NINE MADBURY ROAD - 4TH FLOOR RENOVATION

DURHAM, NEW HAMPSHIRE

RECEIVED
Town of Durham

MAR 18 2025

Planning, Zoning
and Assessing

CODE INFORMATION:

Relevent Codes: IBC 2018 AND NFPA 101 2021 (w/ NH AMENDMENTS)

PROJECT DESCRIPTION:
This project consists of the renovation of the fourth floor of an existing four story mixed-use type V-A building in central Durham, NH. The fourth floor will be renovated from business (B) use to apartments (R-2) use.

BUILDING DATA:

Occupancies:	Business, Mercantile, R2 Residential, S1 Storage	
Building height in feet:	48'	
Number of stories above Grade:	Four	
Footprint area:	8,619 SF	
Construction type:	V-A protected combustible	
Excess street frontage:	Not required	
Distance to property lines and buildings:	N/A	
Sprinkler system:	Supervised NFPA 13 throughout	
Height and Area Limitations:		
Height limitation:	50'	
Basic limitation (from NH amendments to IBC)_:	M+S1=2 stories @ 30', B+R2 = 3 stories @ 40'	IBC/ NH table 503
Increase for sprinkler:	1 story, 20' for all occupancies	IBC/ NH section 504.2
Adjusted height limitation:	M+S1 = 3 stories @ 50', B + R2 = 4 stories @ 60'	
Area limitation:		
Basic area limitation (from NH amendments to IBC):	R-2 is 36,000 SF	IBC/ NH table 503
Street frontage increase:	Not required for code compliance	IBC/ NH section 506.2
Sprinkler increase:	100% or 43200 SF	IBC/ NH section 506.3
Multi-story reduction	20% or 840 SF	IBC/ NH section 506.4

Means of egress:
Occupant load:

Basement:		
Mechanical spaces:	359 SF/ 1 person per 300 SF gross = 2 persons	NFPA 101 table 7.3.1.2
Possible lease space:	5321SF, best guess = 192 persons	NFPA 101 table 7.3.1.2
First Floor:		
Commercial 1:	1242 SF/ person per 30 SF gross = 42 persons	NFPA 101 table 7.3.1.2
Commercial 2:	2071 SF/ 1 person per 30 SF gross = 70 persons	NFPA 101 table 7.3.1.2
Commercial 3:	1664 SF/ 1 person per 30 SF gross = 56 persons	NFPA 101 table 7.3.1.2
Trash/ recyclables:	178 SF/ 1 person per 200 SF gross/ net = 1 persons	NFPA 101 table 7.3.1.2
Second floor:	7515 SF/ 1 person per 200 SF gross/ net = 38 persons	NFAP 101 table 7.3.1.2
Third floor:	7515 SF/ 1 person per 200 SF/ net = 38 persons	NFPA 101 table 7.3.1.2
Attic floor:	5857 SF/ 1 person per 300 SF/ net = 30 persons	NFPA 101 table 7.3.1.2
Total occupant load:	496 persons	

Egress capacity:

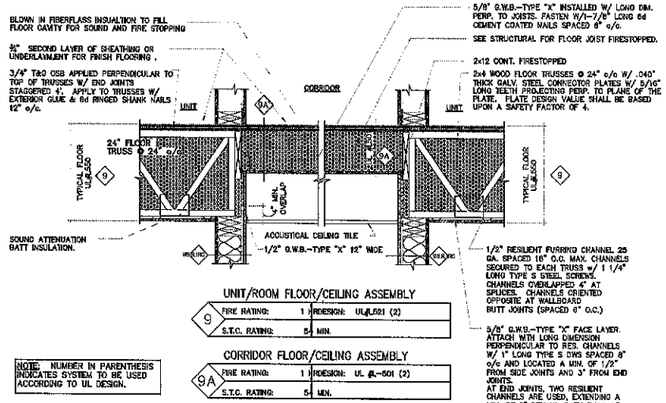
Min. capacity at stairs for occupant load served: Worst-case basement 192 persons x 0.3 per person = 57.6"		NFPA 101 table 7.3.3.1
Min. width at stairs per occupancy type:	44"	IBC section 1017.2
Min. cap. at doors and corridors for occ. loadd served: 251 persons x 0.2 per person = 50.2"		NFPA 101 table 7.3.3.1
Min. width at corridors for occupancy type:	44"	IBC section 1017.2
Minimum number of required exits:	2 from each level	NFPA 101 section 7.4.1
Minimum exit access remoteness	1/3 diagonal with sprinkler system	NFPA 101 section 7.5.1.3.3
Maximum common path of travel:	R2 = 50', others = 100'	NFPA Table A7.6
Maximum dead end limit:	B + M + R2 = 50', S1 = 100'	NFPA Table A7.6
Maximum exit access travel distance:	M = 250', B = 300', R2 = 325', S1 = 400'	NFPA Table A7.6

