
SHEET X OF Y



1 FIRE ALARM FIRST LEVEL AREA B PLAN - BLDG 225

1/8" = 1'-0"

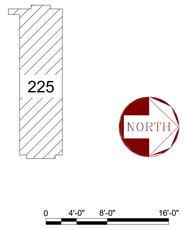
GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.

B. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.

KEYED NOTES

KEYPLAN



NIST
OFPM
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MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT
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MEP CONSULTANTS
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Germantown MD 20874
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F: 301-560-6336
INFO@cfrengineering.com
PROJECT #24049

STANTON ENGINEERING SERVICES, LLC
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COLUMBIA, MD 21046

STATE OF MARYLAND
KIRTHOT E. SHAH
24453
PROFESSIONAL ENGINEER
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RS
DWN BY: DML
CKD BY: TRI
SUBMITTED BY: PS
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SIZE: -
FILE NAME:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
FILE NUMBER:

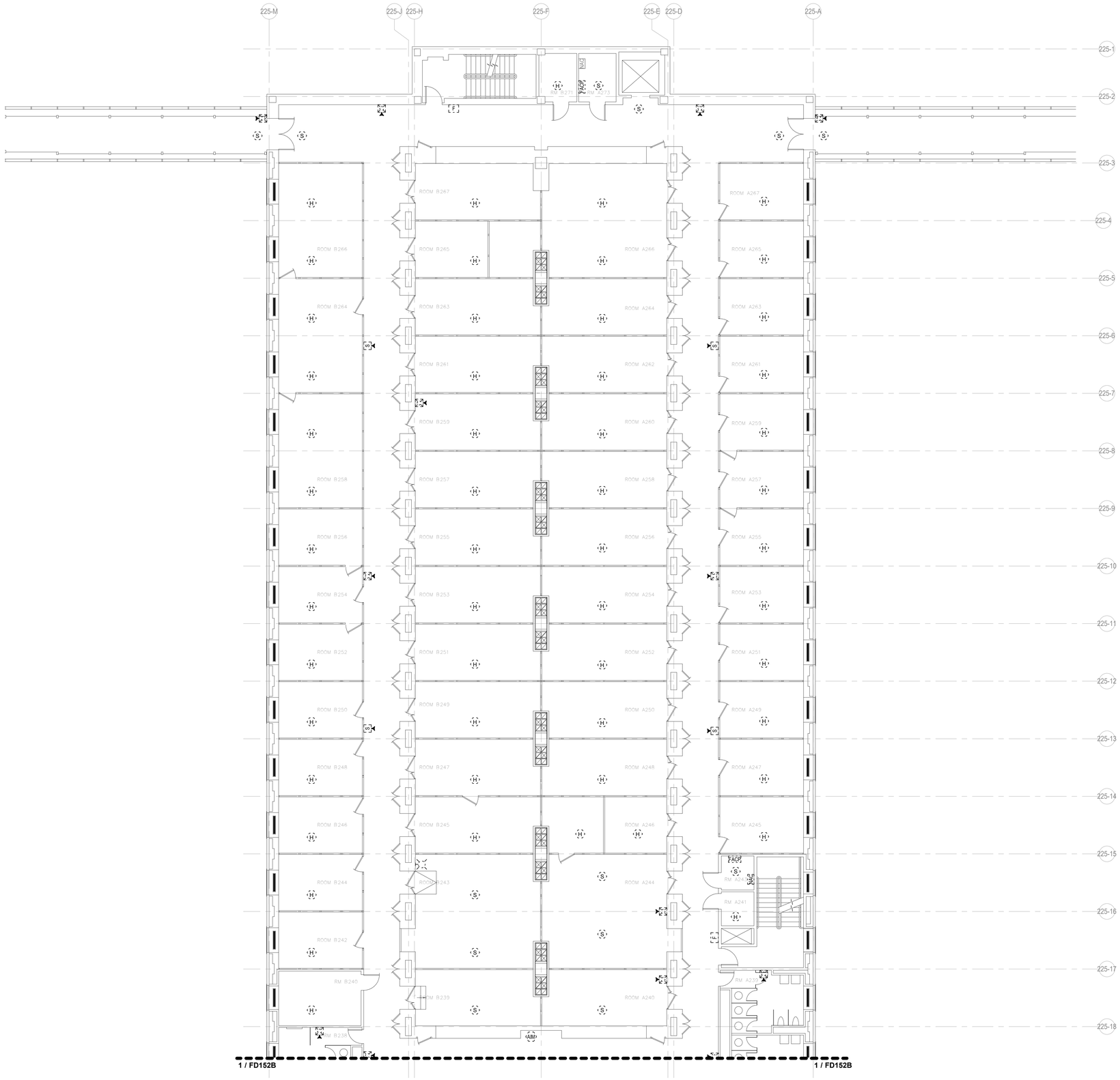
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM FIRST LEVEL AREA B PLAN - BLDG 225

SHEET IDENTIFICATION
FA151B
SHEET X OF Y



1 FIRE ALARM DEMOLITION SECOND LEVEL AREA A PLAN - BLDG 225
1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
B. DEMOLISH ALL EXISTING FIRE ALARM CONDUIT, WIRES, APPLIANCES, DEVICES, AND OTHER ASSOCIATED FIRE ALARM COMPONENTS.

KEYED NOTES

KEYPLAN

0 4'-0" 8'-0" 16'-0"

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STATE OF MARYLAND
DANIEL T. RUSSELL
26433
PROFESSIONAL ENGINEER
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY:	DATE: SEPT/2024
DRAWN BY: DML	CHD BY: TRI
SUBMITTED BY:	SOLICITATION NO.: 1333ND24ENB190117
PLOT SCALE: 1=1	ISSUE DATE: 09/11/2024
SIZE:	FILE NAME:

NIST
OFPM
GAITHERSBURG, MD

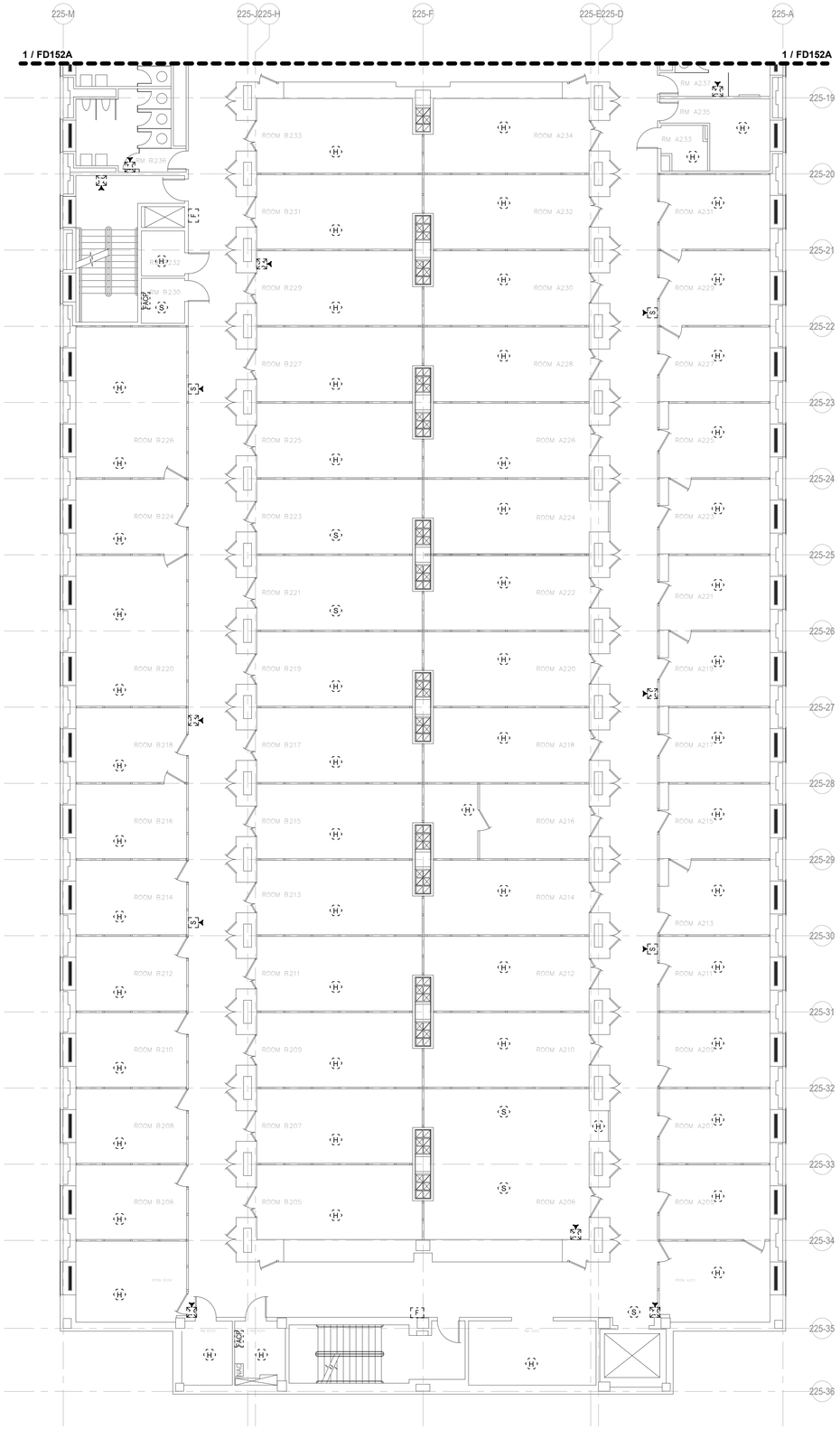
CFR ENGINEERING
20251 CENTURY BLVD SUITE 120
GERMANTOWN, MD 20874

CONTRACT NO.: 1333ND21D0019P0025
FILE NUMBER:

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM DEMOLITION SECOND LEVEL AREA A PLAN - BLDG 225

SHEET IDENTIFICATION
FD152A
SHEET X OF Y



FIRE ALARM DEMOLITION SECOND LEVEL AREA B PLAN - BLDG 225

1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
B. DEMOLISH ALL EXISTING FIRE ALARM CONDUIT, WIRES, APPLIANCES, DEVICES, AND OTHER ASSOCIATED FIRE ALARM COMPONENTS.

