

Description of Property: Please describe the building and surrounding environment. Include information on significant structures, landscape features, or other significant features of the property:

Description of Work Proposed: Please give an overview of the work to be undertaken:

Work Item 1: _____	
Description of Current Condition:	Proposed Work:

Work Item 2: _____	
Description of Current Condition:	Proposed Work:

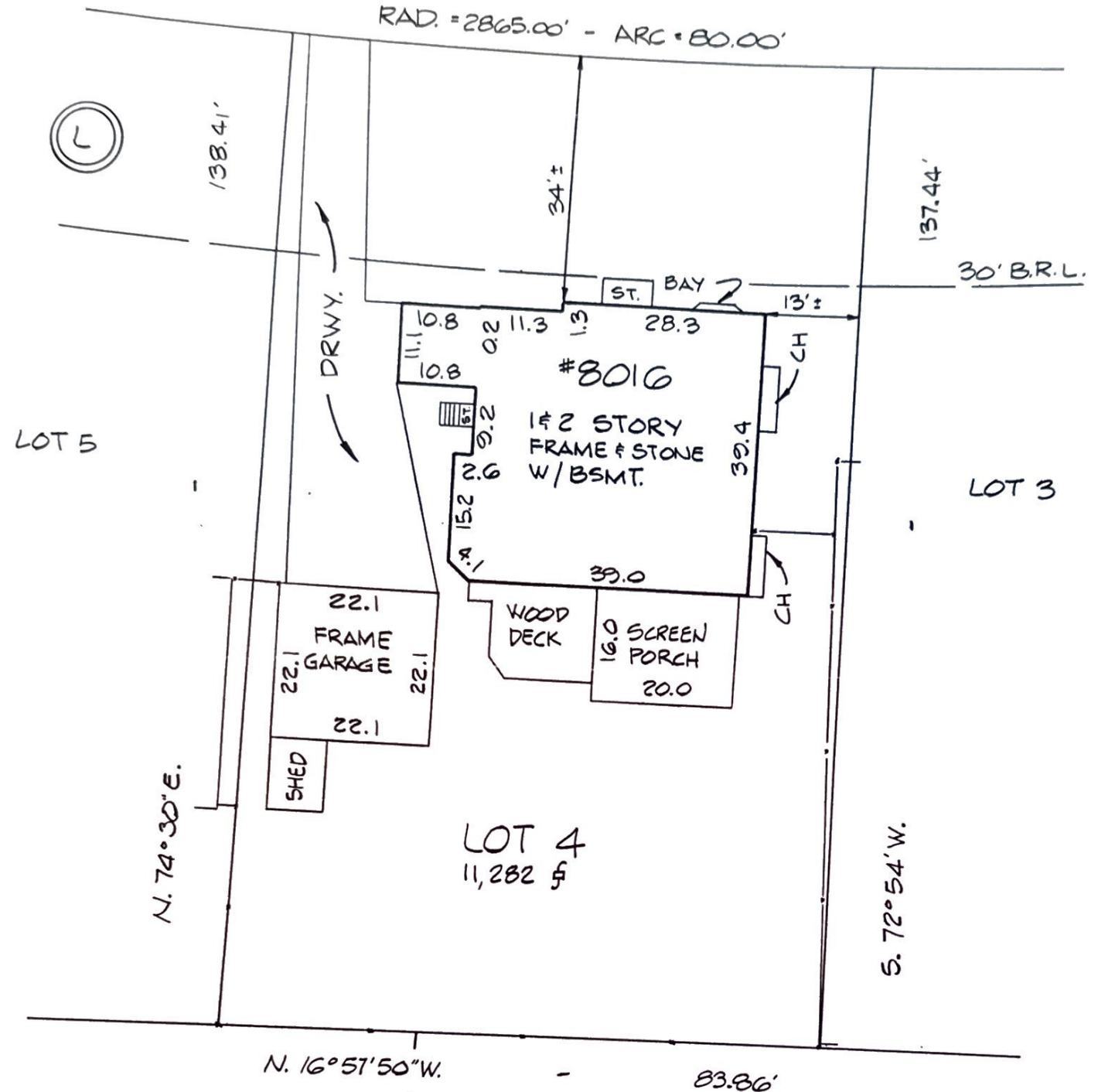
Work Item 3: _____	
Description of Current Condition:	Proposed Work:

**HISTORIC AREA WORK PERMIT
CHECKLIST OF
APPLICATION REQUIREMENTS**

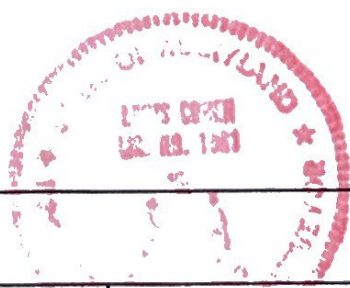
	Required Attachments						
Proposed Work	I. Written Description	2. Site Plan	3. Plans/ Elevations	4. Material Specifications	5. Photographs	6. Tree Survey	7. Property Owner Addresses
New Construction	*	*	*	*	*	*	*
Additions/ Alterations	*	*	*	*	*	*	*
Demolition	*	*	*		*		*
Deck/Porch	*	*	*	*	*	*	*
Fence/Wall	*	*	*	*	*	*	*
Driveway/ Parking Area	*	*		*	*	*	*
Grading/Excavation/ Landscaping	*	*		*	*	*	*
Tree Removal	*	*		*	*	*	*
Siding/ Roof Changes	*	*	*	*	*		*
Window/ Door Changes	*	*	*	*	*		*
Masonry Repair/ Repoint	*	*	*	*	*		*
Signs	*	*	*	*	*		*

HAMPDEN LANE

RAD. = 2865.00' - ARC = 80.00'



Note: This property does not lie within the limits of a flood hazard area as delineated on the maps of the National Flood Insurance Program, unless otherwise shown.
 NOTE: This survey prepared for title purposes only.



CAPITOL SURVEYS

NOTE: This drawing is not intended to establish property lines. It cannot be used for construction purposes. All information shown hereon taken from the land records of the county or city in which the property is located and field work performed.

HOUSE LOCATION
 LOT 4 BLOCK L
GREENWICH FOREST
 MONTGOMERY COUNTY, MARYLAND
 Recorded in Plat Book 10 Plat 722 Scale 1" = 20'

I hereby certify that the position of all the existing improvements on the above described property have been established by accepted field practices, and that unless otherwise shown there are no visible encroachments.

Louis Cohen
 LOUIS COHEN
 Registered Land Surveyor
 Maryland No. 1961

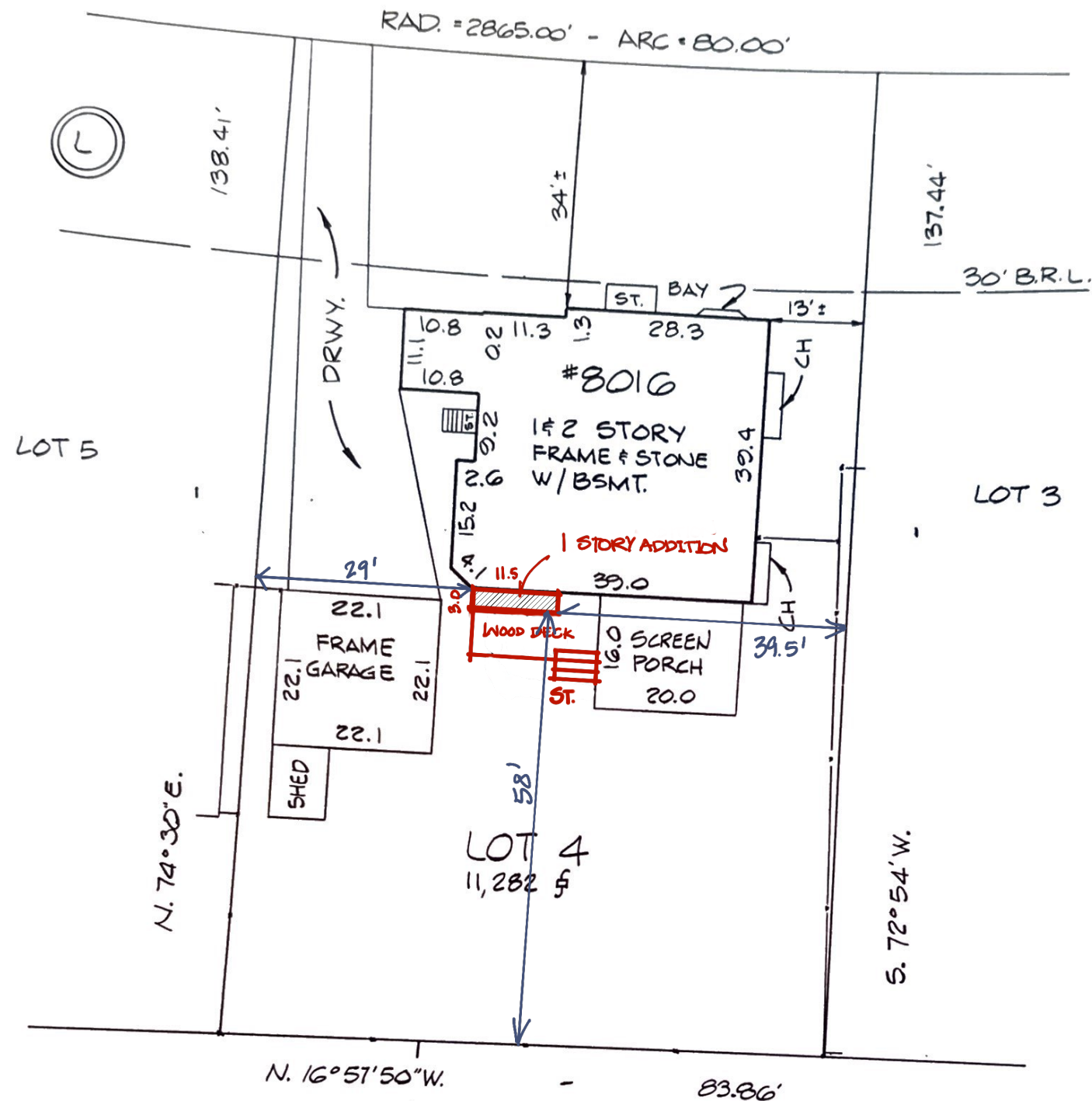
DATE: NOV. 15, 1993

CASE: 2498-93

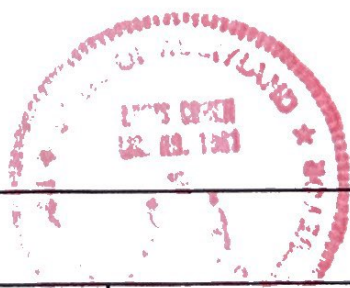
FILE: 48755

HAMPDEN LANE

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GREENWICH FOREST
 MONTGOMERY COUNTY, MARYLAND

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 Registered Land Surveyor
 Maryland No. 1961

DATE: NOV. 15, 1993

CASE: 2498-93

FILE: 48755

8016 hampden lane

BETHESDA, MARYLAND 20814



STRUCTURAL ENGINEER:
JZ Structural Consulting
43130 Amberwood Plaza
Suite 235
Chantilly, VA 20152
(703) 327-9912

BUILDER:
Bethesa Contracting
4304 East-West Hwy
Bethesda, MD 20814
(301) 656-9020

HAMPDEN LANE HOUSE
ADDITION | RENOVATION
8016 HAMPDEN LANE
BETHESDA, MARYLAND
20814

DATE ISSUE
02.04.26 PERMIT SET

COVER SHEET
INFO | INDEX

A-001

ADDITION | RENOVATION

PROPERTY INFORMATION

OWNERS: PARETZKY, RAYMOND P.
ZACHARIA, KAREN
MAILING ADDRESS: 8016 HAMPDEN LANE, BETHESDA, MD 20814
DEED REFERENCE: 12077 / 00725
PROPERTY LOCATION: 8016 HAMPDEN LANE, BETHESDA, MD 20814
LEGAL DESCRIPTION: GREENWICH FOREST
MAP: HN13
GRID: 0000
PARCEL: 0000
NEIGHBORHOOD: 7020026.16
SUBDIVISION: 0026
BLOCK: L
LOT: 4
LAND USE CODE: SINGLE FAMILY, DETACHED
LAND AREA: 11,282 SQ. FT.
ZONE:

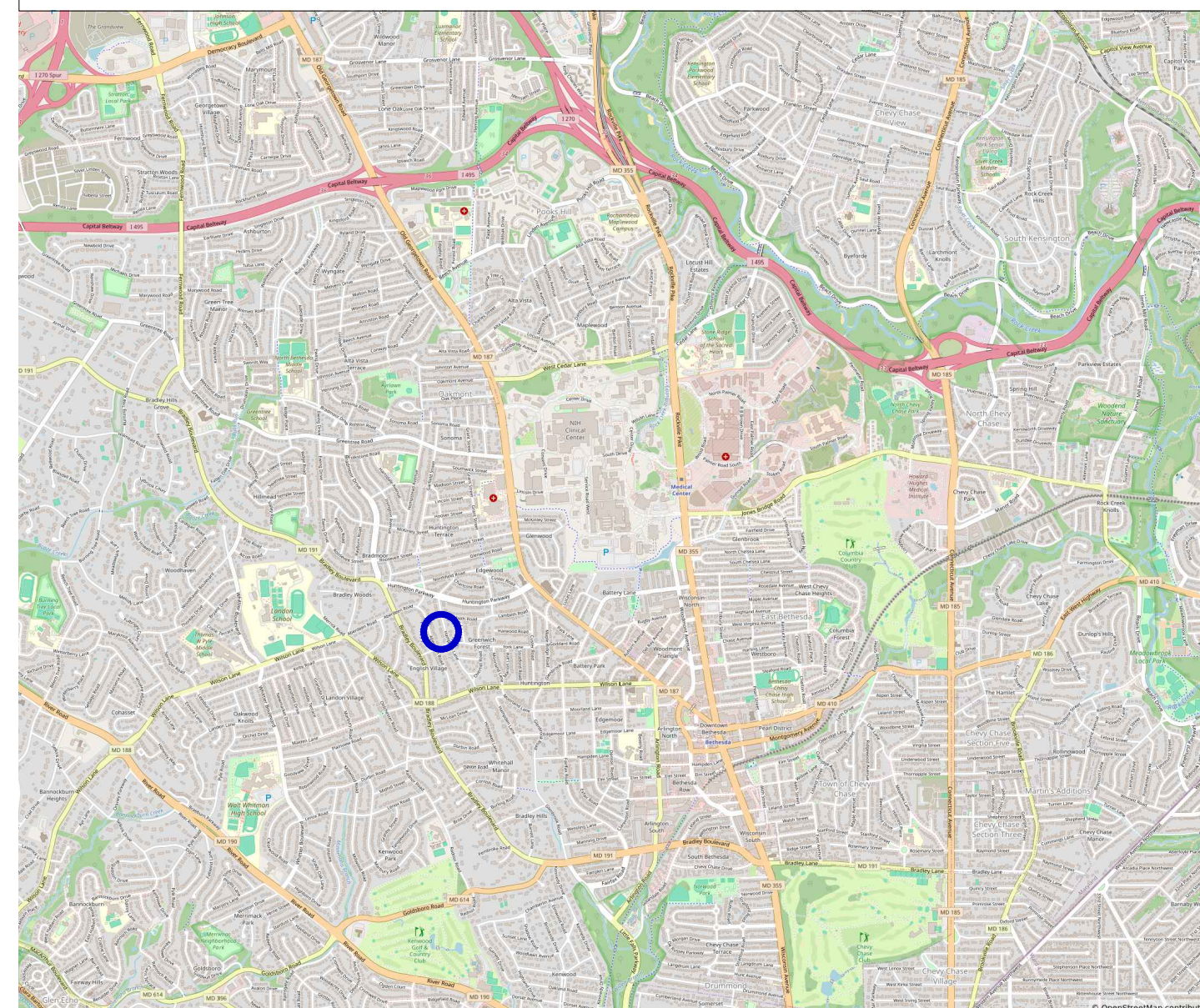
PRIMARY BUILDING
USE: SINGLE FAMILY DWELLING (111)
STORIES: 2
TYPE: STANDARD UNIT
EXTERIOR: FRAME
BASEMENT: YES
YEAR BUILT: 1937
ABOVE GRADE LIVING AREA: 3,181 SQ. FT.
FINISHED BASEMENT AREA: 470 SQ. FT.
BATHROOMS: 4 FULL / 1 HALF
GARAGE: 1 DETACHED

LOCAL DESIGN PARAMETERS

Residential Construction Design Parameters											
Ground Snow Load	Wind Speed	Seismic Design Category	Subject To Damage From				Winter Design Temp.	Ice Shield Underlayment Required	Flood Hazards	Air Freezing Index	Mean Annual Temp.
			Weathering	Frost Line Depth	Termite	Decay					
30 PSF (1.4 kN/m ²)	115 mph (185 km/hr)	B	Severe	30 in (610 mm)	Moderate to heavy	Slight to moderate	13°F (-10.6°C)	Yes	a) July 18, 1975 b) September 29, 2006 c) See note	300	55°F (12.8°C)

LOCATION PLAN

NOT TO SCALE



CODE INFORMATION

THIS PROJECT WAS DESIGNED ACCORDING TO THE MONTGOMERY COUNTY CODE CHAPTER 8- BUILDINGS. THESE LOCAL BUILDING CODES REFERENCE THE FOLLOWING 2021 INTERNATIONAL CODES AS PUBLISHED BY THE INTERNATIONAL CODE COUNCIL.

2021 INTERNATIONAL RESIDENTIAL CODE (IRC)
2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
2021 IRC & IEBC AMENDMENTS 13-24
2021 INTERNATIONAL ENERGY CONSERVATION CODE
2021 INTERNATIONAL FUEL AND GAS CODE
2021 INTERNATIONAL MECHANICAL CODE
NFPA 70 NATIONAL ELECTRICAL CODE / 2017
MONTGOMERY COUNTY CODE CHAPTER 8- BUILDINGS

SQUARE FOOTAGE

8016 Hampden Lane	Area (sf)	Lot Coverage (%)
House		
Existing House	2119	
Proposed Addition	35	
Total House	2154	19.1%
Proposed Hardscape	134	
Total w/ Hardscape	2288	20.3%
Site	11,282	
Accessory Bldgs		
Garage	488	
Shed	120	Need to confirm this size (not dimensioned on the plat)
Total Accessory	608	5.4%
Total Lot Coverage	24.5% (House + Accessory Structures)	25.7% (House + Hardscape + Accessory Structures)

GENERAL CONDITIONS

PROVISIONS

EXISTING CONDITIONS:

The Contractor shall, during the course of the Work, provide and maintain adequate protection for the interior of the existing residence or project, including floors, walls, and openings. Existing conditions and work remaining in place during construction under this Contract shall be restored to the condition prevailing at the time of the Contract award. The Contractor shall protect the adjoining property from damage.

CLEANING UP:

The building and grounds shall be kept clean at all times. Trash and debris shall be removed daily and disposed of in legal landfill for the type of trash and debris being disposed of, or in recycling facility as appropriate. Contractor shall replace all broken glass; remove stains, spots, marks, and dirt from decorated work; clean all hardware and fixtures; and wash all tile and floors. The Contractor shall also comply with all special cleaning instructions contained in the Specifications. After completion of the contract and prior to receiving final payment, the Contractor shall remove from the premises all trash, tools, equipment, and excess materials. The building and grounds shall be left in clean condition.

UNCOVERING OF WORK: In addition to work required by the specifications to be left uncovered for the Architect's observation, the following work shall be left uncovered for his observation - Underground Piping, Interior Mechanical and Electrical, Sub-grade for Footings, Concrete Reinforcement, Base for Slabs, Waterproofing, Sub-grade for Pavements, Roof Decks and Roof Insulation. The Architect shall be notified at least five working days in advance of the time when the work will be ready for observation and shall either make his observation promptly or notify the Contractor that the work may be covered.

CONTRACT STANDARDS AND PROCEDURES

CONTRACT DOCUMENTS

The Drawings and Specifications herein provide graphic and written requirements for execution of the Work by the Contractor. They are intended to be used together and share equal force. Any discrepancies between them shall be reported to the Architect prior to commencing work. Where information is not provided, such as size, gauges, fasteners, spacing of members, and other similar specifications, it shall be the Contractor's sole responsibility to provide a code compliant installation in accordance with the manufacturer's recommendation.

DO NOT SCALE DRAWINGS. Refer to dimensions only. Verify new dimensions prior to installation of any work. Coordinate work in any area with the work of the other trades prior to any work. If dimensions are in question, the Contractor shall be responsible for obtaining clarification from the Architect before proceeding. All dimensions are to framing face, face of masonry, or centerline of columns unless otherwise indicated. All dimensions are given in feet and inches unless otherwise noted. Dimensions and notes for a given condition are typical for similar conditions unless otherwise noted or indicated. Titles, captions, headings, etc. are intended for general reference and are not intended to limit the work required in any way.

RECORD DRAWINGS: Contractor shall maintain on site a complete set of construction documents for the purpose of checking and recording all work, including changes in sizes locations and dimensions as well as any resulting from Change Orders, Bulletins or Field Orders. Record all concealed mechanical and electrical services by color code, including pipe, conduit, wire and cables and valves exactly as they are installed. Record principal dimensions of concealed work and any special notations such as valve numbers.

CONTRACT EXECUTION

All work shall be performed in strict compliance with all federal, state, and local codes and standards as adopted by governing jurisdictions. The Contractor shall be responsible for executing the Work as drawn and specified in the Contract Documents and shall be liable for any approved deviation from the Drawings and Specifications herein. The Contractor shall have the sole responsibility and control over construction means, methods, sequences, techniques, and coordination of all portions of the Work. The Contractor shall visit the site prior to commencing Work to take field measurements and verify field dimensions for horizontal and vertical control and shall report any discrepancies to the Architect. The Contractor shall be responsible for verifying field measurements before ordering materials and prefabricated items. Any necessary adjustments between field measurements and drawings shall be coordinated with the Architect. All specified products and systems shall be installed according to manufacturer's written instructions including, but not limited to, instructions regarding preparation of substrates and adjoining construction, weather conditions, and protection after installation. Work delineated in the construction documents is for reference and location purposes only unless otherwise indicated. Refer to appropriate consultant's drawings and Project Manual for specific information pertaining to those trades and equipment. Each contractor shall coordinate his work with the work of others. He shall keep himself informed of the progress and detail of others and shall be responsible for coordinating and expediting his work with that of others so that the progress of the total work shall be kept on schedule. Each contractor and/or trade fitting or placing his work into the work of others shall do so with the understanding that the installation of his work constitutes his acceptance of the suitability of the work in place. If the work of others is not acceptable for the installation of his work, he shall notify the Contractor. That work installed in the existing work of others that was unsuitable for such installation shall be the responsibility of the contractor and/or trade installing the work. No claims for additional compensation for bringing one's work into an acceptable condition for the installation of the work of others or correcting work installed in an unsuitable condition will be considered. No claims for additional compensation for bringing one's own work into compliance with local codes and regulations and/or these Contract Documents will be considered.

SHOP DRAWINGS

Architect will review Shop Drawings, product data and samples. He/She shall mark each such submittal as follows:

- APPROVED: Where no comment is made.
- APPROVED AS NOTED: Where comments indicate on submittal qualifying, modifying, or otherwise changing it; however, submittal can be used for ordering, fabrication and erection at Contractor's own risk until revised submittals have been made, reviewed and stamped acceptable.
- REVISE AND RESUBMIT: Submittal does not conform; revise and resubmit.
- REJECTED: The essential nature of the submittal needs to be addressed. Consult w/ Architect.

Approval does not authorize changes in the Contract Documents unless specifically stated in a separate letter or change order.

SAMPLES

Each Contractor shall secure and deliver samples of all materials to be used in the work herein described, as required by the specifications and as reasonably requested by the Architect. All samples shall have the same finish as that to be used in the completed work.

SCHEDULE

DATES: Work shall commence and be substantially completed as provided for in the Contract Documents.

SCHEDULE: Provide data and information regarding work operations, sequences, deliveries, lead times, dates, etc., as the Owner may require. Cooperate with Owner in the development of the schedule.

CLOSING PROCEDURES

FINANCIAL: Contractor shall furnish ample evidence to Architect and Owner that all financial obligations have been met by presenting a notarized Release of Liens from all suppliers and subcontractors. The Contractor shall obtain from his surety (if any) a written statement releasing the Owner and Architect from any and all obligations which might arise out of any unpaid, defaulted or otherwise unsatisfied accounts.

PUNCH LIST: Contractor shall complete and correct all items on the punch list as originally issued and amended. If contemplating application for final payment, the Contractor shall schedule one week in advance with the Architect a joint inspection visit to the project to determine if the contract has been fully executed.

RECORD DRAWINGS: The Contractor shall deliver to the Owner these documents as required.

GUARANTEES:

All guarantees submitted should be executed as required herein. The Contractor will guarantee, for the period of one year from the date of substantial completion, all workmanship and materials, and shall repair or replace at no additional cost to the Owner any part thereof, which may become defective. In addition to his own guarantee, the Contractor shall furnish all of those specified.

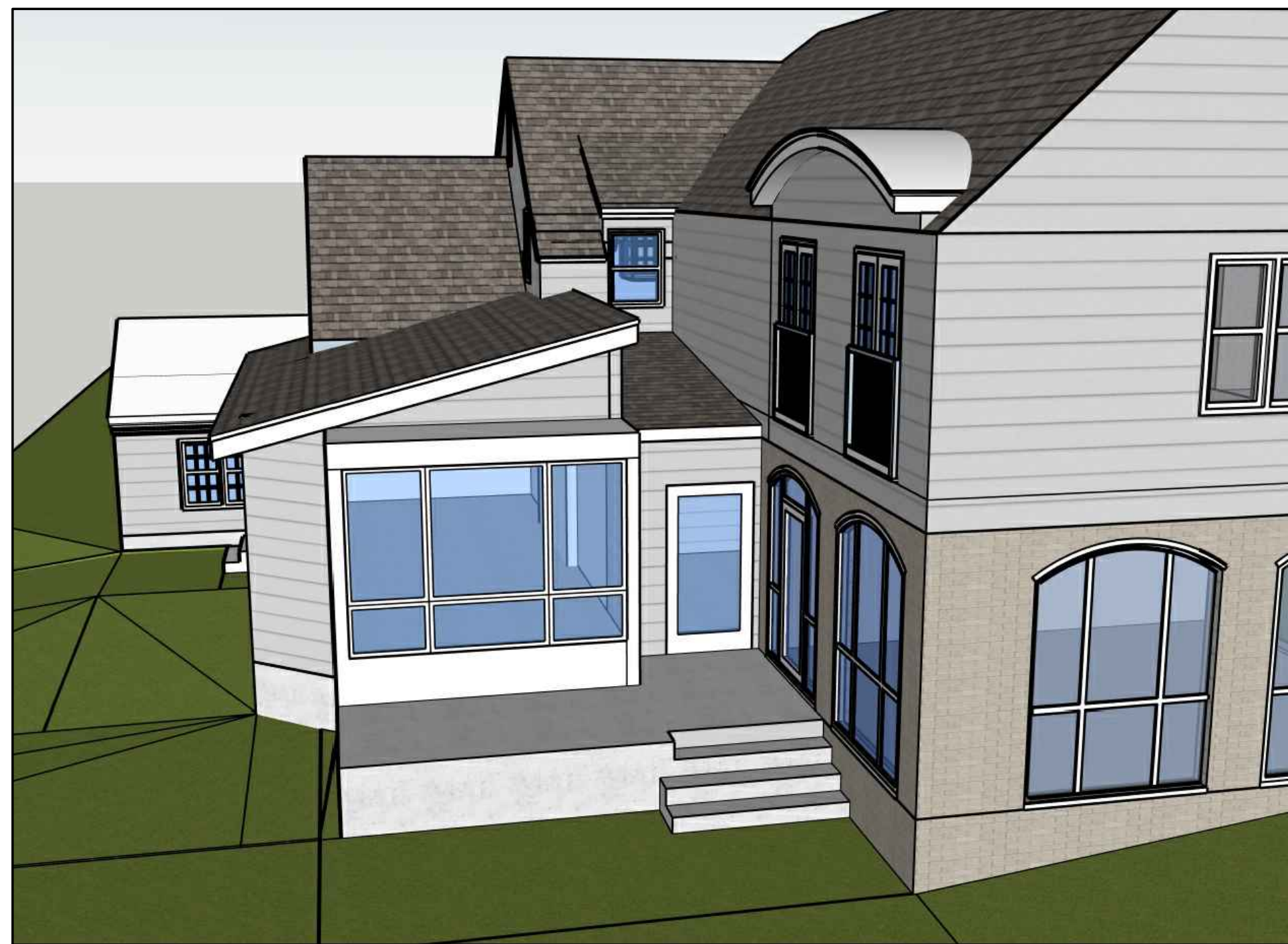
OTHER DOCUMENTS HEREIN: Contractor shall furnish all schedules, instructions, etc., as is necessary to ensure safe and proper operation of the facilities of the building, and as specified herein. Contractor shall furnish reports of any and all tests and the performance of completed systems, as required in the specifications and all certificates of approval.

