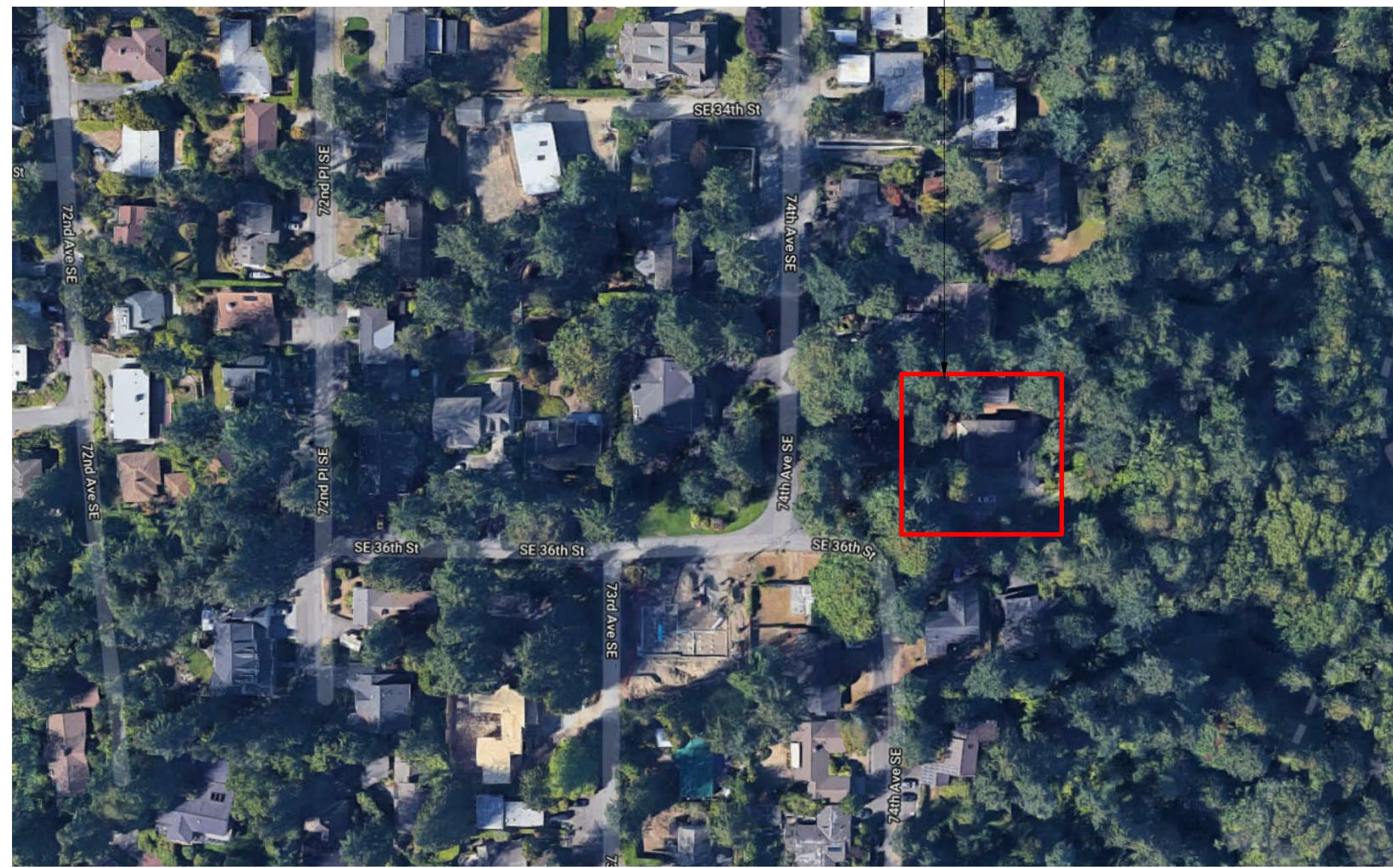
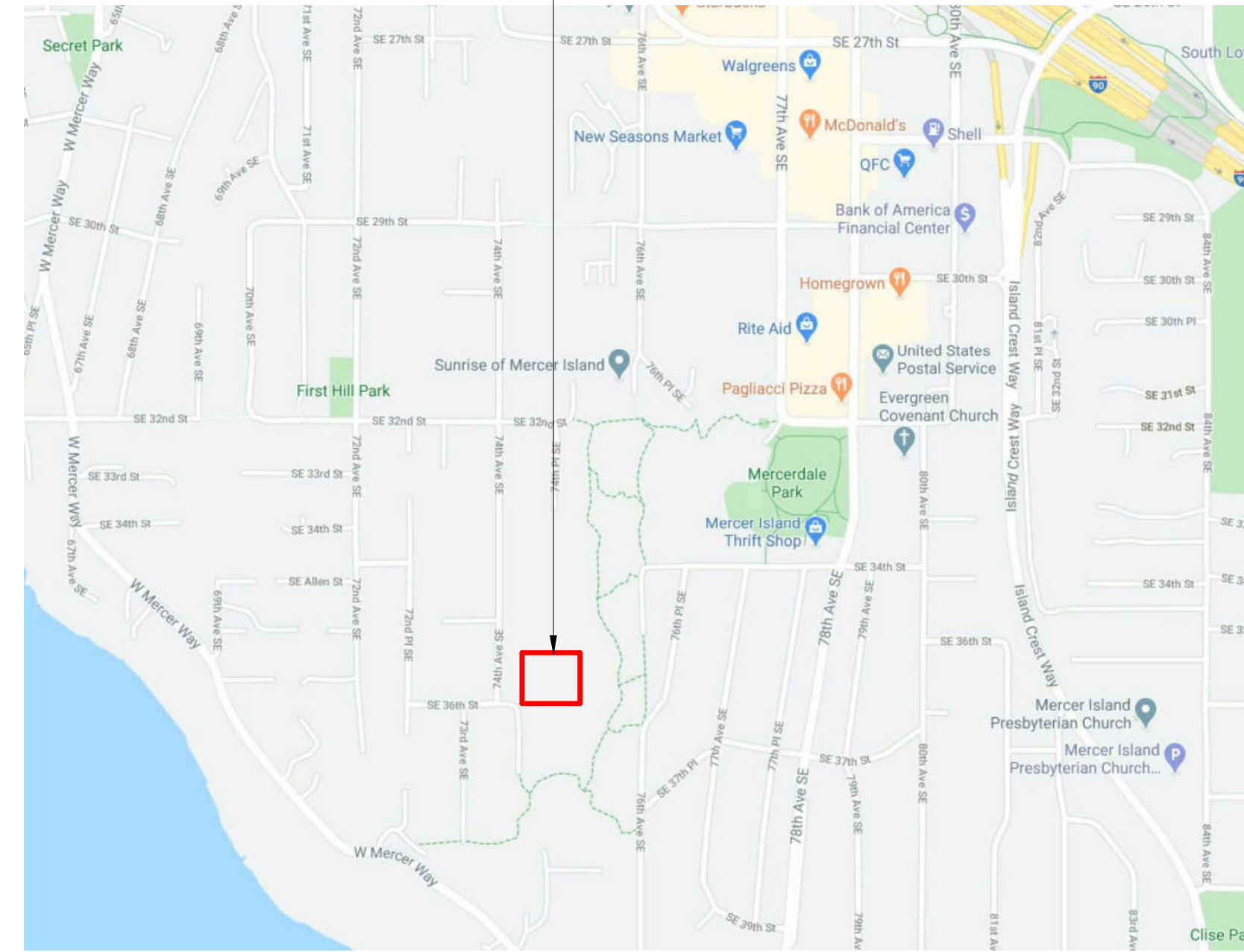


VICINITY MAP:



PROJECT LOCATION



PROJECT INFORMATION:

**SITE ADDRESS:** 3453 74th Ave SE  
Mercer Island, WA 98040  
1300301965

**TAX/PARCEL NUMBER:**

**LEGAL DESCRIPTION:**  
CALKINS C C 1ST TO EAST SEATTLE 16 THRU 20 & E 15 FT OF 21 THRU 25 TGW POR OF VAC STS ADJ  
PLAT BLOCK: 7  
PLAT LOT: 16 TO 25

**SCOPE OF PROJECT:**

**ZONING:** R-8.4

**LOT SIZE:** 21,618 SF

PROJECT CONSISTS OF DEMOLISHING EXISTING HOUSE AND BUILDING A NEW SINGLE-FAMILY RESIDENCE WITH ONE ACCESSORY BUILDING, A NEW DRIVEWAY AND OTHER ASSOCIATED SITE WORK.

FIRST FLOOR	LIVABLE FLOOR AREA	2,572.70 SF
	GARAGE/MECHANIAL AREA	567.40 SF
SECOND FLOOR	GROSS FLOOR AREA (ALLOWED AND PROVIDED)	1,599.13 SF
		<b>4,739.23 SF</b>

BASEMENT	887.63 SF
TOTAL BUILDING AREA	<b>5,626.86 SF</b>

**PROVIDED PARKING:** 2 COVERED 2 UNCOVERED

**ENFORCED CODES:**  
2015 International Residential Code with statewide and City amendments  
2015 International Mechanical Code with statewide and City amendments  
2014 Liquefied Petroleum Gas Code (NFPA 58)  
2015 National Fuel Gas Code (NFPA 54) for LP gas  
2015 International Fuel Gas Code with statewide and City amendments  
2015 International Fire Code with statewide and City amendments  
2015 Washington State Energy Code  
Washington Cities Electrical Code

**FIRE REQUIREMENTS:**  
**Sprinkler System:** An NFPA 13R fire sprinkler shall be provided in accordance with IRC P2904. The system shall be designed and the plans stamped by a person holding a Washington State Certificate of Competency. Contractor shall submit design to the Fire Department for approval. The system shall be installed by a state licensed sprinkler contractor.

Monitored Household Fire Alarm per NFPA 72 and Monitored Sprinkler Water Flow Alarm are required.

PROJECT CONTACTS:

<b>PROJECT DESIGNER:</b> GARRET CORD WERNER, LLC. 3132 WESTERN AVENUE SEATTLE, WA 98121 800.478.1956 CONTACT: AMIR PARNIANPOUR amir@garretcordwerner.com	<b>CLIENT:</b> SHANNON & INNHSUAN FOO 3453 74TH AVE SE MERCER ISLAND, WA 98040 305.613.5505 CONTACT: SHANNON FOO sulliv@gmail.com	<b>STRUCTURAL ENGINEER:</b> CT ENGINEERING INC 180 NICKERSON STREET SUITE 302 SEATTLE, WASHINGTON 98109 206.285.4512 CONTACT: ROB THOMPSON rthompson@ctengineering.com
<b>CIVIL ENGINEER:</b> CORE DESIGN, INC. 12100 NE 195TH STREET, SUITE 300 BOTHELL, WA 98011 425.885.7877 CONTACT: JOSHUA P.BEARD jpb@coredesigninc.com	<b>GEO TECH ENGINEER:</b> PANGEQ, INC. 3213 EASTLAKE AVE E, STE B, SEATTLE, WA 98102 206.262.0370 CONTACT: WILLIAM CHAO wchao@pangeoinc.com	<b>CONTRACTOR:</b> JAYMARC HOMES 7525 SE 24TH ST, STE 487 MERCER ISLAND, WA 98040 425.226.9100 Ext 142 CONTACT: JAMES MCNEAL jamesmcneal@jaymarchomes.com

SHEET LIST:

01-GENERAL		A202	ELEVATIONS
G000	COVER SHEET	A301	BUILDING SECTIONS
G001	ABBREVIATIONS	A302	BUILDING SECTIONS
G002	GENERAL PROJECT NOTES AND REQUIREMENTS	A303	BUILDING SECTIONS
		A304	WALL SECTIONS
G003	ENERGY CODE COMPLIANCE WORKSHEET	A501	TYPICAL ASSEMBLIES - INTERIOR
		A502	TYPICAL ASSEMBLIES - EXTERIOR
G004	SITE SURVEY	A503	TYPICAL ASSEMBLIES - FLOOR
G005	TREE RETENTION PLAN AND DEMO PLAN	A504	TYPICAL ASSEMBLIES - ROOF
G006	SITE PLAN AND DEVELOPMENT INFORMATION	A510	STAIRS PLANS & SECTIONS
		A511	STAIR DETAILS
02-ARCHITECTURE		A512	EXTERIOR DETAILS
A110	FLOOR PLAN - BASEMENT	A513	EXTERIOR DETAILS
A111	FLOOR PLAN - LEVEL 1	A601	WINDOW SCHEDULE & TYPES
A112	FLOOR PLAN - LEVEL 2	A610	DOOR SCHEDULE & TYPES
A116	FLOOR PLAN - ROOF		
A201	ELEVATIONS		



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- MILLWORKER TO CONFIRM ALL CLEARANCES.
- PERMIT DRAWINGS - NOT TO BE USED FOR CONSTRUCTION.
- DO NOT SCALE FROM THIS DRAWING
- ALL GLAZING TEMPERED SAFETY GLASS UNLESS OTHERWISE NOTED
- ELECTRICAL & LIGHTING DRAWINGS FOR DESIGN PURPOSES ONLY. SUBCONTRACTOR TO NOTIFY ARCHITECT OF ANY DISCREPANCIES OR NON-COMPLIANCE OF BUILDING CODES.

DATE	DRAWN BY
3/22/2021	AHP
SCALE	CHECKED BY
	GCW

PROJECT  
**'FOO' RESIDENCE**

3453 74th Ave SE  
Mercer Island, WA  
98040

REV	DATE	ISSUE/REVISION
1	7/15/20	Revision 1

DDP DEDICATED APPROVAL STAMP SPACE

SHEET TITLE  
**COVER SHEET**

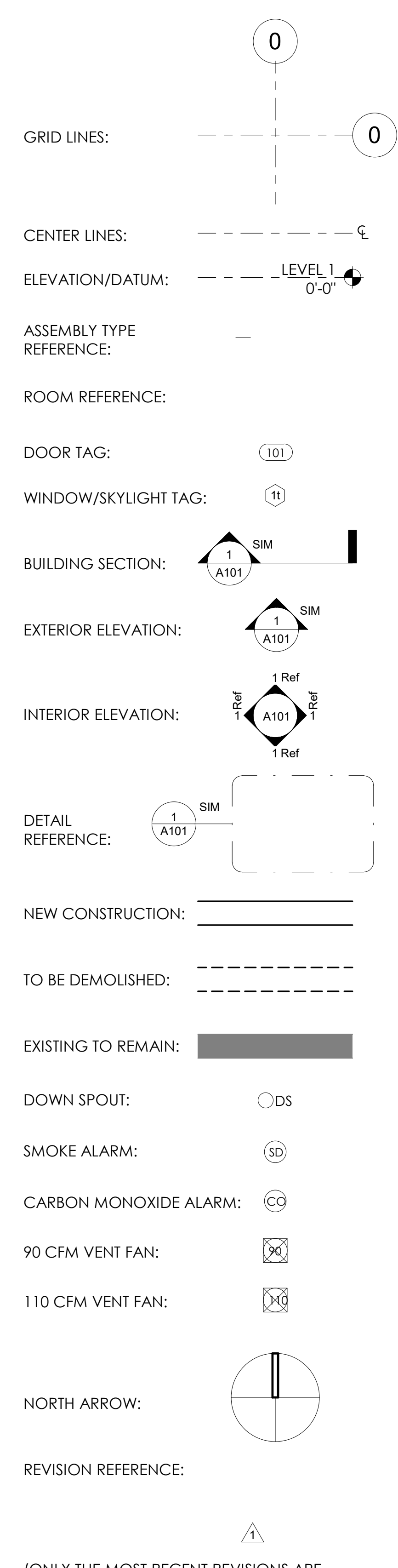
REVISION NO.	1
SUPERSEDES ALL PREVIOUS REVISIONS	
SHEET NO.	<b>G000</b>



**ABBREVIATIONS:**

AB	ANCHOR BOLT	ENG	ENGINEER	KIT	KITCHEN	S	SOUTH
ABV	ABOVE	ENT	ENTRANCE	KO	KNOCKOUT	SAF	SELF ADHERED FLASHING
ACC	ACCESS	EO	EDGE OF	KS	KITCHEN SINK	SALV	SALVAGE
ACOUST	ACOUSTICAL	EQ	EQUAL	LAM	LAMINATE, LAMINATED	SAM	SELF ADHERED MEMBRANE
ACP	ASPHALT CONCRETE	EQUIP	EQUIPMENT	LAV	LAVATORY	SAN	SANITARY
ACT	ACOUSTICAL TILE	ESTIMATE	ESTIMATE	LF	LINEAL FEET	SC	SOLID CORE
AD	AREA DRAIN	EW	EACH WAY	LH	LEFT HAND	SCHED	SCHEDULE
ADD	ADDITIVE	EXH	EXHAUST	LL	LIVE LOAD	S CONC	SCOURED CONCRETE
ADJ	ADJUSTABLE	EXIST	EXISTING	LN	LENGTH	SECT	SECTION
AFF	ABOVE FINISH FLOOR	EXP	EXPANDED/EXPANSION	LP	LOW POINT	SF	SQUARE FOOT
AGG	AGGREGATE	EXPO	EXPOSED	LT	LOCATION	SFGL	SAFETY GLASS
AIB	AIR AND MOISTURE BARRIER	EXT	EXTERIOR	LOC	LOCATION	SH	SHELF
ALT	ALTERNATIVE	EXTR	EXTRUDE	LT	LIGHT	SHR	SHOWER
ALUM	ALUMINUM	FA	FIRE ALARM	LTG	LIGHTING	SHT	SHEET
AP	ACCESS PANEL	FAB	FABRIC	LTL	LINTEL	SHTHG	SHEATHING
APPROX	APPROXIMATE	FB	FLAT BAR	MAN	MANUAL	SIM	SIMILAR
ARCH	ARCHITECT/ARCHITECTURAL	FBRK	FABRIC PANEL	MAS	MASONRY	SPEC	SPECIFICATION
ASL	ABOVE SEA LEVEL	FD	FIRE BRICK	MATL	MATERIAL	SQ	SQUARE
ASPH	ASPHALT	FDN	FLOOR DRAIN	MAX	MAXIMUM	SQ FT	SQUARE FOOT
AUTO	AUTOMATIC	FE	FOUNDATION	MB	MACHINE BOLT	SQ IN	SQUARE INCH
		FE	FIRE EXTINGUISHER	MC	MEDICINE CABINET	SS	STAINLESS STEEL
BD	BOARD	FEC	FIRE EXTINGUISHER CABINET	MDO	MEDIUM DENSITY OVERLAY	ST	STRAIGHT
BITUM	BITUMINOUS	FIN	FINISH	MECH	MECHANICAL	STA	STATION
BLDG	BUILDING	F/F	FINISH TO FINISH	MEMB	MEMBRANE	STD	STANDARD
BLK	BLOCK	FL; FLR	FLOOR; FLOORING	MET	METAL	STL	STEEL
BM	BEAM	FLASH	FLASHING	MEZZ	MEZZANINE	STOR	STORAGE
BOT	BOTTOM	FLUOR	FLUORESCENT	MFR	MANUFACTURER	STRUCT	STRUCTURAL
BO	BOTTOM OF	FLX	FLEXIBLE	MH	MANHOLE	STWY	STAIRWAY
BSMT	BASEMENT	FO	FINISHED OPENING	MIN	MINIMUM	SUR	SURFACE
BRG	BEARING	FOC	FACE OF CONCRETE	MIR	MIRROR	SUSP	SUSPENDED
BRK	BRICK	FOF	FACE OF FRAMING	MISC	MISCELLANEOUS	SYM	SYMMETRICAL
BUR	BUILT UP ROOFING	FOIC	FURNISHED BY OWNER INSTALLED BY CONTRACTOR	MLD	MOLDING		
BVL	BEVELED	FOM	FACE OF MASONRY	MO	MASONRY OPENING	TB	TOWEL BAR
		FOS	FACE OF STUDS	MOD	MODULE	TC	TOP OF CURB
CAB	CABINET	FRPF	FIREPROOF	MTD	MOUNTED	TEL	TELEPHONE
C/C	CENTER TO CENTER	FRPL	FIREPLACE	MTL	MATERIAL	TER	TERRAZZO
CEM	CEMENT	FR	FRAME	MUL	MULLION	T&G	TONGUE AND GROOVE
CER	CERAMIC	FRT	FIRE RETARDANT TREATED	MWK	MILLWORK	THK	THICK
CG	CORNER GUARD	FT	FOOT/FEET	N	NORTH	THR	THRESHOLD
CI	CAST IRON	FTG	FOOTING	N/A	NOT APPLICABLE	THRMR	THERMAL
CIP	CAST-IN-PLACE	FURN	FURNITURE	NIC	NOT IN CONTACT	THRU	THROUGH
CJ	CONTROL JOINT	FURR	FURRING	NO	NUMBER	TKBD	TACK BOARD
CLG	CEILING	FUT	FUTURE	NOM	NOMINAL	TLT	TOILET
CLKG	CAULKING	FV	FIELD VERIFY	NR	NOISE REDUCTION	TO	TOP OF
CLO	CLOSET	FW	FULL WIDTH	NTS	NOT TO SCALE	TOL	TOLERANCE
CLR	CLEAR			OA	OVERALL	TPH	TOILET PAPER HOLDER
CMU	CONCRETE MASONRY UNIT			OBS	OBSCURE	TRD	TREAD
CNTR	COUNTER	GA	GAUGE	OC	ON CENTER	TSL	TOP OF SLAB
COL	COLUMN	GAL	GALLON	OD	OUTSIDE DIAMETER	TST	TOP OF STEEL
CONC	CONCRETE	GALV	GALVANIZED	OFF	OFFICE	TSTAT	THERMOSTAT
CONN	CONNECTION	GC	GENERAL CONTRACTOR	OH	OVERHEAD	TT	TERRAZZO TILE
CONSTR	CONSTRUCTION	GFCI	GROUND FAULT CIRCUIT INTERRUPTOR	OPNG	OPENING	TV	TELEVISION
CONT	CONTINUOUS			OPP	OPPOSITE	TW	TOP OF WALL
CONTR	CONTRACTOR	GFRC	GLASS FIBER REINFORCED CONCRETE			TYP	TYPICAL
CORR	CORRIDOR			UNO	UNLESS NOTED OTHERWISE		
CP	CONCRETE PAVER	GLS	GLASS	UT	UTILITY		
CPT	CARPET/CARPETED	GR	GRADE				
CRS	COURSE	GRND	GROUND	PB	PARTICLE BOARD		
CTSK	COUNTERSUNK	GRNG	GRATING	PC	PRE-CAST CONCRETE		
CT	CERAMIC TILE	GRTG	GRAVEL	PCF	POUNDS PER CUBIC FOOT	VAR	VARIES
CTD	COATED	GVL	GRAVEL	PERP	PERPENDICULAR	VB	VINYL BASE
CTR	CENTER	GWB	GYPSUM WALL BOARD	PL	PROPERTY LINE, PLATE	VCT	VINYL COMPOSITION TILE
CWC	CHILLED WATER CABINET	GYP	GYPSUM	P LAM	PLASTIC LAMINATE	VERT	VERTICAL
CU FT	CUBIC FEET			PLAS	PLASTER	VEST	VESTIBULE
CVG	CLEAR VERTICAL GRAIN			PLYWD	PLYWOOD	VIF	VERIFY IN FIELD
		HB	HOSE BIB	PNL	PANEL	VNR	VENEER
		HC	HOLLOW CORE	PR	PAIR	VOL	VOLUME
		HD GALV	HOT DIPPED GALVANIZED	PSF	POUNDS PER SQUARE FOOT	VT	VINYL TILE
		HDR	HEADER	PT	POINT		
		HDO	HIGH DENSITY OVERLAY	PTD	PAINTED	W	WEST
		HDWD	HARDWOOD	PTN	PARTITION	W/	WITH
		HDWE	HARDWARE	PVC	POLYVINYL CHLORIDE	WB	WOOD BASE
		HM	HOLLOW METAL			WC	WATER CLOSET
		HORIZ	HORIZONTAL			WD	WOOD
		HP	HIGH POINT			WG	WIRE GLASS
		HR	HOUR	QT	QUARRY TILE	WH	WATER HEATER
		HT	HEIGHT	QTR	QUARTER	WIN	WINDOW
		HVAC	HEATING/VENTILATION/AIR CONDITIONING	QTY	QUANTITY	WLC	WALL COVERING
				R	RISER	W/O	WITHOUT
		HW	HOT WATER	RA	RETURN AIR	WP	WATERPROOF
		HWS	HOT WATER SUPPLY	RAD	RADIUS	WPR	WATERPROOFING
		HWT	HOT WATER TANK	RB	RUBBER BASE	WS	WEATHERSTRIPPING
				RCP	REFLECTED CEILING PLAN	WSCT	WAINSCOT
				RD	ROOF DRAIN	WT	WEIGHT
				RECP	RECEPTACLE		
				REF	REFERENCE		
				REFR	REFRIGERATOR		
				REINF	REINFORCE		
				REM	REMOVE		
				REQD	REQUIRED		
				RESIL	RESILIENT		
				REV	REVISION, REVISED		
				RF	ROOF		
				RGH	ROUGH		
				RGTR	REGISTER		
				RH	RIGHT HAND		
				RM	ROOM		
				RMV	REMOVE		
				RO	ROUGH OPENING		
				RWL	RAIN WATER LEADER		
E	EAST	ID	INSIDE DIAMETER				
EA	EACH	IN	INCH				
EB	EXPANSION BOLT	INCL	INCLUDE				
EE	EACH END	INCR	INCREASE				
EF	EACH FACE	INFO	INFORMATION				
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM	INSTL	INSTALL				
		INSUL	INSULATION				
		INT	INTERIOR				
		INV	INVERT				
		JB	JUNCTION BOX				
		JF	JOINT FILLER				
EJ	EXPANSION JOINT	JST	JOIST				
EL	ELEVATION	JT	JOINT				
ELEC	ELECTRICAL						
ELEV	ELEVATOR						
EMER	EMERGENCY						
ENCL	ENCLOSURE						

**SYMBOLS LEGEND**



(ONLY THE MOST RECENT REVISIONS ARE SHOWN CLOUDED. THE TAG REFERS TO PAST REVISIONS. THE NUMBERS ARE KEYED TO THE DATES THE REVISIONS WERE ISSUED).

○ SYMBOLS LEGEND  
12" = 1'-0"

**GENERAL CODES AND REGULATIONS**

**Building Code** - 2015 International Residential Code (IRC) with statewide and City amendments

**Mechanical Code** - 2015 International Mechanical Code with statewide and City amendments 2014 Liquefied Petroleum Gas Code (NFPA 58) 2015 National Fuel Gas Code (NFPA 54) for LP gas 2015 International Fuel Gas Code with statewide and City amendments

**Plumbing Code** - 2015 Uniform Plumbing Code (UPC) including appendices A, B, and I, except chapters 12, 15 and portions of chapter 5 per WAC 51-56-003

**Energy Code** - 2015 WA State Residential Energy Code per WAC 51-11R

**Fire Code** - 2015 International Fire Code (IFC) including Appendix N as adopted by 51-54 WAC

**Electrical Code** - 2008 National Electrical Code (NEC) per WAC 296-46B-010

**Zoning Code** - City of Mercer Island Municipal Code

All surfaces shall be cleaned prior to occupancy.

**GARRET CORD WERNER LLC**  
3132 WESTERN AVE  
SEATTLE WA  
98121



**GARRET CORD WERNER**

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DATE 3/22/2021	DRAWN BY AHP
SCALE 12" = 1'-0"	CHECKED BY GCW

PROJECT

**'FOO' RESIDENCE**

3453 74th Ave SE  
Mercer Island, WA  
98040

REV	DATE	ISSUE/REVISION

DEDICATED APPROVAL STAMP SPACE

**ABBREVIATIONS**

REVISION NO.



SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.

**G001**



## GENERAL REQUIREMENTS

### Governing Codes and Regulations:

**Building Code** - 2015 International Residential Code (IRC) including appendices F, Q, and R, except chapters 11, 25-43 per WAC 51-51-003 - Chapter 51-51 WAC

**Mechanical Code** - 2015 International Mechanical Code (IMC) including adoption of 2015 International Fuel Gas Code, 2014 NFPA 58 & 2014 NFPA 54 - Chapter 51-52 WAC

**Plumbing Code** - 2015 Uniform Plumbing Code (UPC) including appendices A, B, and I, except chapters 12, 15 and portions of chapter 5 per WAC 51-56-003

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**Electrical Code** - 2008 National Electrical Code (NEC) per WAC 296-46B-010

**Contractor Responsibilities:** It is the responsibility of the contractor to ensure compliance and conformance with the various provisions within these ordinances and codes in all of the work. The General Contractor is responsible for coordinating all work including additional permits and subcontractor work.

**Dimensions:** Dimensions that are not stated as "maximum" or "minimum" are absolute. All dimensions are subject to conventional industry tolerances. Verify and coordinate dimensions among all drawings prior to construction. Written dimensions take precedence over scaled lengths and heights in all cases. Do not scale the drawings.

**Discrepancies:** In the event of discrepancies or contradictory information in the drawings, notes, or specifications, it is the obligation of the contractor to notify the architect of the same and to obtain clarification from the architect before proceeding with the work. Any work done by the contractor after discovery of such discrepancy shall be done at the contractor's risk.

**Inspections:** Contractor shall be responsible for coordinating all building inspections. Required building inspections per IRC section R109 and WSEC 105:

- Foundation inspection: after forms are erected and reinforcing steel is placed.
- Plumbing, mechanical, gas, and electrical systems inspection: prior to covering/concealment.
- Frame and masonry inspection: after the roof, masonry, firestopping, draftstopping, and bracing are in place and after plumbing, mechanical, and electrical rough inspections are approved.
- Special Inspections as required by the Engineer of Record.
- Wall insulation inspection: after all wall and cavity insulation is in place and prior to wall covering.
- Other inspections required by the Building Official.
- Final inspection: after the permit work is complete and prior to occupancy.

**Contract Documents:** The Architect shall have the final authority with regard to interpretation of the intent and spirit of the contract documents. The Project Specifications are included by reference. All contract documents pertaining to this project are to be considered and interpreted for bidding and construction purposes as a complete whole. No part of the drawings or project specifications shall be distributed, considered, or used in any way independent of the complete set of documents.

**Typical Details:** Project drawings indicated general and typical details of construction. Where conditions are not specifically indicated but are of similar character to details shown, similar details of construction to those provided shall be used - subject to review and approval by the architect and the structural engineer.

**Work and Data by Others:** The architect assumes no responsibility for, nor verifies the accuracy of, any engineering data supplied by others.

**Submittals:** General Contractor to provide a minimum of 10 business days for architect to review. Shop drawings are required for the following components:

- Items required by consultants. See individual consultant documentation for any shop drawings required by their respective disciplines
- Windows and doors
- Skylights and canopies
- Trellises not of wood
- Railing systems
- Gates and specialty doors
- Wine rack and shelving layouts
- Casework and built-ins
- Sauna and steam rooms
- Other components called out in the specifications

**Changes:** Contractor initiated changes shall be submitted in writing to the architect and/or structural engineer for approval prior to fabrication or construction. Changes shown on shop drawings only do not satisfy this requirement. All changes - whether drawing or field required - shall have revisions approved & filed for record w/ the city once the original submission has been approved and the permit issued. Charge will be made by the city for all revision review and approvals including field inspections beyond that required under permit fees and paid for under estimated inspection fee.

**As-Built Drawings:** Contractor and subcontractors shall mark drawings for as-built condition. Mechanical, electrical, plumbing, and fire-protection drawings shall be revised for as-built conditions by their respective authors. Final as-built reproducible drawings shall be submitted to owner's representative.

**Safety:** Contractor shall be responsible for all required safety precautions and the methods, techniques, sequences, or procedures required to perform the work.

**Site Maintenance:** Contractor shall maintain a trash bin in an area designated by the owner's representative for the collection of all construction debris. Contractor shall dispose of all debris and remove trash bin prior to occupancy. All surfaces shall be cleaned prior to occupancy.

## FIRE-RESITANT CONSTRUCTION

**Occupancy Separation:** The garage shall be separated from the dwelling unit and its attic area by not less than 1/2" gypsum wall board applied to the garage side. Garages shall be separated from all habitable rooms above and all structures supporting the floor/ceiling assembly by not less than 5/8" Type X gypsum board or equivalent. (Table R302.6)

Doors between the garage and the residence shall be minimum 1 3/8" thick solid wood, or 20-minute fire-rated, and shall be equipped with a self-closing device. (R302.5.1)

Ducts in the garage and ducts penetrating the separation assemblies shall be min 26 gage sheet steel and have no openings into the garage. (R302.5.2)

**Under-Stair Protection:** Enclosed accessible space under stairs shall be protected with minimum 1/2" gypsum board on the enclosed side. (R302.7)

**Fire Blocking:** Provide fire blocking in concealed wall spaces of stud walls and partitions vertically at ceiling and floor levels, at 10 feet max. horizontally, and at all interconnections of concealed vertical and horizontal spaces. Fire block concealed spaces between stair stringers at the top and bottom of run between studs and in line with the run of the stairs if the wall under the stairs are unfinished. Fire stop with non-combustible materials in openings around all vents, pipes, ducts, chimneys, fireplaces, and similar openings which afford passage for fire at ceiling and floor levels. (R302.11 & R1003.19)

**Draftstopping:** Draft stop floor/ceiling assemblies greater than 1,000 SF. into approximately equal areas with 1/2" gypsum board parallel to the floor framing members. (R302.12)

## EGRESS

**Egress Openings:** Emergency escape and rescue openings shall have a minimum net clear opening of 5.7 sq. ft. except the minimum net clear opening for emergency escape and rescue grade-floor openings shall be 5 sq. ft. Where provided, they shall have a sill height of not more than 44" measured from the finished floor to the bottom of the clear opening. The minimum net clear opening height shall be 24". The minimum net clear opening width shall be 20". (R310.1)

**Handrails:** One handrail shall be provided at every stairway having four or more risers and shall be continuous for the full length of the flight. Provide 2 handrails where indicated on plans. Handrail height, measured above stair tread nosings, or finish surface of ramp slope, shall be uniform, not less than 34" and not more than 38". Handrails with a circular cross section shall have an outside diameter of at least 1.25" and not greater than 2". If the handrail is not circular, it shall have a perimeter dimension of at least 4" and not greater than 6.25" with a maximum cross-section dimension of 2.25". Handrails with a perimeter greater than 4.25" shall have a graspable finger recess area on both sides of the profile. (R311.7.8)

**Guards:** Guards shall be located along open-sided walking surfaces, mezzanines, stairways, ramps and landings which are located more than 30" above the floor or grade below and within 36" of the edge of the open side. Guards shall be 36" high minimum except guards whose top rail also serves as a stair handrail shall have a height of no less than 34" and not more than 38" measured vertically from the leading edge of the stair tread nosing. (R312)

Open guards shall have balusters or ornamental patterns such that a 4"-diameter sphere cannot pass through any opening except the triangular openings formed by the riser, tread, and bottom rail at the open side of a stairway shall not allow passage of a sphere of 6" in diameter. Guards on the open side of stairs shall not have openings which allow passage of a sphere 4-3/8" in diameter. (R312.1.3)

## FIRE PROTECTION SYSTEMS

**Bidder Designed:** Fire Protection systems, if necessary, shall be bidder designed. Designated subcontractors are responsible for the preparation of drawings and applications for appropriate required permits.

**Sprinkler System:** An NFPA 13R fire sprinkler shall be provided in accordance with IRC P2904. The system shall be designed and the plans stamped by a person holding a Washington State Certificate of Competency. Contractor shall submit design to the Fire Department for approval. The system shall be installed by a state licensed sprinkler contractor.

**Monitored Household Fire Alarm per NFPA 72 and Monitored Sprinkler Water Flow Alarm are required.**

**Smoke Alarm System:** An approved automatic smoke alarm system shall be provided and installed in accordance with the warning equipment provisions of NFPA 72. Smoke alarms shall be provided inside each sleeping room, outside of each sleeping area, and on each story of the dwelling. Required smoke alarms shall be hardwired, interconnected, and have a battery backup. (R314)

**Carbon Monoxide Alarms:** Provide approved carbon monoxide alarms outside of each separate sleeping area and on each level of the dwelling. (R315)

## FIREPLACES AND CHIMNEYS

**Factory-Built Fireplaces:** Factory-built fireplaces shall be UL listed, labeled and installed and terminated in accordance with the conditions of their listing. (R1004)

**Factory-Built Chimneys:** Factory-built chimneys shall be UL 127-96 listed, labeled, installed, and terminated in accordance with the manufacturer's installation instructions. (R1005)

**Hearth Extensions:** Hearth extensions of factory-built fireplaces shall be installed in accordance with the listing of the fireplace and shall be readily distinguishable from the surrounding floor area. (R1004.2)

**Flue Clearances:** Metal flues venting gas appliances shall have a minimum net clearance to combustible materials as required by the appliance manufacturer in accordance with the listing of the flue. (UMC 504(a))

## GLASS, GLAZING & FENESTRATION

Glazing shall be in accordance with IRC section 308.

**Exterior Glazing:** All exterior wall glazing shall be double-glazed and comply with the Washington State Energy Code (WAC 51-11).

**Safety Glazing:** Install in areas subject to human impact (R308.4) Such hazardous locations include:

- Glazing in fixed and operable panels of swinging, sliding, and bifold doors
- Glazing in a fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24" arch of the door in a closed position and whose bottom edge is less than 60" above the floor or walking surface except for:
  - Decorative glazing
  - Where there is an intervening wall
  - Glazing in the wall perpendicular to the latch side of the door
  - Adjacent to the fixed panel of patio doors
- Glazing in an individual or fixed panel that meets all of the following conditions:
  - Exposed area of an individual pane greater than 9 square feet
  - Bottom edge is less than 18" above the floor
  - Top edge is greater than 36" above the floor
  - One or more walking surfaces within 36" horizontally of the glazing
- All glazing in railings, regardless of an area or height above walking surface. Included are structural baluster panels and nonstructural in-fill panels.
- Glazing in walls, enclosures, or fences for hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers, and indoor or outdoor pools where the bottom exposed edge of the glazing is less than 60" above any standing or walking surface and within 60" horizontally of the water's edge.
- Glazing adjacent to stairways, landings, and ramps within 36" horizontally of a walking surface when the bottom exposed edge of the glass is less than 36" above the adjacent walking surface. Except when a rail is installed on the accessible side of the glazing 34" to 38" above the walking surface.
- Glazing adjacent to the landing at the bottom of a stairway within 60" horizontally of the bottom tread when the exposed surface of the glazing is less than 36" above the nose of the tread. Except when the glazing is protected by a guard complying with section R312 and the glass is more than 18" from the guard.

**Fenestration Products:** U-factors of fenestration products (windows, doors, and skylights) shall be determined in accordance with NFRC 100, with exception to garage door U-factors which shall be determined in accordance with either NFRC 100 or ANSI/DAMSA 105. U-factors shall be determined by an accredited, independent laboratory, and labeled and certified by the manufacturer per R303.1.3.

## ENERGY EFFICIENCY

**Insulation and Vapor Barriers:** Application and installation of insulation and vapor barriers shall comply with WSEC. All insulating materials shall have a flame spread index of not more than 25 and a smoke-developed index of not more than 450. (R302.10.1)

**Air Leakage:** The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of WSEC R402.4.1 through R402.4.4.

**Testing:** The building shall be tested and verified as having an air leakage rate of not exceeding 5 air changes per hour. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g.. Testing shall be performed at day time after creation of all penetrations of the building thermal envelope. (WSEC R402.4.1.2)

Ducts, air handlers, and filter boxes shall be sealed. Ducts shall be leak tested in accordance with WSU RS-33, using the maximum duct leakage rates specified. (R403.2.2)

**Air Barrier and Insulation:** The air barriers and insulation in walls, floors, roofs, and any other enclosures of conditioned space shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table R402.4.1.1, or the building shall be tested and verified as having an air leakage rate of not exceeding 5 air changes per hour. (WSEC R402.2.4)

**Weatherstripping:** Access doors from conditioned spaces to unconditioned spaces shall be weatherstripped and insulated to a level equivalent to the insulation on surrounding surfaces. (WSEC R402.2.4)

**Thermostat:** Where the primary heating system is a forced-air furnace, at least one programmable thermostat shall be provided for each separate heating and cooling system. (WSEC R403.1)

**Energy Certificate:** A permanent certificate shall be posted on or within three feet of the electrical panel. The certificate shall be completed by the builder or registered design professional. The certificate shall list the R-values of insulation installed in or on ceiling/roof, walls, foundation (slab, below-grade wall, and/or floor), and ducts outside the conditioned spaces; U-factors for fenestration; and the solar heat gain coefficient (SHGC) of fenestration; and the results from any required duct system and building envelope air leakage testing. Where more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the type and efficiency of heating, cooling, and service water heating equipment. Where a gas-fired unvented room heater, electric furnace, or baseboard electric heater is installed, the certificate shall list this as appropriate. (WSEC R401.3)

## STRUCTURAL SYSTEMS

**Structural Systems:** All structural systems (such as trusses) 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.

**Walls:** Exterior walls to be 2x6 wood studs at 16" o.c. unless indicated otherwise on plans. Interior walls to be 2x4 studs at 16" o.c. unless noted otherwise on plans.

Refer to structural documents by engineer of record for detailed information on structural components and connections.

## SOILS AND FOUNDATIONS

**Soils:** The architect assumes no responsibility as to the physical characteristics of the soils. The geotechnical engineer shall inspect all excavations prior to pouring concrete.

**Damp-proofing:** Except where required by Section R406.2 to be waterproofed, foundation walls that retain earth and enclose interior spaces below grade shall be dampproofed from the top of the footing to the finished grade in accordance with one of the following: bituminous coating; three pounds per square yard of acrylic modified cement; 1/8" coat of surface-bonding cement complying with ASTM C 887; any material permitted for waterproofing in Section R406.2. (R406.1)

**Perimeter Drains:** Provide continuous 6" round perforated drain in gravel fill with filter fabric wrap at all foundation walls. Provide clean-outs such that all portions of drainage system can be adequately cleaned. Locate bottoms of drain pipes at the lowest point of wall footings and tight-line perimeter drains to storm sewer or other approved discharge. Do not connect the perimeter/foundation drain tight-line to any other tight-lines or site drainage systems. (R405)

Provide a minimum 12" wide layer of continuous gravel fill from bottom of footing to within 12" of finish grade - typical at all walls. Approved gravel fill consists of washed, clean, free drainage gravel ranging from 1/4" to 3/4" in size.

Site drainage shall conform to all local regulations and ordinances. Tight-line all roof drains to storm sewer system or approved discharge when storm sewers are not available. Refer to civil engineer's documents for additional information.

**Finish Grade:** Grade at the building face shall have a positive slope away from the building. All site hard surfaces to have a minimum slope of 1/8" per FT to drains unless otherwise noted.

## WOOD AND WEATHER PROTECTION

**Exterior Structures:** Exterior wood framed decks and other wood framed structures exposed to weather: all wood shall be pressure treated to current American Wood Preservers Institute standards. This includes all plywood, trusses, sawn members, glue-laminated members, etc., unless noted otherwise. All nails and connectors shall be heavy-coat galvanized.

**Wood Protection:** Wood framing members in contact with exterior concrete foundations shall be pressure treated. Wood siding, sheathing, and wall framing on the exterior of the building less than 6" from the ground or less than 2" from slabs, steps, and similar horizontal surfaces shall be pressure treated. Ends of wood beams entering a concrete wall (pocket) shall have 1/2" clearance on top, sides, and ends. (R317)

**Wall Flashing:** Approved corrosion resistant flashing shall be applied shingle-fashion in a manner to prevent entry of water into the wall. Self-adhered membrane flashings shall comply with AAMA 711. The flashing shall extend to the surface of the exterior wall finish. Flashing shall be installed at exterior window and door openings; intersections of chimneys or other masonry with frame or stucco walls; under and at the ends of masonry, wood or metal copings and sills; above projecting wood trim; where exterior porches, decks or stairs attach to a wall or floor assembly of wood-frame construction; at wall and roof intersections; at gutters. (R703.8 and WAC 51-51-703)

**Roof Flashings:** Flashing shall be installed at wall and roof intersections, wherever there is a change in roof slope or direction, at gutters, and around roof openings in a manner that prevents moisture from entering the wall and roof assemblies. A flashing shall be installed to divert the water away from where the eave of a sloped roof intersects a vertical side wall. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019". (R903.2)

## INTERIOR ENVIRONMENT

**Attic Ventilation:** The net free ventilating area of enclosed attics and rafter spaces shall not be less than 1/150 of the area of the space ventilated, except that 1/300 min. is permitted if 40%-50% of the required ventilating area is provided by ventilators located in the upper portion of the space no more than 3' below the ridge or highest point of the space, with the balance provided by eave or cornice vents. Where eave or cornice vents are installed, provide minimum 1-inch clear space between insulation and roof sheathing and the location of the vent. (R806)

**Exhaust Fans:** Exhaust fans vented to the exterior are required in bathrooms, water closets, laundry rooms, kitchens, and other rooms where water vapor or cooking odor is produced. (M1507.4 and WAC 51-51-1507)

Provide 50 CFM minimum fan flow rating at bathrooms, laundries, and similar rooms. Provide 300 CFM minimum for kitchens.

**Crawlspace Access:** Provide access to crawlspaces through a floor access opening of 18"x24" minimum or a perimeter wall access opening of 16"x24" minimum. (R408.4)

**Attic Access:** Provide access to any attic area having a clear height of over 30" and greater than 30 SF in size through an opening of 22"x30" minimum. A 30" minimum clear headroom in the attic space shall be provided at or above the access opening. Locate in a hallway or other readily-accessible location. (R807)

**Wet Areas:** Shower compartments and walls above bathtubs with installed shower heads shall be finished with a non-absorbent surface to a height not less than 72" above the floor. (R307.2)

**Solid Blocking:** Provide solid blocking in walls at connection points behind cabinets, wall shelving, towel and grab bars, and other wall-hung items.

**Acoustical Insulation:** Provide sound attenuation blankets at all bathroom, toilet room, and powder room walls and other spaces as noted on plans. Provide sound attenuation blankets at all bathroom, toilet room, and powder room floors and ceilings when these rooms occur above or below a habitable space.

GARRET CORD WERNER LLC  
3132 WESTERN AVE  
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### GENERAL NOTES:

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- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATUMS, AND LEVELS PRIOR TO THE START OF WORK.
- ALL REVISIONS SHOWN TO BE VERIFIED BY ARCHITECT TO COMPLY WITH ALL BUILDING CODES AND STANDARDS.
- MILLWORKER TO CONFIRM ALL CLEARANCES.
- PERMIT DRAWINGS - NOT TO BE USED FOR CONSTRUCTION.
- DO NOT SCALE FROM THIS DRAWING.
- ALL GLAZING TEMPERED SAFETY GLASS UNLESS OTHERWISE NOTED.
- ELECTRICAL & LIGHTING DRAWINGS FOR DESIGN PURPOSES ONLY. SUBCONTRACTOR TO NOTIFY ARCHITECT OF ANY DISCREPANCIES OR NON-COMPLIANCE OF BUILDING CODES.

DATE	DRAWN BY
3/22/2021	AHP
SCALE	CHECKED BY
	GCW

PROJECT

## 'FOO' RESIDENCE

3453 74th Ave SE  
Mercer Island, WA  
98040

REV DATE ISSUE/REVISION

1 7/15/20 Revision 1

DDP DEDICATED APPROVAL STAMP SPACE

SHEET TITLE

## GENERAL PROJECT NOTES AND REQUIREMENTS

REVISION NO.

1  
SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.

G002



**Prescriptive Energy Code Compliance for All Climate Zones in Washington**

<b>Project Information</b>	<b>Contact Information</b>
FOO Residence	Amir Parnianpour
3453 74th Ave SE, Mercer Island, WA 98040	800.478.1956
Parcel # 1300301965	amir@garretcordwerner.com

This project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. In addition, based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant.

Authorized Representative \_\_\_\_\_ Date \_\_\_\_\_

Each dwelling unit in a residential building shall comply with sufficient options from Table R406.2 so as to achieve the following minimum number of credits:

- 1. Small Dwelling Unit: 1.5 credits  
Dwelling units less than 1500 square feet in conditioned floor area with less than 300 square feet of fenestration area. Additions to existing building that are greater than 500 square feet of heated floor area but less than 1500 square feet.
- 2. Medium Dwelling Unit: 3.5 credits  
All dwelling units that are not included in #1 or #3. Exception: Dwelling units serving R-2 occupancies shall require 2.5 credits.
- 3. Large Dwelling Unit: 4.5 credits  
Dwelling units exceeding 5000 square feet of conditioned floor area.
- 4. Additions less than 500 square feet: .5 credits

**Table R406.2 Summary**

Option	Description	Credit(s)		
1a	Efficient Building Envelope 1a	0.5	<input checked="" type="checkbox"/>	0.5
1b	Efficient Building Envelope 1b	1.0	<input type="checkbox"/>	
1c	Efficient Building Envelope 1c	2.0	<input type="checkbox"/>	
1d	Efficient Building Envelope 1d	0.5	<input type="checkbox"/>	
2a	Air Leakage Control and Efficient Ventilation 2a	0.5	<input type="checkbox"/>	1.0
2b	Air Leakage Control and Efficient Ventilation 2b	1.0	<input checked="" type="checkbox"/>	
2c	Air Leakage Control and Efficient Ventilation 2c	1.5	<input type="checkbox"/>	
3a	High Efficiency HVAC 3a	1.0	<input checked="" type="checkbox"/>	
3b	High Efficiency HVAC 3b	1.0	<input type="checkbox"/>	1.0
3c	High Efficiency HVAC 3c	1.5	<input type="checkbox"/>	
3d	High Efficiency HVAC 3d	1.0	<input type="checkbox"/>	
4	High Efficiency HVAC Distribution System	1.0	<input type="checkbox"/>	
5a	Efficient Water Heating 5a	0.5	<input checked="" type="checkbox"/>	0.5
5b	Efficient Water Heating 5b	1.0	<input type="checkbox"/>	
5c	Efficient Water Heating 5c	1.5	<input checked="" type="checkbox"/>	
5d	Efficient Water Heating 5d	0.5	<input type="checkbox"/>	
6	Renewable Electric Energy	0.5	<input type="checkbox"/>	0.0
<b>Total Credits</b>				<b>4.50</b>

\*Please refer to Table R406.2 for complete option descriptions

**ENERGY CODE NOTES**

2015 WASHINGTON STATE ENERGY CODE

ALL DUCTS NOT LOCATED COMPLETELY INSIDE THE BUILDING THERMAL ENVELOPE DUCTS SHALL BE INSULATED TO A MINIMUM OF R-8.

ALL HEADERS IN EXTERIOR WALLS TO HAVE A MINIMUM R-10 INSULATION.

DWELLING UNIT IS REQUIRED TO BE PROVIDED WITH AT LEAST ONE PROGRAMMABLE THERMOSTAT FOR REGULATION OF TEMPERATURE (SEC 503.8.1).

MINIMUM 75% OF ALL INTERIOR LUMINAIRES SHALL BE HIGH EFFICACY LUMINAIRES, AND ALL EXTERIOR LIGHTING SHALL BE HIGH EFFICACY LUMINAIRES.

A SIGNED AFFIDAVIT DOCUMENTING THE DUCT LEAKAGE TEST RESULTS SHALL BE PROVIDED TO THE BUILDING INSPECTOR PRIOR TO AN APPROVED FINAL INSPECTION (SEC 503.10.2).

DUCT LEAKAGE TEST RESULTS SHALL BE PROVIDED TO THE BUILDING INSPECTOR AND HOMEOWNER PRIOR TO APPROVED FINAL INSPECTION (SEC 101.3.2.6 AND 503.10.2).

HEAT RECOVERY UNIT - MINIMUM SENSIBLE HEAT RECOVERY EFFICIENCY SHALL BE 0.70.

**VENTILATION CODE NOTES**

WAC 51-13, WASHINGTON STATE VENTILATION AND INDOOR AIR QUALITY CODE AND INTERNATIONAL MECHANICAL CODE CHAPTER 15 AND IRC.

CONTINUOUSLY WHOLE HOUSE VENTILATION SYSTEM MINIMUM VENTILATION RATE = 105, PER IRC.

NOISE: WHOLE HOUSE FANS LOCATED FOUR FEET OR LESS FROM THE INTERIOR GRILLE SHALL HAVE A SONE RATING OF 1.0 OR LESS.

EXHAUST DUCTS SHALL TERMINATE OUTSIDE OF THE BUILDING .

OUTDOOR AIR DISTRIBUTION: OUTDOOR AIR SHALL BE DISTRIBUTED TO EACH HABITABLE ROOM BY MEANS SUCH AS INDIVIDUAL INLETS, SEPARATE DUCT SYSTEMS, OR A FORCED-AIR SYSTEM.

DOORS SHALL BE UNDERCUT TO A MINIMUM OF ONE-HALF INCH ABOVE THE SURFACE OF THE FINISH FLOOR COVERING. DOORS AND OPERABLE LITES IN WINDOWS ARE DEEMED NOT TO MEET THE OUTDOOR AIR SUPPLY INTAKE REQUIREMENTS.

SOURCE SPECIFIC VENTILATION: INTERMITTENTLY OPERATING MINIMUM EXHAUST RATES FOR BATHROOMS IS 50 CFM, KITCHENS IS 100 CFM. SYSTEMS EXCEEDING 400 CFM'S VENTED TO OUTSIDE AIR MUST BE INTERLOCKED WITH MAKE-UP AIR. PROVIDE MAKE-UP AIR PER SECTION M1503.8. EXHAUST SHALL BE DISTCHARGED OUTSIDE AND BACKDRAFT DAMPERS ARE REQUIRED.

**ENERGY CREDITS**

TOTAL ENERGY CREDITS REQUIRED PER TABLE R406.2: 4.5 CREDITS

EFFICIENT BUILDING ENVELOPE OPTION 1a: 0.5 CREDITS

VERTICAL FENESTRATION U = 0.28  
NEW FLOOR OVER UNCONDITIONED SPACE REQUIRES R-38 INSULATION  
NEW SLAB ON GRADE REQUIRES THERMAL BREAK AT REIMITER FOOTING  
NEW SLAB ON GRADE REQUIRES 24" OF R-10 INSULATION AT PERIMETER

AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTION 2b: 1.0 CREDITS

COMPLIANCE OF AIR LEAKAGE TO 2.0 AIR CHANGES PER HOUR MAXIMUM ALL WHOLE HOUSE VENTILATION REQUIREMENTS PER SECTION M1507.3 OF THE INTERNATIONAL RESIDENTIAL CODE SHALL BE MET WITH A HEAT RECOVERY VENTILATION SYSTEM WITH MINIMUM SENSIBLE HEAT RECOVERY EFFICIENCY OF 0.70.

HIGH EFFICIENCY HVAC EQUIPMENT OPTION 3a: 1.0 CREDITS

GAS, PROPANE OR OIL-FIRED FURNACE WITH MINIMUM AFUE OF 94%, TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE HEATING EQUIPMENT TYPE AND THE MINIMUM EQUIPMENT EFFICIENCY.

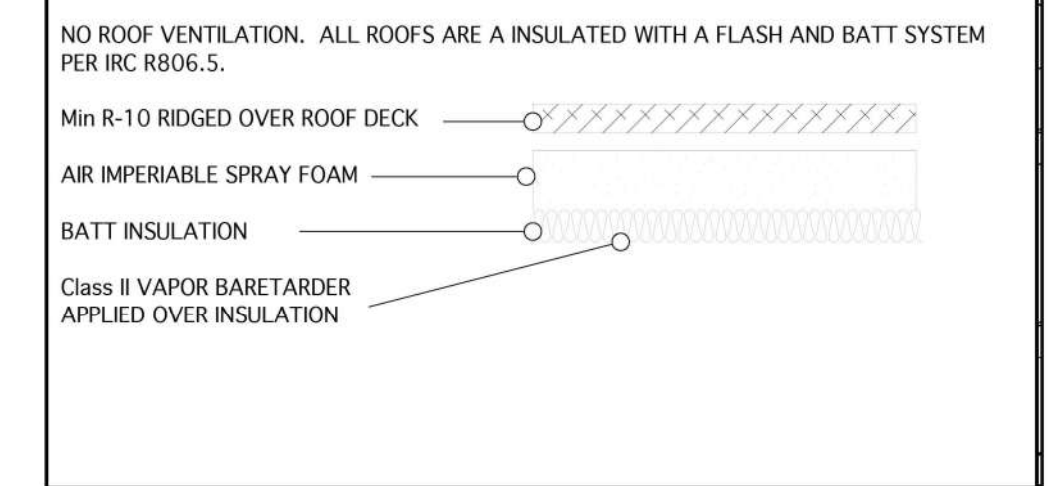
EFFICIENT WATER HEATING OPTION 5a: 0.5 CREDITS

ALL KITCHEN SINK FAUCETS SHALL BE RATED AT 1.75 GPM OR LESS.  
ALL SHOWERHEADS SHALL BE RATED AT 1.75 GPM OR LESS.  
ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS.

EFFICIENT WATER HEATING OPTION 5c: 1.5 CREDITS

GAS WATER HEATER WITH A MINIMUM EF OF 0.91% SHALL BE INSTALLED

**ROOF VENTILATION**



**Simple Heating System Size: Washington State**

This heating system sizing calculator is based on the Prescriptive Requirements of the 2015 Washington State Energy Code (WSEC) and ACCA Manuals J and S. This calculator will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please fill out all of the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please call the WSU Energy Extension Program at (360) 956-2042 for assistance.

<b>Project Information</b>	<b>Contact Information</b>
FOO Residence	Amir Parnianpour
3453 74th Ave SE, Mercer Island, WA 98040	800.478.1956
Parcel # 1300301965	amir@garretcordwerner.com

**Heating System Type:**  All Other Systems  Heat Pump

To see detailed instructions for each section, place your cursor on the word "Instructions".

**Design Temperature**  
 Instructions: Mercer Island  
 Design Temperature Difference (ΔT): 45  
ΔT = Interior (°F) Design - Outdoor Design Temp

**Area of Building**  
 Conditioned Floor Area (sq ft): 5,306  
 Average Ceiling Height (ft): 9.0  
 Conditioned Volume: 47,754

**Glazing and Doors**  
 Instructions: U-0.28  
 U-Factor X Area = UA  
 0.280 X 2,260 = 632.86

**Skylights**  
 Instructions: U-0.50  
 U-Factor X Area = UA  
 0.50 X 0 = 0

**Insulation**  
**Attic**  
 Instructions: R-49  
 U-Factor X Area = UA  
 0.026 X 1,975 = 51.35

**Single Rafter or Joist Vaulted Ceilings**  
 Instructions: R-35 Insulated  
 U-Factor X Area = UA  
 0.027 X 1,154 = 31.17

**Above Grade Walls (see Figure 1)**  
 Instructions: R-21 (R1 plus R-4 ci)  
 U-Factor X Area = UA  
 0.043 X 5,951 = 255.89

**Floors**  
 Instructions: R-10  
 U-Factor X Area = UA  
 0.029 X 330 = 9.57

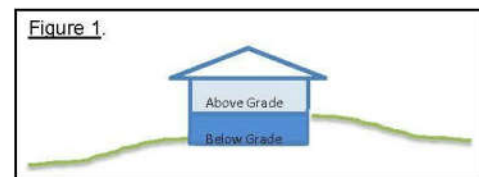
**Below Grade Walls (see Figure 1)**  
 Instructions: R-25 Ins plus R-5 ci  
 U-Factor X Area = UA  
 0.028 X 1,344 = 37.63

**Slab Below Grade (see Figure 1)**  
 Instructions: R-10 Fully Insulated  
 F-Factor X Length = UA  
 0.303 X 134 = 40.60

**Slab on Grade (see Figure 1)**  
 Instructions: R-10 Fully Insulated  
 F-Factor X Length = UA  
 0.360 X 206 = 74.16

**Location of Ducts**  
 Instructions: Conditioned Space  
 Duct Leakage Coefficient: 1.00

**Sum of UA**: 1133.23  
**Envelope Heat Load**: 50,995 Btu / Hour  
Sum of UA x ΔT  
**Air Leakage Heat Load**: 23,208 Btu / Hour  
Volume x 0.018 x ΔT x 24  
**Building Design Heat Load**: 74,204 Btu / Hour  
Air Leakage + Envelope Heat Load  
**Building and Duct Heat Load**: 74,204 Btu / Hour  
Ducts in unconditioned space: Sum of Building Heat Load x 1.10  
 Ducts in conditioned space: Sum of Building Heat Load x 1.1  
**Maximum Heat Equipment Output**: 92,755 Btu / Hour  
Building and Duct Heat Load x 1.25 for Forced Air Furnace  
 Building and Duct Heat Load x 1.25 for Heat Pump



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DATE	DRAWN BY
3/22/2021	AHP
SCALE	CHECKED BY
	GCW

**PROJECT**

'FOO' RESIDENCE

3453 74th Ave SE  
 Mercer Island, WA  
 98040

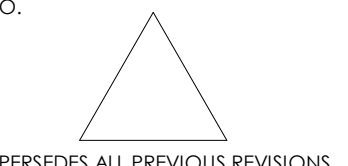
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DDP DEDICATED APPROVAL STAMP SPACE

**SHEET TITLE**

**ENERGY CODE COMPLIANCE WORKSHEET**

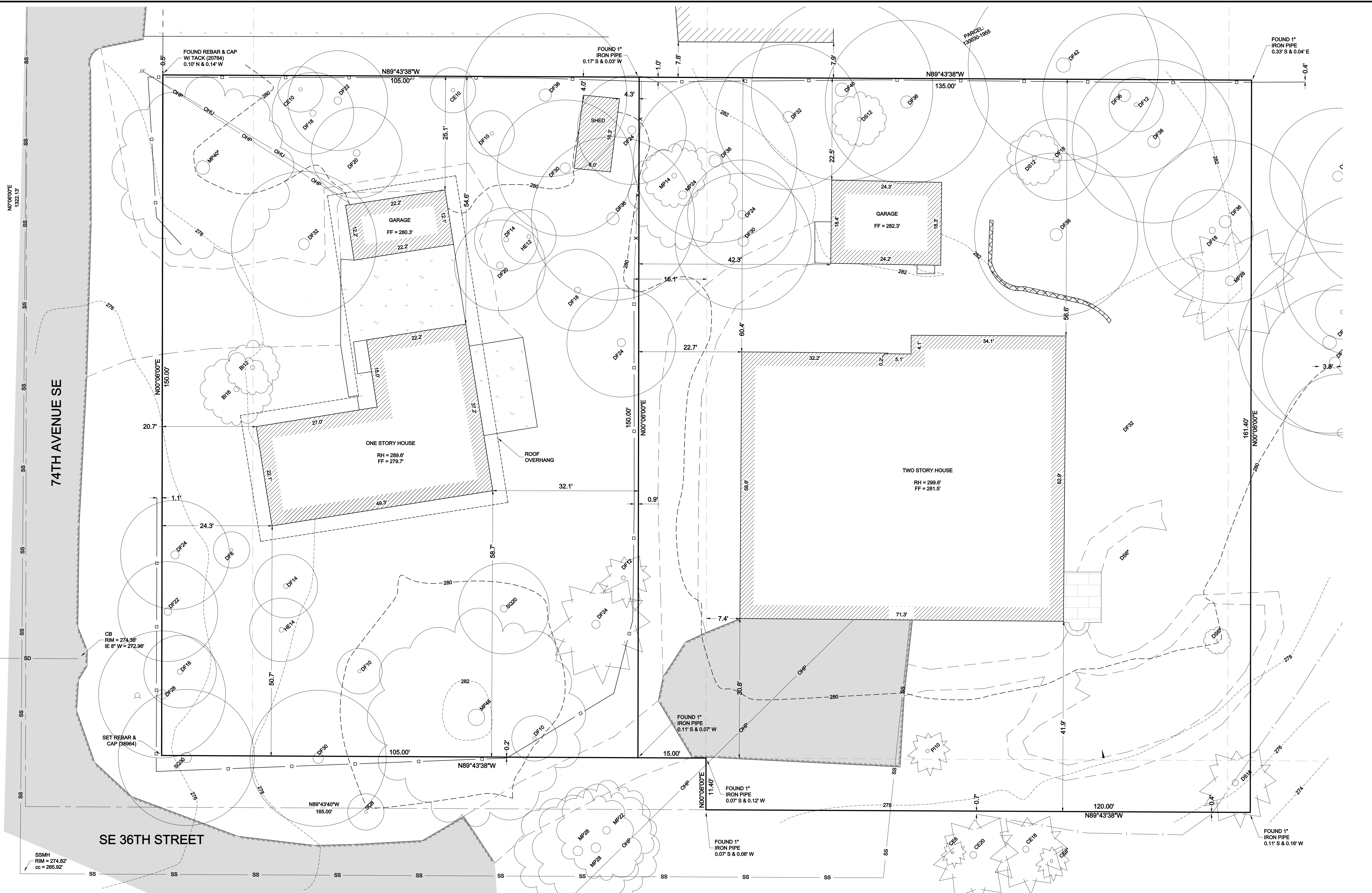
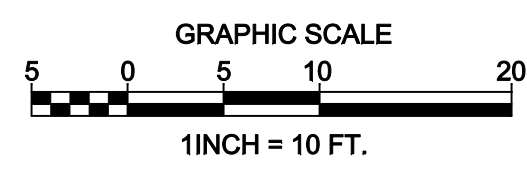
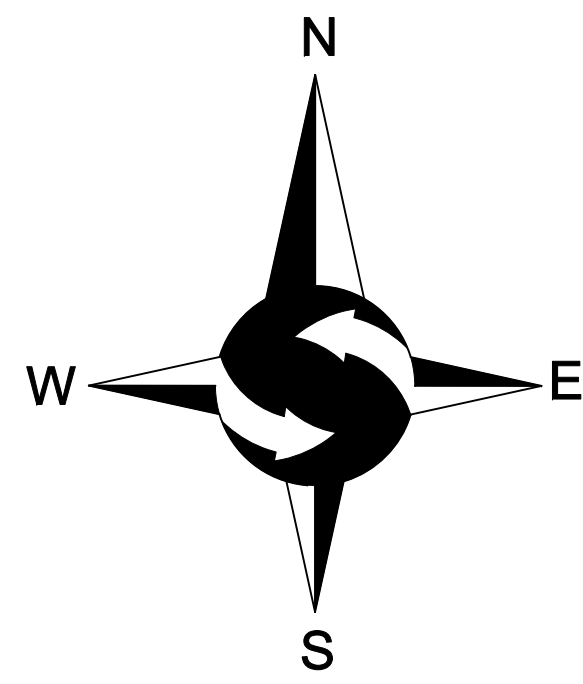
**REVISION NO.**



**SHEET NO.**

G003



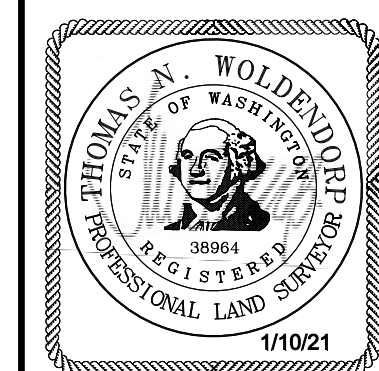


NE 1/4, SW 1/4, SEC 12, TWP 24N, RNG 4E, W.M.

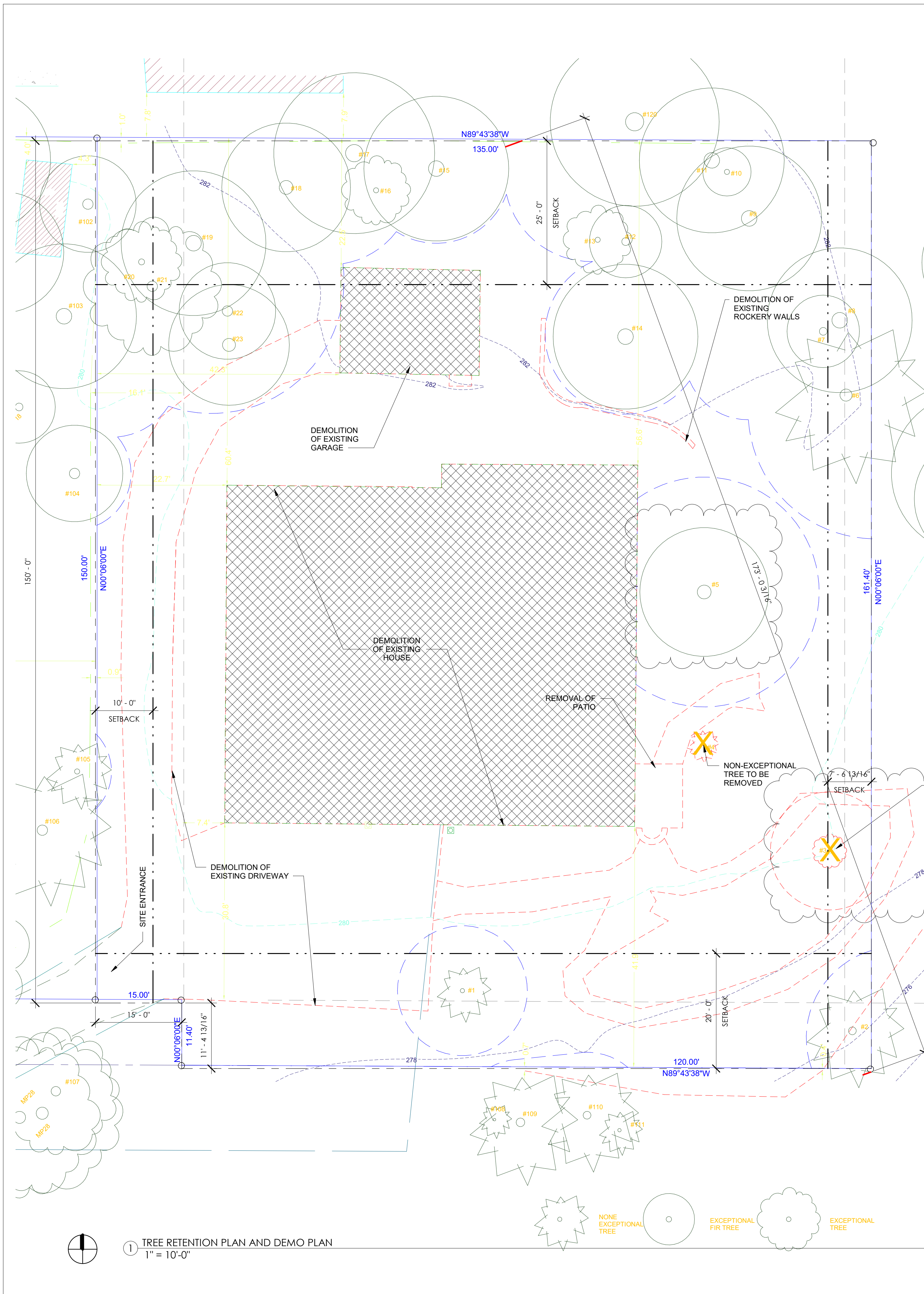
PROJECT NO. 18-243  
 DRAWN BY: EFJ  
 CHECKED BY: TNW  
 DATE: 6/14/18  
 SHEET 1 OF 2

TOPOGRAPHIC SURVEY  
 DAVID ARMITAGE  
 3450 & 3453 74TH AVENUE SE  
 MERCER ISLAND, WA 98040  
 © 2018, SITE SURVEYING, INC., ALL RIGHTS RESERVED

DATE	REVISION	DRN







**Tree Summary Table**  
 For: 3453 74th Ave SE-Neighboring Trees  
 City of Mercer Island  
 Date: 11/5/2018  
 Inspector: Layton

Tree Tag #	Species	Exceptional	DBH (inches)	Height (feet)	Drip-Line / Limits of Disturbance (feet)				Condition	Proposal	Comments	
					N	S	E	W				
101	Douglas fir	yes	12	60				0/10	fair	Protect	suggested, cannot locate	
102	Douglas fir	yes	38	100				4/10	fair	Protect	retention ok 2' from root crown	
103	Douglas fir	yes	30	125				4/5	good	Protect	no concerns	
104	Douglas fir	yes	23	85				4/6	good	Protect	no concerns	
105	Douglas fir	no	16	48				4/4	fair	Protect	old broken top, regrown	
106	Douglas fir	no	20	66				2/2	good	Protect	approx 8' off pt	
107	dogwood	yes	21.23.23	239	85	16	na	22	30	fair	Protect	approx 8' off driveway
108	Lawson cypress	no	8	30	0/0					good	Protect	
109	Lawson cypress	no	16	50	0/2					fair	Protect	lean
110	Lawson cypress	no	16	52	2/4					good	Protect	
111	Lawson cypress	no	10	42	2/2					good	Protect	
112	Douglas fir	yes	22	86				17/16	good	Protect	natural lean southwest	
113	Douglas fir	yes	24	90				12/14	fair	Protect	old broken top	
114	Douglas fir	yes	21	62				19/14	fair	Protect	leans southwest, mod decay column	
115	Douglas fir	yes	38	145				15/16	good	Protect		
116	Douglas fir	yes	11	67				6/8	fair	Protect	suggested	
117	Douglas fir	yes	28	130				19/14	good	Protect	good leader	
118	Douglas fir	yes	35	132				10/18	good	Protect		
119	Douglas fir	yes	24	113				14/14	good	Protect		
120	Douglas fir	yes	26	130				14/16	good	Protect		

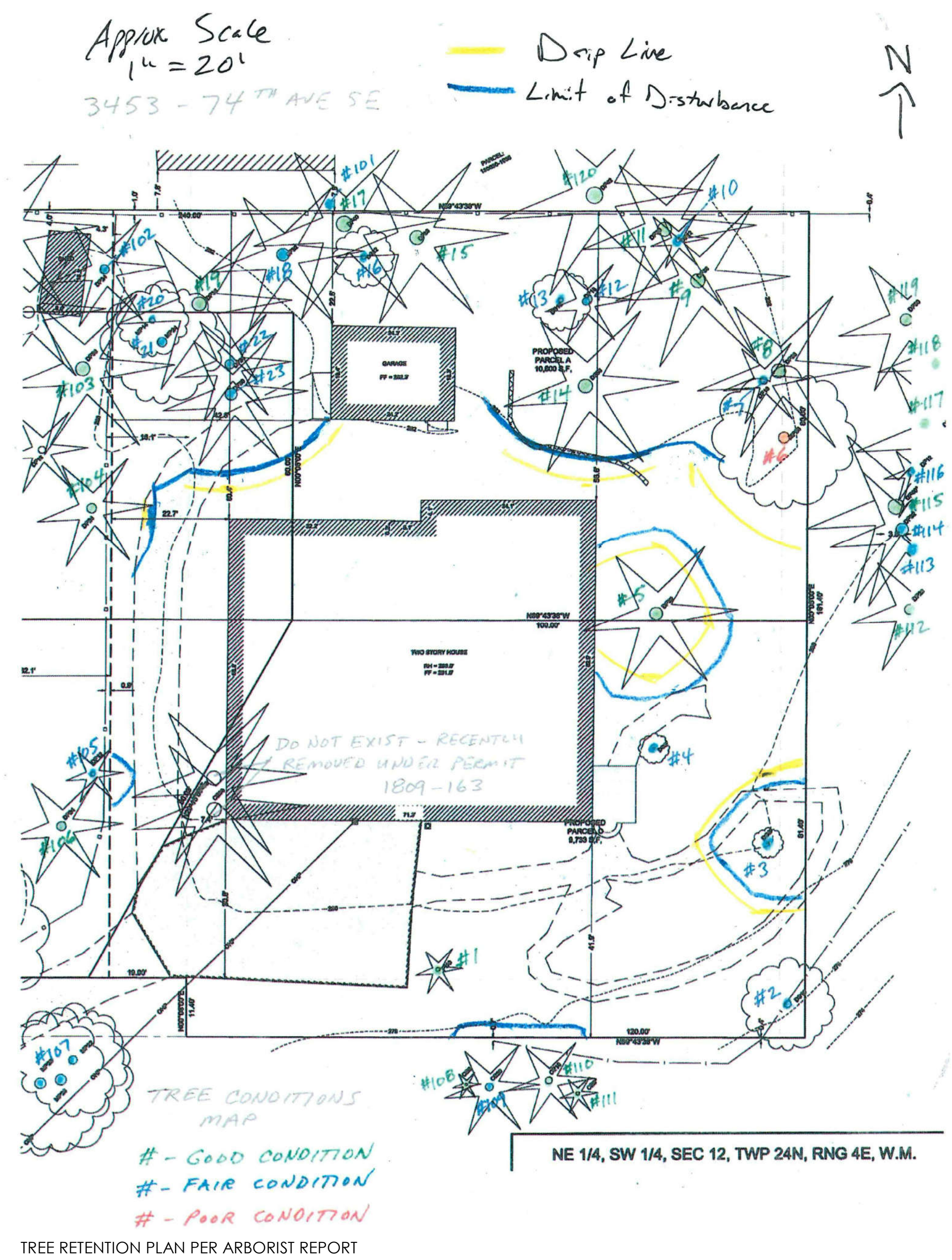
Trees on neighboring properties - Drip-Line and Limits of Disturbance measurements from property line, except for #112-#119, face of trunk  
 Calculated DBH: the DBH in parenthesis is the square root of the sum of the dbh for each individual stem squared  
 (example with 3 stems: dbh = square root [(stem1)² + (stem2)² + (stem3)²])

**NOTE:**  
 Pneumatic excavation should be carried at the limits of disturbance were proposed improvements encroach within either the drip line or limits of disturbance of retained trees. This includes off site utility work for water meter. Air excavation should be monitored and assessed by a qualified arborist. City Arborist to be notified within 24 hours of this work to inspect the findings. Tree protection will be increased where possible near tree 15 and 23.

**Tree Summary Table**  
 For: 3453 74th Ave SE-Property Trees  
 City of Mercer Island  
 Date: 11/5/2018  
 Inspector: Layton  
 Update 3/20/21

Tree Tag #	Common Name	Scientific Name	Exceptional	DBH (inches)	Height (feet)	Drip-Line / Limits of Disturbance (feet)				Condition	Proposal	Comments
						N	S	E	W			
1	Japanese white pine	Pinus parviflora	no	8	28	10	10	11	12	fair	Retain	no concerns
2	red cedar	Juniperus communis	no	10	40	13	14	15	7	fair	Retain	check for decaying top
3	Pacific dogwood	Cornus nutans	yes	6	37	14	8	12	10/10	fair	Retain	check for decaying top
4	weeping dogwood	Cornus florida	no	1.6 (8)	31	7	6	5	12	fair	Retain	check for decaying top
5	grape fr	Ampelopsis	yes	27	90	10/10	10/10	10/10	10/10	good	Retain	check for decaying top
6	dogwood	Cornus florida	no	24	81	0	20	4	16	good	Retain	check for decaying top
7	Douglas fir	Pseudotsuga menziesii	yes	14	73	8	10	4	12	fair	Retain	check for decaying top
8	Douglas fir	Pseudotsuga menziesii	yes	32	116	14	14	14	12	good	Retain	check for decaying top
9	Douglas fir	Pseudotsuga menziesii	yes	33	140	13	15	14	10	good	Retain	check for decaying top
10	Douglas fir	Pseudotsuga menziesii	yes	12	30	7	8	10	6	fair	Retain	check for decaying top
11	Douglas fir	Pseudotsuga menziesii	yes	36	144	18	11	13	10	good	Retain	check for decaying top
12	Douglas fir	Pseudotsuga menziesii	yes	20	88	6	9	11	11	fair	Retain	check for decaying top
13	Pacific dogwood	Cornus nutans	yes	11	50	10	10	14	12	fair	Retain	check for decaying top
14	Douglas fir	Pseudotsuga menziesii	yes	37	120	12	10/12	16	14/12	good	Retain	check for decaying top
15	Douglas fir	Pseudotsuga menziesii	yes	28	126	12	8/12	12	8	good	Retain	check for decaying top
16	Pacific dogwood	Cornus nutans	yes	11	40	12	10/10	14	16	fair	Retain	check for decaying top
17	Douglas fir	Pseudotsuga menziesii	yes	32	120	12	10/14	12	12	good	Retain	check for decaying top
18	Douglas fir	Pseudotsuga menziesii	yes	27	110	10	11/12	10	10	fair	Retain	check for decaying top
19	Douglas fir	Pseudotsuga menziesii	yes	32	118	14	10/14	12	12	good	Retain	check for decaying top
20	dogwood	Cornus florida	yes	14	40	20	7	12	16	fair	Retain	check for decaying top
21	dogwood	Cornus florida	yes	10	40	14	10	13	15	fair	Retain	check for decaying top
22	Douglas fir	Pseudotsuga menziesii	yes	22	60	12	8	10	10	fair	Retain	check for decaying top
23	Douglas fir	Pseudotsuga menziesii	yes	24	60	8	13/12	14	10	fair	Retain	check for decaying top

Parcel Trees - Drip-Line and Limits of Disturbance measurements from face of trunk  
 Trees on neighboring properties - Drip-Line and Limits of Disturbance measurements from property line  
 Calculated DBH: the DBH in parenthesis is the square root of the sum of the dbh for each individual stem squared (example with 3 stems: dbh = square root [(stem1)² + (stem2)² + (stem3)²])



TREE RETENTION PLAN PER ARBORIST REPORT

GARRET CORD WERNER LLC  
 3132 WESTERN AVE  
 SEATTLE WA  
 98121



TEL 206.749.9019  
 FAX 206.749.9128  
 WWW.GARRETCORDWERNER.COM

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- GENERAL NOTES:**
- ALL CODE COMPLIANCE TO BE VERIFIED PRIOR TO CONSTRUCTION BY ARCHITECT AND ADA EXPERT.
  - THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATUMS, AND LEVELS PRIOR TO THE START OF WORK.
  - ALL REVISIONS SHOWN TO BE VERIFIED BY ARCHITECT TO COMPLY WITH ALL BUILDING CODES AND STANDARDS.
  - MILLWORKER TO CONFIRM ALL CLEARANCES.
  - PERMIT DRAWINGS - NOT TO BE USED FOR CONSTRUCTION.
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DATE: 3/22/2021  
 SCALE: 1" = 10'-0"  
 DRAWN BY: AP  
 CHECKED BY: GCW

**'FOO' RESIDENCE**  
 3453 74th Ave SE  
 Mercer Island, WA  
 98040

REV	DATE	ISSUE/REVISION
1	7/15/20	Revision 1
3	2/25/21	City Comments Round 2

DDP DEDICATED APPROVAL STAMP SPACE

**TREE RETENTION PLAN AND DEMO PLAN**

REVISION NO. **3**  
 SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO. **G005**



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DATE	DRAWN BY
3/22/2021	AHP
SCALE	CHECKED BY
1" = 10'-0"	GCW

**'FOO' RESIDENCE**

3453 74th Ave SE  
Mercer Island, WA  
98040

REV	DATE	ISSUE/REVISION
1	7/15/20	Revision 1
2	10/28/20	City Comments
3	2/25/21	City Comments Round 2

DDP DEDICATED APPROVAL STAMP SPACE

**SITE PLAN AND DEVELOPMENT INFORMATION**

REVISION NO.  
**3**  
SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.  
**G006**

**LOT SLOPE CALCULATIONS**

HIGHEST ELEVATION POINT OF LOT:	283.00 FT
LOWEST ELEVATION POINT OF LOT:	275.00 FT
ELEVATION DIFFERENCE:	8.00 FT
HORIZONTAL DISTANCE BETWEEN HIGH AND LOW POINTS:	173.19 FT
LOT SLOPE:	4.62%

**LOT COVERAGE CALCULATIONS**

A. ALLOWED LOT COVERAGE	40% OF LOT
B. ALLOWED LOT COVERAGE AREA	8,647.20 SF
D. NET LOT AREA	21,618.00 SF
E. MAIN STRUCTURE ROOF AREA	3,557.51 SF
F. ACCESSORY BUILDING ROOF AREA	234.00 SF
G. VEHICULAR USE(DRIVEWAY, ACCESS EASEMENTS, PARKING)	1,782.24 SF
H. TOTAL EXISTING LOT COVERAGE AREA	7,395.00 SF
I. (TOTAL LOT COVERAGE AREA REMOVED)	7,395.00 SF
J. TOTAL NEW LOT COVERAGE AREA	5,573.75 SF
K. TOTAL PROJECT LOT COVERAGE AREA = (H-I) + J	<b>5,573.75 SF</b>
N. PROPOSED LOT COVERAGE = (K/D)X100	25.78% OF LOT
O. LANDSCAPING AREA	74.22% OF LOT

**HARDSCAPE**

NET LOT AREA	21,618.00 SF
9% OF NET LOT AREA	1,945.62 SF
UNUSED LOT COVERAGE	3,073.45 SF
TOTAL ALLOWABLE HARDSCAPE AREA	<b>5,019.07 SF</b>
ENTRY WALKWAY	177.00 SF
REAR YARD PATIO	1,540.00 SF
IN-GROUND POOL	756.00 SF
PAVED AREAS	642.25 SF
TOTAL HARDSCAPE ON PROPERTY	<b>3,115.25 SF</b>

**BUILDING AREA**

	EXISTING AREA	REMOVED AREA	NEW AREA	TOTAL
UPPER FLOOR	0 SF	0 SF	1,599.13 SF	1,599.13 SF
MAIN FLOOR	4,330 SF	4,330 SF	2,572.70 SF	2,572.70 SF
GROSS BASEMENT AREA	0 SF	0 SF	887.63 SF	887.63 SF
GARAGE / CARPORT	436 SF	436 SF	567.40 SF	567.40 SF
<b>TOTAL FLOOR AREA</b>	<b>4,766 SF</b>	<b>4,766 SF</b>	<b>5,626.86 SF</b>	<b>5,626.86 SF</b>

	EXISTING AREA	REMOVED AREA	NEW AREA	TOTAL
ACCESSORY BUILDINGS	0 SF	0 SF	234.00 SF	234.00 SF
BASEMENT AREA EXCLUDED	0 SF	0 SF	- 887.63 SF	- 887.63 SF
150 % GFA MODIFIER	0 SF	0 SF	0 SF	0 SF
200 % GFA MODIFIER	0 SF	0 SF	18.95 SF	18.95 SF
<b>TOTAL BUILDING AREA</b>	<b>4,766 SF</b>	<b>4,766 SF</b>	<b>4,997.78 SF</b>	<b>4,992.18 SF</b>

**GROSS FLOOR AREA (GFA)**

A. LOT AREA	21,618.00 SF
B. ALLOWED GROSS FLOOR AREA	5,000.00 SF
C. PROPOSED GROSS FLOOR AREA	<b>4,992.18 SF</b>

**AVERAGE BUILDING ELEVATION**

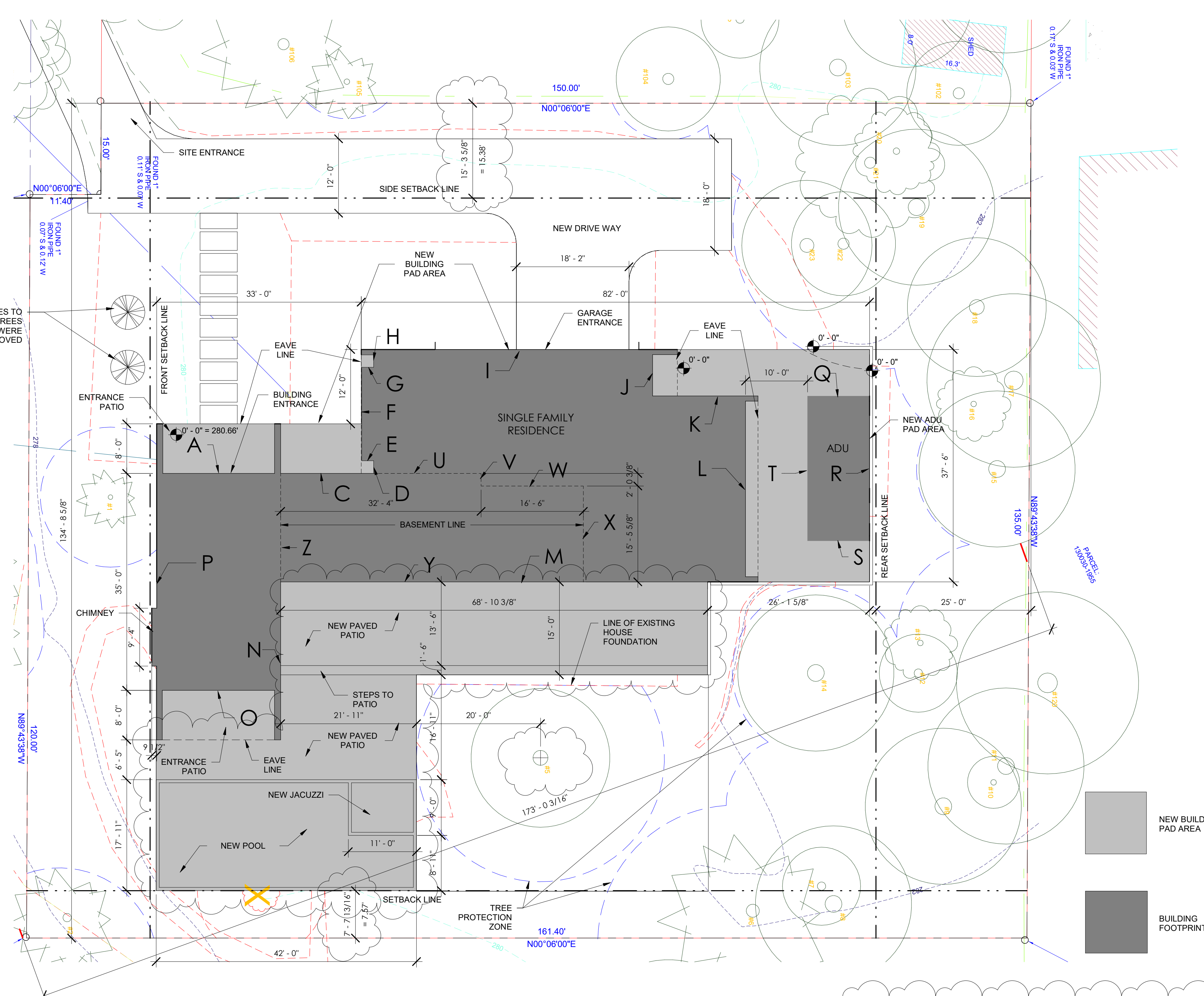
WALL ID	MIDPOINT ELEVATION (FT)	LENGTH ID	WALL SEGMENT LENGTH (FT)	ELEV x LENGTH	
A	280.10	a	20.00	5602.00	
C	280.30	c	13.00	3643.90	
D	280.30	d	2.00	560.60	
E	280.30	e	2.00	560.60	
F	280.30	f	16.00	4538.8	
G	280.50	g	2.00	561.00	
H	280.50	h	2.00	561.00	
I	281.00	i	51.00	14331.00	
J	281.70	j	7.50	2112.75	
K	281.80	k	13.00	3663.40	
L	282.00	l	30.00	8460.00	
M	281.70	m	77.00	21675.50	
N	280.50	n	25.50	7152.75	
O	280.00	o	20.00	5600.00	
P	279.70	p	35.00	9789.50	
TOTAL				88774.2	
ABE				(ELEVxLENGTH)/LENGTH	280.93
HIGHEST BUILDING ELEVATION				(ABE + 30.00')	310.93

**ADU AVERAGE BUILDING ELEVATION**

WALL ID	MIDPOINT ELEVATION (FT)	LENGTH ID	WALL SEGMENT LENGTH (FT)	ELEV x LENGTH	
Q	282.00	q	10.00	2820.00	
R	282.20	r	23.40	6603.48	
S	282.20	s	10.00	2822.00	
T	282.00	t	23.40	6598.8	
TOTAL				18844.28	
ABE				(ELEVxLENGTH)/LENGTH	282.10
HIGHEST BUILDING ELEVATION				(ABE + 17.00')	299.10

**BASEMENT FLOOR AREA EXCLUSION CALCULATION**

WALL ID	WALL SEGMENT COVERAGE (%)	WALL SEGMENT LENGTH (FT)	RESULT	
U	100%	32.33	32.33	
V	100%	2	2	
W	100%	16.5	16.5	
X	100%	15.5	15.5	
Y	100%	48.83	48.83	
Z	100%	17.5	17.5	
TOTAL BASEMENT AREA			887.63	
Portion of Excluded Basement Floor Area			Σ(Wall Segment Coverage x Wall Segment Length)	887.63



1 GFA CALCS  
1" = 10'-0"

**MICC 19.02.020(F)(3)(d)**  
Development proposals for a new single-family home shall remove Japanese knotweed (*Polygonum cuspidatum*) and Regulated Class A, Regulated Class B, and Regulated Class C weeds identified on the King County Noxious Weed list, as amended, from required landscaping areas established pursuant to subsection (F)(3)(a) of this section. New landscaping associated with new single-family home shall not incorporate any weeds identified on the King County Noxious Weed list, as amended. Provided, that removal shall not be required if the removal will result in increased slope instability or risk of landslide or erosion.



