DORMER & DECK ADDITION

6931 CARLTON AVE. FALLS CHURCH, VA 22043

PROJECT NARRATIVE	
The project consists of the following Summary of Work: - Demolition of the existing roof structure over existing rear addition. - Demolition of existing rear deck. - Construction of a new screened porch at the rear of the structure. - Construction of a new shed roof over the new deck and existing rear addition. - Construction of a new shed dormer at the 2nd floor rear of the existing structure. - Rework the existing portico.	
GENERAL NOTES	
The following notes shall apply to all drawings made as part of the Contract for construction for this project, including those drawings listed on the INDEX on this sheet:	
Where discrepancies exist between the standard comments, notes from the design professional or the code, the most restrictive shall apply. All construction shall comply with the 2018 International Residential Code (as amended by the State of Virginia).	
All mechanical, electrical and plumbing work shall meet or exceed the requirements of the 2018 International Residential Code (as amended by the State of Virginia) or any reference codes and standards considered as part of the 2018 International Residential Code (as amended by the State of Virginia).	
All plumbing work shall be inspected by any local or state building official having jurisdiction.	
All electrical work shall be inspected and approved by a licensed underwriter official.	
All heating equipment and installation shall meet the requirements of the 2018 International Energy Conservation Code (as amended by the State of Virginia).	
Contractors on the job must check all dimensions and details and must be responsible for same.	
Intent: Contractors shall hold to the intent of the drawings and shall not change without approval of the licensed engineer/archite and/or the owner.	ct
It is the intent of the drawings to call for a complete and finished work, tested guaranteed, and ready for occupancy.	

The work shall include all misc. items and auxiliaries regardless of whether specifically call for on the drawings.

All exterior and interior finishes to be selected or approved by the owner.

Contractors are to determine and comply with the manufacturer's recommendations on product and equipment handling, storage and installation.

Contractors are to protect new finished surfaces and installed equipment as required until the project is finished.

The contractor shall clean debris resulting from his/her work so as not to create a safety hazard.

Construction shall conform to all state and local building codes.

Plans shall not be scaled for dimension reference. Written dimension lines and notes shall take precedence over scaled dimensions.

The local building code enforcement officer shall approve site required completion of fire rated assemblies above ceilings & under floors, field installed handrails & all work done on site.

All string dimensions are from centerline of column or beam and interior walls to face of stud or inside CMU on exterior wall unless otherwise noted, and are based on nominal sizes of materials. Contractor shall verify dimensions prior to construction.

On-site verification of all dimensions and conditions shall be the responsibility of the general contractor and his subcontractor(s). Contractor to inform Engineer/Architect of conditions which may substantially affect the construction as shown.

Architectural drawings and specifications shall be considered as part of the conditions for work. In the event that certain features of the construction are not fully shown on the drawings, current national, state and local codes, ordinances, regulations or agreements, as well as current acceptable building practices shall govern, and their construction shall be of the same character that is shown or

GENERAL NOTES CONTINUED

The Architect/Engineer will not be responsible for, and will not have control over construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work, and will not be responsible for the failure of the client or his contractors, subcontractors, or anyone performing any of the work, to carry out the work in accordance with the approved contract documents.

The drawings and specifications, as instruments of service, are exclusive property of the Architect/Engineer whether the project for which they were prepared is executed and constructed or not. These documents are not to be reproduced in any form and they are not to be used by the client nor any other entity on any other projects or for any extensions or additions or alterations to the original project except by written authorization and permission from and agreement with the Architect/Engineer.

Contractor shall furnish to the Architect/Engineer shop drawings of all the prefabricated components with one set being retained by the Architect/Engineer. Items requiring shop review include, but are not limited to roof trusses, floor trusses and stairs. Should the design or configuration of any prefabricated components be modified during construction from previously approved shop drawings, the Architect/Engineer shall be furnished, prior to the fabrication, with revised shop drawings incorporating the revision. If the Architect/Engineer is not provided with the above information, the Client shall defend, indemnify, and hold harmless the Architect/Engineer from any claim or suite whatsoever, including but not limited to all payments, expenses, costs included, arising or alleged to have arisen from prefabricated items.

Contractor must comply with rules and regulations of agencies having jurisdiction and shall conform to all city, county, state and federal construction, safety and sanitary laws, codes, statues and ordinances.

SHEET INDEX

LABEL	TITLE

COVER SHEET CS-001 EXISTING FLOOR PLAN A-001 A-002

NEW FLOOR PLAN NEW FLOOR PLAN

A-003 A-004 **ELEVATIONS**

S-001 STRUCTURAL PLAN S-002 STRUCTURAL PLAN

S-003 SECTION DETAILS

S-004 STRUCTURAL NOTES

DESIGN DATA

These plans conform to Chapter 11 of the 2018 International Residential Code using the Prescriptive Approach for Energy Code Compliance:

FENESTRATION U FACTOR = 0.32 MAX SKYLIGHT U FACTOR = 0.55 MAX SHGC = 0.40 MAX

CEILING R-VALUE = 49

Ceilings with Attic Spaces = R-38 AS PER N1102.2.1 Ceilings without Attic Spaces = R-30 AS PER N1102.2.2

WOOD FRAMED WALL R-VALUE = 13+1 c.i. or 15 MASS WALL R-VALUE = 8 / 13

FLOOR R-VALUE = 19

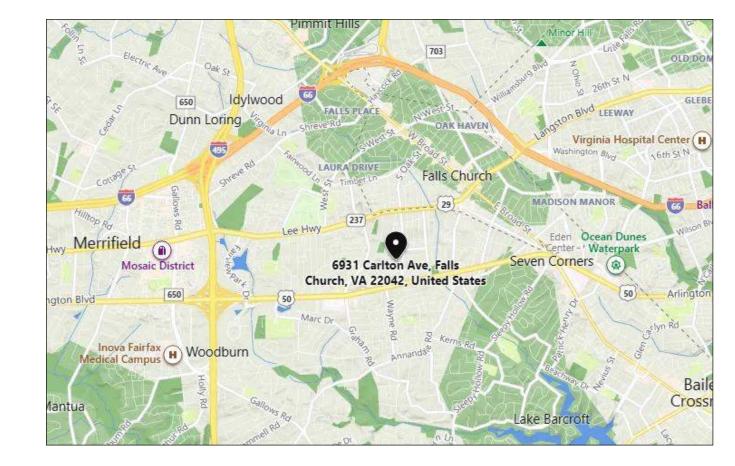
BASEMENT WALL R-VALUE = 10/13

SLAB-ON-GRADE R-VALUE = 10 for unheated slab over 2-foot depth

CRAWLSPACE WALL R-VALUE = 10/13

CONFORMANCE TO TABLE N1102.4.1.1 OF THE IRC FOR AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

VICINITY MAP



PERSPECTIVE OVERVIEW





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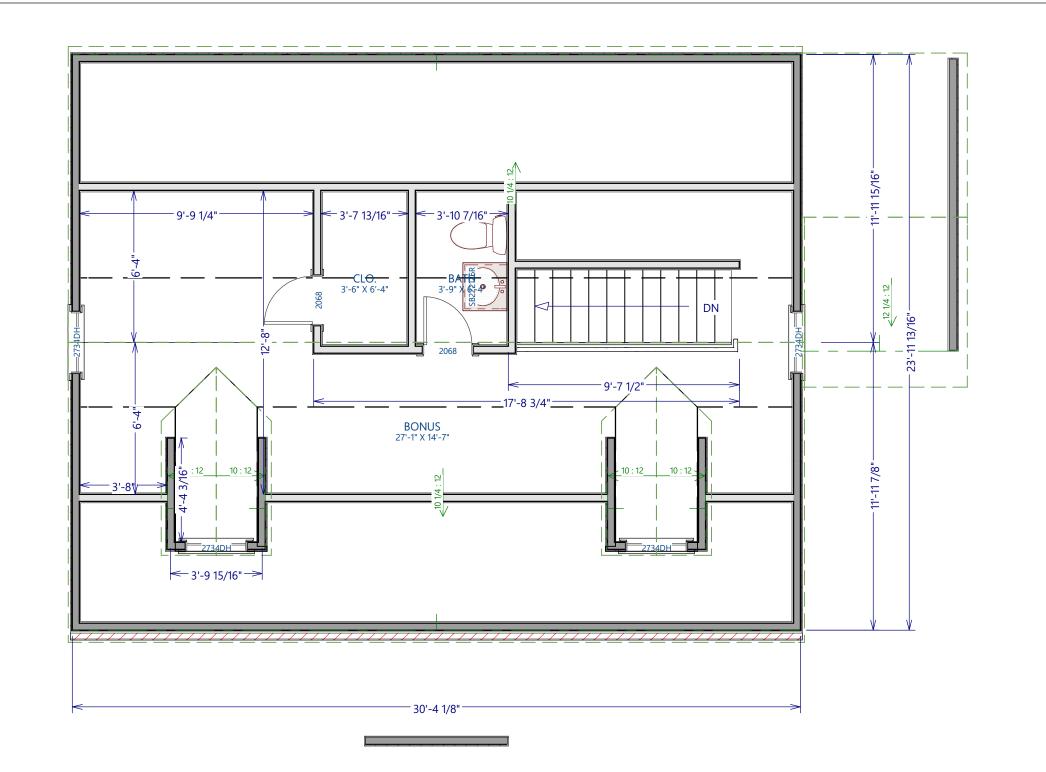
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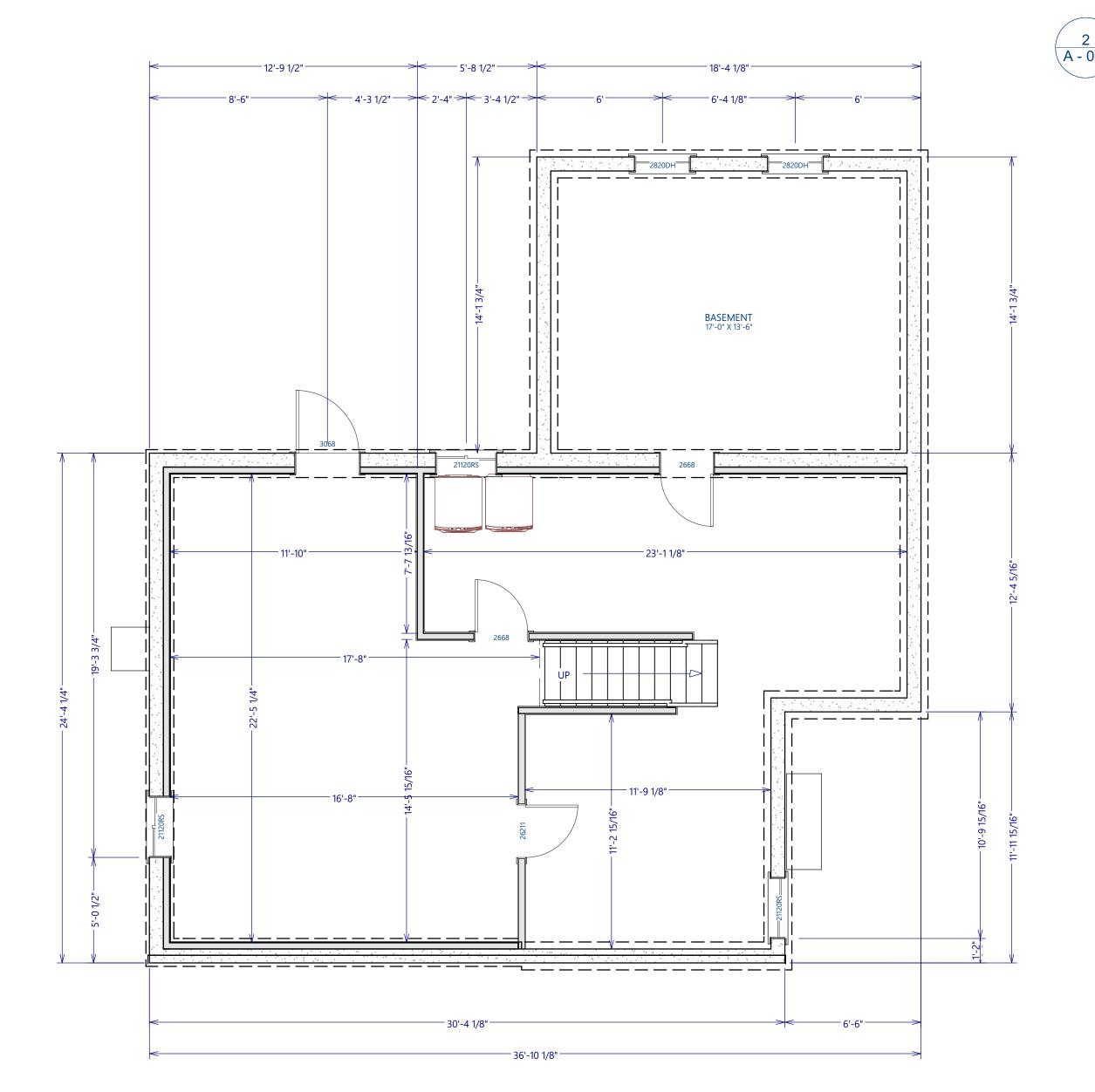
REVISION	DATE	COMMENT
1	12-3-22	PRELIM.
2	12-6-22	PRELIM.2
3	12-18-22	PERMIT

