

# Development Services

## From Concept to Construction

Phone: 503-823-7300 Email: [bds@portlandoregon.gov](mailto:bds@portlandoregon.gov) 1900 SW 4th Ave, Portland, OR 97201

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### APPEAL SUMMARY

**Status:** Hold for Additional Information - Held over from ID 19096 (3/20/19) for additional information

**Appeal ID:** 20220

**Project Address:** 1410 NW Johnson St

**Hearing Date:** 4/10/19

**Appellant Name:** Barry R Smith PC Architect

**Case No.:** B-018

**Appellant Phone:** 503-295-6261

**Appeal Type:** Building

**Plans Examiner/Inspector:** Preliminary

**Project Type:** commercial

**Stories:** 3 **Occupancy:** F-2 **Construction Type:** IIIB

**Building/Business Name:**

**Fire Sprinklers:** Yes - NFPA 13 (Improvements Req'd)

**Appeal Involves:** Alteration of an existing structure, Reconsideration of appeal

**LUR or Permit Application No.:**

**Plan Submitted Option:** pdf [File 1] [File 2] [File 3]

**Proposed use:** Office

### APPEAL INFORMATION SHEET

#### Appeal item 1

##### Code Section

Section 1022 Interior Exit Stairways and Ramps, 1022.3.1 Extension

##### Requires

Where interior exit stairways and ramps are extended to an exit discharge or a public way by an exit passageway, the interior exit stairway and ramp shall be separated from the exit passageway by a fire barrier constructed in accordance with Section 707 or a horizontal assembly constructed in accordance with Section 711, or both. The fire-resistance rating shall be at least equal to that required for the interior exit stairway and ramp. A fire door assembly complying with Section 716.5 shall be installed in the fire barrier to provide a means of egress from the interior exit stairway and ramp to the exit passageway. Openings in the fire barrier other than the fire door assembly are prohibited. Penetrations of the fire barrier are prohibited.

##### Proposed Design

This factory building was granted occupancy December 30, 1908 and little or no improvements have been made since the original construction. The current owner [Seller] has occupied the building since the 1950's using it as an office building and print shop.

Circulation and egress are constricted in the current configuration. Occupants have to travel through adjoin occupied spaces or through an enclosed stair to access tenant spaces. Door swing in the wrong direction and are redundant.

The new Owner [Purchaser] wishes to simplify the enclosed stair to act both as vertical circulation and means of egress as it now functions. The improvements are to secure the required two-hour fire resistive protection around the stairwell, correct the door swing and maneuvering distance condition and separate tenant access spaces by extending the stairwell footprint. (Fire Protection Engineer letters included for protection of existing heavy timber).

Per Section 1022.2, the fire-resistive rating of the Interior Exit Stairway is required to be 2 hour as the stair is connecting four stories.

Building is equipped with an automatic sprinkler system and needs upgrading to current NFPA 13 standards.

There are no combustible concealed attic spaces.

Where non-rated interior glass relite and doors are used, a 2HR rated fire curtain is provided (Tyco Model WS – 2HR Fire Barrier).

Stairwell protection will be extended to the basement.

RESPONSE: A Building Code appeal is required for substituting 2HR fire curtains in lieu of two-hour fire resistive construction.

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**Reason for alternative** The alternate gives the Owner flexibility to visually identify tenant access from egress components.

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APPEAL DECISION

**Extension of stair enclosures: Hold for additional information.**  
**Appellant may contact Corey Stanley (971 291-8919) with questions.**



# 1410 NW JOHNSON STREET

## GENERAL NOTES:

1. CONSTRUCTION SHALL COMPLY WITH ALL CODES AS ADMINISTERED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL CONFORM TO ORDINANCES OR REGULATIONS RELATING TO ENVIRONMENTAL POLLUTION AND PRESERVATION OF NATURAL RESOURCES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL BURIED SERVICES IN UNDAMAGED CONDITION DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY UTILITY LOCATIONS AND CONNECTIONS.
3. CONTRACTOR SHALL INSURE ALL SCAFFOLDING, TEMPORARY FLOORS, ETC., FURNISHED BY HIMSELF OR SUBCONTRACTORS FOR INSTALLATION OF WORK TO BE BUILT AND MAINTAINED TO SAFELY SUPPORT REQUIRED LOADS. COMPLY WITH ALL APPLICABLE LOCAL SAFETY CODES AND SPECIFICALLY THE OCCUPATIONAL SAFETY AND HEALTH ACT FOR THE CONSTRUCTION INDUSTRY.
4. PERFORM ALL WORK IN A FIRE-SAFE MANNER AND SUPPLY AND MAINTAIN ADEQUATE FIRST-AID AND FIRE FIGHTING EQUIPMENT CAPABLE OF EXTINGUISHING INCIPIENT FIRES. COMPLY WITH LOCAL AND STATE FIRE PREVENTION REGULATIONS.
5. PROVIDE ADEQUATE SAFETY AND PROTECTIVE DEVICES FOR WORKMEN DURING EXCAVATION AND CLEARING. REVIEW LOCATION OF EXISTING SERVICES AND UTILITY LINES. PROVIDE PROTECTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS AND SURVEY MARKERS. PROVIDE EROSION CONTROL PER BUILDING DEPARTMENT REQUIREMENTS.
6. PROVIDE SHORING, SHEETING AND BRACING WHEREVER NECESSARY TO PREVENT CAVING DURING EXCAVATION OR TO PROTECT ADJACENT IMPROVEMENTS, PROPERTY, WORKMEN AND THE PUBLIC.
7. SOILS ENGINEER SHALL INSPECT AND APPROVE CUT-OUT FOR FOUNDATION AND FOUNDATION PLAN.
8. CONCRETE TESTING SHALL BE REQUIRED SEE STRUCTURAL GENERAL NOTES FOR TESTING REQUIREMENTS.
9. FURNISH AND PLACE HOLDDOWNS AND DEFORMED STEEL AS INDICATED BY THE STRUCTURAL ENGINEER. STRUCTURAL ENGINEER SHALL INSPECT ALL HOLDDOWNS AND STEEL FOR CONFORMANCE. CONTRACTOR SHALL PROVIDE UL RATINGS FOR RATED STEEL PROTECTION, SEE DRAWINGS FOR RATED REQUIREMENTS.
10. RAPIDLY HANDLE CONCRETE FROM MIXER TO FORMS AND DEPOSIT AS NEAR AS POSSIBLE TO ITS FINAL POSITION TO AVOID SEGREGATION DUE TO HANDLING. SEE STRUCTURAL FOR ADDITIONAL REQUIREMENTS.
11. EXAMINE DRAWINGS FOR REQUIRED ROUGH CARPENTRY MATERIALS INCLUDING PLATES, STUDS, FIRE-STOPS, SOLID BLOCKING, BRIDGING, POSTS, BLOCKS, SUB-FLOORING AND SHEATHING. LUMBER SHALL BE DOUGLAS-FIR (STANDARD), TREATED LUMBER WITH A NET RETENTION OF 0.25 PCF. GYPSUM BOARD SHALL BE AS NOTED ON DRAWINGS. USE EXTERIOR GYPSUM BOARD FOR SOFFITS AND PORCH CEILINGS AND WATERPROOF IN BATHROOMS. PROVIDE ALL GLUE LAMINATED MEMBERS AS INDICATED BY STRUCTURAL. BUILDING PAPER SHALL BE NO. 15 LB. ASPHALT SATURATED ROOFING FELT. ALL HANGERS AND HOLDDOWNS SHALL BE HOT DIPPED GALVANIZED. USE KRAFT FACE FIBERGLASS INSULATION; SEE ENERGY CODE COMPLIANCE. I-JOISTS BY TRUSS JOIST CORPORATION SHALL HAVE HOLES KNOCKED OUT AT FACTORY. INSTALL WITH HOLES UP. SIZE AND DETAILS OF JOISTS SHALL FIT DIMENSIONS AND LOADS AS INDICATED ON DRAWINGS.
12. ALL MANUFACTURED MATERIALS, COMPONENTS, FASTENERS, ASSEMBLIES, ECT., SHALL BE HANDLED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND PROVISIONS OF APPLICABLE ICBO RESEARCH RECOMMENDATIONS.
13. PROVIDE SHOP DRAWINGS FOR ALL PRE-ENGINEERED PRODUCTS (I-JOISTS, ROOF TRUSSES, ETC.) FOR STRUCTURAL REVIEW.
14. IMMEDIATELY NOTIFY ARCHITECT IN WRITING OF ANY DISREPINCIES BETWEEN CONSTRUCTION DOCUMENTS AND ACTUAL CONDITIONS. CORRECTIONS SHALL BE THE RESPONSIBILITY OF THE OWNER/CONTRACTOR.
15. MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE BIDDER DESIGNED AND UNDER SEPARATE PERMIT. CONTRACTOR SHALL PROVIDE ALL REQUISITE SYSTEM DESIGN DOCUMENTS, LOAD CALCULATIONS AND SHOP DRAWINGS REQUIRED FOR REVIEW.

## PROJECT DESCRIPTION

THE PROJECT IS TO HARDEN THE EXISTING EXIT STAIR SYSTEM WHILE EXPANDING THE FIRST FLOOR LOBBY AREA FOR TENANT ACCESS. HARDENING TO SOME EXTENT OCCURS ON ALL FLOORS. ADD ADA BATHROOMS TO UPPER THIRD FLOOR. BRING EXISTING AUTOMATIC SPRINKLER SYSTEM UP TO NFPA13 STANDARDS. PAINT AND REPAIR EXISTING EXTERIOR FIRE ESCAPE AND ASSOCIATED ELEMENTS.

## PROPERTY:

SITE ADDRESS: 1410 NW JOHNSON STREET  
PORTLAND, OREGON 97209

PROPERTY ID: R140740  
STATE ID: 1N1E33AD 2000  
NEW STATE ID: 1N1E33AD -02000  
ALT ACCOUNT #: R180211050  
MAP #: 2928 OLD

## OWNER/DEVELOPER:

PORTLAND LEEDS LIVING LLC  
6605 SW MACADAM STREET  
PORTLAND OREGON 97239  
contact: PH: 503.295.6261  
FAX: N/A  
EM: barry@barryrsmith.com

## ARCHITECT:

BARRY R. SMITH, PC, ARCHITECT  
715 SW MORRISON STREET, SUITE 909  
PORTLAND, OREGON 97205-3105  
contact: BARRY SMITH  
PH: 503.295.6261  
FAX: N/A  
EM: barry@barryrsmith.com

## SEPARATE PERMITS REQUIRED

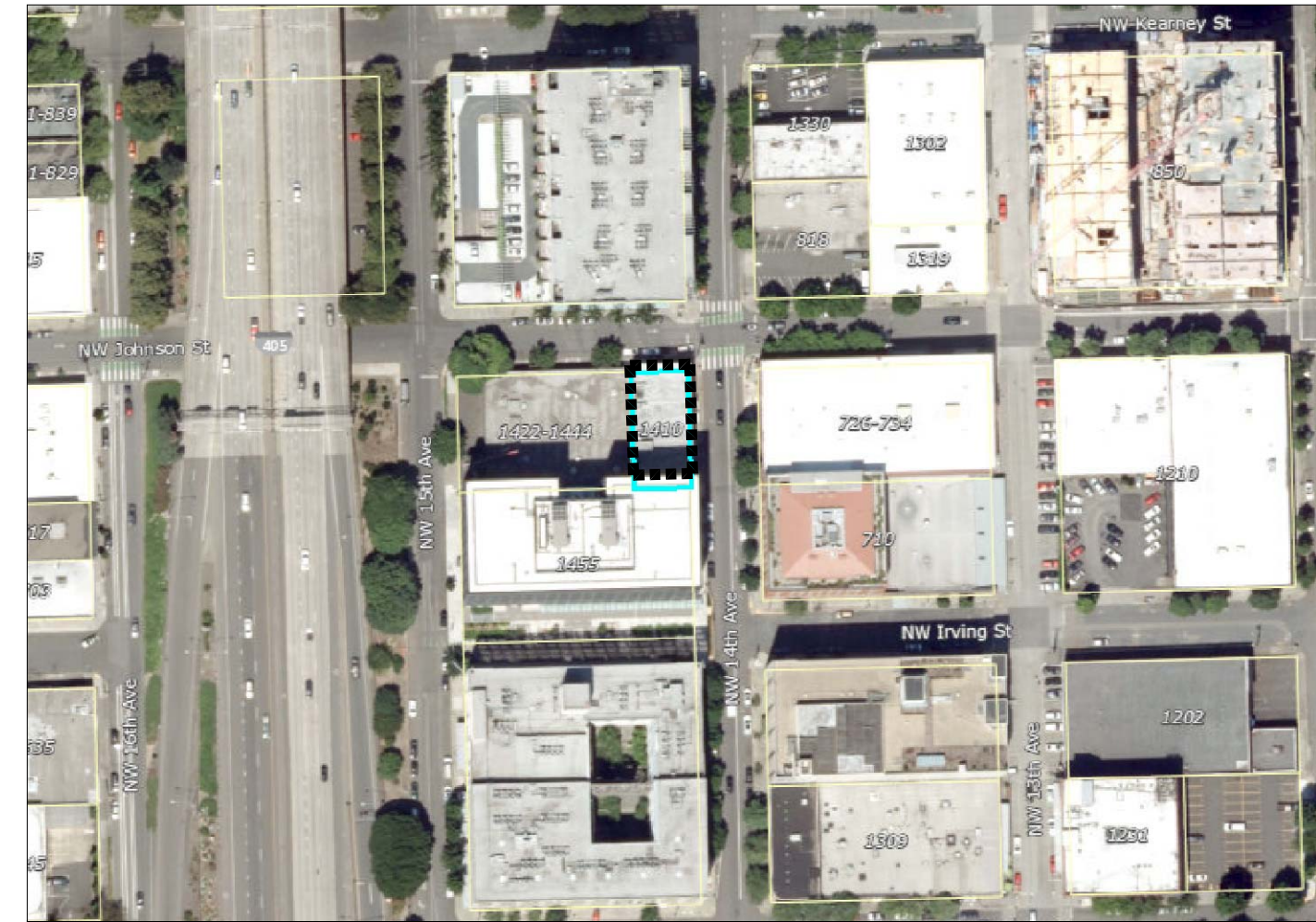
1. MECHANICAL PLANS
2. ELECTRICAL PLANS
3. PLUMBING PLANS

## CODE APPEALS

PENDING - ID#18949

## DRAWING INDEX:

- ARCHITECTURAL
- A0.0 TITLE SHEET
- A01 BUILDING CODE ANALYSIS - SUMMARY
- A02 BUILDING CODE ANALYSIS - HARDENING PLANS
- A03 BUILDING CODE ANALYSIS - HARDENING PLANS
- A10 EXISTING CONDITION PLANS
- A20 DEMOLITION PLANS
- A30 HARDENING PLANS
- A31 ENLARGED HARDENING PLANS + RATED DETAILS
- A50 EXTERIOR ELEVATIONS



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VICINITY PHOTO  
SCALE: N.T.S.

NORTH



**BARRY R SMITH, PC Architect**  
715 SW MORRISON STREET SUITE 909  
PORTLAND OR 97205 503.295.6261 www.barryrsmith.com

1410 NW JOHNSON STREET  
for PORTLAND LEEDS LIVING LLC  
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PORTLAND, OR

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BUILDING CODE ANALYSIS - SUMMARY							
FLOOR	TYPE	OCCUPANCY	EXISTING AREA - SF	ALLOWABLE AREA - SF	SPRINKLER	ALARM	DETECTION
BASEMENT	IIIB	F-2	5,000	18,000	YES	NO	NO
1ST FLOOR	IIIB	F-2	5,000	18,000	YES	NO	NO
2ND FLOOR	IIIB	F-2	5,000	18,000	YES	NO	NO
3RD FLOOR	IIIB	F-2	5,000	18,000	YES	NO	NO
TOTAL FLOORS			20,000 SF	72,000 SF			

### BUILDING CODE

THIS PROJECT HAS BEEN REVIEWED UNDER THE 2014 OREGON STRUCTURAL SPECIALTY CODE (BASED ON THE 2012 IBC), THE 2012 IBC/ICC A117.1 2009 FOR ACCESSIBILITY AND THE 2014 OREGON FIRE CODE. THIS ANALYSIS IDENTIFIES SOME SPECIFIC BUILDING CODE REQUIREMENTS BUT IS NOT INTENDED TO LIST ALL BUILDING CODE REQUIREMENTS. SEE ALL OTHER PLAN SHEETS FOR CONTRACT DOCUMENT INFORMATION.

#### CHAPTER 1 - SCOPE AND ADMINISTRATION:

102 - APPLICABILITY

102.6 - EXISTING STRUCTURES:

THE LEGAL OCCUPANCY OF ANY STRUCTURE EXISTING ON THE DATE OF ADOPTION OF THIS CODE SHALL BE PERMITTED TO CONTINUE WITHOUT CHANGE EXCEPT AS IS SPECIFICALLY COVERED IN THIS CODE OR THE FIRE CODE, OR AS IS DEEMED NECESSARY BY THE BUILDING OFFICIAL FOR THE GENERAL SAFETY AND WELFARE OF THE OCCUPANTS AND THE PUBLIC.

#### CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION:

USE AND CLASSIFICATION ARE LISTED IN THE ABOVE MATRIX FOR:

306 - FACTORY GROUP F

306.3 - LOW-HAZARD FACTORY INDUSTRIAL, GROUP F2.

#### CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS:

THE TABULAR VALUES IN TABLE 503 ARE:

OCC. GROUP	TYPE	ALLOWABLE HEIGHT	ALLOWABLE STORIES	ALLOWABLE AREA
F-2	IIIB	55 FT	3	18,000 SF

#### CHAPTER 6 - TYPES OF CONSTRUCTION:

TABLE 601 - FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS):

TYPE IIB:

PRIMARY STRUCTURAL FRAME	= 0-HOUR
BEARING WALLS - EXTERIOR	= 2-HOUR
BEARING WALLS - INTERIOR	= 0-HOUR
NON-BEARING WALLS - EXTERIOR	= TABLE 602
NON-BEARING WALLS - INTERIOR	= 0-HOUR
FLOOR CONSTRUCTION & SECONDARY MEMBERS	= 0-HOUR
ROOF CONSTRUCTION & SECONDARY MEMBERS	= 0-HOUR

TABLE 602 - FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE:

X < 5FT -	TYPE IIIB - F-2 = 1-HOUR
5FT ≤ X < 10FT -	TYPE IIIB - F-2 = 1-HOUR
10FT ≤ X < 30FT -	TYPE IIB - F-2 = 1-HOUR
X ≥ 30FT -	TYPE IIIB - F-2 = 0-HOUR

GENERAL RATINGS ARE INDICATED ON THE BUILDING CODE ANALYSIS FLOOR PLANS.

#### CHAPTER 7 - FIRE AND SMOKE PROTECTION FEATURES:

705 - EXTERIOR WALLS

705.5 - FIRE-RESISTANCE RATINGS:

EXTERIOR WALLS SHALL BE FIRE-RESISTANCE RATED IN ACCORDANCE WITH TABLES 601 AND 602 AND THIS SECTION.

