GENERAL NOTES

THESE DRAWINGS ARE THE PROPERTY OF THE ARCHITECT AND MAY BE REPRODUCED ONLY WITH THE WRITTEN PERMISSION OF THE ARCHITECT. AUTHORIZED REPRODUCTIONS MUST BEAR THE NAME OF THE ARCHITECT. COPYRIGHT 2023 BY CHESMORE/BUCK ARCHITECTURE. THESE DRAWINGS ARE FULLY PROTECTED BY FEDERAL AND STATE COPYRIGHT LAWS. ANY INFRINGEMENT WILL BE VIGOROUSLY PROSECUTED.

ALL CONSTRUCTION SHALL CONFORM TO THE 2015 INTERNATIONAL RESIDENTIAL CODE (IRC) AND BE IN ACCORDANCE WITH THE WASHINGTON STATE LAWS AND REGULATIONS AND VARIOUS CODES IMPOSED BY LOCAL AUTHORITIES.

DRAWING ONLY WILL NOT SATISFY THIS REQUIREMENT.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND STRUCTURAL MEMBER SIZES PRIOR TO CONSTRUCTION. CONTRACTOR TO INFORM ARCHITECT OF ANY DISCREPANCIES IN THE DRAWINGS OR FROM THE CODES. CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHTECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON THE

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM HIS WORK.

ALL STUCTURAL SYSTEMS SUCH AS WOOD 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.

THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ARCHITECT IF UNUSUAL, UNFORESEEABLE, OR UNEXPECTED SUBSURFACE CONDITIONS ARE ENCOUNTERED.

BECAUSE THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, THE CONTRACTOR SHALL, BEFORE STARTING EACH PORTION OF THE WORK, CAREFULLY STUDY AND COMPARE THE VARIOUS CONTRACT DOCUMENT RELATIVE TO THAT PORTION OF THE WORK, AS WELL AS THE INFORMATION PROVIDED BY THE OWNER, SHALL TAKE FIELD MEASUREMENTS OF ANY EXISTING CONDITIONS RELATED TO THAT PORTION OF THE WORK AND SHALL OBSERVE ANY CONDITIONS AT THE SITE AFFECTING IT. THESE OBLIGATIONS ARE FOR THE PURPOSE OF FACILITATING COORDINATION AND CONSTRUCTION BY THE CONTRACTOR. THE CONTRACTOR SHALL REPORT TO THE ARCHITECT ANY ERRORS, INCONSISTENCIES, OR OMMISSIONS DISCOVERED BY OR MADE KNOWN TO THE CONTRACTOR AS A REQUEST FOR INFORMATION IN SUCH FORM AS THE ARCHITECT MAY REQUIRE. THE CONTRACTOR'S REVIEW IS MADE IN THE CONTRACTOR'S CAPACITY AS A CONTRACTOR AND NOT AS A LICENSED DESIGN PROFESSIONAL.

elevation axb

136.5

1740.5

2223.7

1124.8

472.8

709.2

8131

59.57 average grade

DADU AVERAGE GRADE

}26" **EXISTING** RESIDENCE FF=40.18 HOUSE 42.68 GARAGE AVERAGE GRADE

PROJECT NOTES

PROPOSED NEW DADU/GARAGE OWNERS

STEVE KAO & HUI HONG 21722 CHINOOK ROAD WOODWAY, WA 98020

ZONING

PROPERTY TAX ACCT#

PROPERTY TAX ACCOUNT NUMBER: 294890-0015 LEGAL DESCRIPTION

GROVELAND PARK ADD VAC 3-4 & S 10 FT OF 2 & SH LDS ADJ & VAC ST ADJ IN BLK 22 & VAC N 40 FT OF 16 THRU 22 & VAC S 50 FT OF 9 THRU 15 & VAC ST ADJ IN BLK 2

15,233 S.F

12,000 S.F.

LOT COVERAGE

TOTAL LOT AREA: 42,797 S.F. NET LOT AREA 39,844 S.F. LOT COVERAGE: HOUSE W/ ADDITIONS 5,266 S.F. 1,108 S.F. STRUCTURAL TOTAL 6,517 S.F. SPORT COURT 1,950 S.F. DRIVING SURFACES 6,766 S.F.

HARDSCAPE MAX. ALLOWED 9% OF 42,797 S.F. = 3,852 S.F. STEPPING STONES & ROCKERIES

40% ALLOWABLE LOT COVERAGE OR 17,119 S.F

GROSS FLOOR AREA

MAIN FLOOR 3,916 S.F. UPPER FLOOR 1,908 S.F. 8,416 S.F.

PROVIDE THE DADU WITH A NFPA 13D MONITORED FIRE ALARM SYSTEM.

LOT SLOPE CALCULATION

HIGH POINT 80'-LOW POINT 18'=62' DIFFERENCE 62'/438.3' HORIZONTAL DISTANCE*100=12.8% LOT SLOPE

FIRE SPRINKLERS

ALLOWABLE GROSS FLOOR AREA

PROVIDE A NFPA 13D FIRE SPRINKLER SYSTEM THROUGHOUT THE MAIN HOUSE. THIS SYSTEM WILL REQUIRE A SEPARATE FIRE PERMIT.

SHEET INDEX

MERCER ISLAND COVER SHEET 1.0 SITE PLAN

0.0 SITE SURVEY C-1 CSWPP PLAN

C-2 DRAINAGE PLAN C-3 DETAILS

2.0 FLOOR PLANS/FRAMING PLANS2.1 SCHEDULES AND NOTES

2.2 ELECTRICAL PLANS 3.0 EXTERIOR ELEVATIONS/SECTIONS

3.1 DETAILS S1.0 GENERAL STRUCTURAL NOTES

S1.1 GENERAL STRUCTURAL NOTES S1.2 GENERAL STRUCTURAL NOTES

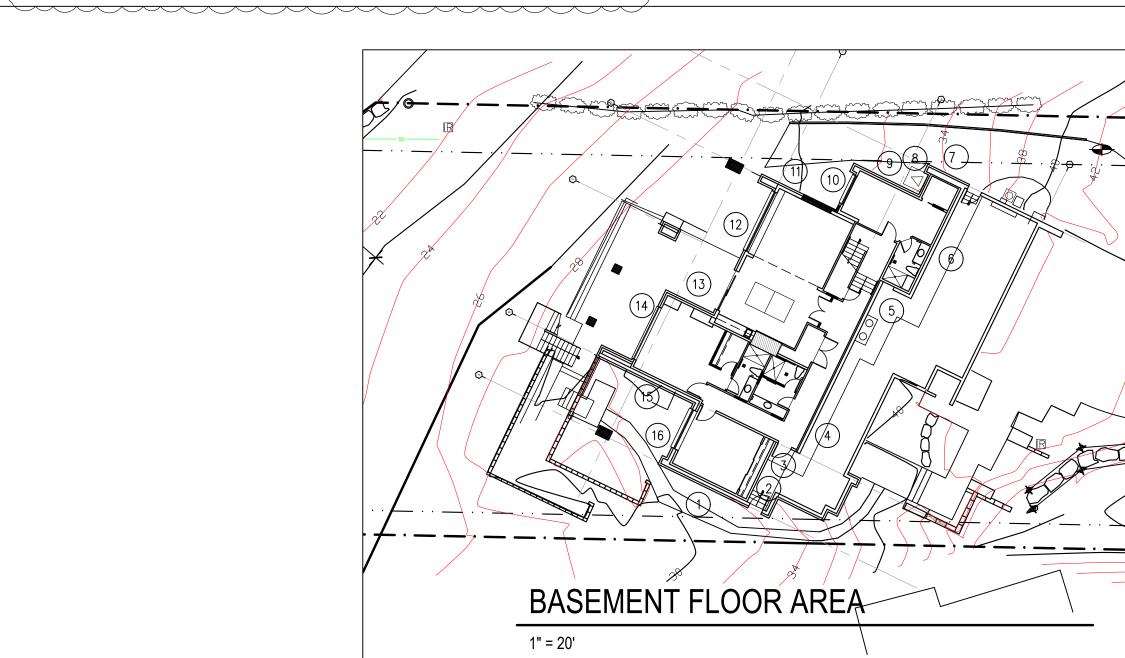
S3.0 DETAILS S3.1 DETAILS S4.0 TYPICAL WOOD DETAILS

S4.1 TYPICAL WOOD DETAILS S4.2 FLOOR DETAILS

S4.3 DECK DETAILS S4.4 WOOD DETAILS

S4.5 PARAPET AND FLAT ROOF DETAILS

S5.0 STEEL DETAILS S6.0 WOOD AND STEEL DETAILS



SITE PLAN

2222 7/6/23

DADU **PLANS**

Sheet No. 2222 7/6/23

FIN SLAB — FINISH SLAB ELEVATION

ROOM NAME Base		MA	TERIA	L					~		$\overline{}$		FIN	ISH								
ENTRY		OR	BAS	E	CAS	ING	WAL	LS.	•		CÉIL	ING	OR	щ	CAS	ING	WAL	.LS			ING	
SARAGE	ROOM NAME	FEO	MTL.	DET.#/SHT.#	DR.	WIN.	N	Е	S	W	мту.	HEIGHT	FLO	BAS	DR.	WIN.	N	Ε	S	W	CEII	REMARKS
TITILITY	NTRY	_	_	ı	_	>	W1	W1	W1	W1	-)	-	_	_	_	-	I	-	-	_	_	-
TARR	GARAGE	_	_	П	_	>	W1	W1	W1	W1	-)	_	_	_	_	_	ı	ı	ı	_	_	_
ANDING	JTILITY	_	_	I	_	(-	W1	W1	W1	W1	1 - 2	_	_	_	_	_	ı	ı	ı	_	_	_
MING	STAIR	_	_	I	_	(-	W1	W1	W1	W1	-)	_	_	_	_	_	ı	ı	ı	_	_	_
KITCHEN	ANDING	_	_	-	_	>	W1	W1	W1	W1		_	_	_	_	_	-	ı	ı	_	_	_
CLOSET WI WI WI WI	LIVING	_	_	_	_		W1	W1	W1	W1	1 ->	_	_	_	_	_	-	_	_	_	_	_
AATH	KITCHEN	_	_	_	_	(-	W1	W1	W1	W1		_	_	_	_	_	-	_	_	_	_	_
EGEND WI - 5/8" TYPE 'X' GYPSUM DRYWALL	CLOSET	_	_	_	_	(-	W1	W1	W1	W1	_)	_	_	_	_	_	-	_	_	_	_	_
EGEND V1 - 5/8" TYPE 'X' GYPSUM DRYWALL	BATH	_	_	I	_	>	W1	W1	W1	W1	-)	_	_	_	_	_	ı	ı	ı	_	_	_
/1 - 5/8" TYPE 'X' GYPSUM DRYWALL	_	_	_	_	_	>						_	_	_	_	_	-	_	_	_	_	_
/1 - 5/8" TYPE 'X' GYPSUM DRYWALL						{					}											
	EGEND	\																				
		PSUM	DRYWA	LL																		
)																		
		<u> </u>	<u> </u>																			

ENERGY:

ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE UNIFORM BUILDING CODE AND THE WASHINGTON STATE ENERGY CODE, LATEST EDITION. VERIFY ALL CONDITIONS BEFORE PROCEEDING WITH WORK.

