

# ANN ARBOR BUILDING BOARD OF APPEALS

## STAFF REPORT

**Meeting Date: June 16, 2022**

**Type of Request: APPEAL**

Building Board of Appeals Request **BBA22-2000** at 322 E. Liberty, Unit: 13, ANN ARBOR, MI 48104.

(Parcel Identification Number: **09-09-29-111-029**)

### DESCRIPTION AND DISCUSSION

#### Property Owners Name and Address:

322 E. Liberty #13, LLC  
40600 Ann Arbor Road E. Ste 201  
Plymouth, MI 48170

### BACKGROUND

The property at 322 E. Liberty is an R-2 Occupancy Classification as described by the 2015 Michigan Building Code and as indicated on the signed sealed plans submitted with the permit application. Building Permit BLDG21-0660 was issued 4/30/2021. 322 E. liberty Unit :13 was originally issued a Certificate of Occupancy 1/26/2007 and at that time had a spiral stairway connecting the 4<sup>th</sup> and 5<sup>th</sup> floor. As part of the scope of work associated with BLDG21-0660 the spiral stairway was removed, and a new stairway constructed. The stairway geometry on the approved plan does not meet the minimum Code requirements of section 1011.5.2 of the 2015 Michigan Building Code and the permit holder was first informed of this violation during a rough building inspection performed 10/19/2021 this violation is also stated on inspection reports dated 10/25/2021, 11/16/2021, 4/5/2022, followed by a meeting via Teams 4/12/2022. The petitioner is requesting relief from the minimum requirements of section 1102.5.2 of the 2015 Michigan Building code.

#### **Standards for Approval:**

1. *The True intent of the code or the rules governing construction have been incorrectly interpreted.*

2. *The provisions of the code do not apply; and*

3. *An equal or better form of construction is proposed*

### STAFF RECOMMENDATION

Staff recommends this application be denied as it does not meet the standards for approval, the code has not been misinterpreted, the provisions of the code do apply and the reduction in stairway Geometry is less safe than that required by the governing code (2015 Michigan Building Code).

While the applicant states the stairway as constructed would meet the requirements of the 2015 Michigan Residential Code that code is not applicable in R-2 occupancies. The 2015 Michigan Residential Code is a standalone code that only pertains to single family houses, duplexes and townhouses and offers no provisions for R-2 structures the Introduction to the 2015 Michigan Residential Code states:

“This comprehensive, stand-alone residential code establishes minimum regulations for one- and two-family dwellings and townhouses using prescriptive provisions.”

322 E. Liberty does not meet the definitions of a one- or two-family dwelling or a townhouse. The nature of this building as R-2 has increased safety concerns that are not considerations in the 2015 Michigan Residential Code which is why it is regulated by the 2015 Michigan Building Code.

Because 322 E. Liberty unit: 13 is an R-2 Occupancy the 2015 Michigan Residential Code is not applicable. This project must comply with the minimum code requirements of the 2015 Michigan Building Code, which per section 101.3 states:

**101.3 Intent.** The purpose of this code is to establish the minimum requirements to provide a reasonable level of safety, public health and general welfare through structural strength, *means of egress* facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide a reasonable level of safety to fire fighters and emergency responders during emergency operations.

While the plan was approved with an element that did not comply with the 2015 Michigan Building Code, there is a provision in the code for just such situations. Section 105.4 states:

**105.4 Validity of permit.** The issuance or granting of a *permit* shall not be construed to be a *permit* for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. *Permits* presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a *permit* based on *construction documents* and other data shall not prevent the *building official* from requiring the correction of errors in the *construction documents* and other data. The *building official* is authorized to prevent occupancy or use of a structure where in violation of this code or of any other ordinances of this jurisdiction.

Per section 1011.5.2 of the 2015 Michigan Building Code the minimum stairway rise and tread depth states stair riser height cannot exceed seven inches, and tread depth shall be eleven inches minimum exception 3 of section 1011.5.2 allows an increase in riser height and reduction in tread depth from the previously mentioned dimensions allowing for seven and three quarter maximum rise and minimum tread depth of ten inches (never is the 2015 Michigan Residential Code referenced).

**1011.5.2 Riser height and tread depth.** *Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum.* The riser height shall be measured

vertically between the *nosings* of adjacent treads. Rectangular tread depths shall be 11 inches (279 mm) minimum measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's *nosing*. *Winder* treads shall have a minimum tread depth of 11 inches (279 mm) between the vertical planes of the foremost projection of adjacent treads at the intersections with the walkline and a minimum tread depth of 10 inches (254 mm) within the clear width of the *stair*.

**Exceptions:**

1. *Spiral stairways* in accordance with Section 1011.10.
2. *Stairways* connecting stepped *aisles* to cross *aisles* or concourses shall be permitted to use the riser/tread dimension in Section 1029.13.2.
3. In Group R-3 occupancies; within *dwelling units* in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual *dwelling units* in Group R-2 occupancies; the maximum riser height shall be 7¾ inches (197 mm); the minimum tread depth shall be 10 inches (254 mm); the minimum *winder* tread depth at the walkline shall be 10 inches (254 mm); and the minimum *winder* tread depth shall be 6 inches (152 mm). A *nosing* projection not less than ¾ inch (19.1 mm) but not more than 1¼ inches (32 mm) shall be provided on *stairways* with solid risers where the tread depth is less than 11 inches (279 mm).

The petitioner references section 410.6 of the 2015 Michigan Rehabilitation Code for existing Buildings this section does not pertain to this situation as it is not an accessibility issue, it is a general requirement. The referenced section states:

**410.6 Alterations.** A building, facility, or element that is altered shall comply with the applicable provisions in chapter 11 of the Michigan building code and ICC/A117.1 listed in chapter 16, unless technically infeasible. When compliance with this section is technically infeasible, then the alteration shall provide access to the maximum extent technically feasible.

The code section that does apply with reference to the 2015 Michigan Rehabilitation Code for Existing Buildings is section 403.1, this stairway was not existing so it does not meet the requirements of exception 1.

**403.1 General.** Except as provided by Section 401.2 or this section, *alterations* to any building or structure shall comply with the requirements of the *International Building Code* for new construction. *Alterations* shall be such that the *existing building* or structure is no less conforming to the provisions of the *International Building 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 1011 of the *International Building Code* where the existing space and construction does not allow a reduction in pitch or slope.
2. Handrails otherwise required to comply with Section 1011.11 of the *International Building Code* shall not be required to comply with the requirements of Section 1014.6 of the *International Building Code* regarding full extension of the handrails where such extensions would be hazardous due to plan configuration.

The Residential Code is not intended to be used in commercial buildings. It is a standalone code that is not to become the standard when the requirements of the building code are not being met. Because the 2015 Michigan Building Code is a minimum standard and the code governing this project and is directly referenced by the 2015 Michigan Rehabilitation Code for Existing Buildings. This appeal does not meet the standards of approval. The code has not been misinterpreted, the provisions of the 2015 Michigan Building Code do apply, and the increased riser height and decreased tread depth is neither equal to, nor better than, the code requirements.

**PROPOSED MOTION**

**APPEAL GRANTED**

That in Case BBA22-2000, **the appeal of the Building Official's decision** that the work to be performed at **322 E. Liberty Unit: 13** is **GRANTED** relief from section 1011.5.2, and the Building Board of Appeals **REVERSES** the Building Official's decision for the reason(s) that *[state reason in motion]*:

- ☐ (1) The true intent of the 2015 Michigan Building Code and section 1011.5.2 governing the renovation of 322 E. Liberty Unit:13 have been incorrectly interpreted by the Building Official;
- ☐ (2) The provisions of 2015 Michigan Building Code section 1011.5.2 does not apply to the construction at 322 E. Liberty Unit: 13;
- ☐ (3) The applicant has proposed an equal or better form of construction.

Stipulations – If Applicable:

***[Chairman to check box(es) following vote]***

**OR**  
**APPEAL DENIED**

That in Case BBA22-2000 **the appeal of the Building Official's decision** that the work to be performed at **322 E. Liberty Unit:13** is **DENIED** and the Building Board of Appeals **AFFIRMS** the Building Official's decision for the reason(s) that *[state reason in motion]*:

- ☐ (1) The true intent of the 2015 Michigan Building Code and section 1011.5.2 governing the construction at 322 E. liberty Unit:13 have been correctly interpreted by the Building Official;
- ☐ (2) The provisions of 2015 Michigan Building Code section 1011.5.2 applies to the construction at 322 E. Liberty Unit:13;
- ☐ (3) The applicant has not proposed an equal or better form of construction;

Stipulations – if Applicable:

***[Chairman to check applicable box(es) following vote]***

Yeas:

Nays:

Absent for this vote:

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Date

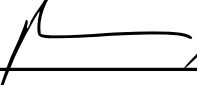
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Paul Darling, Chairperson  
Building Board of Appeals



**City of Ann Arbor**  
**PLANNING & DEVELOPMENT SERVICES**  
301 E. Huron St. | P.O. Box 8647 |  
Ann Arbor, Michigan 48107-8647  
p. 734.794.6263 | f. 734.994.8460 | building@a2gov.org  
**APPLICATION FOR BUILDING/CONSTRUCTION CODE APPEAL**

<b>Facility Information</b>				
Facility Name			County	
Facility Street Address			City	Zip
Permit Number				
<b>Building Data</b>				
New Building <input type="checkbox"/>		Addition <input type="checkbox"/>	Alteration <input type="checkbox"/>	Repair <input type="checkbox"/>
Classification Per Building Code Building Use	No. Of Floors	Construction Type	Area/Floor	No. Of Occupants
<b>Permit Holder</b>				
Name (Company or Individual)			Contact Name	
Street Address	City	State	Zip	
Phone	Fax	Email		
<b>Building Owner</b>				
Name (Company or Individual)			Contact Name	
Street Address	City	State	Zip	
Phone	Fax	Email		
<b>Summary Of Appeal</b>				
CODE SECTION(s)			<i>Provide copies of the following as appropriate:</i> Statement of Facts and Reasoning  <input type="checkbox"/>	
DESIRED RELIEF (State Briefly)				
BASIS OF APPEAL (State Briefly)			Supporting Material  <input type="checkbox"/>	

