

**SITE INFORMATION**

ADDRESS: 1410 HOPKINS ST NW,  
WASHINGTON D.C. 20036  
LOT: 0094  
SQUARE: 0096  
HISTORIC: DUPONT CIRCLE  
ANC: 2B  
SMD: 2B06  
ZONE: RA-8

DESIGN PROFESSIONALS:

ARCHITECT  
GAY WIERDSMA HARDWICK  
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STRUCTURAL ENGINEER  
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**DRAWING LIST**

- A0.0 TITLE SHEET & SITE INFORMATION
- A1.0 DOEE SHEET INFORMATION
- A2.0 BASEMENT FLOOR PLANS
  - A2.1 1ST FLOOR PLANS
  - A2.2 2ND & 3RD FLOOR PLANS - REFERENCE ONLY
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- A4.0 EXISTING BUILDING SECTION
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  - A4.2 EXISTING BUILDING SECTION
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- S1 2ND AND 3RD FLOOR FRAMING PLANS
- S2 ROOF FRAMING PLAN AND WIND BRACING PLAN
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- S5 STRUCTURAL NOTES

**PROJECT DESCRIPTION:**

LOWERING THE BASEMENT SLAB TO BOTTOM OF EXISTING FOOTING. CREATING A ONE BEDROOM APARTMENT IN BASEMENT RENOVATING KITCHEN IN UPPER UNIT AND MOVING 1/2 BATH IN UPPER UNIT. RENOVATING EXTERIOR DECK AND ADDING AN EXTERIOR THROUGH-FLOOR LIFT.

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT CITY, COUNTY, AND STATE BUILDING CODES INCLUDING THE 2012 IBC, DCMR 2013-12B, AND ALL OTHER APPLICABLE CODES TO EACH TRADE INCLUDING:
  - 1.1. TITLE 12 DCMR, DC CONSTRUCTION CODES SUPPLEMENT (2013); 2013 DISTRICT OF COLUMBIA BUILDING CODE; 2013 DISTRICT OF COLUMBIA PROPERTY; MAINTENANCE CODE; 2013 DISTRICT OF COLUMBIA GREEN CONSTRUCTION CODE; 2013 DISTRICT OF COLUMBIA ENERGY CONSERVATION CODE; 2013 DISTRICT OF COLUMBIA FIRE CODE; 2013 DISTRICT OF COLUMBIA MECHANICAL CODE; 2013 DISTRICT OF COLUMBIA PLUMBING; 2012 ICC EXISTING BUILDING CODE; 2012 ICC FUEL GAS CODE; 2012 ICC RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS; 2012 ICC SWIMMING POOL AND SPA CODE; 2011 NATIONAL ELECTRICAL CODE; 2012 ICC BUILDING CODE; 2012 ICC MECHANICAL CODE; 2012 ICC PLUMBING CODE; 2012 ICC PROPERTY MAINTENANCE CODE; 2012 ICC FIRE CODE; 2012 ICC ENERGY CONSERVATION CODE; 2012 ICC GREEN CONSTRUCTION CODE;
2. ALL DIMENSIONS TO BE VERIFIED IN FIELD.
3. ALL DIMENSIONS ARE TO FACE OF MATERIAL, TYP.
4. ANY NECESSARY SUPPLEMENTAL PERMITS TO BE OBTAINED BY TRADE PROFESSIONALS UNDER CONTRACTOR COORDINATION.
5. SEPARATE ALL DEMOLITION WASTE AND RECYCLE AS FEASIBLE. DIVERT GOAL OF 50% WASTE FROM LANDFILL BY RECYCLING CONSTRUCTION MATERIAL AND PACKAGING, DRYWALL REPROCESSING, DONATIONS TO COMMUNITY FORKLIFT, AND ANY OTHER MEANS FEASIBLE.
6. VIF ALL STRUCTURAL LOAD BEARING WALLS BEFORE DEMOLITION AND CONTACT ARCHITECT AND STRUCTURAL ENGINEER IF EXISTING CONDITIONS DIFFER FROM DRAWINGS.
7. CEMENT BOARD TO BE USED BEHIND ALL TILES.
8. ALL PAINT AND PRIMER TO BE LOW VOC.
9. APPLIANCES TO BE ENERGY STAR RATED.
10. FIXTURES TO HAVE WATER SENSE CERTIFICATION.
11. ALL BASEMENT AND WET AREA WALLS TO HAVE PURPLE OR GREEN GYP BOARD.
12. TREAT FOR TERMITES AS NECESSARY AFTER DEMOLITION AND BEFORE RENOVATION OR NEW CONSTRUCTION.
13. SEAL OFF CONSTRUCTION WORK ZONES FROM LIVING AREAS.
14. COVER AND SEAL ALL HVAC VENTS IN WORK AREA PRIOR TO COMMENCING WORK AND KEEP SEALED DURING THE DURATION OF CONSTRUCTION.
15. ALL CLOTHES WASHERS TO HAVE DRAIN PAN
16. VENT ALL DRYERS AND EXHAUST VANS DIRECTLY OUTDOORS WITH MAX 1 90° TURN
17. ALL TRIM TO BE MINIMUM 4" AND TO BE PRIMED AND PAINTED.
18. ALL CONSTRUCTED WALLS TO HAVE BASE MOLDING AND TOE KICKS. COORDINATE PROFILE WITH OWNER.

Subtitle F	Code	Existing	Proposed	Reference	Zoning Relief
Dwelling Units	1	1	2	U202	no
Min Lot Width	Not Specified	17	17		no
Minimum Lot Area	Not Specified	1,424	1,424		no
Minimum Court	Not Specified	4.66	4.66		no
FAR	1.8	2.91	2.94	F - 602	yes
Maximum Height	50	47.19	47.19	F - 603	no
Maximum Stories	No Limit	4	4	F - 603	no
Penthouse	12', 1 story	none	none	F - 603.2	no
Max Lot Occupancy	60%	81.99%	81.99%	F-604	yes
Rear Yard Setback	15' or 1'/height	10.25	6.41	F - 605	yes
Side Yard	none	none	none	F - 606	no
Green Area Ratio	0.4			F - 607	No - historic
Tree Protection (25% slope needs geotech best practice)				D	no
Use Group	Residential	Residential	Residential	U200	no
Parking	1	1	1	C - 701.5	no

Accessory Apartment	Code	Existing	Proposed
GFA	2,000	854.74	2455.28
Accessory apartment - SF		-	520.38
% of GFA	35%	-	21.19%

	Existing	Proposed
Lot	1,424	1,424
Original House	993.10	993.10
Addition (garage expansion)	0	40.26
Rear Deck	174.25	174.25
Elevator Lift	-	17.36
<b>Total</b>	<b>1,167.35</b>	<b>1,167.35</b>
<b>Lot Coverage</b>	<b>81.99%</b>	<b>81.99%</b>



MILLER/ZIGLAR  
RESIDENCE  
  
RENOVATION  
PROJECT

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LICENCES:  
DC: ARC 101315  
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EXPIRES 9/23/21

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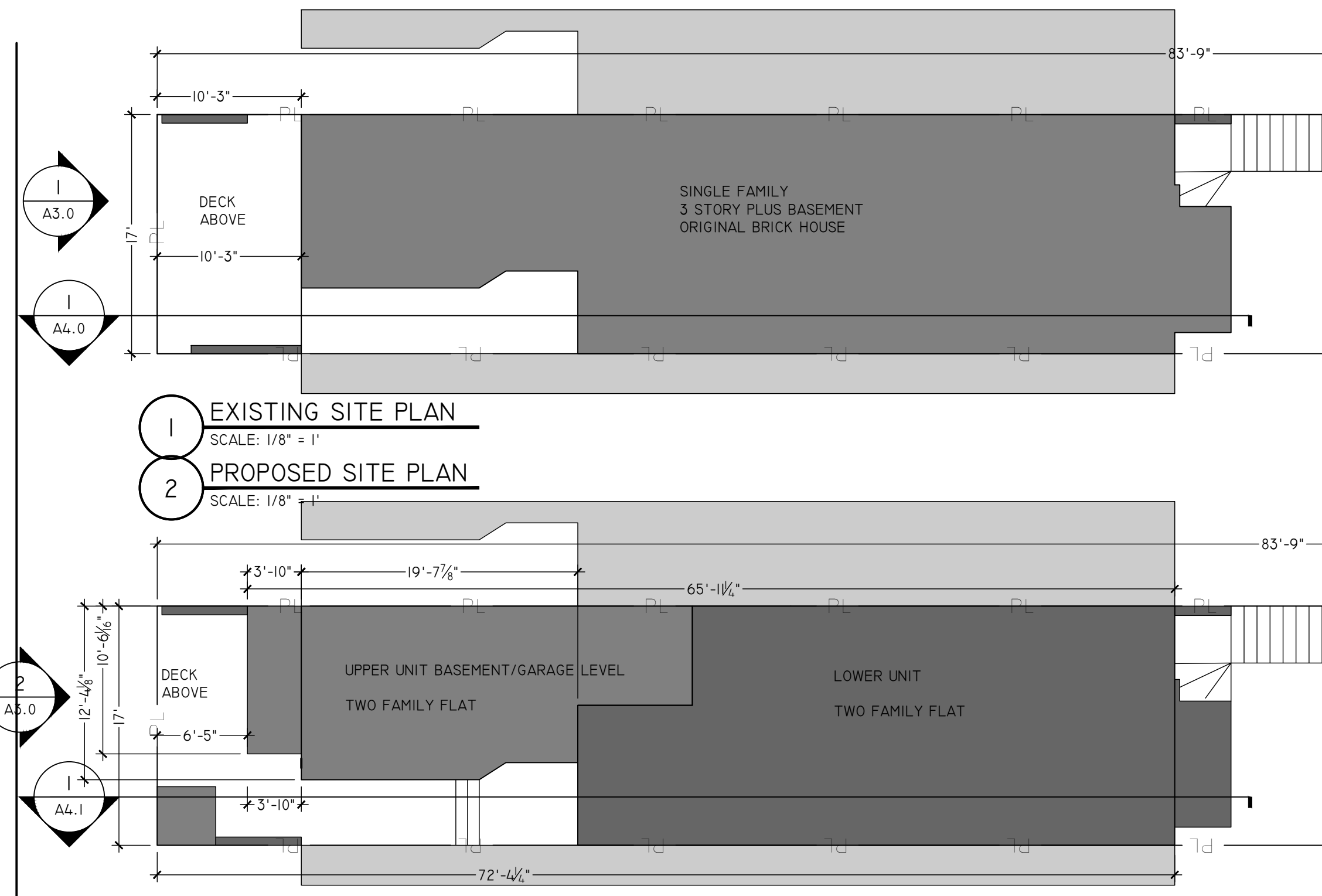
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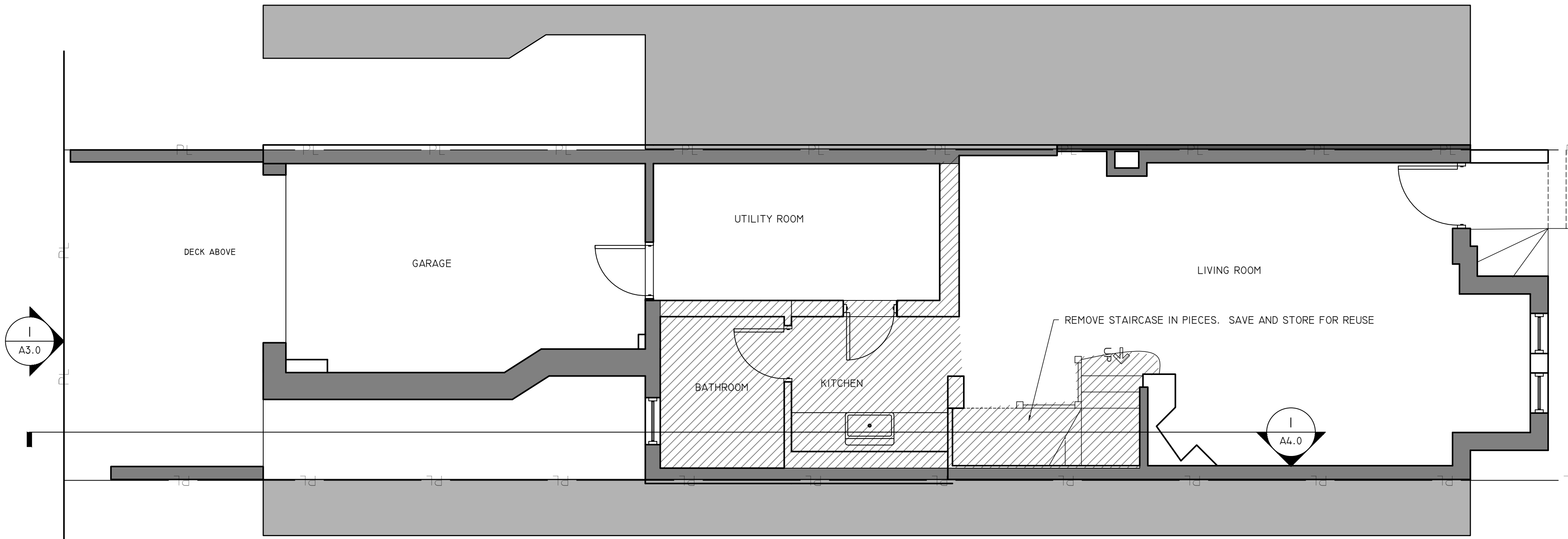
TITLE SHEET  
& SITE  
INFORMATION

Board of Zoning Adjustment  
District of Columbia  
CASE NO. 20610  
EXHIBIT NO. 6  
**A0.0**