DRAWING INDEX

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4	A-203	EXISTING + DEMO PLAN - SECOND FLOOR
5	A-204	EXISTING + DEMO PLAN - ROOF
6	A-301	PROPOSED PLAN - BASEMENT
7	A-302	PROPOSED PLAN - FIRST FLOOR
8	A-303	PROPOSED PLAN - SECOND FLOOR
9	A-304	PROPOSED PLAN - ROOF
10	A-401	EXTERIOR ELEVATIONS: EXISTING + PROPOSED
11	A-402	EXTERIOR ELEVATIONS: EXISTING + PROPOSED
12	A-403	EXTERIOR ELEVATIONS: EXISTING
13	A-501	SECTIONS: EXISTING + PROPOSED
14	A-502	SECTIONS: EXISTING
15	S-001	STRUCTURAL NOTES + DETAILS
16	S-002	STRUCTURAL NOTES + DETAILS

INSULATION NOTES

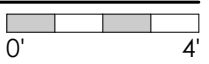
CLIMATE ZONE 4 Energy Efficiency Requirements (2021)					
Location	U-Factor	SHGC	R-Value	This Project	Method
Fenestration	0.30	0.40		0.30 U-Factor 0.40 SHGC	Aluminum Clad Windows + Doors
Skylights	0.55			N/A	
Ceiling			R-60	R-60	Spray Foam Insulation
Floors (Wood-Framing)			R-19	R-19	Spray Foam Insulation
Walls (Wood-Framing)			R-30	R-30	Spray Foam Insulation
Basement Wall			R-13	R-13	Rigid Insulation
Slab			R-13	R-13	Rigid Insulation



2
A-401 EXISTING NORTH (SIDE) ELEVATION
SCALE: 1/4" = 1'-0"

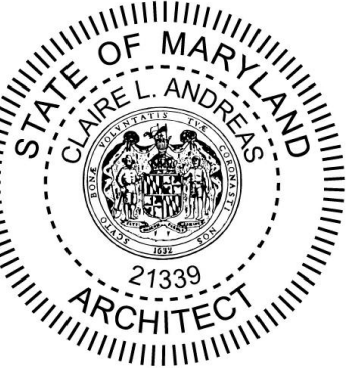


2
A-401 PROPOSED NORTH (SIDE) ELEVATION
SCALE: 1/4" = 1'-0"



PROFESSIONAL CERTIFICATION
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME,
AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NUMBER: 21339
EXPIRATION DATE: 11.20.2026

CLA
STUDIO
7923 Spotswood Drive
Alexandria, VA
22308
(571) 243-5769
claire@studio_cla.com



STRUCTURAL ENGINEER:
JZ Structural Consulting
43130 Amberwood Plaza
Suite 235
Chantilly, VA 20152
(703) 327-9912

BUILDER:
Bethesa Contracting
4304 East-West Hwy
Bethesda, MD 20814
(301) 656-9020

**HAMPDEN LANE HOUSE
ADDITION | RENOVATION**
8016 HAMPDEN LANE
BETHESDA, MARYLAND
20814

DATE: 02.04.26
ISSUE: PERMIT SET

**BUILDING ELEVATION
EXISTING & PROPOSED**

A-401

INSULATION NOTES

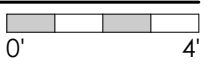
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Fenestration	0.30	0.40		0.30 U-Factor 0.40 SHGC	Aluminum Clad Windows + Doors
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Floors (Wood-Framing)			R-19	R-19	Spray Foam Insulation
Walls (Wood-Framing)			R-30	R-30	Spray Foam Insulation
Basement Wall			R-13	R-13	Rigid Insulation
Slab			R-13	R-13	Rigid Insulation



1
A-402 EXISTING WEST (REAR) ELEVATION
SCALE: 1/4" = 1'-0"



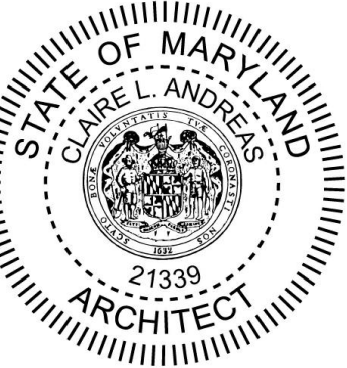
2
A-402 PROPOSED WEST (REAR) ELEVATION
SCALE: 1/4" = 1'-0"



PROFESSIONAL CERTIFICATION
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME,
AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NUMBER: 21339
EXPIRATION DATE: 11.20.2026

CLA
STUDIO
7923 Spotswood Drive
Alexandria, VA
22308
(571) 243-5769
claire@studio_cla.com

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STUDIO CLA, LLC



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43130 Amberwood Plaza
Suite 235
Chantilly, VA 20152
(703) 327-9912

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**HAMPDEN LANE HOUSE
ADDITION | RENOVATION**
8016 HAMPDEN LANE
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20814

DATE	ISSUE
02.04.26	PERMIT SET

**BUILDING ELEVATION
EXISTING & PROPOSED**

A-402



STRUCTURAL ENGINEER:
 JZ Structural Consulting
 43130 Amberwood Plaza
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 Chantilly, VA 20152
 (703) 327-9912

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**HAMPDEN LANE HOUSE
 ADDITION | RENOVATION**
 8016 HAMPDEN LANE
 BETHESDA, MARYLAND
 20814

DATE ISSUE
 02.04.26 PERMIT SET

**BUILDING ELEVATIONS
 EXISTING**

A-403



2
 A-403 SCALE: 1/4" = 1'-0"
EXISTING EAST (FRONT) ELEVATION



1
 A-403 SCALE: 1/4" = 1'-0"
EXISTING SOUTH (SIDE) ELEVATION



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 (301) 656-9020

**HAMPDEN LANE HOUSE
 ADDITION | RENOVATION**
 801 1/2 HAMPDEN LANE
 BETHESDA, MARYLAND
 20814

DATE ISSUE
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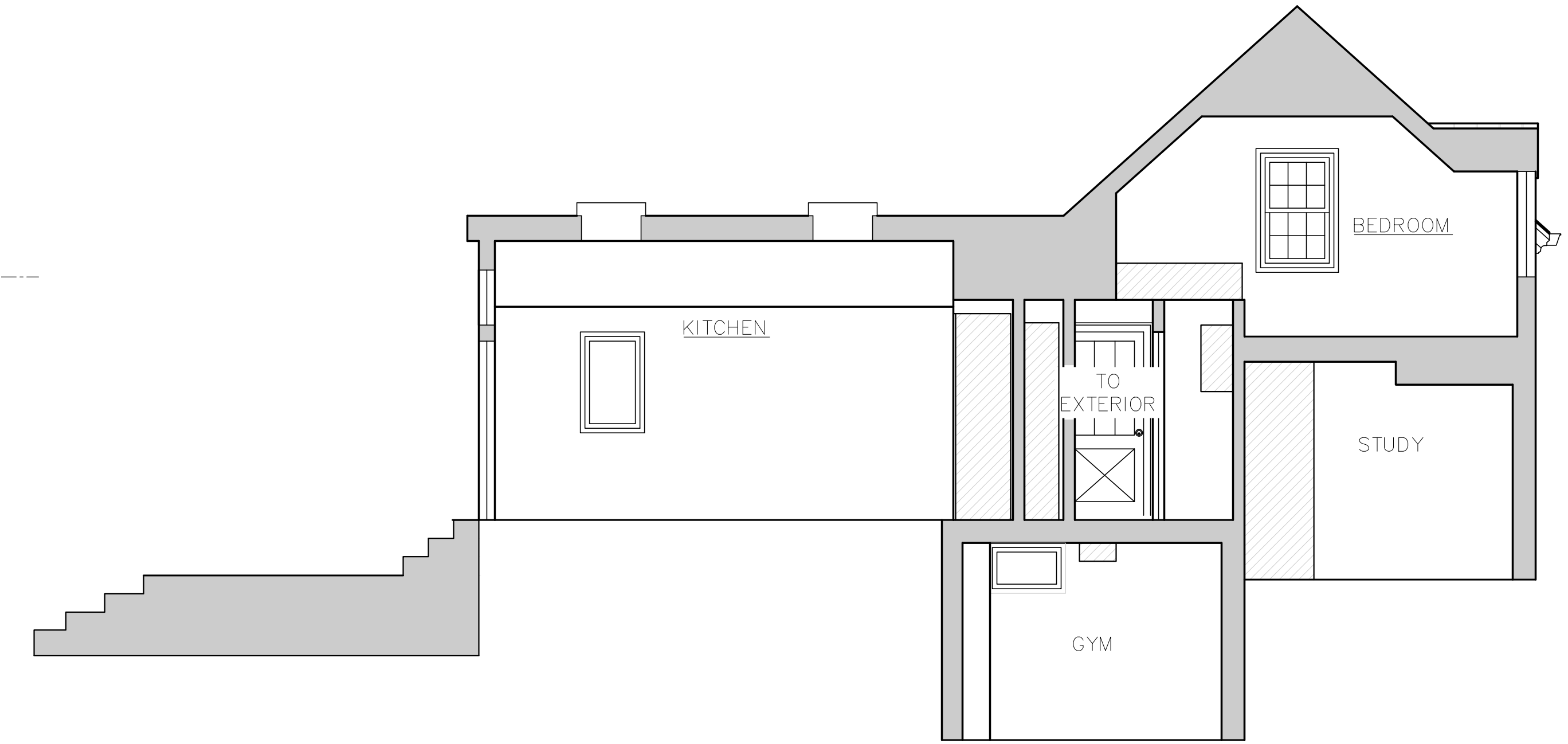
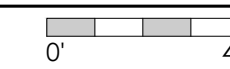
**BUILDING ELEVATION
 EXISTING & PROPOSED**

A-501



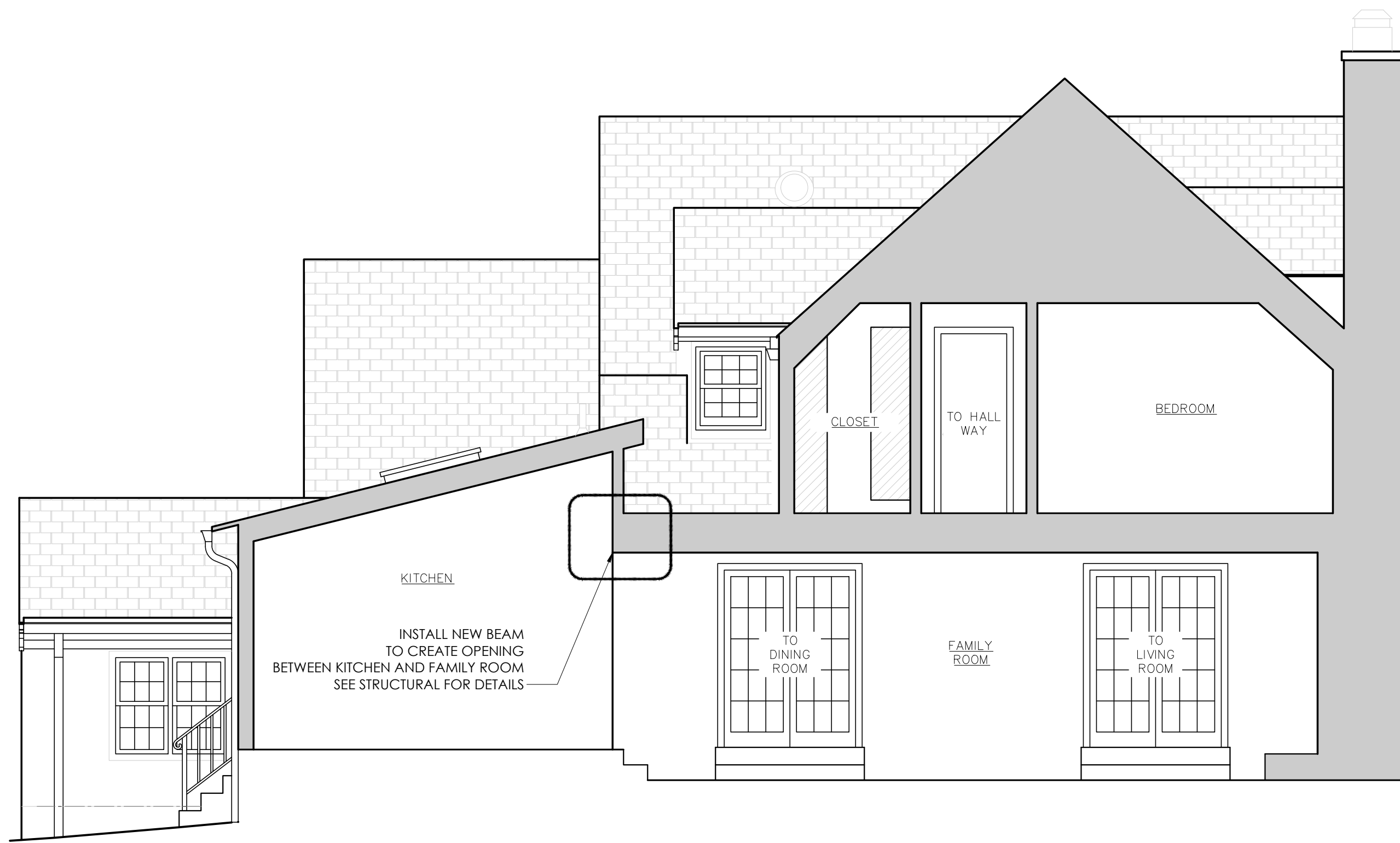
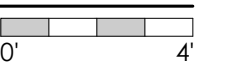
2 EXISTING BUILDING SECTION

A-501 SCALE: 1/4" = 1'-0"