DATE 12/27/2022

SHEET COVER SHEET

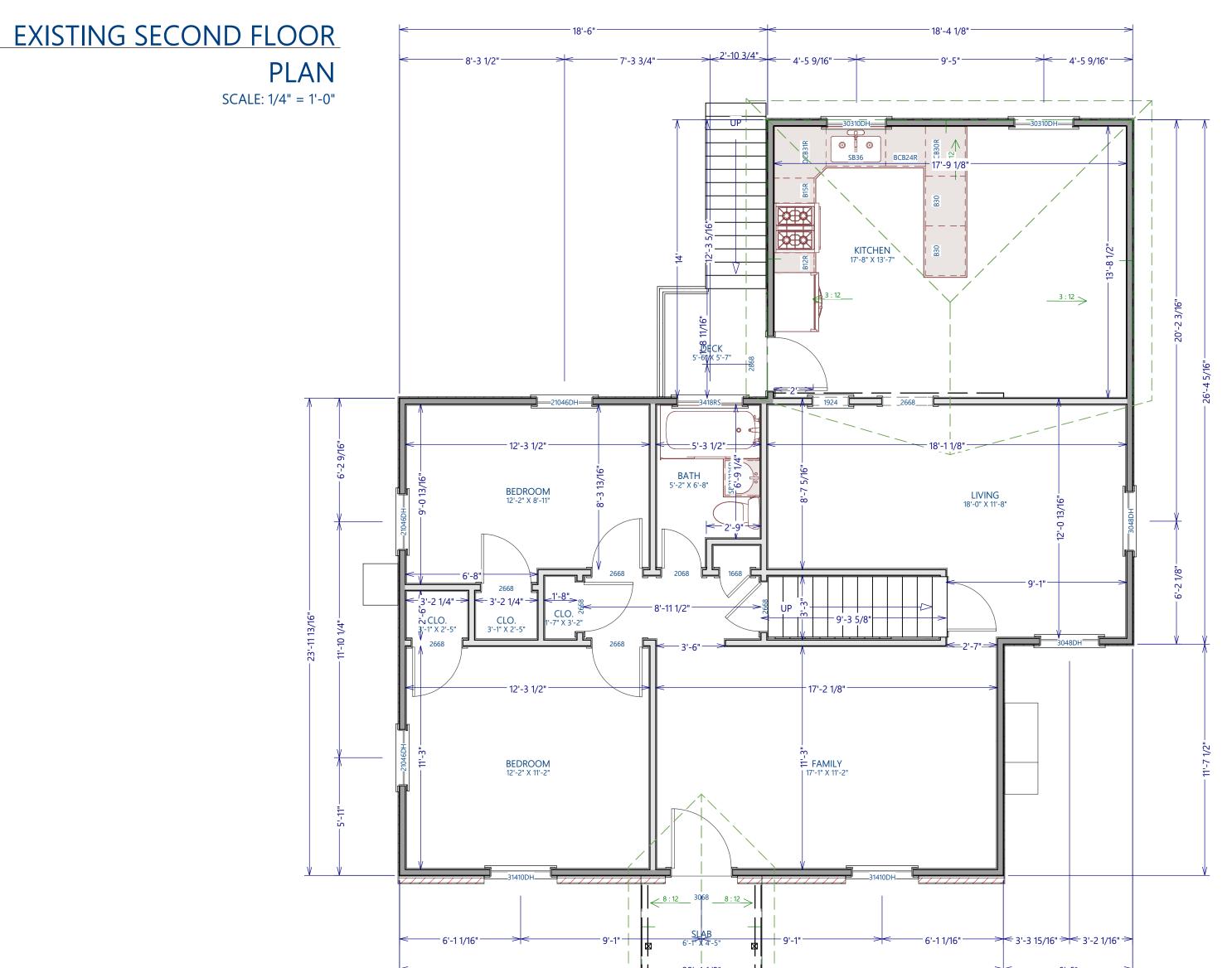
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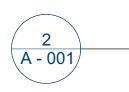




EXISTING FOUNDATION PLAN

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





EXISTING FIRST FLOOR PLAN

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

NACHMAN DESIGN

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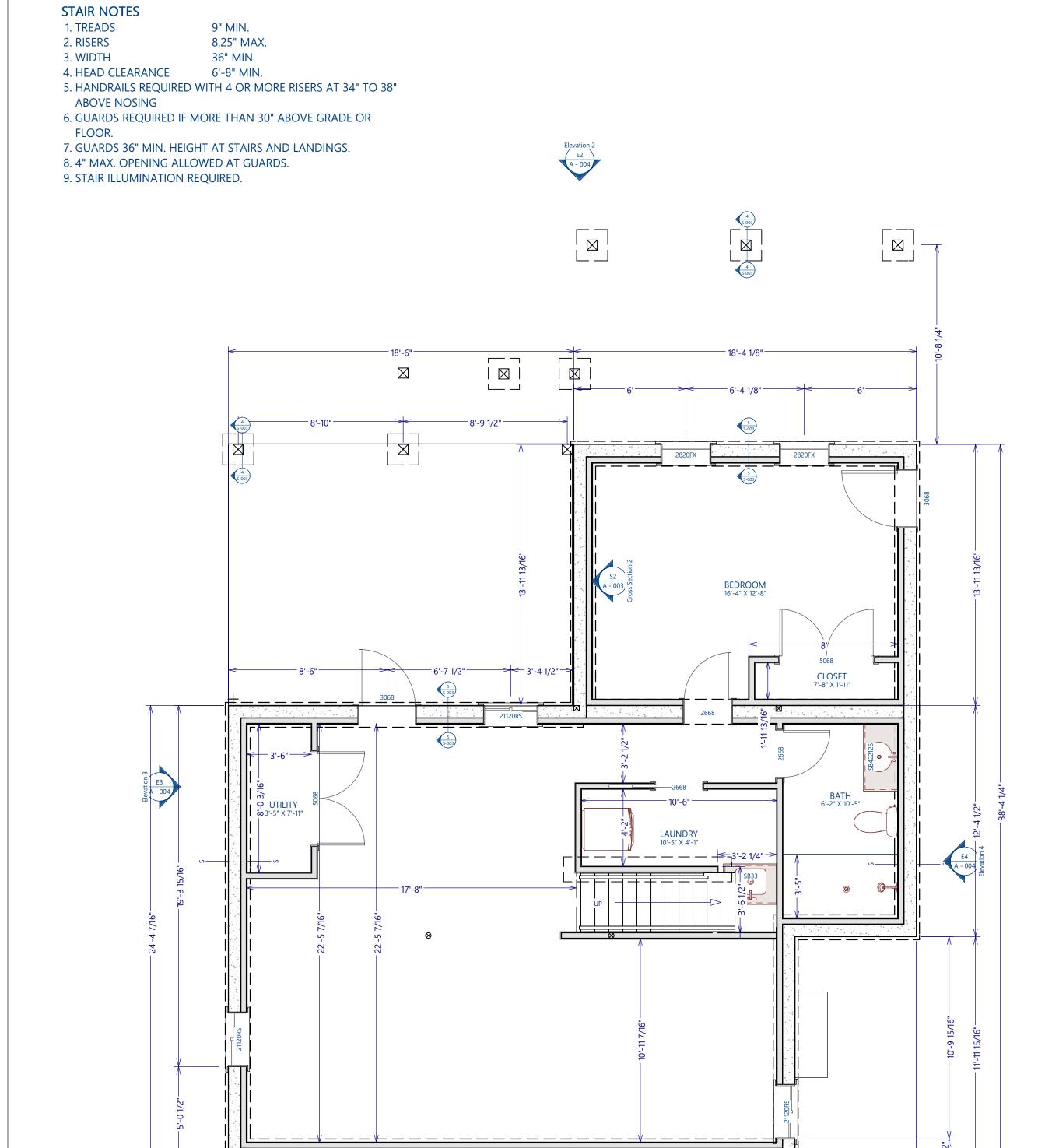
3005 ROGERS DRIVE FALLS CHURCH | VA | 22042