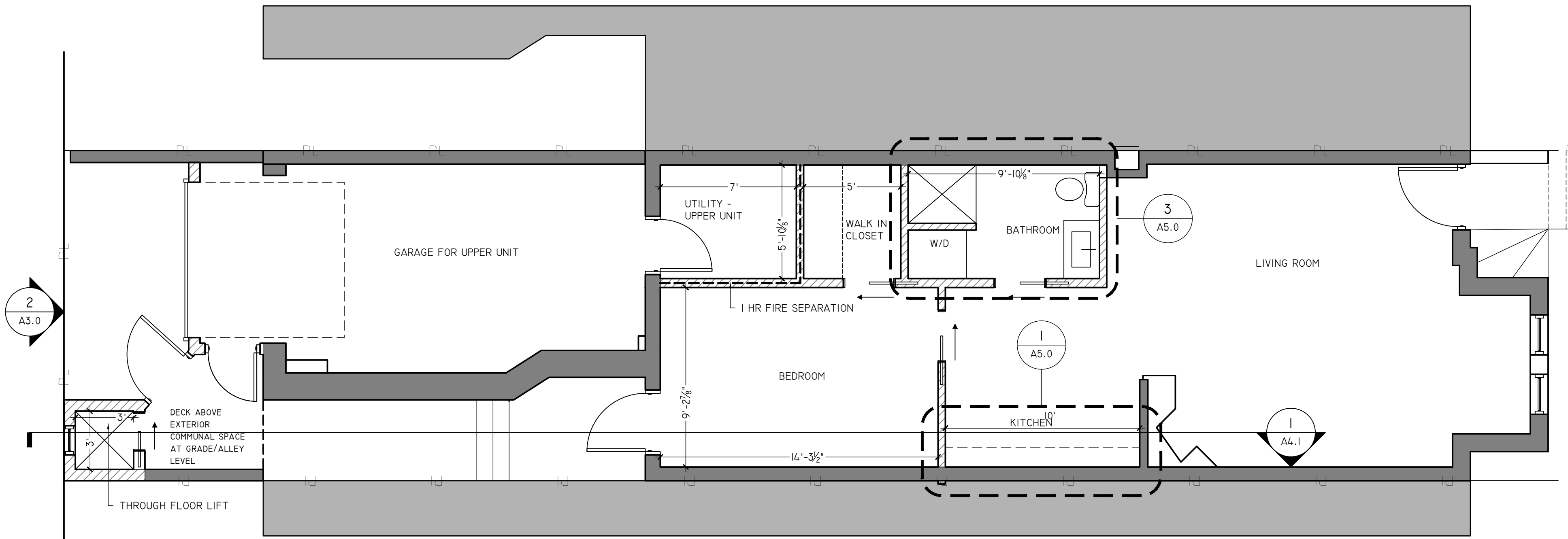
3 VICINITY MAP







**1 DEMOLITION BASEMENT PLAN**  
 SCALE: 1/4" = 1'

 DEMOLISH  
 REMAINS



**2 PROPOSED BASEMENT PLAN**  
 SCALE: 1/4" = 1'

 NEW WALL  
 EXISTING

**MILLER/ZIGLAR  
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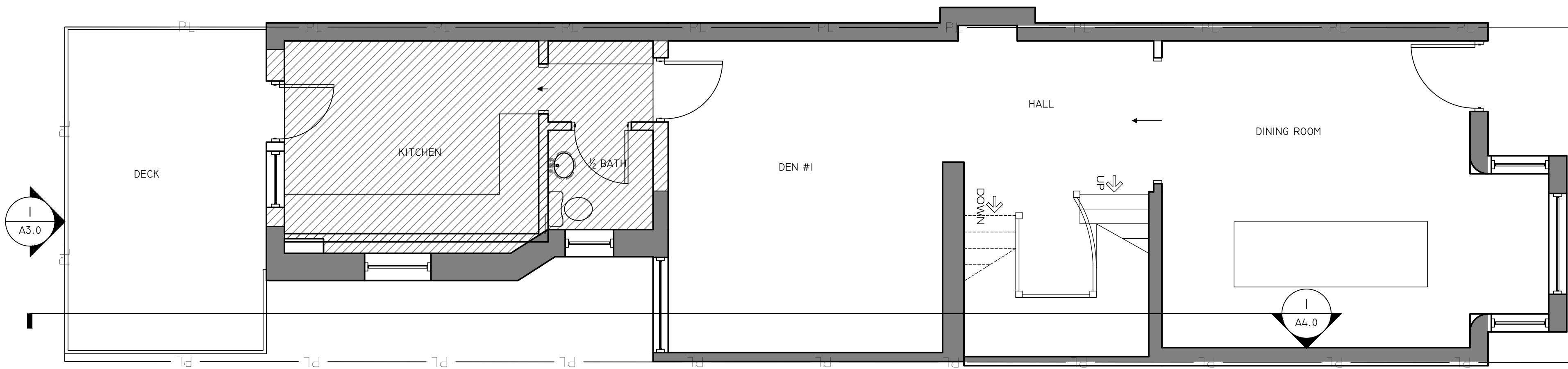
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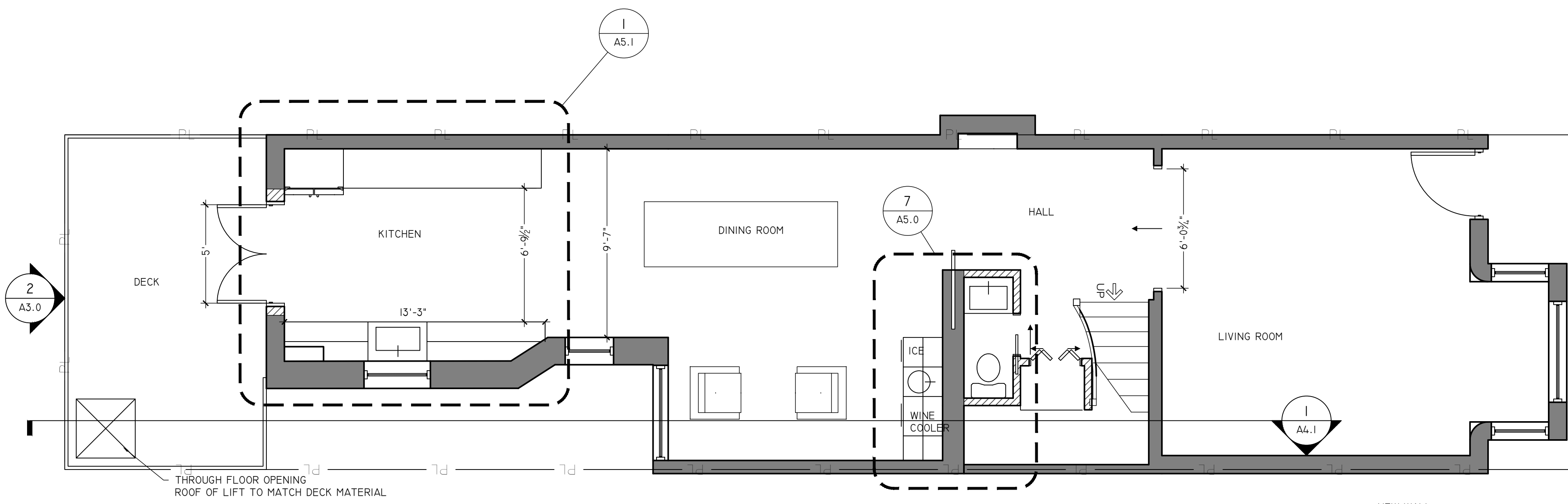
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BASEMENT  
 PLANS



**1 DEMOLITION 1ST FLOOR PLAN**  
SCALE: 1/4" = 1'

DEMOLISH  
REMAINS



**2 PROPOSED 1ST FLOOR PLAN**  
SCALE: 1/4" = 1'

NEW WALL  
EXISTING

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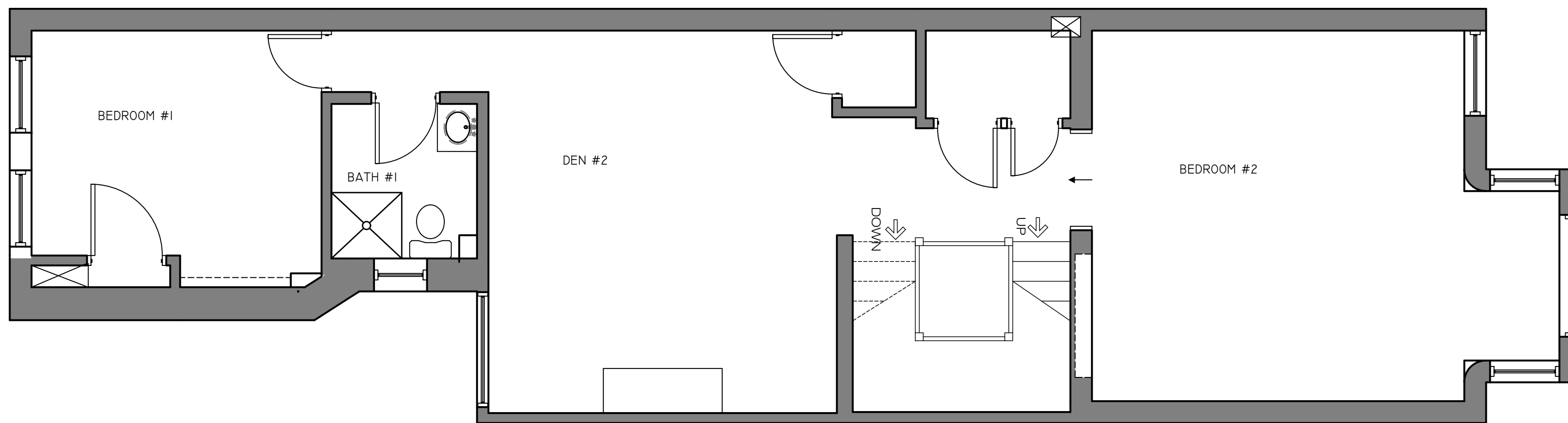
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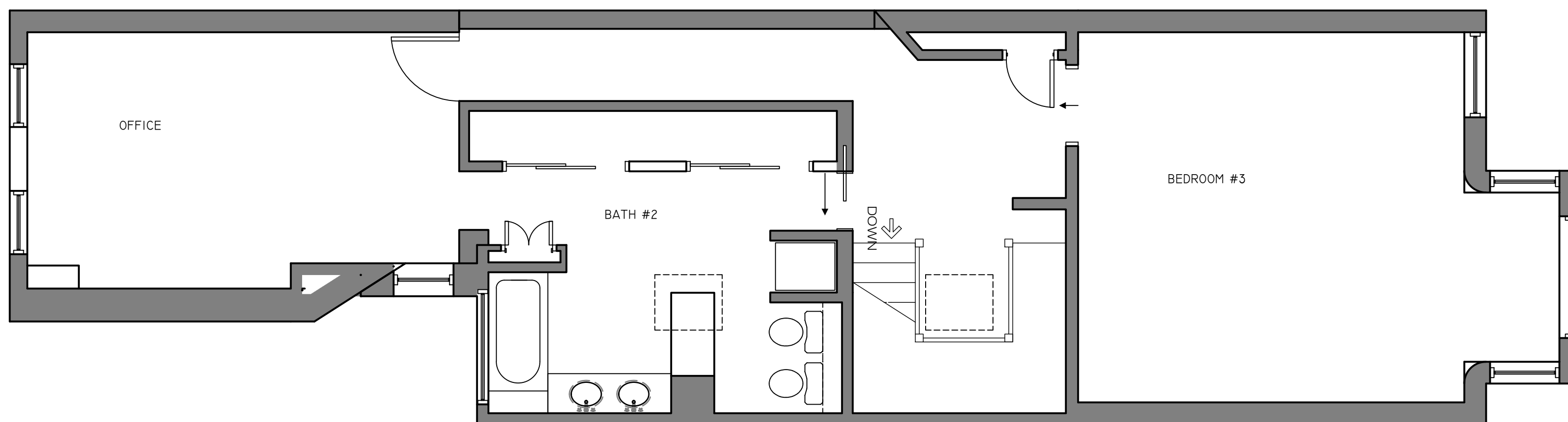
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1ST FLOOR  
PLANS



1 2ND FLOOR PLAN - NIS  
SCALE: 1/4" = 1'



2 3RD FLOOR PLAN - NIS  
SCALE: 1/4" = 1'

MILLER/ZIGLAR  
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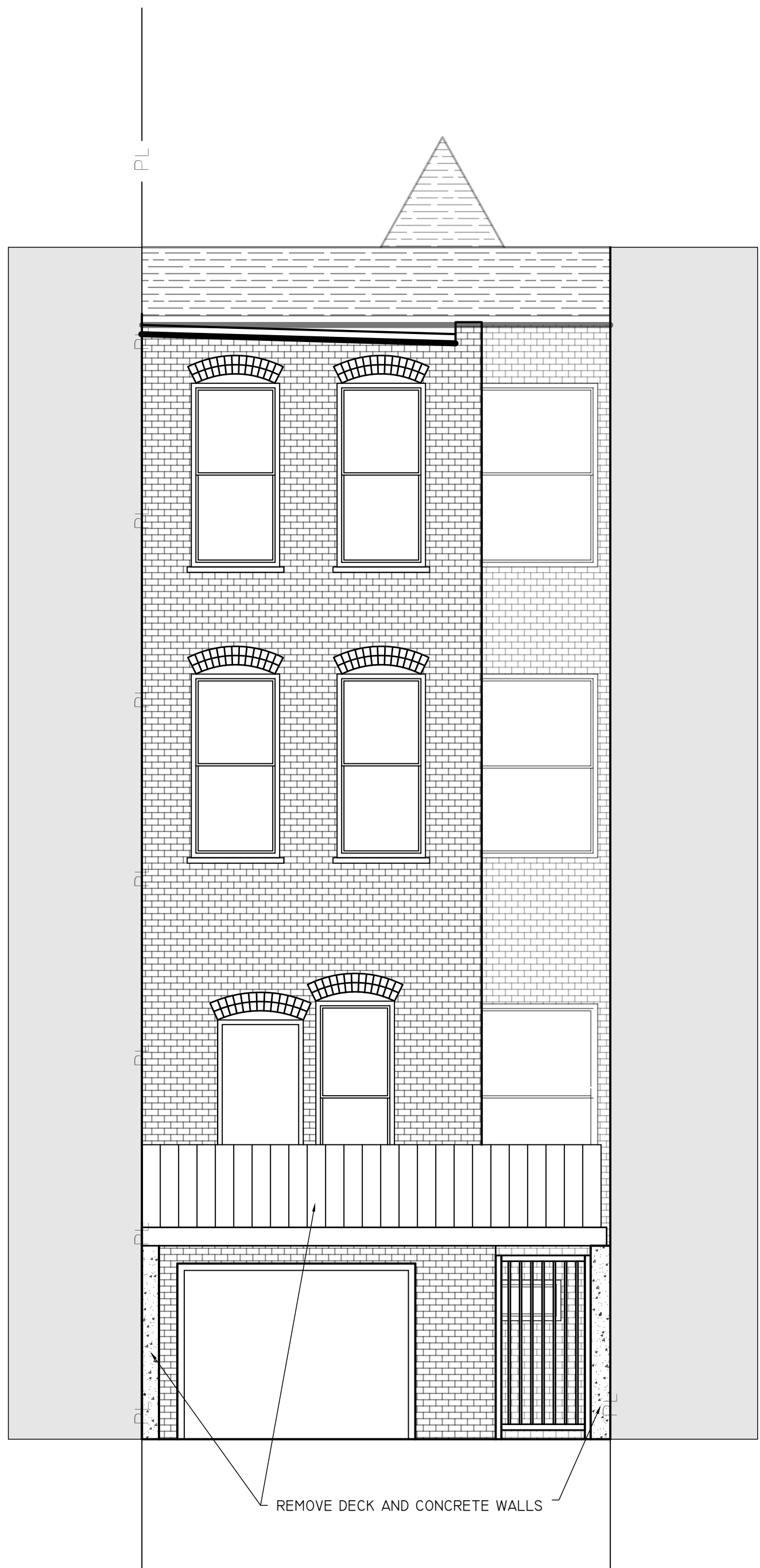
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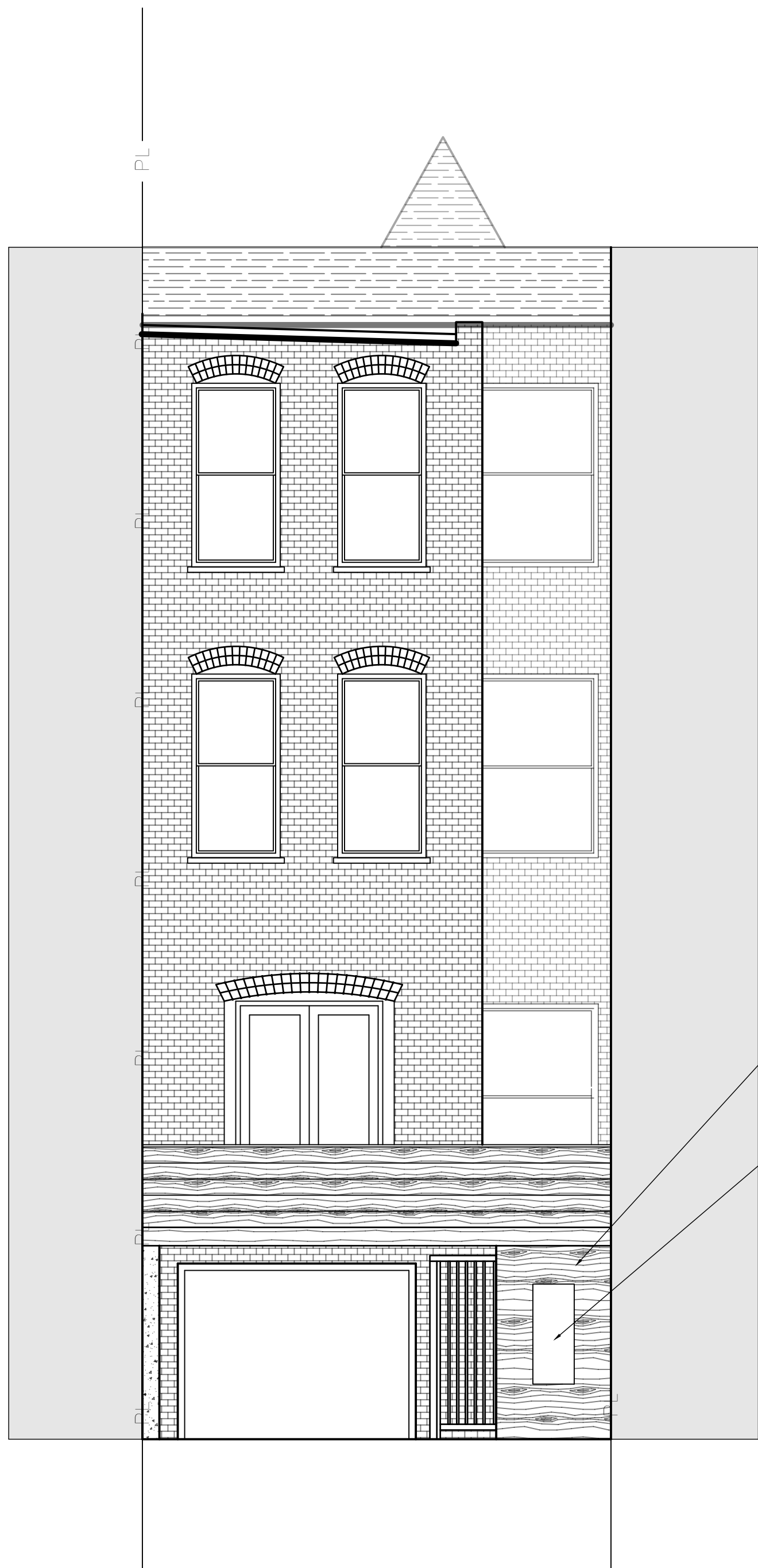
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2ND & 3RD  
FLOOR PLANS  
FOR REFERENCE  
ONLY