<b>Applicant</b> (all correspondence will be sent to this address)			
Name (company or individual)		Applicant Name	
Street Address	City	State	Zip
Phone	Fax	Email	
<b>Application Fee</b> (applicant is responsible for paying fee)			
Residential \$250.00 <input type="checkbox"/>		Commercial \$500.00 <input type="checkbox"/>	
<p><b>Note:</b> You have the right to appeal the City of Ann Arbor's Building Boards of Appeals decision to the State of Michigan. If you choose to appeal this decision, then application must be made within 10 days of the decision to the address listed below, in accordance with Section 16 of 1972 PA 230. Michigan Department of Labor &amp; Economic Growth, Bureau of Construction Codes, P.O. Box 30255, Lansing, MI 48909 517-241-9303, <a href="http://www.michigan.gov/bcc">www.michigan.gov/bcc</a></p> <p><b>Note :</b> Reasons for Appeal (Per MRC, Section R112.2, MBC, Section 113.2) include:</p> <ol style="list-style-type: none"> <li>1. The true intent of the code or the rules governing construction have been incorrectly interpreted.</li> <li>2. The provisions of the code do not apply.</li> <li>3. An equal or better form of construction is proposed.</li> </ol>			
Applicant Signature 		Date 5.5.22	



*Ann Arbor Building Board of  
Appeals Submission for:  
322 E. Liberty– Apt. #13  
Existing Stair Compliance  
Ann Arbor, Michigan*

ARCHITECT OF RECORD:

**ALCID HOME DESIGN LLC**

1725 Lyric Ct.  
Rochester Hills, MI 48307  
(248) 602-1387

BUILDER OF RECORD:

**SUPERB CUSTOM HOMES**

P.O. BOX 703450  
PLYMOUTH, MI. 48170  
(248) 735 - 8730

DESIGNER:

 **patrick dyke  
COLLABORATIVE**

2553 Meade Court, Ann Arbor, MI.  
99 Monroe NW #200, Grand Rapids, MI.  
**2 4 8 . 3 2 1 . 4 4 4 4**

*Original Building Plan Submission*  
*Records Pulled from the City of Ann Arbor*



City of Ann Arbor,  
Washtenaw County, Michigan  
**FINAL SITE PLAN PACKAGE**  
Prepared For  
**DENALI DEVELOPMENT GROUP, L.L.C.**

PART OF LOT 1, BLOCK 3,  
RANGE 6 EAST, CITY OF ANN ARBOR,  
WASHTENAW COUNTY, MICHIGAN



LOCATION MAP

Project Name  
**METRO LOFTS**  
**320-322 E. Liberty Street**

**LEGAL DESCRIPTION**

BEGINNING AT THE NORTHEAST CORNER OF LOT 1 IN BLOCK 3 SOUTH OF HURON STREET, RANGE 6 EAST, RUNNING WEST ALONG THE SOUTH LINE OF LIBERTY STREET, 4 RODS (MEASURED AS 66.06 FEET); THENCE SOUTH PARALLEL WITH THE EAST LINE OF SAID LOT, 8 RODS (MEASURED AS 132.37 FEET) TO THE SOUTH LINE OF SAID LOT, THENCE EAST ON THE SOUTH LINE OF SAID LOT, 4 RODS (MEASURED AS 66.06 FEET), THENCE NORTH ON THE EAST LINE OF SAID LOT, 8 RODS (MEASURED AS 132.37 FEET) TO THE PLACE OF BEGINNING, BEING A PART OF LOT 1, BLOCK 3 SOUTH OF HURON STREET, RANGE 6 EAST, ACCORDING TO THE ORIGINAL PLAT OF THE VILLAGE, NOW CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN. CONTAINING 8,744 SQUARE FEET OR 0.20 ACRES OF LAND.

**ADMINISTRATIVE  
AMENDMENT TO SITE PLAN**

I hereby certify that this site plan has been administratively amended by Planning and Development Services, Fire Services, Systems Planning, and Parks and Recreation Services on May 12, 2005, and is in compliance with Chapter 57 of the Ordinance Code of the City of Ann Arbor, Michigan.

Mark D. Lloyd, Manager  
Planning and Development Services

**OFFICIAL COPY**

**METRO LOFTS**

**320-322 EAST LIBERTY STREET**

**FILE NO. 9291A13.5a**

**GENERAL IN**

Current Zoning:

Property Size:

Proposed Building:

Proposed Living:

Proposed Pkg. Spaces: 21

Proposed Bike Pkg. Spaces: 21

Proposed Front Setback:

10 Feet

Proposed Side and Rear Setbacks:

0 Feet

Proposed Building Height:

59 Feet

**SHEET INDEX**

- SP1 Cover Sheet
- SP2 Boundary/ Topographic/ Tree Survey Plan
- SP3 Engineering Site Plan/ Grading/ Limits of Excavation Plan
- SP4 Storm Water Management Plan/ Storm Water Details Sheet
- SP5 Soil Erosion Control Plan
- A1 Floor Plan: Levels B & 1
- A2 Floor Plan: Levels 2 & 3
- A3 Floor Plan: Levels 4 & 5
- A4 Floor Plan: Roof Level & Framing Concept
- A5 Cross Sections
- A6 Elevations
- A7 Wall Sections

**PROPERTY OWNER**

Denali Development Group, L.L.C.  
141 Allenhurst  
Royal Oak, MI 48067

**PROJECT ARCHITECT**

Neumann Smith & Associates  
400 Galleria Offcentre  
Suite 555  
Southfield, MI 48034  
248-352-8310 Phone  
248-352-1821 Fax

**PROJECT ENGINEER**

Nowak & Fraus, PLLC  
1310 N. Stephenson Hwy.  
Royal Oak, MI 48067  
248-396-0886 Phone  
248-396-1435 Fax

3-15-05 REVISED PER CITY REVIEW



**NOWAK  
&  
FRAUS**

Consulting Engineers Land Surveyors  
Land Planners

1310 N. Stephenson Highway Tel. (248) 399-087  
Royal Oak, MI 48067-1506 Fax. (248) 399-0

**N & F JOB #D'**

F:\2004\24093 - Metro Loft - Ann Arbor\25-Design Development\24093 Floor Plans rev 1.27.05.dwg, 3/14/2005, 5:09:04 PM, Hilti Dev, Xerox S100p scanner, JCL, L.L. NeumannSmith & Assoc.

APT #13

FLOOR PLAN: LEVEL FIVE  
1/8" = 1'-0"

APT #13

FLOOR PLAN: LEVEL FOUR  
1/8" = 1'-0"

INTERIOR WALL FINISH	
---	INDICATES METAL PANEL WALL
---	INDICATES BRICK WALL

**NEUMANN  
SMITH  
& ASSOCIATES**

Architecture  
Planning  
Interior Design

400 Galleria Office Centre  
Suite 555  
Southfield, Michigan 48034

248-352-8310  
Fax 248-352-1821  
NS@neumannsmith.com

LOFT 322  
320-322 E. Liberty St.  
Ann Arbor, Michigan

Revisions



3-14-05 SPA revised per city comments

Date: 10-08-04  
 Drawn: mgd  
 Checked: srb  
 Approved: [Signature]  
 Bidpak Number: [Blank]  
 Job Number: 24093  
 Title: Floor Plan: Levels 4 & 5

Scale: 1/8" = 1'-0"  
 Sheet: A-4

*Apartment #13 Permit Submission Drawings*

*Permit Submission dated April 1st, 2021*



## GENERAL

THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE MICHIGAN BUILDING CODE 2015. A COPY OF THE CODE BOOK SHOULD BE RETAINED BY THE BUILDING RESIDENTIAL CONTRACTOR FOR REFERENCE BY THE ON-SITE CONSTRUCTION PERSONNEL. ALL CONSTRUCTION SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT CODE. MECHANICAL SYSTEM DESIGN IS BY OTHERS. DESIGN AND INSTALLATION SHALL COMPLY WITH THE MICHIGAN MECHANICAL CODE 2015. PLUMBING SYSTEM DESIGN IS BY OTHERS. DESIGN AND INSTALLATION SHALL COMPLY WITH THE MICHIGAN PLUMBING CODE 2015. ELECTRICAL SYSTEM DESIGN IS BY OTHERS. DESIGN AND INSTALLATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE 2017. THE SYSTEM NOTES ARE FOR GENERAL INFORMATION. WHEN CONFLICTS EXIST BETWEEN THESE NOTES AND CURRENT CODES THE MORE STRINGENT REQUIREMENTS SHALL PREVAIL. MATERIALS OR CONSTRUCTION METHODS WHICH ARE NOT SPECIFIED BY LAW OR SHALL CAUSE A HARMFUL EFFECT TO THE NATURAL ENVIRONMENT OR TO THE HEALTH OF ANY PERSON ON THE SITE DURING CONSTRUCTION AND/OR DURING OCCUPANCY SHALL NOT BE USED IN THIS PROJECT. ALL TRADES SHALL CONFORM WITH ALL APPLICABLE FEDERAL, STATE, LOCAL AND OSHA CODES, RULES, AND REGULATIONS. IN CASE OF CONFLICT, THE MOST STRINGENT REQUIREMENTS SHALL APPLY. DIMENSIONS OF INTERIOR WALLS ON PLANS SHALL BE 3 1/2" (ROUGH STUD DIMENSIONS) UNLESS OTHERWISE INDICATED.

## MECHANICAL

CATEGORY IV CONDENSING APPLIANCES SHALL HAVE AN AUXILIARY DRAIN PAN WHERE DAMAGE TO ANY BUILDING COMPONENT WILL OCCUR AS A RESULT OF STOPPAGE IN THE CONDENSATE DRAINAGE SYSTEM UNLESS COMPLYING WITH THE LISTED EXCEPT OF SECTION M 1411.3.2. AIR REMOVED BY EVERY MECHANICAL EXHAUST SYSTEM (INCLUDING BATH EXHAUSTS) SHALL BE DISCHARGED TO THE OUTDOORS. AIR SHALL NOT BE EXHAUSTED INTO AN ATTIC, SOFFIT, RIDGE VENT OR CRAWL SPACE.

## CORRIDOR AND STAIRWAY LIGHTING

ELECTRICAL CONTRACTOR SHALL PROVIDE FIXTURES WITH ADEQUATE ILLUMINATION TO MEET THE REQUIRED FOOT CANDLE LEVELS AT FLOOR AND STAIR TREADS PER CODE. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF THE STAIRWAY. CONTRACTOR MAY PROVIDE ADDITIONAL FIXTURES NOT SHOWN OR RELOCATE FIXTURES SHOWN ON THE PLAN TO MEET THE REQUIRED FOOT CANDLE LEVELS. THERE SHALL BE A WALL SWITCH AT EACH FLOOR LEVEL TO CONTROL THE LIGHT WHERE THE STAIRWAY WALKS UP OR DOWN. THE ILLUMINATION OF EXTERIOR STAIRWAYS SHALL BE CONTROLLED FROM INSIDE THE UNIT.