1 12-3-22 PRELIM.
2 12-6-22 PRELIM.2
3 12-18-22 PERMIT

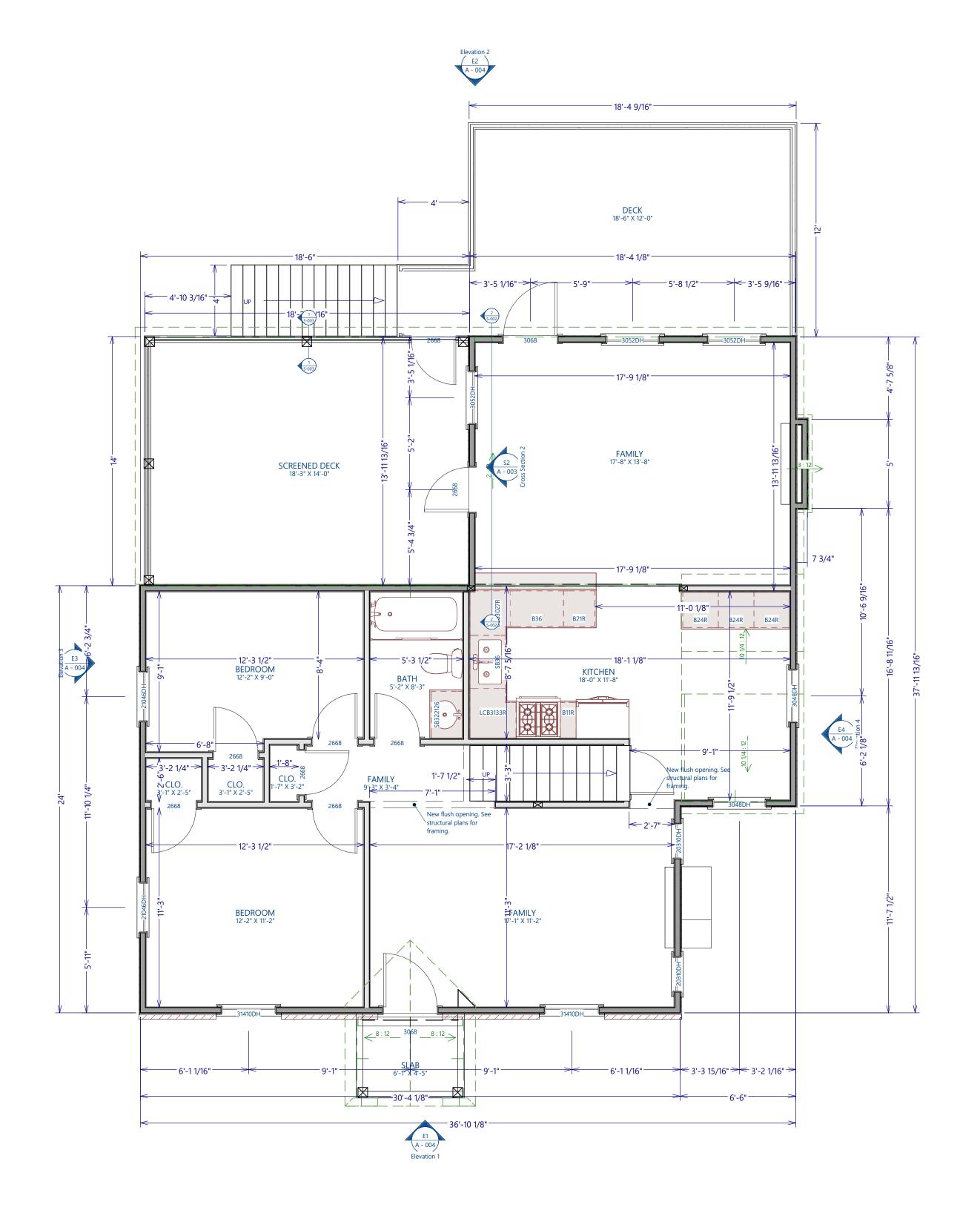
DATE 12/27/2022

SHEET EXISTING FLOOR PLANS













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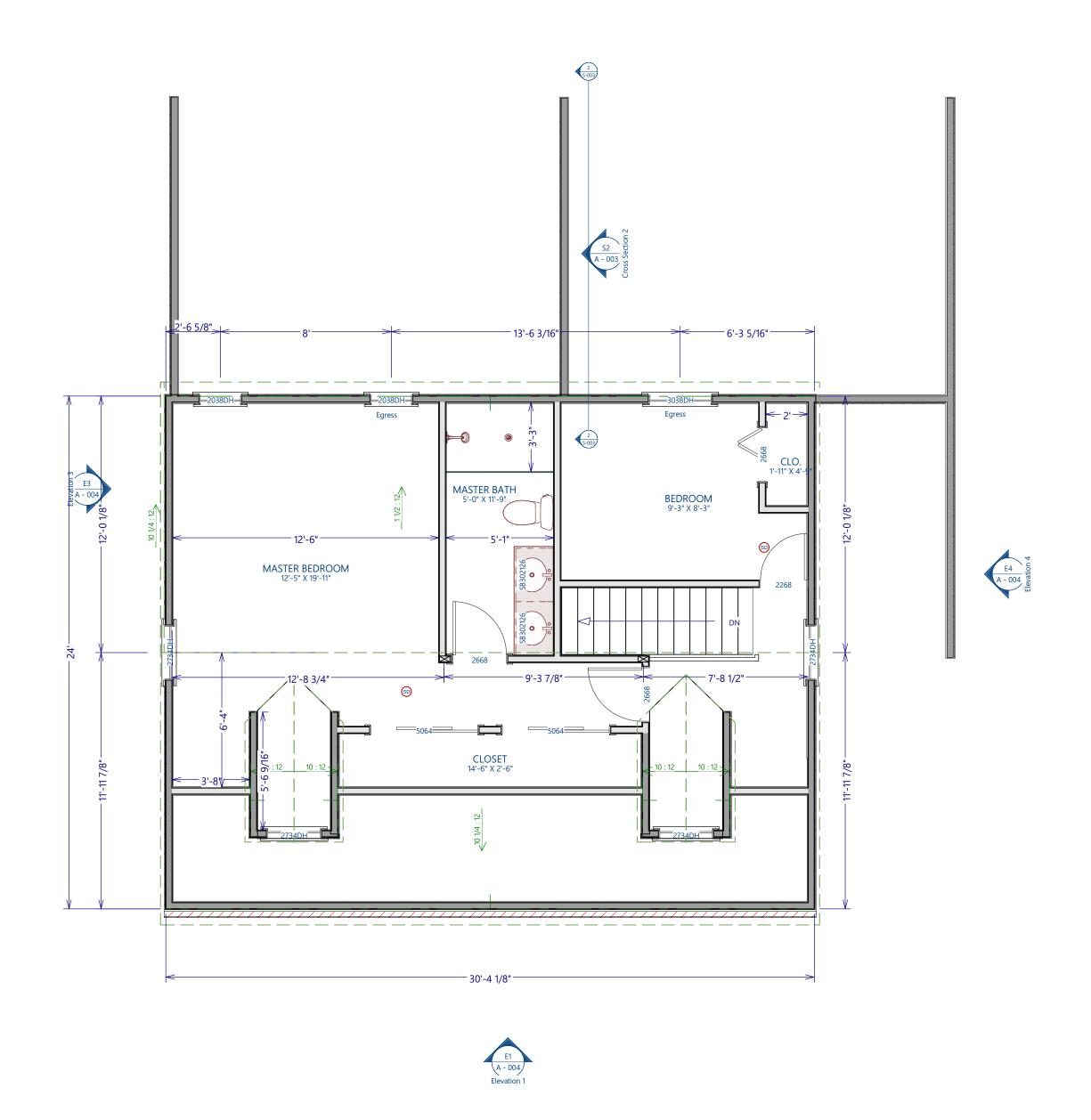
DORMER & DEC

REVISION	DATE	COMMENT
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2	12-6-22	PRELIM.2
3	12-18-22	PERMIT

DATE 12/27/2022

SHEET FLOOR PLANS

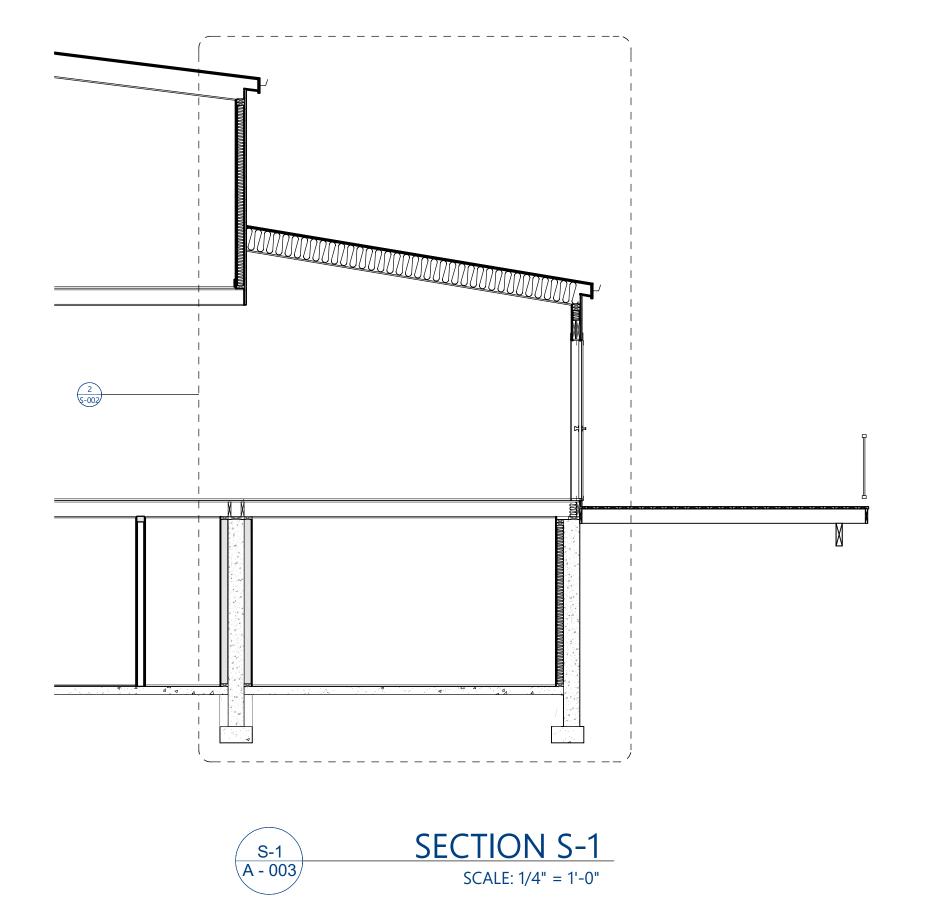




SECOND FLOOR PLAN

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

A - 003





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SIGNATURE AND DATE.



LIC. NO. 055174

6931 CARLTON AVE. ALLS CHURCH, VA 22043

DORMER 6

REVISION	DATE	COMMENT
1	12-3-22	PRELIM.
2	12-6-22	PRELIM.2
3	12-18-22	PERMIT

DATE 12/27/2022

SHEET FLOOR PLANS











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

E2 A - 004







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ADDITION

6931 CARLTON AVE. FALLS CHURCH, VA 22043

 REVISION
 DATE
 COMMENT

 1
 12-3-22
 PRELIM.