1 EXISTING REAR ELEVATION  
SCALE: 1/4" = 1'



2 PROPOSED REAR ELEVATION  
SCALE: 1/4" = 1'

MILLER/ZIGLAR  
RESIDENCE

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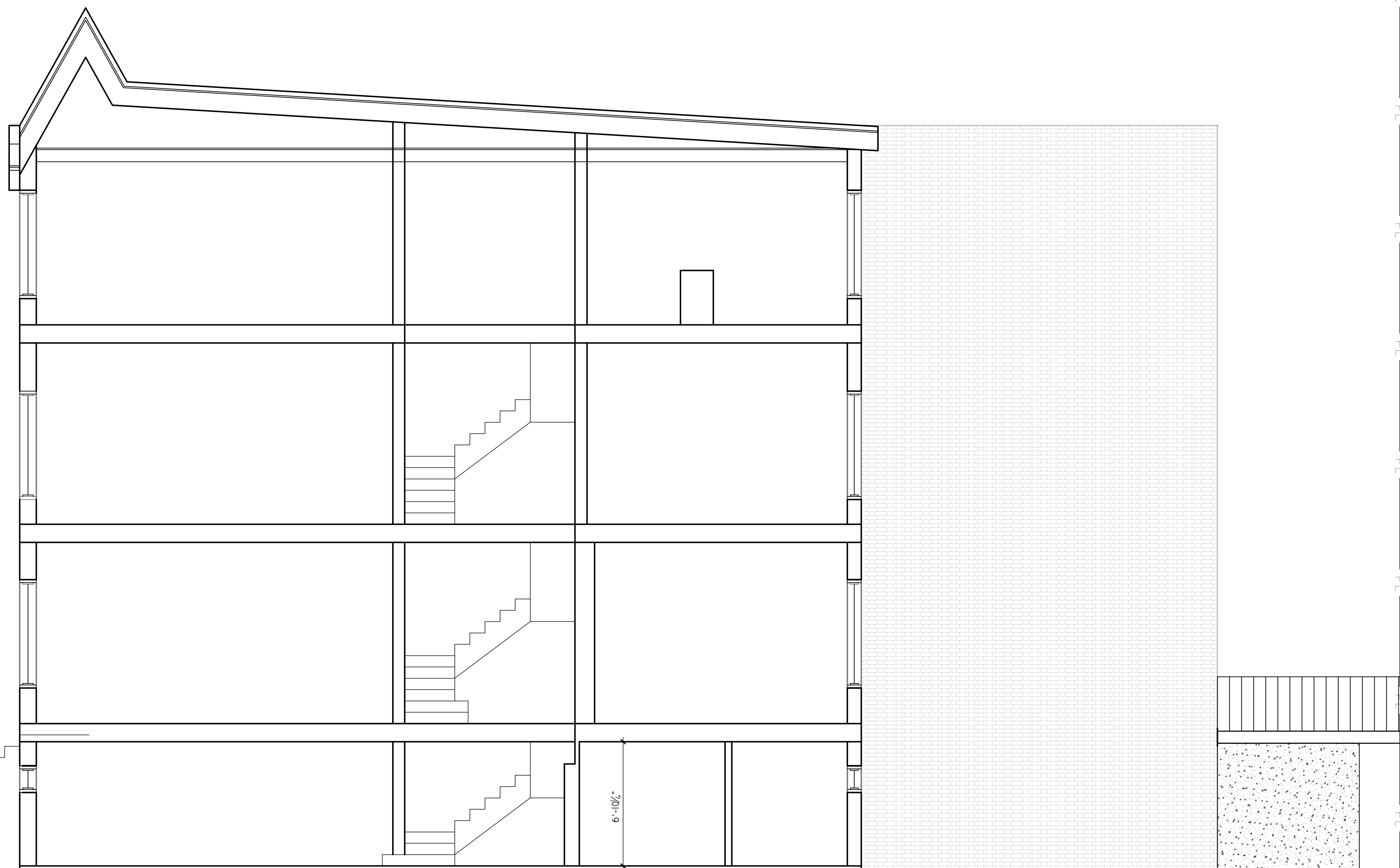
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REAR  
ELEVATIONS

A3.0



1 EXISTING BUILDING SECTION  
SCALE: 1/4" = 1'

MILLER/ZIGLAR  
RESIDENCE

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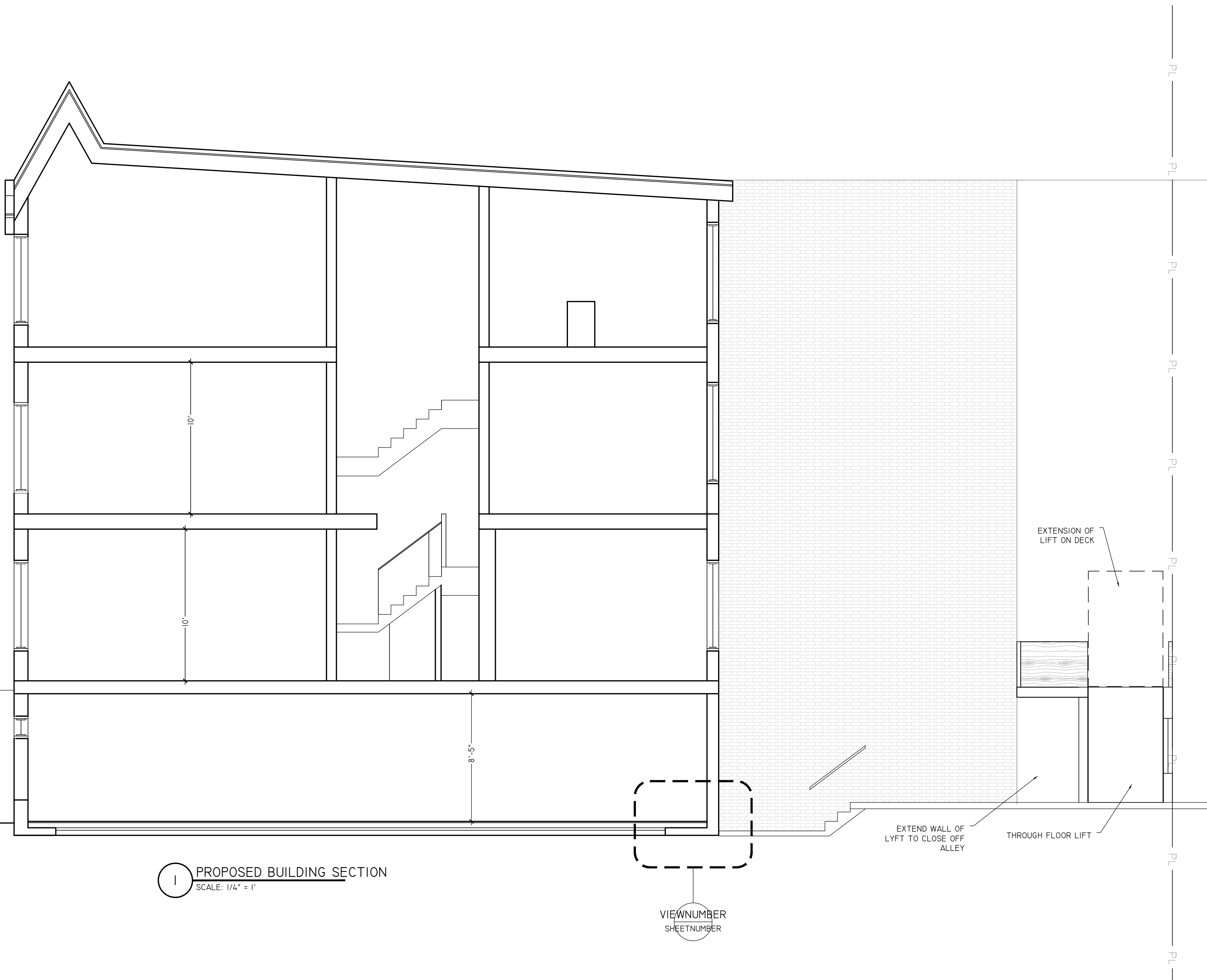
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DESIGN DEV 11-20-20

EXISTING  
BUILDING  
SECTION

A4.0



1 PROPOSED BUILDING SECTION  
SCALE: 1/4" = 1'

VIEWNUMBER  
SHEETNUMBER

MILLER/ZIGLAR  
RESIDENCE

RENOVATION  
PROJECT

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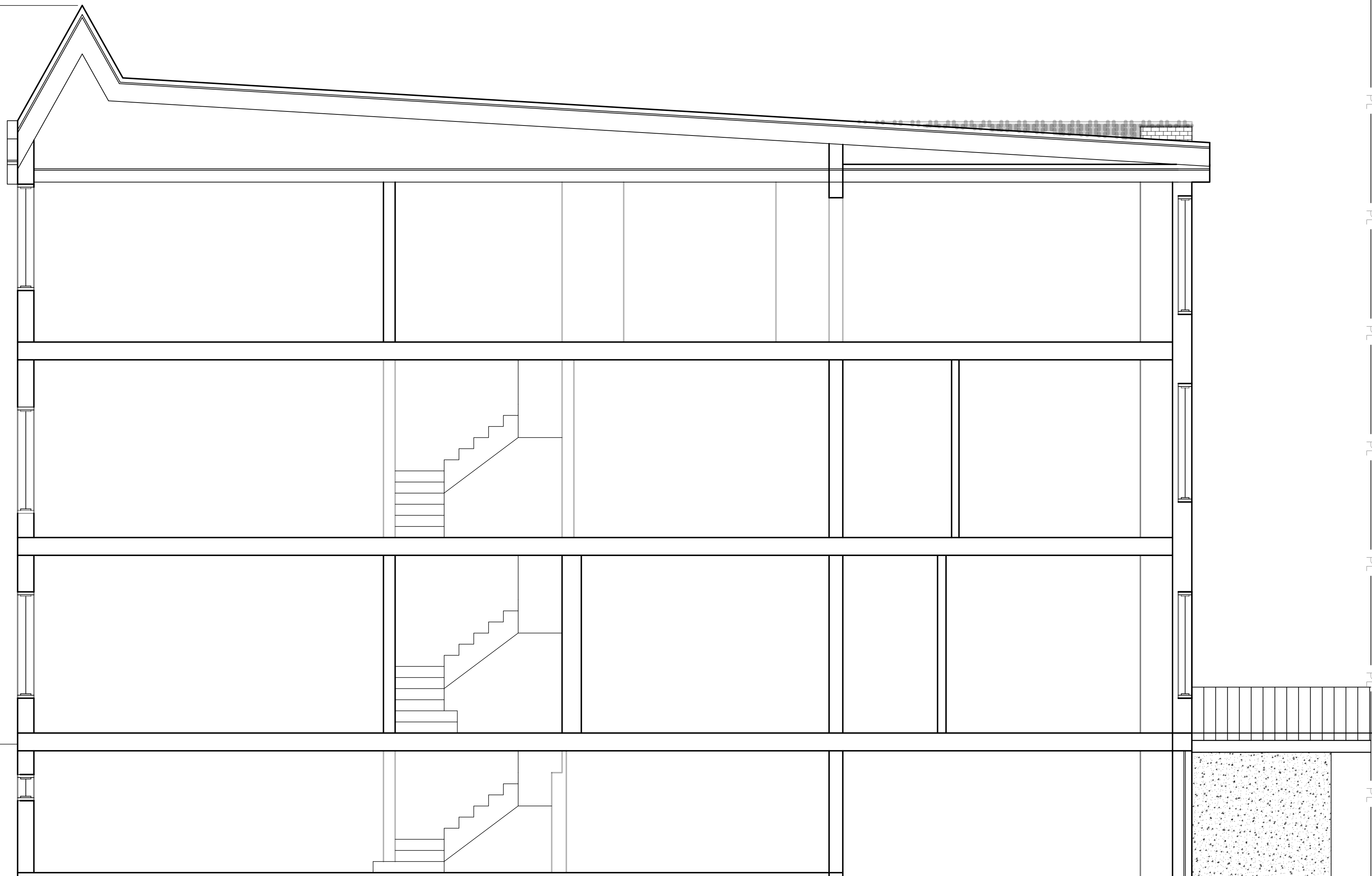
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PROPOSED  
BUILDING  
SECTION

A4.1



1 EXISTING BUILDING SECTION  
SCALE: 1/4" = 1'

MILLER/ZIGLAR  
RESIDENCE

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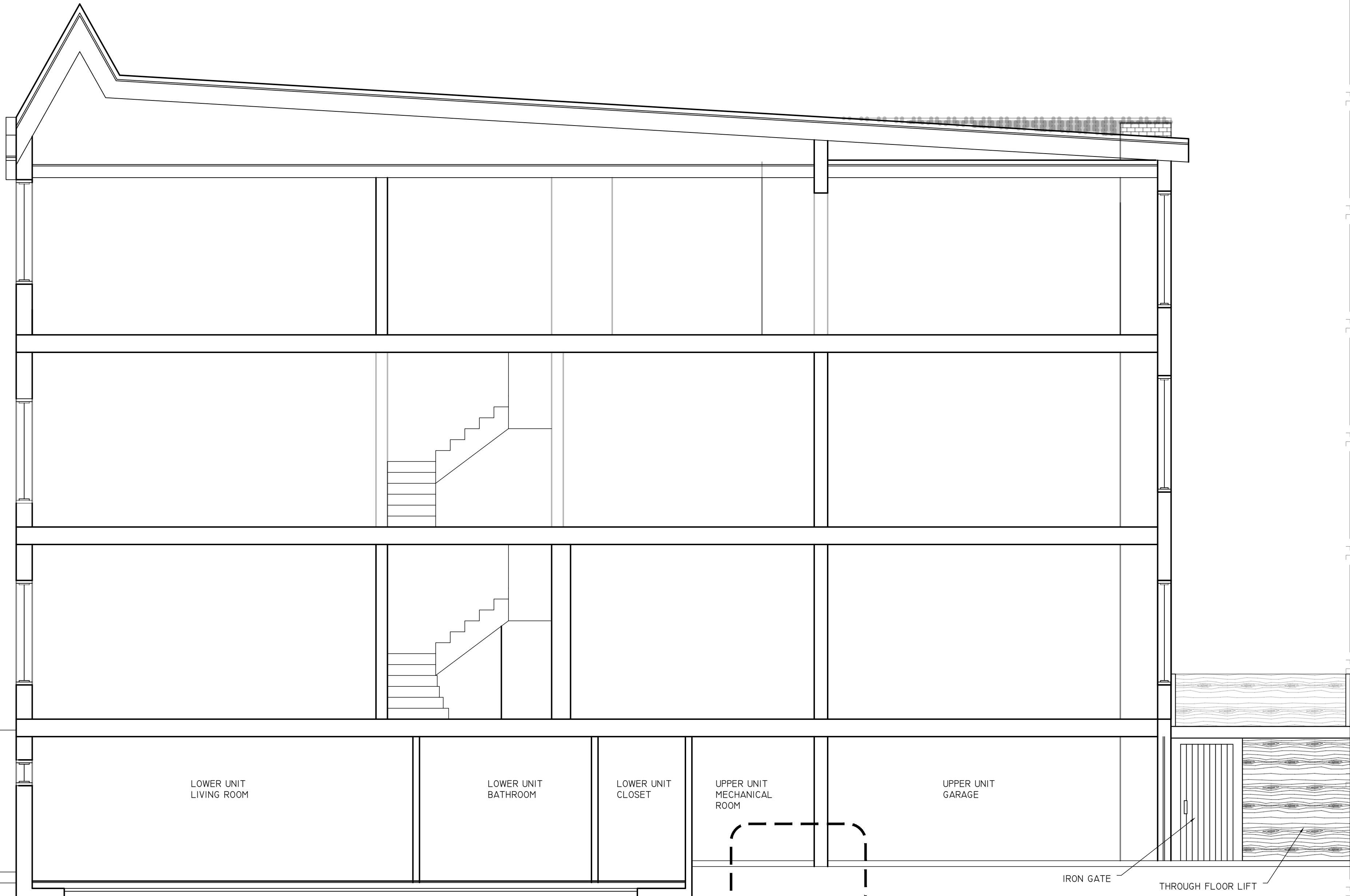
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EXISTING  
BUILDING  
SECTION