## STAIRS

ALL STAIRS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R-311. EXCEPT THE MAXIMUM RISE HEIGHT SHALL BE 7" AND THE MINIMUM TREAD DEPTH SHALL BE 10" UNLESS SPECIFICALLY DIRECTED BY THIS OFFICE. ALL TREADS SHALL HAVE A NOSING AS DESCRIBED BY SECTION R-311.7.3.3. ENCLOSED ACCESSIBLE SPACE UNDER THE STAIR SHALL HAVE WALLS, UNDER STAIR SURFACE AND ANY SOFFITS TO BE PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD. HANDRAILS SHALL HAVE A MINIMUM AND MAXIMUM HEIGHT OF 34" AND 38" RESPECTIVELY MEASURED VERTICALLY FROM THE NOSING OF THE STAIR. HANDRAIL(S) SHALL BE CONTINUOUS THE FULL LENGTH OF THE STAIR, EXCEPT AS ALLOWED BY SECTION R-311.7.3.3. THE HANDRAIL PORTION OF THE HANDRAIL SHALL COMPLY WITH SECTION R-311.7.3.3 FOR TYPE II OR TYPE III HANDRAILS. RISERS WITH 30" OF FLOOR OR GRADE CAN BE OPEN. RISERS GREATER THAN 30" CANNOT HAVE AN OPENING LARGER ENOUGH SO A 4" DIAMETER SPIRE CAN PASS THROUGH.

## GUARD RAIL

BALUSTERS SHALL BE SPACED SO THAT A SPHERE WITH A DIAMETER OF 4" CANNOT PASS THROUGH ANY OPENING. GUARD RAIL AT PORCHES, BALCONIES, OR RAISED FLOOR SURFACE WITH A HEIGHT DIFFERENTIAL OF 30" OR MORE ABOVE THE FINISHED FLOOR OR GRADE SHALL BE A MINIMUM OF 36" HIGH. INTERIOR GUARD RAILS SHALL BE 36" HIGH MINIMUM.

## FOAM PLASTICS

ALL FOAM PLASTICS OR FOAM PLASTIC CORED MATERIAL USED IN BUILDING CONSTRUCTION SHALL HAVE SURFACE BURNING CHARACTERISTICS OR A THERMAL BARRIER AS DESCRIBED IN SECTION R-311 UNLESS NOTED OTHERWISE.

## SMOKE ALARMS AND CARBON MONOXIDE DETECTORS

EACH SLEEPING ROOM SHALL BE PROVIDED WITH A MINIMUM OF ONE (1) SMOKE ALARM (LOCAL FIRE DEPARTMENT APPROVED AND UNDERWRITERS LABORATORIES TESTED AND LABELED) AND ONE (1) SMOKE ALARM INSTALLED IN COMMON AREA HALL OR CORRIDOR ADJACENT TO THE SLEEPING ROOMS WITHIN 10' OF ALL BEDROOM DOORS. ALSO PROVIDE A MINIMUM OF ONE (1) SMOKE ALARM ON EACH FLOOR. THE SMOKE ALARM IS TO BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES. THE SMOKE ALARM SHALL BE WIRED IN SUCH A WAY THAT THE ACTIVATION OF ONE (1) ALARM WILL ACTIVATE ALL ALARMS IN THE DWELLING UNIT. ALL SMOKE ALARMS SHALL BE EQUIPPED WITH A BATTERY BACKUP. SMOKE ALARMS SHOULD NOT BE INSTALLED: LESS THAN 3' HORIZONTALLY FROM DOOR OR OPENING OF BATHROOM WITH TUB OR SHOWER UNLESS THIS WOULD PREVENT PLACEMENT OF REQUIRED SMOKE ALARM WITHIN VICINITY OF BEDROOM. LESS THAN 20' HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE (IONIZATION SMOKE ALARM). LESS THAN 10' HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE (IONIZATION SMOKE ALARM WITH AN ACoustic SILENCE SWITCH). LESS THAN 6' HORIZONTAL FROM A PERMANENTLY INSTALLED COOKING APPLIANCE (PHOTOELECTRIC SMOKE ALARM). INSTALLATION OF EACH (1) OPERATIONAL AND APPROVED CARBON MONOXIDE DEVICE WITHIN EACH RESIDENCE. ONE (1) DEVICE SHALL BE LOCATED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE VICINITY OF THE BEDROOMS WHICH MAY INCLUDE ONE (1) DEVICE NEAR ALL ADJACENT BEDROOMS. IN AREAS WITHIN THE DWELLING ADJACENT TO AN ATTACHED GARAGE, AND IN AREAS ADJACENT TO ANY FUEL BURNING APPLIANCE, THEY SHALL BE INSTALLED IN ACCORDANCE WITH THIS CODE AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE RESIDENCE OWNER OR OCCUPANT OF A RESIDENTIAL UNIT IS RESPONSIBLE FOR THE PROPER OPERATION, TESTING, AND MAINTENANCE OF THE EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS PROVIDED WITH THE EQUIPMENT. THE OPERATION INSTRUCTIONS SHOULD BE SAVED AND DELIVERED TO THE OWNER/OCCUPANT ON THE FIRST OCCUPANCY DATE.

## STEEL

ALL STEEL COLUMNS AND EXTERIOR LINTELS SHALL BE SHOP COATED WITH RUST-INHIBITIVE PAINT ON ALL SURFACES (INSIDE AND OUTSIDE) UNLESS MADE OF CORROSION-RESISTANT STEEL. THE COLUMNS SHALL BE RESTRAINED AT THE BOTTOM TO PREVENT LATERAL DISPLACEMENT. STEEL COLUMNS SHALL BE OF SIZE NOTED ON DRAWINGS.

## BACKER BEHIND TUB AND SHOWER WALLS

"GREEN BOARD" IS NOT ALLOWED AS A BACKER MATERIAL BEHIND TILED TUB AND SHOWER WALLS. ONLY CEMENT FIBER CEMENT OR GLASS MATE OVERLAP SHOWER MEETING THE REQUIREMENTS OF SECTION 702.41.2 ARE ALLOWED.

## DRYER VENTS

THE MAXIMUM LENGTH FOR A DRYER VENT SHALL BE DETERMINED BY ONE OF THE METHODS SPECIFIED IN SECTION M1502.4.1 OR M1502.4.2 WHEN THE EXHAUST DUCT IS CONCEALED WITHIN THE BUILDING FLOOR OR CEILING. THE EXHAUST DUCT SHALL BE IDENTIFIED BY A PERMANENT LABEL OR TAG AS REQUIRED IN M1502.4.5. ALL DUCTS SHALL HAVE A SMOOTH INTERIOR SURFACE. THE EXHAUST DUCT SHALL BE 3" IN LENGTH. THE EXHAUST DUCT SHALL BE IDENTIFIED BY A PERMANENT LABEL OR TAG AS REQUIRED WHETHER THE DUCT IS CONCEALED OR NOT. TAPES AND MASTICS USED TO SEAL SHEET METAL DUCTS MUST BE LISTED TO UL 181 B.

## WALL FRAMING

WOOD WALL FRAMING SHALL COMPLY WITH CHAPTER 5 EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE NOTED ON DRAWINGS. FRAMING SHALL BE INSTALLED PER TABLE R-602.3.1 (1) AND (2). SEE DETAILS AND CODE FOR ALLOWABLE NOTCHING AND BORING OF DIMENSIONAL LUMBER. SEE TABLE R-602.3.1 (1) AND (2) FOR ALLOWABLE NOTCHING AND BORING OF PRE-FABRICATED MATERIALS. PROVIDE FIRE BLOCKING PER SECTION R-302.11. THE EXTERIOR WALL ENVELOPE SHALL BE CONSTRUCTED IN A MANNER THAT PREVENTS THE PENETRATION OF DRINKING WATER INTO THE ASSEMBLY TO THE EXTERIOR UNLESS ONE OF THE EXCEPTIONS LISTED IN SECTION R-703.1 HAS BEEN MET. THE WATER-RESISTIVE BARRIER SHALL COVER THE ENTIRE WALL AREA INCLUDING ATTICS, GABLES, AND SIMILAR WALL AREAS. THE WATER-RESISTIVE BARRIER SHALL BE INSTALLED HORIZONTALLY IN SHINGLE FASHION WITH A MIN LAP OF 6". STUDS IN ALL WALLS SHALL BE SPACED AT 16" O.C. UNLESS OTHERWISE NOTED. EXTERIOR WOOD FRAME WALLS OVER 1'-2" IN HEIGHT SHALL BE A MINIMUM OF 2X6 CONSTRUCTION. ALL STUDS SHALL BE CONTINUOUS FROM FLOOR TO UNDERSIDE OF FLOOR OR ROOF FRAMING ABOVE. SEE FRAMING MATERIALS FOR MINIMUM STUD SIZES AND GRADES. ALL STRUCTURAL MEMBERS TO HAVE MINIMUM DOUBLE STUD CONSTRUCTION CONTINUOUS FROM FLOOR TO UNDERSIDE OF FLOOR OR ROOF FRAMING ABOVE. WINDOW TRANSOM HEADERS SHALL SPAN BETWEEN CONTINUOUS STUDS WITH FLUSH HANGER BRACKETS AS REQUIRED. PROVIDE CONTINUOUS WALL STUDS FROM FLOOR TO UNDERSIDE OF ROOF AT ALL SLOPED CEILING CONDITIONS (BALCONY CONSTRUCTION). LOWER LEVEL (BASEMENT) EXTERIOR FRAME WALLS SHALL BE MINIMUM 2X6 FRAMING AT 16" O.C. WITH PRESSURE TREATED BASE PLATE. INTERIOR LOWER LEVEL BEARING WALLS SHALL BE 2X8 FRAMING AT 16" O.C. WHEN CARRYING MORE THAN TWO (2) FLOORS OR ONE (1) FLOOR AND ONE (1) ROOF.