706 - FIRE WALLS

TABLE 706.4 FIRE WALL FIRE-RESISTANCE RATINGS:

OCCUPANCY GROUP F-2 = 2-HOUR

707 - FIRE BARRIERS

707.3.2 - INTERIOR EXIT STAIRWAY & RAMP CONSTRUCTION:

FIRE BARRIERS FOR INTERIOR EXIT STAIRWAYS ARE 2-HOUR FIRE-RESISTANCE RATED.

707.3.3 - ENCLOSURES FOR EXIT ACCESS STAIRWAYS:

FIRE BARRIERS FOR INTERIOR EXIT STAIRWAYS ARE 2-HOUR FIRE-RESISTANCE RATED.

707.3.4 - EXIT PASSAGEWAY:

FIRE BARRIERS FOR EXIT PASSAGEWAYS ARE 2-HOUR FIRE-RESISTANCE RATED.

708 - FIRE PARTITIONS

708.3 - FIRE-RESISTANCE RATING:

FIRE PARTITIONS SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 1-HOUR.

711 - HORIZONTAL ASSEMBLIES

711.1 - GENERAL:

NONFIRE-RESISTANCE-RATED FLOOR AND ROOF ASSEMBLIES SHALL COMPLY WITH SECTION 714.4.2.

713 - SHAFT ENCLOSURES

713.2 - CONSTRUCTION:

SHAFT ENCLOSURES SHALL BE CONSTRUCTED AS FIRE BARRIERS.

713.4 - FIRE-RESISTANCE RATING:

SHAFT ENCLOSURES ARE 2-HOUR FIRE-RESISTANCE RATED.

714 - PENETRATIONS

714.4.2 - NONFIRE-RESISTANCE-RATED ASSEMBLIES:

PENETRATIONS OF NONFIRE-RESISTANCE-RATED FLOOR OR FLOOR/CEILING ASSEMBLIES OR THE CEILING MEMBRANE OF A NONFIRE-RESISTANCE-RATED ROOF/CEILING ASSEMBLY SHALL MEET THE REQUIREMENTS OF SECTION 713 OR SECTIONS 714.4.2.1 OR 714.4.2.2.

714.4.2.1 - NONCOMBUSTIBLE PENETRATING ITEMS:

NONCOMBUSTIBLE PENETRATING ITEMS THAT CONNECT NOT MORE THAN FIVE STORIES ARE PERMITTED, PROVIDED THAT THE ANNULAR SPACE IS FILLED TO RESIST THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION WITH AN APPROVED NONCOMBUSTIBLE MATERIAL OR WITH A FILL, VOID OR CAVITY MATERIAL THAT IS TESTED AND CLASSIFIED FOR USE IN THROUGH-PENETRATION FIRESTOP SYSTEMS.

714.4.2.2 - PENETRATION ITEMS:

PENETRATING ITEMS THAT CONNECT NOT MORE THAN TWO STORIES ARE PERMITTED, PROVIDED THAT THE ANNULAR SPACE IS FILLED WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION.

716 - OPENING PROTECTIVES

TABLE 716.5 - OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS:

SEE PLAN SET FOR INDIVIDUAL OPENING FIRE PROTECTION ASSEMBLIES.

716.5.9 - DOOR CLOSING:

FIRE DOORS ARE PROPOSED TO BE SELF- OR AUTOMATIC-CLOSING.

#### CHAPTER 8 - INTERIOR FINISHES

TABLE 803.9 - PROPOSED INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY:

OCC. GROUP	EXIT	CORR.	ROOMS
F	C	C	C

#### CHAPTER 9 - FIRE PROTECTION SYSTEMS

903 - AUTOMATIC SPRINKLER SYSTEMS

[F] 903.1 - GENERAL:

AN NFPA 13 AUTOMATIC SPRINKLER SYSTEM IS INSTALLED IN THE BUILDING.

906 - PORTABLE FIRE EXTINGUISHERS

[F] 906.1 - WHERE REQUIRED:

PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED IN OCCUPANCIES AND LOCATIONS AS REQUIRED BY THE FIRE CODE.

#### CHAPTER 10 - MEANS OF EGRESS

SECTION 1004 - OCCUPANT LOAD

TABLE 1004.1.2 - MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT:

FUNCTION OF SPACE	FLOOR FACTOR
BUSINESS	100 GROSS

SECTION 1006 - MEANS OF EGRESS ILLUMINATION

1006.1 - ILLUMINATION REQUIRED:

THE MEANS OF EGRESS, INCLUDING THE EXIT DISCHARGE, SHALL BE ILLUMINATED AT ALL TIMES THE BUILDING SPACE SERVED BY THE MEANS OF EGRESS IS OCCUPIED..

SECTION 1009 - STAIRWAYS

1009.2 - INTERIOR EXIT STAIRWAYS:

STAIRWAY LEADS DIRECTLY TO THE EXTERIOR OF THE BUILDING.

1009.3 - EXIT ACCESS STAIRWAYS:

THE EXIT STAIRWAY IS ENCLOSED.

1009.3.1.2 - FIRE RESISTANCE RATING:

EXIT ACCESS STAIRWAY ENCLOSURE HAS A FIRE-RESISTANCE RATING OF 2-HOURS.

SECTION 1011 - EXIT SIGNS

1011.1 - WHERE REQUIRED:

EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. THE PATH OF EGRESS TRAVEL TO EXITS AND WITHIN EXITS SHALL BE MARKED BY READILY VISIBLE EXIT SIGNS TO CLEARLY INDICATED THE DIRECTION OF EGRESS TRAVEL IN CASES WHERE THE EXIT OR THE PATH OF EGRESS TRAVEL IS NOT IMMEDIATELY VISIBLE TO THE OCCUPANTS. INTERVENING MEANS OF EGRESS DOORS WITHIN EXITS SHALL BE MARKED BY EXIT SIGNS. EXIT SIGN PLACEMENT SHALL BE SUCH THAT NO POINT IN AN EXIT ACCESS CORRIDOR OR EXIT PASSAGEWAY IS MORE THAN 100 FT OR THE LISTED VIEWING DISTANCE FOR THE SIGN, WHICHEVER IS LESS, FROM THE NEAREST VISIBLE EXIT SIGN.

SECTION 1014 - EXIT ACCESS

1014.2 - EGRESS THROUGH INTERVENING SPACES:

1. EGRESS FROM A ROOM OR SPACE SHALL NOT PASS THROUGH ADJOINING OR INTERVENING ROOMS OR AREAS, EXCEPT WHERE SUCH ADJOINING ROOMS OR AREAS AND THE AREA SERVED ARE ACCESSORY TO ONE OR THE OTHER, ARE NOT A GROUP H OCCUPANCY AND PROVIDE A DISCERNIBLE PATH OF EGRESS TRAVEL TO AN EXIT. EXCEPTION: MEANS OF EGRESS ARE NOT PROHIBITED THROUGH INTERVENING ROOMS OR SPACES IN A GROUP H, S, OR F OCCUPANCY WHEN THE ADJOINING ROOMS OR SPACES ARE THE SAME OR A LESSER HAZARD OCCUPANCY GROUP.

TABLE 1014.3 - COMMON PATH OF EGRESS TRAVEL:

OCCUPANCY	SPRINKLERED
F	100 FT

SECTION 1015 - EXIT AND EXIT ACCESS DOORWAYS

1015.2.1 - TWO EXITS OR EXIT ACCESS DOORWAYS:

EXCEPTION 2: WHERE A BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2, THE SEPARATION DISTANCE OF THE EXIT DOORS OR EXIT ACCESS DOORWAYS SHALL NOT BE LESS THAN ONE-THIRD OF THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE AREA SERVED.

SECTION 1016 - EXIT ACCESS TRAVEL DISTANCE

TABLE 1016.2 - EXIT ACCESS TRAVEL DISTANCE:

OCCUPANCY	WITH SPRINKLER SYSTEM
F-2	300 FT

SECTION 1018 - CORRIDORS

TABLE 1018.1 - CORRIDOR FIRE-RESISTANCE RATING:

THE FIRE-RESISTANCE RATING OF THE CORRIDOR IS 0-HOUR, FOR F OCCUPANCY AND AN OCCUPANT LOAD GREATER THAN 30.

SECTION 1020 - EXITS

1020.2.2 - ARRANGEMENT:

THE EXTERIOR EXIT DOOR LEADS DIRECTLY TO THE PUBLIC WAY.

SECTION 1022 - INTERIOR EXIT STAIRWAYS AND RAMPS

1022.2 - CONSTRUCTION:

THE INTERIOR EXIT STAIRWAY WALLS ARE CONSTRUCTED AS 2-HOUR FIRE BARRIERS.

SECTION 1027 - EXIT DISCHARGE

EXIT IS DISCHARGED DIRECTLY TO THE EXTERIOR OF THE BUILDING. THE EXIT DISCHARGE PROVIDES DIRECT ACCESS TO GRADE. THE EXIT DISCHARGE DOES NOT REENTER THE BUILDING.

#### CHAPTER 11 - ACCESSIBILITY

SECTION 1103 - SCOPING REQUIREMENTS:

1103.2.3 - EXISTING BUILDINGS:

EXISTING BUILDINGS SHALL COMPLY WITH SECTION 3411.

#### CHAPTER 34 - EXISTING BUILDINGS AND STRUCTURES

SECTION 3401 - GENERAL:

3401.1 - SCOPE:

THE PROVISIONS OF THIS CHAPTER SHALL CONTROL THE ALTERATION, REPAIR, ADDITION, AND CHANGE OF OCCUPANCY OF EXISTING BUILDINGS AND STRUCTURES.

SECTION 3404 - ALTERATIONS:

3404.1 - GENERAL:

EXCEPT AS PROVIDED BY SECTION 3401.4 OR THIS SECTION, ALTERATIONS TO ANY BUILDING SHALL COMPLY WITH THE REQUIREMENTS OF THE CODE FOR NEW CONSTRUCTION. ALTERATIONS SHALL BE SUCH THAT THE EXISTING BUILDING OR STRUCTURE IS NO LESS COMPLYING WITH THE PROVISIONS OF THIS CODE THAN THE EXISTING BUILDING OR STRUCTURE WAS PRIOR TO THE ALTERATION.

EXCEPTIONS:

1. AN EXISTING STAIRWAY SHALL NOT BE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF SECTION 1009 WHERE THE EXISTING SPACE AND CONSTRUCTION DOES NOT ALLOW A REDUCTION IN PITCH OR SLOPE.

2. HANDRAILS OTHERWISE NOT REQUIRED TO COMPLY WITH SECTION 1009.15 SHALL NOT BE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF SECTION 1012.6 REGARDING FULL EXTENSION OF THE HANDRAILS WHERE SUCH EXTENSIONS WOULD BE HAZARDOUS DUE TO PLAN CONFIGURATION.

3404.3 - EXISTING STRUCTURAL ELEMENTS CARRYING GRAVITY LOAD:

ANY EXISTING GRAVITY LOAD-CARRYING STRUCTURAL ELEMENT FOR WHICH AN ALTERATION CAUSES AN INCREASE IN DESIGN GRAVITY LOAD OF MORE THAN 5 PERCENT SHALL BE STRENGTHENED, SUPPLEMENTED, REPLACED OR OTHERWISE ALTERED AS NEEDED TO CARRY THE INCREASED GRAVITY LOAD REQUIRED BY THIS CODE FOR NEW STRUCTURES. ANY EXISTING GRAVITY LOAD-CARRYING STRUCTURAL ELEMENT WHOSE GRAVITY LOAD-CARRYING CAPACITY IS DECREASED AS PART OF THE ALTERATION SHALL BE SHOWN TO HAVE THE CAPACITY TO RESIST THE APPLICABLE DESIGN GRAVITY LOADS REQUIRED BY THIS CODE FOR NEW STRUCTURES.

SECTION 3406 - FIRE ESCAPES

3406.1 WHERE PERMITTED:

FIRE ESCAPES SHALL BE PERMITTED ONLY AS PROVIDED FOR IN SECTIONS 3406.1.1 THROUGH 3406.1.4.

3406.1.2 EXISTING FIRE ESCAPES:

EXISTING FIRE ESCAPES SHALL BE CONTINUED TO BE ACCEPTED AS A COMPONENT IN THE MEANS OF EGRESS IN EXISTING BUILDINGS.

3406.1.4 LIMITATIONS:

FIRE ESCAPES SHALL COMPLY WITH THIS SECTION AND SHALL NOT CONSTITUTE MORE THAN 50 PERCENT OF THE REQUIRED NUMBER OF EXITS NOR MORE THAN 50 PERCENT OF THE REQUIRED EXIT CAPACITY.

SECTION 3411 - ACCESSIBILITY FOR EXISTING STRUCTURES

3411.1 SCOPE:

THE PROVISIONS OF SECTION 3411.1 THROUGH 3411.9 APPLY TO MAINTENANCE, CHANGE OF OCCUPANCY, ADDITIONS AND ALTERATIONS TO EXISTING BUILDINGS, INCLUDING THOSE IDENTIFIED AS HISTORIC BUILDINGS.

3411.6 ALTERATIONS:

A FACILITY THAT IS ALTERED SHALL COMPLY WITH THE APPLICABLE PROVISIONS IN CHAPTER 11 OF THIS CODE, UNLESS TECHNICALLY INFEASIBLE. WHERE COMPLIANCE WITH THIS SECTION IS TECHNICALLY INFEASIBLE, THE ALTERATION SHALL PROVIDE ACCESS TO THE MAXIMUM EXTENT FEASIBLE.

EXCEPTIONS:

1. THE ALTERED ELEMENT OR SPACE IS NOT REQUIRED TO BE ON AN ACCESSIBLE ROUTE, UNLESS REQUIRED BY SECTION 3411.7.

2. ACCESSIBLE MEANS OF EGRESS REQUIRED BY CHAPTER 10 ARE NOT REQUIRED TO BE PROVIDED IN EXISTING FACILITIES.

SECTION 3412 - COMPLIANCE ALTERNATIVES

3412.1 COMPLIANCE:

THE PROVISIONS OF THIS SECTION ARE INTENDED TO MAINTAIN OR INCREASE THE CURRENT DEGREE OF PUBLIC SAFETY, HEALTH AND GENERAL WELFARE IN EXISTING BUILDINGS WHILE PERMITTING REPAIR, ALTERATION, ADDITION AND CHANGE OF OCCUPANCY WITHOUT REQUIRING FULL COMPLIANCE WITH CHAPTERS 2 THROUGH 33, OR SECTION 3401.3, AND 3403 THROUGH 3409M EXCEPT WHERE COMPLIANCE WITH OTHER PROVISIONS OF THIS CODE IS SPECIFICALLY REQUIRED IN THIS SECTION.

3412.2.4 ALTERATIONS OR REPAIRS

AN EXISTING BUILDING OR PORTION THEREOF, WHICH DOES NOT COMPLY WITH THE REQUIREMENTS OF THIS CODE FOR NEW CONSTRUCTION, SHALL NOT BE ALTERED OR REPAIRED IN SUCH A MANNER THAT RESULTS IN THE BUILDING BEING LESS SAFE OR SANITARY THAN SUCH BUILDING IS CURRENTLY, IF, IN THE ALTERATION OR REPAIR, THE CURRENT LEVEL OF SAFETY OR SANITATION IS TO BE REDUCED, THE PORTION ALTERED OR REPAIRED SHALL CONFORM TO THE REQUIREMENTS OF CHAPTERS 2 THROUGH 12 AND CHAPTERS 14 THROUGH 33.

SEE ALSO:

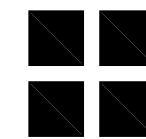
ORS 447.241 STANDARDS FOR RENOVATION, ALTERATION OR MODIFICATION OF CERTAIN BUILDINGS; BARRIER REMOVAL IMPROVEMENT PLAN.

ENERGY CODE		
BUILDING ENVELOPE REQUIREMENTS - OPAQUE ASSEMBLIES		
CLIMATE ZONE	5 AND MARINE 4	
	ALL OTHER	GROUP R
ROOFS		
ATTIC AND OTHER	R-38	R-38
WALLS, ABOVE GRADE		
WOOD FRAMED AND OTHER	R-13 + R-3.8 OR R-21	R-13 + R-3.8 OR R-21
FLOORS		
JOIST / FRAMING (STEEL / WOOD)	R-30	R-30
SLAB-ON-GRADE FLOORS		
UNHEATED SLABS	NR	R-10 FOR 24 IN. BELOW
OPAQUE DOORS		
SWINGING	U-0.70	U-0.70
ROLL-UP OR SLIDING	U-0.50	U-0.50
BUILDING ENVELOPE REQUIREMENTS - FENESTRATION		
CLIMATE ZONE	5 AND MARINE 4	
VERTICAL FENESTRATION (30% MAXIMUM OF ABOVE-GRADE WALL)		
FENESTRATION TYPE	U-FACTOR	
FRAMING MATERIALS OTHER THAN METAL WITH OR WITHOUT METAL REINFORCEMENT OR CLADDING		
FIXED, OPERABLE, AND DOORS WITH GREATER THAN 50% GLAZING	0.35	
SHGC-ALL FRAME TYPES	0.40	





**BARRY R SMITH, PC Architect**  
716 SW MORRISON STREET SUITE 909  
PORTLAND OR 97205 503.295.6261 www.barryrsmith.com



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1410 NW JOHNSON STREET

for PORTLAND LEEDS LIVING LLC  
BUILDING CODE ANALYSIS - FLOOR PLANS

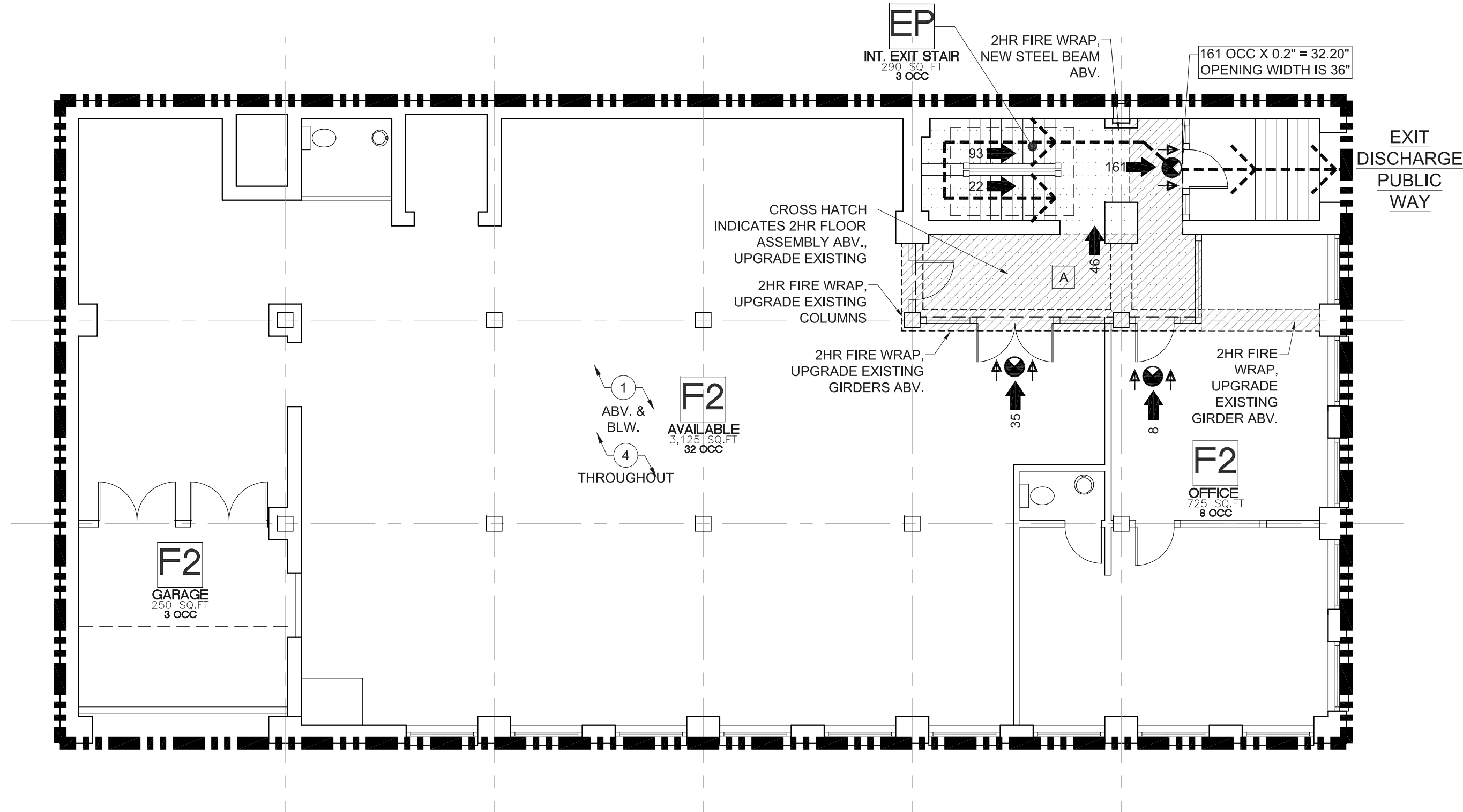
PERMIT SET

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A0.2

04.01.2019

OCCUPANCY SEPARATION	
FIRST FLOOR - 5,000 GROSS SQ. FT. 46 TOTAL OCCUPANT LOAD ALLOWED	
F2	4,100 SQ. FT. - 43 OCCUPANTS FACTORY OCCUPANIES INCLUDE THE USE OF A BUILDING OR STRUCTURE OR PORTION THEREOF, FOR LOW-HAZARD FACTORY INDUSTRIAL 100 GROSS SF ALLOWANCE PER OCCUPANT.
EP	290 SQ. FT. - 3 OCCUPANTS EXIT STAIR ENCLOSURE OR EXIT PASSAGEWAY: BOTH WITH OPENING, DUCT, PENETRATION, AND JOINT PROTECTION. SEE WALL TYPES AND JOINT DETAILS, DOOR AND WINDOW SCHEDULES, PENETRATION DETAILS, AND MECHANICAL DRAWINGS. (PART OF FACTORY OCCUPANCY DESIGNATION AND CALCULATED AS PART OF IT FOR BUILDING AREA CALCULATION PURPOSES.) 100 GROSS SF ALLOWANCE PER OCCUPANT.