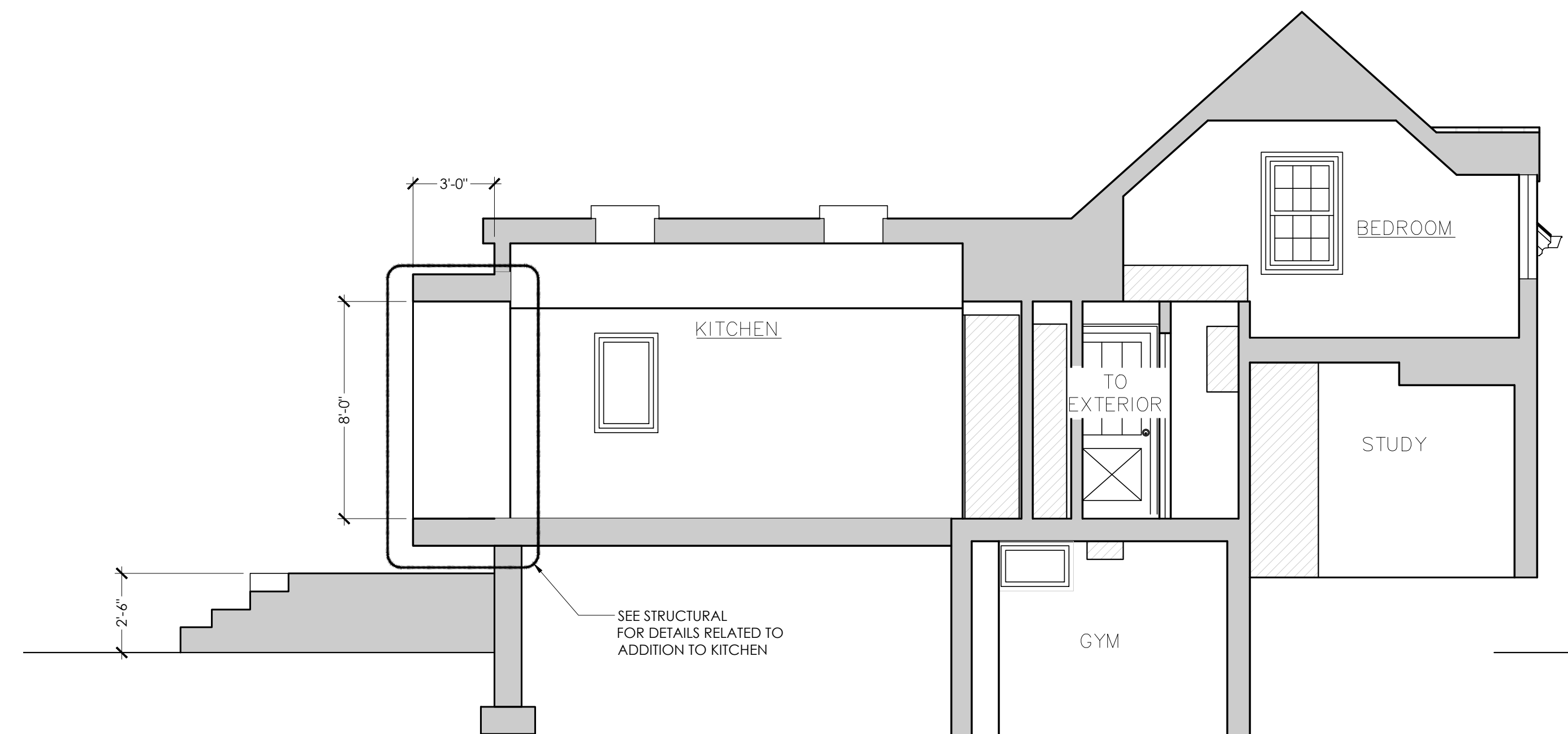
1 EXISTING BUILDING SECTION

A-501 SCALE: 1/4" = 1'-0"



4 PROPOSED BUILDING SECTION

A-501 SCALE: 1/4" = 1'-0"



3 PROPOSED BUILDING SECTION

A-501 SCALE: 1/4" = 1'-0"





STRUCTURAL ENGINEER:
 JZ Structural Consulting
 43130 Amberwood Plaza
 Suite 235
 Chantilly, VA 20152
 (703) 327-9912

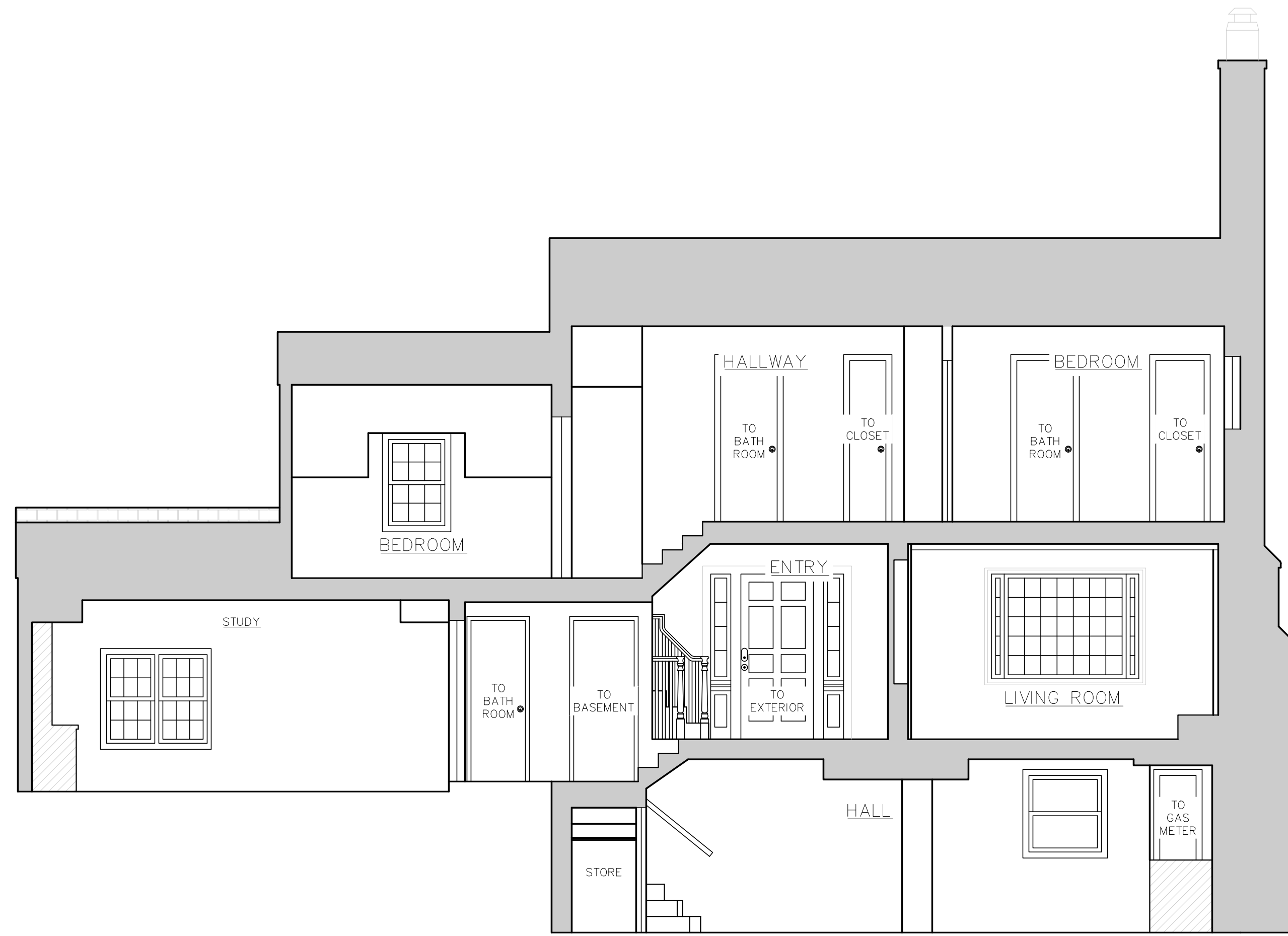
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**HAMPDEN LANE HOUSE
 ADDITION | RENOVATION**
 801 & HAMPDEN LANE
 BETHESDA, MARYLAND
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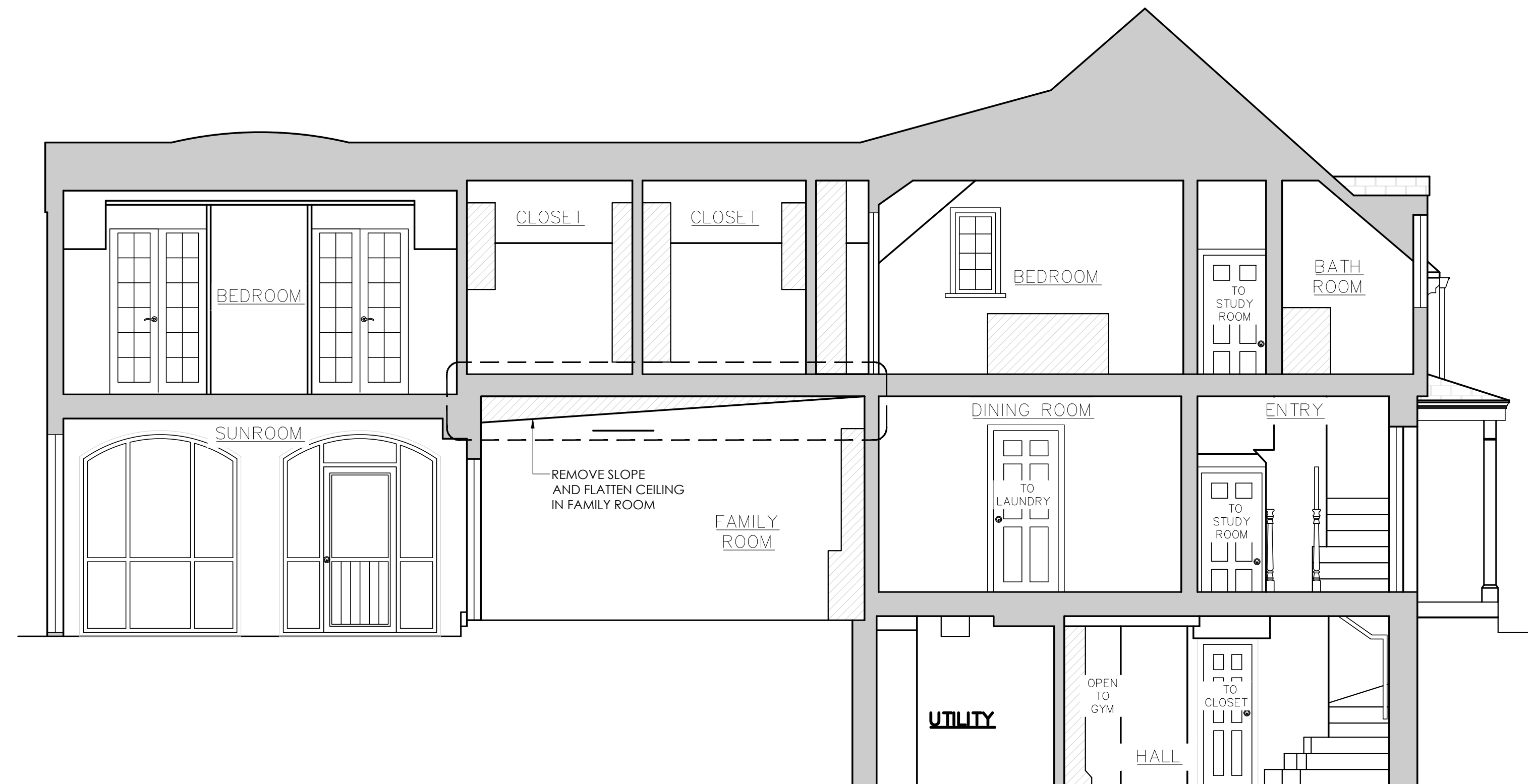
**BUILDING ELEVATION
 EXISTING & PROPOSED**

A-502



2 EXISTING BUILDING SECTION
 A-502 SCALE: 1/4" = 1'-0"

1 EXISTING BUILDING SECTION
 A-502 SCALE: 1/4" = 1'-0"



3 PROPOSED BUILDING SECTION
 A-502 SCALE: 1/4" = 1'-0"



COMPOSITE WOOD/PLASTIC RAILING

Display hidden notes to specifier by using the Show/Hide button or Tools/Options/view/formatting marks/hidden text. Erase hidden text instructions prior to printing.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Composite decking/Railing.

1.2 RELATED SECTIONS

- A. Section 06-1100 - Wood Framing.

1.3 REFERENCES

- A. ASTM D 7032-04 Standard Specification for Establishing Performance Ratings Wood-Plastic Composite Deck Boards and Guardrail Systems.
- B. ICC-ES Acceptance Criteria AC-174 Acceptance Criteria for Deck Board Span Rating and Guardrail Systems.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

Structural Performance:

RadianceRail and BuilderRail systems performance meets or exceeds design loading specified in Chapter 16 of the IBC, Section R301 of IRC, and UBC Chapter 16 when tested in accordance with ICC-ES AC174.

- A. Fire-Test-Response Characteristics per ASTM E-84:

1.5 SUBMITTALS

- A. Product Data: Indicate sizes, profiles.

- B. Samples:

- 1.) RadianceRail

- a) 1- 8" Top Rail (Classic Black, Coastal White, Mountain Cedar, RiverRock, or SandRidge)

- b.) 2- 4" Coastal White Support Rail

- c.) 1- 4" Baluster Coastal White

- d.) 1-4" Coastal White Bottom Rail
- 2.) BuilderRail
 - a.) 2- 4" BuilderBoards (Cedar, Grey, or Redwood)
 - b.) 1-4" Black Classic Metal Baluster
 - c.) 1-4" 5/4 Deck Plank (Cedar, Grey, or Redwood)

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Storage and Handling:
 1. Never dump TimberTech materials when unloading.
 2. Store on a flat surface and cover with non-translucent material.
 3. When carrying TimberTech planks, carry on edge for better support.
 4. Refer to installation instructions for additional guidelines on each product.