## DIMENSIONAL LUMBER

### EXTERIOR-BEARING AND NON-BEARING WALLS:

"10'-1 1/8" PLATE HEIGHT OR LESS: 2X4 SPRUCE-PINE-FIR #2 KD OR BETTER  
"10'-1 1/8" PLATE HEIGHT OR LESS: 2X4 SPRUCE-PINE-FIR #1 KD OR BETTER  
"18'-8" PLATE HEIGHT OR LESS: 2X8 DOUGLAS FIR LARCH #2 KD OR BETTER

### INTERIOR:

"BEARING WALLS - SPRUCE-PINE-FIR #2 KD OR BETTER  
"NON-BEARING WALLS - SPRUCE-PINE-FIR KILN DRIED, STUD GRADE, OR BETTER  
"NON-BEARING WALLS - SPRUCE-PINE-FIR KILN DRIED, STUD GRADE OR BETTER  
"HEADER: HEAVY-FR #2 KD OR BETTER FIBER BENDING STRESS=1,075 PSI (REPETITIVE MEMBER) CLAGTITY/MODULUS =1,300,000 PSI  
"JUST AND PARTIES: HEAVY-FR #2 KD OR BETTER: FIBER BENDING STRESS=1,075 PSI (REPETITIVE MEMBER) CLAGTITY/MODULUS =1,300,000 PSI  
"WALL PLATES: NON-STRUCTURAL BLOCKING: SPRUCE-PINE-FIR, KILN DRIED, UTILITY GRADE OR BETTER  
"FINGER JOINTS: HEAVY-FR #2 KD OR BETTER: FIBER BENDING STRESS=1,075 PSI (REPETITIVE MEMBER) CLAGTITY/MODULUS =1,300,000 PSI  
"ALL PRE-ENGINEERED HEADERS TO BEAR ON THE REQUIRED NUMBER OF STUDS TO MATCH WIDTH OF HANGER MATERIAL AT PERPENDICULAR AND ON A MINIMUM OF TWO (2) JACK STUDS AT PARALLEL WALL. CONDITION UNLESS NOTED OTHERWISE.  
"ALL PRE-ENGINEERED LUMBER MEMBERS SHALL BE BUILT UP FROM THE NUMBER OF HEADERS INDICATED ON DRAWINGS. ALL MEMBERS SHALL BE SECURED WITH NAILS OR BOLTS AS SPECIFIED BY THE MANUFACTURER FOR SIZES INDICATED.  
"ALL GIRDER TRUSSES TO BEAR ON TWO STUDS MINIMUM OR AS REQUIRED TO MATCH NUMBER OF TRUSS PLYS UNLESS NOTED OTHERWISE OR THE DRAWINGS OR ON TRUSS DESIGN DRAWINGS.  
"ALL STRUCTURAL HANGERS TO BE "SIMPSON" OR APPROVED EQUAL...  
"CARPENTER CONTRACTOR TO INSTALL NAIL SIZES AND NUMBER REQUIRED AS SPECIFIED BY MANUFACTURER FOR EACH TYPE OF HANGER.

## WALL SHEATHING

PROVIDE STRUCTURAL GRADE OSB WALL SHEATHING FOR LATERAL BRACING OF EXTERIOR WALL LOADS. WHEN NON-STRUCTURAL SHEATHING IS USED PROVIDE LE-10 DIAGONAL BRACING OR OTHER APPROVED TYPE OF BRACING AT ALL EXTERIOR CORNERS OF STRUCTURE.

## FLAME SPREAD AND SMOKE DENSITY

ALL WALL AND CEILING FINISHES SHALL COMPLY WITH THE REQUIREMENTS OF SECTION R-302.

## SYMBOLS LEGEND

DETAIL A	ELEVATION
DETAIL B	SECTION CUT
SHEET A	EXISTING EXTERIOR WALL
SHEET B	EXISTING INTERIOR PARTITION
	DEMO WALL
	NEW 2x4 WALL WITH 1/2" GYP. BD. BOTH SIDES, UNLESS NOTED OTHERWISE
	EXISTING BRICK

	NORTH ARROW
SIZE W X H FEET AND (1'-0" X 4'-0")	TYPE (SC)
3040 SC	WINDOW
SIZE W X H FEET AND (1'-0" X 4'-0")	TYPE (STL)
3066 STL	DOOR
MATERIAL TYPE	

## ELECTRICAL / PLUMBING SYMBOLS LEGEND

	OUTLET
	SWITCH
	LIGHT FIXTURE PER PLAN
	EXHAUST FAN
	CEILING FAN W/ SEPARATE LIGHT SWITCH
	CARBON MONOXIDE / SMOKE DETECTOR
	SMOKE DETECTOR
	CABLE JACK
	HOSE BIB

## VICINITY MAP:



## PROJECT DESCRIPTION:

INTERIOR REMODEL OF APPROX. 2,224 S.F. OF A 2 LEVEL SINGLE UNIT APARTMENT, INCLUDES BEDROOM, STAIR, KITCHEN AND BATHROOM SPACE. NO EXTERIOR WORK, NO BUILDING STRUCTURAL ALTERATION, NO CHANGE IN OCCUPANCY.

## LOCATION:

322 E. LIBERTY ST. APT. #13, (4TH & 5TH FLOOR OF BLDG.)

## CODE:

2015 MICHIGAN BUILDINGS CODE  
2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS  
2015 MICHIGAN PLUMBING CODE  
2015 MICHIGAN MECHANICAL CODE  
2017 NATIONAL ELECTRIC CODE  
2009 ICC/ANSI A117.1 MICHIGAN BARRIER FREE DESIGN  
2015 INTERNATIONAL ENERGY CONSERVATION CODE ANSI/ASHRAE/IESNA 90-1.2013  
2015 INTERNATIONAL FIRE CODE  
2015 INTERNATIONAL FUEL GAS CODE  
2010 NFPA 13, 13D, 13R  
2013 NFPA 72 FIRE ALARM CODE

## AREA CALCULATIONS:

FINISHED:	1,120 S.F.
1ST FLOOR:	1,204 S.F.
2ND FLOOR:	1,204 S.F.
TOTAL:	2,224 S.F.

## SHEET INDEX

G1	GENERAL NOTES, PROJECT INFORMATION, SHEET INDEX.
A1	1ST FLOOR AS-BUILT & DEMO PLAN
A1.1	1ST FLOOR PLAN
A2	2ND FLOOR AS-BUILT & DEMO PLAN
A2.1	2ND FLOOR PLAN
A3	SCHEDULES & SECTION

FOR PERMIT

REVISION TABLE		
NUMBER	DATE	REVISED BY DESCRIPTION

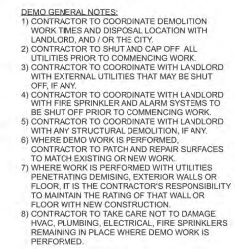
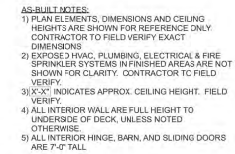
**DEVALI LOFTS**  
322 E. LIBERTY ST. APT. 13 REMODEL  
ANN ARBOR, MI 48104

DESIGNER OF RECORD:  
ALCOID HOME DESIGN LLC  
1000 E. LIBERTY ST. APT. 13  
ANN ARBOR, MI 48104  
248.323.4444

ARCHITECT:  
ALCOID HOME DESIGN LLC  
1000 E. LIBERTY ST. APT. 13  
ANN ARBOR, MI 48104  
248.323.4444

STATE OF MICHIGAN  
ALCOID  
ARCHITECT  
No. 12056676  
EXPIRATION DATE 12/31/2024

DATE: 4/1/2021  
SCALE:  
SHEET TITLE:  
GENERAL NOTES,  
SYMBOLS, PROJECT  
DESCRIPTION, SHEET  
INDEX  
SHEET:  
**G1**



← Z

[illegible]

**DENALI LOFTS**  
322 E. LIBERTY ST. APT. 13 REMODEL  
ANN ARBOR, MI 48104

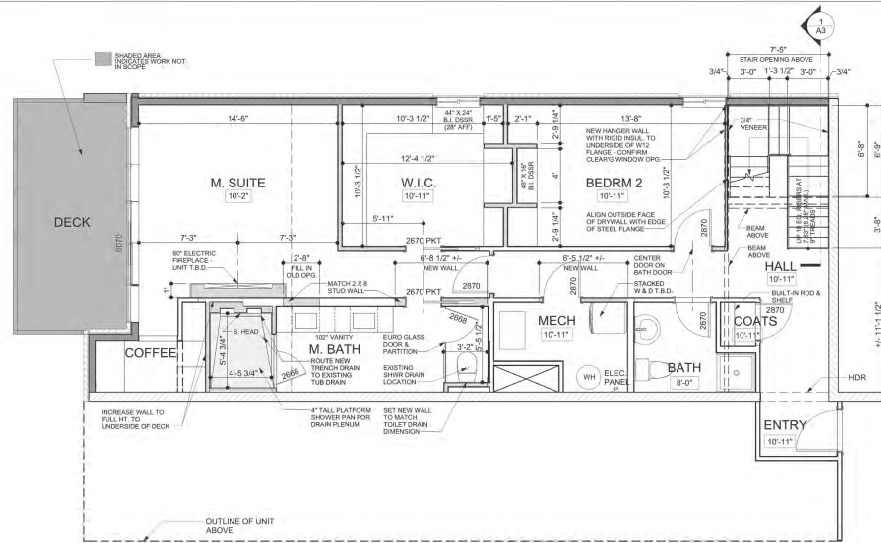
**DESIGNER OF RECORD:**  
patrick dyke  
COLLABORATIVE  
"PROVIDERS OF RETIREMENT"™  
architecture + design  
150 N. Old Woodland Birmingham, AL  
175 Latta Lane Dr. Ave. Atto, MI  
248.321.4444

**ARCHITECT:**  
**ALCID HOME DESIGN LLC**  
1736 Lynde Ct.  
Rochester Hills, MI 48307  
(248) 802-1387



SHEET:

**A1**



- GENERAL NOTES:**
- 1) CONTRACTOR TO COORDINATE CONSTRUCTION WORK TIMES AND DISPOSAL LOCATION WITH LANDLORD AND / OR THE CITY.
  - 2) DIMENSIONS SHOWN IN ROOMS ARE TO WALL FINISH SURFACE, UNLESS NOTED OTHERWISE.
  - 3) BUILDER TO DISCUSS WALL INSULATION AT ALL BATH AND MECH. WALL CONSTRUCTION WITH TENANT.
  - 4) PLUMBER TO VALIDATE ALL SANITARY DRAIN REROUTING PRIOR TO CONSTRUCTION.
  - 5) STAIR FABRICATOR TO VERIFY AS-BUILT OPENING AND ADEQUATE STAIR DESIGN TO CODE IN SHOP DRAWINGS.
  - 6) HVAC CONTRACTOR TO PROPERLY SIZE SUPPLY AND RETURNS SIZING TO CODE FOR NEW CEILING DESIGNS.
  - 7) BUILDER TO COORDINATE WITH INTERIOR DESIGNER FOR ADDITIONAL CABINETRY & SHELVING DESIGN.
  - 8) BUILDER TO COORDINATE WITH INTERIOR DESIGNER FOR LIGHTING, FIREPLACE & PLUMBING FIXTURE SELECTION.