KEYED NOTES

KEYPLAN

0 4'-0" 8'-0" 16'-0"

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT
CFR ENGINEERING
MEP CONSULTANTS
20251 Century Blvd #120
Germantown MD 20874
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F: 301-560-8336
INFO@cfrengineering.com
PROJECT #24049

STANTON ENGINEERING SERVICES LLC
10280 OLD COLUMBIA RD. SUITE 275
COLUMBIA, MD 21046

STATE OF MARYLAND
DANIEL T. RUSSELL
26437
PROFESSIONAL ENGINEER
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	95% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RS
DRAWN BY: DML
SUBMITTED BY: RS
PLOT SCALE: 1:1
SIZE:
ISSUE DATE: 09/11/2024
FILE NAME:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21CNB190025
FILE NUMBER:

NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM DEMOLITION SECOND LEVEL AREA B PLAN - BLDG 225

SHEET IDENTIFICATION
FD152B
SHEET X OF Y

1 FIRE ALARM SECOND LEVEL AREA A PLAN - BLDG 225

1/8" = 1'-0"

GENERAL NOTES

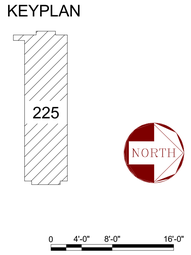
A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.

B. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.

KEYED NOTES

1 END OF SPINE; ENTRANCE TO BUILDING.

KEYPLAN



NIST OFPM Office of Facilities & Property Management

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT

CFR ENGINEERING

MEP CONSULTANTS
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STANTON ENGINEERING SERVICES, LLC

STANTON ENGINEERING SERVICES LLC
10280 OLD COLUMBIA RD. SUITE 275
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STATE OF MARYLAND
ANTHONY K. OTTAH
24452
PROFESSIONAL ENGINEER
4/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: RS
DWN BY: DML
CKD BY: TRI
SUBMITTED BY: PS
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SIZE: -
FILE NAME:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
FILE NUMBER:

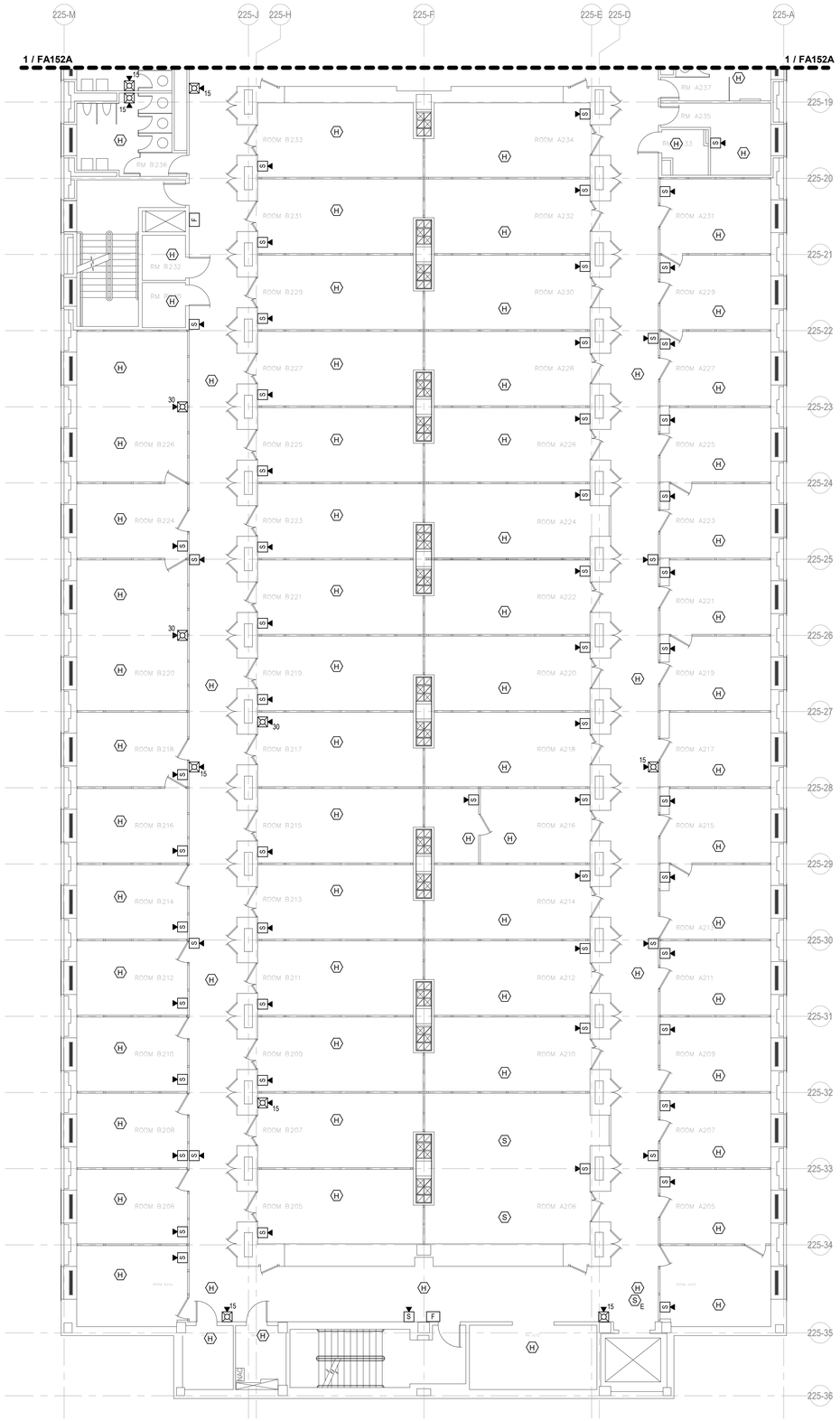
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM SECOND LEVEL AREA A PLAN - BLDG 225

SHEET IDENTIFICATION
FA152A
SHEET X OF Y



1 FIRE ALARM SECOND LEVEL AREA B PLAN - BLDG 225

1/8" = 1'-0"

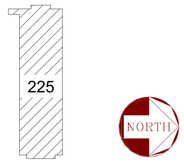
GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.

B. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.

KEYED NOTES

KEYPLAN



0 4'-0" 8'-0" 16'-0"

NIST OFPM Office of Facilities & Property Management

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT

CFR ENGINEERING

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PROJECT #24049

STANTON ENGINEERING SERVICES, LLC

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10280 OLD COLUMBIA RD, SUITE 275
COLUMBIA, MD 21046

STATE OF MARYLAND
MICHAEL E. STANTON
24452
PROFESSIONAL ENGINEER
4/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: RS
DWN BY: DML
CKD BY: TRI
SUBMITTED BY: PS
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SIZE: -
FILE NAME:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
FILE NUMBER:

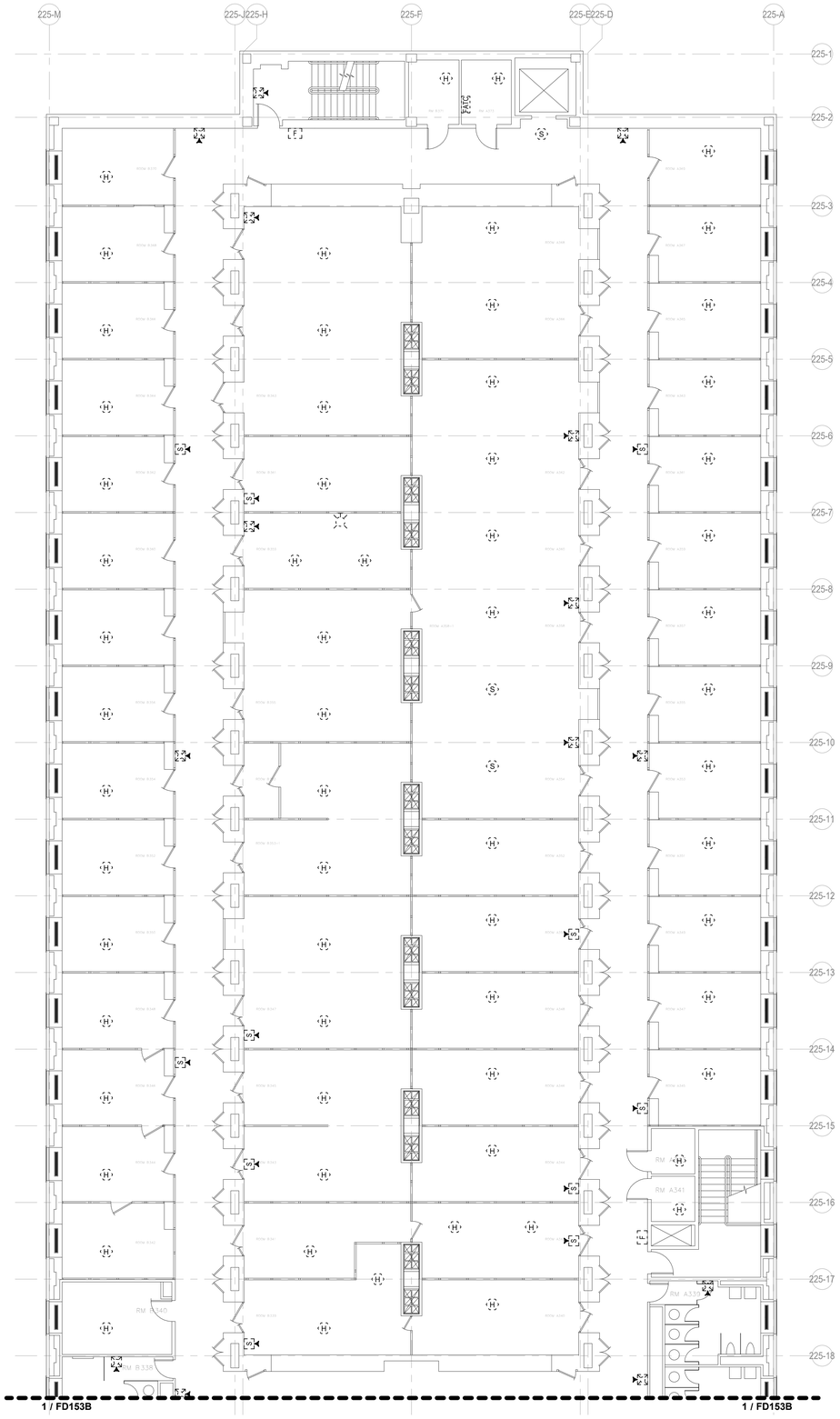
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM SECOND LEVEL AREA B PLAN - BLDG 225