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DATE 3/22/2021	DRAWN BY AHP
SCALE 1/4" = 1'-0"	CHECKED BY GCW

PROJECT

**'FOO'  
RESIDENCE**

3453 74th Ave SE  
Mercer Island, WA  
98040

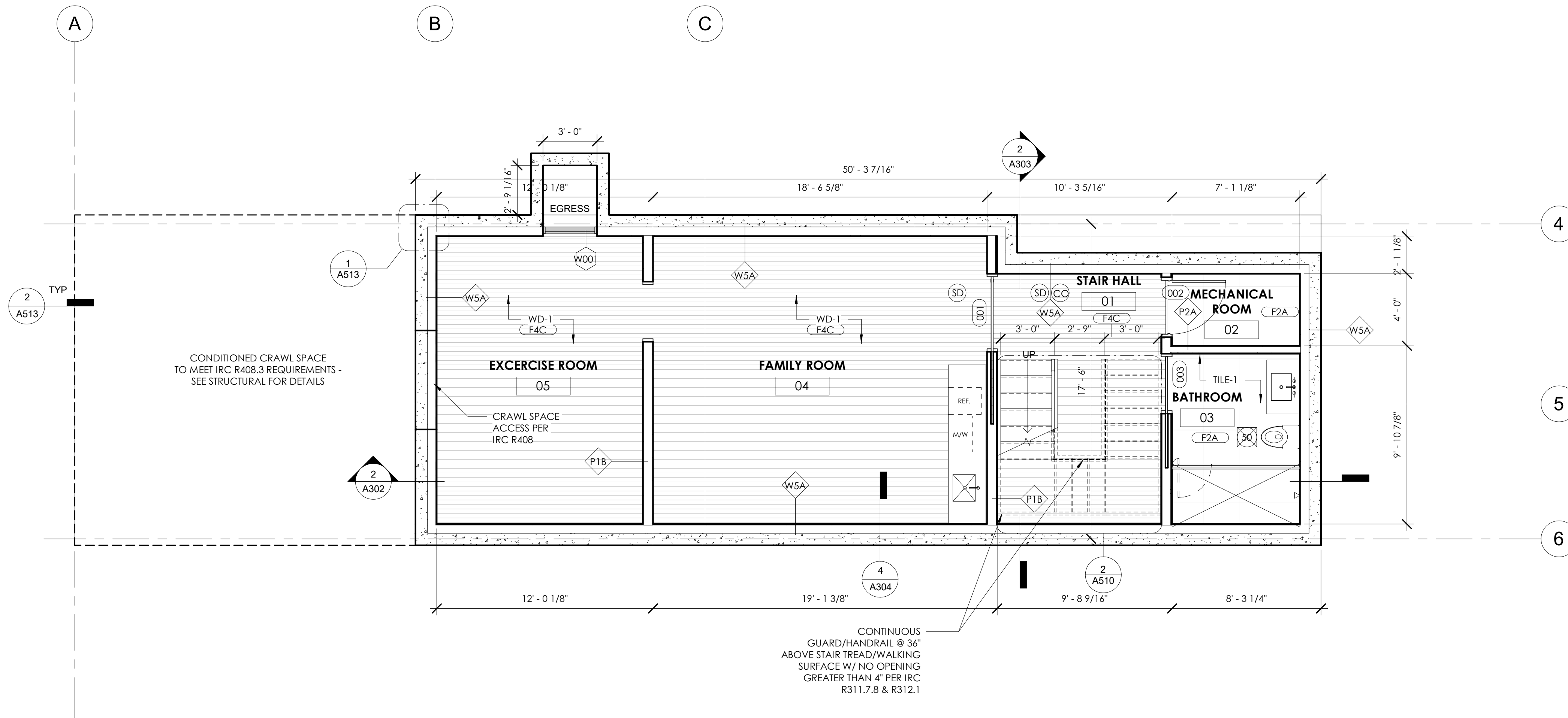
REV	DATE	ISSUE/REVISION
1	7/15/20	Revision 1
2	10/28/20	City Comments
3	2/25/21	City Comments Round 2

SHEET TITLE

**FLOOR PLAN -  
BASEMENT**

REVISION NO.	<b>3</b>
SUPERSEDES ALL PREVIOUS REVISIONS	

SHEET NO.  
**A110**



CONTINUOUS  
GUARD/HANDRAIL @ 36"  
ABOVE STAIR TREAD/WALKING  
SURFACE W/ NO OPENING  
GREATER THAN 4" PER IRC  
R311.7.8 & R312.1

NOTE:  
BASEMENT WILL NOT BE USED AS AN ADU.

**SD SMOKE DETECTORS**

IRC R314.3 SMOKE ALARMS  
SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:

- IN EACH SLEEPING ROOM
- OUTSIDE EACH SEPERATE SLEEPING AREA IN THE IMMEDIATE VACINITY OF THE BEDROOMS.
- ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS, BUT NOT INCLUDING CRAWLSPACES AND UNINHABITABLE ATTICS. IN DWELLINGS OR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER FLOOR SHALL SUFFICE FOR THE ADJACENT LOWER STOREY BELOW THE UPPER LEVEL.

SMOKE DETECTORS ARE TO BE HARDWIRED, INTERCONNECTED, WITH BATTERY BACKUP PER IRC R314.4

**VENTILATION SCHEDULE**

- 100 CFM ON SWITCH
- 105 CFM CONTINUOUSLY OPERATED WHOLE-HOUSE FAN, SIZED PER TABLE IRC M1507.3.3(1)
- 50 CFM ON SWITCH

MIN. 4 S. I. SCREENED OUTDOOR AIR INLET - WALL PORT OR WINDOW VENT AS REQUIRED.

MECHANICAL VENTILATION SYSTEM IN BATHROOMS, LAUNDRY ROOMS, AND SIMILAR ROOMS SHOULD EXHAUST DIRECTLY TO THE OUTSIDE. THE POINT OF DISCHARGE OF EXHAUST SHALL BE AT LEAST THREE FEET (3') FROM ANY OPENING INTO THE BUILDING PER IRC 1502.3 WHOLE-HOUSE EXHAUST FANS SHALL HAVE A SONE RATING OF 1.0 OR LESS WHEN LOCATED FOUR FEET (4') OR LESS FROM THE INTERIOR GRILLE PER IMC 403.8.8.5 / IRC 1507.3.4.2

**CG CARBON MONOXIDE DETECTORS**

IRC R315.1 CARBON MONOXIDE ALARMS. FOR NEW CONSTRUCTION, CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS AND ON EACH LEVEL OF THE DWELLING UNIT AND IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.

1 FLOOR PLAN - BASEMENT  
1/4" = 1'-0"

**MECHANICAL ROOM NOTES**

- IN SEISMIC ZONES D0, D1 & D2, WATER HEATERS SHALL BE ANCHORED TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF ITS VERTICAL DIMENSIONS PER IRC R802.1
- PROVIDE OUTDOOR COMBUSTION AIR FOR FURNACE AND WATER HEATER.

DDP DEDICATED  
APPROVAL STAMP SPACE



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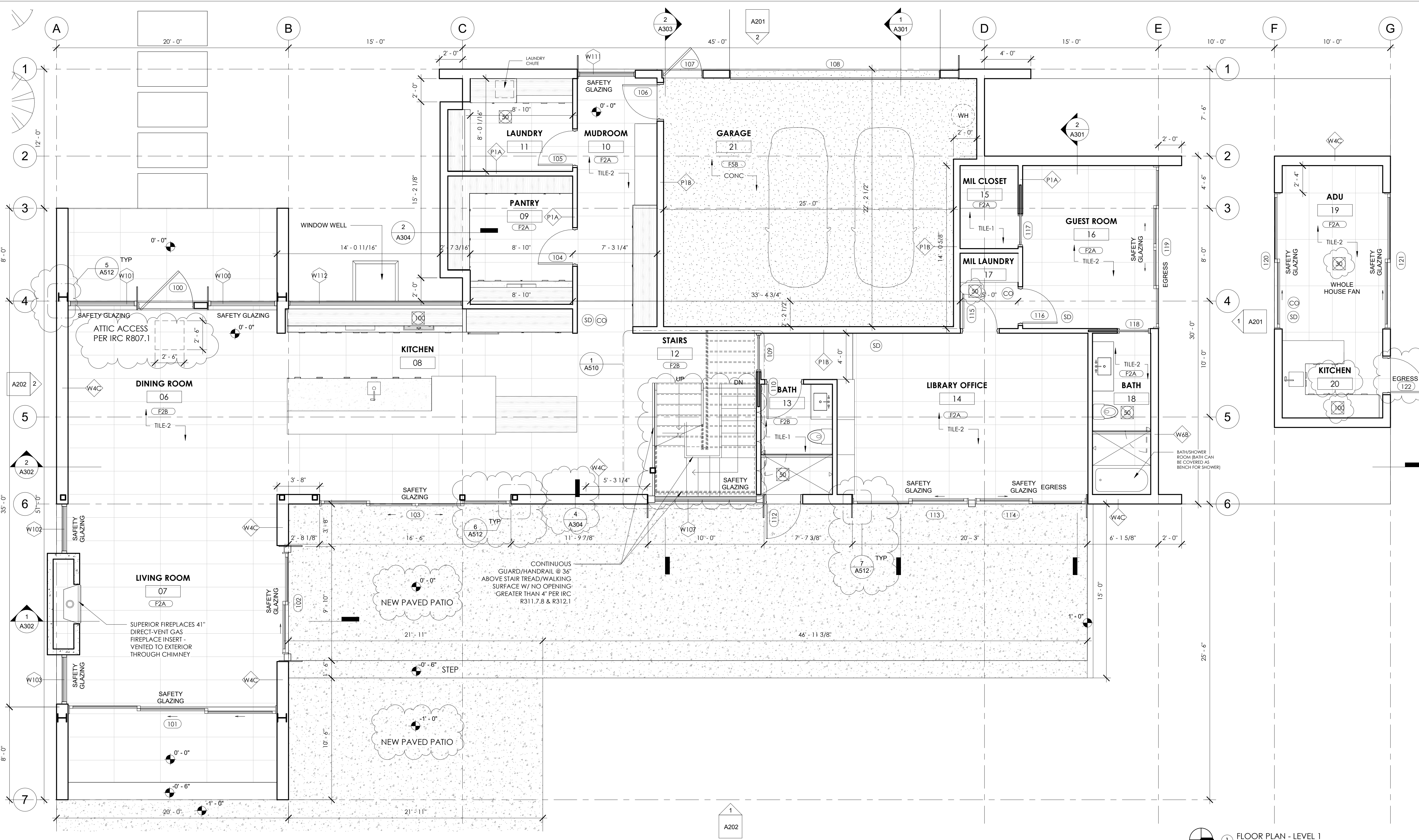
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DATE	DRAWN BY
3/22/2021	AP
SCALE	CHECKED BY
1/4" = 1'-0"	GCW

**'FOO' RESIDENCE**

3453 74th Ave SE  
Mercer Island, WA  
98040

REV	DATE	ISSUE/REVISION
1	7/15/20	Revision 1
2	10/28/20	City Comments
3	2/25/21	City Comments Round 2



**FLOOR PLAN - LEVEL 1**  
1/4" = 1'-0"

**SD SMOKE DETECTORS**

IRC R314.3 SMOKE ALARMS  
SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:

- IN EACH SLEEPING ROOM
- OUTSIDE EACH SEPERATE SLEEPING AREA IN THE IMMEDIATE VACINITY OF THE BEDROOMS.

- ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS, BUT NOT INCLUDING CRAWLSPACES AND UNINHABITABLE ATTICS. IN DWELLINGS OR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER FLOOR SHALL SUFFICE FOR THE ADJACENT LOWER STOREY BELOW THE UPPER LEVEL.

SMOKE DETECTORS ARE TO BE HARDWIRED, INTERCONNECTED, WITH BATTERY BACKUP PER IRC R314.4

**VENTILATION SCHEDULE**

- 100 CFM ON SWITCH
- 105 CFM CONTINUOUSLY OPERATED WHOLE-HOUSE FAN, SIZED PER TABLE IRC M1507.3.3(1)
- 50 CFM ON SWITCH
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MIN. 4 S. I. SCREENED OUTDOOR AIR INLET - WALL PORT OR WINDOW VENT AS REQUIRED.

MECHANICAL VENTILATION SYSTEM IN BATHROOMS, LAUNDRY ROOMS, AND SIMILAR ROOMS SHOULD EXHAUST DIRECTLY TO THE OUTSIDE. THE POINT OF DISCHARGE OF EXHAUST SHALL BE AT LEAST THREE FEET (3') FROM ANY OPENING INTO THE BUILDING PER IRC 1502.3 WHOLE-HOUSE EXHAUST FANS SHALL HAVE A SONE RATING OF 1.0 OR LESS WHEN LOCATED FOUR FEET (4') OR LESS FROM THE INTERIOR GRILLE PER IMC 403.8.8.5 / IRC 1507.3.4.2

**GARAGE NOTES**

- THE GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2" GWB APPLIED TO THE GARAGE SIDE. GARAGES BENEATH HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8" TYPE-X GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2" GYPSUM BOARD OR EQUIVALENT. IRC R309.2
- OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 1 3/8" THICKNESS. SOLID OR HONEYCOMB CORE STEEL DOORS NOT LESS THAN 1-3/8" THICK OR 20-MINUTE FIRE-RATED DOORS. SRC 309.1

**MECHANICAL ROOM NOTES**

- IN SEISMIC ZONES D0, D1 & D2, WATER HEATERS SHALL BE ANCHORED TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF ITS VERTICAL DIMENSIONS PER IRC R802.1
- PROVIDE OUTDOOR COMBUSTION AIR FOR FURNACE AND WATER HEATER.

**CC CARBON MONOXIDE DETECTORS**

IRC R315.1 CARBON MONOXIDE ALARMS. FOR NEW CONSTRUCTION, CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS AND ON EACH LEVEL OF THE DWELLING UNIT AND IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.

DDP DEDICATED APPROVAL STAMP SPACE

SHEET TITLE

**FLOOR PLAN - LEVEL 1**

REVISION NO.

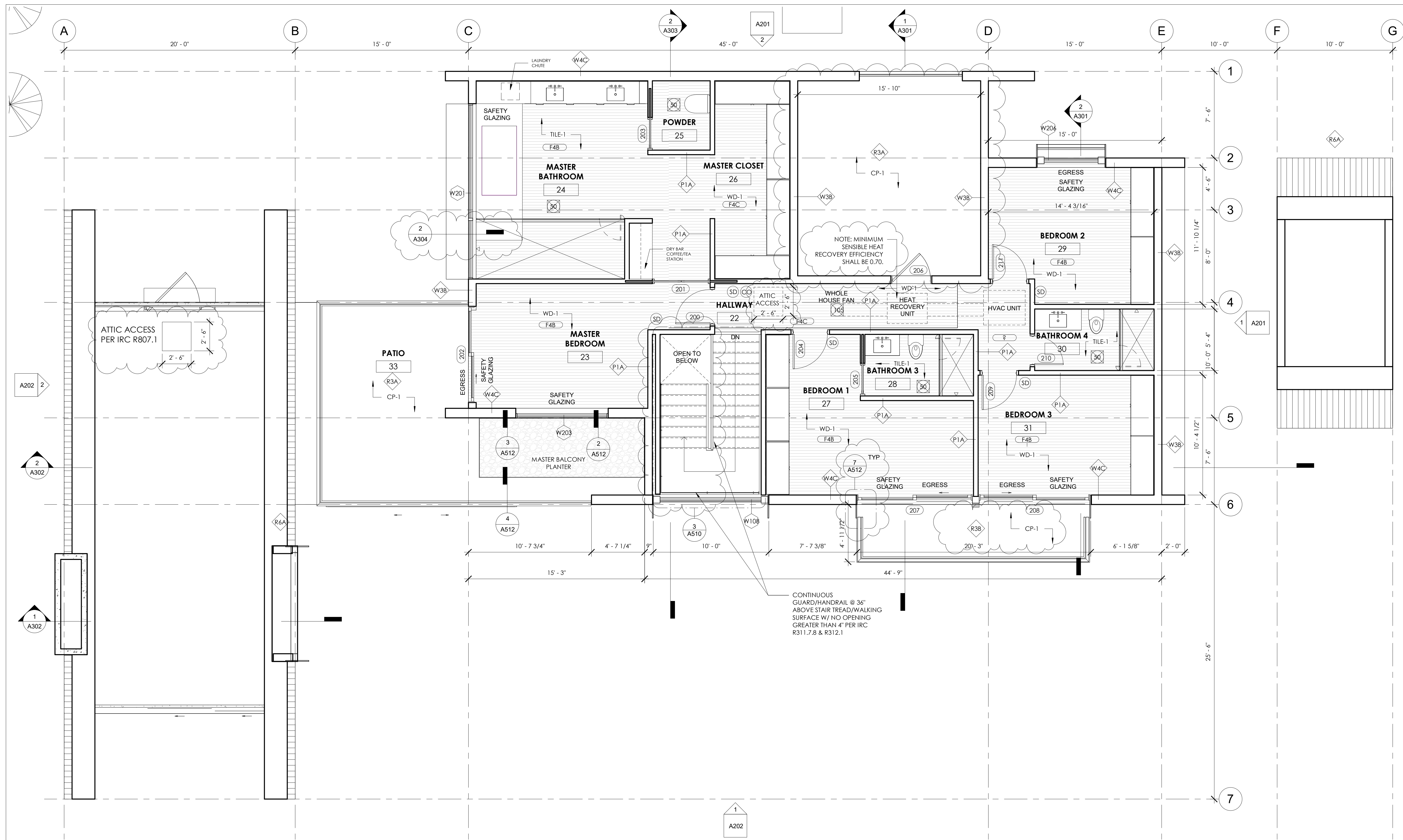
**3**

SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.

**A111**





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DATE 3/22/2021	DRAWN BY AP
SCALE 1/4" = 1'-0"	CHECKED BY GCW

**'FOO' RESIDENCE**

3453 74th Ave SE  
 Mercer Island, WA  
 98040

REV	DATE	ISSUE/REVISION
1	7/15/20	Revision 1
2	10/28/20	City Comments
3	2/25/21	City Comments Round 2

DEDICATED APPROVAL STAMP SPACE

SHEET TITLE  
**FLOOR PLAN - LEVEL 2**

REVISION NO.  
**3**  
 SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.  
**A112**

**SD SMOKE DETECTORS**

IRC R314.3 SMOKE ALARMS  
 SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:

- IN EACH SLEEPING ROOM
- OUTSIDE EACH SEPERATE SLEEPING AREA IN THE IMMEDIATE VACINITY OF THE BEDROOMS.
- ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS, BUT NOT INCLUDING CRAWLSPACES AND UNINHABITABLE ATTICS. IN DWELLINGS OR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER FLOOR SHALL SUFFICE FOR THE ADJACENT LOWER STOREY BELOW THE UPPER LEVEL.

SMOKE DETECTORS ARE TO BE HARDWIRED, INTERCONNECTED, WITH BATTERY BACKUP PER IRC R314.4

**VENTILATION SCHEDULE**

- 100 CFM ON SWITCH
- 105 CFM CONTINUOUSLY OPERATED WHOLE-HOUSE FAN, SIZED PER TABLE IRC M1507.3.3(1)
- 50 CFM ON SWITCH

MIN. 4 S. I. SCREENED OUTDOOR AIR INLET - WALL PORT OR WINDOW VENT AS REQUIRED.

MECHANICAL VENTILATION SYSTEM IN BATHROOMS, LAUNDRY ROOMS, AND SIMILAR ROOMS SHOULD EXHAUST DIRECTLY TO THE OUTSIDE. THE POINT OF DISCHARGE OF EXHAUST SHALL BE AT LEAST THREE FEET (3') FROM ANY OPENING INTO THE BUILDING PER IRC 1502.3 WHOLE-HOUSE EXHAUST FANS SHALL HAVE A SONE RATING OF 1.0 OR LESS WHEN LOCATED FOUR FEET (4') OR LESS FROM THE INTERIOR GRILLE PER IMC 403.8.8.5 / IRC 1507.3.4.2

**CG CARBON MONOXIDE DETECTORS**

IRC R315.1 CARBON MONOXIDE ALARMS. FOR NEW CONSTRUCTION, CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS AND ON EACH LEVEL OF THE DWELLING UNIT AND IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.

**MECHANICAL ROOM NOTES**

- IN SEISMIC ZONES D0, D1 & D2, WATER HEATERS SHALL BE ANCHORED TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF ITS VERTICAL DIMENSIONS PER IRC R802.1
- PROVIDE OUTDOOR COMBUSTION AIR FOR FURNACE AND WATER HEATER.

1 FLOOR PLAN - LEVEL 2  
 1/4" = 1'-0"



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DATE 3/22/2021	DRAWN BY AHP
SCALE 1/4" = 1'-0"	CHECKED BY GCW

**'FOO'  
 RESIDENCE**

3453 74th Ave SE  
 Mercer Island, WA  
 98040

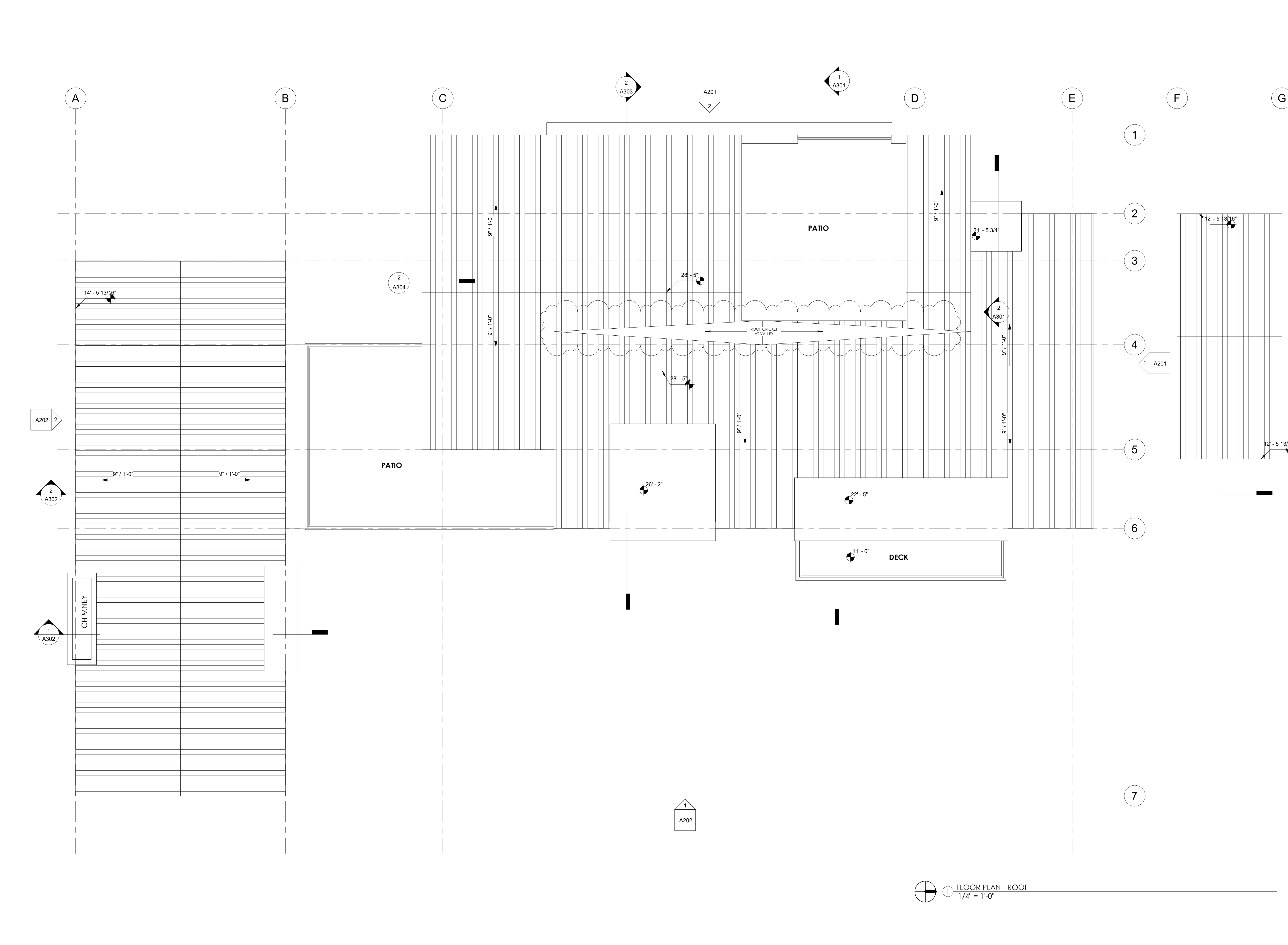
REV	DATE	ISSUE/REVISION
1	7/15/20	Revision 1
3	2/25/21	City Comments Round 2

DDP DEDICATED  
 APPROVAL STAMP SPACE

SHEET TITLE  
**FLOOR PLAN -  
 ROOF**

REVISION NO.  
**3**  
 SUPERSEDES ALL PREVIOUS REVISIONS

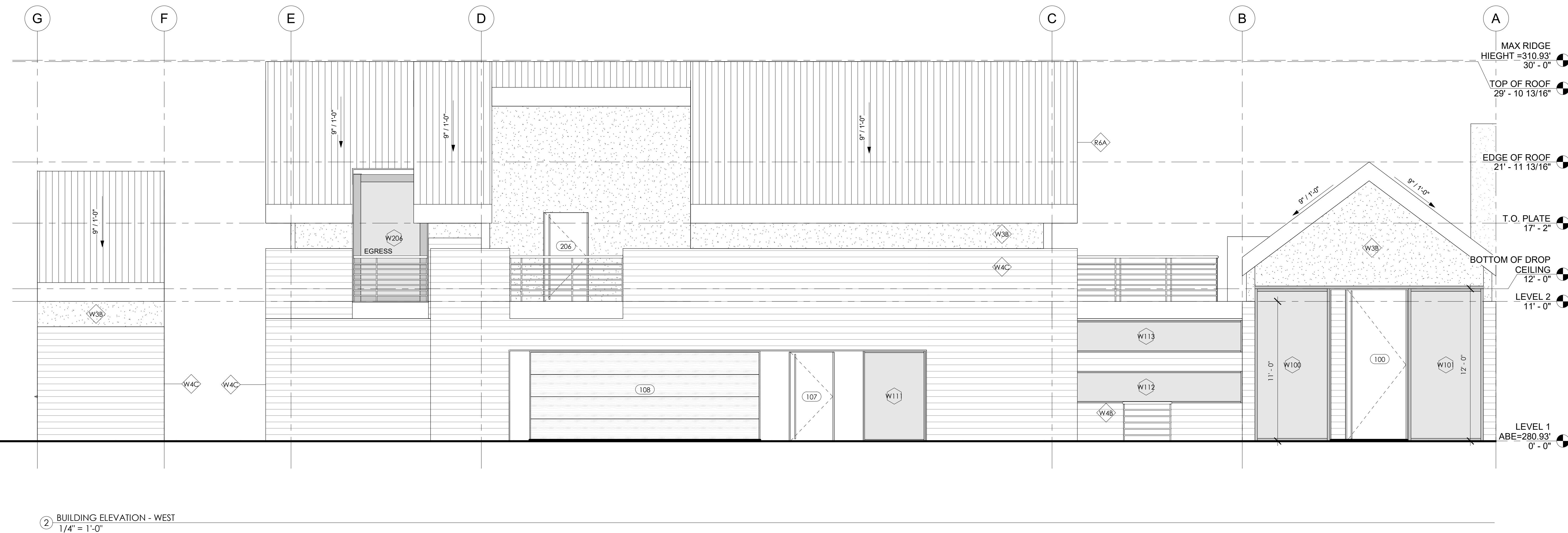
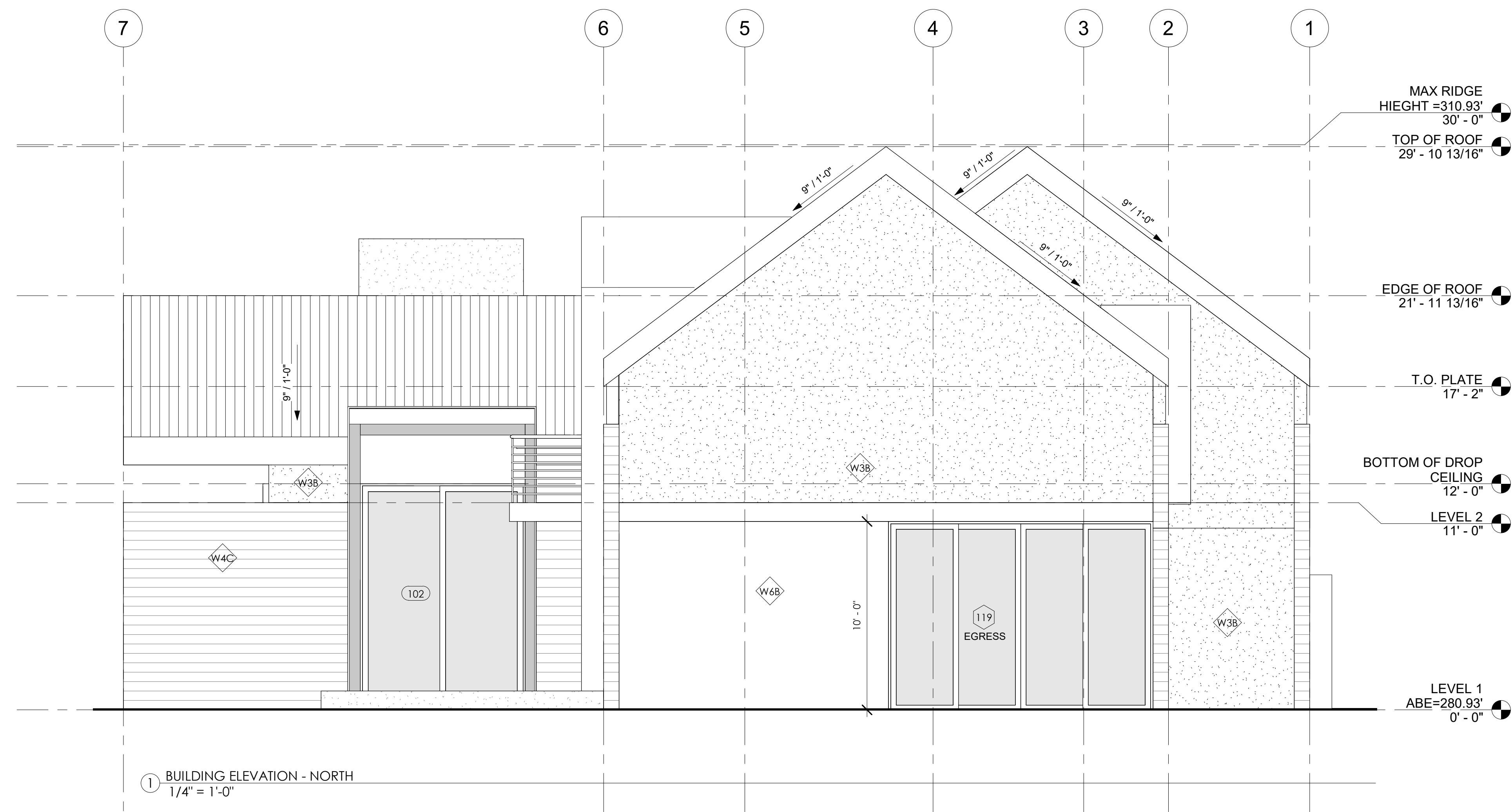
SHEET NO.  
**A116**



① FLOOR PLAN - ROOF  
 1/4" = 1'-0"



AVERAGE BUILDING ELEVATION				
WALL ID	MIDPOINT ELEVATION (FT)	LENGTH ID	WALL SEGMENT LENGTH (FT)	ELEV x LENGTH
A	280.10	a	20.00	5602.00
C	280.30	c	13.00	3643.90
D	280.30	d	2.00	560.60
E	280.30	e	2.00	560.60
F	280.30	f	16.00	4538.8
G	280.50	g	2.00	561.00
H	280.50	h	2.00	561.00
I	281.00	i	51.00	14331.00
J	281.70	j	7.50	2112.75
K	281.80	k	13.00	3663.40
L	282.00	l	30.00	8460.00
M	281.70	m	77.00	21675.50
N	280.50	n	25.50	7152.75
O	280.00	o	20.00	5600.00
P	279.70	p	35.00	9789.50
			TOTAL	88774.2
ABE			(ELEVxLENGTH)/LENGTH	280.93
HIGHEST BUILDING ELEVATION			(ABE + 30.00')	310.93



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DATE 3/22/2021	DRAWN BY AHP
SCALE 1/4" = 1'-0"	CHECKED BY GCW

PROJECT  
**'FOO' RESIDENCE**

3453 74th Ave SE  
 Mercer Island, WA  
 98040

REV	DATE	ISSUE/REVISION
1	7/15/20	Revision 1

MAX RIDGE HIEGHT = 30'-0"  
 30' - 0"

TOP OF ROOF  
 29' - 10 13/16"

EDGE OF ROOF  
 21' - 11 13/16"

T.O. PLATE  
 17' - 2"

BOTTOM OF DROP CEILING  
 12' - 0"

LEVEL 2  
 11' - 0"

LEVEL 1  
 ABE=280.93'  
 0' - 0"

DDP DEDICATED APPROVAL STAMP SPACE

SHEET TITLE  
**ELEVATIONS**

REVISION NO.  
**1**

SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.  
**A201**



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DATE	3/22/2021	DRAWN BY	AHP
SCALE	1/4" = 1'-0"	CHECKED BY	GCW

**'FOO' RESIDENCE**

3453 74th Ave SE  
Mercer Island, WA  
98040

REV DATE ISSUE/REVISION

1	7/15/20	Revision 1
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DPT DEDICATED APPROVAL STAMP SPACE

SHEET TITLE

**ELEVATIONS**

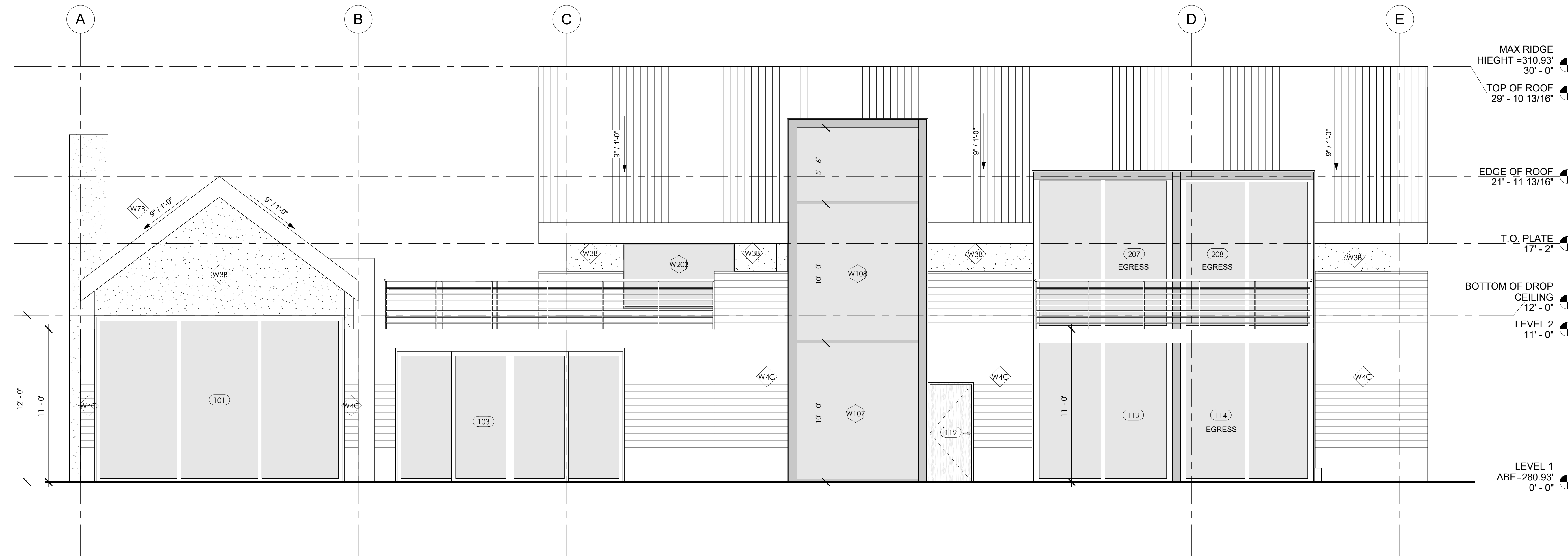
REVISION NO.

**1**

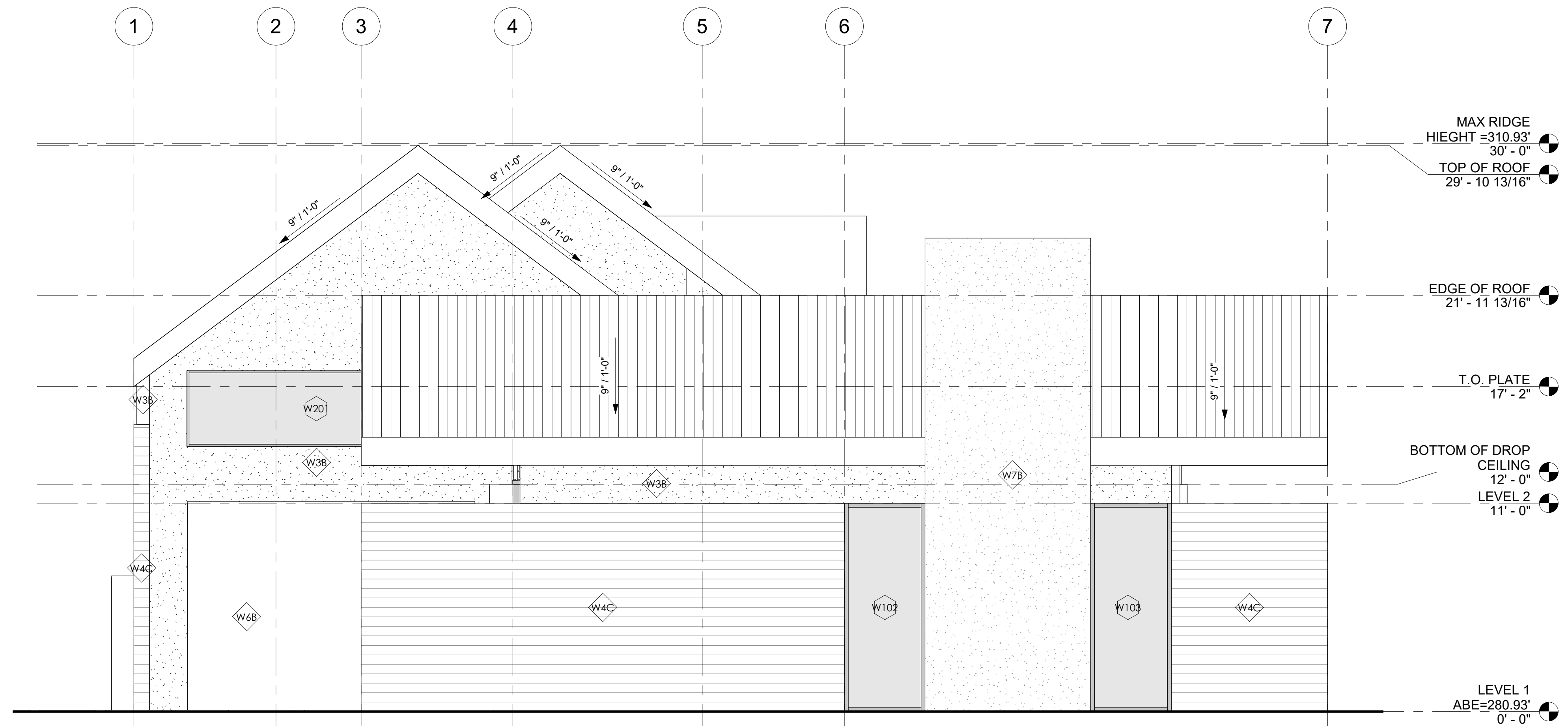
SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.

**A202**



1 BUILDING ELEVATION - EAST  
1/4" = 1'-0"



2 BUILDING ELEVATION - SOUTH  
1/4" = 1'-0"

MAX RIDGE HIEGHT =310.93' 30'-0"  
TOP OF ROOF 29'-10 13/16"

EDGE OF ROOF 21'-11 13/16"

T.O. PLATE 17'-2"

BOTTOM OF DROP CEILING 12'-0"

LEVEL 2 11'-0"

LEVEL 1 ABE=280.93' 0'-0"

AVERAGE BUILDING ELEVATION				
WALL ID	MIDPOINT ELEVATION (FT)	LENGTH ID	WALL SEGMENT LENGTH (FT)	ELEV x LENGTH
A	280.10	a	20.00	5602.00
C	280.30	c	13.00	3643.90
D	280.30	d	2.00	560.60
E	280.30	e	2.00	560.60
F	280.30	f	16.00	4538.8
G	280.50	g	2.00	561.00
H	280.50	h	2.00	561.00
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K	281.80	k	13.00	3663.40
L	282.00	l	30.00	8460.00
M	281.70	m	77.00	21675.50
N	280.50	n	25.50	7152.75
O	280.00	o	20.00	5600.00
P	279.70	p	35.00	9789.50
			TOTAL	88774.2
ABE			(ELEVxLENGTH)/LENGTH	280.93
HIGHEST BUILDING ELEVATION			(ABE + 30.00')	310.93



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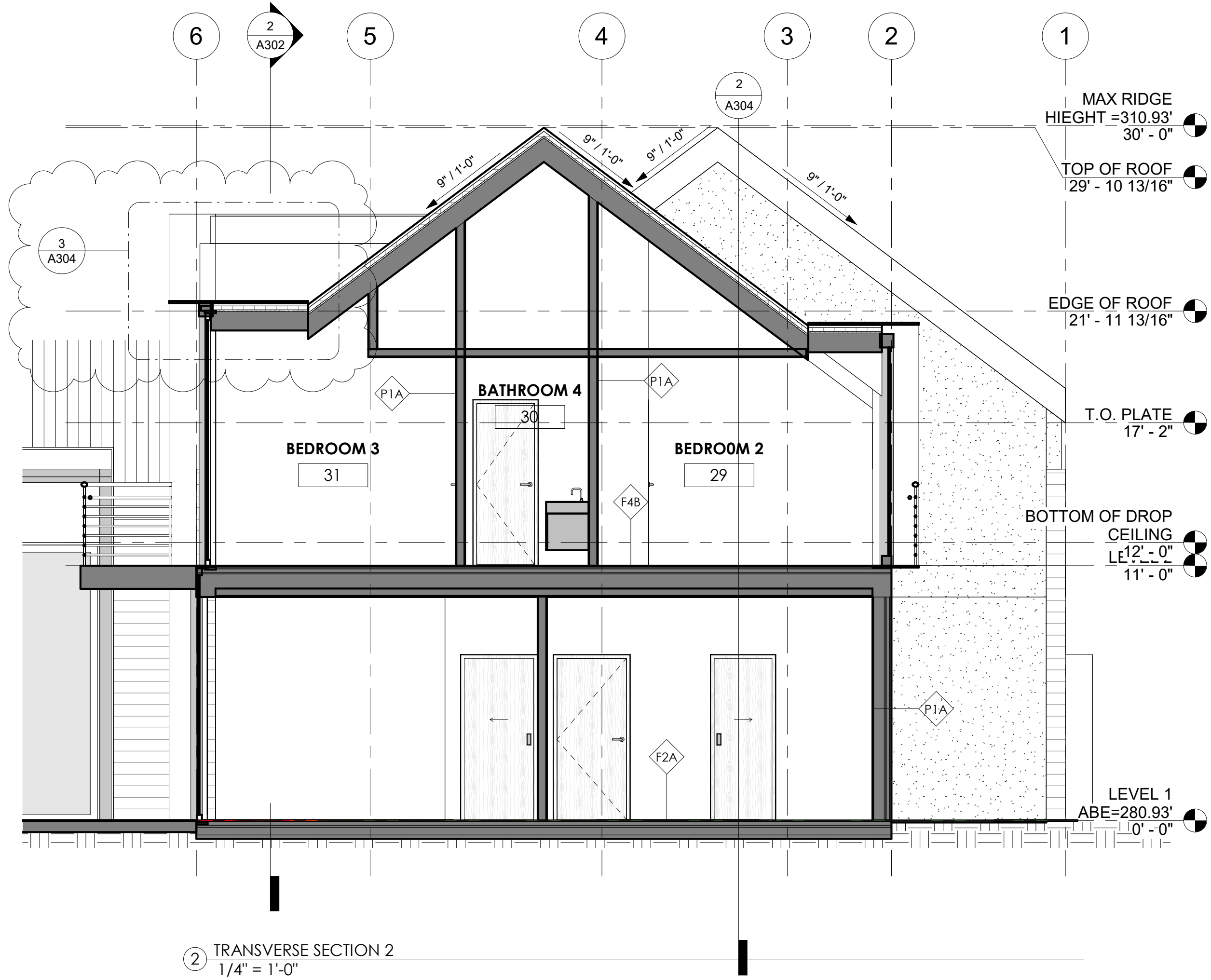
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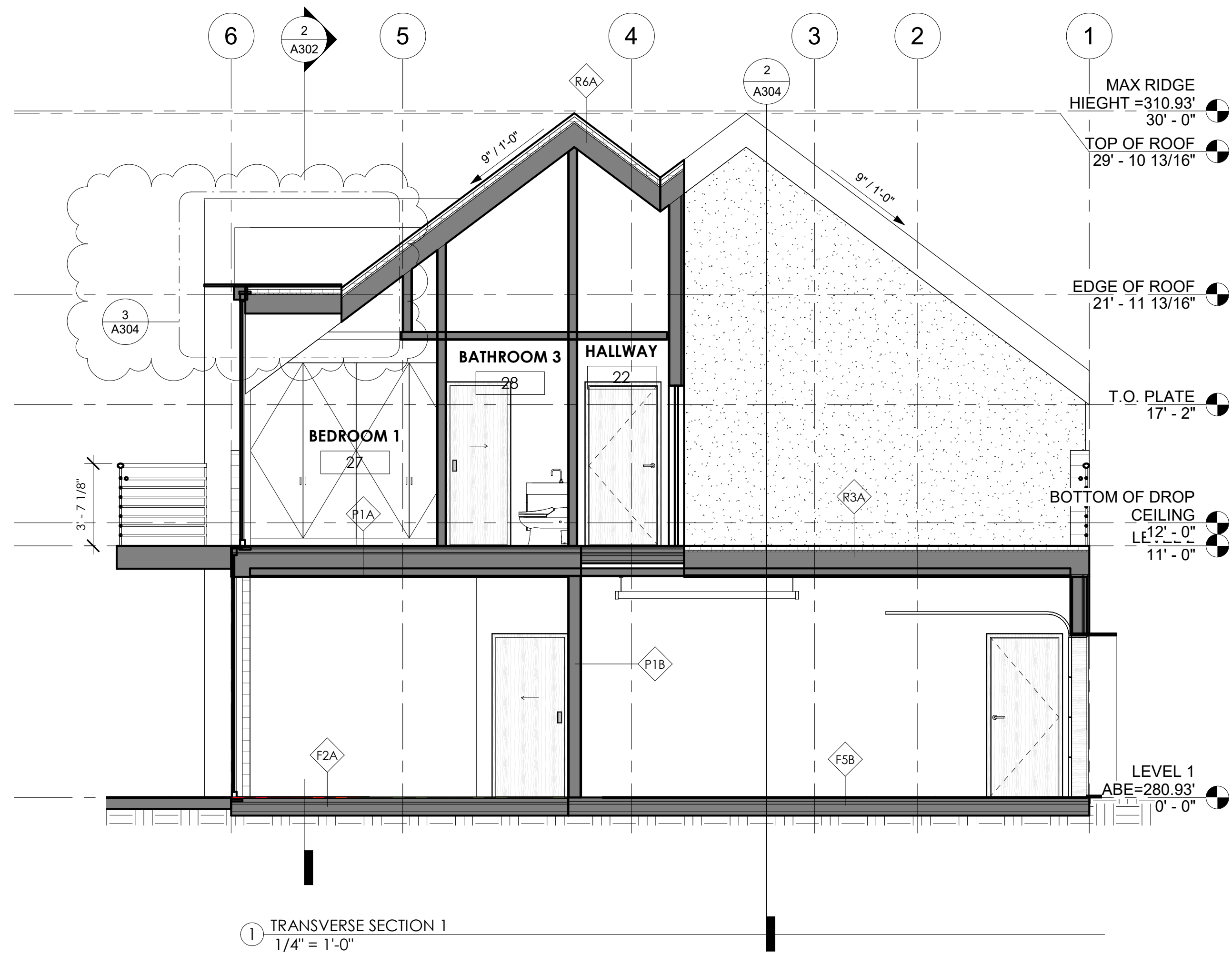
DATE 3/22/2021	DRAWN BY AHP
SCALE 1/4" = 1'-0"	CHECKED BY GCW

PROJECT  
**'FOO' RESIDENCE**  
 3453 74th Ave SE  
 Mercer Island, WA  
 98040

REV	DATE	ISSUE/REVISION
1	7/15/20	Revision 1
3	2/25/21	City Comments Round 2



② TRANSVERSE SECTION 2  
 1/4" = 1'-0"



① TRANSVERSE SECTION 1  
 1/4" = 1'-0"

DDP DEDICATED  
 APPROVAL STAMP SPACE

SHEET TITLE  
**BUILDING SECTIONS**

REVISION NO.

**3**

SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.

**A301**



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DATE	DRAWN BY
3/22/2021	AHP
SCALE	CHECKED BY
1/4" = 1'-0"	GCW
PROJECT	

**'FOO' RESIDENCE**

3453 74th Ave SE  
Mercer Island, WA  
98040

REV	DATE	ISSUE/REVISION
1	7/15/20	Revision 1
2	10/28/20	City Comments

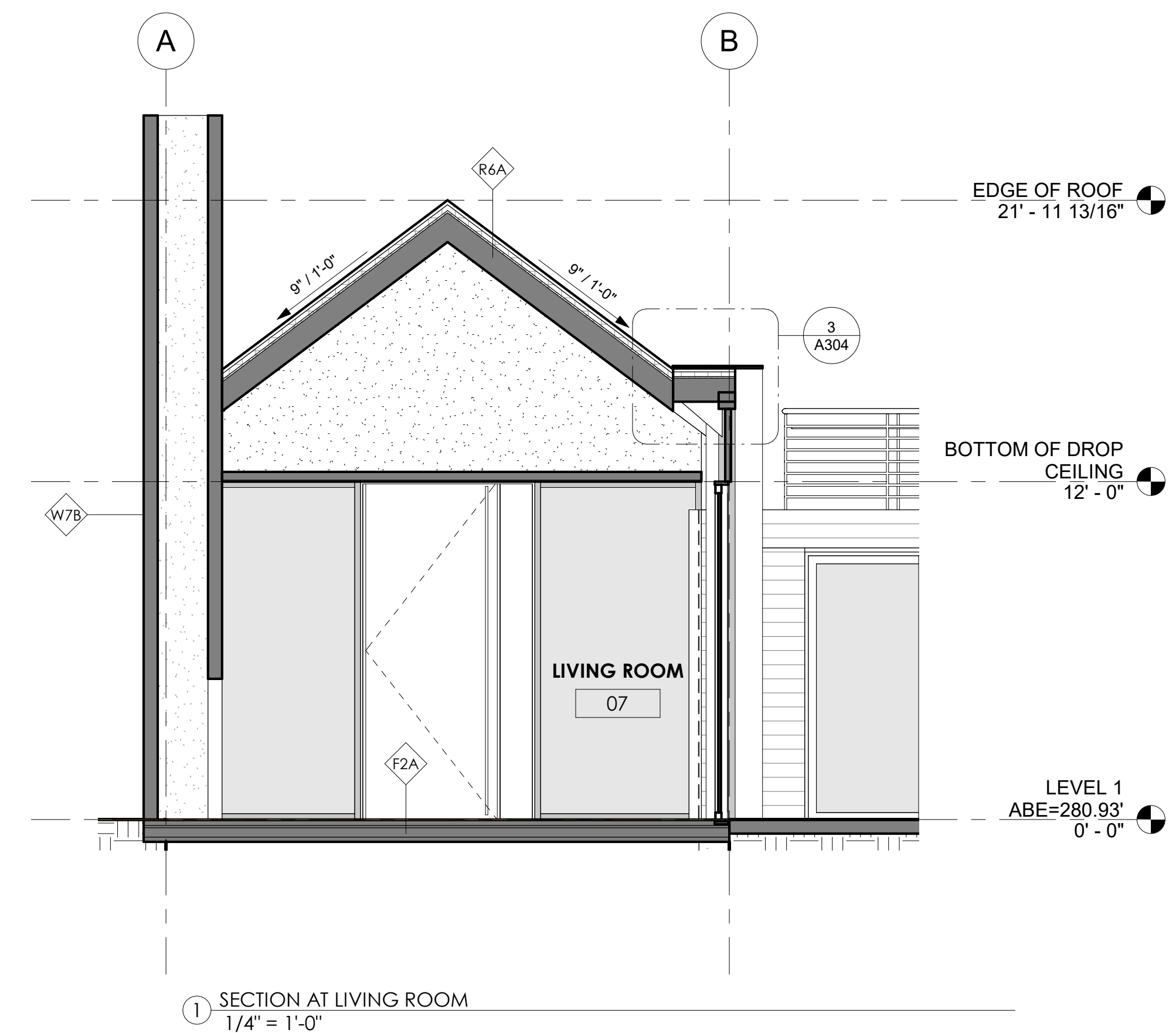
DDP DEDICATED  
APPROVAL STAMP SPACE

**BUILDING SECTIONS**

REVISION NO.  
**2**

SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.  
**A302**



1 SECTION AT LIVING ROOM  
1/4" = 1'-0"



2 LONGITUDINAL SECTION  
1/4" = 1'-0"

EDGE OF ROOF  
21' - 11 13/16"

BOTTOM OF DROP  
CEILING  
12' - 0"

LEVEL 1  
ABE=280.93'  
0' - 0"

MAX RIDGE  
HEIGHT = 310.93'  
30' - 0"  
TOP OF ROOF  
29' - 10 13/16"

EDGE OF ROOF  
21' - 11 13/16"

T.O. PLATE  
17' - 2"

BOTTOM OF DROP  
CEILING  
12' - 0"

LEVEL 2  
11' - 0"

LEVEL 1  
ABE=280.93'  
0' - 0"

BASEMENT  
-10' - 6"



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DATE 3/22/2021	DRAWN BY AP
SCALE 1/4" = 1'-0"	CHECKED BY GCW

PROJECT  
**'FOO' RESIDENCE**  
 3453 74th Ave SE  
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 98040

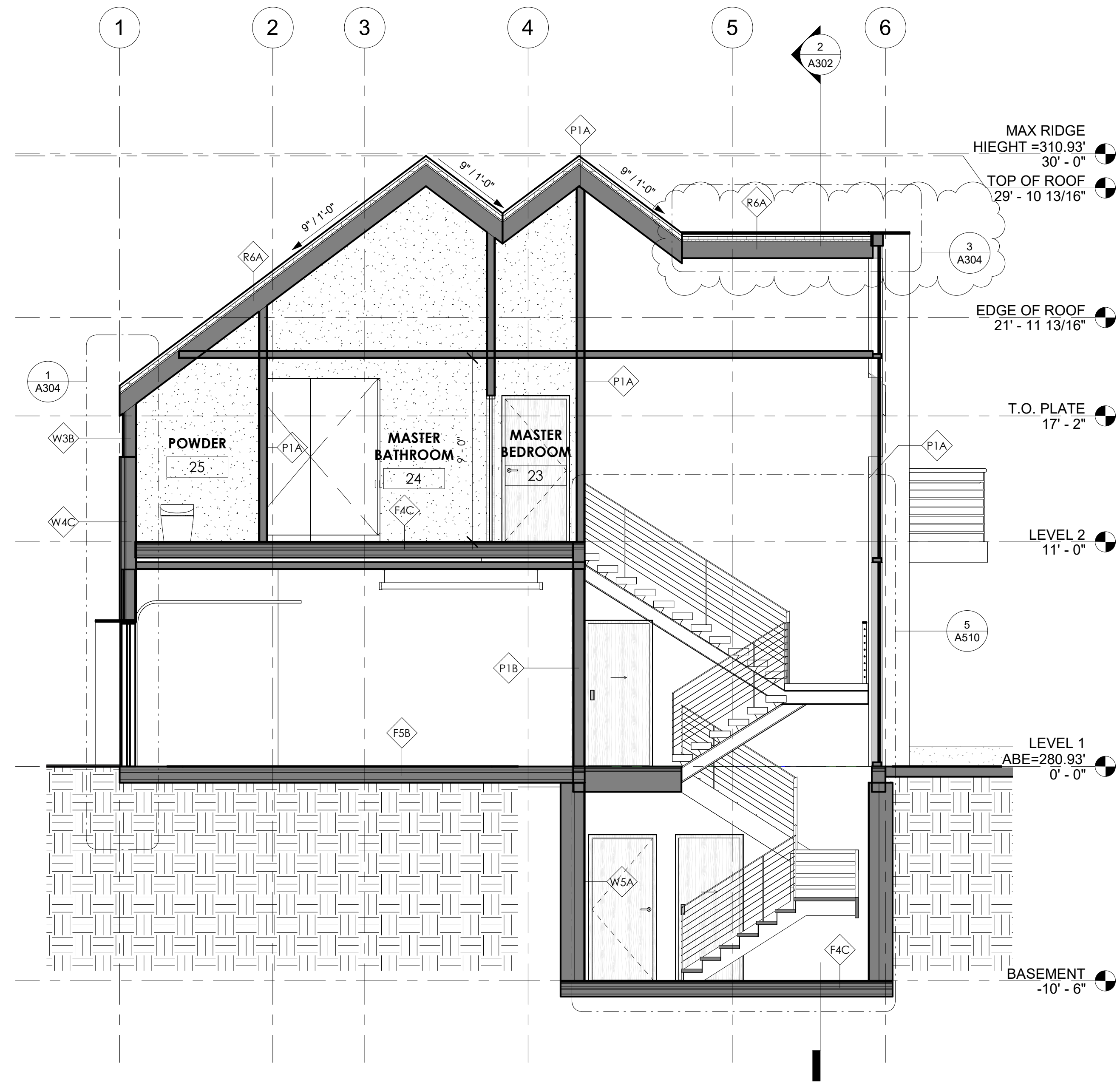
REV	DATE	ISSUE/REVISION
2	10/28/20	City Comments
3	2/25/21	City Comments Round 2

DDP DEDICATED  
 APPROVAL STAMP SPACE

SHEET TITLE  
**BUILDING SECTIONS**

REVISION NO.  
**3**  
 SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.  
**A303**



② TRANSVERSE SECTION 3  
 1/4" = 1'-0"



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DATE	3/22/2021	DRAWN BY	AHP
SCALE	1/2" = 1'-0"	CHECKED BY	GCW

PROJECT

**'FOO' RESIDENCE**

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Mercer Island, WA  
98040

REV	DATE	ISSUE/REVISION
3	2/25/21	City Comments Round 2

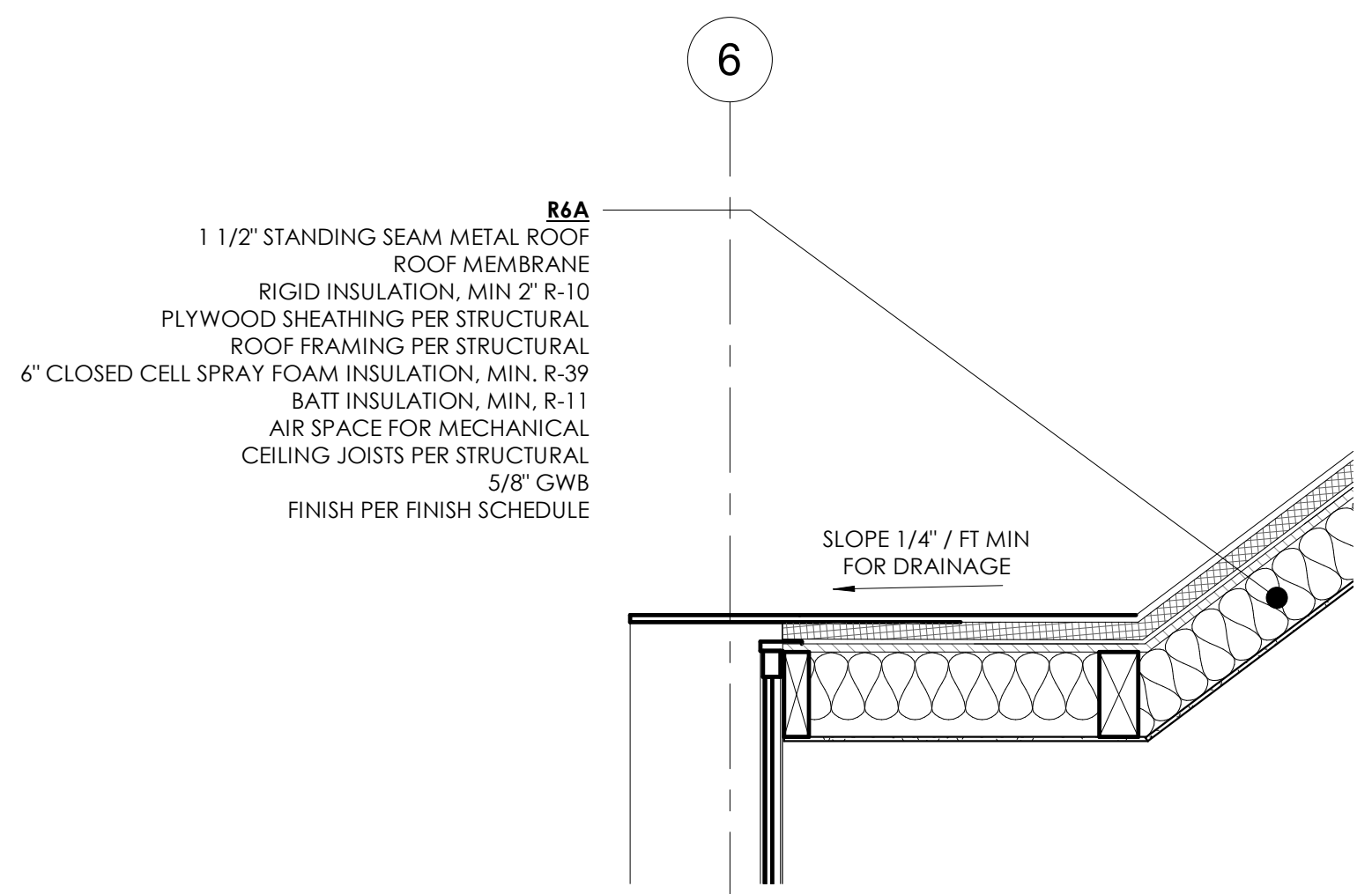
DDP DEDICATED APPROVAL STAMP SPACE

SHEET TITLE  
**WALL SECTIONS**

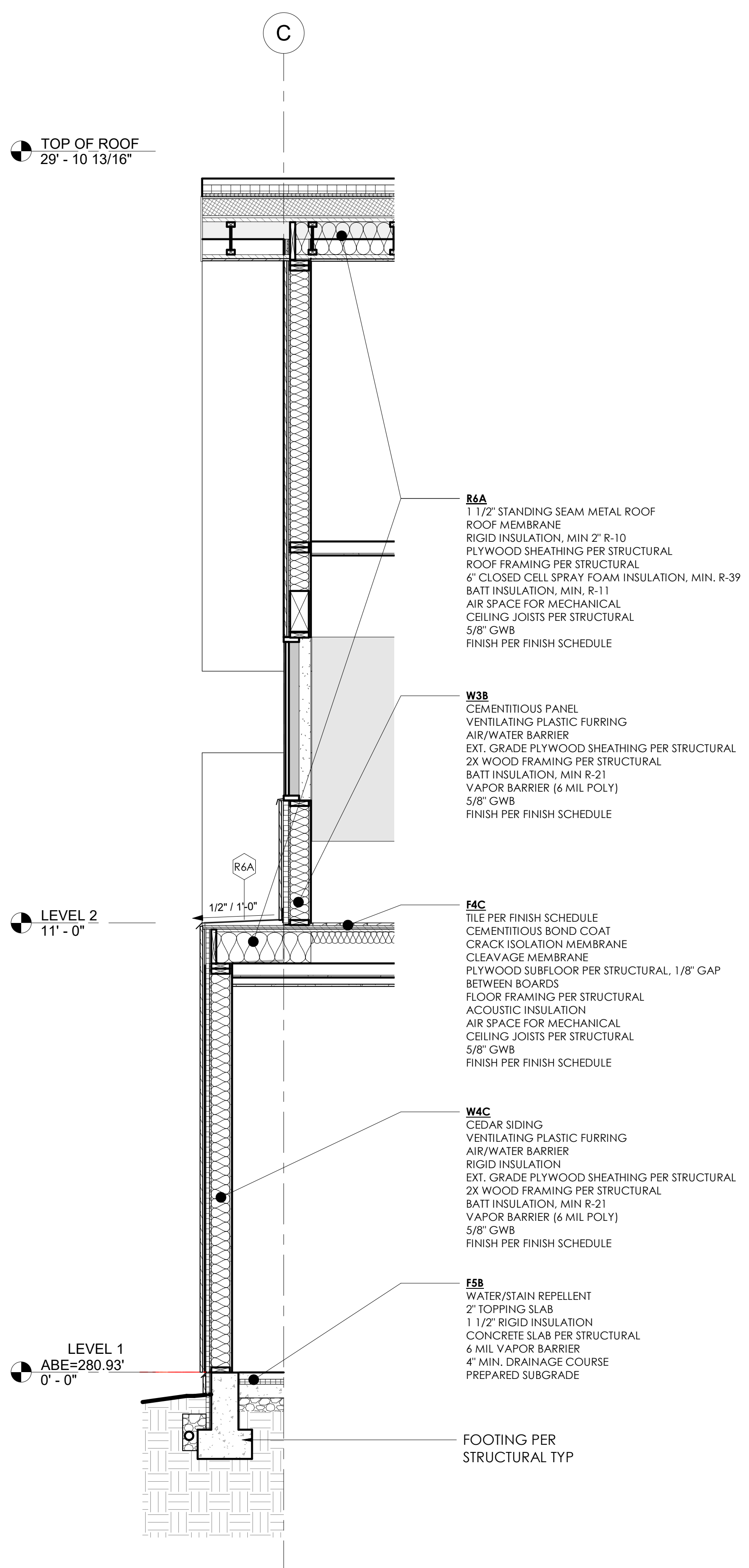
REVISION NO.  
**3**  
SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.  
**A304**

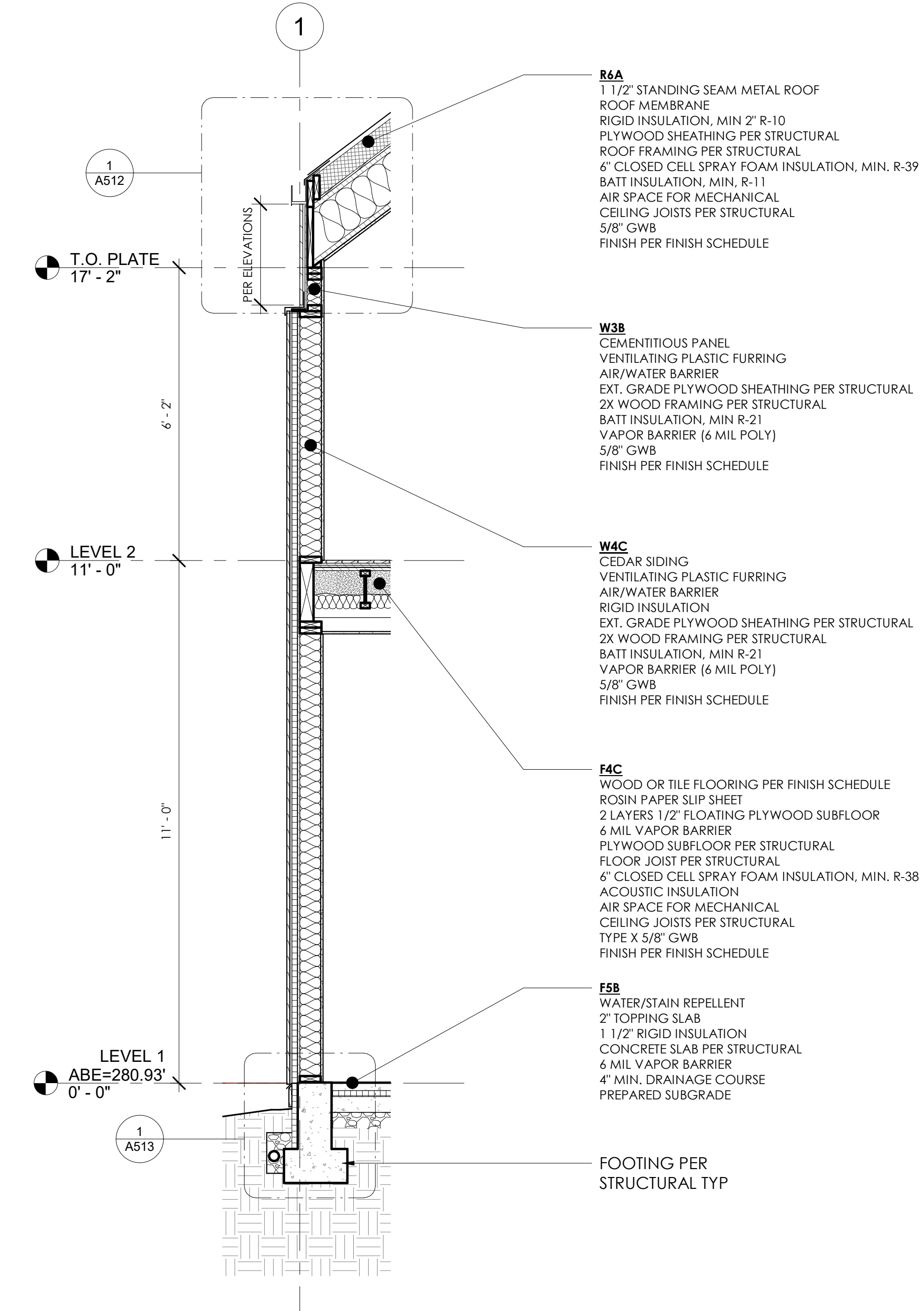
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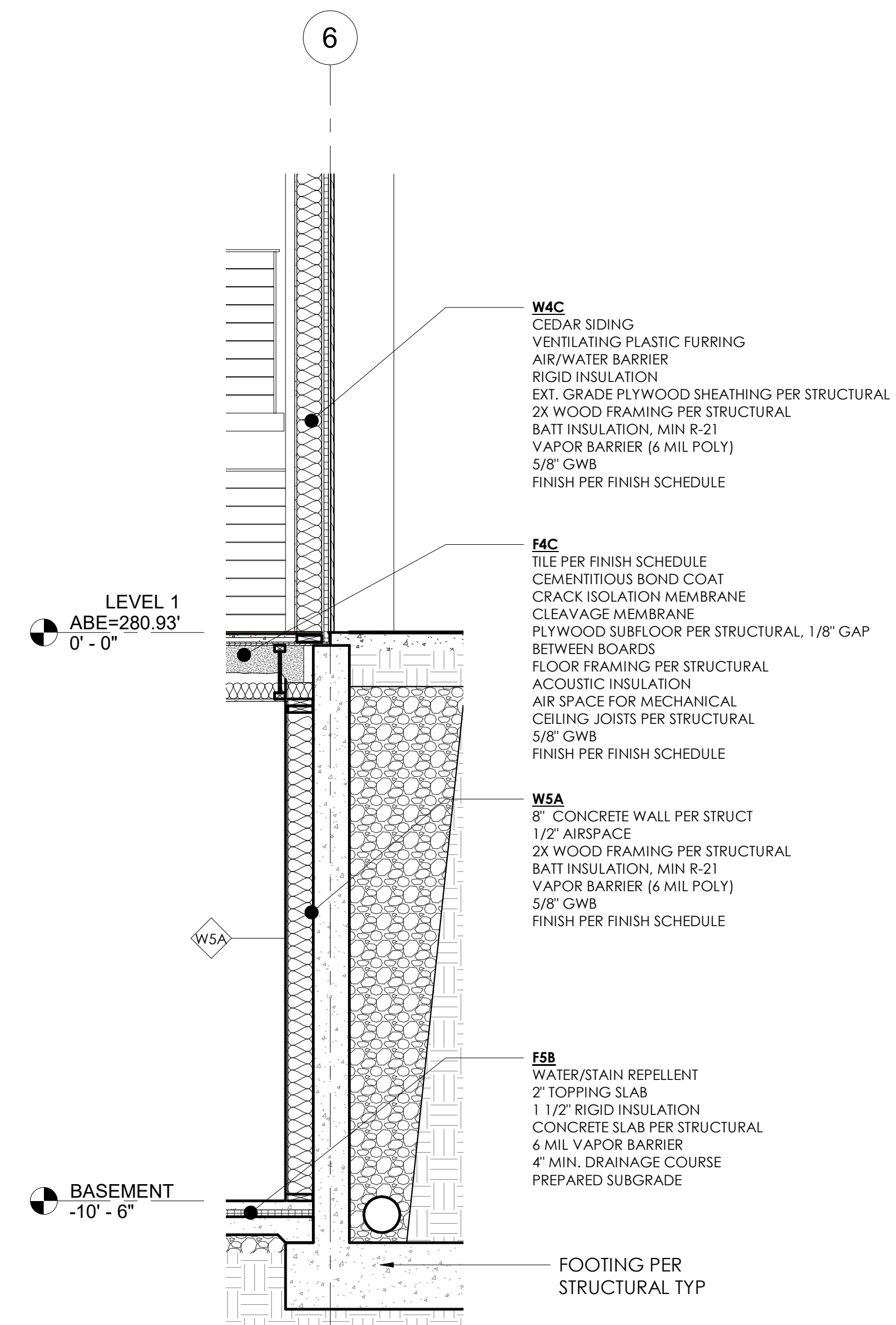
3 WALL SECTION 3  
1/2" = 1'-0"



2 WALL SECTION 2  
1/2" = 1'-0"



1 WALL SECTION 1  
1/2" = 1'-0"

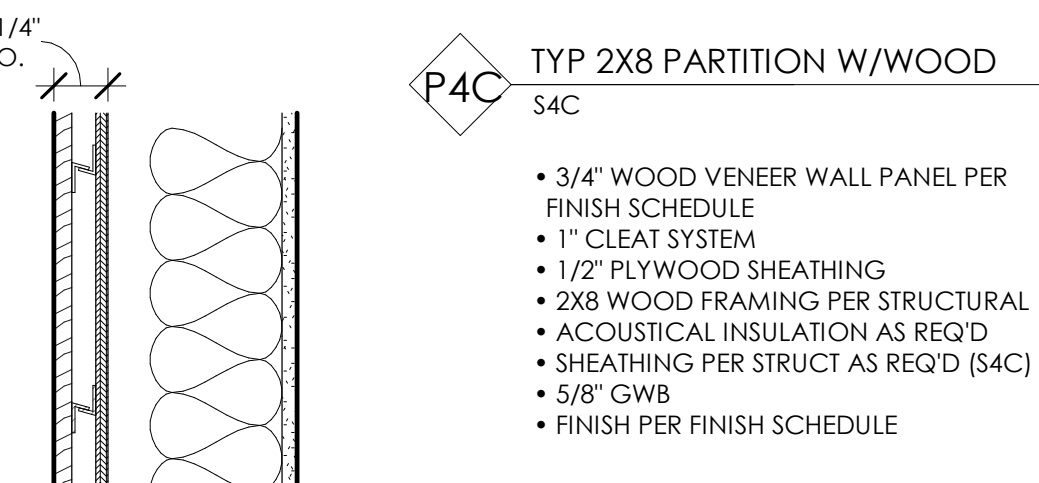
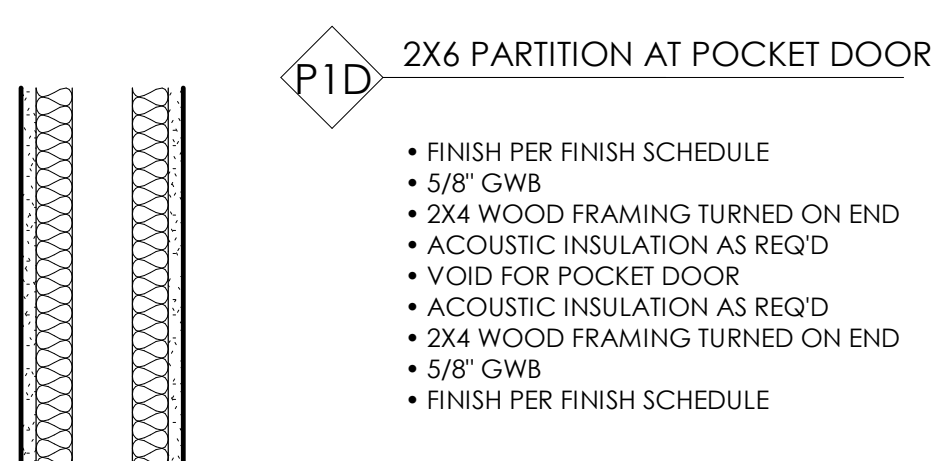
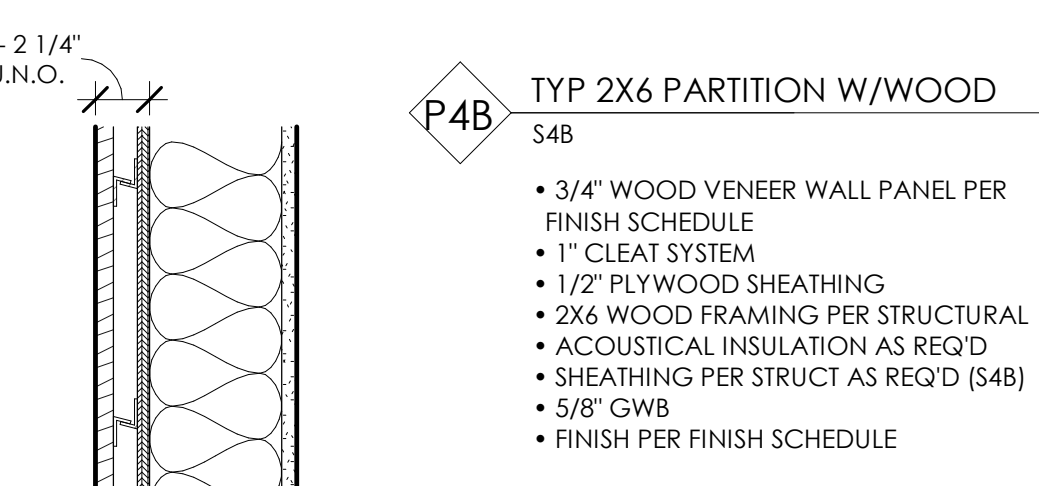
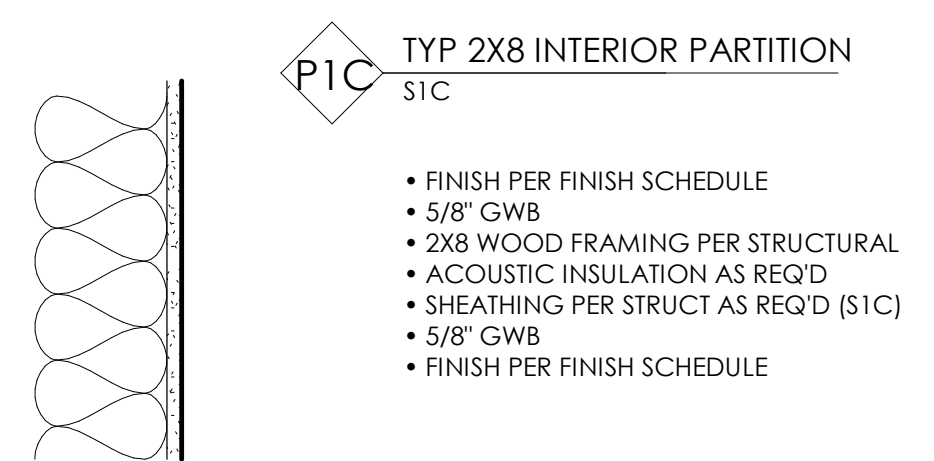
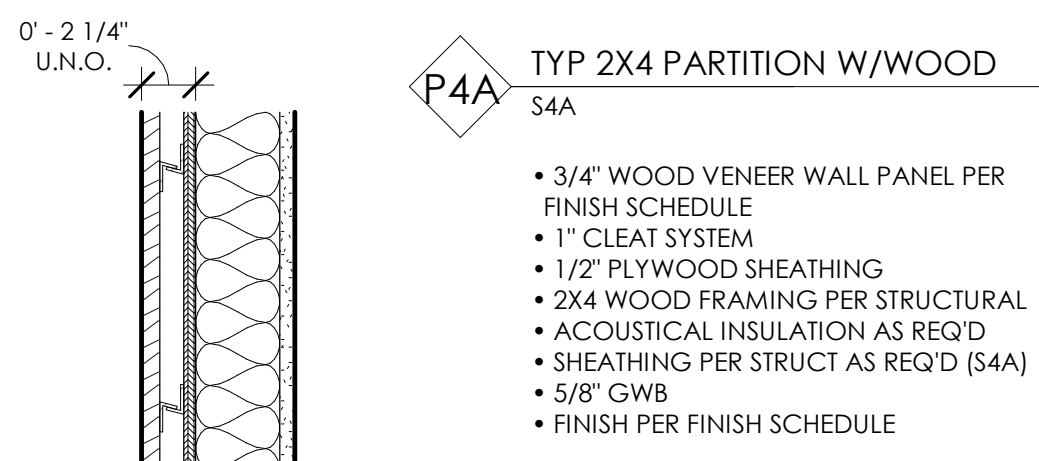
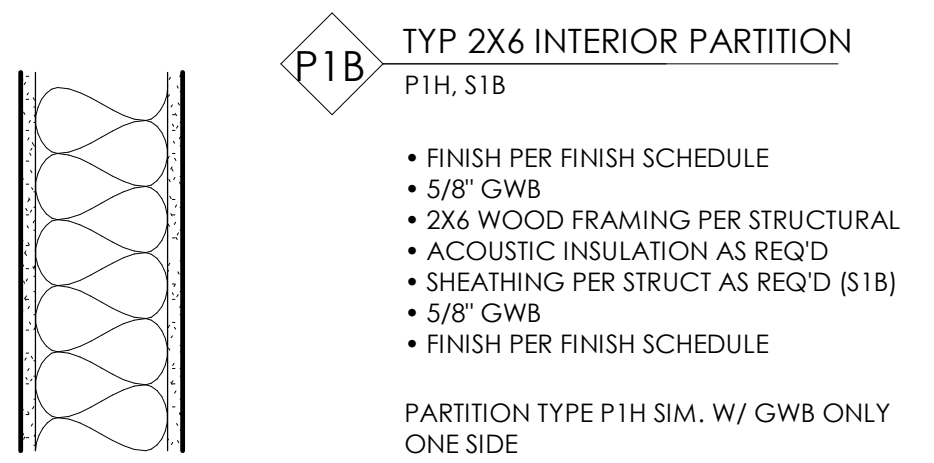
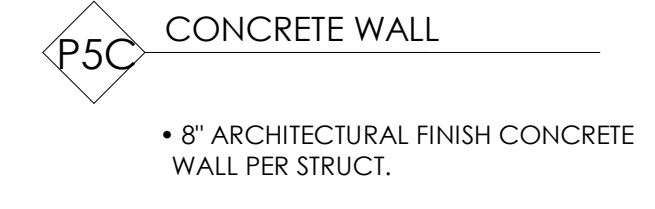
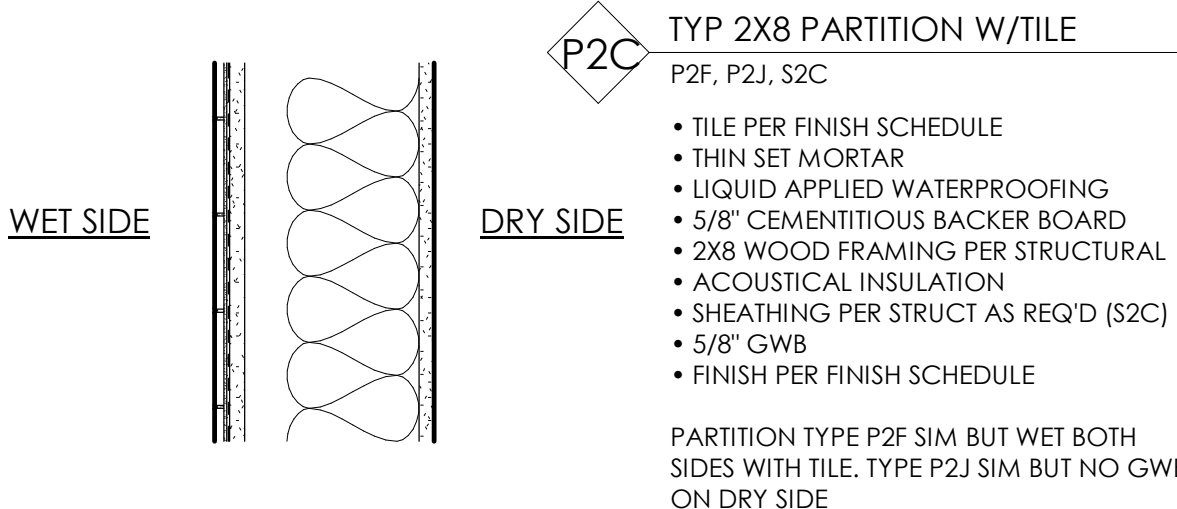
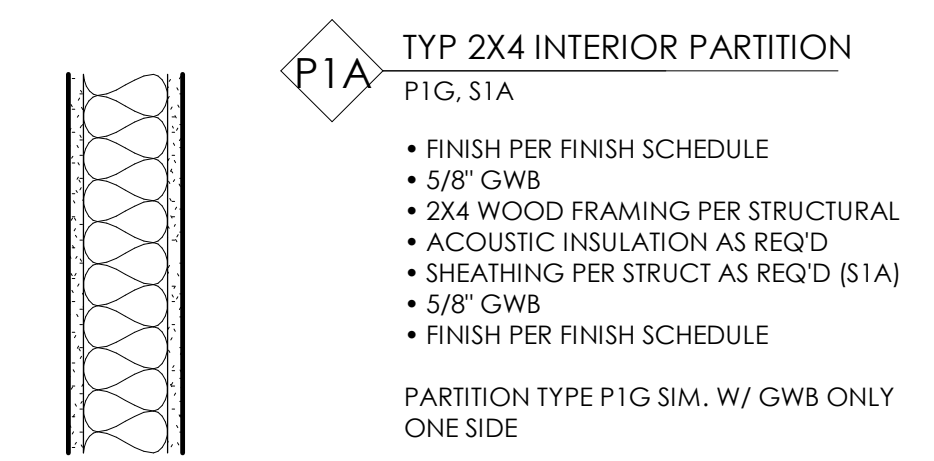
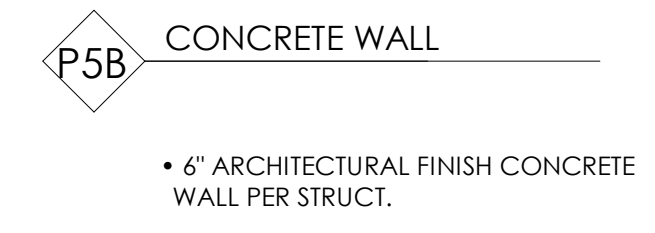
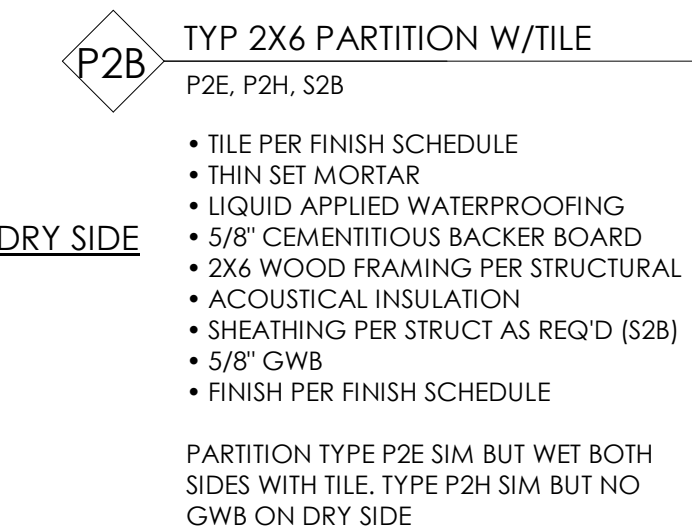
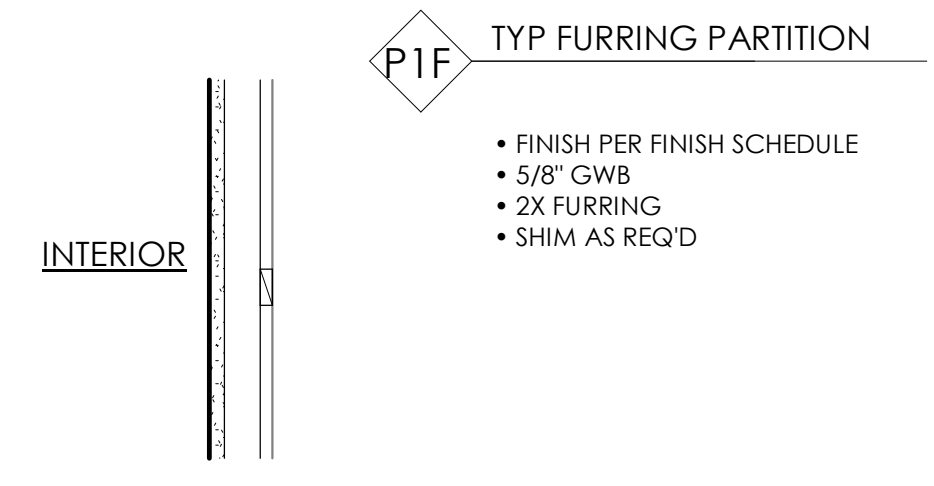
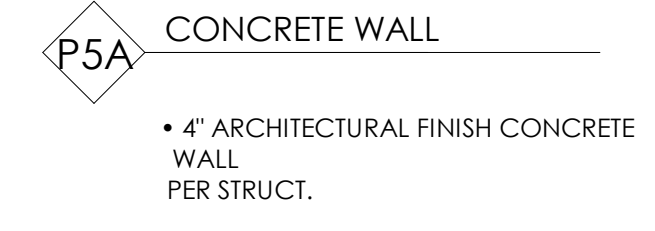
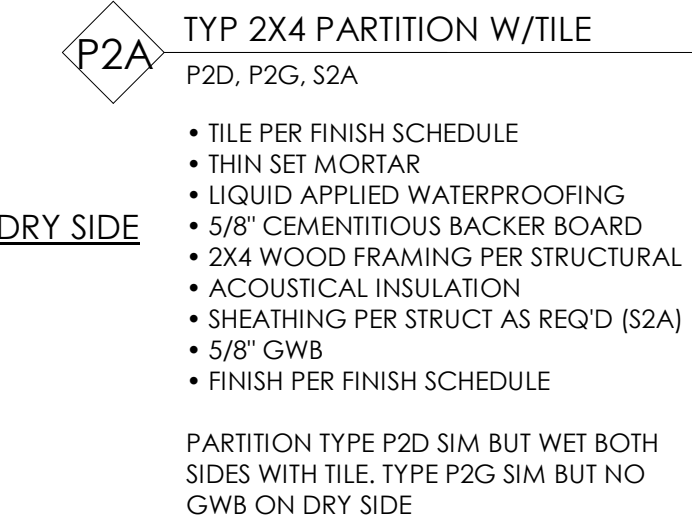
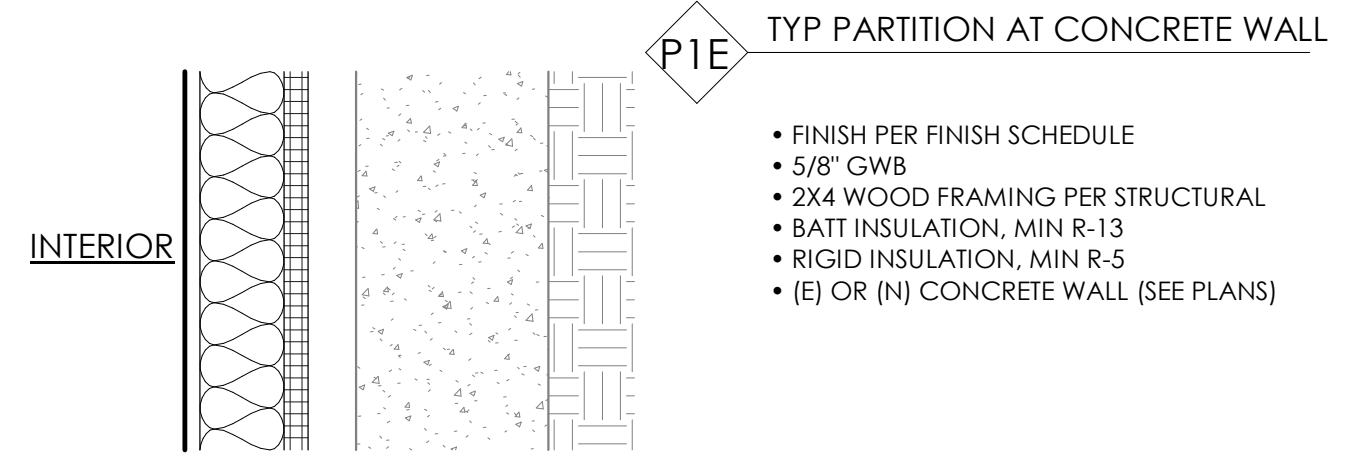


4 WALL SECTION 4  
1/2" = 1'-0"



**WALL ASSEMBLY AND PARTITION NOTES**

1. REPLACE 5/8" GWB WITH 5/8" TYPE 'X' GYPSUM BOARD FOR 1 HOUR RATED WALLS WHERE INDICATED ON PLANS.
2. REPLACE 5/8" GWB WITH 5/8" WR GWB IN WET LOCATIONS.
3. ADD PLYWOOD SHEATHING PER STRUCTURAL AT SHEAR WALL LOCATIONS.
4. AT LOCATIONS WHERE NEW WATERPROOFING IS INSTALLED ADJACENT TO EXISTING WATERPROOFING, GC TO VERIFY COMPATIBILITY.
5. ALL TILE WALLS TO COMPLY WITH APPROPRIATE METHOD LISTED IN THE TCNA HANDBOOK FOR CERAMIC, GLASS, AND STONE TILE INSTALLATION.