Fire ratings (IBC type V-A construction)

	Fire Rating:	Certification:	Code reference:
Basic building elements:			
Structural frame:	1-hour	Varies: See drawings	IBC table 601
Exterior bearing walls:	2 hour or 1 hour (note 4)	Varies: See drawings	IBC table 601
Interior bearing walls (not acting as fire separations):	1-hour	Varies: See drawings	IBC table 601
Interior non-bearing walls (not action as fire separation):	0-hours	N/A	
Floor construction:	1-hour	Varies: see drawings	IBC table 601
Roof construction:	1-hour	Varies: see drawings	IBC table 601
Interior fire separations (note 3):			
Stair (vertical exit enclosure) walls:	2-hour fire barrier	UL-U301	IBC section 1020.1
Elevator hoist-way:	2-hour fire barrier	UL-U301	IBC section 707.4
Elevator machine room enclosure:	2-hour fire barrier	UL-U301	IBC
section 3006.4			
Second floor use separation assembly:	1-hour floor/ ceiling	UL-L550	IBC/ NH table 503
Dwelling unit/ unit separations (walls)*	1/2 hour fire partition	IBC calculated method	IBC section 708
Dwelling unit/ unit separation (floor/ ceiling assemblies):	1/2	UL-L550	IBC section 711.3
Dwelling unit/ corridor separations:	1-hour fire partition	IBC calculated method	IBC section 708
Opening protectives:			
Exit access (stairway/ corridor) doors:	1-1/2 hour	Label per NFPA 80	IBC table 715.4
Elevator doors:	1-1/2 hour	Per elevator code	IBC table 715.4
Elevator machine room door:	1-1/2 hour	Label per NFPA 80	IBC table 715.4
Dwelling unit/ corridor doors:	1/3 hour	Label per NFPA 80	IBC table 715.4
Doors within dwelling units:	0-hours		
Doors to exterior:	0-hours		
Interior finishes:			
Stairway walls and ceilings:	Class B		Table 803.5
Exit access corridor walls & ceilings:	Class C		Table 803.5
Room walls and ceilings:	Class C		Table 803.5
Stairway and corridor floors:	Class II		Section 804.5.1
Room floors:	CCC FF-1 "pill test"		Section 804.5.1

Accessibility:
1. Sixty percent of public building entrances must be accessible per IBC section 1105.1.
2. All commercial spaces (non-residential areas) area required to be accessible.
3. No dwelling units are required to be accessible "Type A" units (IBC section 1107.6.2.2.1-less than 20 dwelling units).
4. All dwelling units are required to be "Type B" or "Fair Housing Act" type units.
5. Corridors and corridor side of unit doors at residential levels must be accessible.
6. See civil drawings for accessible features outside of the building.

CODE ANALYSIS
1/4" = 1'-0"



TYPICAL FLOOR / CEILING CONSTRUCTION (ALL FLOORS)

GENERAL PLAN NOTES:
1. ALL CONSTRUCTION SHALL CONFORM TO APPLICABLE CODES AND REGULATIONS.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE, AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING WORK.
3. OMISSIONS OR CONFLICTS AMONG VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
4. DO NOT SCALE THE DRAWING. USE WRITTEN DIMENSIONS, OR WHERE NO DIMENSION IS PROVIDED CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
5. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS, WHETHER SPECIFICALLY CALLED OUT OR NOT.
6. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZE OF BLOCKOUTS, INSERTS, AND OPENINGS, CURBS, BASES AND PADS, AND DIMENSIONS NOT SHOWN ON ARCHITECTURAL OR STRUCTURAL DRAWINGS.
7. CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION DESIGNS ARE TO BE PROVIDED BY AND ARE THE RESPONSIBILITY OF THEIR RESPECTIVE SUB-CONTRACTORS AND THEIR DESIGN ENGINEERS. ISAAK DESIGN, PLLC, DOES NOT HAVE RESPONSIBILITY FOR DESIGN OF THOSE SYSTEMS.
8. SEE OWNER PROVIDED CUT SHEETS, FOR FIXTURES AND HARDWARE AND CONFIRM SELECTION BEFORE COMMENCING WORK.