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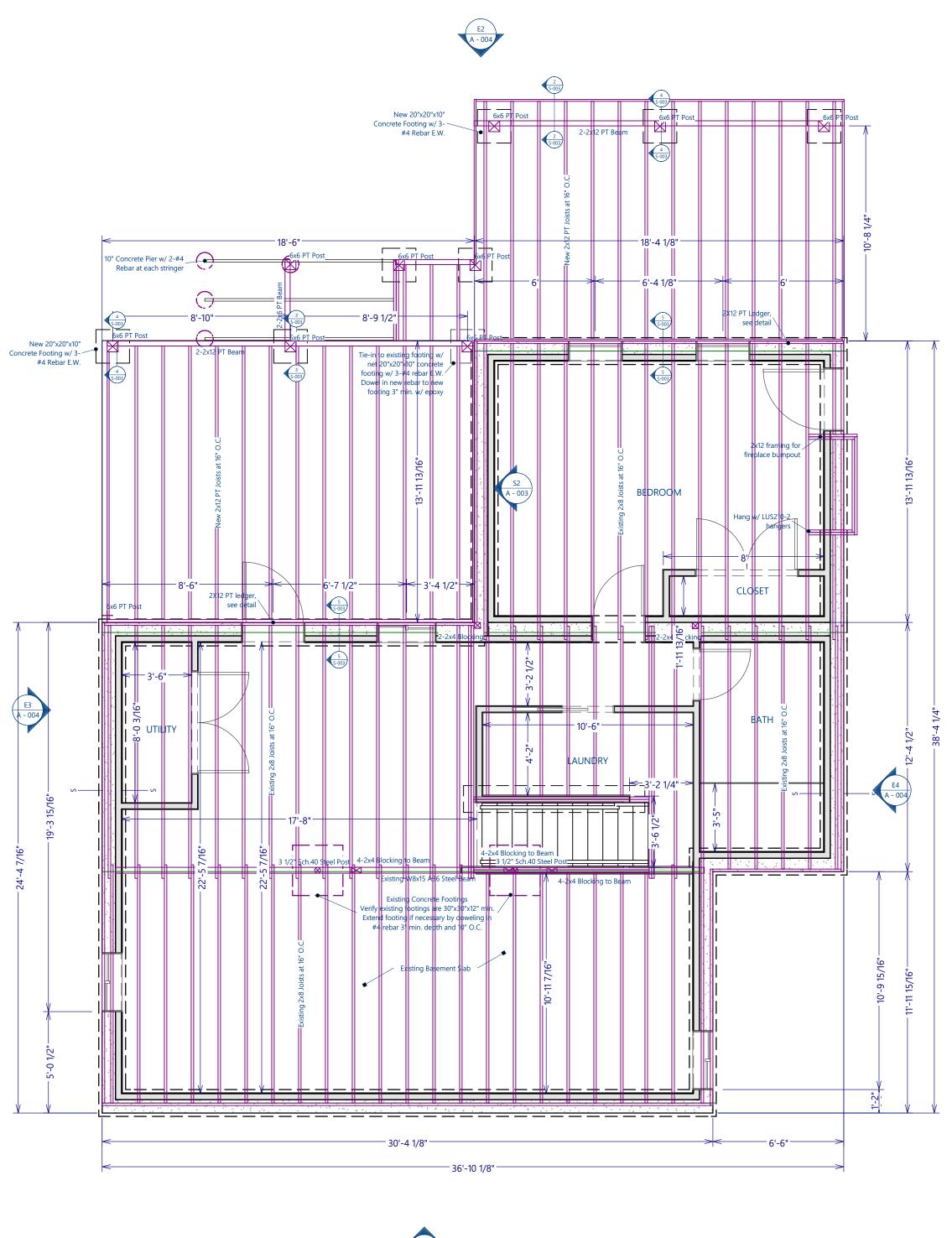
 3
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 PERMIT

