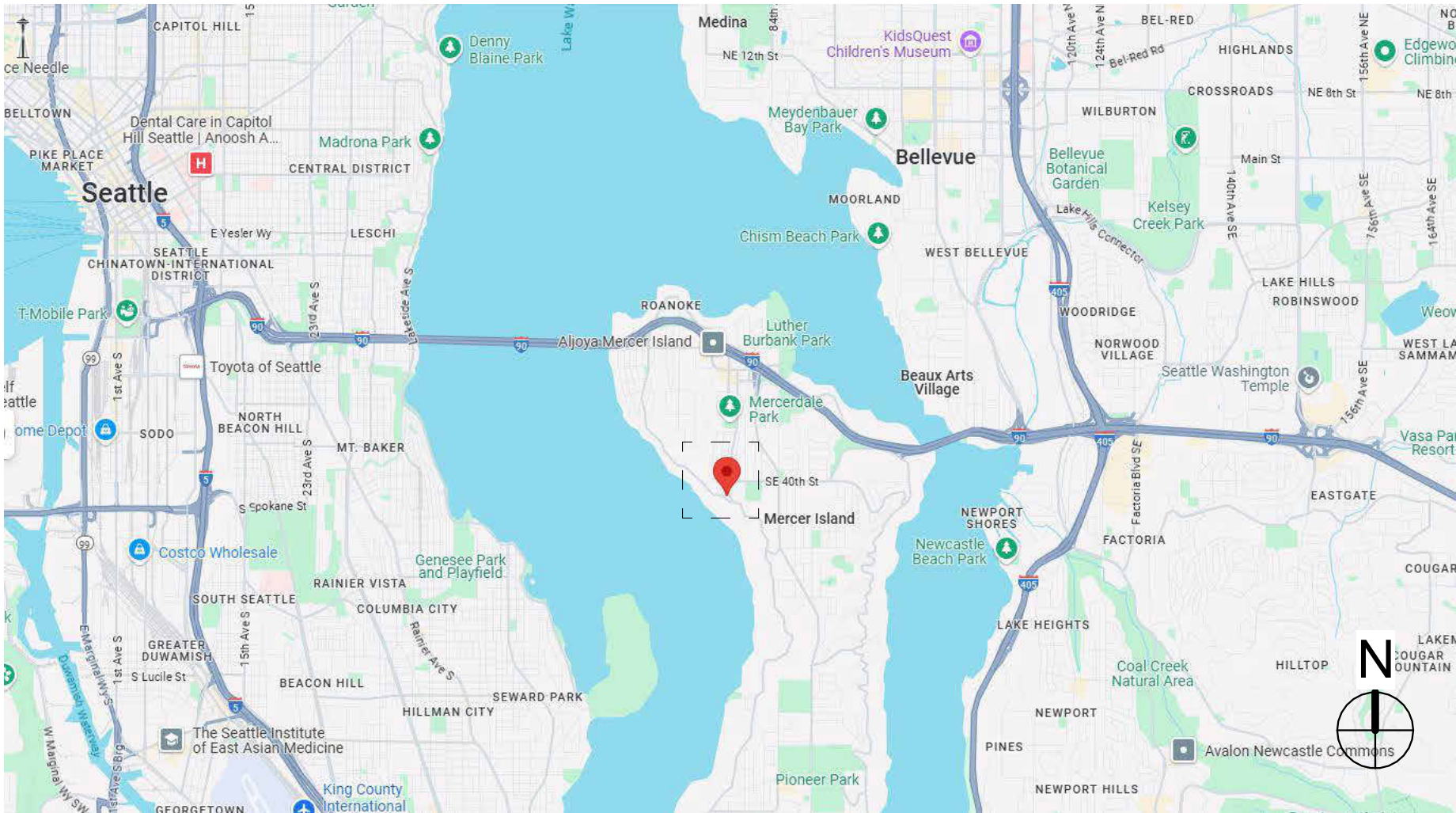


PROJECT INFORMATION

LEGAL DESCRIPTION:	GOODFELLOW HOME TRS DIV #1 PARCEL C MERCER ISLAND SHORT PLAT NO 78-11-038 REC NO 8204129001 SD PLAT DAF - LOTS 1-2-14-15 & 16 BLK 1 GOODFELLOW HOME TRS DIV #1 TGV POR VAC ST ADJ & TGV POR TR 16 REPLAT OF ISLAND PARK LY NELY OF W MERCER WAY DAF - BEG AT NELY COR OF SD TR TH S 41-14-11 E ALG NE LN THOF 12.56 FT TH S 48-45-49 W 98.04 FT TO NELY LN OF WEST MERCER WAY TH NWLY ALG SD NELY LN TO N LN OF SD TR TH E ALG SD N LN TO BEG Plat Block: 1 & Plat Lot: POR
PARCEL NUMBER:	283710-0012
ZONING:	R-9.6
JURISDICTION:	MERCER ISLAND
PRESENT USE:	Single Family (Res Use/Zone)
PROJECT ADDRESS:	4103 78th Ave SE, Mercer Island, WE 98040
OWNER INFORMATION:	SHIHANG ZHANG & CHUHAN HOU zshihang@gmail.com
ARCHITECT:	5ft2 Studio Architects, LLC info@5ft2studio.com
GENERAL CONTRACTOR:	TBD
STRUCTURAL ENGINEER:	Name: Malsam Tsang structure engineering Email : QuinnM@malsam-tsang.com
WORK DESCRIPTION:	Propose new level 2 addition on top of the existing 2 story single-family house (level 1 and level basement) No new foot print is added

VICINITY MAP



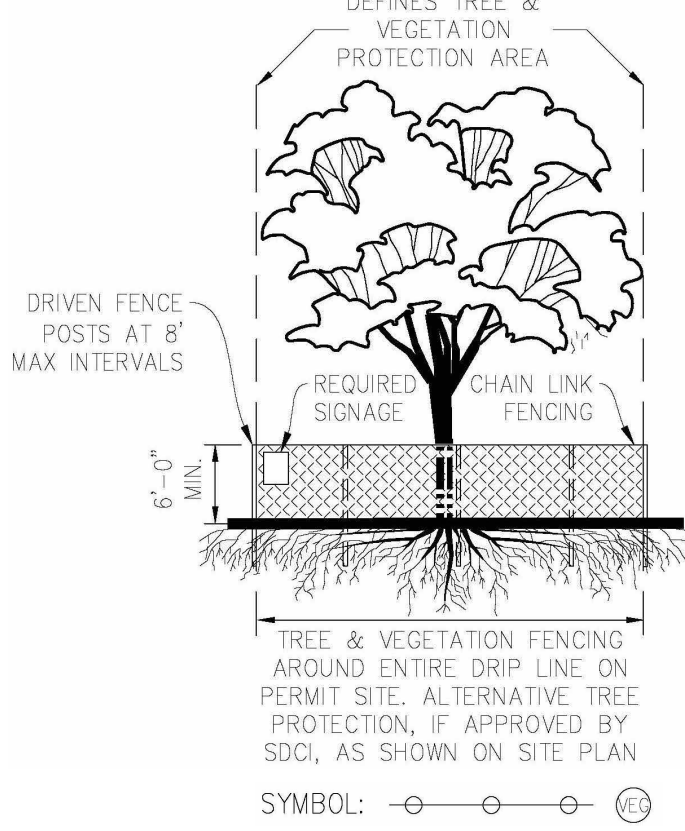
TREE & VEGETATION PROTECTION

TREE PROTECTION FENCING AND SIGN:

- CHAIN LINK FENCE REQUIRED (NO ORANGE CONSTRUCTION FENCE OR PLYWOOD)
- MINIMUM 6" HIGH
- CHAINLINK FENCES SHALL BE PLACED ON PIER BLOCKS
- MUST BE INSTALLED PRIOR TO DEMOLITION OR GROUND DISTURBANCE
- KEPT IN PLACE FOR THE DURATION OF CONSTRUCTION
- NO DUMPING OF ANY MATERIALS IN THE PROTECTION AREA
- NO SOIL DISTURBANCE OR ACTIVITY ALLOWED WITHIN FENCED AREA. MATERIAL STORAGE (STOCKPILING, PARKING, EXCAVATION, DUMPING, OR WASHING
- MODIFICATIONS OF THESE REQUIREMENTS BY APPROVAL OF SDCI PLANNER ONLY
- IF ROOTS GREATER THAN 2 INCH FOUND OUTSIDE OF FENCING, PROTECT BY HAND EXCAVATION AND, IF NECESSARY, CUT CLEANLY AND KEEP MOIST
- USE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS

VEGETATION PROTECTION (DOES NOT APPLY TO TREES):

- ORANGE MESH OR SIMILAR OPEN MATERIAL
- PROTECT VEGETATION OUTSIDE CONSTRUCTION ZONE WITH FENCING AS SHOWN



ABBREVIATIONS

CL	CENTERLINE	MAS	MASONRY
#	POUND OR NUMBER	MAX	MAXIMUM
(E)	EXISTING	MECH	MECHANICAL
(N)	NEW	MEMB	MEMBRANE
(2)	DOUBLE	MTL	METAL
		MFR	MANUFACTURER
		MIN	MINIMUM
		MTRL	MATERIAL
		MUL	MULLION
ABV	ABOVE	N/A	NOT APPLICABLE
APF	APPROXIMATE	NIC	NOT IN CONTRACT
ARCH	ARCHITECTURAL	NOM	NOMINAL
A/C	AIR CONDITIONING	NTS	NOT TO SCALE
ABE	AVERAGE BUILDING ELEVATION		
APT	APARTMENT		
AG	AVERAGE GRADE		
AWN	AWNING		
BM	BEAM	OC	ON CENTER
		OFF	OFFICE
		Ovh	OVERHEAD
		OPP	OPPOSITE
CAB	CABINET	PERF	PERFORATED
CB	CATCH BASIN	PLAM	PLASTIC LAMINATE
CLG	CEILING	PLAS	PLASTER
COL	COLUMN	PLYWD	PLYWOOD
CONC	CONCRETE	PNL	PANEL
CI	CONTINUOUS INSULATION	PR	PAIR
		PRCST	PRE-CAST
DEMO	DEMOLITION	PT	POINT
DF	DOUGLAS FIR	PTD	PAINTED
DN	DOWN	PTN	PARTITION
DR	DOOR	PL	PROPERTY LINE
DS	DOWN SPOUT	PL	PROJECT
DTL	DETAIL	PSI	POUNDS/SQUARE INCH
DW	DISHWASHER	PT	PRESSURE TREATED
DWG	DRAWING		
EA	EACH	STBK	SETBACK
EG	EGRESS	R	RISER
EL	ELEVATION	RA	RETURN AIR
EF	EXHAUST FAN	RAD	RADIUS
ELEC	ELECTRICAL	RB	RUBBER BASE
ELEV	ELEVATOR	RD	ROOF DRAIN
EQ	EQUAL	REFR	REFRIGERATOR
EST	ESTIMATE	REQ	REQUIRED
EXIST	EXISTING	RESIL	RESILIENT CHANNEL
EXT	EXTERIOR	REV	REVISION/REVISED
		RGSTR	REGISTER
FD	FLOOR DRAIN	RM	ROOM
FF	FINISH FLOOR	RO	ROUGH OPENING
FLASH	FLASHING		
FRFP	FIREPROOF		
FP	FIREPLACE	SD	SMOKE DETECTOR
FT	FOOT OR FEET	SEC	SECTION
FURR	FURRING	SF	SQUARE FEET
		SG	SAFETY GLASS
GA	GAUGE	SHT	SHEET
GALV	GALVANIZED	SHTG	SHEATHING
GC	GENERAL CONTRACTOR	SHWR	SHOWER
GL	GLASS	SPEC	SPECIFICATION
GLB	GLUE-LAMINATED BEAM	SS	STAINLESS STEEL
GR	GYPSON WALL BOARD	STL	STEEL
GWB		STOR	STORAGE
		STRUC	STRUCTURAL
		SUSP	SUSPENDED
HB	HOSE BIB	T	TREAD
HC	HOLLOW CORE	TBD	TO BE DETERMINED
HDR	HEADER	T+G	TONGUE AND GROOVE
HORIZ	HORIZONTAL	TG	TEMPERED GLASS
HT	HEIGHT	THK	THICK
HVAC	HEATING/VENTILATION/ AIR CONDITIONING	TO	TOP OF
HW	HOT WATER	TYP	TYPICAL
IN	INCH	VB	VAPOR BARRIER
INCL	INCLUDING/INCLUDED	VEN	VENEER
INSUL	INSULATION	VERT	VERTICAL
INT	INTERIOR		
JB	JUNCTION BOX	WC	WATER CLOSET
JF, JT	JOINT FILLER, JOINT	WD	WOOD
		WF	WIDE FLANGE
		WH	WATER HEATER
LAM	LAMINATE/LAMINATED	WL	WATER LINE
LAV	LAVATORY	WO	WITHOUT
LT	LENGTH	WP	WINDOW
LGT	LIGHT	WT	WATERPROOF WEIGHT

ADOPTED CODES

- BUILDING: 2021 WASHINGTON STATE RESIDENTIAL CODE
- ENERGY: 2021 WASHINGTON STATE ENERGY CODE
- PLUMBING: 2021 UNIFORM PLUMBING CODE (UPC) / WASHINGTON STATE AMENDMENT
- ELECTRICAL: NATIONAL ELECTRICAL CODE (NEC) / WASHINGTON CITIES ELECTRICAL CODE (WCEC)
- MECHANICAL: 2021 INTERNATIONAL MECHANICAL CODE

FIRE SPRINKLER

MMC TITLE 17: REQUIRED FIRE SYSTEMS AND FIRE PREVENTION FEATURES:

NFPA 13D FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13D AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.

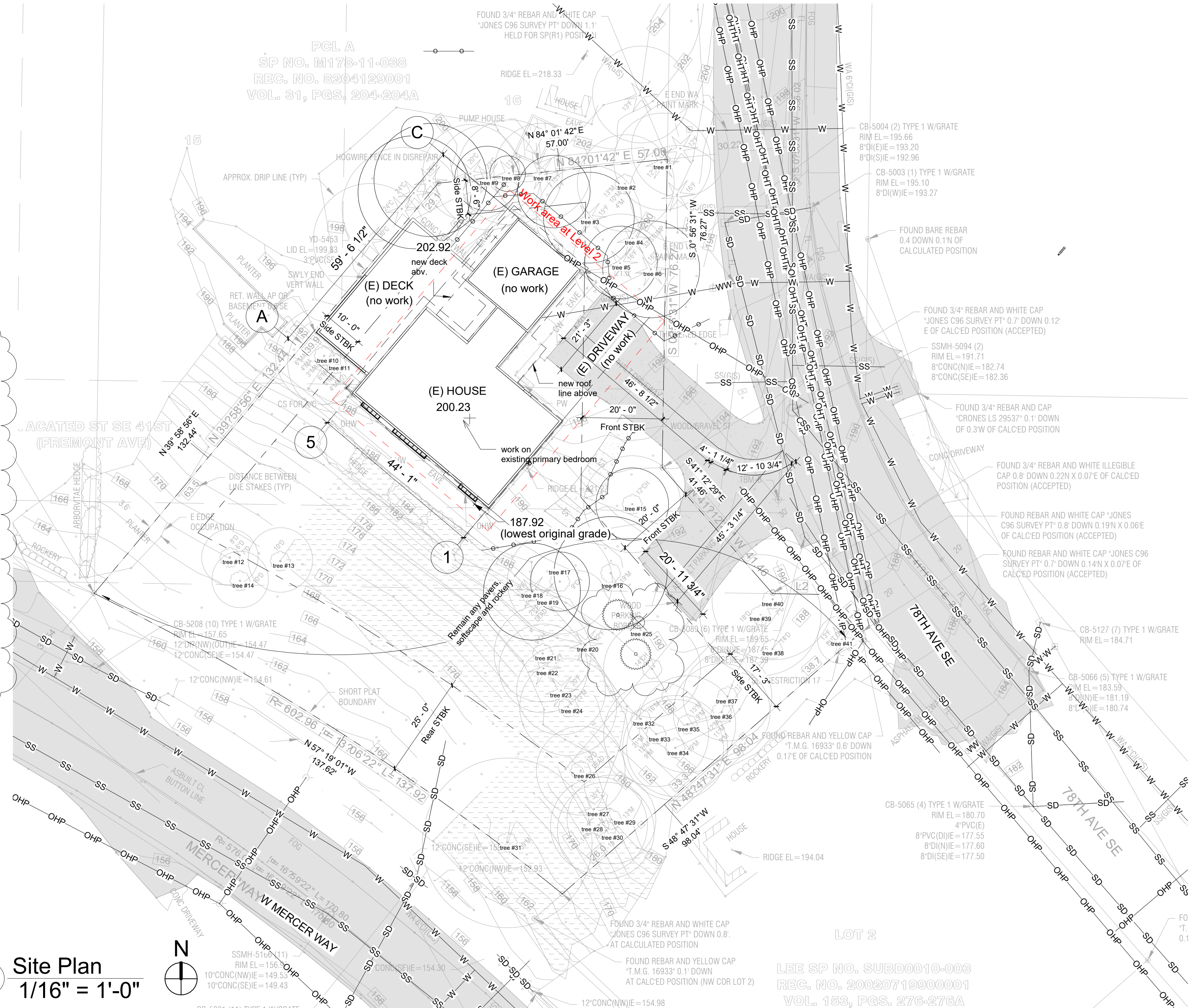
PLANT SCHEDULE

BOTANICAL NAME	COMMON NAME	SPACING	NUMBER
THUJA PLICATA	WESTERN RED CEDAR	AS SHOWN	2

CODE COMPLIANCE & INSTALL NOTES:

REQUIRED REPLACEMENT TREES PER INVENTORY AND REPLACEMENT FORM: 2
TOTAL REPLACEMENT TREES PROVIDED: 2
FEE IN LIEU:

PLANTING TIMING: REPLACEMENT TREES SHALL BE PLANTED IN THE WET SEASON (OCTOBER 1 THROUGH APRIL 1) WHERE POSSIBLE OR AS CITY ARBORIST APPROVES.
MAINTENANCE OF REPLACEMENT TREES: THE PARCEL OWNER SHALL MAINTAIN ALL REPLACEMENT TREES IN A HEALTHY CONDITION FOR A PERIOD OF FIVE YEARS AFTER PLANTING. THE APPLICANT SHALL BE OBLIGATED TO REPLANT ANY REPLACEMENT TREE THAT DIES, BECOMES DISEASED, OR IS REMOVED DURING THIS FIVE-YEAR TIME PERIOD.
IMPORT TOPSOIL: CONTRACTOR TO REMOVE COMPACTED NATIVE SOILS AROUND TREE ROOTBALLS AND INSTALL WINTERMIX TOPSOIL OR COMPOST/TOPSOIL BLEND FOR IMPORT TOPSOIL AREAS SHOWN IN THE PROJECT DETAILS. SEE DETAILS #1 AND #2 BELOW TYPICAL.
TREE PROTECTION/RETENTION: SEE TREE FENCING AND PROTECTION DETAIL SHEET C1.0 FOR TREE FENCING AND PROTECTION REQUIREMENTS FOR TREES TO REMAIN, TYPICAL.



SITE PLAN LEGEND

[Symbol]	CONCRETE
[Symbol]	ROOF EXTENSION
[Symbol]	CRITICAL AREA
[Symbol]	TREE FENCE
[Symbol]	REMOVE TREE
[Symbol]	REPLACEMENT TREE - WESTERN RED CEDAR (2)

5ft2 Studio Architects
2625 Northup Way, Ste 100,
Bellevue, WA 98004
info@5ft2studio.com
www.5ft2studio.com



24 Merc
Mercerdale
4103

4103 78th Ave SE,
Mercer Island, WA
98040

Building Permit

THIS DRAWING AS AN INSTRUMENT OF SERVICE IS THE PROPERTY OF 5FT2 STUDIO ARCHITECTS, AND MAY NOT BE REPRODUCED WITHOUT THE ARCHITECT'S PERMISSION.

ALL INFORMATION SHOWN ON THIS DRAWING IS FOR USE ON THIS SPECIFIC PROJECT ONLY AND SHALL NOT BE USED OTHERWISE WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT.

CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS ON THE JOB AND THIS OFFICE SHALL BE INFORMED OF ANY DISCREPANCIES AND VARIATIONS SHOWN ON THE DRAWINGS.

NO.	DESCRIPTION	DATE
1	Revision 1	09.06.2025
2	Revision 2	09.23.2025

DATE: Mar 21, 2025

Cover
Sheet
and Site
Plan

.G1.0

GENERAL NOTES

A. The drawings are intended to only partially describe the scope of work for the project, any work not shown here, but required by code, or the specifications, or to make the work complete, shall be provided as part of the work.

B. Refer to the list of abbreviations for common abbreviations used in the drawings. If an abbreviation is not on the list, or not commonly used, refer to the architect for clarification.

C. It is the intent of the documents that all work complies with all applicable local, state, and national codes and ordinances in effect at the date of permit submittal. Nothing in these drawings shall be construed to grant approval for any code violation. Any errors, omissions, or non-compliance with governing codes shall be brought to the attention of the architect immediately.

D. Before starting each portion of the work, the contractor shall carefully study and compare the various drawings and other contract documents related to that portion of the work, as well as owner-provided information, shall take field measurements of any existing conditions related to that portion of the work and shall observe any conditions at the site affecting it. Any errors, inconsistencies or omissions shall be reported promptly to the architect.

E. Do not scale the drawings. The contractor shall use dimensions shown on the drawings and verify actual field measurements. If discrepancies are found, the architect shall be notified at once.

F. Dimensions are shown to the face of concrete, face of stud at exterior walls, face of finished wall at interior walls, face of finished wall at existing walls, and edge of openings, unless detailed or noted otherwise on drawings. Refer to the architect if clarification is needed.

G. Repetitive features not indicated in the drawings everywhere they occur shall be provided as if drawn in full.

H. The contract documents are complementary, and what is required by one shall be as binding as if required by all. In case of discrepancy, refer to the architect for clarification.

I. The contractor shall verify the dimensions required for all equipment, appliances, fixtures, cabinets, ductwork, and openings before framing begins. the contractor shall coordinate with the subcontractors of all trades to verify the sizes and locations of openings through the floors, walls, ceilings and roofs for ducts, pipes, conduits, and equipment. The contractor shall coordinate the location and installation of wood backing, blocking, furring and stripping as required for the installation and attachment of work of all trades.

J. The systems, including, but not limited to, mechanical, plumbing, and electrical work are bigger designed. The contractor shall be responsible for all work done on site (field). Work shown on the drawings is intended to illustrate the general design intent, scope, and location of work. All work not specifically drawn, but required for a complete, legal, and functioning system, shall be provided as part of the work.

K. The contractor shall secure and pay for all permits and governmental fees, licenses and inspections necessary for proper execution and completion of the work, with the exception of the master use permit and the building permit.

L. Prior to the commencement of any construction or site development activity, the contractor and/or architect shall schedule a pre-construction meeting with the project team members for the purpose of answering initial questions, clarifying areas of concern, and formalizing a construction administration process. The meeting(s) shall include the architect, general contractor, owner, landscape architect, structural engineer, civil engineer, geotechnical engineer, and water intrusion consultant

M. All information contained in these documents represents a "basic limited architectural service" that requires the contractor to be knowledgeable and experienced with all aspects of construction including all building codes and regulations imposed by the city or county and any other agency having jurisdiction over the project.

N. It is the responsibility of the contractor to provide all construction necessary for the complete installation of all operating systems, materials and finishes in accordance with mfr.'s recommendation or written specifications. It is the responsibility of the contractor to ensure construction means and method and final construction technique. Contractor shall thoroughly review drawings, specifications and owner's requirements.

O. Safety, care of adjacent properties during construction, compliance with local, state, federal regulations regarding safety on site shall be the contractors responsibility

P. No deviation from these documents shall be made without written approval from the owner and architect. Any changes can affect the structural integrity and code related issues of the structure.

Q. All information contained in these documents is for the purpose of construction permit acquisition and construction only. The information provided is not intended for any other purpose and no other use is intended or implied, e.g. plan information is not intended to be used as a base for sale or transfer of real estate

R. The architect may assist in coordination with consultants (such as soils, structural, civil engineers etc) but under the terms of basic limited service, receives no compensation for, and assumes no responsibility or liability for the area of their (consultants) work and expertise.

S. This set of drawings shall not be copied in whole or in part without prior written consent from the owner. this document is considered as one unit and shall not be considered complete or whole if documents are separated in any manner. documents shall not be separated for the purpose of submitting proposals or for separate phases of construction.

T. These documents are prepared for use by the contractor and shall not, either in whole or in part constitute any direction or instruction to any contractor with regard to construction methods, means or techniques.

U. The contractor shall be responsible for demolition work including, but not limited to, sequence & temporary shoring of all existing structures & verification of existing utilities & services.

V. Construction Barricades: Provide construction barricade as required to keep public and employees safe, following all applicable federal, state and city codes and regulations.

Acceptance of these plans for construction constitutes an understanding of above mentioned terms and basic limited architectural service as described in agreement between owner/architect.

SITE NOTES

1. The contractor shall verify dimensions of existing site conditions, distances, and topographic contours. Site conditions shown are from owner-provided information, surveys by others, and public records. The architect is not responsible for the accuracy of the survey or existing site information.

2. The contractor shall verify dimensions of existing site conditions, distances, and topographic contours. Site conditions shown are from owner-provided information, surveys by others, and public records. The architect is not responsible for the accuracy of the survey or existing site information.

3. The Contractor shall order necessary site boundary and setback survey prior to commencement of all work.

4. The contractor shall execute and complete all work on adjacent properties and public rights-of-way that is required by construction easement agreements with neighboring property owners, private contract documents with the city department of transportation, street use permits, or any other agreement or contract. all improvements and repairs to sidewalks, alleys, streets and neighboring properties shall be coordinated to minimize the impact on the public and to maintain access to neighboring properties. the contractor shall make arrangements and secure necessary permits when construction requires street or sidewalk closures.

5. If any hazardous material, including but not limited to asbestos or polychlorinated biphenyl (pcb), is encountered on the site by the contractor, the contractor shall immediately notify the owner.

6. Prior to beginning any demolition work, the owner or contractor shall submit a "notice of intent" to the Puget Sound clean air agency (pscaa) and fulfill their requirements.

7. New water mains, fire hydrants, and temporary fire department access shall be installed, inspected, and approved by the fire department prior to the commencement of combustible construction.

STRUCTURAL/FRAMING (SITE-SPECIFIC STRUCTURAL ENGINEERING SHALL GOVERN)

A. All structural matter refer to structural drawings provided by project structural drawings

B. All materials and workmanship shall conform to the requirements of the drawings, notes, specifications, and all applicable codes and ordinances.

C. All wood frame construction shall conform to the minimum standards of IRC/IBC, unless specified in the Structural Drawings, Structural Notes and Specifications.

D. Columns and posts located on concrete or masonry floors or decks exposed to the weather or to water splash or in basements and which support permanent structures shall be supported by concrete piers or metal pedestals projecting above floors unless approved wood of natural resistance to decay or treated wood is used. The pedestals shall project at least 6 inches above exposed earth and at least 1 inch above such floors.

E. Where installation includes manufactured products, comply with the manufacturer's applicable instructions and recommendations for installation. Verify rough in dimensions for equipment and provide buck-outs, backing and jacks as required.

F. All wood exposed to the weather, such as wood used for deck framing including, decking railings, joists, beams and posts shall be pressure treated or of wood with natural resistance to decay per IRC/IBC
-Girder ends within 1/2 of exterior masonry walls below grade.
-Wood joists in crawl space closer than 18" to ground or girders closer than 12" to ground.
- Wood framing resting on the foundation within 8" of exposed earth.
- Wood framing or furring attached directly to below grade concrete.
- Sleeper or Sills on concrete slab on grade concrete.
- Wood siding within 6" of exterior ground.

G. Verify all rough-in dimensions for equipment, provide all buck-out, blocking, backing and jacks required for installation.

BUILDING ENVELOPE

A. Asphalt-saturated felt free from holes or breaks, weighing not less than 14 pounds per 100 square feet and complying with ASTM D 226 or other approved weather resistant material shall be applied over sheathing of all exterior walls. approved alternative weatherproof membranes shall be used for open joint rain screen siding, weather resistant materials shall be applied horizontally per manufacturers recommendations, with the upper layer lapped over the lower layer not less than 2 inches and not less than 6 inches where joints occur.

B. Approved corrosion-resistive flashing shall be provided in the exterior wall envelope in such a manner as to prevent entry of water into the wall cavity or penetration of water to the buildings structural framing components the flashing shall extend to the surface of the exterior wall surface and shall be installed to prevent water from reentering the exterior wall envelope. flashing shall be installed at, but not limited to the following locations:
- the top of all exterior window & door openings
- intersections of frame walls and masonry or stucco
- under masonry, wood or metal copings and sills
- continuously above all projecting wood trim
- where exterior porches, decks or stairs attach to a wall
- at wall and roof or soffit intersections
- at built-in gutters

FIREBLOCKING AND DRAFTSTOPPING

A. Floor Assemblies Fireblocking and Draftstopping shall be in stalled in accordance with IRC/IBC.

B. Wall Assemblies: Fireblocking shall be installed per IRC/IBC

C. Chimneys and fireplaces: All spaces between chimneys and floors and ceilings through which chimneys pass shall be reblocked with noncombustible material securely fastened in place. The fireblocking of spaced between chimneys and wood joists beams, or headers shall be self supporting or be placed on strips of metal or metal lath laid across the spaces between combustible material and the chimney.

DRYWALL FINISH

A. Provide 1/2" gypsum wall board for non-rated assemblies and 5/8" type x gypsum wall board for 1-hr rated assemblies with all exposed joints and fastener heads smooth and flush with the surface of the board, joints taped and prepared for a plication of finish, use water-resistant board at all wet areas to 4'-0" aft.

B. When gypsum board is used as a base for tile or wall panels far tub, shower or water closet compartment walls, water resistant gypsum backing board shall be used.

C. All gypsum board partitions shall be taped and sanded smooth with no visible joints or lines. all screws or other attachment devices shall be patched and not visible. patch and repair surfaces to match adjacent or adjoining surfaces where required. all surfaces shall be aligned and sanded smooth.

REFLECTED CEILING PLAN NOTES

A. Coordinate the work of all trades involved in the ceiling work to insure clearances for fixtures, ducts, piping, ceiling suspension system, etc., necessary to maintain the finished ceiling heights. see reflected ceiling plans for finished ceiling heights. verify in field.

B. Perimeter ceiling angle, where occurs, shall be installed tight to vertical surfaces, free from curves, breaks, or other irregularities, and painted to match ceiling finish.

C. Furnish and install all fixtures, associated trim, fixture lamps, and seismic bracing as required.

D. Light fixtures, exit signs, sprinklers, and other ceiling elements shall be located in center of individual ceiling tile, unless otherwise noted. all switches and dimmers shall be located 48" above finished floor to center of switch, unless otherwise noted. Multiple switches at one location shall be ganged together and finished with one cover plate, unless otherwise noted.

E. Provide ceiling access as required for equipment and system maintenance, and match adjacent ceiling finish, unless otherwise noted. all soffits and ceiling heights are dimensioned from top of finished floor to bottom of finished gypsum board or ceiling tile and shall allow for thickness of all floor finishes.

F. The reflected ceiling plan indicates the location of ceiling heights, light types, light fixtures, switch locations, and associated items. refer to engineering drawing (lighting plan) for circuiting, wiring layout, and additional information.

G. In the event of discrepancies between the architect's reflected ceiling plan and the engineer's lighting plan, immediately notify the architect in writing before ordering materials or proceeding with work.

H. All specific information concerning installation of various above-ceiling elements are to be found in the hvac, plumbing, fire protection, electrical, and lighting drawings.

I. Notify architect of any conflicts of light fixture locations with main runners, ducts, structures, hvac, and/or (e) conduit, prior to framing for lights. any discrepancies between architect's ceiling grid location and actual field conditions are to be clarified with the architect prior to framing.

J. Submit grille, sprinkler, thermostat, and other fixture and element layouts to the architect for review at least 2 weeks prior to installation.

K. Verify field conditions and locations of all plumbing, mechanical ducts, structural elements, and any and all other applicable items; install applicable new plumbing, mechanical fans, ducts, conduits, and other related and appurtenant items so as to not conflict with luminaires and any and all field conditions.

L. Furnish and install underwriters laboratories inc. (ul) labelled devices throughout.

M. Install light fixtures with protective film or similar cover over louver, lens, baffle, and the like, to avoid fixture soiling or damage; fixtures shall be maintained clean and as new; lamps shall be new at project completion.

N. Refer to engineering drawings for all life safety devices required by code and all emergency light fixtures. architectural drawings shall govern location of these devices.

ELECTRICAL

A. Electrical work shall be performed in a bidder design" manner. The Contractor shall submit such systems separately permit.

B. It is the contractor's responsibility to design systems that meet all requirements and codes. Contractor shall submit drawings, pay for, and obtain permit and perform work in a manner that meets or exceeds the recognized workmanship standards for the industry.

C. All drawings are to be submitted for review and approval to the owner before performing work. Specific attention is to be paid regarding owner requested locations of electrical, phone and computer cabling port locations

D. Proper protection shall be provided around recessed light fixtures per manufactures recommendations so that overheating will not occur. Recessed light fixtures to be C. rated.

DOOR NOTES

A. Refer to door schedule for all door/hardware specifications.

B. Field measure floor to ceiling doors for proper fit.

C. Exterior level landing may slope up to 1/4" per foot max. in any direction for surface drainage.

D. The floor or landing shall not be more than 1/2" lower than the threshold of the doorway, bevel (1:2 max. slope) where the threshold exceeds 1/4" in height.

E. Door openings in partitions not dimensioned are to be located within 4" of adjoining partition, unless otherwise noted.

F. All glass in doors shall be tempered safety glass, unless otherwise noted.

G. Hollow metal doors shall be finished with semi-gloss paint. refer to finish schedule for additional information.

H. Doors opening into required exit corridors do not restrict the required width when opened in any position.

I. All doors required as exits shall swing in the direction of travel.

J. Provide doors made with adhesives and composite wood products where possible that do not contain urea formaldehyde.

MILLWORK NOTES

A. All blocking required shall be ascribed to wall or ceiling, general contractor to check job progress and coordinate with other trades involved. general contractor is responsible for all blocking required; under no circumstances will "extra" work be authorized for extra blocking.

B. The general contractor shall submit shop drawings and samples to the architect for review.

C. Field conditions prior to the start of fabrication, the general contractor shall check and verify all dimensions and conditions at job site and shall be responsible for the same.

D. Joinery, where members are mitered or butted, they shall be joined and secured in a manner to insure against the joint opening.

E. Fabrication, all of the work shall be fabricated, assembled, finished, and erected in the best method known to the cabinet trade. surfaces shall be true, straight, and free from all machine and tools markings, bruises, indentations, chips, or abrasions.

F. Field verification, it shall be the general contractor's responsibility to have examined the job site in conjunction with the project documents so as to be satisfied as to the conditions under which the work will be performed, including such matters as unloading facilities, locations and sizes of elevators, equipment, or facilities needed preliminary to and during the work, and other conditions which may affect the work.

G. Protection, the general contractor shall maintain reasonable protection to safeguard his work from damage and to protect building owner's property from injury or loss arising in connection with all project work.

H. The general contractor shall guarantee that all materials and workmanship shall be of the quality specified and shown and that any defect due to improper workmanship or materials discovered and made known within one year from the date of substantial completion of the installation shall be repaired or replaced with reasonable promptness without additional cost. architect will give notice of such observed defects with reasonable promptness.

I. Installation, general contractor will shim and level countertops above files after files are installed by others. files in operations area to be shimmed and secured to millwork after they are set in place, general contractor to level floor under files in all areas where files are ganged or installed below fixed cabinetry. (plastic laminated shims as required at file cabinet area).

J. All millwork shall receive final finish at the shop or factory prior to delivery. general contractor shall protect all finished and installed millwork from damage by other trades. damaged or defective millwork shall be replaced by the general contractor. at his expense.

K. Millwork contractor to coordinate location of electrical, telephone, and communications outlets and install grommets in countertop surfaces as required to conceal cables.

L. Shelving, no unbraced length of shelving and or counterwork shall exceed 3'-0" without additional supports and or blocking, all end conditions shall be properly blocked and or supported.

M. Overhead cabinets, all blocking and wood cleats for overhead cabinets to be screwed and secured to full height or braced ceiling height metal studs and wood grounds.

MECHANICAL

A. HVAC and Plumbing work shall be performed in a "Bidder Design manner. The contractor shall submit such systems separately for permit.

B. It is the contractor's responsibility to design systems that meet all requirements and codes. Contractor shall submit drawings, pay and obtain permit and perform work in a manner that meets or exceeds the recognized workmanship standards for the industry.

C. All drawings are to be submitted for review and approval to the Owner before performing work.

D. Heating equipment shall be listed and labeled by an approved agency and installed to listed specifications.

E. Appliances installed in garages or other areas where they may be subject to mechanical damage shall be suitably guarded against such damage by being installed behind protective barriers or by being elevated or located out of the normal path of vehicles.

F. Equipment located in a garage and capable of igniting flammable vapors shall be installed with the pilots or burners or heating elements and switches at least 18 inches above the floor level.

G. Appliances designed to be in fixed positions shall be fastened or anchored in an approved manner Water heater shall be anchored or strapped to resist horizontal displacement caused by earthquake motion. Strapping shall be at points within the upper one-third and lower one-third of the appliance's vertical dimensions. At the lower point, the strapping shall maintain a minimum distance of 4 inches above controls.

H. Verify types, manufacture, and locations of a plumbing, faucets with Owner prior to purchasing and/or installing

I. Vent outlet for gas appliances shall be 3' minimum away from operable windows, and 10' minimum away from fresh air intakes per VIA VIAQ 303.4.1.5.

J. Protection of structure: the building or structure shall not be weakened by the installation of mechanical systems. Penetrations of floor/ceiling assemblies and assemblies required to have fire resistance rating shall be protected in accordance with IRC/IBC

K. The cutting, notching and boring of wood framing members shall comply with IRC/IBC
Joist notching shall be per IRC 502.8: Notches on the ends of members shall not exceed one-fourth the member depth. Holes bored in joists shall not be within 2 inches of the top or bottom of the joist, and the diameter of any such hole shall not exceed one-third the depth of the joist. Notches in the top or bottom of members shall not exceed one-sixth the depth, shall not be longer than one third of the depth of the member and shall not be located in the middle third of the span.

L. Stud cutting and notching shall be per IRC/IBC. In exterior walls and bearing partitions, any wood stud is permitted to be cut or notched not to exceed 25 percent of its depth Cutting or notching of studs not greater than 40 percent of a single stud depth is permitted in nonbearing partitions supporting no loads other than the weight of the partition. A hole not greater in diameter than 60 percent of the stud depth is permitted to be bored in any wood stud, provided that the resulting hole no more than 5/8 to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior walls or bearing partitions drilled over 40% and up to 60% shall also be doubled with no more than two successive doubled studs bored.

M. Engineered wood products shall be cut and notched in accordance with IRC/IBC
Cuts, notches and holes bored in trusses, structural composite lumber, structural glue laminated members and l-joists are prohibited except where permitted by the manufacturer's recommendations or where the effects of such alterations are specifically considered n the design of the member by a registered design professional.

N. Contractor shall submit shop drawings of ductwork and registers, including access panels if required; cuts of all fixtures, fittings, and accessories, to architect for review and action prior to proceeding with fabrication and/or installation or relocation.

O. Air balancing- air conditioning system throughout entire space is to be properly balanced after move in. air balance shall be performed by an independent air balance contractor who shall certify that the report is accurate. submit 2 copies to building owner.

P. Heat producing equipment- hvac contractor to refer to reflected ceiling and furniture drawings for occupancy figures and heat producing equipment.

Q. Ceiling diffusers - installation shall be coordinated with all trades as required for proper assembly. ceiling diffusers to be relocated to maintain new fixture patterns as required.

R. All peripheral shut-off valves shall be accessible at all times.

S. The contractor shall coordinate his plumbing work with manufacturer's specifications. the contractor shall coordinate plumbing work with that of all other trades.

T. The contractor shall plan installation of new plumbing work and connections to existing work to insure minimum interference with regular operations of existing facilities. submit to the building manager a date schedule for approval of necessary temporary shutdowns of existing services. all shutdowns shall be made at such time as will not interfere with regular operations of existing facilities and only after written approval of the building manager.

U. Penetrations - sleeves are to be provided for each pipe passing through walls, partitions, floors, and slabs. all penetrations of rated assemblies shall be fire stopped per code.

V. Testing - before being covered up or built-in, all piping shall be tested as required by the authorities having jurisdiction.

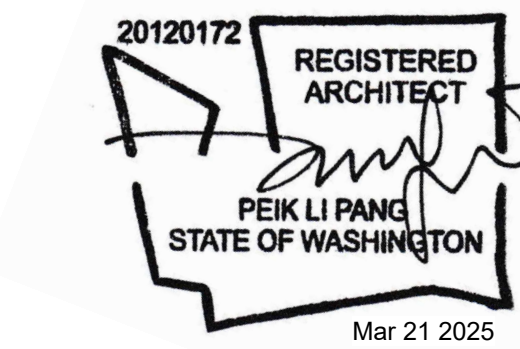
W. Contractor should fulfill mechanical ventilation requirement per IRC/IBC

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2625 Northup Way, Ste 100,
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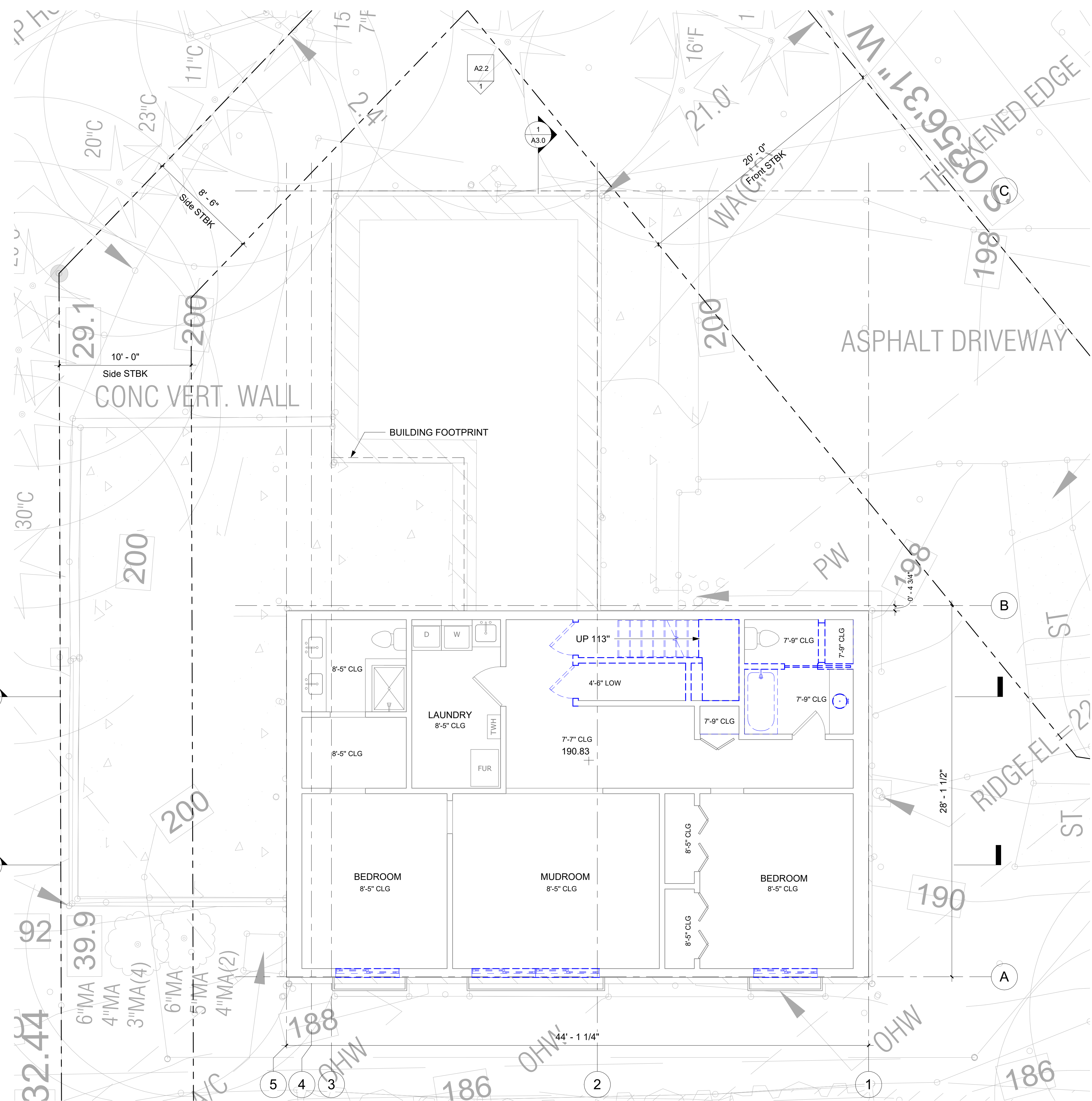
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NO.	DESCRIPTION	DATE
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DATE: Mar 21, 2025

General
Notes

.G1.1



WALL LEGEND
DEMOLISHED WALLS, DOORS, WINDOWS,
DECKS & ROOF

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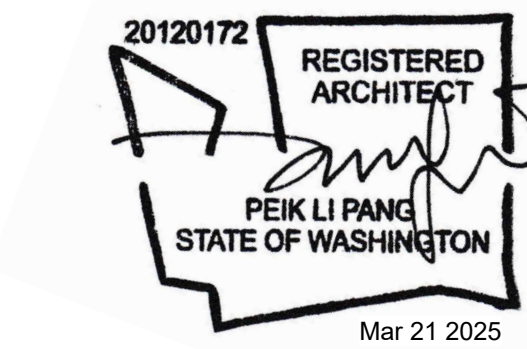


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1	Existing Basement	1/4" = 1'-0"

Existing
Basement
Plan
A1.0



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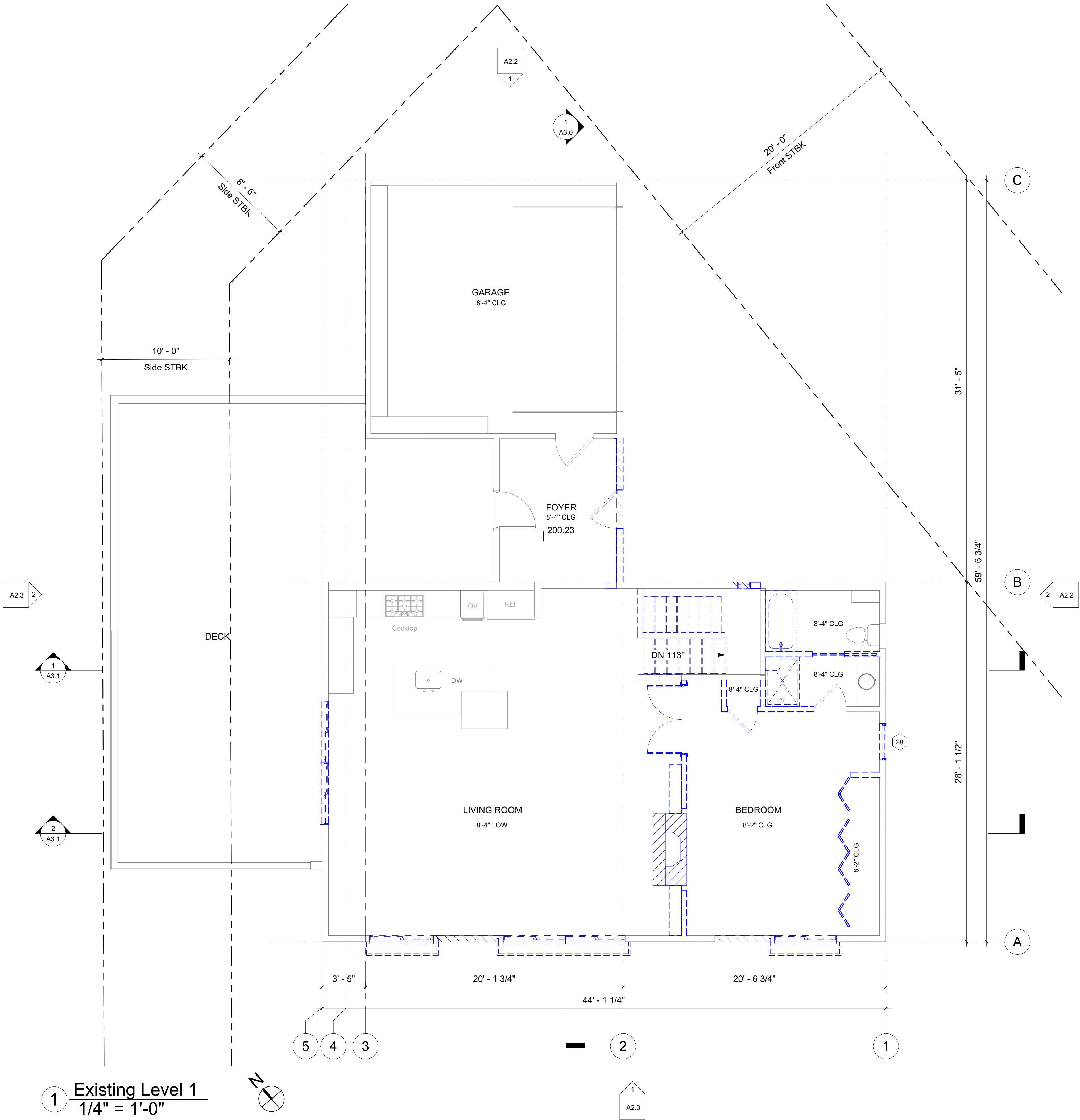
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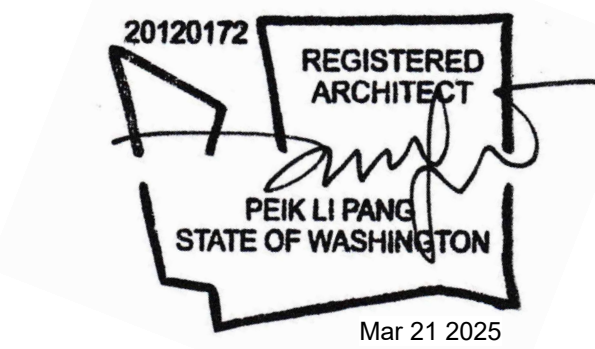
Existing
First
Floor
Plan