GENERAL NOTES
1/4" = 1'-0"

OWNER:

9 Madbury Road, LLC
6 Jenkins Court
Durham, NH 03824
Matthew Crape
(203) 339-0370

PROJECT LOCATION:

9-11 Madbury Road
Durham, NH 03824

ARCHITECT:

Isaak Design, PLLC
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Tel: (603) 969-6711
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Nick Isaak, AIA
LEEP AP

LIST OF DRAWINGS

Sheet Number	Sheet Name
A0.0	TITLE SHEET
A1.01	LEVEL 4 DEMOLITION PLAN
A0.01	PARTITION TYPES
A0.11	LIFE SAFETY PLAN
A1.02	LEVEL 4 PROPOSED FLOOR PLAN
A6.01	DOOR SCHEDULE

PERMIT SET

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No.	Description	Date

9 Madbury
9 Madbury, Durham, NH

TITLE SHEET

Project number	Project Number
Date	1/12/25
Drawn by	NI
Checked by	NI

A0.0

Scale 1/4" = 1'-0"

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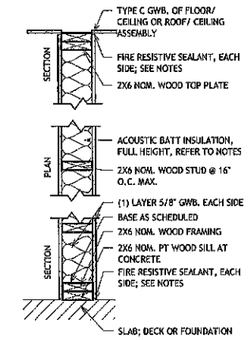
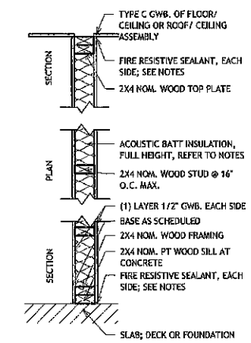
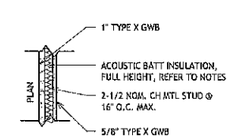


W6.R1 — INTERIOR PARTITION TYPE
1-HOUR RATED 6" NOM. WOOD STUD PARTITION



W4 — INTERIOR PARTITION TYPE
NON-RATED 4" NOM. WOOD STUD PARTITION



5H.R1 — INTERIOR PARTITION TYPE
1-HOUR RATED 2-1/2" NOM. MTL STUD SHAFT WALL

S6.R1A

MATERIAL

(S)	STEEL
(W)	WOOD
(M)	MASONRY
(C)	CONCRETE
(F)	FURRING
(SH)	SHAFTWALL
(FW)	FIREWALL

NOMINAL CORE/ STUD SIZE/ THICKNESS

(1)	7/8"
(2)	1 1/2"
(3)	2 1/2"
(4)	3 1/2"/ 3 5/8"
(6)	5 1/2"/ 6"
(8)	7 1/2"/ 7 5/8"

CUSTOM SUFFIX

(A)	ACOUSTICAL CONSTRUCTION
(D)	DEMISING WALL
(S)	SMOKE BARRIER
(RC)	RESILIENT CHANNEL

FIRE RATING (IN HOURS)

(R1)	1 HOUR
(R2)	2 HOURS
(R3)	3 HOURS
(R4)	4 HOURS

XX — INTERIOR PARTITION TYPE - NOMENCLATURE

PERMIT SET

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No.	Description	Date

9 Madbury
9 Madbury, Durham, NH

PARTITION TYPES

Project number	Project Number
Date	1/12/25
Drawn by	Author
Checked by	Checker

A0.01

Scale 1" = 1'-0"