63  
A0.2

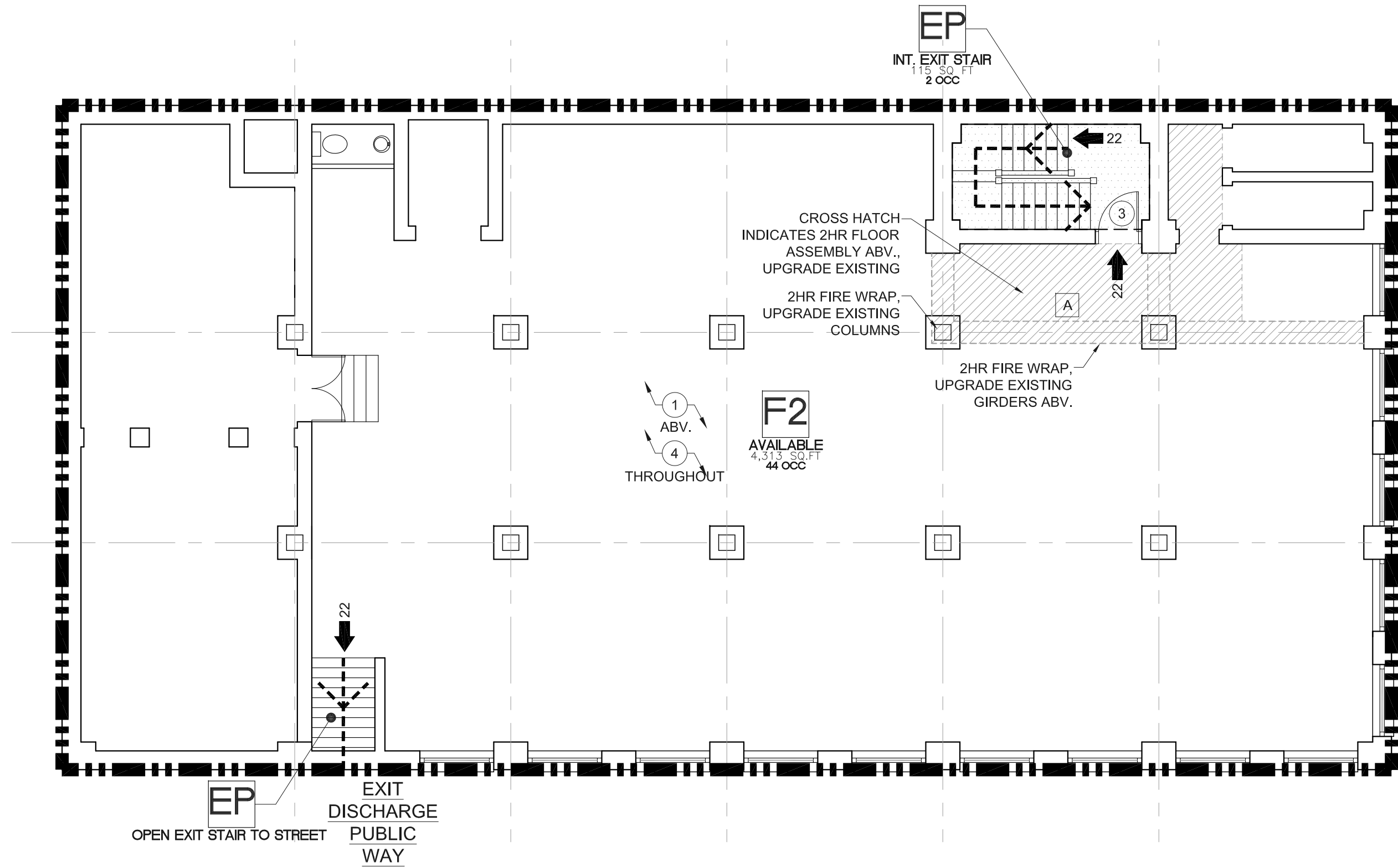
## BUILDING CODE ANALYSIS - FIRST FLOOR PLAN

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

SEE HARDENING PLANS ON A3.0 FOR FURTHER INFORMATION



OCCUPANCY SEPARATION	
BASEMENT FLOOR - 5,000 GROSS SQ. FT. 46 TOTAL OCCUPANT LOAD ALLOWED	
F2	4,313 SQ. FT. - 44 OCCUPANTS FACTORY OCCUPANIES INCLUDE THE USE OF A BUILDING OR STRUCTURE OR PORTION THEREOF, FOR LOW-HAZARD FACTORY INDUSTRIAL 100 GROSS SF ALLOWANCE PER OCCUPANT.
EP	115 SQ. FT. - 2 OCCUPANTS EXIT STAIR ENCLOSURE OR EXIT PASSAGEWAY: BOTH WITH OPENING, DUCT, PENETRATION, AND JOINT PROTECTION. SEE WALL TYPES AND JOINT DETAILS, DOOR AND WINDOW SCHEDULES, PENETRATION DETAILS, AND MECHANICAL DRAWINGS. (PART OF FACTORY OCCUPANCY DESIGNATION AND CALCULATED AS PART OF IT FOR BUILDING AREA CALCULATION PURPOSES.) 100 GROSS SF ALLOWANCE PER OCCUPANT.



66  
A0.2

## BUILDING CODE ANALYSIS - BASEMENT FLOOR PLAN

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

SEE HARDENING PLANS ON A3.0 FOR FURTHER INFORMATION



BUILDING CODE ANALYSIS	
KEY NOTES	
<b>WALL ASSEMBLIES:</b> SEE LEGEND BELOW FOR FIRE-RATED WALLS.	
<b>FLOOR / ROOF ASSEMBLIES:</b>	
①	0-HOUR HORIZONTAL FLOOR/CEILING ASSEMBLY (TABLE 601)
②	0-HOUR ROOF ASSEMBLY (TABLE 601)
<b>OPENING PROTECTION:</b>	
③	90 MIN. DOOR @ 2-HR INTERIOR EXIT STAIRWAYS (TABLE 716.5)
<b>FIRE PROTECTION:</b>	
④	BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13. (903.3.1.1)
GENERAL NOTES	
<ul style="list-style-type: none"><li>THIS CODE ANALYSIS PLAN IS FOR REFERENCE ONLY. SEE ALL OTHER PLAN SHEETS FOR CONTRACT DOCUMENT INFORMATION. THIS CODE ANALYSIS IDENTIFIES SOME SPECIFIC BUILDING CODE REQUIREMENTS BUT IS NOT INTENDED TO LIST ALL BUILDING CODE REQUIREMENTS.</li><li>SEE OTHER PLANS AND DETAIL SHEETS FOR ACCESSIBILITY CONFORMANCE.</li></ul>	
LEGEND	
	INDICATES EMERGENCY EGRESS PATH @ A MINIMUM OF 1 FOOT-CANDLE. SEE SHEET LIGHTING PLANS FOR EXTERIOR LIGHTING REQUIREMENTS. LIGHTING LEVELS ARE PER ALL APPLICABLE FIRE/LIFE/SAFETY CODES.
	2-HOUR FIRE BARRIER & EXTERIOR WALL (705 & 707)
	NON-RATED WALL (TABLE 601)
	EXIT DISCHARGE
	NUMBER AND DIRECTION OF OCCUPANTS FROM THE SPACE.
APPEALS	
PENDING	



**BARRY R SMITH, PC Architect**  
716 SW MORRISON STREET SUITE 909  
PORTLAND OR 97205 503.295.6261 www.barryrsmith.com

PORTLAND, OR

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for PORTLAND LEEDS LIVING LLC  
BUILDING CODE ANALYSIS - FLOOR PLANS

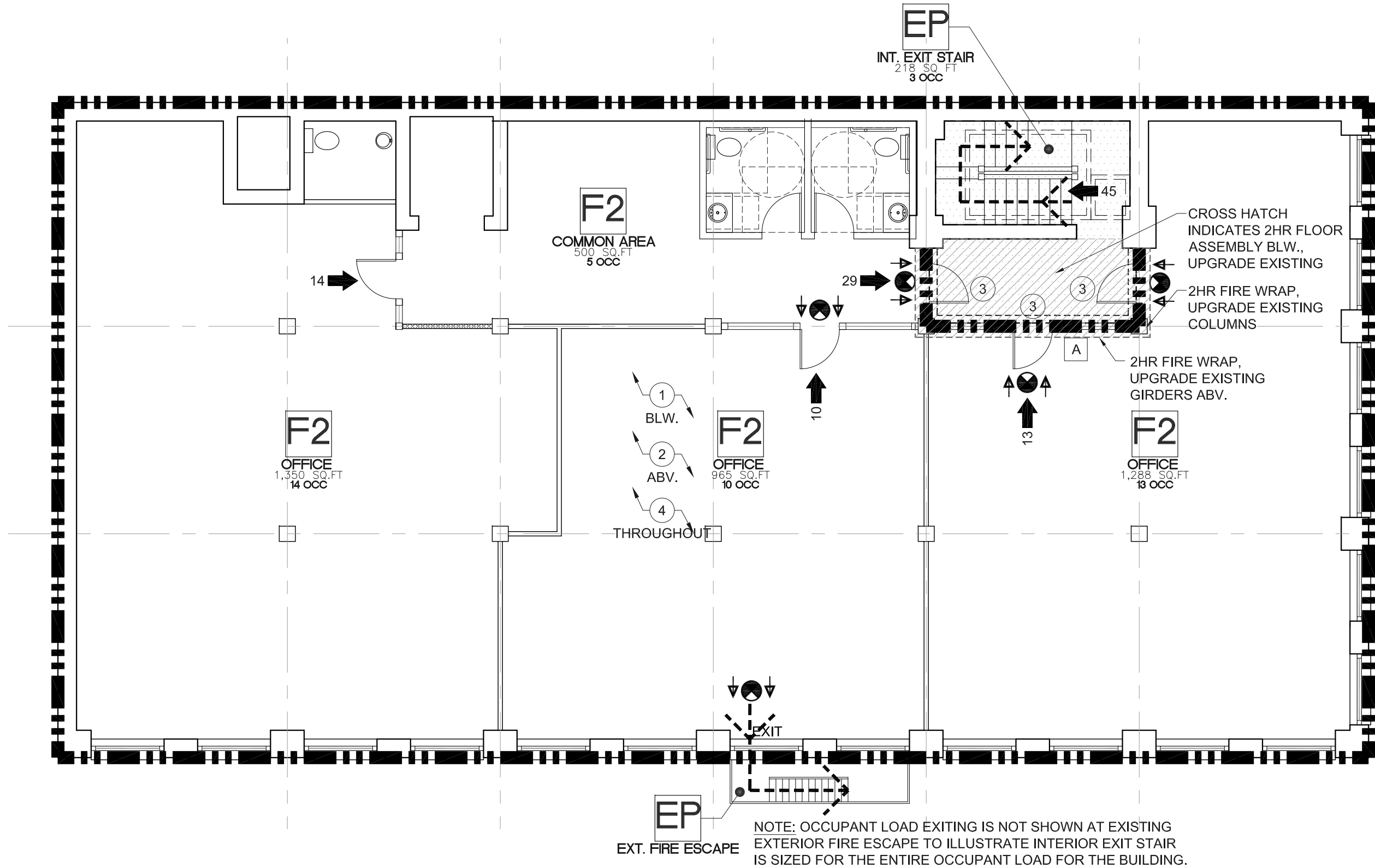
PERMIT SET

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04.01.2019

OCCUPANCY SEPARATION	
THIRD FLOOR - 5,000 GROSS SQ. FT. 45 TOTAL OCCUPANT LOAD ALLOWED	
F2	4,103 SQ. FT. - 42 OCCUPANTS FACTORY OCCUPANIES INCLUDE THE USE OF A BUILDING OR STRUCTURE OR PORTION THEROF, FOR LOW-HAZARD FACTORY INDUSTRIAL 100 GROSS SF ALLOWANCE PER OCCUPANT.
EP	218 SQ. FT. - 3 OCCUPANTS EXIT STAIR ENCLOSURE OR EXIT PASSAGEWAY: BOTH WITH OPENING, DUCT, PENETRATION, AND JOINT PROTECTION. SEE WALL TYPES AND JOINT DETAILS, DOOR AND WINDOW SCHEDULES, PENETRATION DETAILS, AND MECHANICAL DRAWINGS. (PART OF FACTORY OCCUPANCY DESIGNATION AND CALCULATED AS PART OF IT FOR BUILDING AREA CALCULATION PURPOSES.) 100 GROSS SF ALLOWANCE PER OCCUPANT.



63  
A0.3

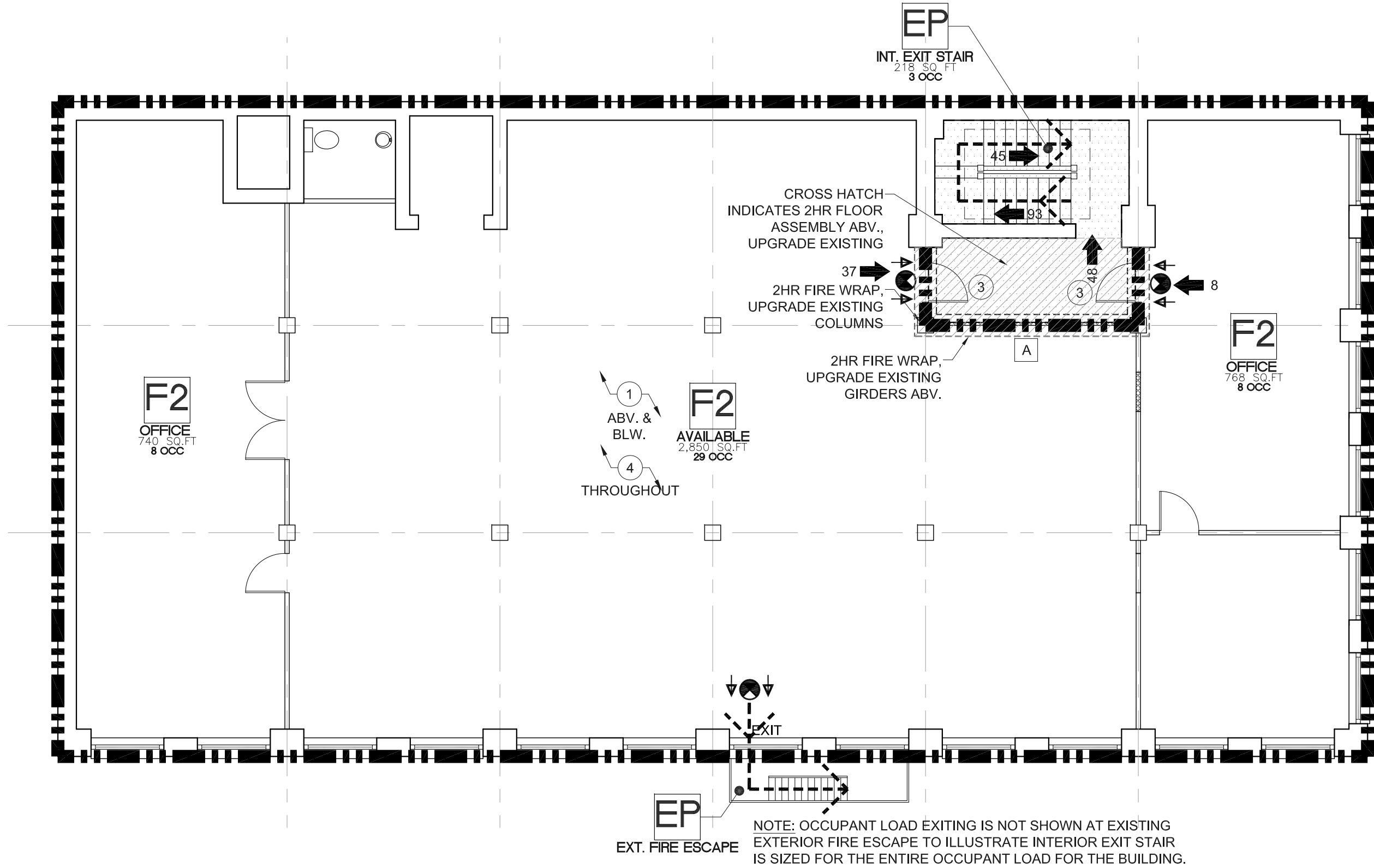
BUILDING CODE ANALYSIS - THIRD FLOOR PLAN

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

SEE HARDENING PLANS ON A3.0 FOR FURTHER INFORMATION



OCCUPANCY SEPARATION	
SECOND FLOOR - 5,000 GROSS SQ. FT. 48 TOTAL OCCUPANT LOAD ALLOWED	
F2	4,358 SQ. FT. - 45 OCCUPANTS FACTORY OCCUPANIES INCLUDE THE USE OF A BUILDING OR STRUCTURE OR PORTION THEROF, FOR LOW-HAZARD FACTORY INDUSTRIAL 100 GROSS SF ALLOWANCE PER OCCUPANT.
EP	218 SQ. FT. - 3 OCCUPANTS EXIT STAIR ENCLOSURE OR EXIT PASSAGEWAY: BOTH WITH OPENING, DUCT, PENETRATION, AND JOINT PROTECTION. SEE WALL TYPES AND JOINT DETAILS, DOOR AND WINDOW SCHEDULES, PENETRATION DETAILS, AND MECHANICAL DRAWINGS. (PART OF FACTORY OCCUPANCY DESIGNATION AND CALCULATED AS PART OF IT FOR BUILDING AREA CALCULATION PURPOSES.) 100 GROSS SF ALLOWANCE PER OCCUPANT.