SHEET IDENTIFICATION
FA152B
SHEET X OF Y



1 FIRE ALARM DEMOLITION THIRD LEVEL AREA A PLAN - BLDG 225

1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
B. DEMOLISH ALL EXISTING FIRE ALARM CONDUIT, WIRES, APPLIANCES, DEVICES, AND OTHER ASSOCIATED FIRE ALARM COMPONENTS.

KEYED NOTES

KEYPLAN

0 4'-0" 8'-0" 16'-0"

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT
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PROJECT #24049

STANTON ENGINEERING SERVICES LLC
10280 OLD COLUMBIA RD. SUITE 275
COLUMBIA, MD 21046

STATE OF MARYLAND — TRI T. DAM — 26437 — PROFESSIONAL ENGINEER — 9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.
MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: RDS
DRAWN BY: DML
SUBMITTED BY: RDS
PLOT SCALE: 1:1
SIZE:
ISSUE DATE: 09/11/2024
FILE NAME:

DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND20D0001900025
FILE NUMBER:

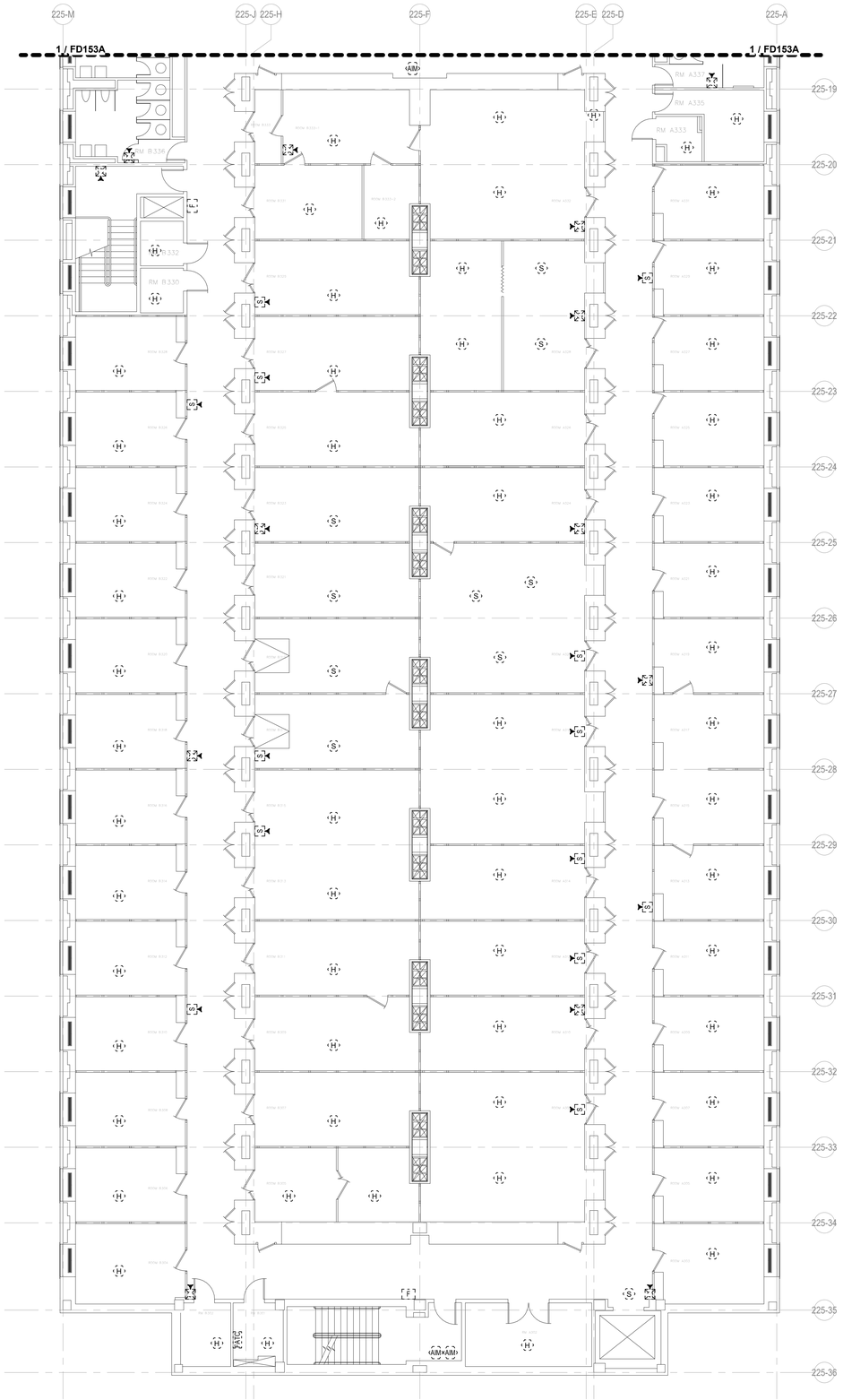
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM DEMOLITION THIRD LEVEL AREA A PLAN - BLDG 225

SHEET IDENTIFICATION
FD153A
SHEET X OF Y



1 FIRE ALARM DEMOLITION THIRD LEVEL AREA B PLAN - BLDG 225

1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
B. DEMOLISH ALL EXISTING FIRE ALARM CONDUIT, WIRES, APPLIANCES, DEVICES, AND OTHER ASSOCIATED FIRE ALARM COMPONENTS.

KEYED NOTES

KEYPLAN

NORTH

0 4'-0" 8'-0" 16'-0"

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT
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PROJECT #24049

STANTON ENGINEERING SERVICES LLC
STANTON ENGINEERING SERVICES LLC
10280 OLD COLUMBIA RD. SUITE 275
COLUMBIA, MD 21046

STATE OF MARYLAND
TRISTAN R. CLARK
26437
PROFESSIONAL ENGINEER
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RS
DRAWN BY: DML
SUBMITTED BY: RS
PLOT SCALE: 1=1
SIZE:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21D000190025
ISSUE DATE: 09/11/2024
FILE NUMBER:
FILE NAME:

NIST
OFPM
GAITHERSBURG, MD

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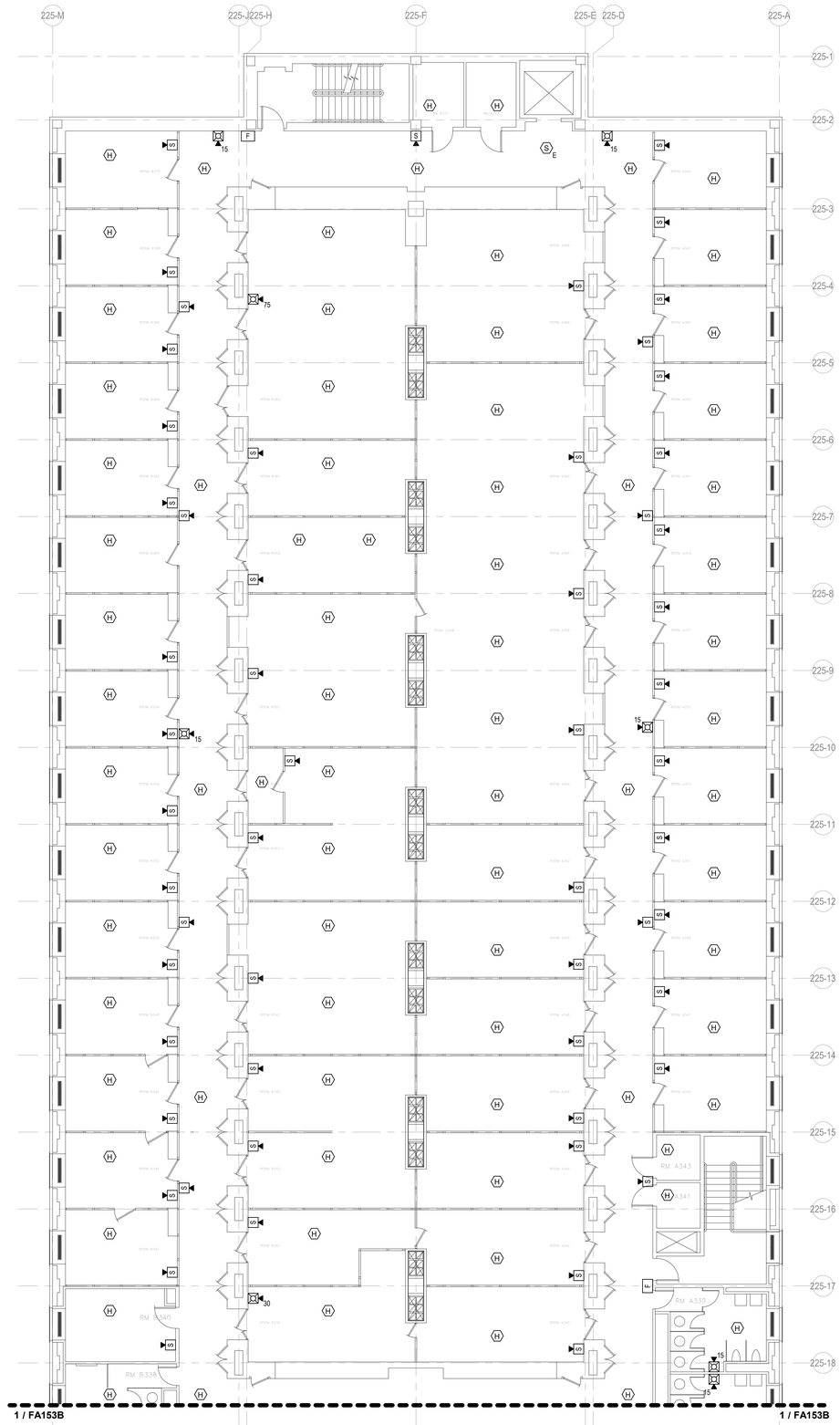
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM DEMOLITION THIRD LEVEL AREA B PLAN - BLDG 225

SHEET IDENTIFICATION
FD153B
SHEET X OF Y



1 FIRE ALARM THIRD LEVEL AREA A PLAN - BLDG 225

1/8" = 1'-0"

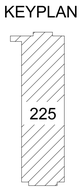
GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.

B. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.

KEYED NOTES

KEYPLAN



0 4'-0" 8'-0" 16'-0"

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT
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MEP CONSULTANTS
20251 Century Blvd #120
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PROJECT #24049

STANTON ENGINEERING SERVICES, LLC
STANTON ENGINEERING SERVICES LLC
10280 OLD COLUMBIA RD. SUITE 215
COLUMBIA, MD 21046

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RS
DRAWN BY: DML
SUBMITTED BY: RS
CHKD BY: TRI
PLOT SCALE: 1:1
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
ISSUE DATE: 09/11/2024
FILE NUMBER:
SIZE:
FILE NAME:

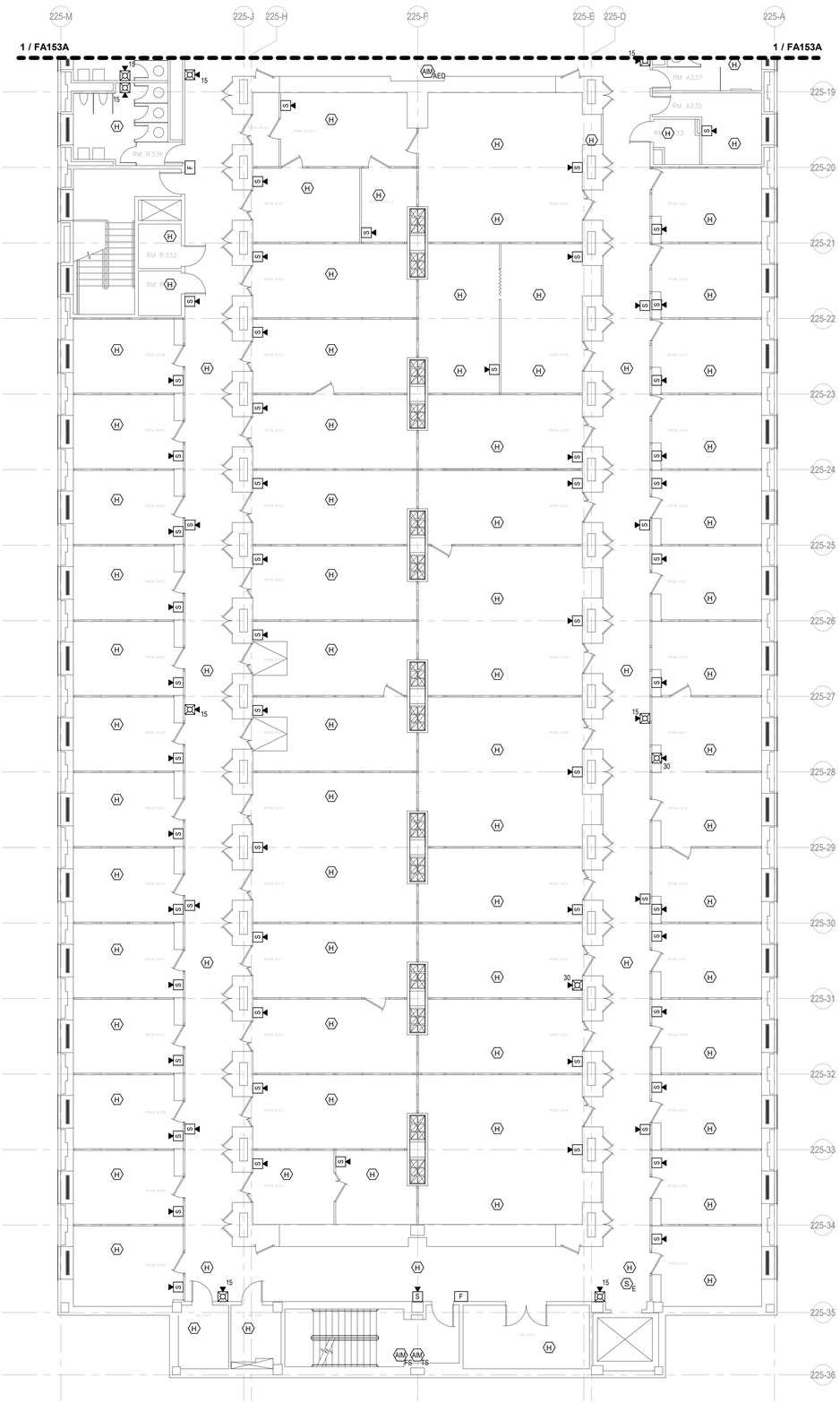
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM THIRD LEVEL
AREA A PLAN - BLDG 225

SHEET IDENTIFICATION
FA153A
SHEET X OF Y



1 FIRE ALARM THIRD LEVEL AREA B PLAN - BLDG 225

1/8" = 1'-0"

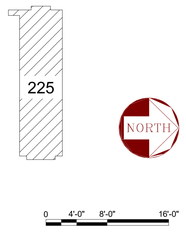
GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.

B. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.

KEYED NOTES

KEYPLAN



NIST OFPM Office of Facilities & Property Management

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT
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10280 OLD COLUMBIA RD, SUITE 275
COLUMBIA, MD 21046

STATE OF MARYLAND
RUSHOT K. DAVIS
24453
PROFESSIONAL ENGINEER
4/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: RS
DWN BY: DML
CKD BY: TRI
SUBMITTED BY: PS
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SIZE: -
FILE NAME:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
FILE NUMBER:

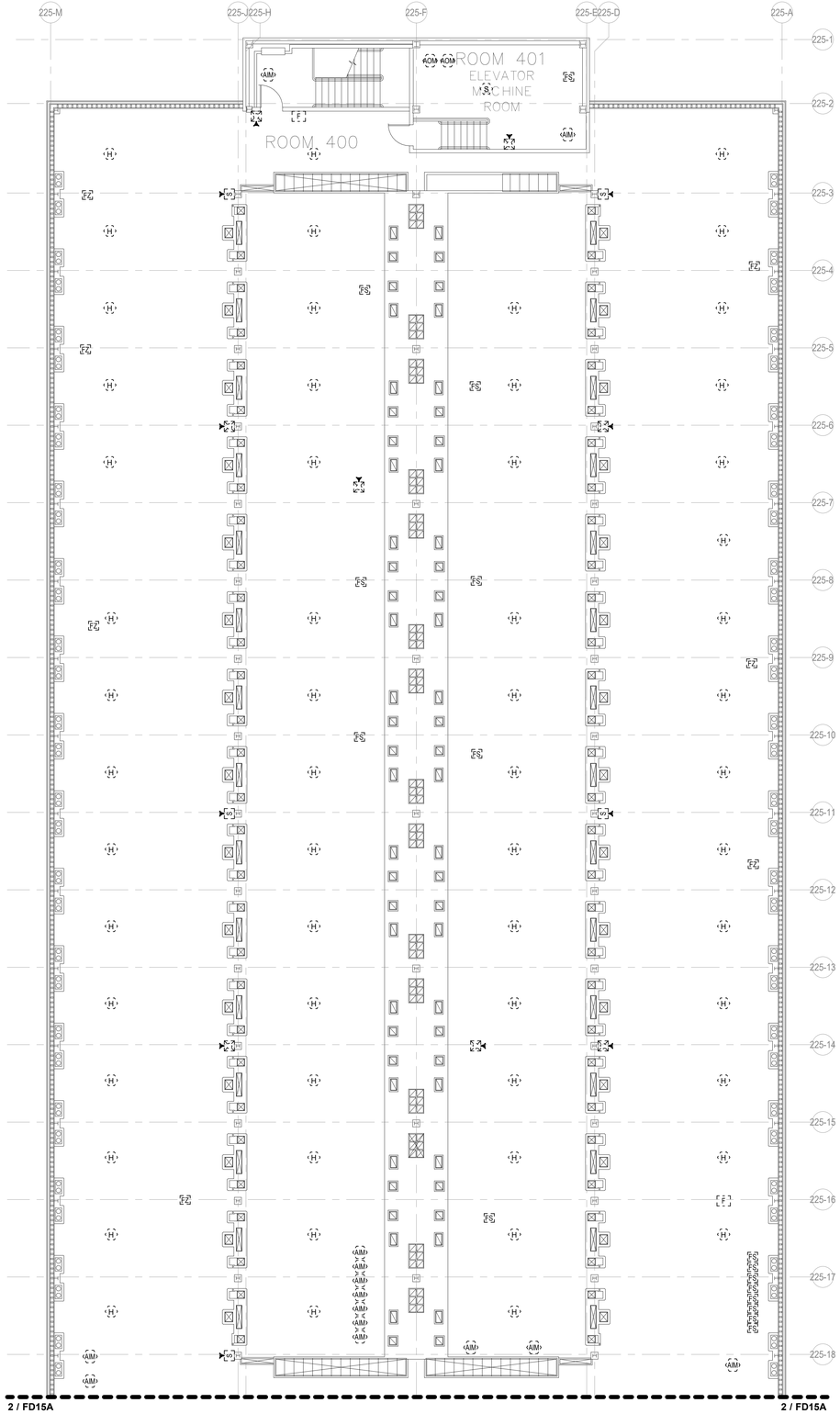
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