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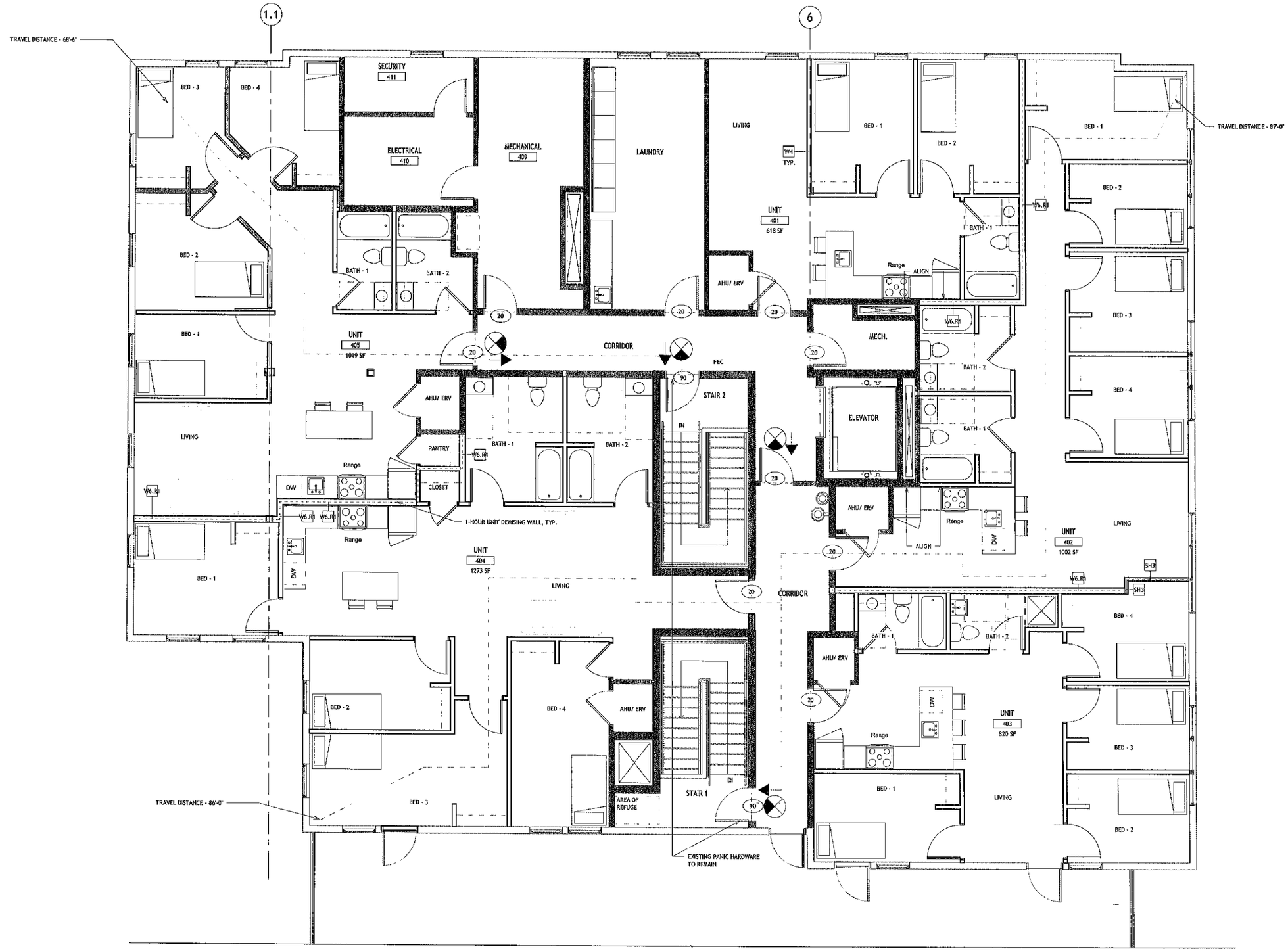

1 Level 4 - Life Safety Plan
1/4" = 1'-0"

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9 Madbury
9 Madbury, Durham, NH

LIFE SAFETY PLAN

Project number	Project Number
Date	1/12/25
Drawn by	Author
Checked by	Checker

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Scale 1/4" = 1'-0"