A4.2





1 PROPOSED BUILDING SECTION  
SCALE: 1/4" = 1'

VIEWNUMBER  
SHEETNUMBER

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RESIDENCE  
  
RENOVATION  
PROJECT

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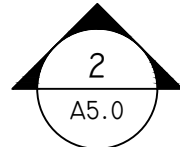
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PROPOSED  
BUILDING  
SECTION

A4.3

1 APT KITCHEN PLAN  
SCALE: 1/2" = 1'



2 APT KITCHEN ELEV  
SCALE: 1/2" = 1'

3 APT BATHROOM PLAN  
SCALE: 1/2" = 1'

4 APT BATHROOM  
SCALE: 1/2" = 1'

5 APT BATHROOM  
SCALE: 1/2" = 1'

6 APT BATHROOM  
SCALE: 1/2" = 1'

7 1/2 BATH IST FLOOR  
SCALE: 1/2" = 1'

8 1/2 BATH IST FLOOR  
SCALE: 1/2" = 1'

MILLER/ZIGLAR  
RESIDENCE

RENOVATION  
PROJECT

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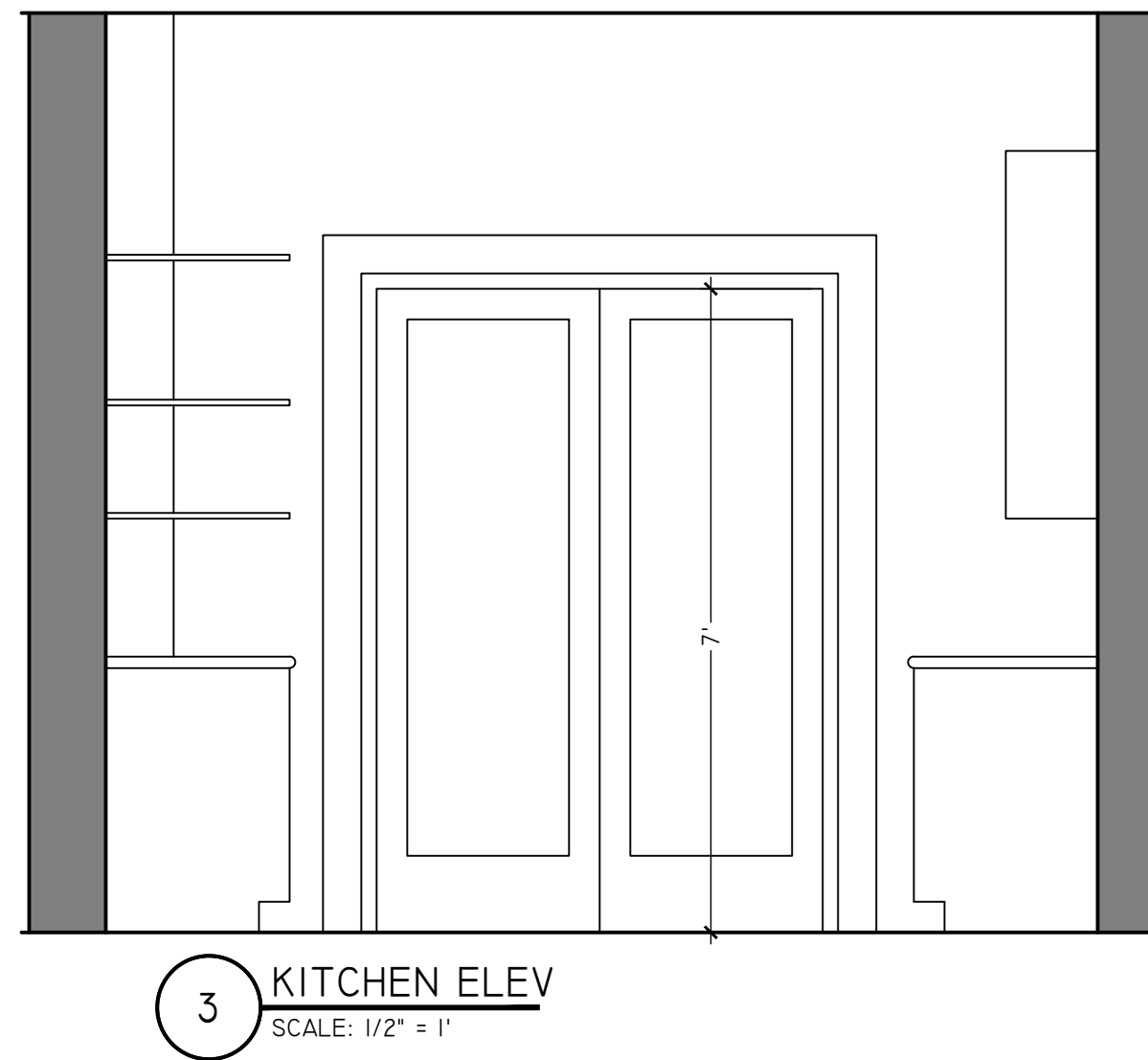
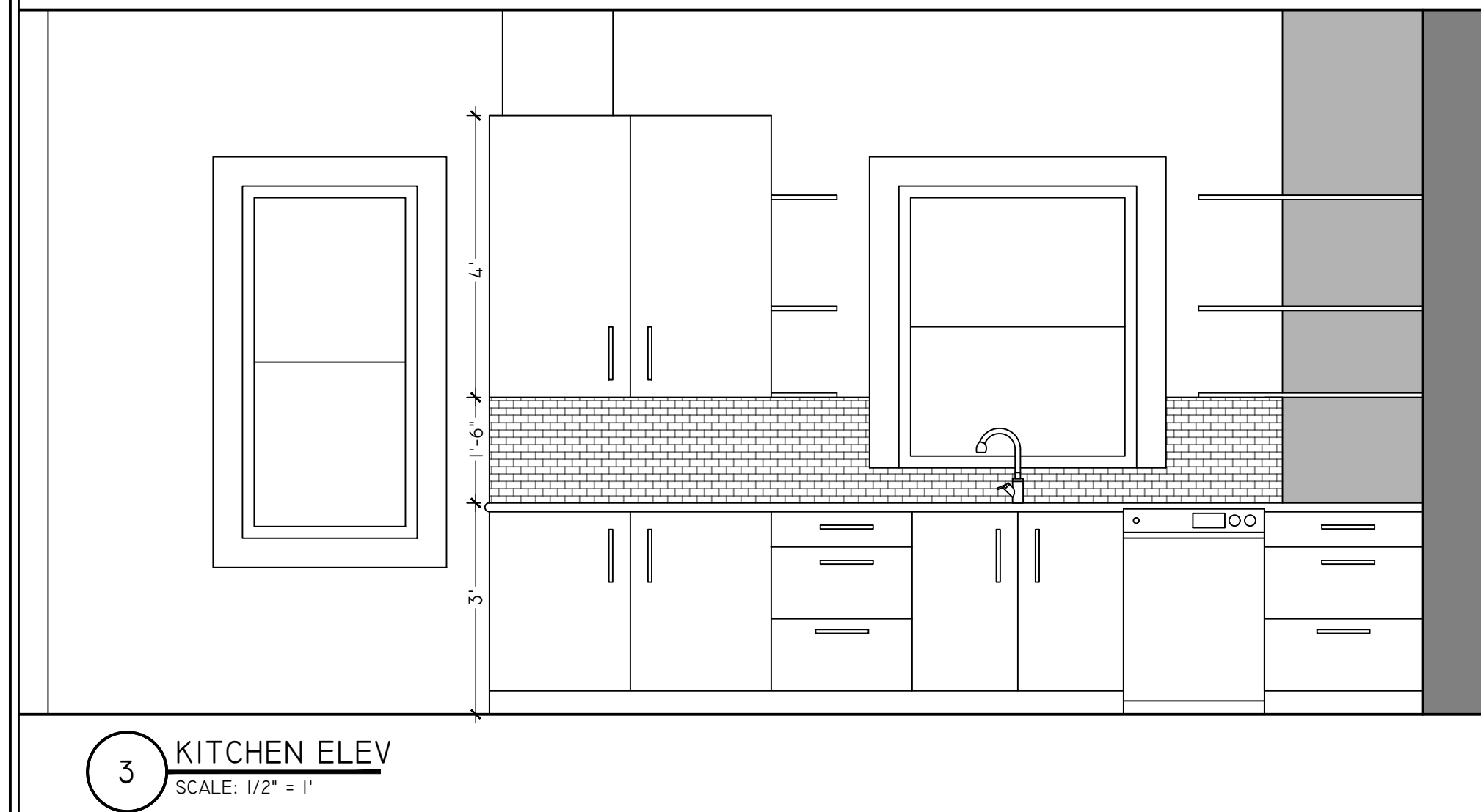
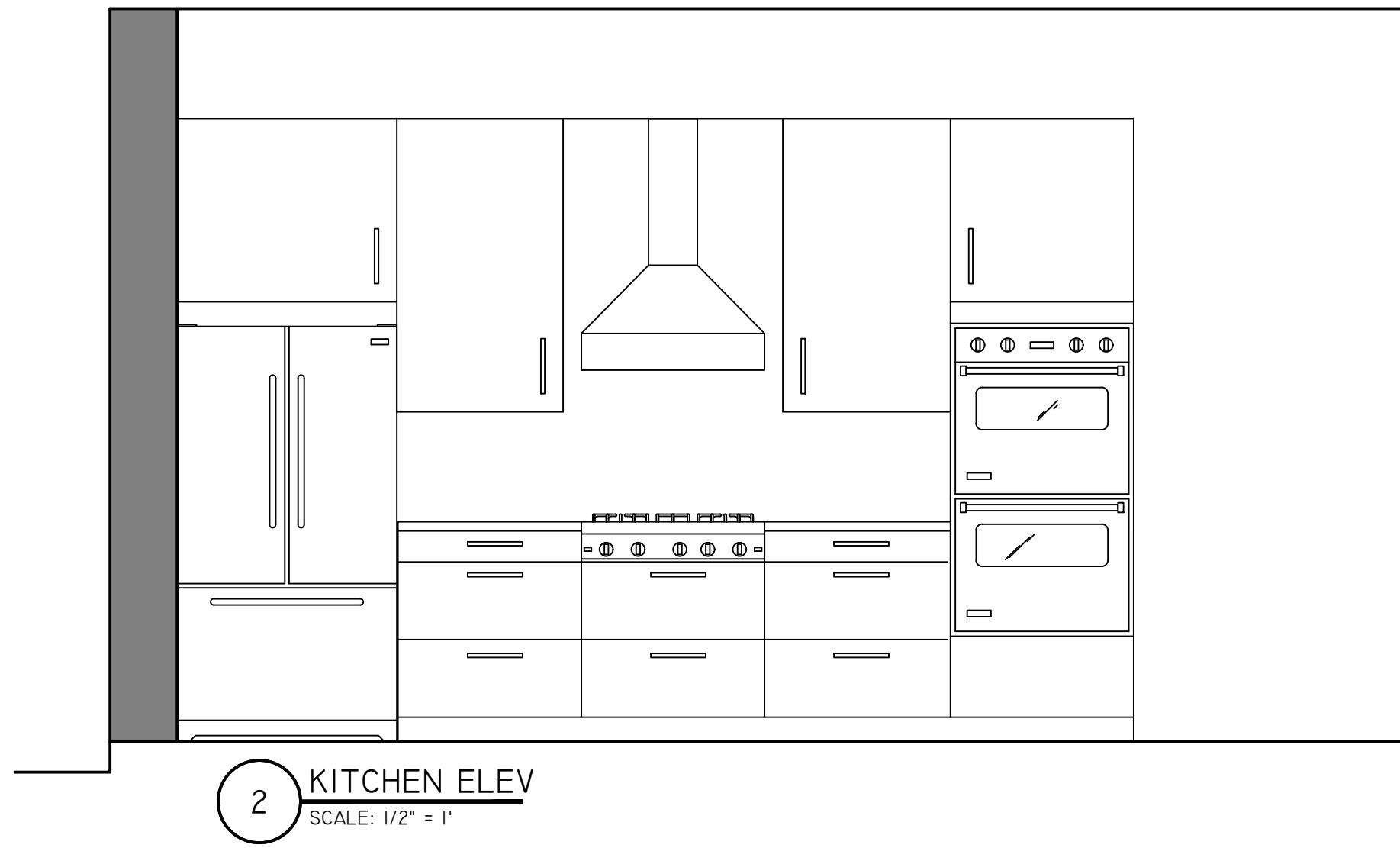
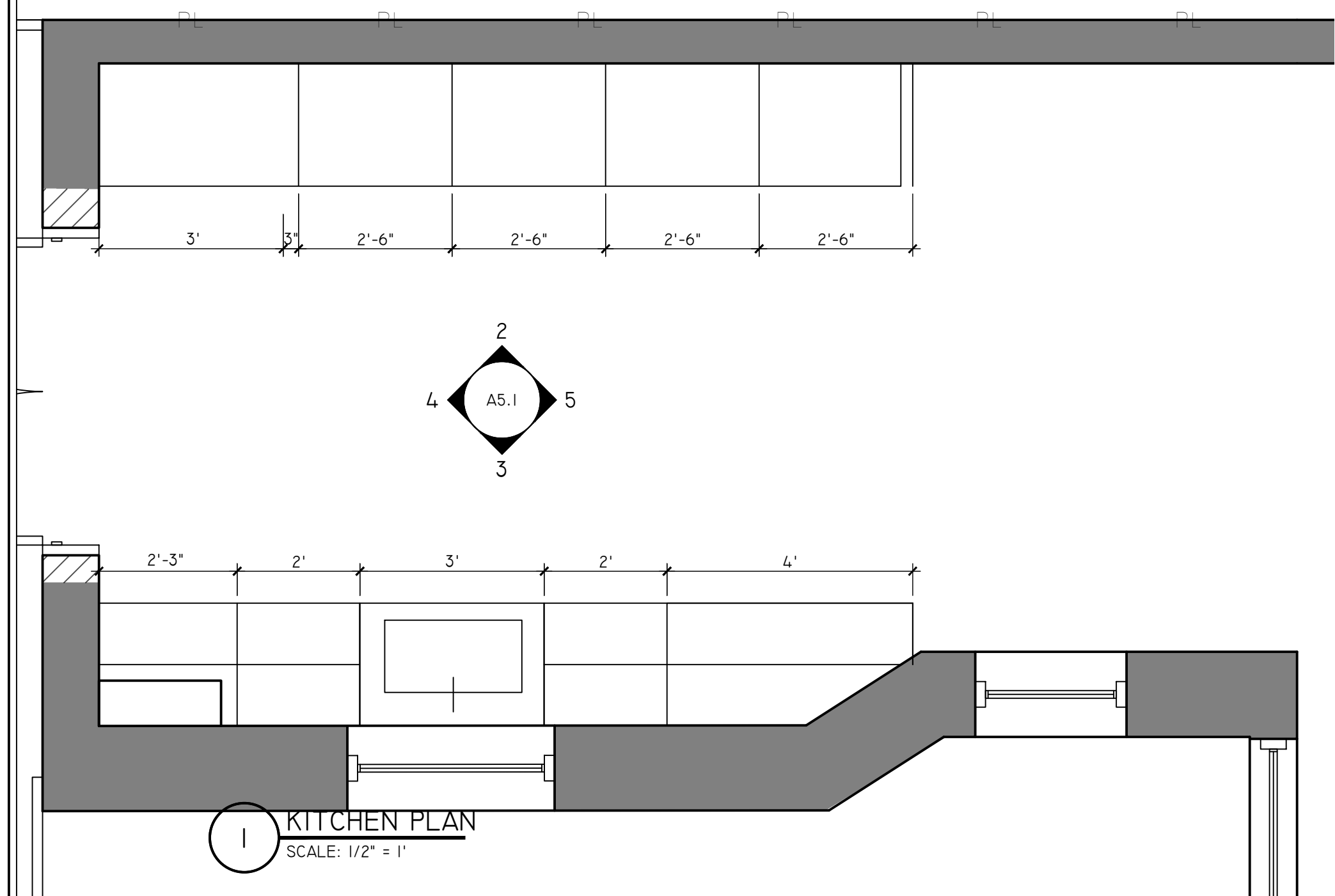
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INTERIOR  
ELEVATIONS