APPLICATION AND INSTALLATIONS OF INSULATION AND VAPOR BARRIERS SHALL COMPLY WITH STATE OF WASHINGTON THERMAL INSULATION STANDARDS (H.B. 98).

WALLS: INSULATED WITH R-21 BATT

ROOF AND CEILING: INSULATED WITH R-49 BATT IN ATTICS. PROVIDE INSULATION IN CEILING WHERE POSSIBLE AND IN 2X12 RAFTERS R-38 IF VAULTED CEILING CONDITION EXISTS. MAINTAIN A MINIMUM OF 2" CLEAR BETWEEN TOP OF INSULATION AND BOTTOM OF SHEATHING FOR VENTING. VENTING MUST OCCUR IN EACH JOIST SPACE. WHERE CONTINUOUS VENTING WITHIN A JOIST SPACE IS INTERRUPTED BY A HEADER (I.E., SKYLIGHT OR AT HIP END), PROVIDE (2) 1 1/2" VENTING HOLES AT THE TOP OF THE RAFTER AT THE HEADER TO ALLOW FOR CONTINUAL THROUGH-VENTING INTO THE NEXT JOIST SPACE.

FLOORS: PROVIDE R-30 BATT INSULATION OVER UNHEATED SPACE (UNLESS NOTED OTHERWISE).

SLAB ON GRADE: PROVIDE EXTRUDED RIGID CLOSED CELL INSULATION R-10. INSULATION TO PROVIDE THERMAL BREAK BETWEEN SLAB AND FOOTING AND RUN FROM THE TOP OF THE SLAB TO THE BOTTOM OF THE FOOTING. INSULATION MAY BE INTERRUPTED FOR 6" EVERY 2'-0" TO ALLOW FOR DOWELING TO TIE SLAB AND FOOTING TOGETHER.

VAPOR BARRIERS: AN APPROVED VAPOR BARRIER SHALL BE INSTALLED AT EXTERIOR WALLS AND AT ALL ROOF DECKS, BELOW ENCLOSED JOIST SPACES WHERE CEILING FINISHES ARE DIRECTLY INSTALLED TO JOISTS, AND ANY OTHER WALL OR CEILING SURFACES WHICH RECEIVE INSULATION. THIS VAPOR BARRIER MAY BE A COMPONENT OF THE INSULATION MATERIAL. APPLICATION AND INSTALLATIONS OF INSULATION AND VAPOR BARRIERS SHALL COMPLY WITH STATE OF WASHINGTON THERMAL INSULATION STANDARDS (H.B. 96).

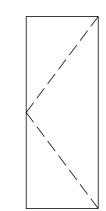
SECTION R406 ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS

R406.3 SMALL DWELLING UNIT	3.0	CREDITS	REQUIRED
FUEL NORMALIZATION CREDITS SYSTEM TYPE 2 LISTED HEAT PUMP	1.0	CREDITS	
2. AIR LEAKAGE CONTROL 2.2 REDUCE AIR LEAKAGE TO 2.0 AIR CHANGES	1.0	CREDITS	
3. HIGH EFFICIENCY HVAC EQUIPMENT 3.2 AIR SOURCE DUCTED HEAT PUMP MIN. HSPF 9.5	1.0	CREDITS	
TOTAL PROVIDED	. 3.0) CREDITS	

DOOR SCHEDULE DOOR DIMENSION 3'-0" 6'-8" ● O ● SOLID CORE WITH CLOSER 2'-6" 6'-8" 10'-0" 8'-0"

DOOR TYPES

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

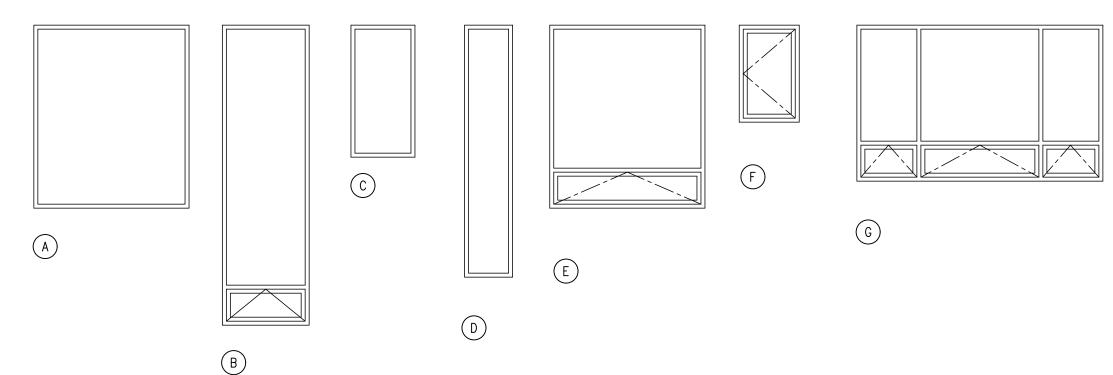




	$M \mid M \mid$	$\supset \bigcirc \bigvee$	SCH	F	ח	ULF				WINDOWS BY: MARVIN ALUMINUM CLAD FRAMES; INSULATED HIGH PERFORMANCE GLAZING
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	, , , , , ,		0011							
	ROUGH	PENING				DETAILS				
(#)	WIDTH	HEIGHT	ROUGH HEAD (FROM SUBFLOOR)	TYPE	U-VALUE	HEAD DET#/SHT#	JAMB DET#/SHT#	JAMB DET#/SHT#	SILL DET#/SHT#	REMARKS
1	6'-5"	7'-6"	_	Α	.30	_	_	_	-	-
2	3'-7"	12'-6"	_	В	.30	_	_	_	_	-
3	2'-5"	5'-6"	_	С	.30	_	_	_	_	-
4	2'-0"	10'-6"	_	D	.30	_	_	_	_	_
5	2'-0"	10'-6"	_	D	.30	_	_	_	_	_
6	6'-5"	7'-7"	_	E	.30	_	_	_	_	-
7	2'-8"	4'-0"	_	F	.30	_	_	_	_	_
8	10'-0"	6'-7"	_	G	.30	_	_	_	_	_
	_	_		_	_	_	_	_	_	_
	_	_		_	_	_	_	_	_	-

WINDOW TYPES

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



ΑF	PLIA	NCE SCH	EDULE		O.P.C.I. = OWNER TO	PROVIDE/CONTRACTOR TO INSTALL
MARK	PRODUCT	MANUFACTURER	MODEL NO.	FINISH/COLOR	LOCATION	REMARKS
DW	_	-	-	-	-	-
RANGE	_	-	-	-	-	-
REFER	-	-	-	-	-	-
-	_	-	-	-	-	-
_	_	-	-	-	-	-

Ρl	_ U M B I	NG FIXT	URE SC	HEDULE	<u>.</u>		
MARK	FIXTURE	MANUFACTURER	MODEL NO.	FINISH/COLOR	FITTING	LOCATION	REMARKS
LAV	-	-	-	-	_	-	-
TUB	_	-	_	-	-	-	-
SINK1	_	-	_	-	-	-	-
SINK2	_	-	_	-	-	-	-
WC	_	-	_	-	_	-	-
_	_	-	_	-	_	_	-

SI	PECIAL	TIES SCI	HEDULE			
MARK	PRODUCT	MANUFACTURER	MODEL NO.	FINISH/COLOR	LOCATION	REMARKS
-	-	-	-	-	_	-
_	_	-	-	-	-	-
-	_	_	_	-	_	_
-	_	-	-	-	_	-
_	-	_	-	-	_	-
_	-	-	-	-	_	-
_	-	-	-	-	_	-
_	-	-	-	-	_	-
_	-	-	-	-	_	-





S AND KAO RESIDENCE |
SLAND, WA GRAAD

SCHEDULES

7/6/23

ELECTRICAL SYMBOLS

0	RECESSED LIGHT/ROUND TRIM	₩	SWITCH
	RECESSED LIGHT/SQUARE TRIM	,	3-WAY SWITCH
 	WALL MOUNTED LIGHT	ઝ₁	DIMMING SWITCH
$^{\perp}$	CUDEACE /DENDANT LICHT	⊢ . α.	CWITCH W / TIMED

SWITCH W/ TIMER → SURFACE/PENDANT LIGHT SWITCH W/ OCCUPANCY SENSOR WALLWASH LIGHT ☑ 6-BUTTON KEYPAD, LUTRON SMART DIMMER SWITCH, LUTRON

\$□ FLOOD LIGHT --- STRIP LIGHT

→ DUPLEX RECEPTACLE → DUPLEX RECEPT./HALF-SWITCHED → DUPLEX RECEPT. W/ DUAL USB-C

 □ CARBON MONOXIDE DETECTOR (CM)
 ← FOURPLEX RECEPTACLE © COMBO-SMOKE/CARBON MONOXIDE DETECTOR (S/CM)

Ø FLOOR RECEPTICAL Ø CEILING/SOFFIT RECEPTACLE HEAT DETECTOR

F EXHAUST FAN (VENT TO EXTERIOR) TELEPHONE CENTRAL VACUUM WALL PORT

→ TELEVISION MOTION SENSOR TELEVISION/MULTI-FUNCTION CABLE DOORBELL CAT 6 COMPUTER NETWORK/DATA HERMOSTAT → FIBER OPTIC OUTLET