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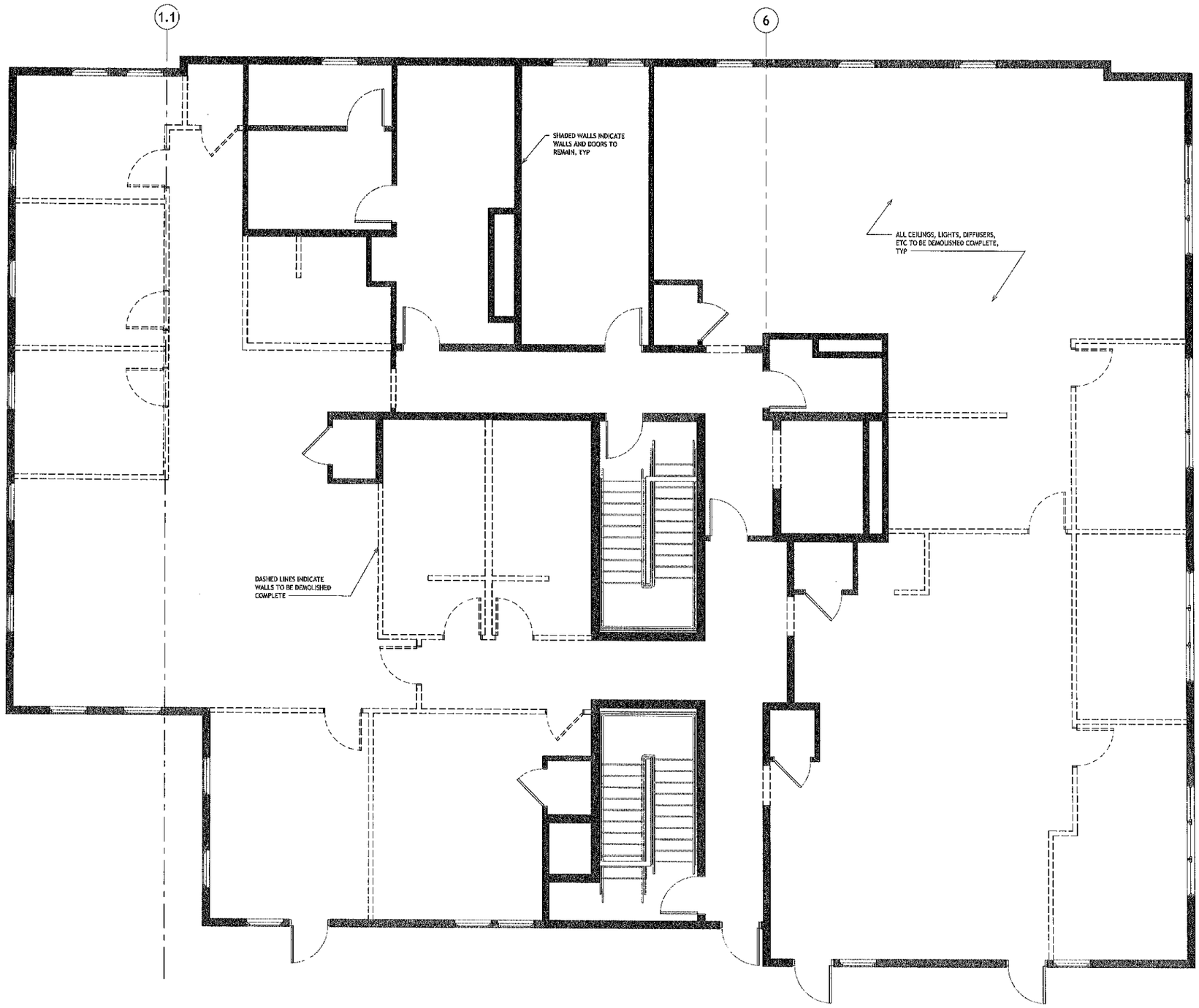

1 Level 4 - EXISTING/ DEMO PLAN
1/4" = 1'-0"

EXISTING WALL TO REMAIN

PROPOSED NEW WALL

EXISTING WALL TO BE DEMOLISHED

WALL LEGEND
1/4" = 1'-0"

GENERAL DEMOLITION NOTES
1. EACH CONTRACTOR TO CAREFULLY EXAMINE EXISTING CONDITIONS AT TIME OF BID. ALL INCIDENTAL DEMOLITION IS NOT SHOWN.
2. REFER TO MEP DEMOLITION DRAWINGS FOR THE WORK OF THOSE TRADES. THE CONTRACTOR IS TO COORDINATE WITH THE DEMOLITION WORK OF THOSE TRADES.
3. DEMOLITION OF WALLS INCLUDES ALL ITEMS ATTACHED TO THE WALL, UNLESS NOTED TO BE SALVAGED.
4. PROTECT EXISTING DOORS THAT AREA SCHEDULED TO REMAIN IN PLACE.