FIRST FLOOR PLAN

FOR PERMIT

REVISION TABLE	
NUMBER	DESCRIPTION

**DENALI LOFTS**  
322 E. LIBERTY ST. APT. 13 REMODEL  
ANN ARBOR, MI 48104

DESIGNER OF RECORD:  
ALCOID HOME DESIGN LLC  
1775 CONSUMERS DRIVE, SUITE 100  
ANN ARBOR, MI 48106  
248.231.4444

ARCHITECT:  
ALCOID HOME DESIGN LLC  
1775 CONSUMERS DRIVE, SUITE 100  
ANN ARBOR, MI 48106  
(248) 231-4444



DATE: 4/1/2021

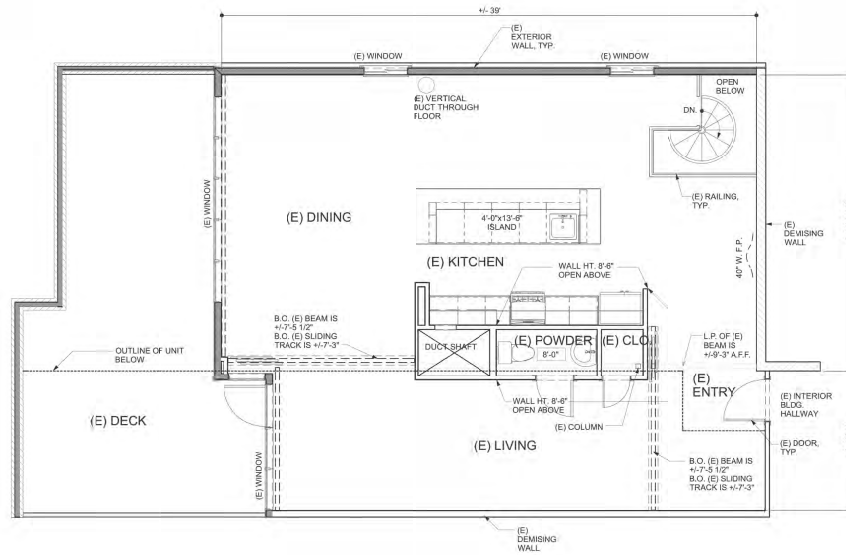
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SHEET TITLE:  
1ST FLOOR  
PLAN

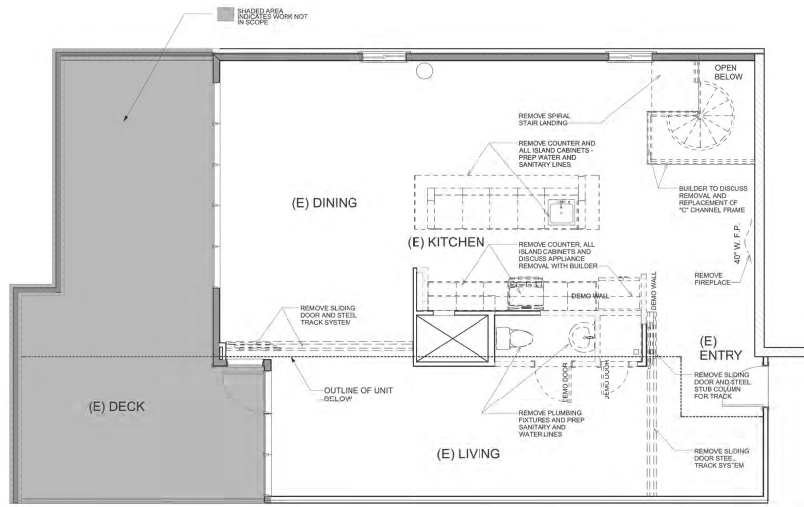
SHEET:

A1.1





2ND FLOOR "AS-BUILT" PLAN



2ND FLOOR DEMOLITION PLAN

FOR PERMIT

REVISION TABLE	
NUMBER	DATE / DESCRIPTION

**DENALI LOFTS**  
322 E. LIBERTY ST. APT. 13 REMODEL  
ANN ARBOR, MI 48104

DESIGNER OF RECORD:  
ALCO HOME DESIGN LLC  
1775 CONSUMERS BLVD. SUITE 100  
ANN ARBOR, MI 48106  
248.323.4444

ARCHITECT:  
ALCO HOME DESIGN LLC  
1775 CONSUMERS BLVD. SUITE 100  
ANN ARBOR, MI 48106  
248.323.4444



DATE: 4/1/2021

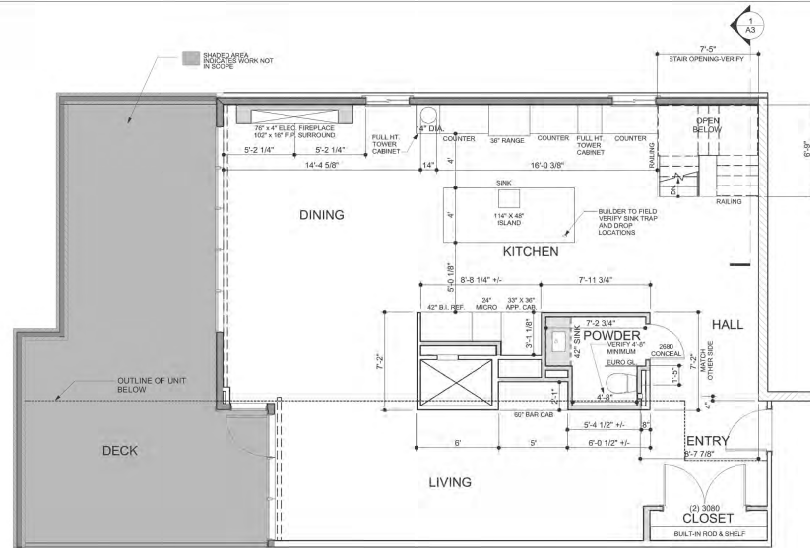
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SHEET TITLE:  
2ND FLOOR  
AS-BUILT &  
DEMO PLAN

SHEET:

A2

2ND FLOOR PLAN



- GENERAL NOTES:**
- 1) CONTRACTOR TO COORDINATE CONSTRUCTION WORK TIMES AND DISPOSAL LOCATION WITH LANDLORD AND / OR THE CITY.
  - 2) DIMENSIONS SHOWN IN ROOMS ARE TO WALL FINISH SURFACE, UNLESS NOTED OTHERWISE.
  - 3) BUILDER TO DISCUSS WALL INSULATION AT ALL BATH AND MECH. WALL CONSTRUCTION WITH TENANT.
  - 4) PLUMBER TO VALIDATE ALL SANITARY DRAIN REPAIRS PRIOR TO CONSTRUCTION.
  - 5) STAIR FABRICATOR TO VERIFY AS-BUILT OPENING AND ADEQUATE STAIR DESIGN TO CODE IN SHOP DRAWINGS.
  - 6) HVAC CONTRACTOR TO PROPERLY SIZE SUPPLY AND RETURNS SIZING TO CODE FOR NEW CEILING DESIGNS.
  - 7) BUILDER TO COORDINATE WITH INTERIOR DESIGNER FOR ADDITIONAL CABINETS & SHELVING DESIGN.
  - 8) BUILDER TO COORDINATE WITH INTERIOR DESIGNER FOR LIGHTING, FIREPLACE & PLUMBING FIXTURE SELECTION.

FOR PERMIT

REVISION TABLE		
NUMBER	DATE	REVISION BY / DESCRIPTION

**DENALI LOFTS**  
322 E. LIBERTY ST. APT. 13 REMODEL  
ANN ARBOR, MI 48104

DESIGNER OF RECORD:  
ALCO HOME DESIGN LLC  
1775 CONSUMERS DRIVE, SUITE 100  
ANN ARBOR, MI 48106  
248.231.4444

ARCHITECT:  
ALCO HOME DESIGN LLC  
1775 CONSUMERS DRIVE, SUITE 100  
ANN ARBOR, MI 48106  
(248) 231-4444











DATE: 4/1/2021

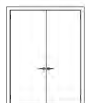

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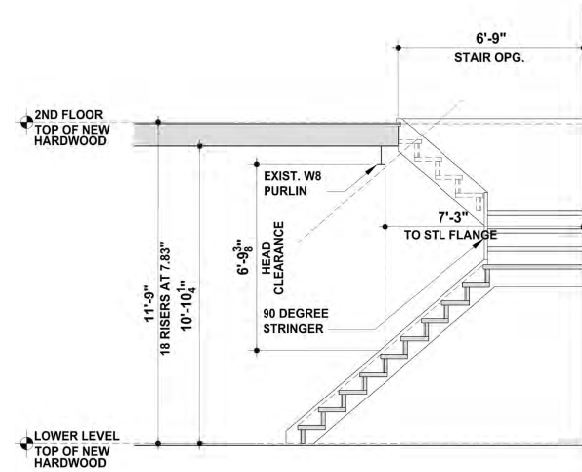
SHEET TITLE:  
2ND FLOOR  
PLAN

SHEET:

A2.1

DOOR SCHEDULE										
FLOOR/ROOM NAME	3D INTERIOR ELEVATION LABEL	DESCRIPTION	QTY	WIDTH	HEIGHT	HEADER	CODE	TEMPERED	MANUFACTURER	COMMENTS
1 M. BATH/M. BATH		2668 SHOWER-GLASS SLAB	1	30"	80"			YES		
1 TOILET/M. BATH		2668 SHOWER-GLASS SLAB	1	30"	80"			YES		
1 M. BATH/M. SUITE		2670 PKT POCKET-SLAB	1	30"	84"	2X6X65" (2)				
1 W.I.C./N. SUITE		2670 PKT POCKET-SLAB	1	30"	84"	2X6X65" (2)				
1 M. SUITE/HALL		2670 HINGED-SLAB	1	32"	84"	2X6X37" (2)				
1 MECH/HALL		2670 HINGED-SLAB	1	32"	84"	2X6X37" (2)				
1 BEDRM2/HALL		2670 HINGED-SLAB	1	32"	84"	2X6X37" (2)				
1 BATH/HALL		2670 HINGED-SLAB	1	30"	84"	2X6X35" (2)				
1 COATSHALL		2670 HINGED-SLAB	1	32"	84"	2X6X37" (2)				

DOOR SCHEDULE										
FLOOR/ROOM NAME	3D INTERIOR ELEVATION LABEL	DESCRIPTION	QTY	WIDTH	HEIGHT	HEADER	CODE	TEMPERED	MANUFACTURER	COMMENTS
2 ENTRY/CLOSET		(2) 3060 DOUBLE HINGED-SLAB	1	72"	96"	2X6X77" (2)				
2 POWDER/HALL		2680 HINGED-SLAB	1	30"	96"	2X6X35" (2)				



1. STAIR SECTION

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

FOR PERMIT

REVISION TABLE			
NUMBER	DATE	REVISED BY	DESCRIPTION

**DENALI LOFTS**  
322 E. LIBERTY ST. APT. 13 REMODEL  
ANN ARBOR, MI 48104

DESIGNER OF RECORD:  
ACCORD HOME DESIGN LLC  
1125 CHURCH ST. SUITE 100  
ANN ARBOR, MI 48106  
734.769.1100  
734.769.1101