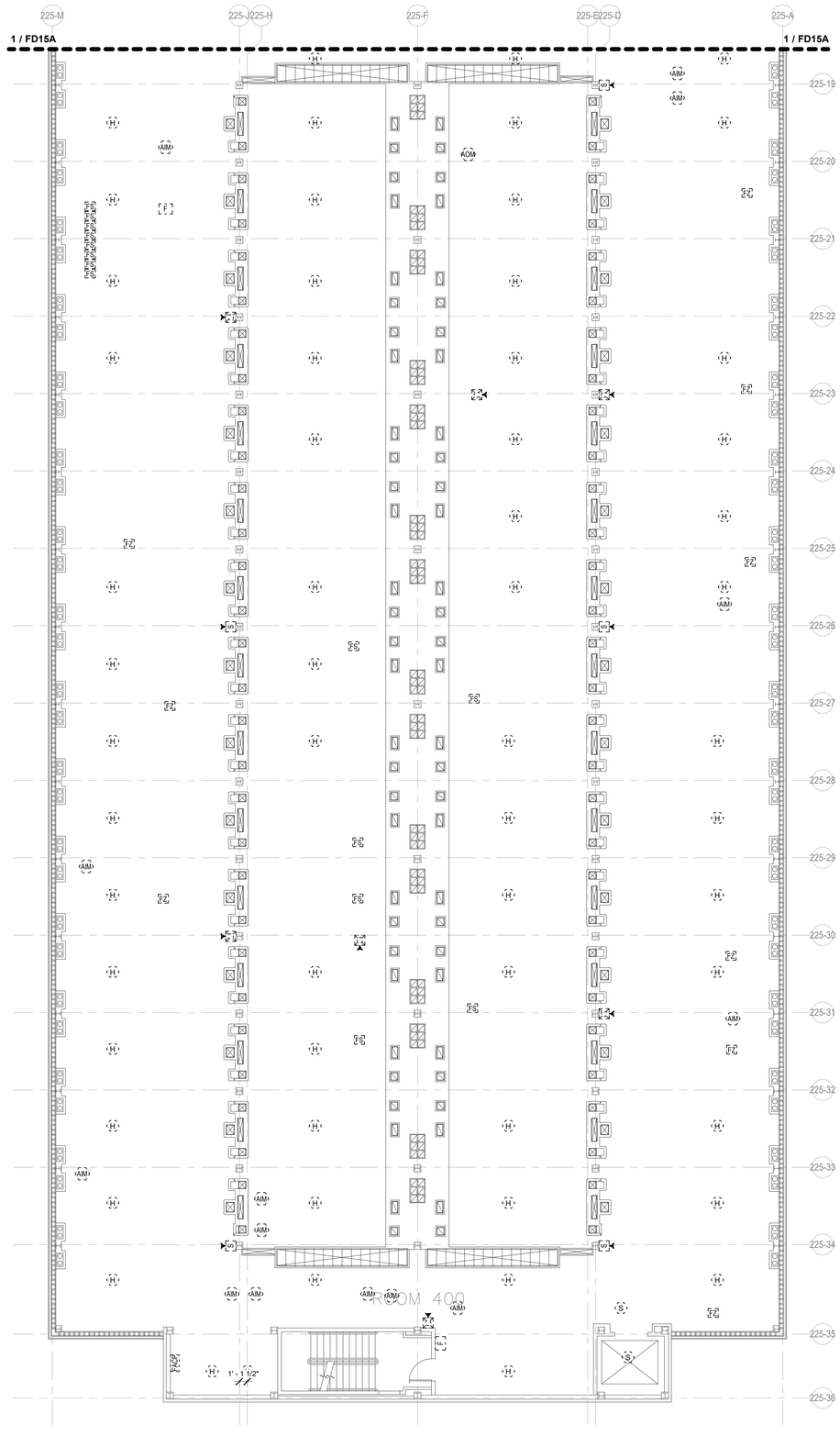
FIRE ALARM THIRD LEVEL AREA B PLAN - BLDG 225

SHEET IDENTIFICATION
FA153B
SHEET X OF Y



1 FIRE ALARM DEMOLITION ATTIC LEVEL AREA A PLAN - BLDG 225

1/8" = 1'-0"



2 FIRE ALARM DEMOLITION ATTIC LEVEL AREA B PLAN - BLDG 225

1/8" = 1'-0"

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
B. DEMOLISH ALL EXISTING FIRE ALARM CONDUIT, WIRES, APPLIANCES, DEVICES, AND OTHER ASSOCIATED FIRE ALARM COMPONENTS.

KEYED NOTES

KEYPLAN

0 4'-0" 8'-0" 16'-0"

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT
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PROJECT #24049

STANTON ENGINEERING SERVICES, LLC
STANTON ENGINEERING SERVICES LLC
10280 OLD COLUMBIA RD. SUITE 215
COLUMBIA, MD 21046

STATE OF MARYLAND — DANIEL M. LEVY — 26437 — PROFESSIONAL ENGINEER — 9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: DML
DRAWN BY: DML
CKD BY: TRI
SUBMITTED BY: TRI
DATE: 09/27/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21D0001/1333ND23F00025
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
FILE NUMBER:
SIZE:
FILE NAME:

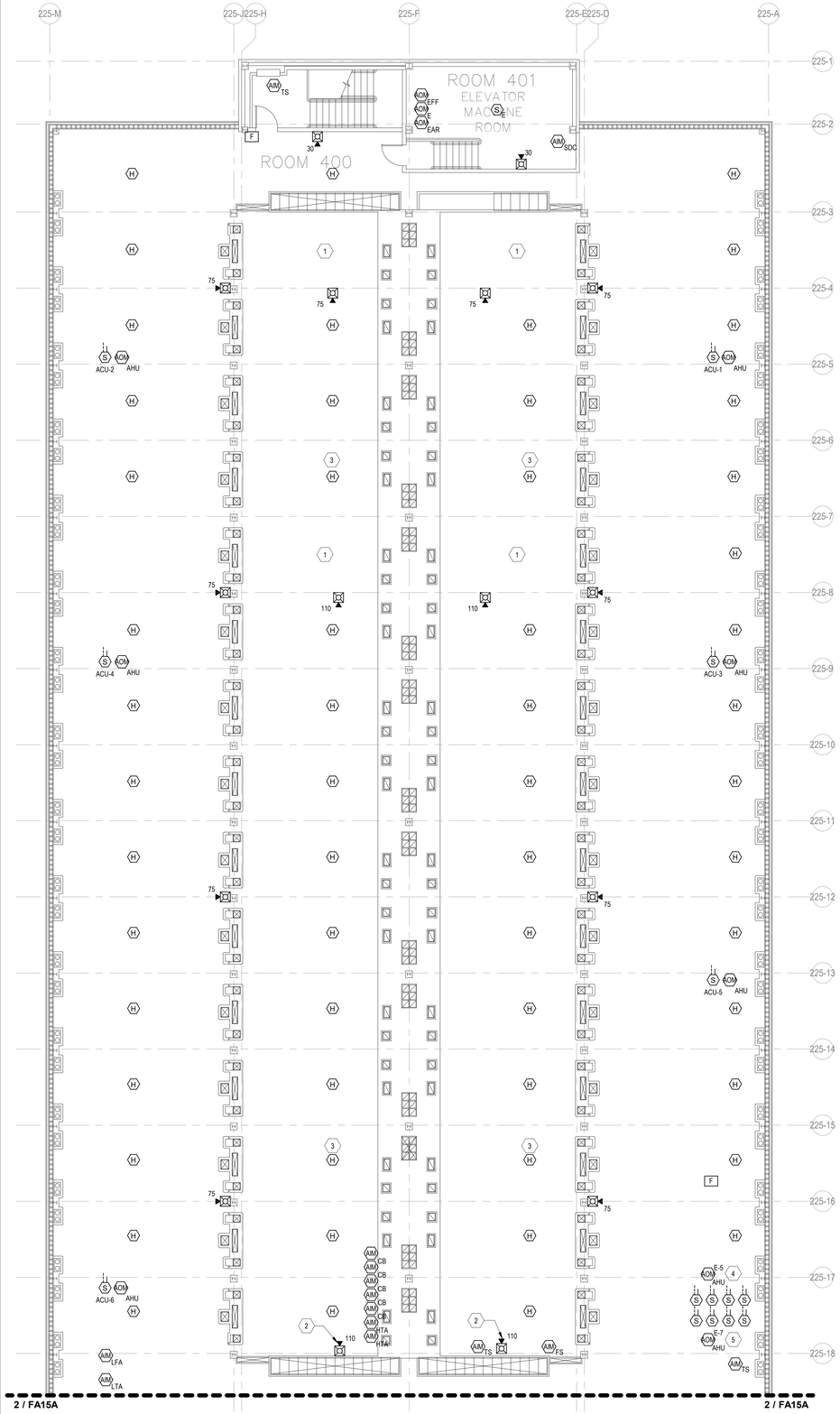
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