66  
A0.3

BUILDING CODE ANALYSIS - SECOND FLOOR PLAN

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

SEE HARDENING PLANS ON A3.0 FOR FURTHER INFORMATION

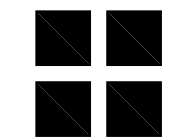


BUILDING CODE ANALYSIS	
KEY NOTES	
<b>WALL ASSEMBLIES:</b> SEE LEGEND BELOW FOR FIRE-RATED WALLS.	
<b>FLOOR / ROOF ASSEMBLIES:</b> ① 0-HOUR HORIZONTAL FLOOR/CEILING ASSEMBLY (TABLE 601) ② 0-HOUR ROOF ASSEMBLY (TABLE 601)	
<b>OPENING PROTECTION:</b> ③ 90 MIN. DOOR @ 2-HR INTERIOR EXIT STAIRWAYS (TABLE 716.5)	
<b>FIRE PROTECTION:</b> ④ BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13. (903.3.1.1)	
GENERAL NOTES	
<ul style="list-style-type: none"><li>THIS CODE ANALYSIS PLAN IS FOR REFERENCE ONLY. SEE ALL OTHER PLAN SHEETS FOR CONTRACT DOCUMENT INFORMATION. THIS CODE ANALYSIS IDENTIFIES SOME SPECIFIC BUILDING CODE REQUIREMENTS BUT IS NOT INTENDED TO LIST ALL BUILDING CODE REQUIREMENTS.</li><li>SEE OTHER PLANS AND DETAIL SHEETS FOR ACCESSIBILITY CONFORMANCE.</li></ul>	
LEGEND	
	INDICATES EMERGENCY EGRESS PATH @ A MINIMUM OF 1 FOOT-CANDLE. SEE SHEET LIGHTING PLANS FOR EXTERIOR LIGHTING REQUIREMENTS. LIGHTING LEVELS ARE PER ALL APPLICABLE FIRE/LIFE/SAFETY CODES.
	2-HOUR FIRE BARRIER & EXTERIOR WALL (705 & 707)
	NON-RATED WALL (TABLE 601)
	EXIT DISCHARGE
	NUMBER AND DIRECTION OF OCCUPANTS FROM THE SPACE.
APPEALS	
PENDING	





**BARRY R SMITH, PC Architect**  
715 SW MORRISON STREET SUITE 909  
PORTLAND OR 97205 503.295.6261 [www.barryrsmith.com](http://www.barryrsmith.com)



PORTLAND, OR

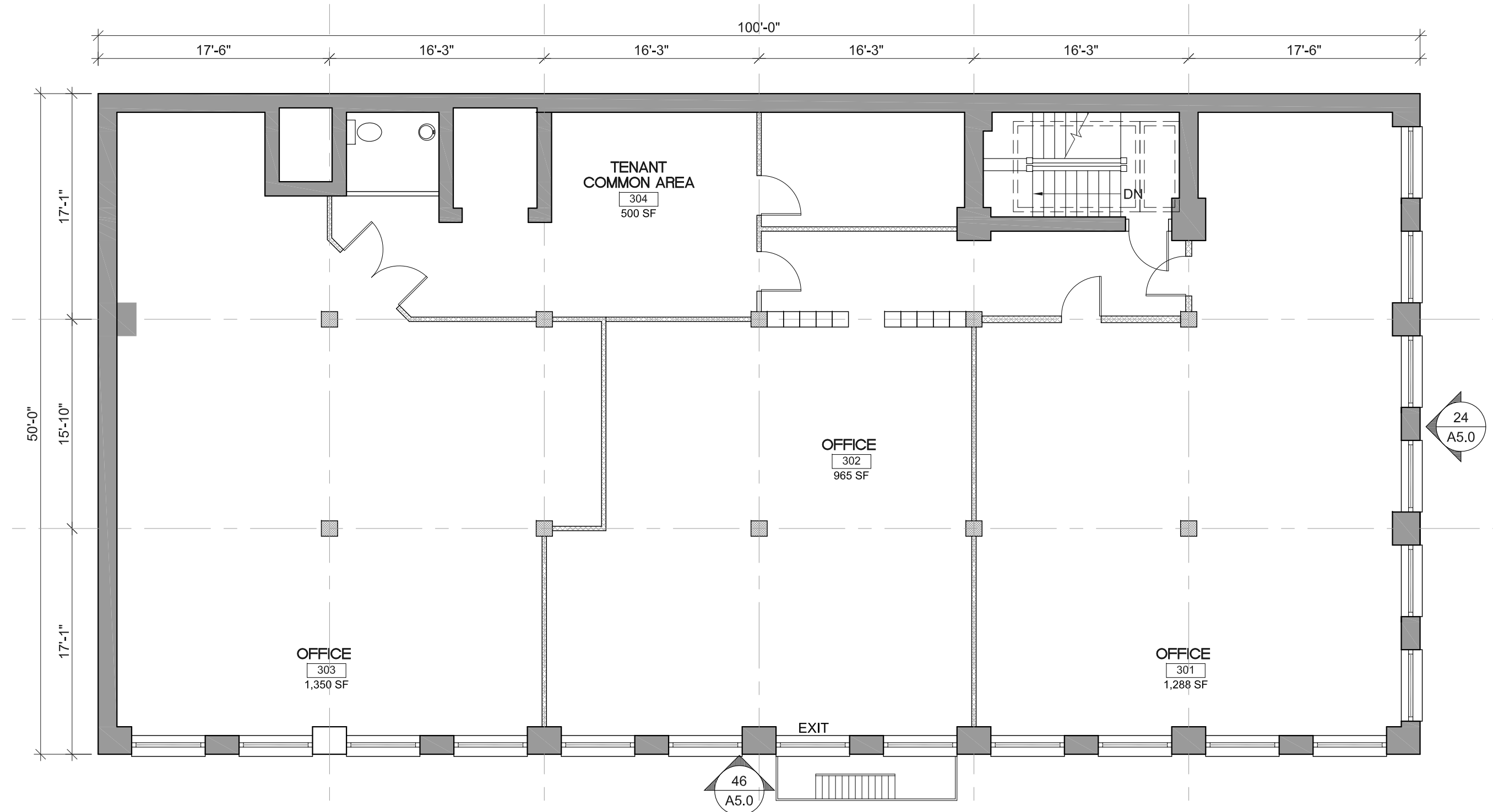
**1410 NW JOHNSON STREET**  
for PORTLAND LEEDS LIVING LLC  
EXISTING CONDITIONS PLANS

PERMIT SET

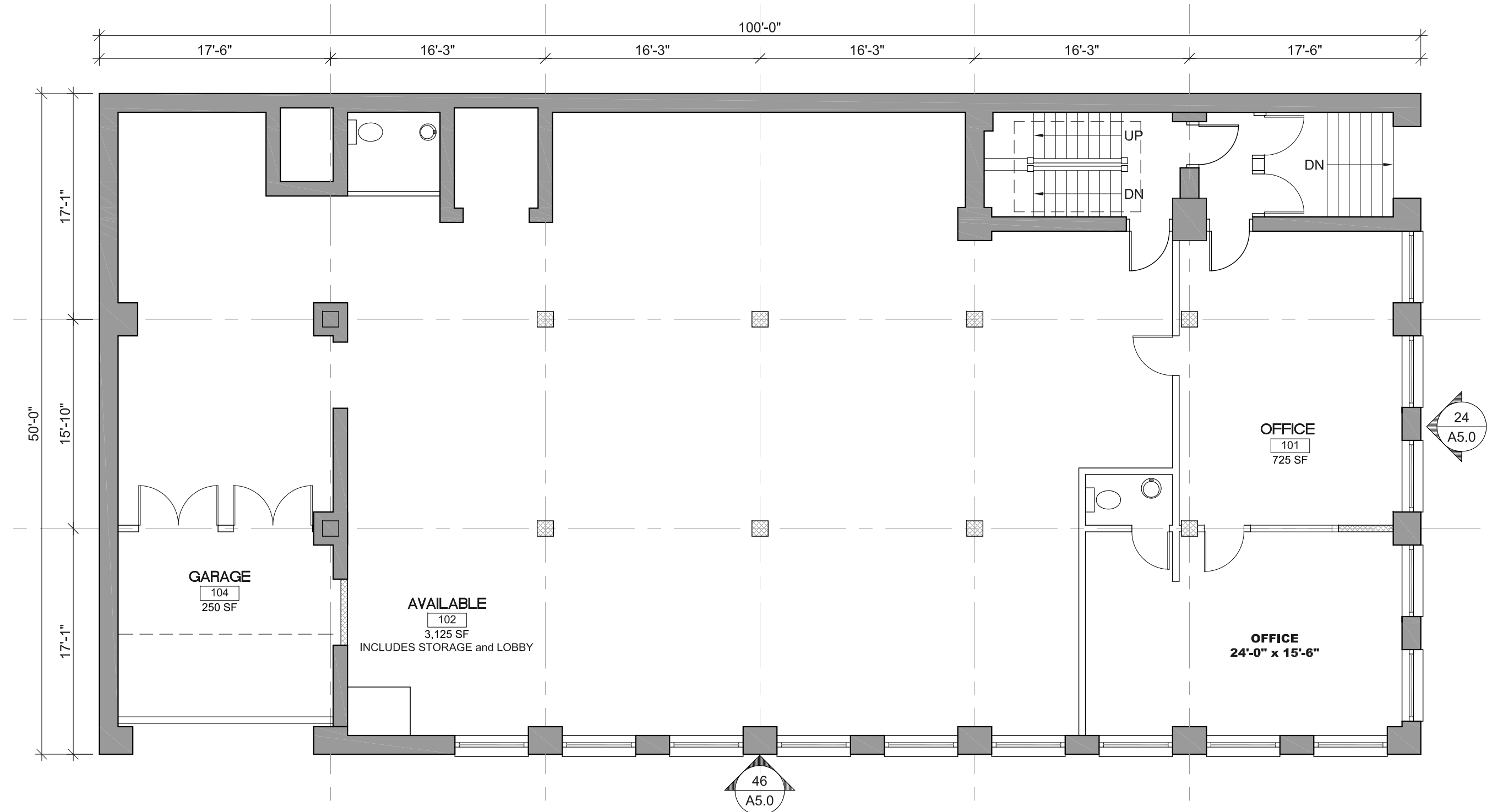
PLL1410NWJ - 01

**A1.0**

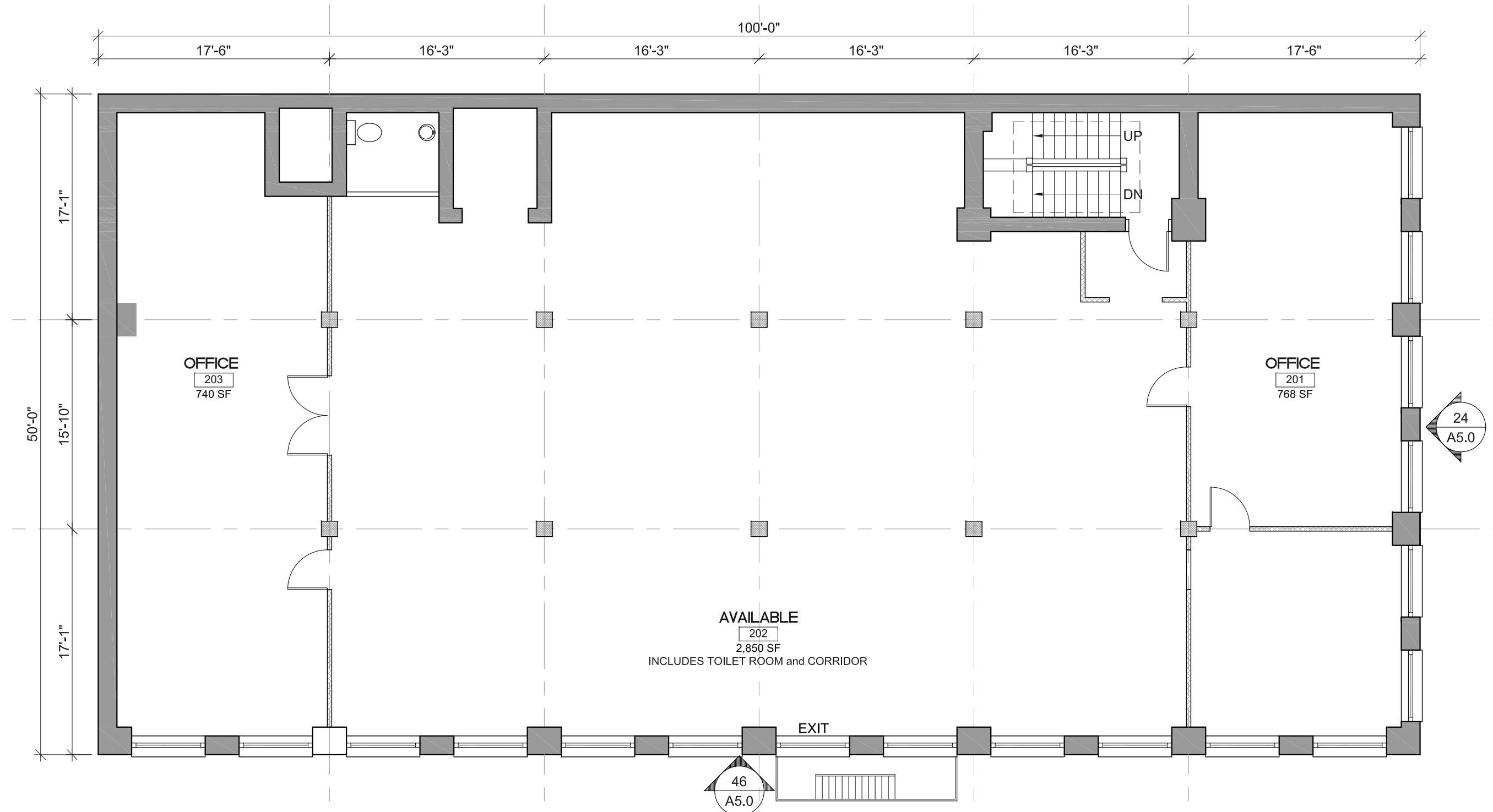
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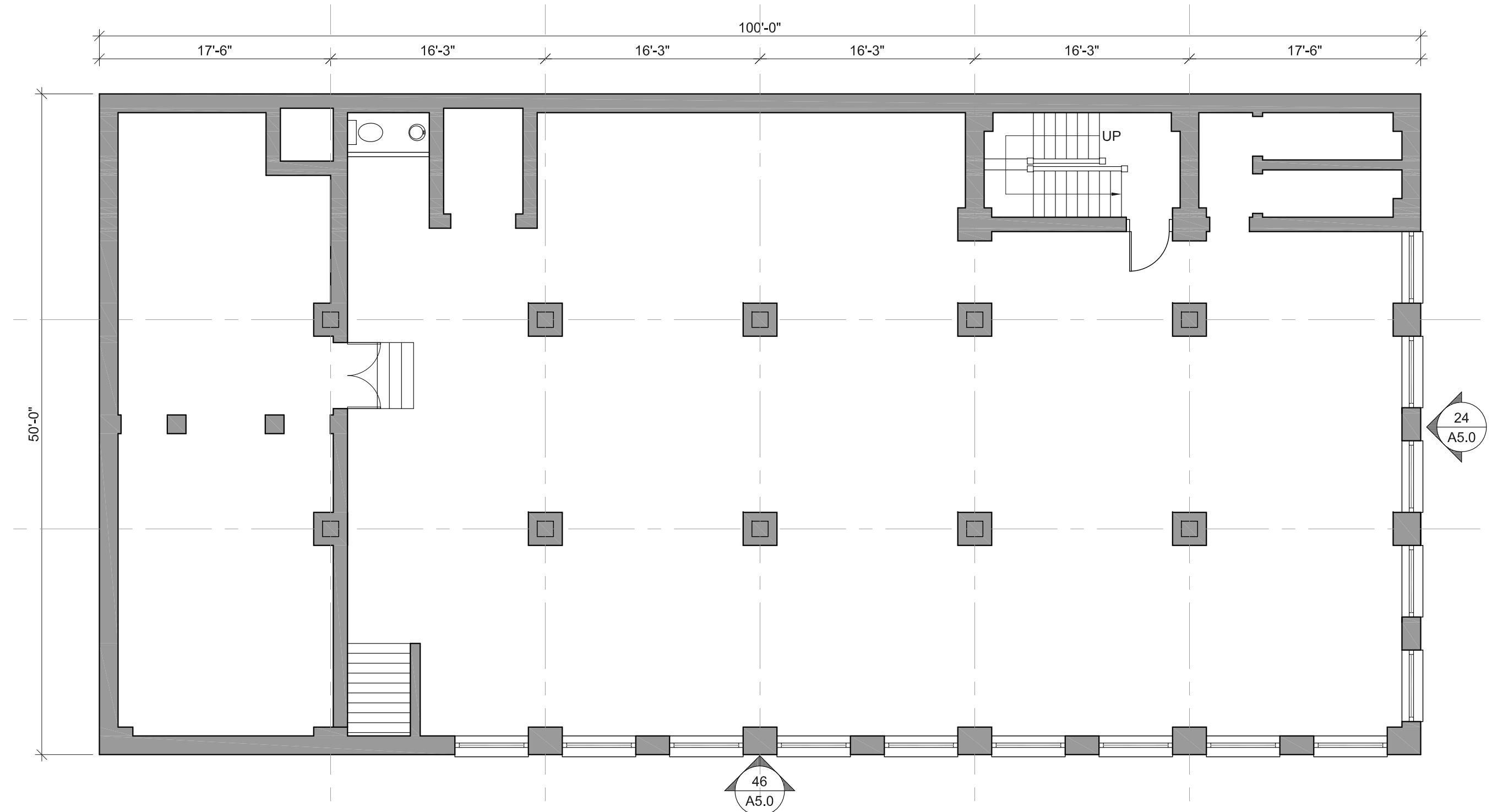
**84 THIRD FLOOR PLAN**  
SCALE: 1/8" = 1'-0" **5,000 SF GROSS** NORTH