ARCHITECT:  
ACCORD HOME DESIGN LLC  
1125 CHURCH ST. SUITE 100  
ANN ARBOR, MI 48106  
734.769.1100  
734.769.1101



DATE: 4/1/2021

SCALE: AS NOTED

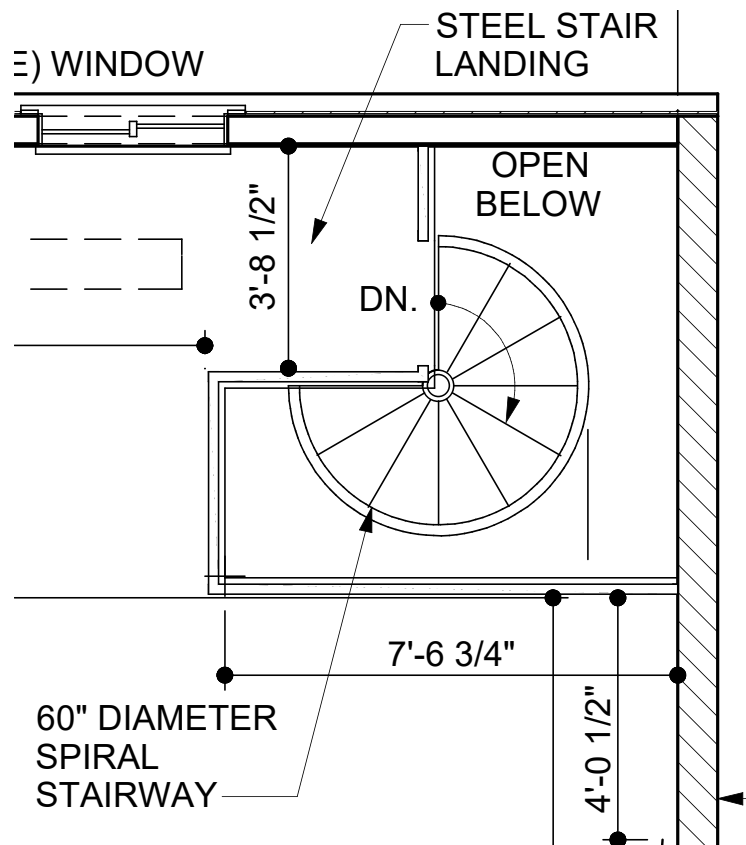
SHEET TITLE:  
DOOR  
SCHEDULES &  
SECTION

SHEET:

A3

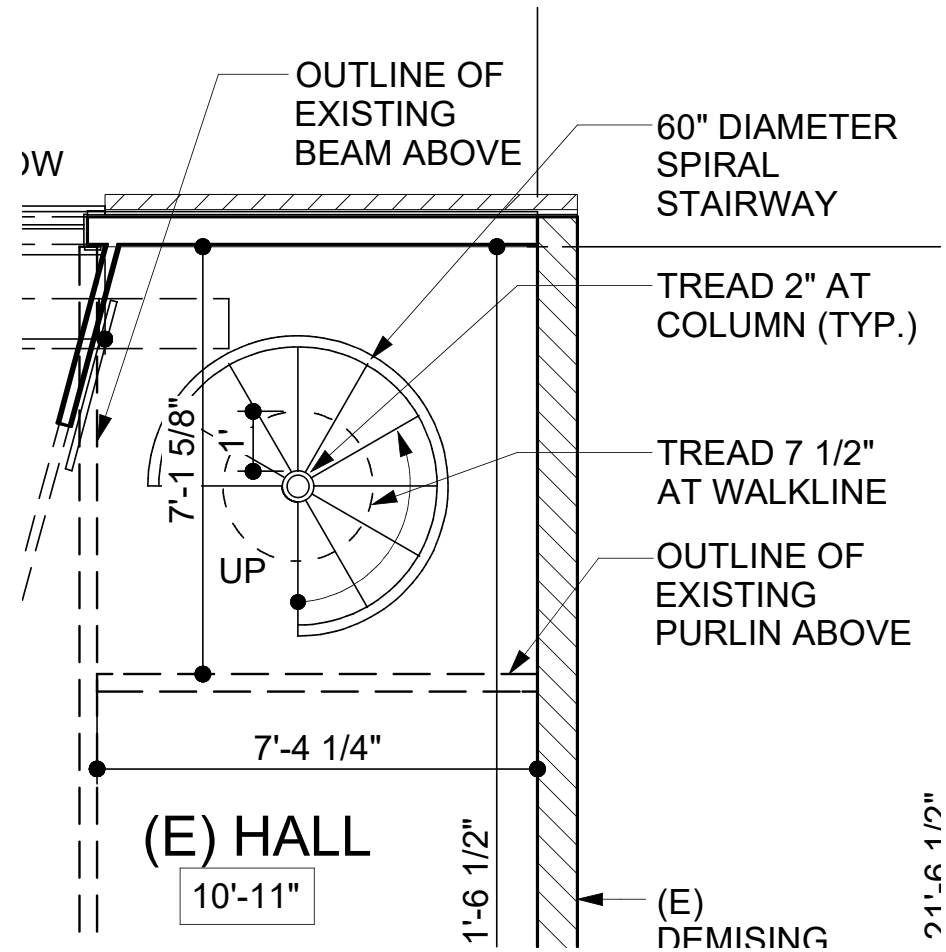
*Documentation of prior Existing Stair*  
*Photos, Measurements, and As-built 3D Model prepared by Alan Alcid*





2ND FLOOR "AS-BUILT" STAIR

1/2" - 1'-0"



1ST FLOOR "AS-BUILT" STAIR

1/2" - 1'-0"



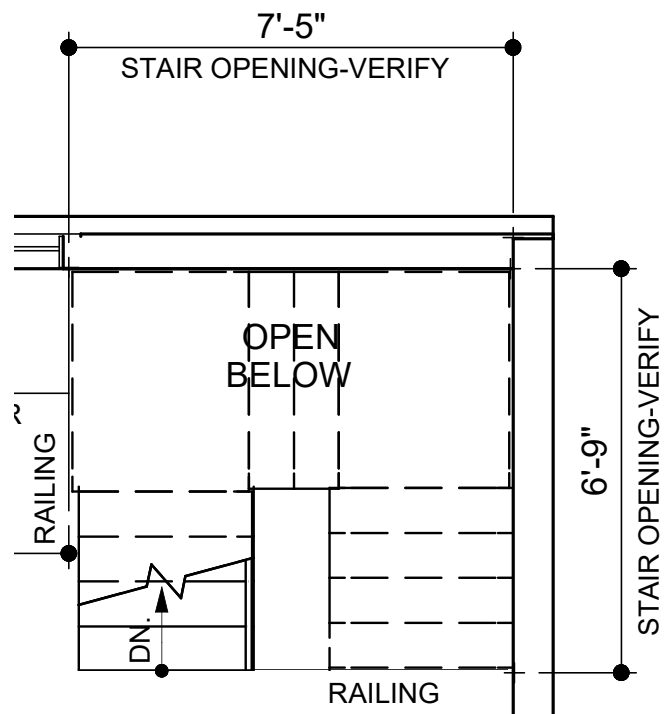
2ND FLOOR "AS-BUILT" PHOTO



1ST FLOOR "AS-BUILT" PHOTO

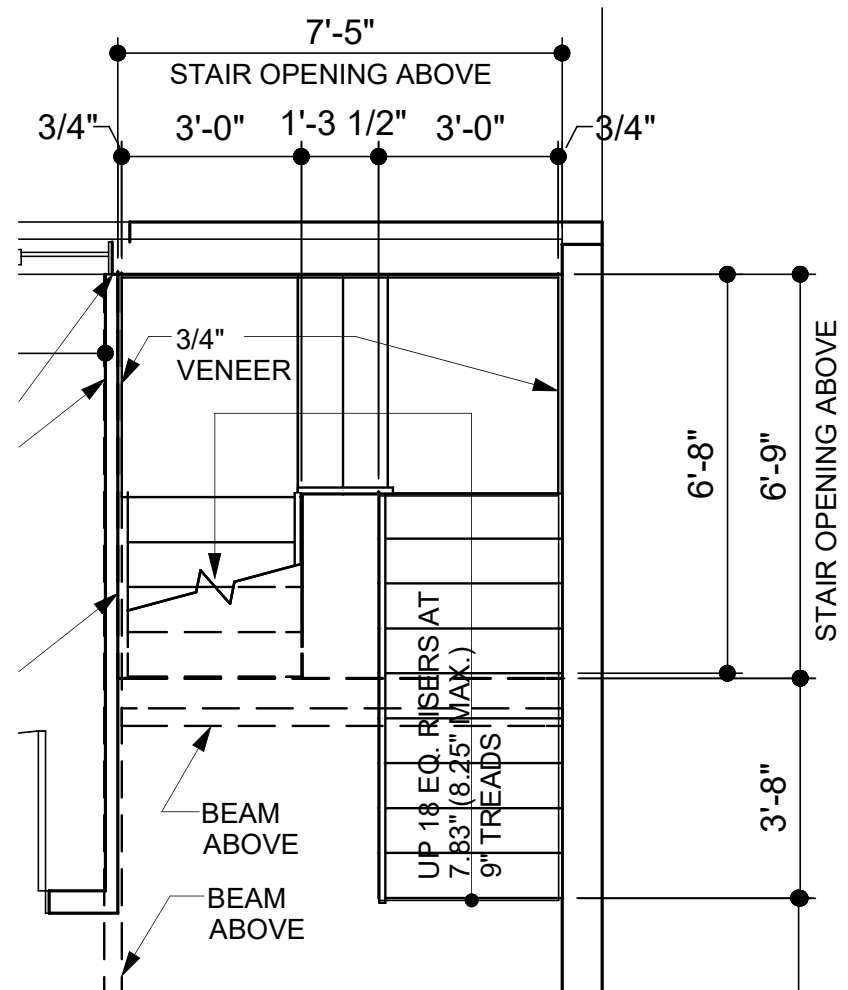
*April 1st, 2021 Permit Submission Stair*  
*Design and Construction Drawings prepared by Patrick Dyke and Alan Alcid*