A5.0



MILLER/ZIGLAR  
RESIDENCE

RENOVATION  
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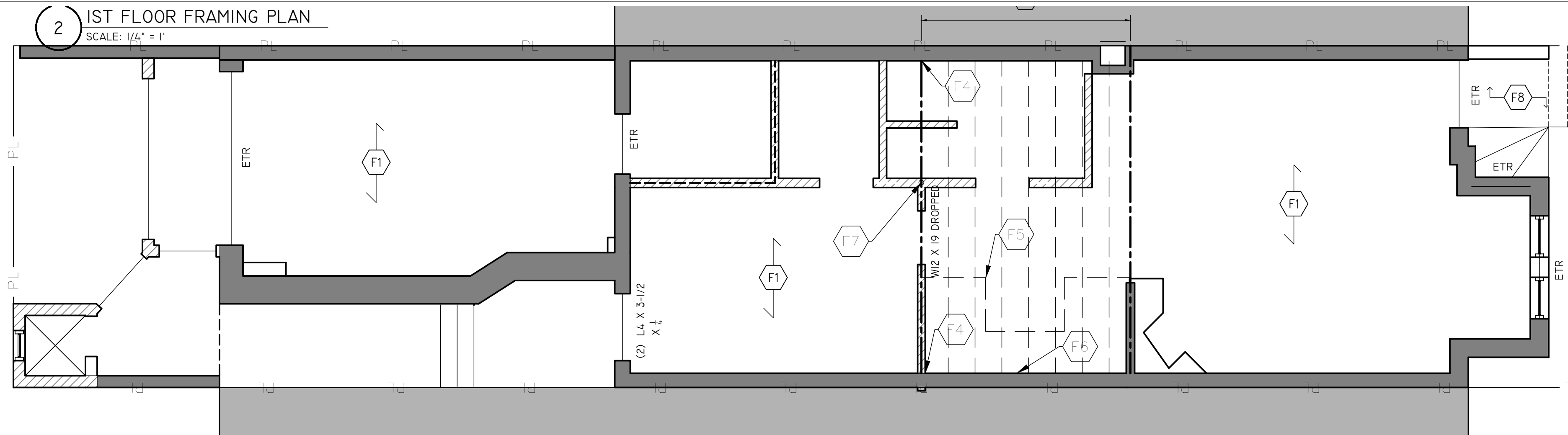
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UPPER UNIT  
KITCHEN

A5.1

**2** 1ST FLOOR FRAMING PLAN  
SCALE: 1/4" = 1'



- 1 EXISTING FOUNDATION WALL AND FOOTING.
- 2 EXISTING SLAB ON GRADE.
- 3 NEW 4" CONCRETE SLAB ON A 6 MIL POLY VAPOR BARRIER ON 4" GRAVEL. REINFORCE THE SLAB WITH 6X6 W2.0X2.0 WWF. THE TOP OF THE SLAB SHALL BE 6" ABOVE THE HIGHEST POINT OF THE BOTTOM OF THE EXISTING FOOTING. SEE THE ARCHITECTURAL DRAWINGS FOR INSULATION REQUIREMENTS.
- 4 BUILD A LANDING ON THE BASEMENT SLAB WITH TREATED LUMBER.
- 5 3"Ø SCHEDULE 40 LALLY COLUMN ON A 42X42X10 FOOTING WITH (4)#4 BARS EACH WAY.
- 6 EXISTING AREAWAY UNCHANGED.
- 7 NEW 4" CONCRETE SLAB ON 4" GRAVEL. REINFORCE THE SLAB WITH 6X6 W2.0X2.0 WWF. PLACE CONTROL JOINTS AT 36" O.C. EACH WAY.
- 8 SLAB ON GRADE STAIRS PER THE TYPICAL DETAIL.
- 9 THE TOP OF THE SLAB SHALL BE 18" ABOVE THE BOTTOM OF THE EXISTING ADJACENT FOOTINGS. PLACE THE SLAB ON 2" RIGID INSULATION FOR FROST PROTECTION. SLOPE THE SLAB TO A 4"Ø DRAIN IN THE CENTER OF THE LANDING.
- 10 4"Ø PERFORATED DRAIN COVERED WITH FILTER FABRIC.
- 11 SLAB STEP PER THE TYPICAL DETAIL.

As an employee of APAC Engineering Inc. I am responsible for determining that the engineering designs included on this sheet are in compliance with the intent of all applicable laws and regulations of the District of Columbia. I have personally prepared or directly supervised the development of, the structural engineering designs included on this sheet.

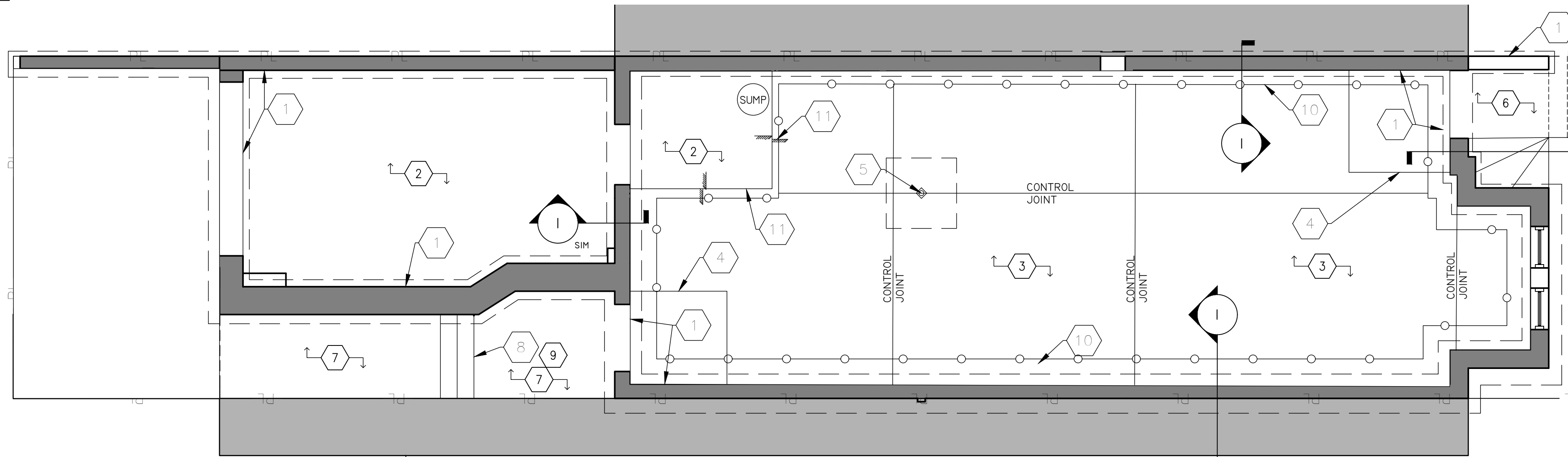
Structural plans certified as provided in Section 106.1.4.1 of the D.C. Construction Codes

- F1 EXISTING 1ST FLOOR FRAMING. SISTER ANY DAMAGED JOIST THAT IS FOUND WITH A DOUBLE 2X8 OR A 2X10.
- F2 EXISTING REAR DECK FRAMING UNCHANGED.
- F3 EXISTING BEAM.
- F4 POCKET THE BEAM IN THE WALL PER THE TYPICAL DETAIL.
- F5 DEMO THE EXISTING BEAMS AT THE STAIRS. SISTER EACH JOIST WITH A DOUBLE 2X10 TO INFILL THE STAIRS. PROVIDE TEMPORARY SHORING FOR THE EXISTING STAIRS ON THE 1ST FLOOR DURING CONSTRUCTION.
- F6 PT2X10 LEDGER WITH 1/2"Ø EPOXY BOLTS AT 16" O.C. TOP AND BOTTOM STAGGERED. ATTACH EACH JOIST TO THE LEDGER WITH AN OVERSIZED SIMPSON LUS HANGER. ADD BLOCKING AS NEEDED TO FILL IN THE GAPS BETWEEN THE JOISTS AND THE HANGER.
- F7 3"Ø SCHEDULE 40 LALLY COLUMN DOWN.
- F8 EXISTING FRONT STOOP UNCHANGED.

**FRAMING NOTES:**

1. SEE THE ARCHITECTURAL DRAWINGS FOR ITEMS NOT SHOWN.
2. PROVIDE SQUASH BLOCKING AS NEEDED BELOW ALL POSTS, COLUMNS, AND MULTIPLE STUDS.
3. PLACE A DOUBLE JOIST BELOW ALL PARTITION WALLS THAT ARE PARALLEL TO THE FLOOR JOISTS. ALTERNATELY PLACE SOLID BLOCKING AT 16" O.C. BELOW THE PARTITION WALLS BETWEEN THE TWO ADJACENT JOISTS.
4. ATTACH ALL QUADRUPLE BEAMS TOGETHER WITH 1/2"Ø BOLTS AT 16" O.C. TOP AND BOTTOM STAGGERED.
5. EPOXY BOLTS SHALL BE SIMPSON "SET". FOLLOW MANUFACTURES INSTRUCTIONS FOR INSTALLATION AND THE INSTRUCTIONS OF ESR 1772. UNO ALL BOLTS SHALL HAVE 6" EMBEDMENT.
6. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING DURING CONSTRUCTION AS NEEDED FOR THE EXISTING STRUCTURAL ELEMENTS THAT WILL REMAIN.
7. EXAMINE THE EXISTING MASONRY WALLS AND POINT ANY DETERIORATED MORTAR JOINTS AND REPLACE ANY DETERIORATED BRICKS OR BLOCKS.
8. WHEN CONNECTING NEW MASONRY TO THE EXISTING MASONRY TOOTH THE NEW WALL INTO THE EXISTING WALL.
9. SEE THE TYPICAL DETAILS FOR ITEMS NOT SHOWN.
10. TYPICAL JOIST HANGER: SIMPSON LUS HANGER.
11. TYPICAL STRINGER HANGER: SIMPSON MTS 15 ON EACH SIDE.
12. TYPICAL POST TO BEAM CONNECTOR: SIMPSON LPC ON EACH SIDE.
13. TYPICAL POST TO BASE PLATE CONNECTOR: SIMPSON L30 ON EACH SIDE.
14. TYPICAL DIMENSIONAL BEAM HANGER: SIMPSON HUS.
15. TYPICAL LVL BEAM HANGER: SIMPSON HHUS
16. ALL SLAB ON GRADE CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI WITH 6%±1% AIR ENTRAINMENT.
17. USE TYPE "N" LIME BASE MORTAR AND CLAY BRICKS THAT MATCH THE STRENGTH AND POROSITY OF THE EXISTING WALL FOR ALL WORK THAT IS DONE TO THE EXISTING MASONRY WALL.
18. LALLY COLUMNS SHALL BE BY THE TIGER BRAND JACK POST COMPANY (ESR 1766).

**1** FOUNDATION PLAN  
SCALE: 1/4" = 1'



**MILLER/ZIGLAR  
RESIDENCE  
RENOVATION  
PROJECT**

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301.565.0543

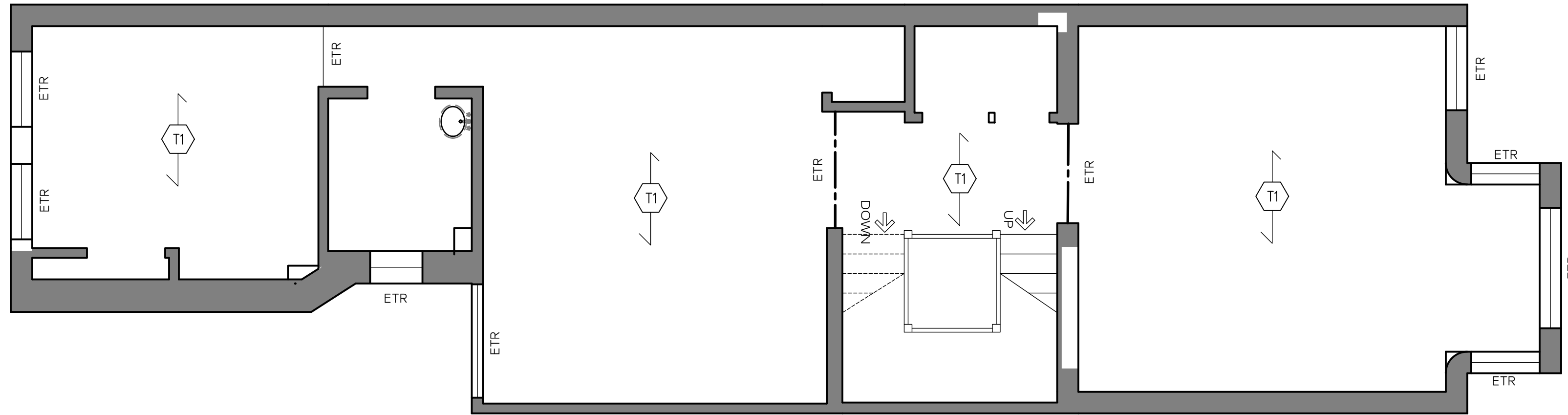
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FOUNDATION  
PLAN AND 1ST  
FLOOR FRAMING  
PLANS

2 3RD FLOOR FRAMING PLAN  
SCALE: 1/4" = 1'



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Structural plans certified as provided in Section 106.1.4.1 of the D.C. Construction Codes

FRAMING NOTES:

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- WHEN CONNECTING NEW MASONRY TO THE EXISTING MASONRY TOOTH THE NEW WALL INTO THE EXISTING WALL.
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- TYPICAL POST TO BASE PLATE CONNECTOR: SIMPSON L30 ON EACH SIDE.
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- USE TYPE "N" LIME BASE MORTAR AND CLAY BRICKS THAT MATCH THE STRENGTH AND POROSITY OF THE EXISTING WALL FOR ALL WORK THAT IS DONE TO THE EXISTING MASONRY WALL.
- LALLY COLUMNS SHALL BE BY THE TIGER BRAND JACK POST COMPANY (ESR 1766).

T1 EXISTING 3RD FLOOR FRAMING. SISTER ANY DAMAGED JOIST THAT IS FOUND WITH A DOUBLE 2X10 OR A 2X12.

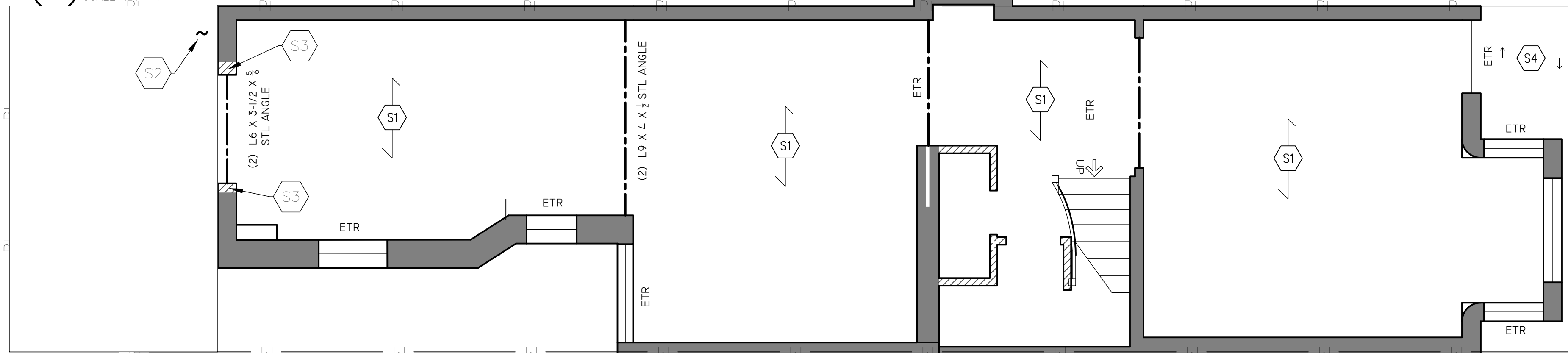
S1 EXISTING 2ND FLOOR FRAMING. SISTER ANY DAMAGED JOIST THAT IS FOUND WITH A DOUBLE 2X10 OR A 2X12.