1.7 WARRANTY

- A. Warranty: Limited Residential Warranty against rot, decay, splitting, checking, splintering, or termite damage for a period of 25 years beginning from date of purchase under normal conditions of use and exposure.
- B. Warranty: Metal Balusters- Limited Residential Warranty for a period of 10 years beginning from date of purchase under normal conditions of use and exposure.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on products by: TimberTech Limited, 894 Prairie Avenue, Wilmington, Ohio 45177.
- B. Substitutions: Not permitted under Division 01.

2.2 APPLICATIONS/SCOPE

- A. Wood/Plastic Composite Lumber:
 1. Material Description: Composite plank consisting of high density polyethylene (HDPE) and wood flour, extruded into profiles and lengths indicated for the following rail systems:
 - RadianceRail** (36" or 42" Heights)
 - a.) Top Rail -6'-0" or 8'-0" lengths (Classic Black, Coastal White, Mountain Cedar, RiverRock, or SandRidge).
 - b.) Support Rail -6'-0" or 8'-0" lengths (Coastal White)
 - c.) Baluster- available for standard 36" and 42" rail heights and stair (34"-38") heights (Classic Black, Coastal White, Mountain Cedar, RiverRock, or SandRidge).
 - d.) Bottom Rail-6'-0" or 8'-0" lengths (Coastal White)
 - e.) Foot Blocks- (Classic Black, Coastal White, Mountain Cedar, RiverRock, or SandRidge)
 - f.) Mounting hardware provided.

BuilderRail (36" or 42" Heights)

- a.) BuilderBoards -6'-0" or 8'-0" lengths (Cedar, Grey, or Redwood)
- b.) Black Classic Metal Baluster- available for 36" and 42" rail heights and stair (34"-38") heights
- c.) 5/4 Deck Plank- **NOT INCLUDED** (Cedar, Grey, or Redwood)
- d.) Foot Blocks-(Cedar, Grey, or Redwood)
- e.) Mounting hardware provided

2.3 ACCESSORIES

Post Covers

- A. Post Skirts
- B. Post Caps

PART 3 EXECUTION

3.1 EXAMINATION

- A. Install according to manufactures instructions.
- B. Cut, and rout using carbide tipped blades.
- C. Pre-drill holes.
- D. Cut ends square.

3.2 CLEANING

- A. Clean surfaces regularly with a composite wood/plastic cleaner such as Corte Clean (www.corteclean.com).
- B. Power wash with a fan tipped nozzle in the direction of the grain of the planks with a maximum of 1500 psi.

END OF SECTION

This Product MasterSpec Section is licensed by Deltek, Inc. to AZEK Building Products ("Licensee").

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For more information, contact AZEK Building Products, 1330 W. Fulton St., Suite #350, Chicago, IL 60607; Phone: (877) 275-2935; Fax: (570)558-8266; Website: www.azek.com; Email: Dave.Whitlock@azekco.com.

For information about MasterSpec, contact Deltek at (800) 424-5080 or visit masterspec.com.

SECTION 067300 - COMPOSITE DECKING

TIPS:

To view non-printing **Editor's Notes** that provide guidance for editing, click on MasterWorks/Single-File Formatting/Toggle/Editor's Notes.

To read **detailed research, technical information about products and materials, and coordination checklists**, click on MasterWorks/Supporting Information.

Access Product MasterSpec Sections:

[<Double click here to view the list of manufacturer Sections available at ProductMasterSpec.com.>](#)

Access BIM Content on BIMsmith Market:

[<Double click here to view products on BIMsmith Market.>](#)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. **[Plastic] [Composite]** decking.
 - 2. Decking fastening system.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for wood framing, furring, blocking, and other carpentry work not exposed to view[**and for framing exposed to view**].
2. Section 062013 "Exterior Finish Carpentry" for cellular PVC trim and mouldings.
3. Section 072500 "Weather Barriers" for flexible flashing used with decking.
4. Section 076200 "Sheet Metal Flashing and Trim" for sheet metal flashing used with decking.

1.3 ACTION SUBMITTALS

- A. Product Data: For **[plastic]** **[composite]** decking and decking fastening system components. Include installation instructions.
- B. Samples: For decking, not less than **24 inches (600 mm)** long, showing the range of variation to be expected in appearance of decking, including surface texture.

1.4 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:
 1. **[Plastic]** **[Composite]** decking.
 2. Decking fastening system.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials under cover and protected from weather and contact with damp or wet surfaces. Stack materials flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.
- B. Handle and store decking materials to comply with manufacturer's written instructions.

1.6 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of decking system that fail in materials or workmanship within specified warranty period.
 1. Failures include, but are not limited to, the following:
 - a. Structural failures, including cracking, splitting, and deforming.
 2. Warranty Period: **[20]** **[10]** years from date of Substantial Completion.
- B. Fade and Stain Warranty: Provide manufacturer's warranty against color fade and permanent staining within warranty period.
 1. Fading is defined as loss of color of more than **[4]** **[5]** Hunter color-difference units as measured in accordance with ASTM D2244.
 2. Warranty Period: **[50]** **[25]** **[20]** years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 DIMENSION LUMBER FRAMING

- A. Deck[**and Stair**] Framing: As specified in Section 061000.

2.2 PLASTIC DECKING

- A. Basis-of-Design Product: Subject to compliance with requirements, provide AZEK Building Products; TimberTech AZEK [**Arbor**] [**Harvest**] [**Porch**] [**Vintage**] Collection or comparable product by one of the following:

1. CertainTeed Corporation.
2. Crawford Industries, LLC.
3. Deceuninck North America.
4. Fiberon.
5. Green Bay Decking.
6. Midwest Manufacturing Extrusion.
7. Millennium Decking Inc.
8. Premium Composites LLC.
9. Rhino Deck.
10. Tamko Building Products, Inc.
11. Thermal Industries, Inc.
12. TimberTech.
13. Trex Company, Inc.
14. Universal Forest Products, Inc.
15. Weyerhaeuser Company.
16. <Insert manufacturer's name>.

- B. All-Plastic Decking: Solid capped four-sided shapes made from HDPE, PVC, polystyrene, or cellular PVC; with no cellulose fiber.

1. Decking Standard: ICC-ES AC174.
2. Decking Size: [**1 by 3-1/8 inches (25 by 79 mm) actual**] [**1 by 3-1/2 inches (25 by 88 mm) actual**] [**1 by 5-1/2 inches (25 by 140 mm) actual**] [**1 by 7-1/4 inches (25 by 188 mm) actual**].
3. Decking Length: [**10 ft. (3.05 m) actual**] [**12 ft. (3.66 m) actual**] [**16 ft. (4.88 m) actual**] [**20 ft. (6.10 m) actual**].
4. Configuration: Provide product with [**grooved edges designed for fastening with concealed decking fasteners**] [or] [square edges].
5. Surface Texture: [**Brushed**] [**Embossed woodgrain**].
6. Color: [**As indicated by manufacturer's designations**] [**Match Architect's Sample**] [**As selected by Architect from manufacturer's full range**] <Insert color>.
7. Fascia Board: **1/2 by 11-3/4 inches by 12 ft. (12.7 by 298.5 mm by 3.66 m) actual** matching decking color.

2.3 COMPOSITE DECKING

- A. Basis-of-Design Product: Subject to compliance with requirements, provide AZEK Building Products; TimberTech **[EDGE Premier]** **[EDGE Prime]** **[EDGE Prime+]** **[PRO Legacy]** **[PRO Reserve]** **[PRO Terrain]** or comparable product by one of the following:
1. CertainTeed Corporation.
 2. Crawford Industries, LLC.
 3. Deceuninck North America.
 4. Fiberon.
 5. Green Bay Decking.
 6. Midwest Manufacturing Extrusion.
 7. Millennium Decking Inc.
 8. Premium Composites LLC.
 9. Rhino Deck.
 10. Tamko Building Products, Inc.
 11. Thermal Industries, Inc.
 12. TimberTech.
 13. Trex Company, Inc.
 14. Universal Forest Products, Inc.
 15. Weyerhaeuser Company.
 16. **<Insert manufacturer's name>**.
- B. Composite Decking: Solid capped **[four]** **[three]**-sided shapes made from a mixture of cellulose fiber and polyethylene or polypropylene.
1. Decking Standard: ICC-ES AC174.
 2. Decking Size: **[0.94 by 5.36 inches (24 by 136 mm) actual]** **[0.89 by 5.36 inches (23 by 136 mm) actual]** **<Insert dimensions>**.
 3. Decking Length: **[10 ft. (3.05 m) actual]** **[12 ft. (3.66 m) actual]** **[16 ft. (4.88 m) actual]** **[20 ft. (6.10 m) actual]**.
 4. Configuration: Provide product with **[grooved edges designed for fastening with concealed decking fasteners]** **[square shouldered edges designed for face connectors]** and **[full]** **[scalloped]** profile.
 5. Surface Texture: **[Brushed]** **[Embossed woodgrain]**.
 6. Color: **[As indicated by manufacturer's designations]** **[Match Architect's Sample]** **[As selected by Architect from manufacturer's full range]** **<Insert color>**.
 7. Fascia Board: **0.94 by 12 inches by 12 ft. (12.7 by 298.5 mm by 3.66 m)** matching decking color.
 8. Stair Riser Board: **0.94 by 7.25 inches by 12 ft. (24 by 184 mm by 3.67 m)** actual matching decking color.

2.4 DECKING FASTENING SYSTEM

- A. Basis-of-Design Product: Subject to compliance with requirements, provide AZEK Building Products; **[CONCEALoc]** **[Cortex]** **[FUSIONLoc]** **[SIDELoc]** **[TOPLoc]** or comparable product by one of the following:
1. Blue Heron Enterprises, LLC.
 2. Grabber Construction Products.
 3. Ipe Clip Fastener Company Inc. (The).
 4. KK Mfg. Co., Inc.

5. M. M. Products, Inc.
 6. Titan Metal Werks, Inc.
 7. Ty-Lan Enterprises Inc.
 8. **<Insert manufacturer's name>**.
- B. Concealed Decking Clips: Black-oxide-coated, stainless steel clips designed to secure decking material and provide uniform spacing of decking material.
- C. Fasteners: Stainless steel screws, minimum #7 size, in sufficient length to penetrate not less than **1-1/4 inches (31 mm)** into wood framing substrate.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.

3.3 INSTALLATION

- A. Set work to required levels and lines, with members plumb, true to line, cut, and fitted. Fit work to other construction; scribe and cope as needed for accurate fit.
- B. Install decking[**and stair treads**] in accordance with manufacturer's written instructions.
- C. Secure decking to wood framing with [**concealed deck clips and screws**] [**exposed fasteners**].
- D. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
- E. For exposed work, arrange fasteners in straight rows parallel with edges of members, with fasteners evenly spaced and with adjacent rows staggered.

END OF SECTION 067300

Section 08 52 13 Ultimate Double Hung G2

Part 1 General

1.1 Section Includes

- A. Ultimate Double Hung G2, Single Hung, Transom, Picture window complete with hardware, glazing, certified mulls, weather strip, insect screen, grilles-between-the-glass, simulated divided lite, jamb extension, combination storm/screen, and standard or specified anchors, trim, attachments, factory-applied historic casing(s) and accessories
- B. Ultimate Double Hung G2 Bay, Bow window complete with hardware, glazing, weather strip, insect screen, grilles-between-the-glass, simulated divided lite, jamb extension, combination storm/screen, head/seat board, and standard or specified anchors, trim attachments, and accessories

1.2 Related Sections

- A. Section 01 33 00 – Submittal Procedures; Shop Drawings, Product Data and Samples
- B. Section 01 62 00 – Product Options
- C. Section 01 65 00 – Product Delivery
- D. Section 01 66 00 – Storage and Handling Requirements
- E. Section 01 71 00 – Examination and Preparation
- F. Section 01 73 00 - Execution
- G. Section 01 74 00 – Cleaning and Waste Management
- H. Section 01 76 00 – Protecting Installed Construction
- I. Section 06 22 00 – Millwork: Wood trim other than furnished by window manufacturer
- J. Section 07 92 00 – Joint Sealant: Sill sealant and perimeter caulking
- K. Section 09 90 00 – Painting and Coasting: Paint and stain other than factory-applied finish

1.3 References

- A. American Society for Testing Materials (ASTM):
 - 1. E283: Standard Test method for Rate of Air Leakage through Exterior Windows, Curtain Walls and Doors
 - 2. E330: Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Door by Uniform Static Air Pressure Difference

- 3. E547: Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Cyclic Static Air Pressure Differential
- E2112: Standard Practice for Installation of Exterior Windows, Doors, and Skylights
- E2190: Specification for Sealed Insulated Glass Units
- C1036: Standard Specification for Flat Glass
- E2068: Standard Test Method for Determination of Operating Force of Sliding Windows and Doors
- E 1996: Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Storm Shutters Impacted by Windborne Debris in Hurricanes
- 4. E 1886: Standard Test method for Performance of Exterior Windows, curtain Walls, and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials
- 5. F 2090-17: Standard Specifications for Windows Fall Prevention Devices with Emergency Escape (egress) Release Mechanisms
- B. American Architectural Manufacturer's Association/Window and Door Manufacturer's Association (AAMA/WDMA/CSA):
 - 6. AAMA/WDMA/CSA 101/I.S.2/A440-08, Standard/Specification for windows, doors and skylights
 - 7. AAMA/WDMA/CSA 101/I.S.2/A440-11, Standard/Specification for windows, doors and skylights
 - 8. AAMA 450-10, Voluntary Performance Rating Method for Muller Fenestration Assemblies
- C. WDMA I.S.4: Industry Standard for Water Repellant Preservative Treatment for Millwork
- D. Window and Door Manufacturer's Association (WDMA): 101/I.S.2 WDMA Hallmark Certification Program
- E. Sealed Insulating Glass Manufacturer's Association/Insulating Glass Certification Council (SIGMA/IGCC)
- F. American Architectural Manufacturer's Association (AAMA): 2605: Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels
- G. National Fenestration Rating Council (NFRC):
 - 9. 101: Procedure for Determining Fenestration Product thermal Properties
 - 10. 200: Procedure for Determining Solar Heat Gain Coefficients at Normal Incidence
- H. Window Covering Manufacturer's Association
 - 11. A100.1: American National Standard for Safety of Corded Window Coverings Products

1.5 Submittals

- A. Shop Drawings: Submit shop drawings under provision of Section 01 33 00.
- B. Product Data: Submit production data for certified options under provision of CSI MasterFormat Section 01 33 00. Product performance rating information may be provided via quote, performance rating summary (NFRC Data), or certified performance grade summary (WDMA Hallmark data).
- C. Samples:
 - 12. Submit corner section under provision of section 01 33 00.
 - 13. Specified performance and design requirements under provisions of CSI MasterFormat Section 01 33 00.