O GARAGE DOOR CONTROL PANEL

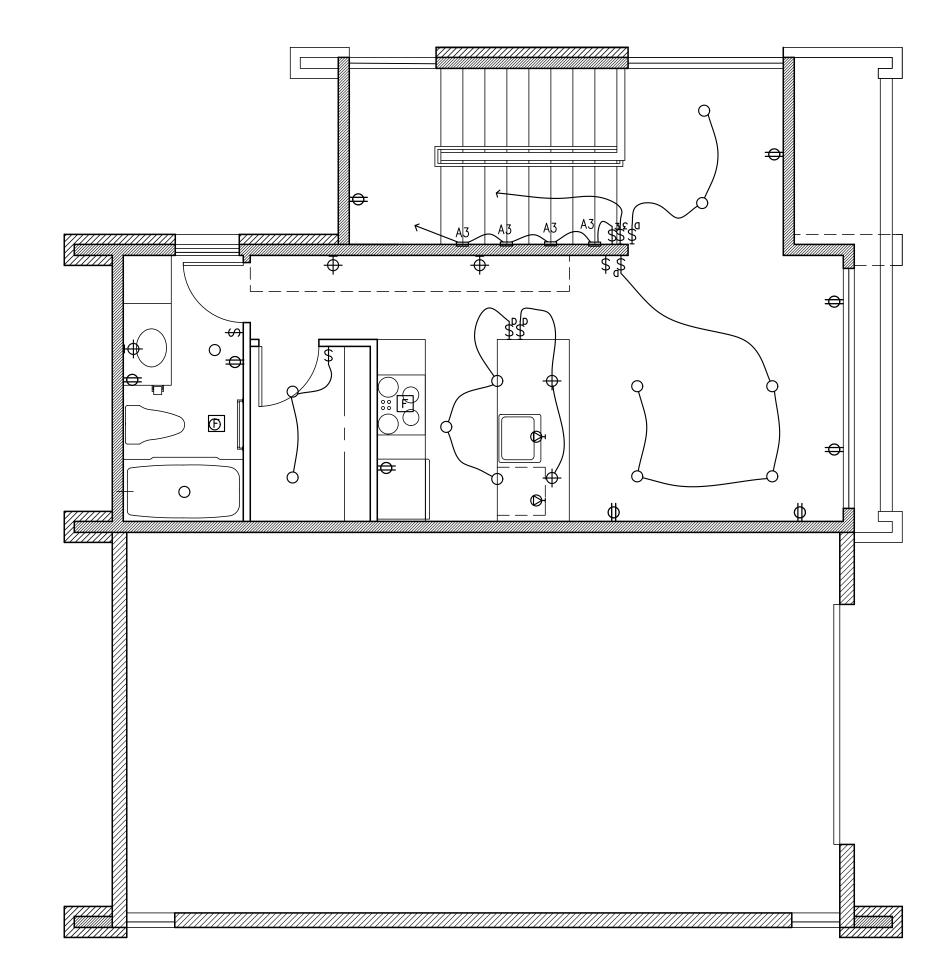
%► SPEAKER OUTLET CIRCUIT BREAKER PANEL SOUND SPEAKER WINDOW SHADE

ELECTRICAL LEGEND

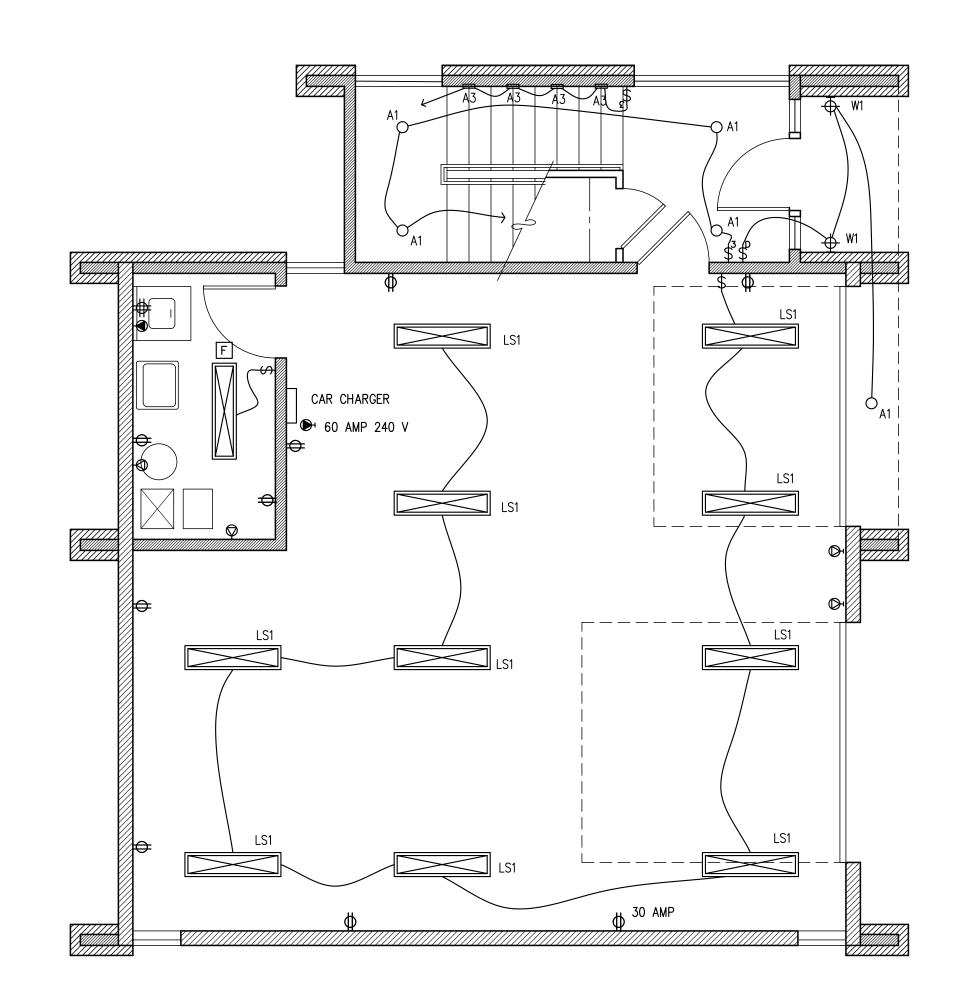
MARK	DESCRIPTION	MANUF.	MODEL NO.	FINISH / TRIM	LAMP
A1	DOWNLIGHT	NORA	NLCBS-4W51-85-30-MPW	NHSIC-485LE3LT	_
A2	SHOWER LIGHT	NORA	NL-427W-	NSERIC-407AT/20	20W/LED
А3	STEP LIGHT	NORA	NSW-851/32BN		3W/LED
F	FAN	PANASONIC	FV-0511VFC1	_	N/A
LS1	SURFACE	NORA	NLSTR-4L1334W		24W
W1	WALL LIGHT	BEGA	33817-K3	BLACK	_

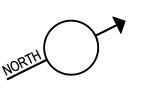
NOTE:
ALL SWITCHES AND OUTLETS TO BE LEVITON WHITE
ALL SWITCHES TO BE LEVITON ROCKER ARM TYPE AND DIMMERS TO HAVE SLIDE BAR CONTROL