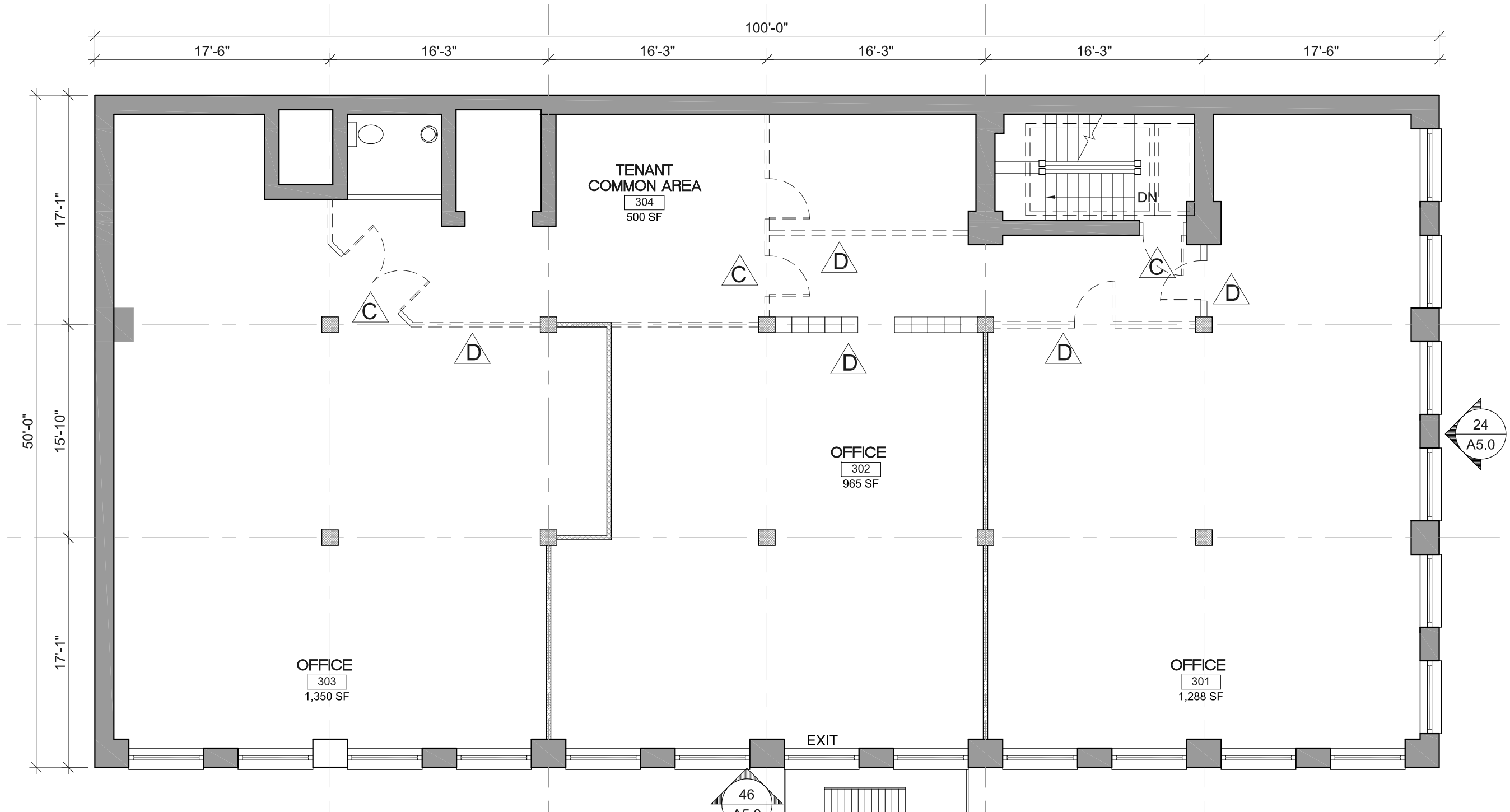
**44 FIRST FLOOR PLAN**  
SCALE: 1/8" = 1'-0" **5,000 SF GROSS** NORTH



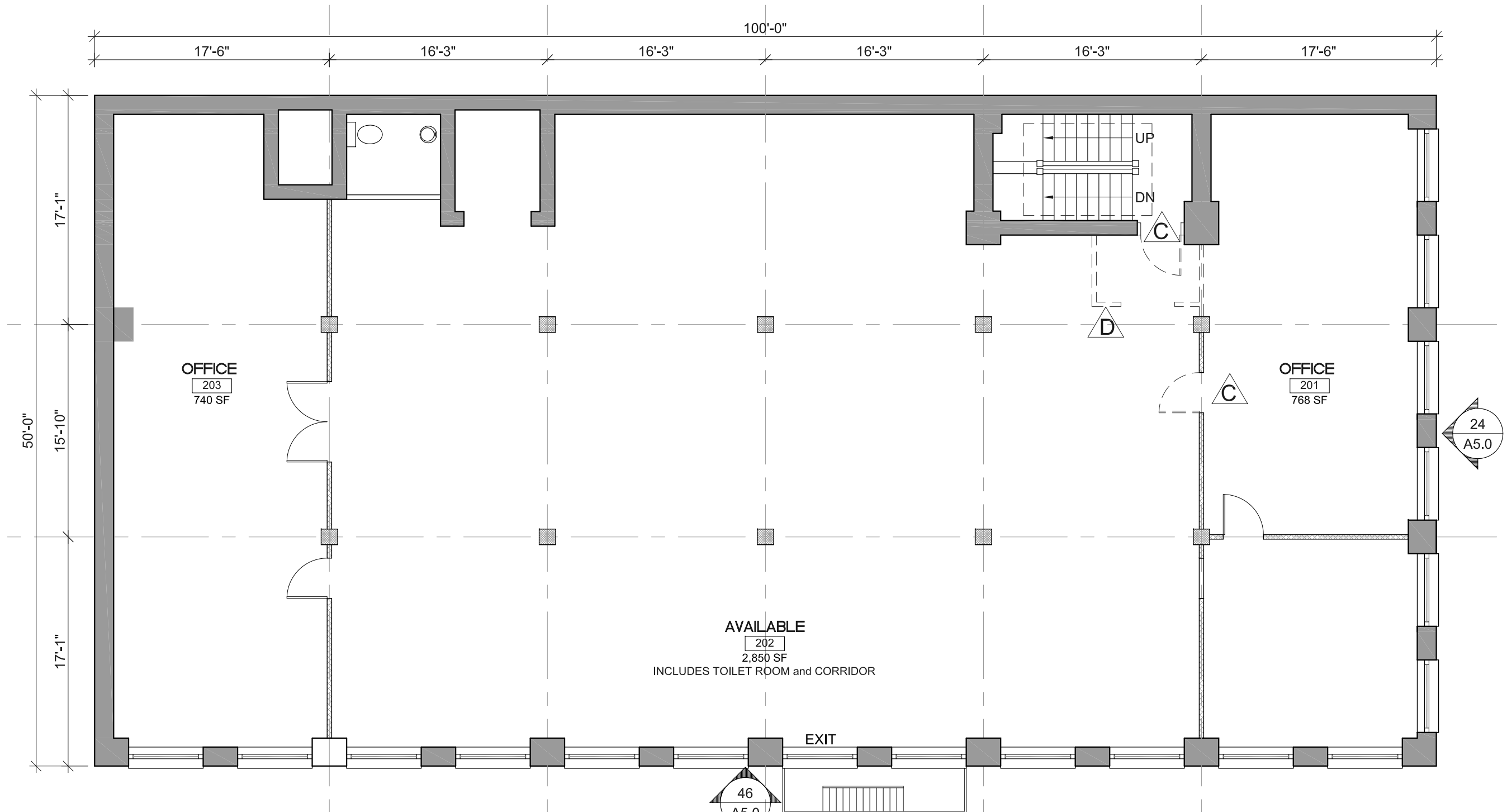
**86 SECOND FLOOR PLAN**  
SCALE: 1/8" = 1'-0" **5,000 SF GROSS** NORTH



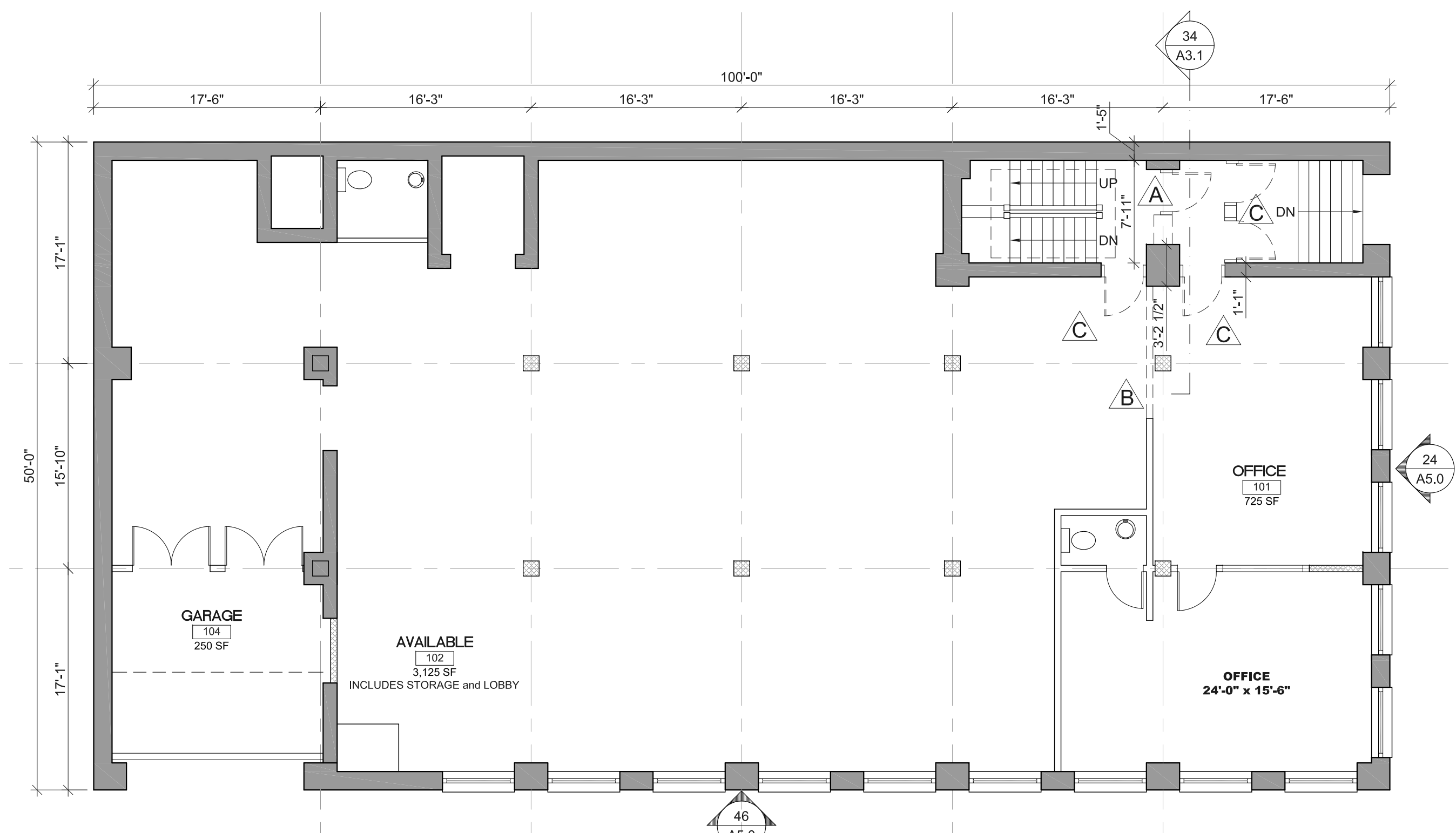
**46 BASEMENT FLOOR PLAN**  
SCALE: 1/8" = 1'-0" **5,000 SF GROSS** NORTH



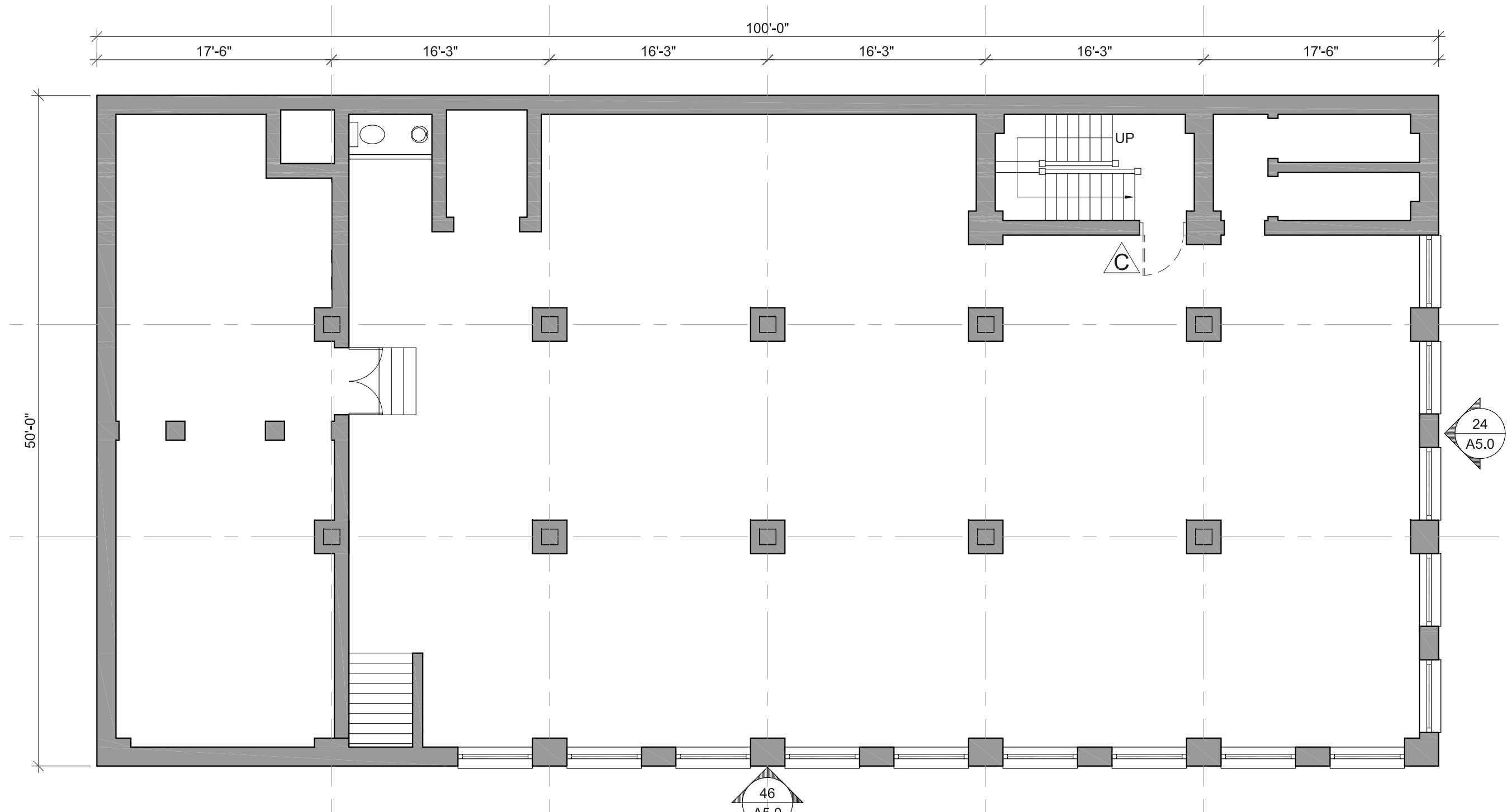
84 THIRD FLOOR DEMO PLAN  
A2.0 SCALE: 1/8" = 1'-0"



86 SECOND FLOOR DEMO PLAN  
A2.0 SCALE: 1/8" = 1'-0"



44 FIRST FLOOR DEMO PLAN  
A2.0 SCALE: 1/8" = 1'-0"



46 BASEMENT DEMO PLAN  
A2.0 SCALE: 1/8" = 1'-0"

DEMOLITION SCHEDULE	
A	REMOVE EXISTING DOORS AND BRICK STEM WALL. PROVIDE BRACING AS REQ'D BY STRUCTURAL.
B	REMOVE PORTION OF NON-LOAD BEARING WOOD PARTITION.
C	REMOVE EXISTING NON-RATED DOORS AND FRAMES.
D	REMOVE EXISTING NON-RATED WOOD PARTITION WALLS.
NOTES:	
• DRAWINGS BASED ON ASBUILT PLANS.	
• CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.	