A1.1

WALL LEGEND

DEMOLISHED WALLS, DOORS, WINDOWS,
DECKS & ROOF





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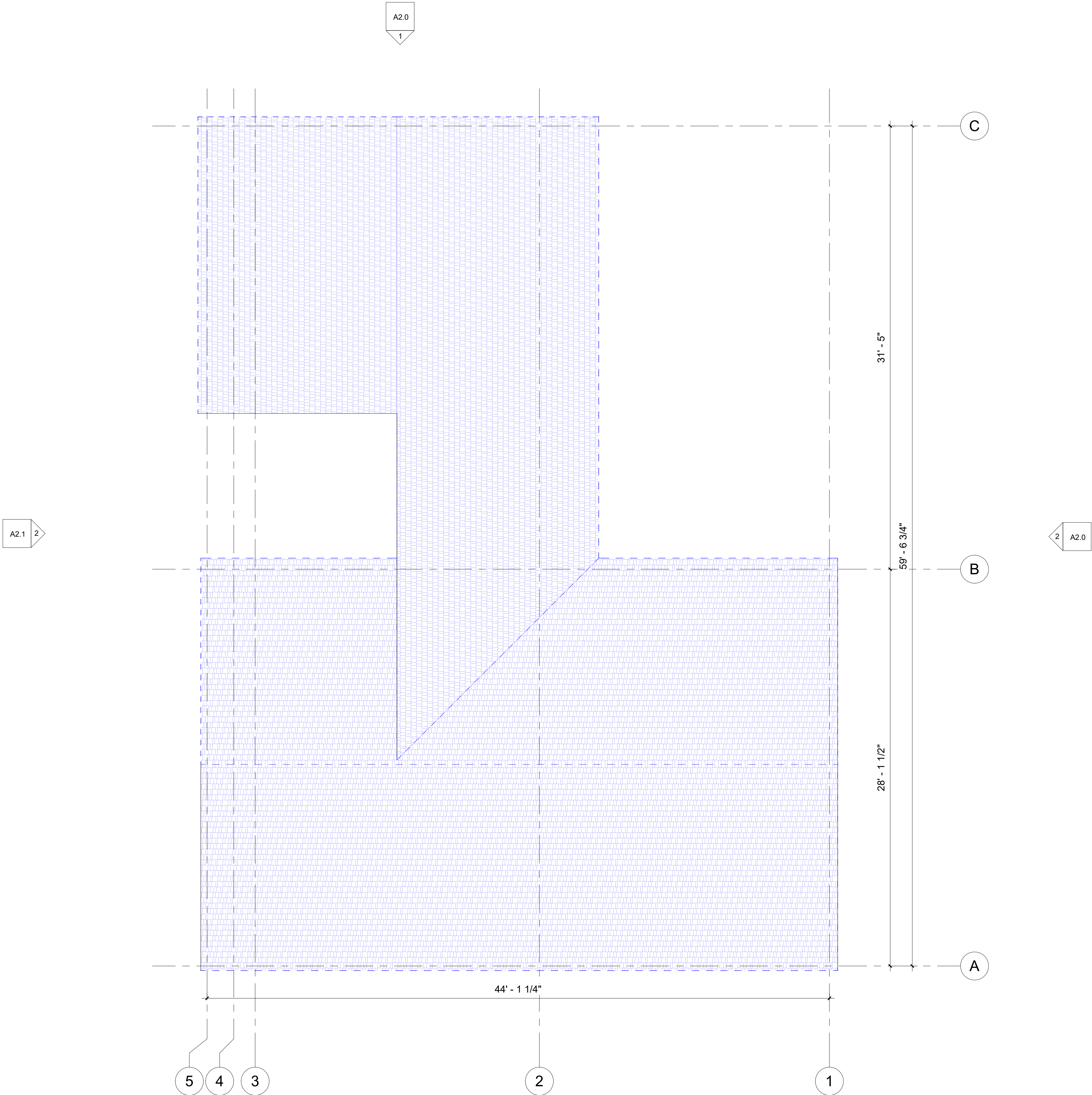
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DATE:	Mar 21, 2025
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Existing
Roof
Plan

A1.2

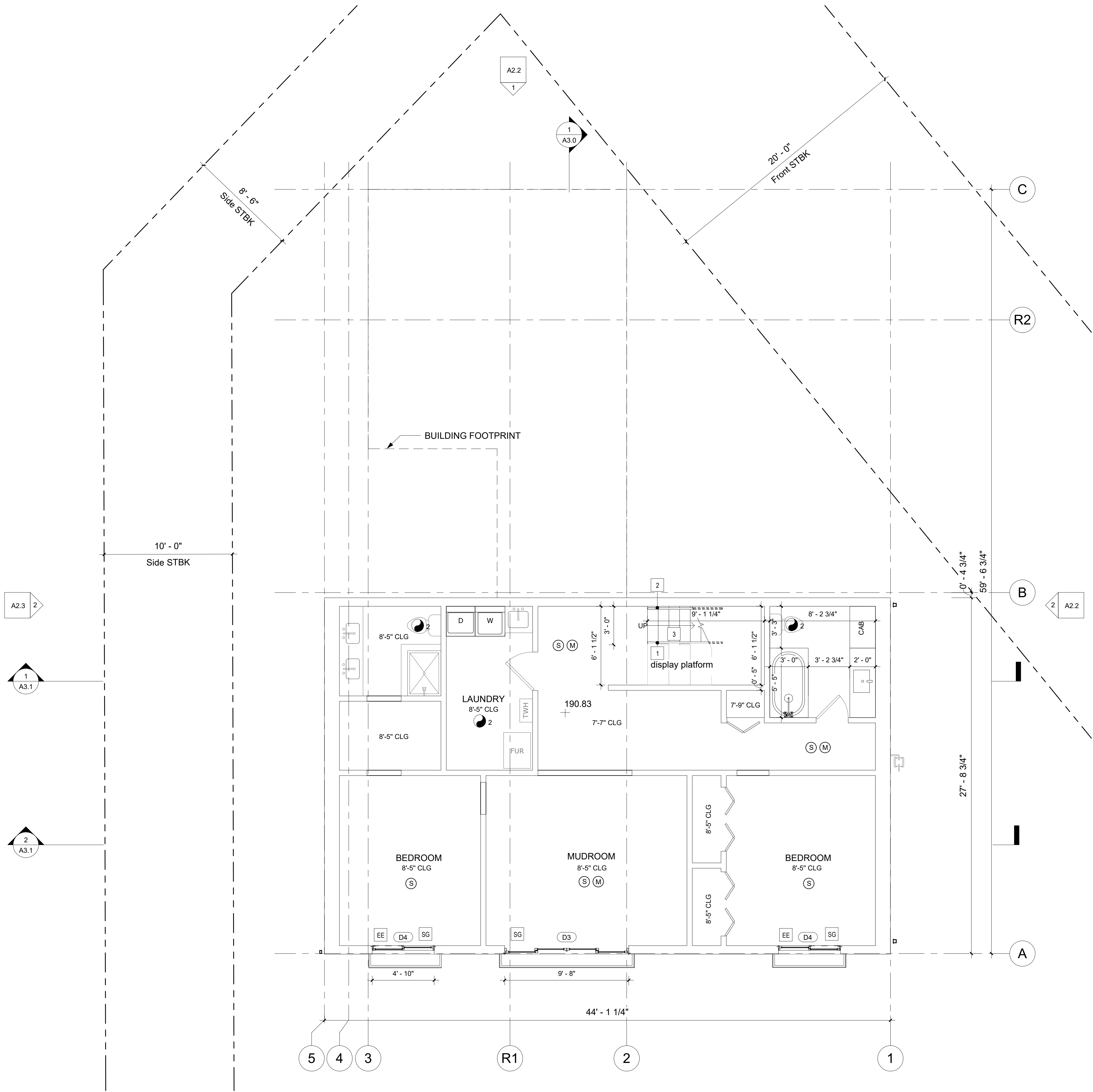


WALL LEGEND

DEMOLISHED WALLS, DOORS, WINDOWS,
DECKS & ROOF

1 Existing Roof Plan
1/4" = 1'-0"

23/9/2025 5:49:50 PM



PLAN NOTES

SG SAFETY GLAZING REQUIREMENT (S.G.) : (R308)
SAFETY GLAZING PER R308 IN WINDOWS AND DOORS

EE EMERGENCY ESCAPE AND RESCUE OPENING (E.E.) : (R310)

R310.1. All sleeping rooms must have an emergency egress window or door that leads directly to a yard or public way
Emergency egress windows must provide a minimum clear openable area of 5.7 square feet, 24 inches high and 20 inches wide.

R310.2.2 Where a window is provided as the emergency escape and rescue opening, it shall have a sill height of not more than 44 inches above the floor; where the sill height is below grade, it shall be provided with a window well in accordance with Section R310.2.3

GUARDRAILS, HANDRAILS AND STAIRS

1 All guardrails to be 36" high minimum above finished floor (a.f.f.) openings in railing assemblies are not to exceed 4 in one direction. guardrails to withstand a uniform load of 50 lbs/ft or a concentrated load of 200 lbs placed at the top of the handrail or guard. infill areas must be able to withstand a load of 50 lbs / square foot

2 Handrails to be between 1 1/4" diameter to 2" diameter, with clearance of 1.5" between rail and wall surface. mount between 34" and 38" above stair nosing or @ 36" a.f.f., typ

3 Riser: max 7 3/4", tread: min.10"

FG FROSTED GLASS

MECHANICAL VENTILATION (M1505)

SEE SHEET A7.1 FOR COMPLIANCE - ALARMS AND VENTILATION
AND WHOLE HOUSE MECHANICAL VENTILATION

1 250 CFM ON SWITCH

2 50 CFM ON SWITCH

3 95 CFM per TABLE
M1505.4.3(1)

S SMOKE DETECTORS (R314.3)

SEE SHEET A7.1 FOR COMPLIANCE - ALARMS AND VENTILATION

M CARBON MONOXIDE ALARM (R315.1)

SEE SHEET A7.1 FOR COMPLIANCE - ALARMS AND VENTILATION

WALL LEGEND

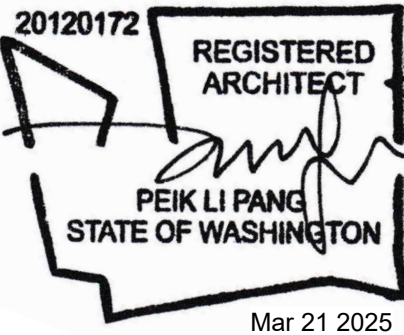
- EXISTING WALLS
- NEW INTERNAL WALLS
- NEW EXTERNAL WALLS

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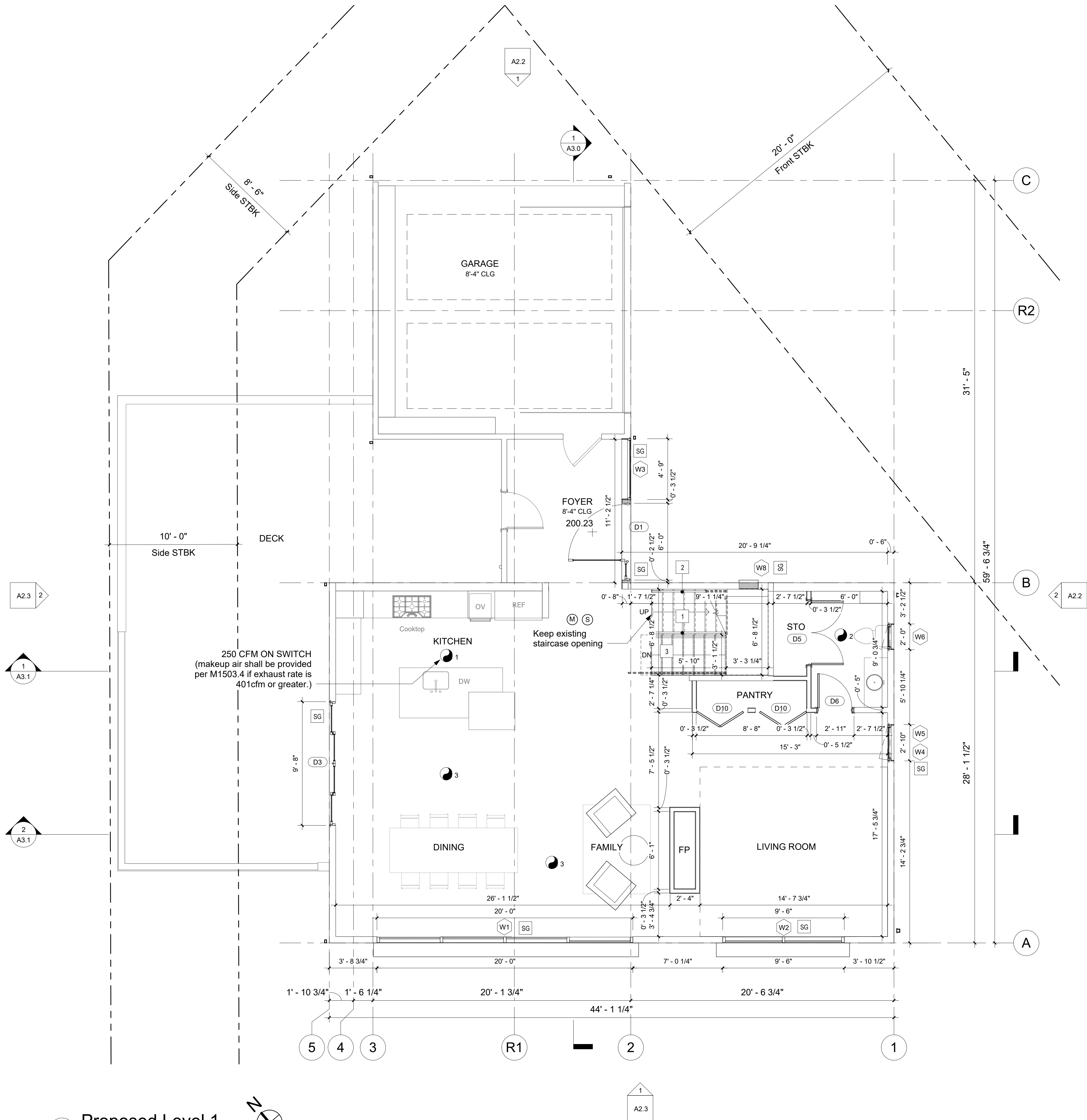
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1	Revision 1	09.06.2025

DATE: Mar 21, 2025

Proposed
Basement
Plan

A1.3

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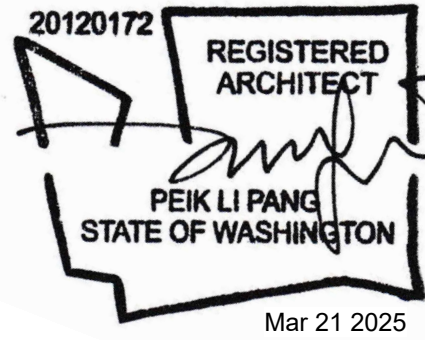


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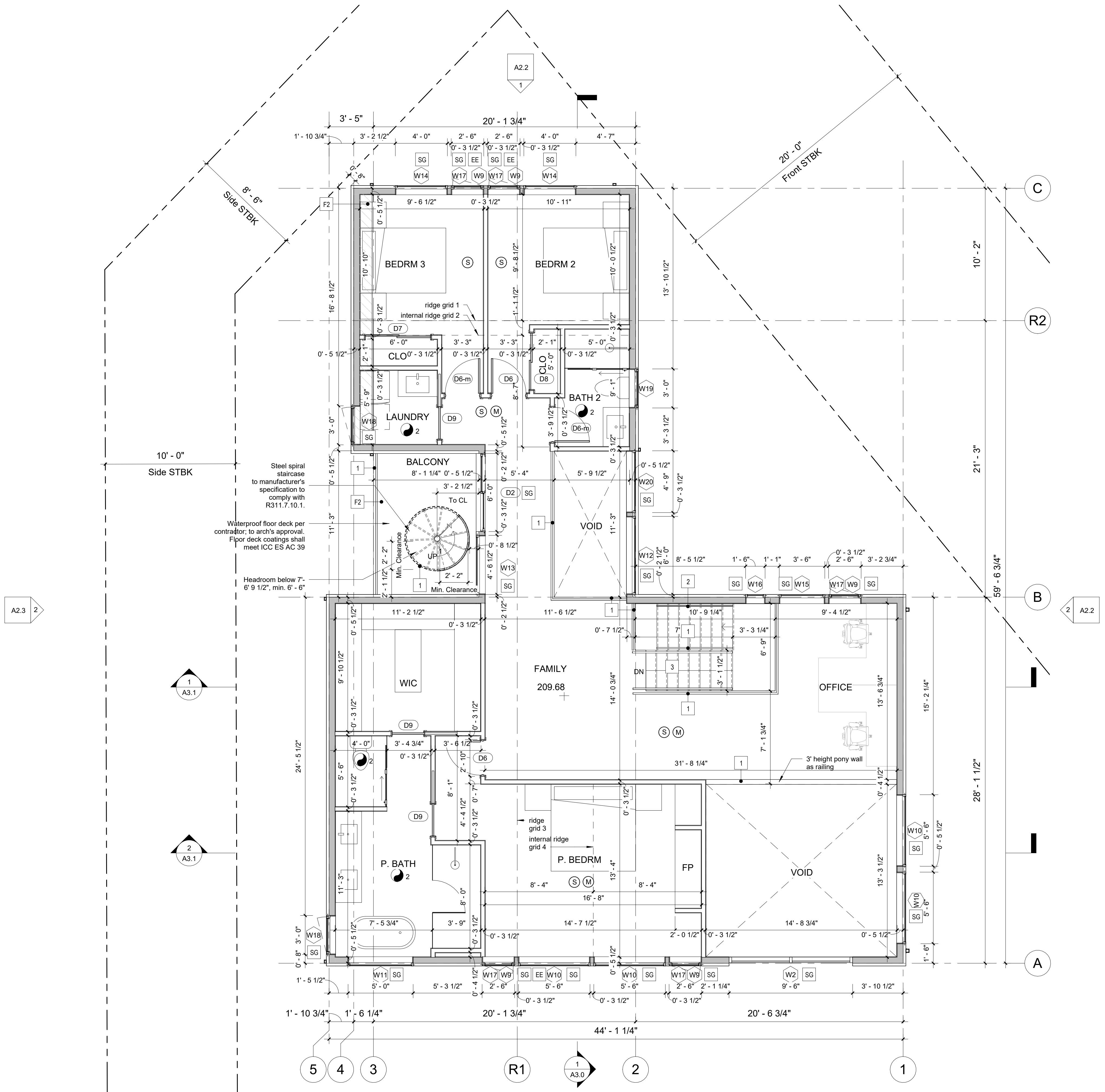
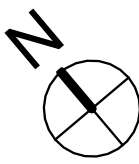
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Proposed
First
Floor
Plan

A1.4

1 Proposed Level 2
1/4" = 1'-0"



PLAN NOTES

- SG SAFETY GLAZING REQUIREMENT (S.G.) : (R308)**
SAFETY GLAZING PER R308 IN WINDOWS AND DOORS
- EE EMERGENCY ESCAPE AND RESCUE OPENING (E.E.) : (R310)**
- R310.1.** All sleeping rooms must have an emergency egress window or door that leads directly to a yard or public way
- Emergency egress windows** must provide a minimum clear openable area of 5.7 square feet, 24 inches high and 20 inches wide.
- R310.2.2** Where a window is provided as the emergency escape and rescue opening, it shall have a sill height of not more than 44 inches above the floor; where the sill height is below grade, it shall be provided with a window well in accordance with Section R310.2.3
- GUARDRAILS, HANDRAILS AND STAIRS**
- 1** All guardrails to be 36" high minimum above finished floor (a.f.f.) openings in railing assemblies are not to exceed 4 in one direction. guardrails to withstand a uniform load of 50 lbs/ft or a concentrated load of 200 lbs placed at the top of the handrail or guard. infill areas must be able to withstand a load of 50 lbs / square foot
- 2** Handrails to be between 1 1/4" diameter to 2" diameter, with clearance of 1.5" between rail and wall surface. mount between 34" and 38" above stair nosing or @ 36" a.f.f., typ
- 3** Riser: max 7 3/4", tread: min. 10"
- FG FROSTED GLASS**
- MECHANICAL VENTILATION (M1505)**
- SEE SHEET A7.1 FOR COMPLIANCE - ALARMS AND VENTILATION AND WHOLE HOUSE MECHANICAL VENTILATION
- 1** 250 CFM ON SWITCH
- 2** 50 CFM ON SWITCH
- 3** 95 CFM per TABLE M1505.4.3(1)
- S SMOKE DETECTORS (R314.3)**
- SEE SHEET A7.1 FOR COMPLIANCE - ALARMS AND VENTILATION
- M CARBON MONOXIDE ALARM (R315.1)**
- SEE SHEET A7.1 FOR COMPLIANCE - ALARMS AND VENTILATION

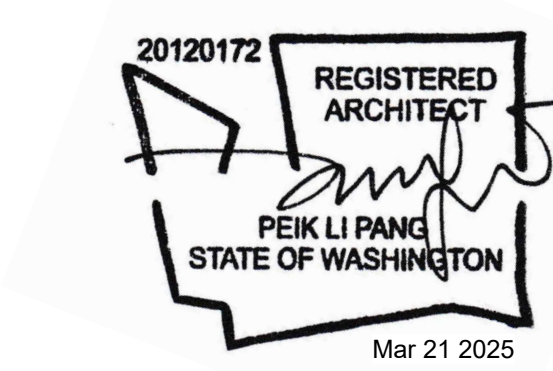
- WALL LEGEND**
- EXISTING WALLS
 - NEW INTERNAL WALLS
 - NEW EXTERNAL WALLS

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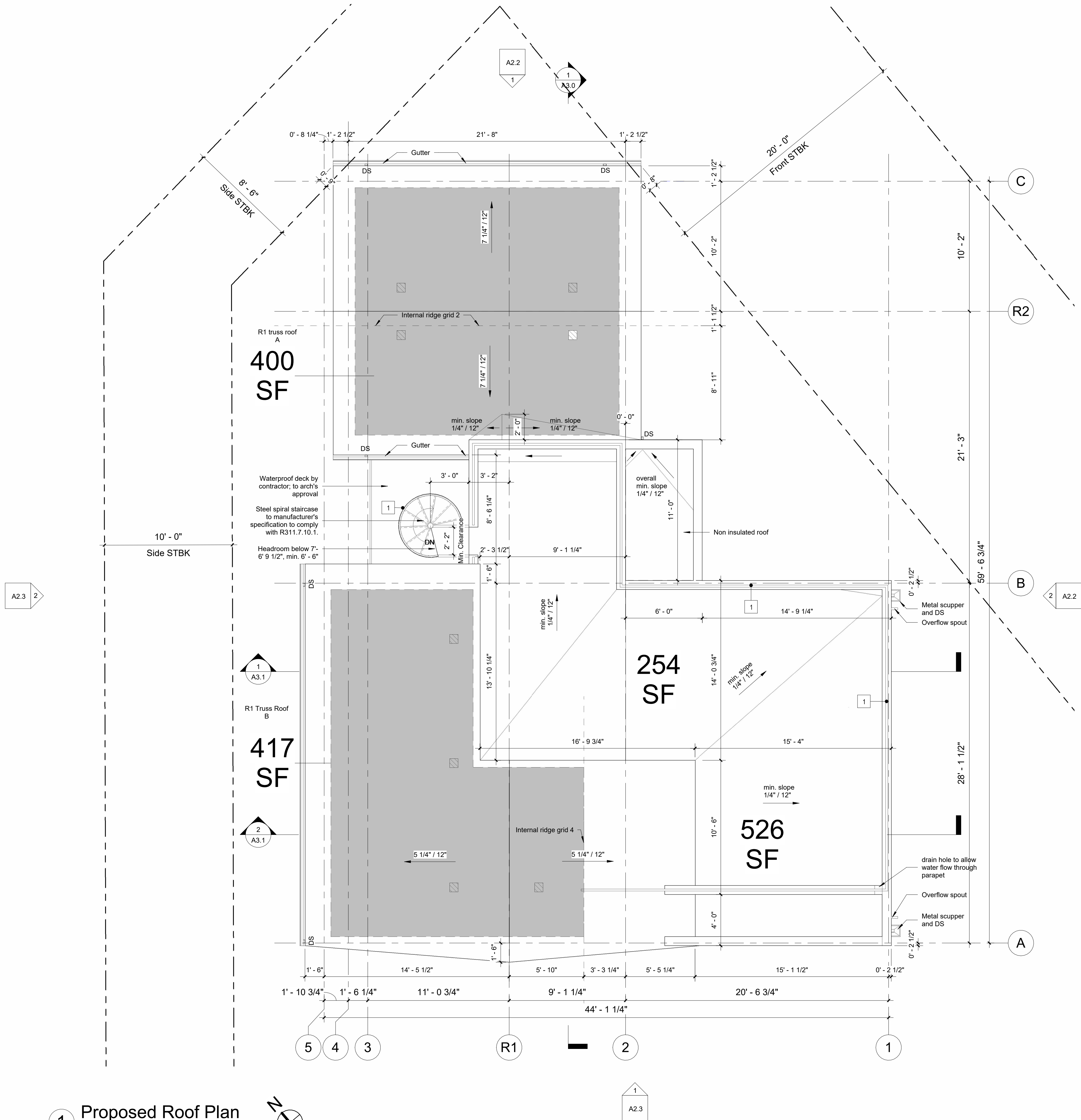
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DATE: Mar 21, 2025

**Proposed
Second
Floor
Plan**

A1.5



1 Proposed Roof Plan
1/4" = 1'-0"

PLAN NOTES

SG SAFETY GLAZING REQUIREMENT (S.G.) : (R308)
SAFETY GLAZING PER R308 IN WINDOWS AND DOORS

EE EMERGENCY ESCAPE AND RESCUE OPENING (E.E.) : (R310)

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GUARDRAILS, HANDRAILS AND STAIRS

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- Handrails to be between 1 1/4" diameter to 2" diameter, with clearance of 1.5" between rail and wall surface. mount between 34" and 38" above stair nosing or @ 36" a.f.f., typ
- Riser: max 7 3/4", tread: min. 10"

FROSTED GLASS

MECHANICAL VENTILATION (M1505)

SEE SHEET A7.1 FOR COMPLIANCE - ALARMS AND VENTILATION
AND WHOLE HOUSE MECHANICAL VENTILATION

- 1 250 CFM ON SWITCH
- 2 50 CFM ON SWITCH
- 3 95 CFM per TABLE M1505.4.3(1)

SMOKE DETECTORS (R314.3)

SEE SHEET A7.1 FOR COMPLIANCE - ALARMS AND VENTILATION

CARBON MONOXIDE ALARM (R315.1)

SEE SHEET A7.1 FOR COMPLIANCE - ALARMS AND VENTILATION

ROOF NOTES

ROOF VENT CALCULATIONS PER R806

R1 Truss Roof A:
Roof area over heated space : 400 sf
Ventilation required:(400 sf/150)X 144 sq. in./sf = 384 sq.in.

Required exhaust = 192 sq. in.
Required intake = 192 sq. in.

PROPOSED EXHAUST NEAR RIDGE OF THE ROOF
Roof Vents providing 50 sq. in. of net free area, 192 /50 = 3.84 pieces (round up to 4) required.

PROPOSED INTAKE ON SOFFITS/UNDEREAVE
Provide 2" wide vent of 96 linear inch = 192 sq. in

R1 Truss Roof B:
Roof area over heated space : 417 sf
Ventilation required:(417 sf/150)X 144 sq. in./sf = 400.32 sq.in.

Required exhaust = 200.16 sq. in.
Required intake = 200.16 sq. in.

PROPOSED EXHAUST NEAR RIDGE OF THE ROOF
Roof Vents providing 50 sq. in. of net free area, 200.16 /50 = 4 required.

PROPOSED INTAKE ON SOFFITS/UNDEREAVE
Provide 2" wide vent of 100.1 linear inch = 200.16 sq. in

ROOF DRAIN SIZE CALCULATIONS PER UPC 2021

Mercer Island's 100-year, 1-hour rainfall rate is about 2.2 in/hr.

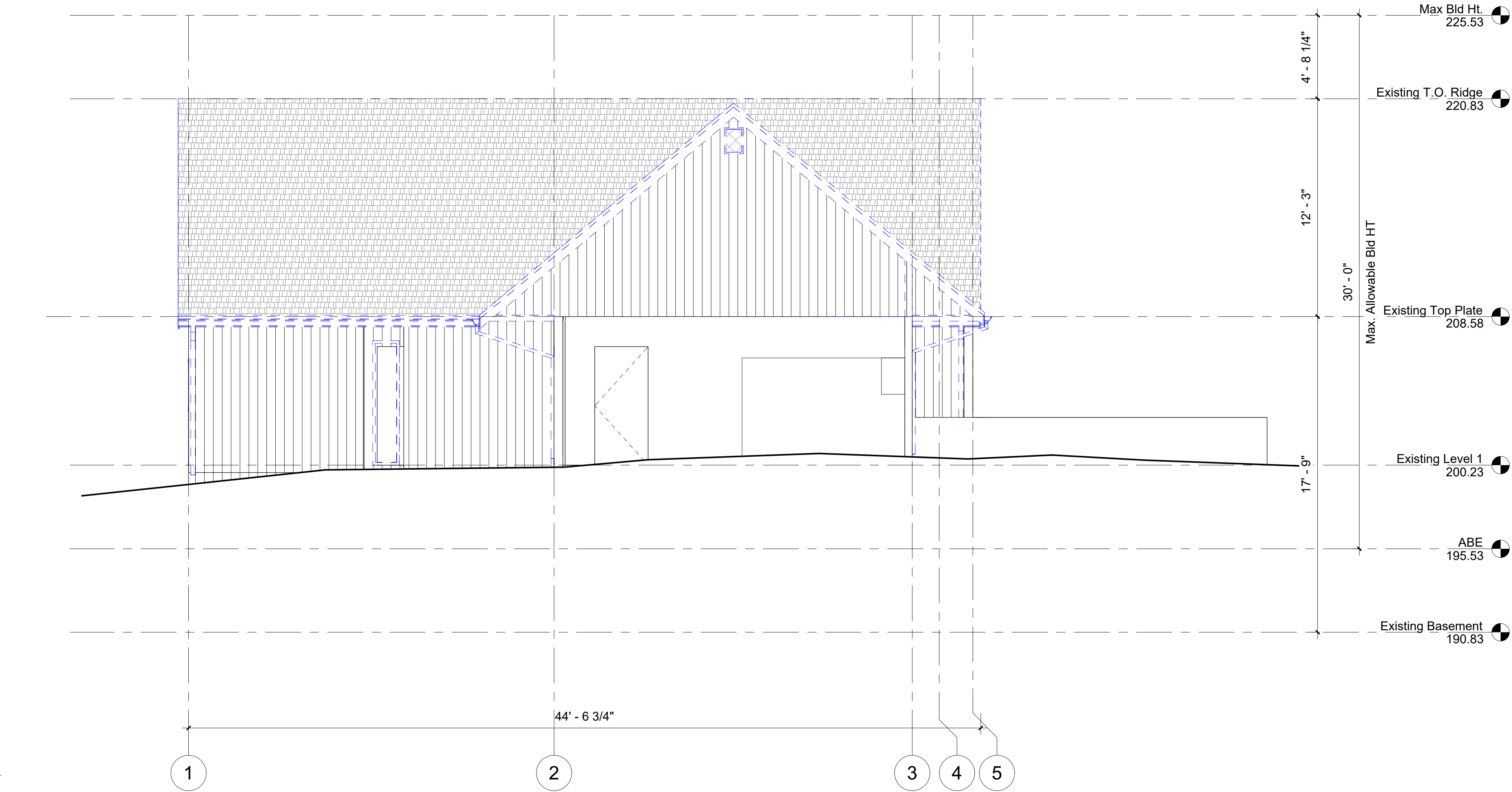
- Drainage flow (gpm) = 254 SF x (526 SF / 2) x 2.2 in/hr x 0.0104 = 11.8 gpm
Required gutter size is 1.5" x 2.5", and vertical leader size of 2" as per UPC Table 1106.3 and Table 1106.6
- Drainage flow (gpm) = 526 / 2 SF x 2.2 in/hr x 0.0104 = 6.0 gpm
Required gutter size is 1.5" x 2.5", and vertical leader size of 2" as per UPC Table 1106.3 and Table 1106.6

LEGEND:

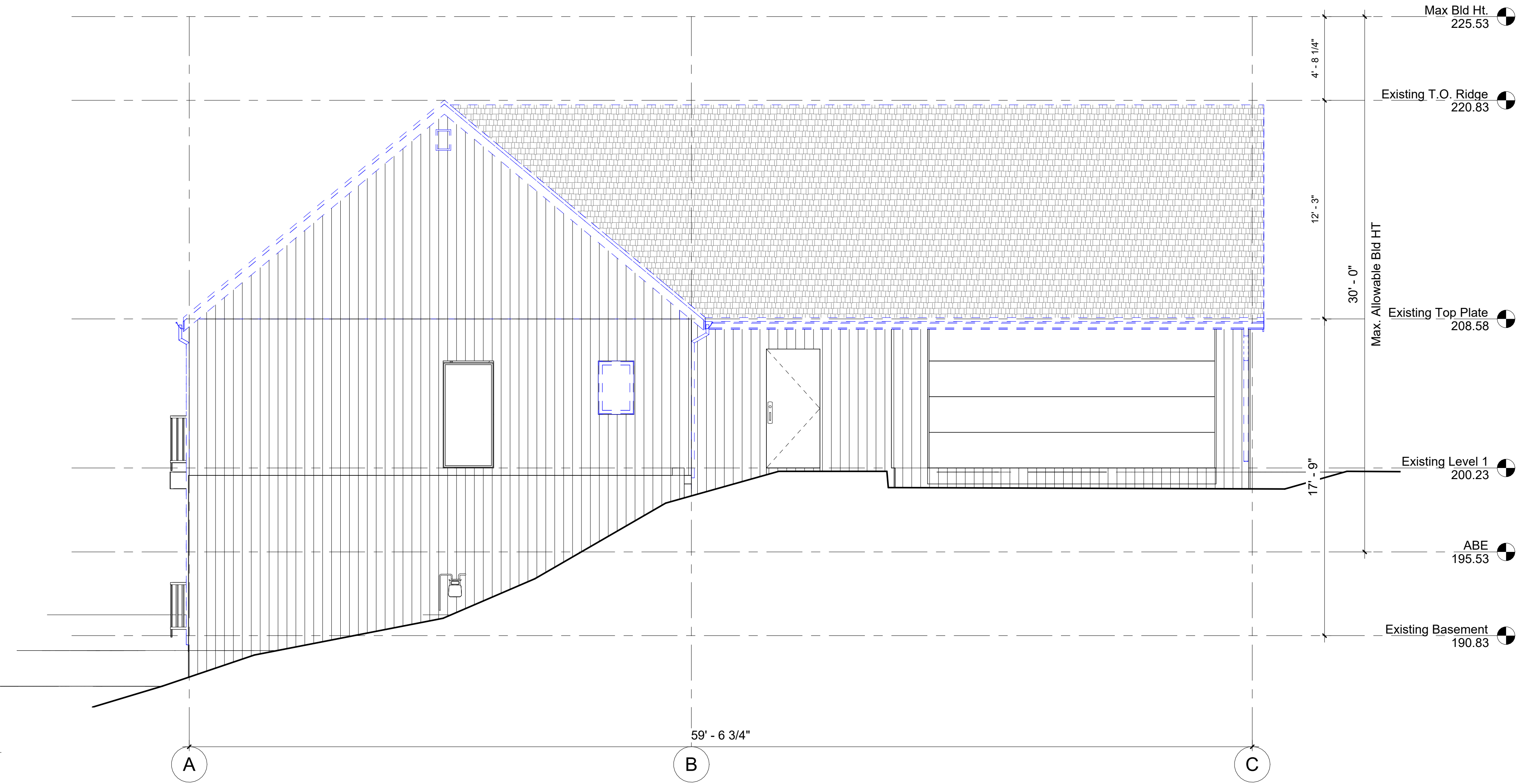
- Roof Vents
- R1 Truss Roof

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1 Existing Elevation - North
Elevation
1/4" = 1'-0"



2 Existing Elevation - East
Elevation
1/4" = 1'-0"



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REGISTERED
ARCHITECT

PEIK LI PANG
STATE OF WASHINGTON

Mar 21 2025

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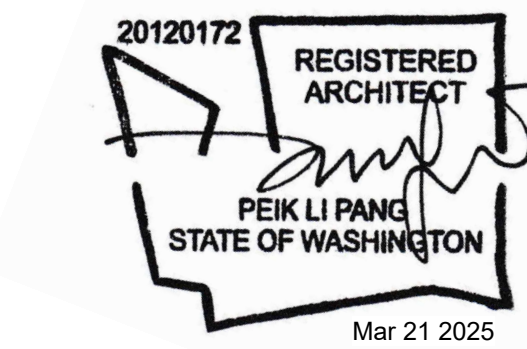
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DATE: Mar 21, 2025

Existing
Elevation
1

A2.0



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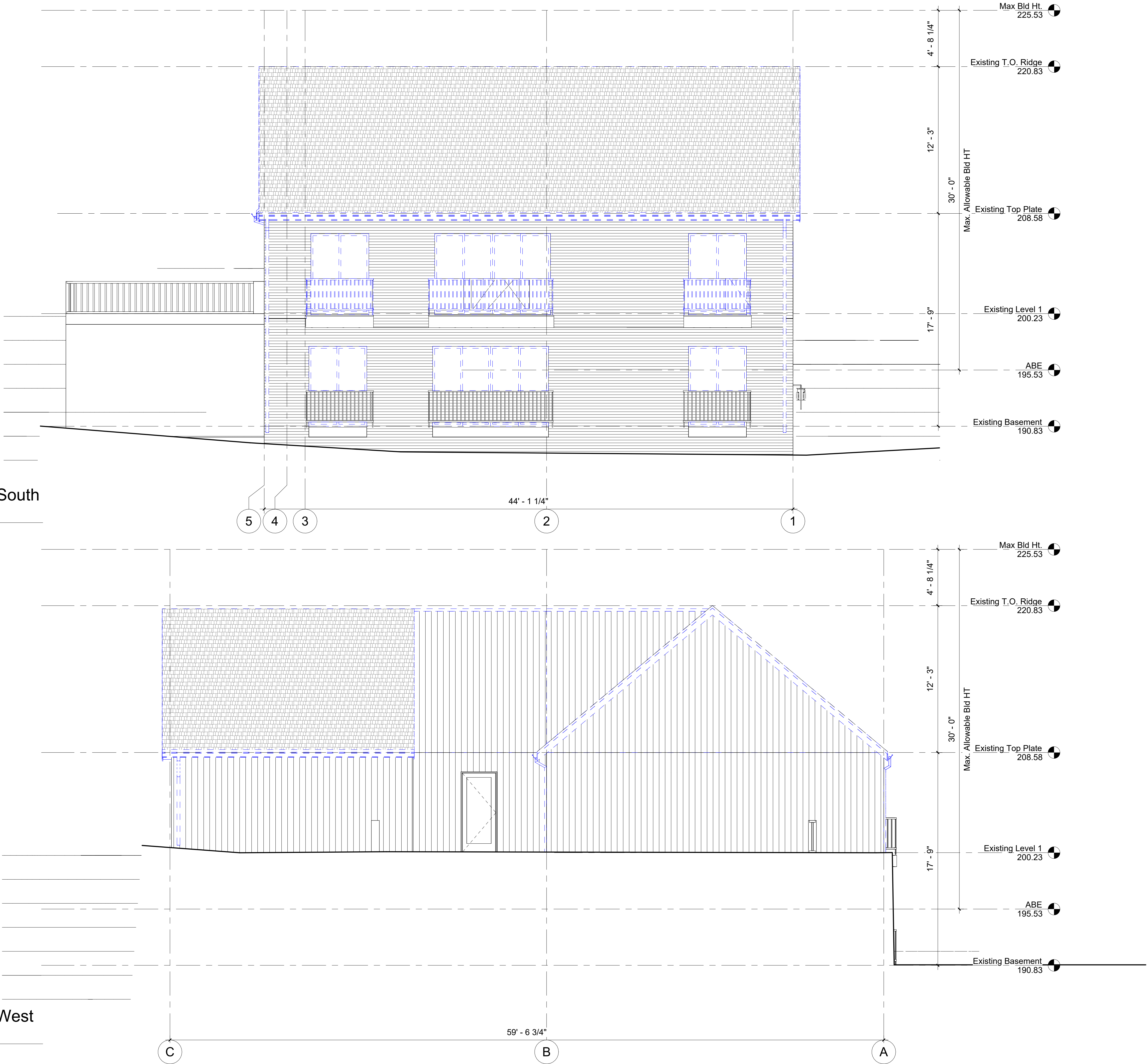
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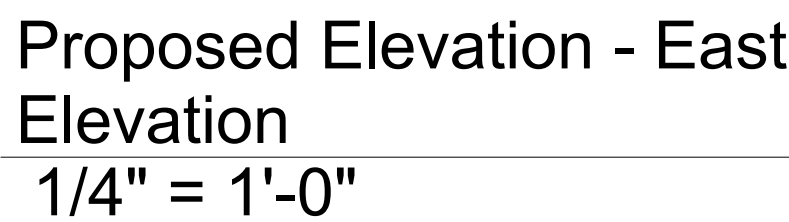
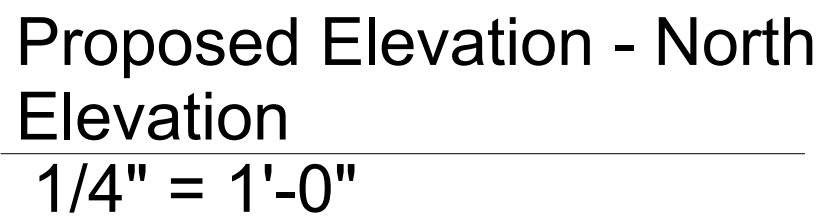
Existing
Elevation
2

A2.1



Existing Elevation - South
Elevation
1/4" = 1'-0"

Existing Elevation - West
Elevation
1/4" = 1'-0"



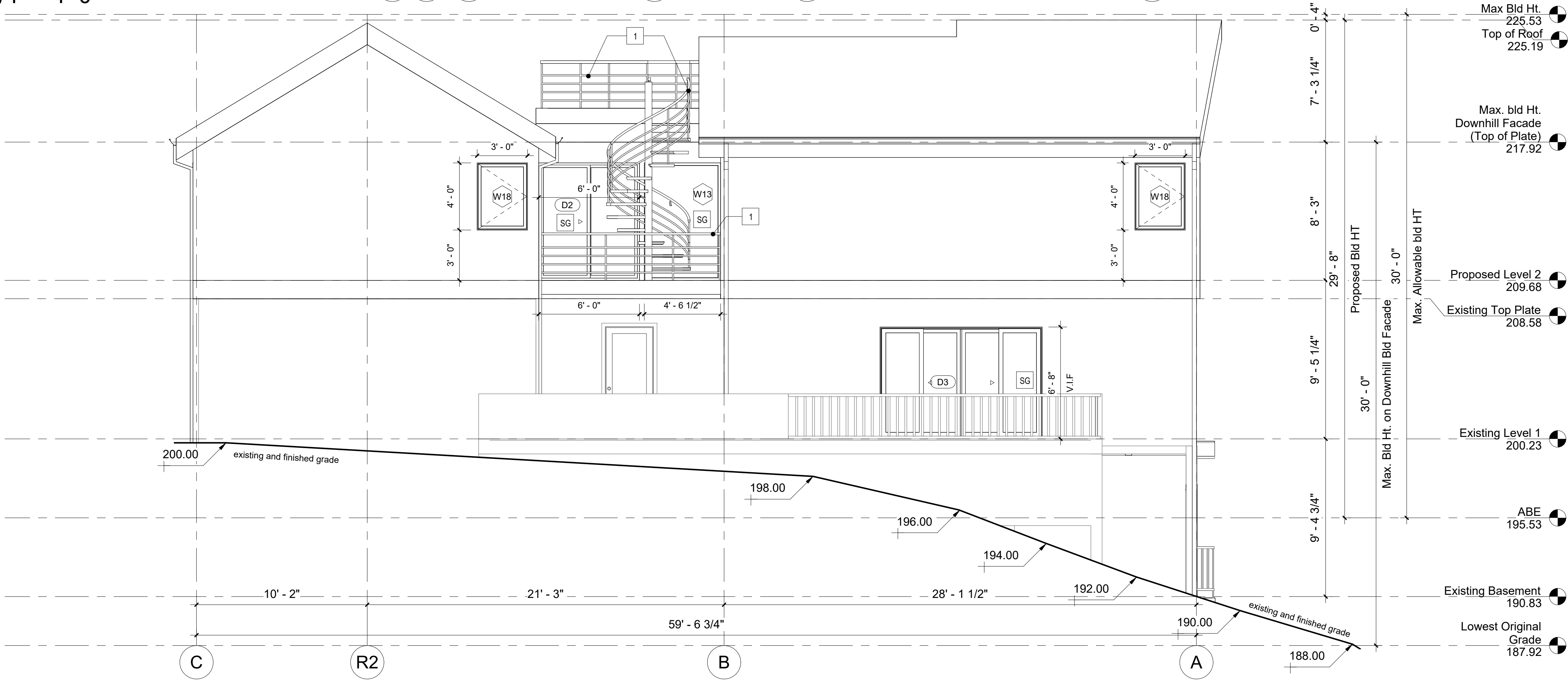
A2.2

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1 Proposed Elevation - South
Elevation
1/4" = 1'-0"

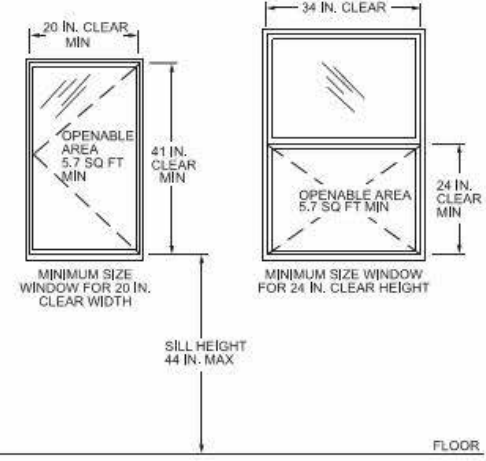


2 Proposed Elevation - West
Elevation
1/4" = 1'-0"



ELEVATION & SECTION NOTES

- SG** SAFETY GLAZING REQUIREMENT (S.G.) : (R308)
SAFETY GLAZING PER R308 IN WINDOWS AND DOORS
- EE** EMERGENCY ESCAPE AND RESCUE OPENING (E.E.) : (R310.2)
R310.1. All sleeping rooms must have an emergency egress window or door that leads directly to a yard or public way and shall have minimum dimensions as specified in this section.
Emergency egress windows must provide a minimum clear openable area of 5.7 square feet, 24 inches high and 20 inches wide.
- 5.7 sf EE** R310.2.2 Where a window is provided as the emergency escape and rescue opening, it shall have a sill height of not more than 44 inches above the floor; where the sill height is below grade, it shall be provided with a window well in accordance with Section R310.2.3



GUARDRAILS, HANDRAILS AND STAIRS

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- 3 Riser: max 7 3/4", tread: min.10"

Window Schedule

Type Mark	Level	Count	Width	Height	Sill Height
-----------	-------	-------	-------	--------	-------------

W1	Existing Level 1	1	20' - 0"	6' - 8"	0' - 0"
W2	Existing Level 1	1	9' - 6"	16' - 7"	0' - 0"
W3	Existing Level 1	1	4' - 9"	8' - 0"	0' - 0"
W4	Existing Level 1	1	2' - 10"	3' - 0"	0' - 0"
W5	Existing Level 1	1	2' - 10"	3' - 0"	3' - 0"
W6	Existing Level 1	1	2' - 0"	3' - 0"	3' - 0"
W8	Existing Level 1	1	1' - 6"	3' - 10"	0' - 0"
W9	Proposed Level 2	5	2' - 6"	3' - 0"	0' - 0"
W10	Proposed Level 2	4	5' - 6"	7' - 0"	0' - 0"
W11	Proposed Level 2	1	5' - 0"	7' - 0"	0' - 0"
W12	Proposed Level 2	1	6' - 0"	7' - 0"	0' - 0"
W13	Proposed Level 2	1	4' - 6 1/2"	7' - 0"	0' - 0"
W14	Proposed Level 2	2	4' - 0"	7' - 0"	0' - 0"
W15	Proposed Level 2	1	3' - 6"	7' - 0"	0' - 0"
W16	Proposed Level 2	1	1' - 6"	7' - 0"	0' - 0"
W17	Proposed Level 2	5	2' - 6"	4' - 0"	3' - 0"
W18	Proposed Level 2	2	3' - 0"	4' - 0"	3' - 0"
W19	Proposed Level 2	1	3' - 0"	3' - 0"	3' - 0"
W20	Proposed Level 2	1	4' - 9"	7' - 0"	0' - 0"

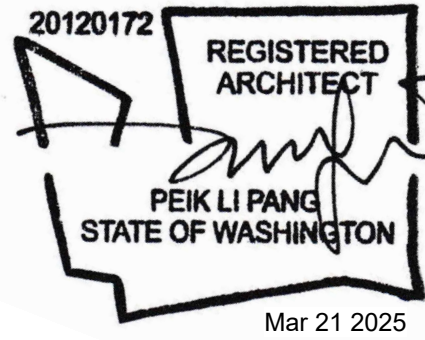
ATTN: The dimension for the window schedule is for reference. The final rough opening are to be verify in field.