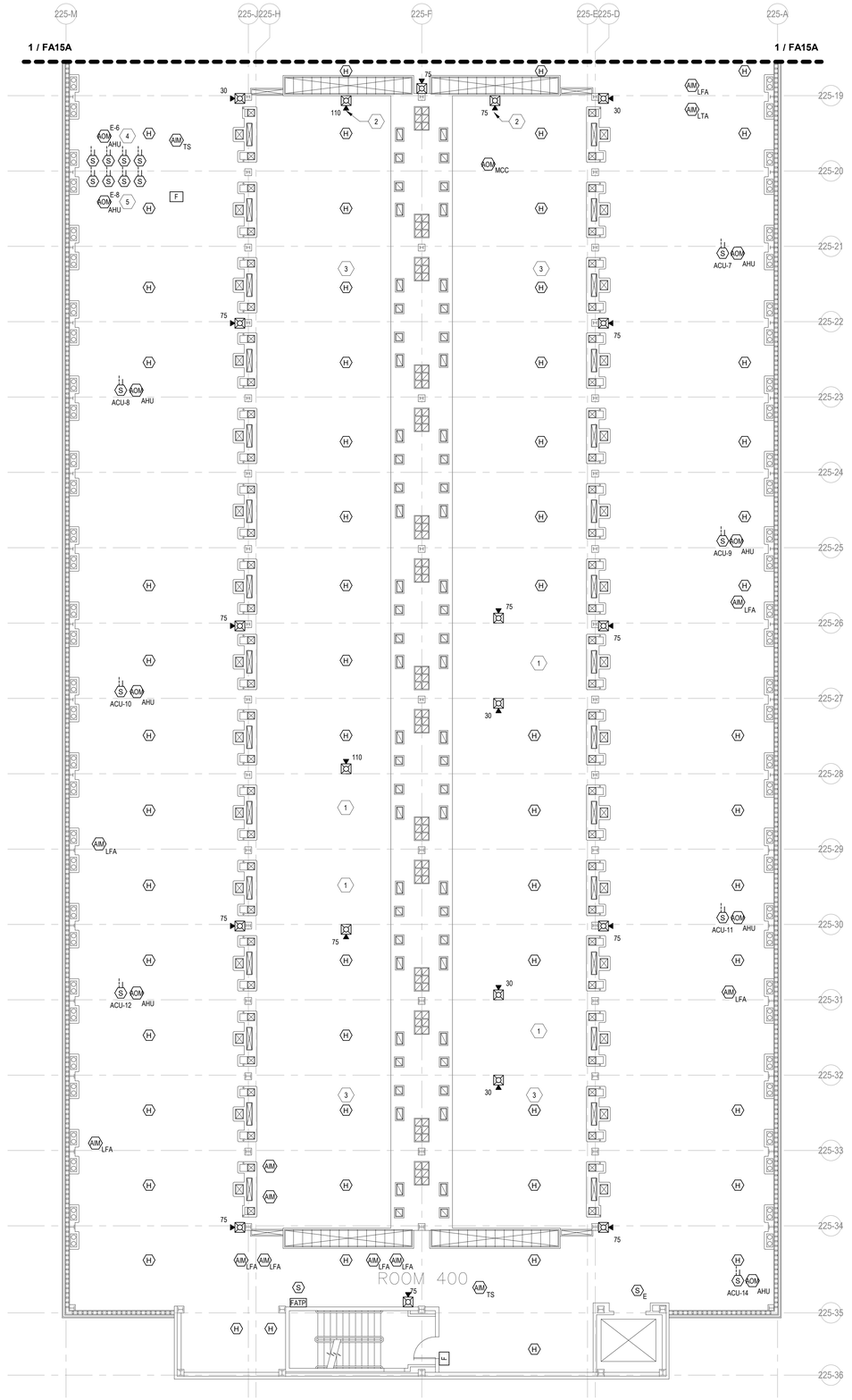
NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM DEMOLITION ATTIC LEVEL AREA A & B PLANS - BLDG 225

SHEET IDENTIFICATION
FD15A
SHEET X OF Y



1 FIRE ALARM ATTIC LEVEL AREA A PLAN - BLDG 225
1/8" = 1'-0"



2 FIRE ALARM ATTIC LEVEL AREA B PLAN - BLDG 225
1/8" = 1'-0"

GENERAL NOTES

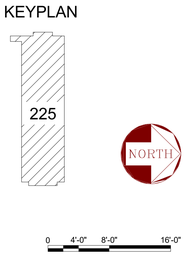
A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.

B. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.

KEYED NOTES

1. LARGE MECHANICAL EQUIPMENT TAKES UP ENTIRE BAY. NOTIFICATION DEVICES MAY BE MOUNTED ON EITHER SIDE.
2. PROVIDE VERTICAL METAL POLES, MATCHING WHAT IS ALREADY TYPICAL THROUGHOUT ATTIC SPACE, TO MOUNT NOTIFICATION DEVICE.
3. SPEAKER/STROBE DEVICES THROUGHOUT CENTER PORTION OF ATTIC SPACE ARE LOCATED AS SHOWN TO ACCOMMODATE FOR OBSTRUCTIONS AND ABILITY TO INSTALL THE DEVICES.
4. DUCT DETECTORS TO SERVE WEST CORRIDOR RETURN FAN FOR EACH LEVEL. ONE CONTROL MODULE FOR FAN SHUTDOWN, CONNECTED TO THE ASSOCIATED DUCT DETECTORS, TO SERVE EACH RETURN FAN.
5. DUCT DETECTORS TO SERVE EAST CORRIDOR RETURN FAN FOR EACH LEVEL. ONE CONTROL MODULE FOR FAN SHUTDOWN, CONNECTED TO THE ASSOCIATED DUCT DETECTORS, TO SERVE EACH RETURN FAN.

KEYPLAN



NIST
OFPM
Office of Facilities & Property Management

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT
CFR ENGINEERING
MEP CONSULTANTS
20251 Century Blvd #120
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PROJECT #24049

STANTON ENGINEERING SERVICES, LLC
STANTON ENGINEERING SERVICES LLC
10280 OLD COLUMBIA RD. SUITE 275
COLUMBIA, MD 21046

STATE OF MARYLAND
MICHAEL E. STANTON
24452
PROFESSIONAL ENGINEER
4/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
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DESIGNED BY: RS
DWN BY: DML
CKD BY: TRI
SUBMITTED BY: PS
PLOT SCALE: 1:1
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CONTRACT NO.: 1333ND21DNB190025
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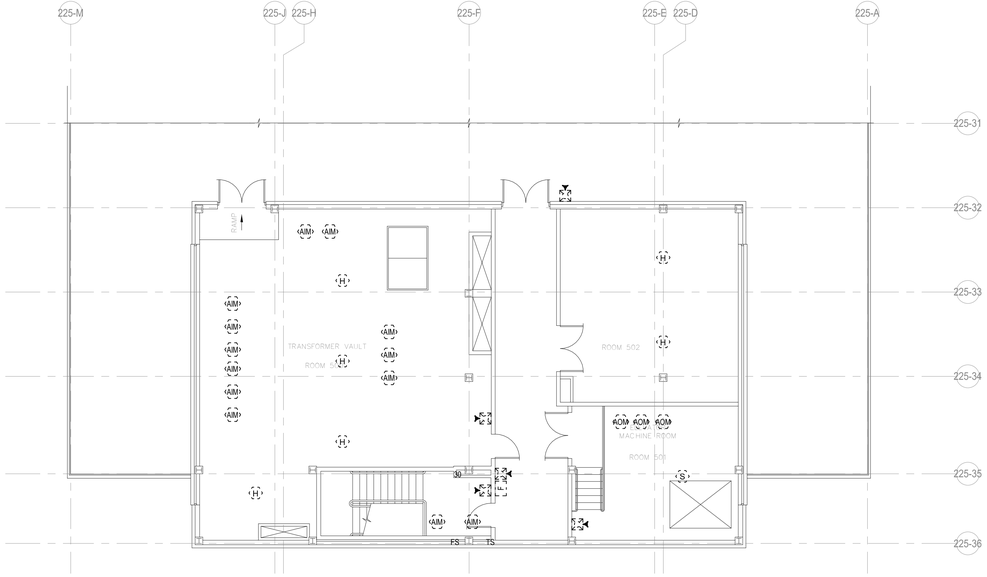
NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM ATTIC LEVEL AREA A & B PLANS - BLDG 225

SHEET IDENTIFICATION
FA15A
SHEET X OF Y



1 FIRE ALARM DEMOLITION PENTHOUSE LEVEL PLAN - BLDG 225

1/8" = 1'-0"

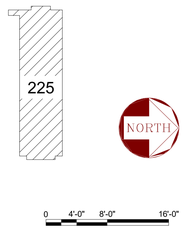
GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.