1.6 Quality Assurance

- A. Requirements: consult local code for IBC [International Building Code] and IRC [International Residential Code] adoption year and pertinent revisions for information on:
 - 14. Egress, emergency escape and rescue requirements
 - 15. Basement window requirements
 - 16. Windows fall prevention and/or window opening control device requirements

1.7 Delivery

- A. Comply with provisions of Section 01 65 00
- B. Deliver in original packaging and protect from weather

1.8 Storage and Handling

- A. Prime and seal wood surfaces, including to be concealed by wall construction, if more than thirty (30) days will expire between delivery and installation
- B. Store window units in an upright position in a clean and dry storage area above ground to protect from weather under provision of Section 01 66 00

1.9 Warranty

Complete and current warranty information is available at marvin.com/warranty. The following summary is subject to the terms, condition, limitations and exclusions set forth in the Marvin Windows and Door Limited Warranty and Products in Coastal Environments Limited Warranty Supplement:

- A. Clear insulating glass with stainless steel spacers is warranted against seal failure caused by manufacturing defects and resulting in visible obstruction through the glass for twenty (20) years from the original date of purchase. Glass is warranted against stress cracks caused by manufacturing defects from ten (10) years from the original date of purchase.
- B. Standard exterior aluminum cladding finish is warranted against manufacturing defects resulting in chalk, fade and loss of adhesion (peel) per the American Architectural Manufacturer's Association (AAMA) Specification 2605-11 Section 8.4 and 8.9 for twenty (20) years from the original date of purchase.
- C. Factory-applied interior finish is warranted to be free from finish defects for a period of five (5) years from the original date of purchase.
- D. Hardware and other non-glass components are warranted to be free from manufacturing defects for ten (10) years from the original date of purchase.

Part 2 Products

2.1 Manufactured Units

- A. Description: Ultimate Double Hung G2 (and related stationary units) as manufactured by Marvin, Warroad, Minnesota.
- B. Description: Ultimate Double Hung G2 Bow unit, (and related stationary units) as manufactured by Marvin Windows and Door, Warroad, Minnesota.
 - 17. Available in 3, 4, 5, and 6 wide assemblies
 - 18. 6 degree angle
 - 19. With and w/out head and seat board
- C. Description: Ultimate Double Hung G2 Bay Assemblies as manufactured by Marvin, Warroad, Minnesota
 - 20. Available 30 degree, 45 degree, and 90 degree
 - 21. With and w/out head and seat board

2.2 Frame Description

- A. Interior: Non Finger-Jointed Pine or finger-jointed core with non finger-jointed Pine veneer; optional non finger-jointed Douglas Fir or finger-jointed core with non finger-jointed Douglas Fir veneer; optional non finger-jointed White Oak or finger-jointed with non finger-jointed Oak veneer; non finger-jointed Cherry or finger-jointed core with Cherry veneer; non finger-jointed Mahogany or finger-jointed core with non finger-jointed Mahogany veneer; non finger-jointed Vertical Grain Douglas Fir or finger-jointed with non finger-jointed Vertical Grain Douglas Fir veneer
 - 22. Kiln-dried to moisture content no greater than 12 percent at the time of fabrication
 - 23. Water repellent, preservative treated in accordance with ANSI/WDMA I.S.4.
- B. Frame exterior aluminum clad with 0.050" (1.3mm) thick extruded aluminum
- C. Frame thickness: 1 1/16" (17mm) head and jambs
- D. Frame depth: Frame depth had an overall 5 21/32" jamb (144mm). 4 9/16" (116mm) jamb depth from the nailing fin plane to the interior face of the frame for new construction.
- E. Sill assembly including the sill liner: 2 7/32" (56mm)
- F. Factory-applied historic profile extrusion

2.3 Sash Description

- A. Interior: Non Finger-Jointed Pine or finger-jointed core with non finger-jointed Pine veneer; optional non finger-jointed Douglas Fir or finger-jointed core with non finger-jointed Douglas Fir veneer; optional non finger-jointed White Oak or finger-jointed with non finger-jointed Oak veneer; non finger-jointed Cherry or finger-jointed core with Cherry veneer; non finger-jointed Mahogany or finger-jointed core with non finger-jointed Mahogany veneer; non finger-jointed Vertical Grain Douglas Fir or finger-jointed with non finger-jointed Vertical Grain Douglas Fir veneer
 - 24. Kiln-dried to moisture content no greater than 12 percent at the time of fabrication
 - 25. Water repellent preservative treated with accordance with WDMA I.S.4.
- B. Sash exterior aluminum clad with 0.050" (1.3mm) thick extruded aluminum
- C. Sash thickness: 1 3/4" (44mm). Corner slot and tenoned.
- D. Operable sash tilt to interior for cleaning or removal
- E. Sash Options:
 - a. Standard: Equal Sash
 - b. Optional:
 - i. Unequal Sash
 - ii. Both Sash Stationary

- F. Exterior Cope Profile: Putty
- G. Interior Sash Sticking
 - 26. Standard: Ogee
 - 27. Optional: Square

2.4 Glazing

- A. Select quality complying with ASTM C1036. Insulating glass SIGMA/IGCC certified to performance level CBA when tested in accordance with ASTM E2190.
- B. Glazing method: Insulating glass
- C. Glazing seal: Silicone bedding on interior and exterior
- D. Glass fill: Air with capillary tubes, Argon
- E. Glass Type: Clear, Bronze, Gray, Reflective Bronze, Tempered, Obscure, Laminated, Low E2 with or without Argon, Low E3 with or without Argon, Low E1, Low E2/ERS, Low E3/ERS
- F. Triple-Pane Glass (TG): Triple-Pane Low E1, Triple-Pane Low E2, Triple-Pane Low E3.

2.5 Certified Mulling

- A. Directional mull limits: 1 High (can be 2 or more units wide in an assembly)
 - 28. Max mullion span is 71 ½" (1816mm); max tributary width 45 ¼" (1149mm)
 - 29. CUDH NG 2.0 to CUDH NG 2.0 only
 - 30. Certified to Design Pressure 50
- B. Directional mull limits: 1 Wide (can be 2 or more units high in an assembly)
 - 31. Max mullion span is 69 ¼" (1759mm); max tributary height 53 19/32" (1361mm)
 - 32. CUDH NG 2.0 over CUDH NG 2.0 only
 - 33. Certified to Design Pressure 50
- C. Multiple Wide x Multiple High assemblies with 1" LVL
 - 34. Max mullion span is 75 11/16" (1922mm); max tributary width is 45 1/4" (1149mm)
 - 35. LVL must be in vertical mull
 - 36. Certified to Design Pressure 50
- D. Multiple Wide x Multiple High assemblies with 3/8" (10mm) MRF
 - 37. Max mullion span is 83 11/16" (2125mm); max tributary width 45 1/4" (1149mm)

- 38. UDH NG 2.0 over UDH NG 2.0 only
- 39. Certified to Design Pressure 65
- E. If any units have a lower design pressure the entire assembly will have the lowest design pressure of any unit or mull in the assembly.

2.6 Finish

- A. Exterior: Aluminum clad. Fluoropolymer modified acrylic topcoat over a primer. Meets AAMA 2605 requirements.
 - 40. Aluminum clad color options: Bahama Brown, Bronze, Cadet Gray, Cascade Blue, Cashmere, Clay, Coconut Cream, Ebony, Evergreen, Gunmetal, Hampton Sage, Pebble Gray, Sierra White, Stone White, Suede, Wineberry, Bright Silver (pearlescent), Copper (pearlescent), Liberty Bronze (pearlescent)
 - 41. Custom colors: Contact your Marvin representative
- B. Interior Finish options:
 - 42. Prime: Factory-applied water-borne acrylic primer. Meets WDMA TM-11 requirements.
 - 43. Painted Interior Finish. Factory-applied water-borne acrylic enamel. Available on Pine product only. Available in White or Designer Black. Meets WDMA TM-14 requirements.
 - 44. Factory-applied water-borne acrylic enamel clear coat. Applied in two separate coats with light sanding between coats. Available on Pine, Mahogany, Mixed Grain Douglas Fir, Vertical Grain Douglas Fir, Cherry, or White Oak. Meets WDMA TM-14 requirements.
 - 45. Factory-applied water-borne urethane stain. Stain applied over a wood (stain) conditioner. A water-borne acrylic enamel clear coat applied in two separate coats, with light sanding between coats, applied over the stain. Available on Pine, Mahogany Mixed Grain Douglas Fir, Vertical Grain Douglas Fir, Cherry, or White Oak. Colors available: Wheat, Honey, Hazelnut, Leather, Cabernet, and Espresso. Meets WDMA TM-14 requirements.

2.7 Hardware

- A. Locking system that provides locking, unlocking, balancing, and tilting of the sash members
- B. Lock Actuator Assembly
 - 46. Material
 - Zinc die-cast
 - Available finishes: Satin Taupe, White, Bronze, Matte Black, Brass, Antique Brass, Polished Chrome, Satin Chrome, Oil Rubbed Bronze, Satin Nickel, or Unlacquered Brass
 - 47. Design Feature and Components

To unlock unit, turn the handle 135°

Lock automatically locks when both sash are closed.

To tilt the bottom sash for wash mode, the bottom sash must be unlocked and raised a few inches; push the button on top of the lock handle and rotate the handle 180°

To tilt the top sash for wash mode, the bottom sash must be tilted and/or removed from the frame; lower the top sash to a good working height, retract the tilt latches on the top rail and tilt sash inward out of the frame

Custodial hardware colors: Satin Taupe, White, Bronze, Matte Black

C. Bottom Rail Lock Actuator Assembly - Lift Lock (Optional for Single Hung)

48. Material

- a. Zinc die-cast
- b. Available finishes: Satin Taupe, White, Bronze, Matte Black, Brass, Antique Brass, Polished Chrome, Satin Chrome, Oil Rubbed Bronze, Satin Nickel,

1. Design Feature and Components

- a. Does not contain Check Rail Lock Actuator Assembly or Strike Assembly
- b. Available in Traditional and Contemporary designs
- c. To unlock unit, lift the lock
- d. Lock automatically locks when bottom sash is closed.
- e. To tilt the bottom sash for wash mode, raise the bottom sash and manually retract the latches.
- f. Custodial hardware colors (available with traditional design): Satin Taupe, White, Bronze, Matte Black

D. Latches

49. Bottom sash latch

50. Material

- i. Bolt: Glass-filled nylon
- ii. Latch housing: Acetal
- iii. Sash latch reinforcement: Stainless steel

51. Top sash tilt latch

a. Material

- i. Bolt: Glass-filled nylon

ii. Latch housing: Glass-filled nylon

52. Latches accommodate travel of sash in frame, and tilting into wash-mode

53. Color: Beige (manual latch for Lift Lock also available in White and Black)

E. Strike Assembly

54. Material

Zinc die-cast strike plate and injection-molded Acetal housing and button

Available finishes: Satin Taupe, White, Bronze, Matte Black, Brass, Antique Brass, Polished Chrome, Satin Chrome, Oil Rubbed Bronze, Satin Nickel, or Unlacquered Brass

55. Strike assembly accommodates locking/unlocking

F. Balance System (balance system determined by sash weight)

56. Block & tackle balances

57. Hybrid spiral balances

G. Factory-applied Window Opening Control Device (WOCD) is a sash limiter that prevents the window opening more than 4" vertically. It meets ASTM F2090-17 specifications for window fall prevention standards. The system consists of two single action devices that allows for egress (when applied to an egress size window) by bypassing the 4" stop feature.

58. Material

59. WOCD device: zinc die-cast

60. WOCD strike plate: nylon

61. 2 WOCD's applied to each double and single hung window and will be recessed into the stiles of the top sash

62. Default color matches lock handle

63. Strike plate mounted to the bottom sash check rail

64. Strike plate color to match weather strip

H. Sash Limiter

65. Bottom Sash Limiter (Acetal)

66. Available on all operator configurations, and IZ3

Selectable bottom sash locations, 4", 6" or 8" Net Clear Opening (NCO)

Non-tilt hardware is default, and a sash removal tool is required in order to bypass the Sash limiter for sash removal (tilt wash mode)

Standard application is factory applied. Available for field retrofit applications.