S2 EXISTING REAR DECK FRAMING BELOW.

S3 INFILL THE WALL WITH SOLID 8" BRICK. BOND THE NEW WALL TOGETHER WITH ROWLOCK COURSES THAT MATCH THE EXISTING WALL. TOOTH THE NEW BRICK WALL INTO THE EXISTING WALL.

S4 EXISTING ROOF UNCHANGED.

2 2ND FLOOR FRAMING PLAN  
SCALE: 1/4" = 1'



MILLER/ZIGLAR  
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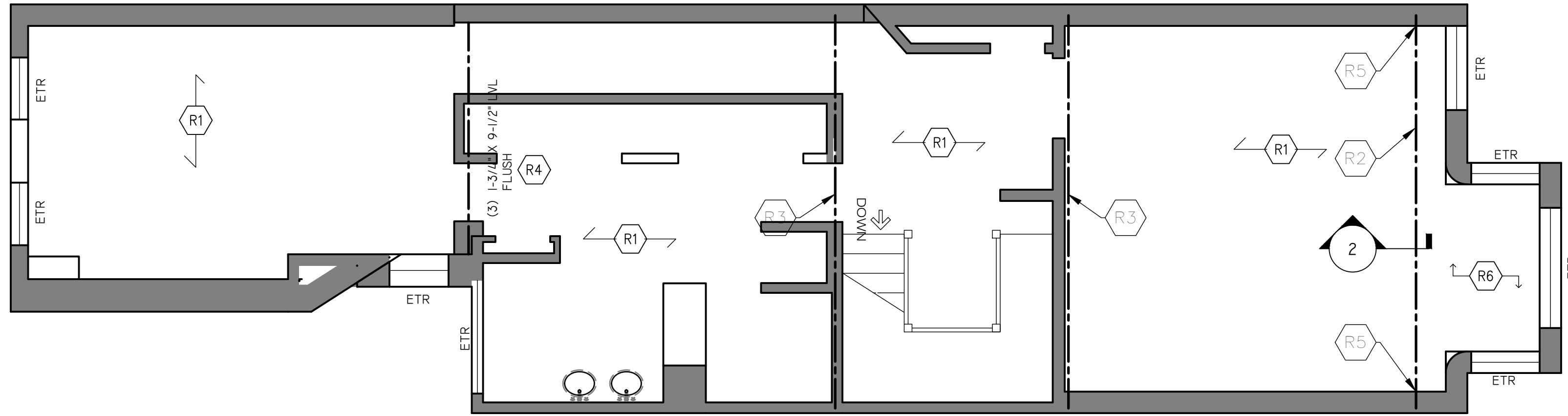
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2ND AND 3RD  
FLOOR FRAMING  
PLANS

SI

**1 ROOF FRAMING PLAN**  
SCALE: 1/4" = 1'



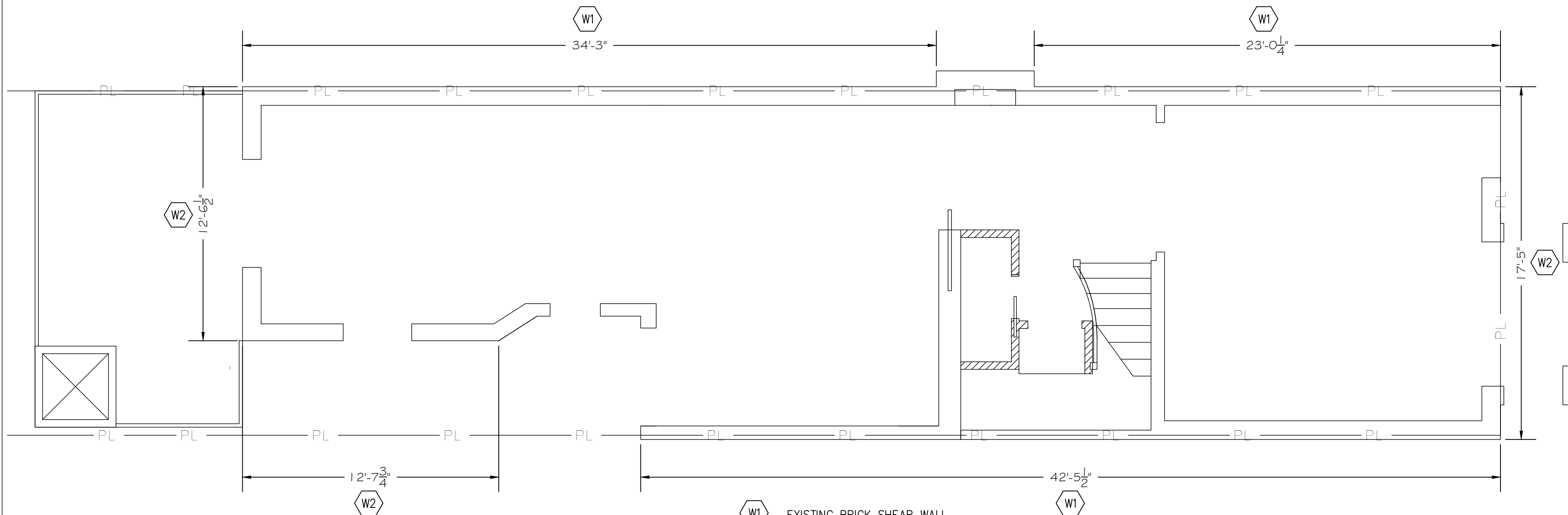
- R1** EXISTING ROOF FRAMING. SISTER ANY DAMAGED RAFTER THAT IS FOUND WITH A DOUBLE 2X6 OR A 2X8.
- R2** PLACE A NEW (4) 1 1/2 X 11 3/8" LVL BELOW THE REAR RAFTERS AT THE RIDGE. ATTACH EACH EXISTING RAFTER TO THE RIDGE WITH A SIMPSON H2.5A HURRICANE TIE. ATTACH EACH EXISTING RAFTER TO THE EXISTING RIDGE WITH A SIMPSON L50 ON EACH SIDE OF THE RAFTER.
- R3** SISTER THE EXISTING GIRDER WITH (2) 1 1/2 X 14" LVL'S.
- R4** ATTACH EACH EXISTING RAFTER TO THE FLUSH BEAM WITH A SIMPSON L50 ON EACH SIDE OF THE RAFTER.
- R5** POCKET THE BEAM IN THE WALL PER THE TYPICAL DETAIL.
- R6** EXISTING TURRET ROOF FRAMING.

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- W1** EXISTING BRICK SHEAR WALL.
- W2** EXISTING PERFORATED BRICK SHEAR WALL.

**2 1ST FLOOR WIND BRACING PLAN**  
SCALE: 1/4" = 1'

**MILLER/ZIGLAR RESIDENCE RENOVATION PROJECT**

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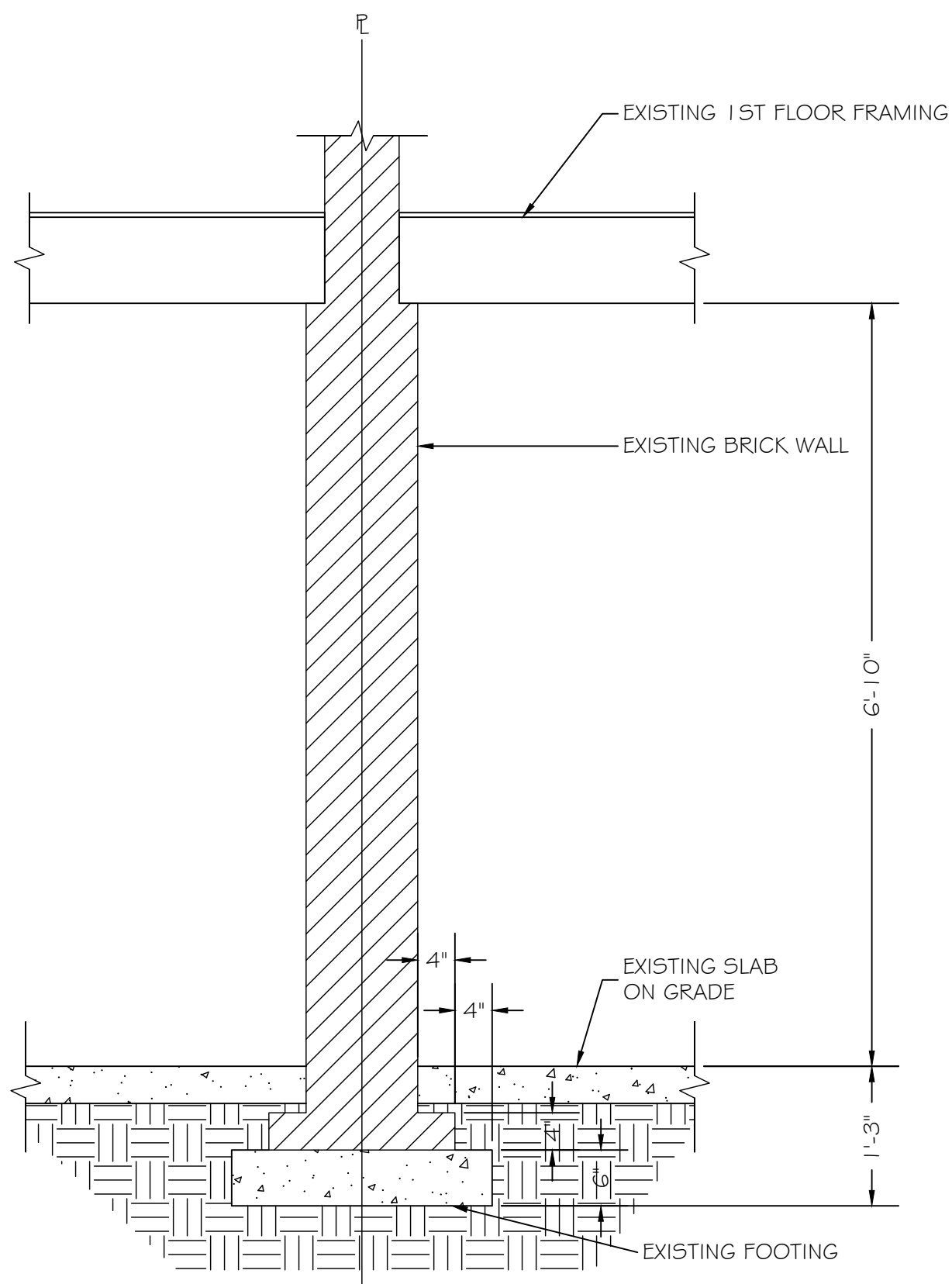
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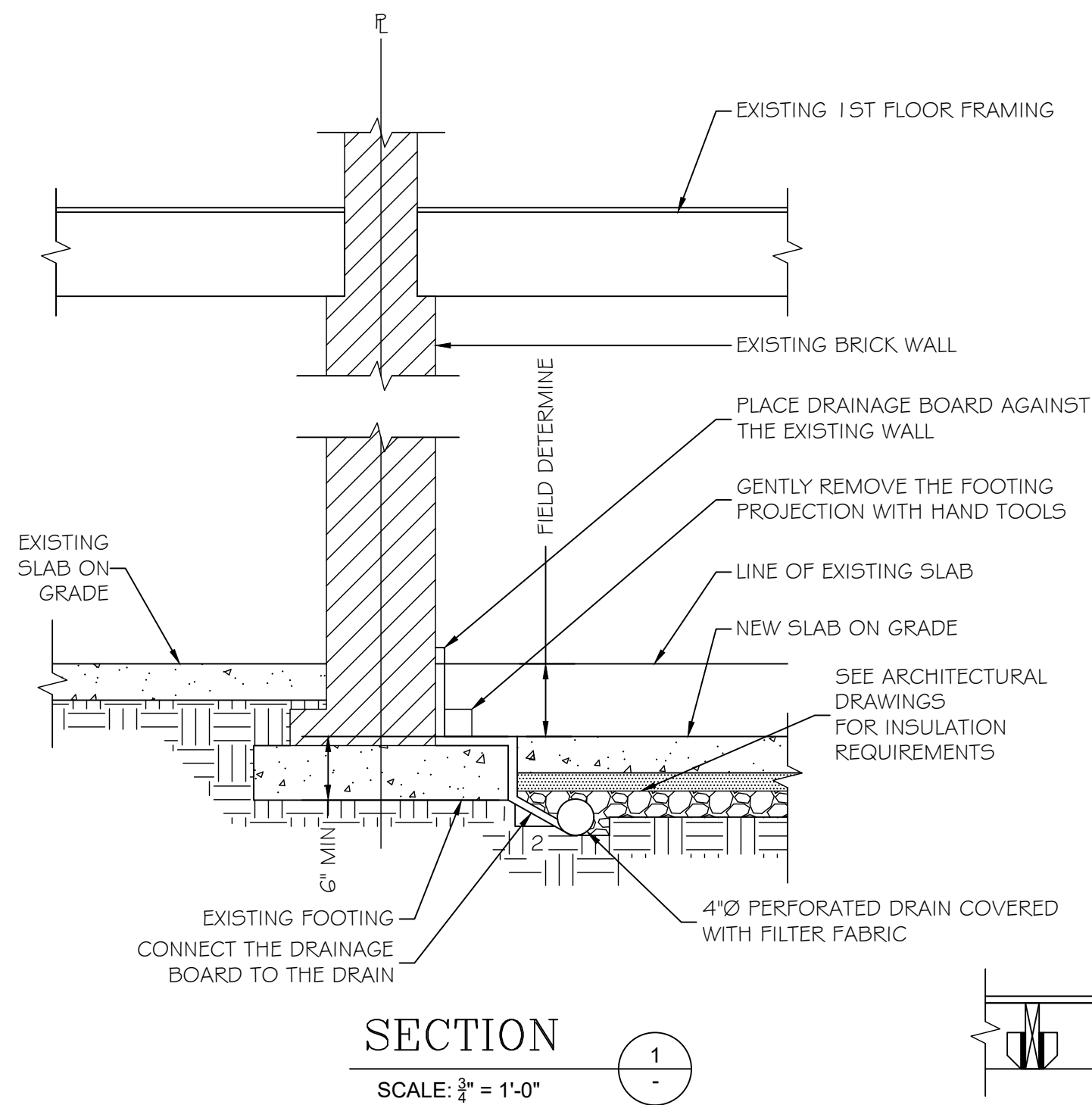
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ROOF FRAMING PLAN AND WIND BRACING PLAN

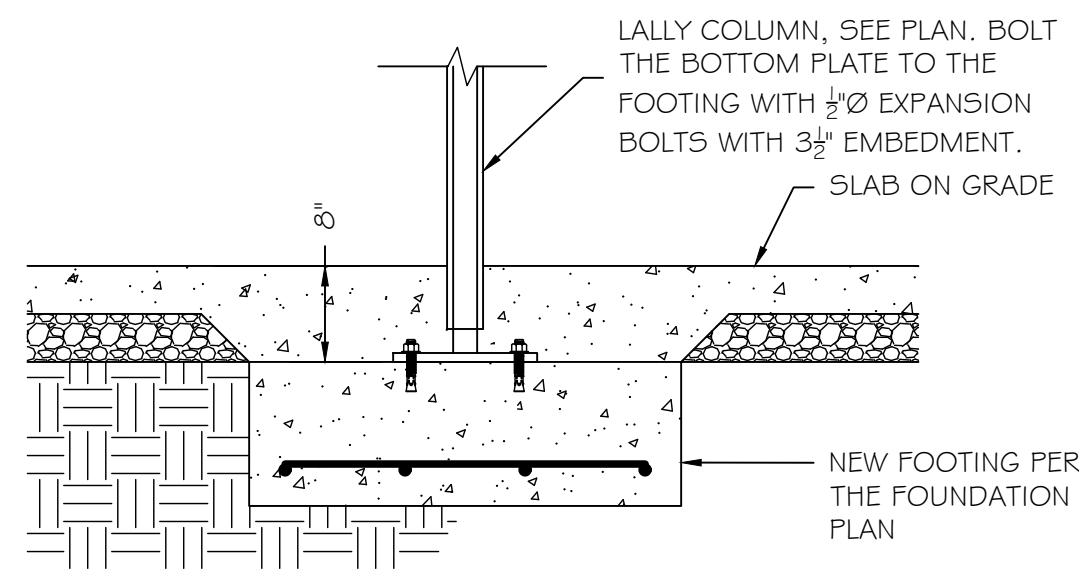


**Test Pit Result**

Scale:  $\frac{3}{4}$ " = 1'-0"