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DATE 3/22/2021	DRAWN BY AHP
SCALE 1 1/2" = 1'-0"	CHECKED BY GCW

PROJECT  
**'FOO' RESIDENCE**

3453 74th Ave SE  
Mercer Island, WA  
98040

REV	DATE	ISSUE/REVISION

DEDICATED APPROVAL STAMP SPACE

SHEET TITLE  
**TYPICAL ASSEMBLIES - INTERIOR**

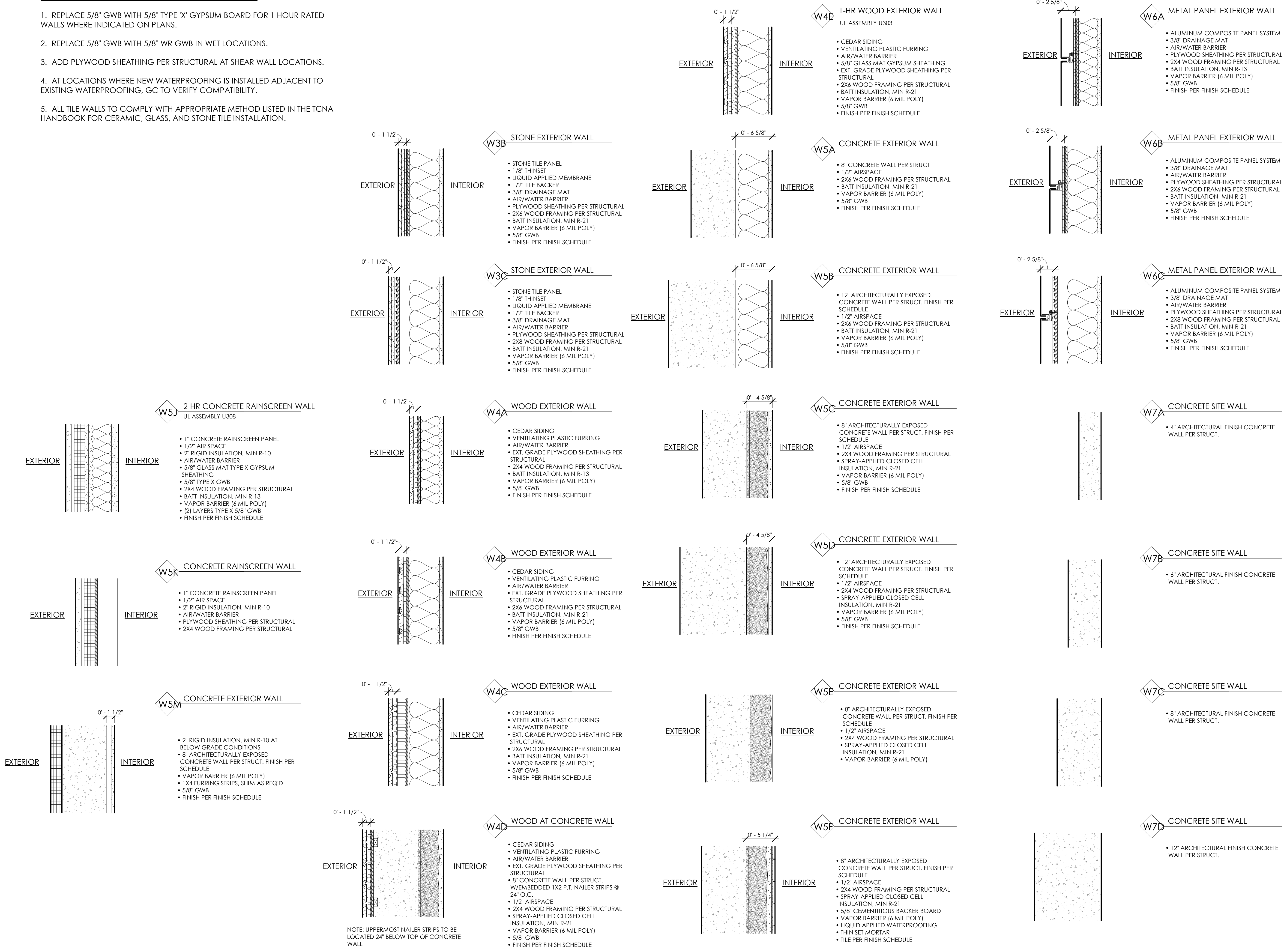
REVISION NO.  
SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.  
**A501**



**WALL ASSEMBLY AND PARTITION NOTES**

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3. ADD PLYWOOD SHEATHING PER STRUCTURAL AT SHEAR WALL LOCATIONS.
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SHEET TITLE  
**TYPICAL ASSEMBLIES - EXTERIOR**

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PROJECT

**'FOO' RESIDENCE**

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Mercer Island, WA  
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3	2/25/21	City Comments Round 2

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**TYPICAL ASSEMBLIES - FLOOR**

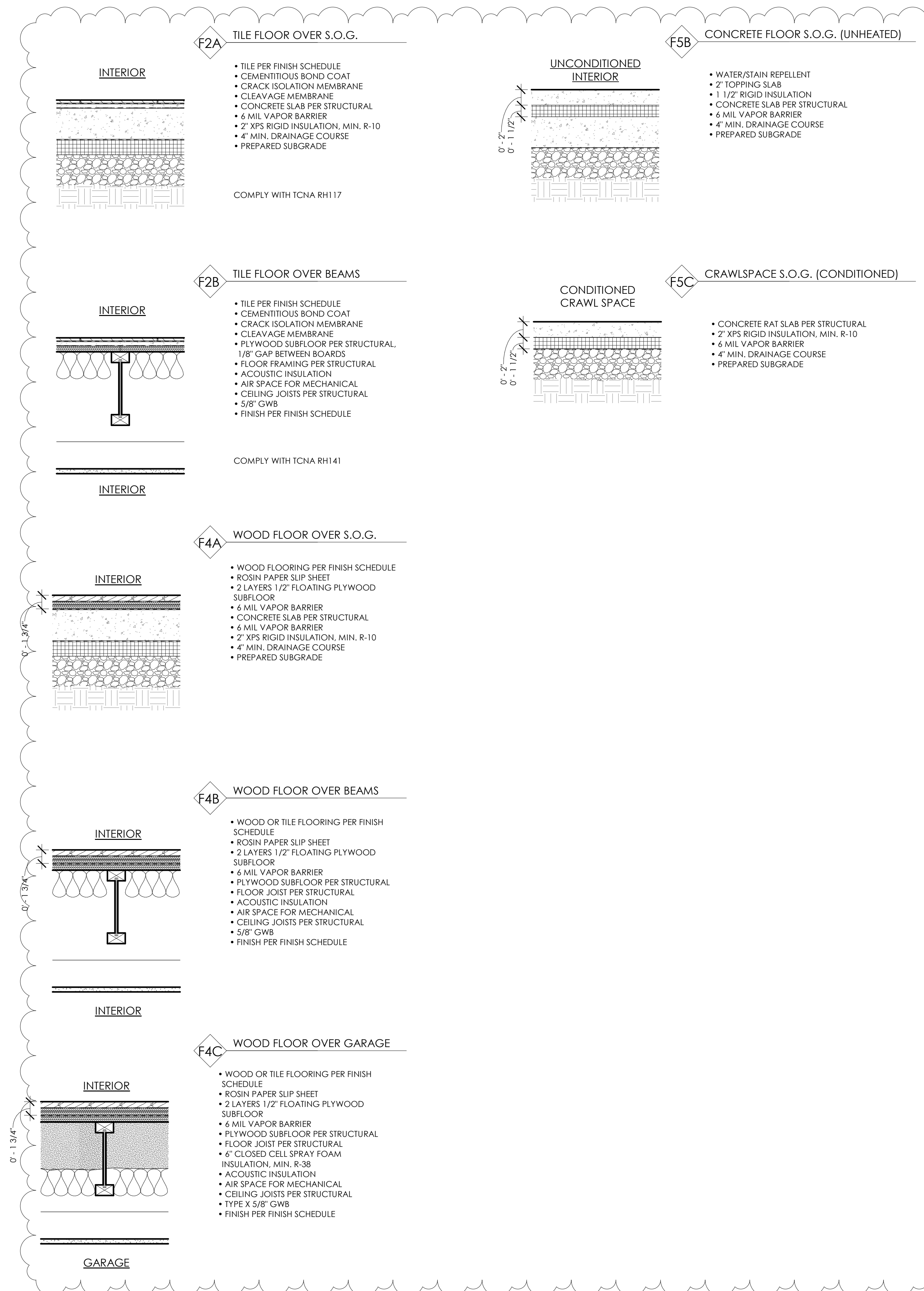
REVISION NO.

**3**

SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.

**A503**





**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**  
 Section 07 10 13—Pedestrian Traffic Coatings  
 Section 07 54 00—Thermoplastic Membrane Roofing  
 Section 07 54 19—Polyvinyl-Chloride Roofing

**REPORT HOLDER:**  
 DURADEK U.S. INC.

**EVALUATION SUBJECT:**  
 DURADEK ULTRA ROOF AND WALKING DECK MEMBRANE

**1.0 EVALUATION SCOPE**  
**Compliance with the following codes:**  
 • 2015, 2012 and 2009 International Building Code® (IBC)  
 • 2015, 2012 and 2009 International Residential Code® (IRC)

**Properties evaluated:**  
 • Physical properties  
 • Wind resistance  
 • Fire classification  
 • Chemical resistance  
 • Impact resistance

**2.0 USES**  
 The Duradek Ultra system is a walking deck and classified (rated) roof covering system for use directly over USG Durock cement board Next Gen and plywood substrates, as described in Section 3.2.3 of this report.

**3.0 DESCRIPTION**  
**3.1 General:**  
 The Duradek Ultra system consists of a membrane and deck adhesive. See Section 4.0 of this report for recognized Duradek configurations and corresponding component requirements.

**3.2 Materials:**  
**3.2.1 Membrane:** Duradek Ultra membrane is a calendared polyvinyl chloride (PVC) film laminated to a woven, heat-set polyester fabric. The surface of the PVC film is factory-printed and top-coated with a PVAcrylic finish. The membrane is produced in a variety of colors and patterns and is available in rolls of various widths and lengths. The membrane weighs approximately 55 ounces per square yard (1864 g/m<sup>2</sup>) and is nominally 0.060 inch (50 mils (1.5 mm)) thick.

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complying with, and installed in accordance with, Sections 3.2.3.1 and 4.2.1. See Footnote 3 of Table 1 for additional installation details.

**4.3 Membrane Installation:**  
 The membrane must be adhered to the substrate with either Duradek D763, Duradek D811-23-S or Duradek D811-23-W adhesive. Duradek D763 must be applied to the substrate with either a U-notched trowel having 1/2-inch-deep-by-1/2-inch-wide (0.8 by 1.6 mm) notches spaced 1/2 inch (0.8 mm) apart or a textured roller. The minimum coverage is 1 gallon per 150 square feet (11.466 m<sup>2</sup>). Duradek D811-23-S and Duradek D811-23-W must be applied with either a brush or a roller at a coverage rate of 1 gallon per 70 to 80 square feet (11.717 m<sup>2</sup> to 12.21 m<sup>2</sup>). The minimum application temperature for both adhesives is 45°F (7.2°C).

A minimum 2-inch (51 mm) width of Duradek D811-23-S or Duradek D811-23-W adhesive must be used at the perimeter of the deck and on walls, edges and right-angle corners. Membrane seams must be overlapped a minimum of 1/4 inch (19.1 mm) at edges and ends, and heat-fused with a hot-air seaming tool. Exposed edges, joints and trim strips must be sealed with sealant.

**4.4 Method of Repair:**  
 A portion of the membrane larger than the affected area must be removed and a new piece of material must be prepared that is 1 1/2-inch (38 mm) larger in dimension than the piece removed. Duradek D763, Duradek D811-23-S or Duradek D811-23-W adhesive must be applied to the substrate and the patch must be placed into the space so it overlaps the existing sheet by 1/4 inch (19 mm). The patch must be welded to the existing sheet using a hot-air seaming tool. When substrate damage occurs, the retention of the fire classification and wind-resistance properties of the system must be demonstrated to the satisfaction of the code official.

**4.5 Wind Resistance:**  
 The roof deck construction over which the Duradek Ultra system is installed must be designed to resist the minimum design wind pressures set forth in the applicable code. The allowable wind uplift pressures for the roof assemblies are noted in Table 1.

Metal edge securement systems must be listed in accordance with 2011 edition of ANSI/SPRIFM 4435 ES-1, and designed and installed for wind loads in accordance with 2015 IBC Section 1504.5 and 2015 IBC Chapter 16 [2003 edition of ANSI/SPRIFM 4435 ES-1, and designed and installed for wind loads in accordance with 2012 and 2009 IBC Section 1504.5 and 2012 and 2009 IBC Chapter 16].

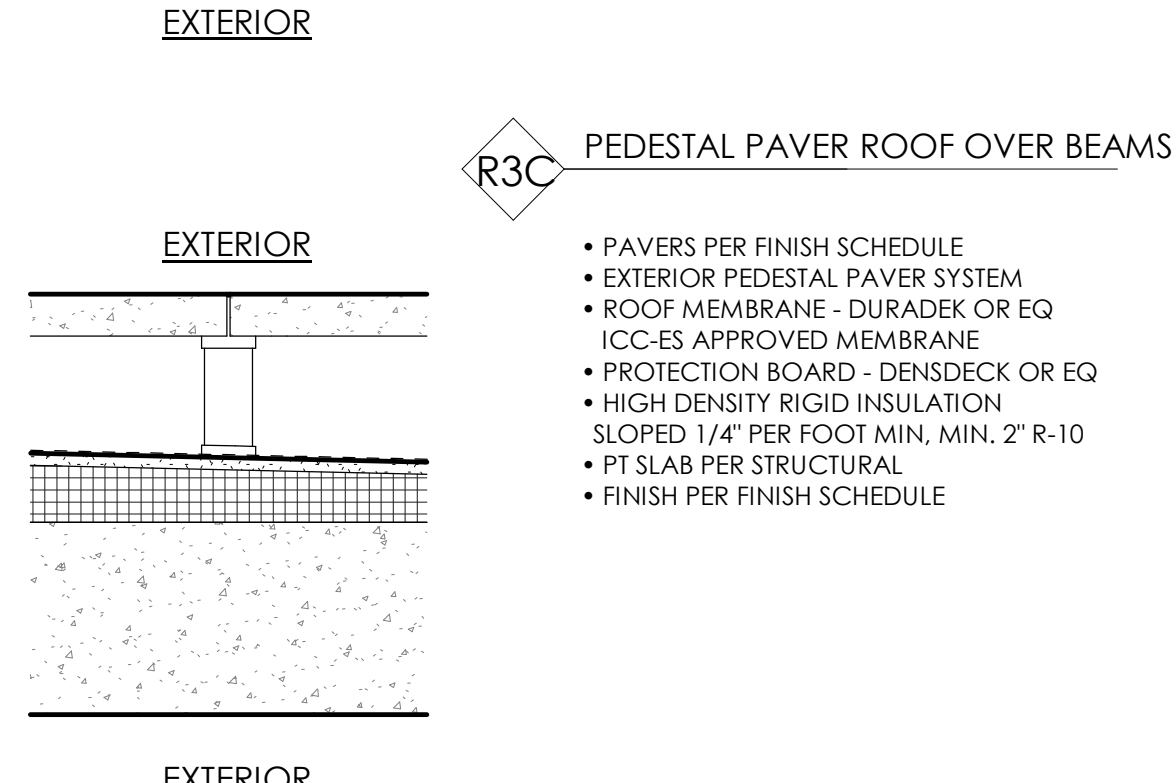
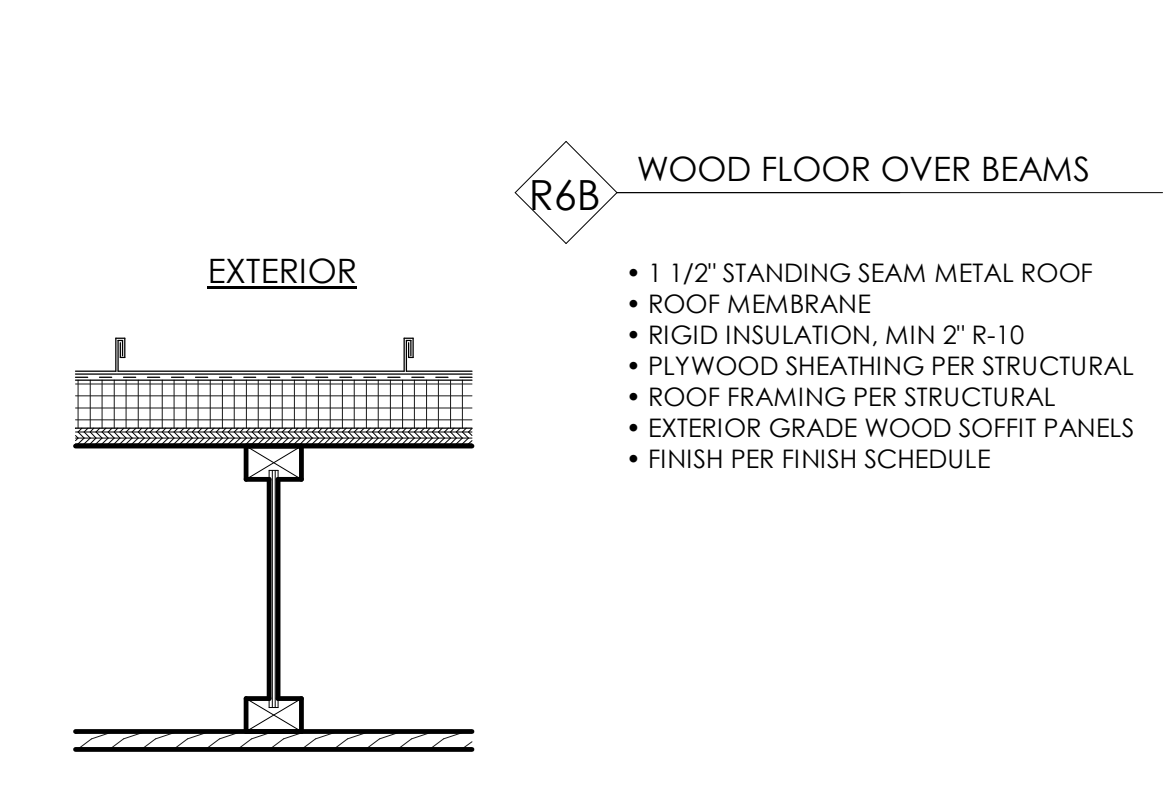
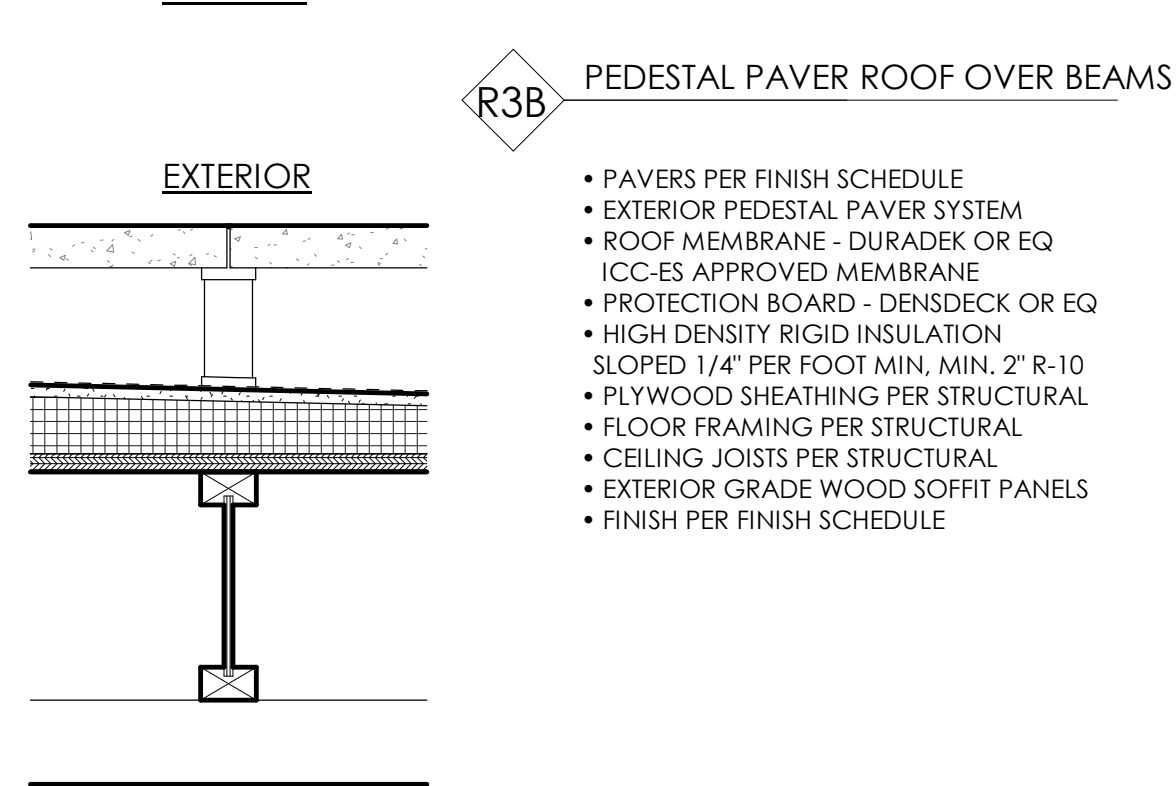
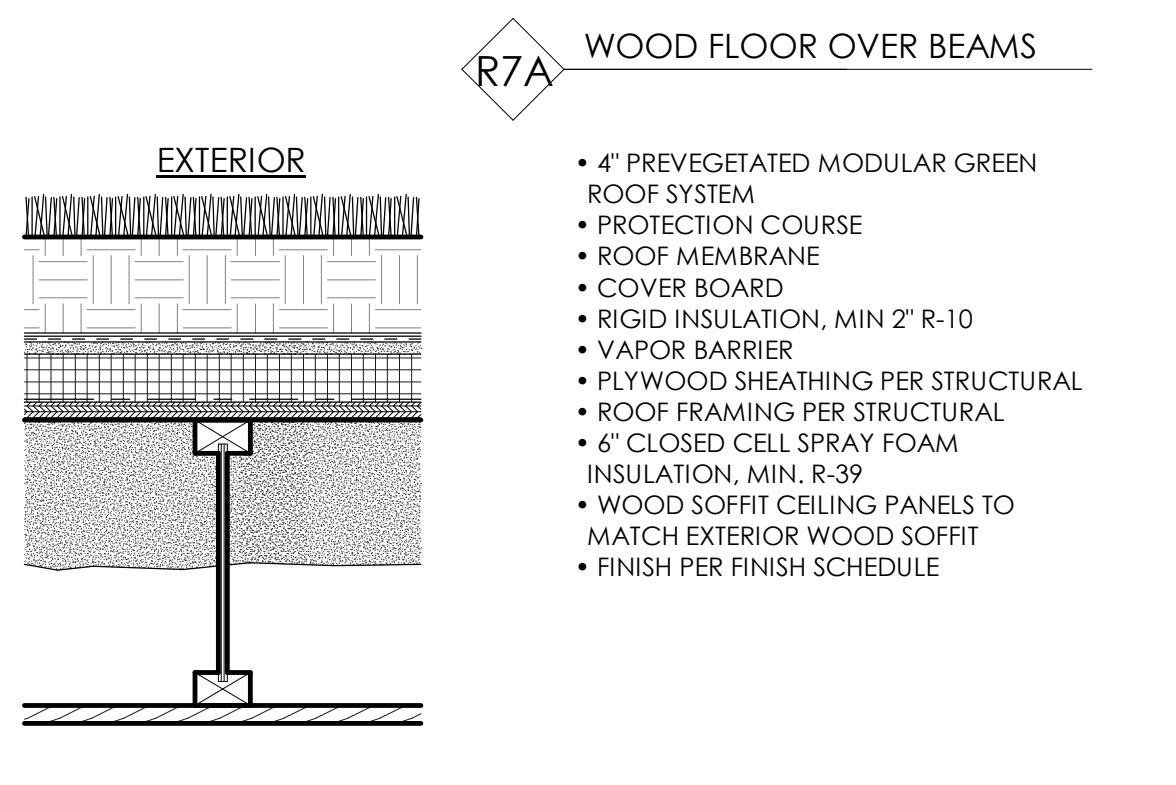
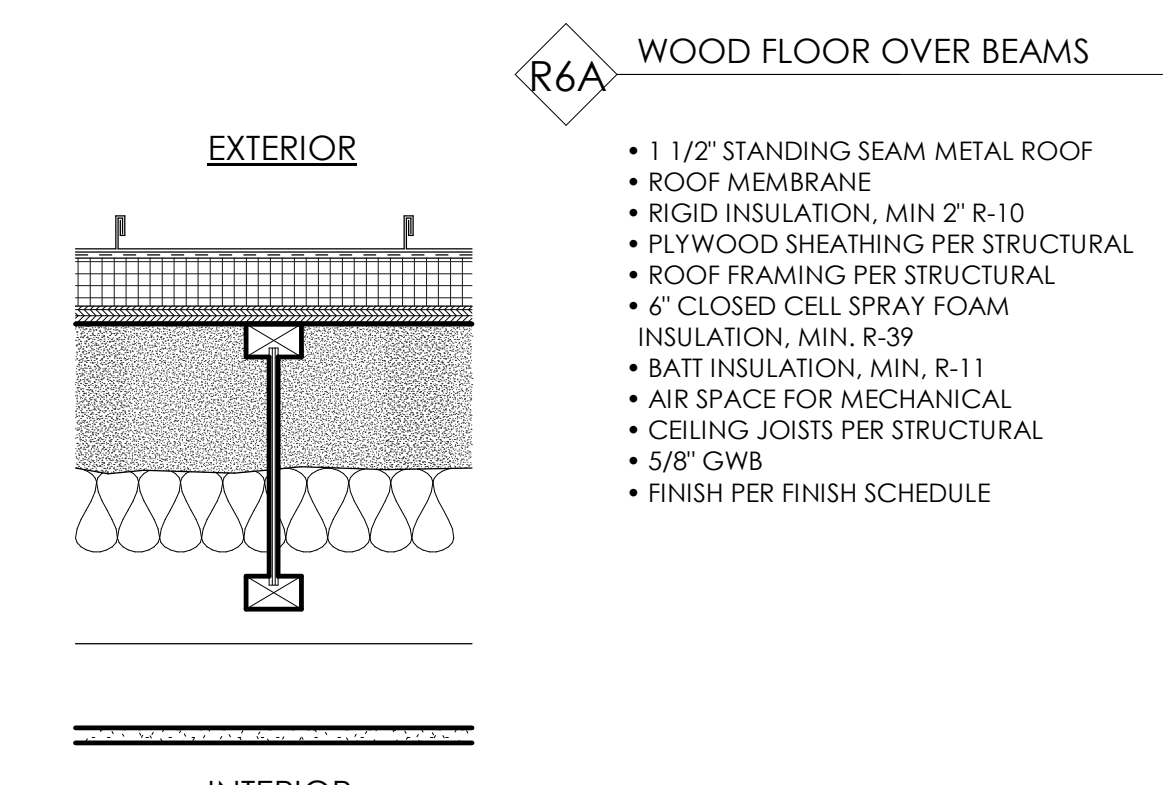
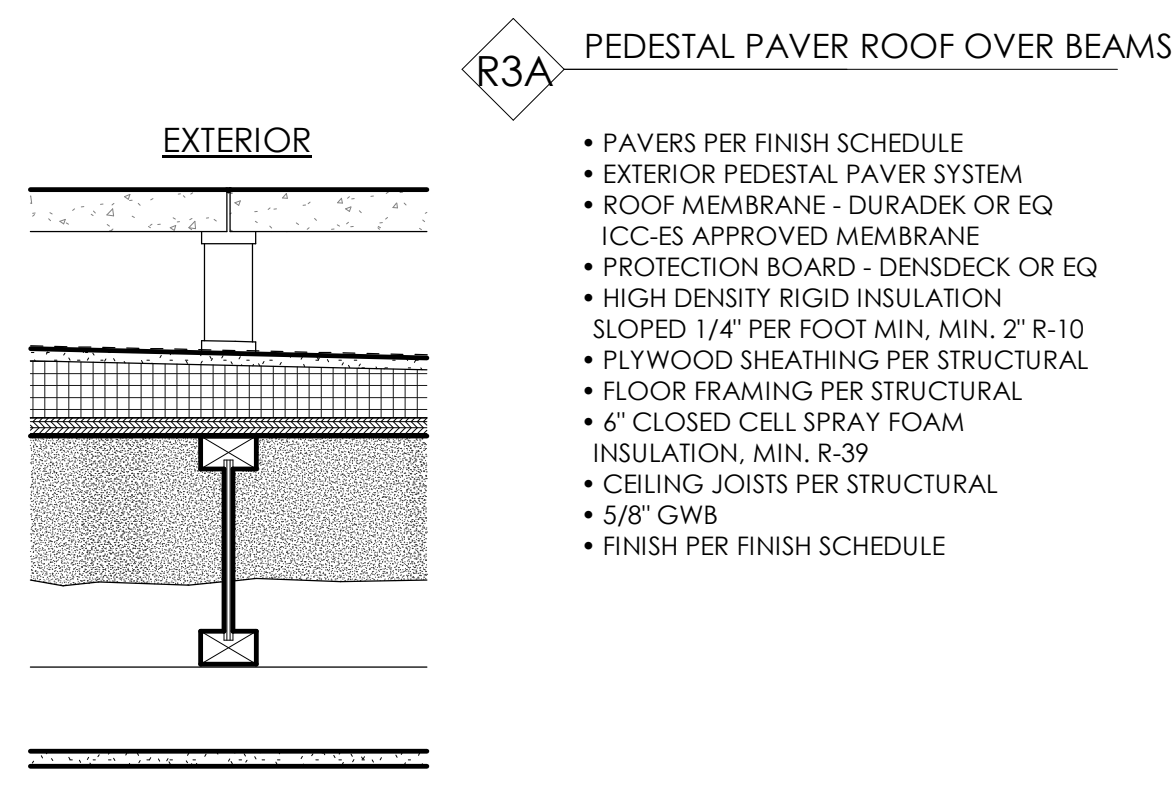
**4.6 Roof Covering Classification:**  
 See Table 1 for fire-classified assembly details.

**5.0 CONDITIONS OF USE**  
 The Duradek Ultra walking deck and roof covering system described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

**TABLE 1—FIRE CLASSIFICATION AND WIND RESISTANCE ASSEMBLIES**

SYSTEM NO.	FIRE CLASSIFICATION	MAXIMUM ALLOWABLE WIND UPLIFT (psf)	SUBSTRATE <sup>1</sup>	ADHESIVE (membrane to substrate)	MEMBRANE
1	A <sup>1</sup>	200	Plywood/cement board <sup>2</sup>	Duradek D763	Duradek Ultra
2	A <sup>1</sup>	200	Plywood/cement board <sup>2</sup>	Duradek D811-23-S and Duradek D811-23-W	
3	Nonclassified	200		Duradek D763	
4	C <sup>1</sup>	240	Plywood	Duradek D811-23-S and Duradek D811-23-W	

For B1: 1 inch = 25.4 mm; 1 psf = 47.8 Pa.  
<sup>1</sup>Maximum slope for fire classification assemblies is 1/12 (2 percent slope).  
<sup>2</sup>See Section 3.2.3 for additional substrate specifications.  
<sup>3</sup>USG Durock cement board Next Gen attached to plywood substrate with Mapei Ultraflex 2 polymer modified mortar, troweled down with a 1/2-inch-by-1/2-inch square-notched trowel, with notches spaced 1/2 inch on center, and screwed to plywood with 1 1/2-inch-long Rock-on® Hi-Lo Thread screws spaced 6 inches on center around the perimeter of the cement board.



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DATE: 3/22/2021  
 SCALE: 1 1/2" = 1'-0"  
 DRAWN BY: AHP  
 CHECKED BY: GCW

**'FOO' RESIDENCE**  
 3453 74th Ave SE  
 Mercer Island, WA  
 98040

REV	DATE	ISSUE/REVISION
2	10/28/20	City Comments

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**TYPICAL ASSEMBLIES - ROOF**

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PROJECT	'FOO' RESIDENCE		

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**STAIRS PLANS & SECTIONS**

REVISION NO.

**3**

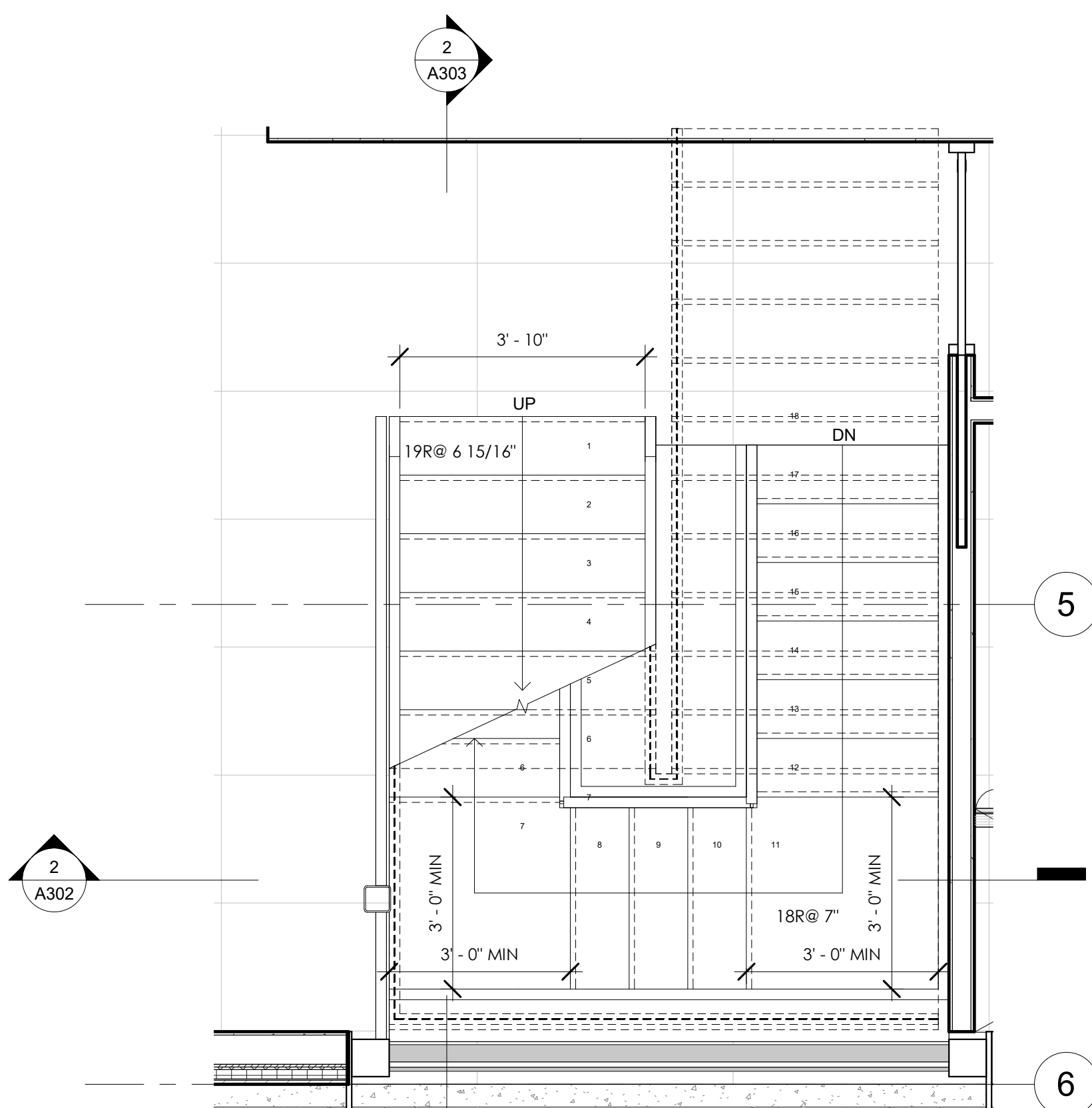
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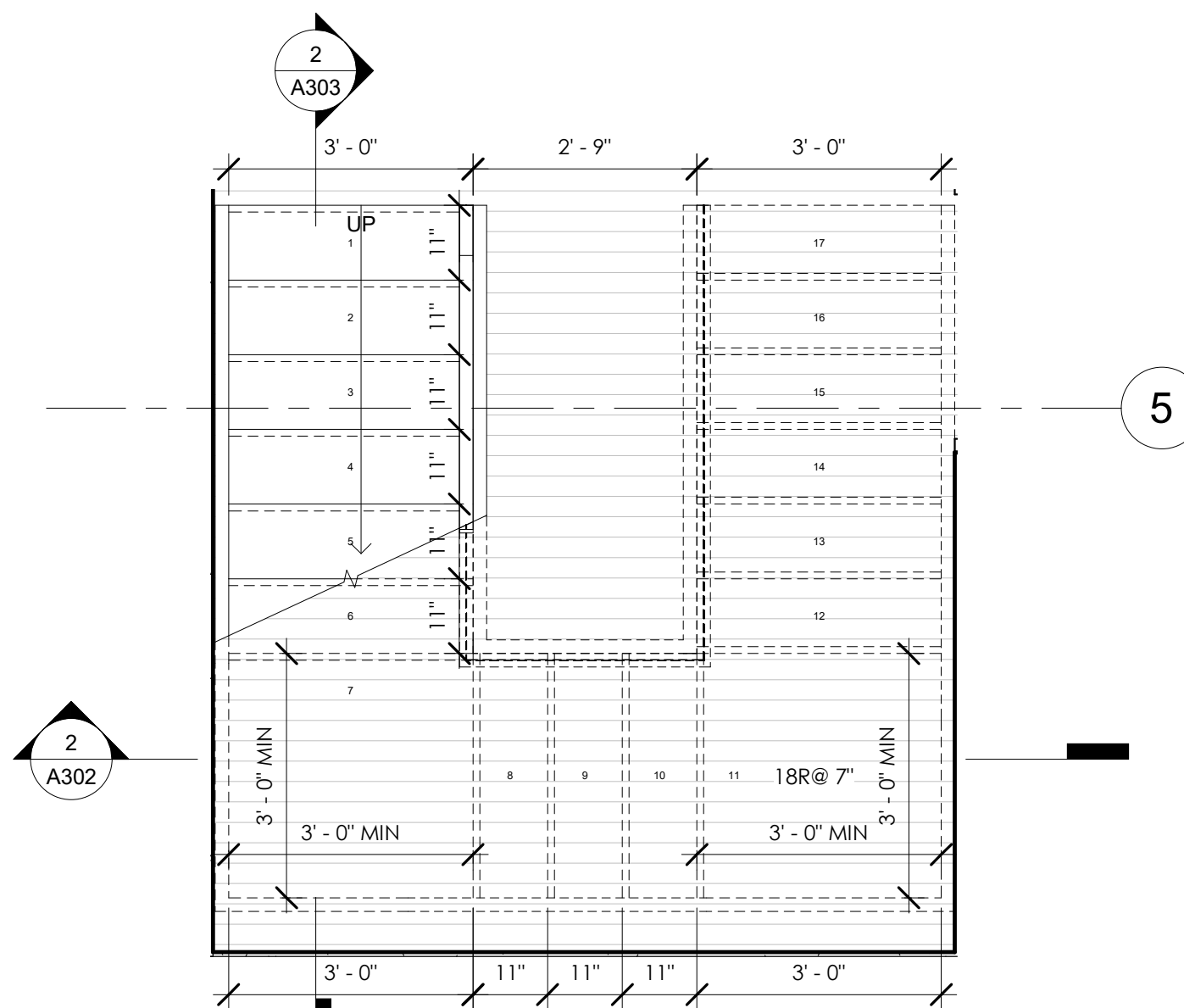
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**STAIR NOTES**

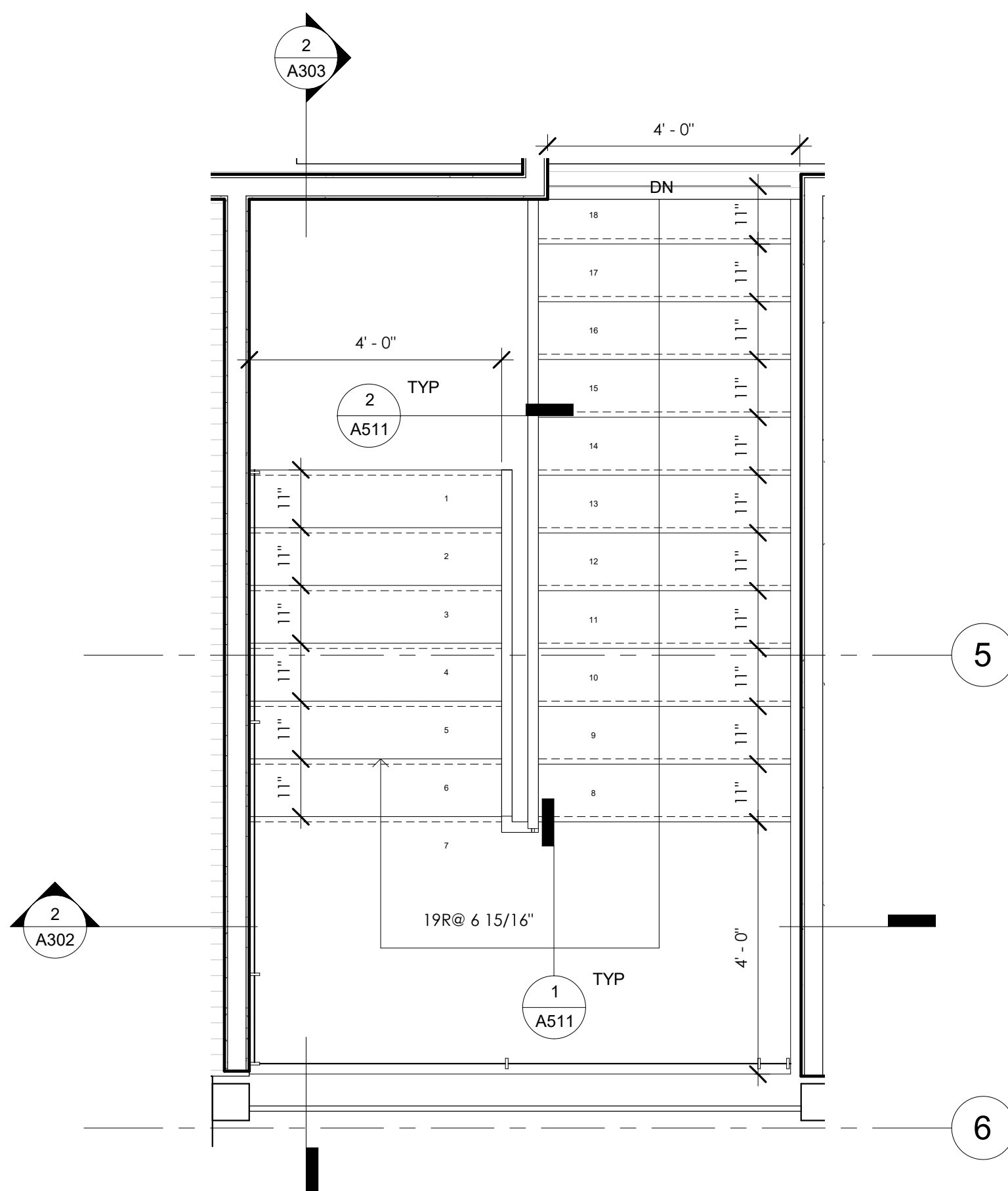
PER IRC R311.7.1: STAIRWAY SHALL BE NOT LESS THAN 36 INCHES (914 MM) IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. HANDRAILS SHALL NOT PROJECT MORE THAN 4 1/2 INCHES ON EITHER SIDE OF THE STAIRWAY AND THE CLEAR WIDTH OF THE STAIRWAY AT AND BELOW THE HANDRAIL HEIGHT, INCLUDING TREADS AND LANDINGS, SHALL BE NOT LESS THAN 31 1/2 INCHES (787 MM) WHERE A HANDRAIL IS INSTALLED ON ONE SIDE AND 27 INCHES (698 MM) WHERE HANDRAILS ARE PROVIDED ON BOTH SIDES.



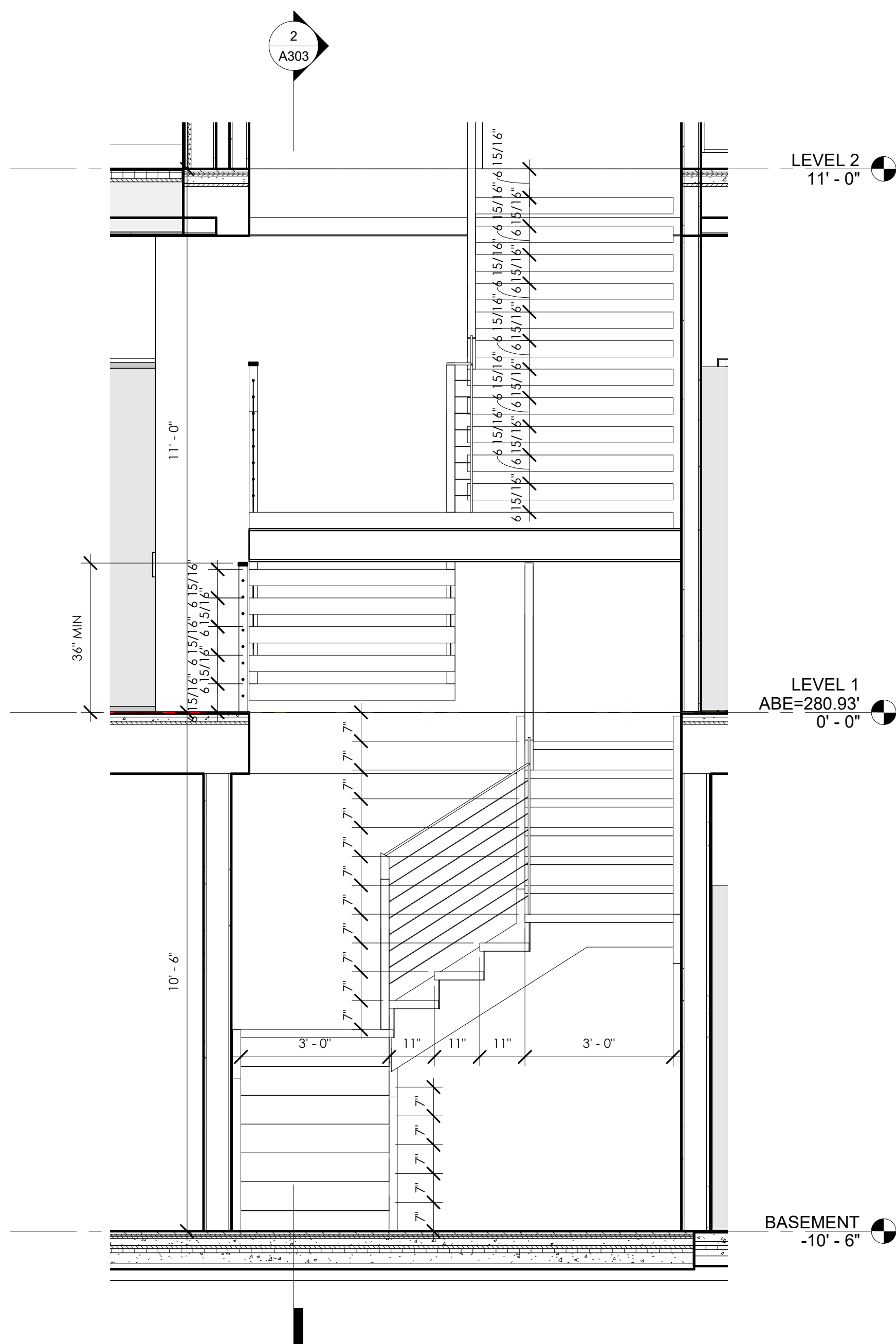
1 STAIRS DETAIL - 1ST FLOOR PLAN  
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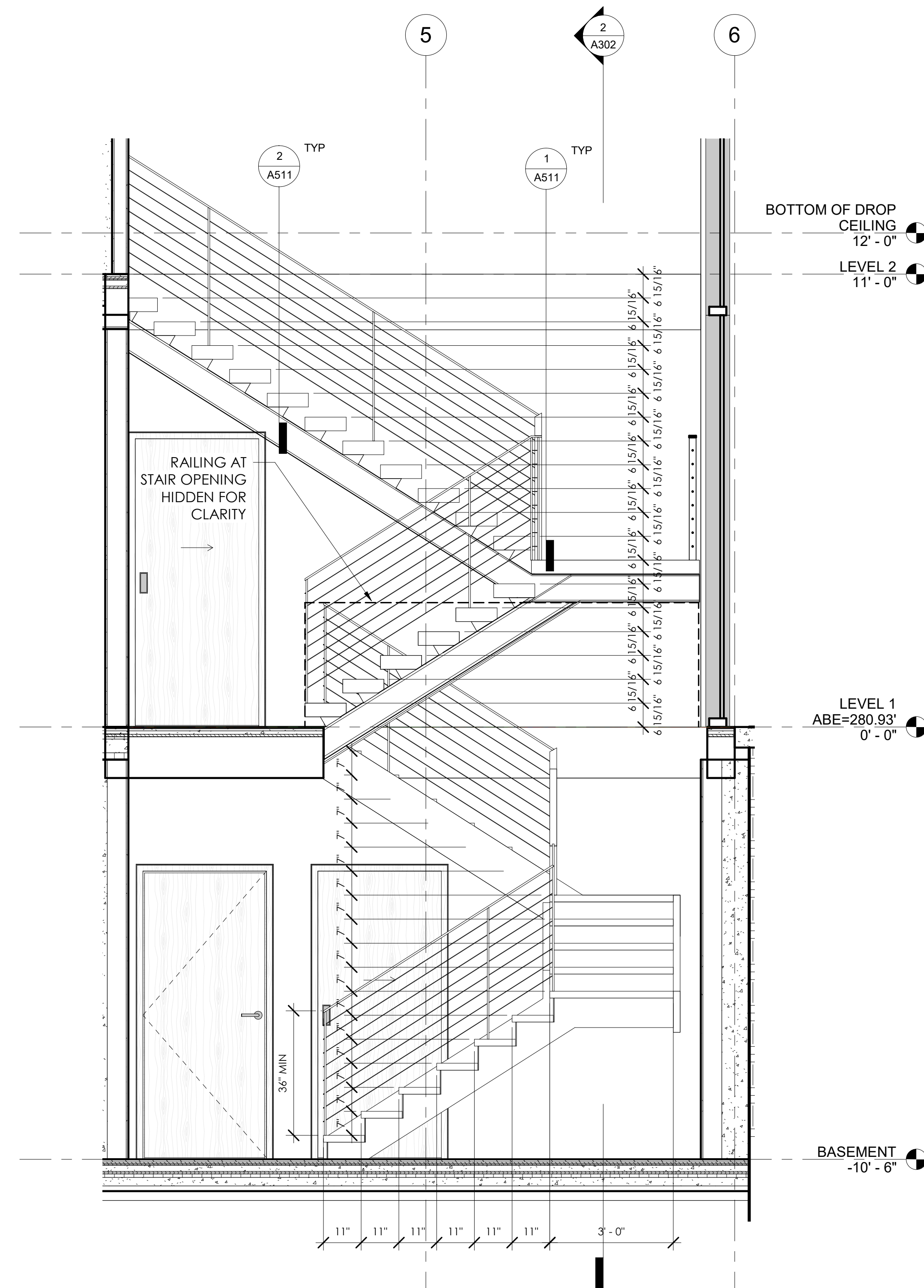
2 STAIRS DETAIL - BASEMENT PLAN  
1/2" = 1'-0"



3 STAIRS DETAIL - 2ND FLOOR PLAN  
1/2" = 1'-0"



4 STAIRS DETAIL - SECTION 1  
1/2" = 1'-0"



5 STAIRS DETAIL - SECTION 2  
1/2" = 1'-0"



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DATE 3/22/2021	DRAWN BY NLD
SCALE 3" = 1'-0"	CHECKED BY GCW

PROJECT

**'FOO'  
RESIDENCE**

3453 74th Ave SE  
Mercer Island, WA  
98040

REV	DATE	ISSUE/REVISION
2	10/28/20	City Comments
3	2/25/21	City Comments Round 2

DDP DEDICATED  
APPROVAL STAMP SPACE

SHEET TITLE

**STAIR DETAILS**

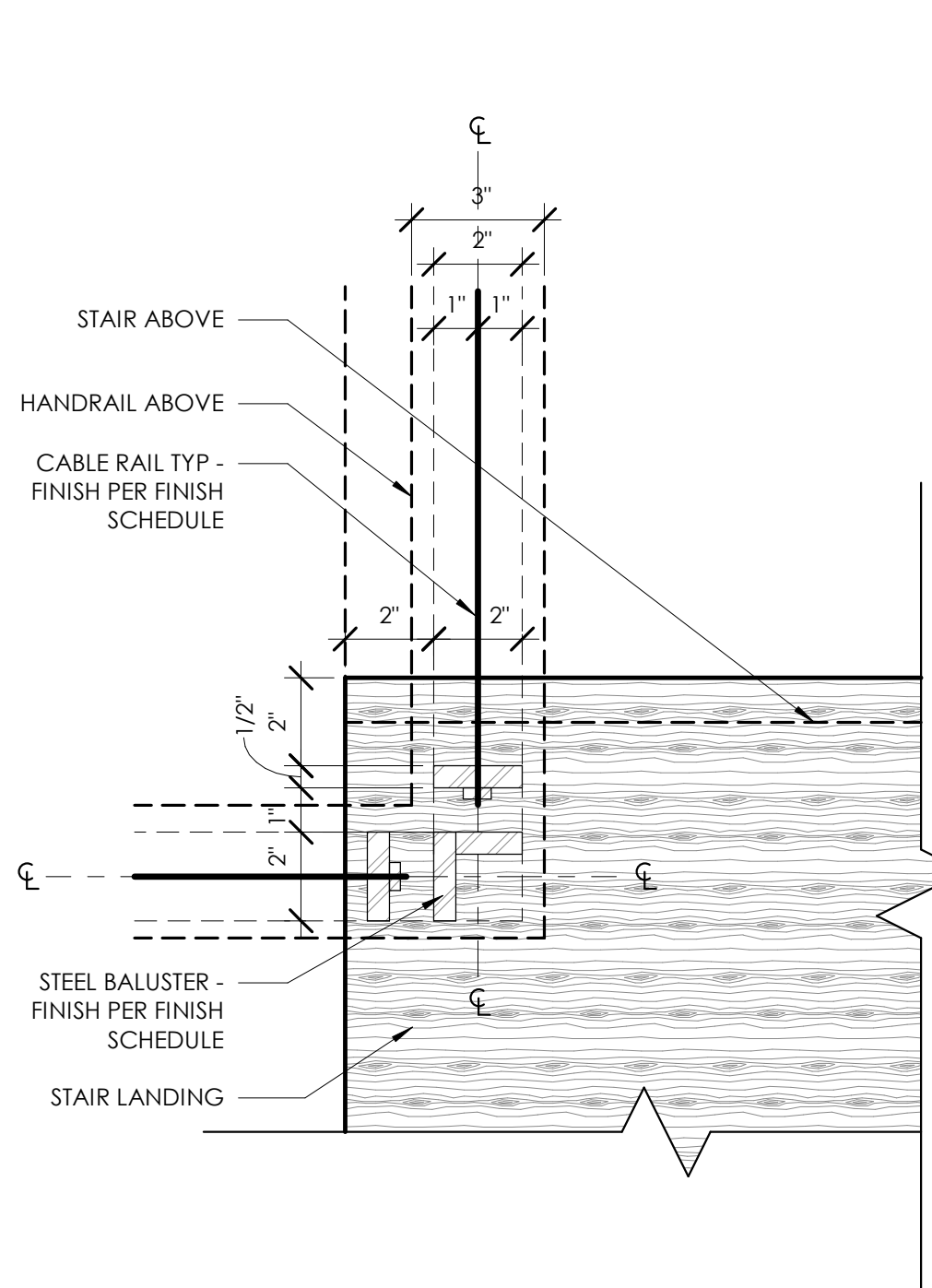
REVISION NO.

3

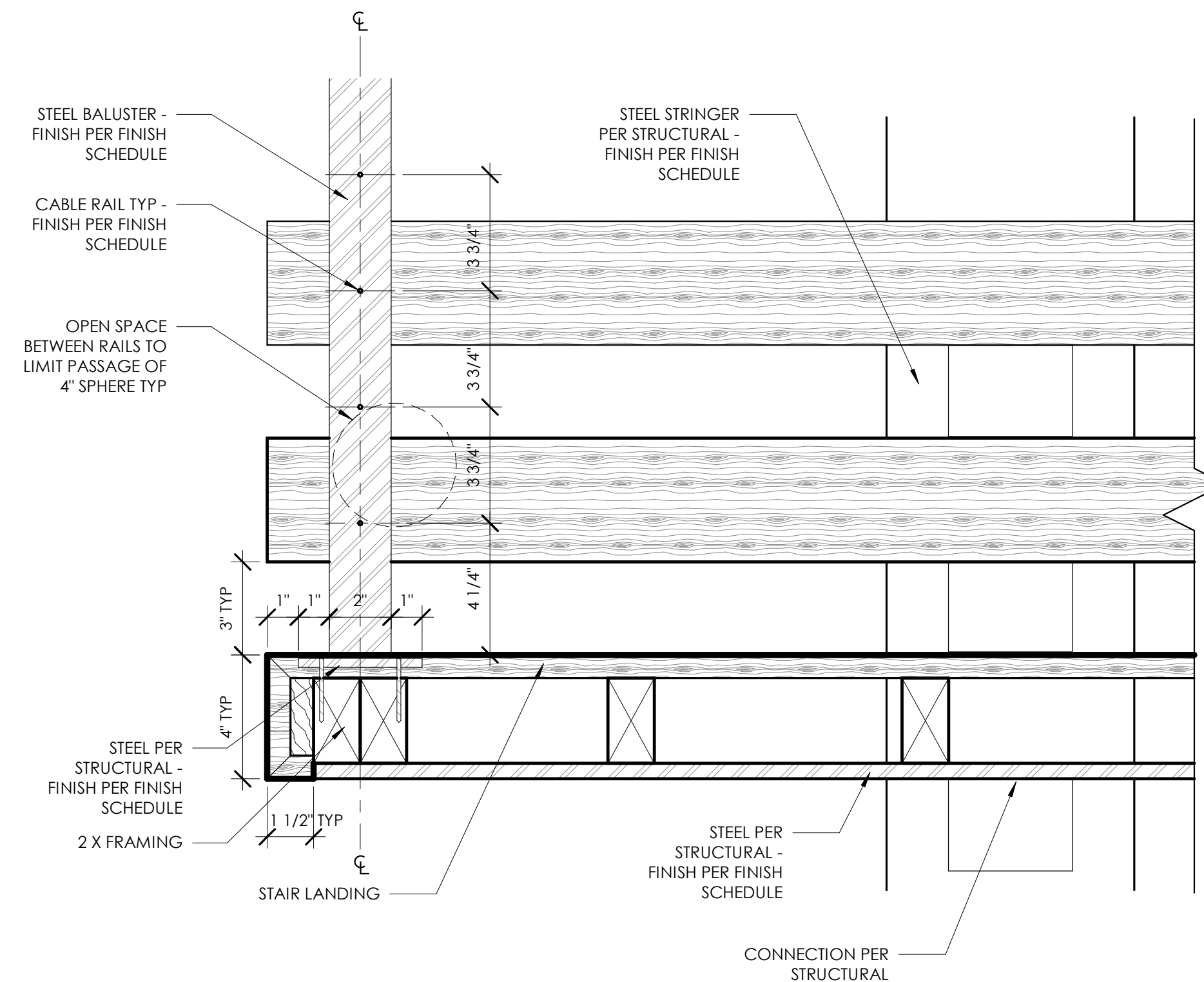
SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.

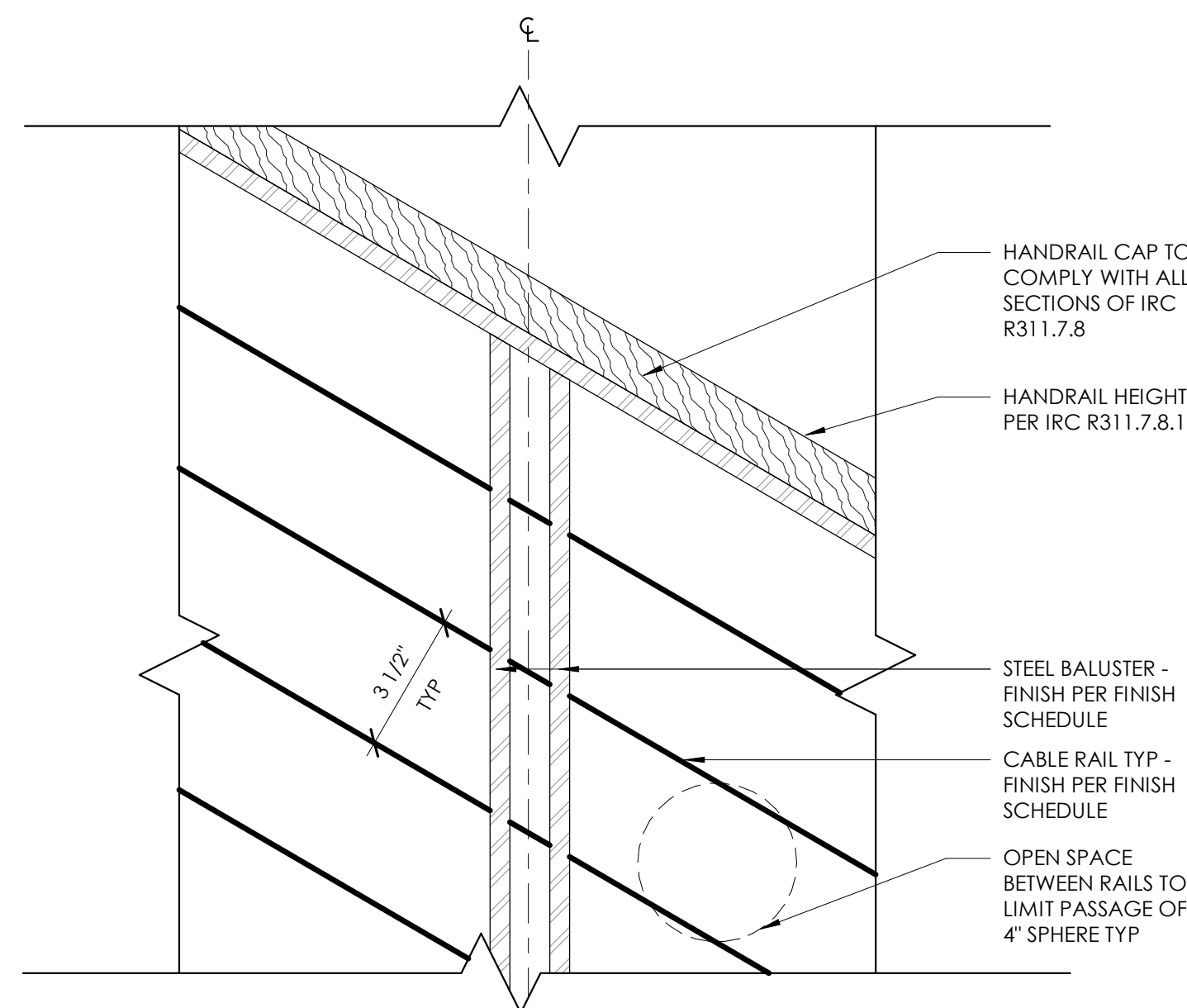
**A511**



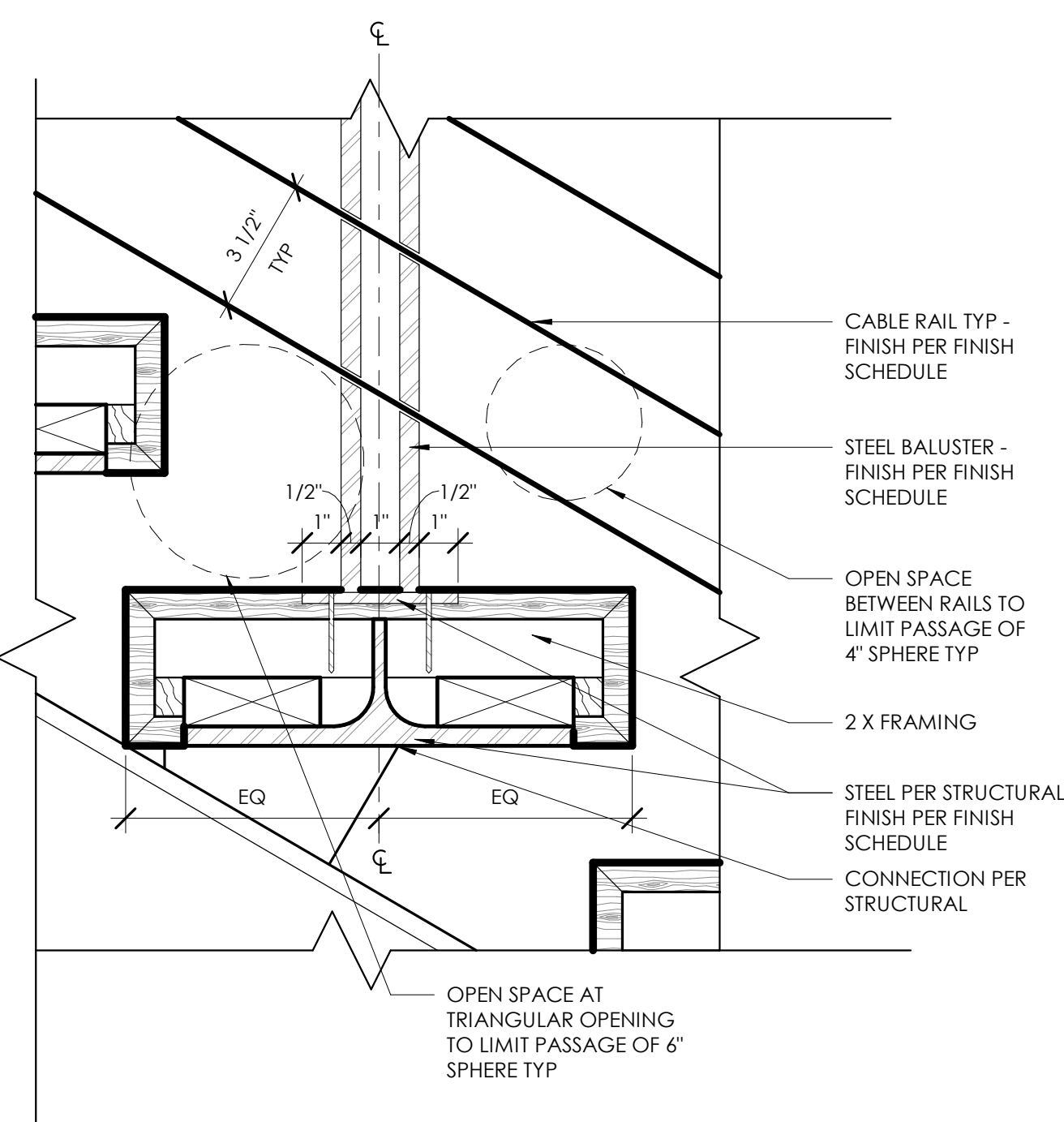
③ TYPICAL BALUSTER CORNER DETAIL  
3" = 1'-0"



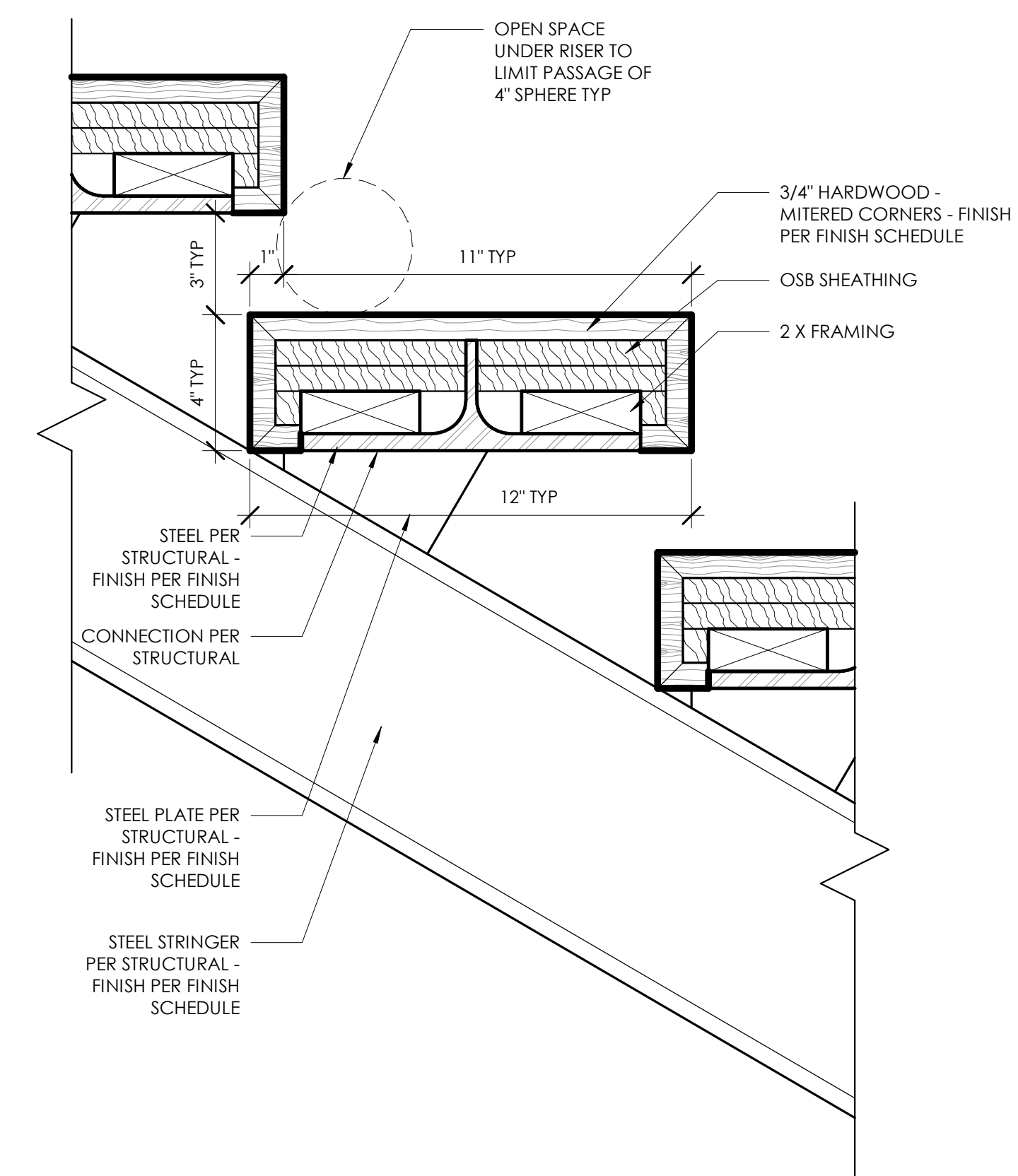
① TYPICAL BALUSTER AT STAIR LANDING DETAIL  
3" = 1'-0"



⑤ TYPICAL HANDRAIL / GUARDRAIL CAP DETAIL  
3" = 1'-0"



④ TYPICAL BALUSTER DETAIL  
3" = 1'-0"



② TYPICAL STAIR TREAD / RISER / STRINGER DETAIL  
3" = 1'-0"



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DATE	3/22/2021	DRAWN BY	AHP
SCALE	3" = 1'-0"	CHECKED BY	GCW

PROJECT  
**'FOO' RESIDENCE**  
3453 74th Ave SE  
Mercer Island, WA  
98040

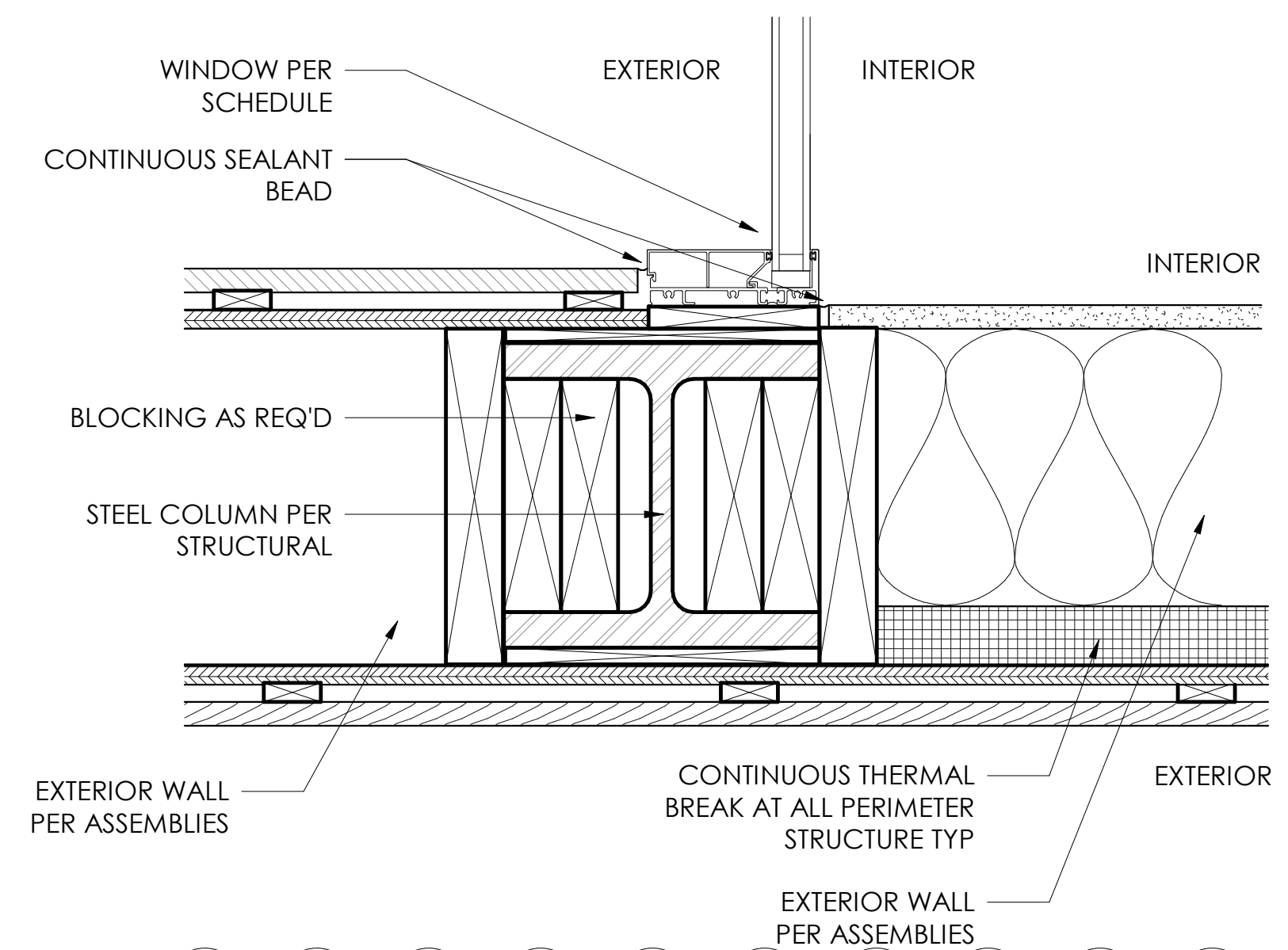
REV	DATE	ISSUE/REVISION
2	10/28/20	City Comments
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DDP DEDICATED APPROVAL STAMP SPACE

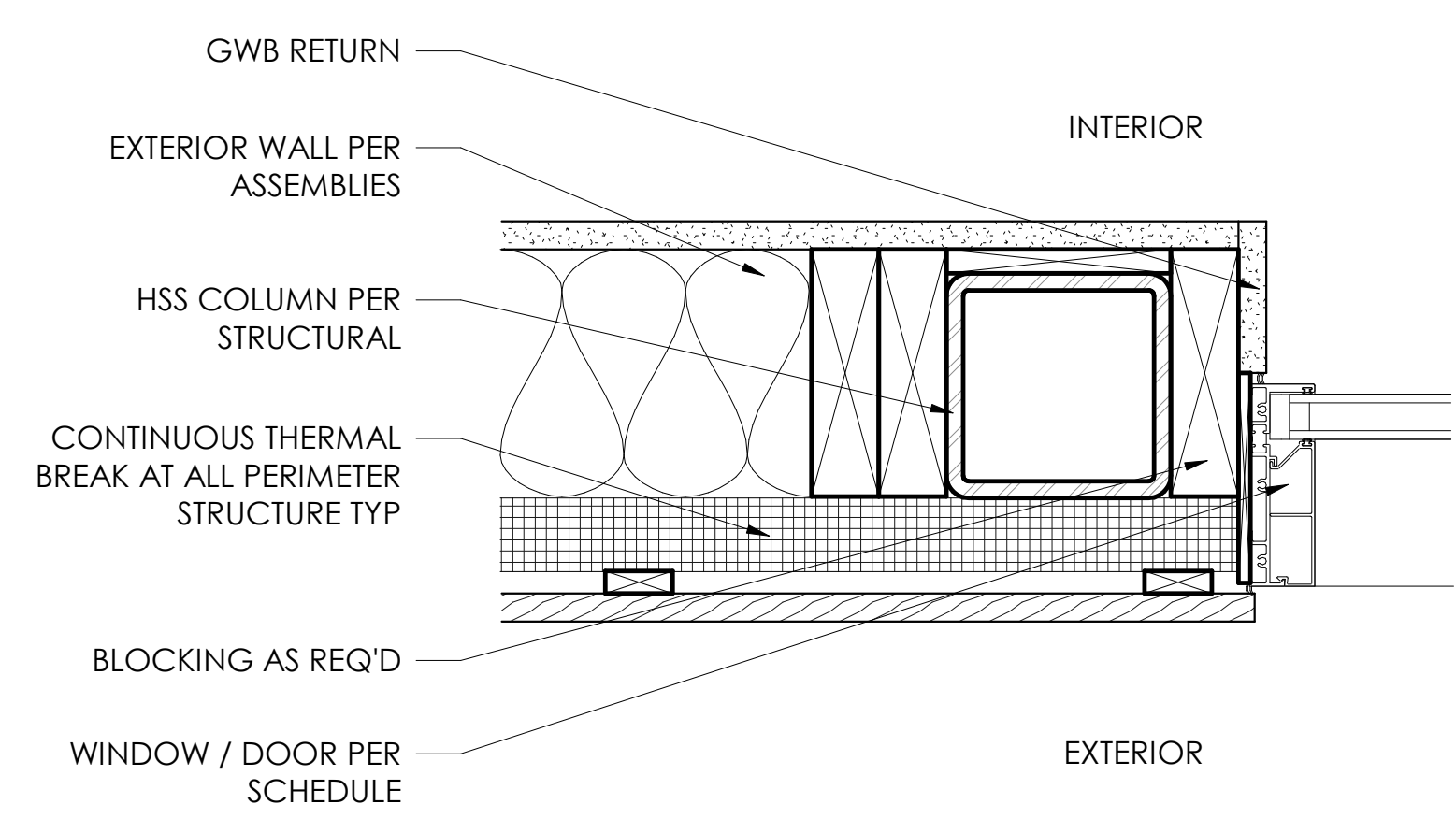
SHEET TITLE  
**EXTERIOR DETAILS**

REVISION NO.  
**3**  
SUPERSEDES ALL PREVIOUS REVISIONS

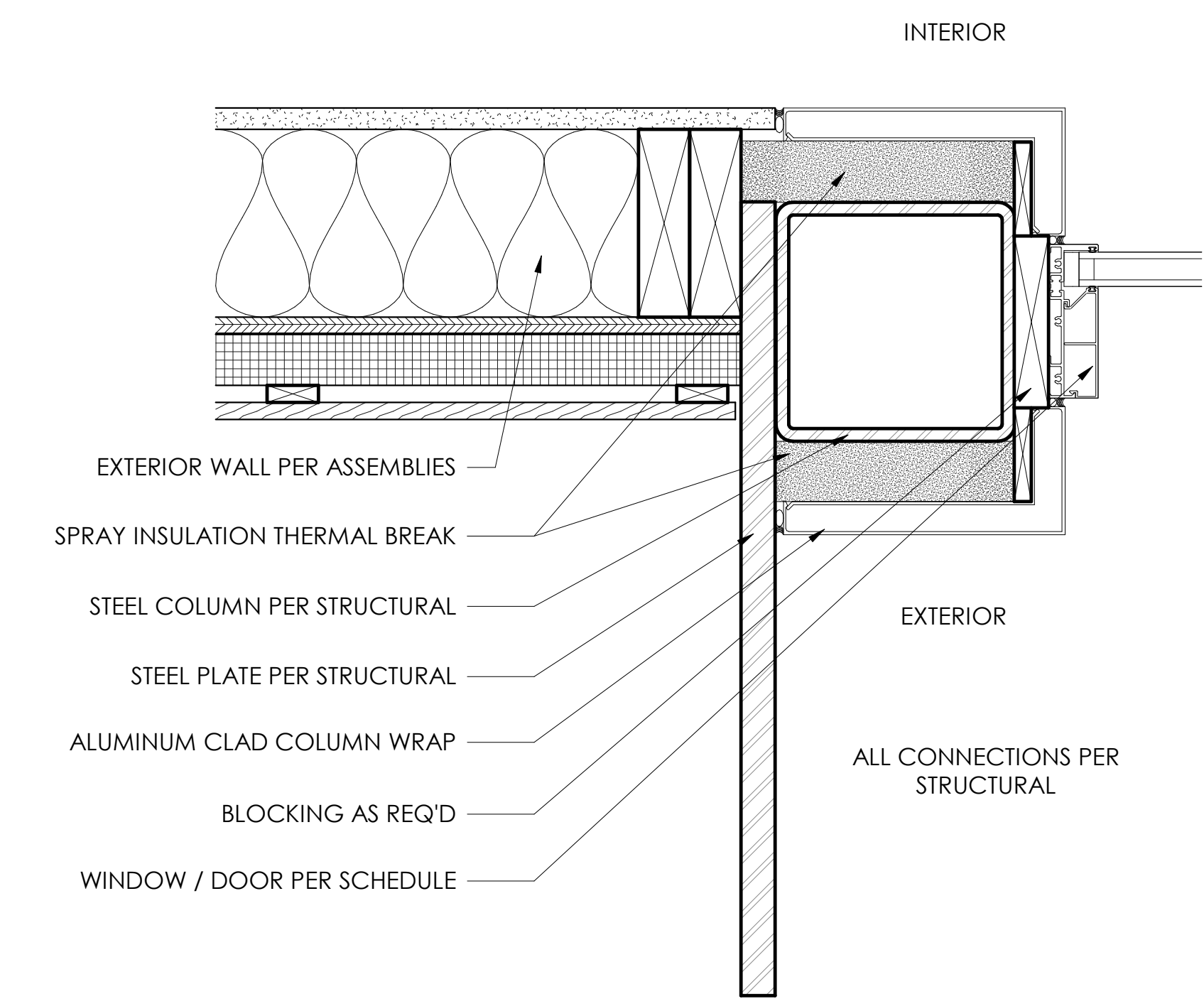
SHEET NO.  
**A512**



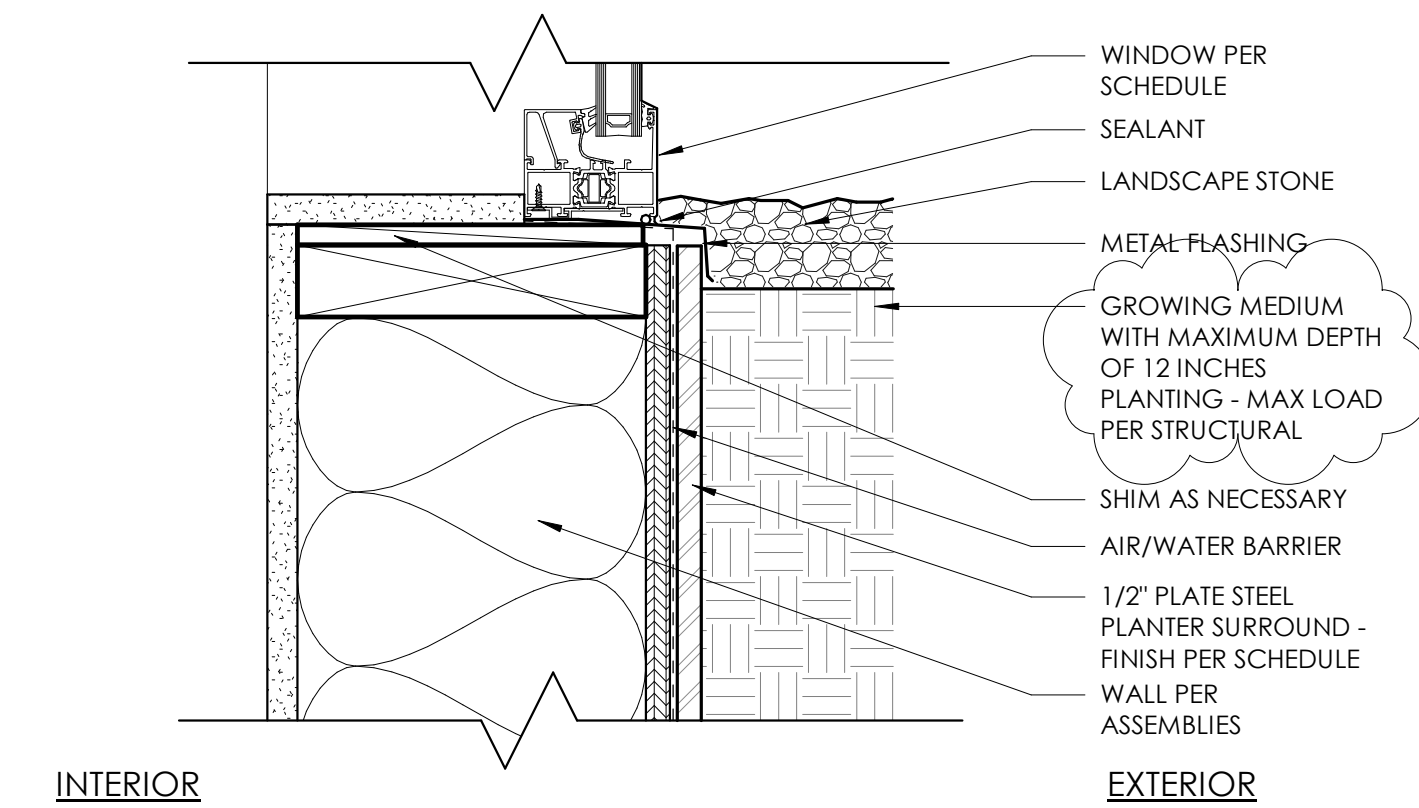
5 EXTERIOR CORNER DETAIL A  
3" = 1'-0"



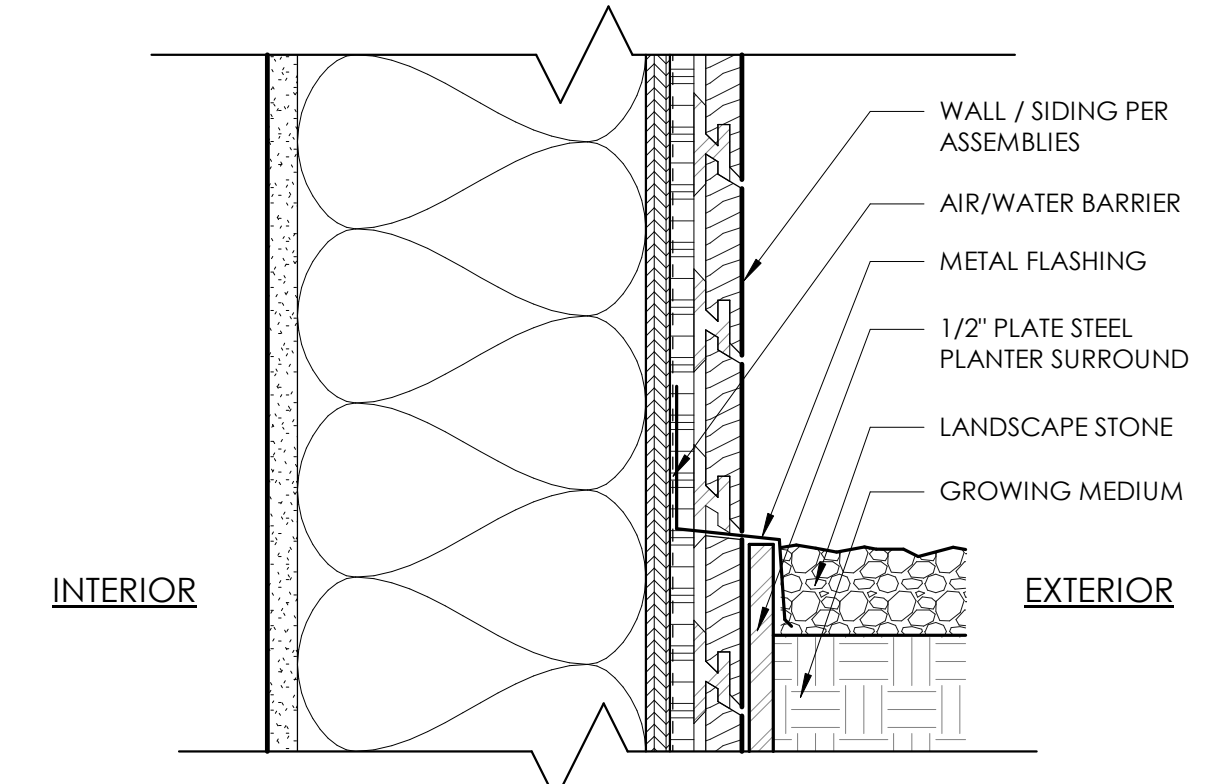
6 TYPICAL EXTERIOR JAMB DETAIL  
3" = 1'-0"



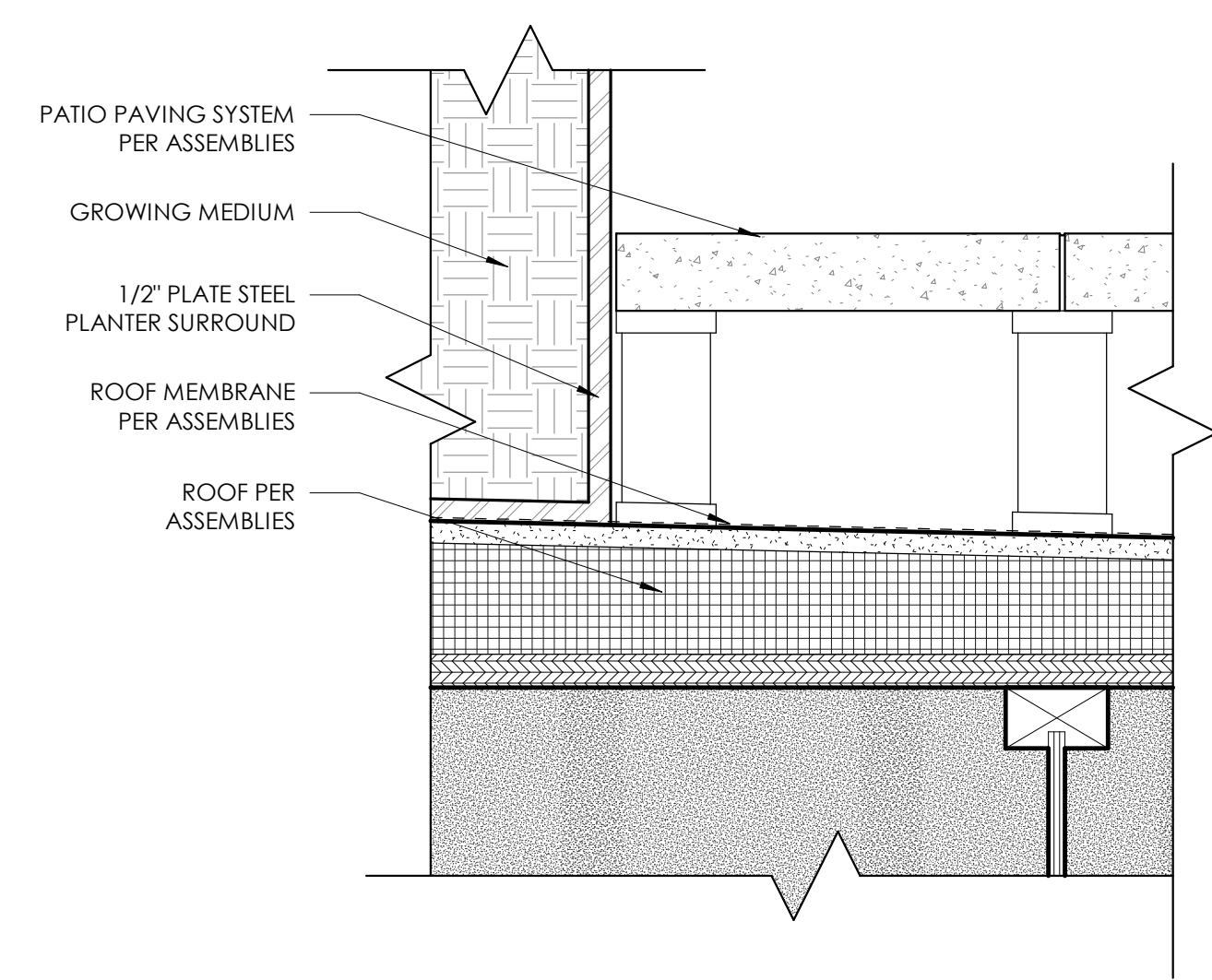
7 TYPICAL EXTERIOR JAMB DETAIL @ METAL SURROUND  
3" = 1'-0"



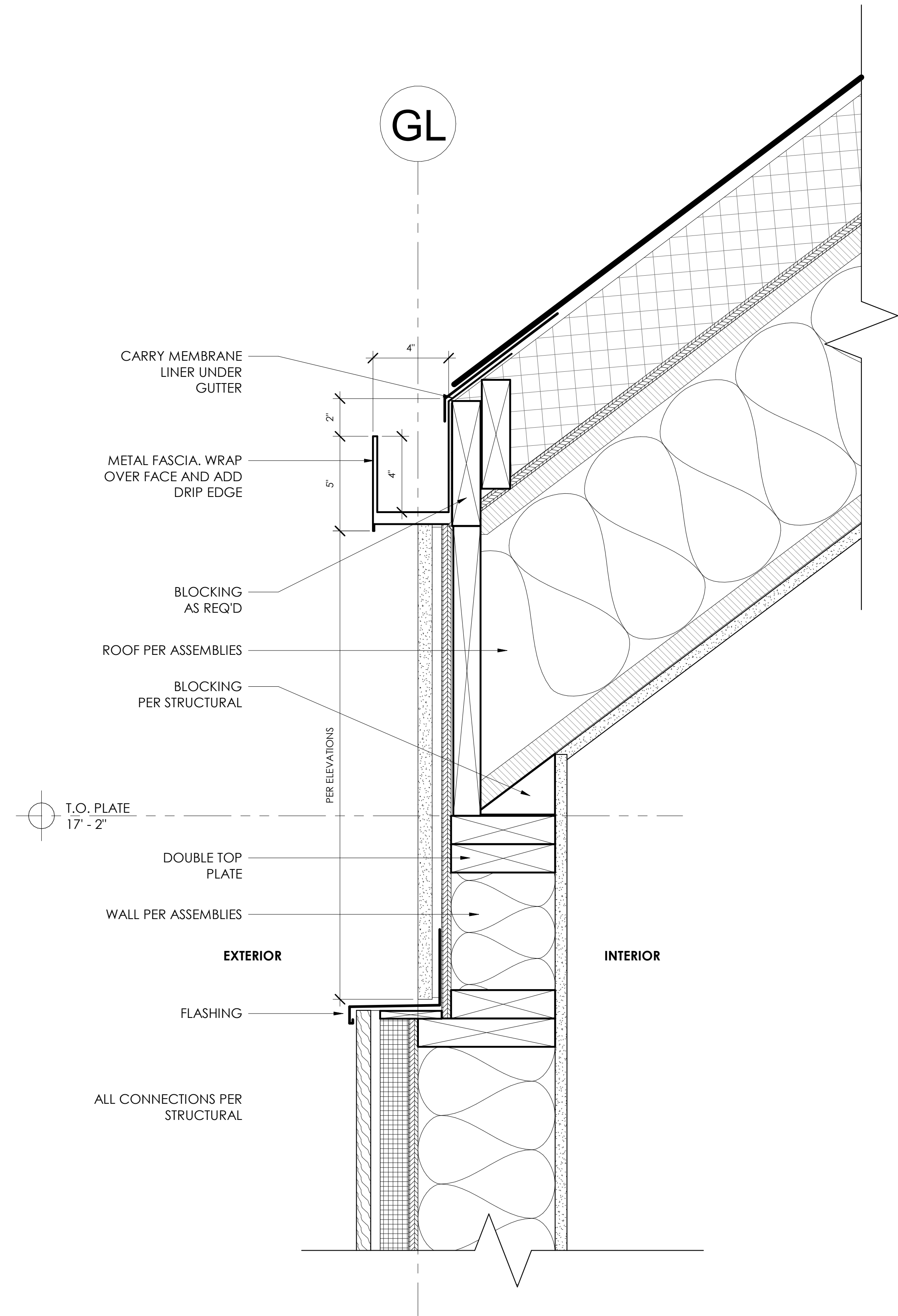
2 BALCONY PLANTER @ WINDOW  
3" = 1'-0"



3 BALCONY PLANTER @ WALL  
3" = 1'-0"



4 BALCONY PLANTER @ PERIMETER  
3" = 1'-0"



1 EXTERIOR GUTTER DETAIL  
3" = 1'-0"



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DATE 3/22/2021	DRAWN BY Author
SCALE 3" = 1'-0"	CHECKED BY Checker

PROJECT

**'FOO'  
RESIDENCE**

3453 74th Ave SE  
Mercer Island, WA  
98040

REV	DATE	ISSUE/REVISION
3	2/25/21	City Comments Round 2

DDP DEDICATED  
APPROVAL STAMP SPACE

SHEET TITLE

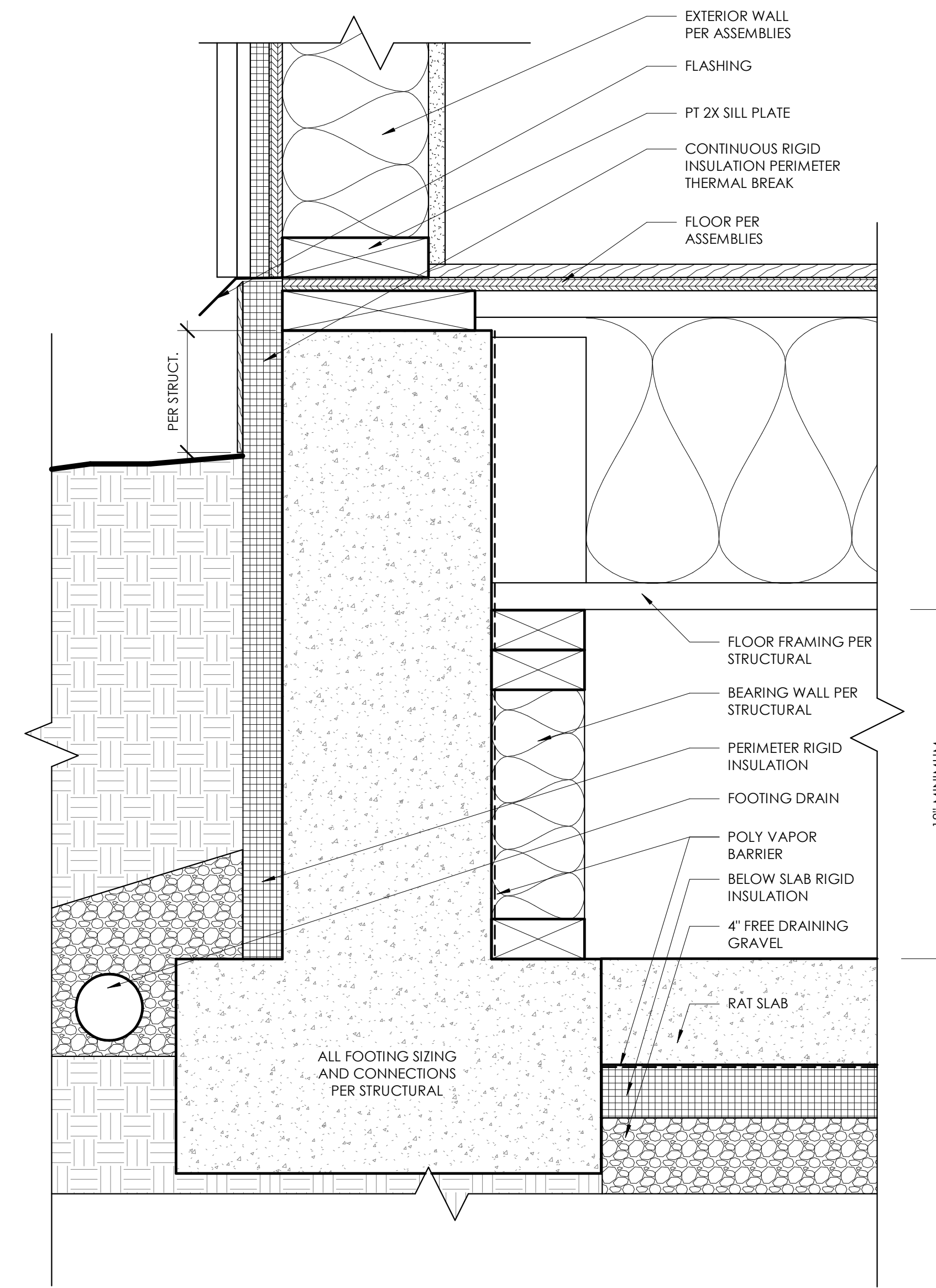
**EXTERIOR  
DETAILS**

REVISION NO.