B. DEMOLISH ALL EXISTING FIRE ALARM CONDUIT, WIRES, APPLIANCES, DEVICES, AND OTHER ASSOCIATED FIRE ALARM COMPONENTS.

KEYED NOTES

KEYPLAN



NIST
OFPM
Office of Facilities & Property Management

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT

CFR ENGINEERING

MEP CONSULTANTS
20251 Century Blvd #120
Germantown MD 20874
P: 877-871-4229
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PROJECT #24049

STANTON ENGINEERING SERVICES, LLC

STANTON ENGINEERING SERVICES LLC
10280 OLD COLUMBIA RD, SUITE 275
COLUMBIA, MD 21046

STATE OF MARYLAND
MICHAEL E. STANTON
No. 24453
PROFESSIONAL ENGINEER
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: RS
DWN BY: DML
CKD BY: TRI
SUBMITTED BY: PS
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SIZE: -
FILE NAME:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
FILE NUMBER:

NIST
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GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

FIRE ALARM DEMOLITION PENTHOUSE LEVEL PLAN - BLDG 225

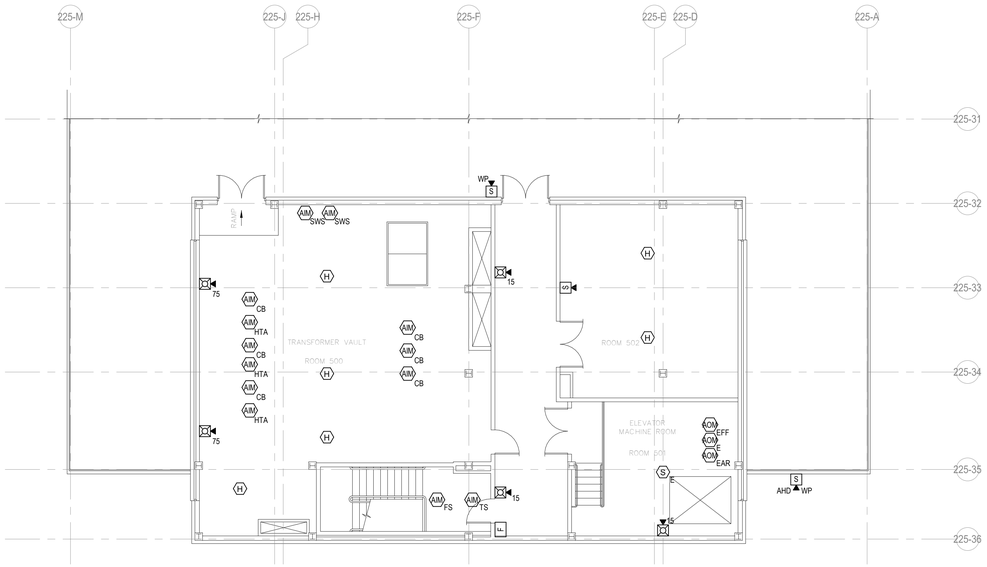
SHEET IDENTIFICATION
FD15P
SHEET X OF Y

GENERAL NOTES

A. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.

B. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.

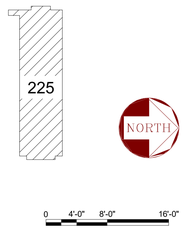
KEYED NOTES



1 FIRE ALARM PENTHOUSE LEVEL PLAN - BLDG 225

1/8" = 1'-0"

KEYPLAN



NIST
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STATE OF MARYLAND
MARK ROBERT STANTON
PROFESSIONAL ENGINEER
24452
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

DESIGNED BY: RS
DWN BY: DML
CKD BY: TRI
SUBMITTED BY: PS
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
SIZE: -
FILE NAME:
DATE: 09/11/2024
SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
FILE NUMBER:

NIST
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GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST - BUILDING 225
FIRE ALARM REPLACEMENT

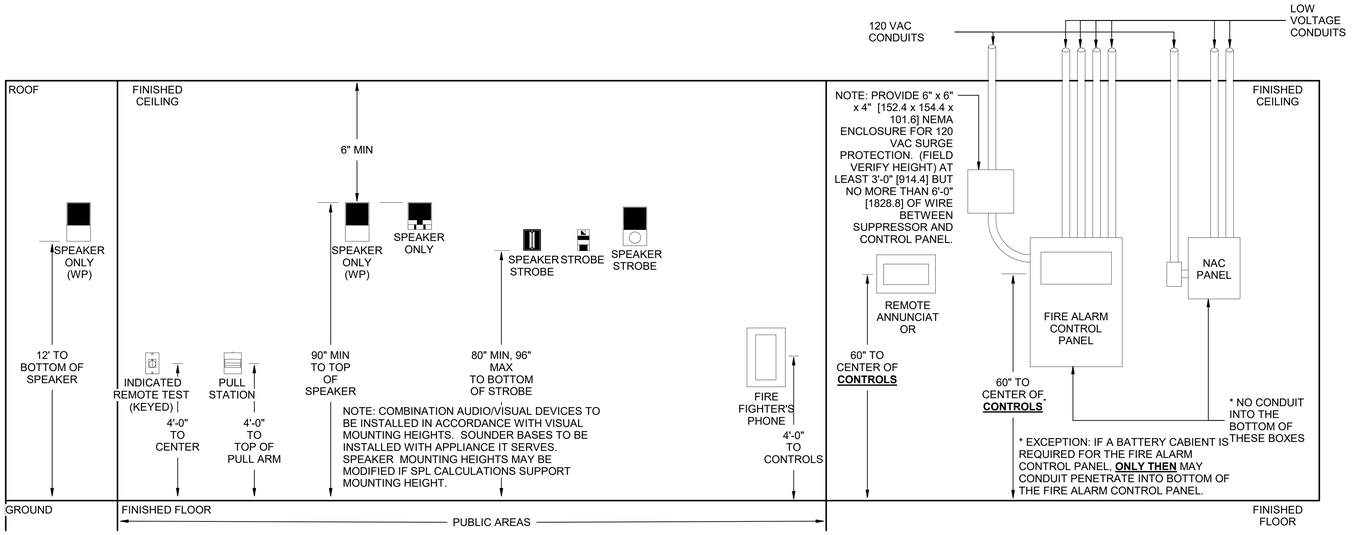
FIRE ALARM PENTHOUSE LEVEL PLAN - BLDG 225

SHEET IDENTIFICATION
FA15P
SHEET X OF Y

GENERAL NOTES

1. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
2. THE NEW FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED, TESTED, AND APPROVED BY THE NIST AHJ IN ACCORDANCE WITH NIST S 7401.01, PRIOR TO THE DEMOLITION OF THE EXISTING FIRE ALARM SYSTEM AND DEVICES.

KEYED NOTES



A1 FIRE ALARM WALL MOUNTING HEIGHT REQUIREMENTS

NTS

NIST OFPM Office of Facilities & Property Management

MECHANICAL AND ELECTRICAL ENGINEERING CONSULTANT

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STATE OF MARYLAND
MICHAEL E. STANTON
PROFESSIONAL ENGINEER
24437
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
2	65% SUBMISSION	03/19/2025	S.B.
1	35% SUBMISSION	09/27/2024	S.B.

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CKD BY: TRI
SUBMITTED BY: PS
PLOT SCALE: 1:1
ISSUE DATE: 09/11/2024
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FILE NAME:
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SOLICITATION NO.: 1333ND24FNB190117
CONTRACT NO.: 1333ND21DNB190025
FILE NUMBER:

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OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST
FIRE ALARM REPLACEMENT

FIRE ALARM DETAILS

SHEET IDENTIFICATION
FA501
SHEET X OF Y

GENERAL NOTES

1. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
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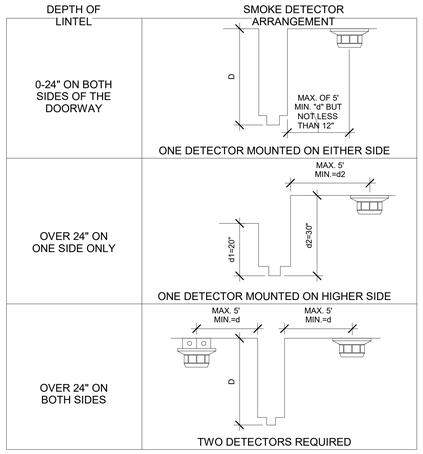
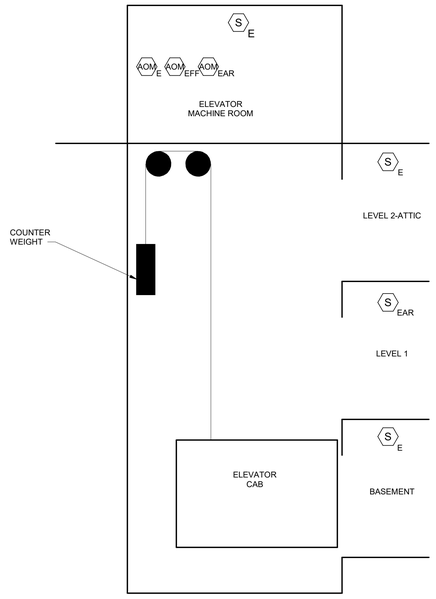
KEYED NOTES