LAM4B408R259730DE0103MB







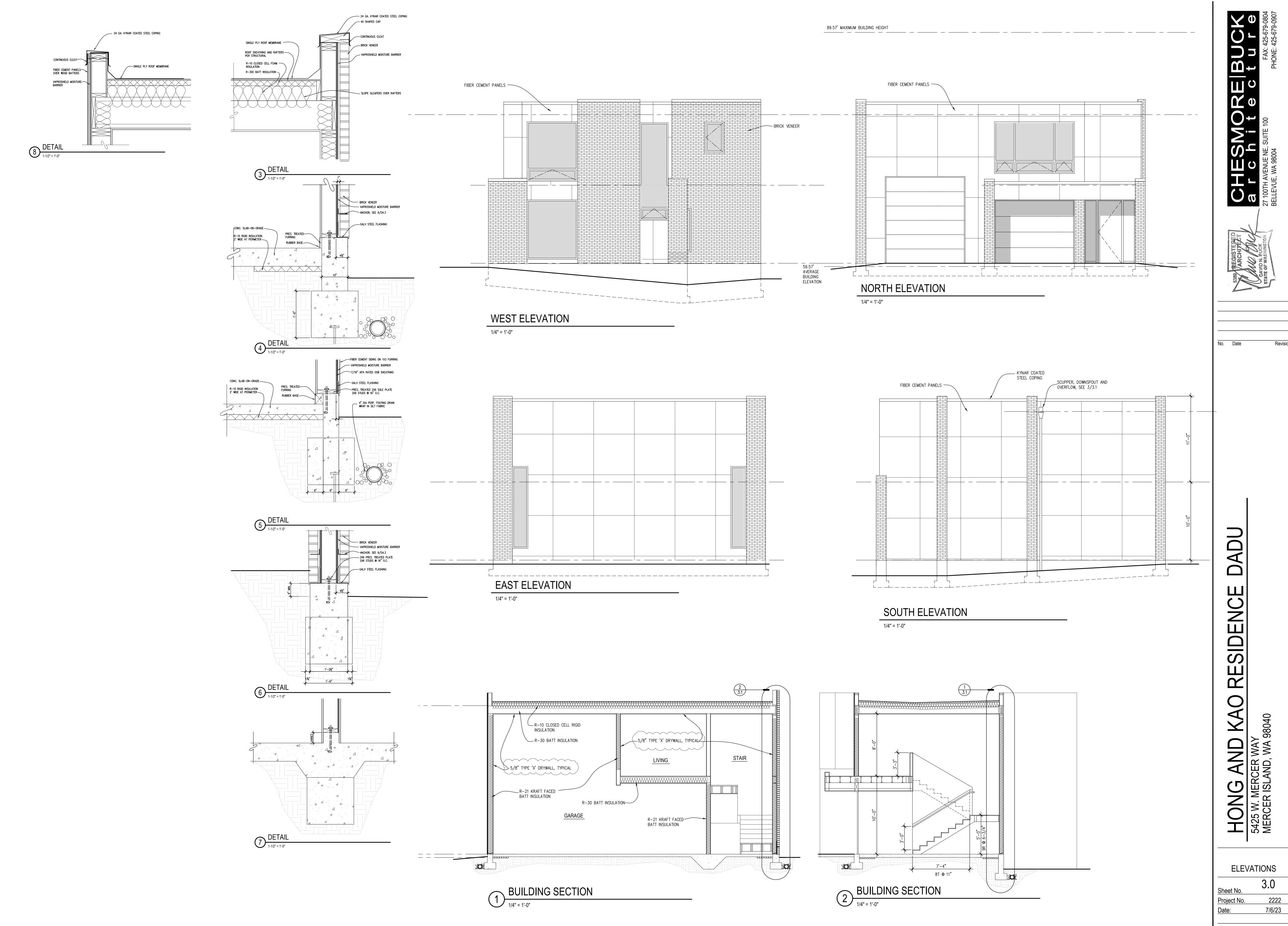


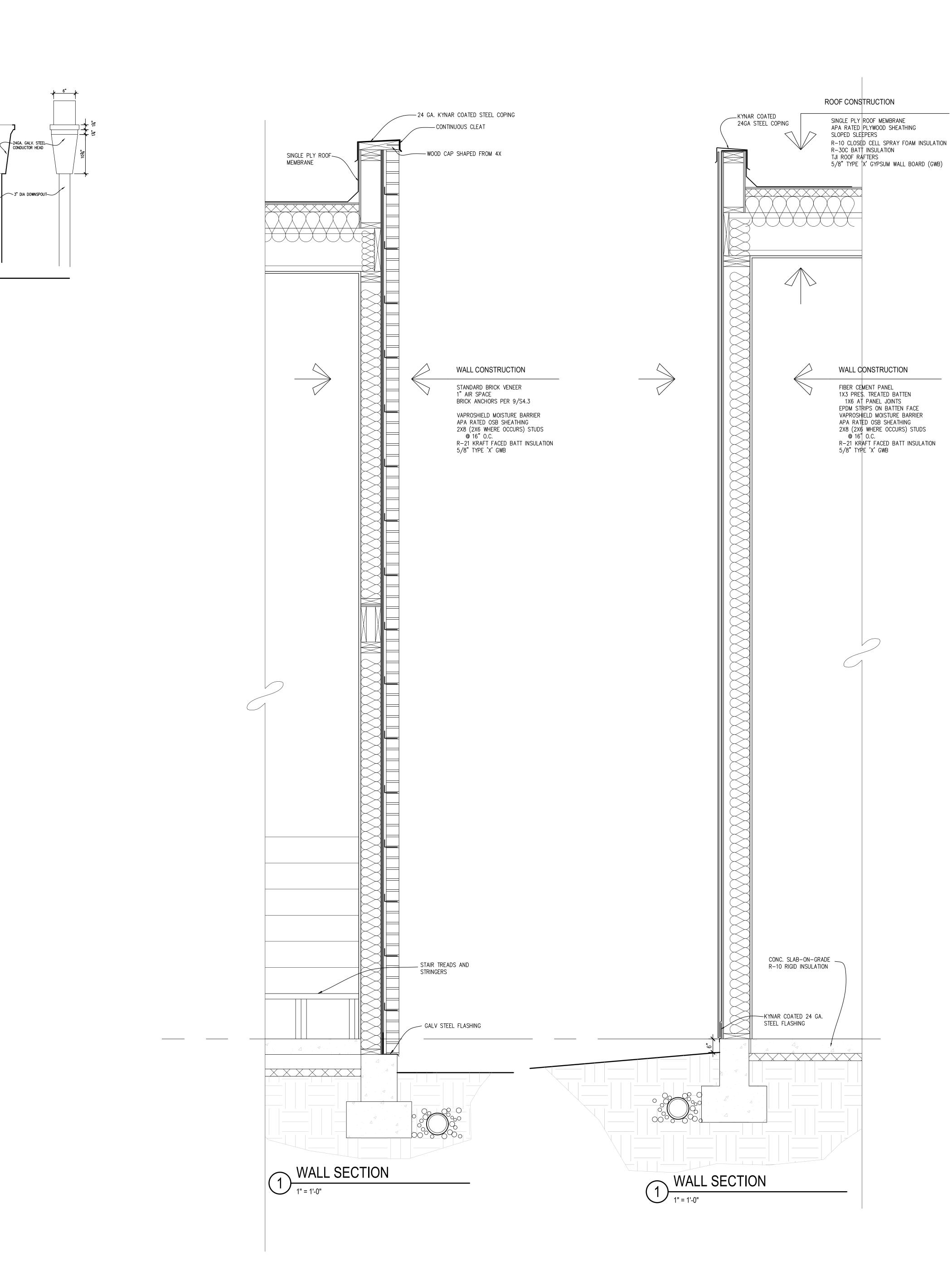
MAIN FLOOR ELECTRICAL PLAN

1/4" = 1'-0"

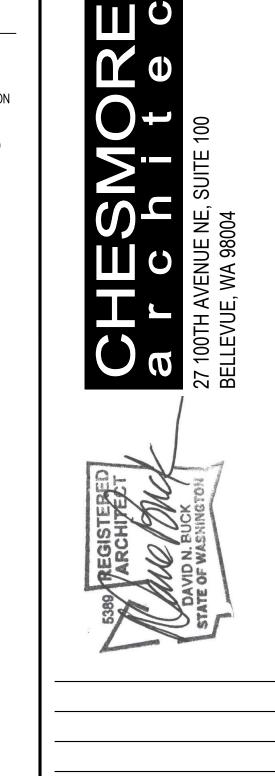
ELECTRICAL PLANS

2222 7/6/23





3 DETAIL
1-1/2" = 1'-0"



G AND KAO RESIDENCE DADU

5425 W. MERCER WAY
MERCER ISLAND, WA 98040

DETAILS

 Sheet No.
 2222

 Date:
 7/6/23

GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

CRITERIA

ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE 2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC).

2. <u>DESIGN LOADING CRITERIA</u>

ROOF SNOW LOAD	25 PSF
ROOF RAIN ON SNOW LOAD	5 PSF
ROOF DEAD LOAD ALLOWANCE FOR PV PANELS	5 PSF
FLOOR LIVE LOAD	40 PSF
FLOOR LIVE LOAD (EXTERIOR DECKS AND BALCONIES)	60 PSF
FLOOR LIVE LOAD (PARKING GARAGE)	50 PSF
GUARDRAILS/BALCONY RAILS	200 LBS

ANALYSIS PROCEDURE: ASCE 7-16 CHAPTER 27 "PART I - BUILDINGS OF ALL HEIGHTS"

RISK CATEGORY II 97 MPH

EXPOSURE "C"

TOPOGRAPHIC FACTOR Kzt = 1.0 MAIN HOUSE WIND BASE SHEAR, NORTH/SOUTH VW = 32.6 K MAIN HOUSE WIND BASE SHEAR, EAST/WEST VW = 38.9 K DADU WIND BASE SHEAR, NORTH/SOUTH VW = 11.6 K

DADU WIND BASE SHEAR, EAST/WEST VW = 10.9 K

EARTHQUAKE ANALYSIS PROCEDURE: IBC "EQUIVALENT LATERAL FORCE PROCEDURE"

SEISMIC DESIGN CATEGORY (SDC) = D RISK CATEGORY = 11

SEISMIC SITE CLASS = D

IMPORTANCE FACTOR le = 1.0

MAPPED MCE Ss = 1.45; S₁ = 0.51DESIGN ACCELERATION Sds = 0.97; Sd, = 0.61

SEISMIC RESISTING SYSTEM: WOOD PANEL BEARING SHEAR WALL, R = 6.5

SEISMIC RESPONSE COEFFICIENT: Cs = 0.149 MAIN HOUSE SEISMIC BASE SHEAR Vs = 67.7 K

DADU SEISMIC BASE SHEAR Vs = 10.8 K

- 3. LATERAL LOADS ARE TRANSFERRED BY THE ROOF AND FLOOR DIAPHRAGMS TO THE SHEAR WALLS. FORCES ARE BASED ON THE TRIBUTARY AREA FOR EACH SHEAR WALL AND ARE CARRIED BY THE SHEAR WALLS TO THE FOUNDATION.
- 4. <u>STRUCTURAL</u> <u>DRAWINGS</u> SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- 5. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.
- 6. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THEIR WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
- 8. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- 9. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. WHERE INFORMATION ON THE DRAWINGS IS IN CONFLICT WITH THE SPECIFICATIONS, THE MORE STRINGENT SHALL APPLY, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. DO NOT SCALE THE DRAWINGS.
- 10. ALL STRUCTURAL SYSTEMS WHICH ARE COMPOSED OF FIELD ERECTED COMPONENTS SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.
- I. SHOP DRAWINGS STRUCTURAL STEEL AND GLUED LAMINATED MEMBERS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.
- 12. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD. AND THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR REVIEW.
- 13. SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.
- 14. <u>DEFERRED SUBMITTALS OF DESIGN BUILD COMPONENTS</u> SHALL BEAR THE STAMP AND SIGNATURE OF A STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER AND SHALL BE APPROVED BY THE COMPONENT DESIGNER PRIOR TO CURSORY REVIEW BY THE ENGINEER OF RECORD FOR LOADS IMPOSED ON THE BASIC STRUCTURE. THE COMPONENT DESIGNER IS RESPONSIBLE FOR CODE CONFORMANCE AND ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON ARCHITECTURAL OR STRUCTURAL DRAWINGS. DEFERRED SUBMITTALS SHALL INDICATE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON BASIC STRUCTURE AND SHALL INCLUDE DESIGN CALCULATIONS WITH THE ENGINEER'S STAMP.

THE FOLLOWING COMPONENTS SHALL BE DEFERRED SUBMITTALS FOR THIS PROJECT: STAIRS, RAILINGS.

15. SPECIAL INSPECTION: STRUCTURAL STEEL FABRICATION AND ERECTION (INCLUDING FIELD WELDING AND HIGH-STRENGTH FIELD BOLTING), EXPANSION BOLTS AND THREADED EXPANSION INSERTS, SCREW ANCHORS, EPOXY GROUTED INSTALLATIONS. AND DRIVEN PILE INSTALLATION SHALL BE SUPERVISED IN ACCORDANCE WITH IBC SECTIONS 1704 & 1705 AND THE PROJECT SPECIFICATIONS BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE OWNER. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE OWNER, ARCHITECT, STRUCTURAL ENGINEER, CONTRACTOR AND BUILDING OFFICIAL. ANY MATERIALS WHICH FAIL TO MEET PROJECT SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

<u>GEOTECHNICAL</u>

16. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL REPORT OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH (CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH) AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND GEOTECHNICAL ENGINEER. UNLESS OTHERWISE NOTED, FOOTINGS SHALL BE CENTERED UNDER COLUMNS OR WALLS ABOVE.

BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE GEOTECHNICAL REPORT.

THE STRUCTURAL DESIGN IS BASED ON THE FOLLOWING VALUES FROM THE REFERENCED GEOTECHNICAL REPORT

ALLOWABLE SOIL BEARING PRESSURE 2,000 PSF 55 PCF/35 PCF LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED) SEISMIC SURCHARGE PRESSURE (RESTRAINED/UNRESTRAINED) 8H PSF/5H PSF PASSIVE SOIL PRESSURE 350 PCF SOIL COEFFICIENT OF FRICTION 0.35 PILE CAPACITY (3 INCH) 12 KIPS

GEOTECHNICAL REPORT REFERENCE: #G-5881 BY GEO GROUP NORTHWEST, INC. DATED MAY 20, 2023.

- 17. <u>PIPE PILES</u> SHALL BE GALVANIZED SCHEDULE-40 (STD) ASTM A53 (TYPE E OR S, GRADE A OR B) 3 INCH NOMINAL PIPE DRIVEN TO REFUSAL PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER. THE ALLOWABLE AXIAL COMPRESSION CAPACITY SHALL BE 12 KIPS. SECTIONS OF PIPE SHALL BE CONNECTED TOGETHER WITH COMPRESSION FITTED SLEEVE COUPLERS.
- 18. PIPE PILING INSPECTION SHALL BE CONTINUOUSLY PERFORMED BY THE GEOTECHNICAL ENGINEER DURING PLACEMENT TO CONFIRM THAT THE PILES ARE INSTALLED IN ACCORDANCE WITH THE PLANS AND GEOTECHNICAL REPORT. AT LEAST 3% OF THE 3 INCH PILES SHALL BE LOAD TESTED IN ACCORDANCE WITH ASTM DI143. MAXIMUM PILE MIS-LOCATION SHALL BE 2" LATERALLY. ACTUAL PILE LENGTH SHALL BE DETERMINED IN THE FIELD BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO DRIVING PILES.