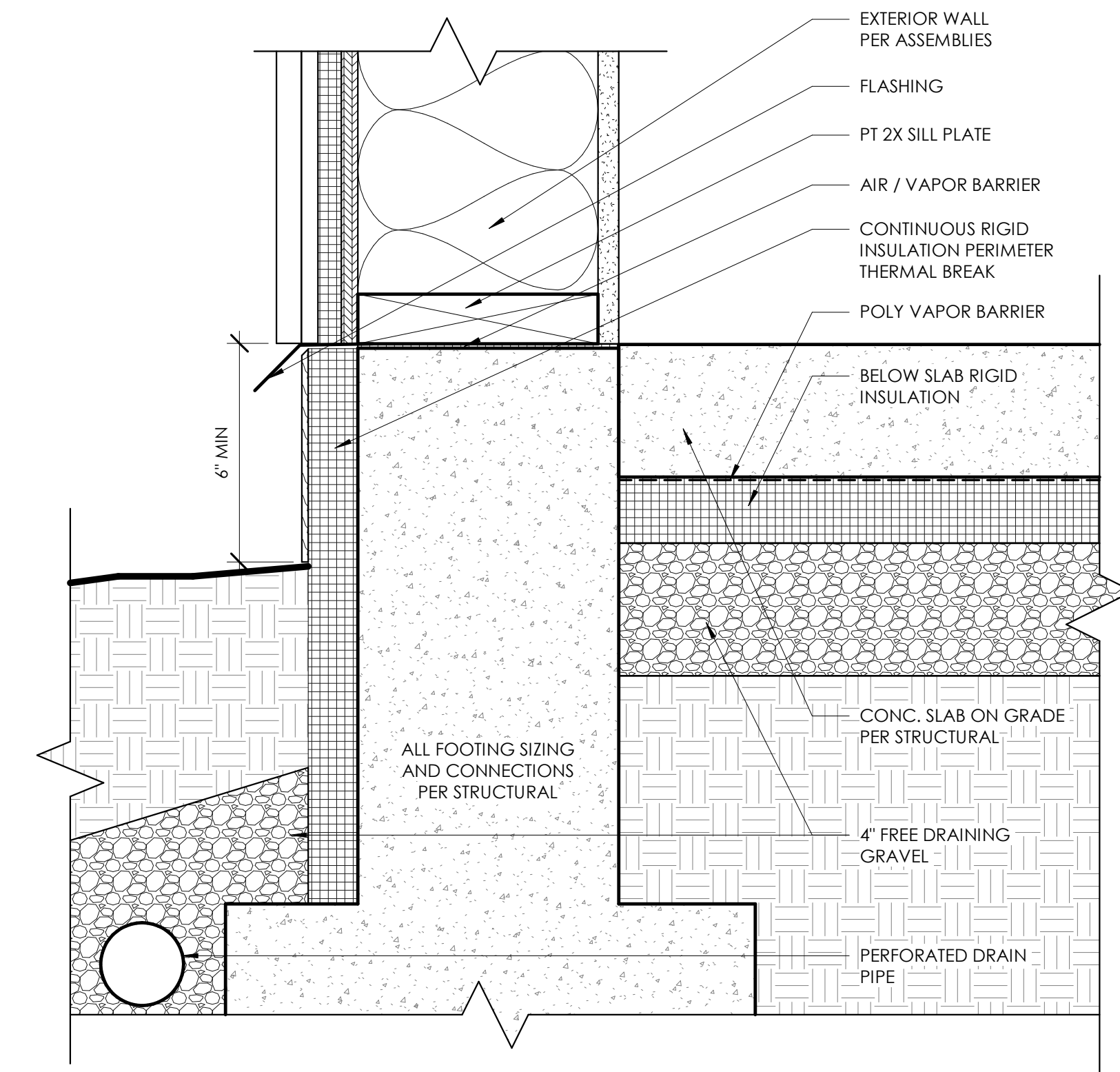
**3**

SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.  
**A513**



② TYPICAL THERMAL BREAK AT CRAWLSPACE  
3" = 1'-0"



① TYPICAL THERMAL BREAK @ FOUNDATION  
3" = 1'-0"



**WINDOW NOTES**

1. Safety glazing (SG) to be provided where required by IRC R308.4. Refer to plans for safety glazing locations. Each pane of safety glazing shall be identified by a label in accordance with the IRC.
2. Emergency escape and rescue openings shall be installed per IRC R310. See plans for locations. All emergency escape and rescue openings shall have a minimum net clear opening of 5.7SF. The minimum net clear opening height shall be no less than 24", clear opening width no less than 20", with a finished sill height not more than 44" above the floor.
3. Window supplier/manufacturer to field verify all rough openings, window divisions, and operation prior to production of all windows.
4. All window finishes per architect. Window supplier to submit color sample for approval by architect/owner.
5. Windows within 10'-0" of grade (or accessible deck) shall be capable of being locked.
6. All glazing to have an area weighted average U-factor of 0.28 max per the WSEC and using the prescriptive option. Manufacturer to confirm during shop drawing process.
7. Safety glazing to be provided when adjacent to stairways and landings within 36" horizontally of a walking surface.

WINDOW SCHEDULE									
Mark	SILL	Length	Height	Area	U-Factor	UA	Glazing	Comments	
W001	3' - 8"	3' - 0"	5' - 6"	16.5 SF	0.28	4.6		EGRESS	
W100	0' - 0"	5' - 11"	12' - 0"	71.0 SF	0.28	19.9	SAFETY GLAZING		
W101	0' - 0"	5' - 11"	12' - 0"	71.0 SF	0.28	19.9	SAFETY GLAZING		
W102	0' - 0"	4' - 6"	11' - 0"	46.8 SF	0.28	13.1	SAFETY GLAZING		
W103	0' - 0"	4' - 6"	11' - 0"	46.8 SF	0.28	13.1	SAFETY GLAZING		
W107	0' - 0"	9' - 11"	10' - 0"	99.2 SF	0.28	27.8	SAFETY GLAZING		
W108	10' - 0"	9' - 11"	10' - 0"	99.2 SF	0.28	27.8	SAFETY GLAZING		
W111	0' - 0"	5' - 2 1/2"	7' - 1"	34.8 SF	0.28	9.8	SAFETY GLAZING		
W112	3' - 0"	15' - 0"	2' - 6"	37.5 SF	0.28	10.5			
W113	7' - 0"	15' - 0"	2' - 6"	37.5 SF	0.28	10.5			
W201	3' - 0"	15' - 2 1/4"	4' - 0"	60.7 SF	0.28	17.0			
W203	1' - 6"	8' - 0"	4' - 8"	37.3 SF	0.28	10.5	SAFETY GLAZING		
W206	0' - 0"	5' - 10"	10' - 0"	58.3 SF	0.28	16.3	SAFETY GLAZING	EGRESS	
Grand total: 13				716.6 SF		200.7			

GLAZED DOOR SCHEDULE										
Mark	Function	Description	Thickness	Height	Width	Area	U-Factor	UA	Glazing	Comments
101	Exterior	Glazed Slider 3 Panel XOO	0' - 8 9/16"	12' - 0"	18' - 0 1/4"	216 SF	0.28	61 SF	SAFETY GLAZING	
102	Exterior	Glazed Slider 2 Panel XO	0' - 5 7/8"	12' - 0"	8' - 9"	105 SF	0.28	29 SF	SAFETY GLAZING	
103	Exterior	Glazed Slider 4 Panel OXXO	0' - 5 7/8"	9' - 6"	16' - 6"	157 SF	0.28	44 SF	SAFETY GLAZING	
113	Exterior	Glazed Slider 2 Panel XO	0' - 5 7/8"	11' - 0"	10' - 0 1/16"	110 SF	0.28	31 SF	SAFETY GLAZING	
114	Exterior	Glazed Slider 2 Panel XO	0' - 5 7/8"	11' - 0"	9' - 6 7/8"	105 SF	0.28	29 SF	SAFETY GLAZING	EGRESS
119	Exterior	Glazed Slider 4 Panel OXXO	0' - 5 7/8"	10' - 0"	14' - 0 5/8"	141 SF	0.28	39 SF	SAFETY GLAZING	EGRESS
120	Exterior	Glazed Slider 2 Panel XO	0' - 5 7/8"	9' - 0"	11' - 9"	106 SF	0.28	30 SF	SAFETY GLAZING	
121	Exterior	Glazed Slider 2 Panel XO	0' - 5 7/8"	9' - 0"	11' - 9"	106 SF	0.28	30 SF	SAFETY GLAZING	
202	Exterior	Glazed Slider 2 Panel XO	0' - 5 7/8"	7' - 0"	8' - 4"	58 SF	0.28	16 SF	SAFETY GLAZING	EGRESS
207	Exterior	Glazed Slider 2 Panel XO	0' - 5 7/8"	11' - 1 1/4"	10' - 0 1/16"	111 SF	0.28	31 SF	SAFETY GLAZING	EGRESS
208	Exterior	Glazed Slider 2 Panel XO	0' - 5 7/8"	11' - 0"	9' - 6 7/8"	105 SF	0.28	29 SF	SAFETY GLAZING	EGRESS
Grand total: 11						1320 SF		370 SF		

GARRET CORD WERNER LLC  
3132 WESTERN AVE  
SEATTLE WA  
98121



GARRET CORD WERNER

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DATE 3/22/2021	DRAWN BY AHP
SCALE	CHECKED BY GCW

PROJECT

**'FOO' RESIDENCE**

3453 74th Ave SE  
Mercer Island, WA  
98040

REV	DATE	ISSUE/REVISION
2	10/28/20	City Comments

DDP DEDICATED APPROVAL STAMP SPACE

SHEET TITLE  
**WINDOW SCHEDULE & TYPES**

REVISION NO.  
**2**  
SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.  
**A601**

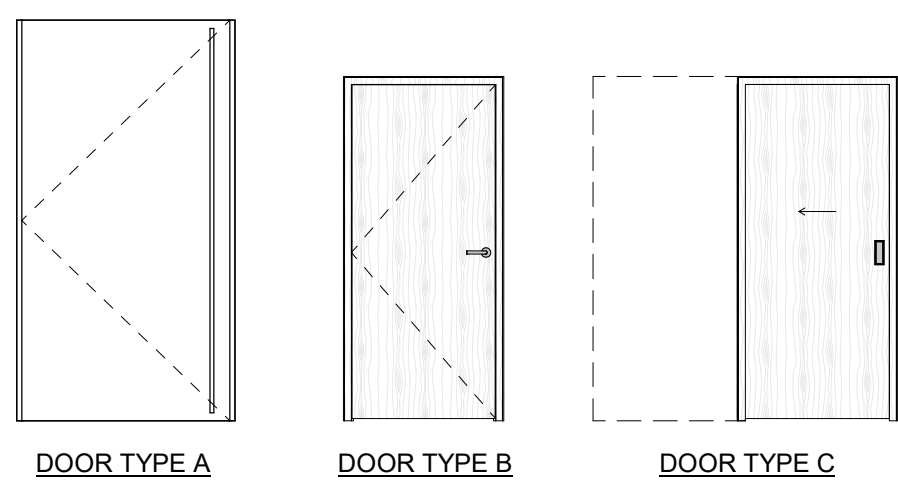


**DOOR NOTES**

- Safety Glazing (SG) to be provided where required by IRC R308.4. All glazing subject to human impact shall be tempered, safety glazing as required by the IRC. Provide safety glazing in fixed or operable panels adjacent to a door where the nearest exposed edge of the glazing is within a 24" arc of either vertical edge or the door in a closed position and where the bottom edge of the glazing is less than 60" above the walking surface. Provide safety glazing for panels over 9SF and within 18" vertical and 36" horizontal of any walking surface. Provide safety glazing in all shower doors, shower enclosures, bathtub enclosures, or bathtub doors. Glass enclosure doors and panels must be labeled category II, and doors must swing outward. Refer to plans for safety glazing locations. Each pane of safety glazing shall be identified by a label in accordance with the IRC.
- Door frames and frame anchorage shall be installed according to the conditions of their listing.
- All exterior doors, except garage doors, to be provided with mortise lock and deadbolt. Minimum 1/2" throw dead latch for doors per IRC R329.
- All glazed doors to have an area weighted average U-factor of 0.30 max. per the WSEC using the prescriptive option.
- 1 1/2" maximum threshold for all exterior doors swinging out to the exterior. (IRC R311.3)
- Exterior doors to have a U-factor of 0.20 max per the WSEC prescriptive option.
- Fire doors, windows, and dampers shall have an approved label or listing mark, indicating fire-protection rating, which is visible for inspection and permanently affixed at the time of manufacture.
- All exterior, mechanical room doors shall be insulated, with interlocking low-rise thresholds and weatherstripping.
- Door thresholds shall not exceed 1/2" in height above finished floor.
- All bedroom, bathroom, and powder room doors to be provided with privacy locks.
- Operation, hinging, pocketing or sliding per plans.
- All interior doors to be painted wood solid core.
- Door supplier/manufacturer to field verify all rough openings and operation prior to production of the doors.
- Sizes noted are for reference only, field verify R.O. size before ordering doors.
- Door glazing to be argon filled, 1" 366 I.G.
- Windows and doors shall limit infiltration per ASTM E 283-73.

**DOOR SCHEDULE**

Mark	Function	Door Type	Height	Width	Thickness	Glazing	Hardware Package	Door Material	Comments
001	Interior	Pocket	8' - 0"	4' - 0"	0' - 1 3/8"				
002	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				
003	Interior	Pocket	7' - 0"	3' - 0"	0' - 1 3/8"				
100	Exterior	Offset Pivot	12' - 0"	4' - 8"	0' - 1 3/4"				ENTRY
101	Exterior	Glazed Slider 3 Panel XOO	12' - 0"	18' - 0 1/4"	0' - 8 9/16"	SAFETY GLAZING			
102	Exterior	Glazed Slider 2 Panel XO	12' - 0"	8' - 9"	0' - 5 7/8"	SAFETY GLAZING			
103	Exterior	Glazed Slider 4 Panel OXXO	9' - 6"	16' - 6"	0' - 5 7/8"	SAFETY GLAZING			
104	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				
105	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				
106	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				
107	Exterior	Offset Pivot	7' - 0"	3' - 4"	0' - 1 3/4"				
108	Exterior	Garage	7' - 0"	18' - 0"	0' - 1 1/2"				
109	Interior	Pocket	7' - 0"	3' - 0"	0' - 1 3/8"				
110	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				
112	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				
113	Exterior	Glazed Slider 2 Panel XO	11' - 0"	10' - 0 1/16"	0' - 5 7/8"	SAFETY GLAZING			
114	Exterior	Glazed Slider 2 Panel XO	11' - 0"	9' - 6 7/8"	0' - 5 7/8"	SAFETY GLAZING			EGRESS
115	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				
116	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				
117	Interior	Pocket	7' - 0"	2' - 6"	0' - 1 3/8"				
118	Interior	Pocket	7' - 0"	2' - 6"	0' - 1 3/8"				
119	Exterior	Glazed Slider 4 Panel OXXO	10' - 0"	14' - 0 5/8"	0' - 5 7/8"	SAFETY GLAZING			EGRESS
120	Exterior	Glazed Slider 2 Panel XO	9' - 0"	11' - 9"	0' - 5 7/8"	SAFETY GLAZING			
121	Exterior	Glazed Slider 2 Panel XO	9' - 0"	11' - 9"	0' - 5 7/8"	SAFETY GLAZING			
122	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				
200	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				
201	Interior	Pocket	7' - 0"	4' - 8"	0' - 1 3/8"	SAFETY GLAZING			
202	Exterior	Glazed Slider 2 Panel XO	7' - 0"	8' - 4"	0' - 5 7/8"	SAFETY GLAZING			EGRESS
203	Interior	Pocket	7' - 0"	2' - 6"	0' - 1 3/8"				
204	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				
205	Interior	Pocket	7' - 0"	2' - 6"	0' - 1 3/8"				
206	Exterior	Offset Pivot	7' - 0"	3' - 4"	0' - 1 3/4"				
207	Exterior	Glazed Slider 2 Panel XO	11' - 1 1/4"	10' - 0 1/16"	0' - 5 7/8"	SAFETY GLAZING			EGRESS
208	Exterior	Glazed Slider 2 Panel XO	11' - 0"	9' - 6 7/8"	0' - 5 7/8"	SAFETY GLAZING			EGRESS
209	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				
210	Interior	Flush	7' - 0"	2' - 6"	0' - 1 3/8"				
211	Interior	Flush	7' - 0"	3' - 0"	0' - 1 3/8"				



DOOR TYPES  
1/4" = 1'-0"

**GARRET CORD WERNER LLC**  
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SEATTLE WA  
98121

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DATE 3/22/2021	DRAWN BY AHP
SCALE 1/4" = 1'-0"	CHECKED BY GCW

PROJECT  
**'FOO' RESIDENCE**

3453 74th Ave SE  
Mercer Island, WA  
98040

REV	DATE	ISSUE/REVISION
-----	------	----------------

DDP DEDICATED APPROVAL STAMP SPACE

SHEET TITLE  
**DOOR SCHEDULE & TYPES**

REVISION NO.  
SUPERSEDES ALL PREVIOUS REVISIONS

SHEET NO.  
**A610**



# ABBREVIATION

&	AND	IN.	INCH(ES)
@	AT	INFO.	INFORMATION
'	FEET(FOOT)	INT.	INTERIOR
"	INCH (INCHES)		
#	POUNDS( ) NUMBER	JT.	JOIST
=	EQUAL(S)	JOINT	JOINT
/	PER		
A.	ANCHOR BOLT	K	KIPS(1000)
ABV.	ABOVE	LAT.	LATERAL
ADD.	ADDITIONAL	LB.	POUND(S)
ADJ.	ADJACENT	L.B.	LAG BOLT(S)
ALUM.	ALUMINUM	L.G.	LONG(TUDINAL)
ALT.	ALTERNATE	LGTH	LENGTH
APPRX.	APPROXIMATE(LY)	LMGF	LIGHT GAUGE METAL FRAMING
ARCH.	ARCHITECT(URAL)	LLH	LONG LEG HORIZONTAL
ASSEMBLY	ASSEMBLY	LLV	LONG LEG VERTICAL
B.	BOTTOM	LSH	LONG SLOTTED HOLE(S)
BEL.	BELOW	LT. WT	LIGHT WEIGHT
BEN.	BOUNDARY EDGE NAILING	L.W.	LIGHT WEIGHT
B.F.	BRACED FRAME		
B.LDG.	BUILDING	MAS.	MASONRY
BLK.	BLOCK	MASN.	MASONRY
BLKG.	BLOCKING	MAT.	MATERIAL
BLW.	BELOW	MAX.	MAXIMUM
BM.	BEAM	M.B.	MACHINE BOLT
BMU	BRICK MASONRY UNIT	MBM	METAL BUILDING MANUFACTURER
BNY.	BOUNDARY NAILING	MECH.	MECHANICAL
B.O.	BOTTOM OF	M.E.J.	MASONRY EXPANSION JOINT
B.O.E.	BOTTOM OF EXCAVATION	MEZZ.	MEZZANINE
B.O.F.	BOTTOM OF FOOTING	MFR.	MANUFACTURER
BRG.	BRIDGE(ING)	MIN.	MINIMUM
BRG.	BEARING	MISC.	MISCELLANEOUS
BTM.	BOTTOM	MTL.	METAL
BTWN.	BETWEEN	(N)	NEW
		N.L.B.	NON-LOAD BEARING
C	CAMBER	NO.	NUMBER
CAMB.	CAMBER(ED)	N.S.	NEAR SIDE
CANT.	CANTILEVER(ED)	N.T.S.	NOT TO SCALE
CF	CUBIC FOOT	N.W.C.	NORMAL WEIGHT CONCRETE
C.I.P.	CAST IN PLACE		
C.J.	CONSTRUCTION JOINT	OC	ON CENTER
CL.	CENTER LINE	O.C.	ON CENTER
CLG.	CEILING	O.D.	OUTSIDE DIAMETER
CLR.	CLEAR	O.F.	OUTSIDE FACE
COL.	COLUMN	O.H.	OPPOSITE HAND
CONC.	CONCRETE	OPNG.	OPENING
CONN.	CONNECTION	OPP.	OPPOSITE
CONST.	CONSTRUCTION	ORNT.	ORIENTATION(ION)
CONT.	CONTINUOUS	OSB	SEISMIC DESIGN CATEGORY
CTSK.	COUNTERSINK	O.W.J.	OPEN WEB JOIST
CTR.	CENTER(ED)	PAR.	PARALLEL
cy	CUBIC YARD	PIC	PRECAST
		PEN	PANEL EDGE NAIL
DB	DROPPED BEAM	PERP.	PERPENDICULAR
DBL.	DOUBLE	PL	PLATE
DCW	DEMAND CRITICAL WELD	PL	PROPERTY LINE
DEPT.	DEPARTMENT	PLAN	PLAN
DET.	DETAIL	PLMBG	PLUMBING
DF	DOUGLAS FIR	PLYWD.	PLYWOOD
DIA.	DIAMETER	PSF	POUNDS PER SQUARE FOOT
DIAG.	DIAGONAL	PSI	POUNDS PER SQUARE INCH
DIAPH.	DIAPHRAGM	P.T.	POST TENSION(ED)
DM.	DIMENSION		
DN.	DOWN	QTY.	QUANTITY
D.O.	DITTO(REPEAT)		
DR.	DRIP	R.	RADIUS
D.S.	DRAG STRUT	RAD.	RADIUS
DWG.	DRAWING(S)	RE.	REFERENCE
DWL.	DOWEL(S)	REF.	REFERENCE
		REINF.	REINFORCEMENT(ING)
(E)	EXISTING	REQ.	REQUIRED
EA.	EACH	R.F.	RIGID FRAME
E.E.	EACH END	R.O.	ROUGH OPENING
E.F.	EACH FACE	R.S.	ROUGH SAWN
E.J.	EXPANSION JOINT		
ELEV.	ELEVATION	SCH.	SCHEDULE
EMB.	EMBED(MENT)	SCH.	STRUCTURAL COMPOSITE WOOD
ENB.	EDGE NAIL	SCHED.	SCHEDULE
ENG.	ENGINEER	SHT.	SHEET
EQ.	EQUAL	SIM.	SIMILAR
EQPT.	EQUIPMENT	S.J.	SHRINKAGE CONTROL JOINT
E.W.	EACH WAY	SKW.	SKEW(ED)
EXP.	EXPANSION	S.O.G.	SLAB ON GRADE
EXT.	EXISTING	SPC.	SPACE(S) (ING)
EXT.	EXTERIOR	SPEC.	SPECIFICATION(S)
		SQ.	SQUARE
FB.	FABRICATION	STD.	STANDARD
FLSH.	FLUSH BEAM	STGR.	STAGGER
F.D.	FOUNDATION	STIFF.	STIFFENER(S)
F.F.	FINISH FLOOR	STR.	STRUT
FIN.	FINISH(ED)	STR.	STRUCTURAL
FLG.	FLANGE	STRUC.	STRUCTURAL
FLOOR.	FLOOR	SUSP.	SUSPENDED(TION)
F.N.	FIELD (FACE) NAIL	SYMM.	SYMMETRICAL
F.O.	FINISHED OPENING		
F.O.C.	FACE OF CONCRETE	T.	TOP
F.O.M.	FACE OF MASONRY	T.&B.	TOP AND BOTTOM
F.O.S.	FACE OF STUD	TEMP.	TEMPORARY
F.O.W.	FACE OF WALL	T.&G.	TONGUE AND GROOVE
FRM.	FRAMING(ING)	THK.	THICK(NESS)
F.S.	FAR SIDE	THRD.	THREADED
FTT.	FEET(FOOT)	TN	TOE NAIL
FRW.	FIRE RETARDANT TREATED WOOD	T.O.S.	TOP OF SHEATHING(SLAB)
FG.	FOOTING	T.O.W.	TOP OF WALL
		TRANSV.	TRANSVERSE
GA.	GAUGE	T.O.S.	TOP OF STEEL
GALV.	GALVANIZE(D)	TYP.	TYPICAL
GB.	GRADE BEAM		
GLB.	GLUE LAMINATED BEAM	U.N.O.	UNLESS NOTED OTHERWISE
GRD.	GRADE	UNDERSIDE	UNDERSIDE
GWB.	GYPSPUM WALLBOARD		
GYP.	GYPCRETE	V.	VERTICAL
		VERT.	VERTICAL
H	HORIZONTAL	VIF.	VERIFY IN FIELD
HD	HOLDDOWN		
H.D.G.	HOT DIPPED GALVANIZED	W.	WIDTH(WIDTH)
HDR.	HEADER	W/	WITH
HGR.	HANGER	W/O	WITHOUT
HORZ.	HORIZONTAL	WD.	WOOD
HORIZ.	HORIZONTAL	W.H.S.	WELDED HEADED STUDS
HR.	HEADER	W.P.	WORK POINT
H.S.B.	HIGH STRENGTH BOLT	W.S.	WELDED STUD
HT.	HEIGHT	WT.	WEIGHT
		W.W.F.	WELDED WIRE FABRIC
I.D.	INSIDE DIAMETER	X-STG	EXTRA STRONG
I.E.	INVERT ELEVATION	XX-STG	DOUBLE EXTRA STRONG
I.F.	INSIDE FACE		
		YD	YARD

**01000 - GENERAL REQUIREMENTS**  
THE STRUCTURAL NOTES SUPPLEMENT THE PLANS AND SPECIFICATIONS. ANY DISCREPANCY FOUND BETWEEN THE DRAWINGS, NOTES, SPECIFICATIONS, SITE CONDITIONS, AND ARCHITECTURAL PLANS SHALL BE REPORTED TO THE ARCHITECT WHO SHALL CORRECT THE DISCREPANCY IN WRITING. ANY WORK COMPLETED AFTER THE DISCOVERY OF THE DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S RISK. REFER TO ARCHITECTURAL PLANS FOR OPENINGS, ARCHITECTURAL TREATMENTS, AND DIMENSIONS NOT SHOWN. CONSULT MECHANICAL PLANS FOR DUCTS AND PIPES ETC. NOT SHOWN.

THE CONTRACTOR SHALL PROVIDE BRACING AND SUPPORT REQUIRED FOR TEMPORARY CONSTRUCTION LOADS AND FOR STRUCTURAL COMPONENTS AS REQUIRED DURING ERECTION. BACKFILL BEHIND WALLS SHALL NOT BE PLACED UNTIL THE WALLS ARE PROPERLY SUPPORTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL WORK INCLUDING BUT NOT LIMITED TO EXCAVATION, SHORING, AND OTHER WORK WITH ALL UTILITIES AND ADJACENT PROPERTIES. CALL THE UTILITY LOCATE SERVICE PRIOR TO ANY WORK AT 1-800-424-5555.

**01001 - CODE REQUIREMENTS**  
ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2015 INTERNATIONAL BUILDING CODE AS ADOPTED BY SEATTLE, WASHINGTON.

**01100 - DESIGN LOADS**  
**DEAD LOADS:**  
ACTUAL WEIGHT OF MATERIALS OF CONSTRUCTION AND PERMANENT EQUIPMENT.

**FLOOR LIVE LOADS:**  
FLOORS (RESIDENTIAL) 40 PSF

**ROOF LIVE LOADS:**  
ROOF 20 PSF

**DECK LIVE LOAD:**  
DECK 60 PSF

**SNOW LOAD DESIGN DATA:**  
Pg = 20 PSF, Pf = 20 PSF, Ce = 0.9, Is = 1.0, Ct = 1.0, 25 PSF UNIFORM

**WIND DESIGN DATA:**  
BASIC WIND SPEED 110 MPH (3-SECOND GUST)  
WIND IMPORTANCE FACTOR Iw = 1.0  
WIND EXPOSURE C EXPOSURE C  
TOPOGRAPHICAL FACTOR Kzt = 1.6  
INTERNAL PRESSURE COEFFICIENT GCp = +/- 0.18  
COMPONENT/CADDING WIND PRESSURE P[C] = 25 PSF

**EARTHQUAKE DESIGN DATA:**  
SEISMIC IMPORTANCE FACTOR Ie = 1.0  
OCCUPANCY CATEGORY II  
SPECTRAL RESPONSE ACCELERATIONS Ss = 1.397 S1 = 0.538  
SITE CLASS D  
SEISMIC DESIGN COEFFICIENTS SDS = 0.92 SD1 = 0.538  
SEISMIC DESIGN CATEGORY OSB  
WOOD LEVELS - BEARING WALL SYSTEM R = 6.5 Cs = 0.14  
LIGHT FRAMED PLYWOOD SHEAR WALLS

**01200 - FOUNDATIONS - GEOTECHNICAL INVESTIGATION**  
FOUNDATION DESIGN BASED ON REPORT 20-084 DATED APRIL 9, 2020 PREPARED BY PAN GEO INC. ALL SITE PREPARATION AND FOUNDATION CONSTRUCTION TO BE PERFORMED PER REPORT. FILLS TO BE COMPACTED TO 95% MODIFIED PROCTOR PER ASTM D-1557.

ALL FOUNDATIONS SHALL BE FOUNDED ON EITHER COMPETENT NATIVE MATERIAL OR BY OTHER MEANS AS DEFINED BY THE GEOTECHNICAL ENGINEER.

WHERE FOOTINGS ARE ALLOWED TO BE FOUNDED ON NATIVE MATERIAL BY THE GEOTECHNICAL ENGINEER, ALLOWABLE BEARING CAPACITY IS 3,000 PSF. 1/3 INCREASE ALLOWABLE FOR WIND OR SEISMIC LOADS.

GEOTECHNICAL DESIGN PARAMETERS HAVE BEEN COORDINATED WITH PAN GEO INC. AS LISTED BELOW:

DESIGN PARAMETERS FOR RETAINING WALLS WITH FLAT BACKL ARE AS FOLLOWS:  
ACTIVE EARTH PRESSURE (YIELDING) 50 PCF  
ACTIVE EARTH PRESSURE (AT-REST) 50 PCF  
PASSIVE EARTH PRESSURE 350 PCF (ALLOWABLE - FS=1.5)  
COEFFICIENT OF FRICTION 0.35 (ALLOWABLE - FS=1.5)  
SOIL PROFILE TYPE CLASS S  
SEISMIC SURCHARGE UNIFORM 8H  
VEHICLE SURCHARGE 2'-0" OF SOIL

ALL FOUNDATION INSTALLATIONS SHALL BE SUBJECT TO APPROVAL OF THE GEOTECHNICAL ENGINEER.

**01300 - SHOP DRAWING SUBMITTAL PROCESS**  
SHOP DRAWINGS ARE TO BE SUBMITTED TO THE ARCHITECT AND ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION. IF SHOP DRAWINGS DIFFER FROM THE APPROVED DESIGN DRAWINGS, NEW DESIGN DRAWINGS BEARING THE SEAL AND SIGNATURE OF A LICENSED STATE OF WASHINGTON STRUCTURAL ENGINEER SHALL BE SUBMITTED ALONG WITH THE SHOP DRAWINGS TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO FABRICATION.

SHOP DRAWINGS ARE REQUIRED FOR ALL STRUCTURAL STEEL AND PROPRIETARY GUARD COMPONENTS.

**01400 - INSPECTIONS AND SPECIAL INSPECTIONS**  
THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL INSPECTIONS REQUIRED BY THE LOCAL BUILDING DEPARTMENT.

SPECIAL INSPECTIONS ARE GENERALLY NOT REQUIRED FOR GROUP R, 3 OCCUPANCIES UNLESS OTHERWISE REQUIRED BY THE BUILDING OFFICIAL. HOWEVER, SPECIAL INSPECTIONS ARE REQUIRED FOR STRUCTURAL STEEL WELDING, SHEAR WALLS WITH TIGHTER NAILING THAN 4" O.C. AS WELL AS POST INSTALLED ANCHORS. REFER TO THE INSPECTION TABLES FOR FURTHER DIRECTION.

**01500 - STRUCTURAL OBSERVATION**  
STRUCTURAL OBSERVATION IS NOT REQUIRED.

**01600 - QUALITY ASSURANCE REQUIREMENTS**  
THE QUALITY ASSURANCE PLAN SHALL BE TO VERIFY THAT THE SPECIAL INSPECTIONS NOTED IN SECTION 01400 AND THE STRUCTURAL OBSERVATION NOTED IN SECTION 01500 HAVE BEEN COMPLETED AND THAT SUPPORTING DOCUMENTATION NOTED IN SUCH SECTIONS HAS BEEN PROVIDED.

QUALITY ASSURANCE PLAN IS NOT REQUIRED FOR STRUCTURES OF LIGHT WOOD FRAMING WITH DESIGN SPECTRAL RESPONSE AT SHORT PERIODS, SDS, NOT EXCEEDING 0.5g.

QUALITY ASSURANCE PLAN IS NOT REQUIRED FOR WIND EXPOSURE B WHERE BASIC WIND SPEED IS LESS THAN 120 MPH.

SUMMARY: A QUALITY ASSURANCE PLAN IS NOT REQUIRED BY CODE FOR THIS STRUCTURE.

**01700 - EXECUTION REQUIREMENTS**  
INSTALLATION OF ALL STRUCTURAL COMPONENTS SHALL BE AS REQUIRED PER ALL LOCAL CODES.

**02000 - SITE CONSTRUCTION**  
ALL SITE CONSTRUCTION SHALL BE CONSISTENT WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS AS NOTED IN THE GEOTECHNICAL ENGINEERING REPORT (SEE SECTION 01300) AND IN SUBSEQUENT DIRECTIVES.

**02100 - EXCAVATION SUPPORT AND PROTECTION**  
EXCAVATION FOR FOUNDATIONS SHALL BE PER PLAN DOWN TO UNDISTURBED NATIVE MATERIAL PER THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS. OVER-EXCAVATED AREAS SHALL BE BACKFILLED WITH LEAN CONCRETE OR PER GEOTECHNICAL RECOMMENDATIONS AT THE CONTRACTOR'S EXPENSE.

EXCAVATION SLOPES SHALL BE SAFE AND SHALL NOT BE GREATER THAN THE LIMITS SPECIFIED BY LOCAL, STATE, AND NATIONAL SAFETY REGULATIONS.

INSTALLATION OF CONSTRUCTION SHORING, IF REQUIRED, SHALL BE PER THE SHORING DRAWINGS, NOTES, AND SPECIFICATIONS.

**02200 - BACKFILL AND COMPACTION**  
BACKFILL SHALL NOT BE PLACED UNTIL THE REMOVAL OF FORMWORK AND OF ANY DEBRIS. BACKFILL BEHIND WALLS SHALL NOT BE PLACED UNTIL THE WALLS ARE PROPERLY SUPPORTED. ALL BACKFILL MATERIAL AND PLACEMENT PROCEDURES SHALL BE CONSISTENT WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS. CANTILEVERED BASEMENT WALLS SHALL CURE FOR A MINIMUM OF 14 DAYS PRIOR TO BACKFILL AND COMPACTION PER THE SOILS REPORT.

# STRUCTURAL NOTES

**03000 - CAST-IN-PLACE CONCRETE**  
CONCRETE CONSTRUCTION SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE STANDARD ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".

CEMENT AND CONCRETE SHALL CONFORM TO IBC SECTION 1903. ADMIXTURES SHALL BE APPROVED BY THE ENGINEER OF RECORD AND SHALL COMPLY WITH ACI 318-14 SECTION 3.6. CONCRETE EXPOSED TO FREEZING AND THAWING SHALL HAVE AN AIR ENTRAINING ADMIXTURE CONFORMING TO IBC SECTION 1904.2. THE USE OF WATER SOLUBLE CHLORIDE ION SHALL NOT BE USED.

CONCRETE MIX DESIGNS SHALL MEET THE FOLLOWING REQUIREMENTS:  
(1) 28 DAY MAX. STRENGTH Fc [PSI] (2) MAX. WATER / CEMENT RATIO (3) MAX. SLUMP [IN] (4) AIR ENTRAINMENT [%] (5) SPECIAL INSPECTION REQUIRED (6) MIN. 90 LB SACKS OF CEMENT (7) LOCATION AND APPLICATION.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
3000	0.45	4+/-1	5+/-1	NO		EXTERIOR SLAB ON GRADE
3000	0.45	4+/-1	0+/-1	NO		INTERIOR SLAB ON GRADE
3000	0.50	5+/-1	0+/-1	NO		FOOTINGS
3000	0.45	5+/-1	5+/-1	NO		STEMS
3000	0.50	5+/-1	5+/-1	NO		ALL OTHER CONCRETE

SPECIAL INSPECTION IS NOT REQUIRED AS THE DESIGN IS BASED ON Fc = 2500 PSI.

CHAMFER ALL EXPOSED CORNERS PER THE ARCHITECTURAL PLANS OR 3/4 INCH IF NOT SPECIFIED BY THE ARCHITECT.

**03100 - REINFORCING STEEL**  
REINFORCING STEEL DETAILING, FABRICATION, AND PLACEMENT SHALL BE PER ACI 318-14. REINFORCING STEEL SHALL MEET THE FOLLOWING REQUIREMENTS.

ASTM A-615 DEFORMED BARS GRADE 40 (fy=60 KSI) FOR #3 BARS ONLY  
ASTM A-615 DEFORMED BARS GRADE 60 (fy=80 KSI) FOR #4 BARS AND LARGER  
ASTM A-706 DEFORMED BARS GRADE 60 (fy=80 KSI) FOR ALL WELDABLE BARS  
ASTM A-1084 SMOOTH BAR (fy=60 KSI) FOR WELDED WIRE FABRIC

REINFORCING FOR SLABS ON GRADE SHALL BE 6X6 W1.4XW1.4 WELDED WIRE FABRIC OR FIBER MESH UNLESS NOTED OTHERWISE. PROVIDE LAP SPLICES PER THE LAP SPLICE SCHEDULE ON SHEET S6.0. REINFORCING STEEL AT ALL WALLS, SLABS, AND FOOTINGS SHALL BE CONTINUOUS AROUND CORNERS ELSE CORNER BARS SHALL BE PROVIDED.

COVER REQUIREMENTS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH  
ALL BAR SIZES ..... 3"  
FORMED SURFACE EXPOSED TO EARTH OR WEATHER  
#6 AND LARGER ..... 2"  
#5 AND SMALLER ..... 1 1/2"  
CONCRETE NOT EXPOSED TO EARTH OR WEATHER  
WALLS AND JOISTS  
#14 AND #18 BARS ..... 1 1/2"  
#11 BARS AND SMALLER ..... 3/4"  
SLABS AND JOISTS  
#14 AND #18 BARS ..... 1 1/2"  
#11 BARS AND SMALLER ..... 1"  
BEAMS, COLUMNS  
PRIMARY REINFORCEMENT ..... 1 1/2"  
TIES, STRUTS, AND SPIRALS ..... 1 1/2"

REINFORCING STEEL SHALL BE ACCURATELY PLACED AND ADEQUATELY SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT. REINFORCING STEEL SHALL NOT BE FIELD BENT EXCEPT AS NOTED IN THE DESIGN DRAWINGS. WELDING OF REINFORCING STEEL SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER OF RECORD EXCEPT AS NOTED ON THE DESIGN DRAWINGS.

**03200 - CONCRETE WALL REINFORCING**  
PLACE TWO HORIZONTAL #5 BARS AT EACH FLOOR LEVEL OR TOP OF WALL ELEVATION. PROVIDE CORNER BARS TO MATCH HORIZONTAL REINFORCEMENT AT EACH WALL CORNER AND INTERSECTION. PROVIDE TWO VERTICAL #5 BARS AT EACH WALL CORNER AND INTERSECTION. AT ALL WALL OPENINGS PROVIDE TWO #5 BARS OVER, UNDER, AND AT THE SIDES OF THE OPENINGS. EXTEND THE HORIZONTAL BARS THE LAP SPLICE DISTANCE PLUS THE OPENING OR EXTEND AS FAR AS POSSIBLE AND HOOK. PROVIDE ONE #5 BAR BY 4'-0" LONG DIAGONALLY AT EACH CORNER OF THE WALL OPENING. ALL CONCRETE SHALL BE PLACED AND CONSOLIDATED WALLS SHALL BE REINFORCED PER SCHEDULE BELOW UN.O.:

WALL THICKNESS	HORIZONTAL	VERTICAL	LOCATION
6"	#4 AT 14"OC	#5 AT 18"OC	CENTERLINE
8"	#4 AT 10"OC	#5 AT 15"OC	CENTERLINE
10"	#4 AT 16"OC	#5 AT 18"OC	EACH FACE
12"	#4 AT 12"OC	#5 AT 18"OC	EACH FACE

**05000 - STRUCTURAL STEEL**  
DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "AISC 360-10 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS". MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING UN.O.:

STRUCTURAL W SHAPE	ASTM A-992	Fy = 50 KSI
S, M, AND C SHAPES	ASTM A-36	Fy = 36 KSI
STEEL ANGLES	ASTM A-36	Fy = 36 KSI
PLATE MATERIAL	ASTM A-36	Fy = 36 KSI
STRUCTURAL PIPE	ASTM A-53 GRADE B	Fy = 35 KSI
STRUCTURAL HSS	ASTM A-500 GRADE B	Fy = 46 KSI
ANCHOR RODS	ASTM F1554	Fy = 36 KSI
WOOD CONNECTION BOLTS	ASTM A-307 GRADE A	
WELDING ELECTRODES	E7018	

ALL WELDING SHALL CONFORM TO THE AWS D1.4 "STRUCTURAL WELDING CODE". ALL WELDING SHALL BE PERFORMED BY A WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO) AND AMERICAN WELDING SOCIETY (AWS) CERTIFIED WELDERS. ALL COMPLETE PENETRATION (CP) WELDS SHALL BE ULTRASONICALLY TESTED. ALL FILLET WELDS SHALL BE VISUALLY INSPECTED RE: S1.3.

STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A-123. ALL FIELD WELDS EXPOSED TO WEATHER SHALL BE COATED WITH BRUSH APPLIED ZINC-RICH PAINT COMPLYING WITH ASTM A-780.

ALL STRUCTURAL STEEL TO RECEIVE ONE COAT OF PAINT (PRIME COAT). PROVIDE A MINIMUM FRY-FILM THICKNESS OF ONE MIL. PREPARE SURFACE TO MEET REQUIREMENTS OF SSPC-SP-2. TOUCHUPS OF ABRASIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR. UNO. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION RELATING TO FINISH PAINT OR OTHER FINISH REQUIREMENTS.

**06000 - WOOD FRAMING NOTES**  
FRAMING CONNECTORS, ACCESSORIES, AND FASTENERS AS NOTED IN THE PLANS AND DETAILS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE. EQUIVALENT HARDWARE MAY BE USED WITH PRIOR APPROVAL BY ENGINEER OF RECORD. INSTALL ALL HARDWARE PER MANUFACTURERS SPECIFICATIONS. WHERE STRAPS CONNECT TWO MEMBERS TOGETHER, PLACE HALF OF THE REQUIRED FASTENERS INTO EACH MEMBER. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. SEE SECTION 06100 FOR FASTENER REQUIREMENTS AT TREATED LUMBER. TYPICAL NAILING NOT SHOWN PER PLAN, DETAIL, OR SCHEDULE SHALL CONFORM TO FASTENING SCHEDULE PER IBC TABLE 2304.10.1 OR TO THE FASTENING SCHEDULE ON SHEET S9.0.

NAILS SHALL BE COMMON UNLESS NOTED OTHERWISE COMMON NAIL DIMENSIONS ARE AS FOLLOWS:

NAIL SIZE	DIAMETER	LENGTH
8d	0.131"	2 1/2"
10d	0.148"	3"
12d	0.148"	3 1/4"
16d	0.162"	3 1/2"

UNLESS NOTED OTHERWISE PER SHEARWALL SCHEDULE OR PLANS, ANCHOR BOLTS AT SILL PLATES SHALL BE 5/8 INCH DIAMETER WITH 7 INCHES MINIMUM EMBEDMENT INTO CONCRETE AND SHALL BE SPACED NOT MORE THAN 4 FEET APART. THERE SHALL BE A MINIMUM OF TWO BOLTS PER SILL PIECE WITH ONE BOLT LOCATED NOT MORE THAN 12 INCHES NOR LESS THAN 4 1/2 INCHES FROM EACH END OF THE PIECE. A 3"x3"x1/4" PLATE WASHER SHALL BE PROVIDED FOR ALL ANCHOR BOLTS (COUNTERSINK PLATE WASHERS SHALL NOT BE ALLOWED).

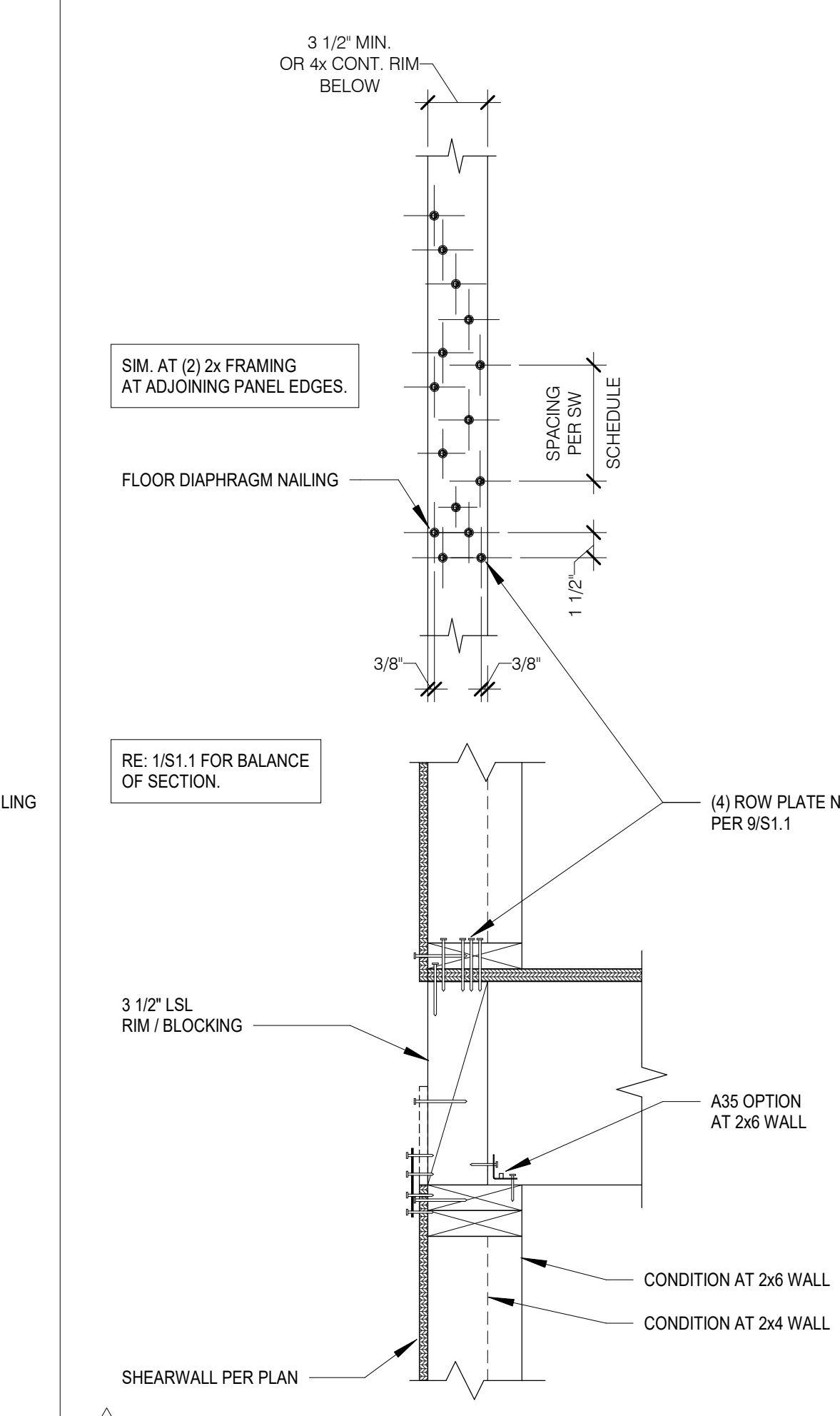
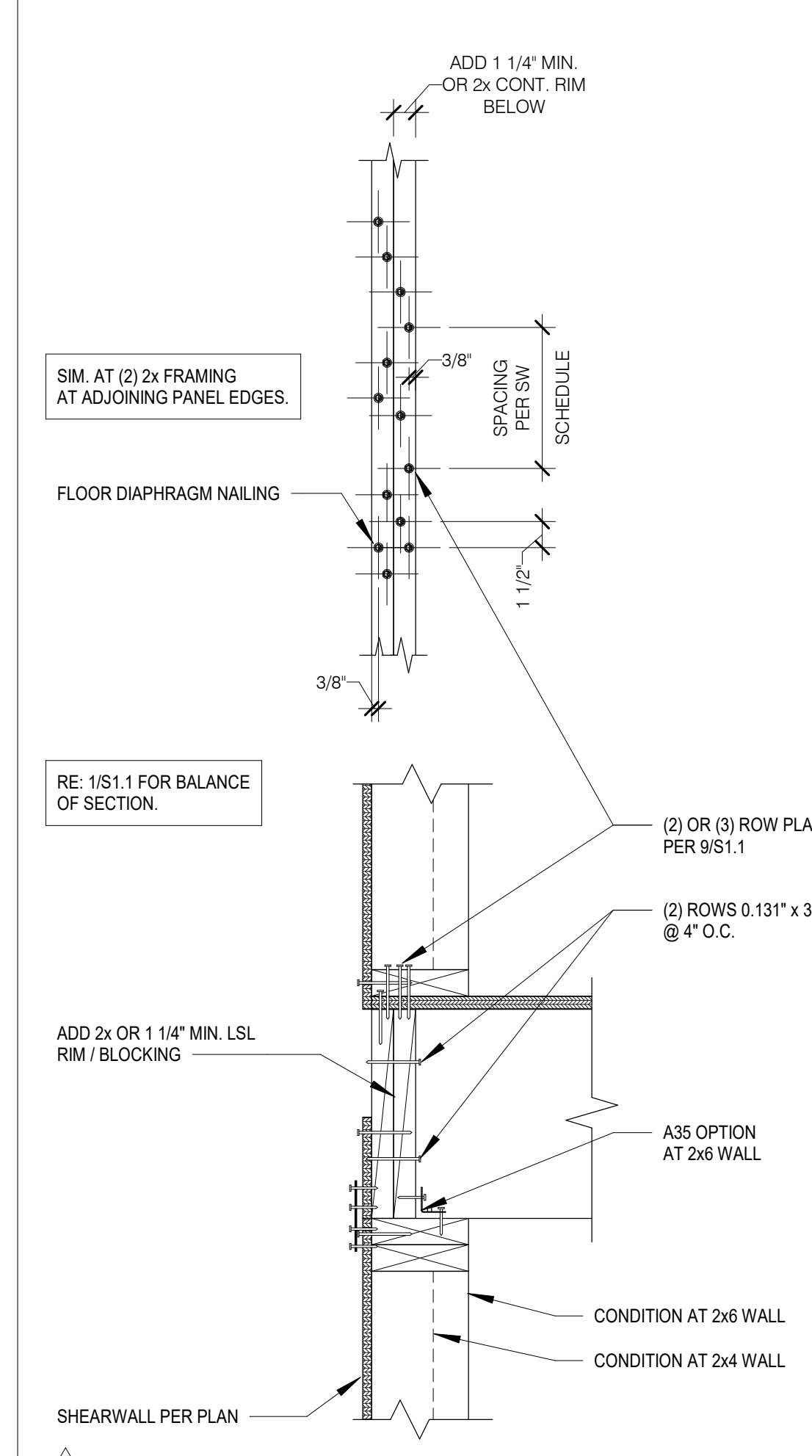
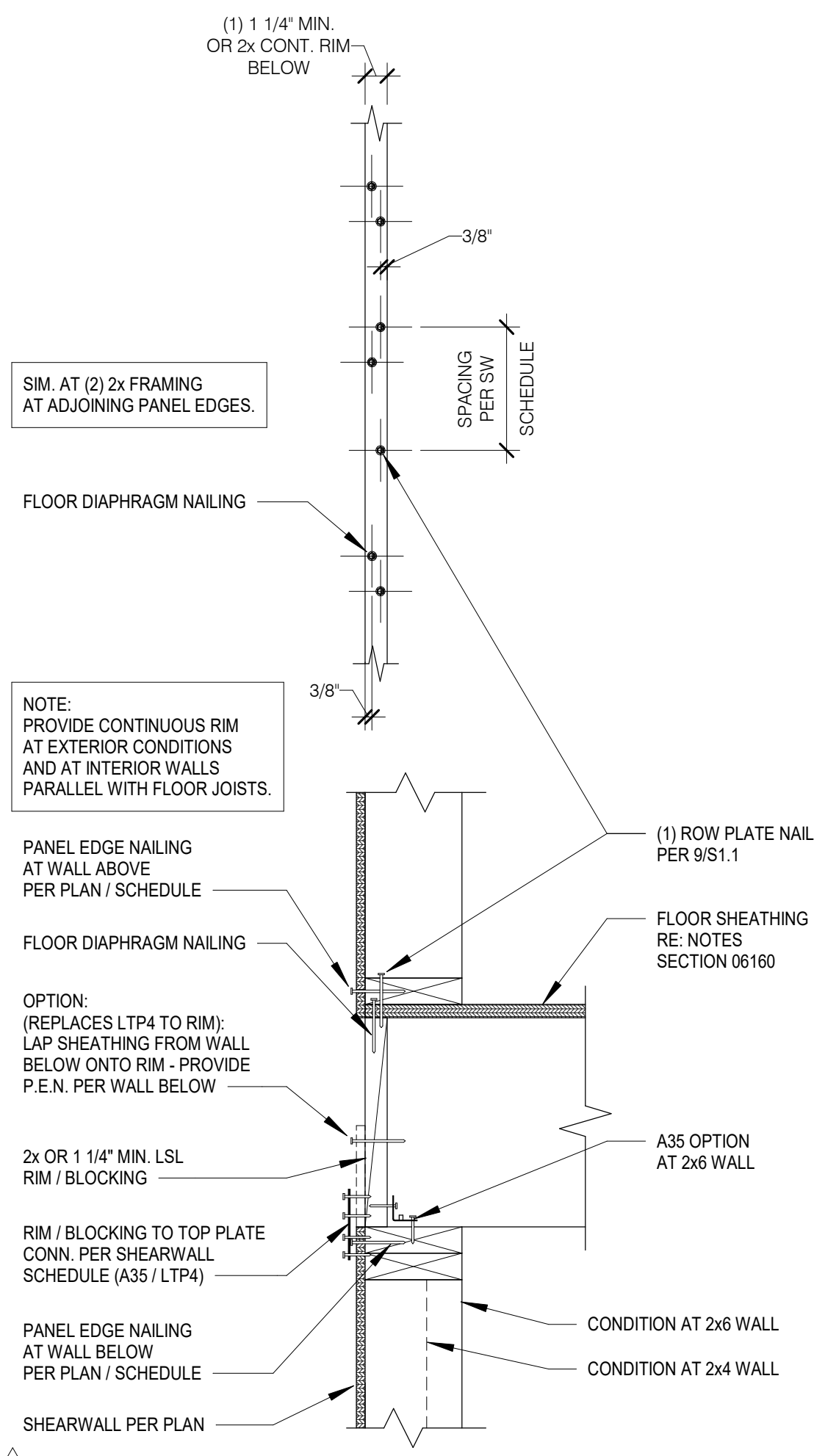
**06100 - ROUGH FRAMING**  
SAWN LUMBER SHALL CONFORM TO WEST COAST LUMBER INSPECTION BUREAU (WCLBI) "GRADING AND DRESSING RULES" NO. 17 LATEST EDITION. SAWN LUMBER SHALL BE S4S AND SURFACED DRIED, 19 PERCENT MAXIMUM MOISTURE CONTENT. PROTECT LUMBER FROM WEATHER AND PROVIDE FURTHER DRYING OF ASSEMBLED FRAMING TO MINIMIZE WOOD SHRINKAGE POTENTIAL. ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE TREATED U.N.O. PER PLAN. LUMBER SPECIES, GRADE, AND PROPERTIES FOR EACH USE/LOCATION SHALL BE AS FOLLOWS U.N.O. PER PLANS/SCHEDULE:

USE/LOCATION	SPECIES	GRADE	Fb (PSI)	Fv (PSI)	Fcp (PSI)	Fc (PSI)	E (PSI)
WALL STUDS/BLOCKING	HEM-FIR	STUD	675	150	405	800	1,266
2X, 3X 4" WIDE							
2X, 3X 6" & WIDER	HEM-FIR	NO. 2	850	150	405	1300	1,366

WALL PLATES	HEM-FIR	STUD	675	150	405	800	1,266
2X4, 3X4							
2X6, 3X6	HEM-FIR	NO. 2	850	150	405	1300	1,366

JOISTS	HEM-FIR	NO. 2	850	150	405	1300	1,366
2X, 3X							





SHEARWALL SCHEDULE - 7/16" APA RATED SHEATHING W/ HEM-FIR STUDS AND HEM-FIR PLATES

WALL TYPE	SHEATHING (2)	PANEL EDGE NAILING (3)	FIELD NAILING (4)	BOTTOM PLATE NAILING (7)		RIM OR BLOCKING TO TOP PLATE CONN. (10)			FRAMING AT ADJOINING PANEL EDGES (5)	FOUNDATION SILL PLATE (12)	ANCHOR BOLT SPACING 5/8" DIA. 7" EMBED (13)
				ROWS	SPACING	0.148"x.25" TOENAIL	LTP4 DIRECT TO FRAMING	A35 ONLY			
P6TN	7/16" SHT. ONE SIDE	6" O.C.	12" O.C.	(1)	8" O.C.	N/A	4" O.C.	N/A	2x	2x	48" O.C.
P6	7/16" SHT. ONE SIDE	6" O.C.	12" O.C.	(1)	6" O.C.	N/A	24" O.C.	24" O.C. EA. SIDE	2x	2x	48" O.C.
P4	7/16" SHT. ONE SIDE	4" O.C.	12" O.C.	(2)	6" O.C.	N/A	16" O.C.	16" O.C. EA. SIDE	(2)x OR 3x	2x	36" O.C.
P3	7/16" SHT. ONE SIDE	3" O.C.	12" O.C.	(2)	5" O.C.	N/A	12" O.C.	12" O.C. EA. SIDE	(2)x OR 3x	2x	30" O.C.
P2	7/16" SHT. ONE SIDE	2" O.C.	12" O.C.	(3)	6" O.C.	N/A	10" O.C.	10" O.C.	(2)x OR 3x	2x	24" O.C.
2P4	7/16" SHT. BOTH SIDES	4" O.C.	12" O.C.	(4)	6" O.C.	N/A	16" O.C. EA. SIDE	16" O.C. EA. SIDE	(2)x OR 3x	2x	18" O.C.
2P3	7/16" SHT. BOTH SIDES	3" O.C.	12" O.C.	(4)	5" O.C.	N/A	12" O.C. EA. SIDE	12" O.C. EA. SIDE	(2)x OR 3x	2x	14" O.C.
2P2	7/16" SHT. BOTH SIDES	2" O.C.	12" O.C.	(4)	4" O.C.	N/A	10" O.C. EA. SIDE	10" O.C. EA. SIDE	(2)x OR 3x	2x	10" O.C.

**SHEARWALL SCHEDULE NOTES:**

- STUDS SHALL NOT BE SPACED MORE THAN 16" O.C.
- RE: S1.0 SECTION 06100 "ROUGH FRAMING" FOR REQUIRED WALL STUD AND PLATE SPECIES AND GRADE.
- RE: S1.0 SECTION 06160 "WOOD SHEATHING" FOR REQUIRED SHEAR WALL SHEATHING, THICKNESS AND GRADE. ALL SHEAR WALL PANELS SHALL BE APPLIED DIRECTLY TO FRAMING.
- SHEATHING PANELS MAY BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY WITH ALL PANEL EDGES BACKED/BLOCKED WITH 2" NOMINAL OR WIDER FRAMING. SEE NOTE 5.
- FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL NOT BE LESS THAN 3" NOMINAL AND NAILS SHALL BE STAGGERED FOR ALL SHEARWALL MARKS EXCEPT "P".
- WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS OR FRAMING SHALL BE 3" NOMINAL OR THICKER AND NAILS SHALL BE STAGGERED.
- NAILS FOR PLYWOOD AND OSB PANEL EDGE AND FIELD NAILING SHALL BE 8D COMMON (0.131" X 2 1/2").
- NAILS FOR BOTTOM PLATE FRAMING SHALL BE 12D COMMON (0.148" X 3.25").
- FLOOR DIAPHRAGM NAILING SHALL BE PLACED BETWEEN THE SPACING CALLED OUT FOR BOTTOM PLATE NAILING. DO NOT OVER NAIL THE BLOCKING.
- ANCHOR BOLTS SHALL BE GALVANIZED 5/8" DIAMETER A-307 AND SHALL BE SECURED IN PLACE PRIOR TO CONCRETE POUR. NET STICKING OF ANCHOR BOLTS IS NOT ALLOWED.
- GALVANIZED 3" X 3" X 0.229" (MIN.) PLATE WASHERS ARE REQUIRED AT EACH ANCHOR BOLT - SEE 8 THIS SHEET FOR PLACEMENT REQUIREMENTS. RECESSING PLATE WASHERS IN PLATES IS NOT ALLOWED.
- LTP4 FRAMING PLATES SHALL BE INSTALLED WITH 12-8D X 1 1/2" (0.131" X 1 1/2") NAILS. RE: DETAILS 1, 2 & 3/S1.1.
- A35 FRAMING ANGLES SHALL BE INSTALLED WITH 12-8D X 1 1/2" (0.131" X 1 1/2") NAILS. RE: DETAILS 1, 2 & 3/S1.1.
- ALL NAILS INTO PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED CONFORMING TO ASTM 153 OR STAINLESS STEEL.
- ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE TREATED.
- WHERE BOTTOM PLATE NAILING SPECIFIES A SPACING OF 4 INCHES OR LESS NAILS SHALL BE INSTALLED IN TWO ROWS OFFSET 1/2 INCH AND STAGGERED.
- GALVANIZED EXPANSION ANCHORS OF SIMILAR DIAMETER AND EMBEDMENT ALLOWED AT INTERIOR BEARING AND PARTY WALLS.
- 2"x2"s IN LIEU OF 3"x3"s AT PANEL EDGES ACCEPTABLE PROVIDED STUDS ARE ATTACHED PER 10S1.2 SIM. AND BOTTOM PLATE NAILING.
- WHERE BUILDING OFFICIALS ALLOW, OSB SHEATHING MAY BE APPLIED OVER 1/2" OR 3/8" GYPSUM WALL BOARD PROVIDED SHEATHING IS NAILED WITH 10D NAILS (0.148" DIA X 3" LONG).

**SCALE: NONE**

**(1) SHEARWALL TYPE W1 SHEATHING:** 15/32" CD-CC SHEATHING APPLIED DIRECTLY TO FRAMING

**NAILING:** USE LENGTH DIA. STUDS AND PLATE: HEM-FIR #2 OR BETTER

**SPECIAL INSPECTION:** PER JURISDICTION

**STUD SPACING:** 16" O.C. MAX.

**FLOOR THICKNESS:** 23/32"

**ANCHOR BOLT:** 5/8" DIA., 7" EMBED.

**RIM/BLOCKING:** 0.148" DIA. NAILS AT 4" O.C./SG=0.50

**VERTICAL LOAD TRANSFER CAPACITY:** 3300 LB./FT.

**LATERAL LOAD TRANSFER CAPACITY:** (1.25') 600 LB./FT. (3.50') 1200 LB./FT.

**RIM/BLOCKING:** NO. PIECES/THICKNESS

**BOTTOM PLATE NAILING (CLOSEST SPACING)**

- ROWS 0.148" DIA. AT 4" O.C. (1) 1.25"
- ROWS 0.148" DIA. AT 4" O.C. (1) 1.75"
- ROWS 0.148" DIA. AT 4" O.C. (1) 3.50"

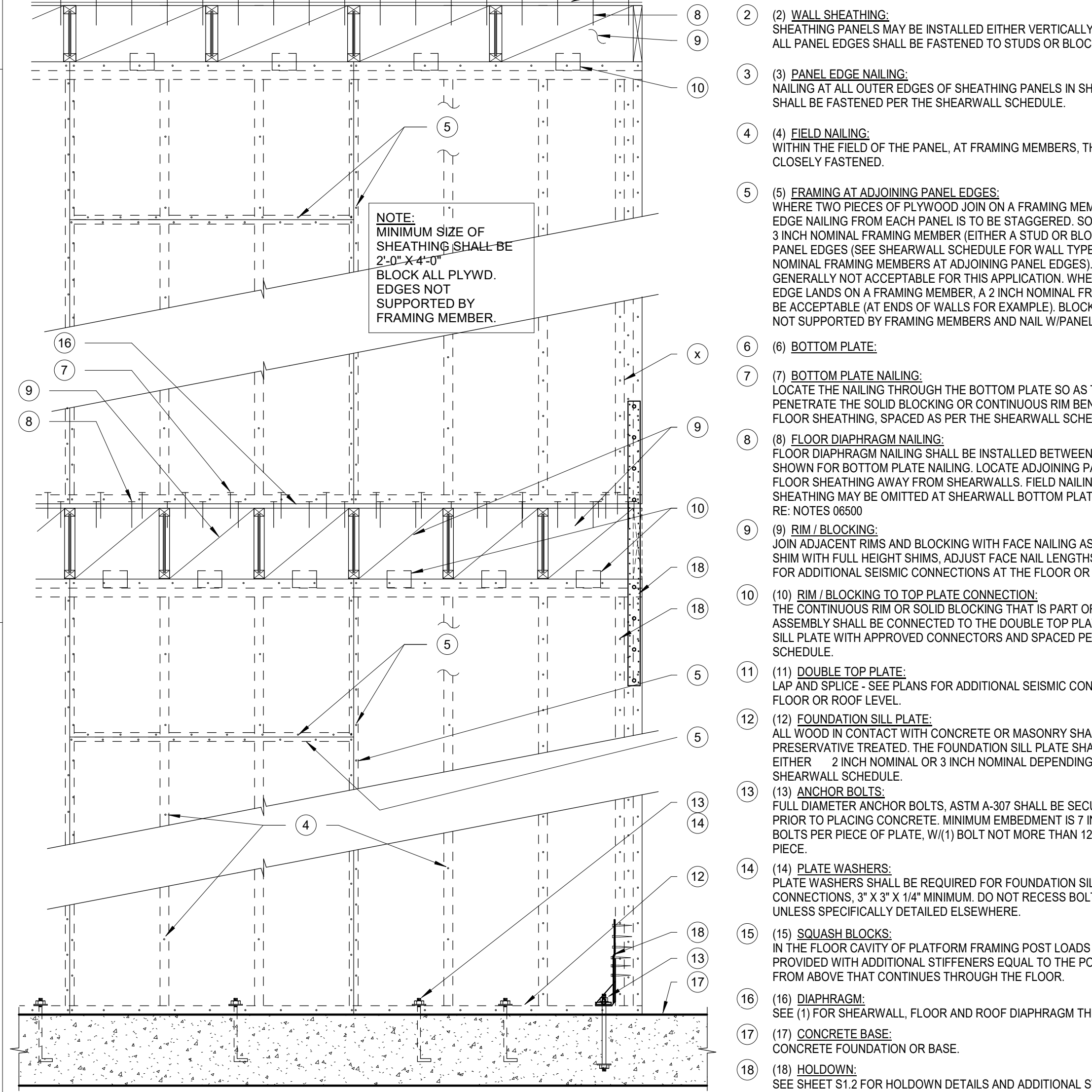
**APPROVED RIM PRODUCTS:** TRUS JOIST ER-4979 TIMBERSTRAND LSL 2.0E, PARALLAM PSL 2.0E, T-J-STRAND

**SUBSTITUTIONS TO ABOVE REQUIRE ENGINEER OF RECORD APPROVAL PRIOR TO INSTALLATION. SUBMIT DOCUMENTATION BY A CODE APPROVED AGENCY CONFIRMING THE REQUIRED CAPACITIES AND MINIMUM NAIL SPACING FOR THE CONDITIONS DESCRIBED.**

1 P6TN & P6 TYP. SHEARWALL CONN. SCALE: 1 1/2" = 1'-0"

2 P4, P3 & P2 TYP. SHEARWALL CONN. SCALE: 1 1/2" = 1'-0"

3 2P4, 2P3 & 2P2 TYP. SHEARWALL CONN. SCALE: 1 1/2" = 1'-0"



**(2) WALL SHEATHING:** SHEATHING PANELS MAY BE INSTALLED EITHER VERTICALLY OR HORIZONTALLY. ALL PANEL EDGES SHALL BE FASTENED TO STUDS OR BLOCKING.

**(3) PANEL EDGE NAILING:** NAILING AT ALL OUTER EDGES OF SHEATHING PANELS IN SHEARWALLS SHALL BE FASTENED PER THE SHEARWALL SCHEDULE.

**(4) FIELD NAILING:** WITHIN THE FIELD OF THE PANEL, AT FRAMING MEMBERS, THE PANELS ARE LESS CLOSELY FASTENED.

**(5) FRAMING AT ADJOINING PANEL EDGES:** WHERE TWO PIECES OF PLYWOOD JOIN ON A FRAMING MEMBER, THE PANEL EDGE NAILING FROM EACH PANEL IS TO BE STAGGERED. SOME WALLS REQUIRE 3 INCH NOMINAL FRAMING MEMBER (EITHER A STUD OR BLOCKING) AT ADJOINING PANEL EDGES (SEE SHEARWALL SCHEDULE FOR WALL TYPES REQUIRING 3 INCH NOMINAL FRAMING MEMBERS AT ADJOINING PANEL EDGES). DOUBLED STUDS ARE GENERALLY NOT ACCEPTABLE FOR THIS APPLICATION. WHERE A SINGLE PANEL EDGE LANDS ON A FRAMING MEMBER, A 2 INCH NOMINAL FRAMING MEMBER SHALL BE ACCEPTABLE (AT ENDS OF WALLS FOR EXAMPLE). BLOCK ALL PLYWOOD EDGES NOT SUPPORTED BY FRAMING MEMBERS AND NAIL W/PANEL EDGE NAILING.

**(6) BOTTOM PLATE:**

**(7) BOTTOM PLATE NAILING:** LOCATE THE NAILING THROUGH THE BOTTOM PLATE SO AS TO FULLY PENETRATE THE SOLID BLOCKING OR CONTINUOUS RIM BENEATH THE FLOOR SHEATHING, SPACED AS PER THE SHEARWALL SCHEDULE.

**(8) FLOOR DIAPHRAGM NAILING:** FLOOR DIAPHRAGM NAILING SHALL BE INSTALLED BETWEEN THE SPACING SHOWN FOR BOTTOM PLATE NAILING. LOCATE ADJOINING PANEL EDGES OF FLOOR SHEATHING AWAY FROM SHEARWALLS. FIELD NAILING OF FLOOR SHEATHING MAY BE OMITTED AT SHEARWALL BOTTOM PLATE NAILING. RE: NOTES 06500

**(9) RIM / BLOCKING:** JOIN ADJACENT RIMS AND BLOCKING WITH FACE NAILING AS SPECIFIED ABOVE. SHIM WITH FULL HEIGHT SHIMS. ADJUST FACE NAIL LENGTHS. REFER TO PLANS FOR ADDITIONAL SEISMIC CONNECTIONS AT THE FLOOR OR ROOF LEVEL.

**(10) RIM / BLOCKING TO TOP PLATE CONNECTION:** THE CONTINUOUS RIM OR SOLID BLOCKING THAT IS PART OF THE SHEARWALL ASSEMBLY SHALL BE CONNECTED TO THE DOUBLE TOP PLATE OR FOUNDATION SILL PLATE WITH APPROVED CONNECTORS AND SPACED PER THE SHEARWALL SCHEDULE.

**(11) DOUBLE TOP PLATE:** LAP AND SPICE - SEE PLANS FOR ADDITIONAL SEISMIC CONNECTIONS AT THE FLOOR OR ROOF LEVEL.

**(12) FOUNDATION SILL PLATE:** ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE TREATED. THE FOUNDATION SILL PLATE SHALL BE EITHER 2 INCH NOMINAL OR 3 INCH NOMINAL DEPENDING ON THE SHEARWALL SCHEDULE.

**(13) ANCHOR BOLTS:** FULL DIAMETER ANCHOR BOLTS, ASTM A-307 SHALL BE SECURED IN PLACE PRIOR TO PLACING CONCRETE. MINIMUM EMBEDMENT IS 7 INCHES. MIN. (2) BOLTS PER PIECE OF PLATE, W/(1) BOLT NOT MORE THAN 12" FROM END OF PIECE.

**(14) PLATE WASHERS:** PLATE WASHERS SHALL BE REQUIRED FOR FOUNDATION SILL PLATE CONNECTIONS. 3" X 3" X 1/4" MINIMUM. DO NOT RECESS BOLTS IN SILL PLATE UNLESS SPECIFICALLY DETAILED ELSEWHERE.

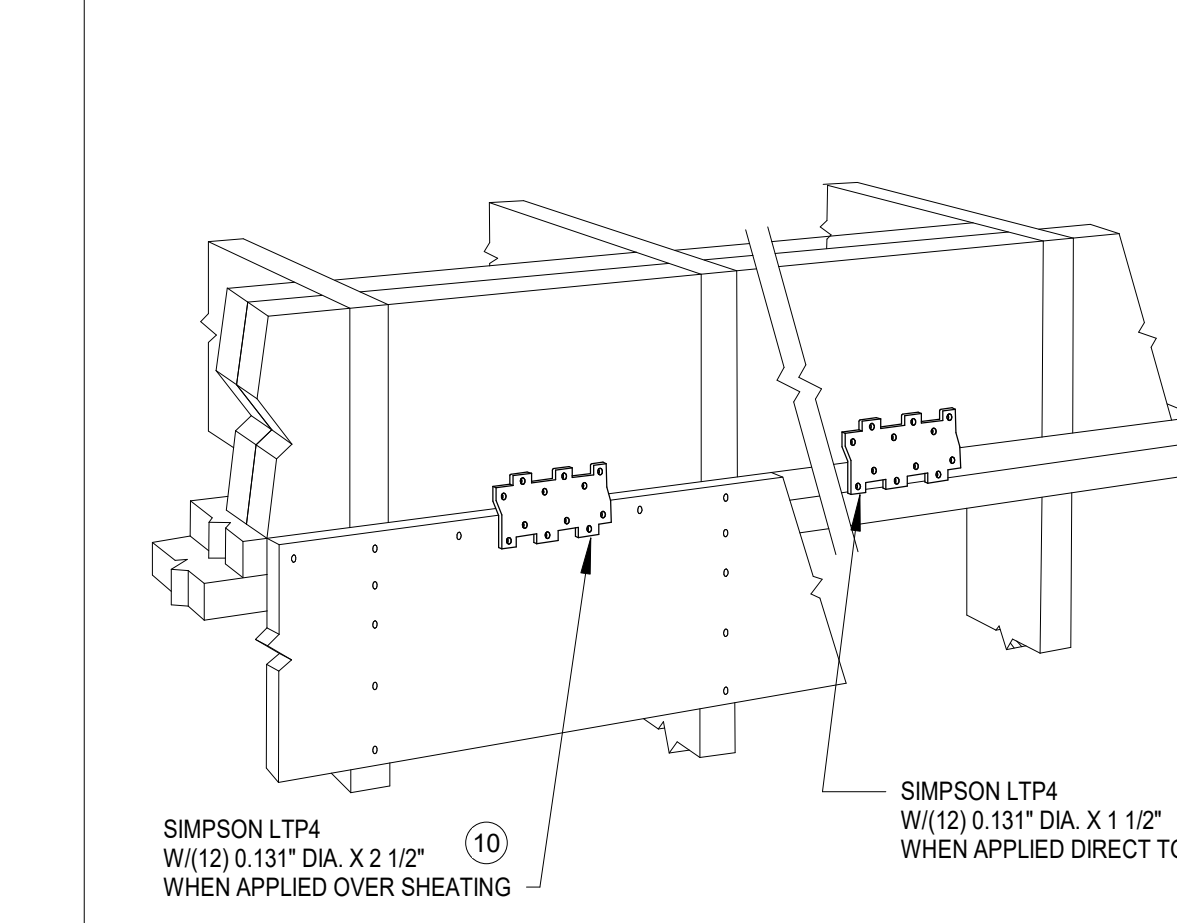
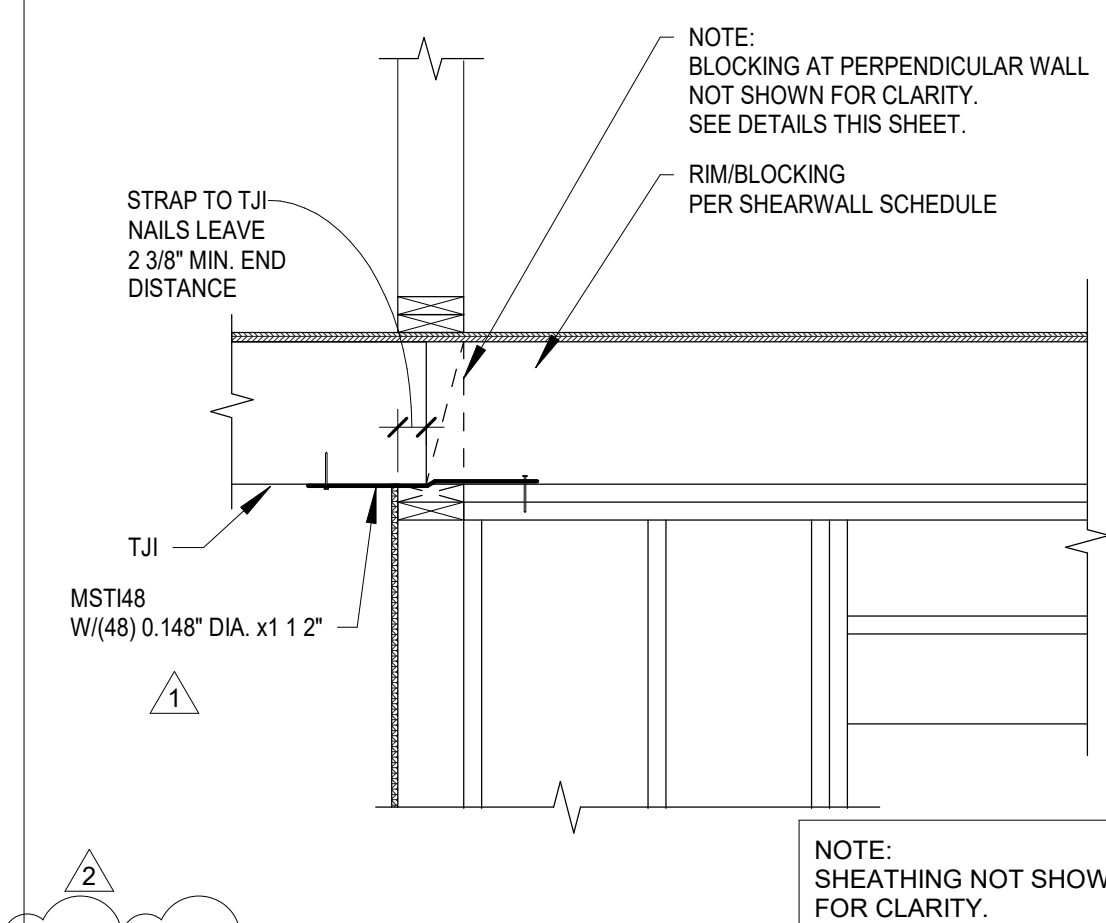
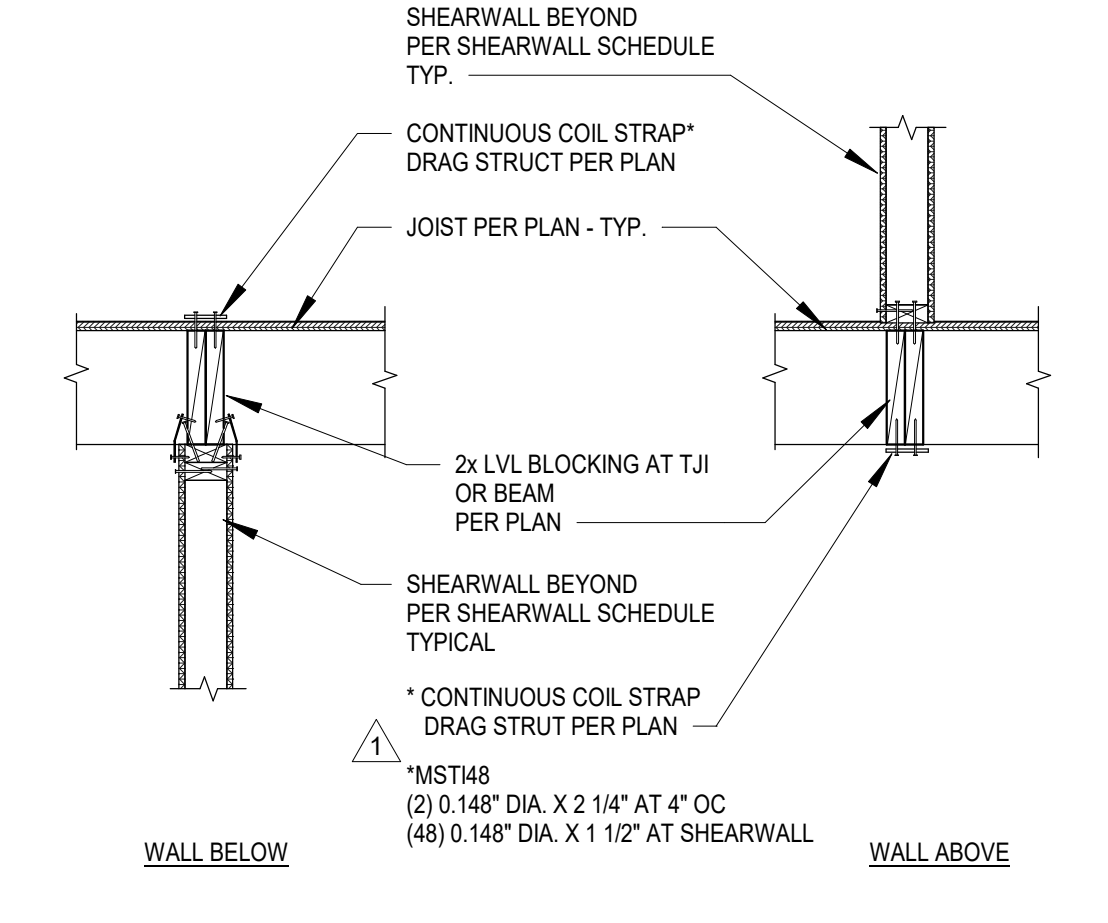
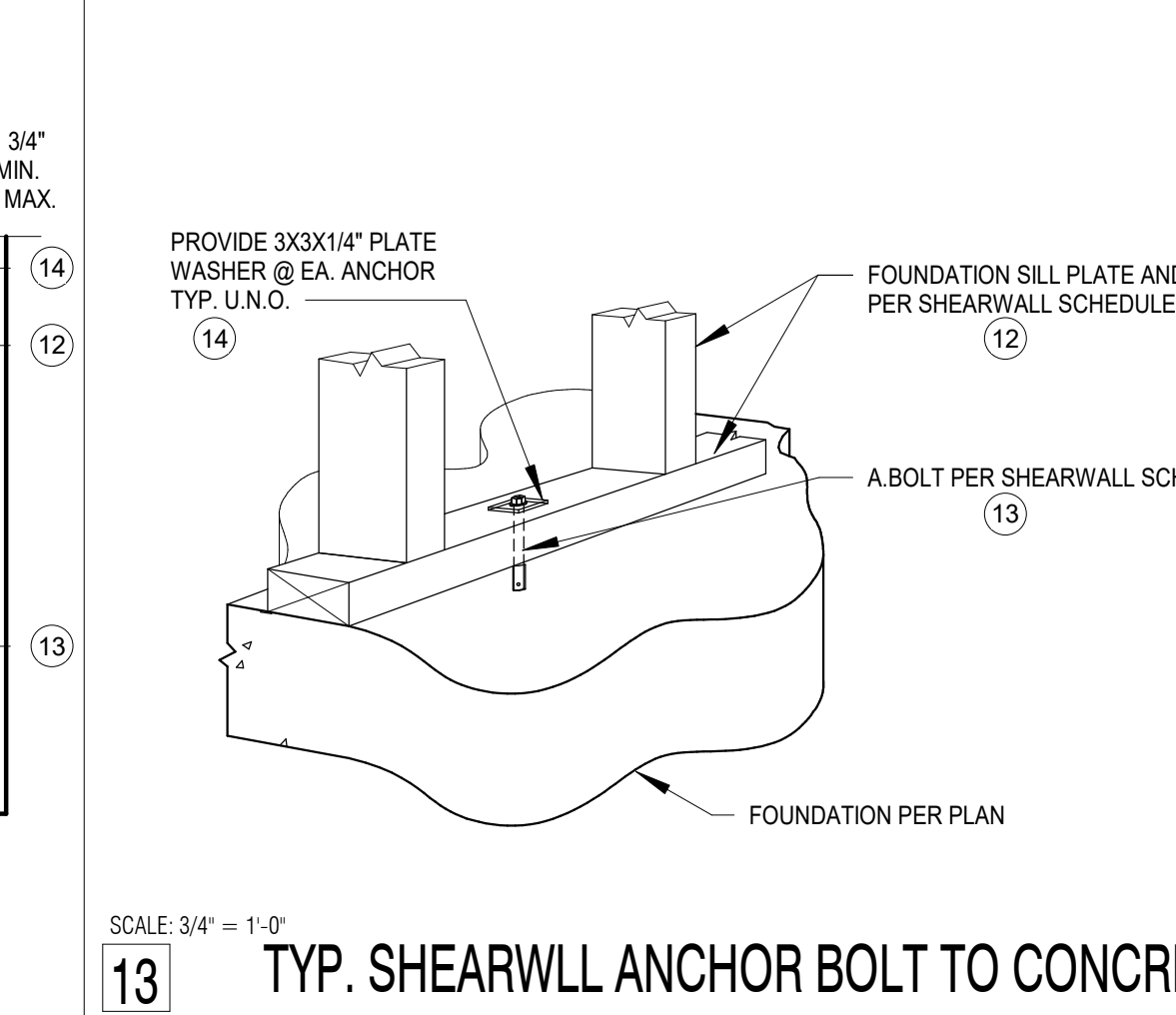
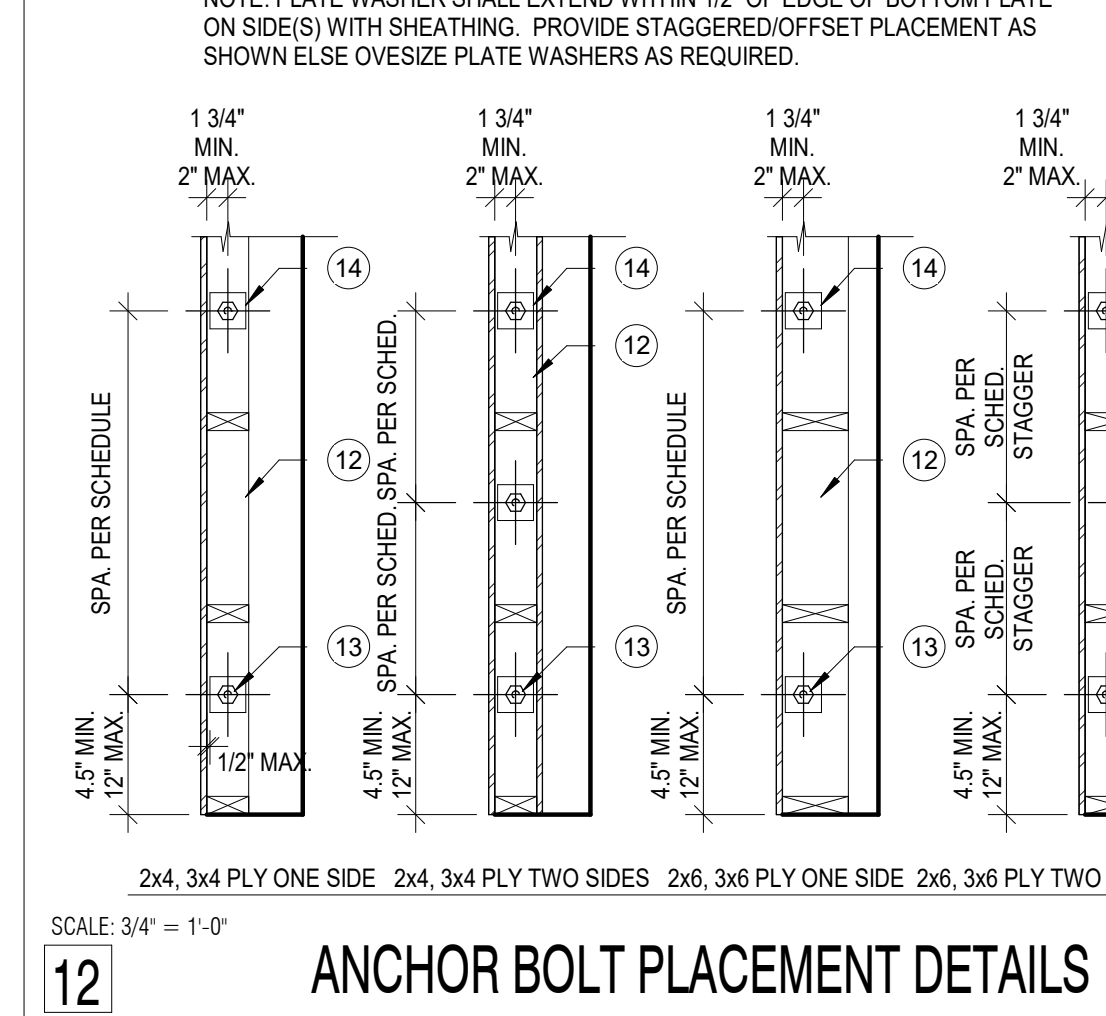
**(15) SQUASH BLOCKS:** IN THE FLOOR CAVITY OF PLATFORM FRAMING POST LOADS SHALL BE PROVIDED WITH ADDITIONAL STIFFENERS EQUAL TO THE POST SIZE FROM ABOVE THAT CONTINUES THROUGH THE FLOOR.