**BARRY R SMITH, PC Architect**  
715 SW MORRISON STREET SUITE 909  
PORTLAND OR 97205 503.295.6261 www.barryrsmith.com

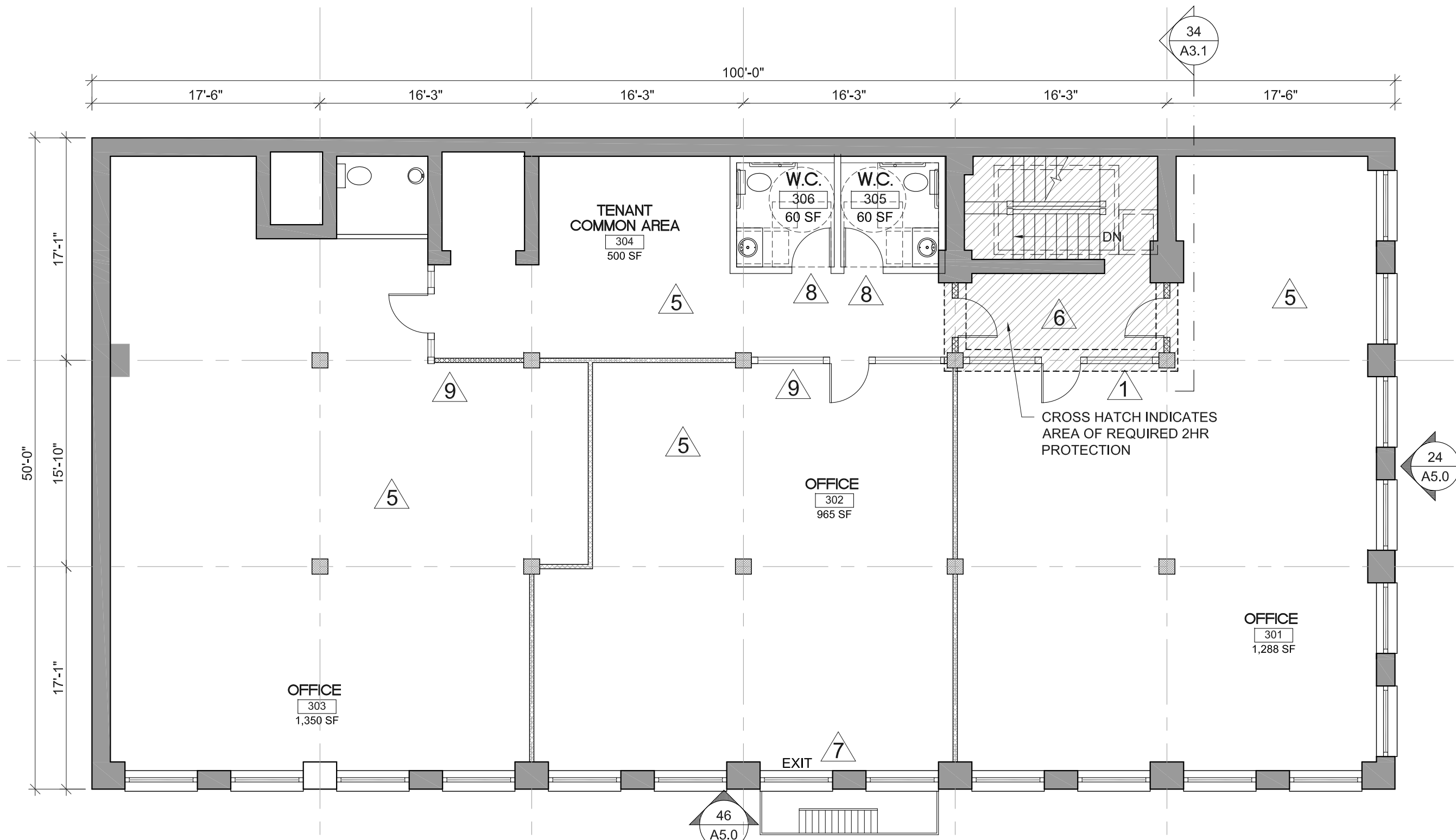
1410 NW JOHNSON STREET  
for PORTLAND LEEDS LIVING LLC  
DEMOLITION PLANS

PERMIT SET

PLL1410NWJ - 02

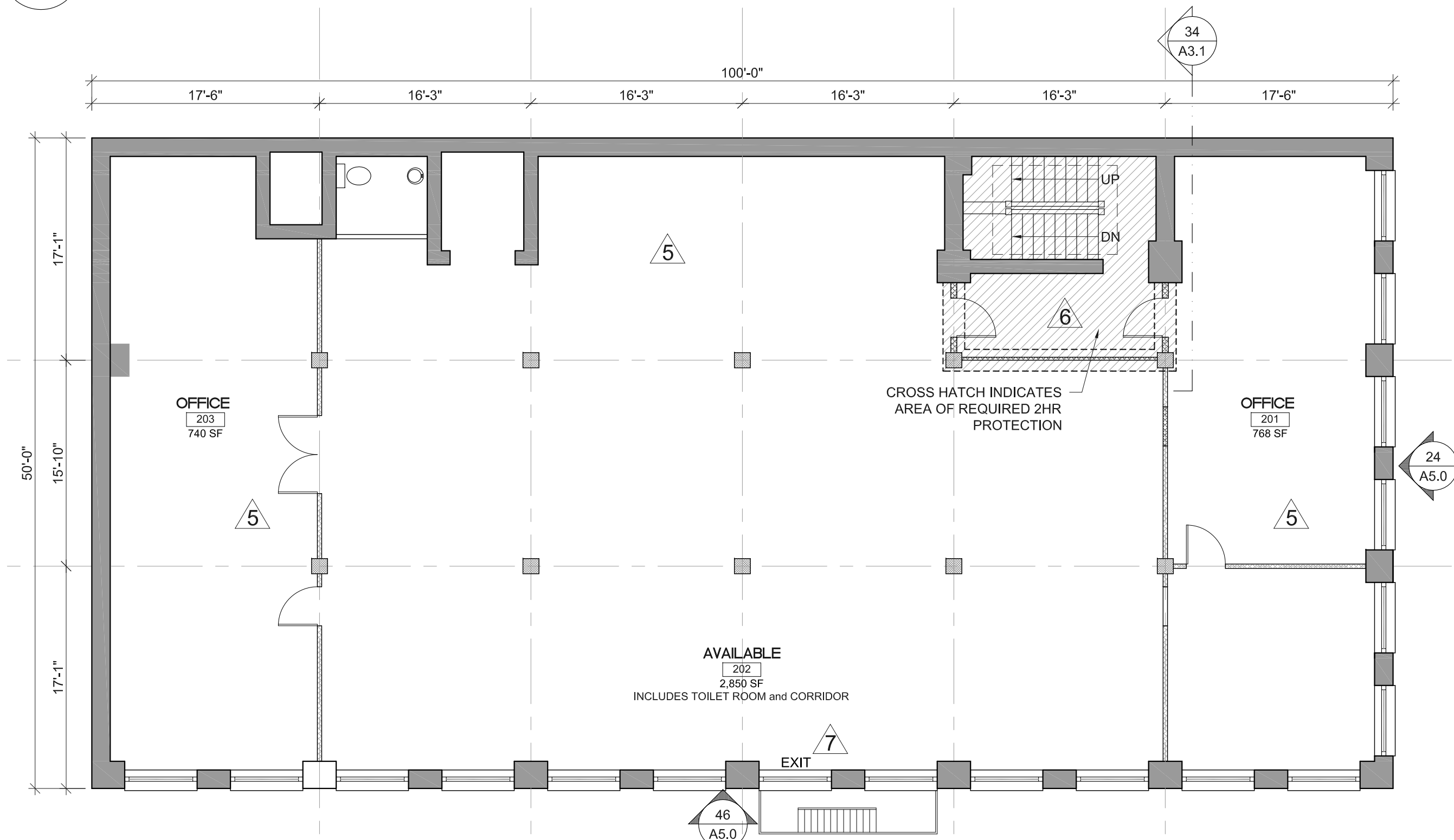
A2.0  
04.01.2019





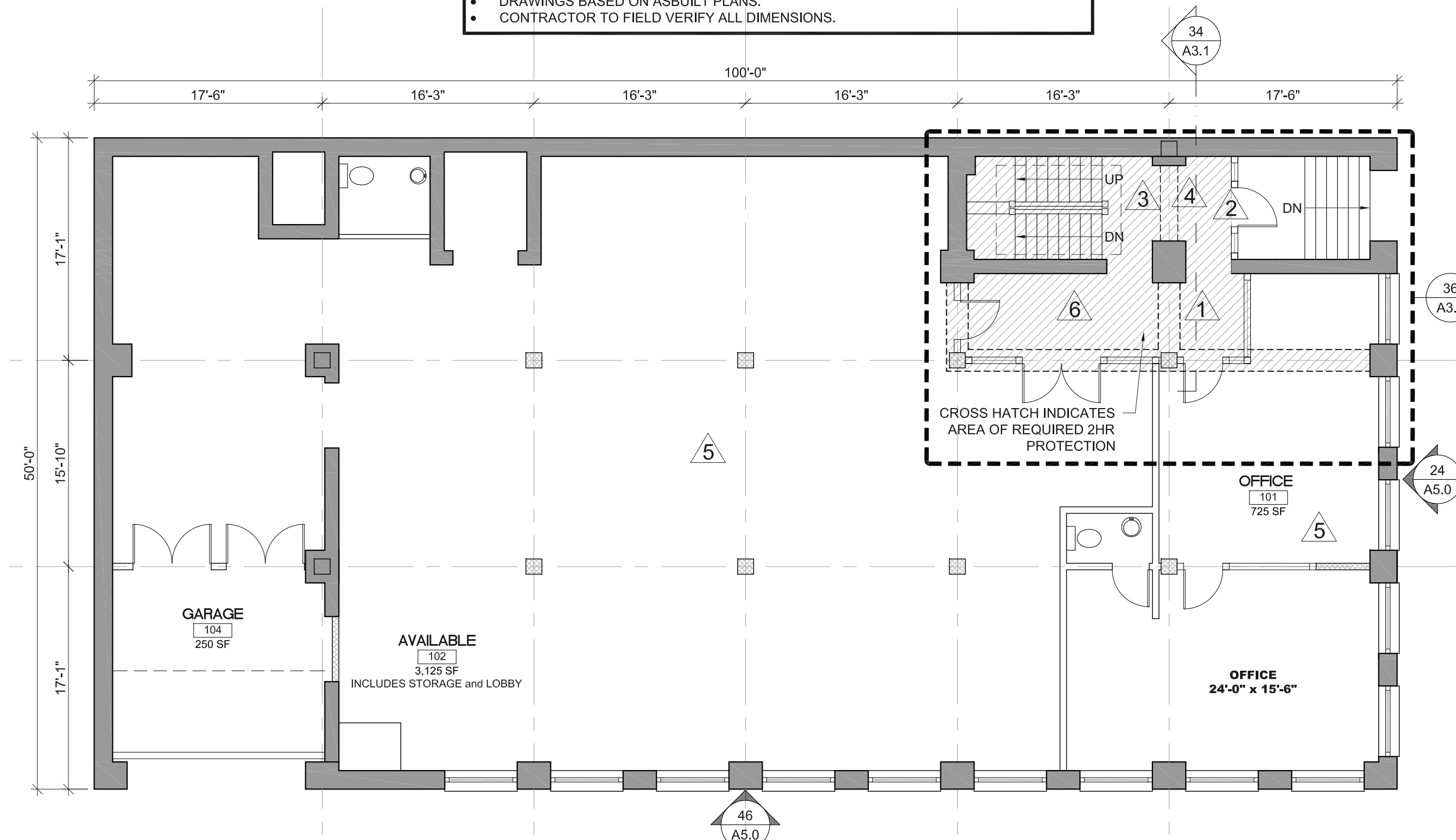
84 THIRD FLOOR HARDENING PLAN

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



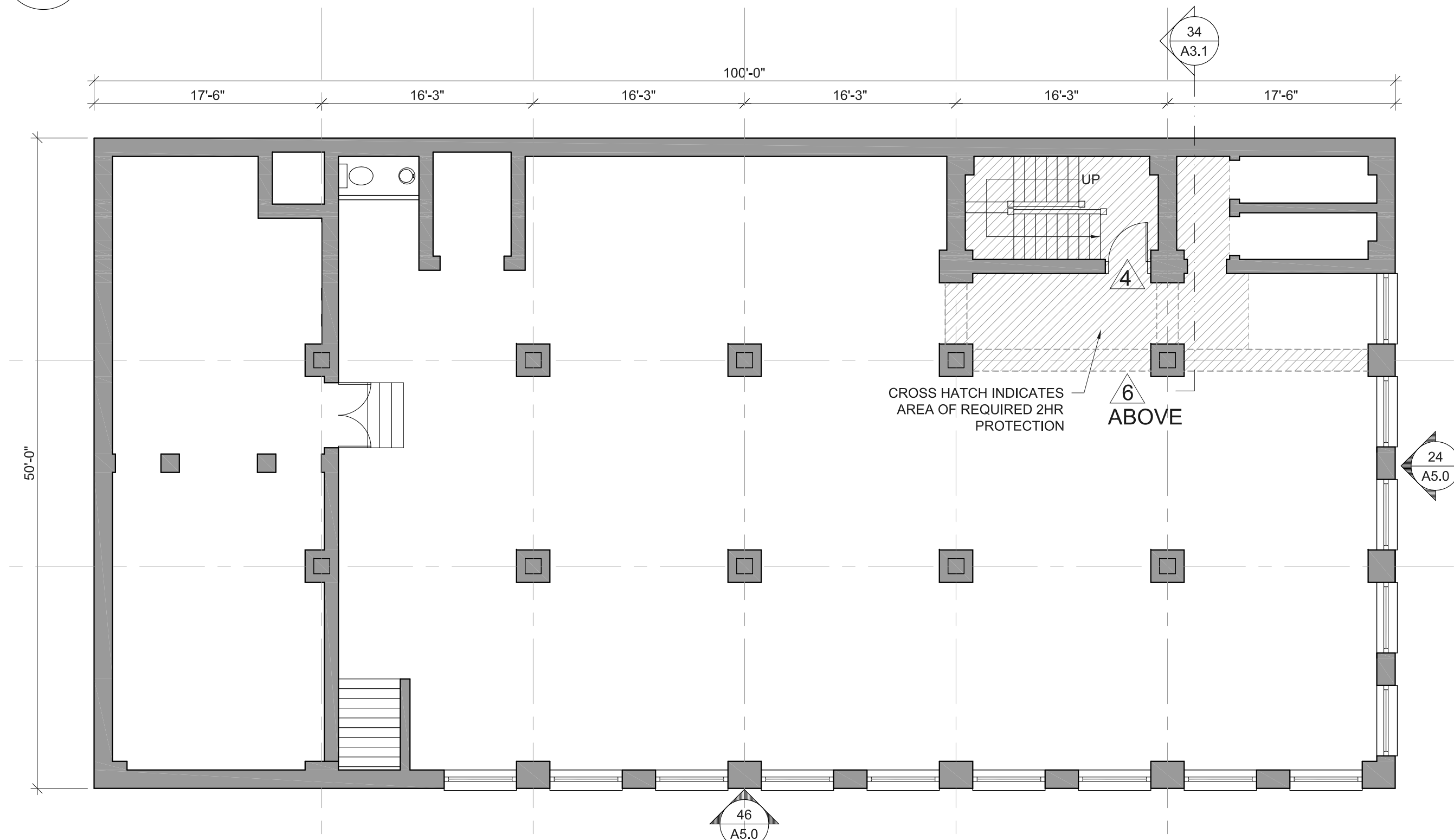
86 SECOND FLOOR HARDENING PLAN

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



44 FIRST FLOOR HARDENING PLAN

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



46 BASEMENT HARDENING PLAN

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

HARDENING SCHEDULE

1. EXPAND EXITING ENCLOSED STAIR AND EXIT LOBBY. PROVIDE 2HR FIRE CURTAIN AT NON-RATED ASSEMBLIES REQUIRING 2HR FIRE RESISTANCE WITH "TYCO MODEL WS - 2HR FIRE BARRIER" ASSEMBLY.
2. REPLACE NON RATED EXIT DOORS WITH PANIC EGRESS PASSAGE.
3. REPAIR EXISTING WOOD STAIR.
4. NEW BRACING PER STRUCTURAL. PROTECT STRUCTURAL ELEMENTS TO MEET 2HR FIRE REISISTIVE REQUIREMENTS.
5. ALL AREAS NOT A PART OF THE EXIT STAIR SYSTEM SHALL BE PROTECTED WITH A MINIMUM NFPA 13 FIRE SPRINKLER SYSTEM THROUGHOUT.
6. EXPAND 2HR RATED STAIR ENCLOSURE. USE 2HR RATED WALL AND 1.5 HR DOOR ASSEMBLIES. PROVIDE 2HR FIRE RESISTIVE CONSTRUCTION FOR LOAD BEARING STRUCTURAL ELEMENTS. EXTEND PROTECTION TO NEXT VERTICAL SUPPORT(S) CONTINUOUS TO FOUNDATION.
7. REPAIR EXISTING WINDOW, FRAME AND WEIGHTS. PAINT AND REPAIR EXISTING FIRE ESCAPE.
8. ADD ACCESSIBLE TOILET ROOMS.
9. FRAMING TO MEET CORRIDOR REQUIREMENTS.

NOTES:  
• DRAWINGS BASED ON ASBUILT PLANS.  
• CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.



**BARRY R SMITH, PC Architect**  
715 SW MORRISON STREET SUITE 909  
PORTLAND OR 97205 503.956.6261 www.barryremith.com

PORTLAND, OR

1410 NW JOHNSON STREET  
for PORTLAND LEEDS LIVING LLC  
HARDENING PLANS

PERMIT SET

PLL1410NWJ - 03

A3.0

04.01.2019



**BARRY R SMITH, PC Architect**  
716 SW MORRISON STREET SUITE 909  
PORTLAND OR 97205 503.295.6261 www.barryrsmith.com

PORTLAND, OR

1410 NW JOHNSON STREET  
for PORTLAND LEEDS LIVING LLC  
HARDENING PLANS - ENLARGED

PERMIT SET

PLL1410NWJ - 03

A3.1

04.01.2019

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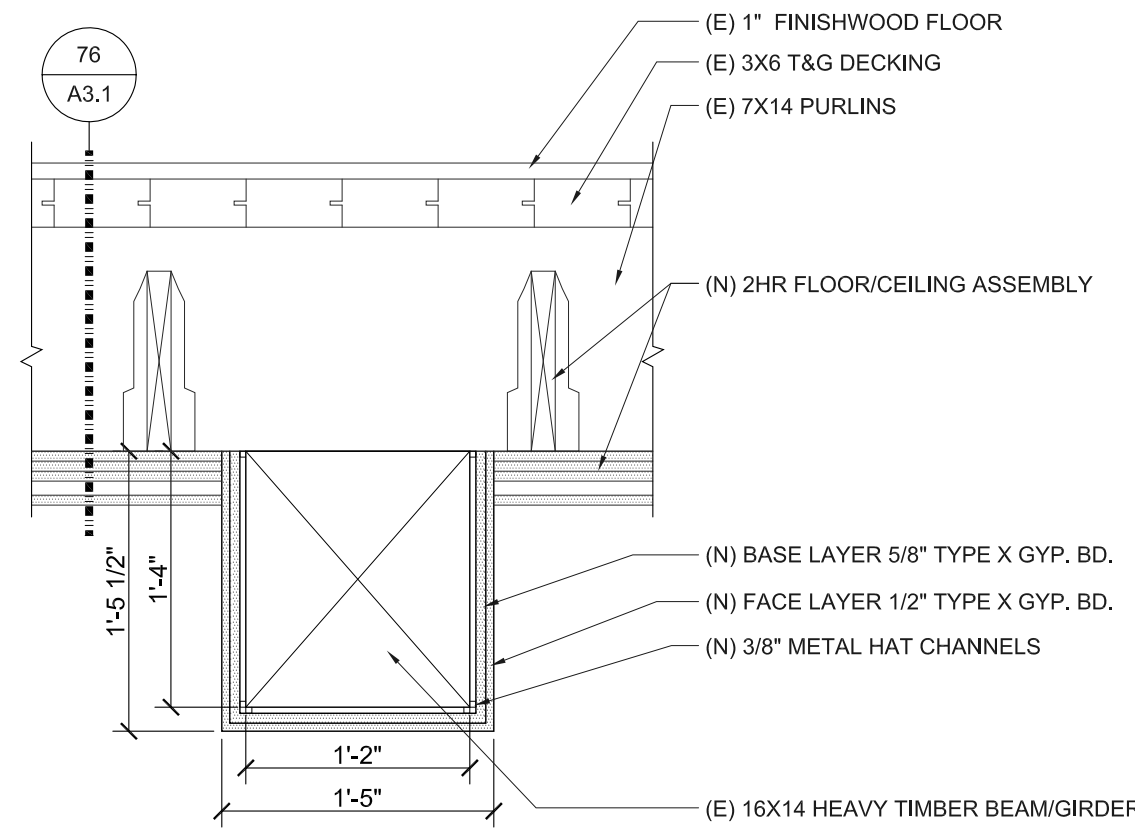
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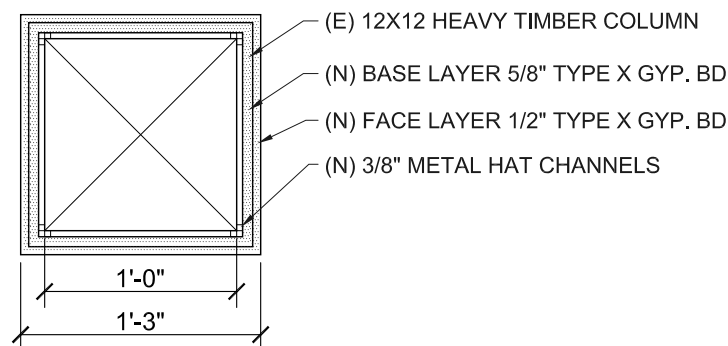
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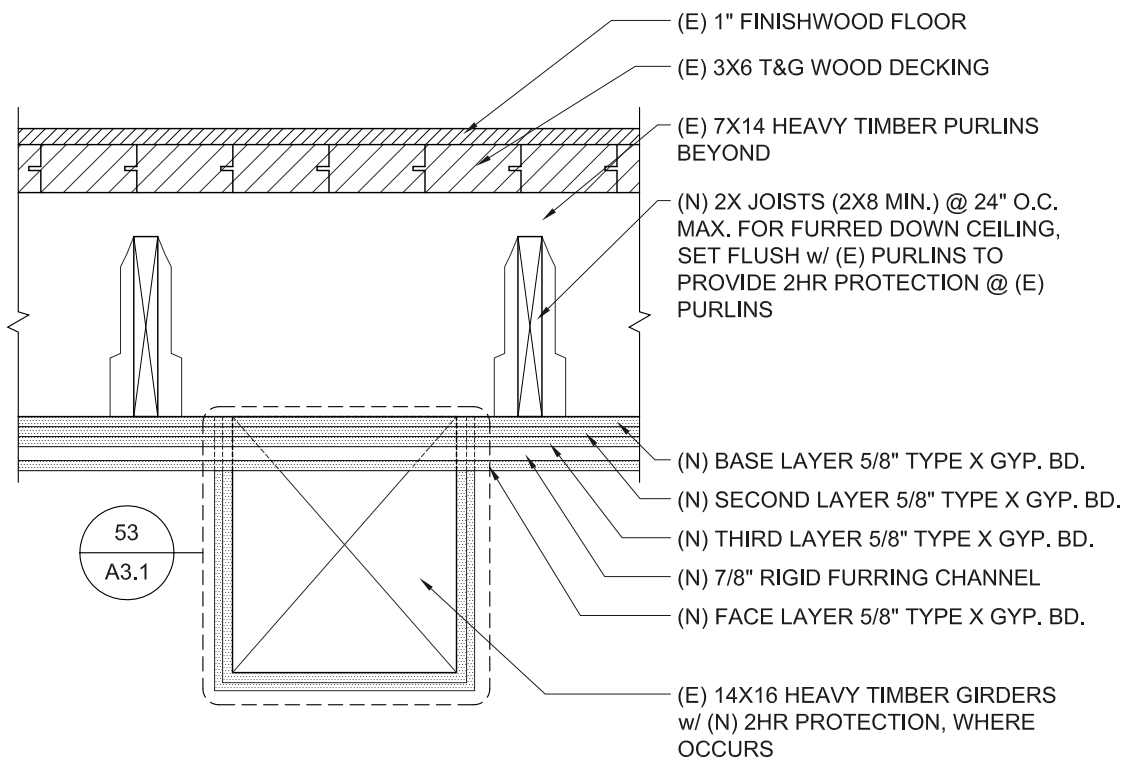
CONSTRUCTION:  
BASE LAYER 5/8" TYPE X GYPSUM WALLBOARD ATTACHED TO 3/8" METAL HAT CHANNELS WHICH ARE ATTACHED TO 14X16 HEAVY TIMBER WOOD BEAM NOMINAL (MINIMUM 8X12 NOMINAL). FACE LAYER 1/2" TYPE X GYPSUM WALLBOARD.