A1 TYPICAL SMOKE DETECTOR INSTALLATION FOR DOOR CONTROL
NTS



A4 TRACTION ELEVATOR FIRE ALARM DETAIL (TYP)
NTS

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PROJECT #24049

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STANTON ENGINEERING SERVICES LLC
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STATE OF MARYLAND
MARK HOLLY DEAN
PROFESSIONAL ENGINEER
9/24/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
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CONTRACT NO.: 1333ND21DNB190025
FILE NUMBER:

NIST
OFPM
GAITHERSBURG, MD

CFR ENGINEERING
20251 CENTURY BLVD, SUITE 120
GERMANTOWN, MD 20874

NIST
FIRE ALARM REPLACEMENT

FIRE ALARM DETAILS

SHEET IDENTIFICATION
FA502
SHEET X OF Y

Device	Mode	Report FIRE at Local Node	Report FIRE at Lobby FACP	Report FIRE at GCC(s)	Display FIRE point on GCC(s)	Report SUPERVISORY at Local Node	Report SUPERVISORY at Lobby FACP	Report SUPERVISORY at GCC(s)	Display Supervisory point on GCC(s)	Report TROUBLE at Local Node	Report TROUBLE at Lobby FACP	Report TROUBLE at GCC(s)	Display TROUBLE at GCC(s)	Report Pri2 at Local Node	Report Pri2 at Lobby FACP	Report Pri2 at GCC(s)	Display Pri2 point on GCC(s)	Report Alarm Zone to Node 1.39 / Lenel	Display Alarm Zone Point(s) on GCC/Node 5	Activate Clear Strobes	Activate Speakers	Evacuation Message	Fire Fighter HiLo Message	Door Release	AHU Shutdown	Elevator Primary Recall Relay	Elevator Alternate Relay	Elevator Flashing Hat Relay	Elevator Shaft Damper Relay	Display CON/Relays on TWS Graphics
		FIRE				Supervisory				Trouble				Pri2 / M&E				AZ		Notification		Messages		Relays		Elevator Control				
Manual Pull Station	On Network	●	●	●	●															●	●	●		●						●
	Local Mode	●	●																	●	●	●		●						
Heat Detector	On Network	●	●	●	●															●	●	●		●						●
	Local Mode	●	●																	●	●	●		●						
Smoke Detector	On Network	●	●	●	●															●	●	●		●						●
	Local Mode	●	●																	●	●	●		●						
Smoke Detector in Primary Utility Spaces1	On Network	●	●	●	●																									●
	Local Mode	●	●																	●	●	●		●						
Heat Detector in Primary Utility Spaces1	On Network	●	●	●	●																									●
	Local Mode	●	●																	●	●	●		●						
Elevator Landing Smoke Primary Floor	On Network	●	●	●	●																					●				●
	Local Mode	●	●																	●	●	●		●		●				
Elevator Landing Smoke Alt Floor(s)	On Network	●	●	●	●															●	●	●		●			●			●
	Local Mode	●	●																	●	●	●		●			●			
Elevator Shaft Smoke Detector	On Network	●	●	●	●															●	●	●		●				●		●
	Local Mode	●	●																	●	●	●		●				●		
EMR Smoke Detector	On Network	●	●	●	●															●	●	●		●				●		●
	Local Mode	●	●																	●	●	●		●				●		
Sprinkler Water Flow(Zone)	On Network	●	●	●	●															●	●	●		●						
	Local Mode	●	●																	●	●	●		●						
Sprinkler Valve Tamper	On Network					●	●	●	●																					
	Local Mode					●	●																							
Smoke Duct Detector	On Network					●	●	●	●																●					
	Local Mode					●	●																							
Automatic External Defibrillator (AED)	On Network					●	●	●	●																					
	Local Mode					●	●																							
M&E Points	On Network																													●
	Local Mode																													●
Lobby Panel Commands																														
Bldg. 225 Evac Switch																				●	●	●								
Selective Evac Message ON Switch																						●								
All Speaker Page																					●									
Fire Fighter HiLO On																							●							
Panel AV Bypass										●	●	●	●																	
Panel Door Holder Bypass										●	●	●	●																	
Panel Elevator Control Bypass										●	●	●	●																	
Panel Fan Damper Bypass										●	●	●	●																	
Duct Smoke Detector Bypass										●	●	●	●																	
Fire Alarm AC Power Failure										●	●	●	●																	
Fire Alarm Battery Low										●	●	●	●																	
Open Circuit										●	●	●	●																	
Short Circuit										●	●	●	●																	
Ground Fault										●	●	●	●																	
Pri2 Alarm(s) (Will Not report to other panel in Local Mode)																														
Condensate Pump														●	●	●	●													
Sump Pump														●	●	●	●													
Vacuum Pump														●	●	●	●													
Fan AHU/ACU Trouble														●	●	●	●													
High Temp Alarm														●	●	●	●													
Low Temperature														●	●	●	●													
LowFlow Alarm														●	●	●	●													
Water Detection														●	●	●	●													
SWS Auto Switch Monitor														●	●	●	●													
Circuit Breaker														●	●	●	●													
Power Monitor for Pri2														●	●	●	●													
AZ																														
Alarm Zone																		●	●											

Note 1 All detectors in normally occupied spaces and those associated with elevator safety will initiate evacuation and perform their intended fire safety output(s) in both Network and Local modes. The only detectors to retain separate Network and Local mode operation shall be those in primary utility spaces such as an attic, penthouse, service entrance, or main mechanical room. This does not include small mechanical or electrical closets on a normally occupied floor.

Note 2 In order for any smoke detector to initiate an alarm sequence it must be verified. Verification is provided if second alarm is received by the FACP within 60 seconds of the first alarm. A second alarm can be provided by the same smoke detector, a different smoke detector, or any other "FIRE" point (such as heat detectors, water flows, pull stations, and fire stats) on the same FACP. An alarm from a different FACP cannot provide verification. All alarms that are not verified are recorded with a tally. If the tally number reaches 10 for a single smoke detector, then the smoke detector will initiate an alarm sequence despite no verification. If the FACP is on local mode, verification is bypassed and a single smoke detector alarm will initiate an alarm sequence.

Note 3 All physical points should display on the TSW graphics.

1 FIRE ALARM MATRIX- BLDG 225
NTS

2 FIRE ALARM RISER DIAGRAM BUILDING 225
NTS

GENERAL NOTES

1. FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND REFER TO FA001.
2. ALL DETECTORS IN NORMALLY OCCUPIED SPACES AND THOSE ASSOCIATED WITH ELEVATOR SAFETY WILL INITIATE EVACUATION AND PERFORM THEIR INTENDED FIRE SAFETY OUTPUT(S) IN BOTH NETWORK AND LOCAL MODES. THE ONLY DETECTORS TO RETAIN SEPARATE NETWORK AND LOCAL MODE OPERATION SHALL BE THOSE IN PRIMARY UTILITY SPACES SUCH AS AN ATTIC, PENTHOUSE, SERVICE ENTRANCE, OR MAIN MECHANICAL ROOM. THIS DOES NOT INCLUDE SMALL MECHANICAL OR ELECTRICAL CLOSETS ON A NORMALLY OCCUPIED FLOOR.
3. IN ORDER FOR ANY SMOKE DETECTOR TO INITIATE AN ALARM SEQUENCE IT MUST BE VERIFIED. VERIFICATION IS PROVIDED IF SECOND ALARM IS RECEIVED BY THE FACP WITHIN 60 SECONDS OF THE FIRST ALARM. A SECOND ALARM CAN BE PROVIDED BY THE SAME SMOKE DETECTOR, A DIFFERENT SMOKE DETECTOR, OR ANY OTHER "FIRE" POINT (SUCH AS HEAT DETECTORS, WATER FLOWS, PULL STATIONS, AND FIRE STATS) ON THE SAME FACP. AN ALARM FROM A DIFFERENT FACP CANNOT PROVIDE VERIFICATION. ALL ALARMS THAT ARE NOT VERIFIED ARE RECORDED WITH A TALLY. IF THE TALLY NUMBER REACHES 10 FOR A SINGLE SMOKE DETECTOR, THEN THE SMOKE DETECTOR WILL INITIATE AN ALARM SEQUENCE DESPITE NO VERIFICATION. IF THE FACP IS ON LOCAL MODE, VERIFICATION IS BYPASSED AND A SINGLE SMOKE DETECTOR ALARM WILL INITIATE AN ALARM SEQUENCE.

KEYED NOTES

1 PROVIDE NEW SINGLE MODE CONNECTOR MODULE IN THE FIRE ALARM CONTROL PANEL. PROVIDE TWO MEDIA MODULE LEFT FIBER CARDS AND TWO NEW MEDIA MODULE RIGHT FIBER CARDS.

NIST OFPM

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PROJECT #24049

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COLUMBIA, MD 21046

STATE OF MARYLAND ANH-HUY K. DANG 56452 PROFESSIONAL ENGINEER 8/29/2025

MARK	DESCRIPTION	DATE	APPR.
4	100% SUBMISSION	07/23/2025	S.B.
3	95% SUBMISSION	05/16/2025	S.B.
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NIST
OFPM
GAITHERSBURG, MD

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GERMANTOWN, MD 20874

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NIST
FIRE ALARM REPLACEMENT

FIRE ALARM MATRIX & RISER DIAGRAM - BLDG 225

SHEET IDENTIFICATION
FA651
SHEET X OF Y