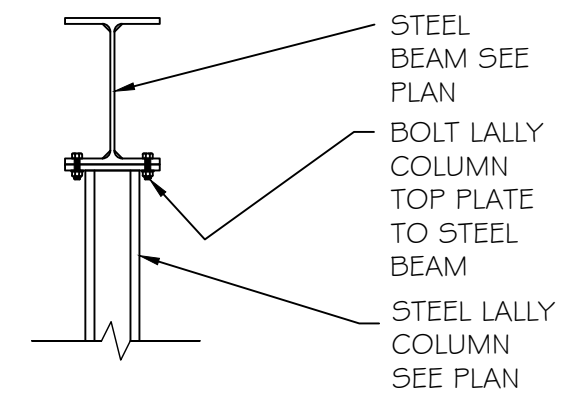


**SECTION 1**  
Scale:  $\frac{3}{4}$ " = 1'-0"



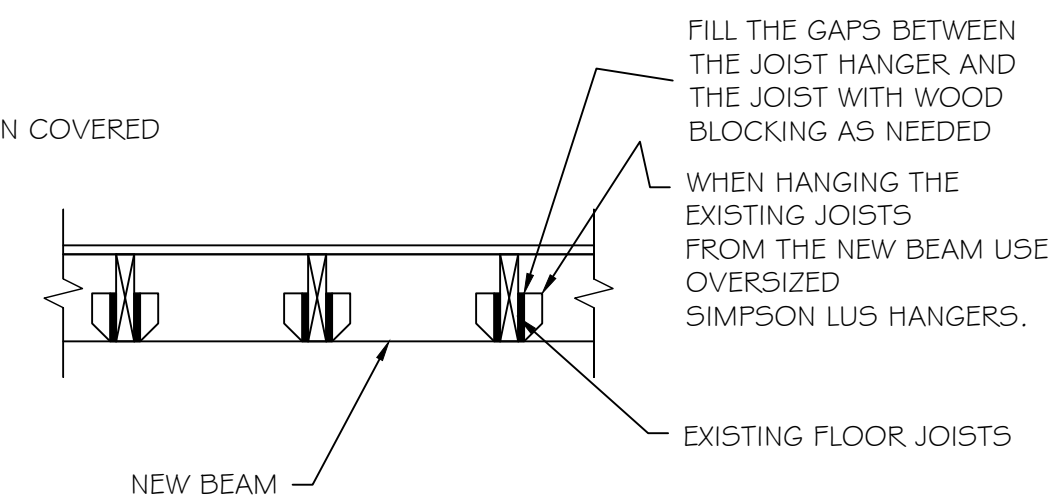
**Typical Lally Column to Footing Detail**

Scale:  $\frac{3}{4}$ " = 1'-0"



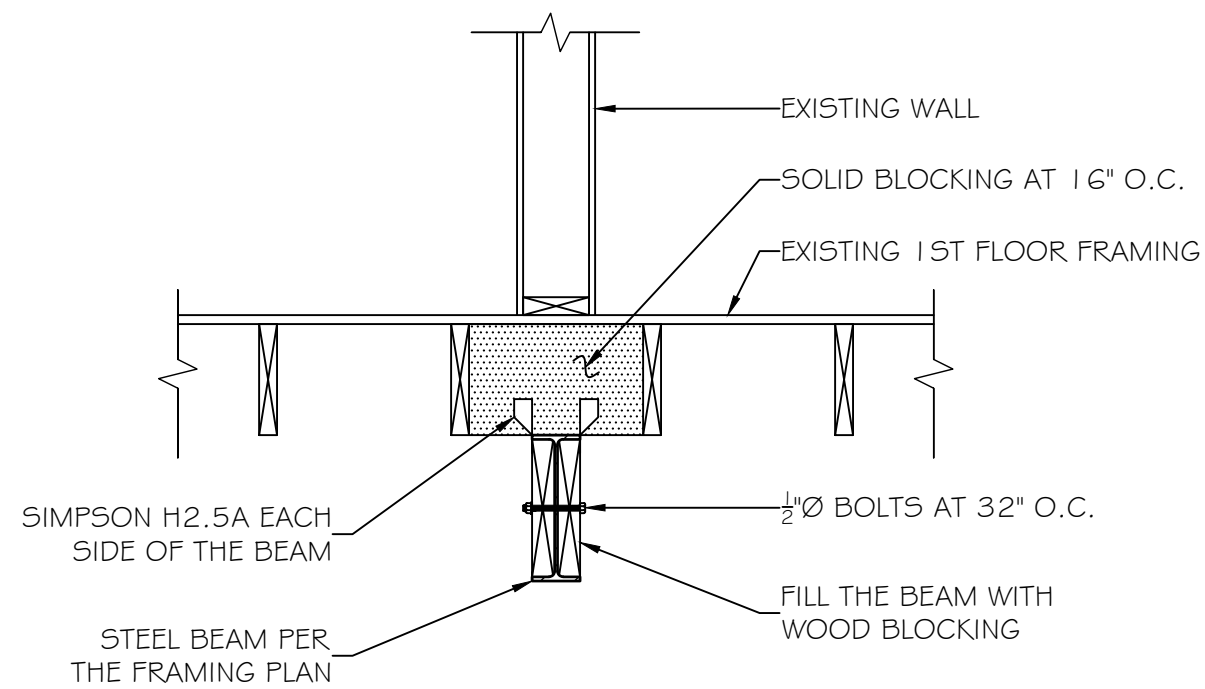
**Typical Steel Beam to Lally Column Detail**

Scale:  $\frac{3}{4}$ " = 1'-0"



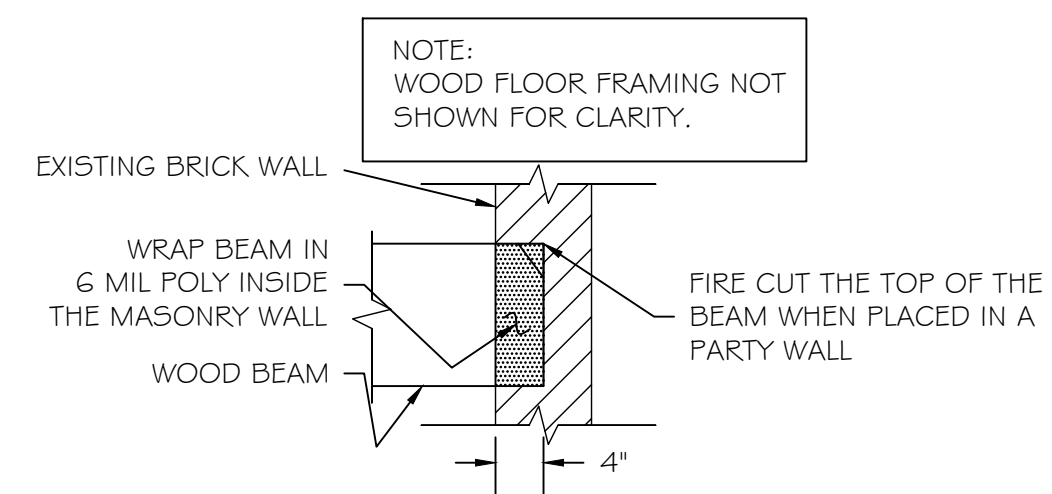
**Typical Ex. Joist to New Beam Detail**

Scale:  $\frac{3}{4}$ " = 1'-0"



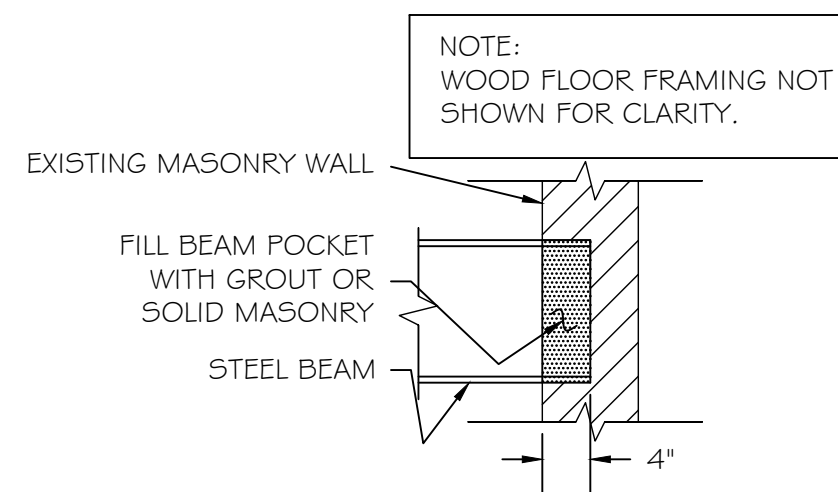
**Typical Steel Beam Detail**

Scale:  $\frac{3}{4}$ " = 1'-0"



**Typical Wood Beam to Masonry Wall Detail**

Scale:  $\frac{3}{4}$ " = 1'-0"



**Typ. Steel Beam to Existing Masonry Wall Detail**

Scale:  $\frac{3}{4}$ " = 1'-0"

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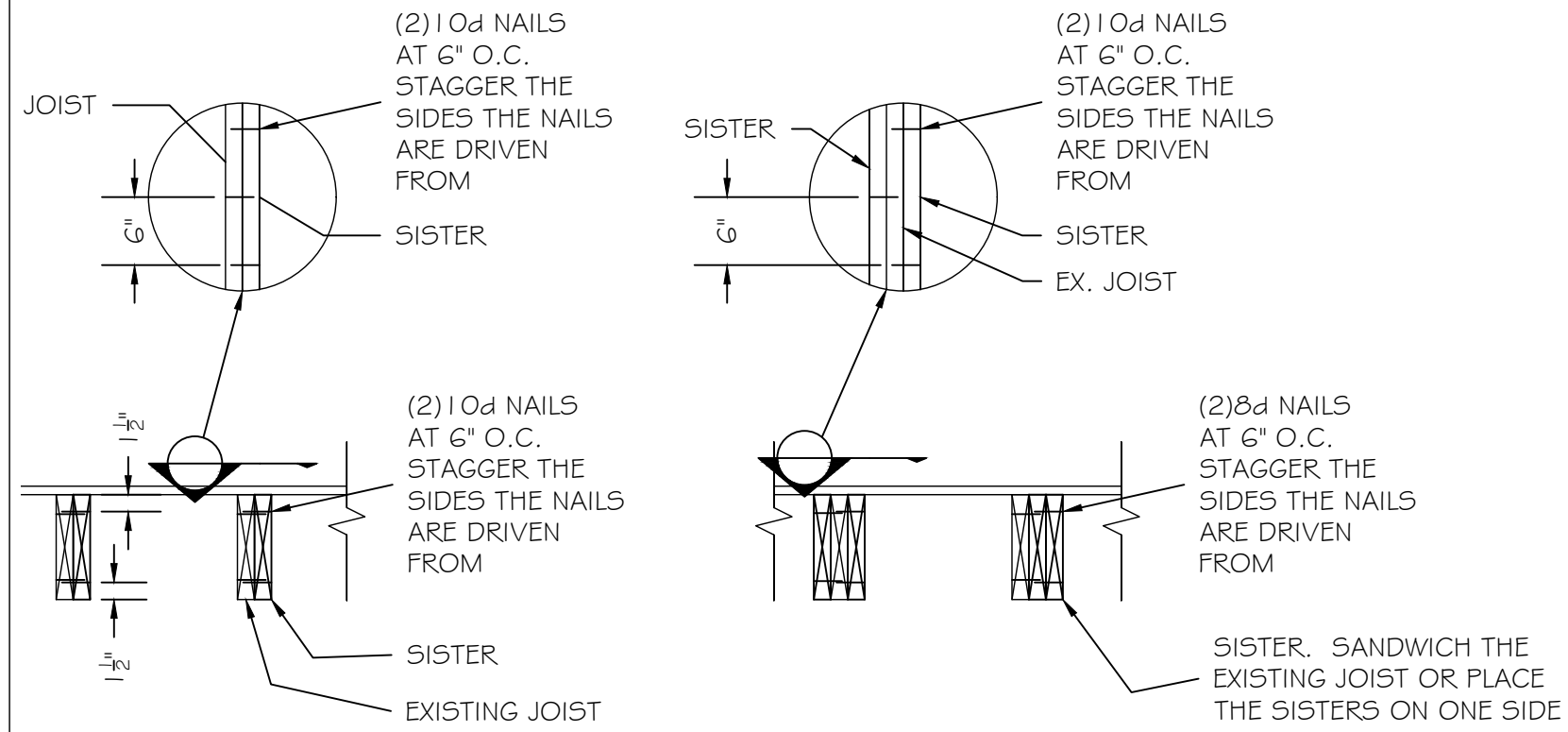
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SECTIONS AND DETAILS