53  
A3.1 2 HR. HEAVY TIMBER BEAM WRAP  
SCALE: 1" = 1' - 0" CITY OF PORTLAND BUILDING CODE APPEAL IDXXXX



CONSTRUCTION:  
BASE LAYER 5/8" TYPE X GYPSUM WALLBOARD ATTACHED TO 3/8" METAL HAT CHANNELS WHICH ARE ATTACHED TO 12X12 HEAVY TIMBER WOOD COLUMN (MINIMUM 12X12 NOMINAL). FACE LAYER 1/2" TYPE X GYPSUM WALLBOARD.

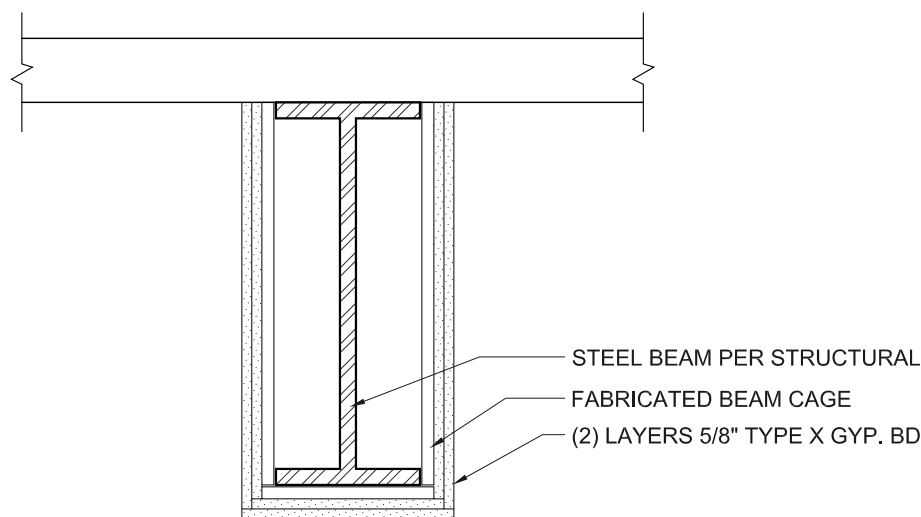
54  
A3.1 2 HR. HEAVY TIMBER COLUMN WRAP  
SCALE: 1" = 1' - 0" CITY OF PORTLAND BUILDING CODE APPEAL IDXXXX



BASE LAYER - 5/8" TYPE X GYPSUM WALLBOARD APPLIED AT RIGHT ANGLES TO 2X8 WOOD JOISTS 24" O.C. WITH 1-1/4" TYPE W DRYWALL SCREWS 12" O.C. SECOND LAYER - 5/8" TYPE X GYPSUM WALLBOARD APPLIED AT RIGHT ANGLES TO JOISTS WITH 2" TYPE W DRYWALL SCREWS 12" O.C. SECOND LAYER JOINTS OFFSET 24" FROM BASE LAYER JOINTS. THIRD LAYER - 5/8" TYPE X GYPSUM WALLBOARD APPLIED AT RIGHT ANGLES TO JOISTS WITH 2-1/2" TYPE W DRYWALL SCREWS 12" O.C. THIRD LAYER JOINTS OFFSET 12" FROM SECOND LAYER JOINTS. HAT-SHAPED 7/8" RIGID FURRING CHANNELS 24" O.C. APPLIED AT RIGHT ANGLES TO JOISTS OVER THIRD LAYER WITH TWO 2-1/2" LONG TYPE W DRYWALL SCREWS AT EACH JOIST. FACE LAYER - 5/8" TYPE X GYPSUM WALLBOARD APPLIED AT RIGHT ANGLES TO FURRING CHANNELS WITH 1-1/8" TYPE S DRYWALL SCREWS 12" O.C. WOOD JOISTS SUPPORTING 3/4" T&G EDGE PLYWOOD FLOOR APPLIED AT RIGHT ANGLES TO JOISTS WITH 8d NAILS 6" O.C. AT JOINTS AND 12" AT INTERMEDIATE JOISTS. CEILING PROVIDES TWO-HOUR FIRE-RESISTANCE PROTECTION FOR WOOD FRAMING.

FIRE TEST: UL R4024, 00NK26545, 4-27-01; UL R4024, 03N11206, 3-19-03; UL DESIGN L556; ULC DESIGN M514

76  
A3.1 2-HR FIRE-RATED FLOOR/CEILING DETAIL  
SCALE: 1" = 1' - 0" GA FILE NO.: FC 5725

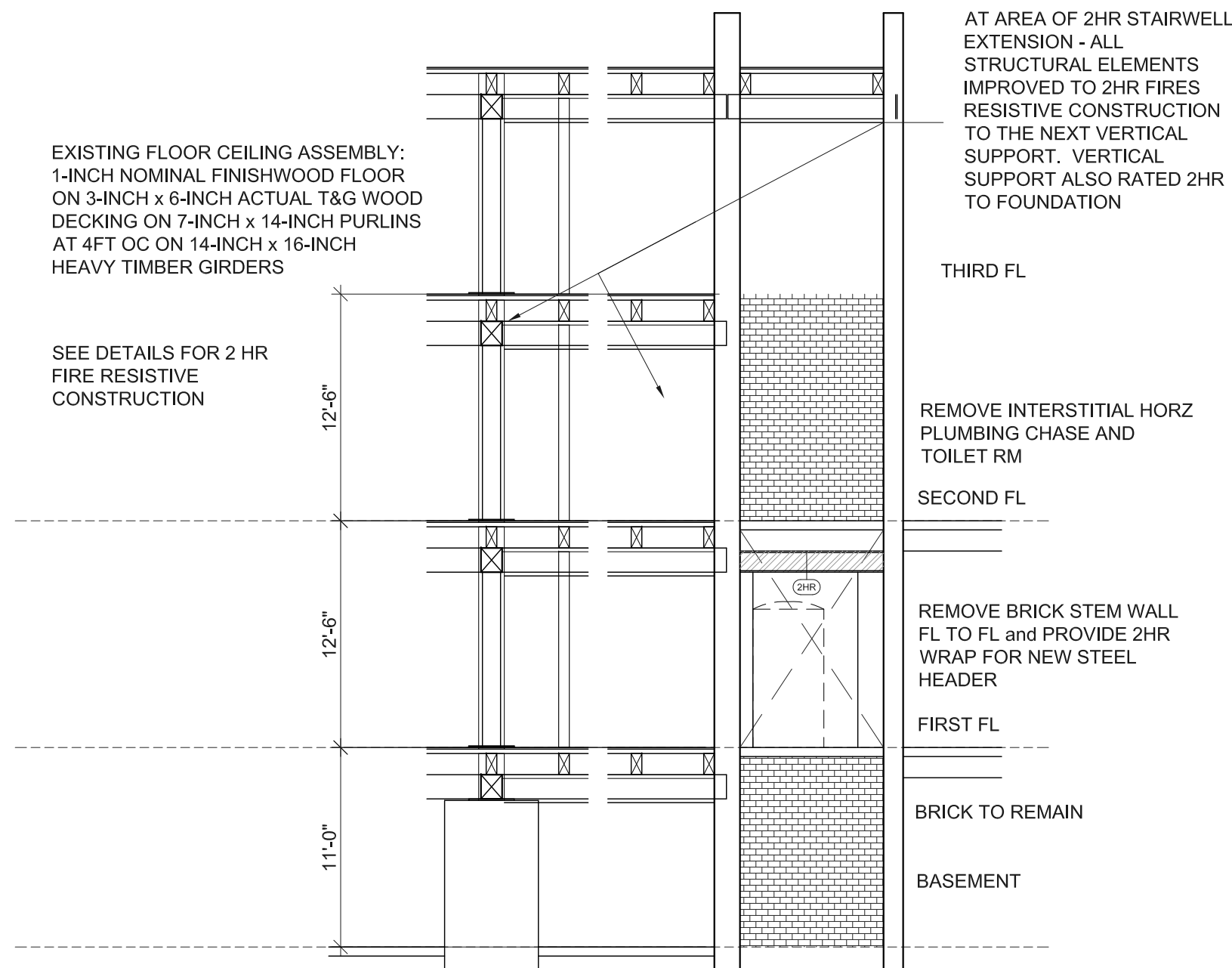


BASE LAYER - 5/8" TYPE X GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED TO BEAM CAGE WITH 1-1/4" TYPE S DRYWALL SCREWS 16" O.C.. FACE LAYER - 5/8" TYPE X GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED TO BEAM CAGE WITH 1-3/4" TYPE S DRYWALL SCREWS 8" O.C.

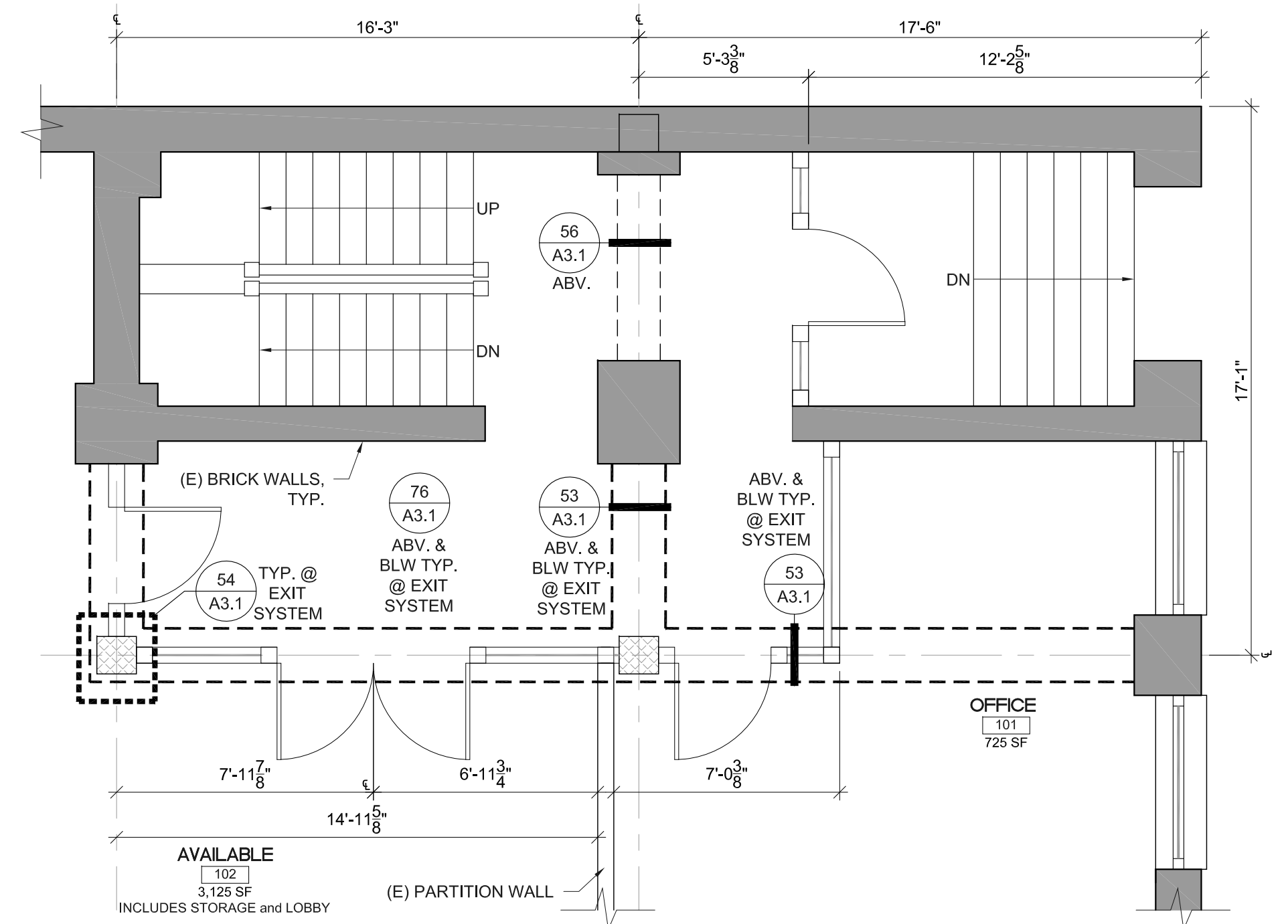
BEAM CAGE FABRICATED FROM HORIZONTAL INSTALLED STEEL ANGLES (25 GA STEEL HAVING 1" AND 2" LEGS) LOCATED NOT LESS THAN 1/2" FROM BEAM FLANGES. 1" LEGS OF THE UPPER ANGLES SECURED TO STEEL DECK UNITS WITH 1/2" TYPE S PAN HEAD SCREWS 12" O.C. 4" U" SHAPED BRACKETS FORMED OF 25 GA "U" SHAPED STEEL CHANNELS (1-11/16" WIDE WITH 1" LEGS) 24" O.C. SUSPENDED FROM UPPER ANGLES WITH 1/2" TYPE S PAN HEAD SCREWS AND SUPPORTED 1" X 2" ANGLES AT LOWER CORNERS ATTACHED TO BRACKETS WITH 1/2" TYPE S PAN HEAD SCREWS. OUTSIDE CORNERS OF GYPSUM BOARD PROTECTED BY 0.020" THICK STEEL CORNER BEADS CRIMPED OR NAILED. (TWO HOUR RESTRAINED OR UNRESTRAINED BEAM.)

FIRE TEST: UL R4024-5, 9-14-66,  
UL DESIGN N501;  
ULC DESIGN O501

56  
A3.1 2-HR FIRE-RATED BEAM WRAP DETAIL  
SCALE: 1" = 1' - 0" GA FILE NO.: BM 2120



34  
A3.1 ELEVATION + SECTION AT EXIT SYSTEM  
SCALE: 1/8" = 1'-0"



36  
A3.1 ENLARGED FIRST FLOOR EXIT LOBBY  
SCALE: 1/4" = 1'-0"



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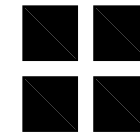
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**BARRY R SMITH, PC Architect**  
715 SW MORRISON STREET SUITE 909  
PORTLAND OR 97205 503.295.6261 [www.barryrsmith.com](http://www.barryrsmith.com)