**(16) DIAPHRAGM:** SEE (1) FOR SHEARWALL, FLOOR AND ROOF DIAPHRAGM THICKNESS.

**(17) CONCRETE BASE:** CONCRETE FOUNDATION OR BASE.

**(18) HOLDOWN:** SEE SHEET S1.2 FOR HOLDOWN DETAILS AND ADDITIONAL STUDS REQUIRED.

9 SHEARWALL SCHEDULE SCALE: 3/4" = 1'-0"



16 DRAG STRUT DETAILS SCALE: 3/4" = 1'-0"

17 TYPICAL SHEARWALL STRAP SCALE: 3/4" = 1'-0"

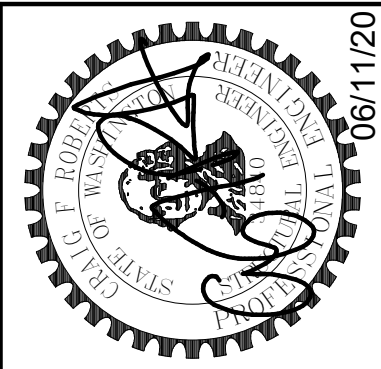
18 TYPICAL SIMPSON LTP4 AT INTERIOR SHEARWALL SCALE: 3/4" = 1'-0"

19 TYPICAL SHEARWALL NOMENCLATURE (ELEVATION) SCALE: 3/4" = 1'-0"

**Shearwall Schedule and Details**  
 Foo Residence  
 3453 74th Ave SE  
 Mercer Island, WA 98040

**S1.1**

**CT ENGINEERING INC.**  
 Structural Engineers  
 180 Nickerson Street, Suite 302, Seattle, WA 98109  
 206.285.4572 (V) 206.285.0618 (F)  
 www.ctengineering.com



**REVISION**

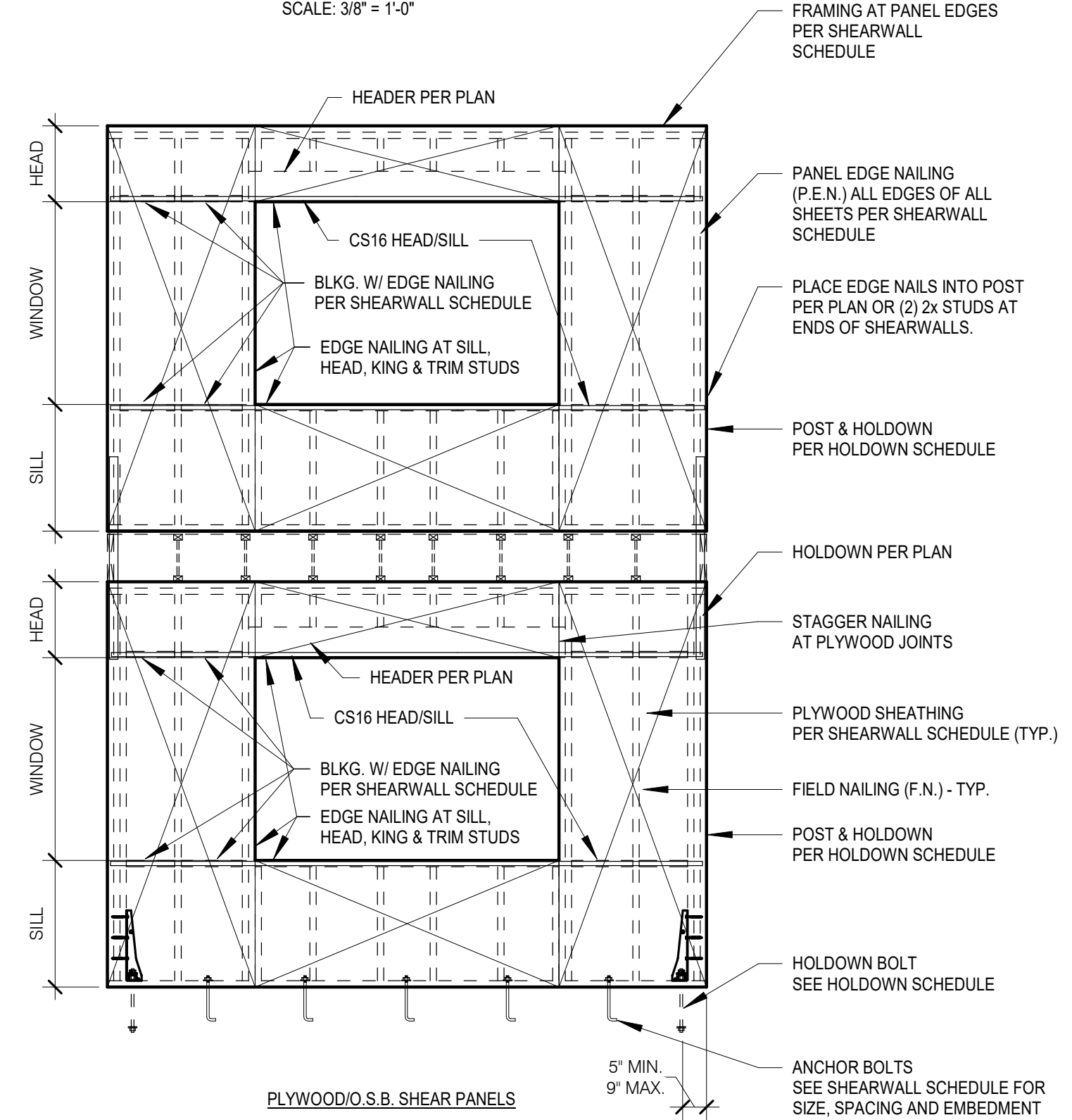
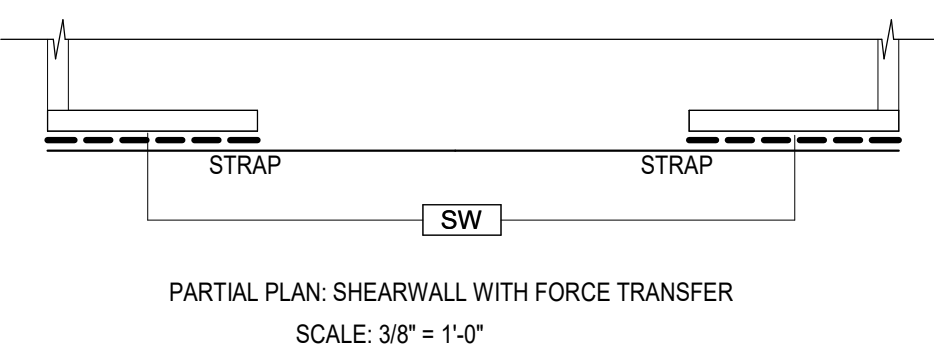
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1	01.08.2021	RESPONSE TO CITY COMMENTS
2	03.16.2021	RESPONSE TO CITY COMMENTS

**KEY ISSUE DATES:**

DATE	ISSUE
01.08.2021	ENG: BJM
03.16.2021	CAD: BJM
03.16.2021	SCALE: As indicated
06.11.2020	SD: DD
06.11.2020	CD: DD
06.11.2020	PERMIT: DD
06.11.2020	OTHER: DD

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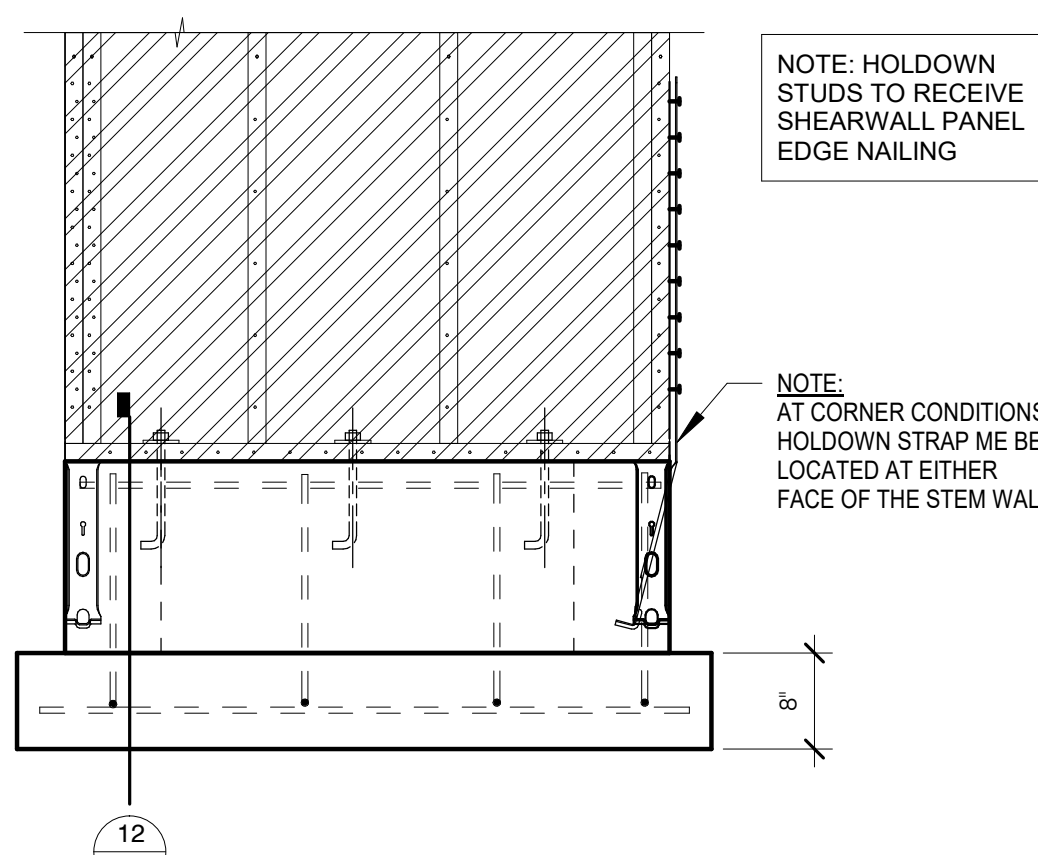


HOLDOWN & FASTENER SCHEDULE (HF STUDS)

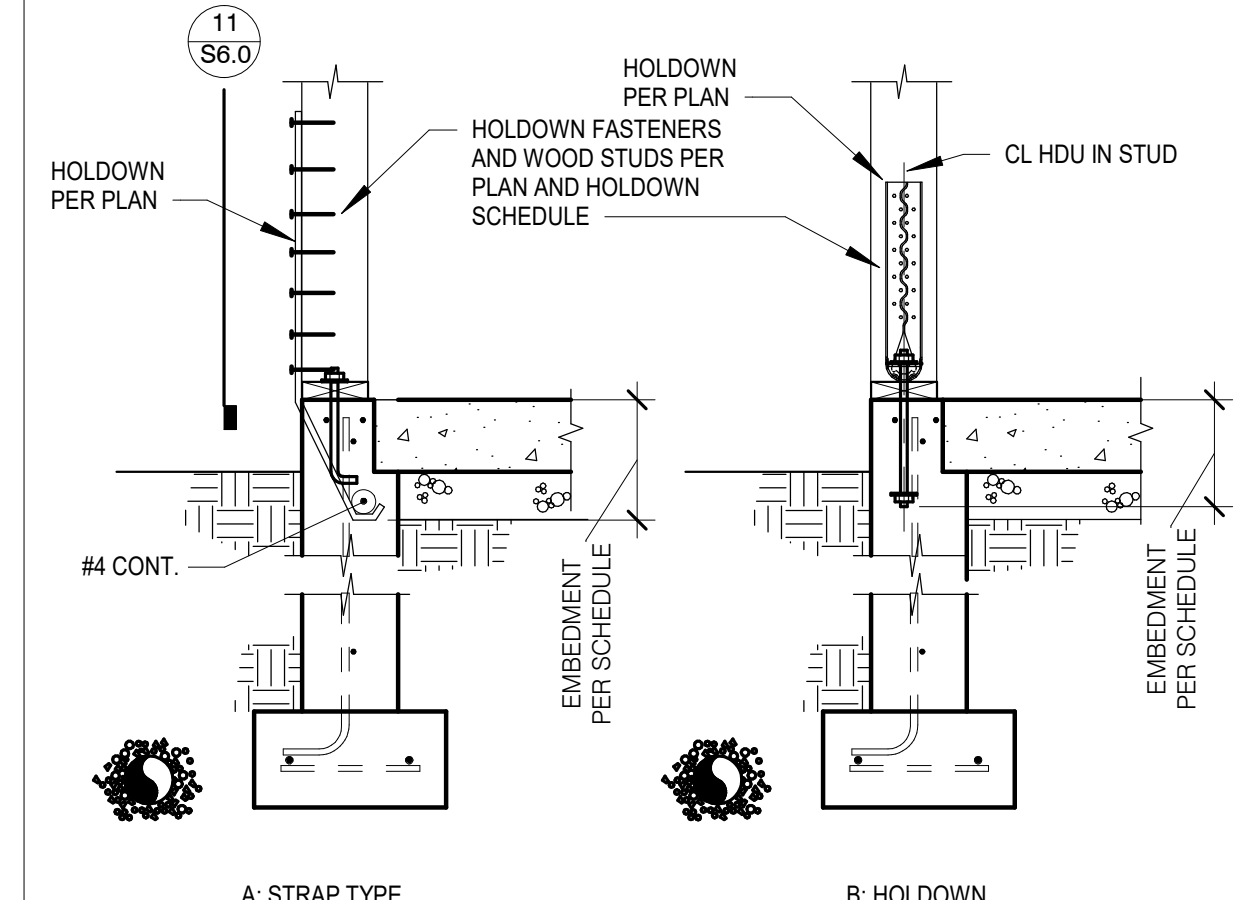
HARDWARE TYPE	WOOD MEMBER/POST		FASTENER	ROD DIAMETER	ANCHOR		EMBEDMENT		STEM (MINIMUM)	DETAIL
	2X4 WALL	2X6 WALL			STEM	THICKENED FOOTING	STEM	THICKENED SLAB		
CS16	2X4	2X6	(28) 8d	N.A.	N.A.	-	N.A.	-	N.A.	RE: 14, 15/S1.2
MST37	(2) 2X4	(2) 2X6	(22) 16d	N.A.	N.A.	-	N.A.	-	N.A.	
MST48	(2) 2X4	(2) 2X6	(34) 16d	N.A.	N.A.	-	N.A.	-	N.A.	
MST60	(2) 2X4	(2) 2X6	(48) 16d	N.A.	N.A.	-	N.A.	-	N.A.	RE: 11, 12/S1.2
LSDTHD8 LSDTHD8RJ	(2) 2X4	(2) 2X6	(16) 12d	STRAP	N.A.	-	8"	-	8"	
STDH14 STDH14RJ	(2) 2X4	(2) 2X6	(24) 12d	STRAP	N.A.	-	14"	-	8"	
HTT22	(2) 2X4	(2) 2X6	(32) 12d	5/8"	N.A.	-	9"	-	8"	RE: 12/S1.2
HU2-SDS2.5	(2) 2X4	(2) 2X6	(6) SDS 1/4X2 1/2"	5/8"	DOUBLE NUT AND WASHER PER 12/S1.2	-	11"	-	6"	
HU4-SDS2.5	(2) 2X4	(2) 2X6	(10) SDS 1/4X2 1/2"	5/8"		-	11"	-	6"	
HU5-SDS2.5	(2) 2X4	(2) 2X6	(14) SDS 1/4X2 1/2"	5/8"		-	11"	-	6"	
HU8-SDS2.5	(2) 2X4 4X4	(2) 2X6 4X6	(20) SDS 1/4X2 1/2"	7/8"	-	-	11"	-	8"	RE: 12/S1.2
HU11-SDS2.5	4X6	6X6	(30) SDS 1/4X2 1/2"	1"	-	-	16"	-	8"	RE: 12/S1.2
HD19	-	6X6	(5) 1"DIA. M.B.	1 1/4"	-	-	16"	-	8"	RE: 12/S1.2
HU14-SDS2.5	4X6	6X6	(36) SDS 1/4X2 1/2"	1"	-	-	16"	-	8"	
MSTC48B3	(2) 2X4	(2) 2X6	(12) 10d FACE, (4) 10d BOTTOM, (38) 10d STUDS/POST			-	-	-	-	

- HOLDOWN AND FASTENER SCHEDULE NOTES:
- HOLDOWNS SHALL BE AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY.
  - 16D = 0.162" DIA. X 3 1/2" LONG.
  - USE HALF THE REQUIRED NAILS IN EACH MEMBER BEING CONNECTED.
  - SCREWS SHALL BE SDS 1/4" DIA. X 2 1/2" AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY.
  - HOLDOWN ANCHORS SHALL BE SECURED IN PLACE PRIOR TO PLACING CONCRETE.
  - ANCHOR BOLT NUT SHALL BE FINGER-TIGHT PLUS 1/3 - 1/2" TURN WITH HAND WRENCH. CARE SHALL BE TAKEN TO NOT OVER-TORQUE THE NUT. IMPACT WRENCHES SHALL NOT BE USED.
  - HU HOLDOWNS SHALL BE INSTALLED CENTERED ALONG THE WIDTH OF THE ATTACHED POST.
  - RE: NOTES SECTION 06100 "ROUGH FRAMING" FOR THE REQUIRED POST SPECIES AND GRADE.
  - BUNDLED STUDS PER DETAIL 18/S1.2.
  - STRAP TIE HOLDOWNS, NAIL STRAPS FROM BOTTOM UP. INSTALL WITH STRAP MATE "NO WET STICKING".
  - ANCHOR BOLT HOLDOWNS SHALL BE ASTM A307 OR A36 STEEL. ANCHOR HEAD REQUIRES NUT/WASHER NUT PER 2/S1.2.

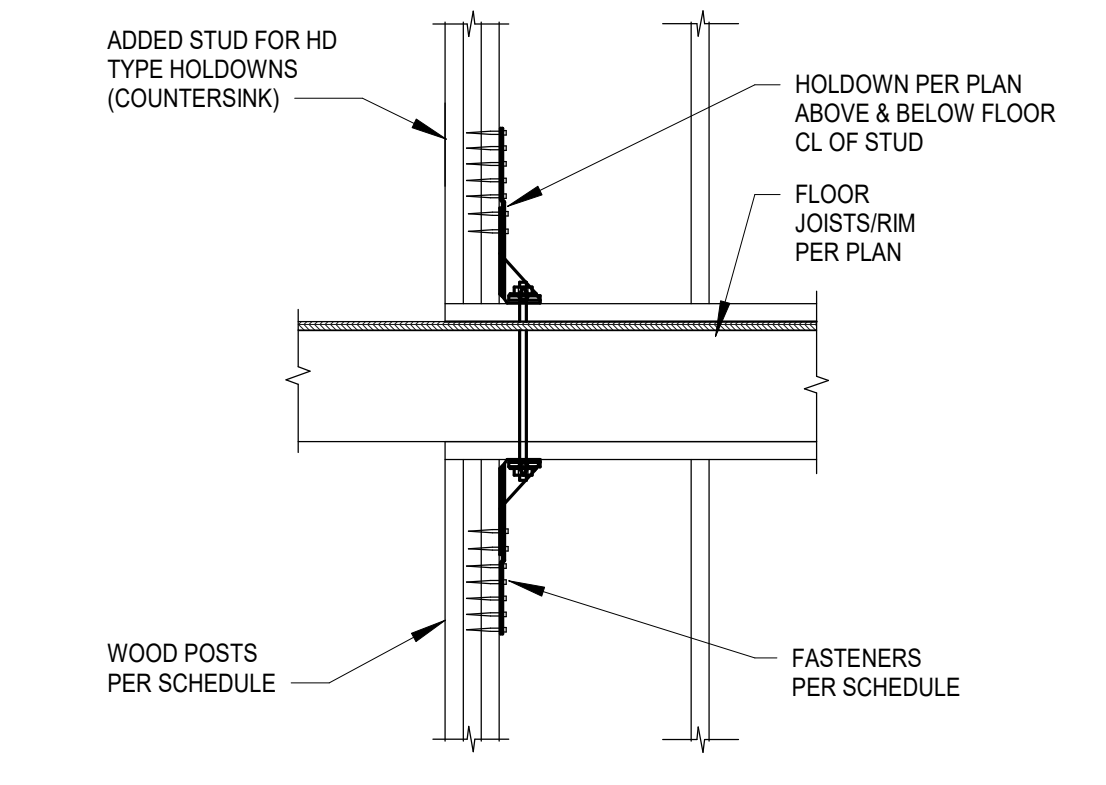
10 SHEARWALL SCHEDULE



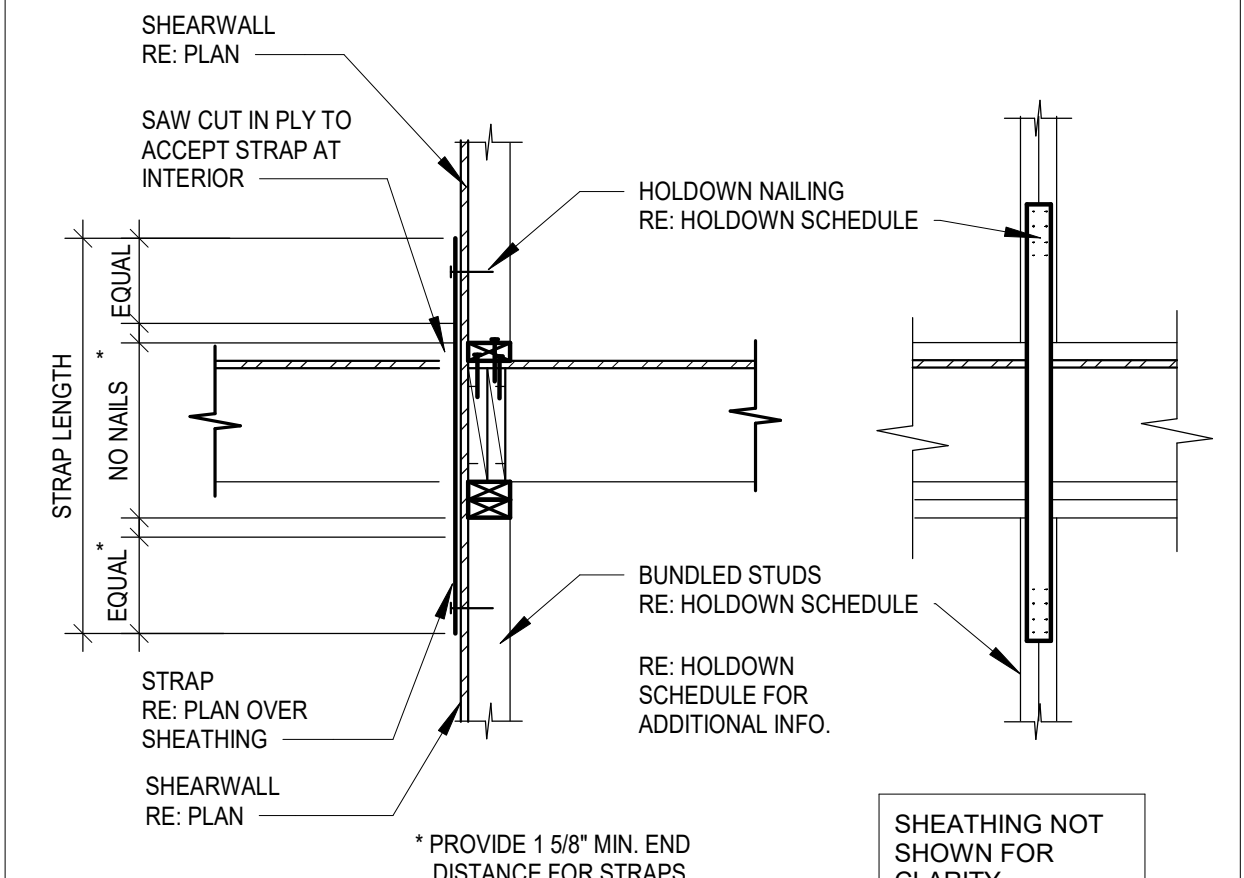
11 EXTERIOR HOLDOWN - ELEVATION



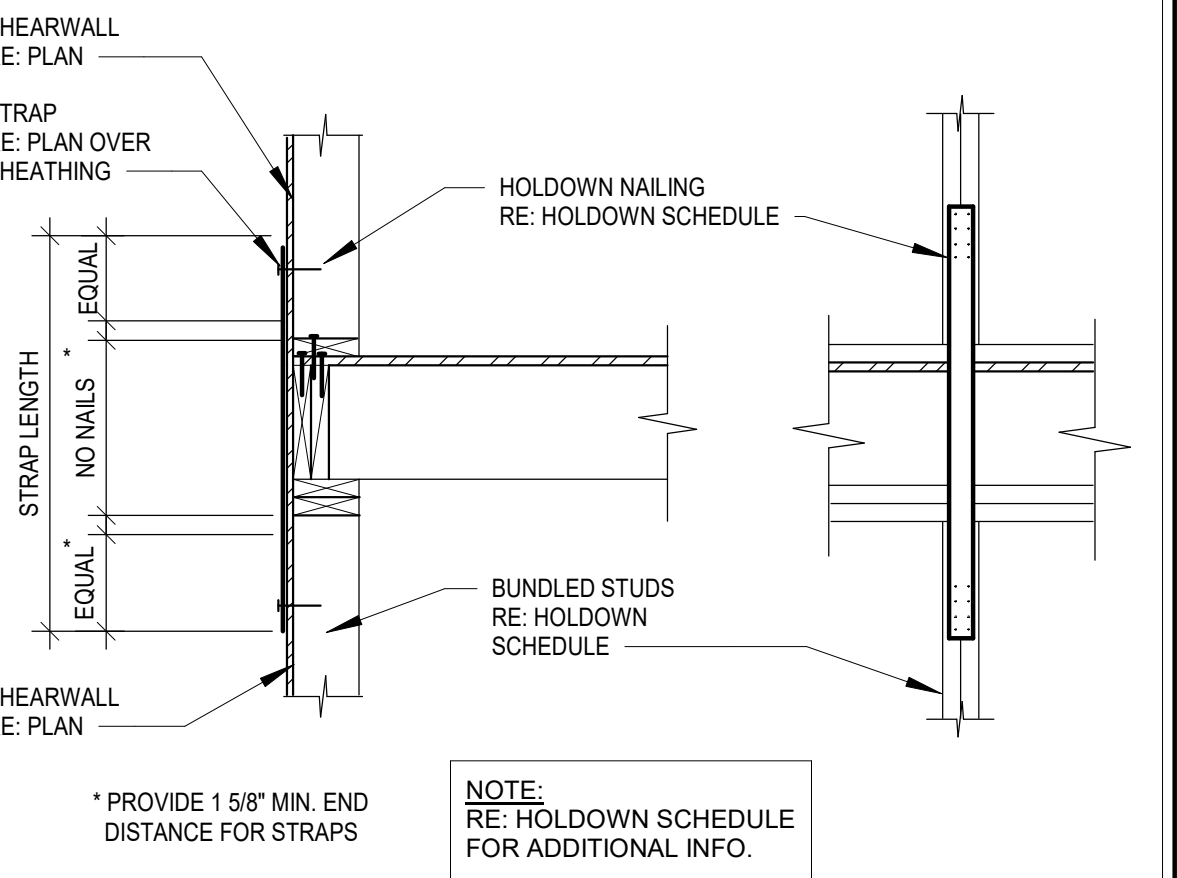
12 EXTERIOR HOLDOWN



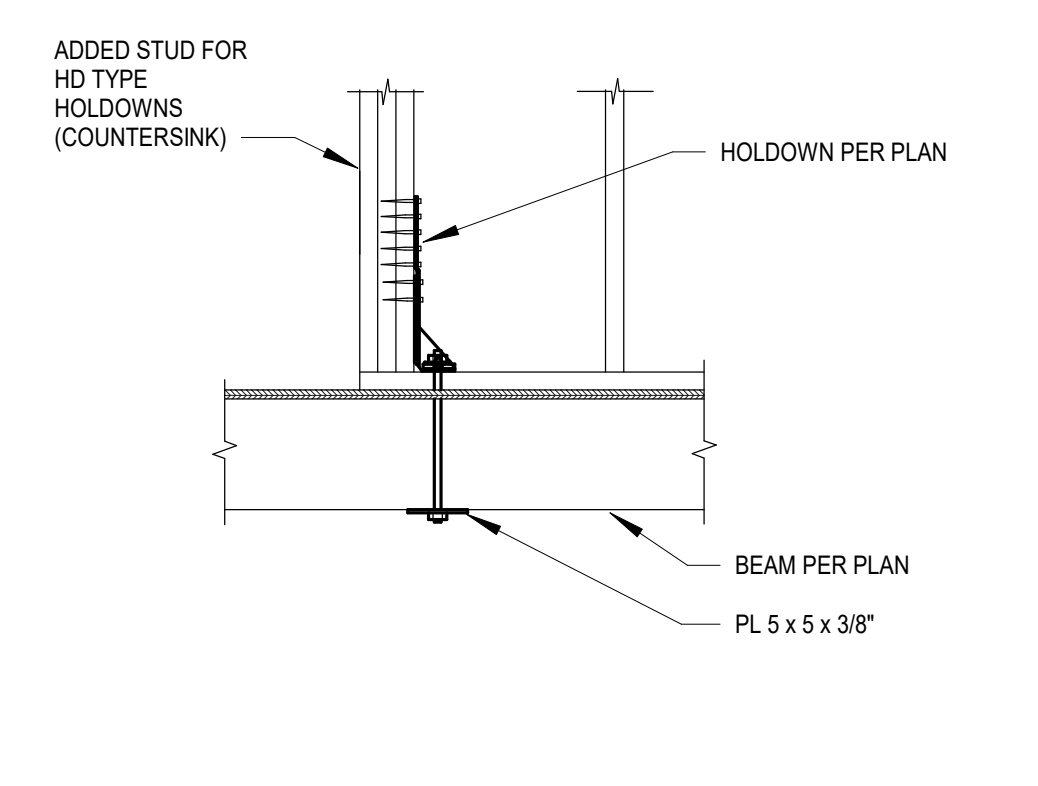
13 TYPICAL HOLDOWN FLOOR TO FLOOR



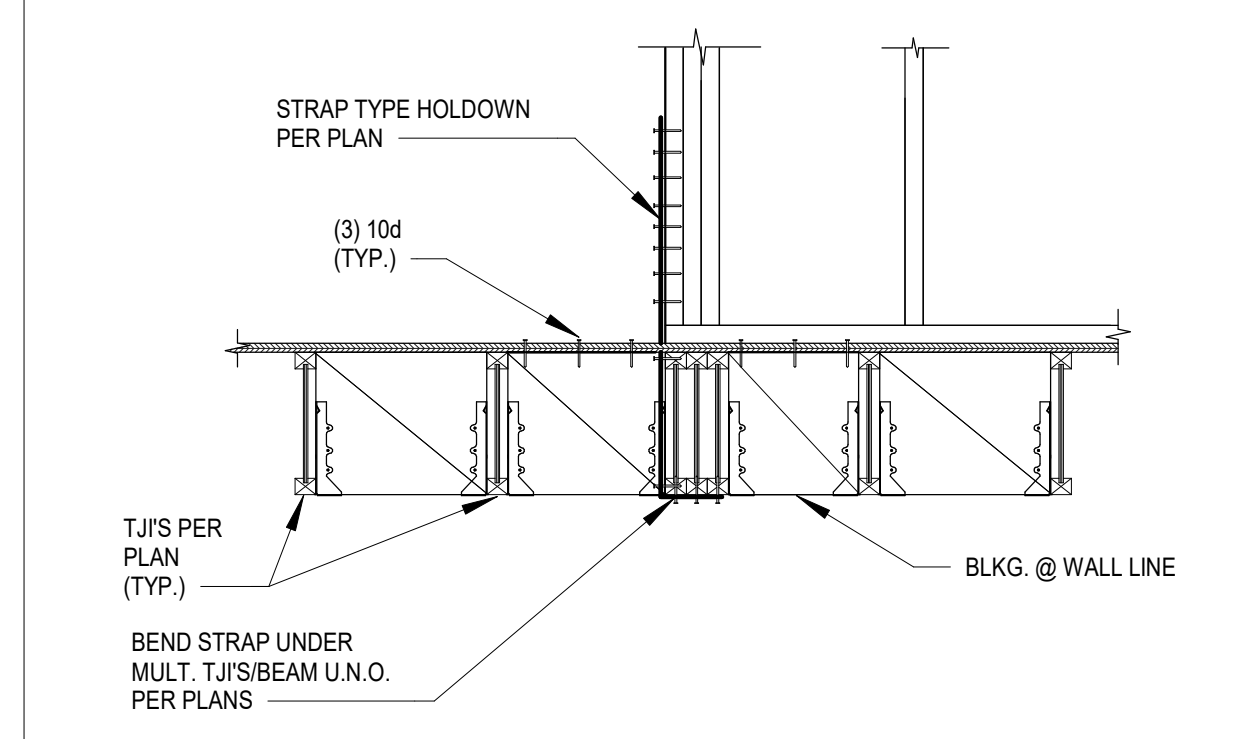
14 INTERIOR HOLDOWN



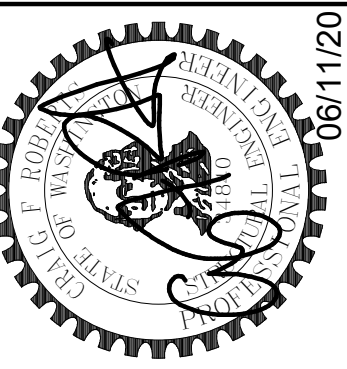
15 EXTERIOR HOLDOWN



16 TYPICAL HOLDOWN TO BEAM



17 HOLDOWN DETAIL



REVISION

No.	DATE	REVISION
1	01.08.2021	RESPONSE TO CITY COMMENTS

KEY ISSUE DATES:

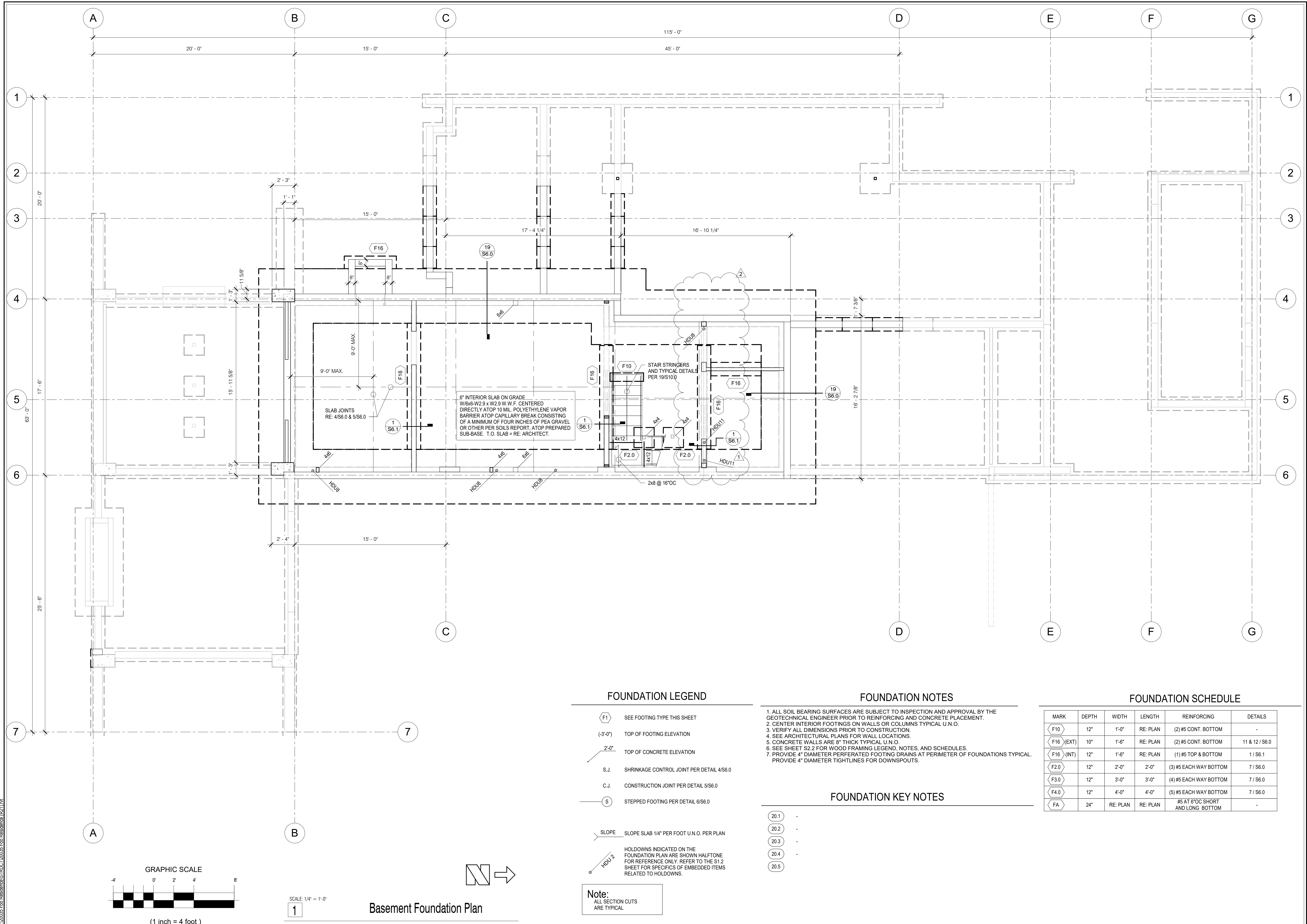
DATE	ISSUE
06.11.2020	DESIGN
06.11.2020	AUTHOR
06.11.2020	CD
06.11.2020	CD
06.11.2020	PERMIT
06.11.2020	OTHER

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**FOUNDATION LEGEND**

- (F1) SEE FOOTING TYPE THIS SHEET
- (-3'-0") TOP OF FOOTING ELEVATION
- 2'-0" TOP OF CONCRETE ELEVATION
- S.J. SHRINKAGE CONTROL JOINT PER DETAIL 4/S6.0
- C.J. CONSTRUCTION JOINT PER DETAIL 5/S6.0
- (S) STEPPED FOOTING PER DETAIL 6/S6.0
- SLOPE SLOPE SLAB 1/4" PER FOOT U.N.O. PER PLAN
- HDU.2 HOLD-DOWNS INDICATED ON THE FOUNDATION PLAN ARE SHOWN HALFTONE FOR REFERENCE ONLY. REFER TO THE S1.2 SHEET FOR SPECIFICS OF EMBEDDED ITEMS RELATED TO HOLD-DOWNS.

Note:  
ALL SECTION CUTS  
ARE TYPICAL

**FOUNDATION NOTES**

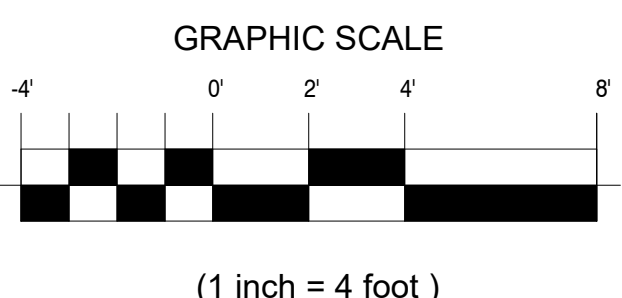
1. ALL SOIL BEARING SURFACES ARE SUBJECT TO INSPECTION AND APPROVAL BY THE GEOTECHNICAL ENGINEER PRIOR TO REINFORCING AND CONCRETE PLACEMENT.
2. CENTER INTERIOR FOOTINGS ON WALLS OR COLUMNS TYPICAL U.N.O.
3. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
4. SEE ARCHITECTURAL PLANS FOR WALL LOCATIONS.
5. CONCRETE WALLS ARE 6" THICK TYPICAL U.N.O.
6. SEE SHEET S2.2 FOR WOOD FRAMING LEGEND, NOTES, AND SCHEDULES.
7. PROVIDE 4" DIAMETER PERFORATED FOOTING DRAINS AT PERIMETER OF FOUNDATIONS TYPICAL. PROVIDE 4" DIAMETER TIGHTLINES FOR DOWNSPOUTS.

**FOUNDATION KEY NOTES**

- (20.1) -
- (20.2) -
- (20.3) -
- (20.4) -
- (20.5) -

**FOUNDATION SCHEDULE**

MARK	DEPTH	WIDTH	LENGTH	REINFORCING	DETAILS
(F10)	12"	1'-0"	RE: PLAN	(2) #5 CONT. BOTTOM	-
(F16) (EXT)	10"	1'-6"	RE: PLAN	(2) #5 CONT. BOTTOM	11 & 12 / S6.0
(F16) (INT)	12"	1'-6"	RE: PLAN	(1) #5 TOP & BOTTOM	1 / S6.1
(F2.0)	12"	2'-0"	2'-0"	(3) #5 EACH WAY BOTTOM	7 / S6.0
(F3.0)	12"	3'-0"	3'-0"	(4) #5 EACH WAY BOTTOM	7 / S6.0
(F4.0)	12"	4'-0"	4'-0"	(5) #5 EACH WAY BOTTOM	7 / S6.0
(FA)	24"	RE: PLAN	RE: PLAN	#5 AT 6"OC SHORT AND LONG BOTTOM	-



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

**Basement Foundation Plan**

**Basement Level Foundation Plan**  
Foo Residence  
3453 74th Ave SE  
Mercer Island, WA 98040

**S2.0**

**CT ENGINEERING INC.**  
Structural Engineers  
180 Nickerson Street, Suite 302, Seattle, WA 98109  
206.285.4572 (V) 206.285.0618 (F)  
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No.	REVISION	DATE
1	RESPONSE TO CITY COMMENTS	01.08.2021
2	RESPONSE TO CITY COMMENTS	03.16.2021

JOB #: 20035  
ENG: Designer  
CAD: Author  
SCALE: As indicated  
KEY ISSUE DATES:  
SD: DD  
DD: DD  
CD: CD  
PERMIT: 06.11.2020  
OTHER: BD

Professional Engineer Seal  
STATE OF WASHINGTON  
L. ROBERT  
06/11/20

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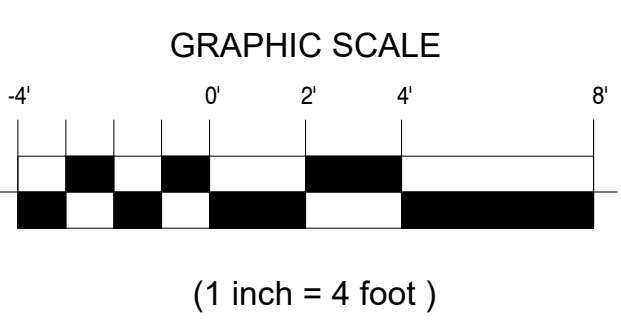
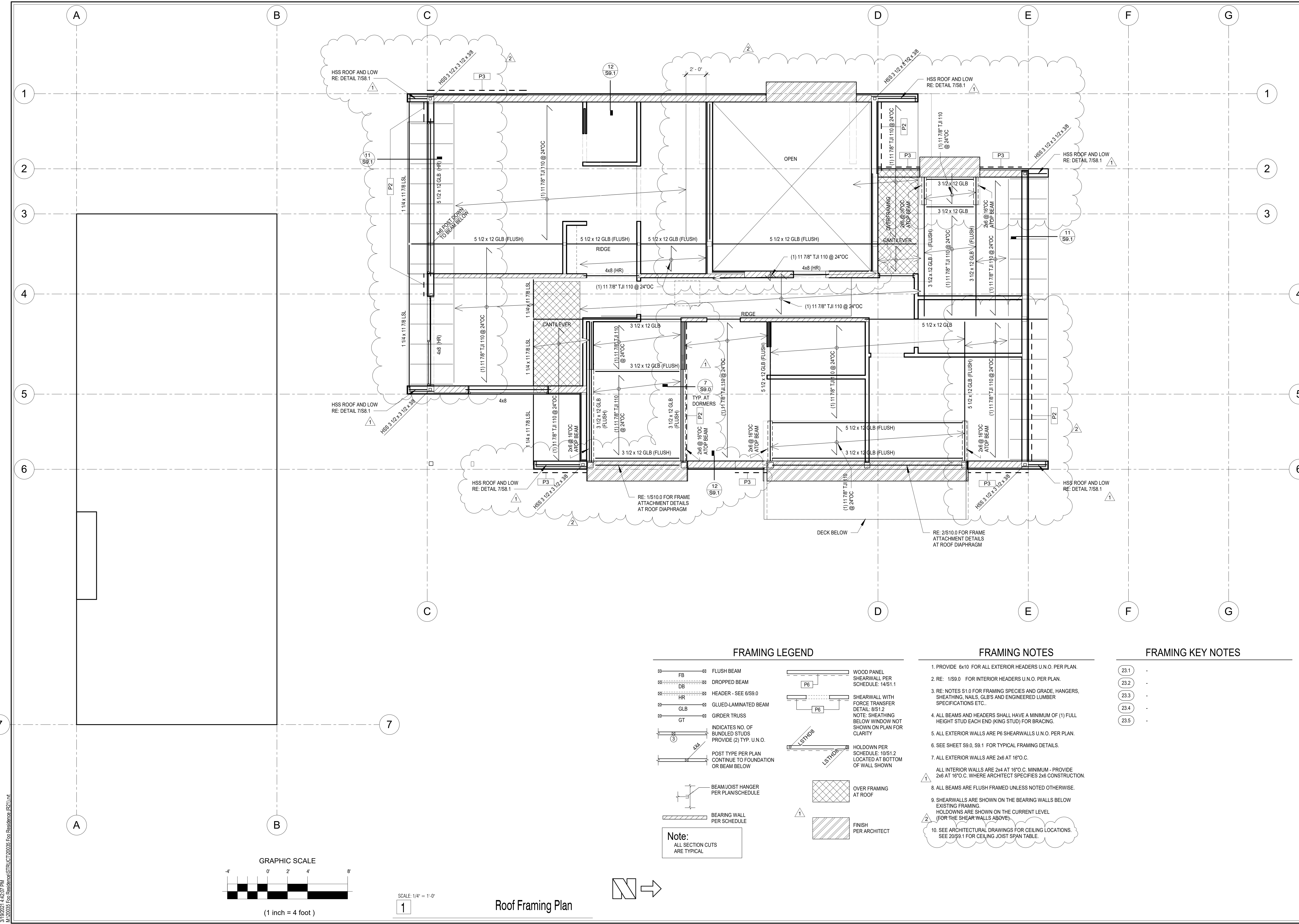








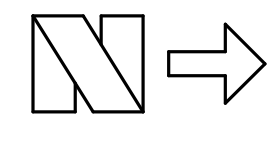




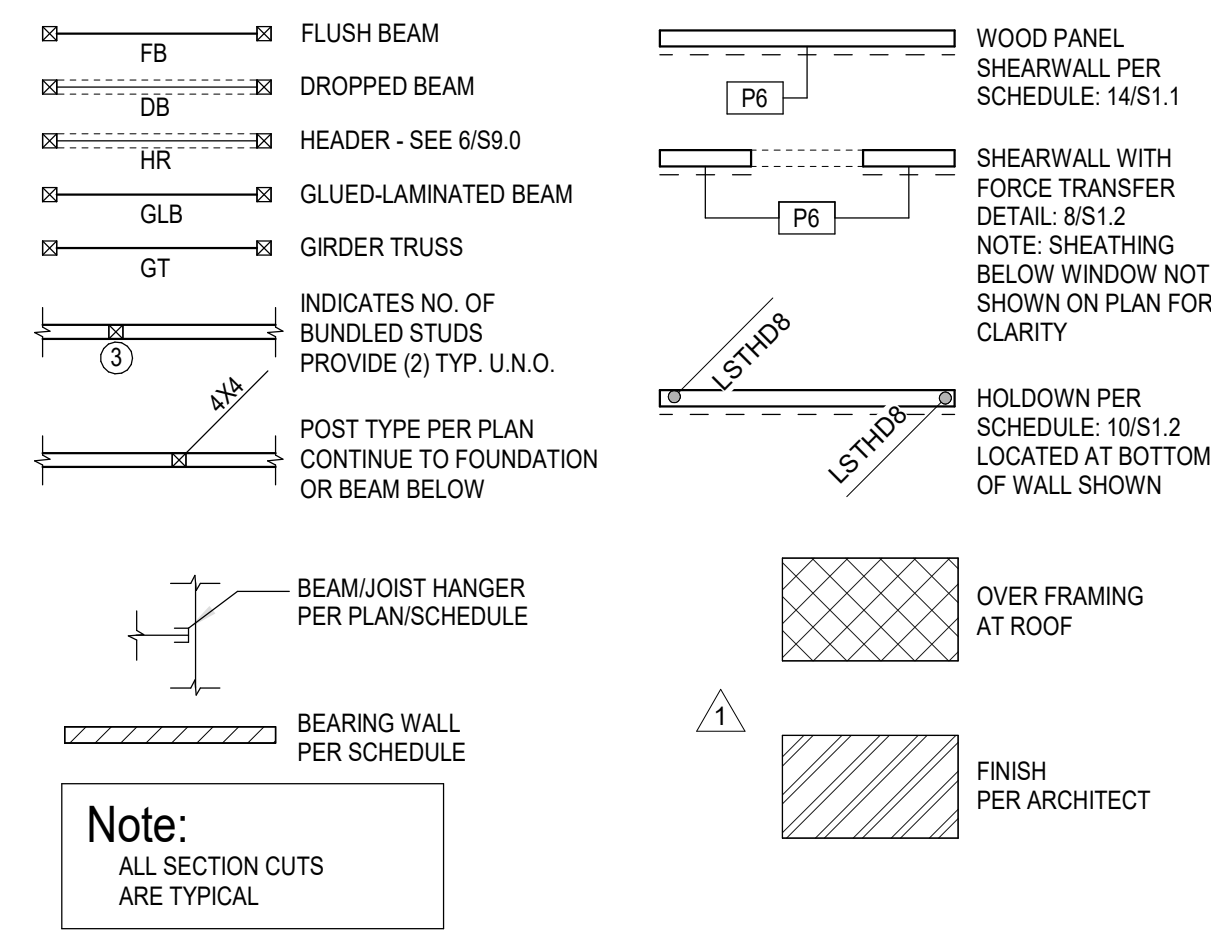
SCALE: 1/4" = 1'-0"

1

Roof Framing Plan



FRAMING LEGEND



FRAMING NOTES

- PROVIDE 6x10 FOR ALL EXTERIOR HEADERS U.N.O. PER PLAN.
- RE: 1/S9.0 FOR INTERIOR HEADERS U.N.O. PER PLAN.
- RE: NOTES S1.0 FOR FRAMING SPECIES AND GRADE, HANGERS, SHEATHING, NAILS, GLBS AND ENGINEERED LUMBER SPECIFICATIONS ETC..
- ALL BEAMS AND HEADERS SHALL HAVE A MINIMUM OF (1) FULL HEIGHT STUD EACH END (KING STUD) FOR BRACING.
- ALL EXTERIOR WALLS ARE P6 SHEARWALLS U.N.O. PER PLAN.
- SEE SHEET S9.0, S9.1 FOR TYPICAL FRAMING DETAILS.
- ALL EXTERIOR WALLS ARE 2x6 AT 16" O.C.
- ALL INTERIOR WALLS ARE 2x4 AT 16" O.C. MINIMUM - PROVIDE 2x6 AT 16" O.C. WHERE ARCHITECT SPECIFIES 2x6 CONSTRUCTION.
- ALL BEAMS ARE FLUSH FRAMED UNLESS NOTED OTHERWISE.
- SHEARWALLS ARE SHOWN ON THE BEARING WALLS BELOW EXISTING FRAMING. HOLD-DOWNS ARE SHOWN ON THE CURRENT LEVEL (FOR THE SHEAR WALLS ABOVE).
- SEE ARCHITECTURAL DRAWINGS FOR CEILING LOCATIONS. SEE 20/S9.1 FOR CEILING JOIST SPAN TABLE.

FRAMING KEY NOTES

- (23.1) -
- (23.2) -
- (23.3) -
- (23.4) -
- (23.5) -

High Roof Framing Plan  
 Foo Residence  
 3453 74th Ave SE  
 Mercer Island, WA 98040

S2.3

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No.	REVISION	DATE
1	RESPONSE TO CITY COMMENTS	01.08.2021
2	RESPONSE TO CITY COMMENTS	03.16.2021

JOB #: 20035  
 ENG: BJM  
 CAD: JMA  
 SCALE: As indicated  
 KEY ISSUE DATES:  
 SD: DD  
 CD: DD  
 PERMIT: 06.11.2020  
 OTHER: DD

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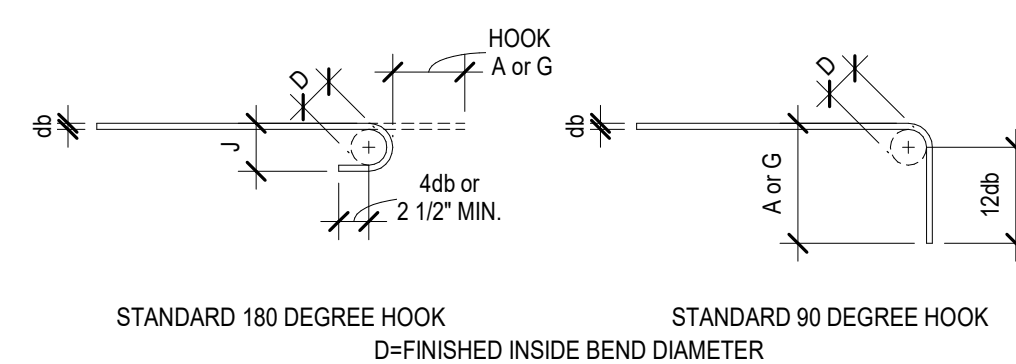


BAR SIZE	f <sub>c</sub> =3000 PSI		
	Ld	OTHER BARS LAP SPLICE	TOP BARS LAP SPLICE
#3	16"	21"	28"
#4	22"	28"	37"
#5	27"	36"	46"
#6	33"	43"	56"

- LAP SPLICE SCHEDULE NOTES:
- TENSION LAP SPLICE SHOWN ABOVE FOR CONCRETE COVER GREATER THAN OR EQUAL TO BAR DIAMETER AND CENTER TO CENTER SPACING GREATER THAN OR EQUAL TO TWO BAR DIAMETERS (SPACING AND COVER CASE1). TENSION LAP SPLICE SHOWN ABOVE ARE CLASS B SPLICES.
  - "OTHER BARS" ARE ALL VERTICAL BARS AND HORIZONTAL BARS WITH LESS THAN 12" OF CONCRETE CAST BELOW THE BAR.
  - "TOP BARS" ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
  - COMPRESSION LAP SPLICES SHALL BE 30 BAR DIAMETERS MIN. U.N.O. ON THE DRAWINGS
  - DEVELOPMENT LENGTH (Ld) IS "OTHER BARS", CLASS A.

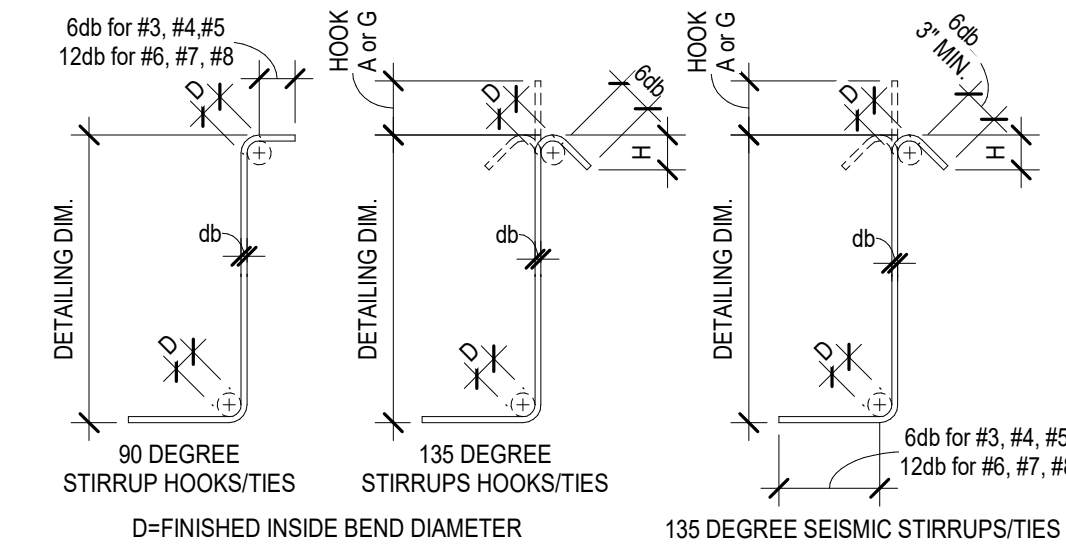
SCALE: NONE  
1 TYPICAL LAP SPLICE SCHEDULE

BAR SIZE	D	STANDARD 180 DEGREE HOOK			STANDARD 90 DEGREE HOOK		
		D	A OR G	J	BAR SIZE	D	A OR G
#3	6db	2 1/4"	5"	3"	#3	2 1/4"	6"
#4	6db	3"	6"	4"	#4	3"	8"
#5	6db	3 3/4"	7"	5"	#5	3 3/4"	10"
#6	6db	4 1/2"	8"	6"	#6	4 1/2"	1'-0"

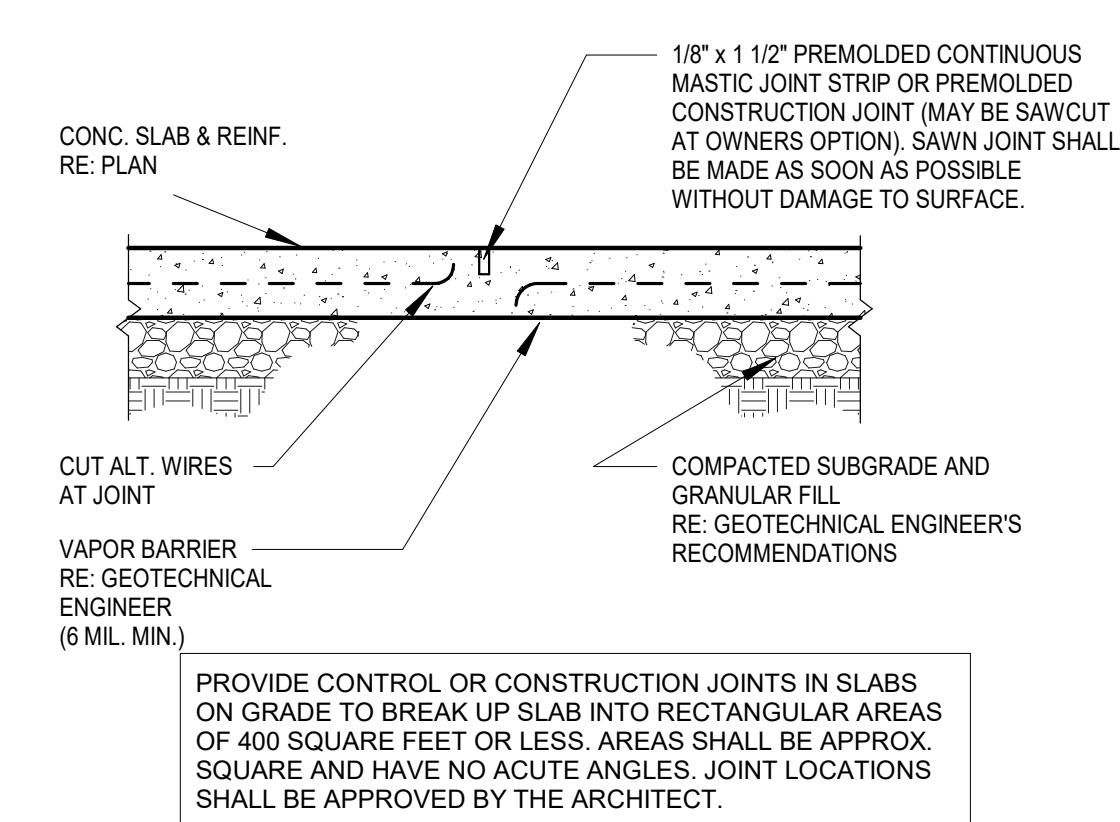


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2 STANDARD HOOK DETAILS

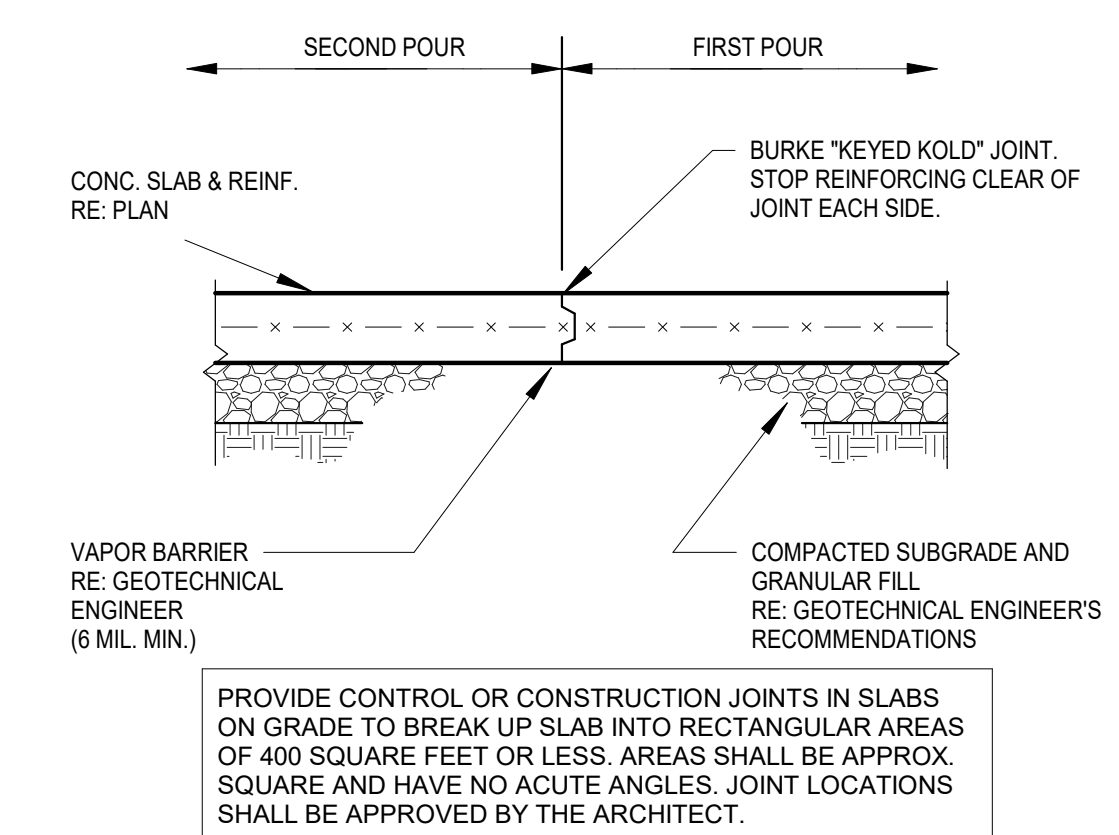
BAR SIZE	D	D	STIRRUP HOOKS/TIES			SEISMIC STIRRUP/TIE	
			90 DEGREE	135 DEGREE	APPROX. H	135 DEGREE SEISMIC HOOK	APPROX. H
#3	4db	1 1/2"	4"	4"	2 1/2"	4 1/4"	3"
#4	4db	2"	4 1/2"	4 1/2"	3"	4 1/2"	3"
#5	4db	2 1/2"	6"	5 1/2"	3 3/4"	5 1/2"	3 3/4"
#6	6db	4 1/2"	1'-0"	7 3/4"	4 1/2"	7 3/4"	4 1/2"



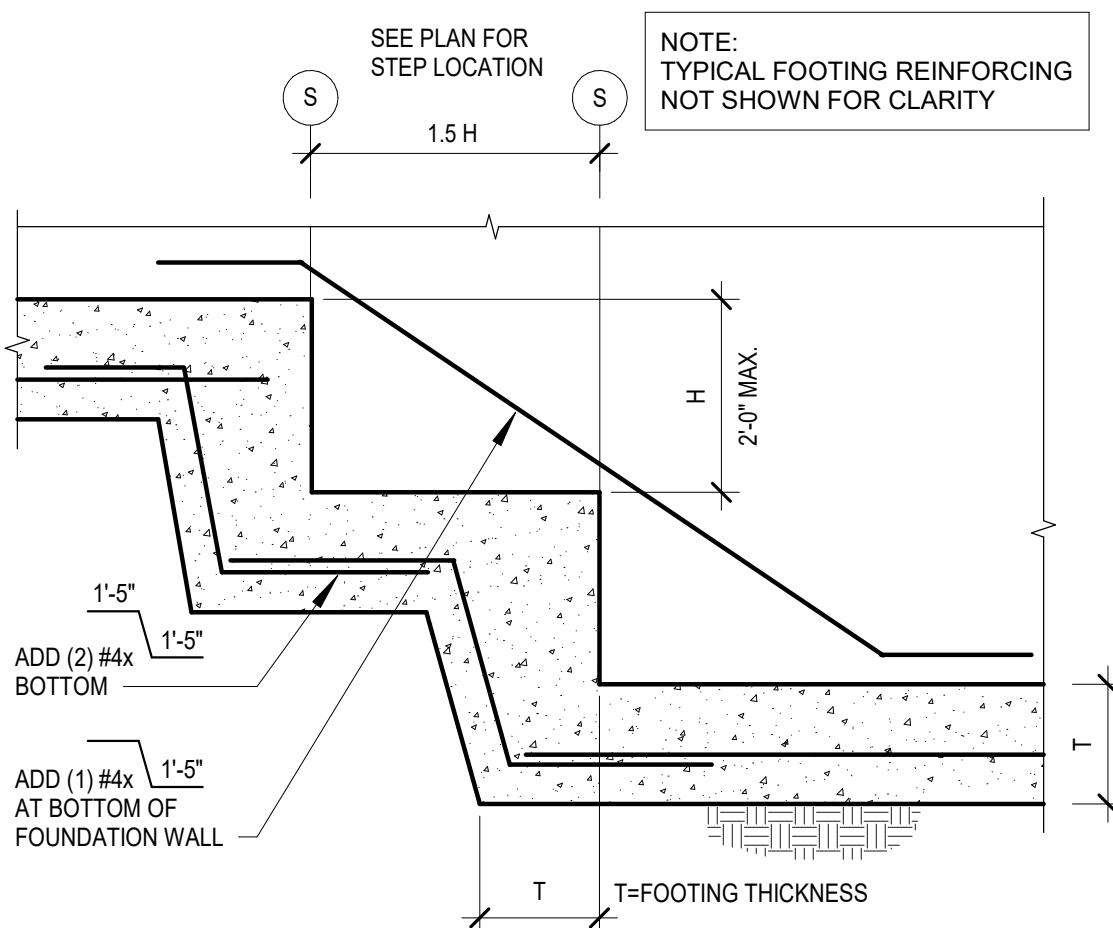
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3 STIRRUP and TIE HOOK DETAILS



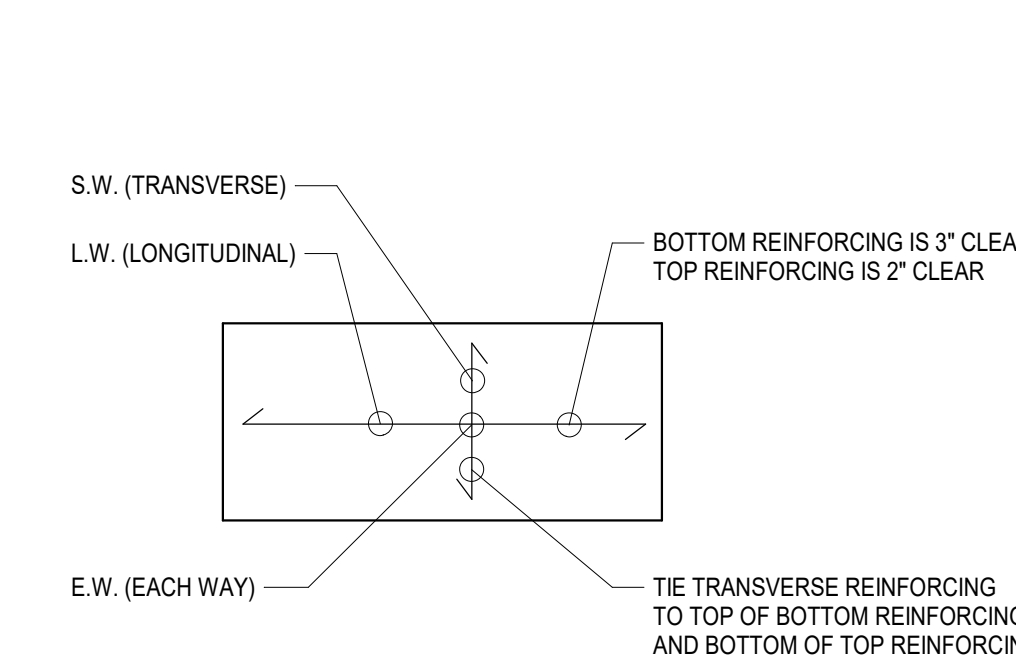
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4 TYPICAL SHRINKAGE CONTROL JOINT (S.J.)



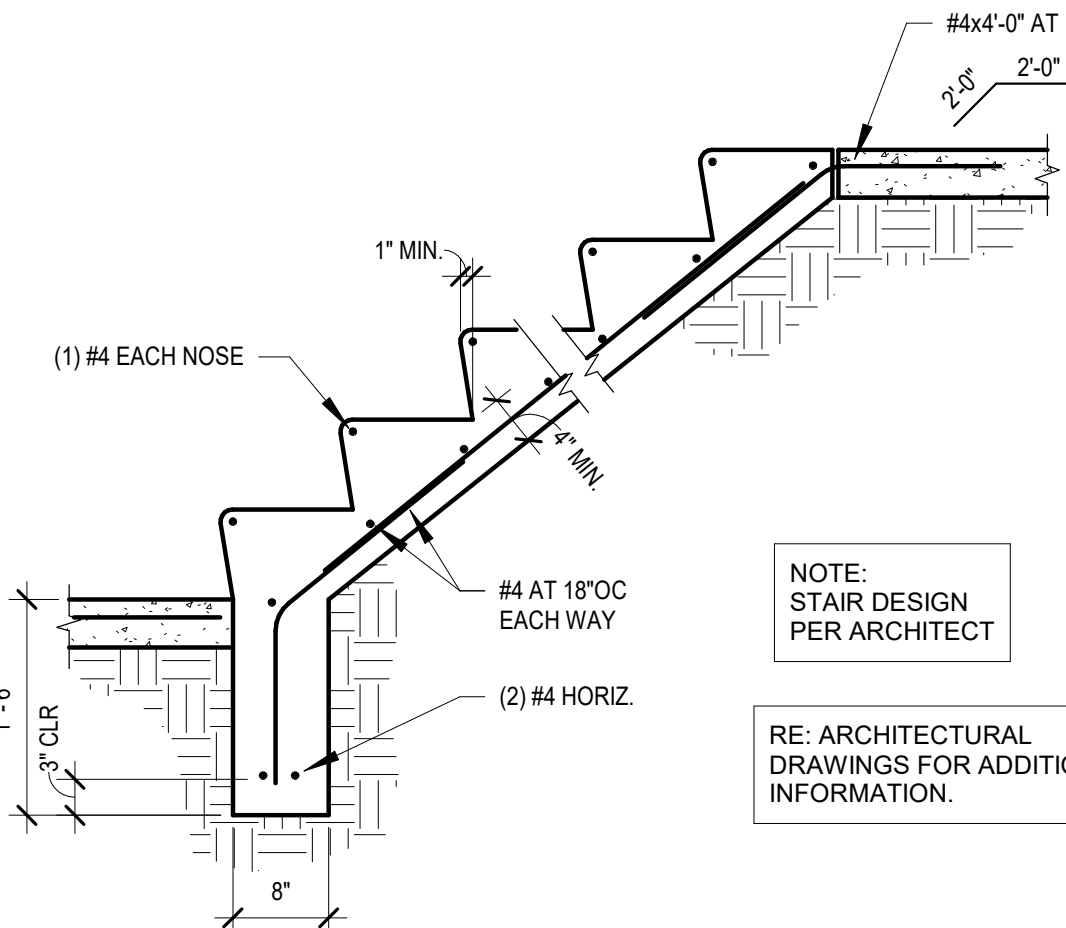
SCALE: NONE  
5 TYPICAL CONSTRUCTION JOINT (C.J.)



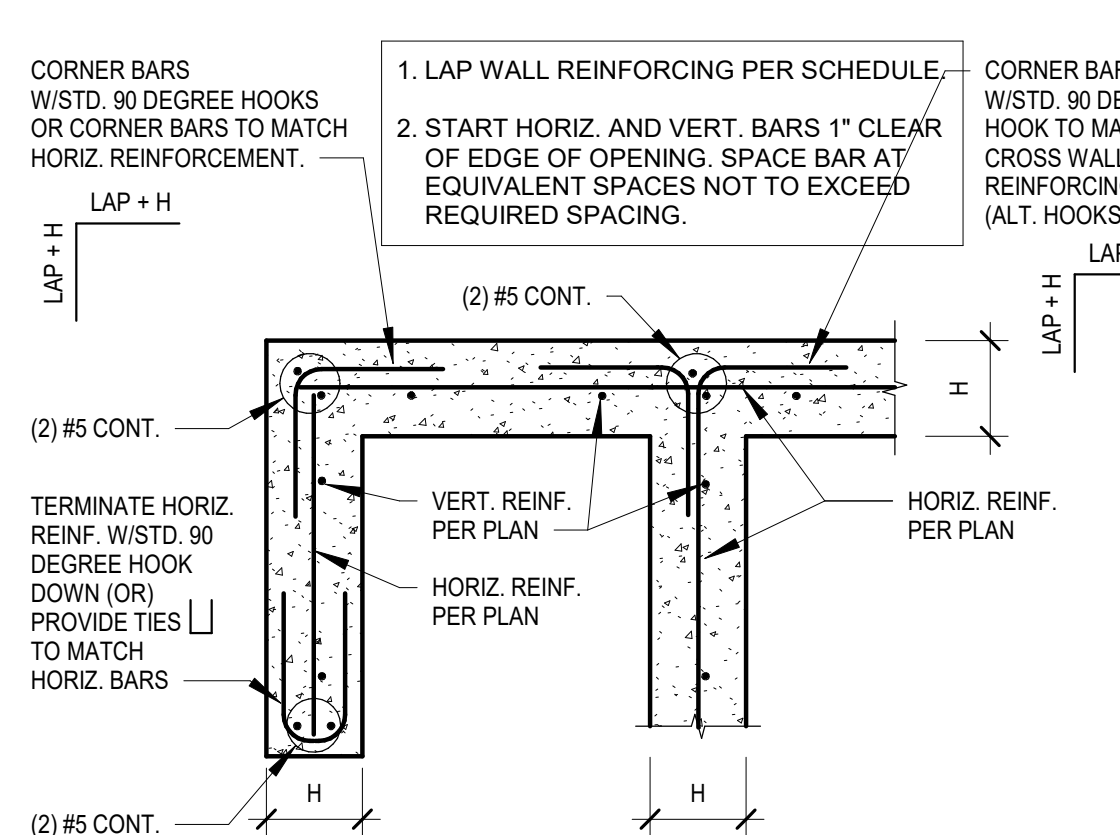
SCALE: 3/4" = 1'-0"  
6 TYPICAL STEPPED FOOTING



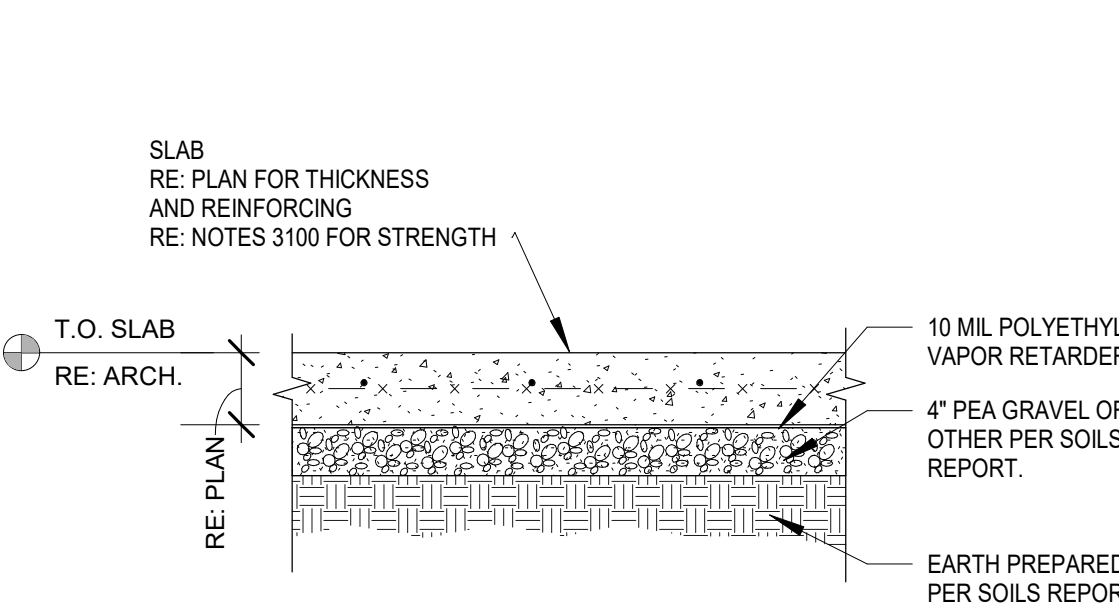
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7 TYPICAL FOOTING REINFORCEMENT PLACEMENT



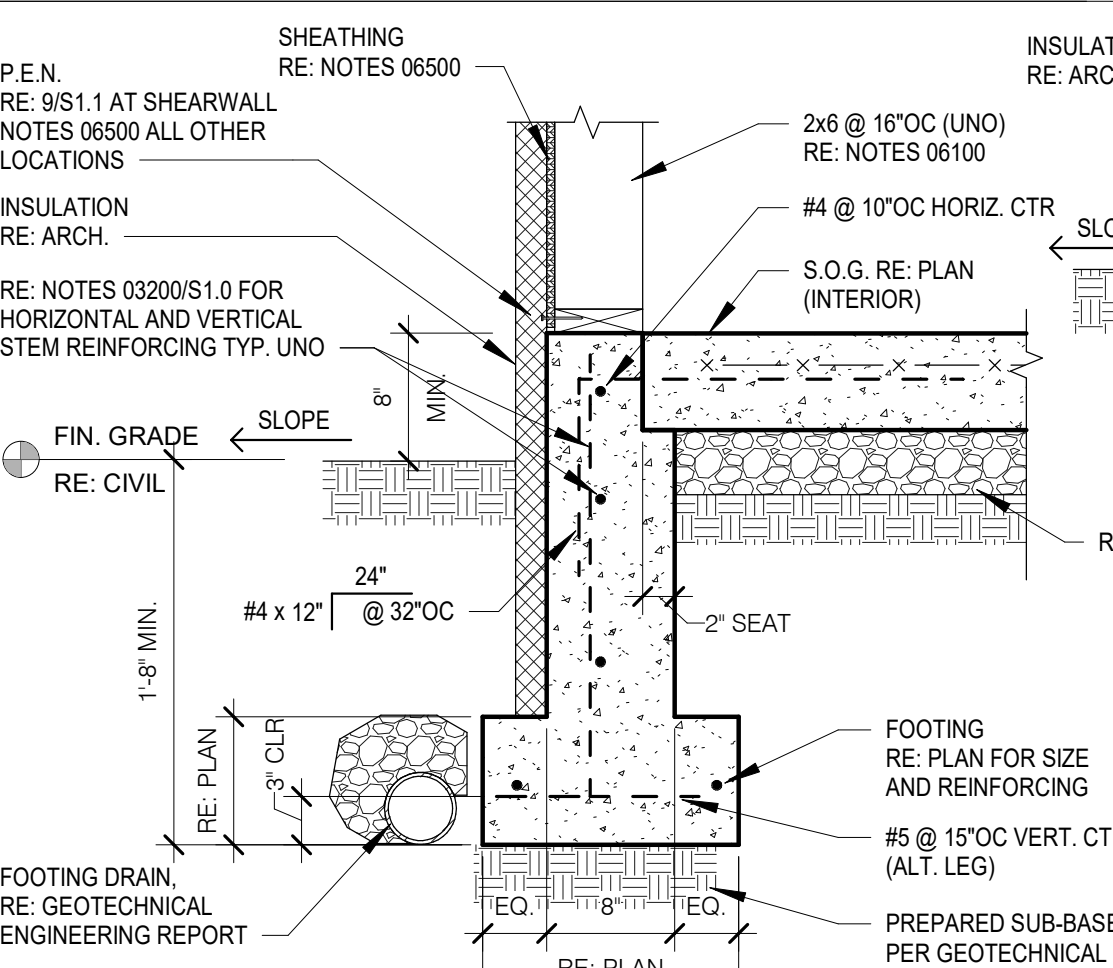
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8 TYPICAL STAIR ON GRADE



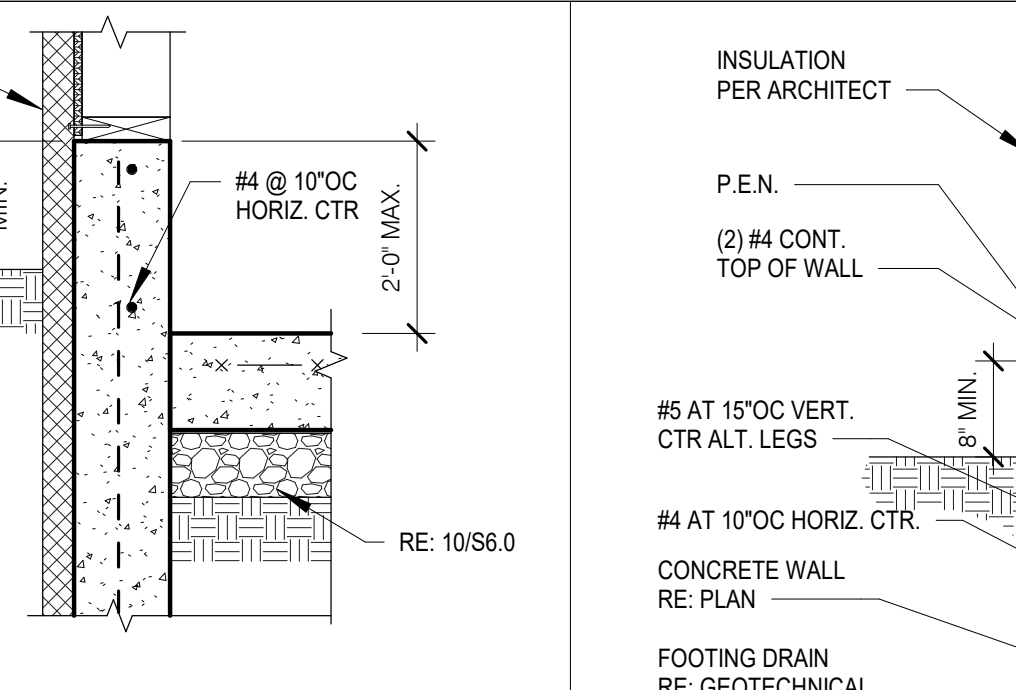
SCALE: 3/4" = 1'-0"  
9 SINGLE CURTAIN WALL REINFORCEMENT PLACEMENT



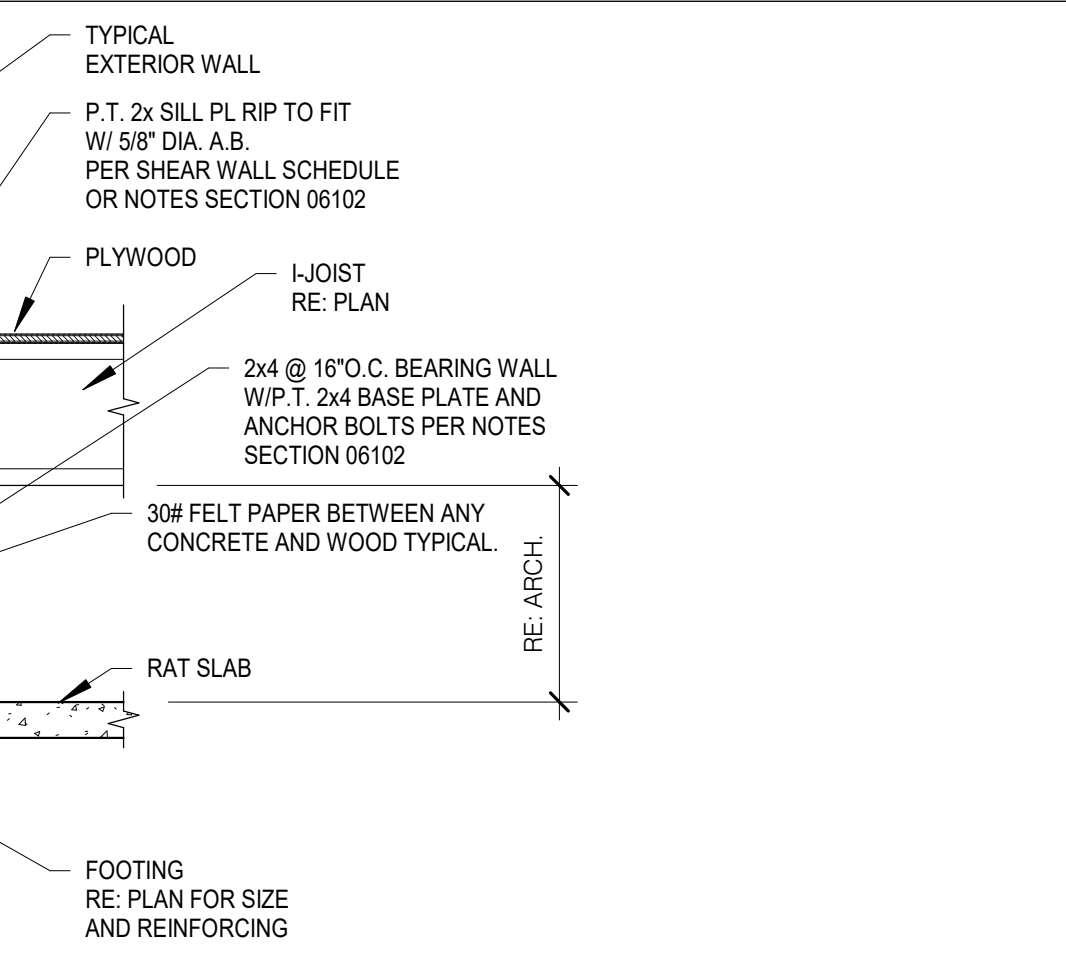
SCALE: 3/4" = 1'-0"  
10 TYPICAL INTERIOR SLAB ON GRADE