Color: Will align with the Exterior Weather Strip Package selection

67. Top Sash Limiter (Extruded PVC)

Available on all operator configurations, with the exception of Single Hung configurations. This includes IZ3

Standard application is factory applied. Available for field applications

Color: Will align with the Interior Weather Strip Package selection

2.8 Weather Strip

A. Operating units:

68. Jambs: Foam-filled bulb

69. Header: Continuous dual leaf

70. Bottom rail and check rail: Hollow bulb

B. Stationary units:

71. Jambs: Foam for picture units; foam-filled bulb for transom unit

72. Header and bottom rail: Hollow bulb

2.9 Jamb Extension

A. Jamb extensions are available for various wall thickness factory-applied up to a 14" (356mm) wide

B. Finish: Match interior frame finish

2.10 Head/Seat Board (For use with Bow and Bay units)

A. Factory-installed (head board) (seat board) for wall thickness indicated or required

B. Finish: Match interior finish

2.11 Insect Screen

A. Factory-installed full or half screen. Half screen covers sash opening.

73. Screen Mesh: Marvin Bright View™

74. Optional Screen mesh: Charcoal Aluminum Wire, Black Aluminum Wire, Bright Bronze Aluminum Wire, Bright Aluminum Wire

B. Screen Frame

75. Window frame height less than or equal to 54 1/2" Aluminum Screen Frame. Option: Extruded Aluminum Screen Frame.

76. Window frame height greater than 54 1/2" Extruded Screen Frame. Option: None.

C. Aluminum frame finish:

77. Color: Matches exterior aluminum clad color

2.12 Combination Storm Sash and Screen

A. Frame: Exterior extruded aluminum 0.050" (1.3mm) thick

B. Finish: Fluoropolymer modified acrylic topcoat applied over Fluoropolymer primer. Meets AAMA 2605 requirements

78. Finish: Stone White, Bahama Brown, Bronze, Pebble Gray

C. Hardware: Spring loaded locking pins to hold movable storm panel in position. Heavy metal clips to lock upper and lower storm panels together

D. Weather strip: Dual durometer weather strip on center cross rail seals against operating panel in closed position

E. Storm panel: Select quality glass in aluminum frame

79. Frame finish: Standard color: Stone White, Bahama Brown, Bronze, Pebble Gray

F. Insect screen panel:

80. Extruded aluminum surround

81. Screen mesh: Standard is Charcoal Aluminum Wire; Optional Marvin Bright View™.

82. Aluminum frame finish: Bronze, White

2.13 Simulated Divided Lites (SDL)

A. 5/8" (16mm) wide, 7/8" (22mm) wide, 1 1/8" (29mm) wide, 1 3/4" (44mm) wide, 1 15/16" (49mm) wide, 2 13/32" (61mm) wide with or w/out internal spacer bar

B. Exterior muntins: 0.050" (1.3mm) thick extruded aluminum

C. Interior muntins: Pine, Mixed Grain Douglas Fir, White Oak, Cherry, Mahogany Vertical Grain Douglas Fir

D. Muntins adhere to glass with closed-cell copolymer acrylic foam tape

E. Exterior sticking: Putty

- F. Interior Sticking:
 - 83. Standard: Ogee
 - 84. Optional: Square
- G. Patterns: Rectangular, diamond, custom lite cut
- H. Finish – exterior matches exterior aluminum clad colors, interior matches interior wood species and color

2.14 Grilles-Between-the-Glass (GBG)

- A. 23/32" (18mm) contoured aluminum bar
 - 85. Exterior Colors: Exterior matches exterior aluminum clad colors. The exterior GBG color is designed to best match the Marvin aluminum clad color when used with Low E glass. The use of different types of glazing may alter the exterior GBG color appearance
 - 86. Interior Colors: White is the default color. Optional colors: Bronze, Pebble Gray, Sierra, White
- B. Optional flat aluminum spacer bar. Contact your Marvin representative.
- C. Pattern: Rectangular, Cottage, Custom lite layout

2.15 Accessories and Trim

- A. Installation Accessories:
 - 87. Factory-installed vinyl nailing/drip cap
 - 88. Installation brackets: 6 3/8" (162mm), 9 3/8" (283mm), 15 3/8" (390mm)
 - 89. Masonry brackets: 6" (152mm), 10" (254mm)
- B. Aluminum Extrusions:
 - 90. Casing Profile: Brick Mould Casing (BMC), Flat Casing, Columbus Casing, Grayson Casing, Ridgeland Casing, Stratton Casing, Thorton Casing, Potter Casing
 - 91. Aluminum clad Extrusion: Frame Expander, Jamb Extender, Mullion Cover, Mullion Expander, Subsill, Subsill End Cap and Lineal Cap
 - 92. Finish: Fluoropolymer modified acrylic topcoat applied over primer. Meets AAMA 2605 requirements
 - 93. Available in all exterior aluminum clad colors
- C. Historic casing, factory-applied profiles: Ridgeland, Flat, BMC, Custom
 - a. Subsills factory-applied

D. Exterior Sash Lugs – Standard Option

94. Standard Profile: Ogee

95. Available on Top Sash

96. Color: Available in all exterior clad color options

Color shall be the same as top sash clad color

97. Standard application is factory applied. Available for field applications

2.16 Lock Status Sensor (Optional)

A. Lock Status Sensor

1. Unit is factory-prepared for an integrated lock status sensor system. Sensor and Magnet mounted inside the boundaries of the overall frame size. Refer to **Lock Status Sensor Installation Instructions**.
2. Lock Status Sensor may be wired or wireless.
 - a. For wired option, check with local codes on potential contractor requirements for low voltage networking connections.
 - b. Wireless option available. Requires purchase of secondary transmitter for operation. Marvin will prep for this option.
3. For CUDH-NG 2.0 products, the sensor will always be located on the right-hand side of the check rail (from the exterior) for the bottom sash. For the top sash, the sensor will be located in the header parting stop of the frame on the right side (from the exterior).
4. Actuator (magnet) for the sensor will be located on the stile for the top sash. For the bottom sash, it will be integrated into the locking hardware on the same side as the sensor.

B. Lock Status Sensor Option Includes:

1. Sensor - Reed
2. Actuator – Neodymium Magnet
3. Actuator Cover (Casement and Double Only)
 - a. Colors: Black: Bare, stain and designer black; White: PIF-White and Prime

Part 3 Execution

3.1 Examination

- A. Verification of Condition: Before installation, verify openings are plumb, square and of proper dimensions as required in Section 01 71 00. Report frame defects or unsuitable conditions to the General contractor before proceeding.
- B. Acceptance of Condition: Beginning on installation confirms acceptance of existing conditions.

3.2 Installation

- A. Comply with Section 01 73 00.
- B. Assemble and install window/door unit(s) according to manufacturer's instruction and reviewed shop drawing.
- C. Install sealant and related backing materials at perimeter of unit or assembly in accordance with Section 07 92 00 Joint Sealants.
- D. Install accessory items as required.
- E. Use finish nails to apply wood trim and mouldings.

3.3 Field Quality Control

- A. Remove visible labels and adhesive residue according to manufacturer's instruction.
- B. Unless otherwise specified, air leakage resistance tests shall be conducted at a uniform static pressure of 75 Pa (~1.57 psf). The maximum allowable rate of air leakage shall not exceed 2.3 L/sm² (~0.45 cfm/ft²).
- C. Unless otherwise specified, water penetration resistance testing shall be conducted per AAMA 502 and ASTM E1105 at 2/3 of the fenestration products design pressure (DP) rating using "Procedure B" – cyclic static air pressure difference. Water penetration shall be defined in accordance with the test method(s) applied.

3.4 Cleaning

- A. Remove visible labels and adhesive residue according to manufacturer's instruction.
- B. Leave windows and glass in a clean condition. Final cleaning as required in Section 01 74 00.

3.5 Protecting Installed Construction

- A. Comply with Section 07 76 00.

- B. Protecting windows from damage by chemicals, solvents, paint or other construction operations that may cause damage.

End of Section

STRUCTURAL NOTES

1 GENERAL

- A. THE DECK AND HOUSE MODIFICATIONS ARE DESIGNED UNDER THE PROVISIONS OF THE 2021 IRC AS AMENDED BY MONTGOMERY COUNTY EXECUTIVE REGULATION NO. 13-24.
- B. THE FOLLOWING LIVE LOADS WERE UTILIZED IN THE DESIGN:
- | | |
|---|--------|
| ROOF | 30 PSF |
| FLOOR | 40 PSF |
| ROOF SNOW LOAD | |
| GROUND SNOW LOAD (Pg) | 30 PSF |
| DEAD LOAD ARE USED AS FOLLOWS UNLESS NOTED OTHERWISE: | |
| ROOF | 17 PSF |
| FLOOR | 10 PSF |

2 DEMOLITION

- A. PROVIDE ADEQUATE SHORING, BRACING AND OTHER TEMPORARY SUPPORT DURING DEMOLITION.
- B. UNTIL PROPERLY SHORED, DO NOT CUT EXISTING STRUCTURAL MEMBER IN A MANNER RESULTING IN A REDUCTION OF LOAD-CARRYING CAPACITY. DO NOT EXCEED THE CAPACITY OF THE EXISTING STRUCTURE WITH SUPERIMPOSED LOADS.
- C. IN GENERAL, SELECTIVE STRUCTURAL DEMOLITION IS TO BE PERFORMED WITH PHYSICAL CUTTING ACTION (I.E. SAWING AND GRINDING INSTEAD OF HAMMERS AND CHOPPERS). DO NOT USE JACKHAMMERS ON STRUCTURALLY SUPPORTED MEMBERS.
- D. CONTRACTOR SHALL VERIFY THAT EXISTING CONSTRUCTION CORRESPONDS TO THAT SHOWN ON THE DRAWINGS. DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.

3 WOOD

- A. ALL FRAMING LUMBER SHALL BE HEM-FIR, GRADE #2, OR SPRUCE-PINE-FIR GRADE #2, OR BETTER, HAVING THE FOLLOWING MINIMUM BASE DESIGN VALUES:
- BENDING STRESS "Fb" = 850 PSI FOR SINGLE MEMBER USE
 - HORIZONTAL SHEAR "Fv" = 135 PSI
 - COMPRESSION PERPENDICULAR TO GRAIN "Fc" = 405 PSI
 - COMPRESSION PARALLEL TO GRAIN "Fc11" = 1,150 PSI
 - MODULUS OF ELASTICITY "E" = 1,300,000 PSI
- NOTE: SPRUCE-PINE-FIR (SOUTH) IS NOT ACCEPTABLE. SPRUCE-PINE-FIR MUST BE GRADED BY NLGA.
- B. ALL EXTERIOR FRAMING SHALL BE PRESSURE-TREATED. FRAMING SHALL BE PRESSURE-TREATED WITH ALKALINE COPPER QUAT (ACO) OR COPPER AZOLE (CBA-A AND CA-B), NOT SODIUM BORATE (SBX). LUMBER OR STRUCTURAL POSTS SHALL BE SOUTHERN YELLOW PINE, GRADE 2 OR BETTER, HAVING THE FOLLOWING MINIMUM PROPERTIES (BASED ON 2X12 LUMBER):
- BENDING STRESS "Fb" = 750 PSI FOR SINGLE MEMBER USE
 - HORIZONTAL SHEAR "Fv" = 90 PSI
 - COMPRESSION PERPENDICULAR TO GRAIN "Fc" = 565 PSI
 - COMPRESSION PARALLEL TO GRAIN "Fc11" = 1,250 PSI
 - MODULUS OF ELASTICITY "E" = 1,400,000 PSI
- C. PLYWOOD LAMINATED (MICROLAM OR LVL) BEAMS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
- BENDING STRESS "Fb" = 2600 PSI
 - HORIZONTAL SHEAR "Fv" = 250 PSI
 - MODULUS OF ELASTICITY "E" = 1,900,000 PSI
- D. ALL WALL STUDS SHALL BE SPF STUD GRADE OR BETTER, HAVING THE FOLLOWING MINIMUM BASE DESIGN VALUES:
- COMPRESSION PARALLEL TO GRAIN "Fc11" = 625 PSI
 - BENDING STRESS "Fb" = 725 PSI FOR SINGLE USE MEMBERS
 - MODULUS OF ELASTICITY "E" = 1,200,000 PSI
- E. UNLESS NOTED OTHERWISE, FASTENING FOR STRUCTURAL MEMBERS SHALL FOLLOW INTERNATIONAL RESIDENTIAL CODE TABLE R602.3(1).
- F. PREFABRICATED JOIST HANGERS, BEAM HANGERS, POST CAPS AND POST BASES SHALL BE SIZED AND ATTACHED PER MANUFACTURERS RECOMMENDATION. FASTENERS AND CONNECTORS UTILIZED WITH PRESSURE-TREATED MEMBERS SHALL MEET Q185 GALVANIZING.