DEMOLITION NOTES
1/4" = 1'-0"

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No.	Description	Date

9 Madbury
9 Madbury, Durham, NH

LEVEL 4 DEMOLITION PLAN

Project number	Project Number
Date	1/12/25
Drawn by	Author
Checked by	Checker

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Scale 1/4" = 1'-0"

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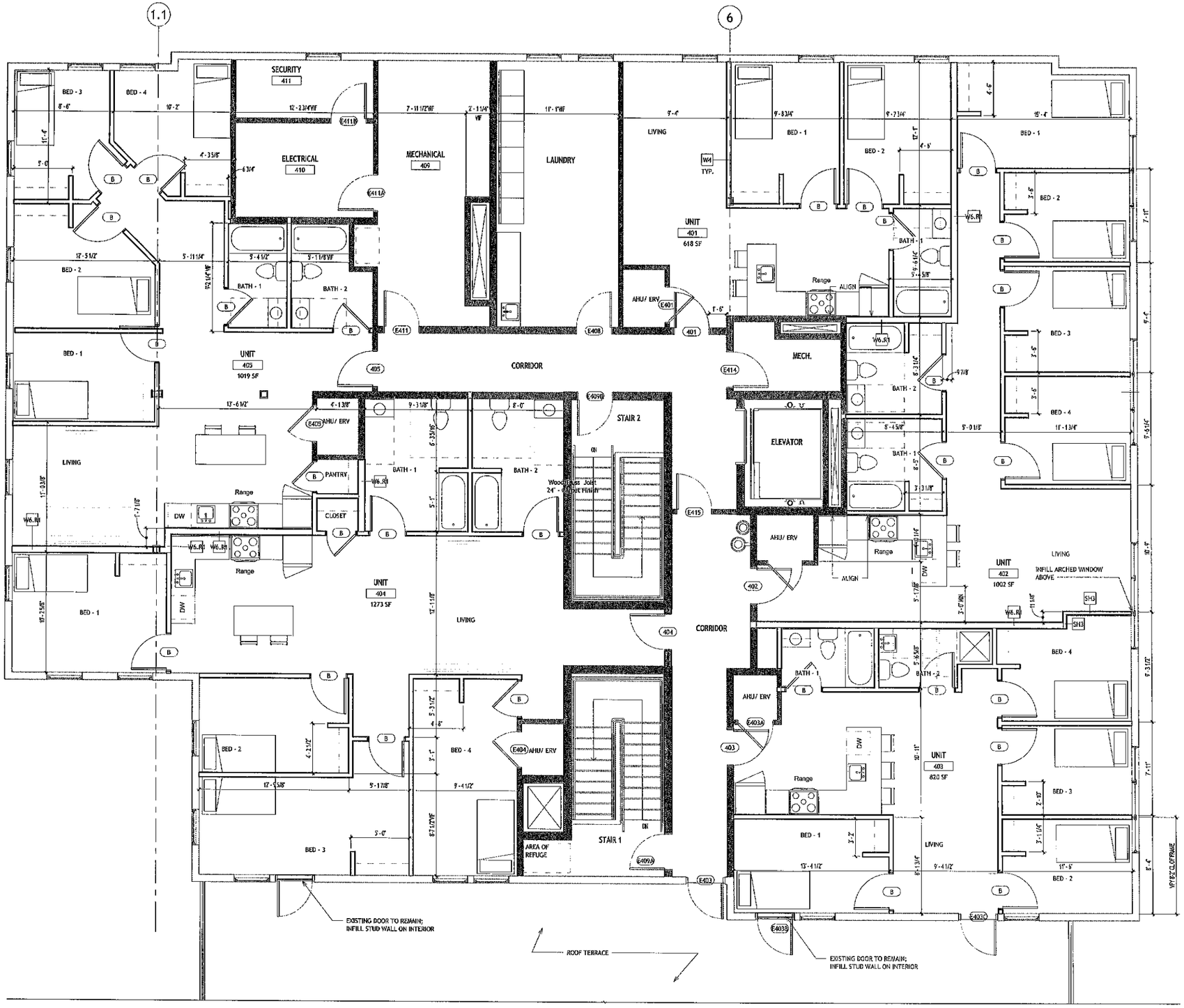