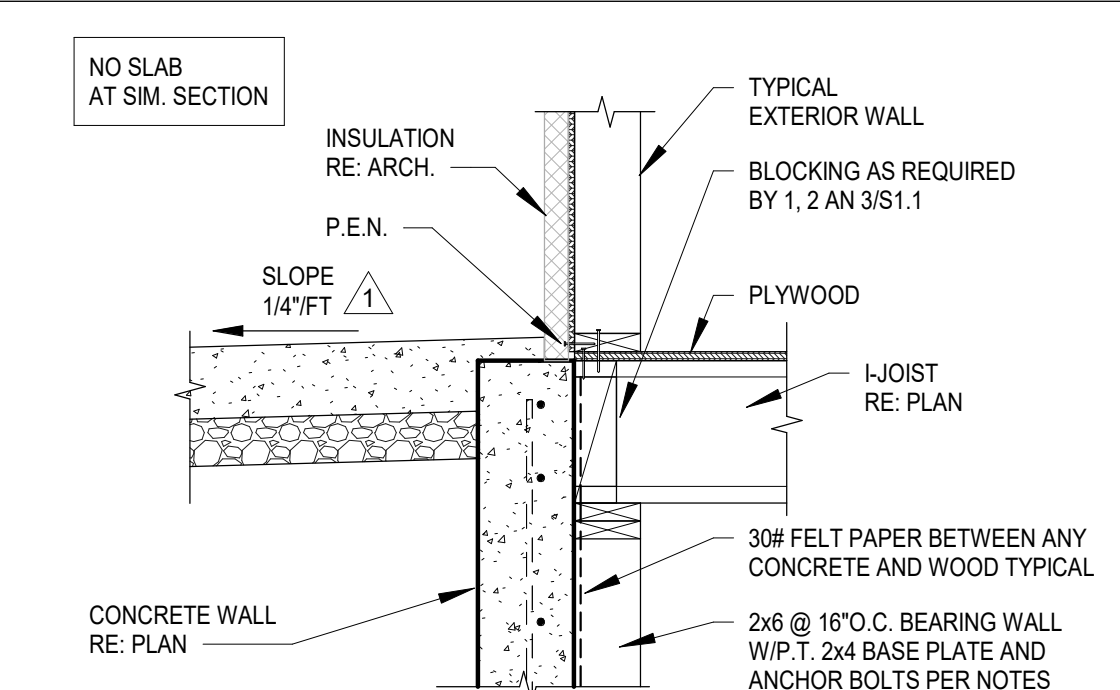
SCALE: 1" = 1'-0"  
11 TYP. PERIMETER FOOTING AT SLAB ON GRADE



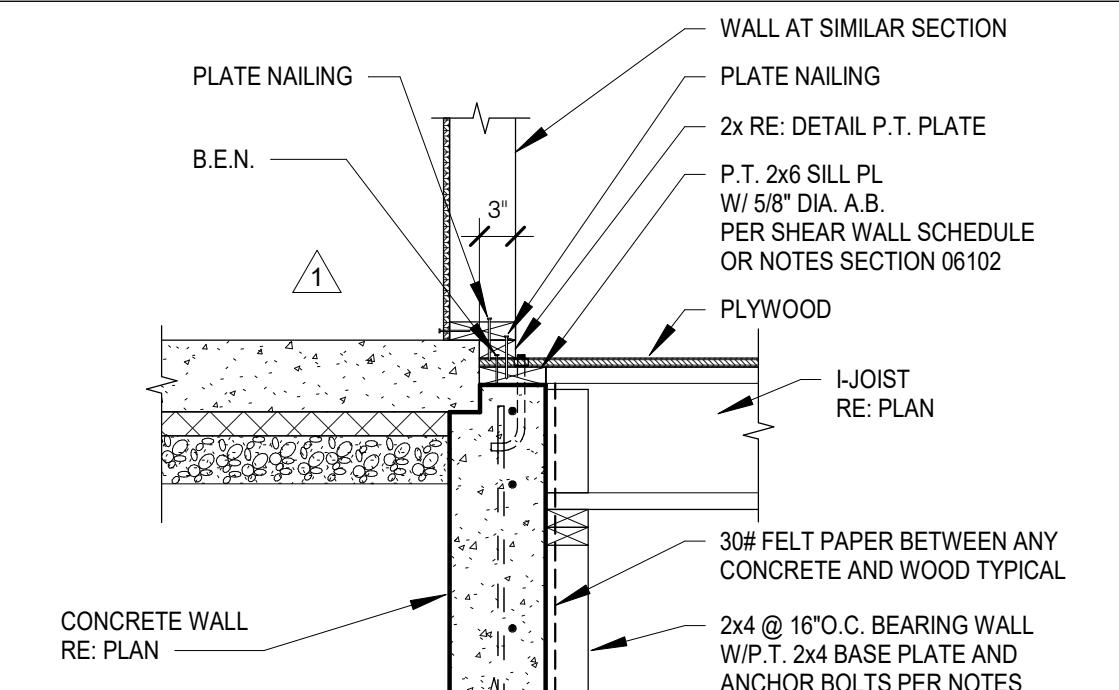
SCALE: 3/4" = 1'-0"  
12 TYPICAL PERIMETER FOOTING AT I-JOIST FRAMING



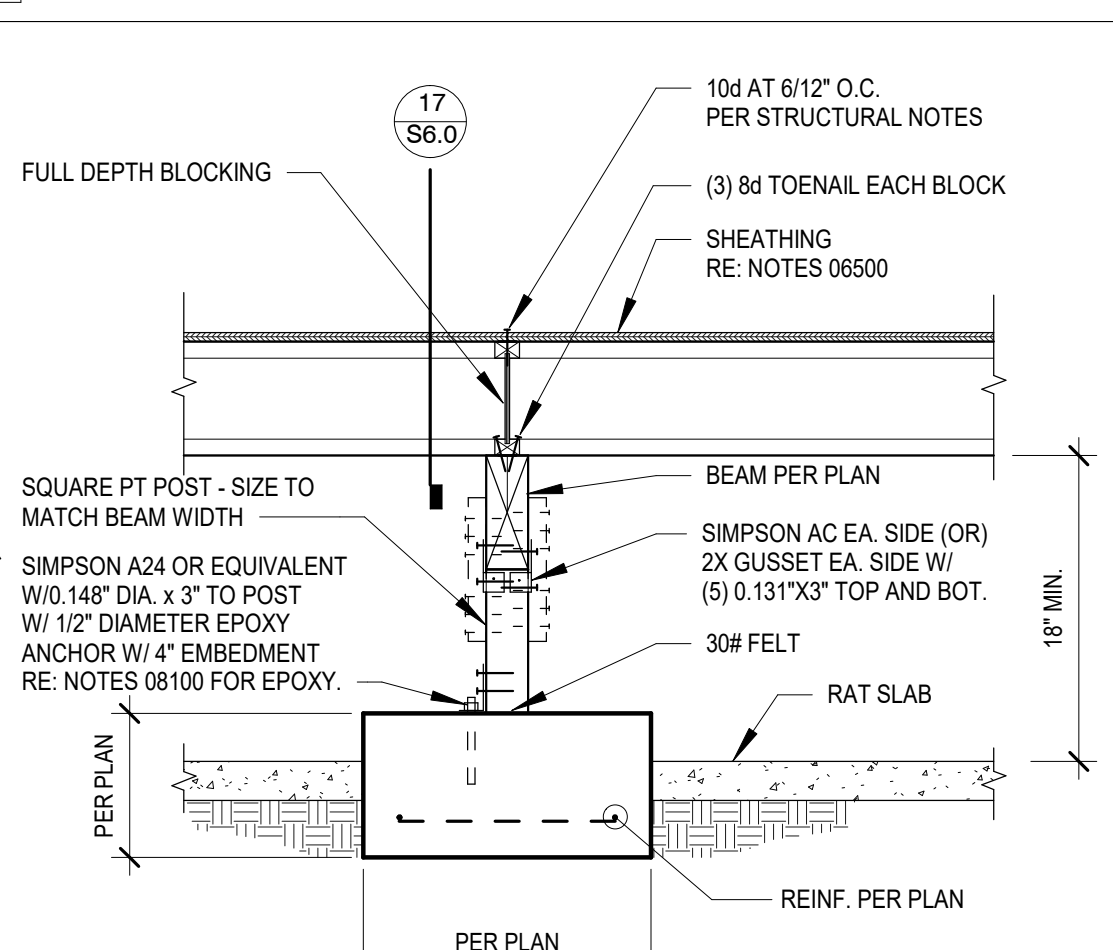
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18 INTERIOR SLAB AT EXTERIOR SLAB



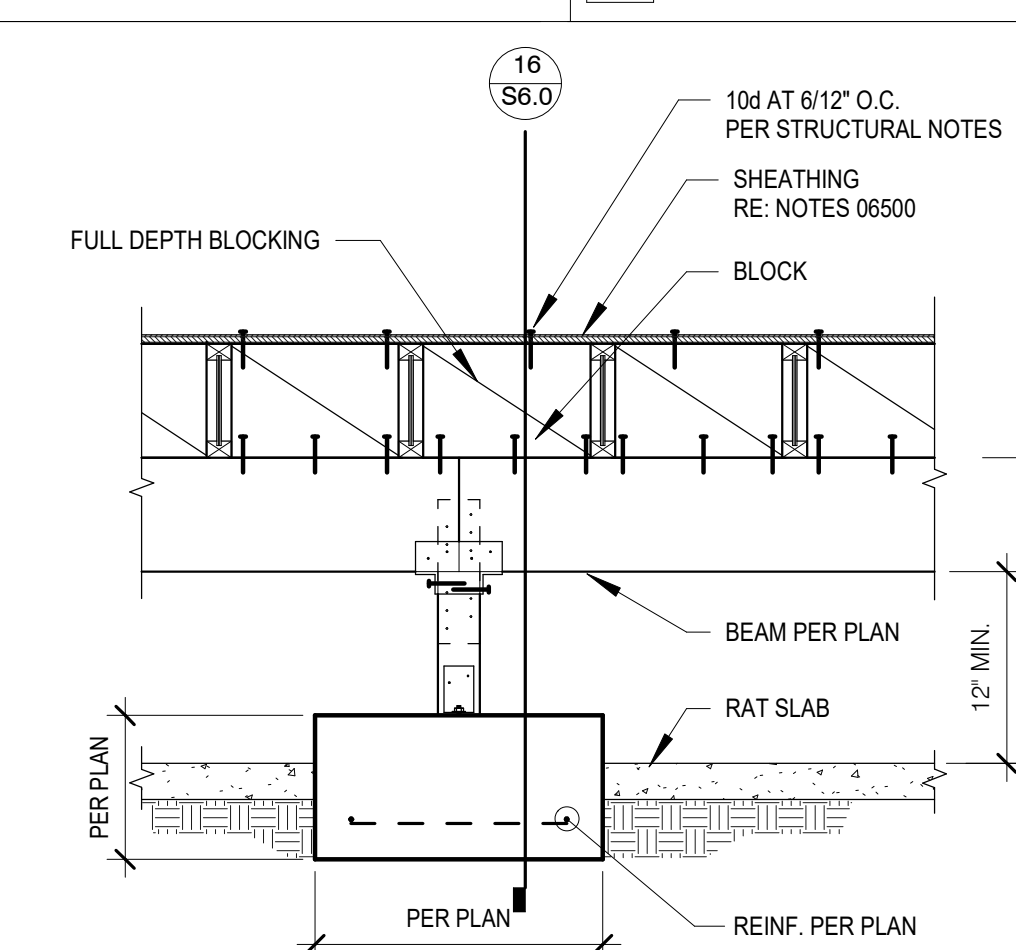
SCALE: 3/4" = 1'-0"  
19a TOP OF EXTERIOR



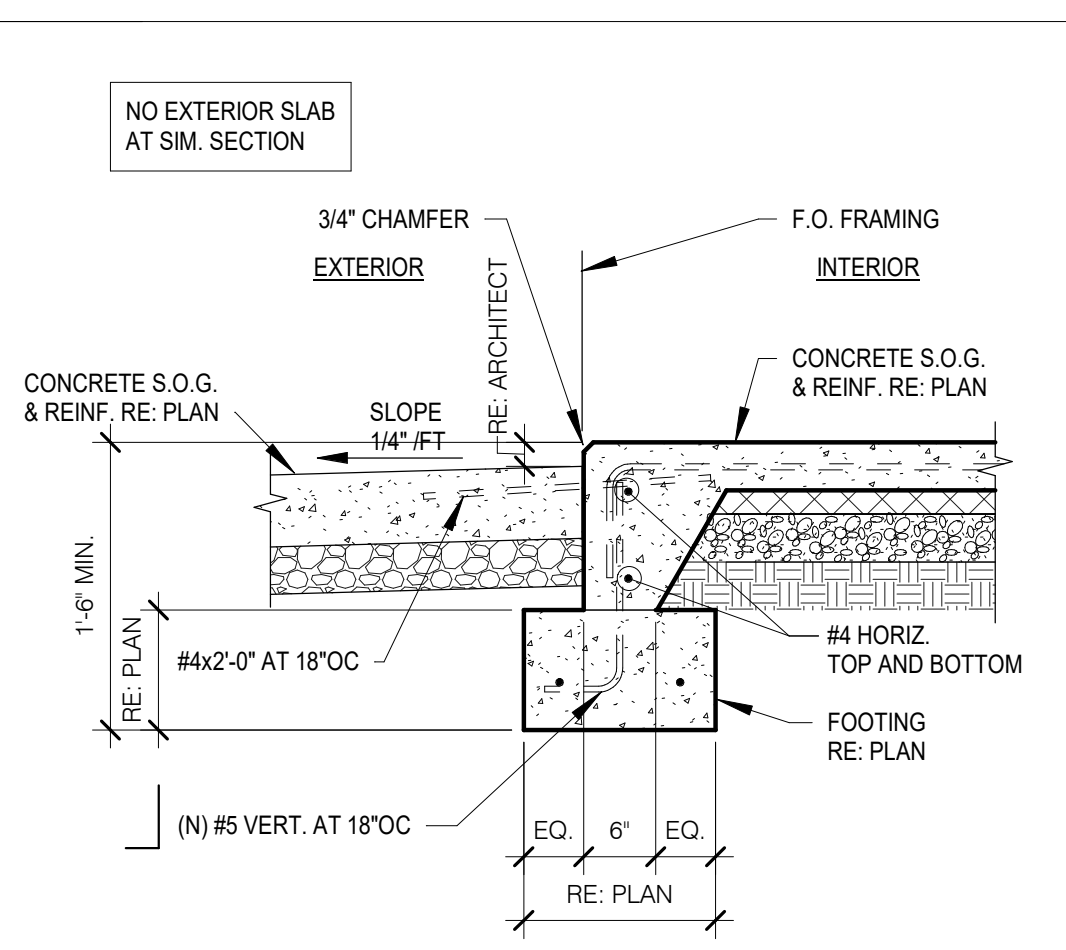
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19b TOP OF INTERIOR



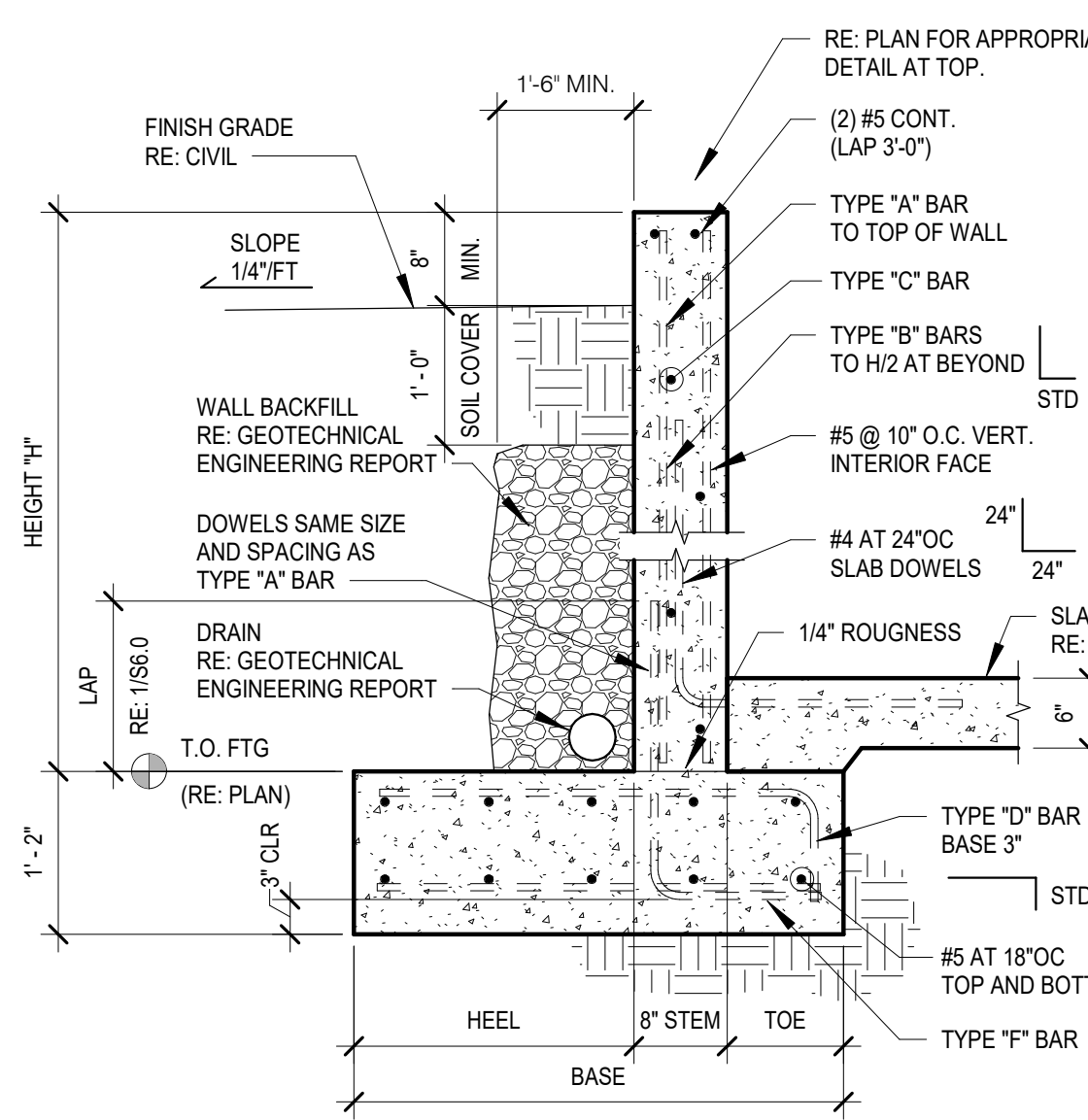
SCALE: 3/4" = 1'-0"  
16 TYPICAL INTERIOR FOOTING (PERP.)



SCALE: 3/4" = 1'-0"  
17 TYPICAL INTERIOR FOOTING (PARALLEL)

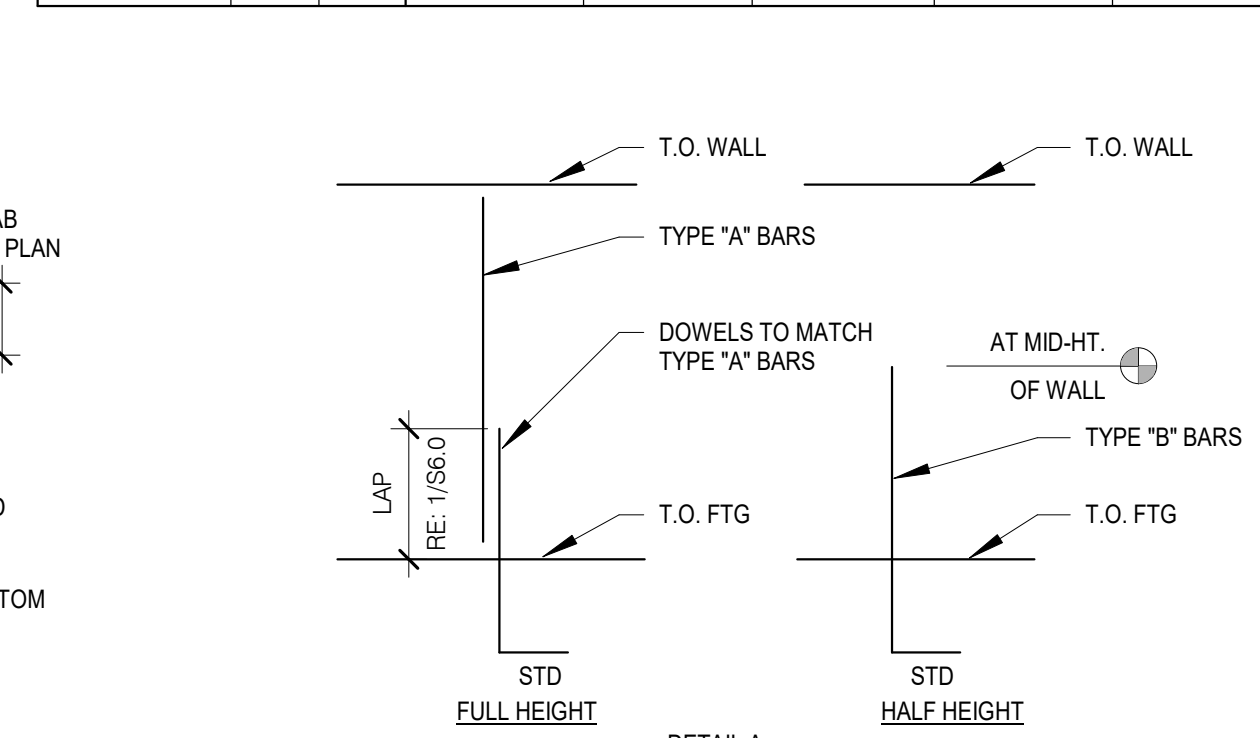


SCALE: 3/4" = 1'-0"  
18 INTERIOR SLAB AT EXTERIOR SLAB



SCALE: 3/4" = 1'-0"  
19 CANTILEVERED RETAINING WALL

CONCRETE DIMENSIONS	REINFORCING							
	HEIGHT "H"	TOE	HEEL	FULL HEIGHT VERT. BARS TYPE "A"	HALF HEIGHT VERT. BARS TYPE "B"	HORIZ. BARS TYPE "C"	FOOTING BARS TYPE "D"	FOOTING BARS TYPE "F"
UP TO 11'-0"	3'-4"	3'-0"		#6 AT 14"OC	#6 AT 14"OC	#4 AT 10"OC	#5 AT 14"OC	#5 AT 14"OC



Typical Concrete Details  
 Foo Residence  
 3453 74th Ave SE  
 Mercer Island, WA 98040

S6.0

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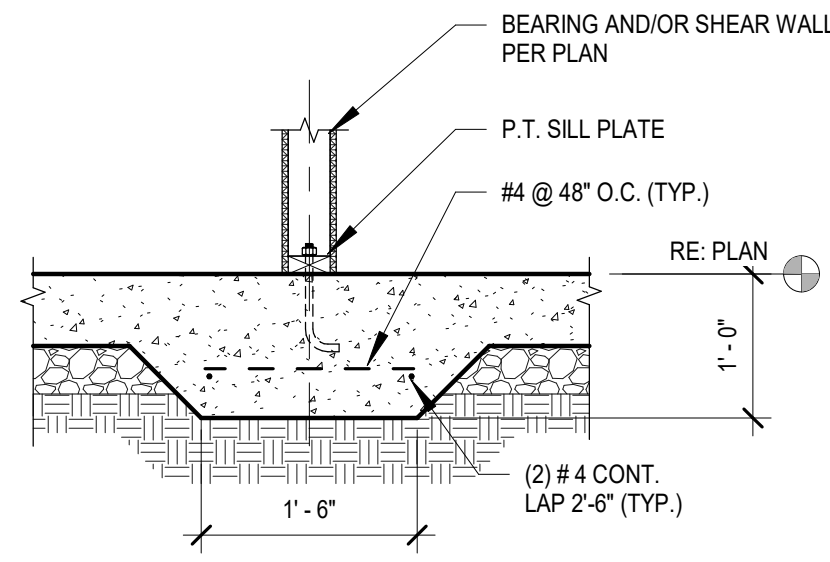
NO.	REVISION	DATE
1	RESPONSE TO CITY COMMENTS	01.08.2021

JOB #:	ENG.:	CAD.:	SCALE:	KEY ISSUE DATES:
20035	BJM	JMA	As Indicated	

SD:	CD:	DD:	CD:	PERMIT:	OTHER:
				06.11.2020	

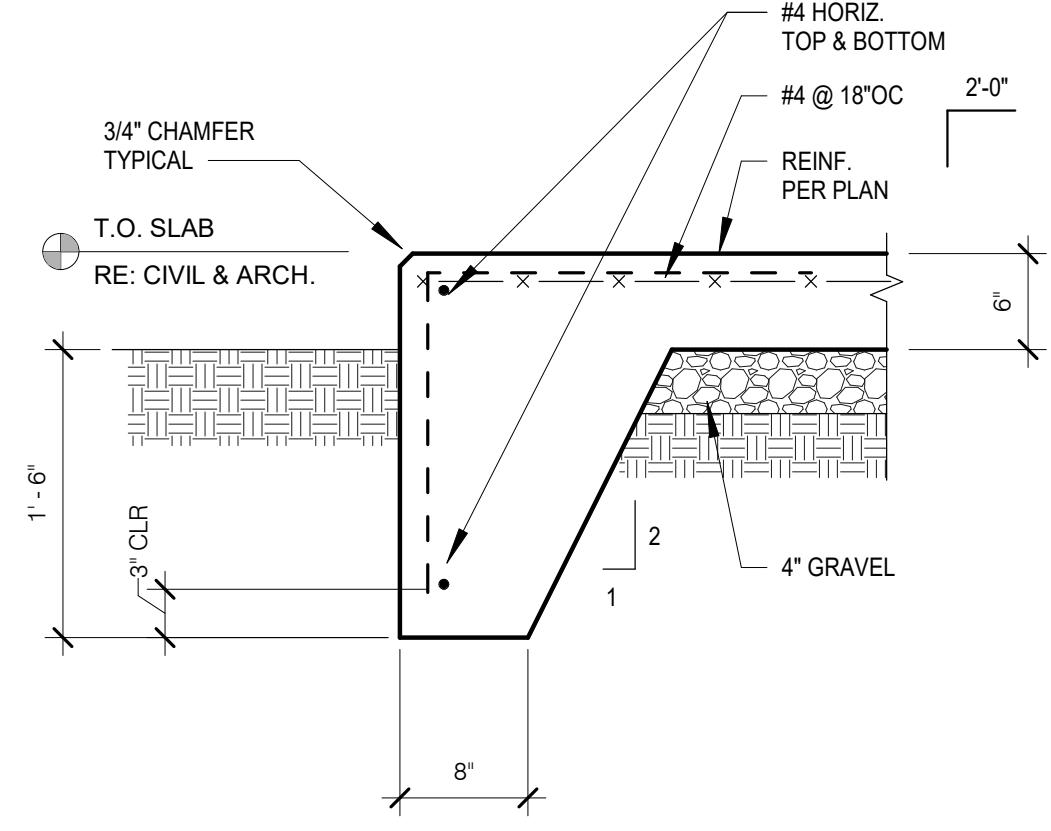
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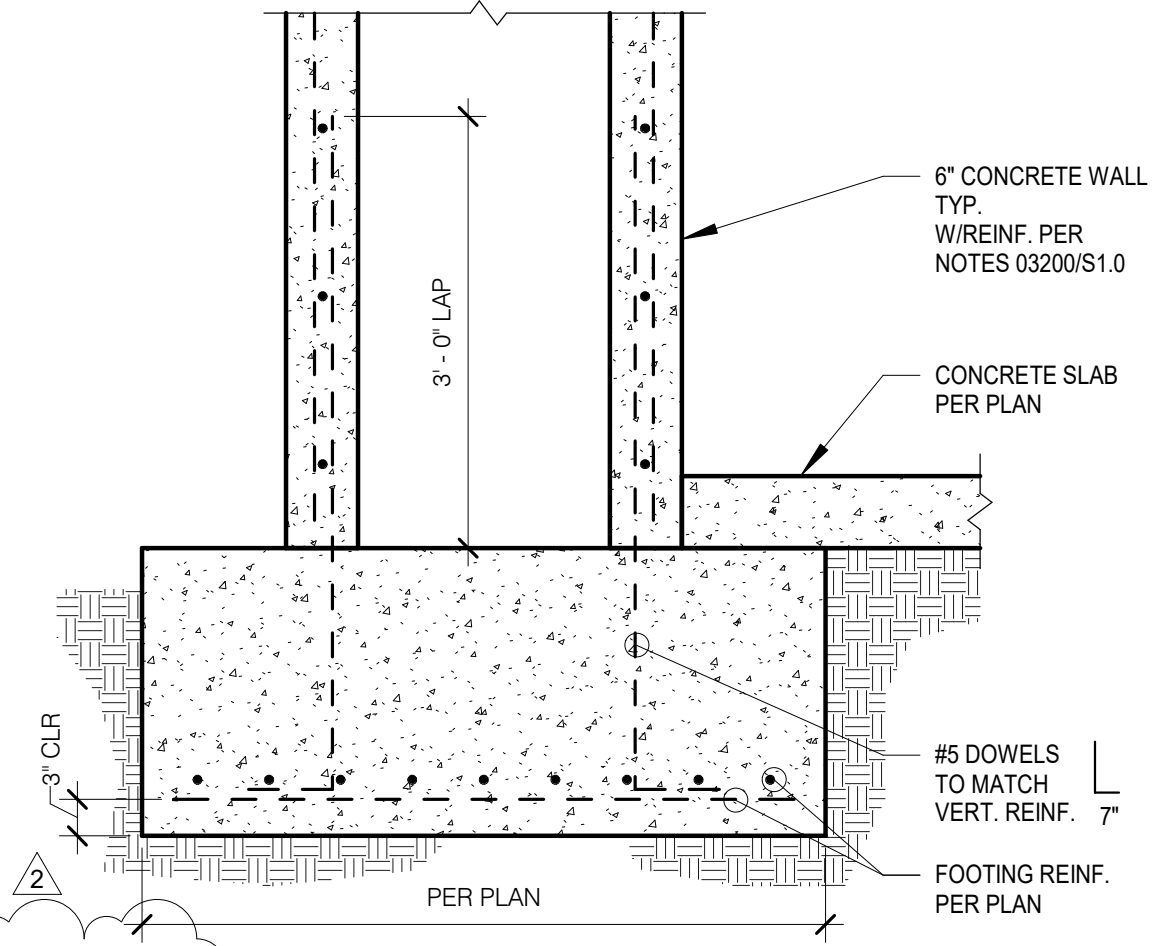
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**1** THICKENED SLAB FTG



SCALE: 1\"/>

**2** TYPICAL EXTERIOR SLAB TURNED DOWN EDGE



SCALE: 3/4\"/>

**3** FOOTING AT CHIMNEY CONC. WALL

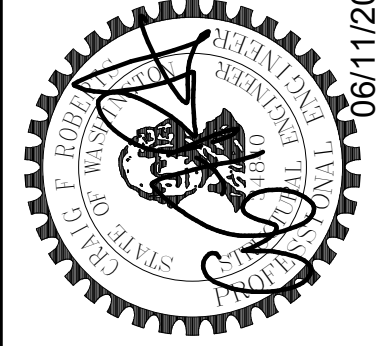
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**Typical Concrete Details**  
 Foo Residence  
 3453 74th Ave SE  
 Mercer Island, WA 98040

**S6.1**

JOB #:	20205
ENG. Designer	
CAD. Author	
SCALE:	As indicated
KEY ISSUE DATES:	
SD	SD
DD	DD
CD	CD
PERMIT:	06.11.2020
OTHER:	BD

No.	REVISION	DATE
2	RESPONSE TO CITY COMMENTS	03.16.2021



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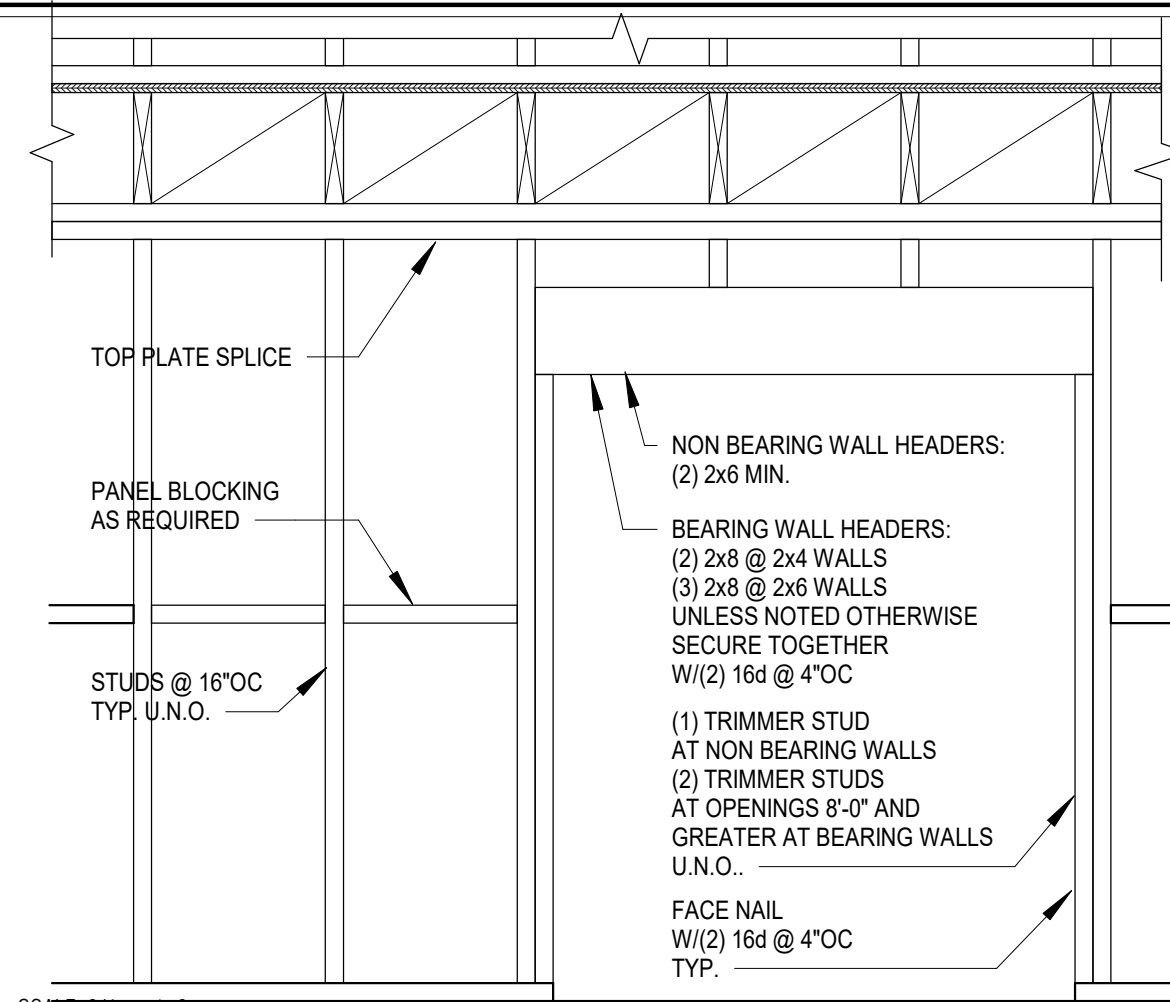




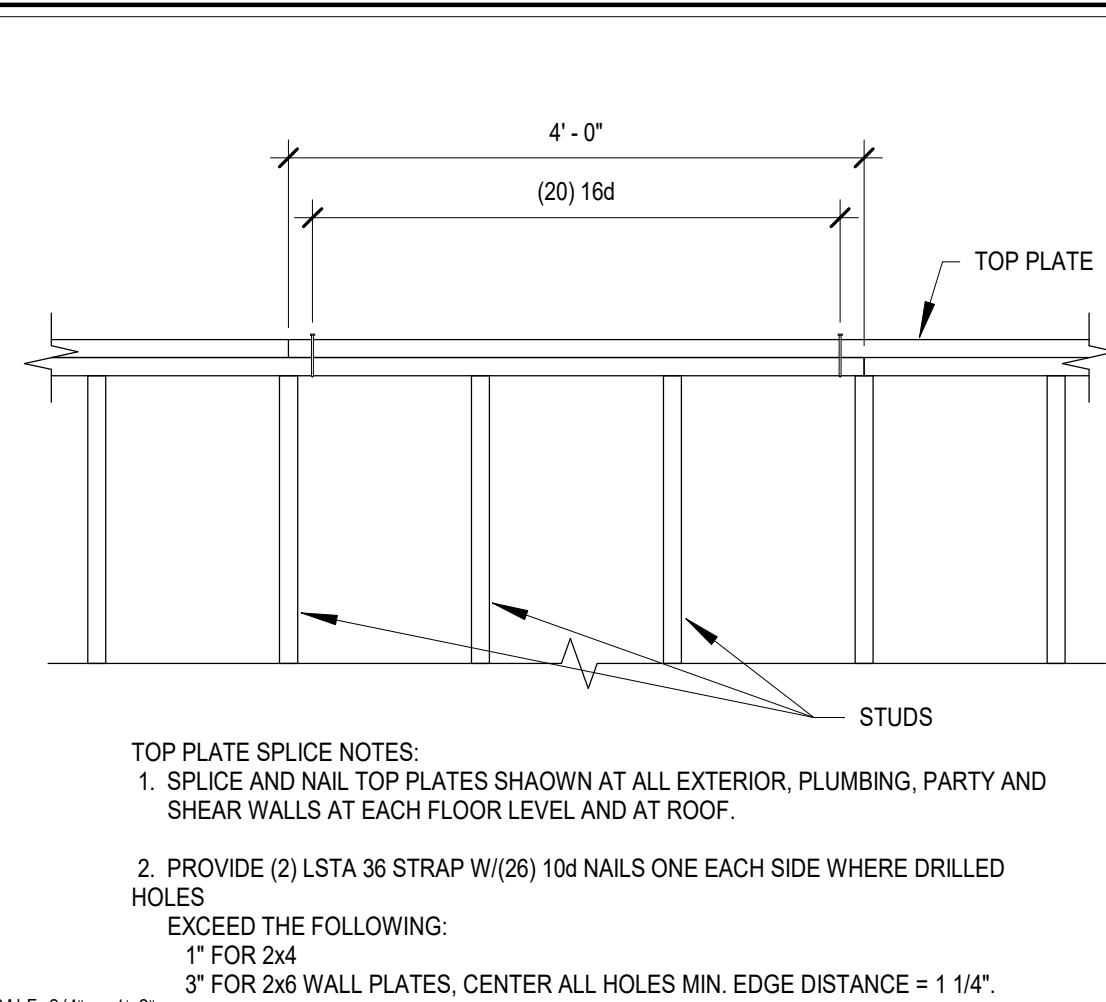




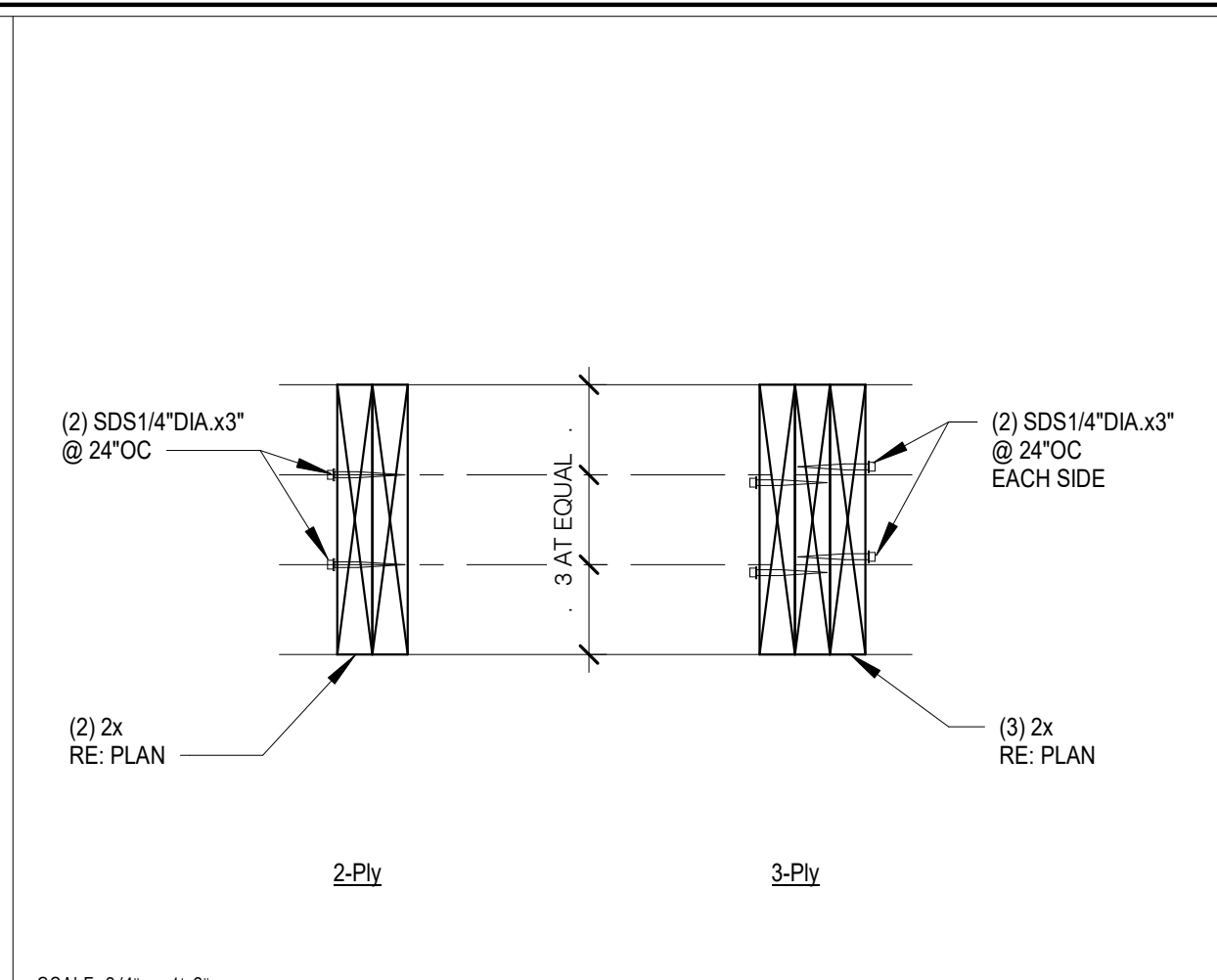




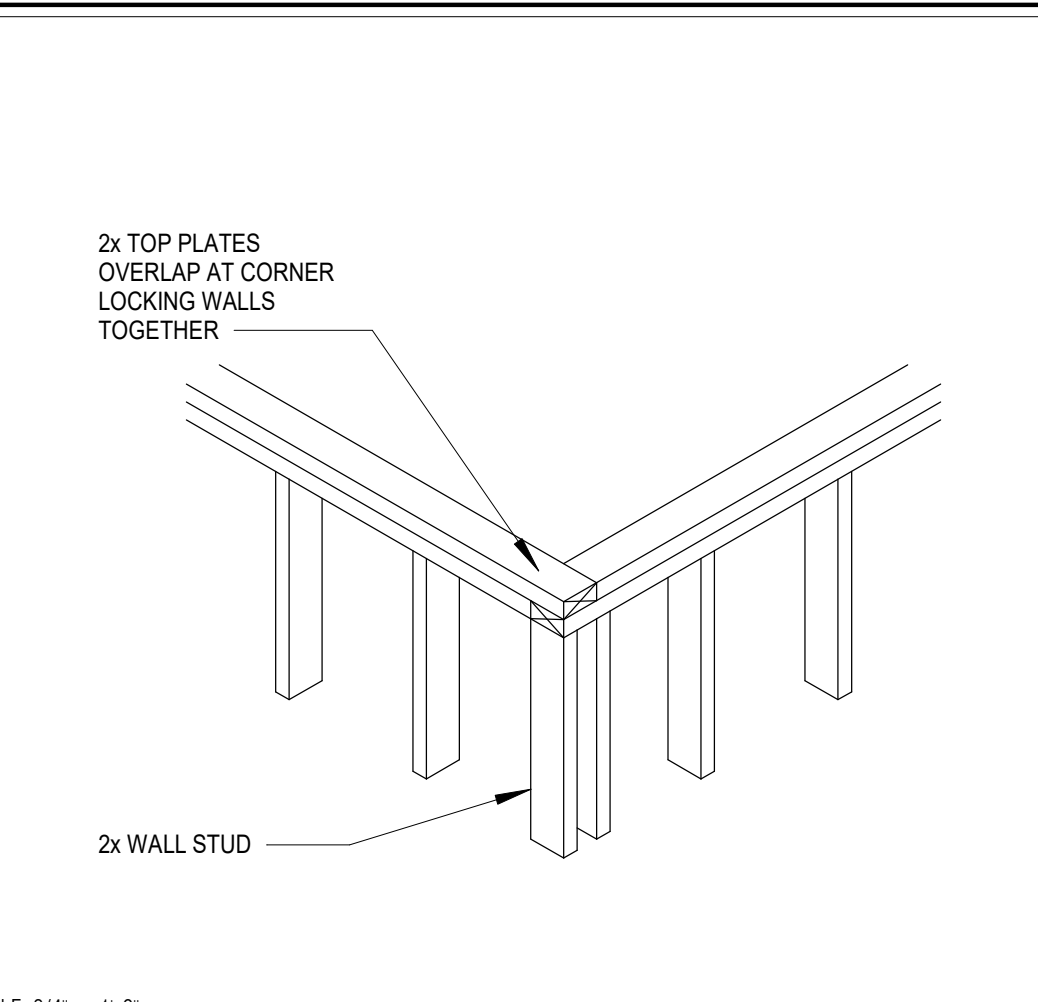
1 TYPICAL INTERIOR HEADER



2 TYPICAL TOP PLATE SPLICE

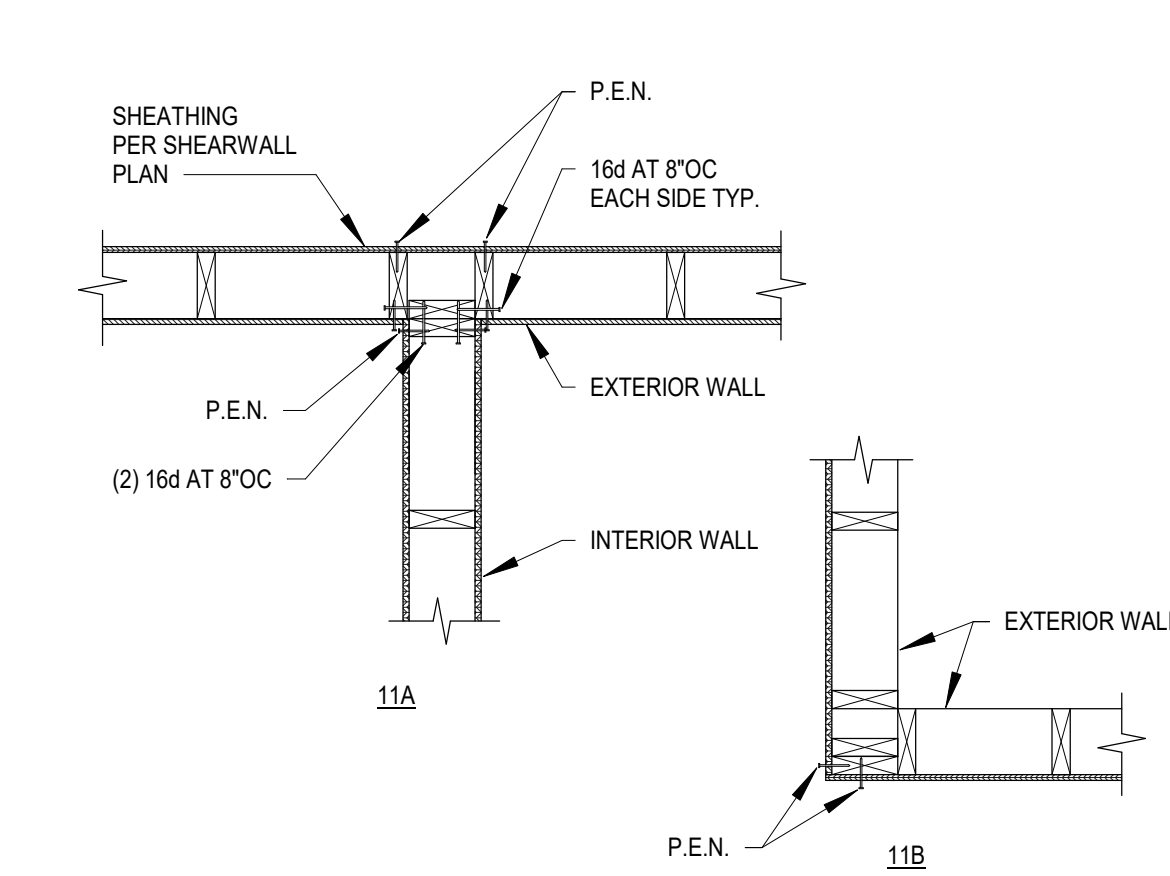


3 TYPICAL 2 or 3 PLY RAFTER or JOIST ATTACHMENT

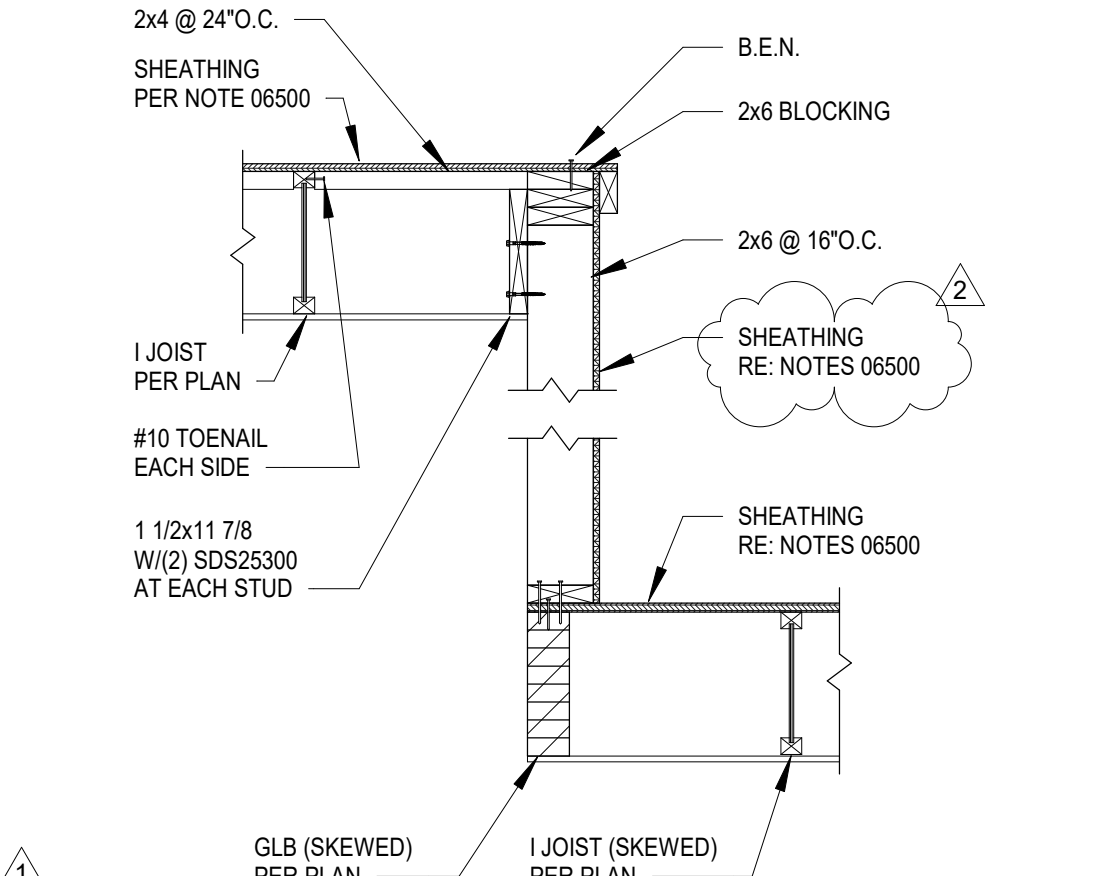


4 TYPICAL TOP PLATE FRAMING DETAIL

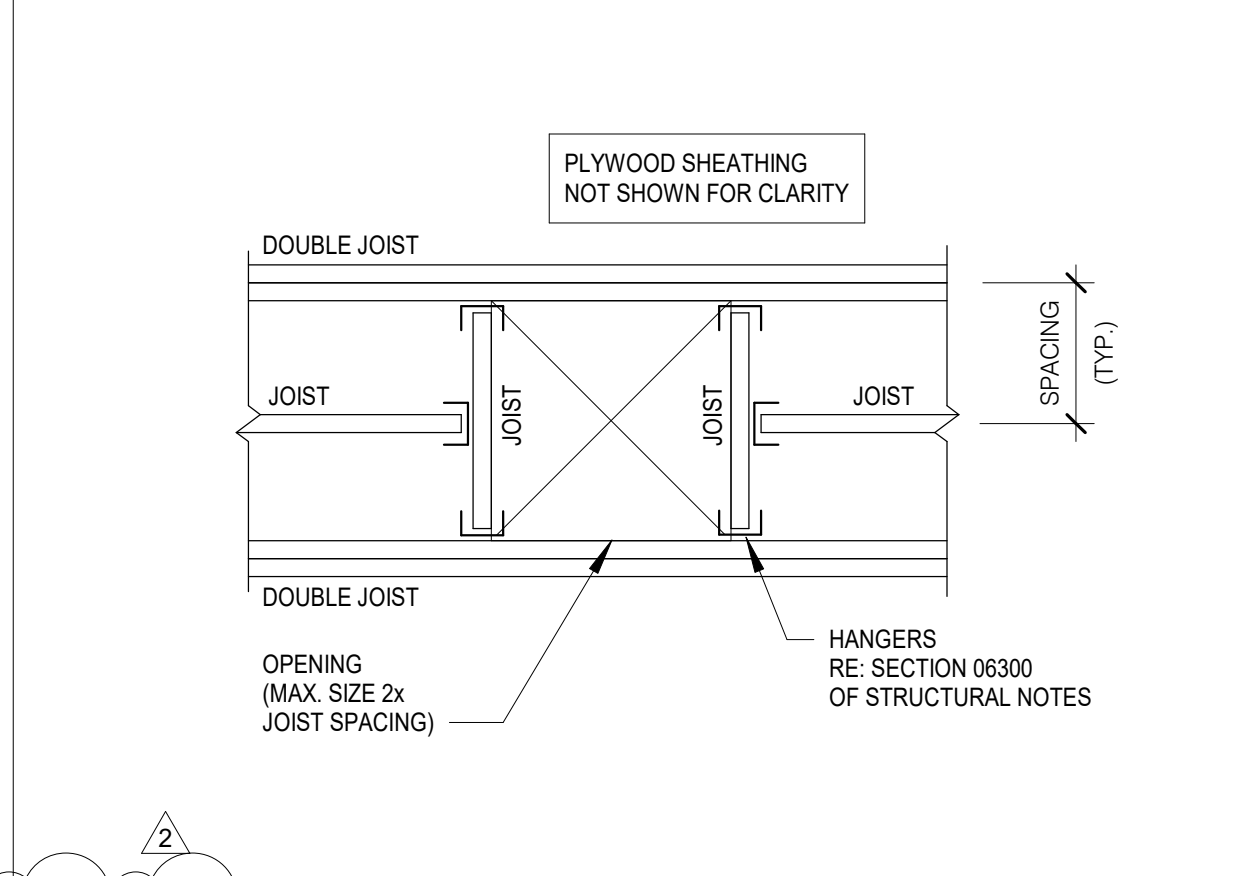
IBC 2015 TABLE 2304.10.1 FASTENING SCHEDULE		
CONNECTION	FASTENING (a)	LOCATION
<b>ROOF</b>		
1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	(3) 8d COMMON (2 1/2" X 0.131"); OR (3) 3" X 0.131" NAILS	EACH END, TOENAIL
BLOCKING BETWEEN RAFTERS OR TRUSSES NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	(2) 8d COMMON (2 1/2" X 0.131")	EACH END, TOENAIL
BLOCKING BETWEEN RAFTERS OR TRUSSES NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	(2) 16d COMMON (3 1/2" X 0.162")	EACH END
FLAT BLOCKING TO TRUSS AND WEB FILLER	16d COMMON (3 1/2" X 0.161") AT 6"OC...	FACE NAIL
2. CEILING JOISTS TO TOP PLATE	(3) 8d COMMON (3 1/2" X 0.131"); OR (3) 3" X 0.131" NAILS	EACH JOIST, TOENAIL
3. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS (NO THRUST) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	(3) 16d COMMON (3 1/2" X 0.162"); OR (4) 3" X 0.131" NAILS	OR FACE NAIL
4. CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	PER TABLE 2308.7.3.1	FACE NAIL
5. COLLAR TIE TO RAFTER	(3) 10d COMMON (3" X 0.148"); OR (4) 3" X 0.131" NAILS	FACE NAIL
6. RAFTER OR ROOF TRUSS TO TOP PLATE (SEE SECTION 2308.7.5, TABLE...	(3) 10d COMMON (3" X 0.148"); OR (4) 3" X 0.131" NAILS	TOENAIL
7. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2-INCH RIDGE BEAM	(2) 16d COMMON (3 1/2" X 0.162"); OR (3) 3" X 0.131" NAILS	END NAIL
<b>WALL</b>		
8. STUD TO STUD (NOT AT BRACED WALL PANELS)	16d COMMON (3 1/2" X 0.162"); 3" X 0.131" NAILS	24"OC FACE NAIL 16"OC FACE NAIL
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS)	16"OC COMMON (3 1/2" X 0.162"); OR 3" X 0.131" NAILS	16"OC FACE NAIL 12"OC FACE NAIL
10. BUILT-UP HEADER (2" TO 2" HEADER)	16d COMMON (3 1/2" X 0.162")	16"OC EACH EDGE, FACE NAIL
11. CONTINUOUS HEADER TO STUD	(4) 8d COMMON (2 1/2" X 0.131")	TOENAIL
12. TOP PLATE TO TOP PLATE	16d COMMON (3 1/2" X 0.162") OR 3" X 0.131" NAILS	16"OC FACE NAIL 12"OC FACE NAIL
13. TOP PLATE TO TOP PLATE, AT END JOINTS	(8) 16d COMMON (3 1/2" X 0.162") OR (12) 3" X 0.131" NAILS	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
14. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d COMMON (3 1/2" X 0.162"); OR 3" X 0.131" NAILS	16"OC FACE NAIL 12"OC FACE NAIL
15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS	(2) 16d COMMON (3 1/2" X 0.162"); OR (4) 3" X 0.131" NAILS	16"OC FACE NAIL
16. STUD TO TOP OR BOTTOM PLATE	(4) 8d COMMON (2 1/2" X 0.131"); OR (3) 3" X 0.131" NAILS	TOENAIL
STUD TO TOP OR BOTTOM PLATE	(2) 16d COMMON (3 1/2" X 0.162"); OR...	END NAIL
17. TOP OT BOTTOM PLATE TO STUD	(2) 16d COMMON (3 1/2" X 0.162"); OR (3) 3" X 0.131" NAILS	OR END NAIL
18. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	(3) 3" X 0.131" NAILS	OR FACE NAIL
19. 1" BRACE TO EACH STUD AND PLATE	(2) 8d COMMON (2 1/2" X 0.131"); OR (2) 3" X 0.131" NAILS	FACE NAIL
20. 1" X 6" SHEATHING TO EACH BEARING	(2) 8d COMMON (2 1/2" X 0.131")	FACE NAIL
21. 1" X 8" AND WIDER SHEATHING TO EACH BEARING	(3) 8d COMMON (2 1/2" X 0.131")	FACE NAIL
<b>FLOOR</b>		
22. JOIST TO SILL, TOP PLATE, OR GIRDER	(3) 8d COMMON (2 1/2" X 0.131"); OR 3" X 0.131" NAILS	TOENAIL
23. RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER...	8d COMMON (2 1/2" X 0.131"); OR 3" X 0.131" NAILS	6"OC, TOENAIL
24. 1" X 6" SUBFLOOR OR LESS TO EACH...	(2) 8d COMMON (2 1/2" X 0.131")	FACE NAIL
25. 2" SUBFLOOR TO JOIST OR GIRDER	(2) 16d COMMON (3 1/2" X 0.162")	FACE NAIL
26. 2" PLANKS (PLANK NAD BEAM-FLOOR AND ROOF)	(2) 16d COMMON (3 1/2" X 0.162")	EACH BEARING, FACE NAIL
27. BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	20d COMMON (4" X 0.192")	32"OC, FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
	3" X 0.131" NAILS	24"OC, FACE NAIL AT TOP AND BOTTOM STAGGERED ON...
28. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	(2) 20d COMMON (4" X 0.192"); OR (3) 3" X 0.131" NAILS	END JOIST OR RAFTER, FACE NAIL
	(3) 16d COMMON (3 1/2" X 0.162"); OR (4) 3" X 0.131" NAILS	FACE NAIL
	(2) 16d COMMON (3) 3" X 0.131" NAILS	FACE NAIL
29. JOIST TO BAND JOIST OR RIM JOIST	(3) 16d COMMON (3 1/2" X 0.162"); OR (4) 3" X 0.131" NAILS	OR END NAIL
30. BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	(2) 8d COMMON (2 1/2" X 0.131"); OR (2) 3" X 0.131" NAILS	EACH END, TOENAIL
31. WOOD STRUCTURAL PANELS TO FRAMING SUBFLOOR TO FRAMING	SEE SHEARWALL SCHEDULE SEE STRUCTURAL NOTES	SECTION 06160
a. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE NOTED OTHERWISE.		
b. FASTENING SCHEDULE BASED ON IBC TABLE 2304.10.1 AND PROVIDES THE MINIMUM NAILING REQUIRED. WHEN SPECIFIED ELSEWHERE IN THESE PLANS PROVIDE NAILING AS SPECIFIED. SEE IBC FOR COMPLETE NAILING SCHEDULE.		



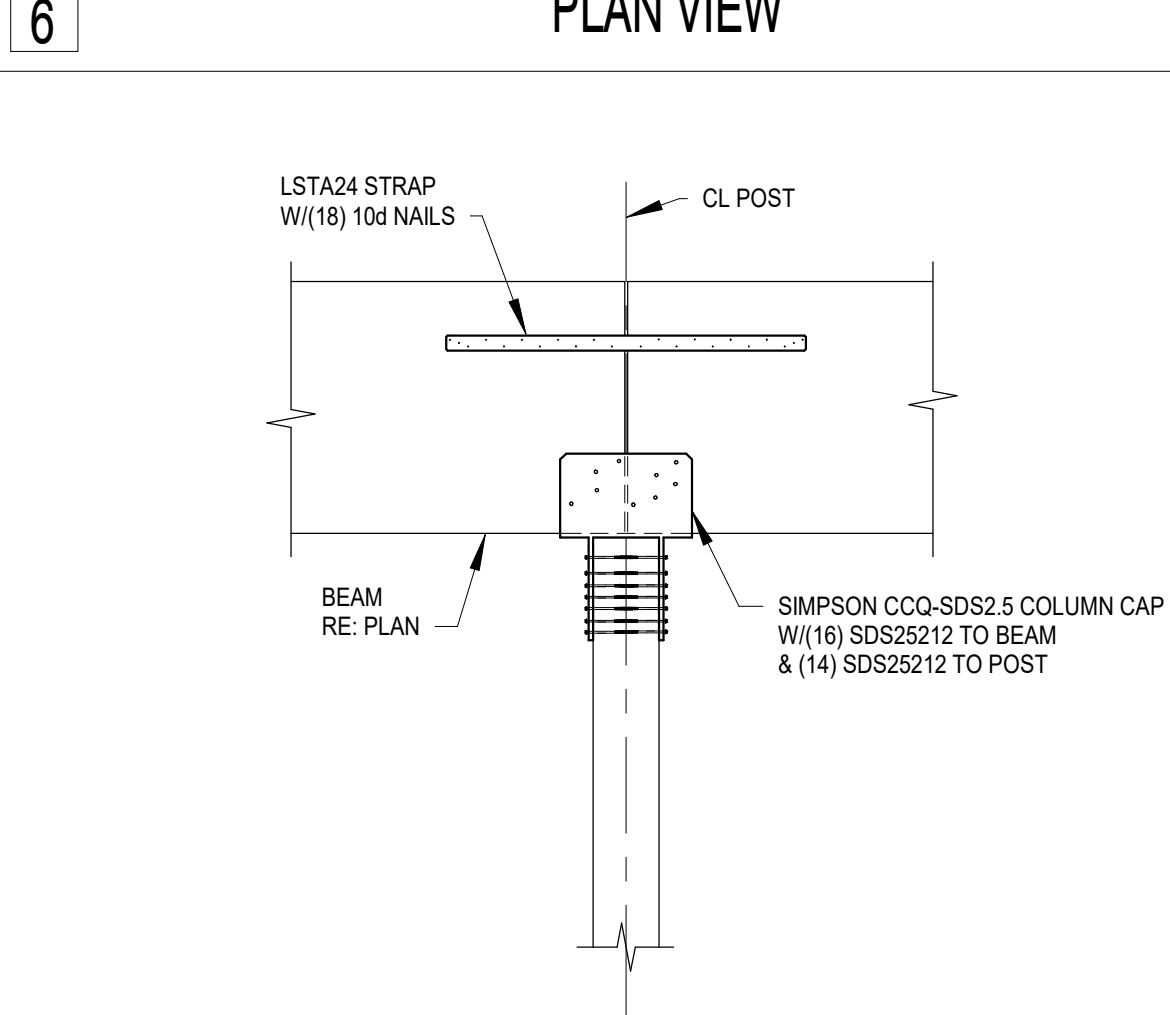
6 PLAN VIEW



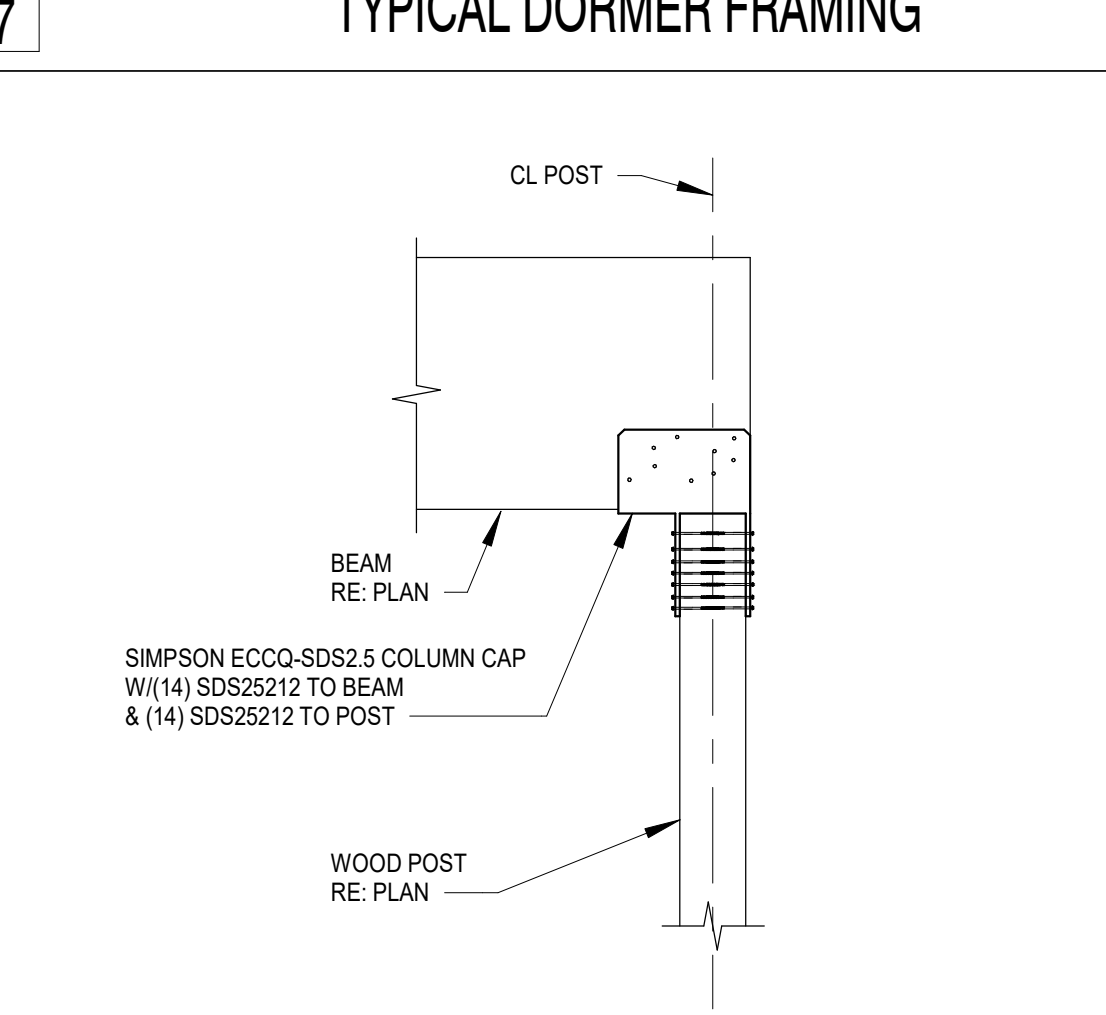
7 TYPICAL DORMER FRAMING



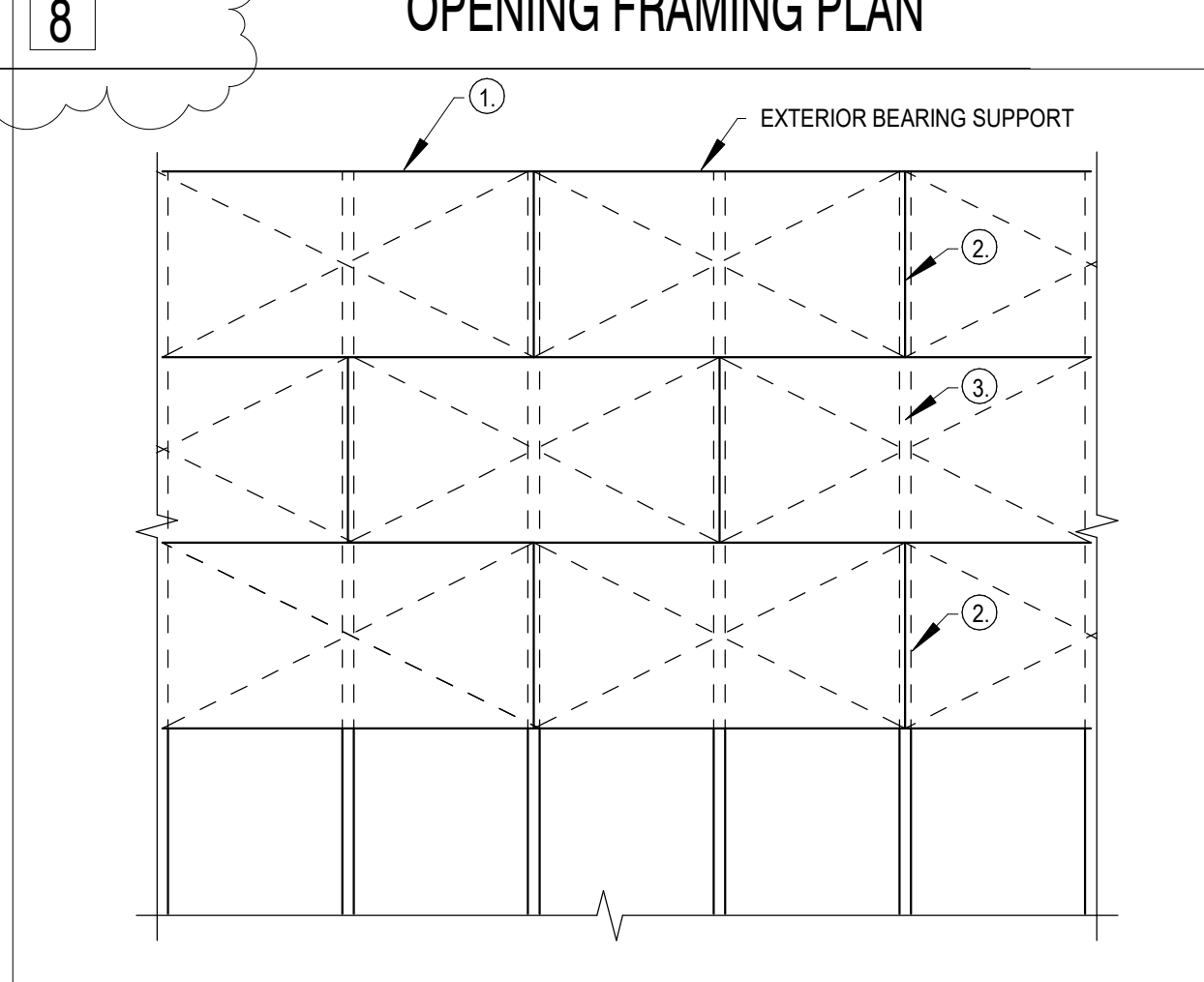
8 OPENING FRAMING PLAN



11 TYPICAL BEAM TO POST CONNECTION



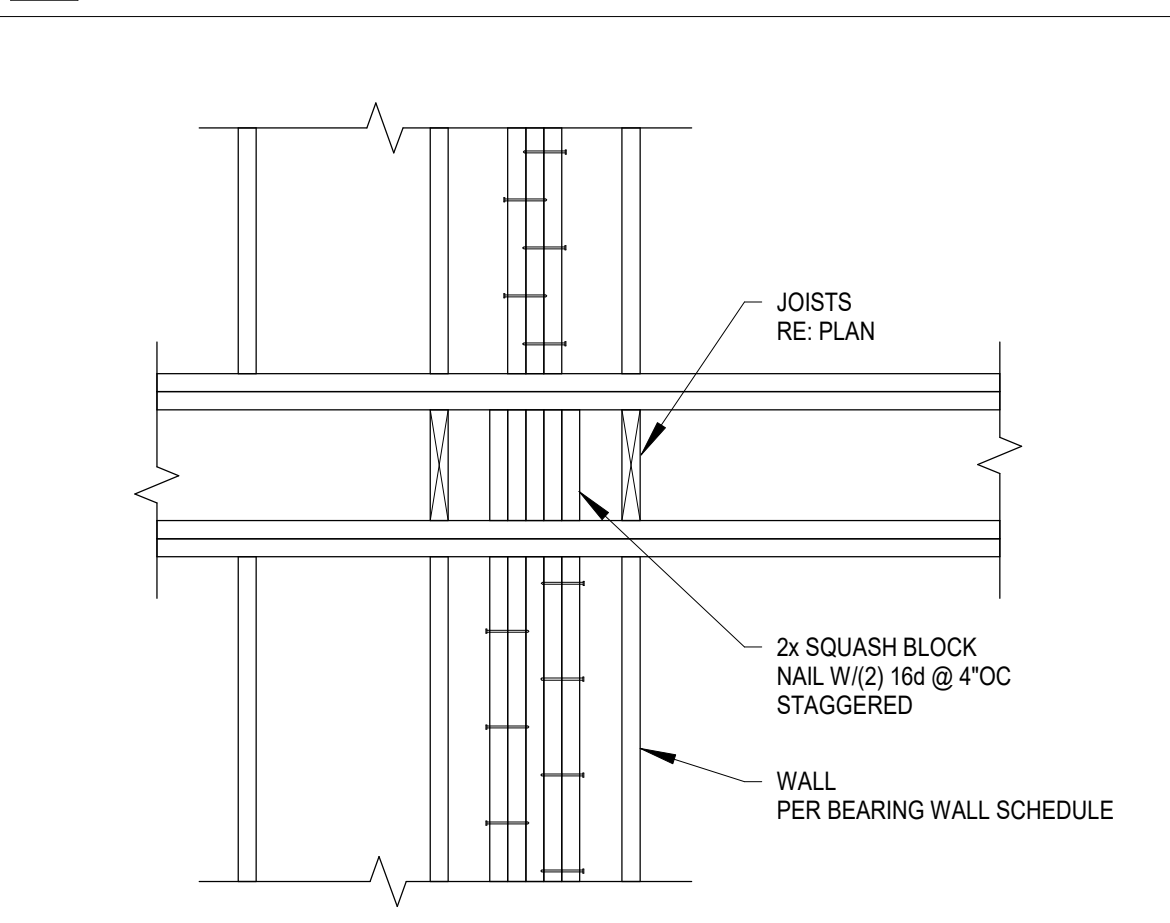
12 TYPICAL BEAM TO POST CONNECTION



13 ROOF/FLOOR SHEATHING LAYOUT

ROOF/FLOOR SHEATHING NOTES:

- BOUNDARY NAILING (B.N.) AT ROOF/FLOOR PERIMETER, AT ALL CONTINUOUS PANEL EDGES.
- EDGE NAILING (P.E.N.) AT ALL EDGES OF ALL PLYWOOD SHEETS AT SUPPORTS AND AT INTERIOR SHEARWALLS.
- INTERIOR FIELD NAILING (F.N.) 12"OC. AT ALL BEARING SUPPORTS.
- SEE PLANS FOR PLYWOOD THICKNESS AND NAILING SCHEDULE.
- LONG DIMENSION OF PLYWOOD SHALL RUN PERPENDICULAR TO TRUSS SYSTEM FRAMING AND FLOOR FRAMING.
- MINIMUM EDGE DISTANCE FOR NAILS SHALL BE 3/8".
- MINIMUM PLYWOOD SHEET SIZE SHALL BE 2'-0" X 4'-0".
- NAILS SHALL NOT BE OVER DRIVEN.



16 TYPICAL BLOCKING AT BUNDLED STUD

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No.	REVISION	DATE
1	RESPONSE TO CITY COMMENTS	01.08.2021
2	RESPONSE TO CITY COMMENTS	03.16.2021

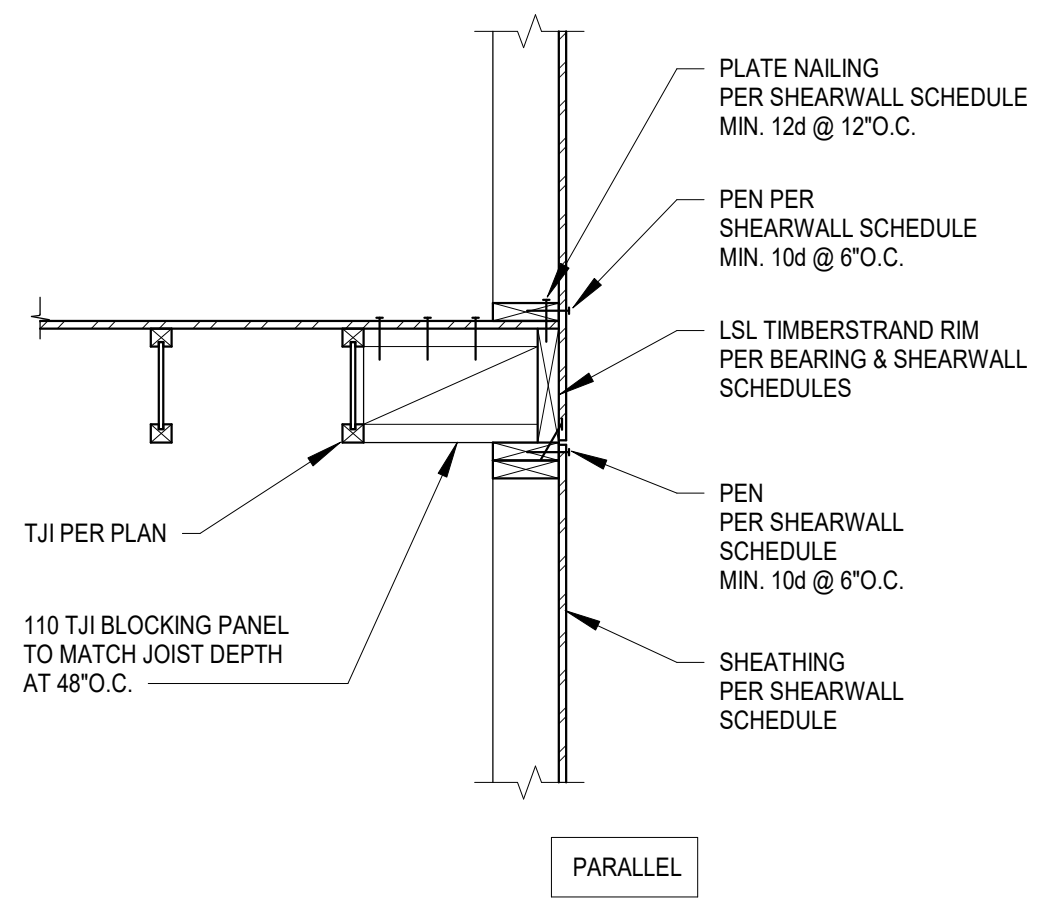
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CAD:	Author
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DD:	DD
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PERMIT:	06.11.2020
OTHER:	BD

**Typical Wood Framing Details**  
Foo Residence  
3453 74th Ave SE  
Mercer Island, WA 98040

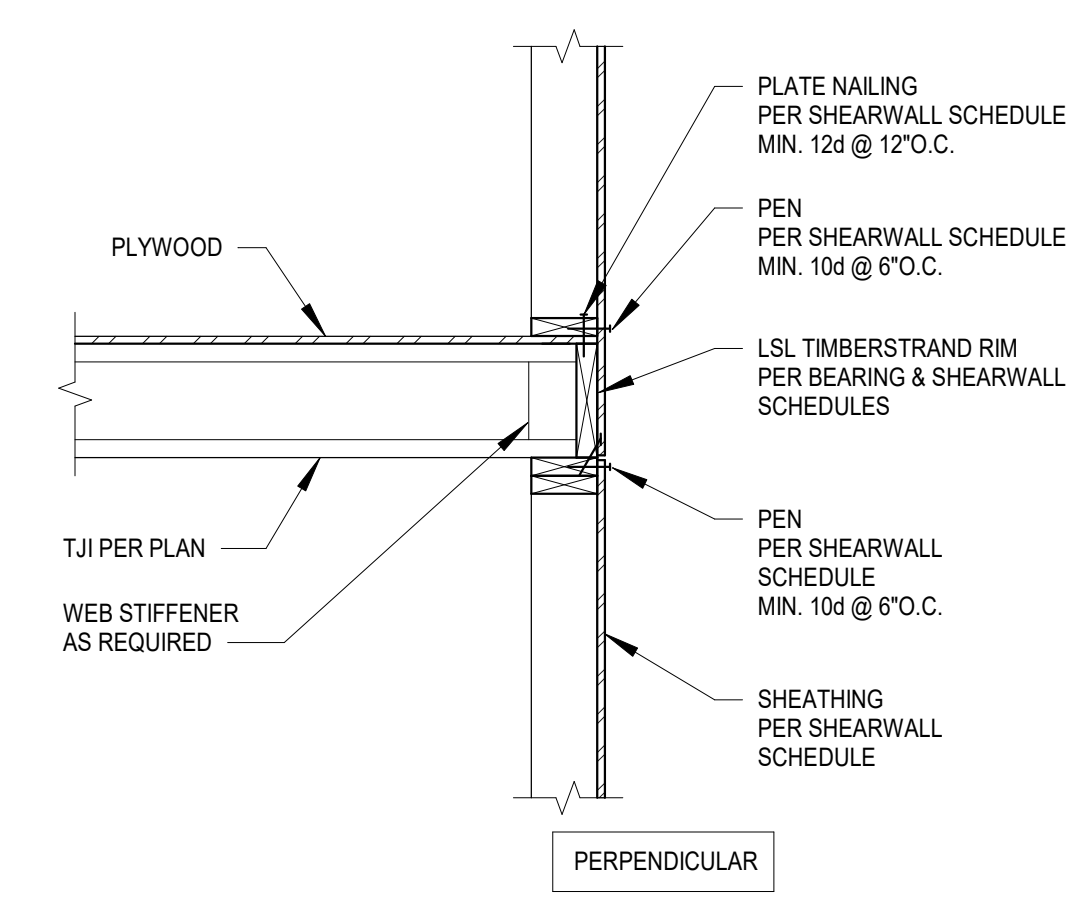
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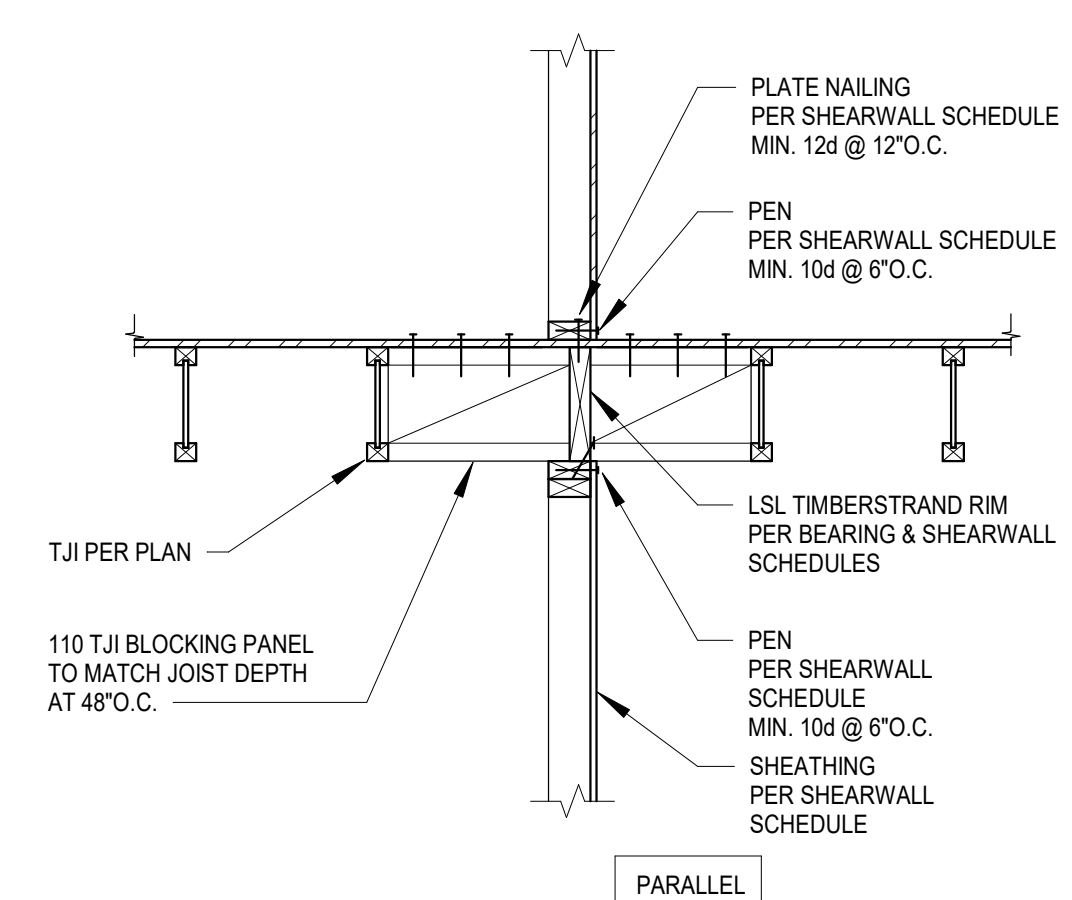




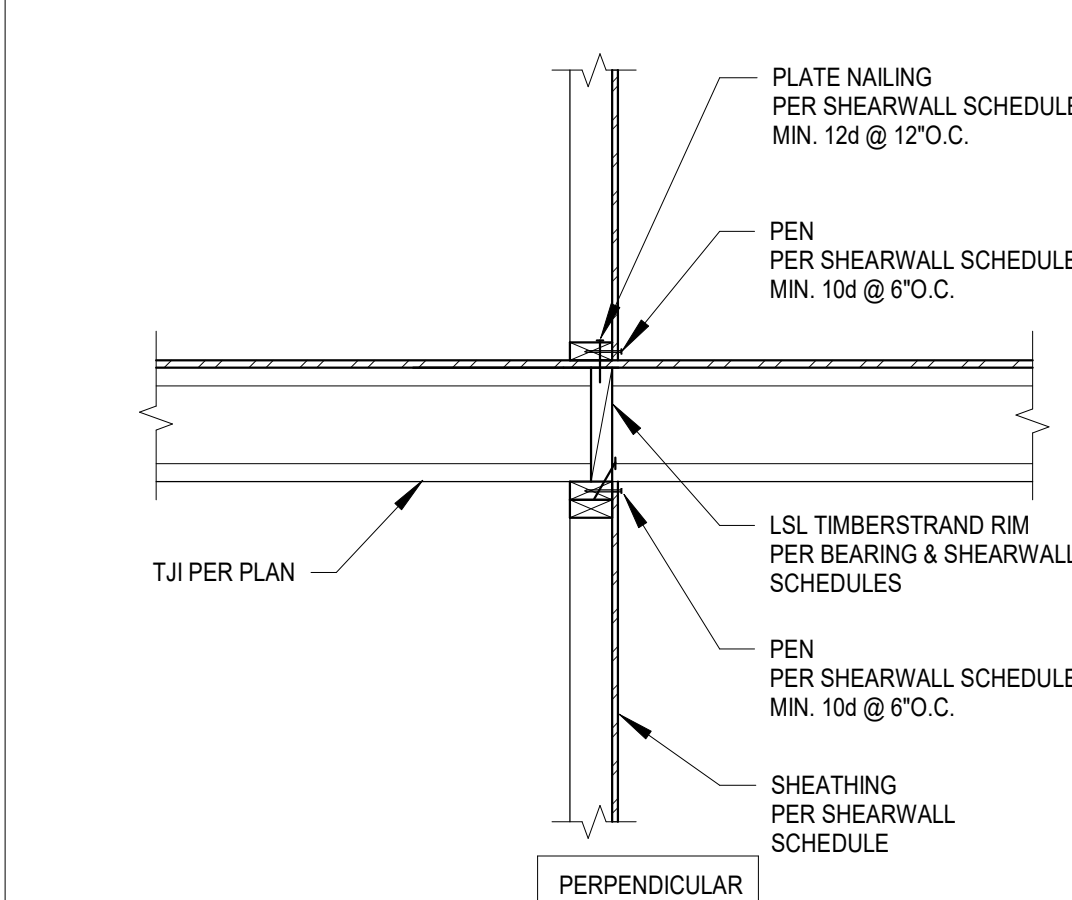
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1 TYPICAL EXTERIOR WALL TO FRAMING



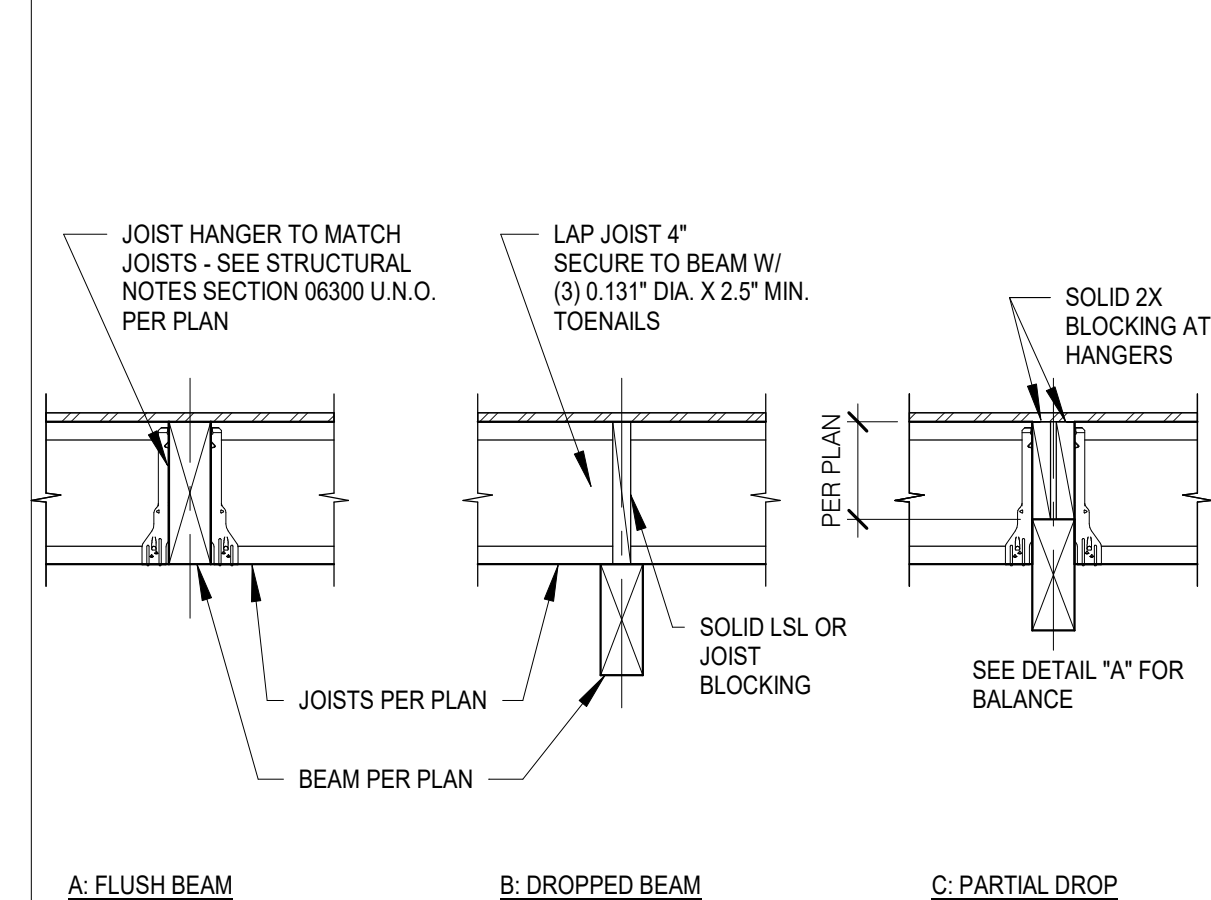
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2 TYPICAL EXTERIOR WALL TO FRAMING



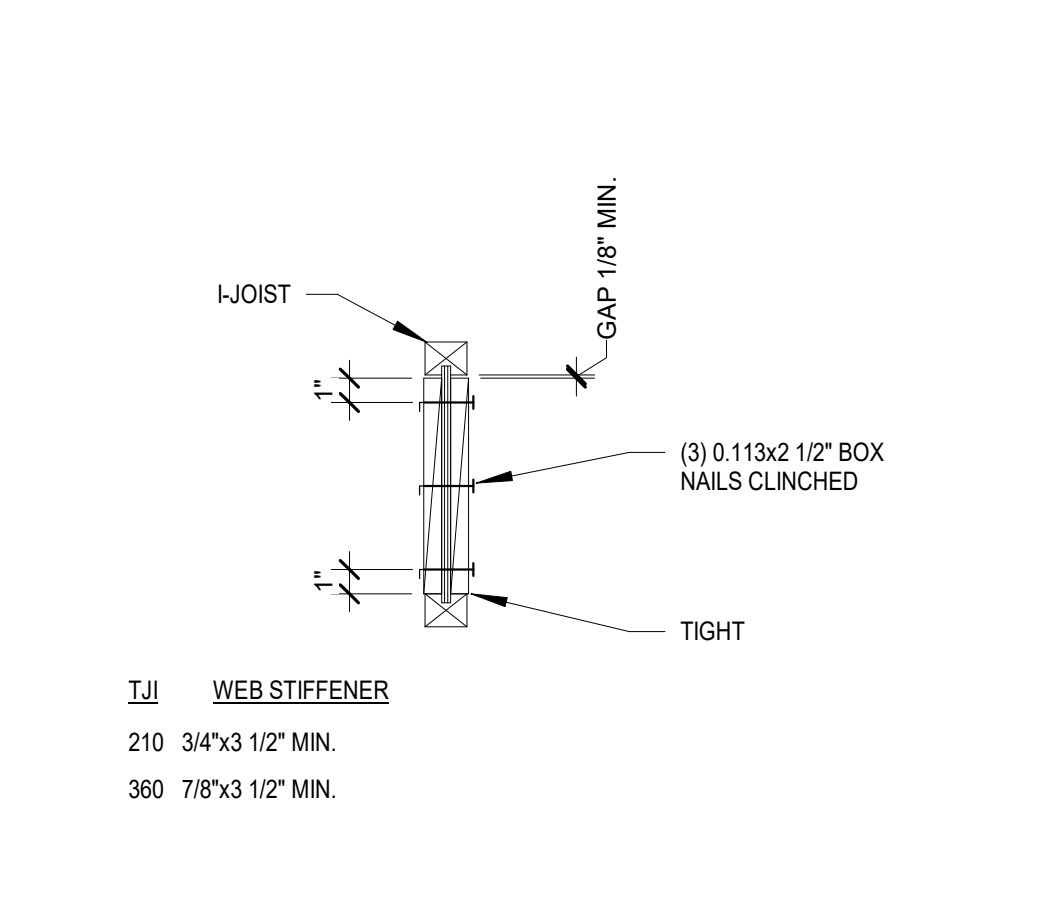
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3 TYPICAL INTERIOR WALL TO FRAMING