RENOVATION

- 19. DEMOLITION: VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. EXISTING REINFORCING SHALL BE SAVED WHERE AND AS NOTED ON THE PLANS. SAW CUTTING, IF AND WHERE USED, SHALL NOT CUT EXISTING REINFORCING THAT IS TO BE SAVED. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS TO 40 PSF.
- 20. ALL EXTERIOR WALLS SHALL BE INSPECTED AND REPAIRED AS FOLLOWS: SCRAPE ALL LOOSE AND WEAKENED MORTAR OUT TO FULL DEPTH OF THE DETERIORATION; REMOVE AND REPLACE ANY LOOSE MASONRY UNITS; CHECK FOR LOOSE FACING BRICK VENEERS; TUCK POINT ALL JOINTS SOLID. ALL MASONRY RESTORATION AND REPAIR SHALL BE PERFORMED IN SUCH A MANNER THAT THE EXISTING STRUCTURE IS NOT WEAKENED OR LEFT UNSUPPORTED DURING THE PROCESS OF THE WORK. ALL EXTERIOR APPENDAGES SUCH AS FIRE ESCAPES, CORNICES AND EYEBROWS SHALL BE INSPECTED FOR STRUCTURAL INTEGRITY AND THE CONDITION OF THE CONNECTIONS TO THE STRUCTURE. NOTIFY THE STRUCTURAL ENGINEER AS TO THE FINDINGS OF THIS INSPECTION.
- 21. CHECK FOR DRYROT AT ALL EXTERIOR WALLS, EXISTING TOILET ROOM FLOORS AND WALLS, AREAS SHOWING WATER STAINS, AND ALL WOOD MEMBERS IN BASEMENT AND CRAWL SPACES. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE STRUCTURAL ENGINEER OR ARCHITECT.

CONCRETE

22. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301. CONSTRUCTION TOLERANCES SHALL NOT EXCEED THOSE LISTED IN ACI 117. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF I'C = 2.500 PSI. ALL CONCRETE EXPOSED TO THE WEATHER AND ALL GARAGE SLABS-ON-GRADE SHALL ATTAIN A 28-DAY STRENGTH I'C OF 3,000 PSI IN ACCORDANCE WITH IBC SECTION 1904.1. AND ACI 318 TABLE 19.3.2.1 THIS INCREASE IN REQUIRED STRENGTH IS FOR DURABILITY ONLY (SPECIAL INSPECTION IS NOT REQUIRED) MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS (BEFORE THE ADDITION OF ADMIXTURES). THE WATER/CEMENT RATIO SHALL NOT EXCEED 0.55 FOR FOOTINGS AND 0.45 FOR ALL SLABS AND EXPOSED CONCRETE UNLESS OTHERWISE NOTED. EXCEPT FOR FOOTINGS AND SLAB ON GRADE, AGGREGATE SIZE SHALL NOT EXCEED 3/4".

THE MINIMUM AMOUNT OF CEMENT AND THE MAXIMUM SLUMP MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. (THE W/C RATIO LIMITS STILL APPLY). THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, CEMENTITIOUS MATERIAL, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 301. CHEMICAL ADMIXTURES AND FLY ASH SHALL CONFORM TO ASTM C494 AND C618 RESPECTIVELY. FLY ASH PERCENTAGE OF TOTAL CEMENTITIOUS MATERIAL SHALL NOT EXCEED 20%. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION, THE COST OF WHICH SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY TO CONTRACT DOCUMENTS. CONTRACTOR MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-14 TABLE 19.3.3.1. ALL CONCRETE TO RECEIVE A STEEL TROWELED FINISH SHALL NOT BE AIR-ENTRAINED.

23. REINFORCING STEEL SHALL CONSIST OF #4 BARS CONFORMING TO ASTM A615, GRADE 40, fy = 40,000 PSI AND SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315 AND 318. LAP ALL CONTINUOUS REINFORCEMENT 48 BAR DIAMETERS, 2'-O" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS, LAP 2'-0" MINIMUM. PROVIDE (2) #4 MIN. U.N.O. TRIM BARS AROUND ALL OPENINGS IN CONCRETE WALLS OR SLABS EXTENDING 2'-O" PAST CORNERS, TYPICAL.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO REINFORCING BARS SHALL BE "WET-SET" INTO THE CONCRETE. PROVIDE A 20' LONG REBAR GROUND (UFER GROUND) PER ELECTRICIAN.

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

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST EARTH FORMED SURFACES EXPOSED TO EARTH (i.e. WALLS BELOW GROUND) OR WEATHER SLABS AND WALLS (INTERIOR FACE)

CONCRETE WALL REINFORCING - PROVIDE THE FOLLOWING UNLESS DETAILED OTHERWISE:

MALL THICKNESS VERTICAL BARS HORIZONTAL BARS 6" WALLS 8" WALLS #4 @ 18" (2 CURTAIN) #4 @ 16" (2 CURTAIN)

25. NON-SHRINK GROUT SHALL BE NON-METALLIC CONFORMING TO ASTM CITOT AND BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (5000) PSI MINIMUM).

ANCHORAGE

- 26. EXPANSION BOLTS INTO CONCRETE SHALL BE "STRONG-BOLT 2 WEDGE ANCHOR", AS MANUFACTURED BY SIMPSON STRONG-TIE ANCHOR SYSTEMS. INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORT NO. ESR-3037 INCLUDING STANDARD EMBEDMENT REQUIREMENTS U.O.N. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C. OR IAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION BOLT INSTALLATION.
- 27. SCREW ANCHORS INTO CONCRETE SHALL BE "TITEN HD", AS MANUFACTURED BY SIMPSON STRONG-TIE ANCHOR SYSTEMS. INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORT NO. ESR-2713 INCLUDING STANDARD EMBEDMENT REQUIREMENTS U.O.N. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C. OR IAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION IS REQUIRED FOR ALL SCREW ANCHOR INSTALLATION.
- 28. DRIVE PINS, SHOT PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE LOW VELOCITY TYPE FASTENERS AS MANUFACTURED BY HILTI CORPORATION. WHEN CALLED FOR IN THE DRAWINGS, PROVIDE THE APPROPRIATE FASTENER AS NOTED IN THE TABLE BELOW FOR EACH GIVEN APPLICATION. INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORTS NO. ESR-2269 FOR THE X-U FASTENERS AND ESR-2379 FOR THE X-CP FASTENERS. MINIMUM EMBEDMENT IN CONCRETE SHALL BE I" UNLESS OTHERWISE NOTED. MAINTAIN AT LEAST 3" TO NEAREST CONCRETE EDGE AND 4" CENTER TO CENTER SPACING. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH L.C.C. OR JAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES.

ALLOWABLE APPLICATION	ALLOWABLE FASTENER TYPE	SHEAR CAPACITY (LBS) TENSIC	ON CAPACITY (LBS)
2X TREATED LUMBER TO CONCRETE (2000 PSI MIN.)	X-CP 72 P8 S23 w/ 1.33" EMBED	250	175
2X LUMBER TO STRUCTURAL STEEL (3/16" MIN., 36 OR 50 KSI)	X-U 52 MX PLUS R-23 WASHERS	250	175

29. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) INTO CONCRETE SHALL BE INSTALLED USING "SET-36" ADHESIVE ANCHOR AS MANUFACTURED BY SIMPSON STRONG-TIE ANCHOR SYSTEMS. INSTALL IN STRICT ACCORDANCE WITH I.C.C. REPORT NO. ESR-4057, INCLUDING STANDARD EMBEDMENT REQUIREMENTS U.O.N. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C. OR IAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED.

MASONRY

30. MASONRY VENEER SHALL HAVE WI.7 (9 GAUGE) WIRE JOINT REINFORCEMENT SPACED AT 16" O.C. VERTICALLY AND SHALL BE ANCHORED TO BACKING WALLS PER IBC SECTION 1404.6 WITH SHEET METAL ANCHORS, WIRE ANCHORS OR ADJUSTABLE ANCHORS. MECHANICALLY CONNECT THE ANCHORS TO THE JOINT REINFORCEMENT WITH CLIPS OR HOOKS THAT WILL ENGAGE OR ENCLOSE THE WIRE. THE WIRE SHALL BE CONTINUOUS WITH BUTT SPLICES BETWEEN ANCHORS PERMITTED.

SHEET METAL ANCHORS (NON-CORRUGATED) SHALL BE AT LEAST 7/8" WIDE, 0.03" THICK, COMPLY WITH TMS 402/602 REQUIREMENTS AND BE SPACED AT 16" O.C. VERTICALLY AND A MAX. OF 24" O.C. HORIZONTALLY.

THE MAXIMUM HEIGHT OF CONTINUOUS BRICK VENEER FROM A CONCRETE FOUNDATION SHALL BE 30 FEET. PROVIDE VERTICAL EXPANSION JOINTS IN CONTINUOUS VENEER @ 25' O.C. MAX. TYPICAL U.O.N. LINTEL ANGLES OVER OPENINGS 6'-0" WIDE OR LESS SHALL BE L4" X 4" X 1/4" HOT DIP GALVANIZED, U.N.O. AND SHALL BEAR ON A MINIMUM OF 4" OF MASONRY EACH END.



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PERMIT SET 6/7/23 DESCRIPTION DATE BY REVISIONS: / ISSUES: (SHT P.E. MKS DRAWN BY: TA SCALE: AS SHOWN DATE: 6/7/23 JOB NO. 23127.01

GENERAL STRUCTURAL NOTES

SHEET NO.

SHEET TITLE:

GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

STEEL

31. <u>STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION</u> SHALL BE BASED ON THE LATEST EDITIONS OF THE A.I.S.C. SPECIFICATIONS AND CODES:

A. AISC - STEEL CONSTRUCTION MANUAL, 15TH EDITION

B. AISC 303-16 - CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.

C. 2014 RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS.

- 32. <u>STRUCTURAL STEEL</u>, WIDE FLANGE (W AND WT) SHAPES SHALL CONFORM TO ASTM A992, Fy = 50 KSI; ALL OTHER ROLLED SHAPES SHALL CONFORM TO ASTM A36, Fy = 36 KSI. STEEL PLATE SHALL CONFORM TO ASTM A36, Fy = 36 KSI. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B, Fy = 35 KSI. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE C, Fy = 50 KSI. CONNECTION BOLTS SHALL CONFORM TO ASTM A307. ANCHOR BOLTS SHALL CONFORM TO ASTM FI554 GRADE 36, Fy = 36 KSI.
- 33. <u>ARCHITECTURALLY EXPOSED STRUCTURAL STEEL</u> SHALL CONFORM TO SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
- 34. <u>ALL A325 CONNECTION BOLTS</u> SHALL BE INSTALLED TO THE SNUG-TIGHT CONDITION PER RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. ALL NUTS SHALL CONFORM TO ASTM A563. ALL WASHERS SHALL CONFORM TO ASTM F436 OR ASTM F959 TYPE 325. ALL BOLT HOLES SHALL BE STANDARD SIZE UNLESS OTHERWISE NOTED.
- 35. <u>ALL A307 CONNECTION BOLTS</u> SHALL BE PROVIDED WITH LOCK WASHERS UNDER NUTS OR SELF-LOCKING NUTS. ALL BOLT HOLES SHALL BE STANDARD SIZE UNLESS OTHERWISE NOTED.
- 36. ALL WELDING SHALL BE IN CONFORMANCE WITH A.I.S.C. AND A.W.S. STANDARDS AND SHALL BE PERFORMED BY W.A.B.O. CERTIFIED WELDERS USING ETO XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY A.W.S.) SHALL BE USED. WELDING OF GRADE 60 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING LOW HYDROGEN ELECTRODES. WELDING OF GRADE 40 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING ETOXX ELECTRODES. WELDING WITHIN 4" OF COLD BENDS IN REINFORCING STEEL IS NOT PERMITTED. SEE REINFORCING NOTE FOR MATERIAL REQUIREMENTS OF WELDED BARS. ALL WELDING SHALL BE PERFORMED BY WELDERS WITH AWS / W.A.B.O. CERTIFICATION WITH THE MATERIAL AND METHOD REQUIRED.

SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS. WELDS SHOWN ON DRAWINGS ARE MINIMUM SIZES. INCREASE WELD SIZE TO AWS MINIMUM SIZES BASED ON PLATE THICKNESS. MINIMUM WELDING SHALL BE 3/16-INCH. THE WELDS SHOWN ARE FOR THE FINAL CONNECTIONS. FIELD WELD ARROWS ARE SHOWN WHERE A FIELD WELD IS REQUIRED BY THE STRUCTURAL DESIGN; THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF A WELD SHOULD BE SHOP OR FIELD WELDED IN ORDER TO FACILITATE THE STRUCTURAL STEEL DELIVERY AND ERECTION.

37. <u>MELDING OF LATERAL FORCE RESISTING MEMBERS</u> SHALL BE PERFORMED IN ACCORDANCE WITH A WELDING PROCEDURE SPECIFICATION (WPS) AS REQUIRED IN AWS DI.I AND APPROVED BY THE STRUCTURAL ENGINEER BEFORE WORK BEGINS. THE WPS VARIABLES SHALL BE WITHIN THE PARAMETERS ESTABLISHED BY THE FILLER METAL MANUFACTURER. WELDING ELECTRODES SHALL BE ETOTG-K2 OR ETOT6 WITH A MINIMUM SPECIFIED CHARPY V-NOTCH (CVN) OF 20 ft-lbs AT -20 DEGREES FAHRENHEIT AND 40 ft-lbs AT 70 DEGREES FAHRENHEIT. REMOVE BOTTOM FLANGE WELD TAB AT MOMENT FRAME CONNECTIONS AND REINFORCE WITH 5/16" FILLET WELD IN CONFORMANCE WITH FEMA-353 RECOMMENDATIONS. WELD ACCESS HOLE DETAILING AT MOMENT FRAME CONNECTIONS SHALL CONFORM WITH FEMA-350 AND FEMA-353 RECOMMENDATIONS.

MOOD

38. <u>FRAMING LUMBER:</u> SHALL BE KILN DRIED OR MC-19 (MOISTURE CONTENT LESS THAN 19%), AND GRADED AND MARKED IN CONFORMANCE WITH W.C.L.I.B. STANDARD NO. 17 GRADING RULES FOR WEST COAST LUMBER. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS (2X, 3X, AND 4X MEMBERS)

DOUGLAS FIR OR HEM-FIR NO. 2

BEAMS AND STRINGERS (INCLUDING 6 X AND LARGER MEMBERS) DOUGLAS FIR NO. I

POSTS AND TIMBERS

DOUGLAS FIR NO. I

STUDS, PLATES & MISCELLANEOUS LIGHT FRAMING DOUGLAS FIR OR HEM-FIR NO. 2
(AS NOTED ON PLANS / DETAILS)

- 39. <u>GLUED LAMINATED MEMBERS</u> SHALL BE FABRICATED IN CONFORMANCE WITH ASTM D3737 AND ANSI AI9O.I STANDARDS. EACH MEMBER SHALL BEAR AN A.I.T.C. IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN A.I.T.C. CERTIFICATE OF CONFORMANCE. CERTIFICATES OF CONFORMANCE MUST BE MADE AVAILABLE TO BUILDING INSPECTORS. ALL SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2,400 PSI, Fv = 240 PSI, E = 1,800 KSI. ALL CANTILEVERED OR CONTINUOUS BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2,400 PSI, Fv = 240 PSI, E = 1,800 KSI. CAMBER ALL SIMPLE SPAN GLULAM BEAMS TO 5,000' RADIUS UNLESS SHOWN OTHERWISE ON THE PLANS. ALL GLUE LAMINATED COLUMNS SHALL BE DOUGLAS FIR COMBINATION 2, Fc = 1,900 PSI, Fby = 1,800 PSI, Fbx = 1,700 PSI, E = 1,700 KSI (4 LAMS MINIMUM DEPTH). CONTRACTOR SHALL VERIFY AVAILABILITY OF THE GL MEMBER SIZES SHOWN ON THE DRAWINGS AND ADJUST THE CONNECTOR SIZES IF NEEDED FOR LARGER MEMBER SIZES.
- 40. LAMINATED VENEER LUMBER (LVL) SHALL BE DESIGNED AND MANUFACTURED PER ASTM D5456. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, AND THE INDEPENDENT INSPECTION AGENCY'S LOGO. ALL LAMINATED VENEER LUMBER SHALL BE MANUFACTURED USING DOUGLAS FIR VENEER GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. MINIMUM STRUCTURAL PROPERTIES ARE AS FOLLOWS:

Fb = 2600 PSI, E = 2.0 x 10⁶ PSI, Fv = 285 PSI

DESIGN SHOWN ON PLANS IS BASED ON MATERIALS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

41. LAMINATED STRAND LUMBER (LSL) SHALL BE DESIGNED AND MANUFACTURED PER ASTM D5456. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, AND THE INDEPENDENT INSPECTION AGENCY'S LOGO. ALL LAMINATED STRAND LUMBER SHALL BE MANUFACTURED USING A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559. MINIMUM STRUCTURAL PROPERTIES ARE AS FOLLOWS:

RIM JOISTS AND BLOCKING (1-1/4" MINIMUM THICKNESS AT NON-SHEAR WALLS; SEE SCHEDULE FOR MINIMUM THICKNESS AT SHEAR WALLS):

Fb = 1700 PSI, E = 1.3×10^6 PSI, Fv = 400 PSI

BEAMS AND HEADERS:

Fb = 2325 PSI, E = 1.55 \times 10⁶ PSI, Fy = 310 PSI

DESIGN SHOWN ON PLANS IS BASED ON MATERIALS MANUFACTURED BY THE WEYERHAEUSER CORPORATION.

ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

- 42. MOOD I-JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE I-JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE I.C.C. OR IAPMO UES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH WOOD JOIST PROVIDED. GLUE FLOOR JOISTS TO SHEATHING AS REQUIRED BY THE JOIST MANUFACTURER.
- 43. <u>MOOD SHEATHING</u> SHALL BE APA RATED, EXTERIOR GLUE; EXPOSURE I, IN CONFORMANCE WITH THE REQUIREMENTS FOR THEIR TYPE IN DOC PS-I OR PS-2. SEE PLANS FOR THICKNESS, PANEL IDENTIFICATION INDEX AND NAILING REQUIREMENTS.

UNLESS OTHERWISE NOTED ON THE PLANS, ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH FACE GRAIN PERPENDICULAR TO SUPPORTS. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE-AND-GROOVE JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH (2) IOd-F NAILS AT EACH END, UNLESS OTHERWISE NOTED. AT BLOCKED FLOOR AND ROOF DIAPHRAGMS PROVIDE FLAT 2X BLOCKING AT ALL UNFRAMED PANEL EDGES AND NAIL WITH EDGE NAILING SPACED PER PLANS. WHERE NOT NOTED OTHERWISE, NAIL PANEL EDGES WITH 8d NAILS @ 6" O.C. EDGES, 12" O.C. IN THE FIELD.

- 44. <u>ALL MOOD</u> EXPOSED TO WEATHER, OR BEARING ON UNPROTECTED CONCRETE BELOW GRADE, OR BEARING ON UNPROTECTED CONCRETE LESS THAN 8" FROM EXPOSED EARTH SHALL BE PRESSURE-TREATED, U.O.N. PRESSURE TREATMENT SHALL BE WITH AN APPROVED PRESERVATIVE CONFORMING TO AMERICAN MOOD PRESERVERS ASSOCIATION UI AND M4 AND SHALL BE BRANDED WITH A QUALITY CONTROL AGENCY MARK BY THE AWPA OR EQUAL. ALL METAL HARDWARE IN CONTACT WITH TREATED WOOD SHALL BE PROTECTED WITH A GI85 GALVANIZED COATING (ZMAX) OR BETTER. ALL NAILS IN TREATED WOOD SHALL BE HOT-DIP GALVANIZED OR BETTER. PROVIDE 2 LAYERS OF 30# ASPHALT IMPREGNATED BUILDING PAPER BETWEEN NON-PRESSURE-TREATED LEDGERS, BLOCKING, ETC., AND CONCRETE.
- 45. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NO. C-C-202I. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE I.C.C. OR IAPMO UES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. CONNECTORS SHALL BE SIZED TO MATCH THE SIZE OF THE FRAMING MEMBERS BEING CONNECTED. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE COMMON. ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED. ALL BOLTS TIGHTENED TO SNUG TIGHT.
- 46. WOOD FASTENERS:

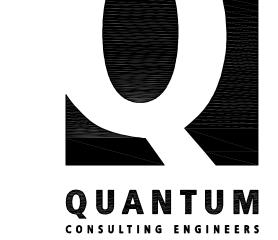
A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

DRAMING ID	NAIL NAME	NAIL DIAMETER	NAIL LENGTH
"6d"	6d Common	0.113"	2"
"8d Box"	8d Box	0.113"	2-1/2"
"8d"	8d Common	0.131"	2-1/2"
"lOd-F"	10d Framer	0.131"	3"
"l0d"	10d Shear	0.148"	2-1/4"
"l6d"	16d Sinker	0.148"	3-1/4"

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

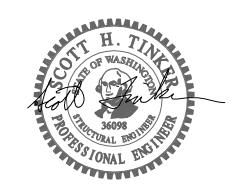
- B. NAILS SHEATHING FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.
- C. <u>SCREMS</u> SHALL BE WOOD SCREMS OF THE DIAMETER AND LENGTH NOTED ON THE DRAWINGS. SDS FASTENERS ARE SIMPSON STRONG DRIVE SCREWS.
- D. HOT DIPPED GALVANIZED NAILS, BOLTS AND METAL PLATES ALL NAILS, BOLTS AND METAL PLATES IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED.
- 47. MOOD FRAMING NOTES: THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:
 - A. <u>ALL WOOD FRAMING DETAILS</u> NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC. MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO IBC TABLE 2304.IO.I. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. TIGHTEN BOLTS AND LAG SCREWS SNUGLY AGAINST WOOD FRAMING AFTER WOOD HAS REACHED SPECIFIED MOISTURE CONTENT.
 - B. <u>MALL FRAMING</u>: ALL BEARING AND SHEAR WALLS SHOWN AND NOT OTHERWISE NOTED SHALL BE 2×4 STUDS @ 16" O.C. AT INTERIOR WALLS AND 2×6 @ 16" O.C. AT EXTERIOR WALLS. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL BEARING AND SHEAR WALLS AND AT EACH SIDE OF ALL OPENINGS. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW.