PORTLAND, OR

**1410 NW JOHNSON STREET**  
for PORTLAND LEEDS LIVING LLC  
EXTERIOR ELEVATIONS

PERMIT SET

PLL1410NWJ - 05

**A5.0**

04.01.2019

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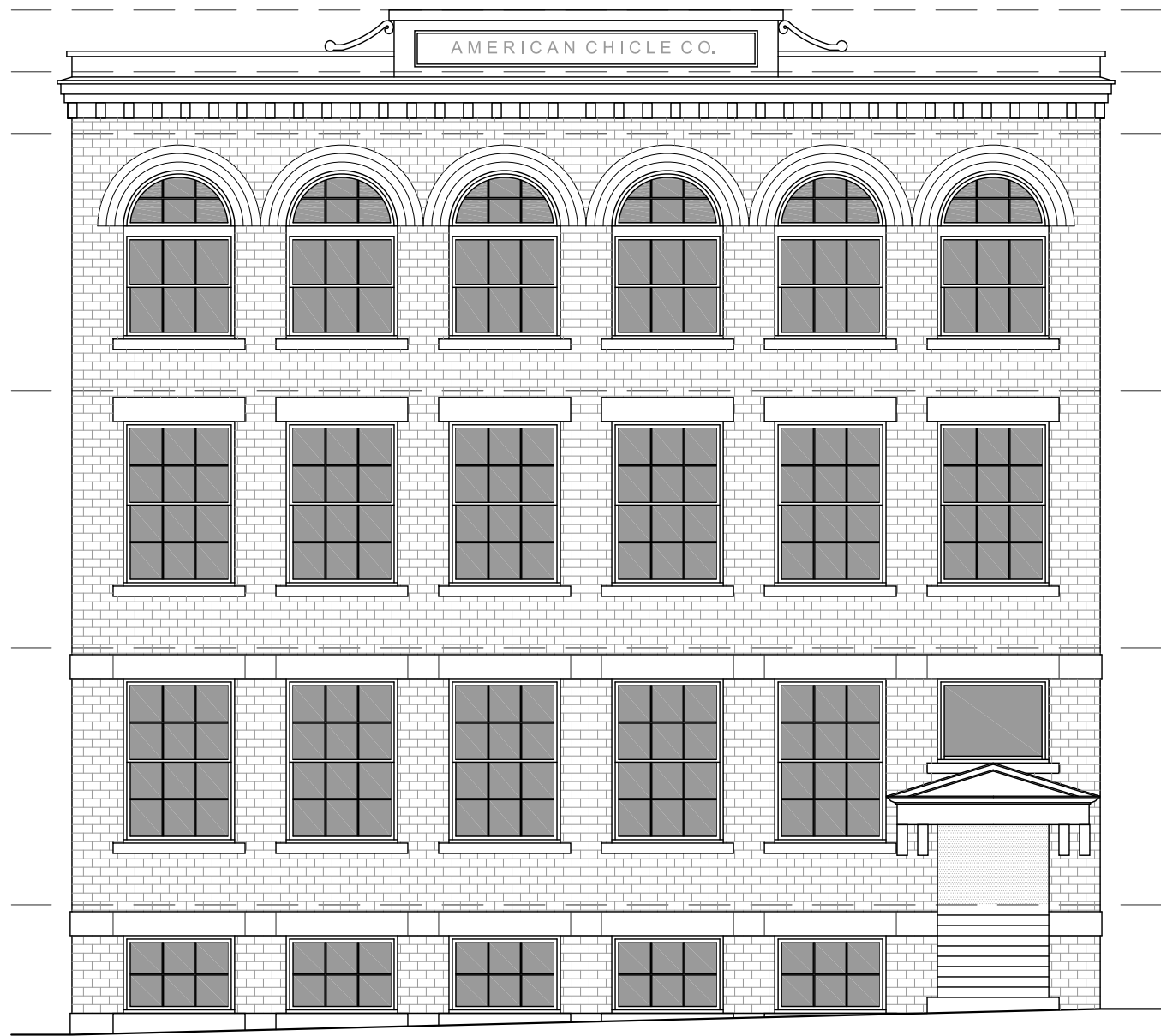
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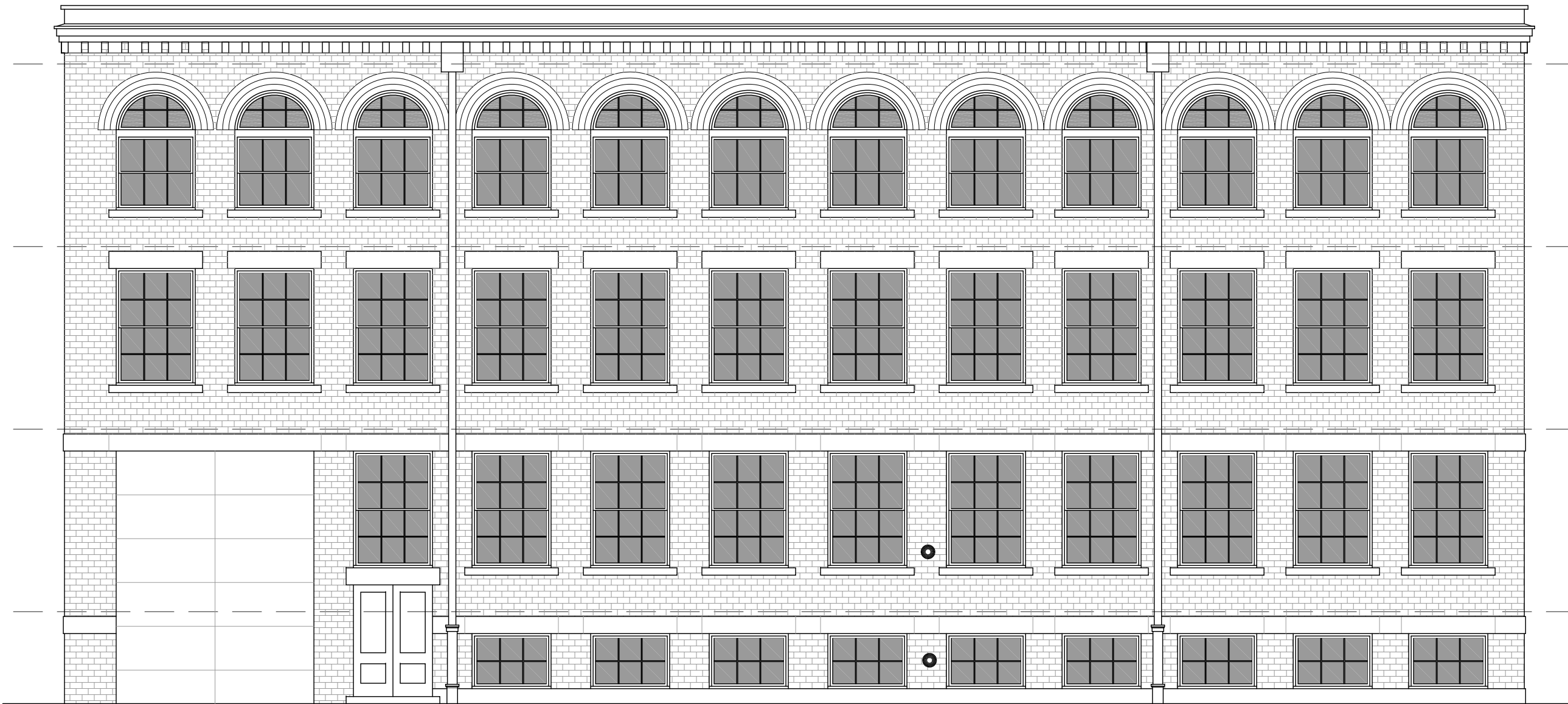
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6



**24 JOHNSON STREET ELEVATION**  
A5.0 SCALE: 1/8" = 1'-0"



NOTE LOCATION OF EXISTING FDC AND BELL

**46 10TH AVENUE ELEVATION**  
A5.0 SCALE: 1/8" = 1'-0"



**Experienced.  
Innovative.  
Trusted.**

# 1410 NW Johnson Street

## Engineering Judgement Report #1

### Protection of 2-hour Rated Column

Client Name: Barry R. Smith, PC, Architect

Client Address: 715 SW Morrison Street, Suite 909, Portland, OR 97205

Date: 4/4/2019



# Table of Contents

1	Project Overview .....	3
2	Applicable Codes, Standards, and Guides .....	3
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3.1	Approach.....	3
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6	Summary.....	5
7	Conclusion .....	5

# 1 PROJECT OVERVIEW

Barry R. Smith, PC, Architect, is renovating the existing 1410 NW Johnson Street building. The existing building is 3 stories with a basement of Type III-B construction and includes Group F-2 occupancy. An NFPA 13 fire sprinkler system is provided throughout.

Code Unlimited has been asked to provide engineering analysis for the fire protection of a column member adjacent to the west stair to ensure 2-hour protection is provided as required by OSSC.

## 2 APPLICABLE CODES, STANDARDS, AND GUIDES

- 2014 Oregon Structural Specialty Code (OSSC)
- Calculating the Fire Resistance of Wood Members and Assemblies Technical Report No. 10 – American Wood Council

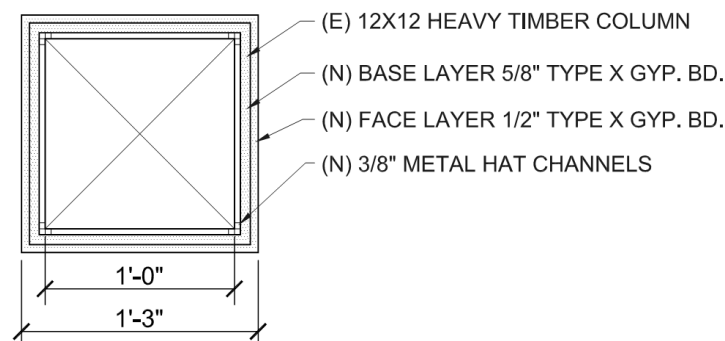
## 3 DISCUSSION

### 3.1 Approach

- The proposed column assembly has been analyzed in accordance with 2014 OSSC §703.3 **Alternative Methods for Determining Fire Resistance.**
- NDS TR-10 is utilized to calculate fire resistance for Type X gypsum board covering a wood member.
- The proposed design has been evaluated by an Oregon Licensed Fire Protection Engineer.

## 4 PROPOSED DESIGN

The 2-hour assembly design is composed of (1) 1/2" face layer and (1) 5/8" base layer of Type "X" gypsum wallboard wrapped around 3/8" metal hat channels which are attached to the greater than or equal to 12" x 12" in size timber column. Table 1 portrays the assembly design in detail:



*Figure 1. Proposed column assembly detail*



## 5 ASSEMBLY ANALYSIS

There are three technical elements in the assembly design:

- Item 1. Finish materials on fire-exposed side of wall that includes Type X gypsum wallboard
- Item 2. Hat channel and clips to provide extra spacing between the wood member and finish materials for walls
- Item 3. Design equations for unprotected fire-resistant exposed wood members.

The analysis will follow.

**Item 1.** 2014 OSSC Table 722.2.1.4(2) allows for equivalent fire protection time of 40 minutes for 5/8" Type X gypsum wallboard and 25 minutes for 1/2" Type X gypsum wallboard on fire-exposed side of walls. Per NDS TR-10, time assigned to the last layer (1/2" Type X gypsum wallboard) can only be multiplied by 0.50 which, in this case, is equivalent to 12.5 minutes.

**Item 2.** Since we are evaluating this application with respect to a 2-hour timber column rather than wall, 3/8" hat channels will be provided. The hat channels will prevent rapid heat transfer between the gypsum board and timber member, reducing preheating of wood column in a fire event.

**Item 3.** Fire resistance of unprotected/exposed wood column on all four sides permits additional equivalent protection per 2014 OSSC 722.6.3 equation 7-20:

$$2.54Zd \left[ 3 - \left( \frac{d}{b} \right) \right] \text{ for columns which may be exposed to fire on four sides}$$

$b$  = The breadth (width) of a larger side of a column before exposure to fire (inches).

$d$  = The depth of a smaller side of a column before exposure to fire (inches).

$Z$  = Load factor, based on Figure 722.6.3(1).

For this condition,  $b=12$ ,  $d=12$ ,  $Z=1.2$  (100% design load)

The calculation yields an equivalent protection time of 73.15 minutes.

Table 1. Timber column size and summary of equivalency for EJ of 2-hour rated wood column.

Timber Column Size	Assembly Description	Rating Provision	Code Section / Additional Provision	Equivalency
12 x 12 nominal	2-hour	(1) 5/8" Type X Gyp	OSSC Table 722.2.1.4(2)	40 minutes
		(1) 1/2" Type X Gyp	OSSC Table 722.2.1.4(2) / NDS TR-10	+ 12.5 minutes
		3/8" Hat Channels	----	Air Gap
		2.54 [1.2] 12 [3 - 12/12]	OSSC 722.6.3 Eq. 7-20	+ 73.15 minutes
		<b>TOTAL ASSEMBLY</b>	----	<b>Exceeds 2-hour requirements</b>

## 6 SUMMARY

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The 2-hour fire protection of the column will be achieved by the protection provided from the Type X gypsum boards and fire-resistance of the heavy timber column.

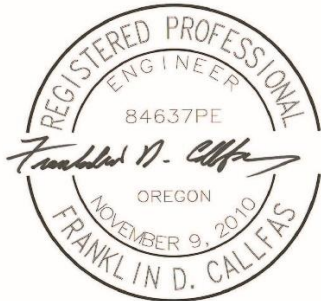
After adding (2) layers (5/8" + 1/2") of Type "X" gypsum wallboard wrap to the face of the assembly an additional 52.5 minutes of equivalent time is added per 2014 OSSC Table 722.2.1.4(2) and NDS TR-10. When we consider the convective and conductive heat transfer reduction by positioning 3/8" hat channels between the wood member and gypsum wrap assembly, the assembly will have a conservative total effective equivalent time of more than 125 minutes. Therefore, the assembly will easily satisfy the design requirements for 2 hours of equivalent protection.

## 7 CONCLUSION

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The proposed design of the primary structural column meets the code requirement to provide 2-hour fire resistance.

As evaluated in this EJ, the column will maintain a 2-hour fire resistance as required by the OSSC.



EXPIRES	12-31-19
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*Franklin Callfas*  
Principal/Fire Protection Engineer  
Code Unlimited





# 1410 NW Johnson Street

## Engineering Judgement Report #2

### Protection of 2-hour Rated Beam

Client Name: Barry R. Smith, PC, Architect

Client Address: 715 SW Morrison Street, Suite 909, Portland, OR 97205

Date: 4/4/2019

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## 1 PROJECT OVERVIEW

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Barry R. Smith, PC, Architect, is renovating the existing 1410 NW Johnson Street building. The existing building is 3 stories with a basement of Type III-B construction and includes Group F-2 occupancy. An NFPA 13 fire sprinkler system is provided throughout.

Code Unlimited has been asked to provide engineering analysis for the fire protection of a beam member adjacent to the west stair to ensure 2-hour protection is provided as required by OSSC.

## 2 APPLICABLE CODES, STANDARDS, AND GUIDES

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- 2014 Oregon Structural Specialty Code (OSSC)
- Calculating the Fire Resistance of Wood Members and Assemblies Technical Report No. 10 – American Wood Council

## 3 DISCUSSION

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### 3.1 Approach

- The proposed beam assembly has been analyzed in accordance with 2014 OSSC §703.3 **Alternative Methods for Determining Fire Resistance**.
- NDS TR-10 is utilized to calculate fire resistance for Type X gypsum board covering a wood member.
- The proposed design has been evaluated by an Oregon Licensed Fire Protection Engineer.

## 4 PROPOSED DESIGN

The 2-hour assembly design is composed of (1) 1/2" face layer and (1) 5/8" base layer of Type "X" gypsum wallboard wrapped around 3/8" metal hat channels which are attached to the greater than or equal to 8" x 12" nominal in size timber beam. Table 1 portrays the assembly design in detail:

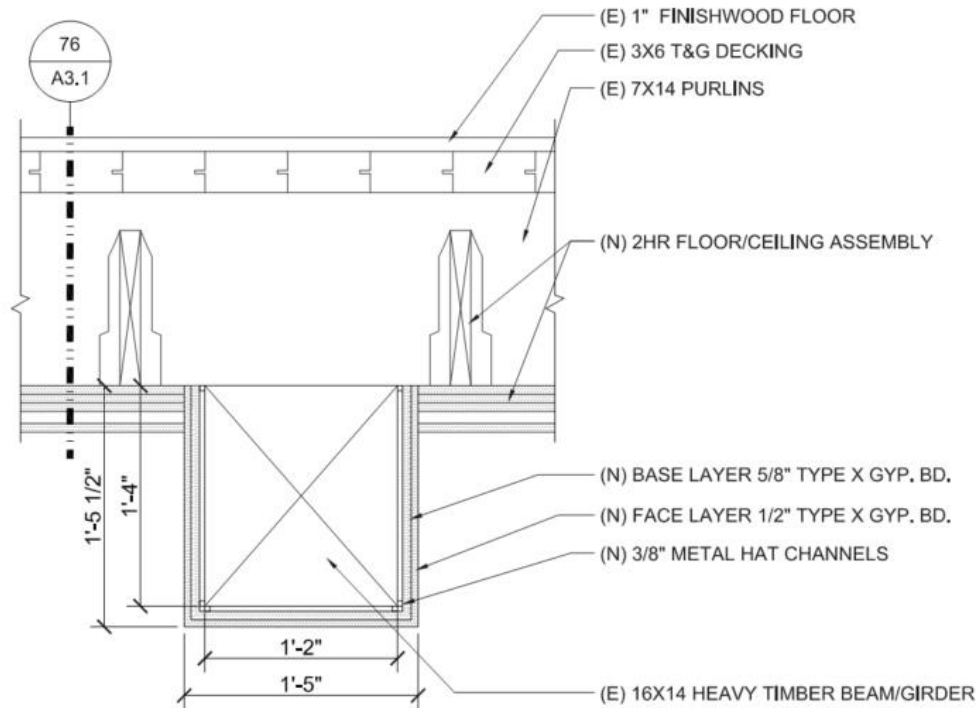


Figure 1. Proposed beam assembly detail

## 5 ASSEMBLY ANALYSIS

There are three technical elements in the assembly design:

- Item 1. Finish materials on fire-exposed side of wall that includes Type X gypsum wallboard
- Item 2. Hat channel and clips to provide extra spacing between the wood member and finish materials for walls
- Item 3. Design equations for unprotected fire-resistant exposed wood members.

The analysis will follow.

**Item 1.** 2014 OSSC Table 722.2.1.4(2) allows for equivalent fire protection time of 40 minutes for 5/8" Type X gypsum wallboard and 25 minutes for 1/2" Type X gypsum wallboard on fire-exposed side of walls. Per NDS TR-10, time assigned to the last layer (1/2" Type X gypsum wallboard) can only be multiplied by 0.50 which, in this case, is equivalent to 12.5 minutes.

**Item 2.** Since we are evaluating this application with respect to a 2-hour timber beam rather than wall, 3/8" hat channels will be provided. The hat channels will prevent rapid heat transfer between the gypsum board and timber member, reducing preheating of wood beam in a fire event.

**Item 3.** Fire resistance of unprotected/exposed wood beam on three sides permits additional equivalent protection, per 2014 OSSC 722.6.3 equation 7-19:

$$2.54Zd \left[ 4 - \left( \frac{d}{b} \right) \right] \text{ for columns which may be exposed to fire on four sides}$$

$b$  = The breadth (width) of a beam before exposure to fire (inches).

$d$  = The depth of a beam before exposure to fire (inches).

$Z$  = Load factor, based on Figure 722.6.3(1).

For this condition,  $b=8$ ,  $d=12$ ,  $Z=1.0$  (100% design load)

The calculation yields an equivalent protection time of 67.7 minutes.

Table 1. Timber beam size and summary of equivalency for EJ of 2-hour rated wood beam.

Timber Beam Size	Assembly Description	Rating Provision	Code Section / Additional Provision	Equivalency
8" x 12" nominal (14" x 16")	2-hour	(1) 5/8" Type X Gyp	OSSC Table 722.2.1.4(2)	40 minutes
		(1) 1/2" Type X Gyp	OSSC Table 722.2.1.4(2) / NDS TR-10	+ 12.5 minutes
		3/8" Hat Channels	----	Air Gap
		2.54 [1.0] 16 [3 - 16/14]	OSSC 722.6.3 Eq. 7-20	+ 67.7 minutes
		<b>TOTAL ASSEMBLY</b>	----	<b>Exceeds 2-hour requirements</b>

## 6 SUMMARY

The 2-hour fire protection of the beam will be achieved by the protection provided from the Type X gypsum boards and fire-resistance of the heavy timber beam.

After adding (2) layers (5/8" + 1/2") of Type "X" gypsum wallboard wrap to the face of the assembly an additional 52.5 minutes of equivalent time is added per 2014 OSSC Table 722.2.1.4(2) and NDS TR-10. When we consider the conductive heat transfer reduction by positioning 3/8" hat channels between the wood member and gypsum wrap assembly, the assembly will have a conservative total effective equivalent time of more than 120 minutes. Therefore, the assembly will satisfy the design requirement for 2 hours of equivalent protection.



## 7 CONCLUSION

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The proposed design of the primary structural beam meets the code requirement to provide 2-hour fire resistance.

As evaluated in this EJ, the beam will maintain a 2-hour fire resistance as required by the OSSC.



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*Franklin Callfas*  
Principal/Fire Protection Engineer  
Code Unlimited