5ft2

5ft2 Studio Architects

2625 Northup Way, Ste 100,
Bellevue, WA 98004

info@5ft2studio.com
www.5ft2studio.com



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Mercerdale
4103

4103 78th Ave SE,
Mercer Island, WA
98040

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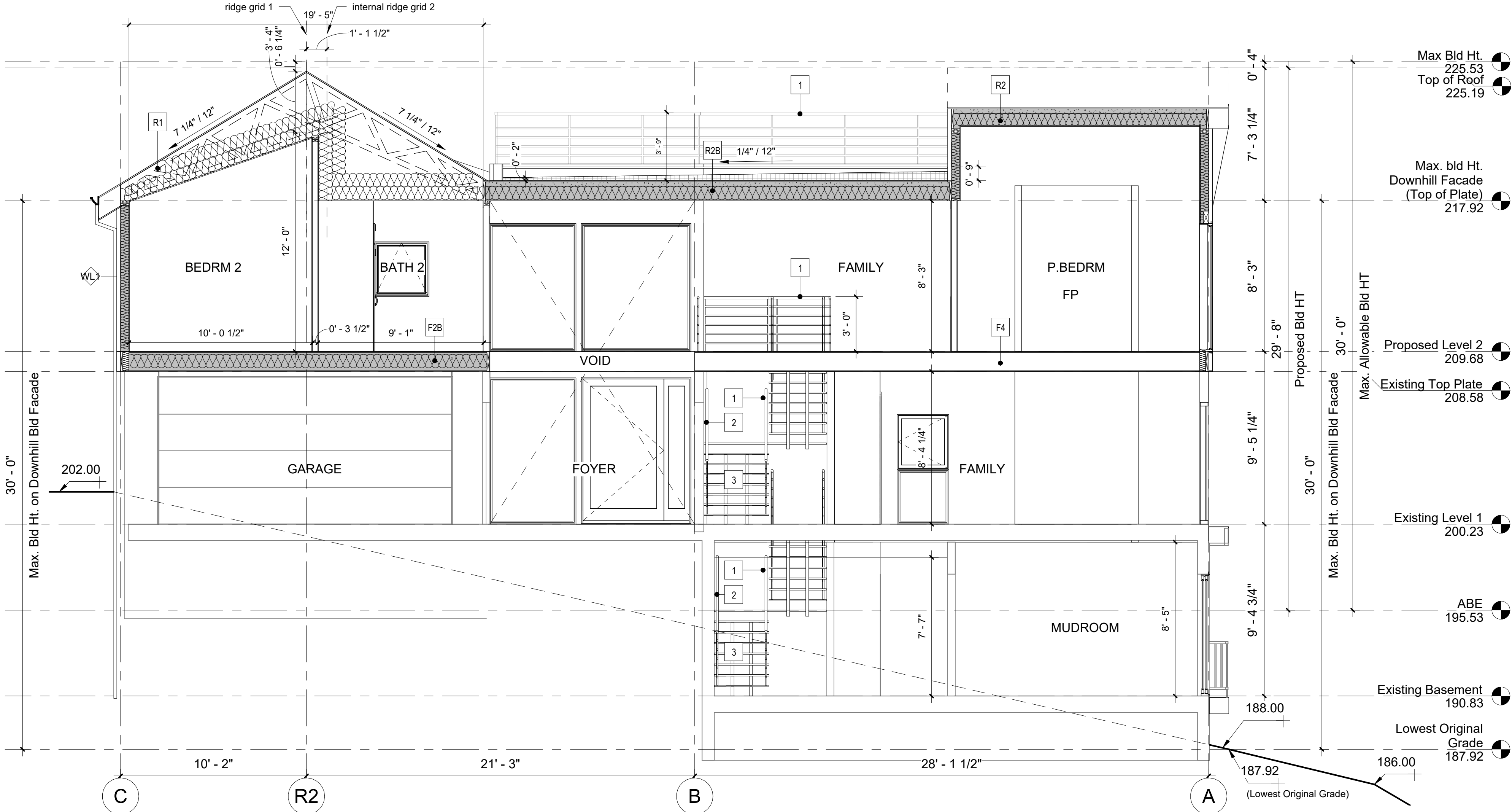
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NO.	DESCRIPTION	DATE
1	Revision 1	09.06.2025

DATE: Mar 21, 2025

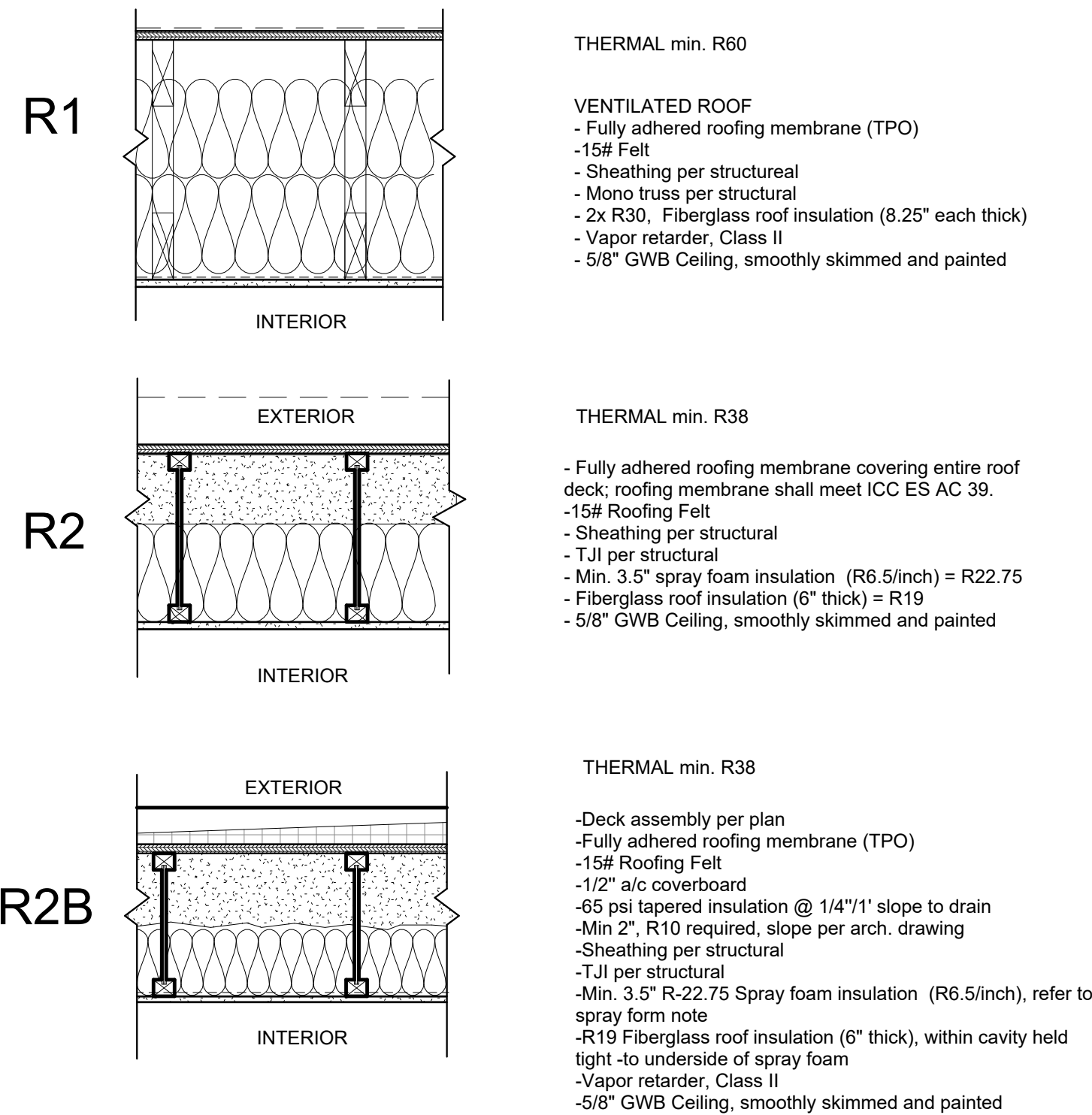
Proposed
Elevation
2

A2.3

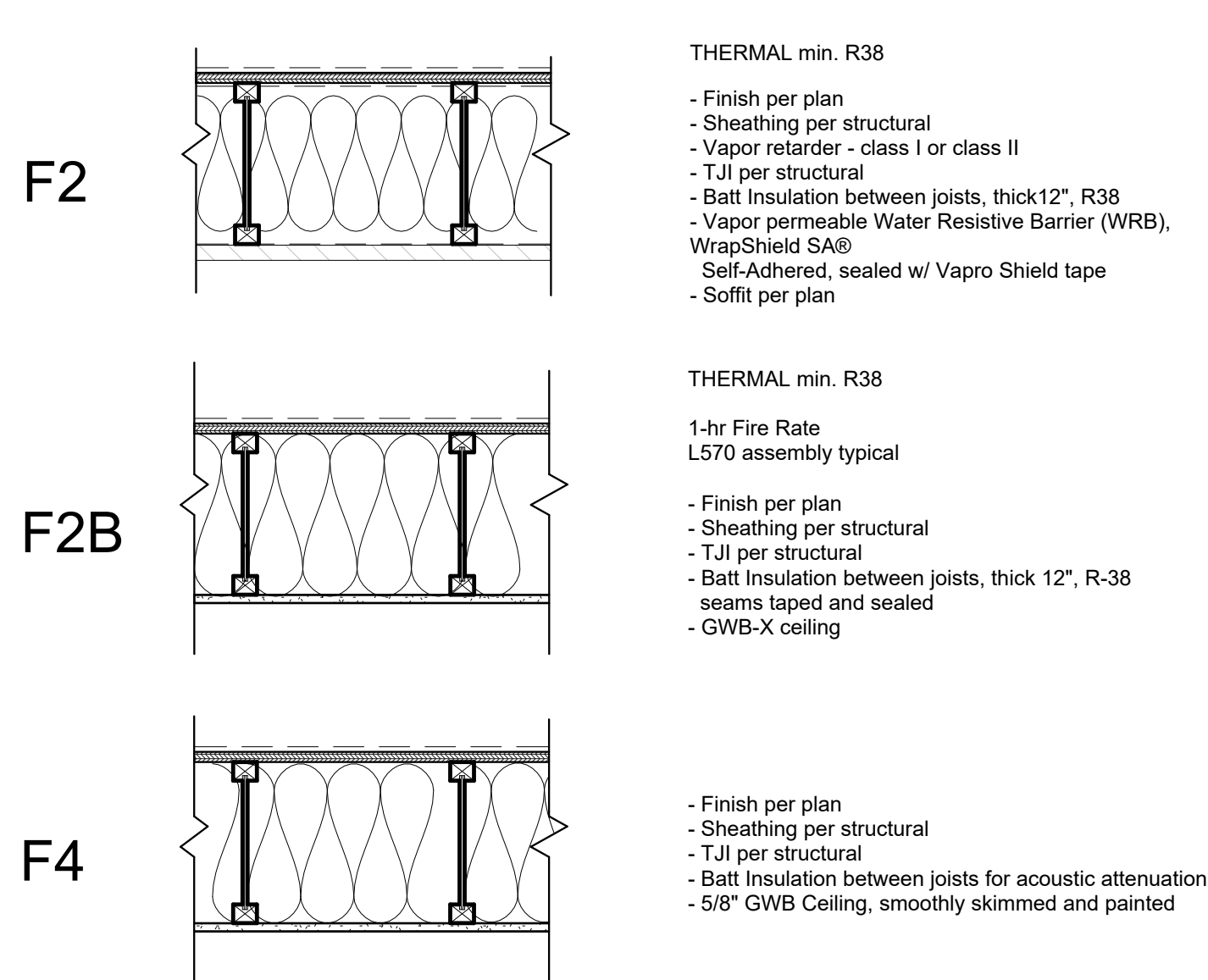


1 Section 1
1/4" = 1'-0"

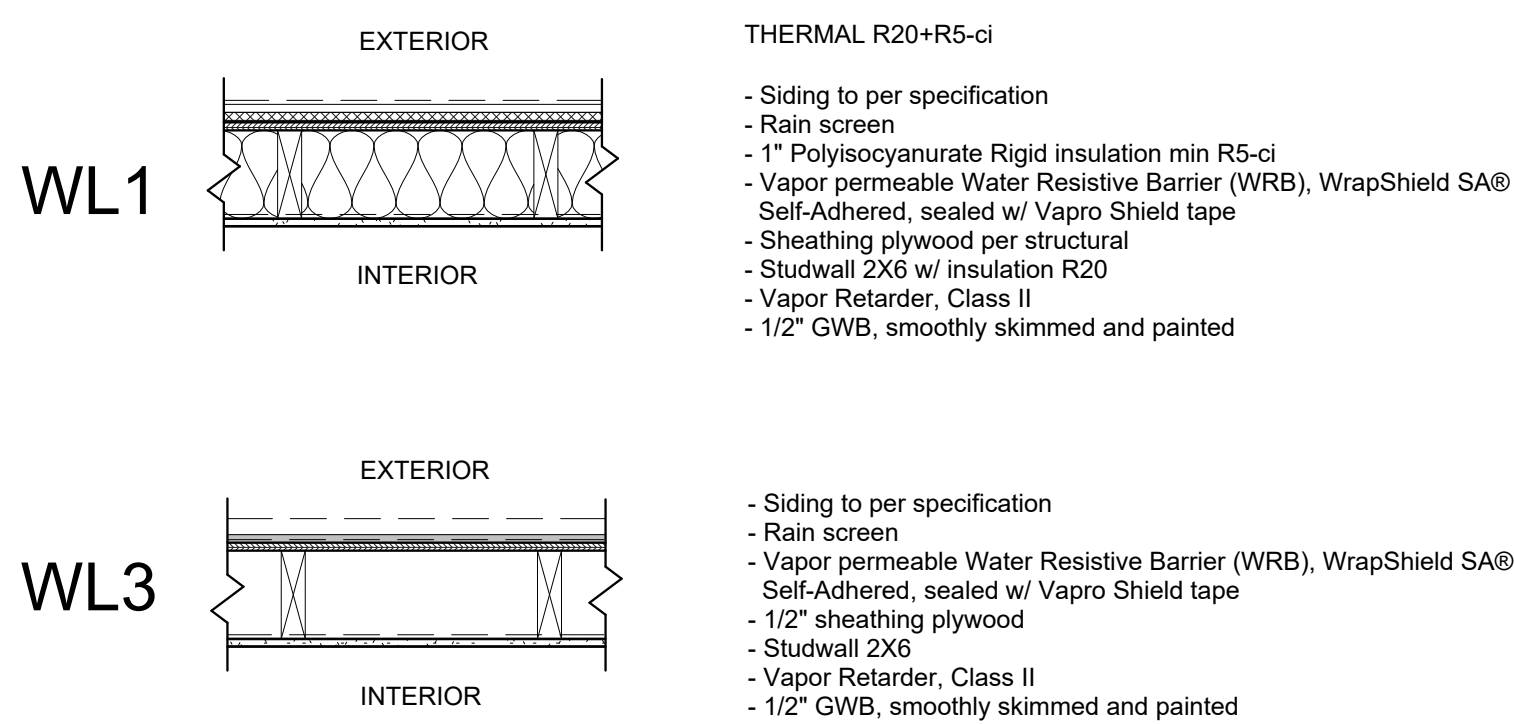
ROOF ASSEMBLIES



FLOOR ASSEMBLIES

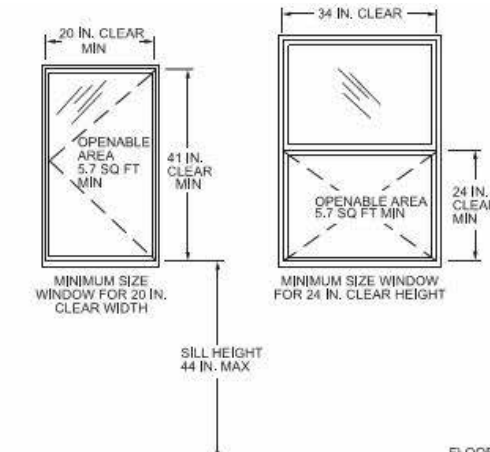


WALL ASSEMBLIES



ELEVATION & SECTION NOTES

- SG SAFETY GLAZING REQUIREMENT (S.G.) : (R308)**
- SAFETY GLAZING PER R308 IN WINDOWS AND DOORS
- 5.7 sf EE EMERGENCY ESCAPE AND RESCUE OPENING (E.E.) : (R310.2)**
- R310.1. All sleeping rooms must have an emergency egress window or door that leads directly to a yard or public way and shall have minimum dimensions as specified in this section.
- Emergency egress windows must provide a minimum clear openable area of 5.7 square feet, 24 inches high and 20 inches wide.
- R310.2.2 Where a window is provided as the emergency escape and rescue opening, it shall have a sill height of not more than 44 inches above the floor; where the sill height is below grade, it shall be provided with a window well in accordance with Section R310.2.3



GUARDRAILS, HANDRAILS AND STAIRS

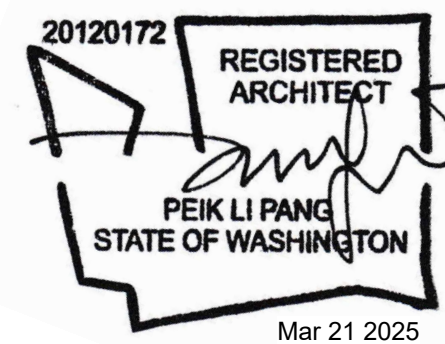
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- 3** Riser: max 7 3/4", tread: min. 10"

5ft2

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Bellevue, WA 98004

info@5ft2studio.com
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Mercerdale
4103

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DATE: Mar 21, 2025

Section
1

A3.0

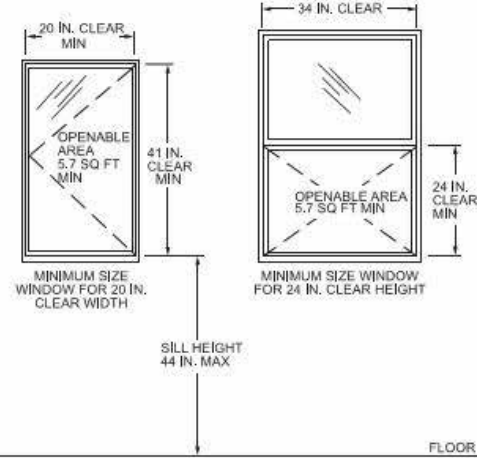
23/9/2025 5:50:09 PM

1 Section 2
1/4" = 1'-0"



ELEVATION & SECTION NOTES

- SG SAFETY GLAZING REQUIREMENT (S.G.) : (R308)
SAFETY GLAZING PER R308 IN WINDOWS AND DOORS
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GUARDRAILS, HANDRAILS AND STAIRS

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5ft2

5ft2 Studio Architects
2625 Northup Way, Ste 100,
Bellevue, WA 98004

info@5ft2studio.com
www.5ft2studio.com

20120172 REGISTERED ARCHITECT
PEIK LI PANG
STATE OF WASHINGTON
Mar 21 2025

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Mercerdale
4103

4103 78th Ave SE,
Mercer Island, WA
98040

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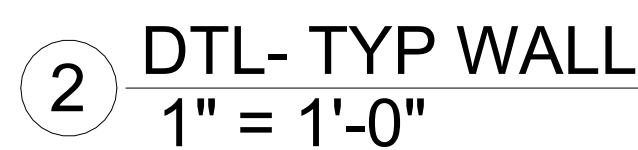
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Section 2



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NO.	DESCRIPTION	DATE
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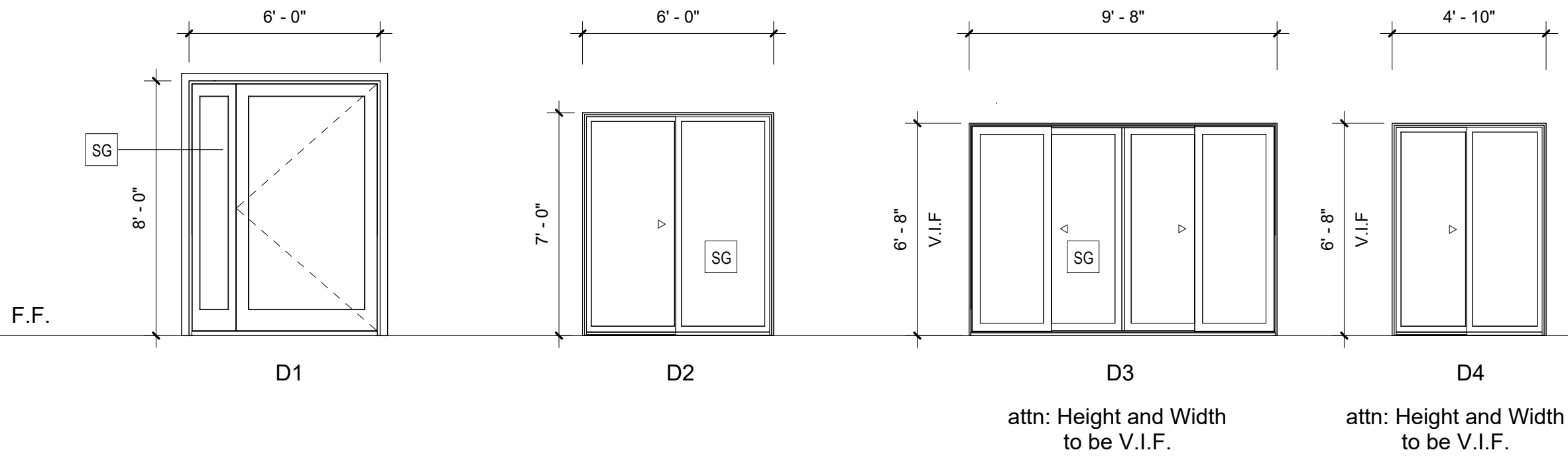
DATE: Mar 21, 2025

Details

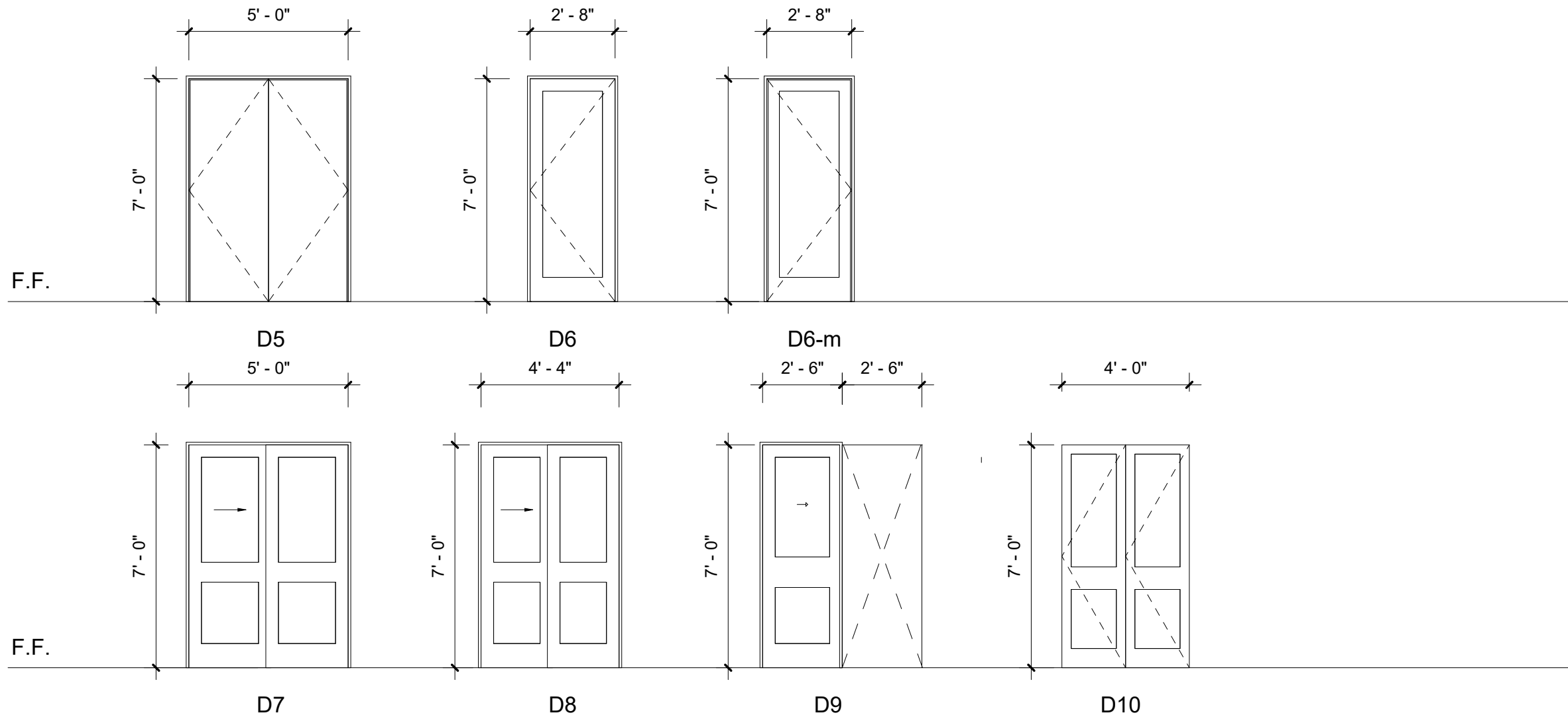
A5.1

DOORS

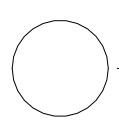
EXTERIOR



INTERIOR



Door Schedule				
Type Mark	Count	Width	Height	Types
D1	1	6' - 0"	8' - 0"	Entrance Door
D2	1	6' - 0"	7' - 0"	Double Panel Sliding Glass Door
D3	2	9' - 8"	6' - 8"	Multi-slider Glass Door
D4	2	4' - 10"	6' - 8"	Double Panel Sliding Glass Door
D5	1	5' - 0"	7' - 0"	Double Flush Glass Door
D6	3	2' - 8"	7' - 0"	Single Flush Door
D6-m	2	2' - 8"	7' - 0"	Single Flush Door
D7	1	5' - 0"	7' - 0"	Double Pocket Sliding Door
D8	1	4' - 4"	7' - 0"	Double Pocket Sliding Door
D9	3	2' - 6"	7' - 0"	Single Pocket Sliding Door
D10	2	4' - 0"	7' - 0"	Bi-Fold 2 Panel Door

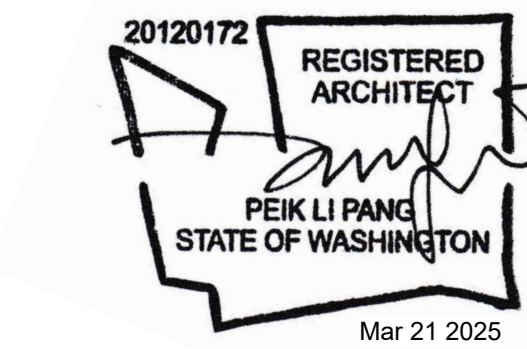
 Schedule - Door
1/4" = 1'-0"

5ft2

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2625 Northup Way, Ste 100,
Bellevue, WA 98004

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4103

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NO. DESCRIPTION DATE

DATE: Mar 21, 2025

Door
Schedule

A6.0

2021 WSEC CODE PATH

ENERGY CODE TO COMPLY WITH CHAPTER 51-11C WAC WASHINGTON STATE ENERGY CODE - RESIDENTIAL 2021 EDITION, SECTIONS R401 THROUGH R404 AND ADDITION OF SECTION R406

- R401.2 Compliance. Projects shall comply with one of the following:
- Sections R401 through R404. In addition, dwelling units and sleeping units in a residential building shall comply with Section R406.
 - Section R405.
 - Section R407.

TABLE R402.1.3 INSULATION MINIMUM R-VALUES AND PENETRATION REQUIREMENTS BY COMPONENTS*

CLIMATE ZONE 5 AND MARINE 4		
Fenestration U-Factor ¹	0.30	
Skylight U-Factor ²	0.50	
Ceiling R-Value ³	60	
Wood Frame Wall ⁴ R-Value	20 ⁴ or 13+10	
Floor R-Value	30	
Below-Grade ⁵ Wall R-Value	10/15/21 int + 5TB	
Slab ⁶ R-Value & Depth	10, 4 ft	

- a. R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the compressed R-value of the insulation from Appendix A Table A101.4 of chapter 51-11C WAC shall not be less than the R-value specified in the table.
- b. "10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall on the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means 5 thermal break between floor slab and basement wall.
- c. R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.6.1.
- d. For single rafter- or joist-vented ceilings, the insulation may be reduced to R-3.8 if the full insulation depth extends over the top plate of the exterior wall.
- e. R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.
- f. For log structures developed in compliance with Standard ICC-400, log walls shall meet the requirements for climate zone 5 of ICC-400.
- g. Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 18 inches on center, 75 percent of the full cavity insulation and headers insulated with a minimum of R-10 insulation.
- h. The first value is cavity insulation, the second value is continuous insulation. Therefore, as an example, "R-13a 10" means R-13 cavity insulation plus R-10 continuous insulation.
- i. A maximum U-factor of 0.32 shall apply to vertical fenestration products installed in buildings located above 4000 feet in elevation above sea level, or in wildfire debris regions where protection of openings is required under Section R301.2.1.2 of the International Residential Code.

2021 Washington State Energy Code - Residential
Single Family - New & Additions (effective March 15, 2024)

R406 ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS COMPLIANCE

2021 Washington State Energy Code - Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family - New & Additions (effective March 15, 2024)

Permit# _____ Address or Lot & Block _____
4103 78th Ave SE
City Mercer Island Zip 98040

These requirements apply to all the IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

Instructions: This single-family project uses the requirements of the Prescriptive Path below to incorporate the minimum values listed. Based on the conditioned floor area of the structure, the number of required additional credits must be selected by the permit applicant.

Provide all information from the following tables in as building permit drawings: Table R402.1.2 - Insulation and Penetration Requirements by Component, Table R406.2 - Fuel Normalization Credits and R406.3 Energy Credits.

Authorized Representative Signature _____	Date _____	
All Climate Zones, Table R402.1.3		
Fenestration U-Factor ¹	R-Value *	U-Factor *
Skylight U-Factor ²	n/a	0.30
Ceiling *	60	n/a
Wood Frame Wall ⁴	20-5 or 13-10	n/a
Floor	30	n/a
Below grade wall	10/15/21 int + 5TB	n/a
Slab ⁶ R-Value & Depth	10, 4 ft	n/a
R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the compressed R-value of the insulation from Appendix A Table A101.4 of chapter 51-11C WAC shall not be less than the R-value specified in the table.		
a. The fenestration U-factor values include skylights.		
b. "10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall on the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means 5 thermal break between floor slab and basement wall.		
c. R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.6.1.		
d. For single rafter- or joist-vented ceilings, the insulation may be reduced to R-3.8 if the full insulation depth extends over the top plate of the exterior wall.		
e. R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.		
f. For log structures developed in compliance with Standard ICC-400, log walls shall meet the requirements for climate zone 5 of ICC-400.		
g. Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 18 inches on center, 75 percent of the full cavity insulation and headers insulated with a minimum of R-10 insulation.		
h. The first value is cavity insulation, the second value is continuous insulation. Therefore, as an example, "R-13a 10" means R-13 cavity insulation plus R-10 continuous insulation.		
i. A maximum U-factor of 0.32 shall apply to vertical fenestration products installed in buildings located above 4000 feet in elevation above sea level, or in wildfire debris regions where protection of openings is required under Section R301.2.1.2 of the International Residential Code.		

Prescriptive Path - Single Family WSEC-R-2021 Edition EPCA C103 (V1/2/2024)

2021 Washington State Energy Code - Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family - New & Additions (effective March 15, 2024)

Each dwelling unit in a residential building shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table R406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

- Small Dwelling Unit: Dwelling units less than 1500 square feet in conditioned floor area with less than 300 square feet of breventilation area. Additional to existing building less than 500 square feet of heated floor area less than 1500 square feet. **5.0 credits**
- Medium Dwelling Unit: All dwelling units that are not included in R1, R3 or R4. **8.0 credits**
- Large Dwelling Unit: Dwelling units exceeding 1500 square feet of conditioned floor area. **9.0 credits**
- Dwelling with serving Group R-2 occupancies: Dwelling units in Group R-2 occupancies. **6.5 credits**
- Additional 150 square feet to 500 square feet: Additional 150 square feet to 500 square feet. **2.0 credits**

The drawings including with the building permit application shall identify which options have been selected and the point value of each option, regardless of whether separate mechanical, plumbing, electrical, or other permits are submitted for the project.

Before selecting your options on this Summary Table, review the details in Table A06.3 (Single Family), on page 4.

System Type	Description of Primary Heating Source	Credits - Select ONE system type
1	For combustion heating equipment meeting minimum federal efficiency standards for the equipment listed in Table C403.3.1(2) or C403.3.2(2). For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) and supplemental heating provided by electric resistance or a combination furnace meeting minimum standards listed in Table C403.3.2(5) found in the 2021 WSEC - COMMERCIAL ENERGY CODE.	0
2	For heating systems based on electric resistance only (either forced air or Zonal).	1.5
3	For heating systems using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) or C403.3.2(5) or air-to-water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/550.	3.0
4	For heating systems based on electric resistance with: 1. Inverter-driven ductless mini-split heat pump systems installed in the largest zone in the dwelling, or 2. With 20W or less total installed heating capacity per dwelling.	2.0

Prescriptive Path - Single Family WSEC-R-2021 Edition EPCA C103 (V1/2/2024)

2021 Washington State Energy Code - Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family - New & Additions (effective March 15, 2024)

Summary of Table R406.3 Credits - limited to one energy option per category*			Comments:	
Options	Energy Credit Option Descriptions	Credits		
1.1	Efficient Building Envelope	0.5	(1)	
1.2	Efficient Building Envelope	1.0	X	
1.3	Efficient Building Envelope	1.5		
1.4	Efficient Building Envelope	2.0		
2.1	Air Leakage Control and Efficient Ventilation	1.0		
2.2	Air Leakage Control and Efficient Ventilation	1.5	X	
2.3	Air Leakage Control and Efficient Ventilation	2.0		
3.1	High Efficiency HVAC	1.0	X	
3.2	High Efficiency HVAC	1.5		
3.3	High Efficiency HVAC	2.0		
3.4	High Efficiency HVAC	2.5		
3.5	High Efficiency HVAC	3.0		
3.6	High Efficiency HVAC	3.5		
3.7	High Efficiency HVAC	4.0		
3.8	High Efficiency HVAC	4.5		
3.9	High Efficiency HVAC	5.0		
3.10	High Efficiency HVAC	5.5		
3.11	High Efficiency HVAC	6.0		
4.1	High Efficiency HVAC Distribution System	0.5		
5.1	Efficient Water Heating	0.5		
5.2	Efficient Water Heating	1.0		
5.3	Efficient Water Heating	1.5		
5.4	Efficient Water Heating	2.0		
5.5	Efficient Water Heating	2.5		
5.6	Efficient Water Heating	3.0		
5.7	Efficient Water Heating	3.5		
5.8	Efficient Water Heating	4.0		
5.9	Efficient Water Heating	4.5		
6.1	Renewable Electric Energy (4.5 credits max)	0.5-4.5	(2)	
7.1	Appliance Package	0.5-4.5	(3)	
Total Credits: 10				

- a. An alternative heating source of at least 60,000 BTU per hour (equivalent of heated floor area or 500 Watts, whichever is larger), may be included in the dwelling unit.
- b. See Section R402.1.3 and residential building in Section R502 for Group R-2 options.
- c. Option 3.11 can only be taken with Options 3.1 and 3.3. To qualify to claim Option 3.11 with 3.3, the system shall be a 1/2 speed heat pump system.
- d. This option may only be claimed using System Type 4 or 5 from Table R406.2.
- e. Primary heating source includes heating, cooling, hot water, hot water, and hot water.
- f. Option 3.11 can only be taken with Efficient Water Heating Options 1 or 2. Equipment using for space heating shall be calculated as provided in Section R406.2.7.5. With minimum COP of 2.0, equipment shall be calculated as provided in Section R406.2.7.5. With minimum COP of 2.0, equipment shall be calculated as provided in Section R406.2.7.5. With minimum COP of 2.0, equipment shall be calculated as provided in Section R406.2.7.5.

Prescriptive Path - Single Family WSEC-R-2021 Edition EPCA C103 (V1/2/2024)

Table R406.3 - Energy Credits (Single Family)		
Option	Description	Credits
1.1	Efficient Building Envelope (Only one option from Items 1.1 through 1.4 may be selected in this category. Compliance with the code that the table lists is demonstrated using Section R402.1.3, Total U-factor alternative, or 1.5 proposed (ICC Target 100) - the required U-factor.	0.5
1.2	Prescriptive compliance is based on Table R402.1.3 with the following modifications: Vertical fenestration U=0.27 Roof U=0.04 Floor U=0.04 Slab on grade R-10 perimeter and under entire slab below grade slab R-10 perimeter and under entire slab.	1.0
1.3	Compliance based on Section R402.1.3. Reduce the Total Target U-factor by 15%.	1.5
1.4	Prescriptive compliance is based on Table R402.1.3 with the following modifications: Vertical fenestration U=0.27 Roof U=0.04 Floor U=0.04 Slab on grade R-10 perimeter and under entire slab below grade slab R-10 perimeter and under entire slab.	2.5

Prescriptive Path - Single Family WSEC-R-2021 Edition EPCA C103 (V1/2/2024)

Table R406.3 - Energy Credits (Single Family)		
Option	Description	Credits
2.1	For air leakage control and efficient ventilation (Only one option from Items 2.1 through 2.3 may be selected in this category.) Compliance based on Section R402.1.2. Reduce the tested air leakage to 2.0 or change per hour maximum at 50 Pascals, or for R-2 occupancies, optional compliance based on Section R402.1.2. Reduce the tested air leakage to 2.5 or change per hour maximum at 50 Pascals.	1.0
2.2	For air leakage control and efficient ventilation (Only one option from Items 2.1 through 2.3 may be selected in this category.) Compliance based on Section R402.1.2. Reduce the tested air leakage to 2.0 or change per hour maximum at 50 Pascals, or for R-2 occupancies, optional compliance based on Section R402.1.2. Reduce the tested air leakage to 2.5 or change per hour maximum at 50 Pascals.	1.5
2.3	For air leakage control and efficient ventilation (Only one option from Items 2.1 through 2.3 may be selected in this category.) Compliance based on Section R402.1.2. Reduce the tested air leakage to 2.0 or change per hour maximum at 50 Pascals, or for R-2 occupancies, optional compliance based on Section R402.1.2. Reduce the tested air leakage to 2.5 or change per hour maximum at 50 Pascals.	2.0

Prescriptive Path - Single Family WSEC-R-2021 Edition EPCA C103 (V1/2/2024)

Table R406.3 - Energy Credits (Single Family)		Credits
Option	Description	
1.1		

ALARMS IRC 2021

SMOKE ALARM AND HEAT DETECTION (IRC R314)

R314.1.1 Listings. Smoke alarms shall be listed in accordance with UL 217. Heat detectors and heat alarms shall be listed for the intended application. Combination smoke and carbon monoxide alarms shall be listed in accordance with UL 217 and UL 2034.

R314.2 Where required. For new construction, Smoke alarms shall be provided in dwelling units. A heat detector or hear alarm shall be provided in new attached garages.

R314.3 Location. Smoke alarms shall be installed in the following locations:
1. In each sleeping room or sleeping loft
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics and not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
4. Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by this section.
5. In napping areas in a family home child care.
6. In the hallway and in the room open to the hallway in dwelling units where the ceiling height of a room open to a hallway serving bedrooms exceeds that of the hallway by 24 inches (610 mm) or more.
7. Within the room to which a loft is open, in the immediate vicinity of the loft.

R314.4 Interconnectivity. Where more than one smoke alarm is required to be installed within an individual dwelling with Section R314.2, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

R314.5 Combination alarms. Combination smoke and carbon monoxide alarms shall be permitted to be used in lieu of carbon monoxide alarms.

R314.4.1 Heat detection interconnection. Heat detectors and heat alarms shall be connected to an alarm or a smoke alarm that is installed in the dwelling. Alarms and smoke alarms that are installed for this purpose shall be located in a hallway, room, or other location that will provide occupant notification.
R314.6 Power source. Smoke alarms, heat alarms, and heat detectors shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.
EXCEPTIONS:
1. Smoke alarms shall be permitted to be battery operated where installed in buildings without commercial power.
2. Smoke alarms installed in accordance with Section R314.2.2 shall be permitted to be battery powered.

CARBON MONOXIDE ALARM (IRC R 315.1)

R315.1.1 Listings. Carbon monoxide alarms shall be listed in accordance with UL 2034. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217.

R315.2 Where required. For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedroom in dwelling units and each level of the dwelling in accordance with manufacturer's recommendation.

R315.3 Location. Carbon monoxide alarms in dwelling units shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms and each level of the dwelling with the manufacturer's recommendations. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

R315.4 Combination alarms. Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.

R315.5 Interconnectivity. Where more than one carbon monoxide alarm is required to be installed within an individual dwelling unit in accordance with Section R 315.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of carbon monoxide alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

NEW ATTACHED GARAGES (IRC R314.2.3)

R314.2.3 New Attached Garages
A heat detector or heat alarm rated for the ambient outdoor temperatures and humidity shall be installed in new garages that are attached to or located under new and existing dwellings. Heat detectors and heat alarms shall be installed in a central location and in accordance with the manufacturer's instructions.

• **R314.3- Smoke alarm locations now include:**
5. In the hallway and in the room open to the hallway in dwelling units where the ceiling height of a room open to a hallway serving bedrooms exceeds that of the hallway by 24 inches or more.
• **R314.3.1-Smoke alarm near cooking appliances now include:**
1. Smoke alarms listed and marked "helps reduce cooking nuisance alarms" shall not be installed less than 6 feet horizontally from permanently installed cooking appliance.

MECHANICAL VENTILATION IRC 2021

LOCAL EXHAUST RATES

- 1 250 CFM ON SWITCH
- 2 50 CFM ON SWITCH

Table M1505.4.4.1 Minimum Local Exhaust Rates		
Area to Be Exhausted	Exhaust Rates	
	Intermittent	Continuous
Open Kitchens	In accordance with Section M1505.4.4.3	Not Permitted
Enclosed Kitchens	In accordance with Section M1505.4.4.3	5 ACH based on kitchen volume
Bathrooms - Toilet rooms	50 cfm	20 cfm

M1505.4.4.3 Local intermittent kitchen exhaust system. Kitchen range hoods for domestic cooking appliances shall meet or exceed either the minimum airflow or the minimum capture efficiency in accordance with Table M1505.4.4.3. Capture efficiency ratings shall be determined in accordance with ASTM E3087.

EXCEPTION: Other intermittent kitchen exhaust fans, including downdraft, shall meet or exceed 300 cfm airflow.

Table M1505.4.4.3
Kitchen Range Hood Airflow Rates (cfm) and ASTM E3087 Capture Efficiency (CE) Ratings According to Kitchen Range Fuel Type

Hood Over Electric Range	Hood Over Combustion Range
65% CE or 160 cfm	80% CE or 250 cfm

M1505 MECHANICAL VENTILATION
Whole-House Mechanical Ventilation System Selected - Exhaust Ventilation System

THE WHOLE HOUSE VENTILATION SYSTEM SHALL PROVIDE OUTDOOR AIR TO EACH HABITABLE SPACE AT A CONTINUOUS RATE OF NOT LESS THAN DETERMINED IN ACCORDANCE WITH IRC 2021 TABLE M1505.4.3(1).

- 3 95 CFM per TABLE M1505.4.3(1)

Table M1505.4.3(1) Whole-House Mechanical Ventilation Airflow Rate					
Dwelling Unit Floor Area (square feet)	Number of Bedrooms				
	0 + 1	2	3	4	5 or more
Airflow in cfm					
≤ 500	30	30	35	45	50
501 + 1,000	30	35	40	50	55
1,001 + 1,500	30	40	45	55	60
1,501 + 2,000	35	45	50	60	65
2,001 + 2,500	40	50	55	65	70
2,501 + 3,000	45	55	60	70	75
3,001 + 3,500	50	60	65	75	80
3,501 + 4,000	55	65	70	80	85
4,001 + 4,500	60	70	75	85	90
4,501 + 5,000	65	75	80	90	95

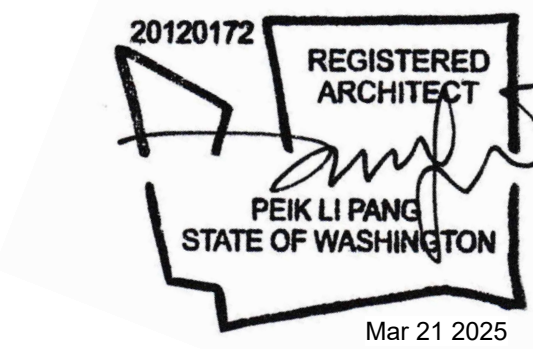
Certified on 3/27/2024 WAC 51-51-1505 Page 3

M1504.3 EXHAUST OPENINGS

Exhaust openings shall terminate as follows:
1. Not less than 3 feet (914mm) from property lines
2. Not less than 3 feet (914mm) from grailty air intake openings, operabe windows and doors.
3. Not less than 10 feet (3048 mm) from mechanical air intake openings except where the exhaust opening is located not less than 3 feet (914mm) above the air intake opening shall comply with Section R303.5.2 and R303.6.



5ft2 Studio Architects
2625 Northup Way, Ste 100,
Bellevue, WA 98004
info@5ft2studio.com
www.5ft2studio.com



24 Merc
Mercerdale
4103

4103 78th Ave SE,
Mercer Island, WA
98040

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CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS ON THE JOB AND THIS OFFICE SHALL BE INFORMED OF ANY DISCREPANCIES AND VARIATIONS SHOWN ON THE DRAWINGS.

NO. DESCRIPTION DATE

DATE: Mar 21, 2025

Compliance
- Alarms
and
Ventilation(IRC
2021)

A7.1

ZONING	R-9.6
LOT AREA	17,573 SF (0.40 ACRES)
SETBACK REQUIREMENT	FRONT SETBACK 20 FT REAR SETBACK 25 FT SIDE SETBACK (2 SIDE YARDS) 25.75FT MIN TOTAL WIDTH OF SIDE YARD (17%) 151'-6 1/4" x 17%= 25'-9" (MINIMUM ON ONE SIDE 8' 6" FT)

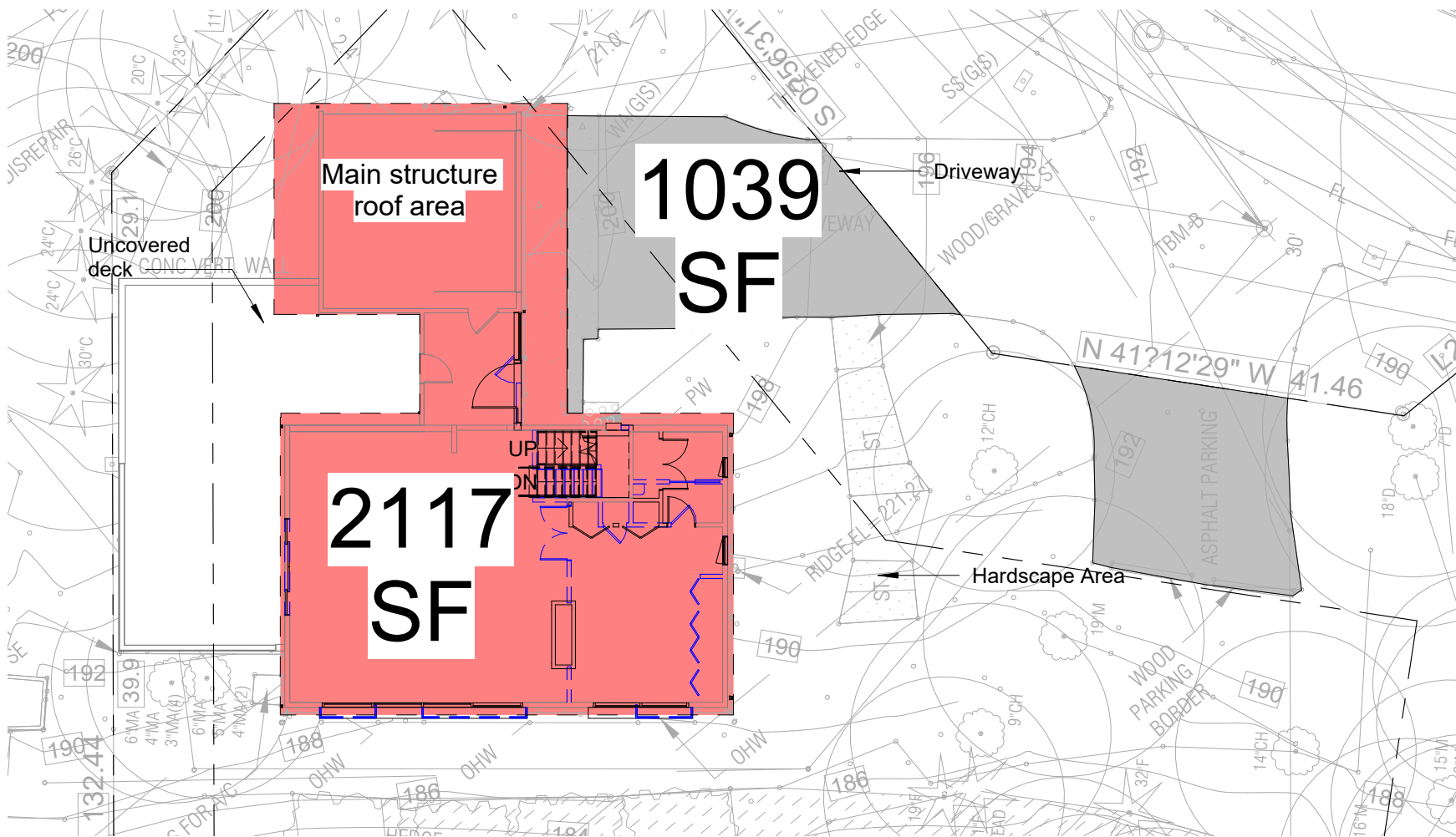
C. 1.c.i.b. For lots with a lot width of more than 90, the sum of the side yards' width shall be a width that is equal to at least 17 percent of the lot width.