4 SHEATHING

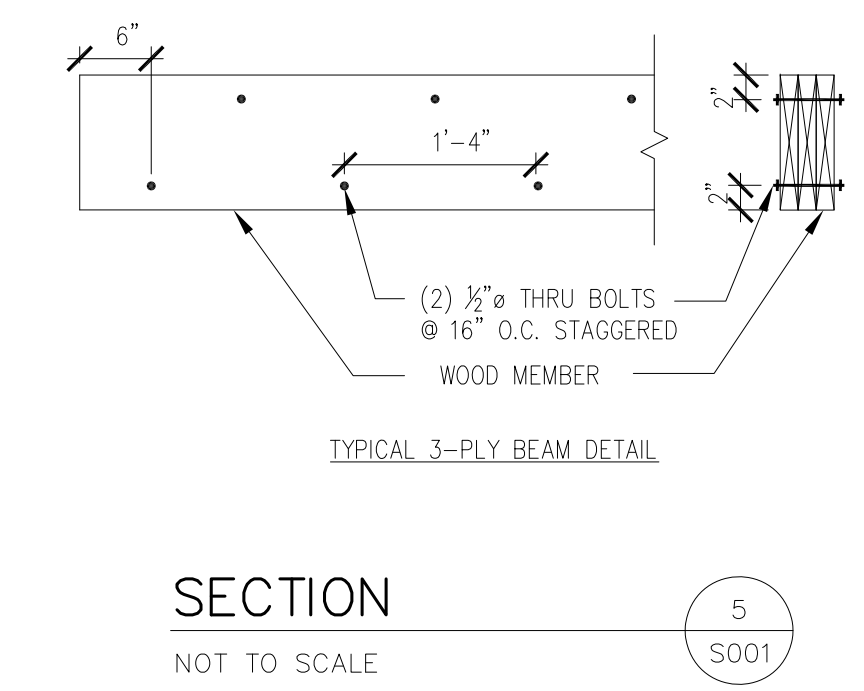
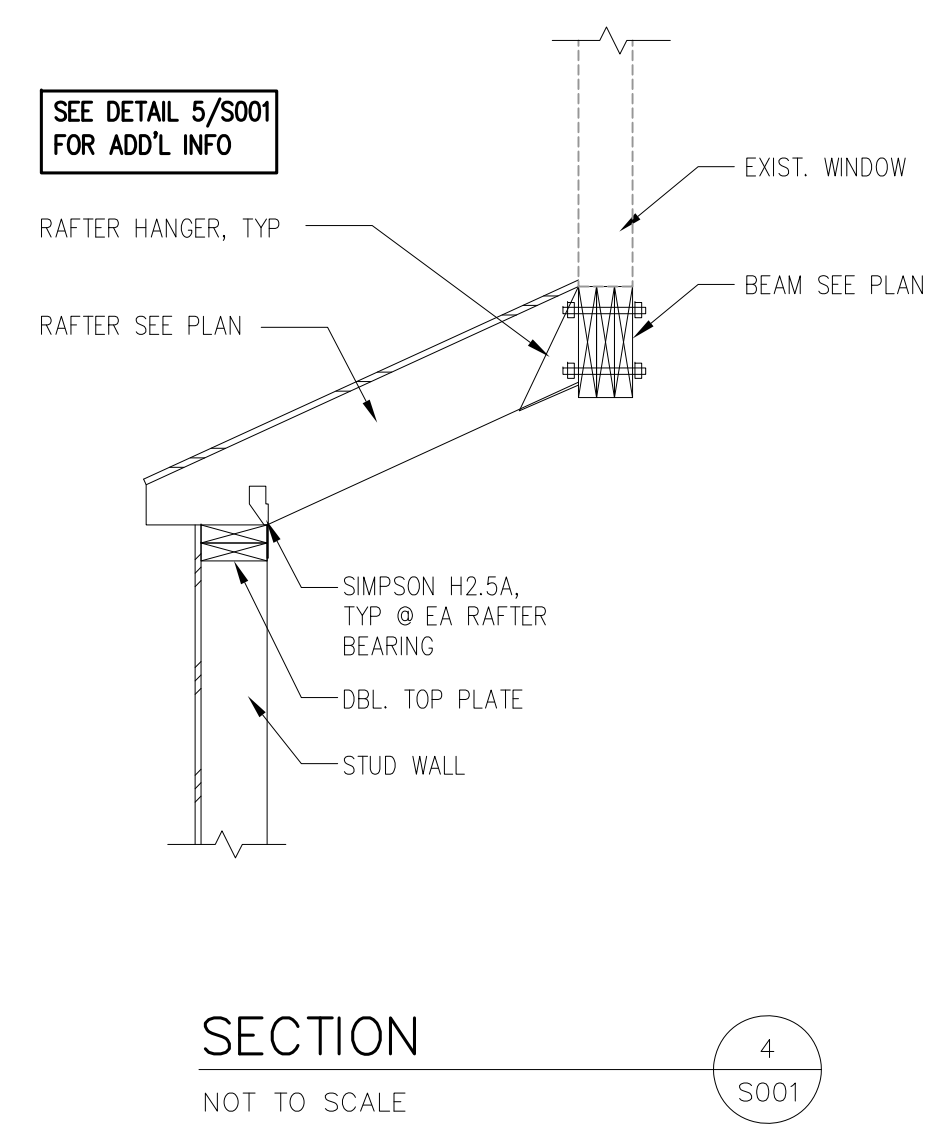
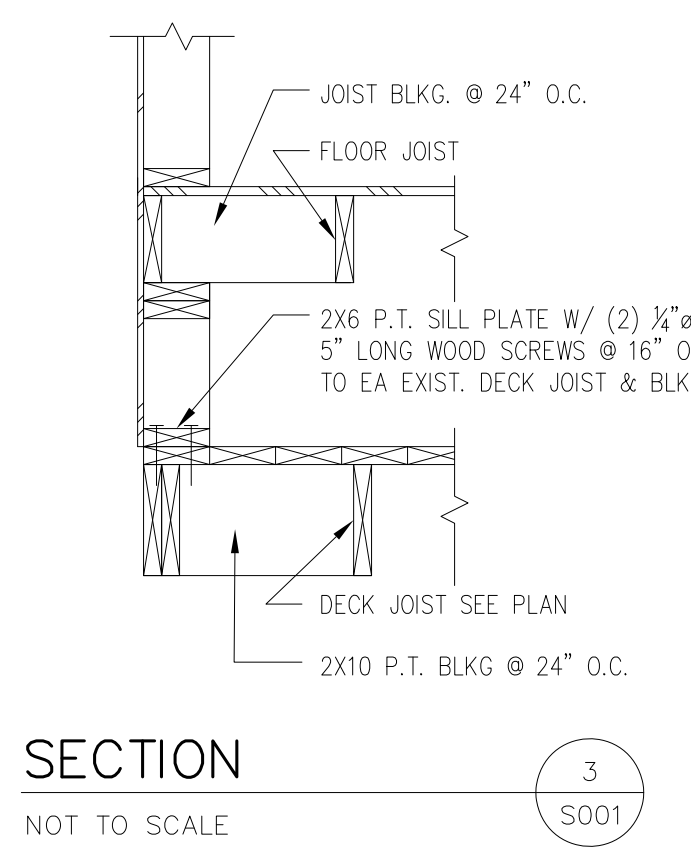
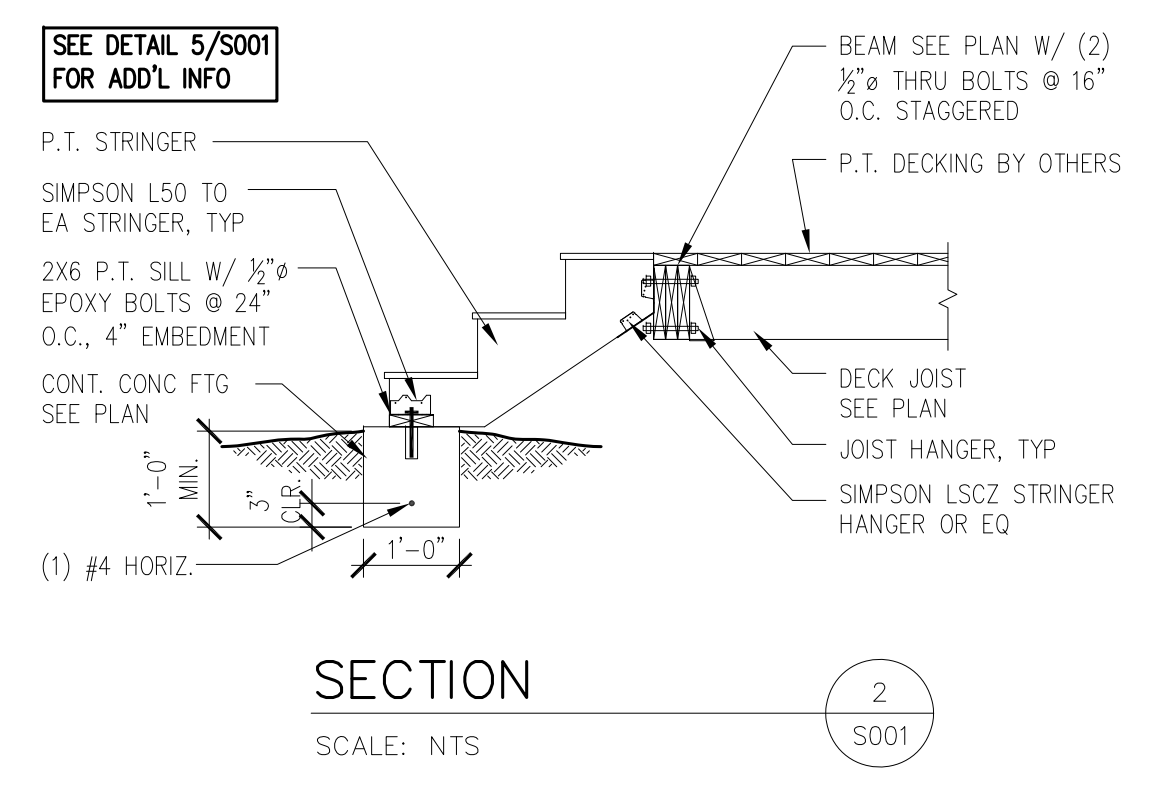
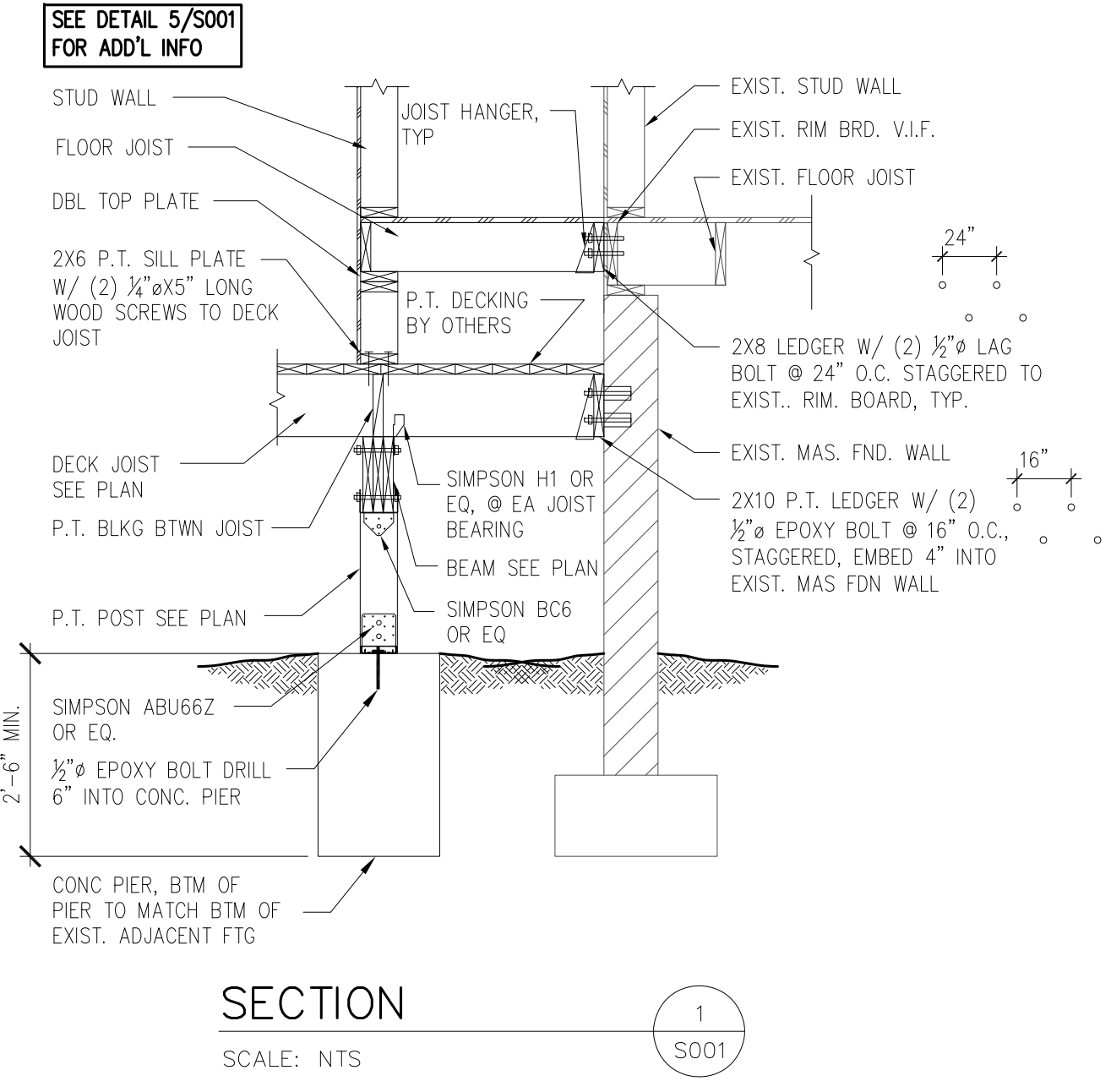
- A. FLOOR SHEATHING SHALL BE 23/32 (3/4) INCH APA RATED STURD-1-FLOOR, TONGUE AND GROOVE, PLYWOOD, OR EQUAL. PANELS SHALL HAVE LONG DIMENSION ORIENTED ACROSS THREE OR MORE JOISTS AND SHALL BE FASTENED WITH CONSTRUCTION ADHESIVE AND 8d NAILS AT 6 INCHES ON CENTER AT PANEL EDGES AND AT 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS. UNLESS NOTED OTHERWISE, PANEL EDGES NEED NOT BE BLOCKED.
- B. ROOF SHEATHING SHALL BE 15/32 (1/2) INCH APA RATED WOOD PANELS WITH SPAN RATING OF 24/0 OR BETTER. FASTEN PANELS TO FRAMING WITH 8d NAILS AT 6 INCHES ON CENTER AT PANEL EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS. ORIENT LONG DIMENSION OF PANELS ACROSS THREE OR MORE SUPPORTS. EDGES NEED NOT BE BLOCKED, UNLESS OTHERWISE NOTED.
- C. ALL EXTERIOR WALL SHEATHING SHALL BE BRACED IN ACCORDANCE R602.10.4 IRC 2021 AS FOLLOWS:
- 1) UON, EXTERIOR SHEATHING SHALL BE AS FOLLOWS:
2X4 MIN. SPF (STUD GRADE) SPACED @ 16" O.C. MAX.
EXTERIOR WALL SHEATHING - 1/2" OSB OR PLYWOOD
FASTENERS - 8d X 2.5" LONG NAILS @ 6" O.C. @ PANEL EDGES & 12" O.C. @ INTERMEDIATE SUPPORTS

5 EARTHWORK

- A. SOIL BEARING VALUE AT THE BOTTOM OF ALL FOOTINGS IS ASSUMED TO BE 2000 PSF. THIS VALUE IS TO BE VERIFIED IN THE FIELD PRIOR TO POURING FOOTINGS BY A REGISTERED ENGINEER EXPERIENCED IN SOILS ENGINEERING OR BY A QUALIFIED INSPECTOR.
- B. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-6" BELOW FINISH EXTERIOR GRADE. WHERE REQUIRED, STEP FOOTINGS IN RATIO OF 2 HORIZONTAL TO 1 VERTICAL.

6 CONCRETE

- A. ALL CONCRETE TO HAVE MINIMUM COMPRESSIVE STRENGTH (F'c) = 3000 PSI IN 28 DAYS. EXTERIOR SLABS SHALL HAVE A MINIMUM STRENGTH OF 3500 PSI. ALL CONCRETE TO BE POURED IN ACCORDANCE WITH ACI 301 SPECIFICATIONS. CONCRETE EXPOSED TO WEATHER TO BE AIR ENTRAINED.
- B. ALL REINFORCING STEEL TO MEET ASTM-A-615 GRADE 60. PLACING PLANS AND SHOP FABRICATION DETAILS SHALL BE IN ACCORDANCE WITH "THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES". FURNISH SUPPORT BARS AND ALL REQUIRED ACCESSORIES IN ACCORDANCE WITH C.R.S.I. STANDARDS. ALL REINFORCING TO BE SPLICED A MINIMUM OF 30 BAR DIAMETERS.
- C. PROVIDE CLEAR DISTANCE TO OUTERMOST REINFORCING AS FOLLOWS:
- BEAMS EXPOSED TO WEATHER 2"
 - FOOTINGS (BOTTOM) 3"
 - WALLS 1-1/2"



Job #
Date: 01/19/2026 Issue: PERMIT SET

REVISION



I hereby certify that these documents were prepared or approved by me, and I am a duly licensed professional engineer under the law of the State of Maryland, License No. 22243, Expiration Date: 05/09/2027

Drawn: HZ Checked: JZ
Scale: AS NOTED
Sheet Title:

NOTES & DETAILS