DATE 12/27/2022

& DECK

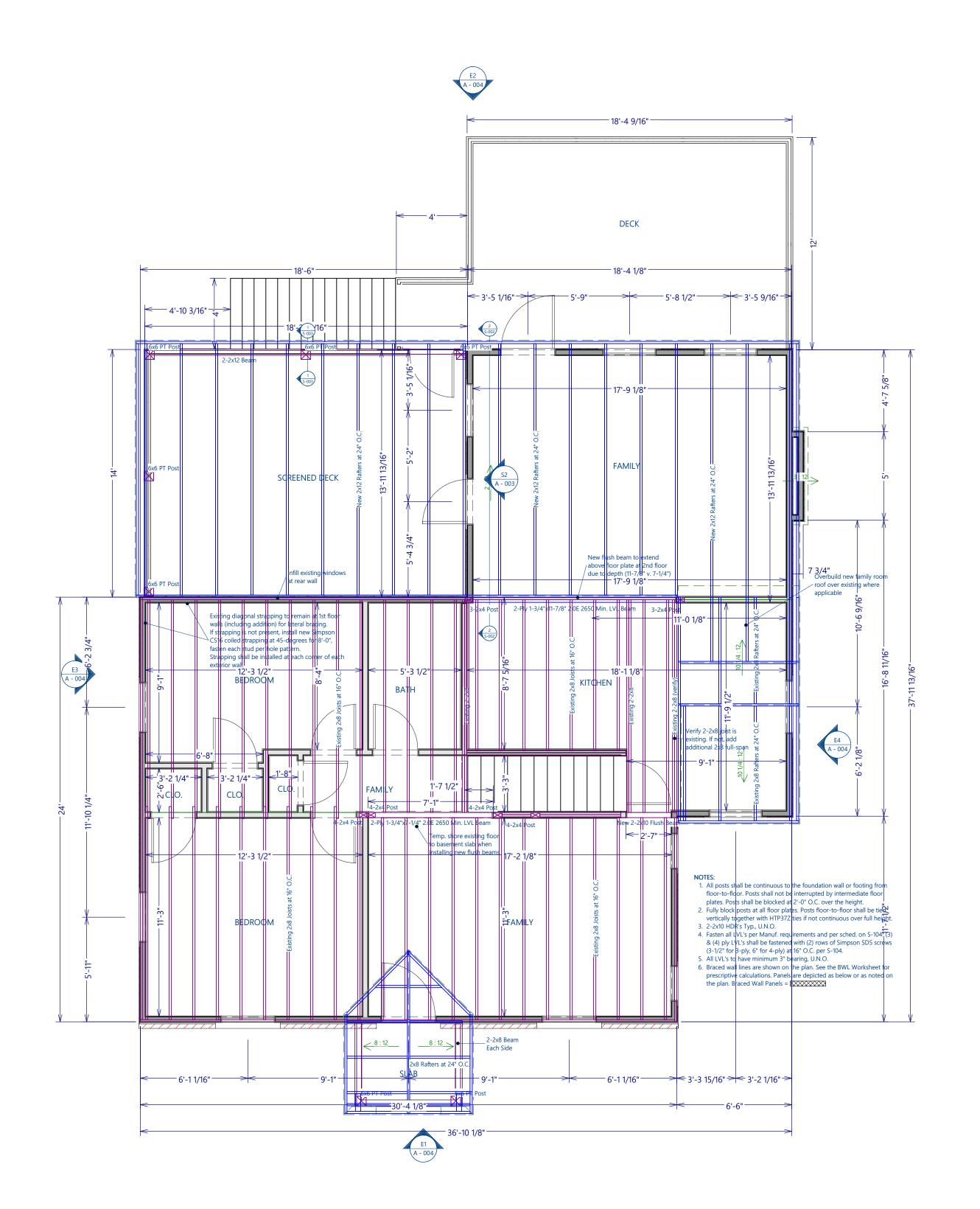
DORMER

SHEET ELEVATIONS











FIRST FLOOR FRAMING PLAN

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



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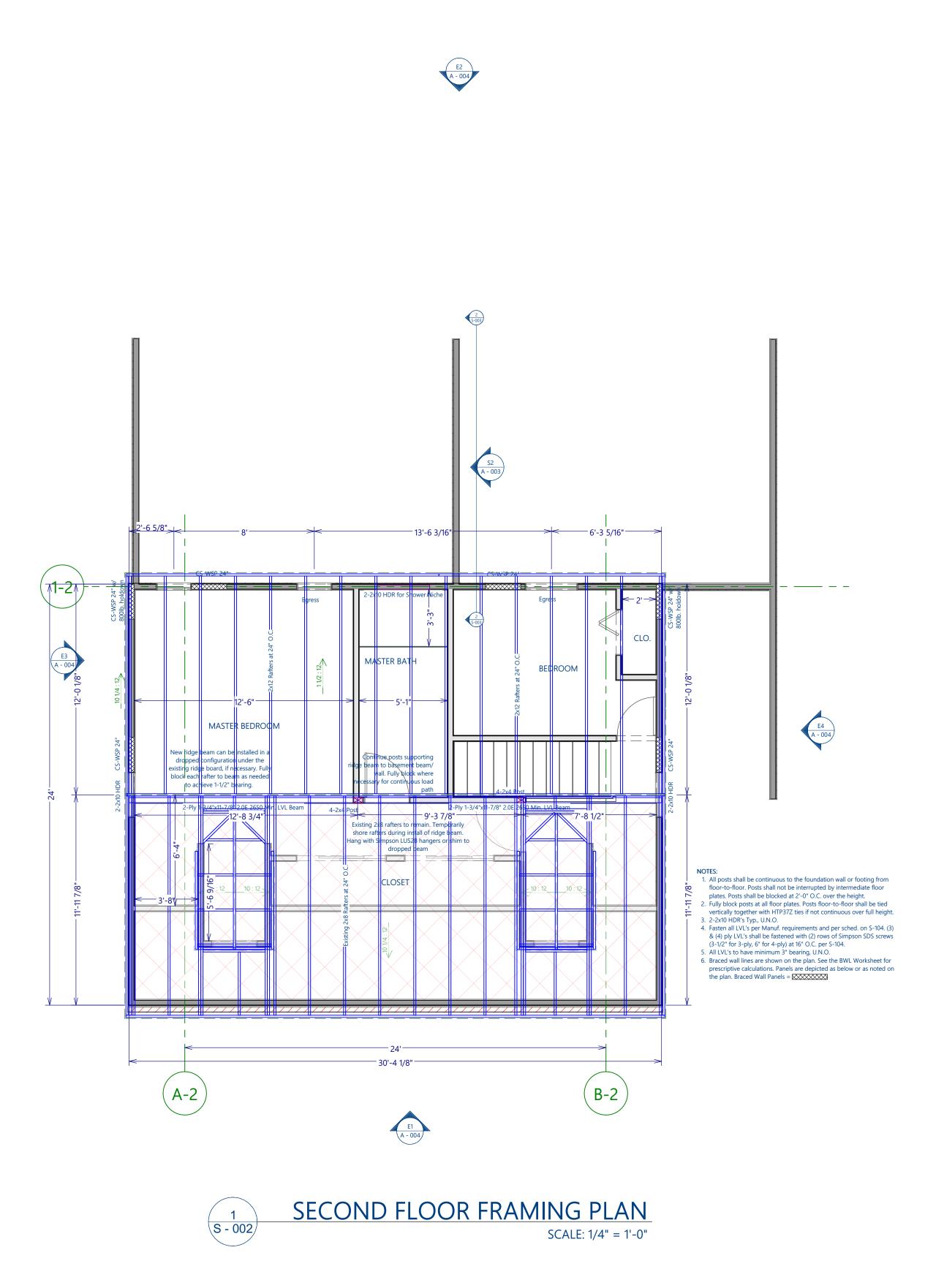
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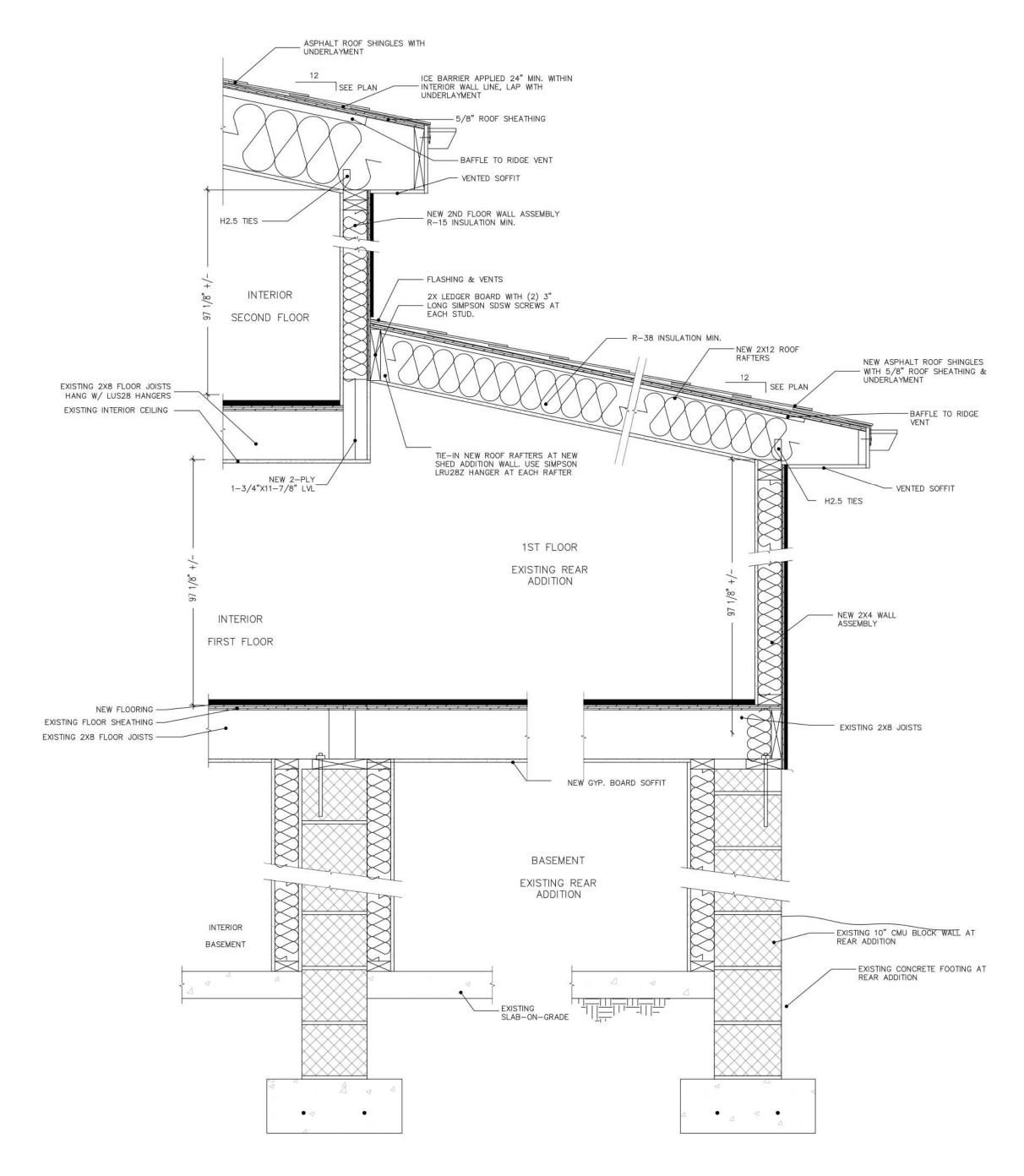
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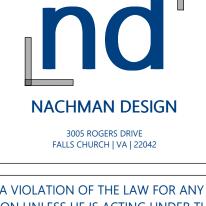
DATE 12/27/2022

SHEET STRUCTURAL PLANS









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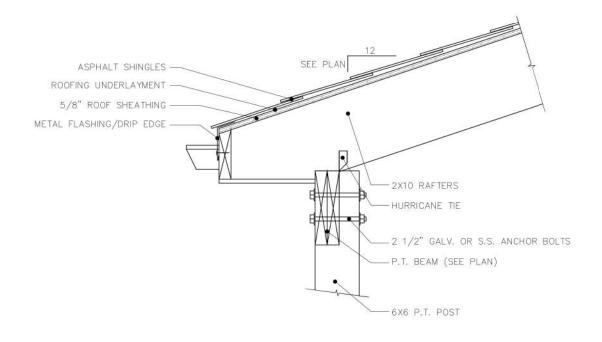
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DORMER & DEC

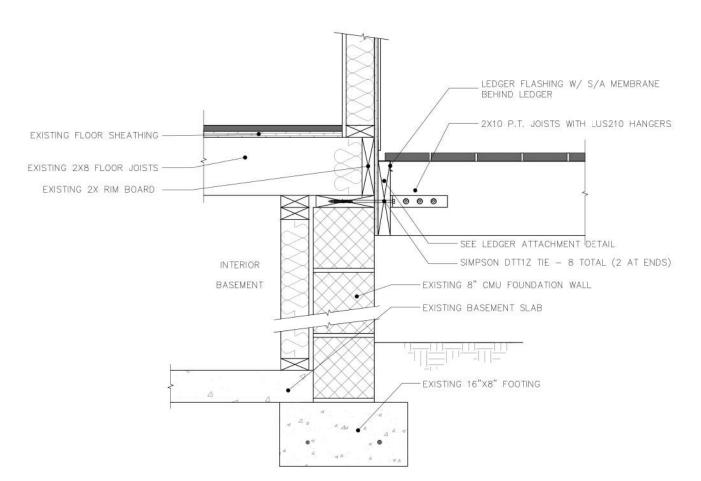
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2 12-6-22	PRELIM.2
3 12-18-22	PERMIT

DATE 12/27/2022

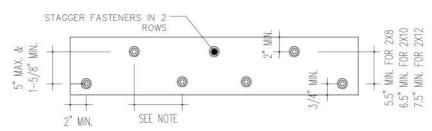
SHEET STRUCTURAL PLANS











- DECK NOTES:

 FASTENERS SHALL BE 1/2" LAG SCREW, THROUGH—BOLT, ANCHOR WITH WASHER, EXPANSION ANCHOR OR ADHESIVE ANCHOR.

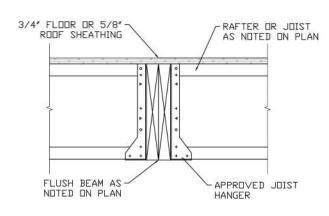
 LAG SCREW SPACING 10" O.C. MAX.

 THROUGH—BOLT SPACING 10" O.C. MAX.

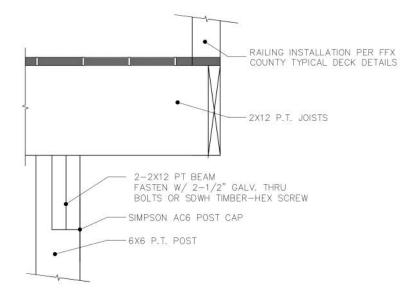
 EXPANSION/ADHESIVE ANCHOR SPACING 16" O.C. MAX.

 LEDGER SHALL HAVE A MIN. DEPTH OF THE JOISTS BEING SUPPORTED



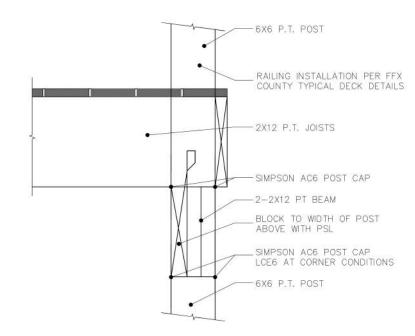


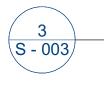




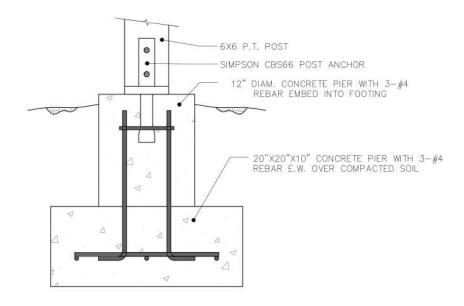


DECK EDGE DETAIL SCALE: 1" = 1'-0"





PORCH FLOOR DETAIL SCALE: 1" = 1'-0"