LOT COVERAGE CALCULATIONS		
A.	Gross Lot Area	17,573 Square Feet
B.	Net Lot Area	17,573 Square Feet
C.	Allowed Lot Coverage Area	6150.55 Square Feet
D.	Allowed Lot Coverage	35 % of Lot
E.	Existing Lot Coverage:	
	1 Main Structure Roof Area	2117 Square Feet
	2 Accessory Building Roof Area	0 Square Feet
	3 Vehicular Use (driveway, paved accesses/ements [portion used by the lot for access],parking	1039 Square Feet
	4 Covered Patios and Covered Decks	0 Square Feet
	5 Total Existing Lot Coverage Area (E1+E2+E3+E4)	3156 Square Feet
F.	(Total Lot Coverage Area Removed)	0 Square Feet
G.	Proposed Adjustment for Single Story (Area)	0 Square Feet
H.	Proposed Adjustment for Flag Lot	0 Square Feet
I.	Total New Lot Coverage Area:	
	1 Main Structure Roof Area	-43 Square Feet
	2 Accessory Structure Roof Area	0 Square Feet
	3 Vehicular Use (driveway, paved accesses/ement [portion used by the lot for access],parking)	53 Square Feet
	4 Covered Patios and Covered Decks	67 Square Feet
	5 Total New Lot Coverage Area (I1 + I2 + I3 + I4)	77 Square Feet
J.	Total Project Lot Coverage Area = (E5 - F) + I5	3,233 Square Feet
K.	Proposed Lot Coverage Area = (J/B) x 100	18.4% % of Lot
Lot Coverage calculations shown on Plan Sheet #		A7.2: Compliance - Zoning 1

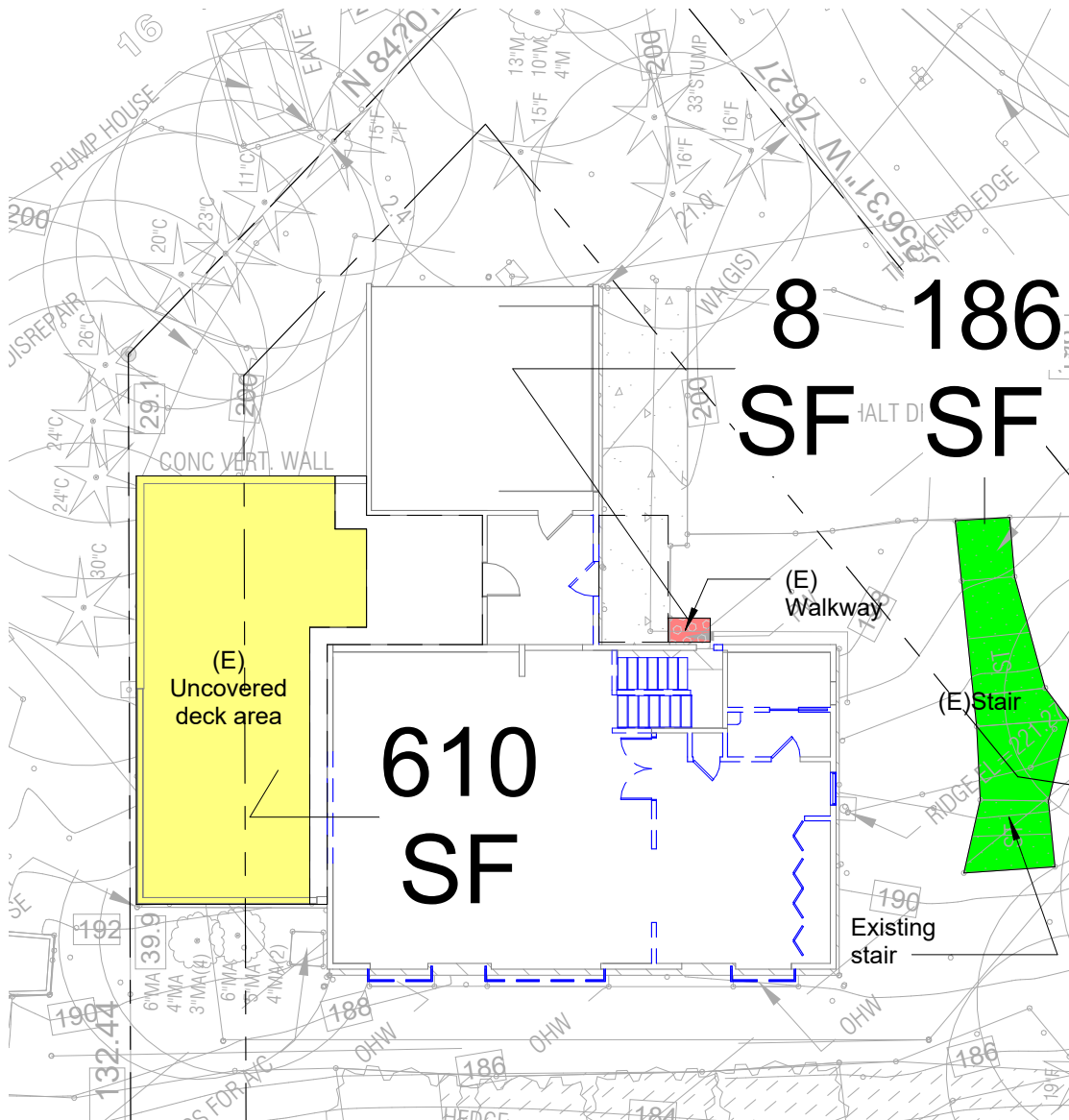
HARDSCAPE CALCULATIONS			
A.	Gross Lot Area		17,573 Square Feet
B.	Net Lot Area		17,573 Square Feet
C.	Area Borrowed from Lot Coverage		2,918 Square Feet
D.	Allowed Hardscape Area = 9% of lot area + C		25.6 % of Lot
E.	Allowed Hardscape Area		4499.6 Square Feet
F.	Total Existing Hardscape Area		
	1 Uncovered Decks		610 Square Feet
	2 Uncovered Patios		0 Square Feet
	3 Walkways		8 Square Feet
	4 Stairs		186 Square Feet
	5 Rockeries and Retaining Walls		0 Square Feet
	6 Other [INSERT TEXT HERE]		0 Square Feet
	7 Total Existing Hardscape Area (F1 + F2 + F3 + F4 + F5 + F6)		804 Square Feet
G.	(Total Hardscape Area Removed)		0 Square Feet
H.	Total New Hardscape Area		
	1 Uncovered Decks		0 Square Feet
	2 Uncovered Patios		0 Square Feet
	3 Walkways		0 Square Feet
	4 Stairs		0 Square Feet
	5 Rockeries and Retaining Walls		0 Square Feet
	6 Other [INSERT TEXT HERE]		0 Square Feet
	7 Total New Hardscape Area (H1 +H2 +H3 +H4 + H5 + H6)		0 Square Feet
I.	Total Project Hardscape Area = (F7-G) + H7		804 Square Feet
J.	Total Project Hardscape Area = (I/B) x 100		4.6 % of Lot
Hardscape calculations shown on Plan Sheet #			
A7.2: Compliance - Zoning 1			

LOT SLOPE CALCULATIONS		
A.	Highest Elevation Point of Lot:	200.66 Feet
B.	Lowest Elevation Point of Lot:	180 Feet
C.	Elevation Difference	40.66 Feet
D.	Horizontal Distance Between High and Low Points	155.3 Feet
E.	Lot Slope*	26.2 %
* Lot Slope is the elevation difference divided by horizontal distance multiplied by 100. *		
Lot Slope calculations shown on Plan Sheet #		A7.2: Compliance - Zoning

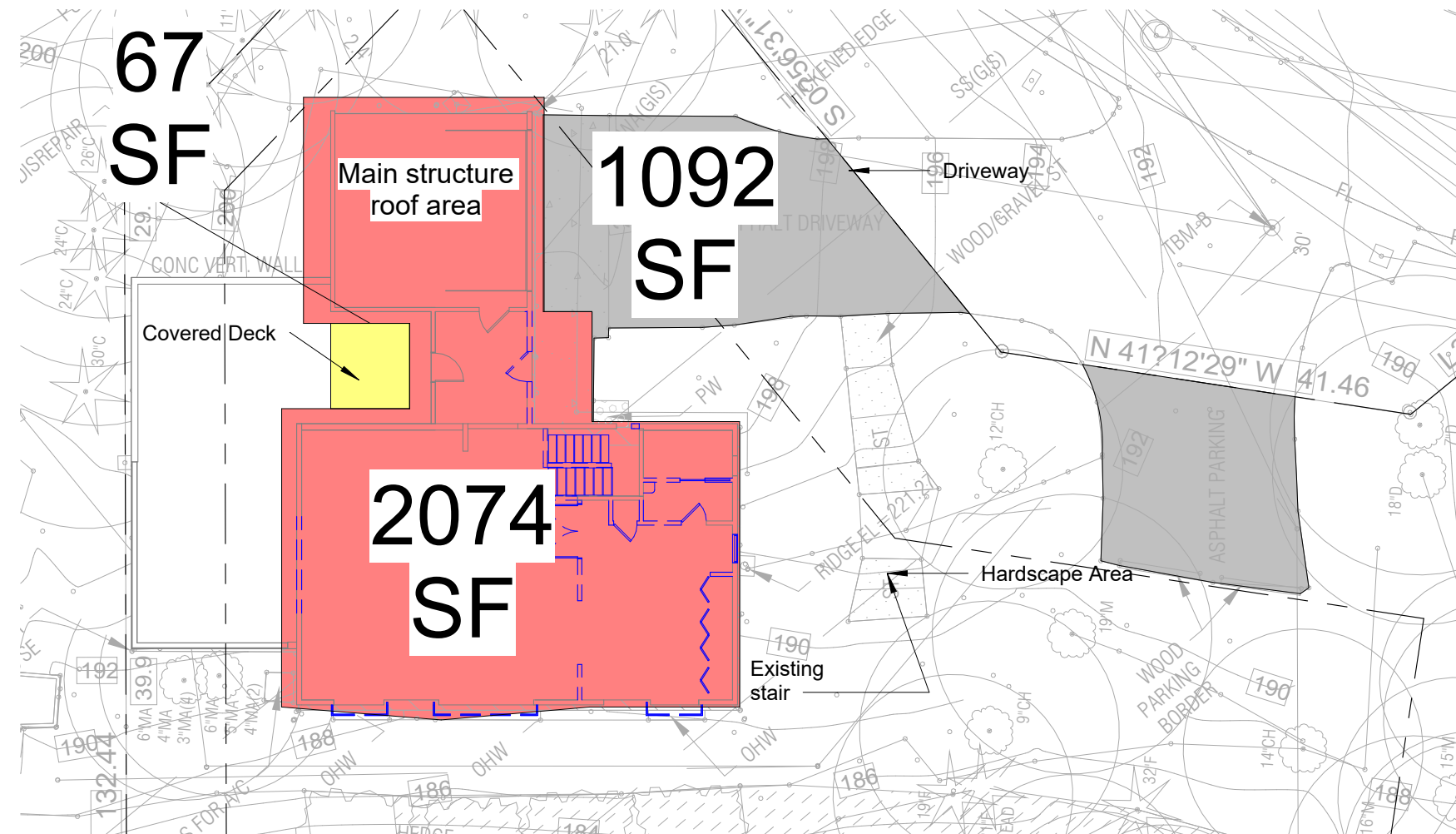
BUILDING HEIGHT CALCULATIONS						
A.	Average Building Elevation (ABE) calculations located on sheet #:					A7.3: Compliance - Zoning
B.	Allowable Building Height (ABE + 30ft.)	225.53 Feet				
C.	Proposed Building Height	225.2 Feet				
D.	Sloping lot (Downhill side) - maximum height of top of exterior wall façade above lowest existing grade (30-ft max)	217.92 Feet				



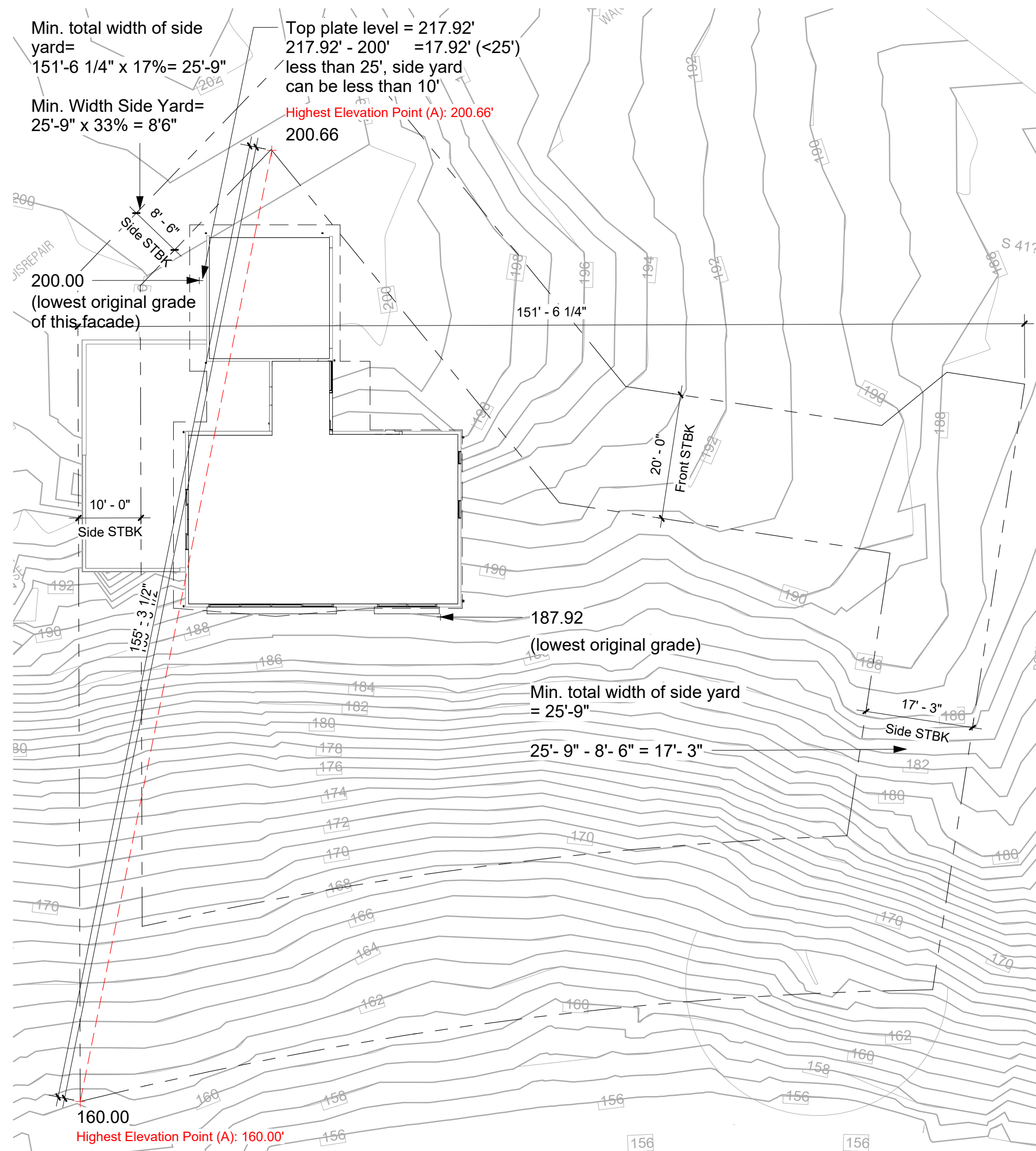
1 D. Existing Lot Coverage
1/16" = 1'-0"



③ D. Hardscape
1/16" = 1'-0"



② D. Proposed Lot Coverage
1/16" = 1'-0"



4 D. Lot Slope & Side Yard Cal.
1/16" = 1'-0"

20120172

REGISTERED
ARCHITECT

PEIK LI PANG
STATE OF WASHINGTON

Mar 21 2025

Building Permit

NO.	DESCRIPTION	DATE
1	Revision 1	09.06.2025

A7.2



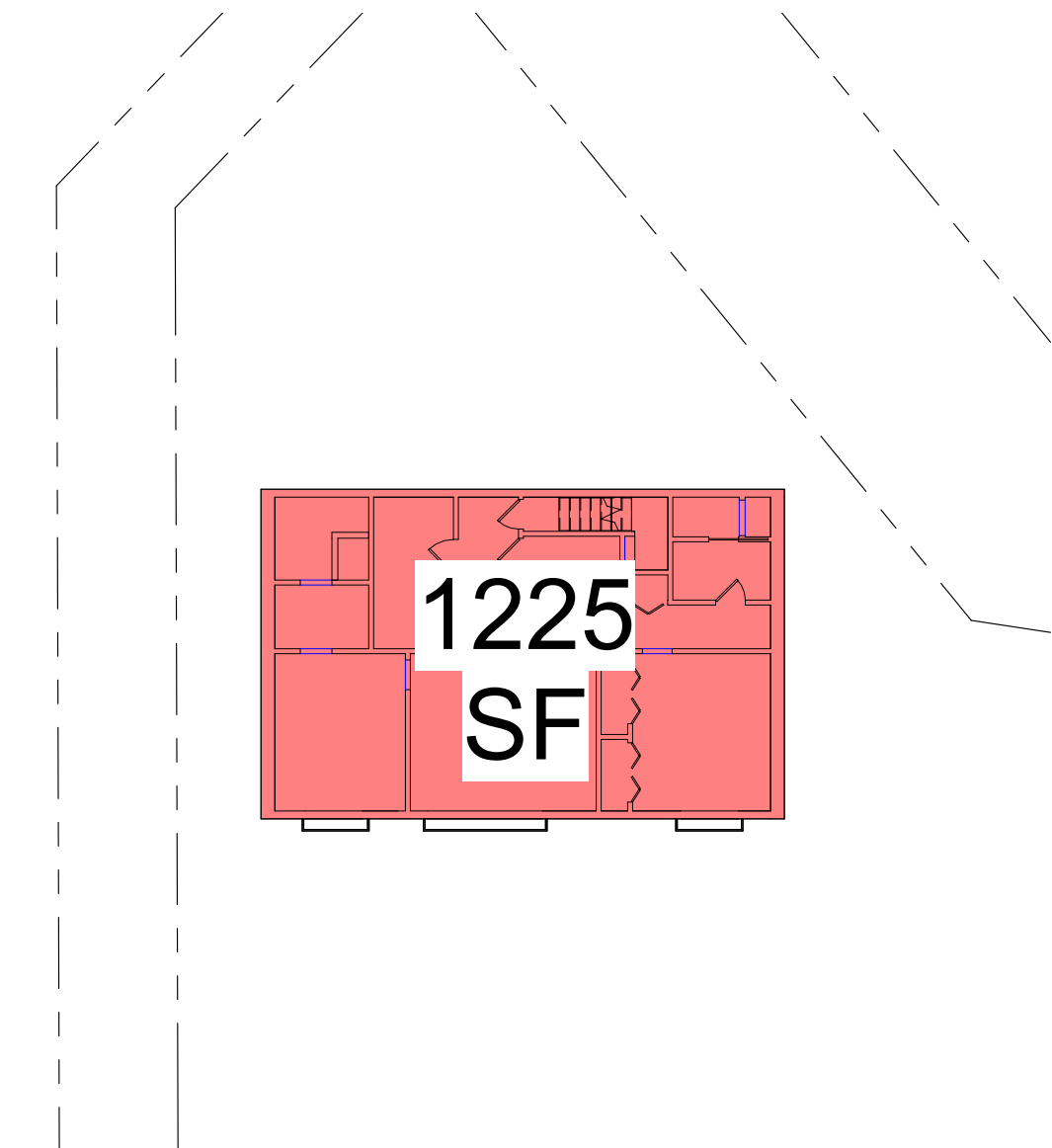
No.	GRADE (FT) (X)	LENGTH (Y)	(X)*(Y)
A	199.70	20.15	4023.96
B	199.50	31.42	6268.29
C	197.50	20.56	4060.60
D	191.80	28.13	5395.33
E	188.10	44.1	8295.21
F	191.60	5.63	1078.71
G	192.90	16.54	3190.57
H	198.15	37.13	7357.31
J	199.60	19.96	3984.02
K	199.70	16.81	3356.96

240.43 47010.95
AVERAGE BUILDING ELEVATION (ABE) 195.53 di

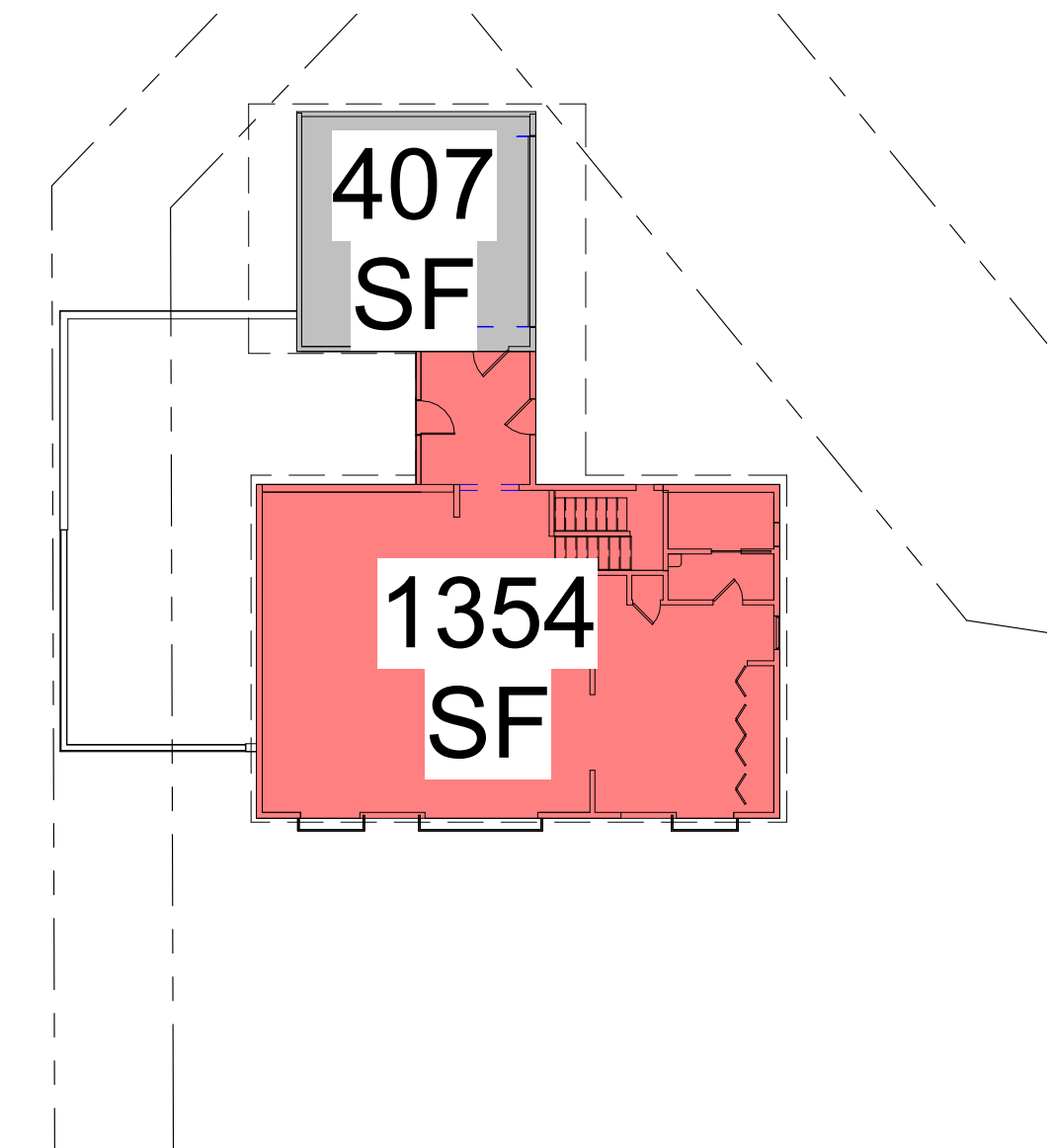
GROSS FLOOR AREA CALCULATIONS				
	Building Area	Existing Area (Sq. Ft.)	Removed Area (Sq. Ft.)	New/Addition Area (Sq. Ft.)
Upper Floor		0	0	1,605
Main Floor		1354	0	0
Gross Basement Area		1225	0	0
Garage / Carport		407	0	0
Total Floor Area		2986	0	1,605
Accessory Buildings		0	0	0
Accessory Dwelling Unit		0	0	0
2nd and 3rd Story Roofed Decks		0	0	18
Basement Area Excluded		0	0	0
150% GFA Modifier* (main and upper floor x2)		0	0	-
200% GFA Modifier* (main and upper floor x2)		0	0	256.0
Staircase GFA Modifier* (x2 for a three story staircase, x3 for a four story staricase)		0	0	-67.0
TOTAL Building Area				4,798.0

A.	Lot Area			17,573 Square Feet
B.	Zone	R-8.4 ()	R-9.6 (x)	R-12 ()
C.	Allowed Gross Floor Area (refer to "allowed GFA")			7029.2 Square Feet
D.	Allowed Gross Floor Area			40 % of Lot
E.	Proposed Gross Floor Area			4798.0 Square Feet
F.	Proposed Gross Floor Area			27.30% % of Lot

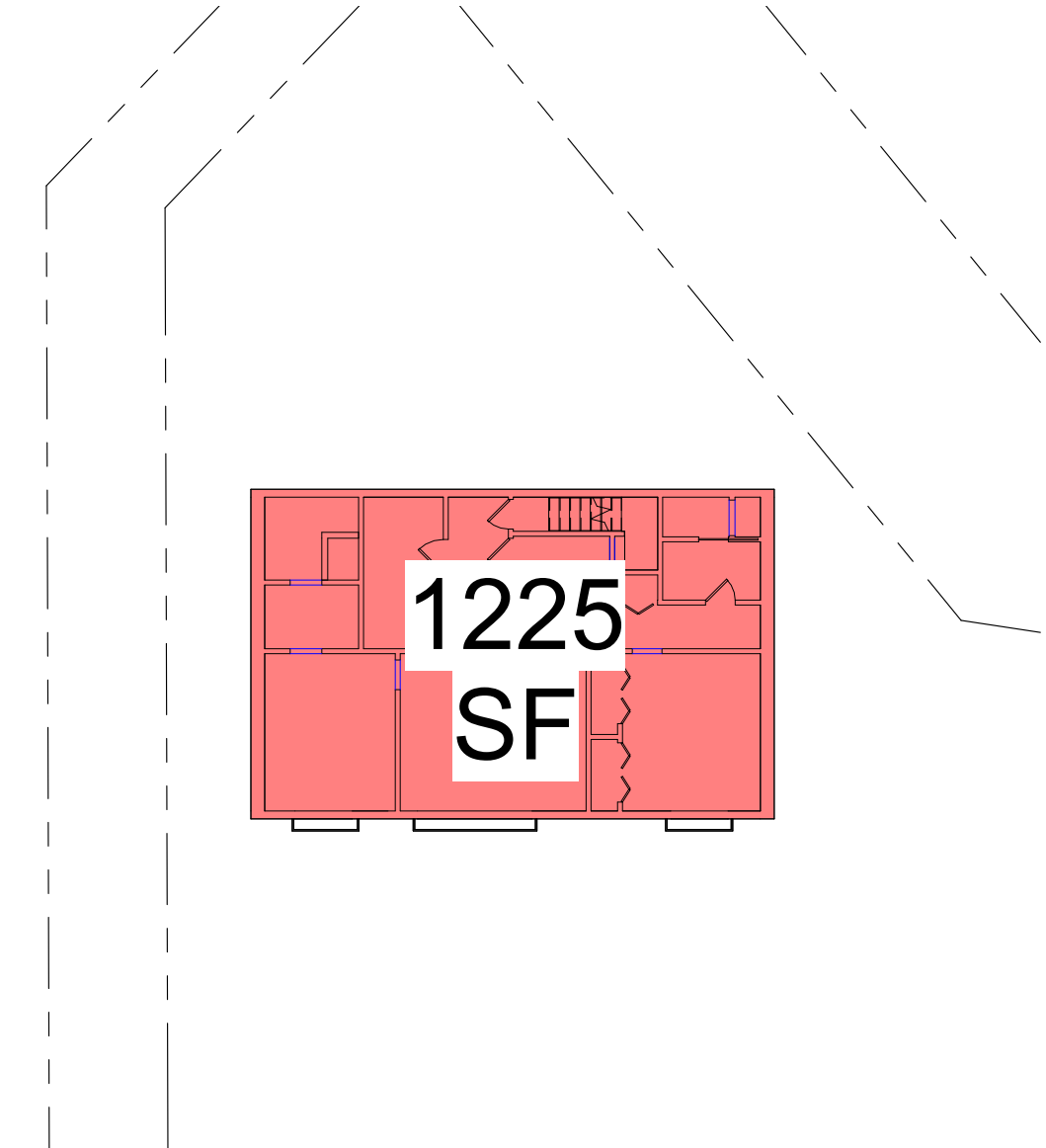
6 D. Average Building Elevation
1/16" = 1'-0"



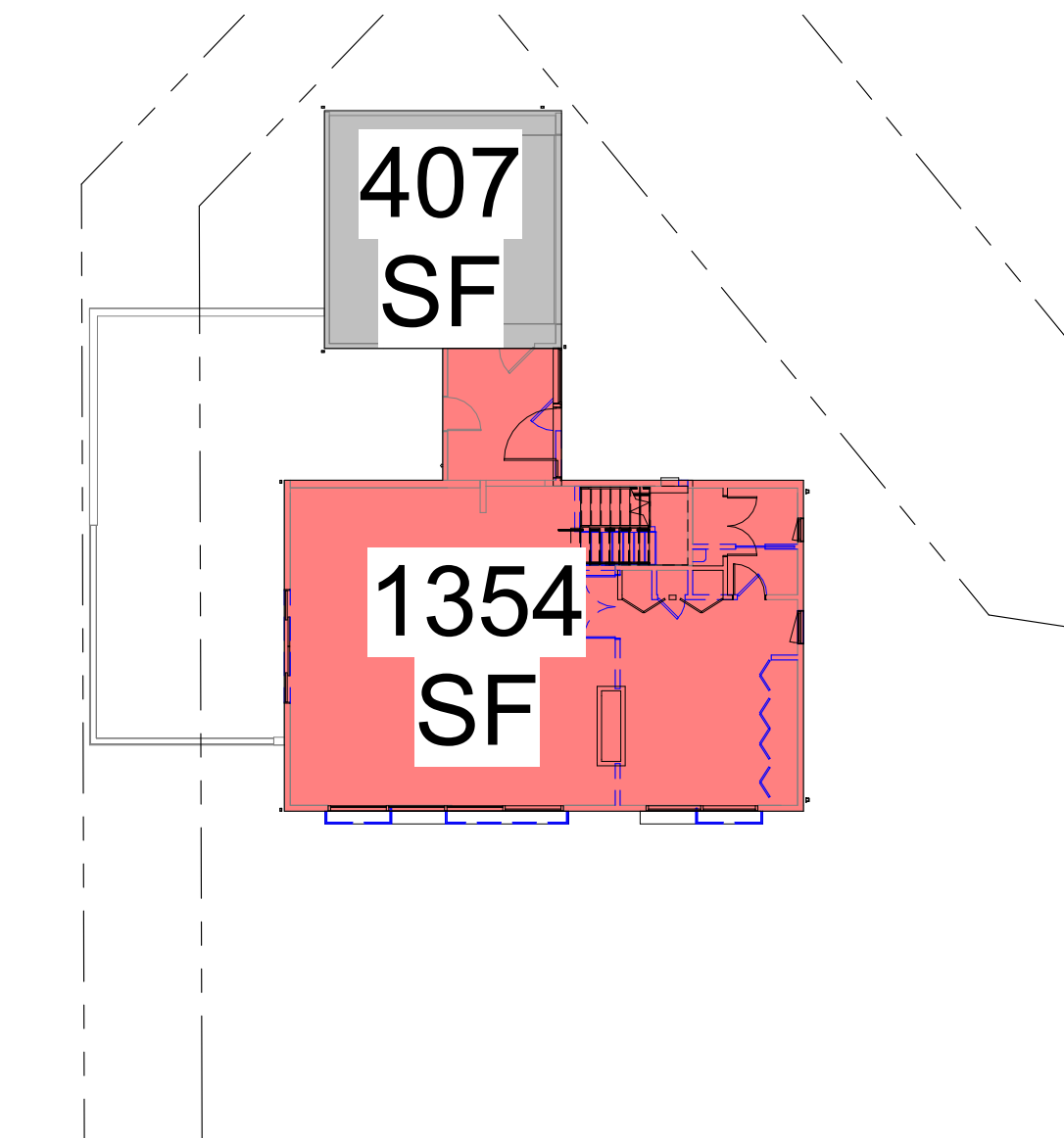
2 D. GFA_Existing Basement
1/16" = 1'-0"



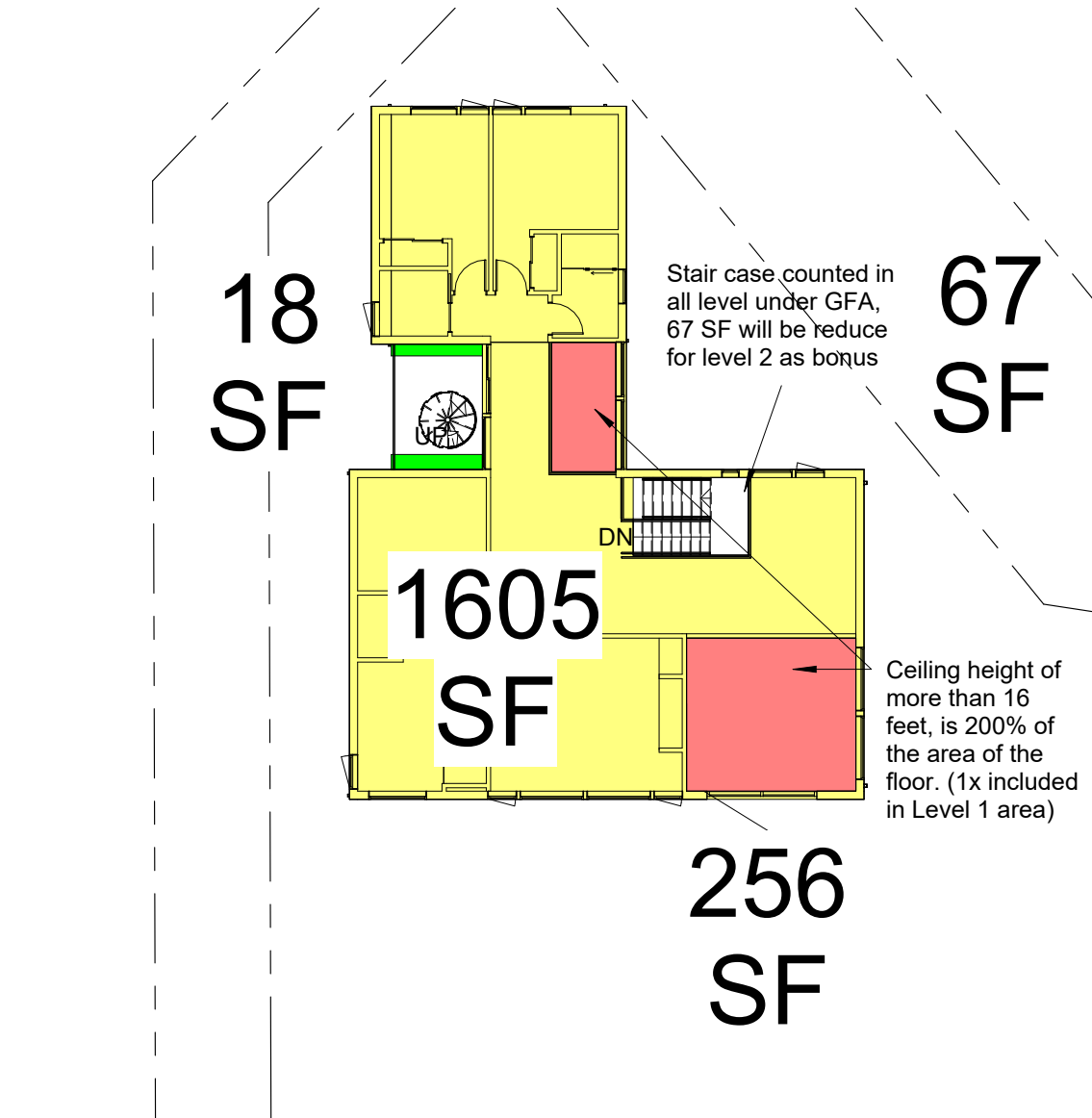
1 D. GFA Existing Level 1
1/16" = 1'-0"



3 D. GFA_Proposed Basement
1/16" = 1'-0"



4 D. GFA_Proposed Level 1
1/16" = 1'-0"



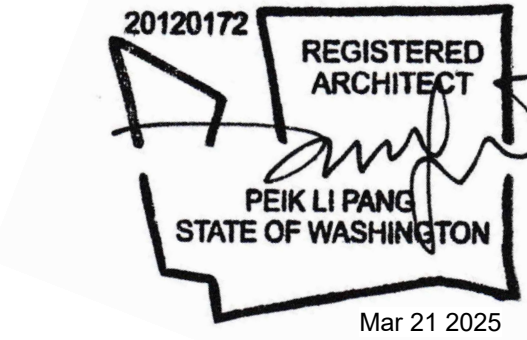
5 D. GFA_Proposed Level 2
1/16" = 1'-0"

5ft2

5ft2 Studio Architects

2625 Northup Way, Ste 100,
Bellevue, WA 98004

info@5ft2studio.com
www.5ft2studio.com



24 Merc
Mercerdale
4103

4103 78th Ave SE,
Mercer Island, WA
98040

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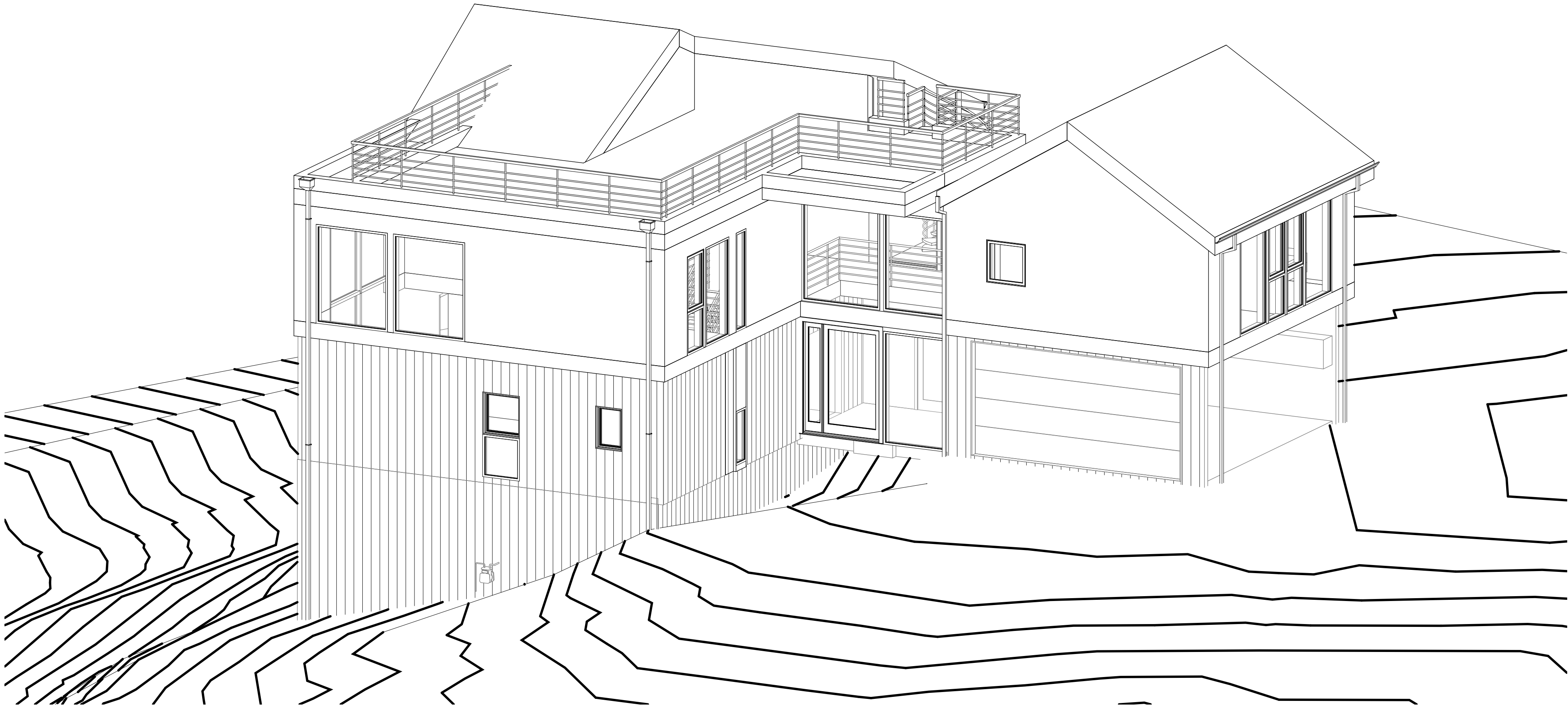
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NO.	DESCRIPTION	DATE
1	Revision 1	09.06.2025

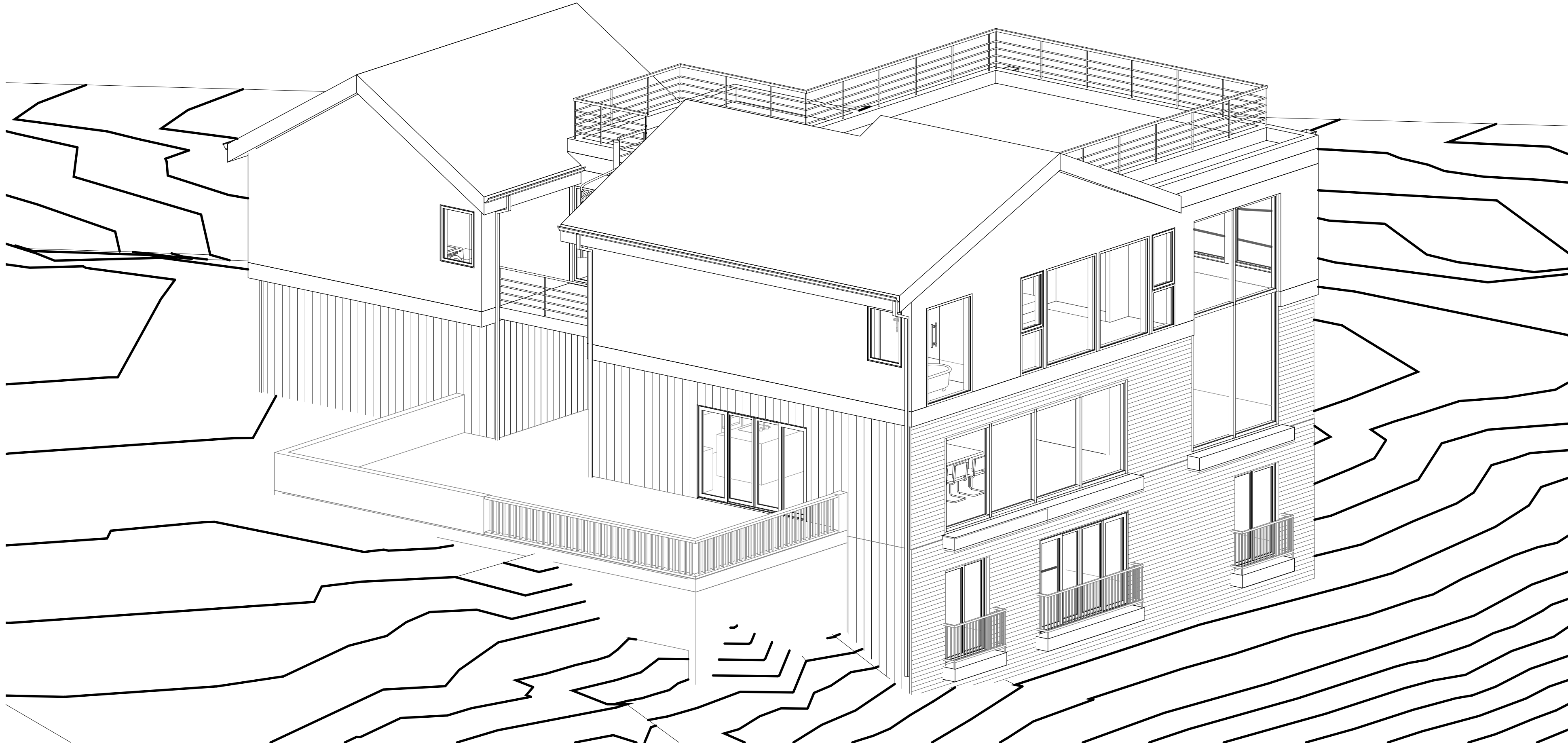
DATE: Mar 21, 2025

Compliance
- Zoning
2

A7.3



1 3d - View 1



2 3d - View 2

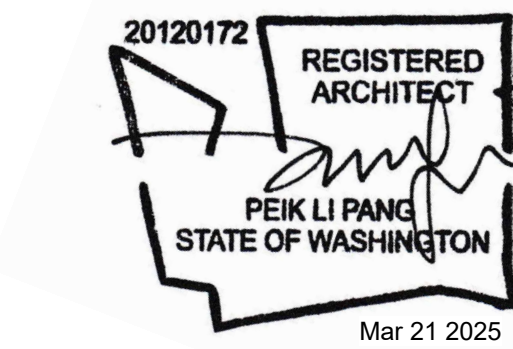
NOTE: ALL THE PERSPECTIVES SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY AND NOT FOR CONSTRUCTION PURPOSES

5ft2

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Bellevue, WA 98004

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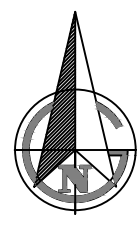
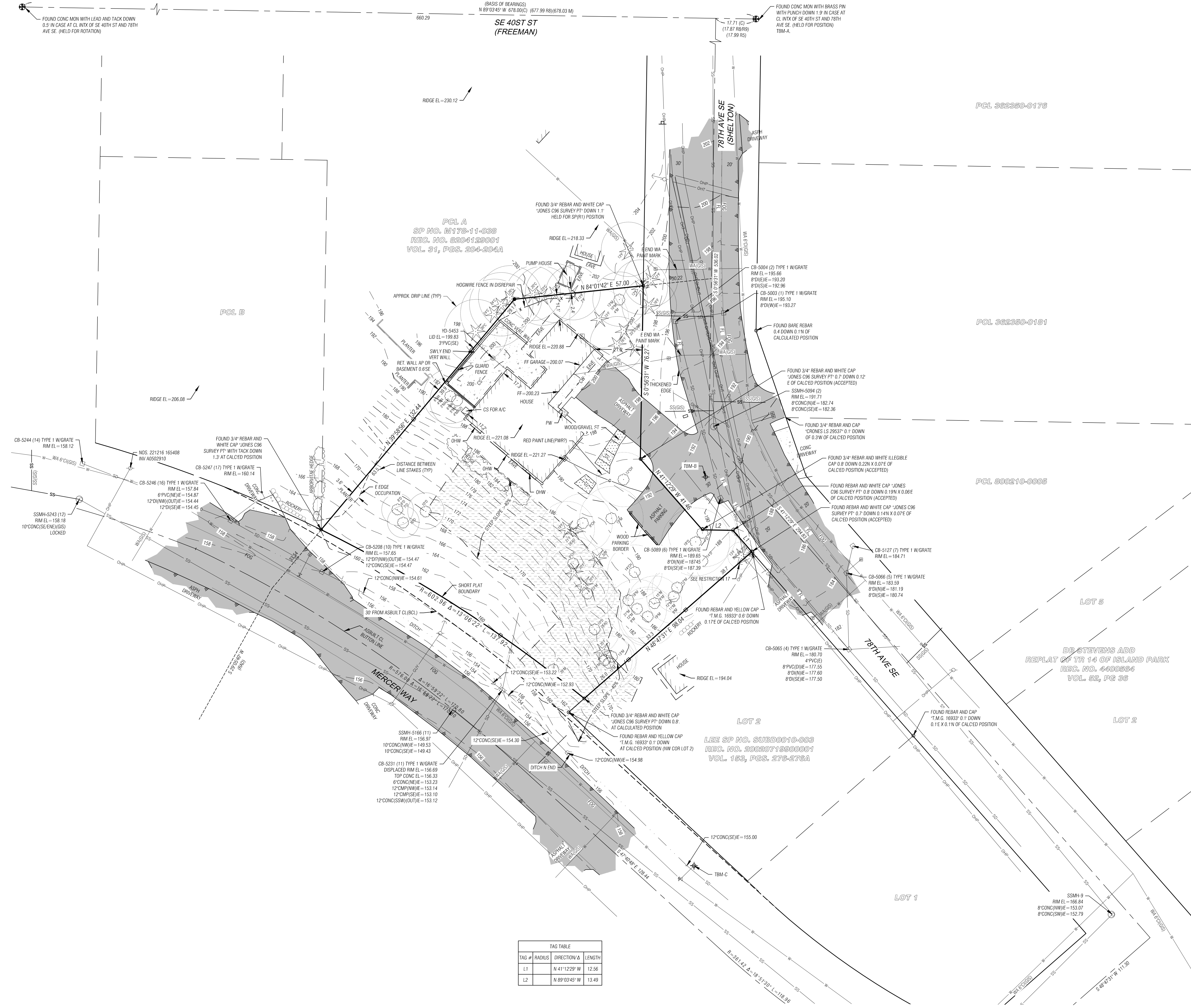
NO.	DESCRIPTION	DATE
1	Revision 1	09.06.2025

DATE: Mar 21, 2025

3D
Views

A9.0

NW1/4 NE1/4, SEC. 13, TWP. 24 N., RGE. 4 E., W.M.