NOTE:  
UNLESS NOTED OTHERWISE THE  
SISTER CAN STOP 1" SHORT OF THE  
EXISTING SUPPORTING WALL OR BEAM

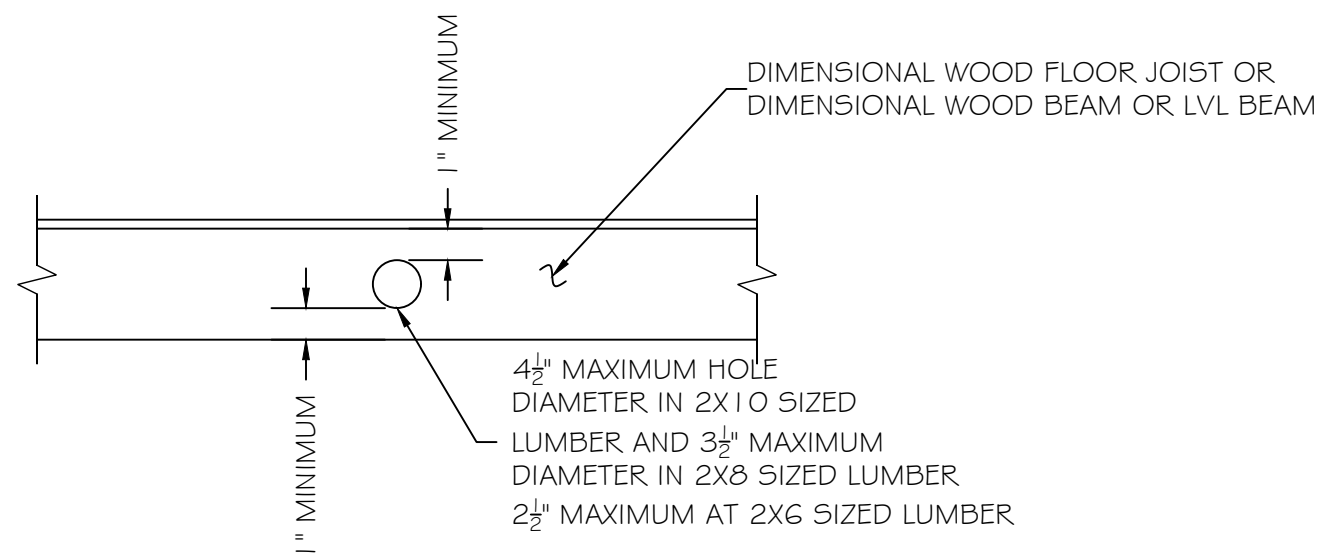


Single Sister

Double Sister

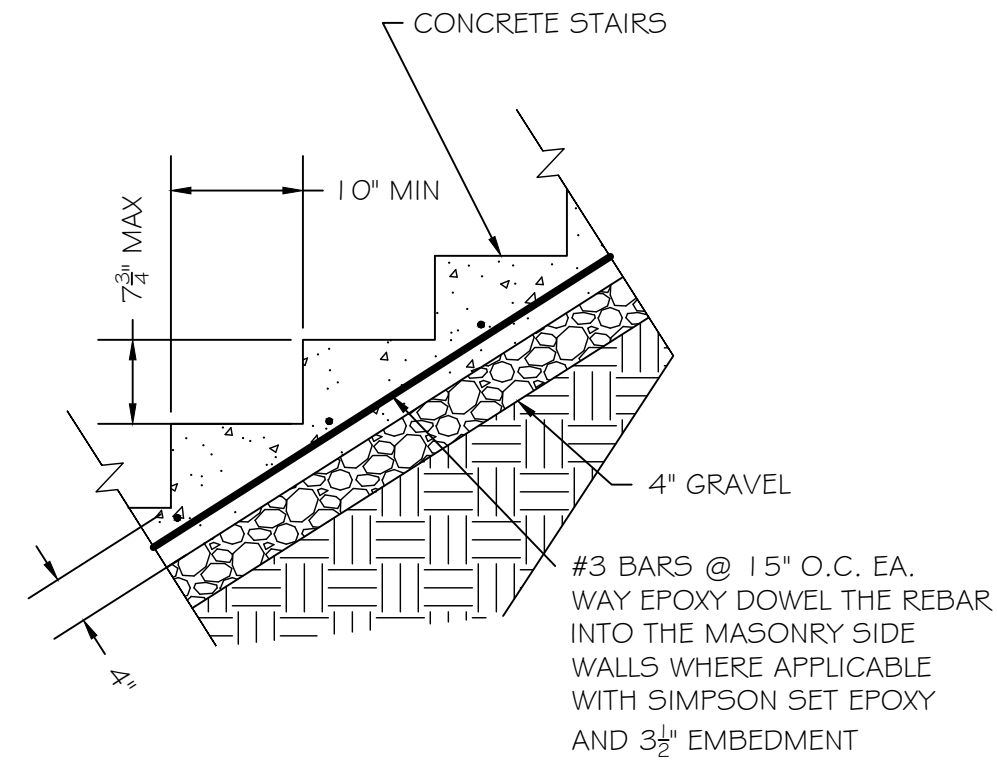
Typical Sistering Details

Scale: NTS



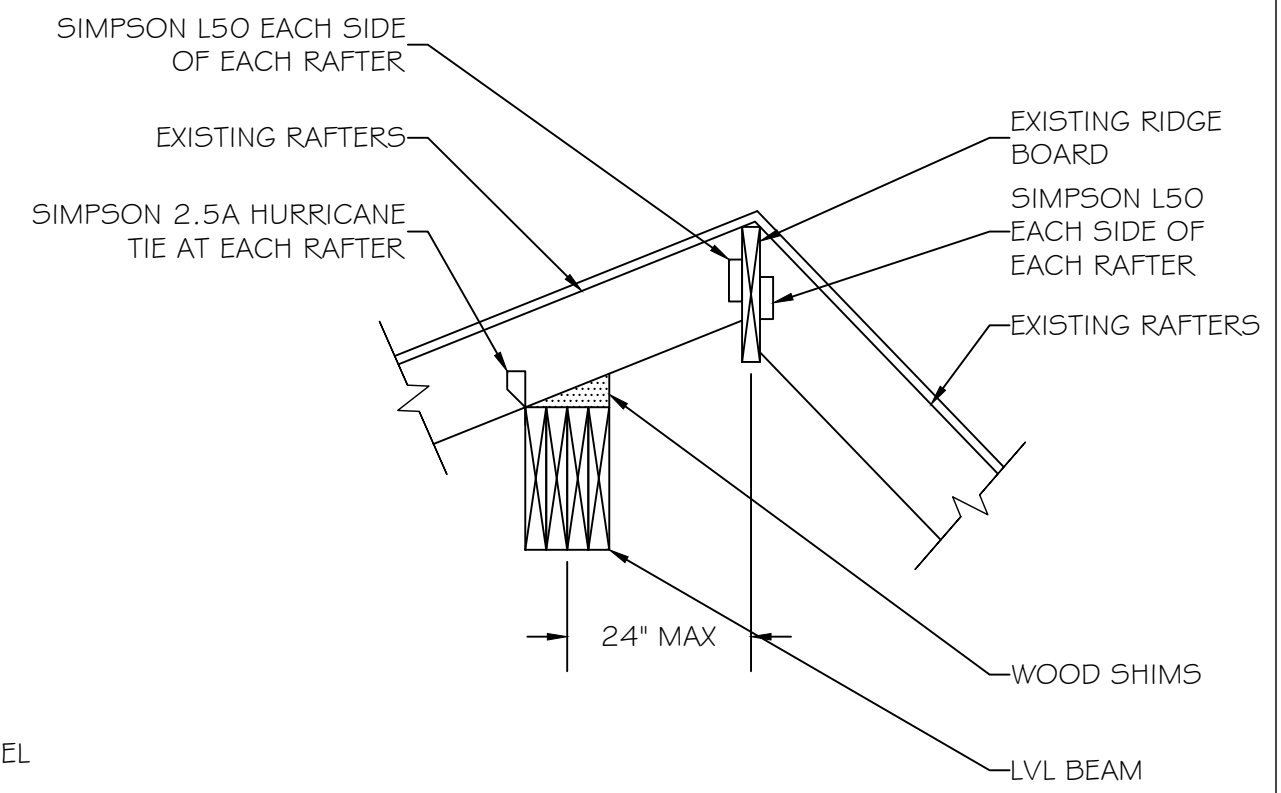
Typical Detail at Dimensional Floor Joist/LVL Beam Holes

3/4" = 1'-0"



Typ. Slab on Grade Stairs Detail

Scale: 3/4" = 1'-0"



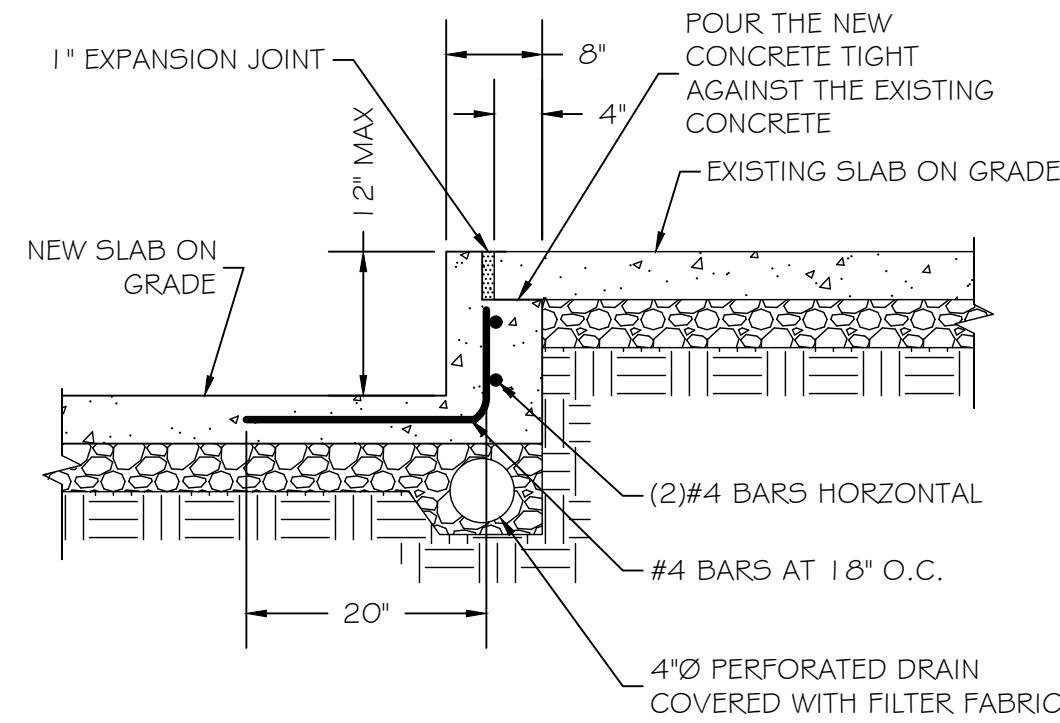
SECTION

SCALE: 3/4" = 1'-0"

2

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Typical Ex. Slab to New Slab Step Detail

Scale: 3/4" = 1'-0"

MILLER/ZIGLAR RESIDENCE

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SECTIONS AND DETAILS



## Structural Notes

1. All work and materials to comply with the requirements of the 2012 IBC codes with the DCMR 12A-2013 Supplement.
2. Codes: the following design standards are applicable by reference:  
 ACI 530-11/ASCE 5-11 Building Code Requirements for Masonry Structures.  
 AITC - Timber Construction Manual - fifth Ed.  
 ACI 318-11 Building Code Requirements for Reinforced Concrete  
 AISC - Manual of Steel Construction Ninth Ed.
3. Foundations: footings and slab on grades are designed to bear on native soil type SM or SC with an allowable bearing pressure of 1500 psf. A qualified soil-bearing inspector prior to placement of concrete shall verify all bearing values.
4. Structural steel:
  - A. All structural steel, including detail material shall conform to ASTM A572 Fy = 50ksi, U.N.O.
  - B. All structural tubing shall conform to ASTM A500, grd.B
  - C. All steel pipe shall be ASTM A53, type E or S, grade B
  - D. All welders shop and field, shall be certified. Use E70xx electrodes only.
  - E. All steel exposed to weather and exterior masonry support shall receive one shop coat of corrosion-inhibiting primer.
  - F. Detailing, fabrication and erection shall be in accordance with AISC. Adequately brace all steel against lateral loads during erection.
  - G. All exterior structural steel shall receive rust preventative paint.
  - H. Connections:
    - I. All beam connections shall be simple shear connections, U.N.O. Where no reaction is provided, the beam shall be assumed to carry 120 % of the allowable uniform load in Kips for beams laterally supported, as given in the AISC steel construction manual.
    - II. Except as noted, all fasteners shall be 3/4" diameter ASTM A325 bolts, designed to act in bearing type connections with threads included.
5. Lumber:
  - A. Lumber shall be SPF #2 with a min. Fb = 875psi Min. Fv = 135psi and min. E = 1,400,000psi.
  - B. LVL and PSL shall have a min. Fb = 2850psi; Fv = 285psi; E = 2,000,000psi.
  - C. Floor decking shall be 3/4" APA rated decking. Roof decking shall be 1/2" APA rated decking. Wall sheathing shall be 7/16" OSB. Glue and screw the floor decking to the joists.
  - D. Exterior wood walls shall be 2x6 studs at 16" o.c. and interior wood walls shall be 2x4 studs at 16" O.C. with a double top plate and single bottom plate. Provide solid blocking at the midheight of each wall and at a minimum of 48" O.C. vertically. All studs, joists and rafters shall align.
  - E. Provide double joists under all walls that run parallel to floor framing.
  - F. Nail all multiple members together per the manufacturer's recommendations and at a minimum use 2-10d nails at 6" O.C. staggered.
  - G. Provide bridging at center of all joist spans Exceeding 8'-0" and at 1/3 points of all joist spans exceeding 16'-0". Provide solid blocking at all bearing points on top of walls or beams.
  - H. Provide solid blocking below all wood posts.
    - I. All posts shall have Simpson Cap and Base Plates typ.
    - J. All joists shall have Simpson Hangers where applicable.
    - K. Glue all multiple studs together. Nail together with 2-10d nails at 3" O.C. Stagger the sides of the studs that the nails are driven from.
  - L. All lumber in contact with masonry or concrete or within in 8" of soil shall be pressure treated. All lumber to conform to IRC R319 for protection against corrosion and termite damage.
  - M. All lumber shall be kiln dried. Store lumber on site in such a manner as to prevent the seepage of water into the wood.
  - N. Wood Lintels shall be as follows:
    - Opening  $\leq$  3'-0" - 2-2x6
    - 3'-0"  $<$  Opening  $\leq$  5'-0" - 2-2x8
    - 5'-0"  $<$  Opening  $\leq$  8'-0" - 2-2x10
    - Greater than 8'-0" - See plans

6. Fasteners:
  - A. All prefabricated angles, bearing plates, and joist hangers shall be installed per the manufacturer recommendations.
  - B. Follow the manufacturer recommendations for setting epoxy bolts.
  - C. Expansion bolts shall be rawl power studs.
7. Masonry:
  - A. Masonry construction shall be in conformance with the applicable sections of ACI 530-11/ASCE5-11, "Specifications for Masonry Structures."
  - B. Concrete masonry units shall be hollow load bearing units (ASTM C90) grade n-1 with a net strength of 2000psi and F'm - 1500psi.
  - C. All joints to be filled solid with mortar.
  - D. Mortar to comply with ASTM C270 (type M or S).
  - E. Provide corrugated masonry ties between brick facia and wood walls or cmu walls at 16" O.C. in each direction.
  - F. Provide 9ga truss style joint reinforcement @ 16" O.C. vertically.
  - G. Lintels shall be as follows:
    - Opening  $\leq$  3'-0" - L4x3 1/2 x 1/4 LLV/ 4" of wall
    - 3'-0"  $<$  Opening  $\leq$  7'-0" - L6x3 1/2 x 5/16 LLV/ 4" of wall.
    - Opening  $>$  7'-0" - See Plan
8. Cast in place concrete:
  - A. Concrete construction shall be in conformance with the applicable sections of ACI 318-11, "Part 3 - Construction Requirements."
  - B. Concrete shall have a minimum compressive strength at 28 days of 3000psi, UNO (unless noted otherwise).
  - C. All concrete shall be placed with a slump of 4" (+ 1/2")
  - D. All concrete shall be normal weight, UNO.
  - E. All concrete exposed to weather shall have 6%  $\pm$ 1% entrained air.
  - F. Contractor shall pour extra concrete to account for the deflection of the formwork to provide a flat finished surface.
  - G. Concrete cover for reinforcement shall be:
 

Columns and beams	1 1/2"
Slabs	3/4"
Footings	3"
9. Reinforcement:
  - A. Reinforcing bars shall be deformed bars conforming to ASTM A615, grade 60 (Fy = 60ksi)
  - B. Welded wire fabric (wwf) shall conform to ASTM a185. Lap edges of wire fabric at least 6" in each direction.
10. Dimensions: The contractor shall field verify all dimensions prior to fabrication of structural components.
11. Coordination: The contractor shall coordinate all sleeves, duct openings and holes between trades. Any conduits or pipes embedded in concrete must be in accordance with ACI 318-11, chapter 6. Where sleeves are closely spaced in a group, the group shall be treated as an opening and reinforced accordingly. Submit drawings showing all opening sizes and locations for the approval by the structural engineer.

### Dead Loads:

SPF #2 -	25 PCF
1/2" Decking -	1.7 PSF
3/4" Decking -	2.5 PSF
Asphalt Shingles -	2.5 PSF
Slate Shingles -	15 PSF
1/2" Drywall -	2.2 PSF
Insulation -	1.5 PSF
Siding -	2.0 PSF
CMU -	87 PCF
Brick -	130 PCF

### LIVE LOADS:

DECK:	40PSF
ATTIC:	20PSF
FLOOR:	40PSF
BALCONY	60PSF
BEDROOM	40PSF
ROOF:	30PSF

### WIND LOADS

BASIC WIND SPEED:	90MPH
WIND LOAD IMPORTANCE FACTOR:	1.0
WIND EXPOSURE FACTOR:	B
WIND DESIGN PRESSURE:	20PSF

### SNOW LOADS:

GROUND SNOW LOAD (PG):	30PSF
FLAT ROOF SNOW LOAD(PF):	30PSF
SNOW EXPOSURE FACTOR (CE):	0.9
SNOW IMPORTANCE FACTOR (I):	1.0

### Deflection Limitations:

Rafters:	L/240
Interior Walls and Partitions:	H/180
Floors and Plastered Ceilings:	L/360
All Other Structural Members:	L/240
Ext. Walls with plaster or stucco finishes:	L/360
Ext. Walls - Wind Loads with Brittle Finishes:	L/240
Ext. walls - Wind Loads with Flexible Finishes:	L/120

### SEISMIC DESIGN DATA:

SEISMIC IMPORTANCE FACTOR (Ie):	1.0
SPECTRAL RESPONSE ACCELERATIONS:	
(Ss):	20.0%
(S1):	8.0%
SPECTRAL RESPONSE COEFFICIENTS:	
(Sds):	33%
(Sd1):	18.7%
SEISMIC DESIGN CATEGORY:	B
SEISMIC SITE CLASSIFICATION:	D
SEISMIC COEFFICIENT (Cs):	0.22
SEISMIC MODIFICATION FACTOR (R):	1.5
BASE SHEAR:	7.77K
ANALYSIS PROCEDURE:	EQUIV. LATERAL FORCE
BASIC SFRS:	ORDINARY MASONRY WALLS.

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STRUCTURAL  
NOTES