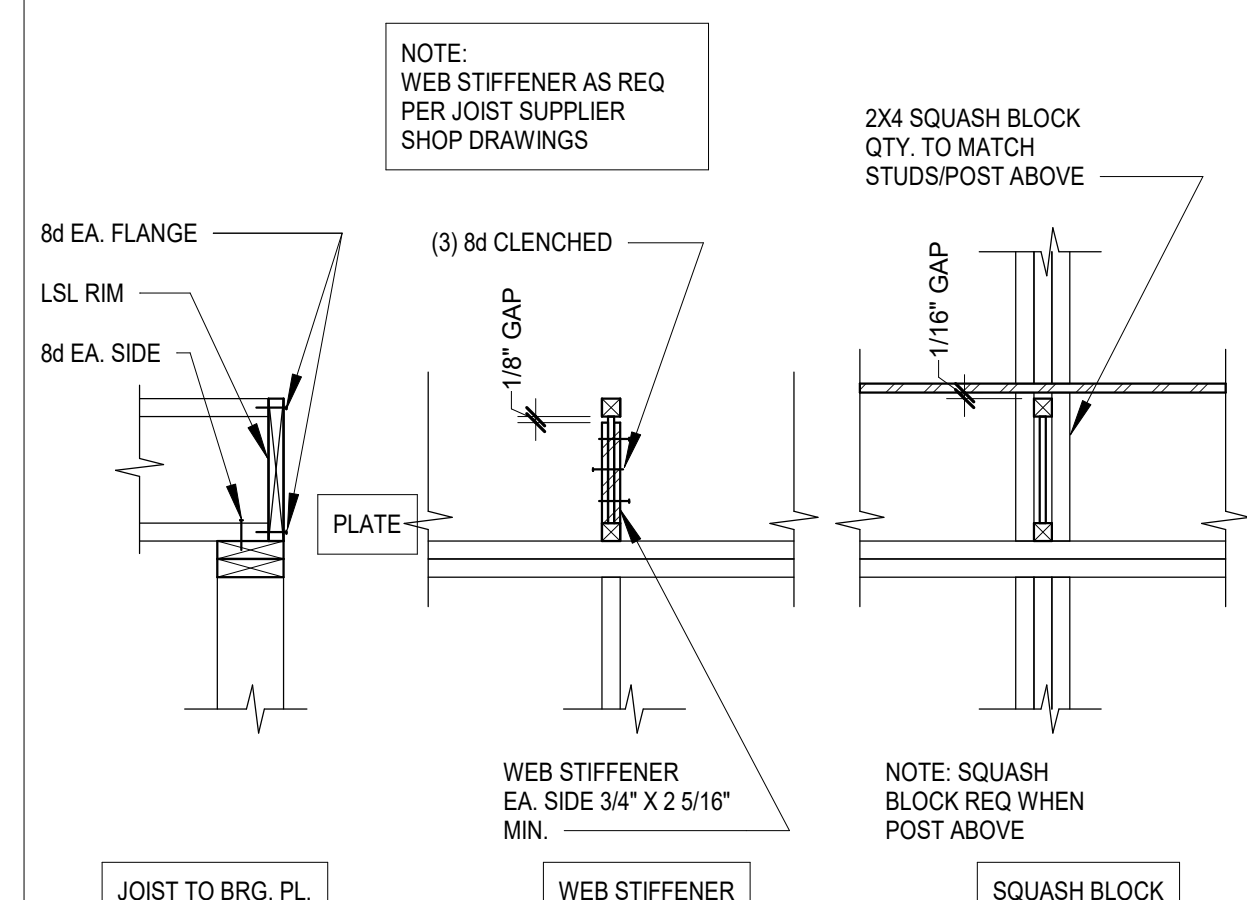
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4 TYPICAL INTERIOR WALL TO FRAMING



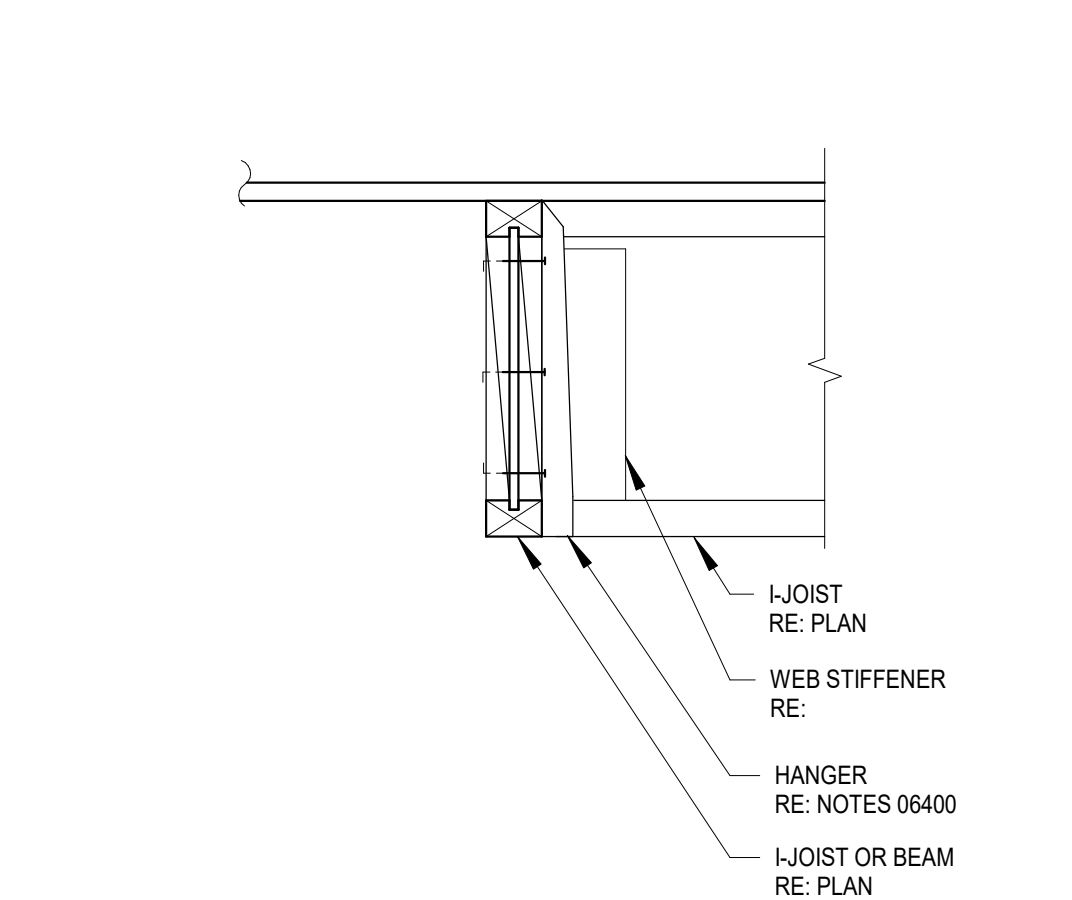
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5 TYPICAL FRAMING TO BEAM



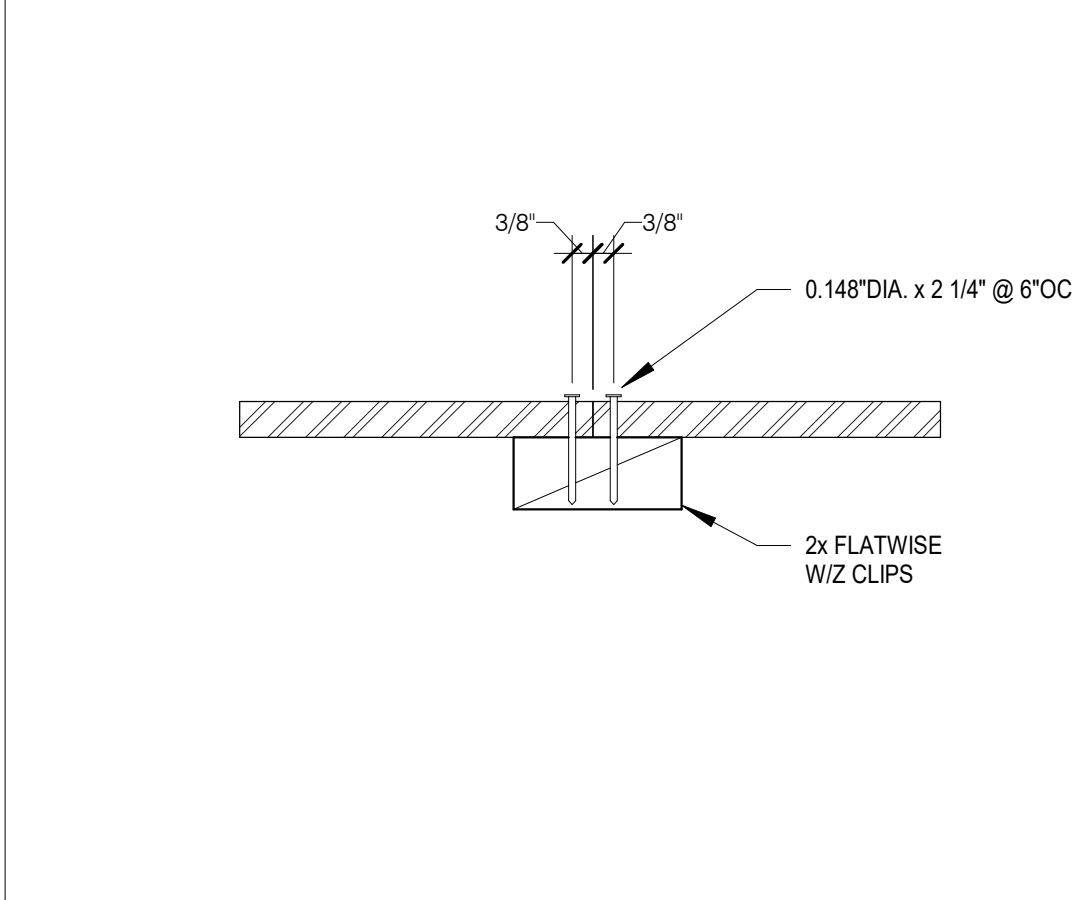
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6 TYPICAL WEB STIFFENER ATTACHMENT



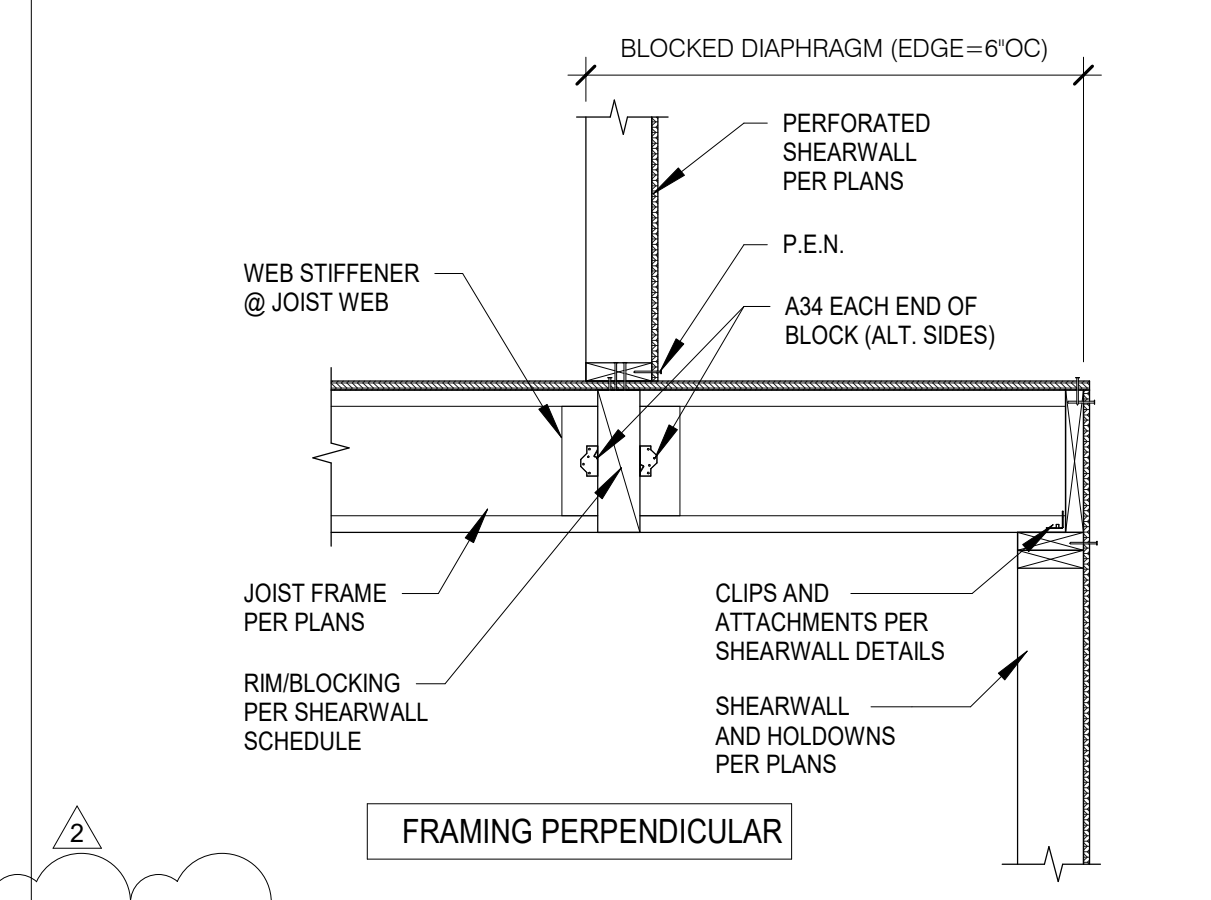
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7 I-JOIST NAILING AT BEARING



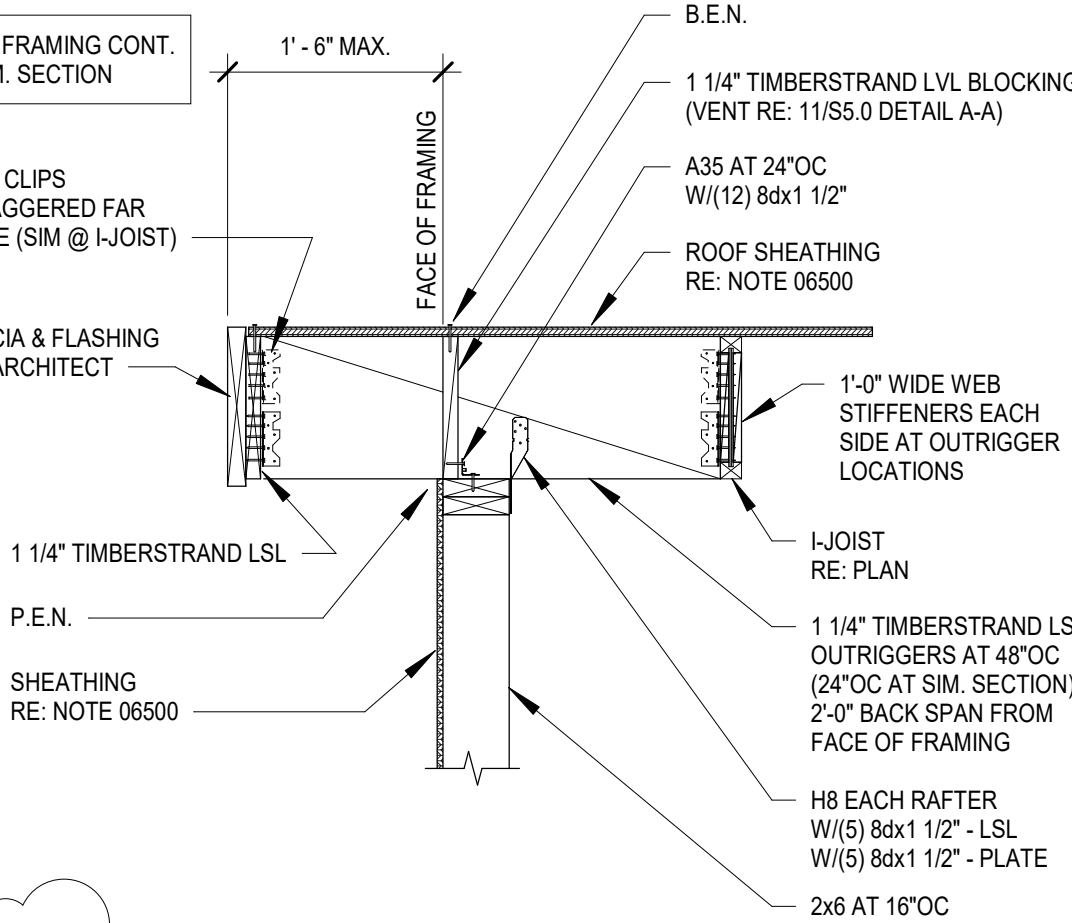
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8 TYPICAL I-JOIST HANGER



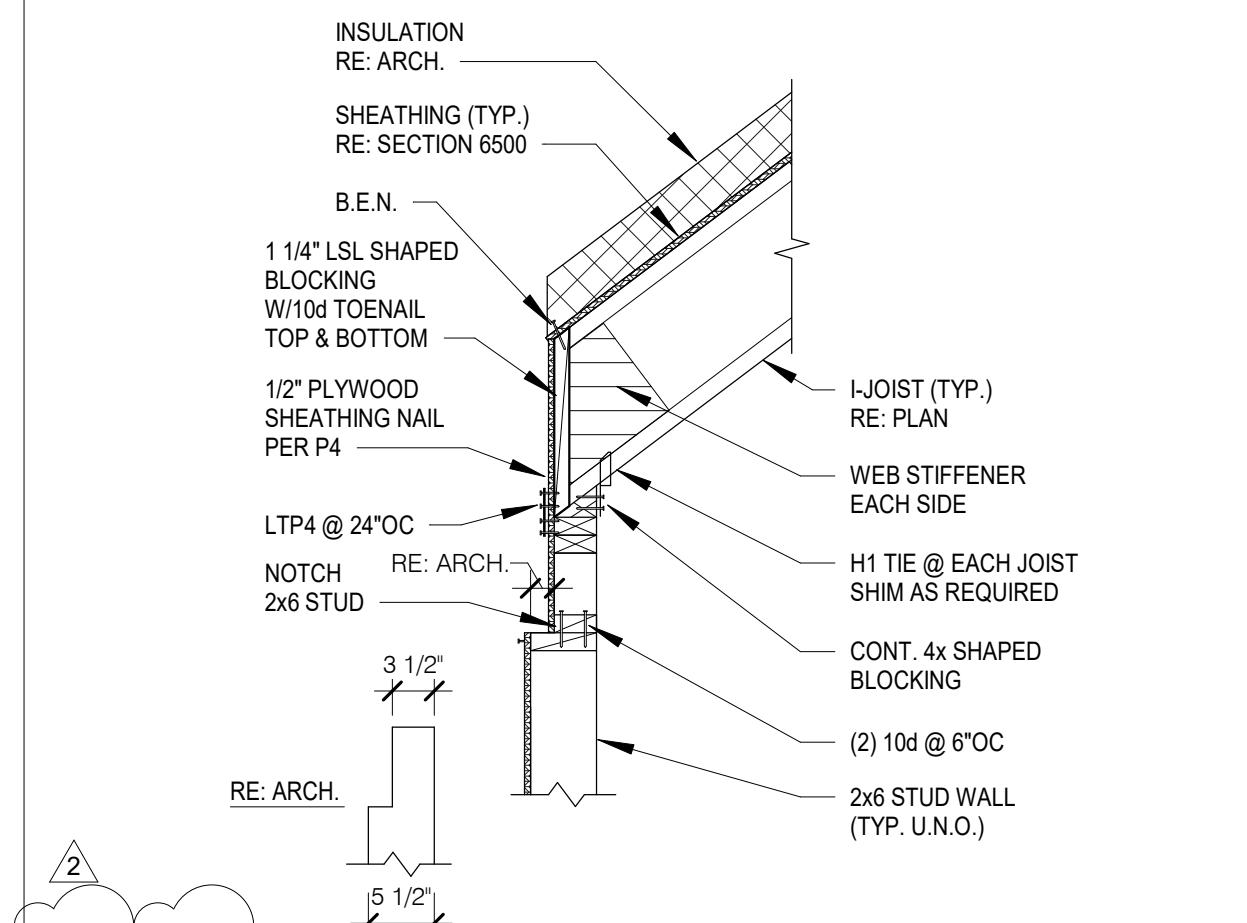
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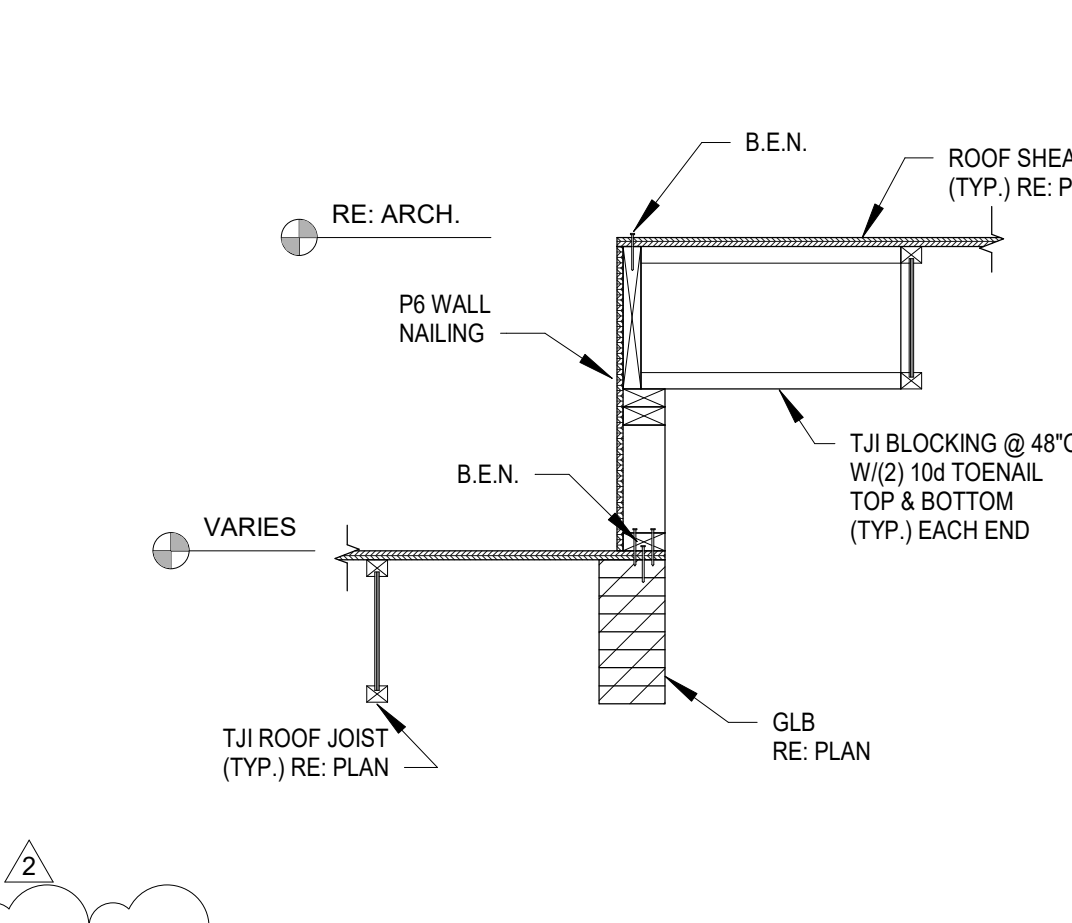
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10 SECTION



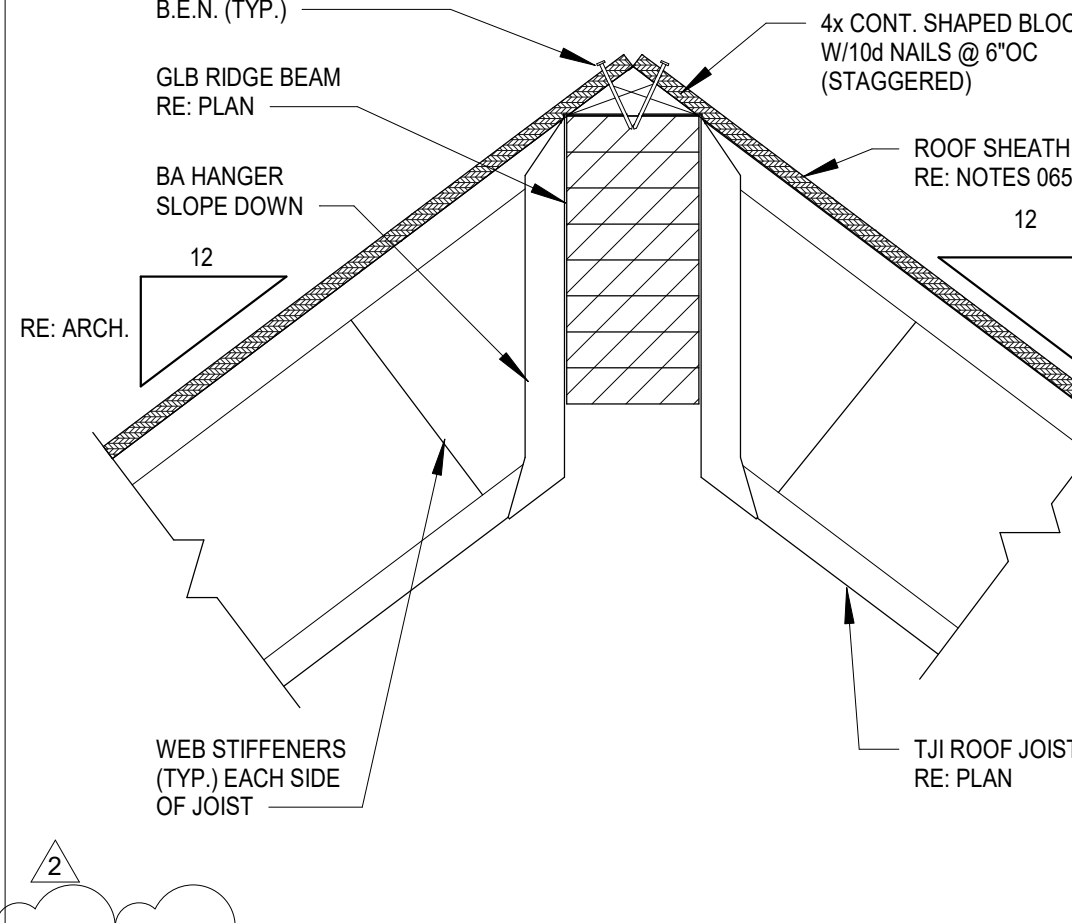
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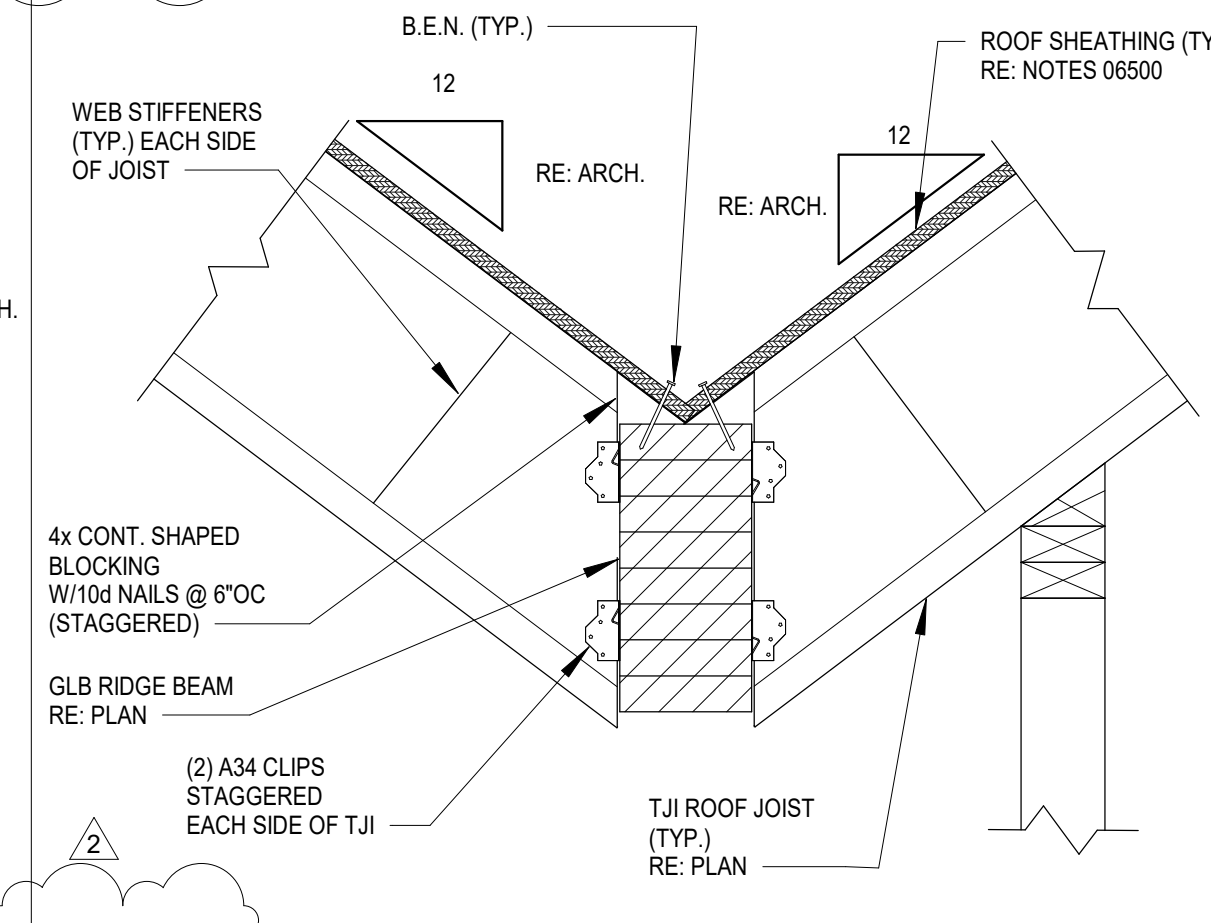
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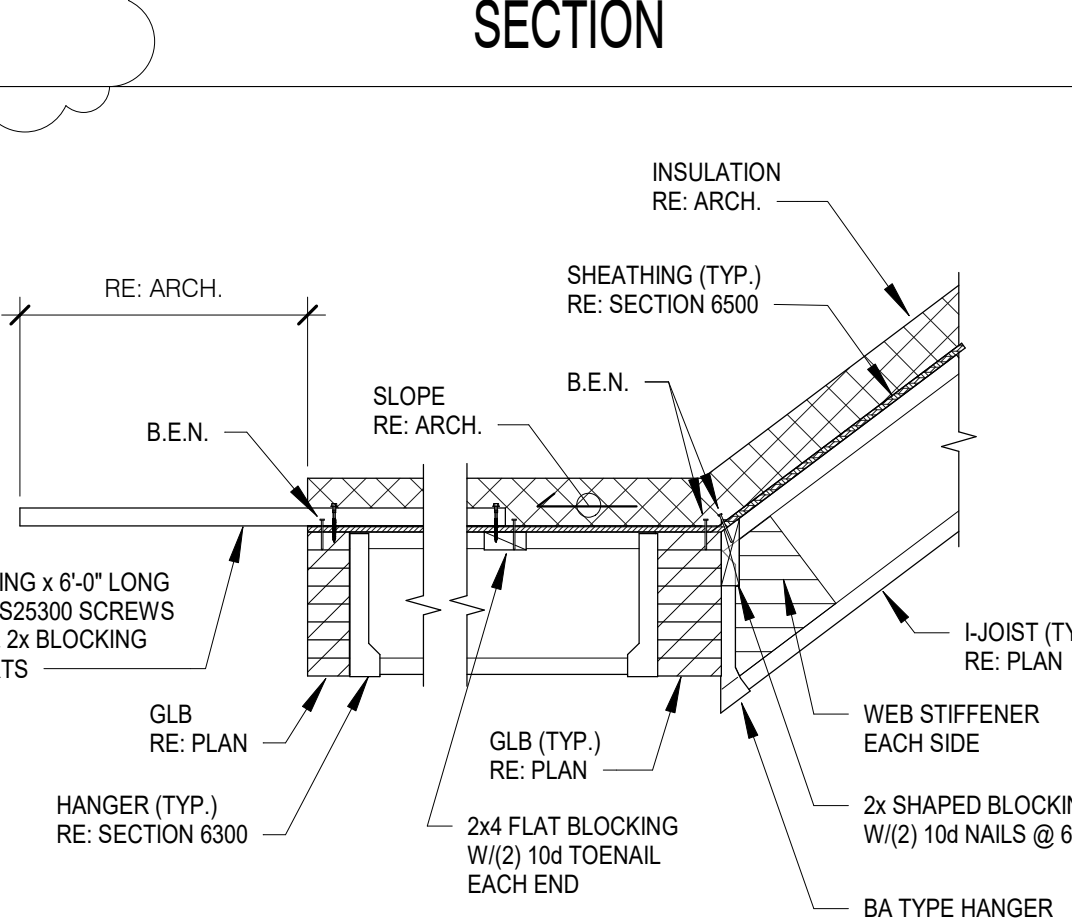
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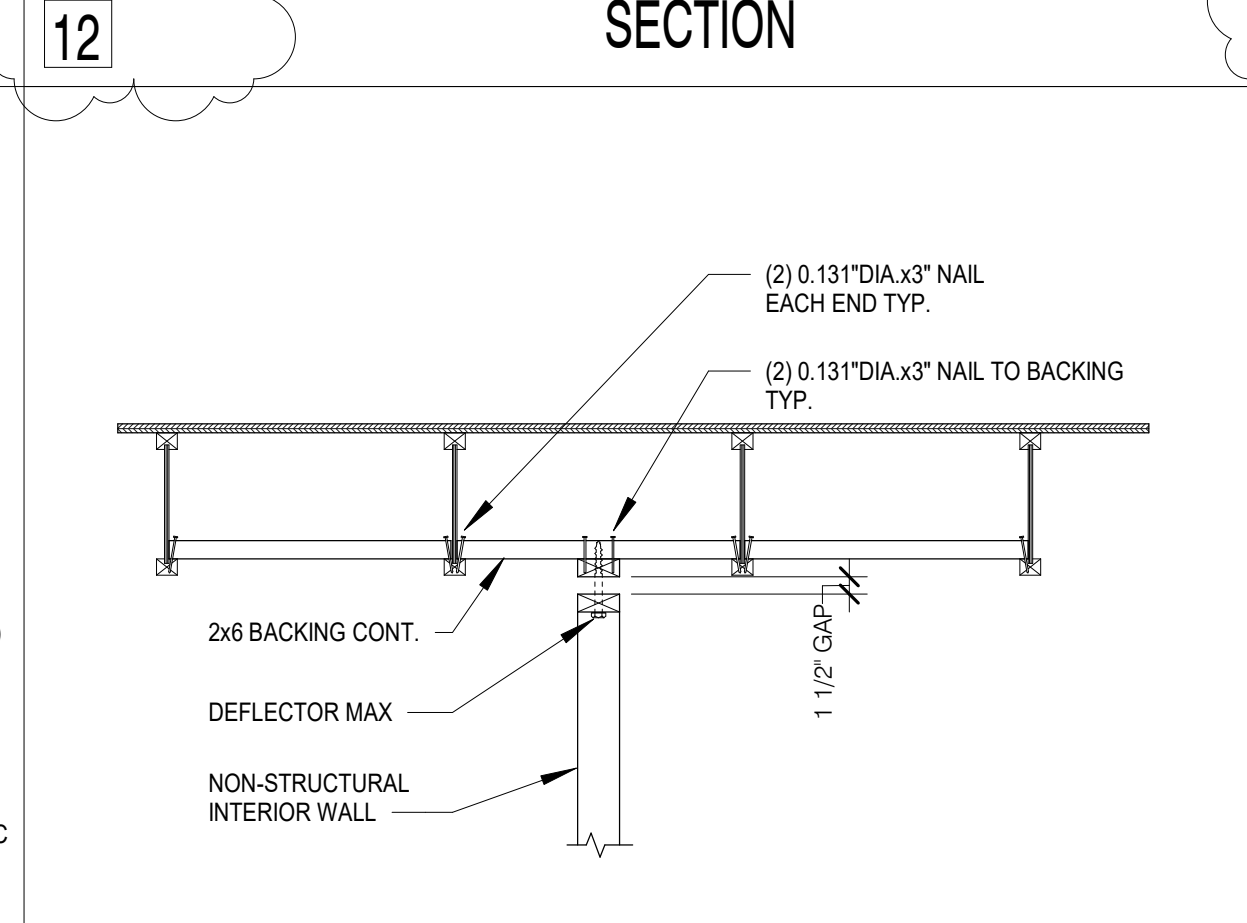
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14 SECTION



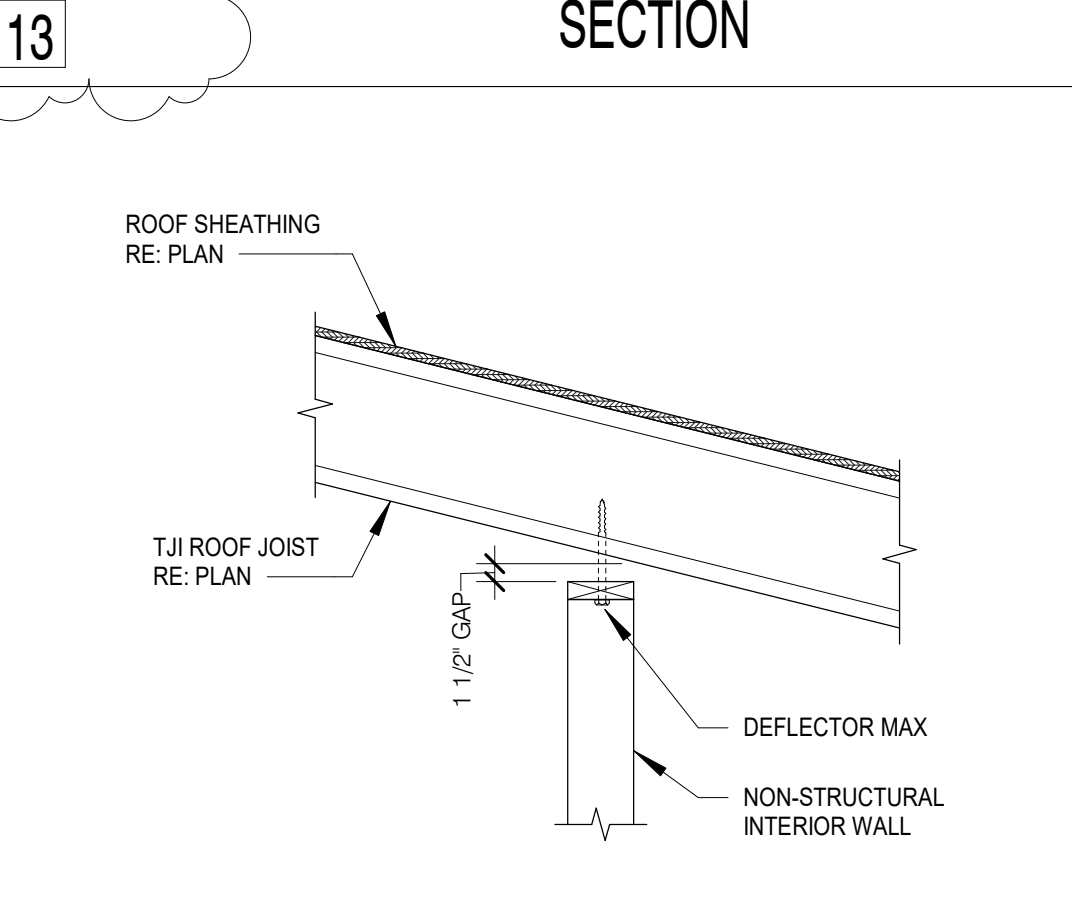
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15 SECTION



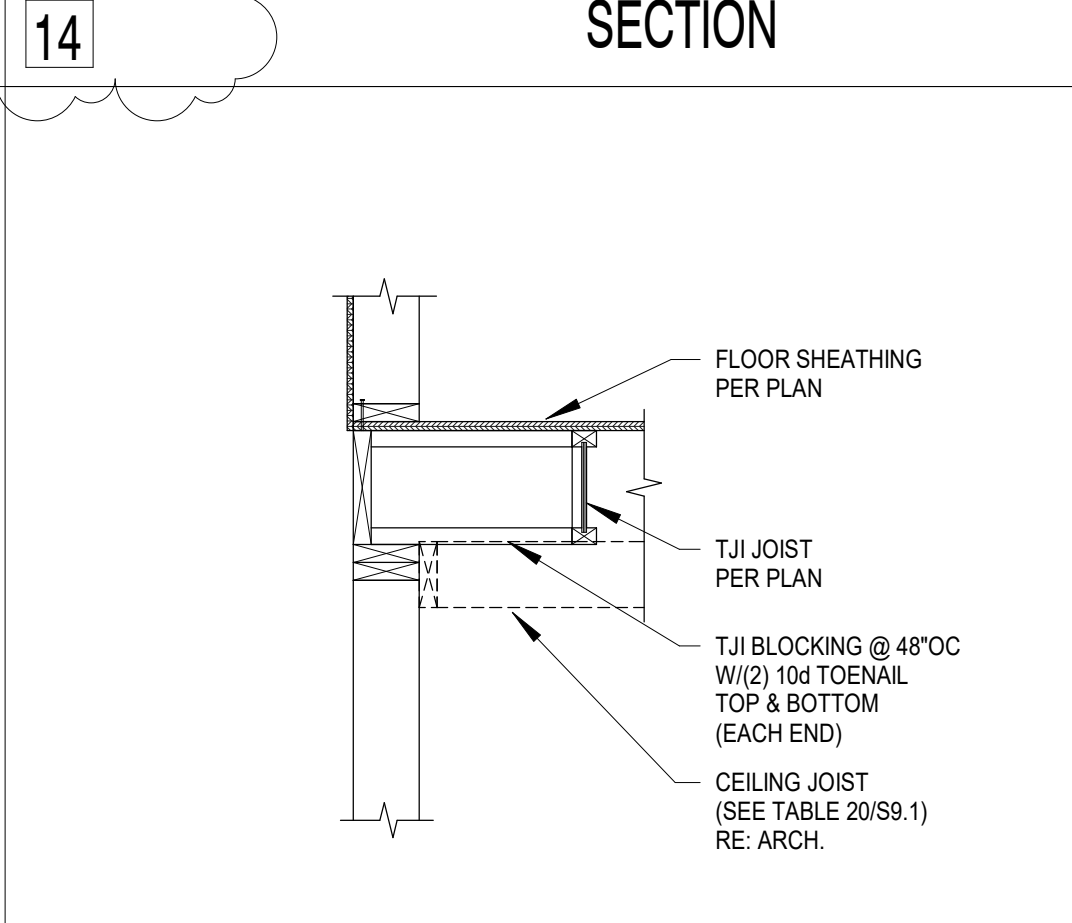
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16 SECTION



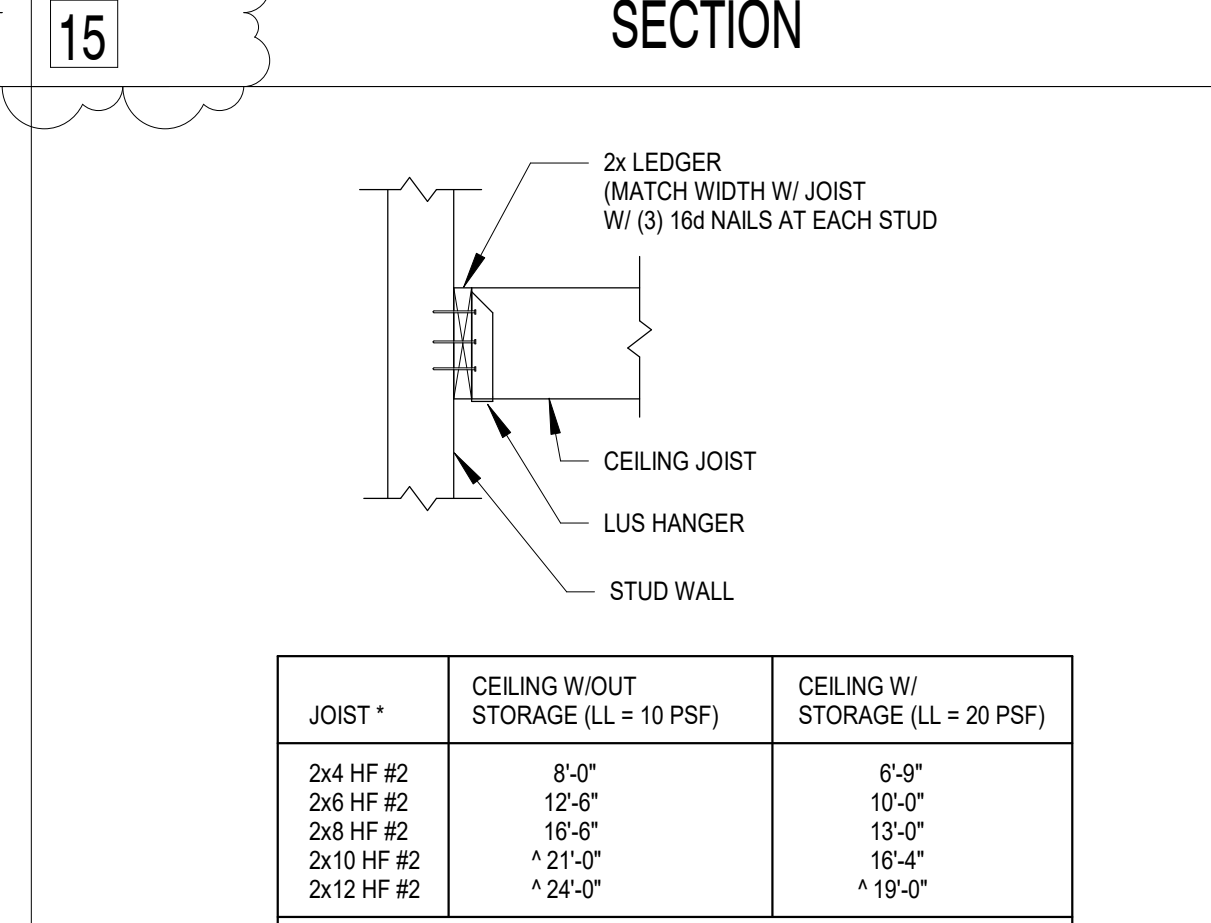
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17 TYPICAL INTERIOR PARTITION AT ROOF



SCALE: 3/4" = 1'-0"  
18 TYPICAL INTERIOR PARTITION AT ROOF



SCALE: 3/4" = 1'-0"  
19 TYPICAL BLOCKING AT CEILING JOIST



SCALE: 3/4" = 1'-0"  
20 CEILING JOIST SPAN TABLE

JOIST *	CEILING W/OUT STORAGE (LL = 10 PSF)	CEILING W/ STORAGE (LL = 20 PSF)
2x4 HF #2	8'-0"	6'-9"
2x6 HF #2	12'-6"	10'-0"
2x8 HF #2	16'-6"	13'-0"
2x10 HF #2	^21'-0"	16'-4"
2x12 HF #2	^24'-0"	^19'-0"

\* ALL JOIST SPACED AT 24"OC  
^ BLOCKING AT 3RD POINTS.

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06/11/20

DATE: 03.16.2021  
REVISION: RESPONSE TO CITY COMMENTS

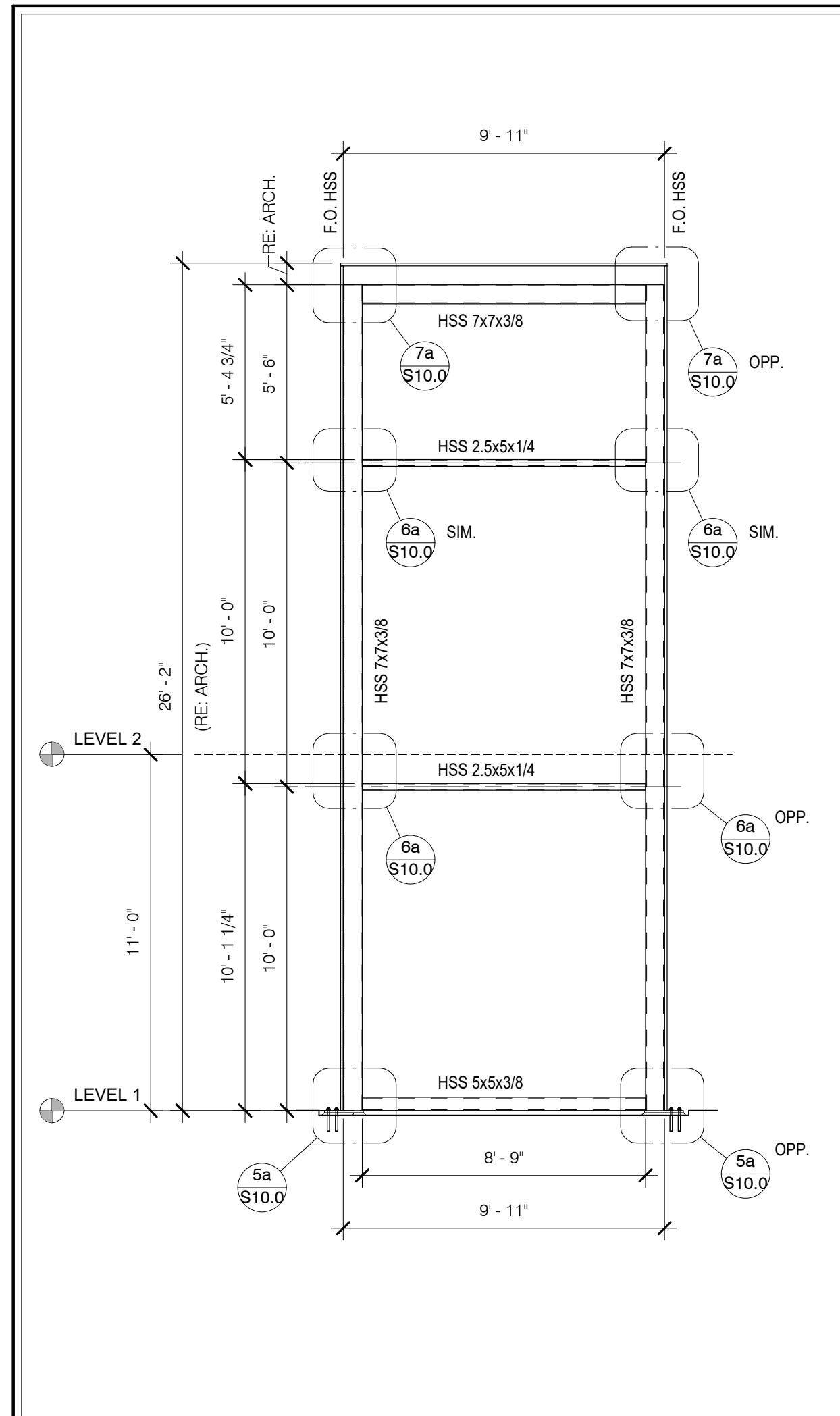
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JOB #: 20035  
DESIGNER: Author  
CAD: As indicated  
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KEY ISSUE DATES:  
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CD: DD  
PD: DD  
PERMIT: 06.11.2020  
OTHER: BD

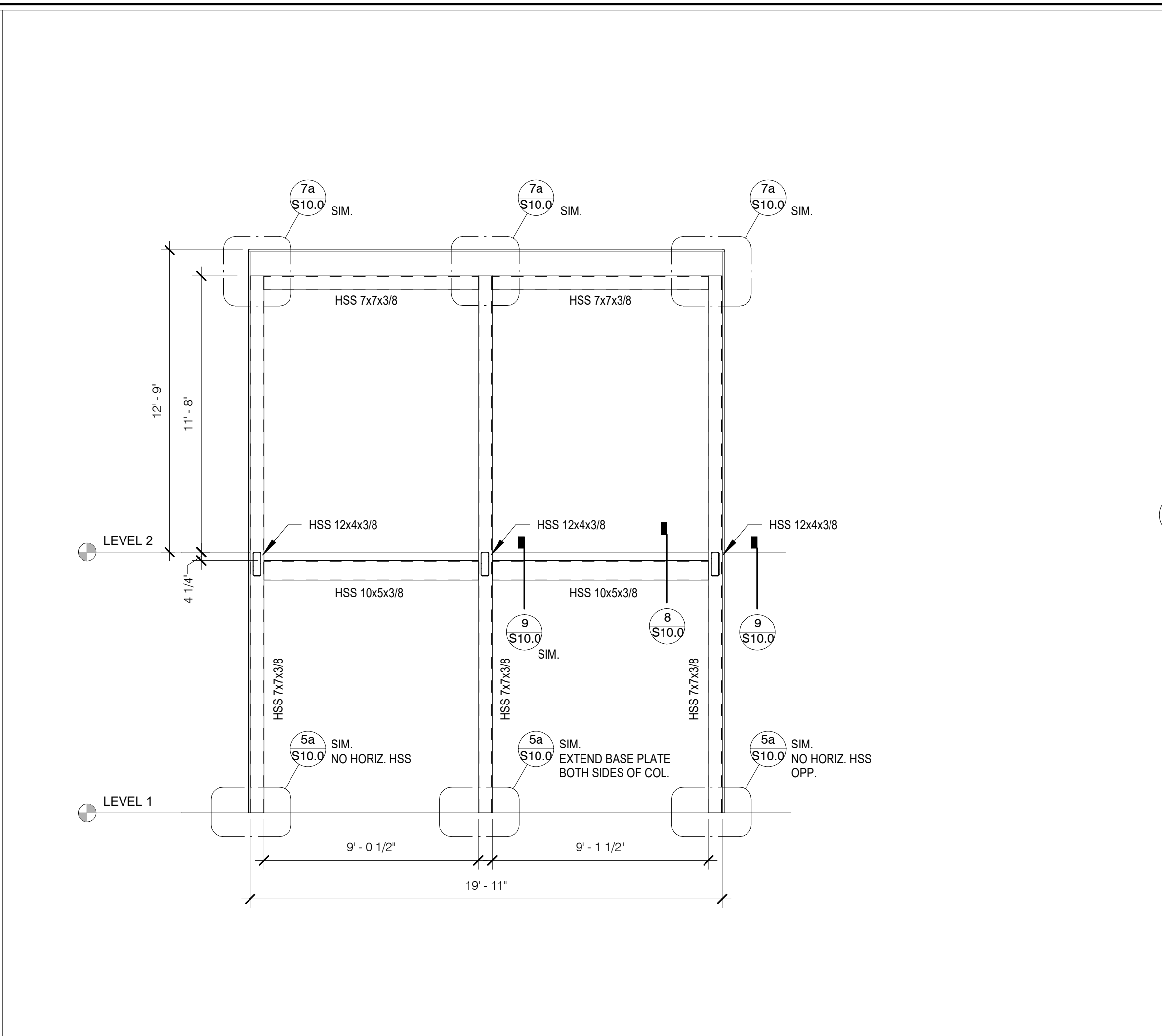
**Floor TJI Wood Framing Details**  
Foo Residence  
3453 74th Ave SE  
Mercer Island, WA 98040

**S9.1**

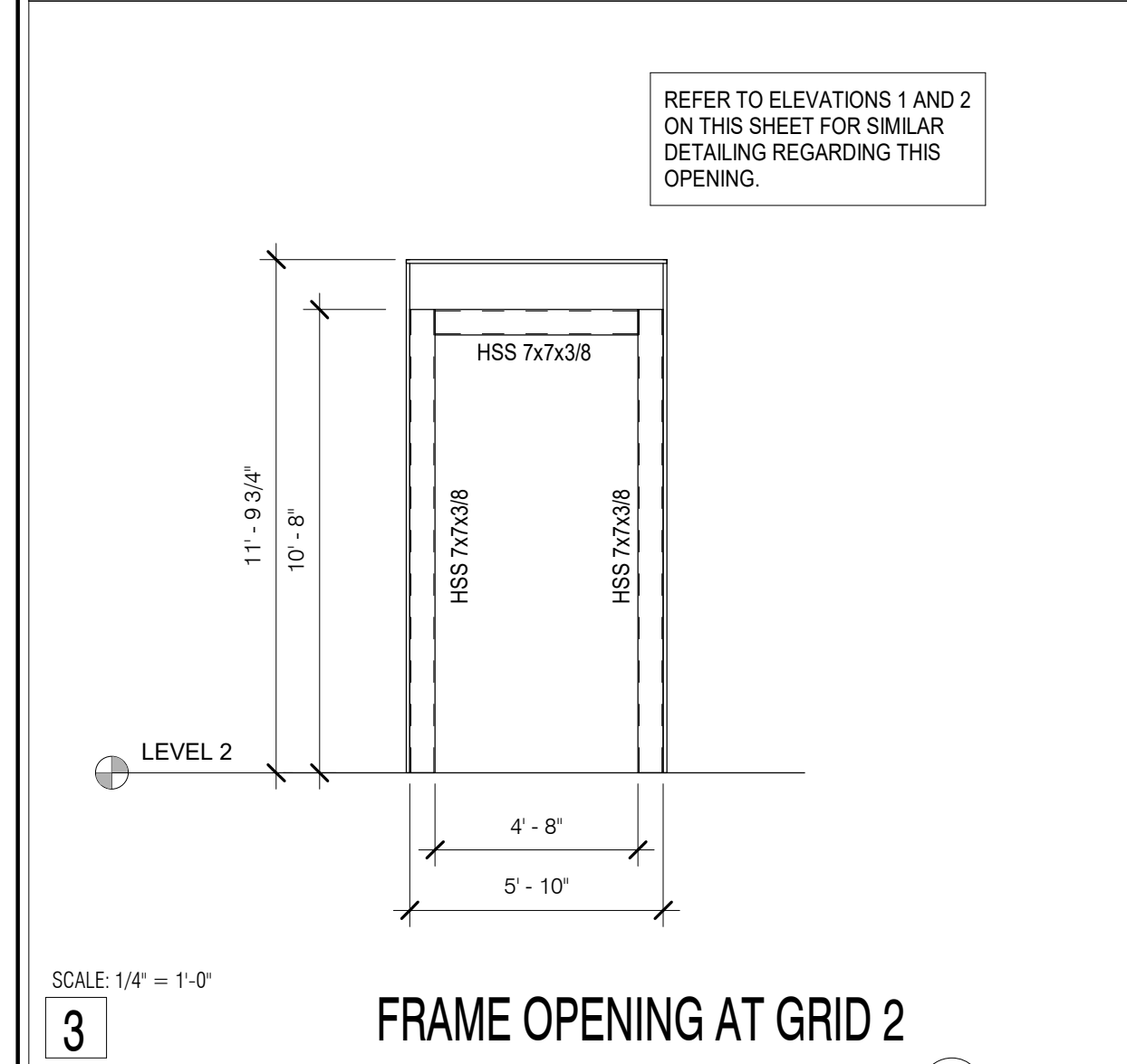




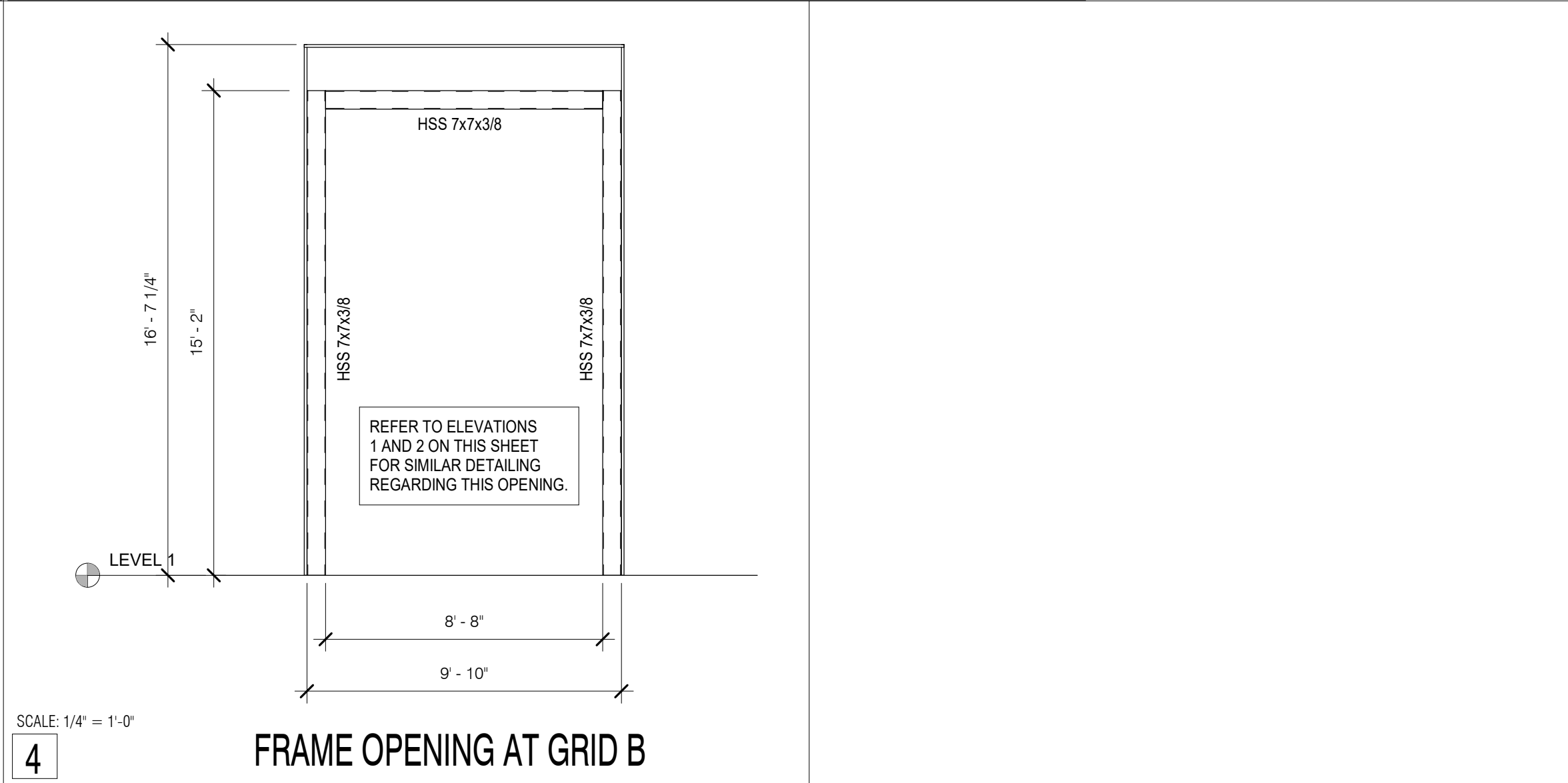
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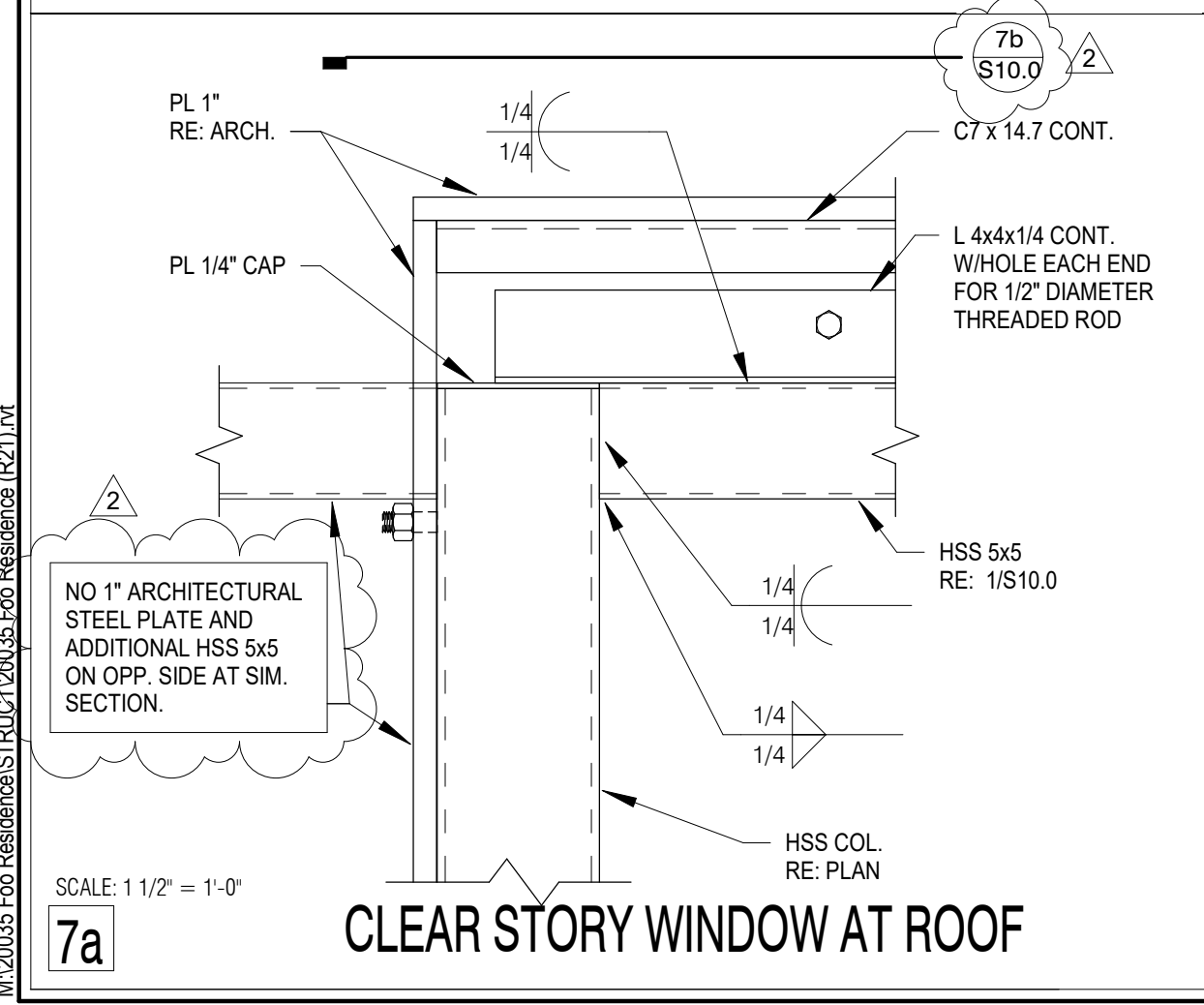
2 FRAME OPENING AT GRID 6  
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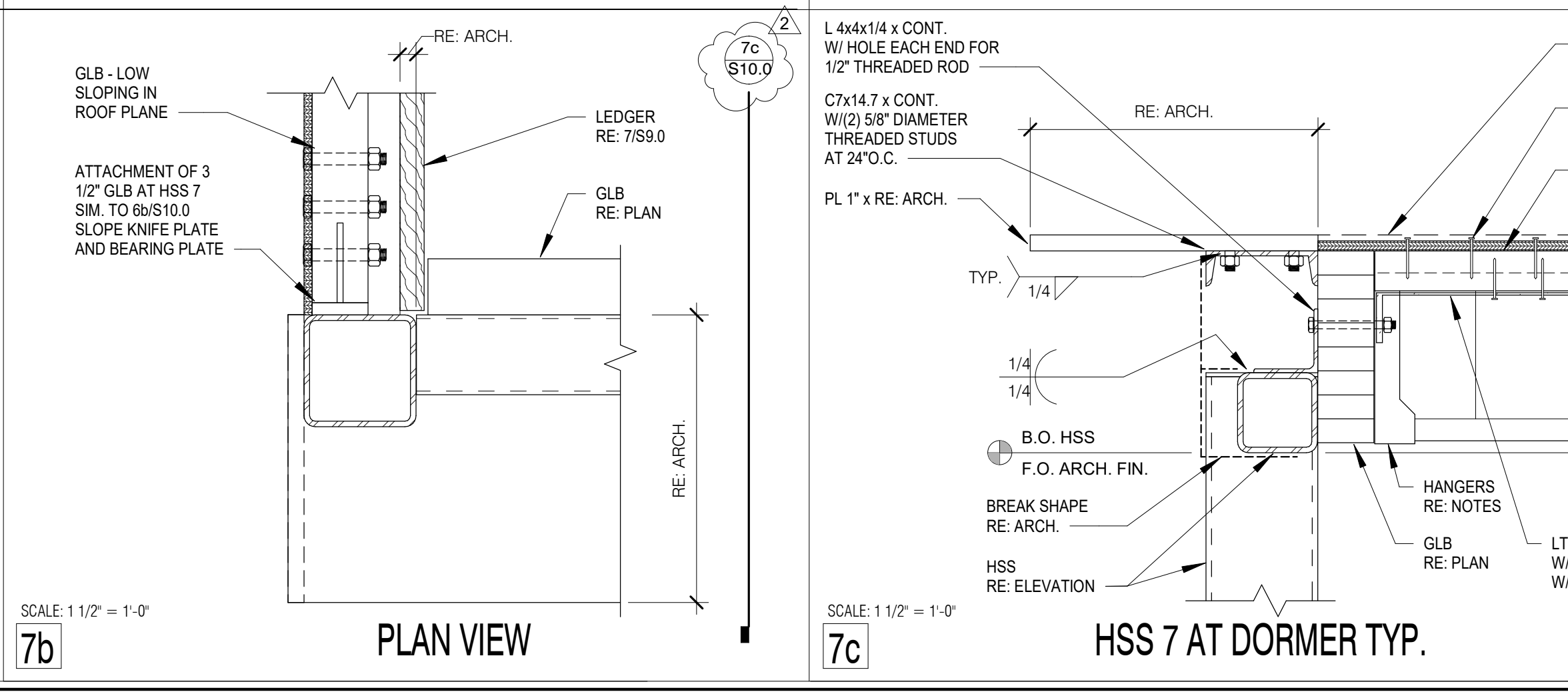
3 FRAME OPENING AT GRID 2  
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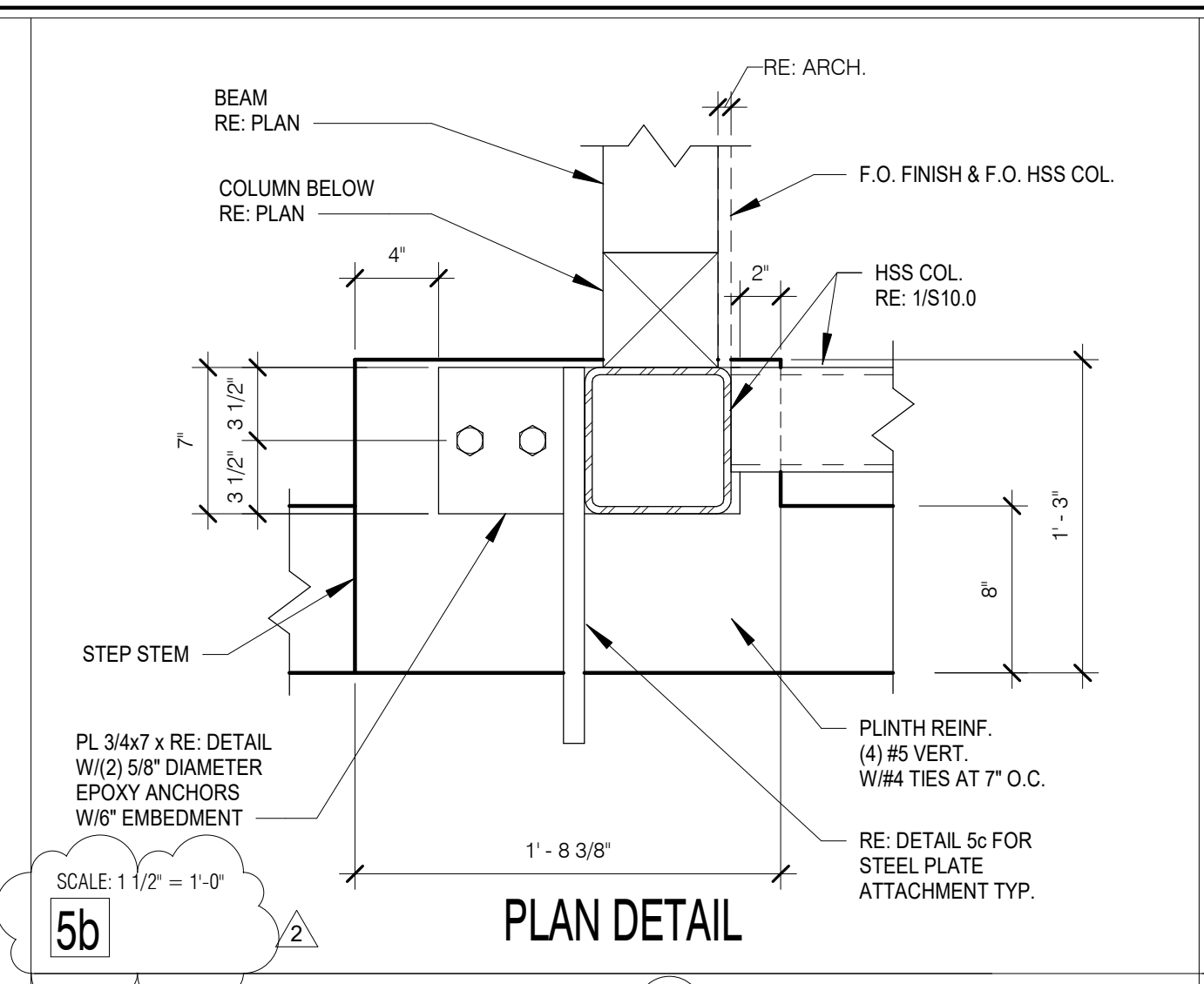
4 FRAME OPENING AT GRID B  
SCALE: 1/4" = 1'-0"



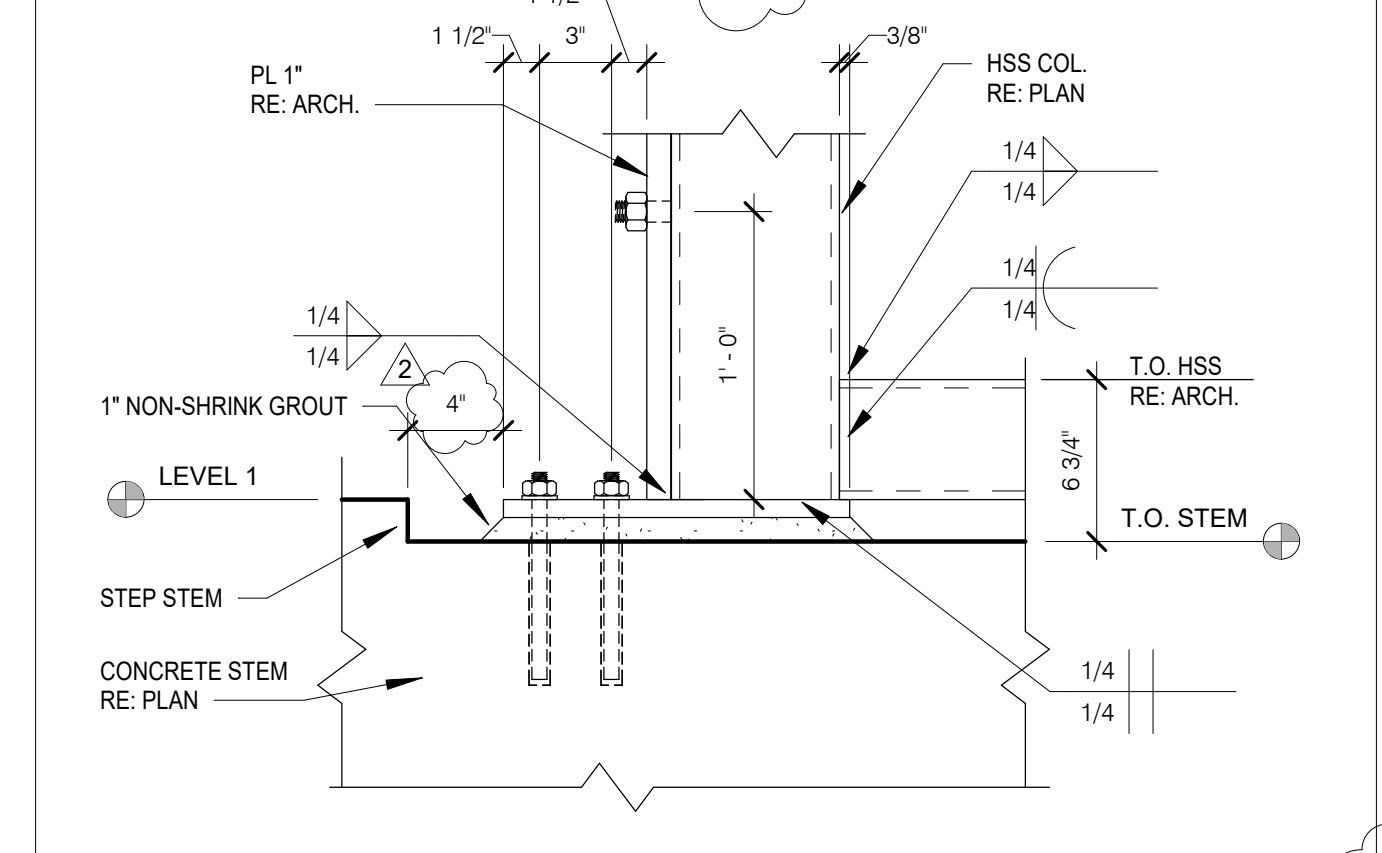
7a CLEAR STORY WINDOW AT ROOF  
SCALE: 1 1/2" = 1'-0"



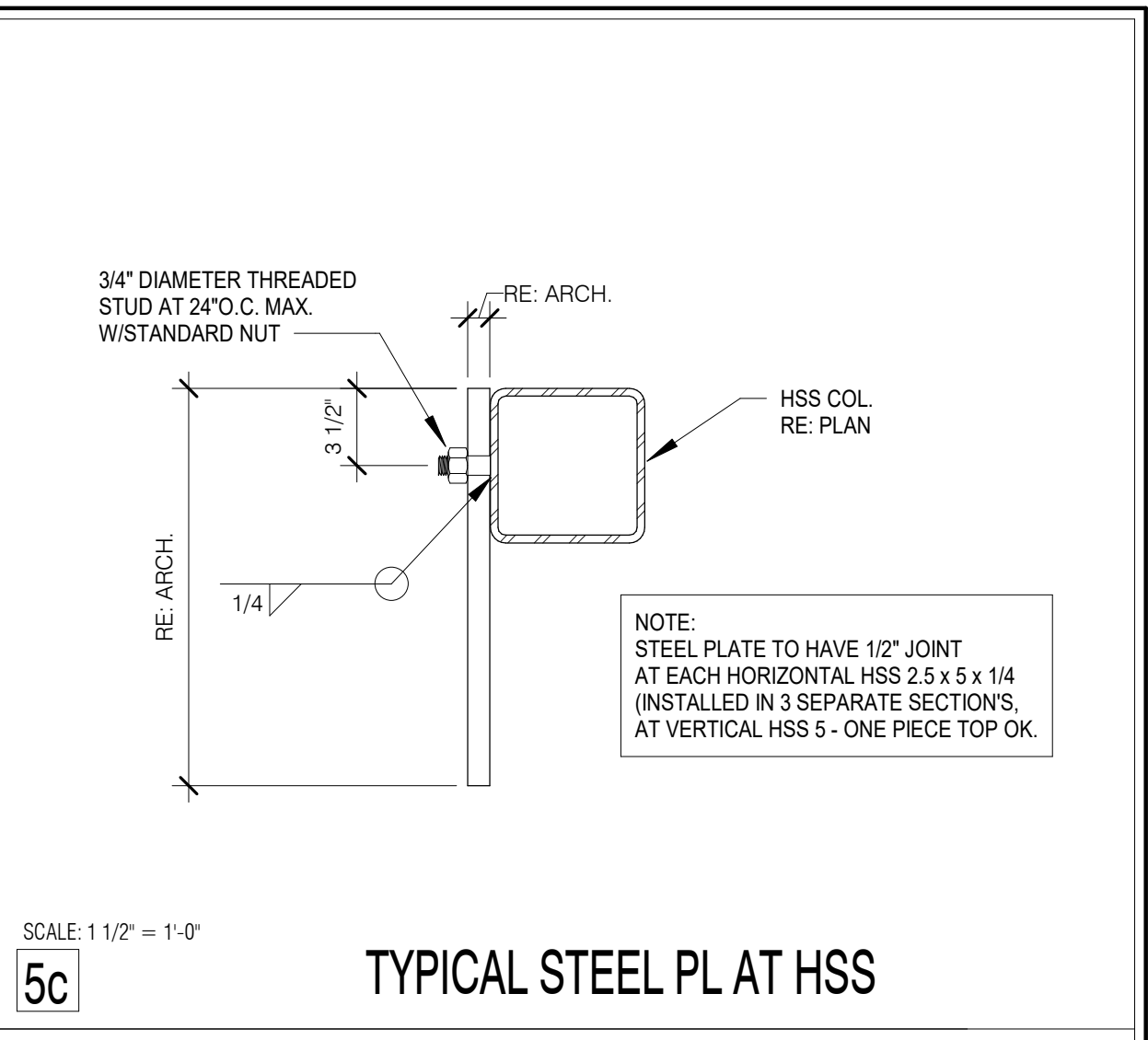
7c HSS 7 AT DORMER TYP.  
SCALE: 1 1/2" = 1'-0"



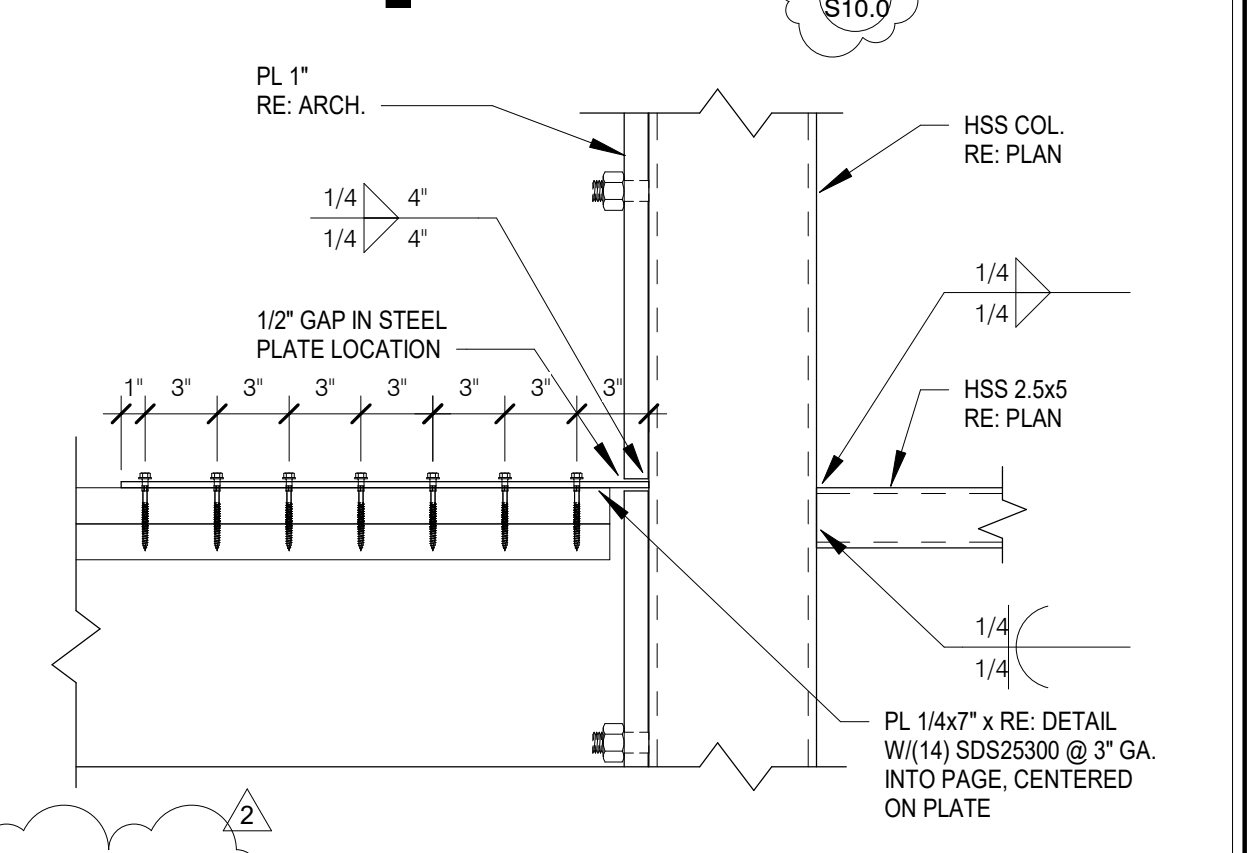
5b PLAN DETAIL  
SCALE: 1 1/2" = 1'-0"



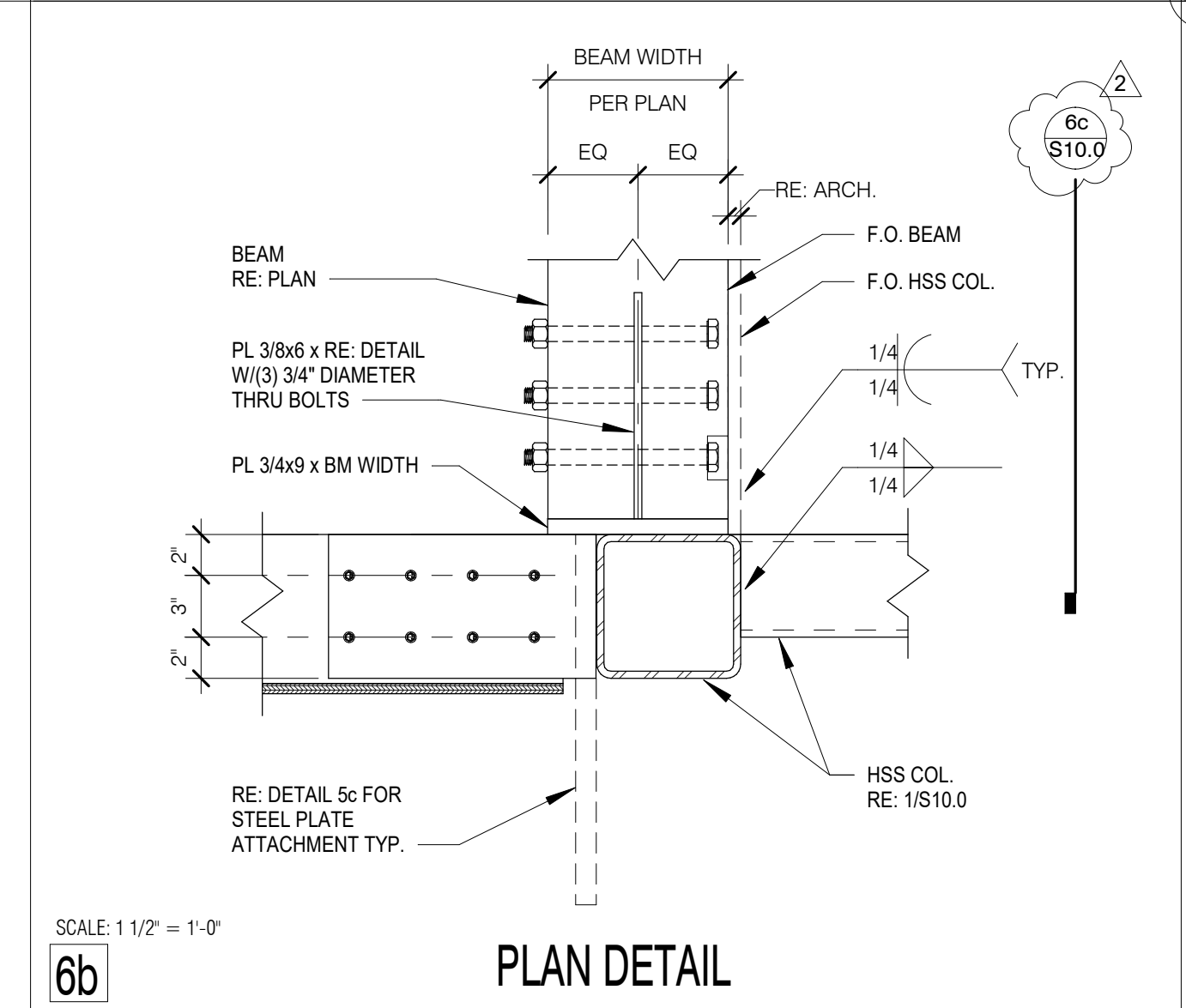
5a CLEAR STORY WINDOW AT LEVEL 1  
SCALE: 1 1/2" = 1'-0"



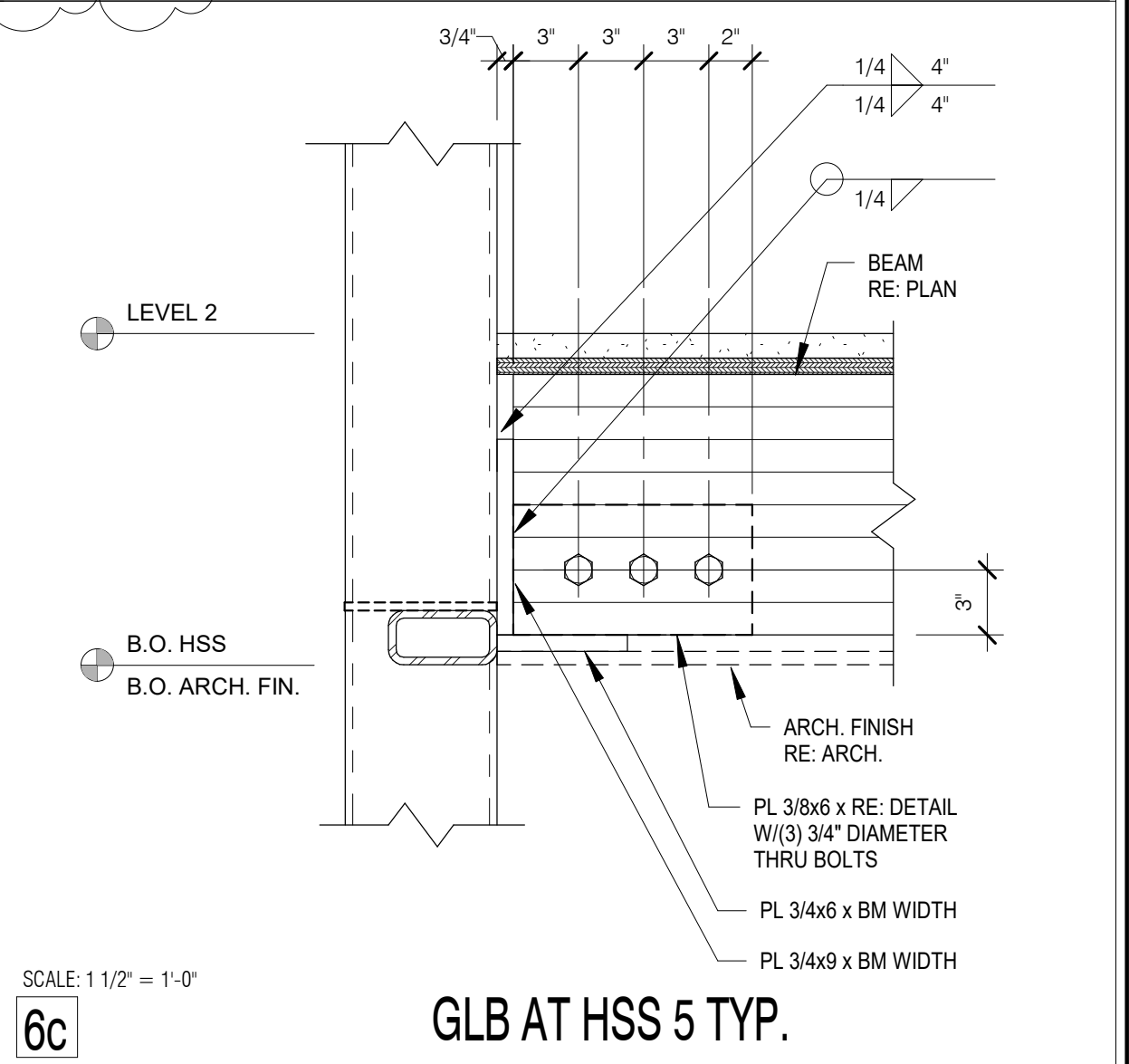
5c TYPICAL STEEL PL AT HSS  
SCALE: 1 1/2" = 1'-0"



6a CLEAR STORY WINDOW AT LEVEL 2  
SCALE: 1 1/2" = 1'-0"



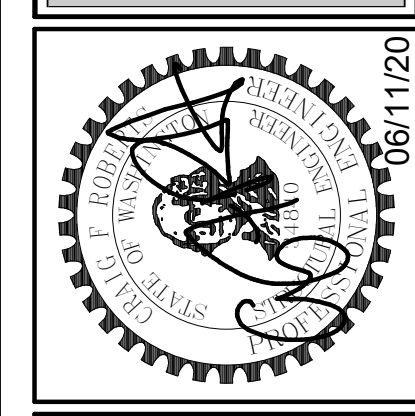
6b PLAN DETAIL  
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6c GLB AT HSS 5 TYP.  
SCALE: 1 1/2" = 1'-0"

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1	RESPONSE TO CITY COMMENTS	01.08.2021
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JOB #:	20035
DESIGNER:	J.M.A.
CHECKER:	J.M.A.
SCALE:	As Indicated
KEY ISSUE DATES:	
SD:	DD
CD:	DD
PD:	DD
PERMIT:	06.11.2020
OTHER:	DD

**Steel Framing Details**  
F00 Residence  
3453 74th Ave SE  
Mercer Island, WA 98040

**S10.0**











**5800 SLRS - STEEL CONNECTIONS, JOINTS AND FASTENERS**

CONNECTIONS, JOINTS AND FASTENERS THAT ARE PART OF THE SEISMIC LOAD RESISTING SYSTEM (SLRS) AS INDICATED IN THE CONSTRUCTION DOCUMENTS SHALL COMPLY WITH AISC 360-10 SPECIFICATION CHAPTER J AND WITH THE ADDITIONAL REQUIREMENTS BELOW.