SCALE: 1" = 20'

VERTICAL DATUM

NAVD 88

BENCHMARKS

TBM-A
CONC MON WITH BRASS PIN WITH PUNCH DOWN 1.9" IN CASE AT CL INTX OF SE 40TH ST AND 78TH AVE SE.
ELEV. = 193.43'

TBM-B
PK AND SHINER 'GEODIMENTION LS 15025' IN ASPHALT DRIVEWAY 11.3' NW COR CB 5089 AND 22.4' SSW OF SSMH-5094.
ELEV. = 190.66'

TBM-C
TOP BOLT OF FIRE HYDRANT 87.3' SE OF MOST SLY PROPERTY CORNER AT E SIDE MERCER WAY.
ELEV. = 159.99'

NOTES

A 3" ELECTRONIC TOTAL STATION WAS USED FOR THIS FIELD TRAVERSE SURVEY. ACCURACY MEETS OR EXCEEDS W.A.C. 332-139-090.

ALL TITLE INFORMATION SHOWN ON THIS SURVEY WAS EXTRACTED FROM ACCESS HOME CLOSING, LLC AND FIRST AMERICAN TITLE COMPANY ALTA SECOND COMMITMENT FILE NUMBER 125350WA, DATED SEPTEMBER 19, 2023. GEOLS HAS RELIED WHOLLY ON THE TITLE COMPANY'S REPRESENTATIONS OF THE TITLE'S CONDITION TO PREPARE THIS SURVEY AND QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME. ALL CONTROL INDICATED AS 'FOUND' WAS RECOVERED FOR THIS PROJECT IN MARCH, 2024, UNLESS OTHERWISE NOTED.

PROPERTY AREA = 17,573± SQUARE FEET.

ALL DISTANCES ARE IN US SURVEY FEET.

UNDERGROUND UTILITIES WERE LOCATED BASED ON SURFACE EVIDENCE (I.E. PAINT MARKS, SAW CUTS IN PAVEMENT, COVERS, LIDS, ETC.). THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, ELEVATION, AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

GEOLS DOES NOT WARRANT THE ACCURACY OF THE SIZE AND SPECIES OF ANY TREES SHOWN HEREON. ALL TREE SIZES SHOULD BE VERIFIED BY A TRAINED ARBORIST.

STEEP SLOPE CALCULATED BASED ON SLOPE > 40% IN 30' HORIZONTAL RUN

HELD FOUND MOST NORTHERLY SHORT PLAT CORNER FOR SHORT PLAT POSITION

LEGAL DESCRIPTION

PARCEL C OF CITY OF MERCER ISLAND SHORT PLAT NO. M-78-11-038 (KLEMPERER SHORT PLAT), ACCORDING TO THE SHORT PLAT RECORDED UNDER KING COUNTY RECORDING NO. 8204129001.

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

REFERENCES

- GOODFELLOWS HOME TRACT NO. 1, VOL. 18 OF PLATS, PG. 17.
- SHORT PLAT OR PLAT NO. M-78-11-038 (KLEMPERER SHORT PLAT) REC. NO. 8204129001.
- SP NO. SUB0010-003 REC. NO. 20020719900001, VOL. 153 OF SURV., PGS. 276-278A.
- ROS REC. NO. 20181204800002, VOL. 395 OF SURV., PG. 45.
- ROS REC. NO. 201510080002, VOL. 331 OF SURV., PG. 232.
- CITY OF MERCER ISLAND UTILITY GIS MAP.
- D.B. STEVENS ADD. VOL. 52 OF PLATS, PG. 36.
- ROS REC. NO. 202007280002, VOL. 428 OF SURV., PG. 264.
- ROS REC. NO. 9904199010, VOL. 129, PG. 45.

RESTRICTIONS OF RECORD

14. SUBJECT TO ANY AND ALL OFFERS OF DEDICATION, CONDITIONS, RESTRICTIONS, EASEMENTS, BOUNDARY DISCREPANCIES OR ENCROACHMENTS, NOTES AND/OR PROVISIONS SHOWN OR DISCLOSED BY SHORT PLAT OR PLAT OF GOODFELLOWS HOME TRACT NO. 1 AS RECORDED IN VOLUME 18 OF PLATS, PAGE 17. (NOTHING TO PLOT).

15. SUBJECT TO ANY AND ALL OFFERS OF DEDICATION, CONDITIONS, RESTRICTIONS, EASEMENTS, BOUNDARY DISCREPANCIES OR ENCROACHMENTS, NOTES AND/OR PROVISIONS SHOWN OR DISCLOSED BY SHORT PLAT OR PLAT NO. M-78-11-038 (KLEMPERER SHORT PLAT) RECORDED UNDER RECORDING NUMBER 8204129001. (NOTHING TO PLOT).

16. SUBJECT TO THE TERMS AND PROVISIONS CONTAINED IN THE DOCUMENT ENTITLED 'WAIVER AND COVENANT NOT TO SUE ON CONSTRUCTION FOR STEEP SLOPE SLIDE PHONE AREAS' AS RECORDED OCTOBER 14, 1983 UNDER RECORDING NO. 830140585. (NOT A SURVEY MATTER).

17. SUBJECT TO AN EASEMENT FOR INGRESS AND EGRESS, INCLUDING TERMS AND PROVISIONS CONTAINED THEREIN IN FAVOR OF PACIFIC NORTHWEST BELL TELEPHONE COMPANY. A WASHINGTON CORPORATION ITS SUCCESSORS AND ASSIGNS AS RECORDED UNDER RECORDING NO. 840118044. BLANKET EASEMENT - NO SPECIFIC AREA DESCRIBED - AROUND GUY WIRE AND ANCHOR FOR POWER POLES. NOTHING TO PLOT.

LEGEND	
● SET 1/2" X 24" REBAR WITH YELLOW PLASTIC CAP STAMPED 'GEOLS PLS #44337'	C CEDAR
□ SET 2"x2"x24" WHITE BOARD ON LINE	D DECIDUOUS
⊕ FOUND MONUMENT AS NOTED	F FIR
○ FOUND CORNER AS NOTED	M MAPLE
⊗ GAS METER	MA MADRONA
⊗ GAS VALVE	CH CHERRY
⊗ MAIL BOX	CS CONC SLAB
⊗ POWER METER	CC CONC WALK
⊗ SIGN	FF FINISH FLOOR
⊗ GUY ANCHOR	FF FIRE HYDRANT
⊗ UTILITY POLE	FL FLOW LINE
⊗ CATCH BASIN - TYPE I	FL FOS LINE
⊗ CULVERT	IE INVERT ELEVATION
⊗ YARD DRAIN	OHT OVERHEAD TEL/COMM LINE
⊗ SEWER MANHOLE	OHW OVERHEAD WINDOW
⊗ FIRE HYDRANT	PP POWER POLE
⊗ WATER METER	PA PLANTER AREA
⊗ WATER VALVE	PW PAVEMENT WALK (PERVIOUS)
⊗ SHRUB	ST STAIRS
⊗ CONIFEROUS TREE	GIS INFORMATION FROM CITY GIS (POSITION NOT FIELD VERIFIED)
⊗ DECIDUOUS TREE	
	ASPHALT HATCH
	CONCRETE HATCH
	STEEP SLOPE > 40% HATCH
	PAVEMENT WALK HATCH (PERV)
	ASPHALT LINE
	FENCE LINE
	GAS LINE
	OVERHEAD POWER LINES
	OVERHEAD COMM. LINES
	OVERHEAD GUY LINE
	SANITARY SEWER LINE
	STORM DRAIN LINE
	UNDERGROUND POWER LINE
	WATER LINE

GEOLS LAND SURVEYING
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REALITY CAPTURE

540 BELLEVUE WAY SE, UNIT 6A, WA 98004
PHONE: (425) 503-6591
WWW.GEOLS.NET

SHIHANG ZHANG

4103 78TH AVE SE, MERCER ISLAND, 98040

4103 78TH AVE SE.

BOUNDARY AND TOPOGRAPHIC SURVEY

LIDAR M. S. DAVIDSON
STATE OF WASHINGTON
REGISTERED
SURVEYOR
3-27-24

DRAWN BY:
LSD

REV. BY:
LD

DATE:
3-27-2024

SCALE:
1" = 20'

DRAWING NO.
24027

SHEET
1 OF 1

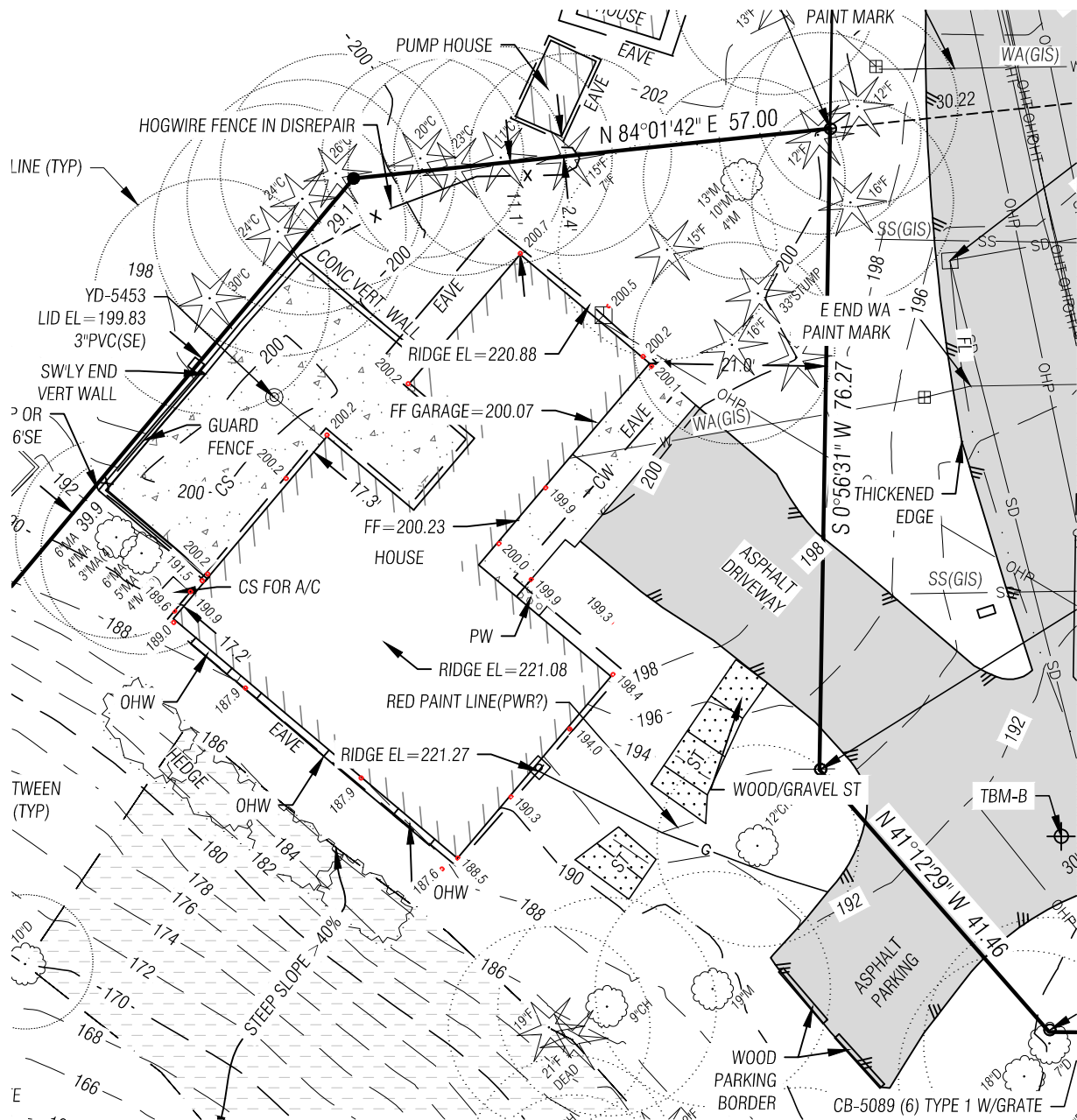


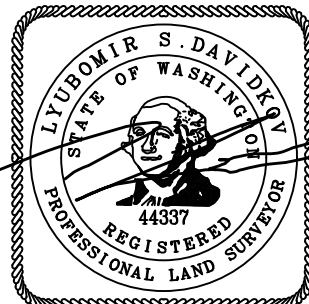
EXHIBIT A



0 20
SCALE: 1" = 20'

NOTES:

- SPOT ELEVATIONS ACCURACY:
HARD SURFACE - WITHIN 0.1'
OTHER SURFACE WITHIN 0.2'
- CONTOURS ELEVATION ACCURACY ARE
WITHIN 1/2 OF CONTOUR INTERVAL



8-30-25

4103 78TH AVE SE.
BUILDING SPOT ELEVATIONS

GEOLS LAND SURVEYING
SCANNING & 3D
REALITY CAPTURE

540 BELLEVUE WAY SE, UNIT 6A, WA 980004

PHONE: (425) 503-6591 / WWW.GEOLS.NET

JOB NO. 24027

SHEET 1 OF 1

GENERAL STRUCTURAL NOTES

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (IBC) 2021 EDITION.

2. DESIGN LOADING CRITERIA	
FLOOR LIVE LOAD (RESIDENTIAL)	40 PSF
FLOOR LIVE LOAD (RESIDENTIAL DECKS AND BALCONIES)	60 PSF
SNOW	25 PSF
WIND	METHOD - DIRECTIONAL PROCEDURE
	Kzt=1.0, GCp=0.18, 98 MPH (RISK CATEGORY II), EXPOSURE "C"
EARTHQUAKE	ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
	LATERAL SYSTEM: LIGHT FRAMED SHEAR WALLS
	SDC D, SITE CLASS D(DEFAULT), Iw=1.0, Ss=1.421, S1=0.494,
	SDs=1.137, Sd1=NULL, Cs=0.175, R=6.5,
	SEISMIC DESIGN BASE SHEAR Vsx=15.92 KIPS

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

4. PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL WALL SECTIONS, BUILDING SECTIONS, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.

5. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION."

6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTOR'S WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.

7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.

8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.

9. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE, AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER. MANUFACTURERS INSTALLATION INSTRUCTIONS SHALL BE AVAILABLE ON THE JOB SITE AT THE TIME OF INSPECTION FOR THE INSPECTORS USE AND REFERENCE.

GEOTECHNICAL

- 10.SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE SOILS ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.

ALLOWABLE SOIL PRESSURE	2000 PSF
LATERAL EARTH PRESSURE (UNRESTRAINED)	35 PCF
PASSIVE PRESSURE	300 PCF
COEFFICIENT OF FRICTION	0.40
2" DIAMETER EXTRA STRONG PIPE PILE CAPACITY	3 TONS

SOILS REPORT REFERENCE: GEOTECHNICAL ENGINEERING STUDY AND CRITICAL AREA STUDY, PROPOSED ADDITION, 4103-78TH AVENUE SOUTHEAST, MERCER ISLAND, WASHINGTON, PREPARED BY GEOTECH CONSULTANTS INC. REPORT NO JN 24239, DATED JUNE 5TH, 2025

CONCRETE

- 11.CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 318 AND ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF Fc = 3000 PSI. SLUMP OF CONCRETE SHALL NOT EXCEED 6". STRUCTURAL DESIGN IS BASED ON A CONCRETE STRENGTH OF Fc = 2500 PSI, THEREFORE NO CONCRETE STRENGTH TESTING REQUIRED. CONCRETE EXPOSURE CATEGORIES ARE F1, S0, W0, AND C1.

ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-19, TABLE 19.3.3.1.

- 12.REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, fy = 60 KSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, fy = 40 KSI. WELDED WIRE WIRE FABRIC SHALL CONFORM TO ASTM A1064. SPIRAL REINFORCEMENT SHALL BE DEFORMED WIRE CONFORMING TO ASTM A615, GRADE 60, fy = 60 KSI.

- 13.DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-99 AND 318-19. LAP ALL CONTINUOUS REINFORCEMENT #6 AND SMALLER 48 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 48 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-19, CLASS B. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

- 14.CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS OR LARGER)	2"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS OR SMALLER)	1-1/2"
COLUMN TIES OR SPIRALS AND BEAM STIRRUPS	1-1/2"
SLABS AND WALLS (INT FACE)	GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

ANCHORAGE

- 15.EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-3G" EPOXY ADHESIVE AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-4057. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED. RODS SHALL BE ASTM A36, UNO.

- 16.HEAVY DUTY THREADED CONCRETE ANCHORS SPECIFIED ON THE DRAWINGS SHALL BE "TITEN HD SCREW ANCHOR" AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-2713 AND ESR-1056, INCLUDING MINIMUM EMBEDMENT AND EDGE DISTANCE REQUIREMENTS. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED.

- 17.EXPANSION BOLTS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "STRONG-BOLT 2" ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT CONFORMANCE TO ICC-ES REPORT ESR-3037 AND IAPMO-UES REPORT ER-240, INCLUDING MINIMUM EMBEDMENT AND EDGE DISTANCE REQUIREMENTS. SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. BOLTS INTO CONCRETE MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED.

- 18.DRIVE PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE LOW VELOCITY TYPE (PDPWL-300MG, 0.145" DIAMETER, UNO) AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY OR AN APPROVED EQUIVALENT IN STRENGTH AND EMBEDMENT. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT ESR-2138. MINIMUM EMBEDMENT IN CONCRETE SHALL BE 1", UNO. MAINTAIN AT LEAST 3" TO NEAREST CONCRETE EDGE.

WOOD

- 19.ALL 2x LUMBER SHALL BE KILN DRIED OR MC-19, AND ALL LUMBER SHALL BE GRADED AND MARKED IN CONFORMANCE WITH WCLB STANDARD GRADING RULES FOR WEST COAST LUMBER NO 17. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS AND BEAMS	(2x AND 3x MEMBERS)	HEM-FIR NO 2 OR SPRUCE-PINE-FIR NO 2 MINIMUM BASE VALUE, Fb = 850 PSI
	(4x MEMBERS)	DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fb = 900 PSI
BEAMS	(6x AND LARGER)	DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fb = 875 PSI
POSTS	(4x MEMBERS)	DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fc = 1350 PSI
	(6x AND LARGER)	DOUGLAS FIR-LARCH NO 2 MINIMUM BASE VALUE, Fc = 600 PSI
STUDS, PLATES AND MISC FRAMING		HEM-FIR NO 2 OR SPRUCE-PINE-FIR NO 2

- 20.GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND ANSI/AITC STANDARDS. EACH MEMBER SHALL BEAR AN AITC OR APA-EWS IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC OR APA-EWS CERTIFICATE OF CONFORMANCE. ALL SIMPLE SPAN GLULAM BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2400 PSI, Fv = 265 PSI, E = 1800 KSI, UNO. ALL CANTILEVER GLULAM BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2400 PSI, Fv = 265 PSI, E = 1800 KSI, UNO. GLUED LAMINATED COLUMNS SHALL BE DOUGLAS FIR COMBINATION 3, L2D GRADE, Fc = 2300 PSI, Fb = 2000 PSI, E = 1900 KSI.

- 21.MANUFACTURED LUMBER, PSL, LVL, AND LSL, SHALL BE MANUFACTURED UNDER A PROCESS APPROVED BY THE NATIONAL RESEARCH BOARD. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, THE NATIONAL RESEARCH BOARD NUMBER, AND THE QUALITY CONTROL AGENCY. ALL PSL, LVL, AND LSL LUMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH ICC-ES REPORT ESR-1387 USING DOUGLAS FIR VENEER GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. THE MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PSL (2.0E)	Fb = 2900 PSI	E = 2000 KSI	Fv = 290 PSI
LVL (2.0E)	Fb = 2600 PSI	E = 2000 KSI	Fv = 285 PSI
LSL (1.55E)	Fb = 2325 PSI	E = 1550 KSI	Fv = 310 PSI
LSL 1-1/4" RIM (1.3E)	Fb = 1700 PSI	E = 1300 KSI	Fv = 425 PSI
PSL COLUMN (1.8E)	Fc = 2500 PSI	E = 1800 KSI	Fv = 190 PSI

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY THE TRUS-JOIST CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH MEMBERS PROVIDED.

MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%. EXCESSIVE DEFLECTIONS MAY OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE.

- 22.PREFABRICATED PLYWOOD WEB JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE TRUS-JOIST CORPORATION. ALTERNATE PLYWOOD WEB JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH PLYWOOD WEB JOIST PROVIDED.

- 23.PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS-1 OR PS-2, ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.

WALL SHEATHING SHALL BE 7/16" or 1/2" (NOMINAL) WITH SPAN RATING 24/0

FLOOR SHEATHING SHALL BE 3/4" T&G (NOMINAL) WITH SPAN RATING 48/24

WATERPROOF DECK SHEATHING SHALL BE 3/4" T&G (NOMINAL) WITH SPAN RATING 48/24

FLAT ROOF SHEATHING SHALL BE 3/4" T&G (NOMINAL) WITH SPAN RATING 48/24

ROOF SHEATHING SHALL BE 1/2" or 7/16" (NOMINAL) WITH SPAN RATING 32/16 FOR ROOFS WITH A PITCH GREATER THAN 2:12

REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.

- 24.ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2)LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.

- 25.PRESSURE TREATED WOOD (INCLUDES PRESERVATIVE AND FIRE TREATED) SHALL BE TREATED PER AWPA STANDARDS. PRESSURE TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO RETENTION OF 0.25 PCF. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO A RETENTION OF 0.40 PCF. SODIUM BORATE (58X) TREATED WOOD SHALL NOT BE USED WHERE EXPOSED TO WEATHER. FASTENERS AND TIMBER CONNECTORS WITHOUT AMMONIA IN DIRECT CONTACT WITH ACQ-A TO A RETENTION LEVEL OF 0.40 PCF), CBA-A (UP TO A RETENTION LEVEL OF 0.41 PCF), CA-B (UP TO A RETENTION LEVEL OF 0.21 PCF), SHALL BE G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653. FASTENERS AND TIMBER CONNECTORS WITH AMMONIA IN DIRECT CONTACT WITH ACQ-A (OVER A RETENTION LEVEL OF 0.40 PCF), CBA-A (OVER A RETENTION LEVEL OF 0.41 PCF), CA-B (OVER A RETENTION LEVEL OF 0.21 PCF), OR WITH ACZA TREATED WOOD SHALL BE TYPE 304 OR 316 STAINLESS STEEL.

- 26.TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2024. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ALL 2x JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJI JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "IUS" SERIES JOIST HANGERS. ALL DOUBLE-JOISTS BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIU" SERIES JOIST HANGERS.

WHERE CONNECTOR STRAPS CONNECT (2)MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.

ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

- 27.WOOD FASTENERS

- A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	TYPE	LENGTH	SHANK Ø	HEAD Ø
8d	COMMON	2-1/2"	0.131"	0.281"
10d	GUN	3"	0.131"	0.281"
12d	GUN	3-1/4"	0.131"	0.281"
16d	BOX	3-1/2"	0.135"	0.344"

IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.

NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.

- B. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG SCREWS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (2018 EDITION) WITH A LEAD BORE HOLE OF 60-70% OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS. BOLT HOLES SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN THE BOLT DIAMETER. HOLES SHALL BE ACCURATELY ALIGNED IN MAIN MEMBERS AND SIDE PLATES/MEMBERS. BOLTS SHALL NOT BE FORCIBLY DRIVEN.

- C. SDS AND SDWS SCREWS CALLED OUT ON PLAN ARE TIMBER SCREWS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY. SCREWS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. EQUIVALENT SCREWS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. LAG SCREWS ARE NOT AN EQUIVALENT SUBSTITUTION.

- 28.WOOD FRAMING NOTES - THE FOLLOWING APPLY UNLESS NOTED OTHERWISE ON THE PLANS:

- A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC, THE AITC "TIMBER CONSTRUCTION MANUAL", AND THE AF&PA "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". MINIMUM NAILING, SHALL CONFORM TO TABLE 2304.10.2, OF THE IBC, UNO. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.

- B. WALL FRAMING: REFER TO ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16"oc, UNO. (2)STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. (2)2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS IN STRUCTURAL WALLS, UNO. NAIL MULTI-MEMBER HEADERS WITH (2)ROWS 10d AT 12"oc. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.

ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE AND BOTTOM PLATE TO EACH STUD WITH (3)10d NAILS. FACE NAIL DOUBLE TOP PLATES WITH 10d AT 12"oc AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE (12)10d NAILS AT 4"oc EACH SIDE OF JOINT. AT TOP PLATE INTERSECTIONS PROVIDE (3)10d FACE NAILS.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH (2)ROWS OF 12d NAILS AT 16"oc, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS AT 4'-0"oc EMBEDDED 7" MINIMUM, UNO. THERE SHALL BE A MINIMUM OF (2)BOLTS PER PLATE SECTION WITH (1)BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4-1/2" FROM EACH END OF THE PLATE SECTION. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH (2)ROWS OF 10d AT 16"oc. UNLESS NOTED OTHERWISE, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH #6 x 1-1/4" TYPE S OR W SCREWS AT 12"oc. UNLESS NOTED OTHERWISE, 7/16" OR 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS AT 6"oc AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS AT 12"oc. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS.

- C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS, UNO. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOENAIL TIMBER JOISTS TO SUPPORTS WITH (3)10d NAILS AND NAIL TJI JOISTS TO SUPPORTS WITH (2)10d NAILS. ATTACH JOISTS TO BEAMS WITH SIMPSON JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH (2)ROWS 10d AT 12"oc. TOENAIL RIM JOIST TO TOP PLATE WITH 10d AT 6"oc. TOENAIL BLOCKING BETWEEN JOISTS TO TOP PLATE WITH (3)10d NAILS.

UNLESS NOTED OTHERWISE ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS WITH END JOINTS STAGGERED, AND NAILED AT 6"oc WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND AT 12"oc TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 10d AT 12"oc, UNO.

- 29.NOTCHES AND HOLES IN WOOD FRAMING:

- A. SAWN LUMBER JOISTS AND RAFTERS: NOTCHES AT THE ENDS OF JOISTS SHALL NOT EXCEED 1/4 THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED 1/6 THE JOIST DEPTH, BE LONGER THAN 1/3 THE JOIST DEPTH, OR BE LOCATED IN THE MIDDLE 1/3 OF THE SPAN. HOLES SHALL NOT BE WITHIN 2" OF THE TOP OR BOTTOM OF THE JOIST AND THE DIAMETER SHALL NOT EXCEED 1/3 THE JOIST DEPTH. SPACING BETWEEN HOLES SHALL BE A MINIMUM OF (2)TIMES THE DIAMETER OF THE LARGEST HOLE OR 2" AND SHALL BE LOCATED A MINIMUM OF 2" FROM ANY NOTCH.

- B. EXTERIOR AND BEARING WALLS: WOOD STUDS ARE PERMITTED TO BE NOTCHED TO A DEPTH NOT EXCEEDING 1/4 OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40% OF THE STUD WIDTH IS PERMITTED IN WOOD STUDS. HOLES SHALL NOT BE WITHIN 5/8" TO THE EDGE OF THE STUD. SPACING BETWEEN HOLES SHALL BE A MINIMUM OF (2)TIMES THE DIAMETER OF THE LARGEST HOLE OR 2" AND SHALL NOT BE LOCATED AT THE SAME SECTION AS A NOTCH.

- C. CUTS, NOTCHES, AND HOLES IN MANUFACTURED LUMBER, PREFABRICATED PLYWOOD WEB JOISTS, AND PREFABRICATED TRUSSES ARE PROHIBITED EXCEPT WHERE NOTED ON STRUCTURAL PLANS OR PERMITTED BY MANUFACTURER'S RECOMMENDATIONS.

- 30.ELECTRICAL, MECHANICAL, PLUMBING, AND DRAINAGE SYSTEMS SHALL BE DESIGNED TO ACCOMMODATE THE DIFFERENTIAL SHRINKAGE OR MOVEMENT OF THE WOOD STRUCTURE (3/8" PER FLOOR).

- 31.DEFLECTION OF CANTILEVERS SHALL BE CLOSELY MONITORED BY THE CONTRACTOR DURING CONSTRUCTION. CONTRACTOR TO VERIFY AND ENSURE ALL POST CAPS AND POST BEARING CONDITIONS ARE INSTALLED IN STRICT CONFORMANCE TO THE STRUCTURAL PLANS. CANTILEVERS IN WOOD FRAMING CAN DEFLECT UP TO 1/8" PER FOOT (I.E. 4" CANTILEVER MAY DEFLECT 1/2"). IF DEFLECTION EXCEEDS 1/8" PER FOOT NOTIFY STRUCTURAL ENGINEER IMMEDIATELY. BEFORE FINISHES ARE INSTALLED, FLOORS AT OR ABOVE CANTILEVERS MAY REQUIRE LEVELING COMPOUND AND SOFFITS FURRED TO MAKE THEM LEVEL.

- 32.PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE "NATIONAL DESIGN STANDARD FOR METAL PLATE-CONNECTED WOOD TRUSS CONSTRUCTION", ANSI/TPI 1 BY THE TRUSS PLATE INSTITUTE FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. LOADING SHALL BE AS FOLLOWS:

TOP CHORD LIVE LOAD	25 PSF
TOP CHORD DEAD LOAD	15 PSF
BOTTOM CHORD DEAD LOAD	5 PSF
TOTAL LOAD	45 PSF
WIND UPLIFT (TOP CHORD)	10 PSF
BOTTOM CHORD LIVE LOAD	10 PSF
(BOTTOM CHORD LIVE LOAD DOES NOT ACT CONCURRENTLY WITH THE ROOF LIVE LOAD)	
REFER TO PLAN FOR ADDITIONAL LOADING	

TRUSSES SHALL BE DESIGNED TO NOT ALLOW LIMITED STORAGE PER IBC TABLE 1607.1. WEBS SHALL BE CONFIGURED SO THAT ALL OPENINGS ARE SMALLER THAN 24" WIDE x 42" HIGH.

WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANGNAIL OR EQUAL). SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTED DOCUMENTS SHALL BE STAMPED AND SIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, HIPS, VALLEYS, ETC, SHOWN ON THE DRAWINGS. EXACT COMPOSITION OF SPECIAL HIP, VALLEY, AND INTERSECTION AREAS, USE OF GIRDER TRUSSES, JACK TRUSSES, STEP-DOWN TRUSSES, ROOF OVER-FRAMING, ETC SHALL BE DETERMINED BY THE MANUFACTURER UNLESS SPECIFICALLY INDICATED ON THE PLANS. PROVIDE ALL TRUSS TO TRUSS AND TRUSS TO GIRDER TRUSS CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. PROVIDE FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.

RENOVATION

- 33.CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.

- 34.CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING CONSTRUCTION AND/OR DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS TO 20 PSF.

- 35.CONTRACTOR SHALL CHECK FOR DRYROT AT ALL AREAS OF NEW WORK. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE STRUCTURAL ENGINEER OR ARCHITECT.

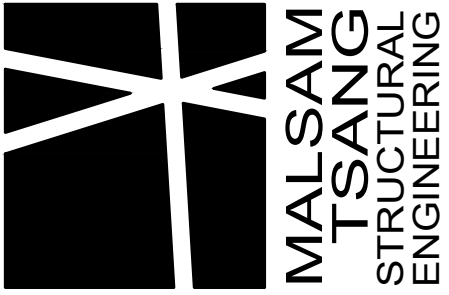
- 36.EXISTING REINFORCING SHALL BE SAVED WHERE AND AS NOTED ON THE PLANS. SAW CUTTING, IF AND WHERE USED, SHALL NOT CUT EXISTING REINFORCING THAT IS TO BE SAVED.

- A. ALL NEW OPENINGS THROUGH EXISTING WALLS, SLABS AND BEAMS SHALL BE ACCOMPLISHED BY SAW CUTTING WHEREVER POSSIBLE.
- B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATION OF MEMBERS PRIOR TO CUTTING ANY OPENINGS.
- C. SMALL ROUND OPENINGS SHALL BE ACCOMPLISHED BY CORE DRILLING, IF POSSIBLE.
- D. WHERE NEW REINFORCING TERMINATES AT EXISTING CONCRETE, DOWELS EPOXY GROUTED INTO EXISTING CONCRETE SHALL BE PROVIDED TO MATCH HORIZONTAL REINFORCING, UNO.

- 37.WHERE NEW EXCAVATIONS EXTEND BELOW AND UNDERMINE EXISTING FOOTINGS THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PROVIDE TEMPORARY SUPPORT TO THE STRUCTURE AND EXISTING FOUNDATION AS REQUIRED. THE CONTRACTOR IS RESPONSIBLE TO INSTALL ALL TEMPORARY SUPPORT AS REQUIRED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

- 38.DEMOLITION AND REMOVAL OF THE EXISTING SLAB ON GRADE OR EXISTING FLOOR FRAMING WILL RESULT IN AN UNBRACED CONDITION AT THE EXISTING FOUNDATION WALLS. EXCAVATIONS MAY ALSO EXTEND BELOW AND UNDERMINE THE EXISTING FOOTINGS. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PROVIDE TEMPORARY SUPPORT TO THE STRUCTURE AND EXISTING FOUNDATION AS REQUIRED. THE CONTRACTOR IS RESPONSIBLE TO INSTALL ALL TEMPORARY SUPPORT AS REQUIRED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

FOR ABBREVIATIONS SEE 1/53.0



122 S. JACKSON ST. - SUITE 210
SEATTLE, WA 98104 - (206)789-0038

4103 78TH AVE SE

MERCER ISLAND, WA



PROJECT NO 0496.2025.02.01
PROJECT MANAGER IHL
DRAWN RAP
ENGINEER QUINN MACKENZIE
206.637.1380
QUINN@MALSAM-TSANG.COM

REV	DESCRIPTION	DATE
	PERMIT SET	3.21.25
△	FOUNDATION RETROFIT	6.10.25
△	PILE REVISIONS	8.20.25

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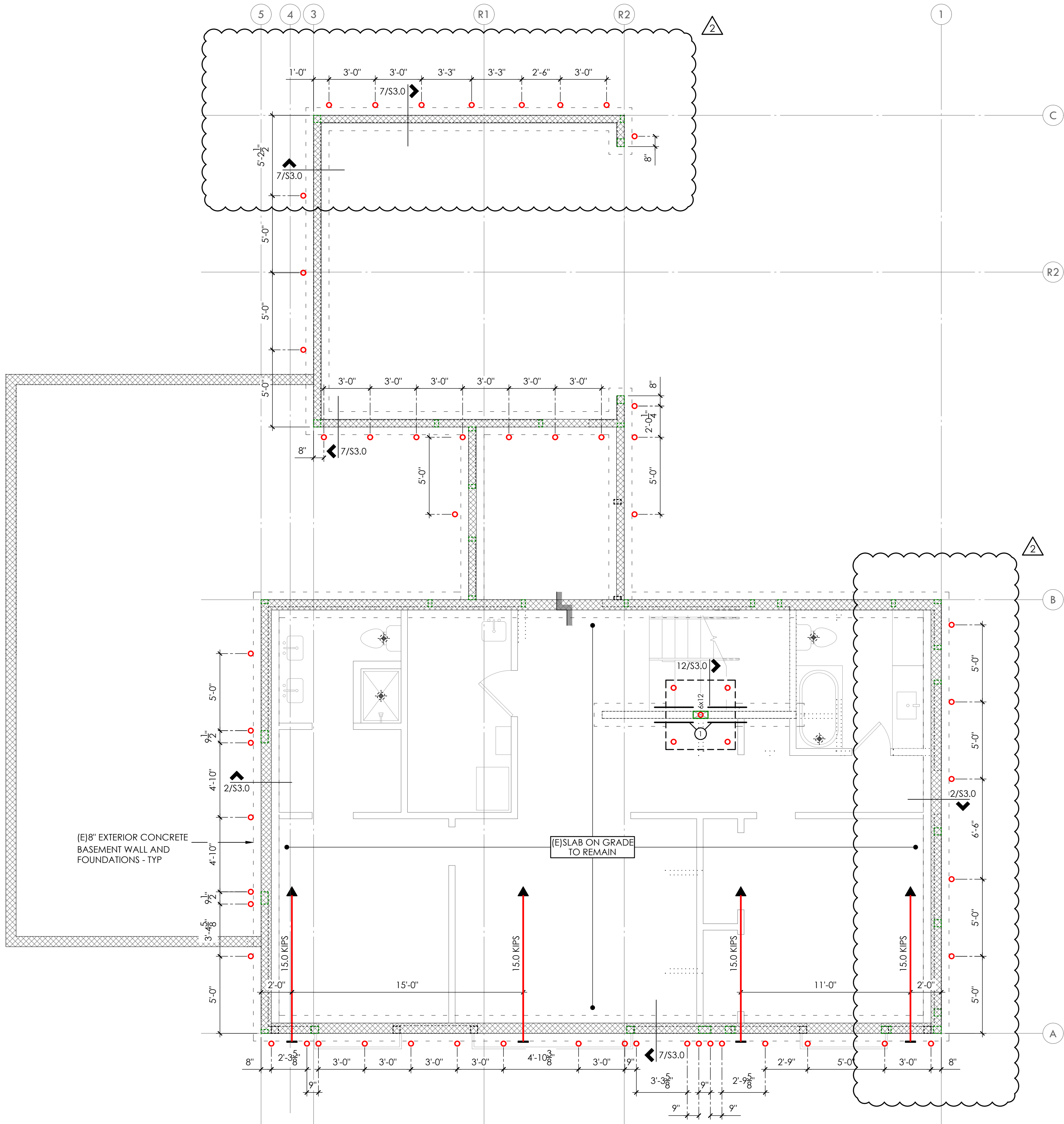
GENERAL STRUCTURAL NOTES

S1.0

SCALE - NTS

PIPE PILE AND HELICAL ANCHOR PILE SPECIFICATIONS AND NOTES

- 2" DIAMETER EXTRA STRONG PIPE PILES SHALL BE DRIVEN TO REFUSAL. REFUSAL SHALL BE DEFINED AS LESS THAN 1" PENETRATION IN 60 SECONDS DURING CONTINUOUS DRIVING OF A 90-LB JACK HAMMER UNDER THE FULL EFFORT OF THE OPERATOR.
- HELICAL ANCHORS CONSIST OF 2-3/8" SQUARE/ROUNDED SHAFT LEAD w/ 8"Ø MIN HELIX OR 10" DOUBLE HELIX AS REQUIRED AND SHALL BE INSTALLED PER GEOTECH RECOMMENDATIONS
- GEOTECHNICAL SPECIAL INSPECTOR SHALL BE CONTINUOUSLY PRESENT DURING HELICAL ANCHOR AND PIPE PILE INSTALLATION AND TESTING.
- HELICAL ANCHORS AND PIPE PILES NEED TO BE PLACED WITH 3" OF SPECIFIED LOCATION. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO INSTALLING PILES.
- HELICAL ANCHORS SHALL BE INSTALLED TO A MINIMUM EMBEDMENT OF 5'. ANCHORS SHALL BE INSTALLED PAST MINIMUM DEPTH AS REQUIRED TO ACHIEVE MINIMUM INSTALLATION TORQUE AS REQUIRED PER GEOTECHNICAL ENGINEER.
- A MINIMUM OF (1) HELICAL ANCHOR SHOULD BE LOAD-TESTED CONDUCTED TO CONFIRM THE ASSUMED DESIGN CAPACITY. THE LOAD TEST SHOULD BE PERFORMED IN GENERAL ACCORDANCE WITH D3689 STANDARD TEST METHODS FOR DEEP FOUNDATIONS UNDER AXIAL TENSION LOAD. THE LOAD TEST SHOULD BE PERFORMED TO AT LEAST 2 TIMES THE DESIGN ANCHOR CAPACITY. GEOTECH MUST BE PRESENT TO OBSERVE LOAD TEST.
- STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE A OR B, $f_y = 35$ KSI. PILES SHALL BE DRIVEN IN NORMAL SECTIONS AND CONNECTED WITH COMPRESSION FITTED SLEEVE COUPLERS. PIPE JOINTS ARE NOT ALLOWED TO BE WELDED TOGETHER.
- PIPE PILES SHALL BE DRIVEN TO A MINIMUM EMBEDMENT OF 8' PER GEOTECH
- REFER TO GENERAL STRUCTURAL NOTES SHEET S1.0 FOR ADDITIONAL REQUIREMENTS.
- REFER TO SOILS REPORT FOR ADDITIONAL PILE INSTALLATION REQUIREMENTS.
- CONTRACTOR TO VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS, SURVEY DRAWINGS, AND EXISTING SITE CONDITIONS.
- DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.



LEGEND

- CONCRETE WALL BELOW
- (E)CONCRETE WALL BELOW
- STRUCTURAL WALL ABOVE
- (E)STRUCTURAL WALL ABOVE
- PLUMBING PENETRATION ABOVE
- STEP PER ARCH
- 2"Ø STANDARD WEIGHT PILE (3-TON CAPACITY) REFER TO 3/S3.0 FOR EMBEDMENT INTO FOOTING
- HELICAL ANCHOR w/ MINIMUM ALLOWABLE CAPACITY FOR LOADS LISTED

MATERIALS

- SAWN LUMBER
- TRUSSES
- ENGINEERED
- GLU-LAM
- STEEL MEMBER

FOUNDATION PLAN

LEVEL 1 AND BASEMENT WALLS SHOWN DASHED

PLAN NOTES

1. REFER TO SHEET S3.0 FOR TYPICAL FOUNDATION AND CONCRETE DETAILS.
2. REFER TO GENERAL STRUCTURAL NOTES SHEET S1.0 FOR ADDITIONAL REQUIREMENTS.
3. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.

FOOTING SCHEDULE

MARK	SIZE	REINFORCING
A	4'-6" SQ x 16" DP	(8) #4 EW BOT

FOOTNOTES

- 1 PROVIDE (2) 2'-6" #4 DOWELS EACH END FROM NEW FTG TO EXISTING FTG. EPOXY EMBED 4" INTO EXISTING FTG w/ SIMPSON SET-3G. SPECIAL INSPECTION REQUIRED

LEGEND

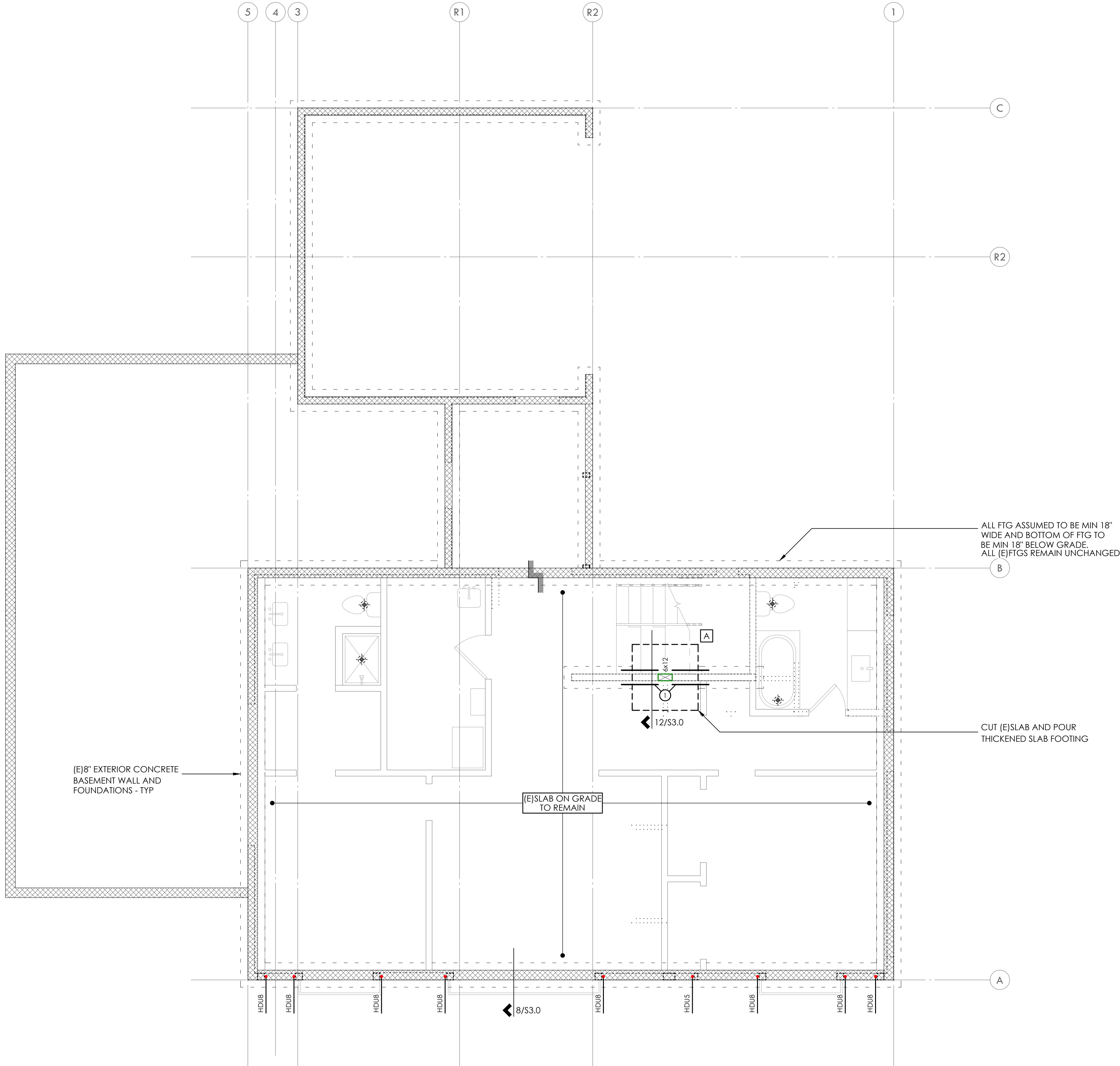
- CONCRETE WALL BELOW
(E)CONCRETE WALL BELOW
STRUCTURAL WALL ABOVE
(E)STRUCTURAL WALL ABOVE
PLUMBING PENETRATION ABOVE
STEP PER ARCH

MATERIALS

- SAWN LUMBER
TRUSSES
ENGINEERED
GLU-LAM
STEEL MEMBER

FOUNDATION PLAN

LEVEL 1 AND BASEMENT WALLS SHOWN DASHED



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PLAN NOTES

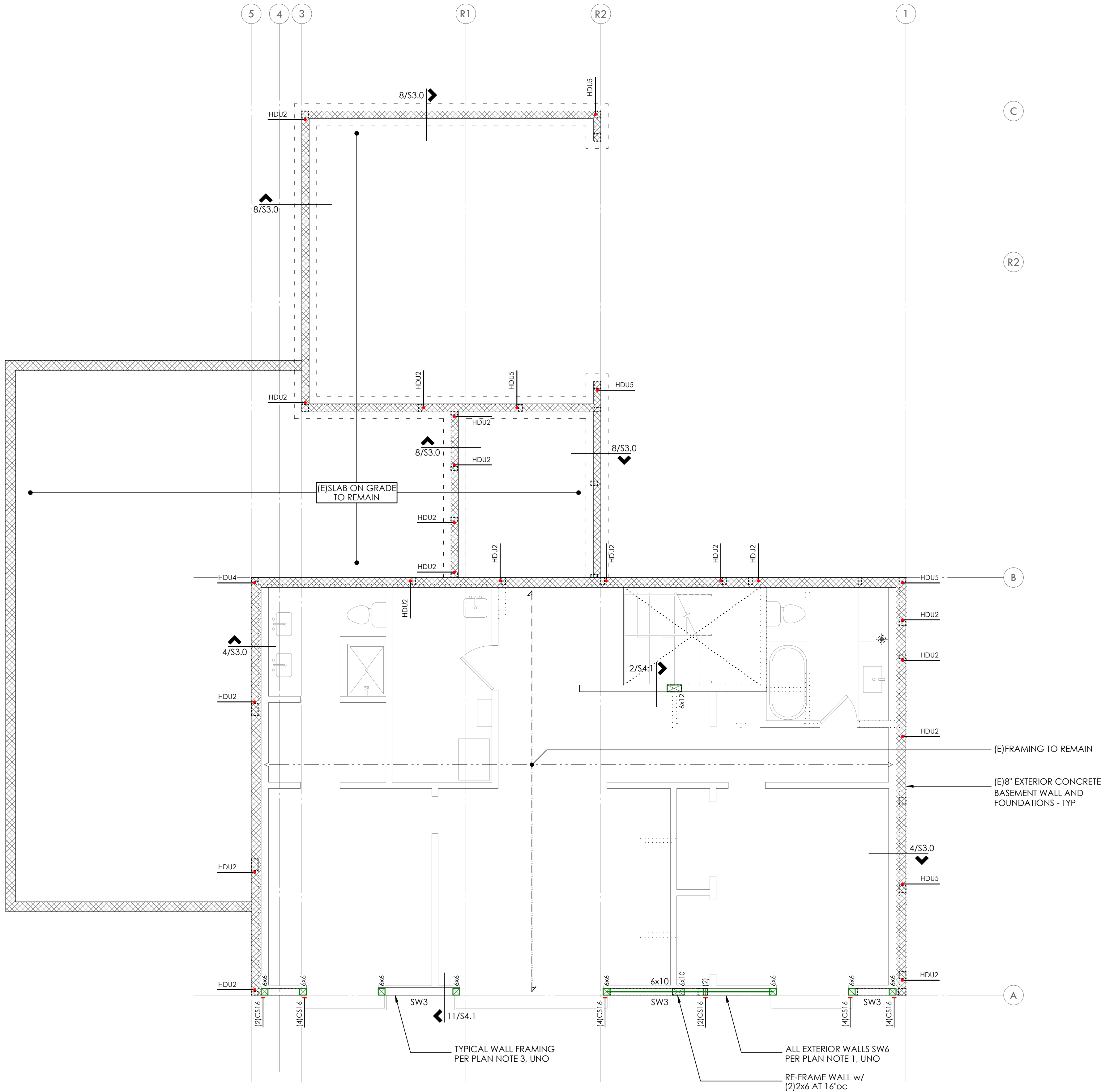
- "SW." INDICATES SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE ON 4/S4.0 FOR ADDITIONAL INFORMATION. ALL EXTERIOR WALLS ARE SW6, UNO.
- WHERE POSTS OCCUR, PROVIDE SOLID VERTICAL GRAIN BLOCKING THRU FLOOR TO MATCHING SUPPORTS BELOW, UNO.
- TYPICAL WALL FRAMING CONSISTS OF 2x6's AT 16"oc AT EXTERIOR WALLS AND 2x4's or 2x6's AT 16"oc AT INTERIOR WALLS PER ARCH DRAWINGS, UNO.
- REFER TO SHEET S4.0 FOR TYPICAL WOOD FRAMING DETAILS.
- REFER TO GENERAL STRUCTURAL NOTES SHEET S1.0 FOR ADDITIONAL REQUIREMENTS.
- DO NOT SCALE DRAWINGS. REFER TO ARCH DRAWINGS FOR ALL DIMENSIONS.