1 Level 4 - Floor Plan
1/4" = 1'-0"

EXISTING WALL TO REMAIN

PROPOSED NEW WALL

WALL LEGEND
EXISTING WALL TO BE DEMOLISHED
1/4" = 1'-0"

GENERAL PLAN NOTES:
1. GENERAL CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS. NOTIFY ARCHITECT IF FIELD CONDITIONS ARE DIFFERENT THAN SHOWN IN DRAWINGS.
2. REFERENCE LIFE SAFETY DRAWINGS FOR ADDITIONAL INFORMATION.
3. ACCESSIBLE CLEARANCES ARE REQUIRED AT ALL ACCESSIBLE FIXTURES AND EQUIPMENT.
4. INTERIOR DIMENSIONS ARE GIVEN FROM FACE OF STUD TO FACE OF STUD U.N.O.
5. ALL INTERIOR UNIT WALLS TO BE W4, U.N.O.
6. ALL DOORS SHALL BE INSTALLED WITH HINGE SIDE OF FINISHED OPENING 6" FROM ADJACENT WALL, OR CENTERED WITHIN WALL, UNLESS NOTED OTHERWISE.
7. ALL DOORS INTENDED FOR PASSAGE MUST MEET ACCESSIBILITY MANEUVERING CLEARANCES.
8. ALL WORK SHALL COMPLY WITH APPLICABLE LOCAL CODES AS WELL AS STATE AND FEDERAL GUIDELINES.
9. REFER TO A6.0 FOR DOOR AND FRAME TYPES.

GENERAL PLAN NOTES
1/4" = 1'-0"

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No.	Description	Date

9 Madbury
9 Madbury, Durham, NH

LEVEL 4 PROPOSED FLOOR PLAN

Project number	Project Number
Date	1/12/25
Drawn by	NI
Checked by	NI

A1.02

Scale 1/4" = 1'-0"

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Door Schedule

Mark	Door Size Width	Door Size Height	Door Size Thickness	Door Material	Door Finish	Door Under Cut	Frame Material	Frame Type	Frame Finish	Fire Rating Label	Hardware Set No.	Comments
401	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		
402	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		
403	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		
404	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		
405	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		
E401	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		EXISTING TO REMAIN
E402	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		EXISTING TO REMAIN
E403	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD			EXISTING TO REMAIN
E403A	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		EXISTING TO REMAIN
E403C	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD			EXISTING TO REMAIN
E404	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD			EXISTING TO REMAIN
E404	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD			EXISTING TO REMAIN
E405	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		EXISTING TO REMAIN
E407	3' - 0"	6' - 8"	0' - 1 3/4"									
E408	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		EXISTING TO REMAIN
E409	3' - 0"	6' - 8"	0' - 1 3/4"									
E409A	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	90 MIN		EXISTING TO REMAIN
E410	3' - 0"	6' - 8"	0' - 1 3/4"									
E411	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		EXISTING TO REMAIN
E411A	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		EXISTING TO REMAIN
E412	3' - 0"	6' - 8"	0' - 1 3/4"									
E413	3' - 0"	6' - 8"	0' - 1 3/4"									
E414	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD	20 MIN		EXISTING TO REMAIN
E415	3' - 0"	6' - 8"	0' - 1 3/4"	MTL	PTD		MTL		PTD			EXISTING TO REMAIN
E416	3' - 0"	6' - 8"	0' - 1 3/4"									
E417	3' - 0"	6' - 8"	0' - 1 3/4"									
E418	3' - 0"	6' - 8"	0' - 1 3/4"									
E419	3' - 0"	6' - 8"	0' - 1 3/4"									
E420	3' - 0"	6' - 8"	0' - 1 3/4"									
E421	3' - 0"	6' - 8"	0' - 1 3/4"									
E422	3' - 0"	6' - 8"	0' - 1 3/4"									

Door Schedule - UNIT DOORS

Mark	Door Size Width	Door Size Height	Door Size Thickness	Door Material	Door Finish	Door Under Cut	Frame Material	Frame Type	Frame Finish	Fire Rating Label	Hardware Set No.	Comments
B	3' - 0"	6' - 8"	0' - 1 3/4"	WD-HC	PTD		WD					

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Fax
e-mail

No.	Description	Date

9 Madbury
9 Madbury, Durham, NH

DOOR SCHEDULE

Project number	Project Number
Date	1/12/25
Drawn by	Author
Checked by	Checker

A6.01

Scale

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