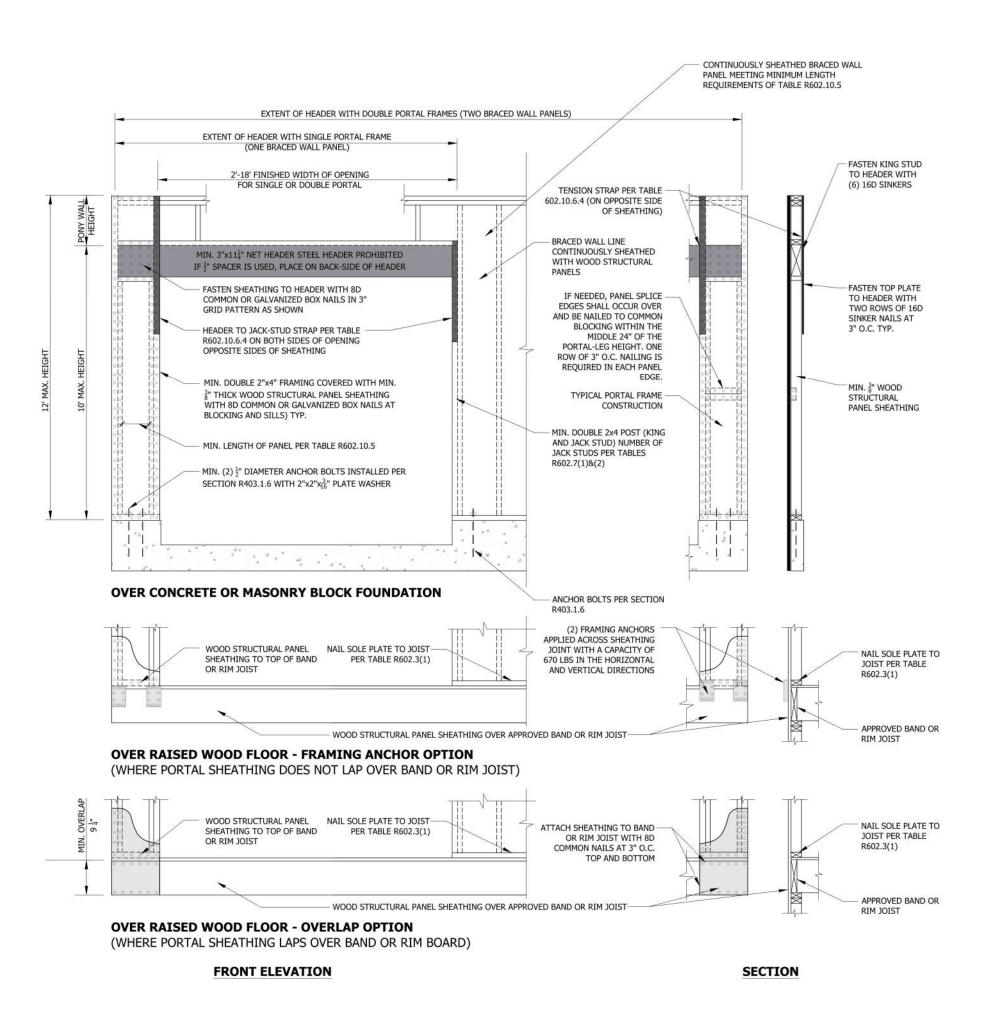
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REVISION DATE COMMENT 1 12-3-22 PRELIM.
2 12-6-22 PRELIM.2 3 12-18-22 PERMIT

DATE 12/27/2022

SHEET DETAILS



WALL BRACING NOTES

Structure is designed and braced according to the requirements of Section R602.10 of the 2018 Virginia Residential Code.

Unless otherwise noted, all exterior walls (including areas above and below openings and on gable end walls) are to be braced using the CS-WSP Method, which calls for continuous wood structural panel sheathing with a minimum 3/8" thickness, secured at panel edges with 6d common nails at 6" o.c. and 12" o.c. at intermediate supports (or 16 ga. x 1-3/4" staples at 3" o.c. at panel edges and spaced 6" o.c. at intermediate supports).

Exterior corner framing shall be in compliance with the detail.

Lengths of the braced wall panels at corners and adjacent to window and door openings are designed to be in accordance with the minimum dimensions required by Table R602.10.5. Where CS-PF is noted on the structural plans, wall panels are to be constructed as

"continuous portal frame panels" as per figure R602.10.6.4.

Where PFH portal frame with hold downs is noted, embed hold down anchors/straps per detail and attach to framing with required nails.

Where GB gypsum board wall panels are noted, attach 1/2" gypsum board with 5d ring shank x 1-5/8" long nails at 7" o.c., or Type W or S screws at 7" o.c.

Where LIB let in bracing is noted, use Simpson WB 126 strap with 2-16d nails at each plate and 1-8d nail per stud at 16" o.c., minimum 53 degree angle.

Where an 800 lb. hold down is noted, it is in lieu of the standard 24" sheathed return panel. All other requirements and details contained in the 2018 VRC that are not specifically stated in these notes are also to be followed.

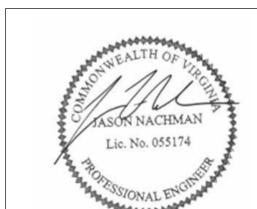


Classic Wall Bracing Worksheet

per 2018 Virginia Residential Code Section R602.10

Ulti	mate Wind Speed	(mph)	11	15																		
Contraction Contra	BWL Designation	on	A-	-2	В	-2					1-	-2										
No	o. of Floors above I	BWL	0)	()					()										
	BWP Method		CS-V	VSP	CS-V	WSP	4				CS-V	WSP						-			5	
Av	erage BWL Spacin	g (ft)	2	4	2	4					2	4										
Ta	bular Requiremen	t (ft)	3.9	90	3.	90					3.	90										
	Exposure		В	1.00	В	1.00					В	1.00										
	Eave-to-Ridge H	t. (ft)	11.00	1.06	11.00	1.06					11.00	1.06									s(
_	Max. Wall Ht.	(ft)	8.00	0.90	8.00	0.90					8.00	0.90										
ments	No. of BWLs	3	2	1.00	2	1.00					2	1.00										
Adjustments	Omit Interior Fin	ish?	No	1.00	No	1.00					No	1.00										
	Added Hold-dow	vns?	No	1.00	No	1.00					No	1.00										
	Joints Blocked	d?	Yes	1.00	Yes	1.00					Yes	1.00										
	Fasteners @ 4"	o.c.?	No	1.00	No	1.00					No	1.00										
Re	quired BWP Lengt	h (ft)	3.7	72	3.	72					3.	72										
		BWP	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length
	Contributing	1	CS-WSP	2.00	CS-WSP	2.00					CS-WSP	2.00										
S	Length (ft)	2	CS-WSP	2.00	CS-WSP	2.00					CS-WSP	2.00										
BWr	WSP=actual SFB=actual	3																				
Actual BWPs	GB(ss)=0.5xactual GB(ds)=actual	4																				
20	CS-PF=1.5xactual PFG=1.5xactual PFH=4'	5																				
	ABW=4'	6																				
		7																				
A	ctual BWP Length	(ft)	4.0	00	4.	00					4.	00										
	Actual ≥ Required	!?	PA:	SS	PA	SS					PA	SS										
	BWPs ≤ 20' Apart	1?	Ye	es	Y	es					Y	es										
	≥ 2 Panels in BWL	-?	Ye	es	Y	es					Y	es									2	
	BWP 10' from End		Ye			es	L					es		# (A) P		-						
(Continuous Sheath End Conditions		End 1	End 2	End 1	End 2			End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2
	BWL Compliance		PA	SS	PA	SS					PA	SS										
o r	eport an error or	r bug,	call 703-3	24-1842,	TTY 711				Α	Fairfax C	ounty, Virg	ginia Publ	ication							Classic V	RC2018 -	7/26/202

FIRST FLOOR BWL WORKSHEET



NACHMAN DESIGN

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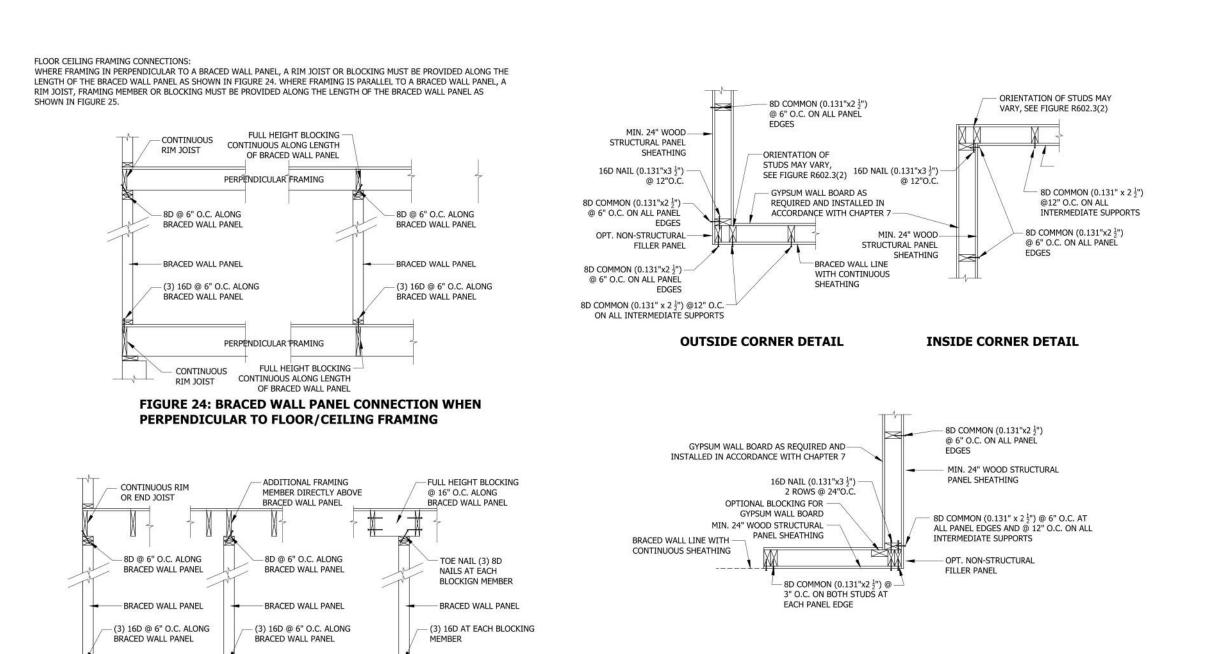
REVISION	DATE	COMMENT
1	12-3-22	PRELIM.
2	12-6-22	PRELIM.2
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DATE 12/27/2022

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BRACED WALL DETAILS

S - 004

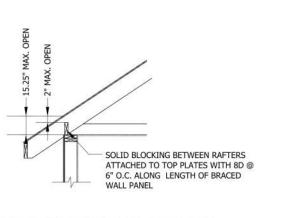


EACH SIDE - FULL HEIGHT BLOCKING

@ 16" O.C. ALONG

MEMBER DIRECTLY ABOVE

FIGURE 25: BRACED WALL PANEL CONNECTION WHEN PARALLEL TO FLOOR/CEILING FRAMING



BRACED WALL PANEL CONNECTION TO PERPENDICULAR RAFTERS

1. GENERAL

THE STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC). THE FOLLOWING LIVE LOADS WERE UTILIZED IN THE DESIGN:

> 40 PSF LIVING AREAS **SLEEPING ROOMS** 30 PSF EXTERIOR DECK 40 PSF 60 PSF BALCONY **GARAGE SLAB** 50 PSF 30 PSF ATTIC FLOOR 20 PSF ATTIC STORAGE SNOW LOAD (GROUND SNOW) 25 PSF 115 MPH (Vult) WIND LOAD **EXPOSURE CATEGORY** SEISMIC DESIGN CATEGORY TERMITE HAZARD MODERATE TO HEAVY DAMAGE FROM WEATHERING SEVERE DECAY PROBABILITY SLIGHT TO MODERATE A MINIMUM DEAD LOAD OF 15 PSF WAS ADDED IN THE DESIGN.

THE BASIC STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE COMPLETED INSTALLATION OF FLOORS FOR THEIR STABILITY. CONTRACTOR SHALL NOT PLACE BACKFILL UNTIL THESE ELEMENTS ARE COMPLETELY INSTALLED, OR CONTRACTOR HAS PROVIDED SHORING AND BRACING TO ADEQUATELY RESTRAIN WALL

2. EARTHWORK

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.

BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-0" BELOW FINISHED EXTERIOR GRADE. WHERE REQUIRED. STEP FOOTINGS SHALL BE IN A RATIO OF 2 HORIZONTAL TO 1 VERTICAL.

COMPACTED BACKFILL BELOW BUILDING SLABS (EXCEPT AT STRUCTURED SLAB AREAS) – ALL SOIL FILL MATERIAL MUST BE APPROVED BY 7. WOOD SOILS ENGINEER PRIOR TO PLACEMENT. MATERIALS TO BE FREE FROM ORGANIC MATERIAL, TRASH, MUCK, CONCRETE, ASPHALT OR OTHER DELETERIOUS SUBSTANCES. PRIOR TO PLACING FILL, THE EXISTING SURFACE SHALL BE CLEARED OF ALL REFUSE OR ORGANIC MATERIALS. FILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO A MINIMUM OF 95% OF THE DRY MAXIUMUM DENSITY AS DETERMINED BY ASTM D698.

STEP NEW FOOTINGS UP OR DOWN SUCH THAT BOTTOM OF FOOTING MATCHES THE EXISTING AT INTERSECTIONS BETWEEN NEW AND EXISTING WALLS. DRILL AND GROUT 2#5 BARS X 2'-0" LONG INTO EXISTING FOOTING. PROVIDE MINIMUM 6" EMBEDMENT.

RESTRAINED FOUNDATION WALLS ARE DESIGNED FOR A LATERAL EARTH PRESSURE OF 60 PCF AND RETAINING WALLS FOR A LATERAL EARTH PRESSURE OF 45 PCF, ASSUMING A PERIMETER DRAINTILE SYSTEM WITH FREE DRAINING SOIL MATERIAL OR DRAINAGE BOARD BEHIND WALL. NOTIFY ENGINEER IF SOIL CONDITIONS DIFFER.

PROVIDE 4" DIAMETER FOOTING DRAINS AROUND THE ENTIRE INTERIOR AND EXTERIOR PERIMETER OF THE FOUNDATION. COVER PIPE WITH 12" OF CLEAN STONE ADN PAPER, SLOPE 1% TO POINT OF DISCHARGE DETERMINED ON-SITE.

3. DEMOLITION

PROVIDE ADEQUATE SHORING, BRACING AND OTHER TEMPORARY SUPPORT DURING DEMOLITION. RETAIN THE SERVICES OF A QUALIFIED SPECIALTY ENGINEER TO DESIGN AND MONITOR THE TEMPORARY SUPPORT. SUBMIT DRAWINGS FOR RECORD ONLY.

UNTIL PROPERLY SHORED, DO NOT CUT EXISTING STRUCTURAL MEMBER IN A MANNER RESULTING IN A REDUCTION OF THE LOAD-CARRYING CAPACITY. DO NOT EXCEED THE CAPACITY OF THE EXISTING STRUCTURE WITH SUPERIMPOSED LOADS.

IN GENERAL, SELECTIVE STRUCTURAL DEMOLITION IS TO BE PERFORMED WITH PHYSICAL CUTTING ACTION (I.E. SAWING AND GRINDING INSTEAD OF HAMMERING AND CHOPPING). DO NOT USE JACKHAMMERS ON STRUCTURALLY SUPPORTED MEMBERS.

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.

4. CONCRETE

ALL CONCRETE TO HAVE MINIMUM 28-DAY COMPRESSIVE STRENGTH (F'c) = 3000 PSI. EXTERIOR AND GARAGE SLABS SHALL HAVE A MINIMUM STRENGTH OF 3500 PSI. ALL CONCRETE TO BE POURED IN ACCORDANCE WITH ACI 301. CONCRETE EXPOSED TO WEATHER TO BE AIR ENTRAINED.

ALL REINFORCING STEEL TO MEET ASTM A615 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 SHALL BE SPLICED A MINIMUM OF 30 BAR DIAMETERS.

PROVIDE CONCRETE COVER CLEAR DISTANCE TO OUTERMOST REINFORCING AS FOLLOWS:

FOOTINGS 3" WALLS 1-1/2"

PROVIDE CORNER BARS TO MATCH HORIZONTAL REINFORCING IN WALLS AND FOOTINGS. PROVIDE REINFORCING DOWELS BETWEEN FOOTINGS AND WALLS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING.

ALL CONCRETE SLABS SHALL BE PROVIDED WITH 1/2" PREMOLDED PERIMETER ISOLATION JOINTS AND SAWCUT CONTRACTION JOINTS AT PATTERNS COMPATIBLE WITH INTERIOR COLUMN LOCATIONS. PATTERNS SHALL NOT EXCEED 20 FEET SQUARE.

ALL CONCRETE SURFACES EXPOSED TO WEATHER SHALL HAVE A NON-SKID SURFACE.

5. MASONRY

ALL CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 FOR LOAD BEARING MASONRY. ALL MASONRY TO HAVE REINFORCING AS PER VIRGINIA RESIDENTIAL CODE R606.9. MORTAR SHALL BE ASTM C270 TYPE S.

LINTELS FOR MASONRY WALLS SHALL BE AS FOLLOWS. PROVIDE 1 ANGLE FOR EACH 4" OF WALL THICKNESS AS FOLLOWS:

OPENINGS UP TO 3'-0" 4" X 3-1/2" X 1/4" – LLV 3'-1" TO 5'-0" 4" X 3-1/2" X 5/16" – LLV 5'-1" TO 6'-6" 5" X 3-1/2" X 5/16" – LLV CONSULT ARCHITECT/ENGINEER FOR OPENINGS GREATER THAN 6'-6". (LLV = LONG LEG VERTICAL)

LINTELS SHALL BE PROVIDED AT ALL OPENINGS AND RECESSES AT INTERIOR AND EXTERIOR MASONRY WALLS, INCLUDING OPENINGS FOR DUCTS, LOUVERS, HEATING UNITS, ETC., WHETHER OR NOT SHOWN ON THE DRAWINGS.

ALL VERTICAL REINFORCING SHALL BE GROUTED IN PLACE WITH TYPE S MORTAR OR PEA GRAVEL CONCRETE.

ALL EXPANSION BOLTS OR SLEEVE ANCHORS IN MASONRY WALLS SHALL BE PLACED IN SOLID GROUTED MASONRY.

PROVIDE REINFORCING DOWELS FROM ALL FOOTINGS INTO MASONRY WALLS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING.

ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 OR ASTM 572 GRADE 50. PIPE TO BE A53. TUBE TO BE A500 OR A501. DETAILING TO BE IN ACCORDANCE WITH AISC STRUCTURAL STEEL DETAILING MANUAL. BOLTED FIELD CONNECTION SHALL BE 3/4" DIAMETER HIGH STRENGTH BOLTS MEETING ASTM A325.

SUBMIT COMPLETE SHOP AND ERECTION DRAWINGS FOR APPROVAL PRIOR TO FABRICATION OR ERECTION.

ALL WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY. THE WELDING ELECTRODES, MACHINES, ETC. SHALL BE COMPATIBLE WITH STEEL BEING WELDED.

ALL FRAMING LUMBER SHALL BE SPRUCE-PINE-FIR, GRADE #1 / #2, OR BETTER, HAVING THE FOLLOWING MINIMUM PROPERTIES (BASED ON 2X12 MEMBERS):

BENDING STRESS "Fb" = 850 PSI FOR SINGLE MEMBER USE 135 PSI HORIZONTAL SHEAR "Fv" = COMPRESSION PERPENDICULAR TO GRAIN "Fc" = 405 PSI COMPRESSION PARALLEL TO GRAIN "Fcll" = 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.

LUMBER OR STRUCTURAL POSTS SHALL BE SPRUCE-PINE-FIR, GRADE #1 / #2, OR BETTER, HAVING THE FOLLOWING MINIMUM PROPERTIES (BASED ON 2X12 LUMBER):

850 PSI FOR SINGLE MEMBER USE BENDING STRESS "Fb" = HORIZONTAL SHEAR "Fv" = 135 PSI COMPRESSION PERPENDICULAR TO GRAIN "Fc" = 405 PSI COMPRESSION PARALLEL TO GRAIN "Fcll" = 1,150 PSI 1,300,000 PSI MODULUS OF ELASTICITY "E" =

LAMINATED VENEER LUMBER (LVL) BEAMS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

BENDING STRESS "Fb" = 2,510 PSI HORIZONTAL SHEAR "Fv" = 285 PSI MODULUS OF ELASTICITY "E" = 2,000,000 PSI

PARALLEL STRAND LUMBER (PSL) BEAMS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

2.0E (U.N.O.) COMPRESSION PARALLEL TO GRAIN "Fcll" = 2,500 HORIZONTAL SHEAR "Fv" = 285 PSI 2,000,000 PSI MODULUS OF ELASTICITY "E" =

ALL WALL STUDS SHALL BE SPF STUD GRADE OR BETTER, HAVING THE FOLLOWING MINIMUM PROPERTIES (BASED ON 2X4 & 2X6 MEMBERS):

COMPRESSION PARALLEL TO GRAIN "Fcll" = 725 PSI 675 PSI FOR SINGLE MEMBER USE BENDING STRESS "Fb" = MODULUS OF ELASTICITY "E" = 1,200,000 PSI

LAMINATED VENEER LUMBER (LVL) AND PARALLEL STRAND LUMBER (PSL) ENGINEERED WOOD PRODUCTS SHALL BE MANUFACTURED BY WEYERHAUSER. IF THE SPECIFIED MATERIAL IS SUBSTITUTED WITH ANOTHER PRODUCT, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SUBSTITUTED PRODUCT STRUCTURALLY MEETS OR EXCEEDS THE ORIGINALLY SPECIFIED PRODUCT.

ENGINEERED FLOOR "I" JOISTS SHALL BE MANUFACTURED BY WEYERHAUSER. CONTRACTOR SHALL PROVIDE SIGNED AND SEALED SHOP DRAWINGS FROM THE MANUFACTURER FOR REVIEW. DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE JURISDICTION WHERE CONSTRUCTION IS TAKING PLACE.

ALL EXPOSED EXTERIOR FRAMING AND FRAMING IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE-TREATED WITH ALKALINE COPPER QUOT (ACQ) OR COPPER AZOLE (CBA-A AND CA-B), NOT SODIUM BORATE (SBX). ALL WOOD SHALL BE 8" MINIMUM ABOVE FINISHED GRADE OR SHALL BE PRESSURE TREATED.

UNLESS NOTED OTHERWISE, FASTENING FOR STRUCTURAL MEMBERS SHALL FOLLOW INTERNATIONAL RESIDENTIAL CODE TABLE R602.3(1) AND R606.11(1) FOR MASONRY WALLS.