FOOTNOTES

- 1
- 2
- 3

LEGEND

- CONCRETE WALL BELOW
- (E)CONCRETE WALL BELOW
- STRUCTURAL WALL BELOW
- STRUCTURAL WALL ABOVE
- (E)STRUCTURAL WALL BELOW
- (E)STRUCTURAL WALL ABOVE
- SPAN AND EXTENTS
- (E)SPAN AND EXTENTS
- HEADER/BEAM BELOW FRAMING - TYP
- (E)HEADER/BEAM
- (X) NUMBER OF BUILT UP STUDS
- PLUMBING PENETRATION ABOVE



MATERIALS

- SAWN LUMBER
- TRUSSES
- ENGINEERED
- GLU-LAM
- STEEL MEMBER

LEVEL 1 FLOOR FRAMING PLAN

LEVEL 1 WALLS SHOWN DASHED
BASEMENT WALLS SHOWN SOLID



122 S. JACKSON ST. - SUITE 210
SEATTLE, WA 98104 - 206.789.8038

4103 78TH AVE SE
MERCER ISLAND, WA



PROJECT NO 0496.2025.02.01
PROJECT MANAGER IHL
DRAWN RAP
ENGINEER QUINN MACKENZIE
206.637.1380
QUINN.M@MALSAM-TSANG.COM

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△	PILE REVISIONS	8.20.25

ARCH 5H2 STUDIO ARCHITECTS
CLIENT 425.287.1567
ZHAANG + HOU

LEVEL 1 FLOOR FRAMING PLAN

S2.2

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

Printed By: rhl
Printed Date: 8/20/2025 - 12:40pm

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PLAN NOTES

1. TYPICAL FLOOR FRAMING CONSISTS OF 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER 11-7/8" TJI 210's AT 16"oc. UNO. PROVIDE DBL JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH.
2. GLUE AND NAIL FLOOR SHEATHING w/ 8d AT 6"oc AT FRAMED PANEL EDGES AND OVER SHEAR-WALLS AND AT 12"oc IN FIELD. UNO.
3. "SW_" INDICATES SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE ON 4/S4.0 FOR ADDITIONAL INFORMATION. ALL EXTERIOR WALLS ARE SW6. UNO.
4. ALL REQUIRED HEADERS ARE SHOWN ON PLAN AND SHALL BE (2)2x8. UNO. REFER TO DETAIL 8/S4.0 FOR ADDITIONAL REQUIREMENTS.
5. PROVIDE (2)BEARING (TRIMMER) STUDS AT EACH END OF ALL HEADERS AND BEAMS 6'-0" IN LENGTH AND OVER. UNO.
6. WHERE POSTS OCCUR, PROVIDE SOLID VERTICAL GRAIN BLOCKING THRU FLOOR TO MATCHING SUPPORTS BELOW. UNO.
7. TYPICAL WALL FRAMING CONSISTS OF 2x6's AT 16"oc AT EXTERIOR WALLS AND 2x4's or 2x6's AT 16"oc AT INTERIOR WALLS PER ARCH DRAWINGS. UNO.
8. REFER TO SHEET S4.0 FOR TYPICAL WOOD FRAMING DETAILS.
9. REFER TO GENERAL STRUCTURAL NOTES SHEET S1.0 FOR ADDITIONAL REQUIREMENTS.
10. DO NOT SCALE DRAWINGS. REFER TO ARCH DRAWINGS FOR ALL DIMENSIONS.

FLUSH BEAM SCHEDULE

MARK	SIZE ①	BRG STUDS	HANGER - UNO
B1	LSL 1-3/4 x 11-7/8	2	HUS1.81/10
B2	GL 3-1/2 x 11-7/8 OR LSL 3-1/2 x 11-7/8	2	HHUS410② HHUS410
B3	GL 5-1/2 x 11-7/8 OR PSL 5-1/4 x 11-7/8	3	HGUS5.50/10 HGUS5.50/10
B4	PSL 7 x 11-7/8	4	HGUS7.25/10

- ① ALL GLULAM BEAMS ARE 24F-V4 - UNO
② PROVIDE HUC410 WHERE REQUIRED - UNO

FOOTNOTES

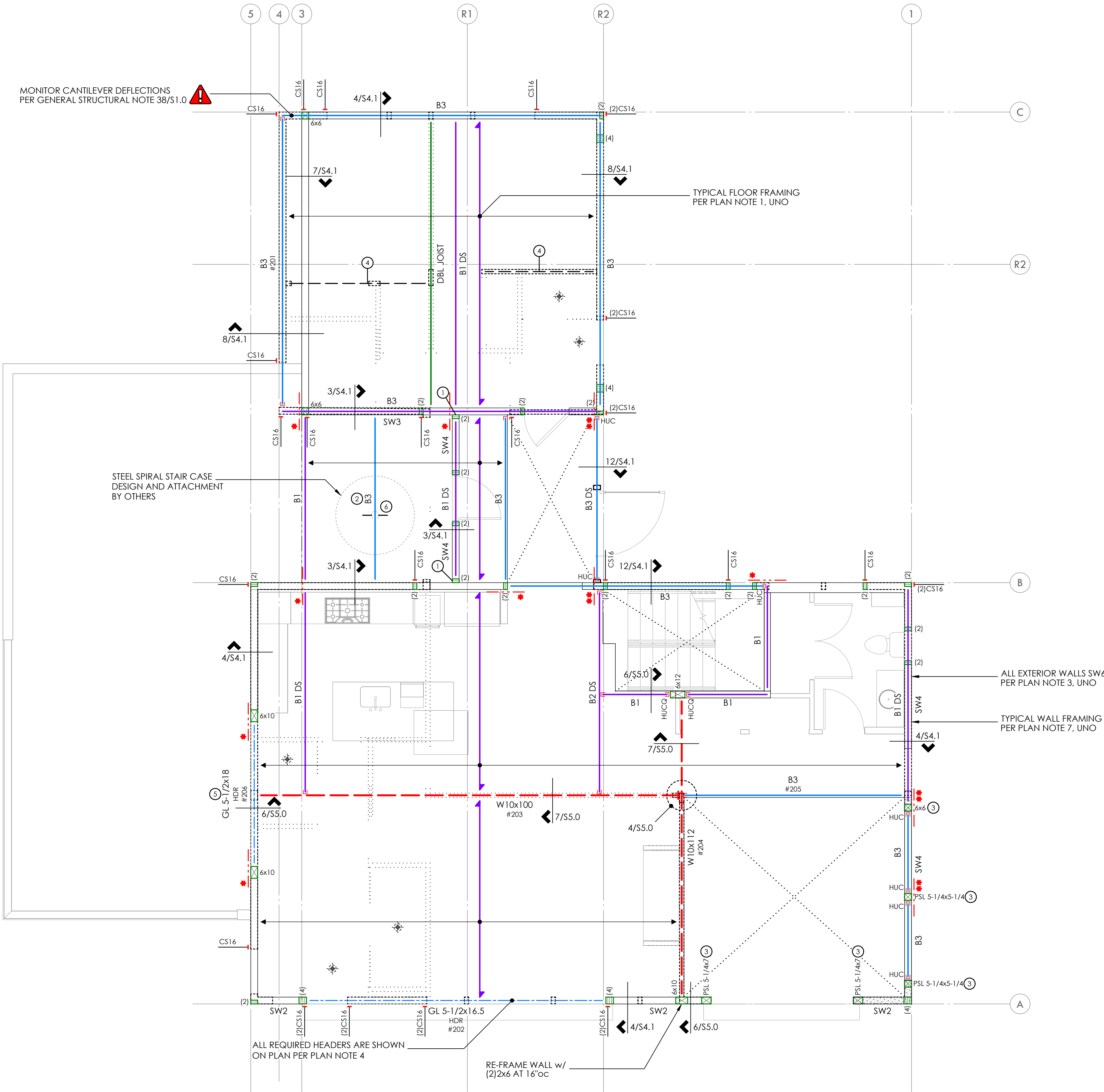
- ① SHEARWALL SHEATHING CONTINUOUS THRU WALL INTERSECTION
② LOCATE BEAM TO RECEIVE STEEL SPIRAL STAIRCASE ATTACHMENT
③ CONT POST FROM L1 TO ROOF - PROVIDE (2)A35 CLIPS TO AND BOT OF POST
④ PROVIDE TJI BLOCKING BELOW WALL WITH IUS HANGER EACH END
⑤ NO TOP PLATES OVER HEADER
⑥ PROVIDE FULL DEPTH TJI BLOCKING ON EACH SIDE OF STAIR ATTACHMENT

LEGEND

- STRUCTURAL WALL BELOW
- - - STRUCTURAL WALL ABOVE
— (E)STRUCTURAL WALL BELOW
— SPAN AND EXTENTS
— HEADER/BEAM BELOW FRAMING - TYP
(x) NUMBER OF BUILT UP STUDS
— PLUMBING PENETRATION ABOVE
- - - - - HORIZ CS16 x X'-0" OVER FLOOR SHEATHING - LAP RIM/BREAM 1'-6" AND NAIL REMAINING LENGTH TO SNUG FIT FLAT 2x6 BLOCKING BETWEEN JOISTS

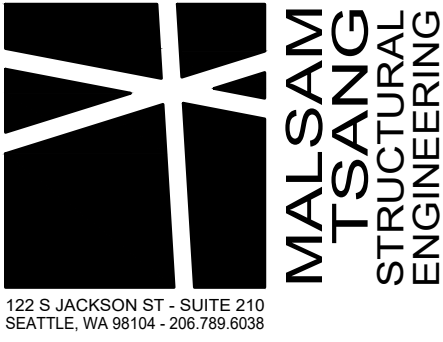
MATERIALS

- SAWN LUMBER
TRUSSES
ENGINEERED
GLU-LAM
STEEL MEMBER



LEVEL 2 FLOOR FRAMING PLAN

LEVEL 2 WALLS SHOWN DASHED
LEVEL 1 WALLS SHOWN SOLID



4103 78TH AVE SE
MERCER ISLAND, WA



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PROJECT MANAGER IHL
DRAWN RAP
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206.637.1380
QUINN.M@MALSAM-TSANG.COM

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425.287.1567
CLIENT ZHANG + HOU

LEVEL 2 FLOOR
FRAMING PLAN

S2.3

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

Revised By: YHHL
Revised Date: Aug 20, 2025 - 1:24pm

PLAN NOTES

1. TYPICAL TRUSS ROOF FRAMING CONSISTS OF 7/16" or 1/2" APA RATED SHEATHING (SPAN RATING 32/16) OVER PRE-MANUFACTURED TRUSSES AT 24"oc, UNO. PROVIDE H2.5A CLIPS EACH END OF ALL TRUSSES, AND H2.5A EACH SIDE OF ALL MULTIPLE TRUSSES, UNO. REFER TO ARCH DRAWINGS FOR TRUSS PROFILE.
2. TYPICAL AWNING FRAMING CONSISTS OF 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER 2x SLOPED RIPPERS OVER 2x10's AT 16"oc, UNO. SLOPED PER ARCH. PROVIDE H2.5A CLIPS EACH END OF ALL RAFTERS, H2.5A EACH SIDE OF MULTIPLE RAFTERS, UNO.
3. TYPICAL ROOF DECK FRAMING CONSISTS OF PALLETIZED DECKING (5 PSF MAX) OVER TAPERED RIGID INSULATION OVER 3/4" T&G APA RATED SHEATHING (SPAN RATING 48/24) OVER 11-7/8" TJI 210's AT 16"oc, UNO. PROVIDE H8 CLIPS EACH END OF ALL JOISTS, AND H2.5A EACH SIDE OF ALL BEAMS, UNO.
4. NAIL ROOF SHEATHING w/ 8d at 6" oc AT FRAMED PANEL EDGES AND OVER SHEARWALLS, AND AT 12"oc IN FIELD, UNO.
5. GLUE AND NAIL FLOOR AND ROOF DECK SHEATHING w/ 8d at 6"oc AT FRAMED PANEL EDGES AND OVER SHEARWALLS, AND AT 12"oc IN FIELD, UNO.
6. "SW ." INDICATES SHEARWALL BELOW FRAMING SHOWN. REFER TO SHEARWALL SCHEDULE ON 4/S4.0 FOR ADDITIONAL INFORMATION. ALL EXTERIOR WALLS ARE SW6, UNO.
7. ALL REQUIRED HEADERS ARE SHOWN ON PLAN AND SHALL BE (2)2x8, UNO. REFER TO DETAIL 8/S4.0 FOR ADDITIONAL REQUIREMENTS.
8. PROVIDE (2)BEARING (TRIMMER) STUDS AT EACH END OF ALL HEADERS, BEAMS, AND GIRDER TRUSSES 6'-0" IN LENGTH AND OVER, UNO.
9. WHERE POSTS OCCUR, PROVIDE SOLID VERTICAL GRAIN BLOCKING THRU FLOOR TO MATCHING SUPPORTS BELOW, UNO.
10. TYPICAL WALL FRAMING CONSISTS OF 2x6's AT 16"oc AT EXTERIOR WALLS AND 2x4's or 2x6's AT 16"oc AT INTERIOR WALLS PER ARCH DRAWINGS, UNO.
11. REFER TO SHEET S4.0 FOR TYPICAL WOOD FRAMING DETAILS.
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FLUSH BEAM SCHEDULE

MARK	SIZE ①	BRG STUDS	HANGER - UNO
B1	LSL 1-3/4 x 11-7/8	2	HUS1.81/10
B2	GL 3-1/2 x 11-7/8 OR LSL 3-1/2 x 11-7/8	2	HHUS410 ② HHUS410
B3	GL 5-1/2 x 11-7/8 OR PSL 5-1/4 x 11-7/8	3	HGUS5.50/10 HGUS5.50/10
B4	PSL 7 x 11-7/8	4	HGUS7.25/10

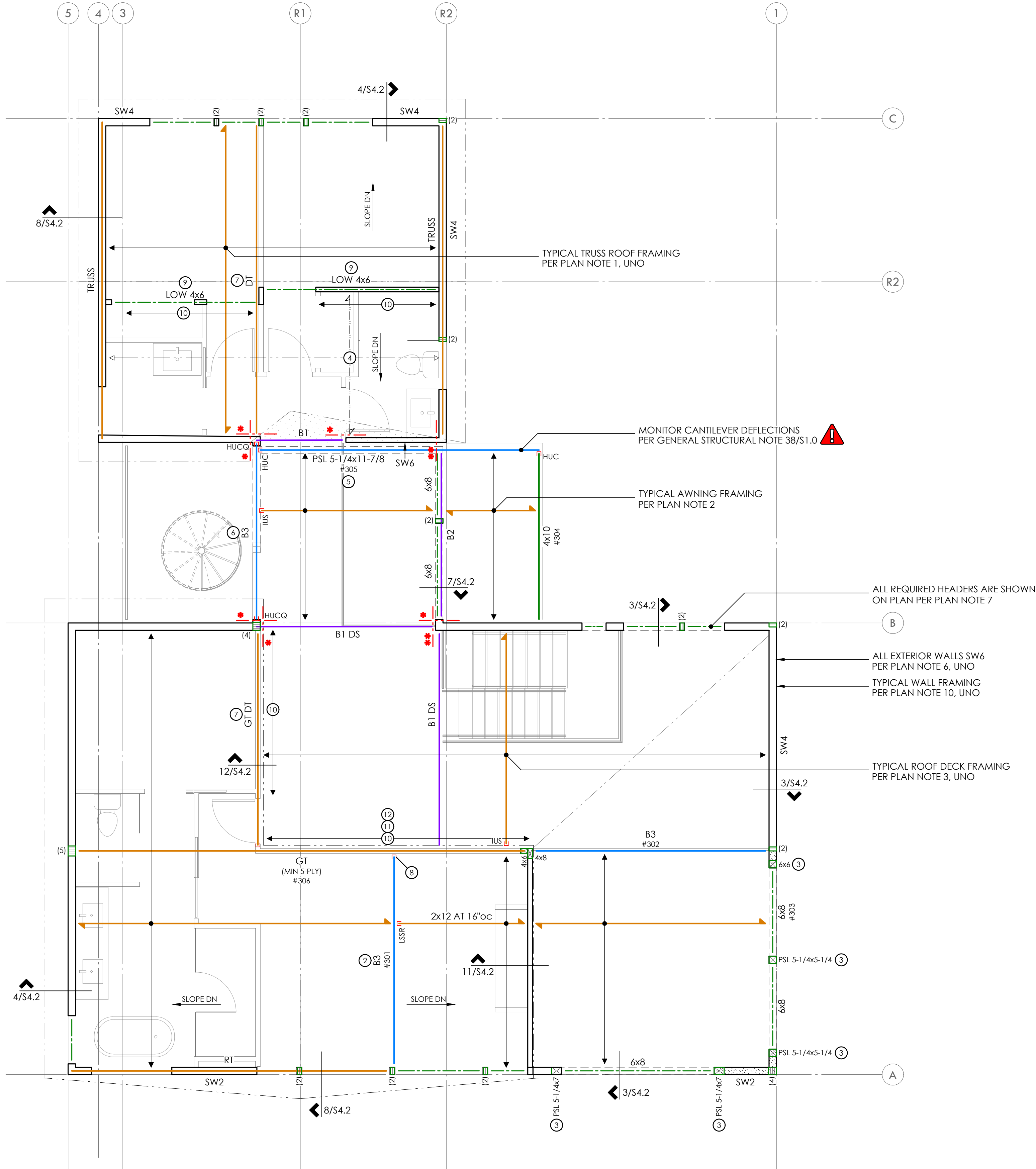
- ① ALL GLULAM BEAMS ARE 24F-V4 - UNO
② PROVIDE HUC410 WHERE REQUIRED - UNO

FOOTNOTES

- ① SHEARWALL SHEATHING CONTINUOUS THRU WALL INTERSECTION
- ② VERIFY RIDGE BEAM LOCATION WITH ARCH
- ③ CONT POST FROM L1 TO ROOF - PROVIDE (2)A35 CLIPS TOP AND BOT OF POST
- ④ LOW SOFFIT FRAMING w/ 2x6's AT 16"oc w/ LUS HANGER TO 2x6 LEDGER w/ (2)0.22"Ø X 5" SDWS TIMBER SCREWS AT 16"oc INTO EACH STUD - INSTALL OVER GWB PER ARCH
- ⑤ NOTCH AND TAPER BEAM TO MATCH JOIST DEPTH - 9-1/2" MIN, NO OVERCUTS
- ⑥ PROVIDE ATTACHMENT OF STEEL SPIRAL STAIR CASE ONTO BEAM
- ⑦ TRUSS MANUFACTURER TO DESIGN TRUSS TO TRANSFER 1000 LBS LATERALLY FROM TOP TO BOTTOM CHORD
- ⑧ TRUSS MANUFACTURE TO DESIGN FOR 4600 LB POINT LOAD FROM PERPENDICULAR BEAM. PROVIDE 12 WIDE VERTICAL TRUSS MEMBER TO RECEIVE BEAM HANGER.
- ⑨ POCKET BEAM INTO WALL w/ (2)BEARING STUDS AND (1)FULL HEIGHT STUD EACH SIDE
- ⑩ NOT A BEARING WALL FOR TRUSSES
- ⑪ TRUSS MANUFACTURE TO DESIGN TRUSS FOR 25 PSF DL AND 60 PSF LL FROM ROOF DECK FRAMING
- ⑫ TRUSS MANUFACTURE TO PROVIDE 2x12 BOT CHORD MEMBER TO RECEIVE HANGER CONNECTION FROM ROOF DECK FRAMING

LEGEND

- STRUCTURAL WALL BELOW
- PARAPET WALL ABOVE
- BALLOON FRAME WALL w/ (2)2x6 STUDS AT 16"oc
- SPAN AND EXTENTS
- HEADER/BEAM BELOW FRAMING - TYP
- DIRECTION OF SLOPE
- (x) NUMBER OF BUILT UP STUDS
- OVERFRAMING - 2x6 AT 24"oc w/ 6'-0" MAX SPAN OR POST DOWN MID-SPAN TO TRUSSES BELOW - VERIFY w/ TRUSS MANUFACTURER

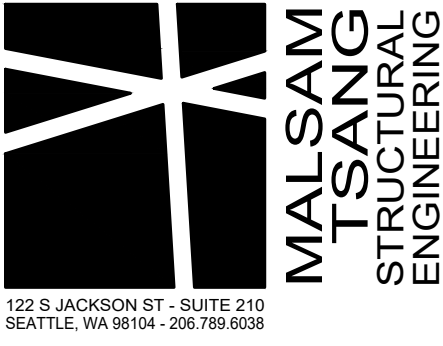


MATERIALS

- SAWN LUMBER
- TRUSSES
- ENGINEERED
- GLU-LAM
- STEEL MEMBER

ROOF FRAMING PLAN

LEVEL 2 WALLS SHOWN SOLID



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MERCER ISLAND, WA



PROJECT NO 0496.2025.02.01
PROJECT MANAGER IHL
DRAWN RAP
ENGINEER QUINN MACKENZIE
206.637.1380
QUINN@MALSAM-TSANG.COM

REV	DESCRIPTION	DATE
PERMIT SET		3.21.25
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PILE REVISIONS		8.20.25

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425.287.1567
CLIENT ZHANG + HOU

ROOF FRAMING
PLAN

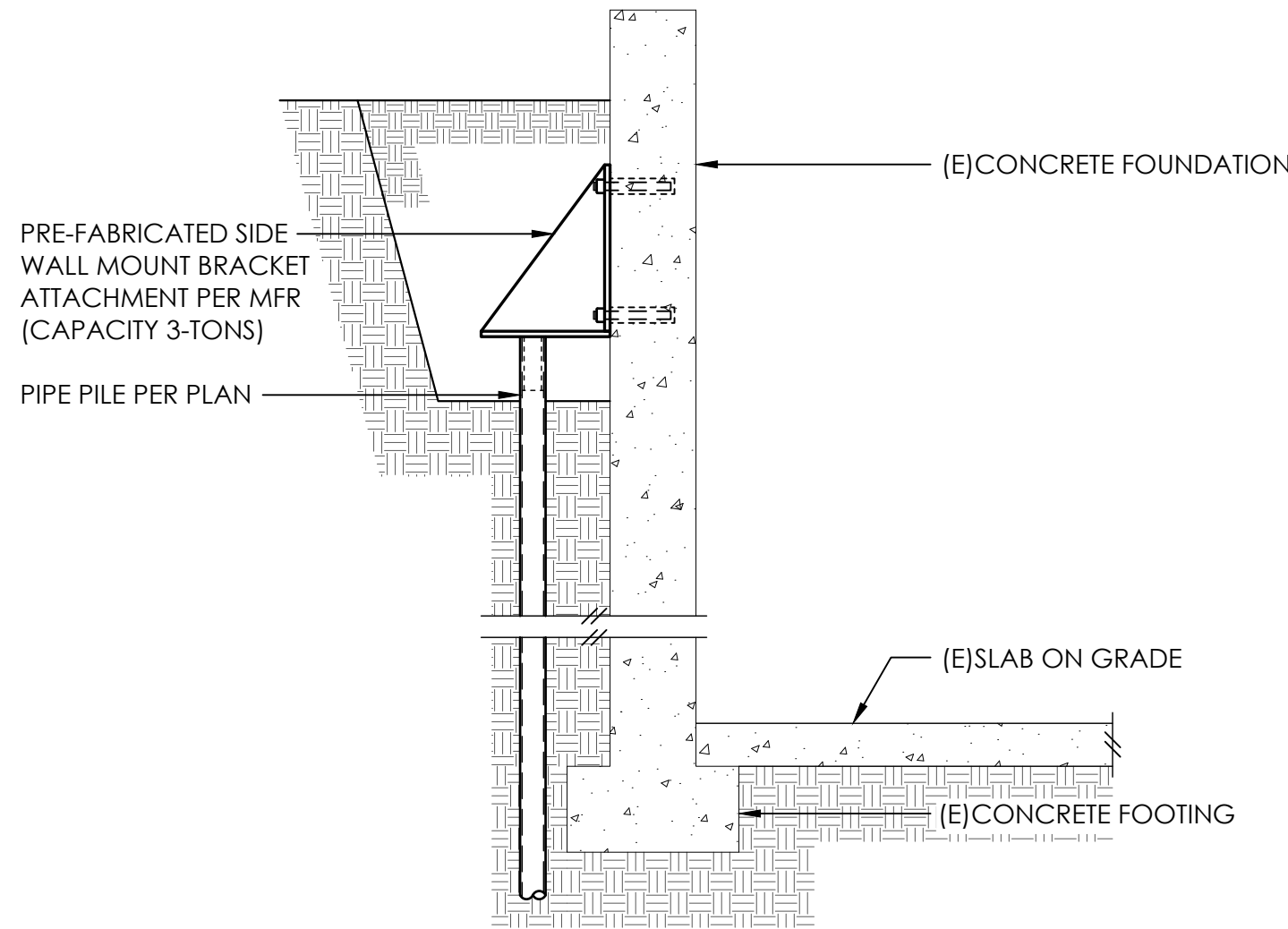
S2.4

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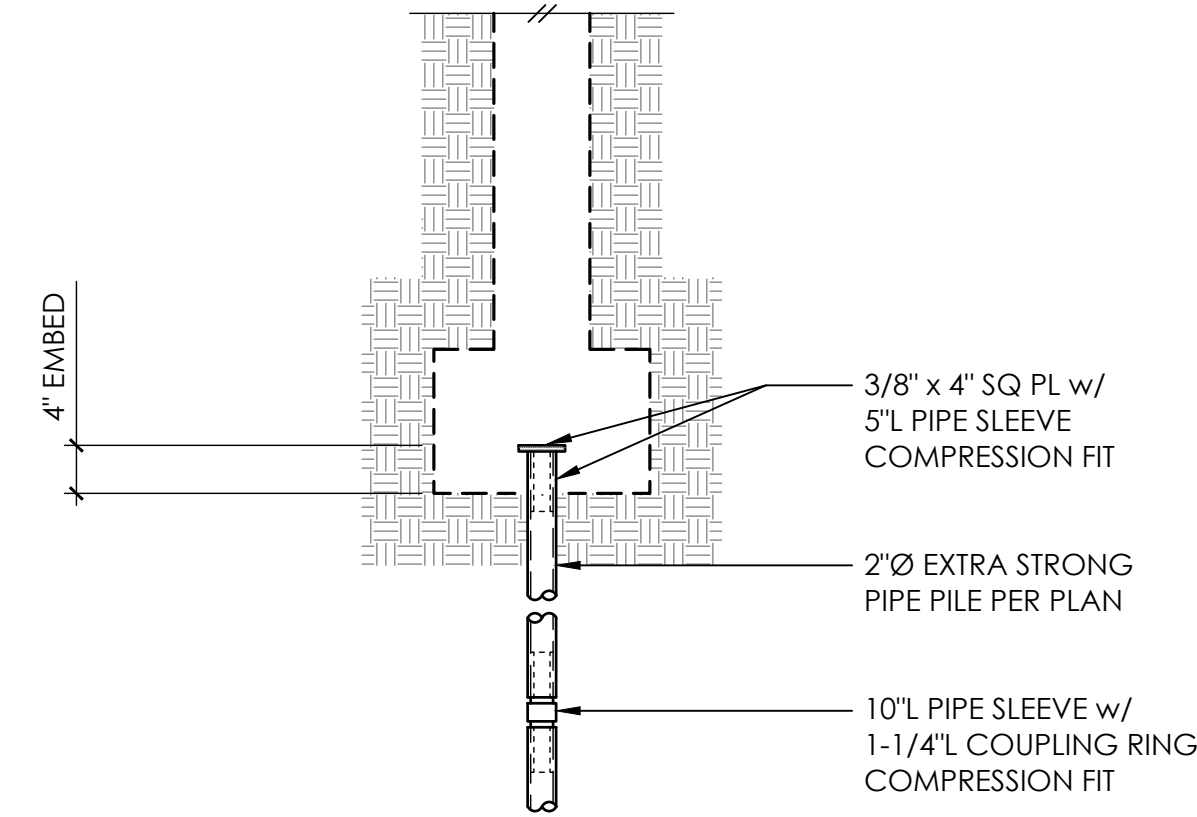
ABBREVIATIONS

±	PLUS OR MINUS	GL	GLUE LAMINATED	OSB	ORIENTED STRAND
Ø	DIAMETER		TIMBER	BOARD	BOARD
AB	ANCHOR BOLT	GR	GRADE	PLF	POUNDS PER LINEAR
ADDL	ADDITIONAL	GT	GIRDER TRUSS	FOOT	FOOT
ALT	ALTERNATE	GWB	GYPSUM WALLBOARD	PLY	PLYWOOD
APPROX	APPROXIMATE	HD	HOLDOWN	PREFAB	PREFABRICATED
ARCH	ARCHITECT, ARCHITECTURAL	HDR	HEADER	PSF	POUNDS PER SQUARE FOOT
		HF	HEM FIR		POUNDS PER SQUARE INCH
BLKG	BLOCKING	HGR	HANGER	PSI	POUNDS PER SQUARE INCH
BM	BEAM	HM	HIP MASTER		PARALLEL STRAND LUMBER
BOE	BOTTOM OF EXCAVATION	HORIZ	HORIZONTAL	PSL	PARALLEL STRAND LUMBER
		HT	HEIGHT	PT	PRESSURE TREATED LUMBER
BOT	BOTTOM	IBC	INTERNATIONAL BUILDING CODE		
CL	CENTERLINE			REINF	REINFORCING
CLR	CLEARANCE	INT	INTERIOR	REQD	REQUIRED
CONT	CONTINUOUS	IRC	INTERNATIONAL RESIDENTIAL CODE	SOG	SLAB ON GRADE
DBL	DOUBLE			SQ	SQUARE
DF	DOUGLAS FIR	JST	JOIST	STD	STANDARD
DP	DEEP, DEPTH	K	KIPS (1000 LBS)	SW	SHEARWALL
DN	DOWN	KP	KING POST	T&G	TONGUE AND GROOVE
DS	DRAW STRUT	L	LENGTH	THRD	THREADED
DWGS	DRAWINGS	LBS	POUNDS	TPL	TRIPLE
(E)	EXISTING	LONG	LONGITUDINAL	TRANSV	TRANSVERSE
EA	EACH	LSL	LAMINATED STRUCTURAL LUMBER	TYP	TYPICAL
EMBED	EMBEDMENT		LAMINATED VENEER LUMBER	UNO	UNLESS NOTED OTHERWISE
EQ	EQUAL	LVL	LAMINATED VENEER LUMBER		
EQUIV	EQUIVALENT			VERT	VERTICAL
EW	EACH WAY	MAX	MAXIMUM	W	WIDE OR WIDTH
EXP	EXPANSION	MB	MACHINE BOLT	w/	WITH
EXT	EXTERIOR	MFR	MANUFACTURER	w/o	WITHOUT
FDN	FOUNDATION	MIN	MINIMUM	WHS	WELDED HEADED STUD
FRMG	FRAMING	MISC	MISCELLANEOUS	WTS	WELDED THREADED STUD
FT	FEET	NO	NUMBER	WWM	WELDED WIRE MESH
FTG	FOOTING	NTS	NOT TO SCALE		
GA	GAUGE	oc	ON CENTER		
GALV	GALVANIZED	OPP	OPPOSITE		

1

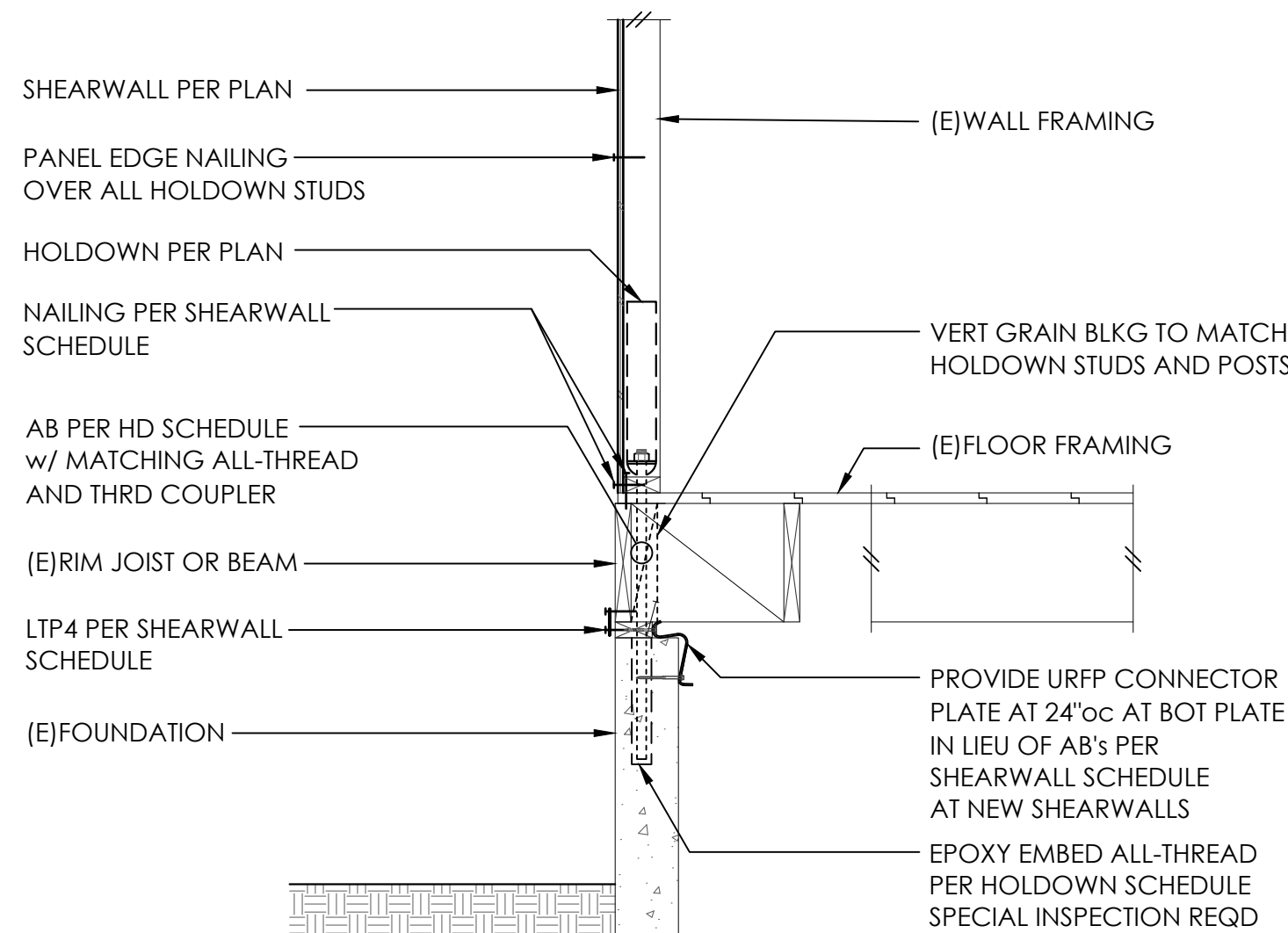


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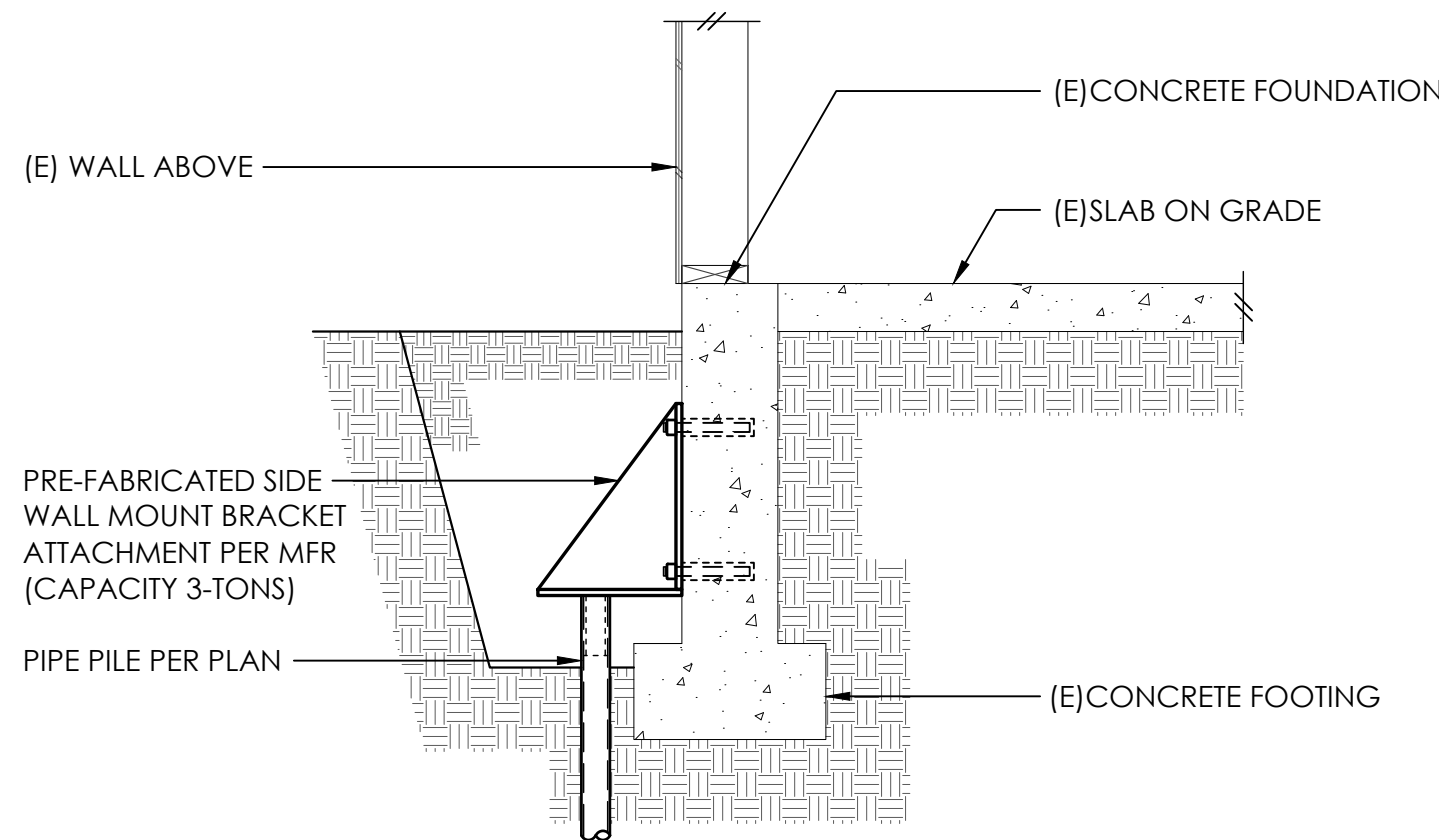


2"Ø PILES
TYPICAL PIPE PILE

3

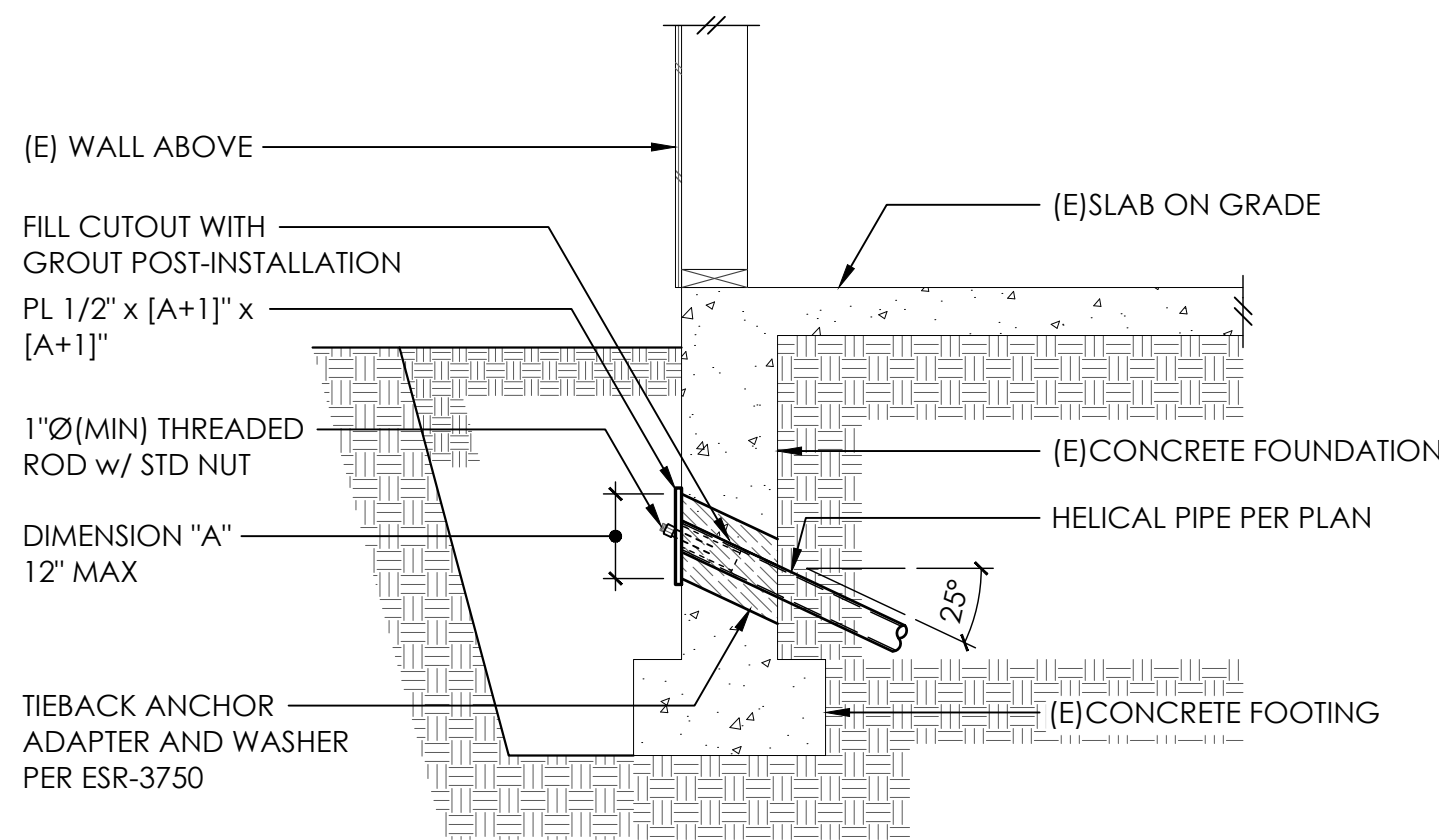


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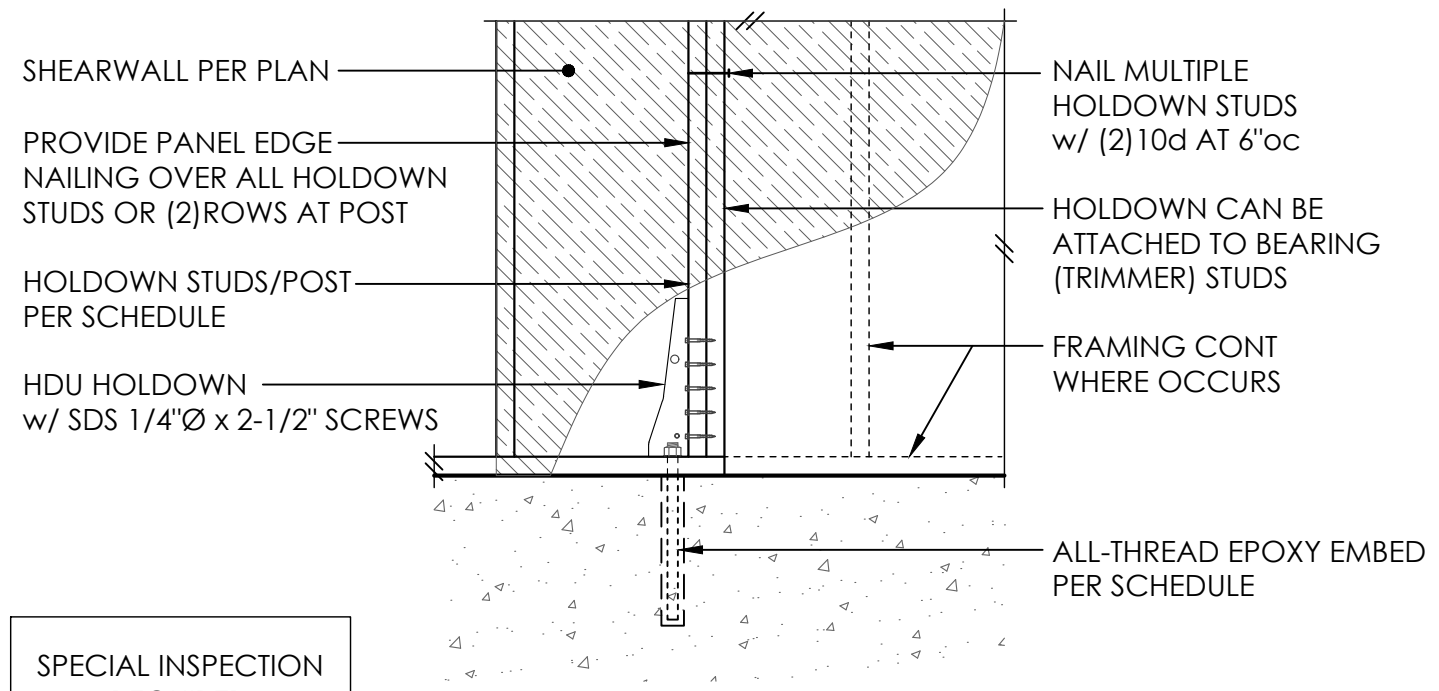
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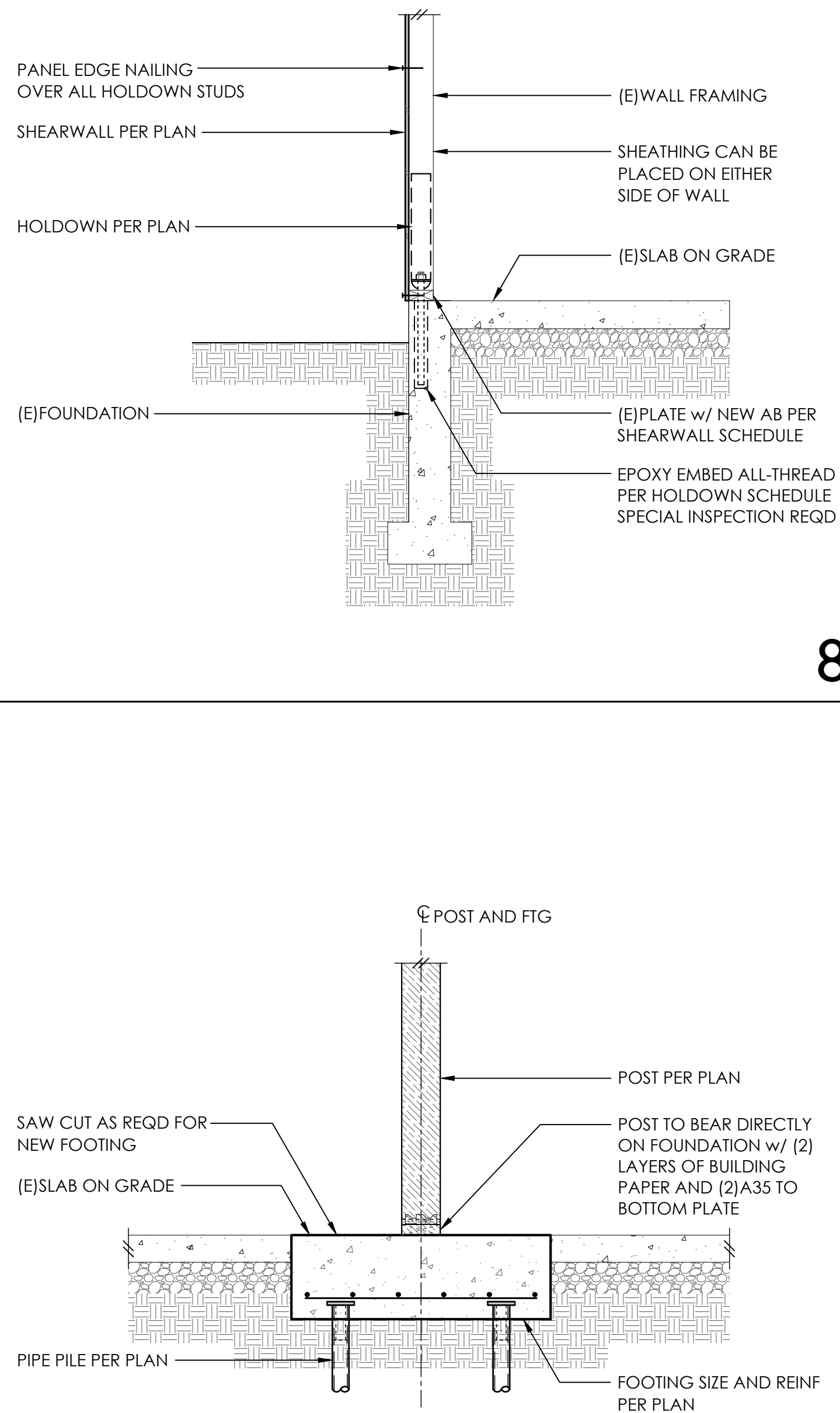
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HDU HOLDOWN SCHEDULE