- ALL BEARING STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS AT 8" O.C. STAGGERED OR BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS WITH 3"x3"x1/4" PLATE WASHERS @ 4'-O" O.C., UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH 10d-F NAILS @ 8" O.C. STAGGERED. REFER TO THE PLANS AND SHEAR WALL SCHEDULE FOR REQUIRED SHEATHING AND NAILING. WHEN NOT OTHERWISE NOTED, PROVIDE GYPSUM WALLBOARD ON INTERIOR SURFACES ATTACHED TO ALL STUDS, TOP AND BOTTOM PLATES AND BLOCKING WITH SCREWS AT 8" O.C. USE 1-1/4 " W #6 SCREWS FOR 1/2" GWB AND 5/8" GWB WHERE OCCURS. VERIFY THE FIRE ASSEMBLY REQUIREMENTS WHERE APPLICABLE WITH THE ARCHITECT.
- C. <u>FLOOR AND ROOF FRAMING</u>: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH IOd-F NAILS @ 8" O.C. STAGGERED UNLESS OTHERWISE NOTED.
- D. <u>POSITIVE</u> <u>CONNECTIONS</u>: PROVIDE THE FOLLOWING SIMPSON CONNECTORS AT TYPICAL FRAMING UNLESS OTHERWISE NOTED ON PLAN OR DETAIL. PROVIDE CCQ/ECCQ CAPS AND PBS BASES AT POSTS. PROVIDE BC BASE WHERE POST BEARS ON WOOD FRAMING BELOW. PROVIDE LUS SERIES HANGERS FOR 2X FLOOR AND ROOF JOISTS. CONNECTORS SHALL BE SIZED TO MATCH THE SIZE OF THE FRAMING MEMBERS BEING CONNECTED.



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PROJECT:

HONG AND KAO RESIDENCE

5425 W. MERCER WAY MERCER ISLAND, WA 98040

APPROVAL:

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GENERAL STRUCTURAL NOTES

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DATE:

JOB NO.

SHEET TITLE:

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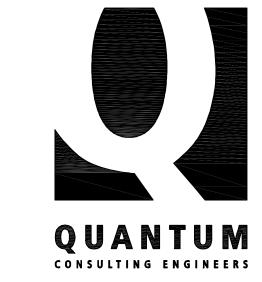
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GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

	ABBREVIATIONS							
<u> </u>	At Page (Nails)	L	Angle					
d O	Penny (Nails) Diameter	LB. LL	Pound Live Load					
0	Degrees	LLH	Long Leg Horizontal					
# #	Pounds Number	LLV LONGIT.	Long Leg Vertical Longitudinal					
		LT. MT.	Lightweight					
(A) A.B.	Above Anchor Bolt	MAX.	Maximum					
ADD'L	Additional	MECH.	Mechanical					
ALT. APPROX	Alternate X. Approximate	MEZZ. MF	Mezzanine Moment Frame					
ARCH.	Architect	MFR.	Manufacturer					
A.S.D.	Allonable Stress Design	MIN. MISC.	Minimum Miscellaneous					
(B)	Below	MK.	Mark					
B/ BF	Bottom of Braced Frame	(N)	New					
BLKG.	Blocking	N.	North					
BLDG. BM.	Building Beam	N.S. NOM.	Near Side Nominal					
BOT.	Bottom	NTS	Not to Scale					
BRG.	Bearing	0.6	On Conton					
BTWN.	Between	0.C. 0.D.	On Center Outside Diameter					
CL or q		0.F.	Outside Face					
C CIP	Camber Cast In Place	O.H. OPNG.	Overhang Opening					
C.J.	Construction Joint or Control Joint	OPP.	Opposite					
CJP CLG.	Complete Joint Penetration Ceiling	PAF	Powder Actuated Fastener					
CLR.	Clear	PC	Precast					
CMU COL.	Concrete Masonry Unit	PERM. PERP.	Permanent					
CONC.	Column Concrete	PJP	Perpendicular Partial Joint Penetration					
CONN.	Connections	PL or P	Plate					
CONST.	Construction Continuous	PLF PLYWD	Pounds per linear Foot Plywood					
CSK.	Countersink	PREFAB.	Prefabricated					
DBA	Deformed Bar Anchor	PSF PSI	Pounds per Square Foot Pounds per Square Inch					
DBL.	Double	P.T. or PT	Post-Tensioning					
DEG. DF	Degree Douq Fir-Larch	P/T	Pressure-Treated					
DIA.	Diameter	RAD.	Radius					
DIAG. DIAPH.	Diagonal Diagonam	REF. REINF.	Reference Reinforce or Reinforcement					
DIM.	Diaphragm Dimension	REQD.	Required					
DN.	Down	REV.	Revise					
DO DTL.	Ditto Detail	R.O.	Rough Opening					
DTP	Double Top Plate	5.	South					
DWG.	Drawing	SCH. or SCH SECT.	HED. Schedule Section					
(E)	Existing	SHT.	Sheet					
E. EA.	East Each	SIM. SOG	Similar Slab On Grade					
E.F.	Each Face	SPEC.	Specification					
EL. ELEV.	Elevation Elevator	SQ. SQ. FT.	Square Square Feet					
EMBED.	Embedment Length	5Q. IN.	Square Inch(es)					
ENGR. EQ.	Engineer Faual	SPF S.S.	Spruce-Pine-Fir Stainless Steel					
E.M.	Equal Each Way	STD.	Standard					
EXP. EXT.	Expansion	STIFF.	Stiffener					
LAI.	Exterior	STL. STR.	Steel Structural					
FDN.	Foundation	SUB.	Substitute					
FIN. FLR.	Finish Fl <i>oo</i> r	SYM.	Symmetrical					
FRP	Fiber Reinforced Polymer	T/	Top of					
F.S. FT.	Far Side Foot or Feet	T&B T& <i>G</i>	Top and Bottom Tonque \$ Groove					
FTG.	Footing	TEMP.	Temporary					
GA.	Gauge	THRU T.O.C.	Through Top of Concrete					
GALV.	Galvanized	T.O.S.	Top of Steel					
GL GNB	Glue Laminated Gypsum Wall Board	T.O.W. TRANS.	Top of Wall Transverse					
OND	cypsum Nam Doard	TS	Tube Steel					
HDG HDR.	Hot Dipped Galvanized	TYP.	Typical					
HF.	Header Hem Fir	U.O.N.	Unless Otherwise Noted					
HGR.	Hanger	\/EDT	\					
HORIZ. HSS	Horizontal Hollow Structural Section	VERT. VIF	Vertical Verify in Field					
HT.	Height		-					
I.D.	Inside Diameter	W. W/ or w/	West With					
I.F.	Inside Face	W.H.S.	Welded Headed Stud					
IN. INFO.	lnch Information	W/ <i>0</i> W.P.	Without Work Point					
INT.	Interior	W.T.S.	Welded Threaded Stud					
JT.	Joint	WWF	Welded Wire Fabric					
	JOIIIL	X SECT.	Cross Section					
K KSF	Kips Kips per Sayare Foot	X-STR XX-STR	Extra Strong Double Extra Strong					
KSI	Kips per Square Foot Kips per Square Inch	/V\-J \	boune Exil a sirong					