**STEEL BOLTED JOINTS**

ALL BOLTS SHALL BE PRETENSIONED HIGH STRENGTH BOLTS AND SHALL MEET THE REQUIREMENTS FOR SLIP-CRITICAL FAYING SURFACES IN ACCORDANCE WITH AISC 360-10 SPECIFICATION SECTION J3.8 WITH A CLASS A SURFACE.

THE FAYING SURFACES FOR END PLATE MOMENT CONNECTIONS ARE PERMITTED TO BE COATED WITH COATINGS NOT TESTED FOR SLIP RESISTANCE OR WITH COATINGS WITH A SLIP COEFFICIENT LESS THAN THAT OF A CLASS A FAYING SURFACE.

BOLTS SHALL BE INSTALLED IN STANDARD HOLES OR IN SHORT-SLOTTED HOLES PERPENDICULAR TO THE APPLIED LOAD. FOR BRACE DIAGONALS, OVERSIZE HOLES SHALL BE PERMITTED WHEN THE CONNECTION IS DESIGNED AS A SLIP CRITICAL JOINT AND THE OVERSIZED HOLE IS IN ONE PLY ONLY. ALTERNATE HOLE TYPES AS SPECIFIED PER AISC 358-05 "PREQUALIFIED CONNECTIONS FOR SPECIAL AND INTERMEDIATE STEEL MOMENT FRAMES FOR SEISMIC APPLICATIONS" ARE ACCEPTABLE AS NOTED IN THE CONSTRUCTION DOCUMENTS.

**DEMAND CRITICAL WELDS**

WHERE WELDS ARE SPECIFIED AS DEMAND CRITICAL WELDS (DCW) WITHIN THE CONSTRUCTION DOCUMENTS THEY SHALL BE MADE WITH A FILLER METAL CAPABLE OF PROVIDING A MINIMUM CHARPY V-NOTCH (CVN) TOUGHNESS OF 20 FT-LB AT -20° F AS DETERMINED BY THE APPROPRIATE AWS CLASSIFICATION TEST METHOD OR MANUFACTURER CERTIFICATION, AND 40 FT-LB AT 70° F AS DETERMINED BY AISC 341-05 APPENDIX X OR OTHER APPROVED METHOD, WHEN THE STEEL FRAME IS NORMALLY ENCLOSED AND MAINTAINED AT A TEMPERATURE OF 50° F OR HIGHER. SMAW ELECTRODES CLASSIFIED IN AWS A5.1 AS E7018 OR E7018-X, SMAW ELECTRODES CLASSIFIED IN AWS A5.5 AS E7018-C3L OR E8018-C3, AND GMAW SOLID ELECTRODES ARE EXEMPTED FROM PRODUCTION LOT TESTING WHEN THE CVN TOUGHNESS OF THE ELECTRODE EQUALS OR EXCEEDS 20FT-LB AT A TEMPERATURE NOT EXCEEDING -20° F AS DETERMINED BY AWS CLASSIFICATION TEST METHODS. THE MANUFACTURER'S CERTIFICATE OF COMPLIANCE SHALL BE CONSIDERED SUFFICIENT EVIDENCE OF MEETING THIS REQUIREMENT.

**MINIMUM DCW AT MOMENT FRAMES:**

DEMAND CRITICAL WELDS SHALL BE PROVIDED AS A MINIMUM AT SPECIAL AND INTERMEDIATE MOMENT FRAMES AT THE FOLLOWING CJP GROOVE WELDS:

1. WELDS OF BEAM FLANGES TO COLUMNS
2. WELDS OF SINGLE PLATE SHEAR CONNECTIONS TO COLUMNS
3. WELDS OF BEAM WEBS TO COLUMNS
4. COLUMN SPLICE WELDS, INCLUDING COLUMN BASES

DEMAND CRITICAL WELDS AS A MINIMUM SHALL BE PROVIDED AT ORDINARY MOMENT FRAMES PER ITEMS 1, 2, AND 3 ABOVE.

**MINIMUM DCW AT ECCENTRICALLY BRACED FRAMES:**

1. CJP GROOVE WELDS BETWEEN LINK BEAMS AND COLUMNS
2. WELDS THAT JOIN THE WEB PLATE TO FLANGE PLATES IN BUILT UP EBF LINK BEAMS
3. CJP GROOVE WELDS AT COLUMN SPLICES

**PROTECTED ZONE**

WHERE A "PROTECTED ZONE" IS SPECIFIED WITHIN THE CONSTRUCTION DOCUMENTS IT SHALL COMPLY WITH THE FOLLOWING:

1. WITHIN THE PROTECTED ZONE, DISCONTINUITIES CREATED BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING AND THERMAL CUTTING SHALL BE REPAIRED AS REQUIRED BY THE ENGINEER OF RECORD.
2. WELDED SHEAR STUDS AND DECKING ATTACHMENTS THAT PENETRATE THE BEAM FLANGE SHALL NOT BE PLACED ON BEAM FLANGES WITHIN THE PROTECTED ZONE. DECKING ARCH SPOT WELDS AS REQUIRED TO SECURE DECKING SHALL BE PERMITTED.
3. WELDED, BOLTED, SCREWED OR SHOT-IN ATTACHMENTS FOR PERIMETER EDGE ANGLES, EXTERIOR FACADES, PARTITIONS, DUCT WORK, PIPING OR OTHER CONSTRUCTION SHALL NOT BE PLACED WITHIN THE PROTECTED ZONE.

**CONTINUITY PLATES AND STIFFENERS**

CORNERS OF CONTINUITY PLATES AND STIFFENERS PLACED IN THE WEBS OF ROLLED SHAPES SHALL BE CLIPPED AS DESCRIBED BELOW.

1. ALONG THE WEB THE CLIP SHALL BE DETAILED SO THAT THE CLIP EXTENDS A DISTANCE OF AT LEAST 1 1/2" BEYOND THE PUBLISHED K DETAIL DIMENSION FOR THE ROLLED SHAPE.
2. ALONG THE FLANGE THE CLIP SHALL BE DETAILED SO THAT THE CLIP DOES NOT EXTEND A DISTANCE OF 1/4" BEYOND THE PUBLISHED K1 DETAIL DIMENSION.
3. THE CLIP SHALL BE DETAILED TO FACILITATE SUITABLE WELD TERMINATIONS FOR BOTH THE FLANGE WELD AND THE WEB WELD.
4. IF A CURVED CLIP IS USED, IT SHALL HAVE A MINIMUM RADIUS OF 1/2".
5. AT THE COLUMN WEB/FLANGE JUNCTURE WELD TABS SHALL NOT BE REMOVED.

**5810 ORDINARY MOMENT FRAME (OMF)**

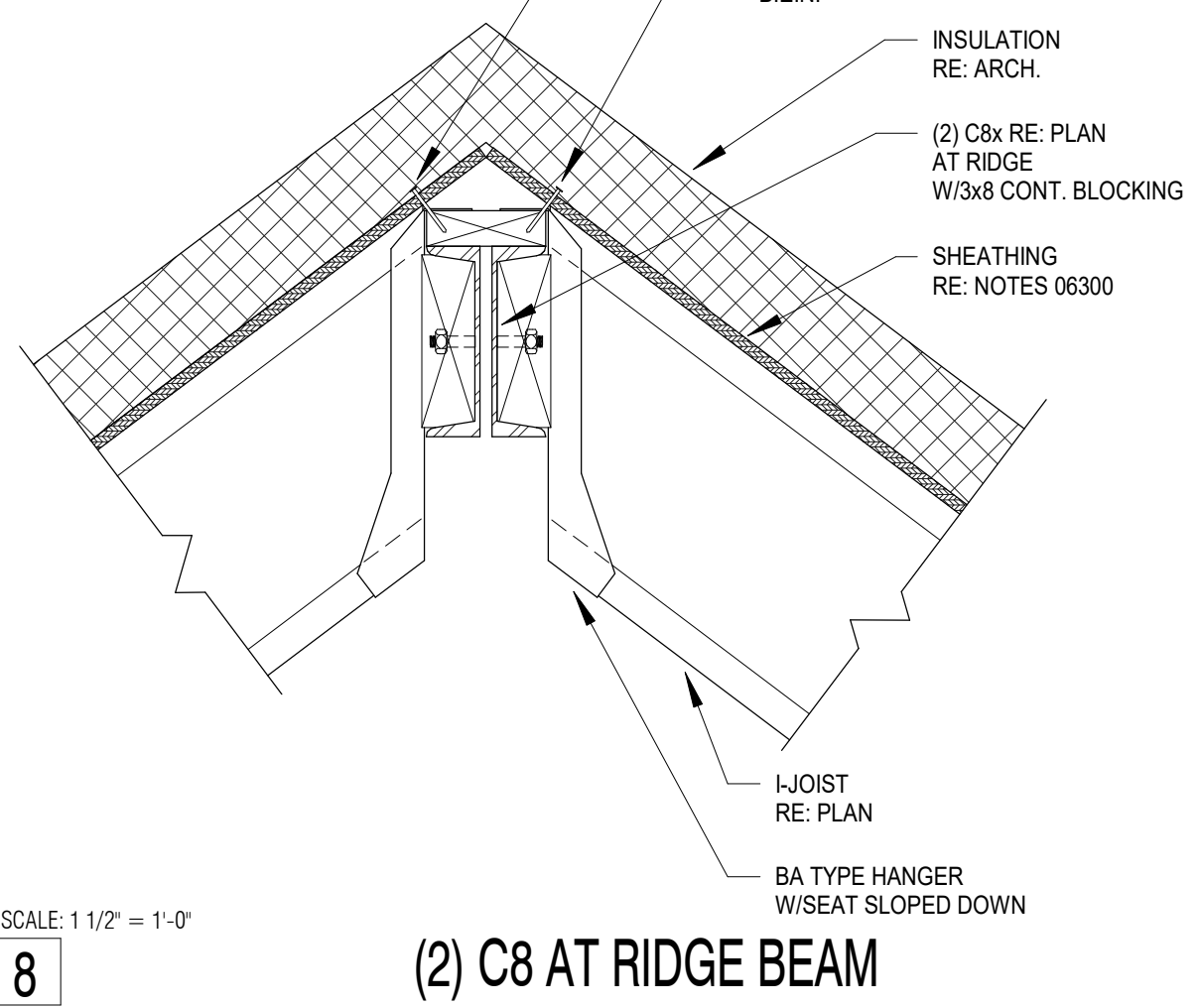
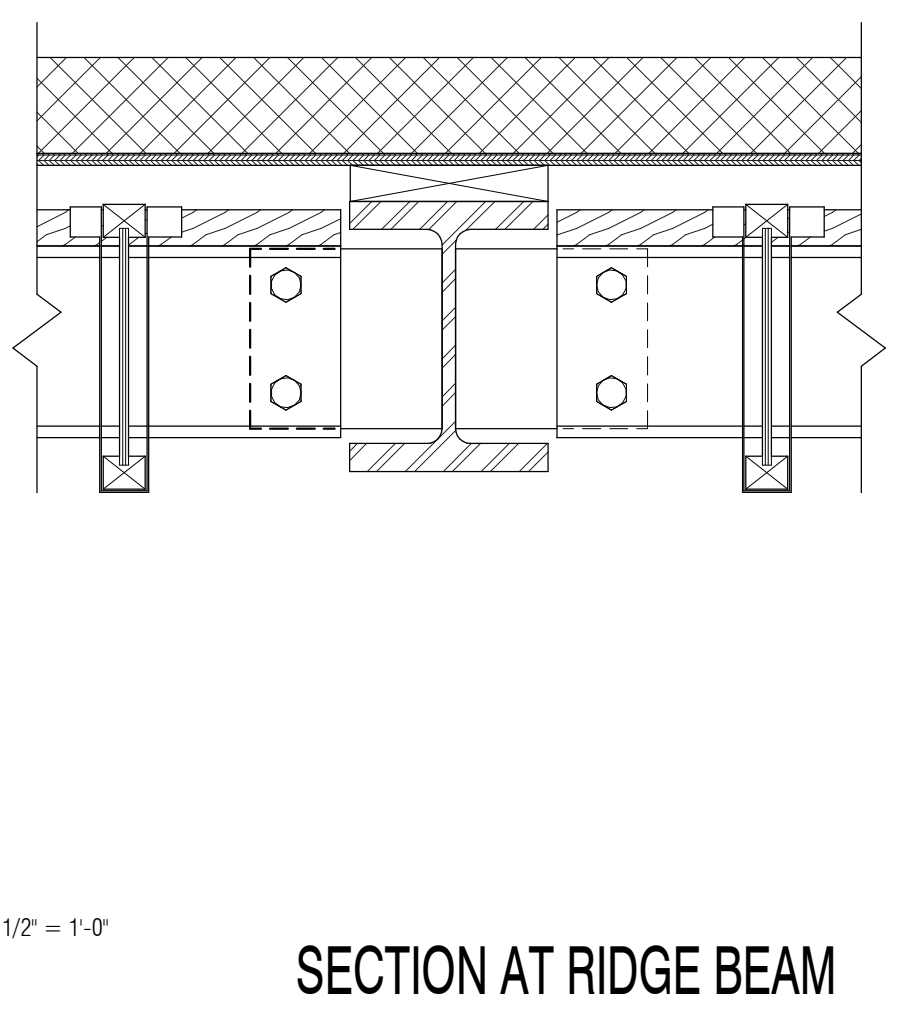
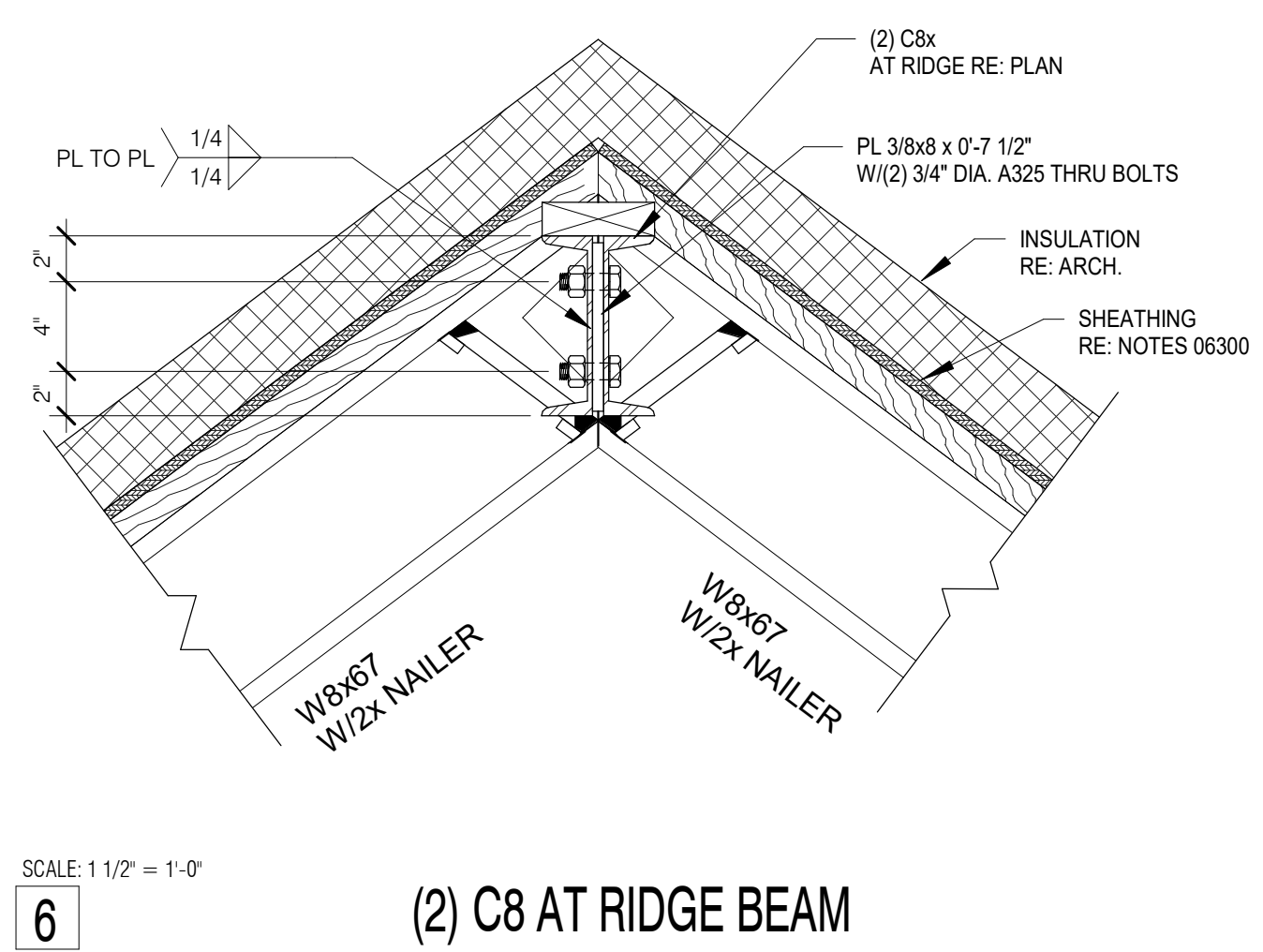
WHERE STEEL BACKING IS USED IN FULLY RESTRAINED MOMENT CONNECTIONS WITH COMPLETE JOINT PENETRATION (CJP) BEAM FLANGE GROOVE WELDS, STEEL BACKING AND TABS SHALL BE REMOVED EXCEPT THAT TOP FLANGE BACKING ATTACHED TO THE COLUMN BY A CONTINUOUS FILLET WELD ON THE EDGE BELOW THE CJP GROOVE WELD NEED NOT BE REMOVED.

COMPLETE JOINT PENETRATION GROOVE WELDS OF BEAM FLANGES, SHEAR PLATES, AND BEAM WEBS TO COLUMNS SHALL BE DEMAND CRITICAL WELDS PER NOTES SECTION 5800.

REMOVAL OF STEEL BACKING AND TABS SHALL BE AS FOLLOWS:

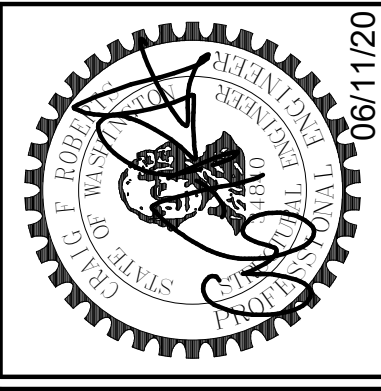
FOLLOWING THE REMOVAL OF BACKING, THE ROOT PASS SHALL BE BACKGROUGED TO SOUND WELD METAL AND BACKWELDED WITH A REINFORCING FILLET. THE REINFORCING FILLET SHALL HAVE A MINIMUM LEG SIZE OF 5/16 IN.  
WELD TAB REMOVAL SHALL EXTEND TO WITHIN 1/8 IN OF THE BASE METAL SURFACE, EXCEPT AT CONTINUITY PLATES WHERE REMOVAL TO WITHIN 1/4 IN OF THE PLATE EDGE IS ACCEPTABLE. EDGES OF THE WELD TAB SHALL BE FINISHED TO A SURFACE ROUGHNESS VALUE OF 500 MICRO (10-6) IN. OR BETTER. GRINDING TO A FLUSH CONDITION IS NOT REQUIRED. GOUGES AND NOTCHES ARE NOT PERMITTED. THE TRANSITIONAL SLOPE OF ANY AREA WHERE GOUGES AND NOTCHES HAVE BEEN REMOVED SHALL NOT EXCEED 1:5. MATERIAL REMOVED BY GRINDING THAT EXTENDS MORE THAN 1/16 IN. BELOW THE SURFACE OF THE BASE METAL SHALL BE FILLED WITH WELD METAL. THE CONTOUR OF THE WELD AT THE ENDS SHALL PROVIDE A SMOOTH TRANSITION, FREE OF NOTCHES AND SHARP CORNERS.

WELD ACCESS HOLES SHALL BE AS SHOWN ON SHEET S.X. THE WELD ACCESS HOLE SHALL HAVE A SURFACE ROUGHNESS VALUE NOT TO EXCEED 500 MICRO (10-6) IN. AND SHALL BE FREE OF NOTCHES AND GOUGES. NOTCHES AND GOUGES SHALL BE REPAIRED AS REQUIRED BY THE ENGINEER OF RECORD. WELD ACCESS HOLES ARE PROHIBITED IN THE BEAM WEB ADJACENT TO THE END-PLATE IN BOLTED MOMENT END-PLATE CONNECTIONS.



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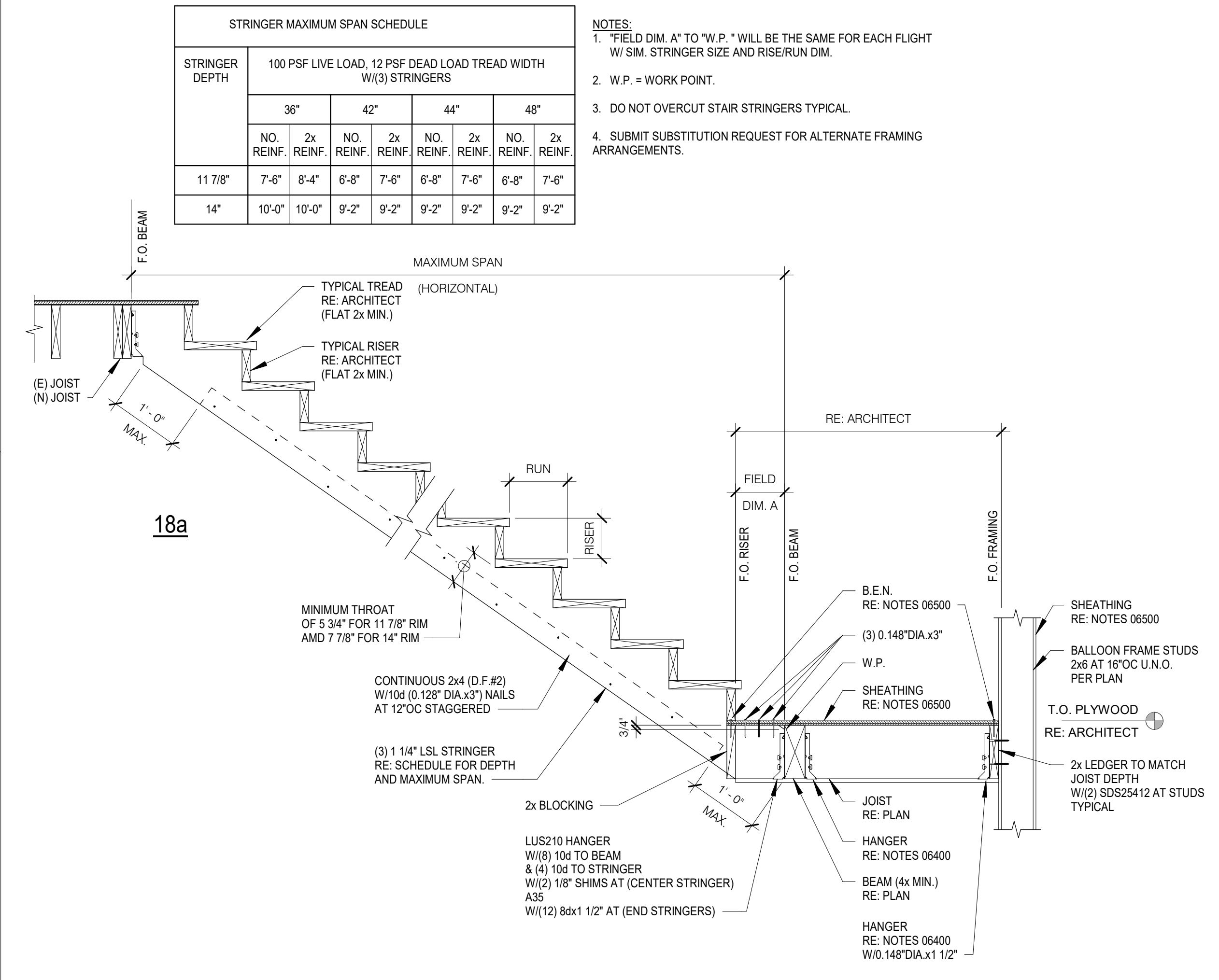
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KEY ISSUE DATES:	
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CD:	DD
DD:	DD
PERMIT:	06.11.2020
OTHER:	DD

**Ordinary Moment Frame**  
Foo Residence  
3453 74th Ave SE  
Mercer Island, WA 98040

**S10.4**

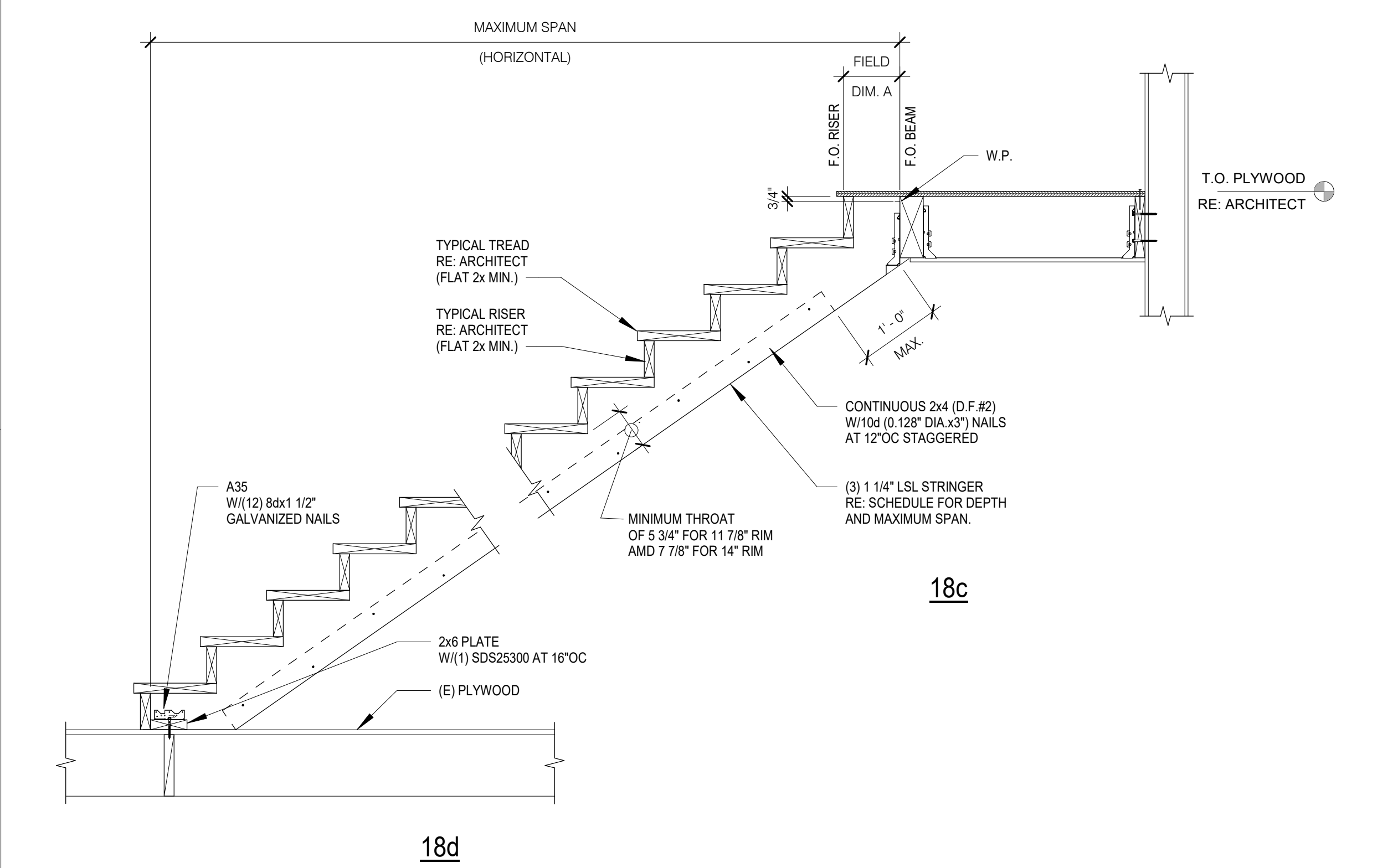


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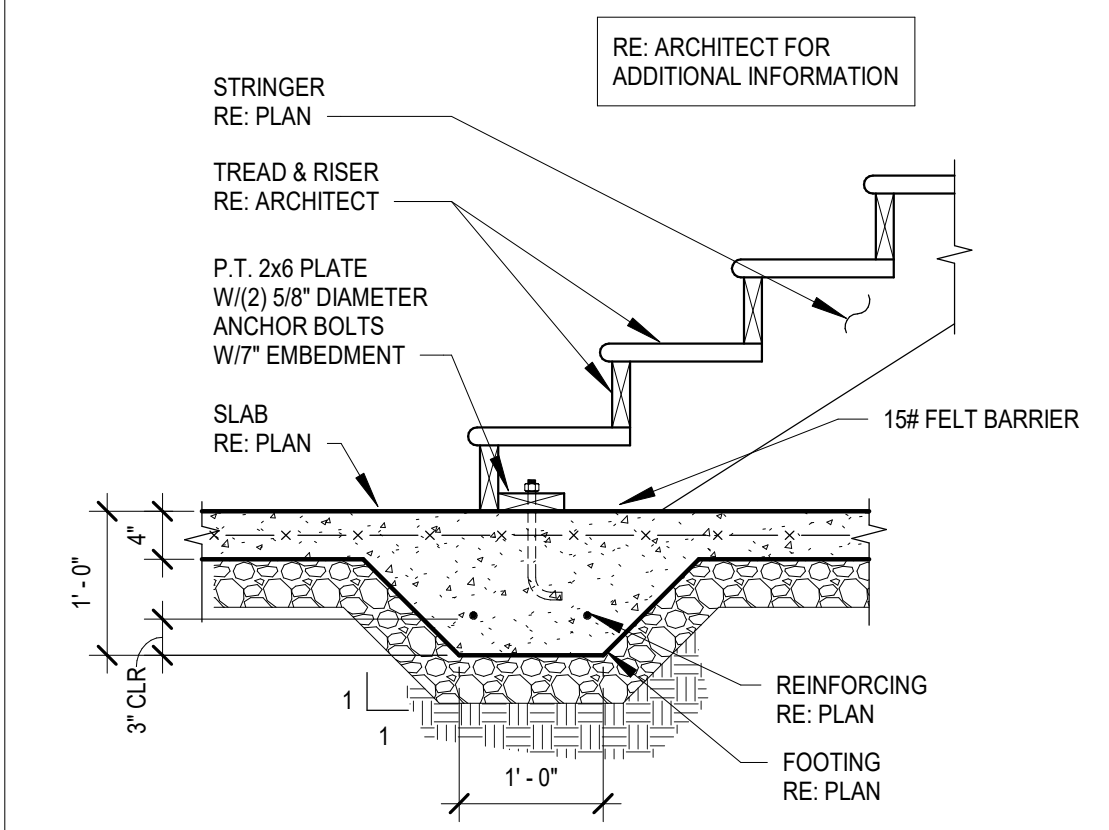
18b



18c

18d

19



18

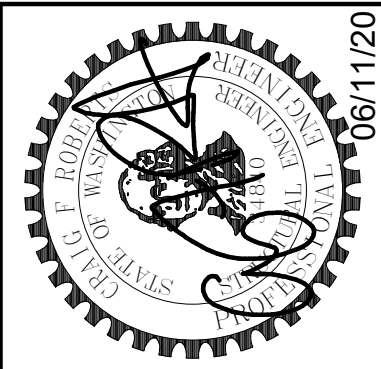
TYPICAL STAIRS AT SLAB

19

TYPICAL STAIR FRAMING

**Wood Stair Component Details**  
 Foo Residence  
 3453 74th Ave SE  
 Mercer Island, WA 98040

**S10.5**



**CT ENGINEERING INC.**  
 Structural Engineers  
 180 Nickerson Street, Suite 302, Seattle, WA 98109  
 206.285.4572 (V) 206.285.0618 (F)  
 www.ctengineering.com

No.	REVISION	DATE

JOB #:	202035
ENG:	Designer
CAD:	Author
SCALE:	3/4" = 1'-0"
KEY ISSUE DATES:	
SD:	DD
CD:	DD
PERMIT:	06.11.2020
OTHER:	BD



# BUILDING PERMIT PLANS FOR 3453 74TH AVE W FOR JIMMY & SHANNON FOO

## VERTICAL DATUM, BENCHMARK & CONTOUR INTERVAL

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY WCCS SURVEY CONTROL DATABASE.

POINT ID NO. 238

ELEVATION: 324.56 FEET (98.926 METERS) NAVD88

2" BRASS CAP IN MONUMENT CASE AT THE INTERSECTION OF SE 32ND ST & 74TH AVE SE

2.0" CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 1.0" FOR THIS PROJECT.

## BASIS OF BEARING

HELD RECORD OF SURVEY BY MS WEBB SURVEYING AS RECORDED IN VOLUME 135 OF SURVEYS, PAGE 243, RECORDS OF KING COUNTY, WASHINGTON AND RECORDED UNDER RECORDING NUMBER 200000215900011. ACCEPTED A BEARING OF N 90°00'00" W FOR THE CENTERLINE OF SE 32ND STREET BASED ON FOUND MONUMENTS IN CASE.

## SURVEY NOTES

THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT, EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.

INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND NIKON NIVO 5.C TOTAL STATION. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.

THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN JUNE 2018 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.

ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

## LEGAL DESCRIPTION

PARCEL: 130030-1965  
LOTS 16 THROUGH 20 AND THE EAST 15 FEET OF LOTS 21 THROUGH 25, BLOCK 7, C.C. CALKINS FIRST ADDITION TO EAST SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 4 OF PLATS, PAGE 88, RECORDS OF KING COUNTY, WASHINGTON; TOGETHER WITH THE WEST HALF OF VACATED 74TH PLACE SE LYING NORTH OF THE SOUTH MARGIN OF SAID PLAT AND SOUTH OF THE EASTERLY EXTENSION OF THE NORTH LINE OF SAID LOT 16, AND TOGETHER WITH THAT PORTION OF VACATED SE 36TH STREET, LYING WITHIN SAID PLAT AND WEST OF THE CENTERLINE OF 74TH PLACE SE AND EAST OF THE SOUTHERLY EXTENSION OF THE WEST LINE OF SAID LOT 20.

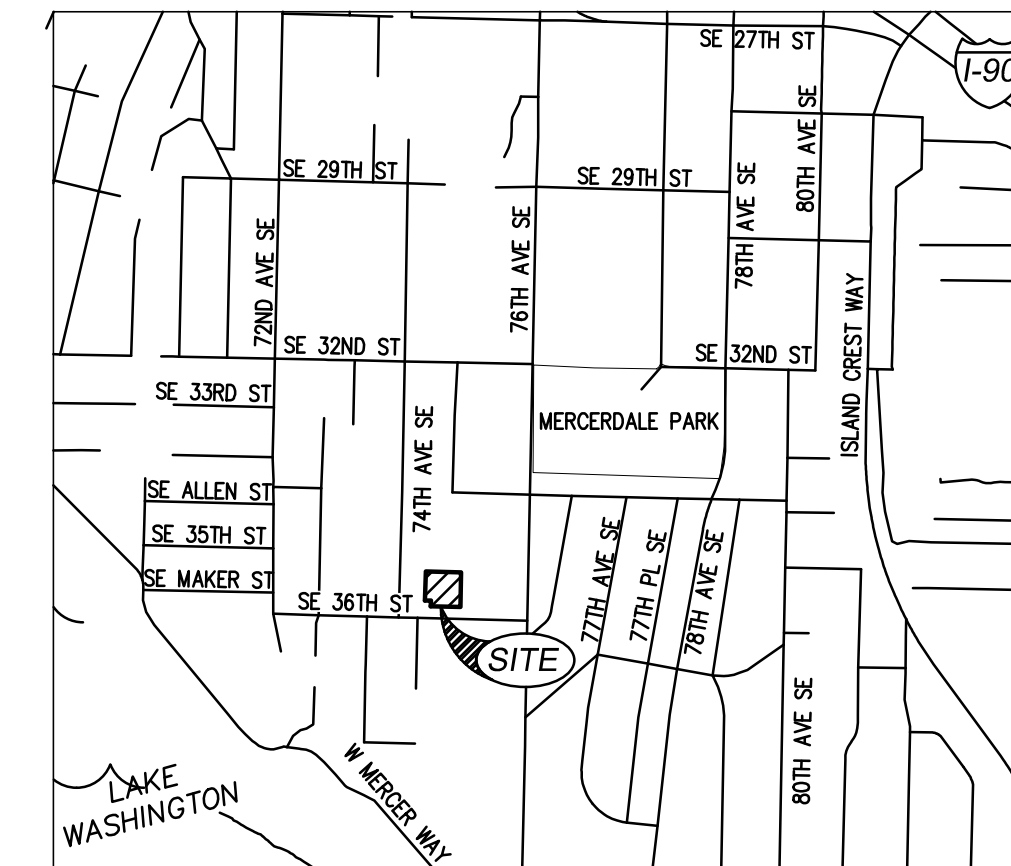
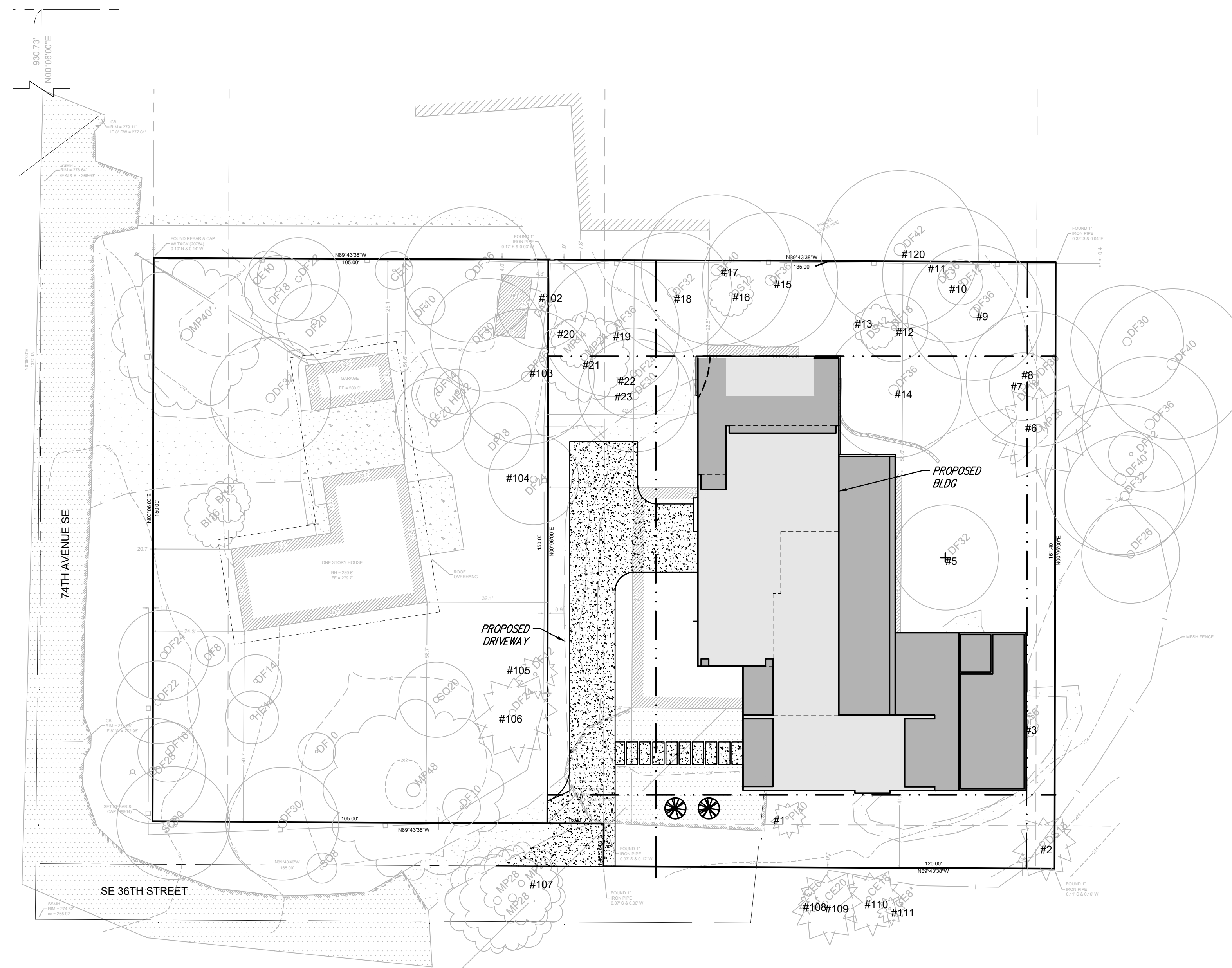
SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

## SITE STATISTICS

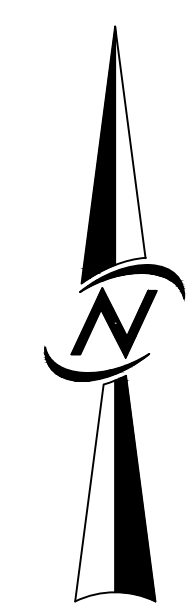
ZONING: R-8.4 (RESIDENTIAL-SINGLE FAMILY)  
SITE AREA: 21,618 SF (±0.496 ACRES)  
TAX PARCEL: 130030-1965

## LEGEND

EXISTING	
	FOUND MONUMENT AS DESCRIBED
	FOUND REBAR AS DESCRIBED
	TACK IN LEAD FOUND
	SET 5/8" X 24" IRON ROD W/1" YELLOW PLASTIC CAP
	POWER METER
	UTILITY POLE
	GAS METER
	SANITARY SEWER MANHOLE
	WATER VALVE
	FIRE HYDRANT
	WATER METER
	SIGN
	APPROXIMATE LOCATION SANITARY SEWER LINE
	APPROXIMATE LOCATION STORM DRAIN LINE
	OVERHEAD POWER
	OVERHEAD UTILITIES
	CHAINLINK FENCE
	WOOD FENCE
	CONCRETE WALL
	ROCKERY
	ASPHALT SURFACE
	GRAVEL SURFACE
	SEQUOIA
	CEDAR
	DOUGLAS FIR
	HEMLOCK
	MAPLE
	PINE
	SPRUCE
	DECIDUOUS
	DENOTES MULTI-TRUNK



VICINITY MAP  
SCALE: 1:1000



SCALE: 1" = 20'  
0 10 20 40

### OWNER:

JIMMY & SHANNON FOO  
2820 29TH AVE W  
SEATTLE, WA 98199  
CONTACT: SHANNON FOO  
PHONE: (306) 613-5505

### ENGINEER

CORE DESIGN INC  
12100 NE 195TH ST, SUITE 300  
BOTHELL, WASHINGTON 98011  
(425) 885-7877  
CONTACT: MICHAEL A. MOODY, P.E.

### SURVEY:

SITE SURVEYING INC  
21923 NE 11TH ST  
SAMMAMISH, WASHINGTON 98074  
(425) 298-4412

### SHEET INDEX

C1.01	COVER SHEET
C1.02	TOPOGRAPHIC SURVEY
C1.03	SITE PLAN
C1.31-C1.32	STORMWATER DRAINAGE DETAIL
C2.01	TESC PLAN

**UNDERGROUND LOCATOR SERVICE**  
CALL BEFORE YOU DIG!  
811  
**PERMIT #XXXX-XXX**

DATE	DESIGNED	FLAVIO R. BAINOTTI	SEE STAMP DATE
REVISIONS	DRAWN	MARY MOORE	
NO.	APPROVED	MICHAEL A. MOODY, PE	
		JOSHUA BEARD	
		PROJECT MANAGER	

**SITE PLAN  
3453 74TH AVE SE  
JIMMY & SHANNON FOO**

12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

**CORE DESIGN**

CIVIL ENGINEERING  
LANDSCAPE ARCHITECTURE  
PLANNING  
SURVEYING

DATE

SHEET

OF

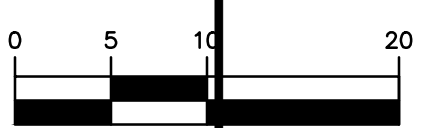
**C1.01**

**6**

PROJECT NUMBER  
**20034**



SCALE: 1" = 10'

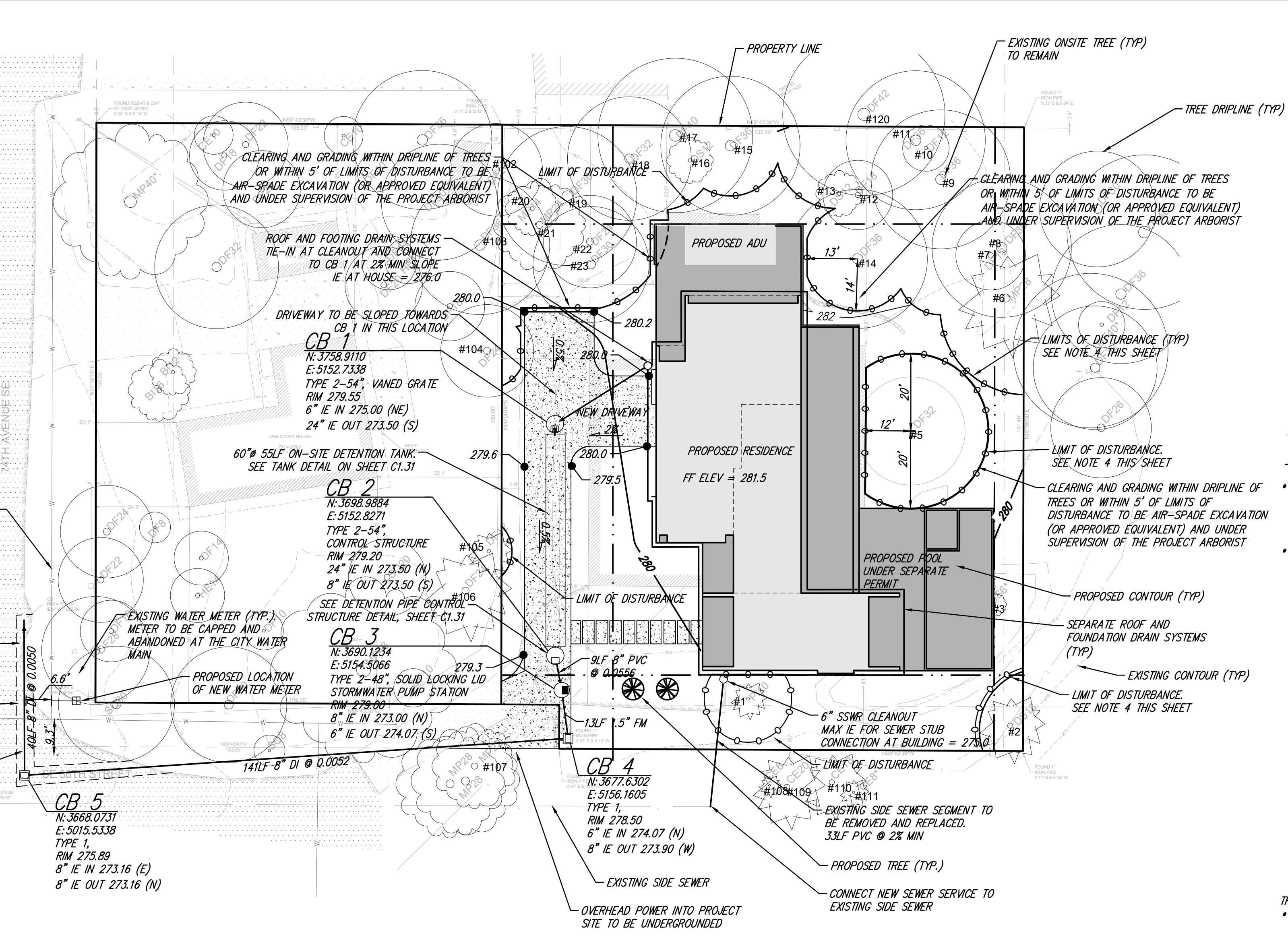


APPROXIMATE LOCATION OF CITY WATER MAIN BASED ON CITY GIS DATA. MAIN TO BE FIELD LOCATED TO CONFIRM 5' SEPARATION FROM PROPOSED STORM

THE LIMITS OF PAVEMENT AND OTHER ROW AREA RESTORATIONS IN THE PUBLIC RIGHT OF WAY SHALL BE DETERMINED BY THE CITY ENGINEER PRIOR TO FINAL INSPECTION OF THE PROJECT

SAWCUT LINE (TYP) REMOVE AND REPLACE EXISTING PAVEMENT FOR CONSTRUCTION OF DRAINAGE SYSTEM

PROPOSED RIM ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO MATCH EXISTING GRADE



**LOT COVERAGE PROPOSED**

LOT	21,618	SQ.FT.
ROOF AREA=	3,936	SQ.FT.
DRIVE / WALK =	4,888	SQ.FT.
TOTAL IMPERVIOUS =	8,824	SQ.FT.
PROPOSED IMPERVIOUS =	40.8%	

**BMP T5.13: POST-CONSTRUCTION SOIL QUALITY AND DEPTH DESIGN GUIDELINES**

- SOIL RETENTION. RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE. IN ANY AREAS REQUIRING GRADING REMOVE AND STOCKPILE THE DUFF LAYER AND TOPSOIL ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SITE WHERE FEASIBLE.
- SOIL QUALITY. ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:
  - A TOPSOIL LAYER WITH MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A pH FROM 6.0 TO 8.0 OR MATCHING THE pH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL.
  - USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
    - THE ORGANIC CONTENT FROM "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATIONS FOR BMP T7.30: BIORETENTION CELLS, SWALES, AND PLANTER BOXES, WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1. THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
    - CALCULATED AMENDMENT RATES MAY BE MET THROUGH THE USE OF COMPOSTED MATERIAL (A) ABOVE, OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAINMENT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173-350-220.

THE RESULTING SOIL SHOULD BE CONDUCTIVE TO THE TYPE OF VEGETATION TO BE ESTABLISHED.

- IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:
  - LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
  - AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PRE-APPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT STOCKPILED EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED RATE.
  - IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS.

MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.

**NOTES**

- SEE PSE PLANS FOR LOCATION OF UTILITIES. PROPOSED DRY UTILITIES WILL BE BURIED.
- THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST-CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT CIVIL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS SPECIFIED ON THE APPROVED PLAN SET PRIOR TO FINAL INSPECTION OF THE PROJECT.
- THE TV INSPECTION OF THE EXISTING SHARED SIDE SEWER TO THE CITY SEWER MAIN ON 74TH AVE SE IS REQUIRED PRIOR TO ANY WORK RELATED TO THE SIDE SEWER. IF THE RESULT OF THE TV INSPECTION IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, THE REPLACEMENT OF THE EXISTING SIDE SEWER IS REQUIRED.
- TREE PROTECTION FENCING SHALL BE INSTALLED AT THE LIMIT OF DISTURBANCE PER DETAIL, SHEET C2.01.

**Tree Summary Table**  
For: 3453 74th Ave SE-Property Trees  
City of Mercer Island

**American Forest Management, Inc**  
Date: 11/5/2018  
Inspector: Layton  
Date: 10/28/2019  
Inspector: Tomco

Tree/ Tag #	Species	Exceptional	DBH (inches)	Height (feet)	Drip-Line / Limits of Disturbance (feet)				Condition	Proposal	Comments
					N	S	E	W			
1	Japanese white pine	no	8	28	10	10	11	12	good	Retain	No concerns.
2	red alder	no	15	63	13	14	16	7	fair	Retain	Leans sw, declining top.
3	Pacific dogwood	yes	8	37	14	8	12	12/10	fair	Remove	Exceptional due to size: Several small cavities, mild anthracnose infection. Exceptional threshold 6".
4	flowering dogwood	no	5.8 (8)	31	7	6	5	12	fair	Remove	Leans west, pruned in past.
5	white fir	yes	27	92	10/20	20	10/20	10/12	good	Retain	Exceptional due to size: No concerns. Exceptional threshold 24".
6	bigleaf maple	no	24	83	0	24	4	16	poor	Retain	Extensive trunk rot, kretzschmaria, major top dieback. Grove tree. Part of grove but poor health.
7	Douglas fir	yes	15	78	6	10	4	12	fair	Retain	Natural lean west, suppressed, minor decay column. Grove tree.
8	Douglas fir	yes	32	116	14	14	16	12	good	Retain	Exceptional due to size: Good form, natural lean east.
9	Douglas fir	yes	33	140	12	15	14	10	good	Retain	Exceptional due to size: 60% lcr. Grove tree.
10	Douglas fir	yes	12	33	7	8	10	6	fair	Retain	Old broken top, suppressed, moderate decay column. Grove tree.
11	Douglas fir	yes	36	144	na	11	13	10	good	Retain	Exceptional due to size: 70% lcr. Grove tree.
12	Douglas fir	yes	20	86	6	9	11	11	fair	Retain	Old broken top. Grove tree.
13	Pacific dogwood	yes	11	53	10	19	14	12	fair	Retain	Exceptional due to size: Large canker on east side, longevity in question. Grove tree.
14	Douglas fir	yes	37	127	12	15/12	16	14/13	good	Retain	Exceptional due to size: 70% lcr. Grove tree.
15	Douglas fir	yes	28	128	12	8/12	12	8	good	Retain	Natural lean north. Grove tree.
16	Pacific dogwood	yes	11	49	12	18/10	14	16	fair	Retain	Exceptional due to size: suppressed by Douglas fir. Grove tree.
17	Douglas fir	yes	32	128	12	16/14	12	12	good	Retain	Exceptional due to size: 70% lcr. Grove tree.
18	Douglas fir	yes	27	112	10	11/12	10	10	fair	Retain	60% lcr, old broken top. Grove tree.
19	Douglas fir	yes	32	118	14	10/14	12	12	good	Retain	Exceptional due to size: 60% lcr. Grove tree.
20	bigleaf maple	yes	12	40	20	0	12	16	fair-poor	Retain	Suppressed, old broken top, asymm crown to north. Grove tree.
21	bigleaf maple	yes	19	88	14	18	13	15	fair	Retain	Lots of dead cambium on ne side, suspect xylem. Grove tree.
22	Douglas fir	yes	22	97	12	8	10	10	fair	Retain	Old broken top. Grove tree.
23	Douglas fir	yes	24	90	8	13/12	14	10	fair	Retain	Old broken top. Grove tree.

Parcel Trees - Drip-Line and Limits of Disturbance measurements from face of trunk  
Trees on neighboring properties - Drip-Line and Limits of Disturbance measurements from property line  
Calculated DBH: the DBH is parenthesis is the square root of the sum of the dbh for each individual stem squared (example with 3 stems: dbh = square root [(stem1)² + (stem2)² + (stem3)²]).

**Tree Summary Table**  
For: 3453 74th Ave SE-Neighboring Trees  
City of Mercer Island

**American Forest Management, Inc**  
Date: 11/5/2018  
Inspector: Layton

Tree/ Tag #	Species	Exceptional	DBH (inches)	Height (feet)	Drip-Line / Limits of Disturbance (feet)				Condition	Proposal	Comments
					N	S	E	W			
101	Douglas fir	yes	12	60					fair	Protect	suppressed, cannot isolate
102	Douglas fir	yes	19	108			4/10		fair	Protect	shallow/rotl cork 2' from root crown
103	Douglas fir	yes	30	125			4/5		good	Protect	no concerns
104	Douglas fir	yes	23	98			4/6		good	Protect	no concerns
105	Douglas fir	no	10	48			4/4		fair	Protect	old broken top, regrown
106	Douglas fir	no	20	96			2/2		good	Protect	approx 8' off pl
107	bigleaf maple	yes	21,23,23 (39)	95	16	na	22	30	fair	Protect	approx 8' off driveway
108	Lawson cypress	no	8	35	0/0				good	Protect	
109	Lawson cypress	no	16	50	0/2				good	Protect	lean
110	Lawson cypress	no	16	52	2/4				good	Protect	
111	Lawson cypress	no	10	42	2/2				good	Protect	
112	Douglas fir	yes	22	86		19		17/16	good	Protect	natural lean southwest
113	Douglas fir	yes	24	90			12/14		fair	Protect	old broken top
114	Douglas fir	yes	21	82			18/14		fair	Protect	lean southwest, mod decay column
115	Douglas fir	yes	38	145			15/16		good	Protect	
116	Douglas fir	yes	11	67			6/8		fair	Protect	suppressed
117	Douglas fir	yes	28	130			10/14		good	Protect	good taper
118	Douglas fir	yes	35	132			10/18		good	Protect	
119	Douglas fir	yes	24	113			14/14		good	Protect	
120	Douglas fir	yes	36	135			14/16		good	Protect	

Trees on neighboring properties - Drip-Line and Limits of Disturbance measurements from property line, except for #112-#119, face of trunk  
Calculated DBH: the DBH is parenthesis is the square root of the sum of the dbh for each individual stem squared (example with 3 stems: dbh = square root [(stem1)² + (stem2)² + (stem3)²]).

DATE: \_\_\_\_\_

DESIGNED: FLAVIO R. BAINOTTI

DRAWN: MARY MOORE

APPROVED: MICHAEL A. WOODY, PE

JOSHUA BEARD

PROJECT MANAGER

CIVIL ENGINEERING LANDSCAPE ARCHITECTURE PLANNING SURVEYING

**CORE DESIGN**

12100 NE 195th St, Suite 300, Bothell, Washington 98011 425.885.7877

CIVIL SITE PLAN AND TREE PROTECTION PLAN  
**3453 74TH AVE SE**  
**JIMMY & SHANNON FOO**  
2820 29TH AVE W  
SEATTLE, WA 98199

DATE: \_\_\_\_\_

SHEET 11 OF 16

**C1.03** 6

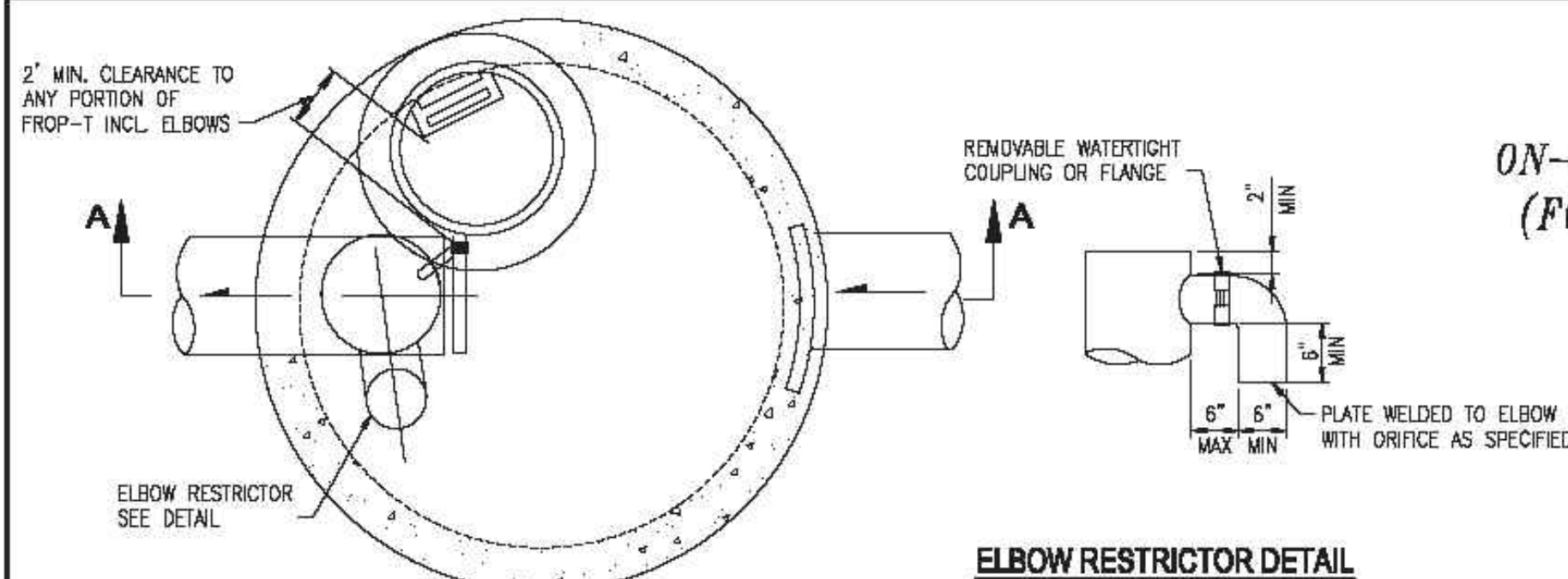
PROJECT NUMBER 20034

**UNDERGROUND LOCATOR SERVICE**  
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PERMIT #XXXX-XXX

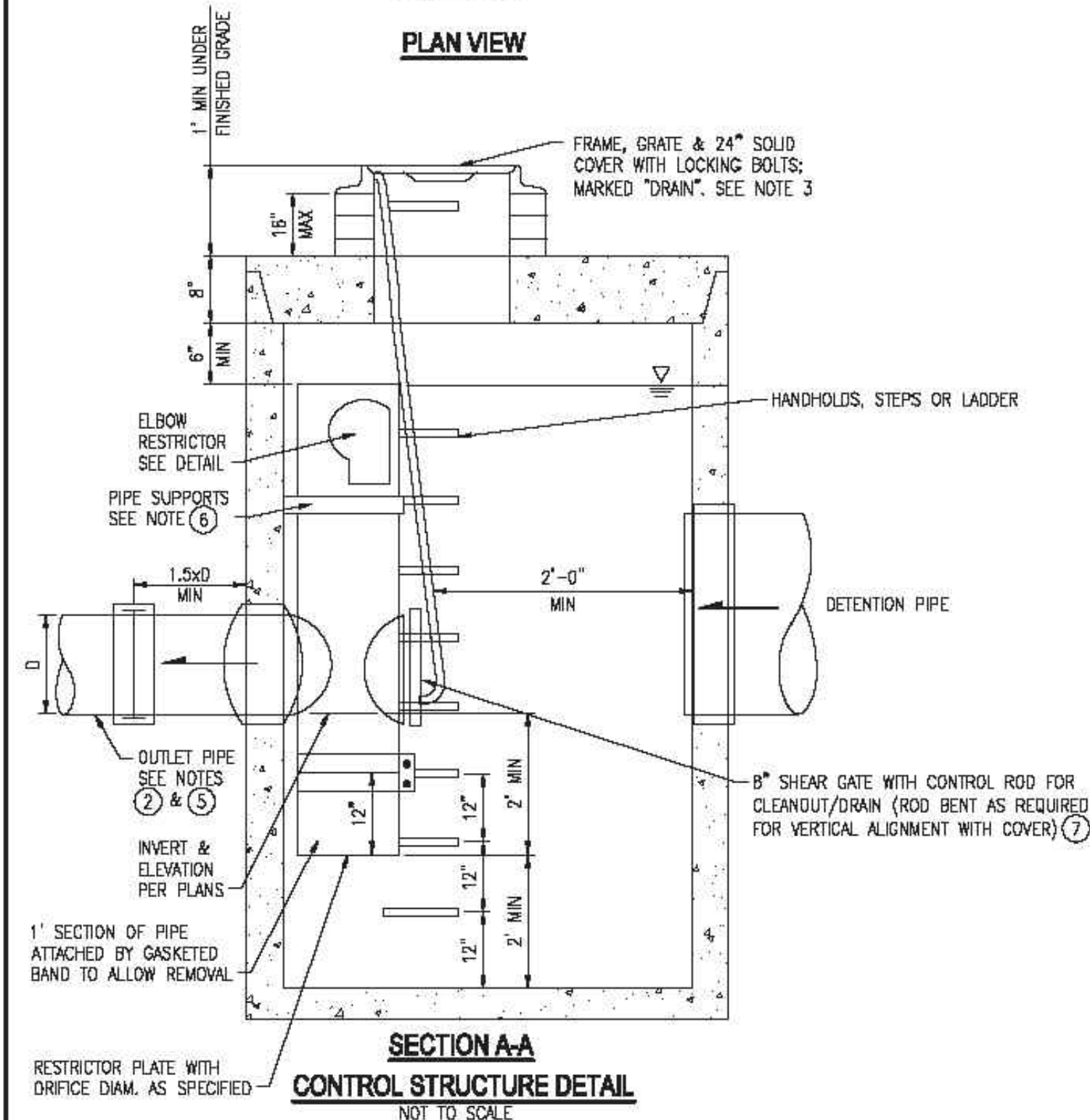


**ATTACHMENT 1**  
**CITY OF MERCER ISLAND**  
**ON-SITE DETENTION SYSTEM WORKSHEET**  
**(FOR NEW PLUS REPLACED IMPERVIOUS**  
**AREA OF 9,500 SF OR LESS)**

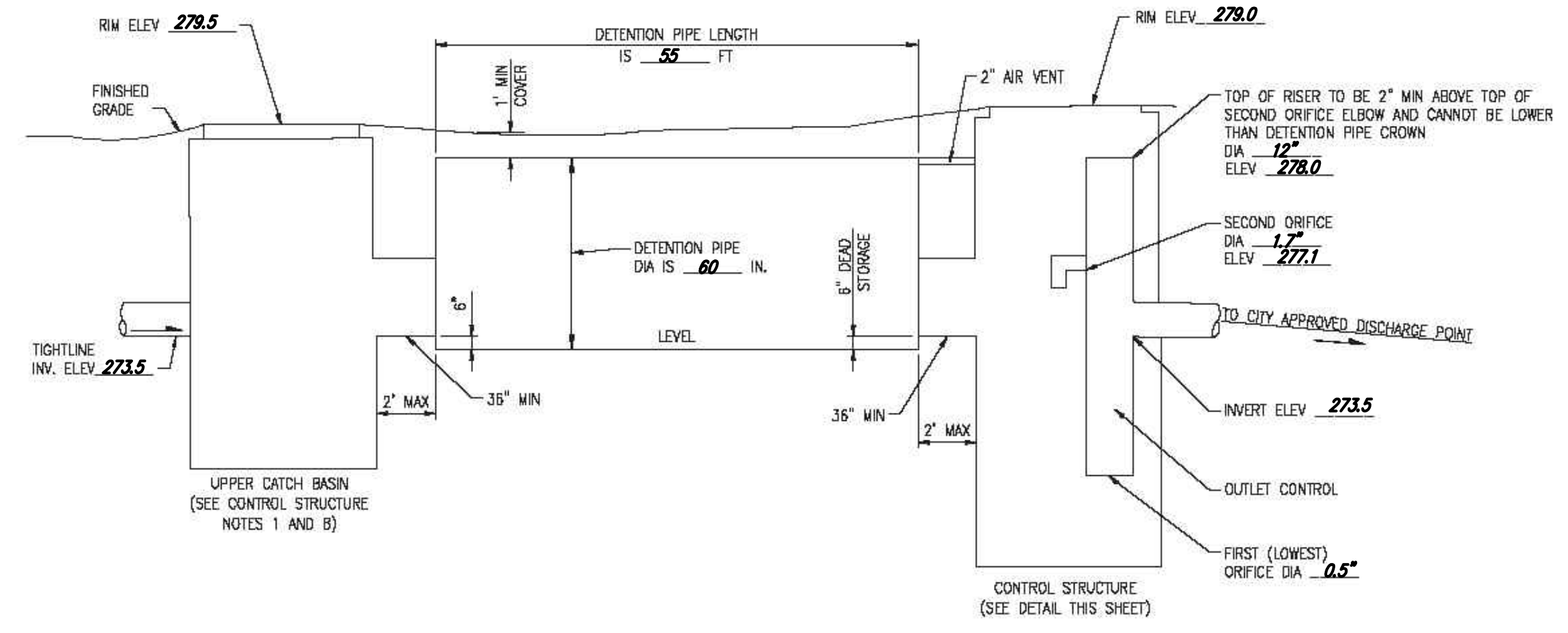


**ELBOW RESTRICTOR DETAIL**

OWNER: <b>JIMMY AND SHANNON FOO</b>	ADDRESS: <b>3453 74TH AVE W. MERCER ISLAND, WA 98040</b>	PREPARED BY: <b>MICHAEL WOODY, P.E.</b>
PERMIT #:	PHONE: <b>425-885-7877</b>	DATE: <b>2/19/2021</b>
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): <b>8,468</b>	DETENTION PIPE DIA (INCH): <b>60"</b>	DETENTION PIPE LENGTH (FT): <b>55</b>
SOIL TYPE: <b>C</b>	PIPE MATERIAL: <b>CMP</b>	ORIFICE #1 DIA <b>0.5"</b> INCH, ELEV <b>273.5</b>
		ORIFICE #2 DIA <b>1.2"</b> INCH, ELEV <b>277.1</b>



**SECTION A-A CONTROL STRUCTURE DETAIL**  
NOT TO SCALE



**ON-SITE DETENTION SYSTEM**  
NOT TO SCALE (ENGINEER TO FILL IN BLANKS)

**CONTROL STRUCTURE NOTES:**

- ① USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
- ② OUTLET PIPE: MIN. 6 INCH.
- ③ METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
- ④ FRAME AND LADDER OR STEPS OFFSET SO:
  - A. CLEANOUT GATE IS VISIBLE FROM TOP;
  - B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
  - C. FRAME IS CLEAR OF CURB.
- ⑤ IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
- ⑥ PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
- ⑦ THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION Z032A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B. THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION). IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED. A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED. THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT. ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
- ⑧ THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FT.

**ON-SITE DETENTION SYSTEM NOTES:**

1. CALL DEVELOPMENT SERVICES (206-275-7805) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
2. RESPONSIBILITY FOR OPERATION AND MAINTANANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
3. PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 9.05 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING, LINED CORRUGATED POLYETHYLENE PIPE (LDFE), ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCH (MEETS AASHTO DESIGNATIONS M274 AND M36), CORRUGATED OR SPIRAL RIB ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.
4. FOOTING DRAINS SHALL NOT BE CONNECTED TO THE DETENTION SYSTEM.

NO.	REVISIONS	DATE

**CORE DESIGN**  
 CIVIL ENGINEERING  
 LANDSCAPE ARCHITECTURE  
 PLANNING  
 SURVEYING  
 12100 NE 195th St, Suite 300, Bothell, Washington 98011 425.885.7877

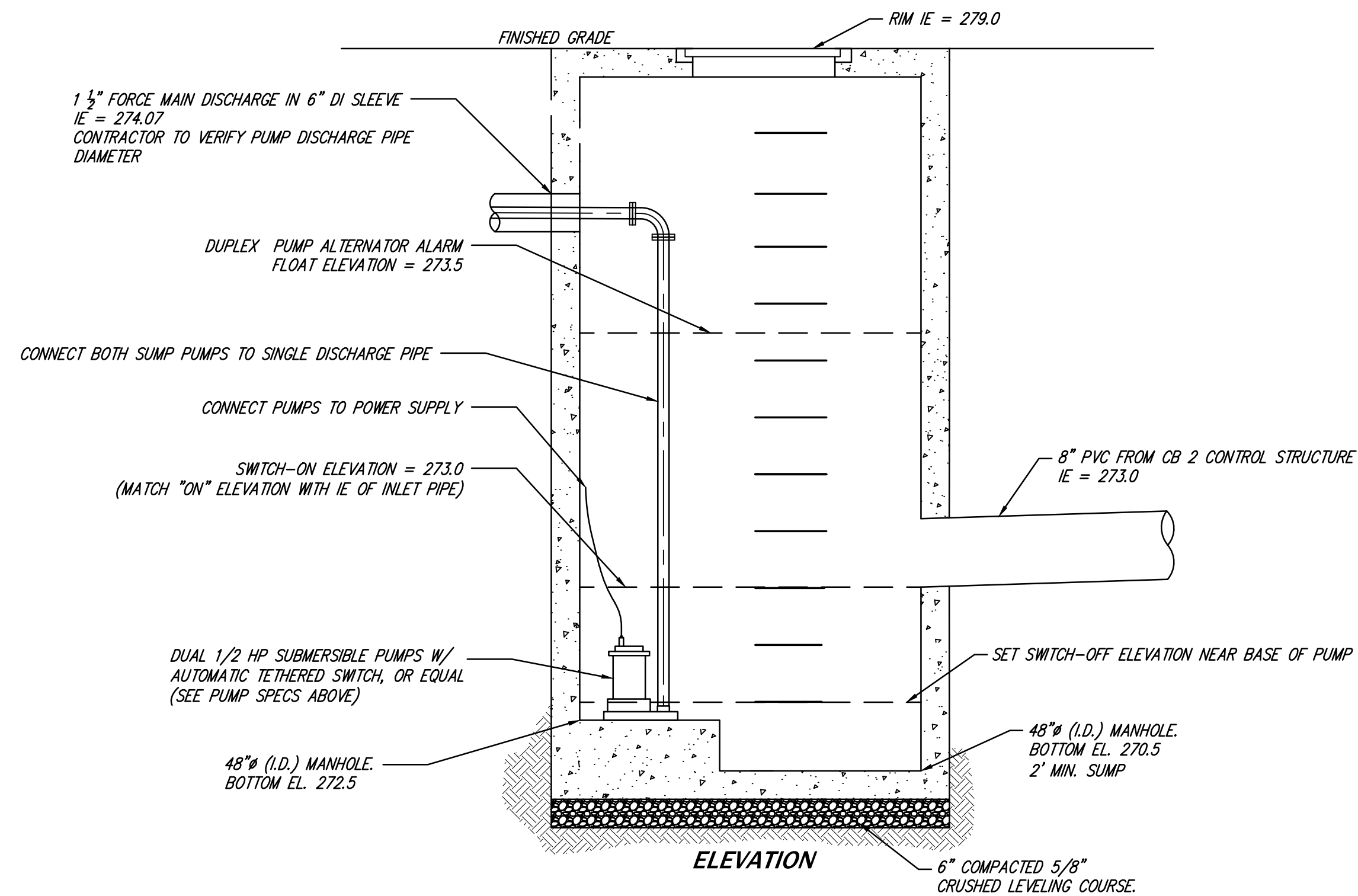
**STORMWATER DETAILS**  
**3453 74TH AVE SE**  
**JIMMY & SHANNON FOO**  
 2820 29TH AVE W  
 SEATTLE, WA 98199

DATE	SEE STAMP DATE
DESIGNED	FLAVIO R. BAINOTTI
DRAWN	MARY MOORE
APPROVED	MICHAEL A. WOODY, PE
	JOSHUA BEARD
	PROJECT MANAGER
SHEET	OF
<b>C1.31</b>	<b>6</b>
PROJECT NUMBER	20034

**UNDERGROUND LOCATOR SERVICE**  
 CALL BEFORE YOU DIG!  
 811  
**PERMIT #XXXX-XXX**

3/8/2021 10:45 AM J:\2020\ENGINEERING\FINAL SHEETS\20034 - STORMWATER DETAILS.DWG





**CB 3 STORMWATER PUMP LIFT STATION DETAIL**

NO SCALE

**PUMP SPECIFICATIONS AND DETAILS**

INSTALL (2) 1/2-HORSEPOWER THERMOPLASTIC SUBMERSIBLE SUMP PUMPS WITH SEPARATE TETHERED AUTOMATIC ON-OFF SWITCH

**MINIMUM PUMP REQUIREMENTS:**

- DISCHARGE FLOW OF AT LEAST 55.6 GALLONS PER MINUTE (0.124 CFS FOR 25-YEAR STORM) AT 7 FEET DYNAMIC HEAD (PUMP "OFF" ELEVATION TO OUTLET ELEVATION AT FINISHED GRADE)
- MUST FUNCTION AUTOMATICALLY
- MUST BE SUBMERSIBLE

INSTALL DUPLEX PUMP ALTERNATOR WITH ALARM

PROVIDE ON-SITE BACK-UP POWER SUPPLY TO PUMP SYSTEM

PUMP SYSTEM SHALL BE OWNED, OPERATED, MAINTAINED, REPAIRED AND REPLACED (AS NEEDED) BY PROPERTY OWNERS SERVED BY SUCH SYSTEM.

PROPERTY OWNERS SERVED BY THE PUMP SYSTEM SHALL BE RESPONSIBLE FOR ANY AND ALL CLAIMS FOR INJURIES AND DAMAGE DUE TO THE OPERATION OR NON-OPERATION OF THE PUMP SYSTEM.

DATE	SEE STAMP DATE
DESIGNED	FLAVIO R. BAINOTTI
DRAWN	MARY MOORE
APPROVED	MICHAEL A. WOODY, PE
	JOSHUA BEARD
	PROJECT MANAGER

NO.	REVISIONS	DATE

CIVIL ENGINEERING  
LANDSCAPE ARCHITECTURE  
PLANNING  
SURVEYING

**CORE DESIGN**

12100 NE 195th St, Suite 300  
Bellevue, Washington 98011 425.885.7877

**STORMWATER DETAILS**  
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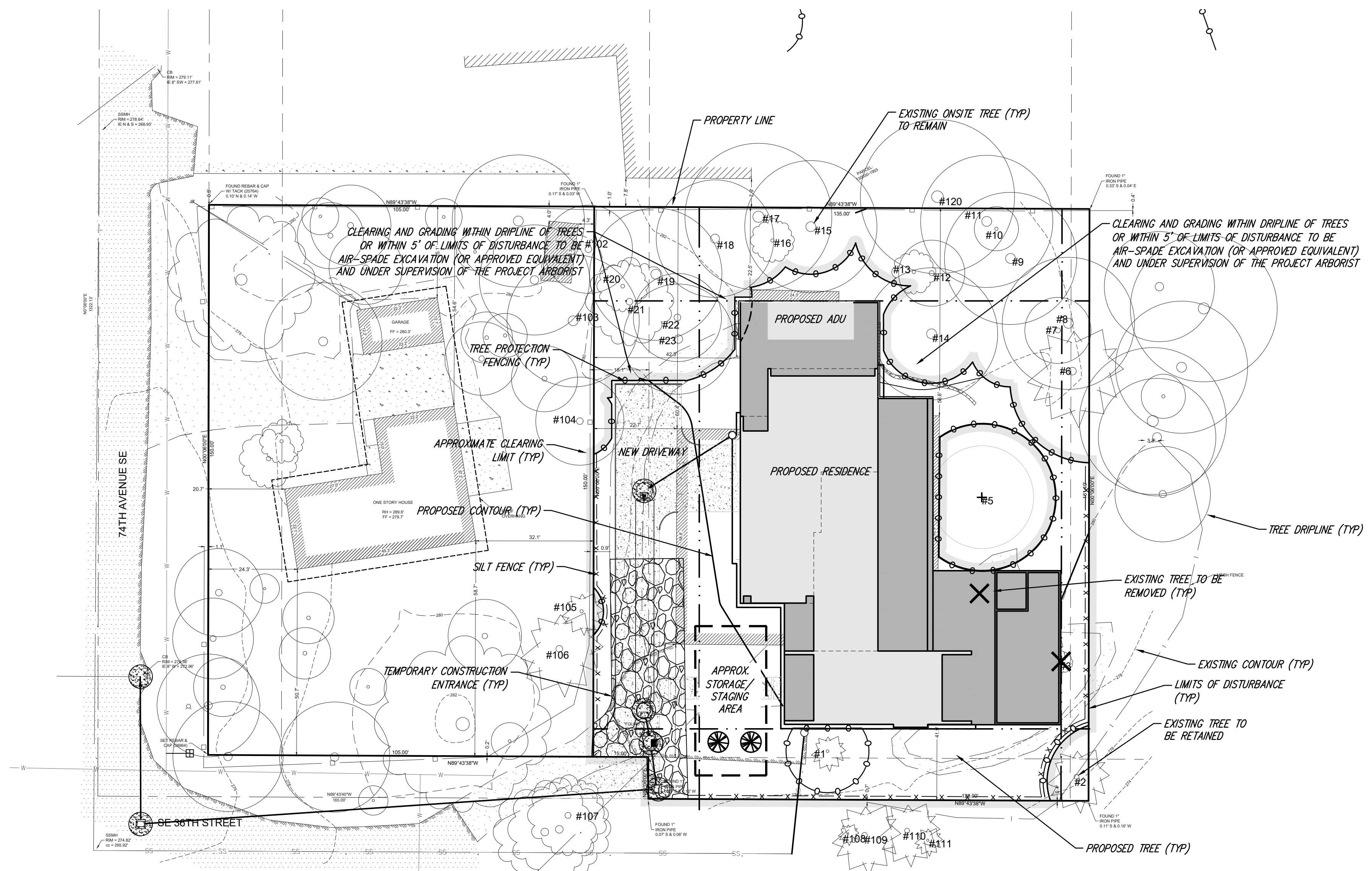
PERMIT #XXXX-XXX

SHEET 811 OF 6  
**C1.32** 6  
PROJECT NUMBER 20034

2/19/2021 12:56 PM v. 1 (2020) 20034 [ENGINEERING] FINAL SHEETS (20034) STORMWATER DETAILS.DWG





**TREE PROTECTION AREA (TPZ)**

**KEEP OUT!**

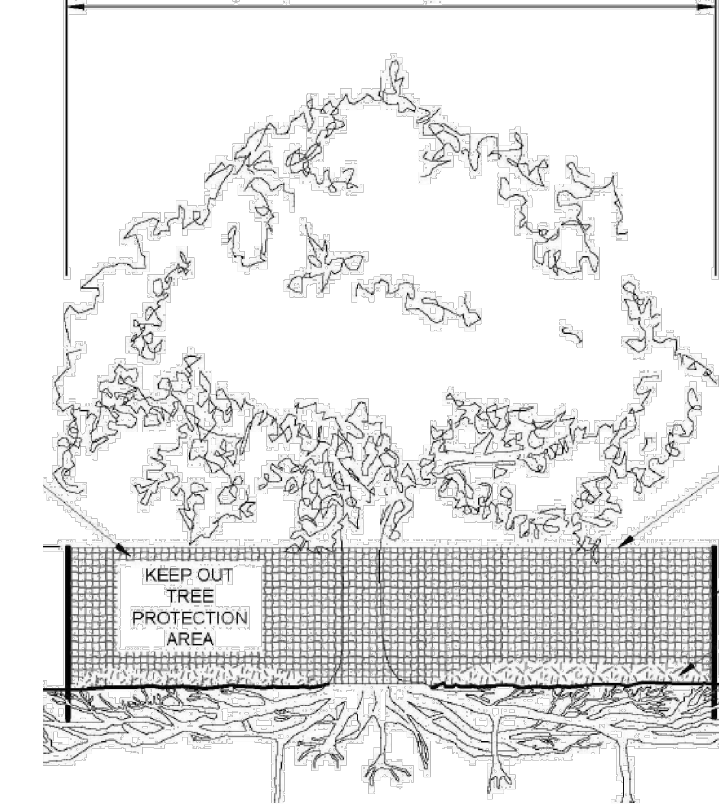
**DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA**

Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

1. Correction Notices or Stop Work Orders until compliance is achieved
2. RE Inspection Fees
3. Arborist reports recommending mitigation

- Notes**
1. No pruning shall be performed unless under the direction of an arborist
  2. No equipment shall be stored or operated inside the protective fencing including during fence installation and removal
  3. No storage of materials shall occur inside the protective fencing
  4. Refer to Site/Utility Plan for allowable modifications to the tree protection area.
  5. Unauthorized activities in tree protection area may require evaluation by private arborist to identify impacts and mitigation required
  6. Exposed roots: For roots > 1" damaged during construction, make a clean straight cut to remove damaged portion and inform City Arborist

Drawn dripline or other limit of Tree Protection area. See Site/Utility Plan for fence alignment.

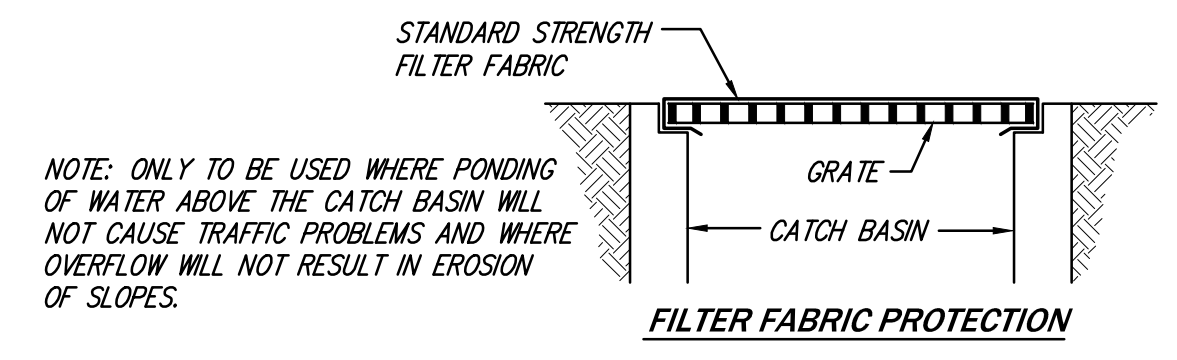


Tree protection fence: 4-6" chain link fence, solidly anchored into the ground, or if authorized High-density polyethylene fencing with 3.5" x 1.5" openings; color orange. Steel posts installed at 8' o.c.

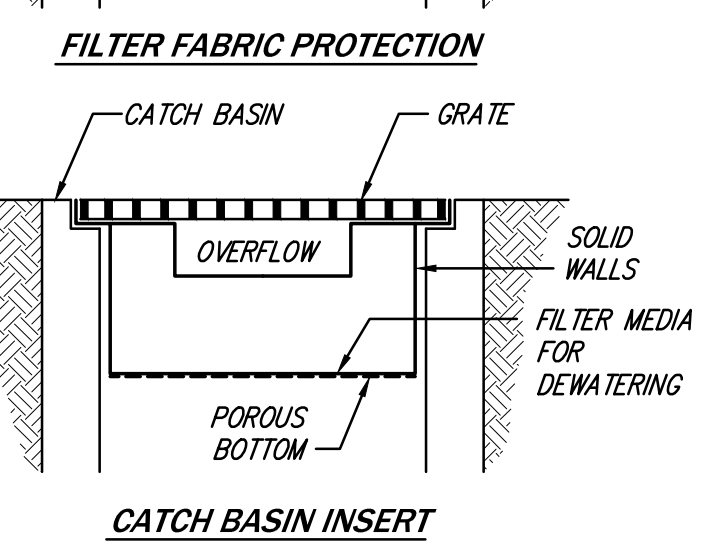
2" x 6" steel posts or approved equal

Maintain existing grade with the tree protection fence unless otherwise indication on the plans

Any Work in the protected area must be with the permission of the City Arborist [john.kenney@mercergov.org](mailto:john.kenney@mercergov.org)



NOTE: ONLY TO BE USED WHERE PONDING OF WATER ABOVE THE CATCH BASIN WILL NOT CAUSE TRAFFIC PROBLEMS AND WHERE OVERFLOW WILL NOT RESULT IN EROSION OF SLOPES.



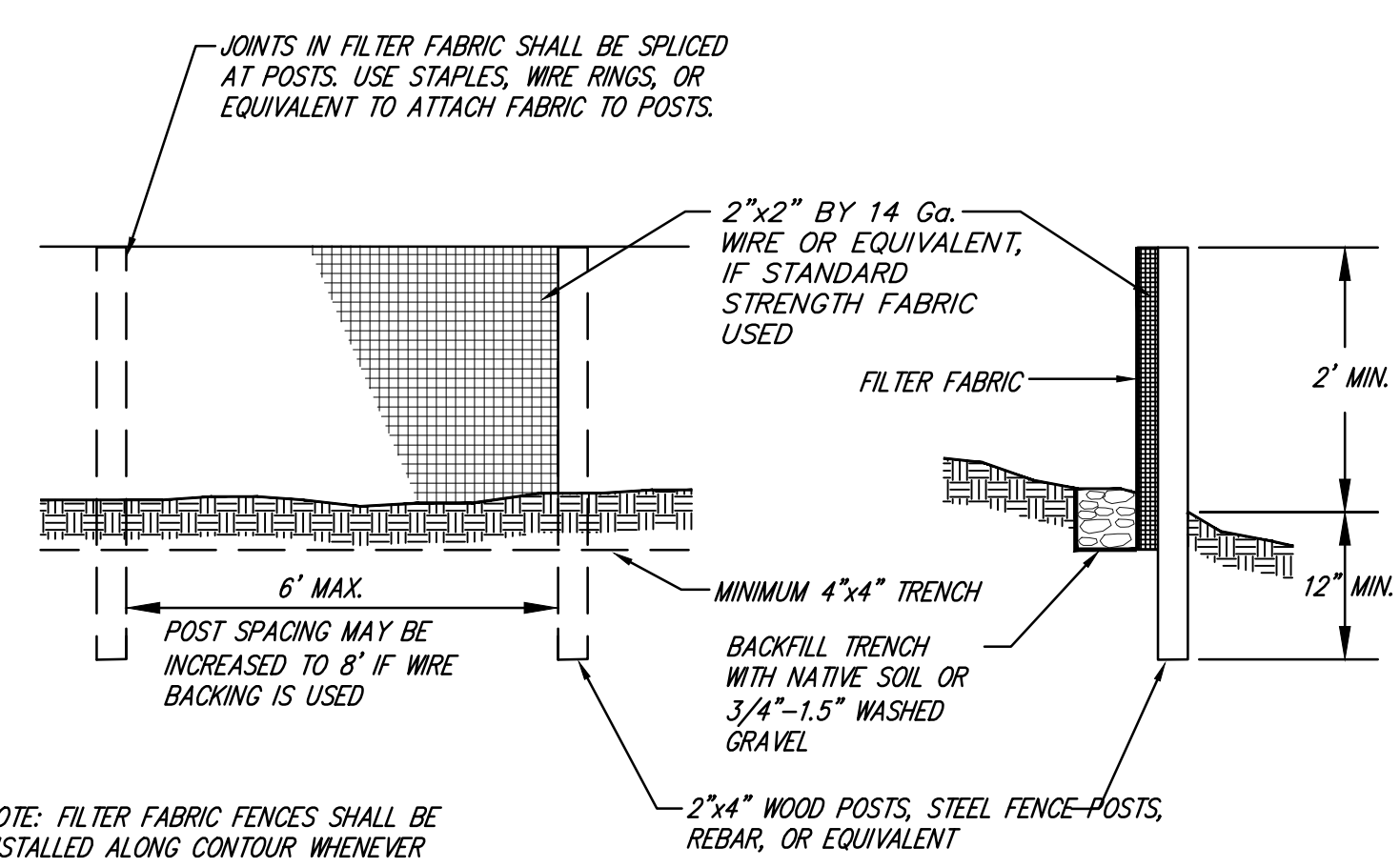
NOTE: THIS DETAIL IS ONLY SCHEMATIC. ANY INSERT IS ALLOWED THAT HAS A MIN. 0.5 C.F. OF STORAGE. THIS MEANS TO DEWATER THE STORED SEDIMENT, AN OVERFLOW, AND CAN BE EASILY MAINTAINED.

**MAINTENANCE STANDARDS**

1. ANY ACCUMULATED SEDIMENT ON OR AROUND THE FILTER FABRIC PROTECTION SHALL BE REMOVED IMMEDIATELY. SEDIMENT SHALL NOT BE REMOVED WITH WATER, AND ALL SEDIMENT MUST BE DISPOSED OF AS FILL ON-SITE OR HAULED OFF-SITE.
2. ANY SEDIMENT IN THE CATCH BASIN INSERT SHALL BE REMOVED WHEN THE SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE. THE FILTER MEDIA FOR THE INSERT SHALL BE CLEANED OR REPLACED AT LEAST MONTHLY.
3. REGULAR MAINTENANCE IS CRITICAL FOR BOTH FORMS OF CATCH BASIN PROTECTION. UNLIKE MANY FORMS OF PROTECTION THAT FAIL GRADUALLY, CATCH BASIN PROTECTION WILL FAIL SUDDENLY AND COMPLETELY IF NOT MAINTAINED PROPERLY.

**FILTER FABRIC PROTECTION FOR CB'S**

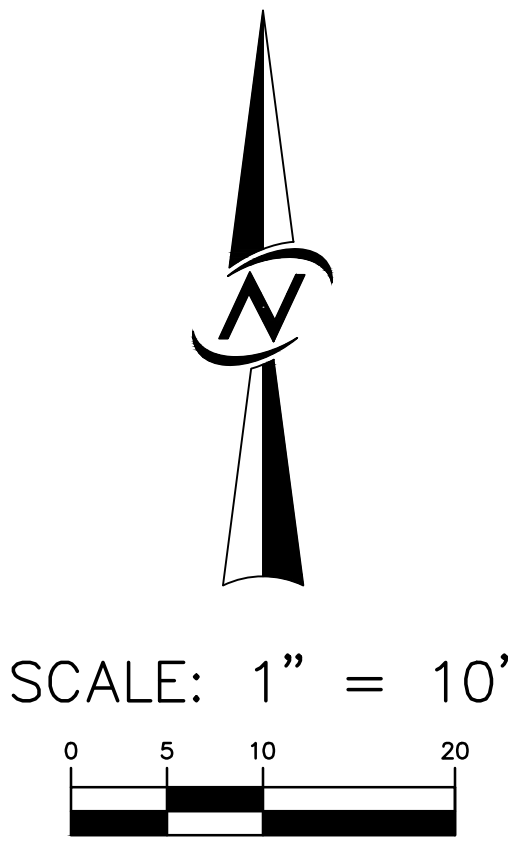
NO SCALE



NOTE: FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE

**FILTER FABRIC FENCE DETAIL**

NO SCALE



**LEGEND**

SEE SHEET C2.31 FOR DETAILS, NOTES AND CONSTRUCTION SEQUENCE.

INLET FILTER (M.S.D.O.T. STD. DTL. 1-40.20-00)  
FILTER FABRIC FENCE

CONSTRUCTION ACCESS

CLEARING LIMITS

EXISTING CONTOUR

PROPOSED CONTOUR

EX TREE TO BE REMOVED

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**TESC PLAN**  
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 LANDSCAPE ARCHITECTURE  
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SHEET **C2.01** OF **6**  
 PROJECT NUMBER **20034**