CUTTING AND NOTCHING OF CONVENTIONAL FLOOR JOISTS SHALL CONFORM TO THE FOLLOWING:

NOTCH DEPTH IN THE TOP OR BOTTOM OF THE JOISTS OR BEAMS SHALL NOT EXCEED ONE-SIXTH THE DEPTH OF THE MEMBERS AND SHALL NOT BE LOCATED IN THE MIDDLE ONE-THIRD OF THE SPAN (INCLUDING BIRDS MOUTH CUTS).

NOTCH DEPTH AT THE ENDS OF THE MEMBER SHALL NOT EXCEED ONE-FOURTH THE DEPTH OF THE MEMBER.

THE TENSION SIDE OF BEAMS, JOISTS AND RAFTERS SHALL NOT BE NOTCHED, EXCEPT AT ENDS OF MEMBERS.

HOLES BORED OR CUT INTO JOISTS SHALL NOT BE CLOSER THAN TWO INCHES TO THE TOP OF BOTTOM OF THE JOISTS. THE DIAMETER OF THE HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOISTS.

PROVIDE SOLID BLOCKING AT 4'-0" ON-CENTER BETWEEN BAND JOIST AND FIRST INTERIOR PARALLEL JOIST.

PREFABRICATED JOIST HANGERS, BEAM HANGERS, POST CAPS AND POST BASES SHALL BE MANUFACTURED BY SIMPSON-STRONG-TIE. ALL HANGERS, CAPS AND BASES SHALL BE SIZED AND ATTACHED PER MANUFACTURER'S RECOMMENDATION. FASTENERS AND CONNECTORS UTILIZED WITH PRESSURE-TREATED MEMBERS SHALL MEET G185 HOT-DIPPED GALVANIZING. IF THE SPECIFIED MATERIAL IS SUBSTITUTED WITH ANOTHER PRODUCT, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SUBSTITUTED PRODUCT STRUCTURALLY MEETS OR EXCEEDS THE ORIGINALLY SPECIFIED PRODUCT.

PREFABRICATED STEEL HANGERS SHALL BE INSTALLED AS FOLLOWS:

ALL JOISTS, RAFTERS, AND BEAMS FLUSH-SUPPORTED TO OTHER FRAMING SHALL HAVE PREFABRICATED JOIST/BEAM HANGERS.

HANGERS SHALL BE SIZED IN ACCORDANCE WITH MANUFACTURER'S CATALOGUE FOR THE JOIST/BEAM TYPE, NUMBER OF PLIES, DEPTH, AND WIDTH.

WHERE HANGER LOADS ARE NOTED ON THE DRAWINGS, HANGERS SHALL BE SIZED TO CARRY THE LOAD VALUE.

PROVIDE SPECIAL SLOPED AND/OR SKEWED HANGERS FOR SLOPED AND SKEWED MEMBERS

ANCHOR BOLTS CONNECTING PRESSURE-TREATED WOOD PLATES TO MASONRY OR CONCRETE SHALL BE HOT-DIPPED GALVANIZED OR STAINLESS-STEEL.

ALL HEADERS SHALL HAVE A MINIMUM OF TWO STUDS AT EACH END UNLESS NOTED. BUILT-UP STUD COLUMNS SHALL HAVE ONE JACK STUD AND THE REMAINING STUDS SHALL BE KING STUDS. MULTIPLE STUDS SHALL BE NAILED WITH 12d NAILS AT 8" ON-CENTER. PROVIDE SOLID BLOCKING OR CRIPPLE STUDS IN FLOOR SYSTEM AT ALL POINT LOADS ABOVE.

ALL FREESTANDING POSTS SHALL HAVE PREFABRICATED POSTCAP AND BASE. POSTS WITHIN WALLS SHALL HAVE PREFABRICATED CAP ATTACHED TO BEAM. POSTS BEARING ON MASONRY OR CONCRETE SHALL HAVE A PREFABRICATED BASE.

HOLES BORED IN BEARING WALL STUDS SHALL NOT EXCEED 1/3 OF STUD WIDTH.

ALL STUD BEARING WALLS TO BE PROVIDED WITH 2 CONTINUOUS TOP PLATES AND 1 CONTINUOUS BOTTOM PLATE WITH A MINIMUM OF ONE ROW OF HORIZONTAL BRIDGING AT MID HEIGHT OF WALL UNLESS NOTED OTHERWISE. SPLICES OF TOP PLATE SHALL OCCUR OVER STUD. SPLICES SHALL BE STAGGERED A MINIMUM OF 4'-0".

ALL ROOF RAFTERS SHALL BE CONNECTED AT EACH BEARING POINT WITH ONE PREFABRICATED GALVANIZED METAL CONNECTOR. EACH ANCHOR SHALL BE 18 GAGE MINIMUM THICKNESS AND SHALL BE ATTACHED TO HAVE A CAPACITY TO RESIST 450# UPLIFT LOADING UNLESS SHOWN OTHERWISE ON DRAWINGS.

ROOF TRUSSES SHALL BE APPROVED, DESIGNED AND CERTIFIED BY THE MANUFACTURER'S PROFESSIONAL ENGINEER OF THE JURISDICTION WHERE CONSTRUCTION IS TAKING PLACE TO SUPPORT THE LOADING AS REQUIRED. TRUSS DESIGNS SHALL CONTAIN DATA ON METAL CONNECTORS, LUMBER SPECIFICATIONS, PITCH, SPAN AND SPACING, SPECIES AND STRESS GRADE OF LUMBER, ETC. SUBMIT THREE SIGNED AND SEALED COPIES OF SHOP DRAWINGS OF TRUSSES FOR THE ARCHITECT'S APPROVAL PRIOR TO ORDER.

UNLESS OTHERWISE NOTED, PROVIDE:

DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS, EXCEPT PARALLEL PLUMBING WALLS.

DOUBLE 2X10 HEADERS OVER ALL DOOR AND WINDOW OPENINGS.

SINGLE ROW OF 1X3 CROSS BRIDGES PER JOIST SPAN.

SOLID WOOD BLOCKING BELOW ALL HEADERS, BEAMS AND LINTELS.

WALL BRACING ACCORDING TO SEC. 602.10 OF THE VA RESIDENTIAL CODE.

FIREBLOCKING BETWEEN ALL JOISTS.

8. SHEATHING

FLOOR SHEATHING SHALL BE 23/32" (3/4") THICK APA AND HUD/FHA RATED, TONGUE AND GROOVE PLYWOOD. PANELS SHALL HAVE LONG DIMENSION ORIENTED ACROSS THREE OR MORE JOISTS AND SHALL BE FASTENED WITH CONSTRUCTION ADHESIVE AND 10d NAILS AT 6" ON-CENTER AT PANEL EDGES AND AT 12" ON-CENTER AT INTERMEDIATE SUPPORTS. UNLESS NOTED OTHERWISE, PANEL EDGES NEED NOT BE BLOCKED.

EXTERIOR WALL SHEATHING SHALL BE 7/16" (1/2") THICK APA AND HUD/FHA RATED WOOD STRUCTURAL PANELS. FASTEN PANELS TO STUDS WITH 8d NAILS AT 6" ON-CENTER AT PANEL EDGES AND AT 12" ON-CENTER AT INTERMEDIATE SUPPORTS, UNLESS NOTED OTHERWISE, PANEL EDGES NEED NOT BE BLOCKED.

ROOF SHEATHING SHALL BE 19/32" (5/8") THICK APA AND HUD/FHA RATED WOOD PANELS WITH SPAN RATING OF 24/0 OR BETTER. FASTEN PANELS TO FRAMING WITH 8d NAILS AT 6" ON-CENTER AT PANEL EDGES AND 12" ON-CENTER AT INTERMEDIATE SUPPORTS. ORIENT LONG DIMENSION OF PANELS ACROSS THREE OR MORE SUPPORTS. UNLESS NOTED OTHERWISE, PANEL EDGES NEED NOT BE BLOCKED.

9. FINISHES

ALL GYPSUM BOARD TO BE OF TYPE AND THICKNESS SHOWN ON DRAWINGS, TAPED, SPACKLED (LEVEL 3) AND PAINTED 2 COATS TO FORM A SMOOTH, UNIFORM WALL FINISH.

GYPSUM BOARD SHALL BE SCREW APPLIED, FOLLOWING THE SPECIFICATIONS OF THE NATIONAL TILE COUNCIL OF AMERICA AND THE MANUFACTURER.

COUNCIL OF AMERICA AND THE MANUFACTURER.

ALL VINYL FLOOR SYSTEMS SHALL BE INSTALLED OVER AN APPROVED UNDERLAYMENT MATERIAL AS APPROVED BY THE MANUFACTURER.

ALL DOOR AND WINDOWS SHALL BE INSTALLED SQUARE AND TRUE TO ALIGNMENT FOLLOWING THE MANUFACTURER'S SPECIFICATIONS.

ALL TILES SHALL BE PROPERLY INSTALLED USING THICK OR THIN SET METHOD FOLLOWING THE SPECIFICATIONS OF THE NATIONAL TILE

INSTALL VINYL IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

10. MISCELLANEOUS

ALL WOOD BLOCKING, NAILERS, ETC. SHALL BE ATTACHED TO STEEL OR CONCRETE FRAMING WITH POWDER ACTUATED FASTENERS OR 1/2" DIAMETER BOLTS UNLESS NOTED OTHERWISE. FASTENERS SHALL BE SPACED AT 24" MAXIMUM ON-CENTER. FASTENERS SHALL HAVE A MINIMUM CAPACITY OF 100# IN SHEAR AND PULLOUT UNLESS NOTED OTHERWISE.

WARNING:

THE STRUCTURAL INTEGRITY OF THE BUILDING SHOWN ON THESE PLANS IS DEPENDENT UPON COMPLETION ACCORDING TO PLANS AND SPECIFICATIONS. STRUCTURAL MEMBERS ARE NOT SELF-BRACING UNTIL PERMANENTLY AFFIXED TO THE STRUCTURE AS DIRECTED. THE STRUCTURAL ENGINEERS ASSUME NO LIABLILTY FOR THE STRUCTURE DURING CONSTRUCTION UNLESS THE CONSTRUCTION METHOD AND BRACING ARE INCLUDED IN THE PLANS AND SPECIFICATIONS OR ARE SUPERVISED BY THE STRUCTURAL ENGINEERS DURING CONSTRUCTION.



IT IS A VIOLATION OF THE LAW FOR ANY PERSON UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ARCHITECT/ENGINEER TO ALTER THIS DRAWING IN ANY WAY. ALTERATIONS MUST HAVE THE SEAL AFFIXED ALONG WITH A DESCRIPTION OF THE ALTERATION, THE SIGNATURE AND DATE.



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REVISION	DATE	COMMENT
1	12-3-22	PRELIM.
2	12-6-22	PRELIM.2
3	12-18-22	PERMIT

DATE 12/27/2022

SHEET STRUCTURAL NOTES