## 2ND FLOOR PERMIT STAIR

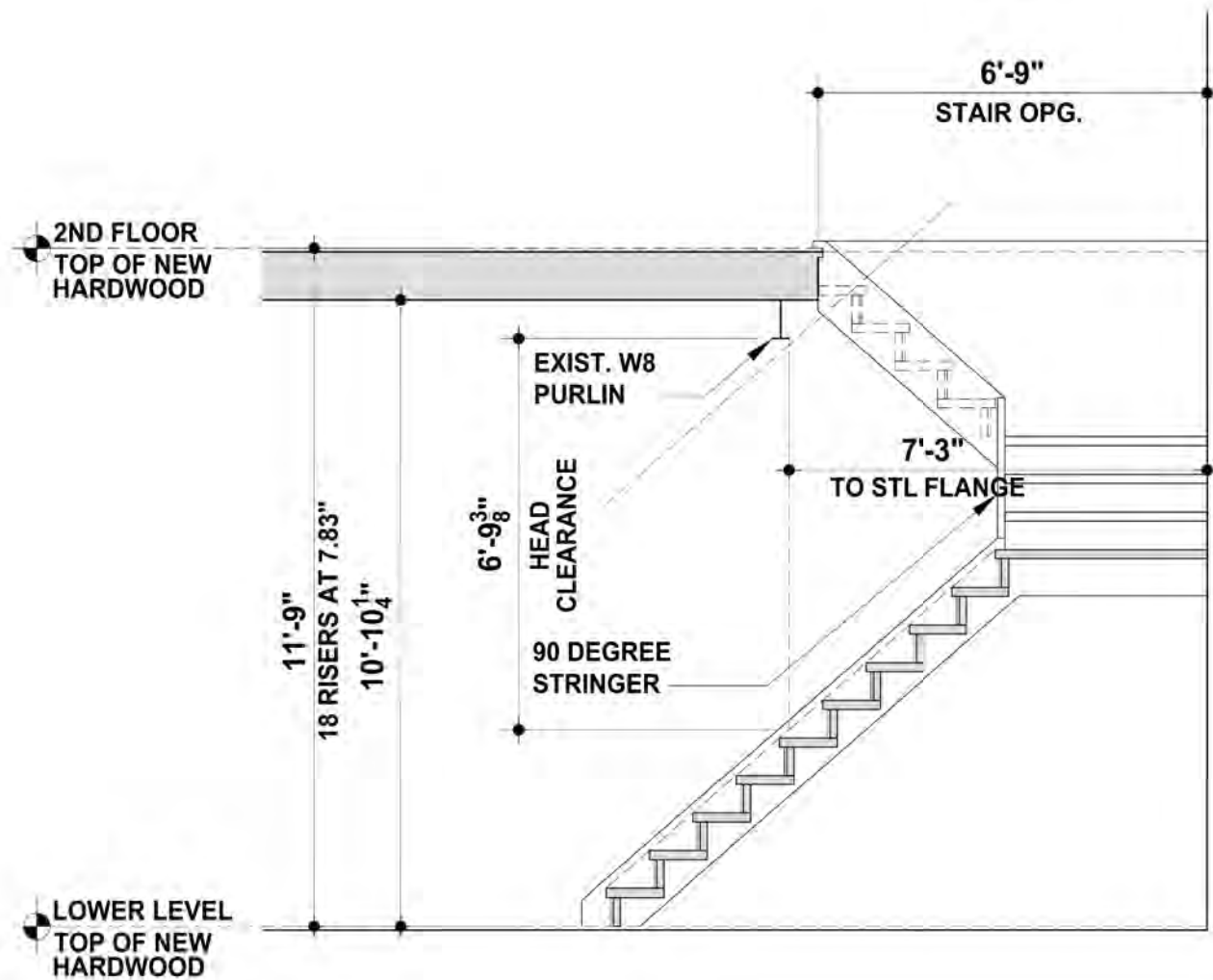
1/2" - 1'-0"



## 1ST FLOOR PERMIT STAIR

1/2" - 1'-0"





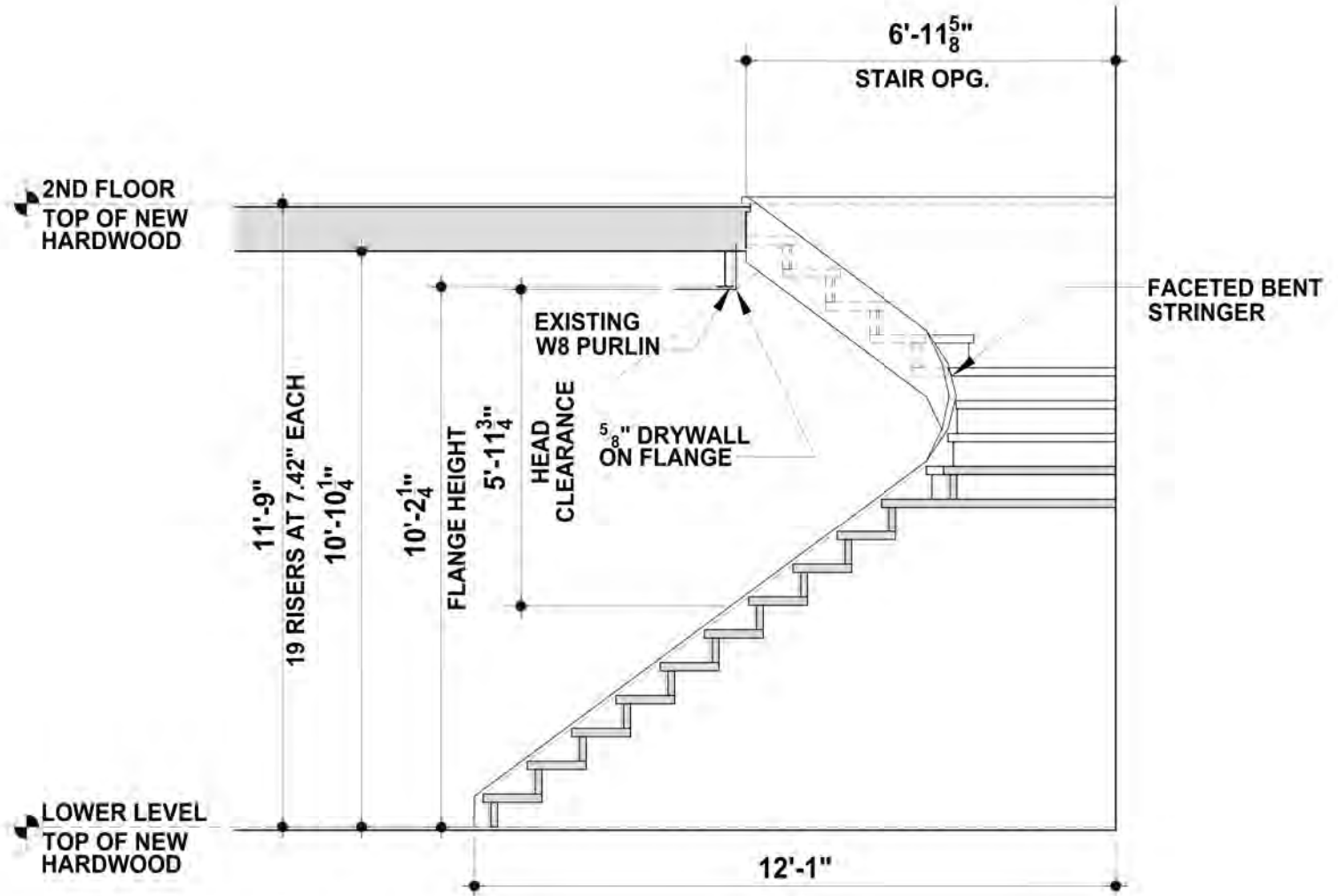
PERMIT STAIR SECTION

1/2" = 1'-0"

*2015 MBC Code Compliant Stair*  
*Code Compliant Stair with 5'-11 3/4" Head Clearance*







## SECTION 1 - 2015 MBC CODE COMPLIANT WINDER STAIR

1/2" = 1'-0"



April 29, 2022

Superb Custom Homes  
PO Box 703450  
Plymouth, MI 48170

Attention: Mr. Richard Kligman

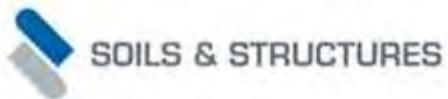
Regarding: Stair Opening  
322 E. Liberty, Ann Arbor

Dear Mr. Kligman:

Soils & Structures, Inc. was asked to review the proposed stairs located at the above-mentioned address.

The proposed stairs are to replace an existing spiral stair case using the existing opening in the floor. The floor consists of 8" precast concrete plank with 2" of composite topping. The precast plank is supported by a steel beam on the West side of the opening and that steel beam is supported by another steel beam on the North side of the opening. Both steel beams extend to the edge of the existing opening. The East side of the opening is the exterior wall of the building and the South side is a demising wall with another residence.

It is not recommended to enlarge the existing opening. The opening cannot be enlarged to the North, East or South. To enlarge the opening to the West the steel beam will need to be relocated, which means the beams support in the demising wall will need to be relocated. The 4000 pounds of loading will have to be supported down to the foundation, three floors below.



If you have any questions, please feel free to contact our office. We are pleased to have been of service to you.

Sincerely,  
Soils & Structures, Inc.

A handwritten signature in black ink, reading "Jason B. Bissonette". The signature is fluid and cursive, with the first name "Jason" being the most prominent.

Jason B. Bissonette P.E, S.E.  
Ann Arbor Office Manager  
JBB/jb

At the onset of this project, the owner was concerned about the safety factor of using the prior "As-built" Spiral Stair on a daily basis. He was concerned about the overall diameter and the extremely shallow treads, and the subsequent risk for slipping that it created for him and his guests. The diameter was VERY narrow (60" total with only 24 1/2" from the inside of the pole) and only 2" tread depth at the inward support column.

There were challenges to modifying the stair opening because of the structure, the existing opening size and shape, the structural steel locations, and the fact the original approved stair (only dating back to 2004) didn't meet any code language that we are aware of at that time.

A Winder stair was the most condensed version of the stairway that could satisfy the 2015 MBC; however, the opening is too small to achieve the code compliant head clearance (See Page 18 of the drawing package). The only way to design it to comply would be to increase the opening size.

Given the fact that the existing opening was created with Precast Concrete Plank bearing on a steel frame (see the attached Structural Engineers Assessment), the unit was 4 stories above grade, the modifications would require heavy equipment in conjunction with access to other resident's units and the common spaces (which was not permissible); it was determined that it was not a "feasible" option to rebuild the stair to 2015 MBC Compliance.

After conversation with the city regarding the above concerns with the stair, we submitted a stair design that we thought would qualify under Article 410.6 (Alterations to Elements) of the 2015 MRCEB (Michigan Rehab Code for Existing Buildings) as an attempt to improve upon certain "infeasible elements" of the design that we might be challenged by in their existing condition. The Rehab Code was also listed as an applicable code on the Permit Submission, so it made sense.

Our focus on Section 410.6 Alterations was as follows:

A building, facility, or element that is altered shall comply with the applicable provisions in chapter 11 of the Michigan building code and ICC/A117.1 listed in chapter 16, unless technically infeasible. **When compliance with this section is technically infeasible, then the alteration shall provide access to the maximum extent technically feasible.**

Exceptions:

- 1) **The altered element or space is not required to be on an accessible route, unless required by section 410.7 of the code.**
- 2) **Accessible means of egress required by the chapter 10 of the Michigan building code are not required to be provided in existing buildings and facilities.**

Given the additional facts below, we felt it was feasible to have the stair submitted with the Permit Set qualify as an "exception" to the 2015 MBC Coe compliance under Article 410.6 of the 2015 MRCEB.