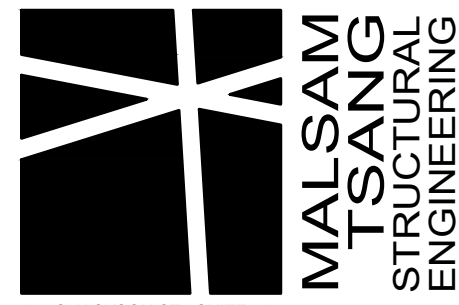
PLAN	AT STEMWALL	AT FOOTING	HD POST
MARK	AB	EMBED ALL-THREAD	EMBED 4x WALL 6x WALL
HDU2	5/8"Ø ALL-THREAD	12" 5/8"Ø 9"	(2)2x4 (2)2x6
HDU4	5/8"Ø ALL-THREAD	12" 5/8"Ø 9"	(2)2x4 (2)2x6
HDU5	5/8"Ø ALL-THREAD	12" 5/8"Ø 9"	(2)2x4 (2)2x6

- ① A307 ALL-THREAD AND MAINTAIN 1-3/4" MIN EDGE DISTANCE - 12" MIN END DISTANCE TO STEMWALL END/CORNER
- ② MINIMUM SIZE OF POST UNO ON FRAMING PLANS
- ③ MINIMUM 1'-6" WIDE x 1'-0" DEEP FOOTING

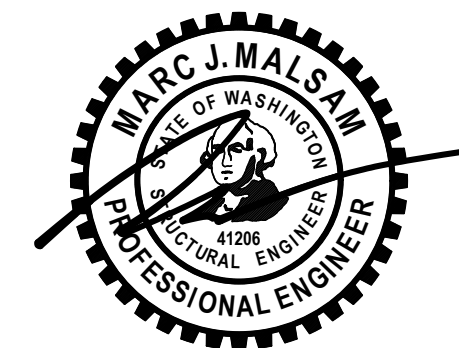
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MERCER ISLAND, WA



PROJECT NO 0496.2025.02.01
PROJECT MANAGER IHL
DRAWN RAP
ENGINEER QUINN MACKENZIE 206.637.1380
QUINNWM@MALSAM-TSANG.COM

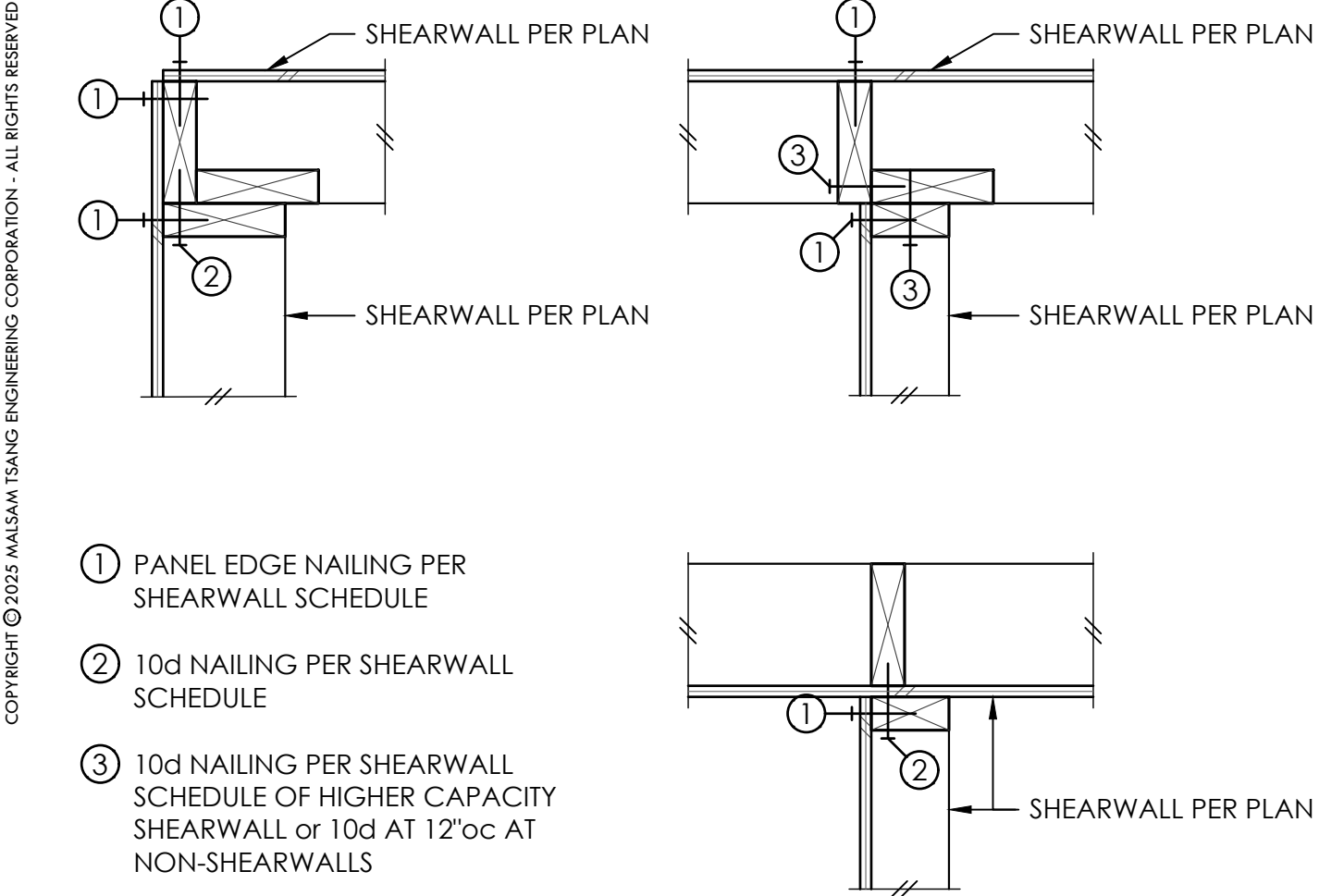
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TYPICAL CONCRETE DETAILS

S3.0
SCALE - 3/4" = 1'-0"

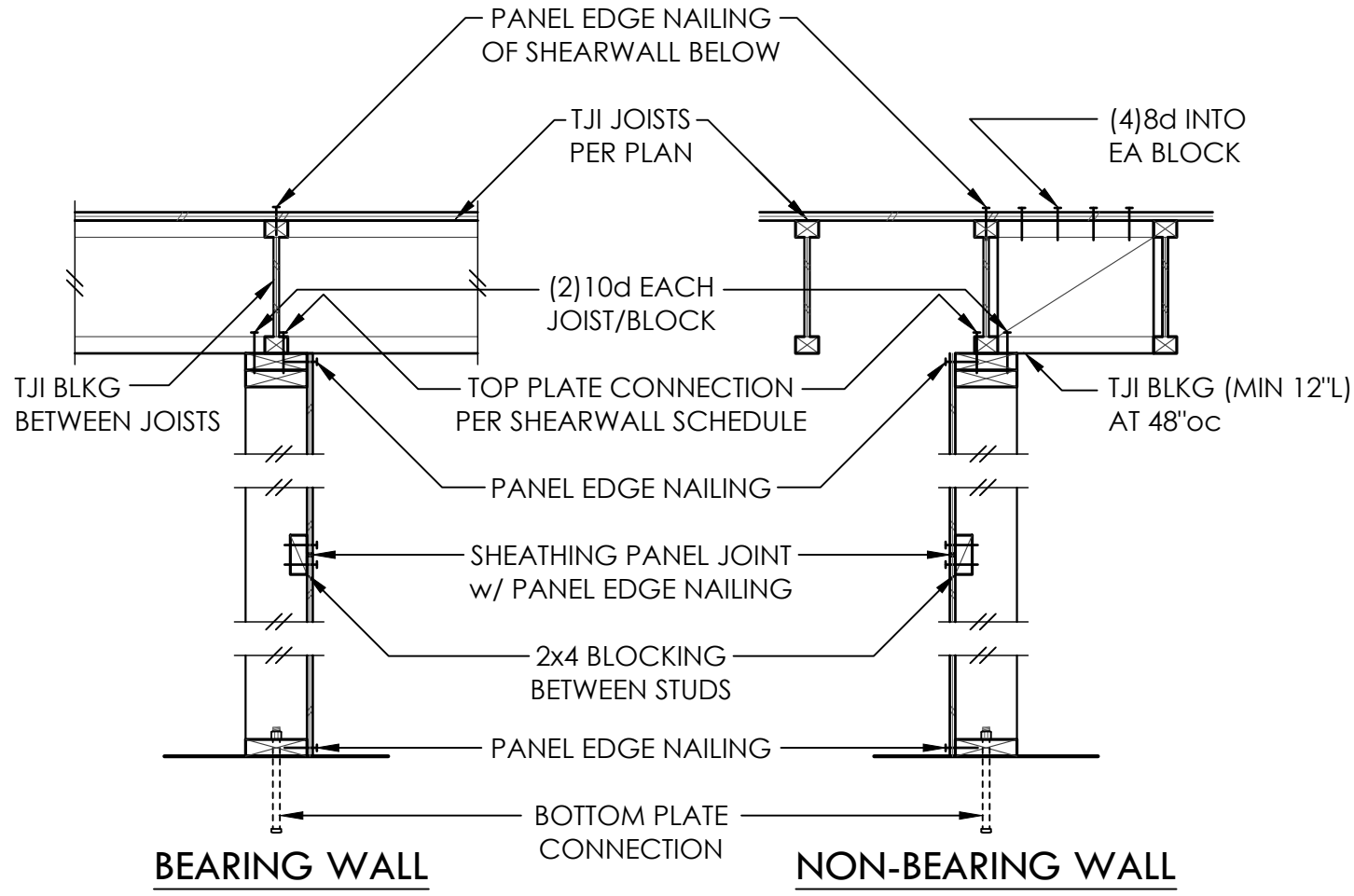
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SCALE: 1-1/2" = 1'-0"

TYPICAL SHEARWALL INTERSECTIONS

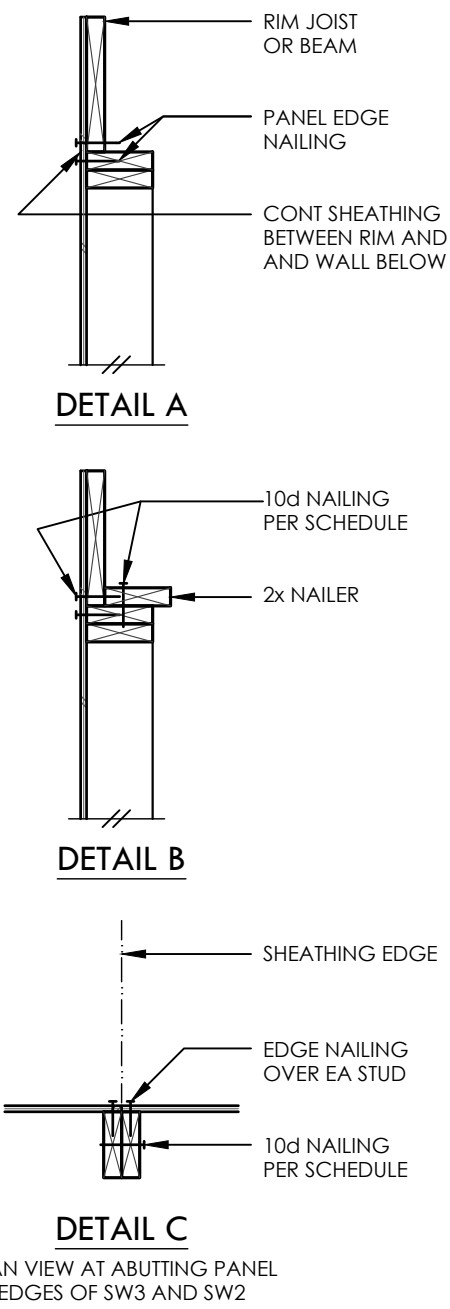
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NOTE:
SEE SHEARWALL SCHEDULE FOR ALL NAILING AND CONNECTIONS, UNO

TYPICAL SHEARWALL CONSTRUCTION

2



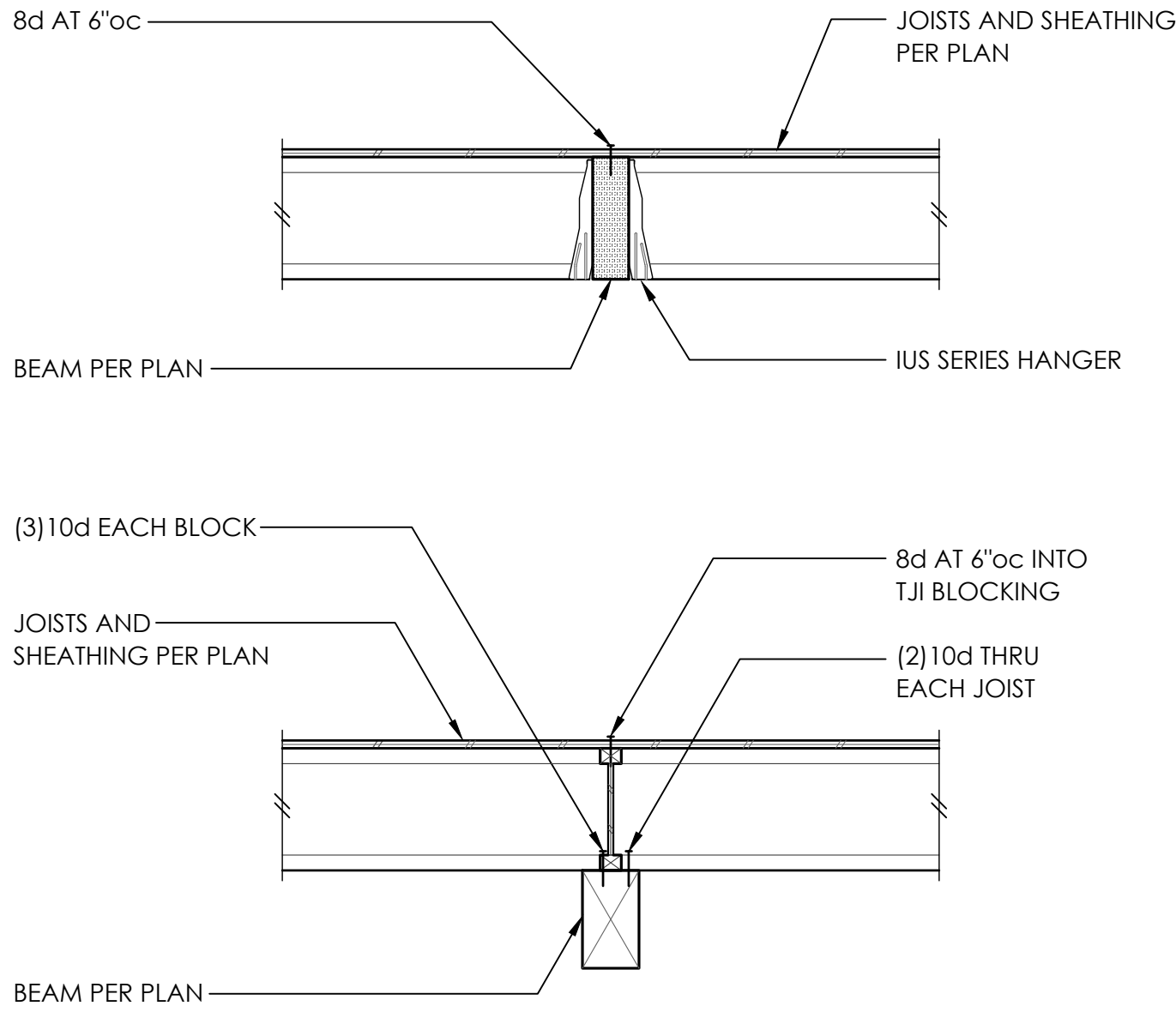
DETAIL C
PLAN VIEW AT ABUTTING PANEL EDGES OF SW3 AND SW2

SHEARWALL SCHEDULE

MARK	SHEATHING	PANEL EDGE NAILING	TOP PLATE CONNECTION		BASE PLATE CONNECTION	
			TJI/2x	RIM/BEAM	AT WOOD	AT CONCRETE
SW6	1/2" PLY or 7/16" OSB	8d AT 6"oc	10d AT 6"oc	A35 AT 30"oc	12d AT 6"oc	5/8"Ø AB AT 48"oc
SW4	1/2" PLY or 7/16" OSB	8d AT 4"oc	10d AT 4"oc	A35 AT 18"oc	12d AT 4"oc	5/8"Ø AB AT 42"oc
SW3	1/2" PLY or 7/16" OSB	8d AT 3"oc	(2)ROWS 10d AT 6"oc	A35 AT 16"oc	(2)ROWS 12d AT 6"oc	5/8"Ø AB AT 36"oc
SW2	1/2" PLY or 7/16" OSB	8d AT 2"oc	(2)ROWS 10d AT 4"oc	A35 AT 12"oc	(2)ROWS 12d AT 4"oc	5/8"Ø AB AT 24"oc

- BLOCK PANEL EDGES WITH 2x4 LAID FLAT AND NAIL PANELS TO INTERMEDIATE SUPPORTS WITH 8d AT 12"oc.
- 8d NAILS SHALL BE 0.131"Ø x 2-1/2" x 0.281"Ø, 10d NAILS SHALL BE 0.131"Ø x 3" x 0.281"Ø, AND 12d NAILS SHALL BE 0.131"Ø x 3-1/4" x 0.281"Ø.
- EMBED CAST IN PLACE ANCHOR BOLTS AT LEAST 7". FOR POST INSTALLED ANCHOR BOLTS, USE 5/8"Ø x 6" TITEN HD SCREWS, UNO (SINGLE 2x SILL). ALL BOLTS SHALL HAVE 3" x 3" x 0.229" PLATE WASHERS. THE PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE WITH SHEATHING.
- 3x STUDS OR DBL STUDS NAILED TOGETHER w/ 10d NAILING IS REQD AT ABUTTING PANEL EDGES OF SW3, AND SW2. REFER TO DETAIL C. WHERE 3x STUDS ARE USED, STAGGER NAILS AT ADJOINING PANEL EDGES.
- TWO STUDS MINIMUM OR POST PER PLAN ARE REQUIRED AT EACH END OF ALL SHEARWALLS AND ALL END STUDS SHALL RECEIVE PANEL EDGE NAILING.
- ALL NEW EXTERIOR WALLS SHALL BE SW6, UNLESS NOTED OTHERWISE.
- NAILS SHALL NOT BE SPACED LESS THAN 3/8" FROM EDGES OF SHEATHING. SHEATHING NAILS SHALL BE DRIVEN SO THEIR HEADS ARE FLUSH WITH SHEATHING (NOT COUNTERSUNK).
- LTP4's INSTALLED OVER SHEATHING WITH 8d (0.131"Ø x 2-1/2" x 0.281"Ø) NAILS MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.
- A35's OR LTP4's MAY BE ELIMINATED PER DETAIL A OR DETAIL B.

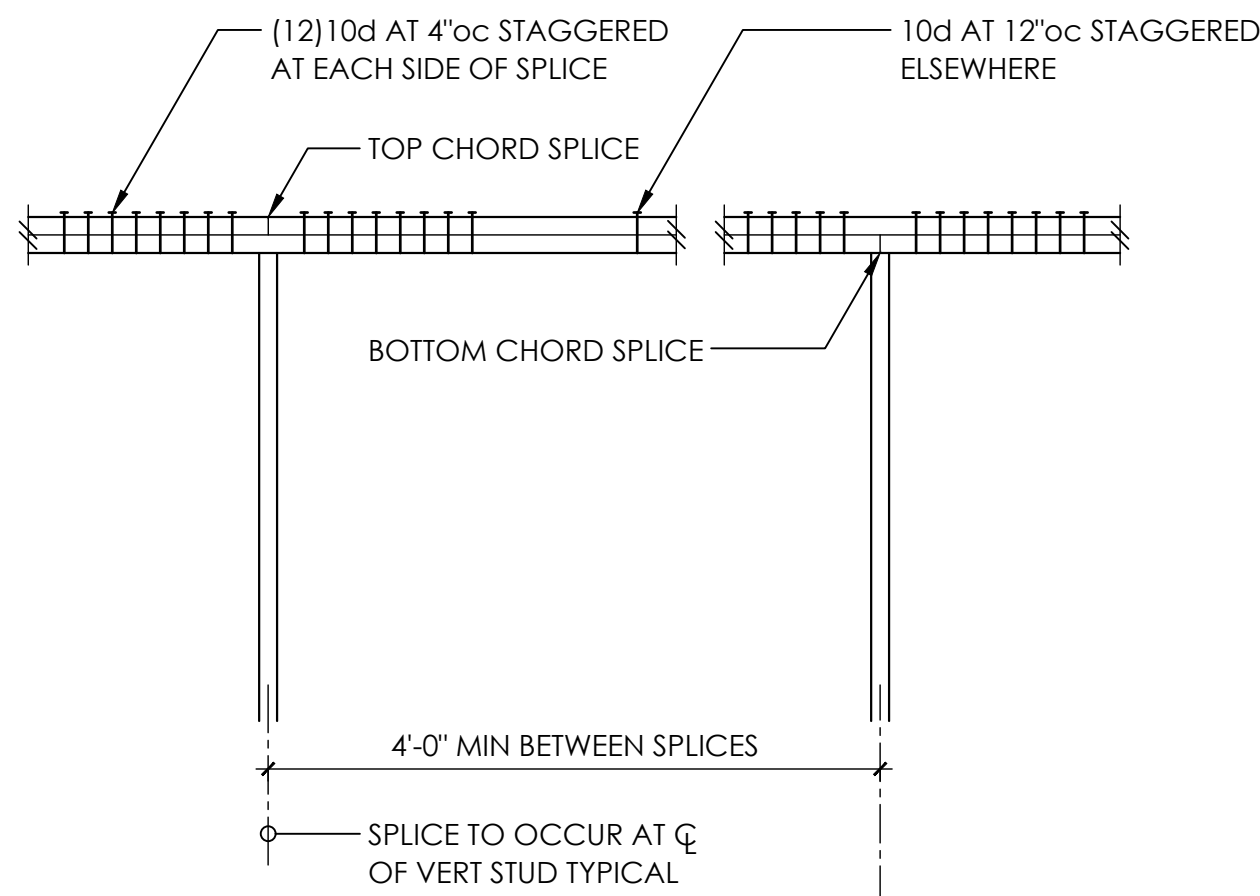
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5

TYPICAL FLUSH AND DROPPED BEAM

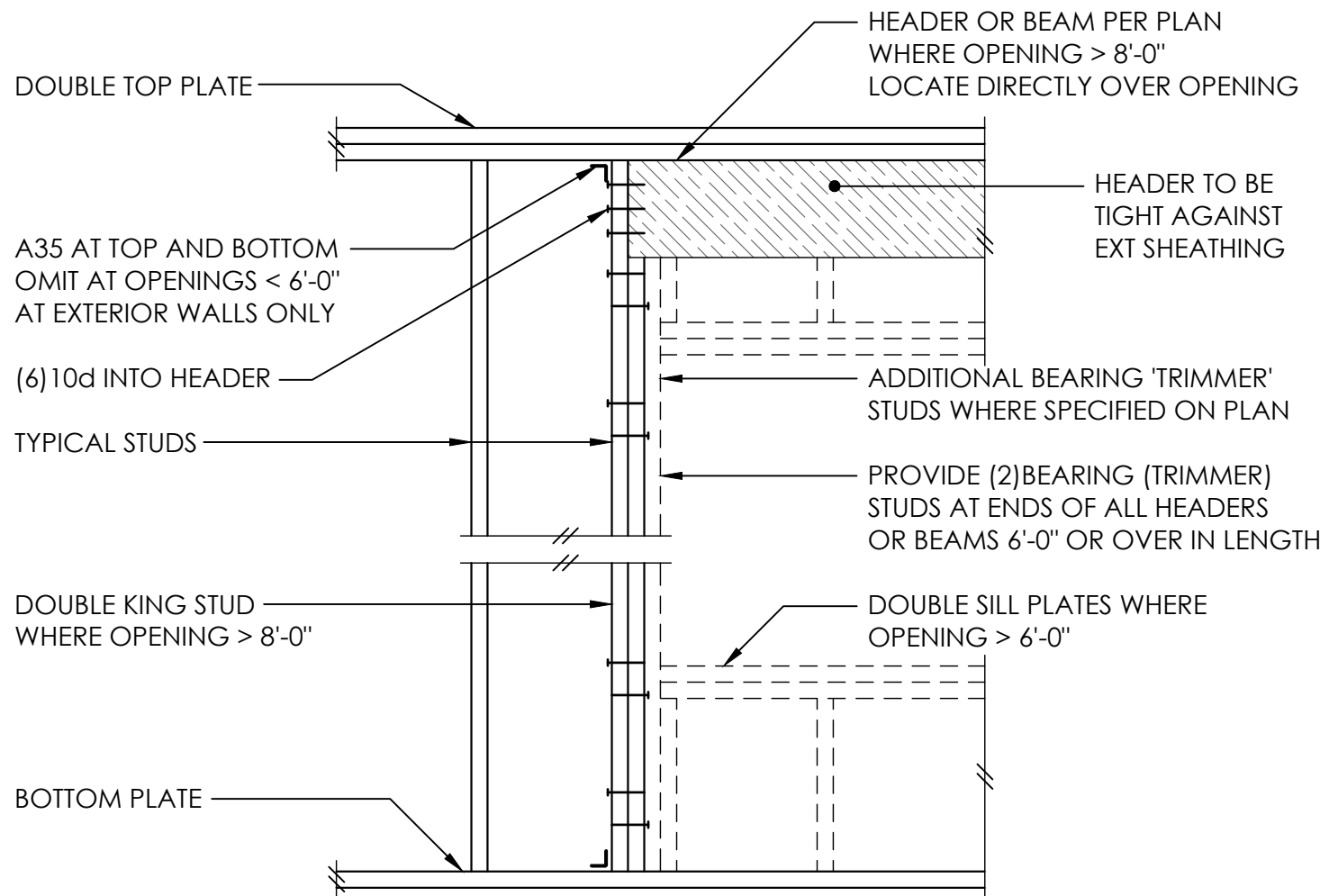
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- NOTE:
- NAILING AT TOP PLATE SPLICES MAY BE ELIMINATED w/ CS16 x 30"
 - WHERE VERTICAL PENETRATIONS THRU PLATE EXCEED 1" FOR A 4x WALL OR 3" FOR A 6x WALL - PROVIDE CS16 x 30" AT TOP PLATE
 - MINIMUM EDGE DISTANCE FOR VERTICAL PENETRATIONS THRU TOP PLATE IS 1-1/4"

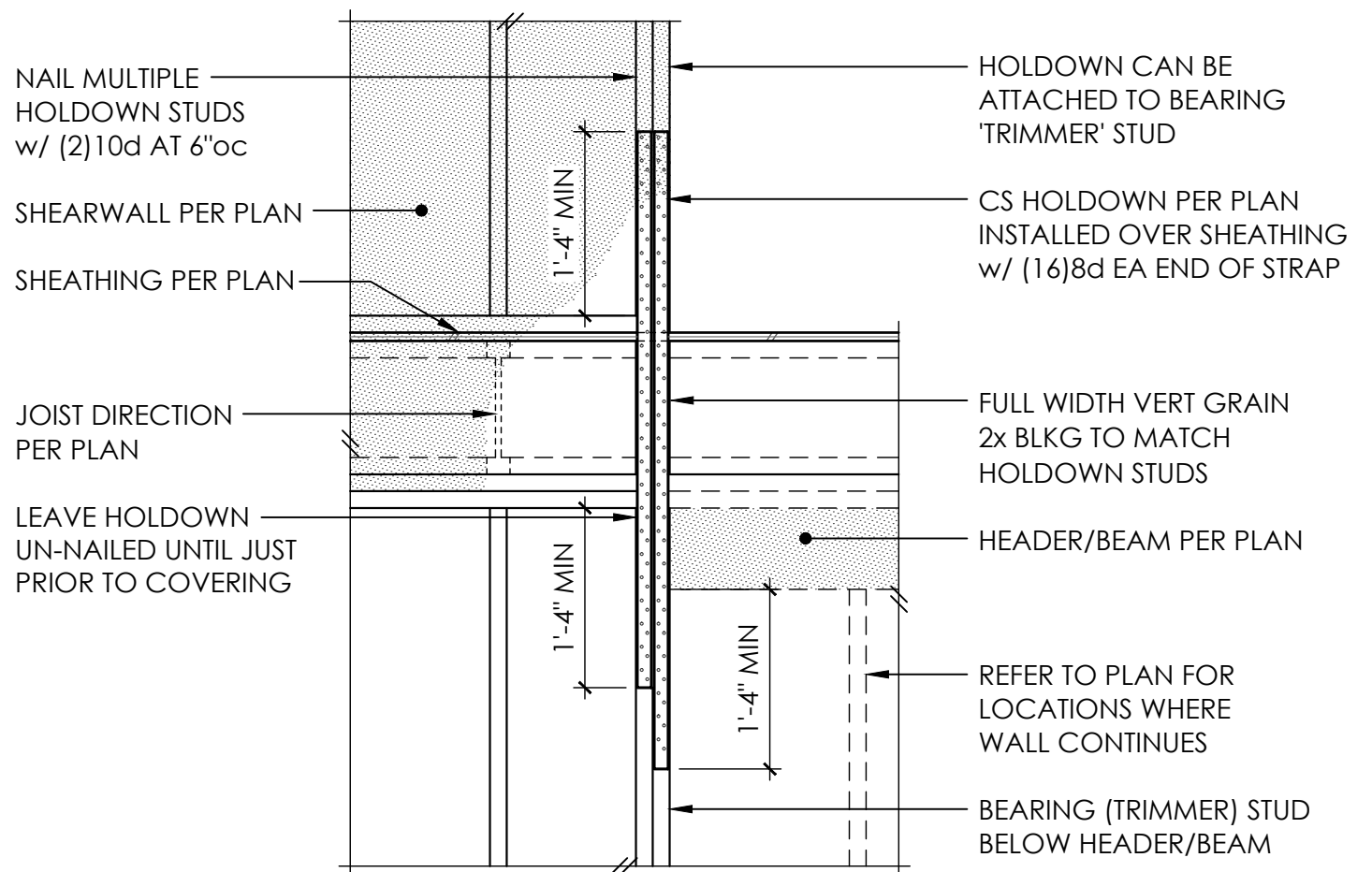
TYPICAL TOP PLATE SPLICE

7



TYPICAL HEADER SUPPORT

8

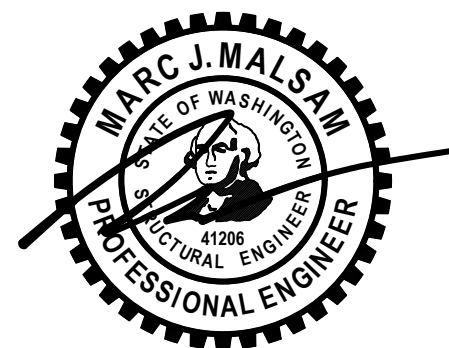


TYPICAL CS16 HOLDOWN

12



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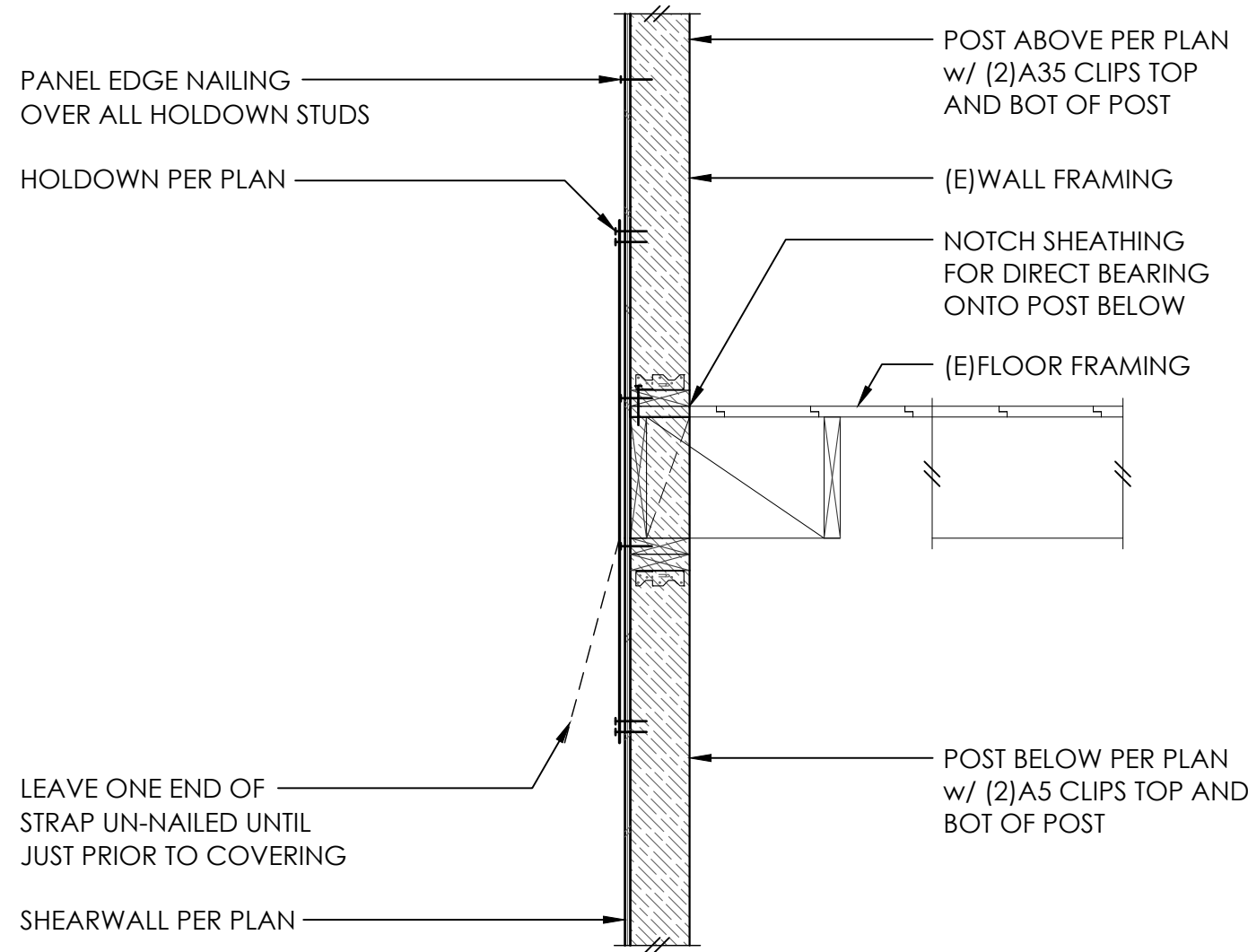


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PROJECT MANAGER	IHL	
DRAWN	RAP	
ENGINEER	QUINN MACKENZIE	
	206.637.1380	
	QUINNWM@MALSAM-TSANG.COM	
REV	DESCRIPTION	DATE
	PERMIT SET	3.21.25
	FOUNDATION RETROFIT	6.10.25
	PILE REVISIONS	8.20.25
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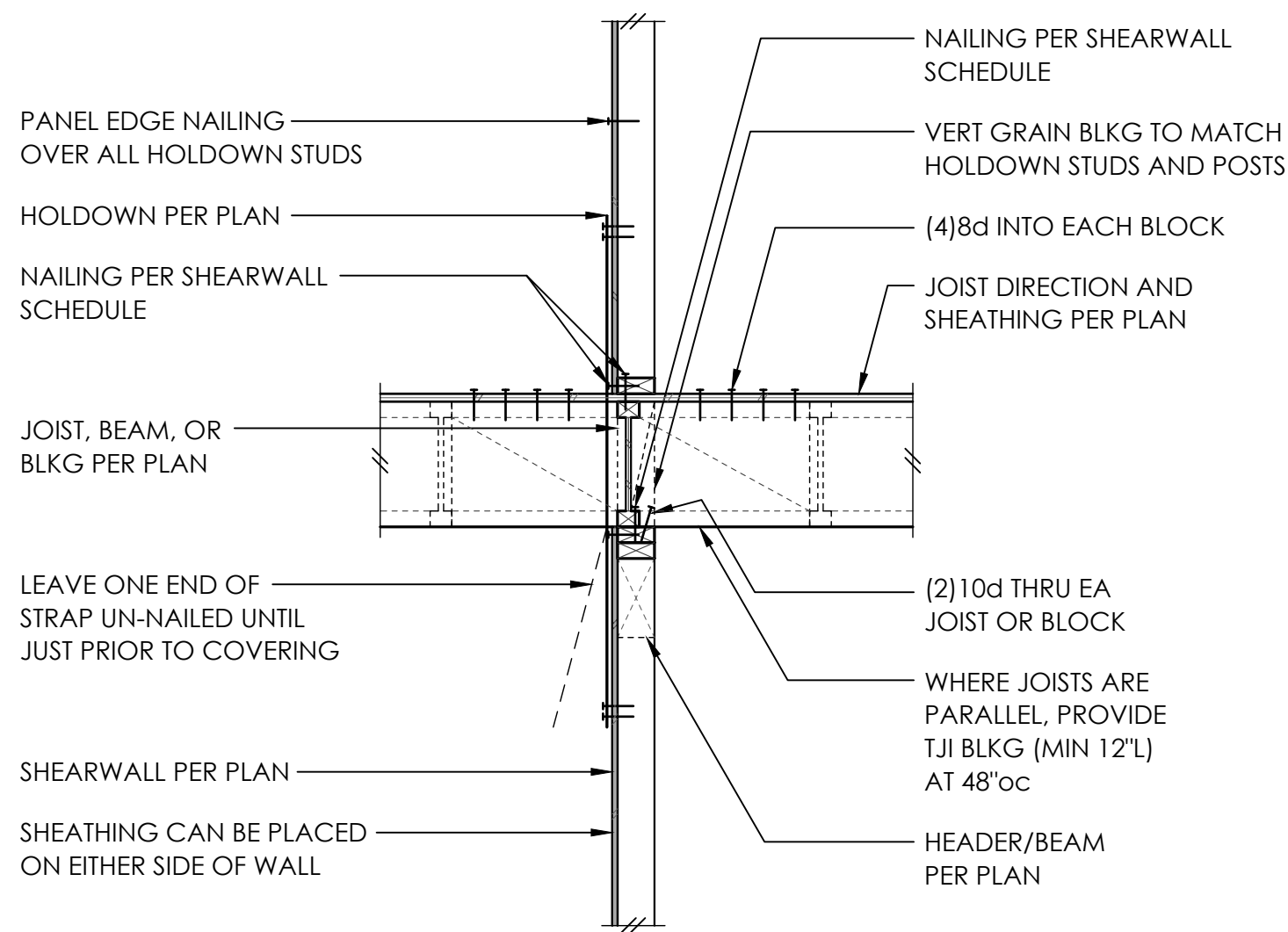
TYPICAL WOOD
FRAMING DETAILS

S4.0
SCALE - 3/4" = 1'-0"

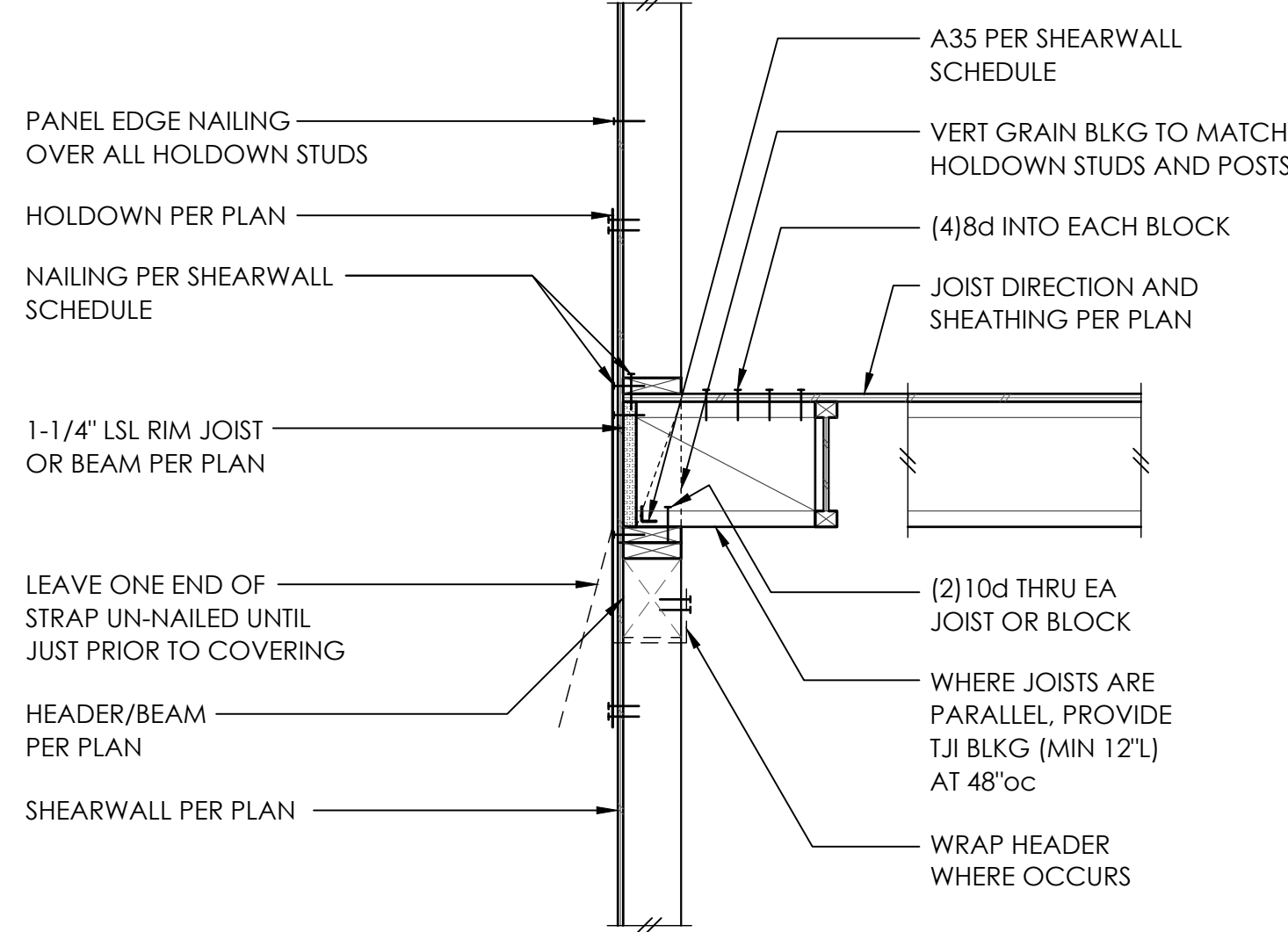
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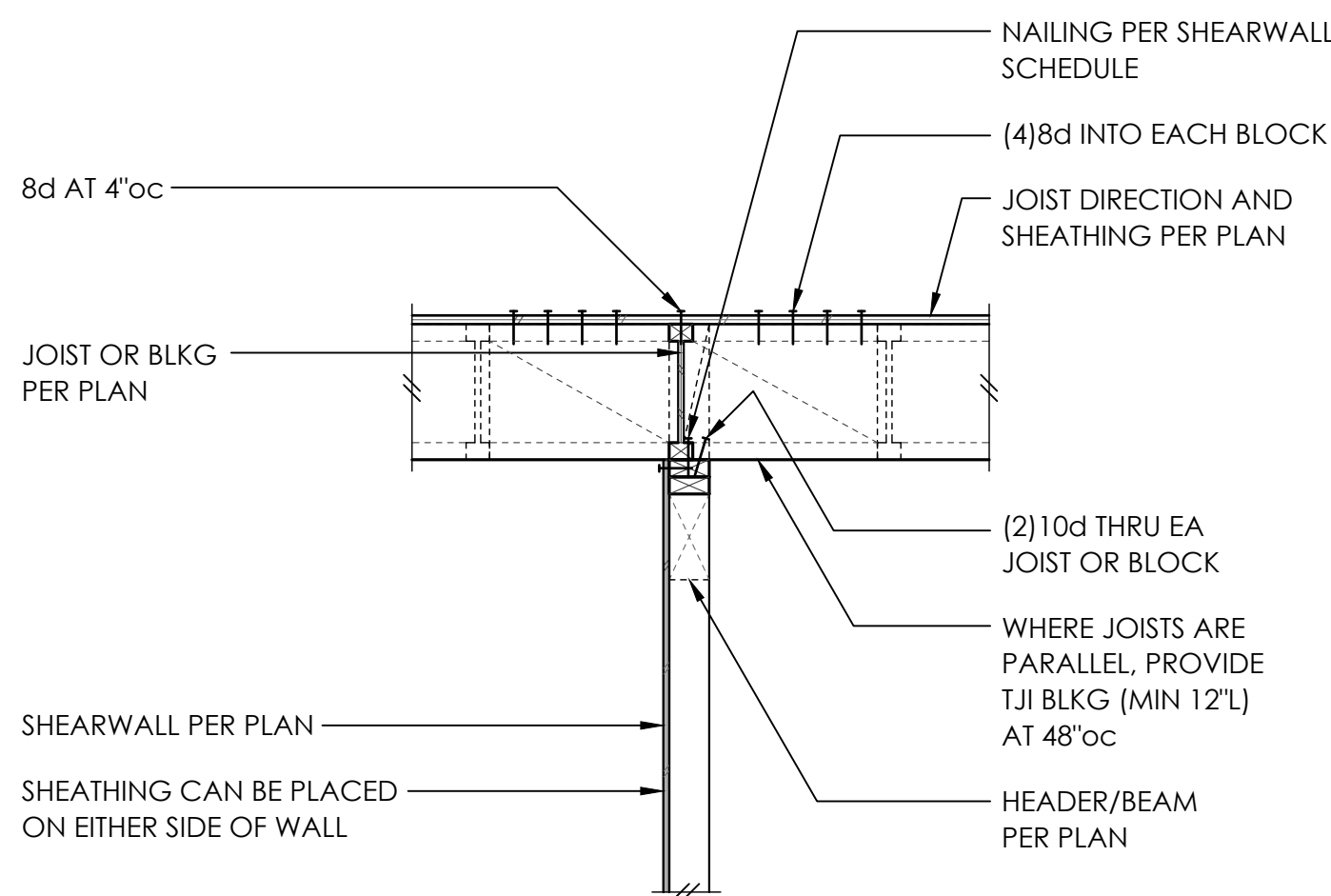
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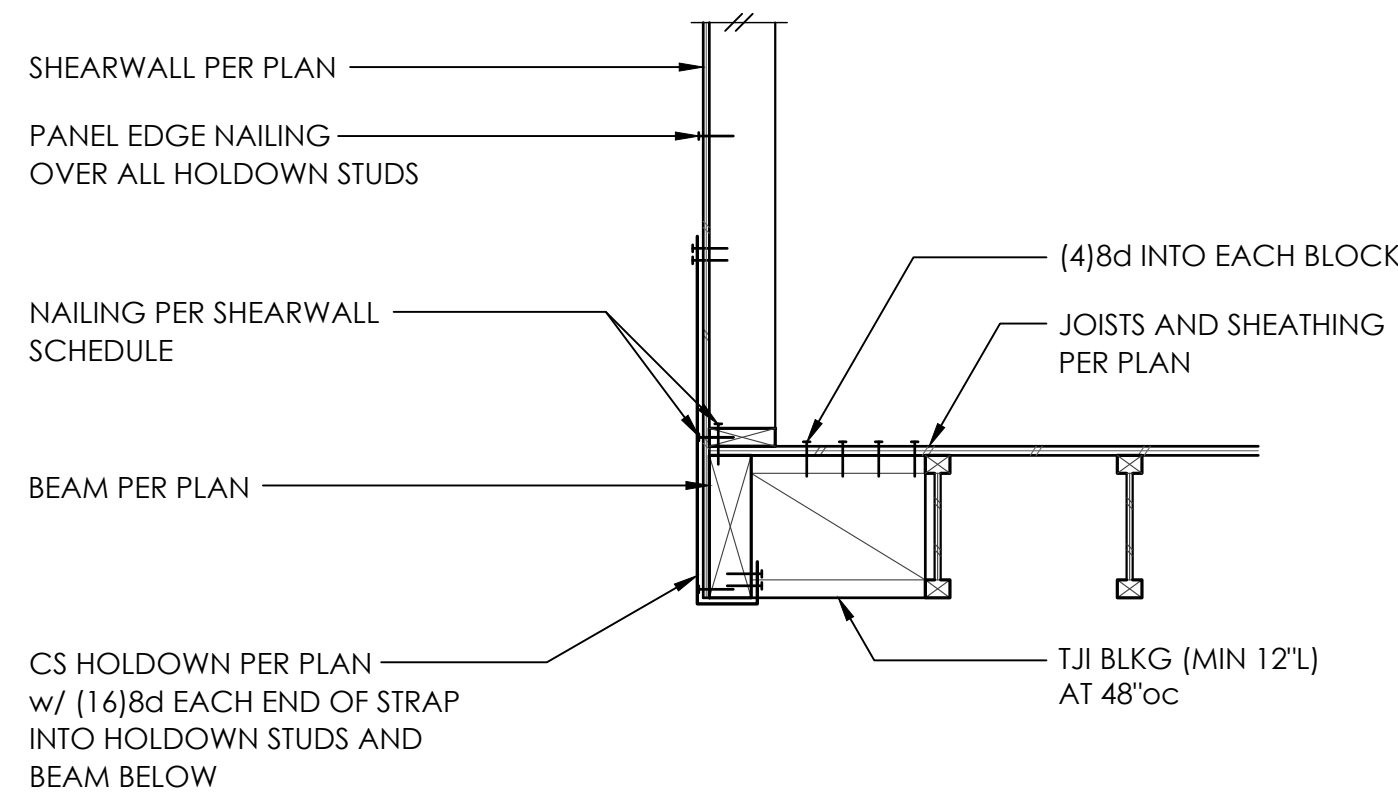
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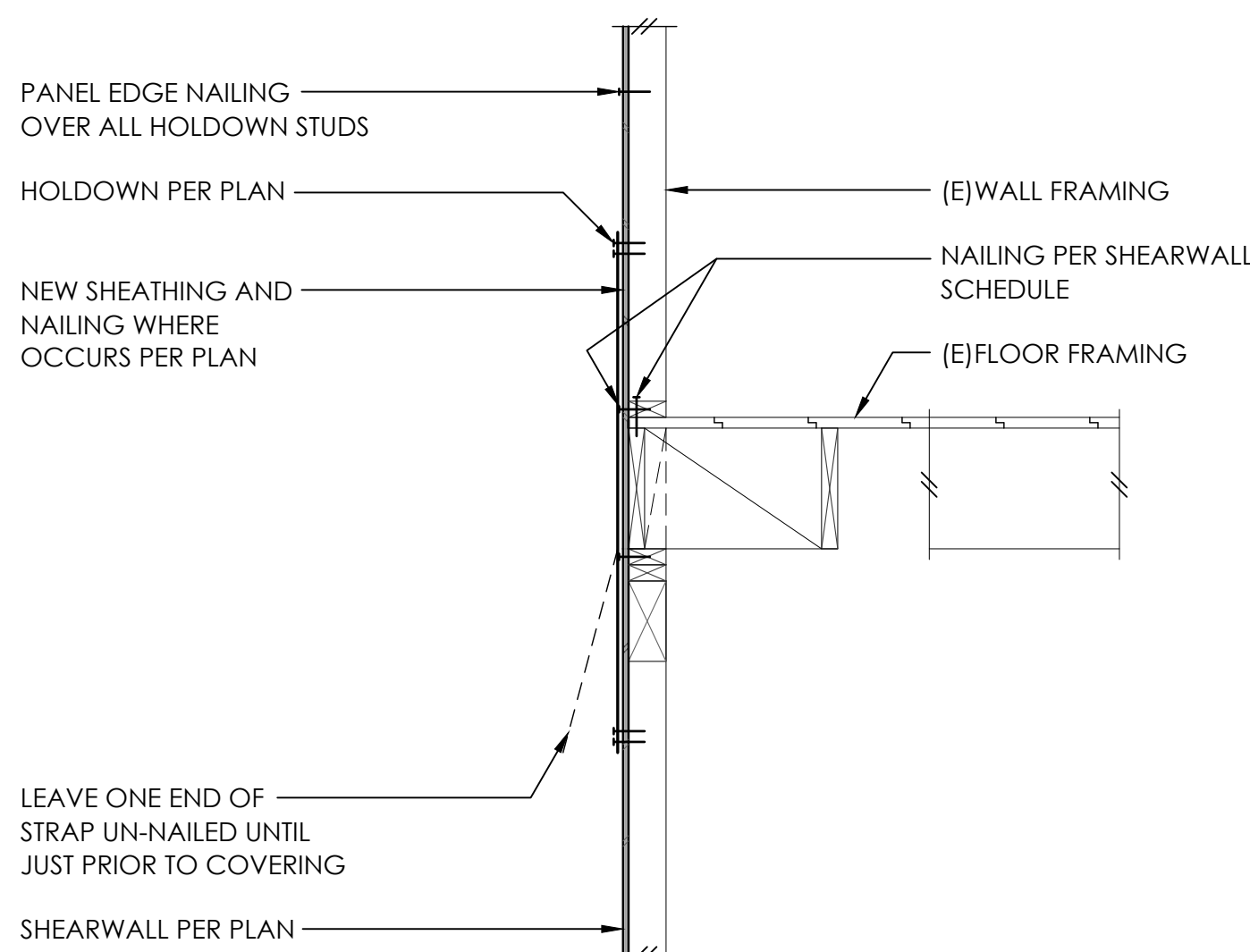
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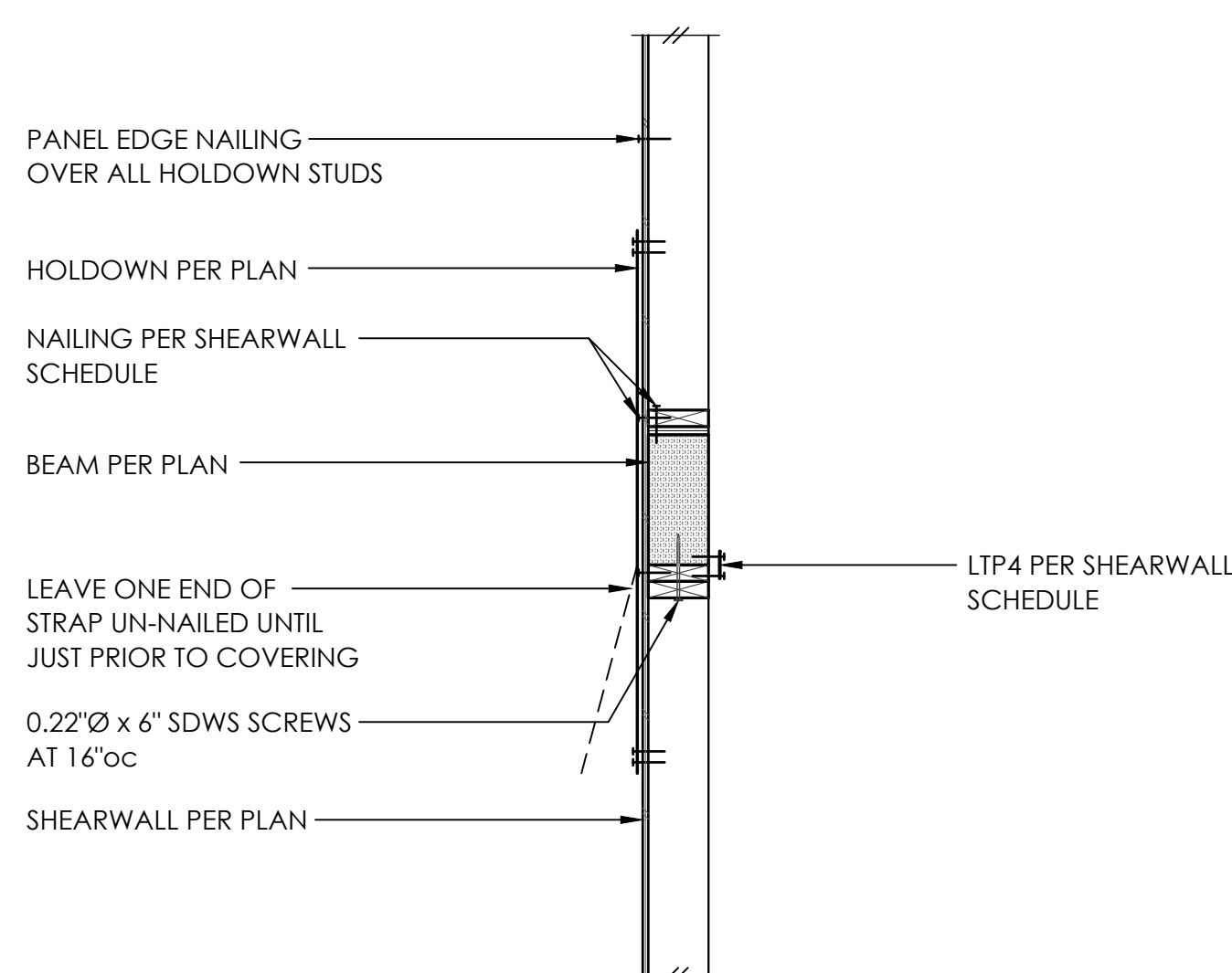
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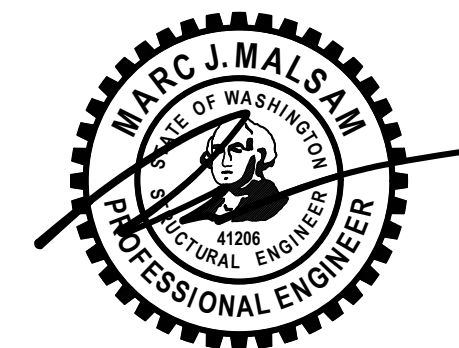
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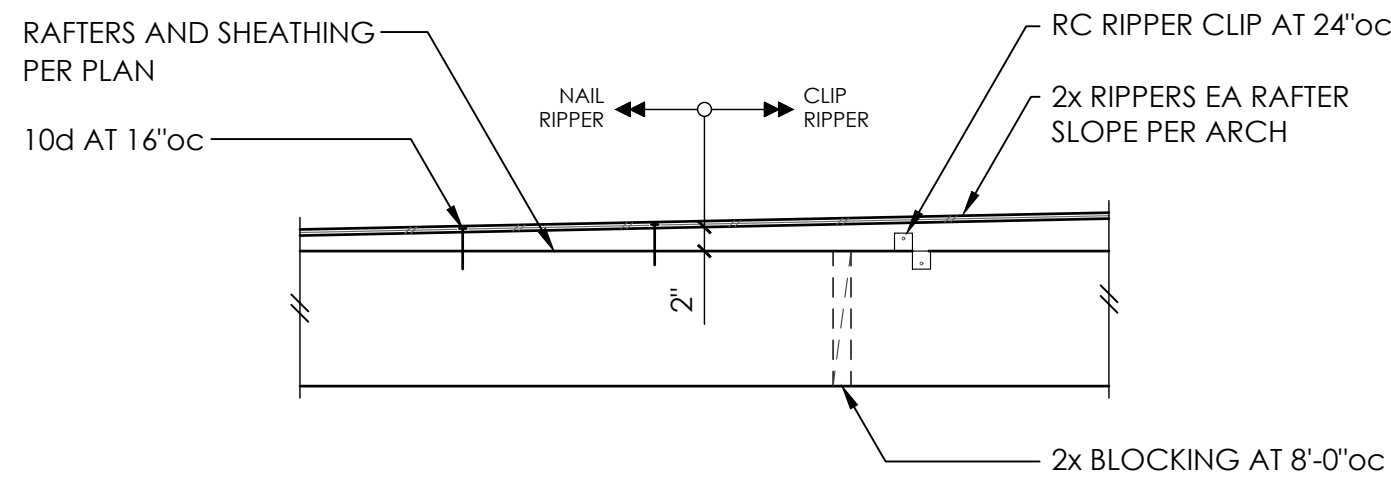
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DRAWN RAP
ENGINEER QUINN MACKENZIE
206.637.1380
QUINN@MALSAM-TSANG.COM