- 1.) Apartment #13 will be used as a Single-Family Residence and is privately owned.
- 2.) Each floor of the 2-story unit has an Egress Door to a fire Rated Corridor and Egress Stairs.
- 3.) Each floor of the 2-story unit has a complete Fire Suppression System.
- 4.) The internal stair is not used as a "Means of Egress".

The stair that was designed, submitted, and approved for Permit was the most efficient stairway shape possible for that opening without winders or a spiral configuration (owner requested). The riser and run for

qualified under the 2015 Michigan Residential Code (the risers are within  $\sim 1/16''$  +/- of 2015 MBC compliance) and given it would be owned and operated as a single-family residence, it made sense.

Upon payment for, and receipt of, the approved building permit, we removed the pre-existing spiral stair system so that we could saw cut the spancrete to the edge of the flanking structural steel (in order to accommodate the approved stair design). We were subsequently advised that once these stairs were removed, we were unable to reinstall the same non-conforming stairs system. The current stair system is a clear improvement on the health, safety, and welfare over the pre-existing spiral stair; and conforms in any and all residential living applications.

The owner felt, that if the stair drawn for Permit Submission were to be rejected by the city at the time of Plan Review, he would keep the existing Spiral Stair ("As-built") intact and renovate it within the full compliance potential of the City of Ann Arbor.

For all these reasons above, we hope you will understand the logic and unfolding of the design development, and the sequence of events that lead to the construction of the stair. We ask that, considering all of the information above, you approve the stair as it has been built to date.





# Review Report

322 E. Liberty St. (Unit 13) – Stairs  
Ann Arbor, MI

This review is conducted based upon a cited inspection report for noncompliance in the construction of a staircase within a dwelling unit at the above reference location. This review is limited in scope to the issues concerning the replacement of the spiral staircase.

## Building Notes:

R-2 Occupancy, Multi-family dwelling. (see 4/25/22 Notes/Dempsey)  
4th and 5th floor renovation Unit 13

Permit Information page indicates the project is:

Subtype: Comm Add/Alt.

This suggest this is an alteration of a commercial building. Not sure what is defined as a commercial building.

Short Description: Interior remodel – kitchen, bathroom, staircase

Status: Issued

## Inspection Report

10/25/2021 Inspection Report, cites the Michigan Building Code and references Section 1011.5.2 for riser height and tread depth.

“Stairway is going to be redesigned by DP to meet minimum code requirements 1011.5.2 Riser height and tread depth” (Inspector Worthington James)

In an email dated April 25, 2022, Building Official Glen Dempsey notes “the rise and run of the code requirements for an R-2, multi-family building (2015 MBC) weren’t realized in the code review and the permit was issued on 4/30/21.”

He further states, “During the construction and in the rough inspections on 10/19/21, 10/25/21 and 11/26/21 it was identified that the staircase did not meet the code requirements . . .”

## Construction Information

The construction documents show a replacement stair configuration for the existing spiral stairs. This details for the stair configuration include a riser of 7.83" (8.25" MAX) and 9" Tread.

Information provided by the owner indicated the existing spiral stairway posed a safety concern as the stairway's . . . "overall diameter and the extremely shallow treads and the subsequent risk for slipping that it created for him and his guest. The diameter was VERY narrow (60" total with only 24 ½" from the inside of the pole and only 2" tread depth at the inward support column."

## Code Requirements

Section 1011.5.2 Exception 3 of the Michigan Building Code states:

"In Group R-3 occupancies; within dwelling units in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual dwelling units in Group R-2 occupancies; the maximum riser height shall be 7 ¾ inches (197 mm); the minimum tread depth shall be 10 inches (254 mm); the minimum winder tread depth at the walkline shall be 10 inches (254 mm); and the minimum winder tread depth shall be 6 inches (152 mm). A nosing projection not less than ¾ inch (19.1 mm) but not more than 1 ¼ inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm)."  
[emphasis mine]

Exception 4 discusses replacement stair referring to the Existing Buildings Code (Michigan Rehabilitation Code)

"See Section 403.1 of the International Existing Building Code for the replacement of existing stairways."

Section 403.1 provides:

"Except as provided by Section 401.2 or this section, alterations to any building or structure shall comply with the requirements of the International Building Code for new construction. **Alterations shall be such that the existing building or structure is no less conforming to the provisions of the International Building Code than the existing building or structure was prior to the alteration.**

Exceptions:

**An existing stairway shall not be required to comply with the requirements of Section 1011 of the International Building Code where the existing space and construction does not allow a reduction in pitch or slope.**

Handrails otherwise required to comply with Section 1011.11 of the International Building Code) shall not be required to comply with the requirements of Section 1014.6 of the International Building Code regarding full extension of the handrails where such extensions would be hazardous due to plan configuration.” [emphasis mine]

Replacing the spiral staircase with the stair configuration constructed to replace the spiral staircase may qualify under this exemption.

While the stair configuration does not meet the requirements of the Michigan Building Code for a R-2 occupancy, the replacement staircase may meet the intent of the code as it would “no less conforming to the provisions of the International Building Code than the existing building or structure was prior to the alteration.”

Using the Michigan Residential Code, Section R311.7.5 provides:

“R311.7.5 Stair Treads and Risers

Stair treads and risers shall meet the requirements of this section. For the purposes of this section, dimensions and dimensioned surfaces shall be exclusive of carpets, rugs or runners.

R311.7.5.1 Riser Height

The maximum riser height shall be 8 1/4 inches (210 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

#### R311.7.5.2 Tread Depth

The minimum tread depth shall be 9 inches (229 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Winder treads shall have a minimum tread depth of 10 inches (254 mm) measured as above at a point 12 inches (305 mm) from the side where the treads are narrower. Winder treads shall have a minimum tread depth of 6 inches (152 mm) at any point. Within any flight of stairs, the greatest winder tread depth at the 12-inch (305 mm) walk line shall not exceed the smallest by more than 3/8 inch (9.5 mm).”

#### **Structural Analysis**

A structural analysis conducted by Jason B. Bissonette, PE SE, Soils and Structures Inc. dated April 29, 2022 outlines the issues concerning enlarging the opening to accommodate a larger stair configuration. The analysis cites the difficulties increasing the floor opening to accommodate the rise and run of a stair configuration meeting the requirements of Section 1011.5.2.

The report concludes, “it is not recommended to enlarge the existing opening. The opening cannot be enlarged to the North, East, or South. To enlarge the opening to the West the steel beam would need to be relocated, which means the beams supports in the demising wall will need to be relocate. The 4000 pounds of loading will have to be supported down to the foundation, three floors below.”

#### **Conclusion**

The stairway in question is internal to the dwelling unit and each floor of unit is served by an exit door leading to a corridor which provides access to an enclosed stairwell meeting the code. This would facilitate evacuation in an emergency.

The structural analysis indicates a conclusive case where structural modification would present considerable impediments and result in significant alterations in lower levels of the structure.

In comparison:

- A spiral stair shall have a 7 1/2 inch (191 mm) minimum clear tread depth at a point 12 inches (305 mm) from the narrow edge. The risers shall be sufficient to provide a headroom of 78 inches (1981 mm) minimum, but riser height shall not be more than 9 1/2 inches. The minimum width is at and below the handrail shall be 26 inches
- The reconfigured stair provides a tread depth of 9 inches for the full width of the stair and a riser height of 7.33 inches. The minimum width of the reconstruction stair is 36 inches

	Tread	Riser	Width
Spiral	7 ½” at 12” from narrow edge	9 ½	26”
Reconfigured Stair	9”	7.83”	36”

It is reasonable to conclude, the replacement stair configuration improves the condition over the existing circular stairway and offers a greater level of safety for the occupants than the existing spiral staircase and would qualify under the provisions of 1011.5.2

Amended 050422



## Henry L. Green

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The National Institute of Building Sciences appointed Henry L. Green as President and CEO in August 2008, retiring after over 10 years' service in 2019. Prior to this appointment Henry served as Executive Director of the Bureau of Construction Codes in the Michigan Department of Labor for more than 19 years.

Henry was a founding member of the International Code Council (ICC) Board of Directors completing a term as President in 2006. He served as a member of the National Institute of Building Sciences Board of Directors for 8 years, completing a term as Chairman in 2003. Henry was a member of the Building Officials and Code Administrators (BOCA) Board of Directors for ten years, holding the position of President in 1997.

In 2005, Henry was recognized by the United States House of Representatives for his work as "...a tireless advocate for building safety and enforcement of codes."

The Automatic Fire Alarm Association (AFFA) named Henry "Man of the Year" for his contributions to life safety as Chairman of the BOCA Ad Hoc Committee for Fire Protection. AFFA acknowledged, "...under his fine leadership, the committee developed numerous code changes to the BOCA National Building and Fire Prevention Codes ... and significantly improved life safety in both new and existing construction."

Henry received the "Distinguished Service to Government" award from the Building Industry Association of Southeastern Michigan and was awarded the Walker S. Lee Award in recognition of outstanding service to BOCA International.

Henry was named an Honorary Architect by the American Institute of Architects in 2008 for his role as "... as a skillful consensus builder in the building codes and standards arena as a perpetual advocate for bringing architects into leadership roles."

In 2010, the Fairfax County Board of Supervisors presented Henry with the "Building Safety Community Partnership Award in recognition of his exemplary contributions to the advancement of building safety in Fairfax County.

In 2010, Henry was also was honored by the High-Performance Buildings Congressional Caucus Coalition with the Leadership Towards High-Performance Award in recognition for his personal and organizational leadership toward widespread realization of high-performance buildings.

Henry received the ICC Bobby J. Fowler Award in October 2013, which is presented to an

individual whose contributions to the building safety industry advance the Code Council's goals to achieve a safer built environment.

American Society of Civil Engineers awarded Henry the ILC Member Appreciation Award in 2018 for dedicated and continuous support of the ASCE Industry Leaders Council.

In 2019, BOMA International awarded Henry with the Distinguished Service Award for his insight, support and guidance elevating BOMA International building code advocacy efforts for the improvement of the existing building stock and overall built environment through his efforts managing issues that affect the commercial real estate industry.

Prior to Retirement, Henry was awarded the National Institute of Building Sciences Mortimer M. Marshall Lifetime Achievement Award for his dedication and service to the building industry and the Institute.

In 2020, Henry served as the lead author and chief content editor for the 5<sup>th</sup> Edition of *Building Department Administration*, published by the International Code Council.

Henry served on the ASCE Blue Ribbon Panel in 2021 for the development of the Objective Resilience Manuals, A series of Reports presenting facts and conclusions for Engineering practices used to achieve resilience in the built environment.

Henry is a published author, and has been a keynote speaker at numerous meetings and conventions. He has led a number of panel discussions of distinguished leaders in the building industry. His work has included numerous presentations before the United States Congress, in committee meetings and briefings.

In 2019, Henry started HLGreenllc as a consultant to the building industry.