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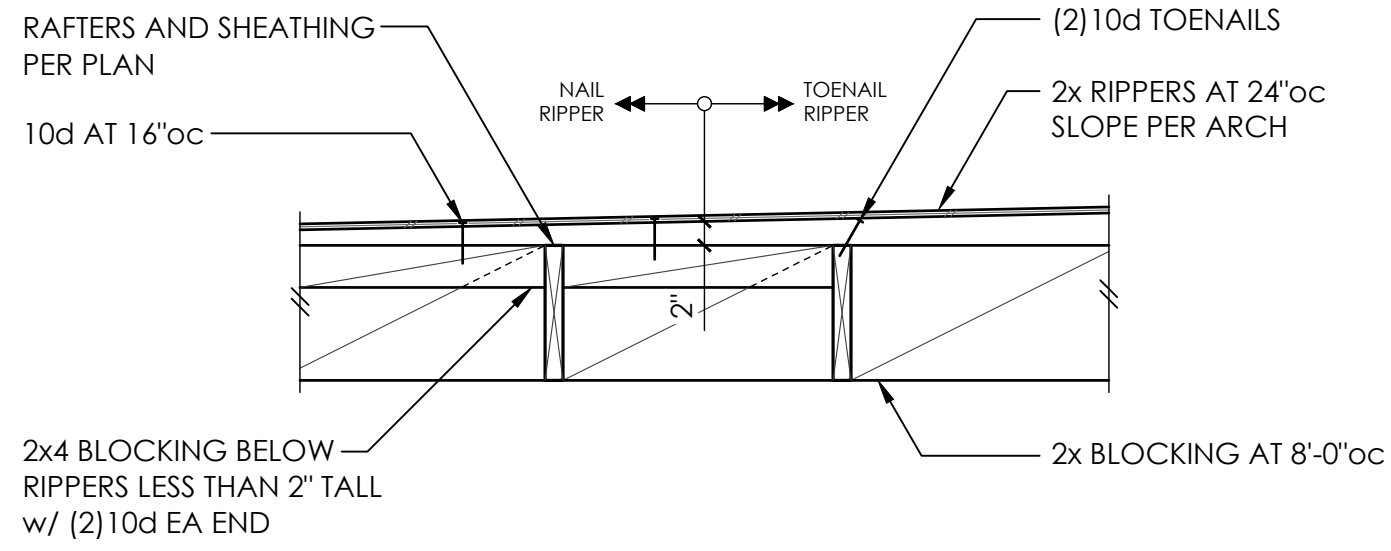
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**WOOD FRAMING
DETAILS**

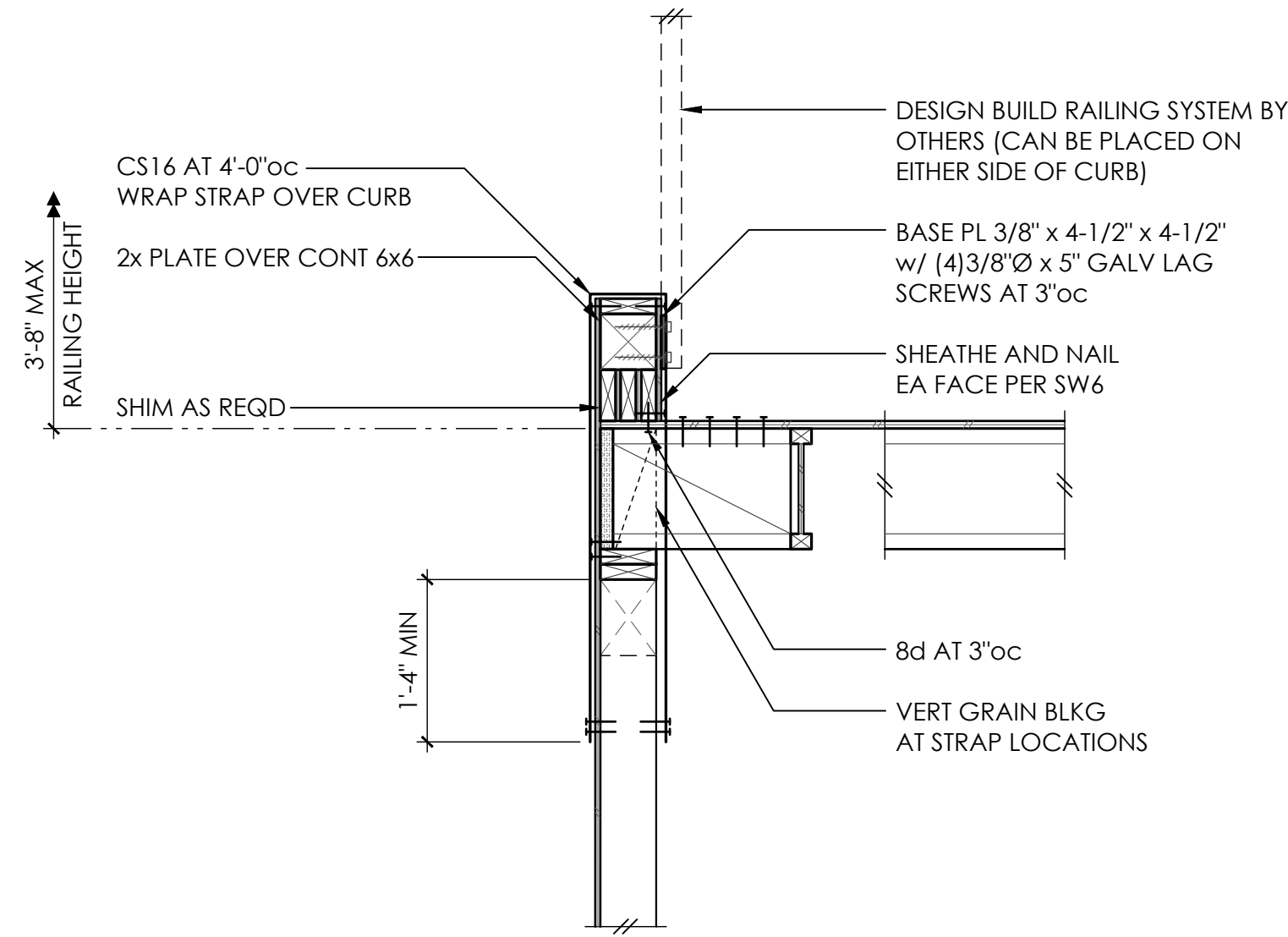
S4.1
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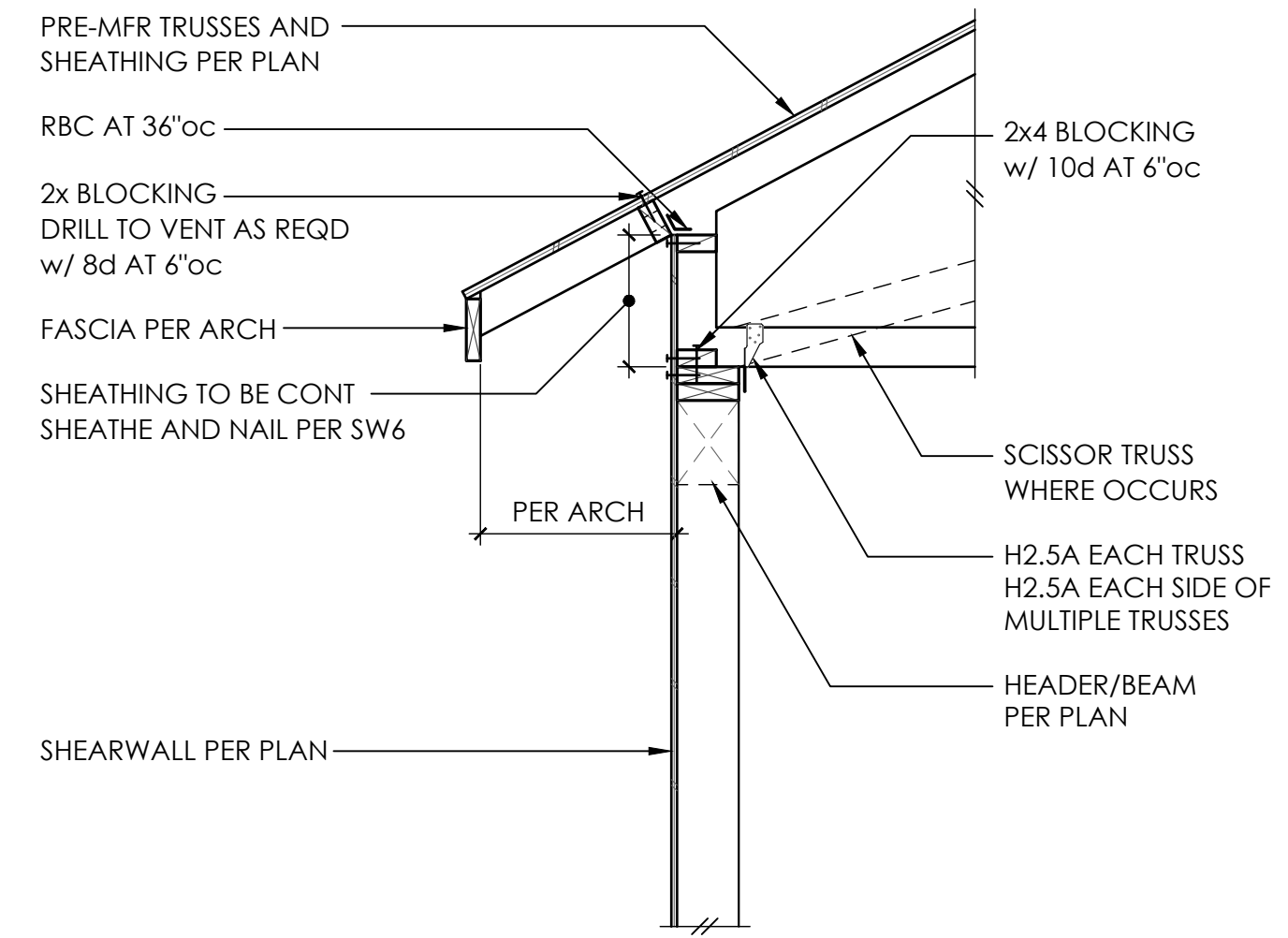
TYPICAL RIPPER ALIGNED w/ RAFTERS



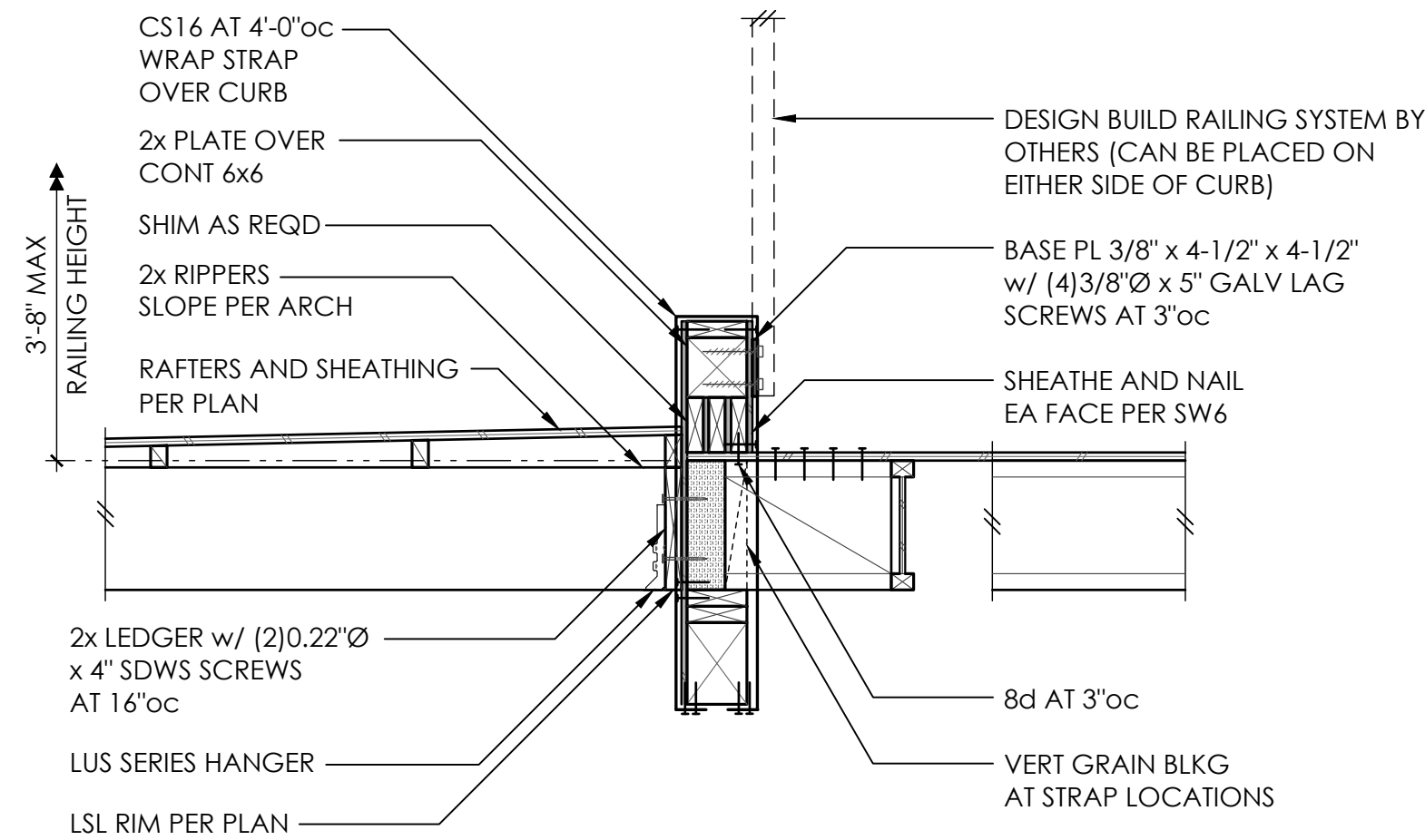
TYPICAL RIPPER PERPENDICULAR TO RAFTERS



3

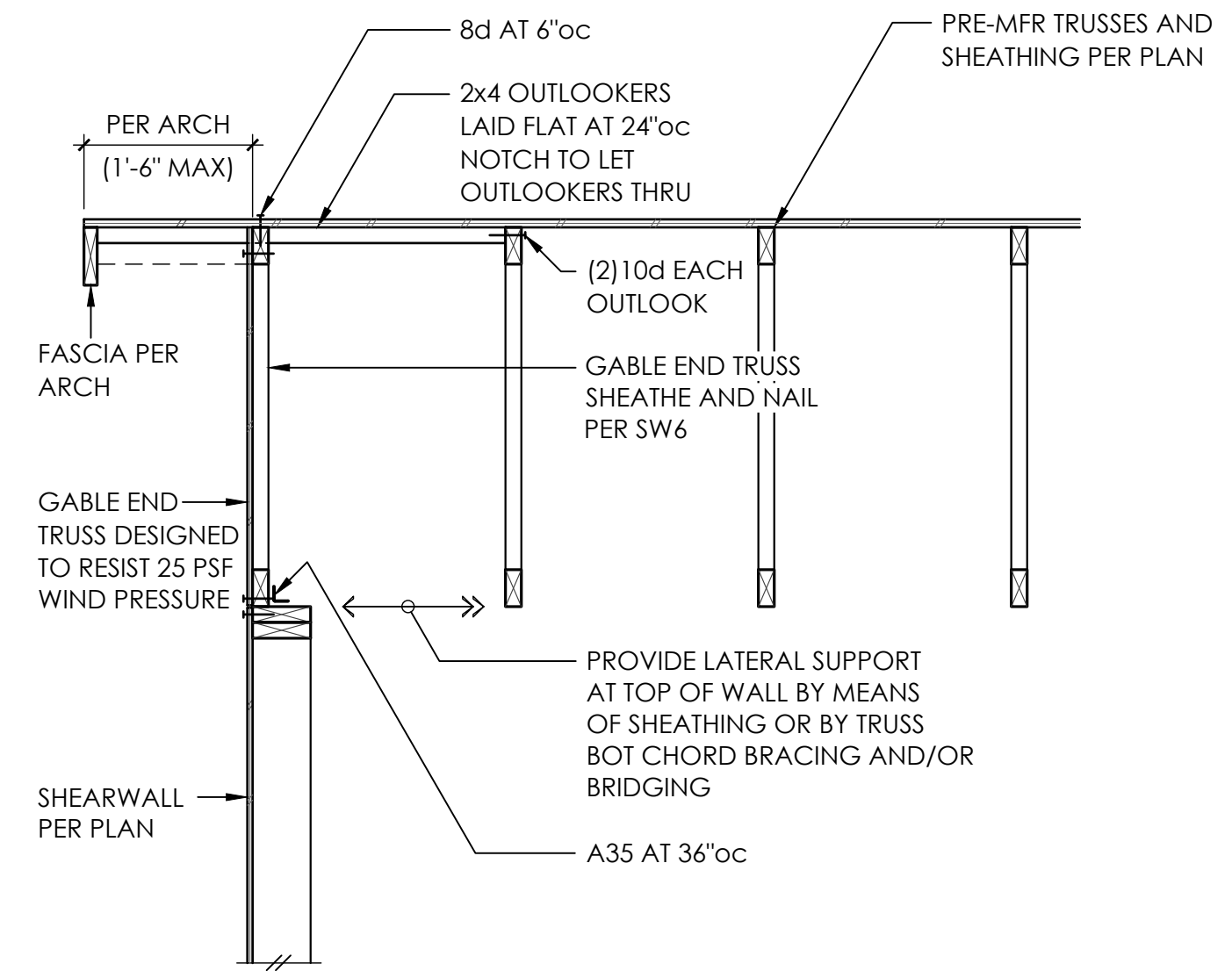


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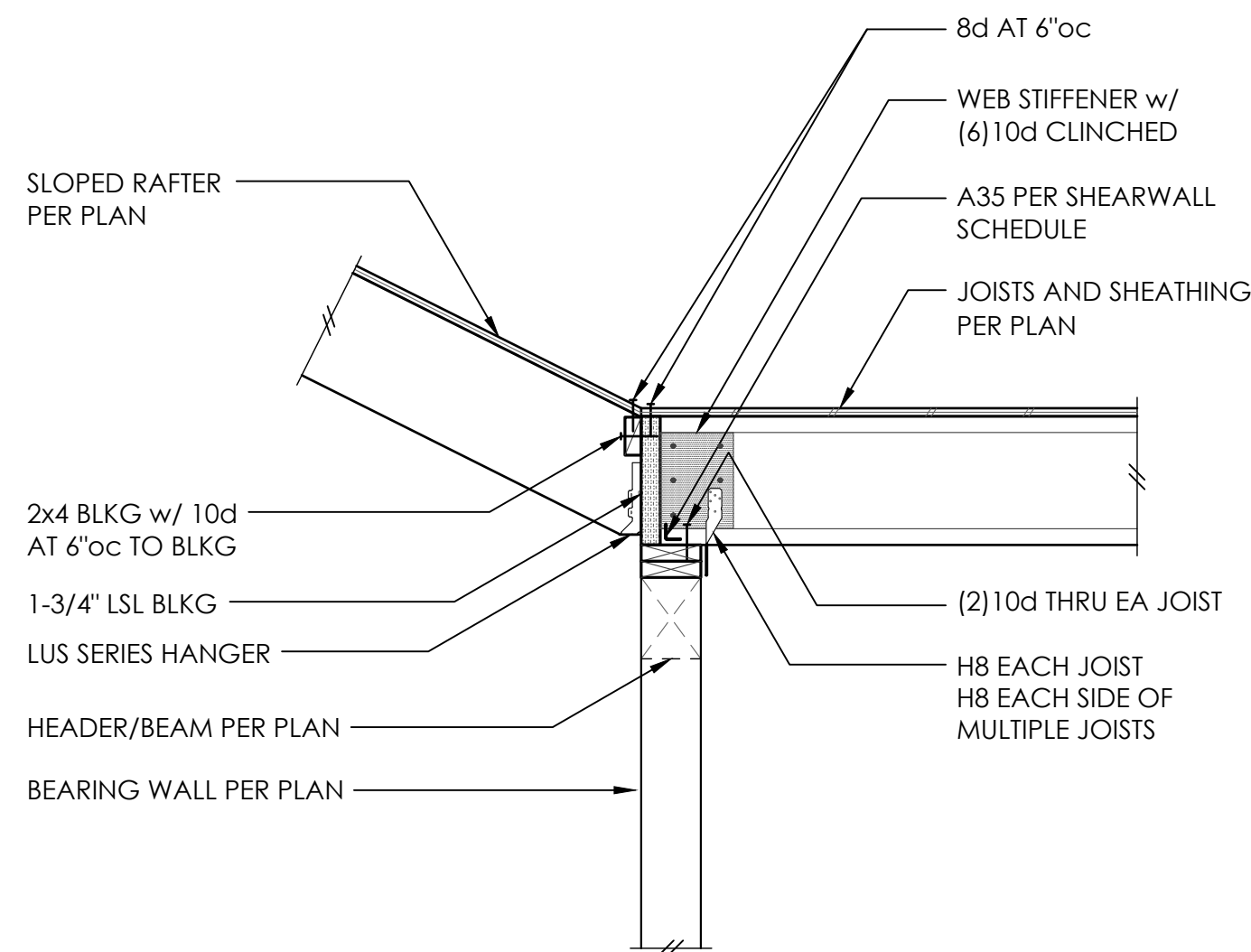


FOR CALLOUTS
IN COMMON
REFER 3/S4.2

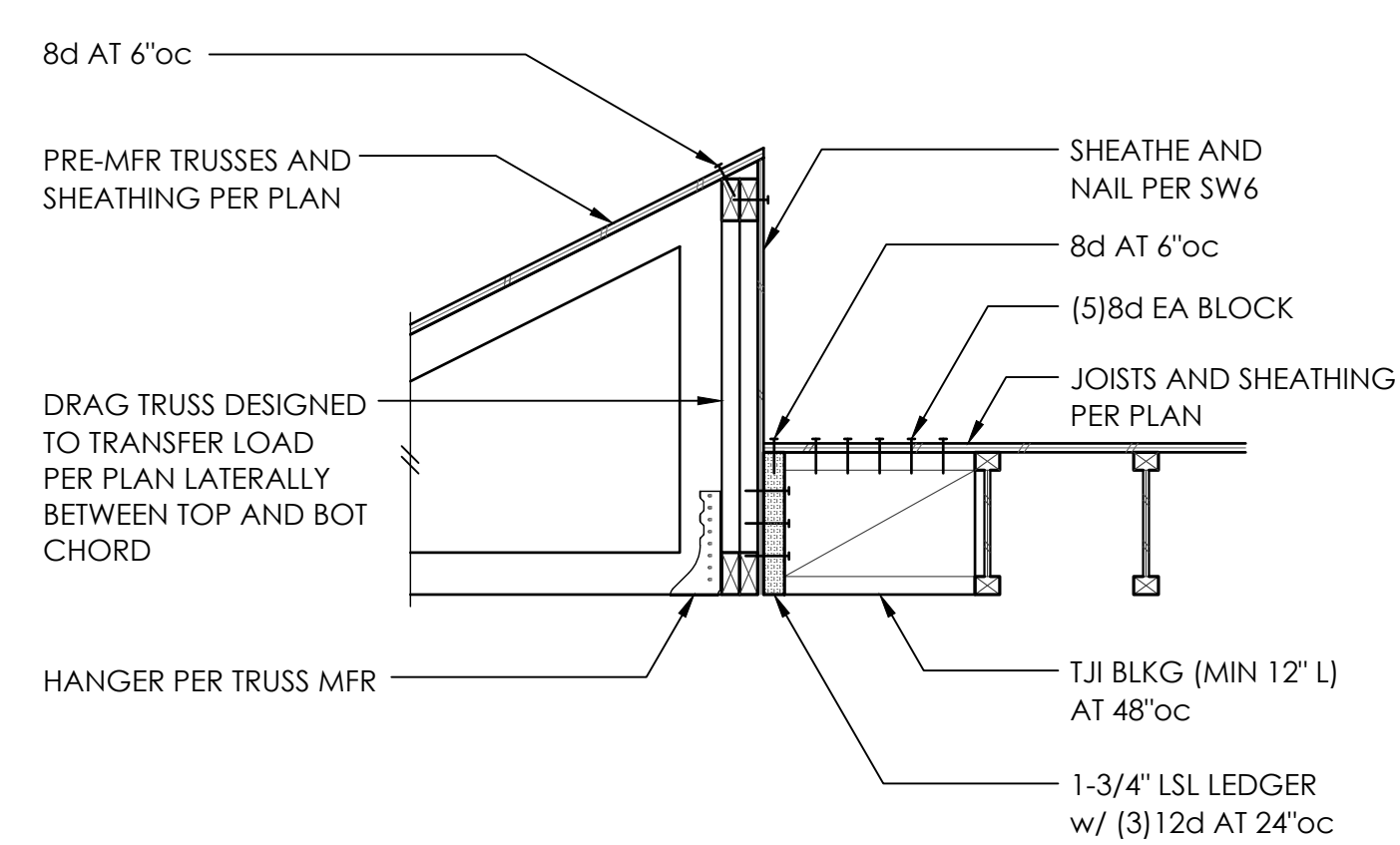
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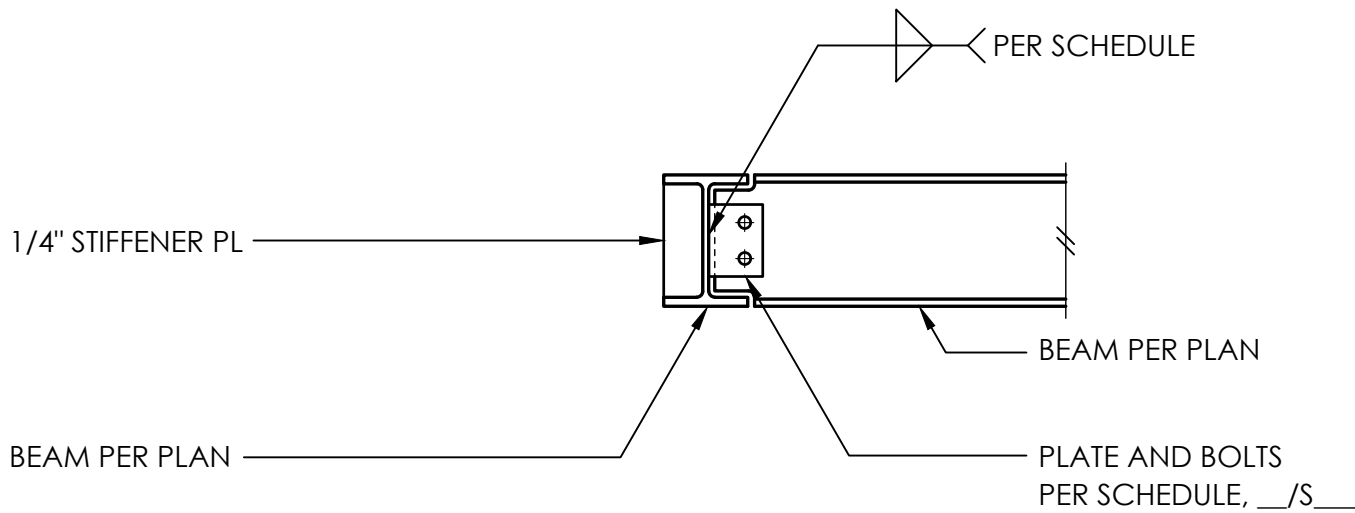
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TYPICAL BEAM TO BEAM CONNECTION

4



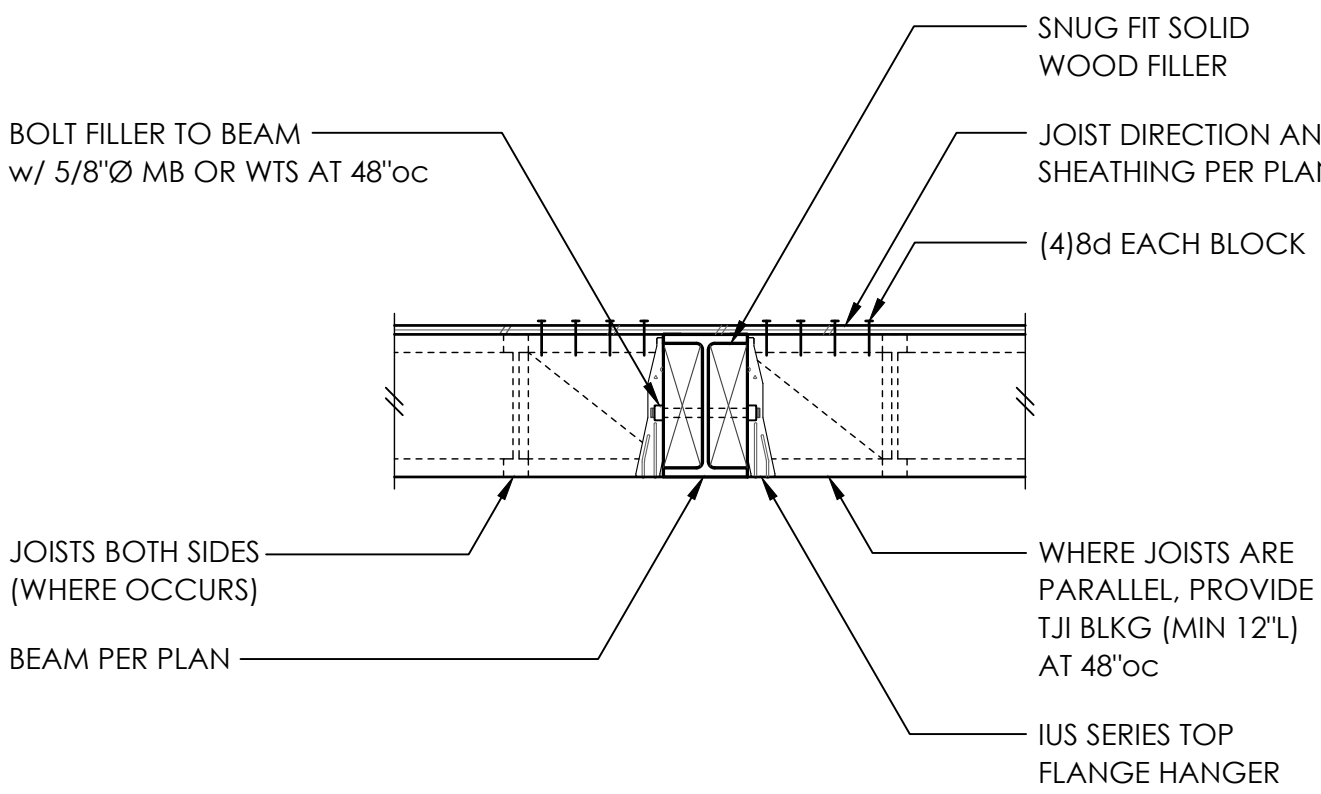
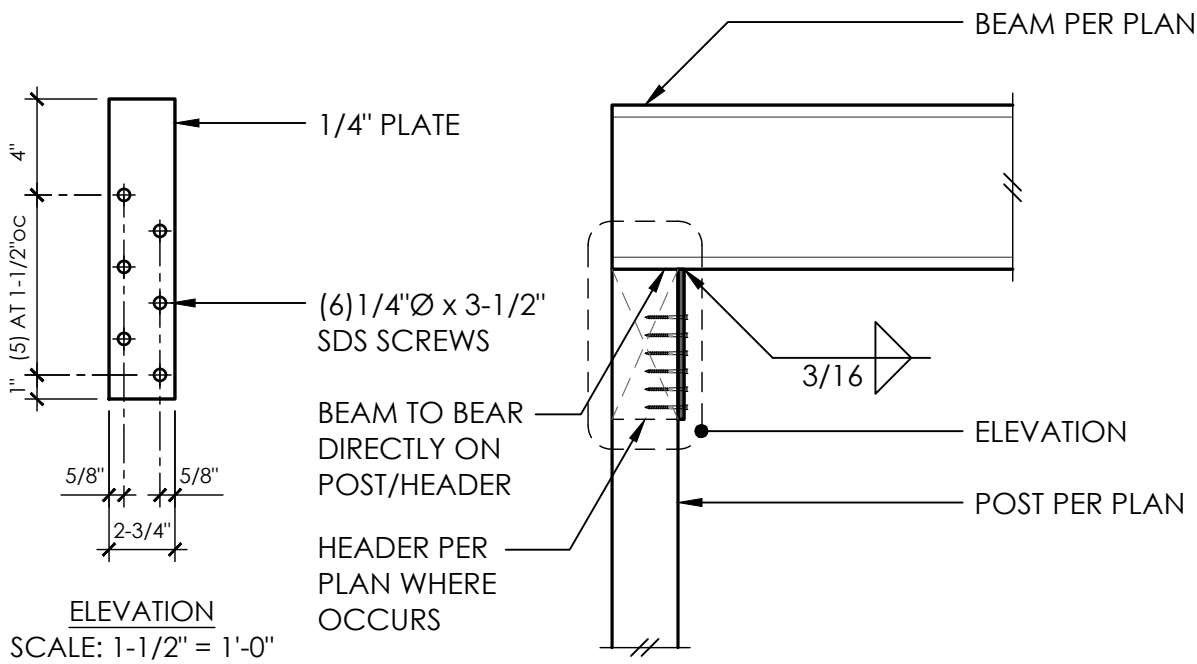
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7

TYP SINGLE SHEAR PLATE CONNECTION AND SCHEDULE

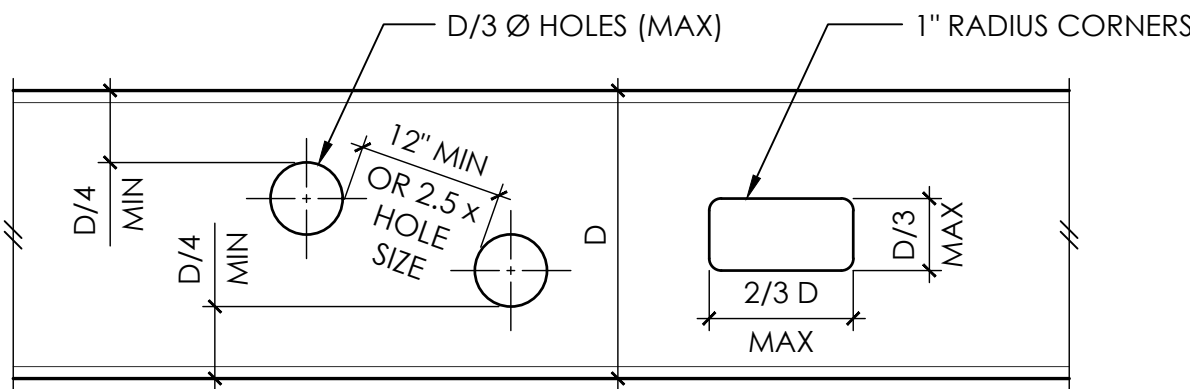
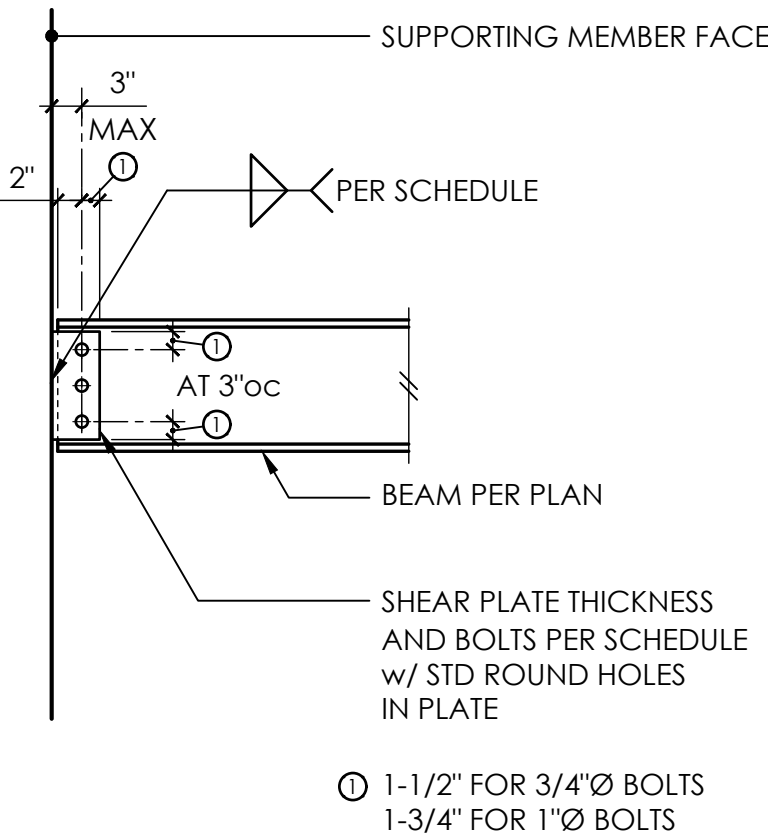
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SHEAR PLATE SCHEDULE

BEAM SIZE	NO OF BOLTS	BOLT SIZE	PLATE THK	WELD SIZE	CAP
W8/W10	2	7/8"Ø	5/16"	1/4"	21.8k
W12	3	7/8"Ø	5/16"	1/4"	32.6k
W14	3	7/8"Ø	5/16"	1/4"	32.6k
W16	4	7/8"Ø	5/16"	1/4"	43.5k
W18	5	7/8"Ø	5/16"	1/4"	54.4k
W21	4	1"Ø	3/8"	5/16"	50.6k
W24	5	1"Ø	3/8"	5/16"	64.4k
W27	6	1"Ø	3/8"	5/16"	74.2k
W30	7	1"Ø	3/8"	5/16"	86.0k

BOLT TYPE - A325N
PLATE MATERIAL - A36
CAPACITY LISTED PER AISC MANUAL,
FIFTEENTH ADDITION, TABLE 10-10g



- CONTRACTOR SHALL COORDINATE SIZES AND LOCATIONS OF ALL BEAM PENETRATIONS w/ MECHANICAL DRAWINGS. ALL PENETRATIONS LARGER THAN 2"Ø SHALL BE SHOWN ON SHOP DRAWINGS OR SKETCHES AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. FIELD CUTTING NOT PERMITTED WITHOUT APPROVAL.
- OPENINGS MAY OCCUR IN MIDDLE HALF OF BEAM LENGTH ONLY.
- NO CUTTING MAY OCCUR IN TOP OR BOTTOM QUARTER OF BEAM DEPTH.
- ADJACENT OPENINGS MUST BE SPACED AT THE GREATER OF, 12" OR 2.5 x LARGER OPENING SIZE, EDGE TO EDGE.
- MAXIMUM SIZES OF OPENINGS SHALL BE D/3 Ø OR D/3 x 2D/3 AS SHOWN.
- NO OPENINGS SHALL OCCUR WITHIN 12" OF AN ADJACENT BEAM CONNECTION.
- REQUIRED OPENINGS NOT MEETING ABOVE CRITERIA SHALL BE SUBMITTED TO ENGINEER FOR REINFORCING DESIGN.

9

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11

TYPICAL STEEL BEAM PENETRATIONS

12



PROJECT NO 0496.2025.02.01
PROJECT MANAGER IHL
DRAWN RAP
ENGINEER QUINN MACKENZIE
206.637.1380
QUINN@MALSAM-TSANG.COM

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ARCH 5th2 STUDIO ARCHITECTS
425.287.1567
CLIENT ZHANG + HOU

STEEL DETAILS

S5.0
SCALE - 3/4" = 1'-0"