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GENERAL STRUCTURAL NOTES

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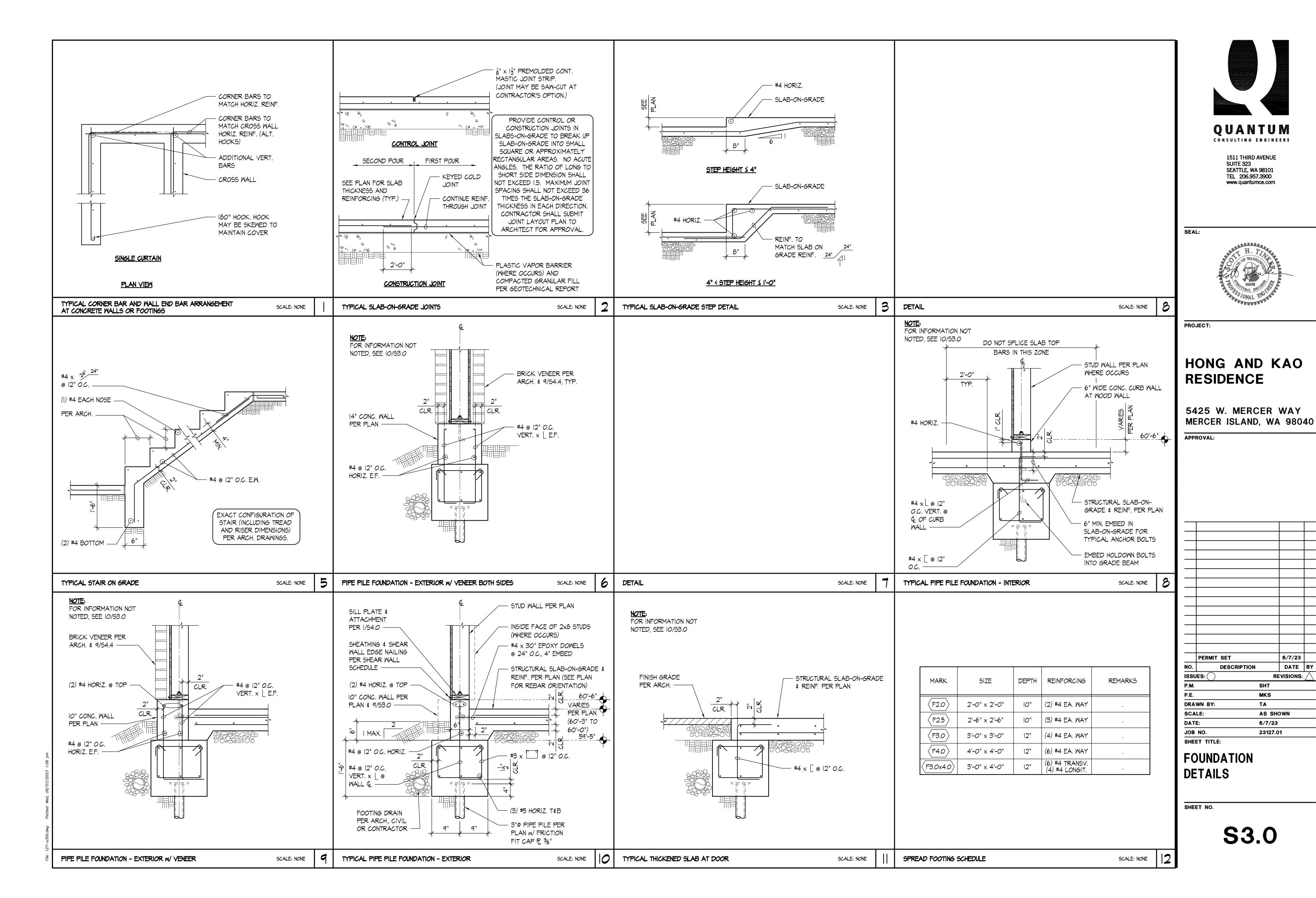
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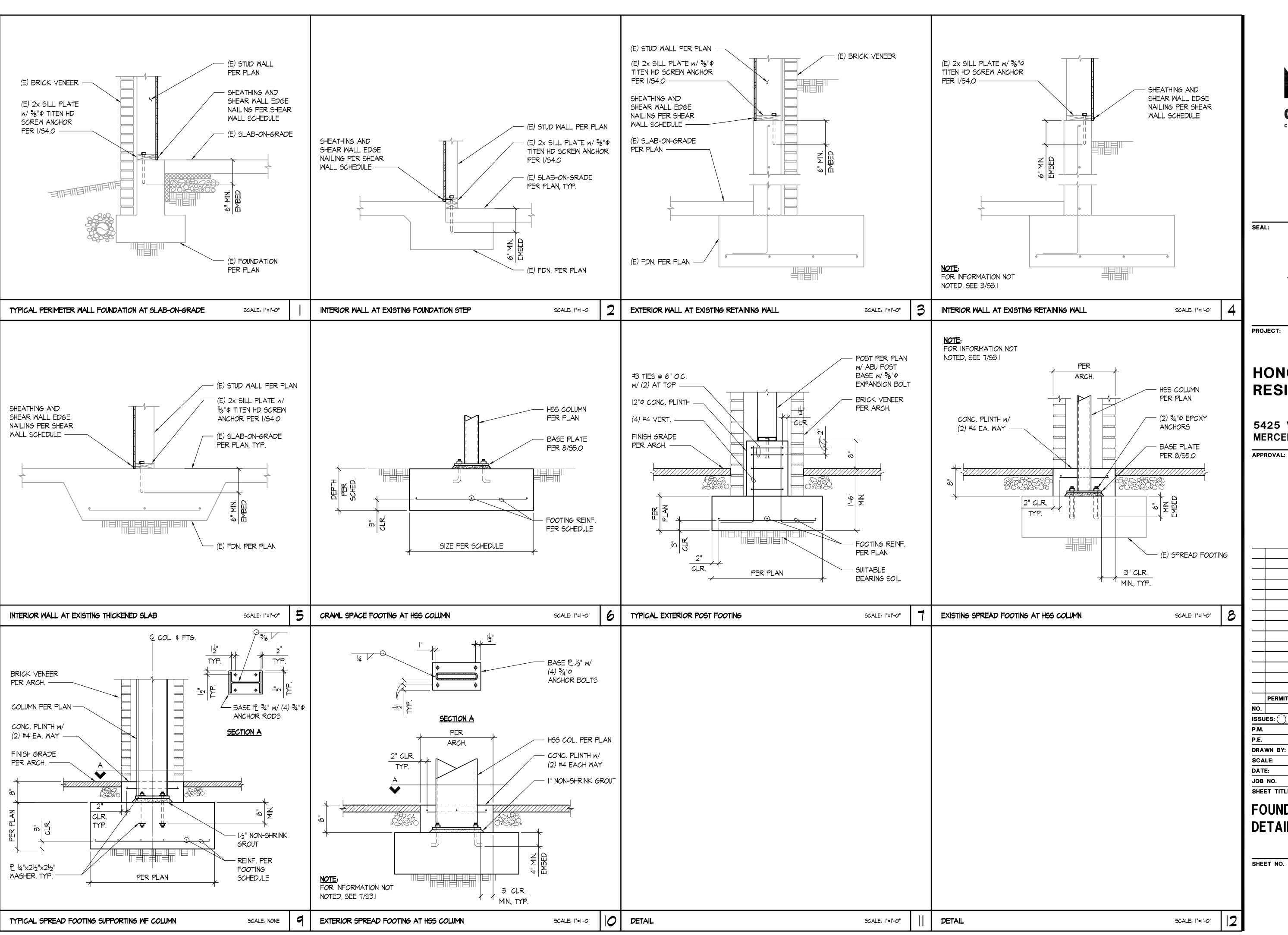
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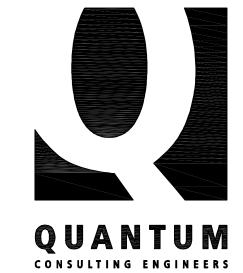
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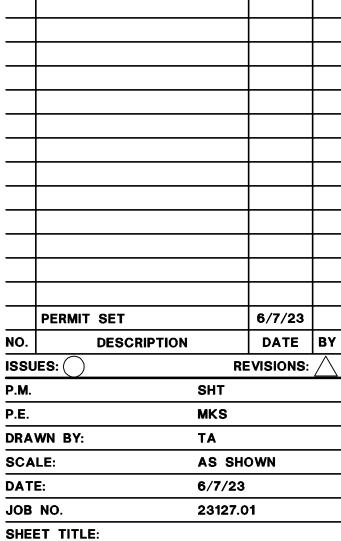




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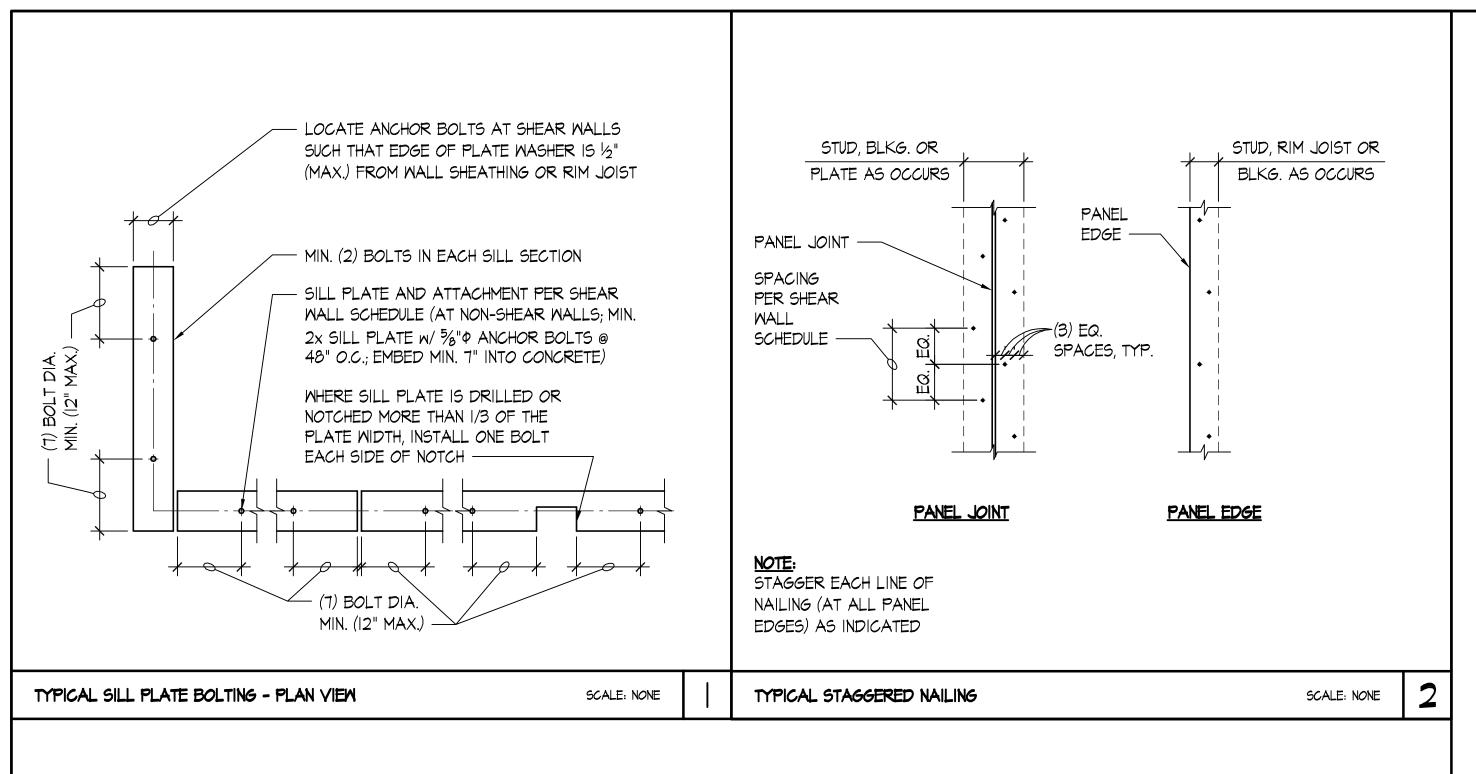
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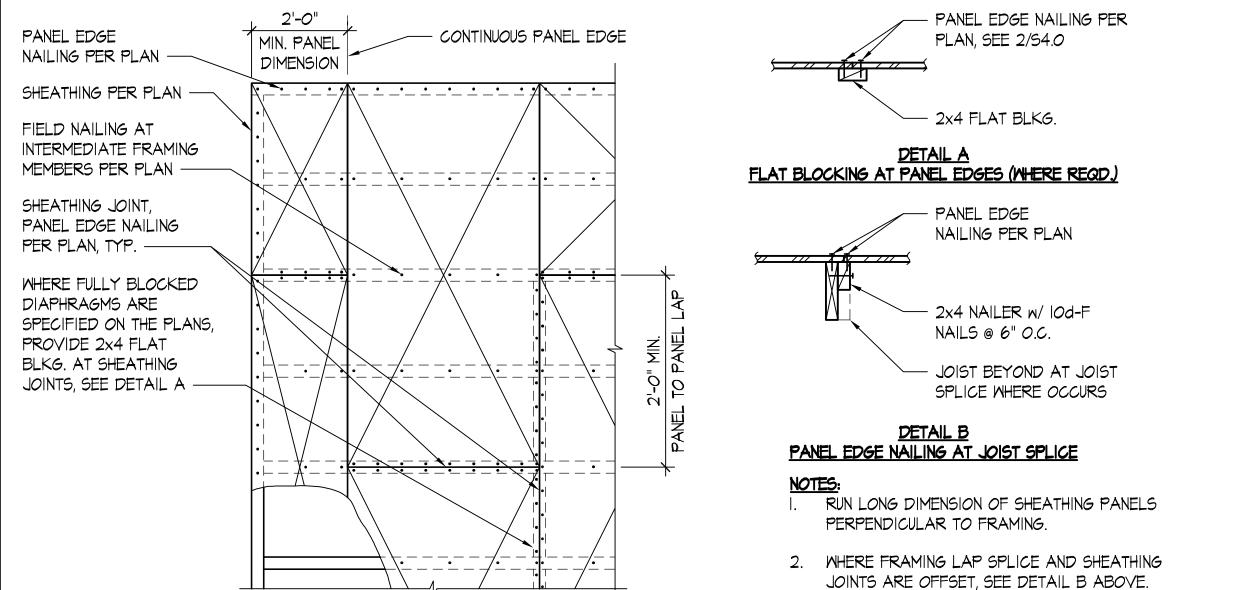


FOUNDATION DETAILS

SHEET NO.

S3.1





TYPICAL ROOF AND FLOOR DIAPHRAGM SHEATHING

FRAMING

ORIENTATION

PER PLAN

- HOLDOWN STUDS OR POST

SHEATHING AND SHEAR WALL EDGE

SHEAR WALL EDGE NAILING AT

EACH HOLDOWN STUD OR POST

NAILING PER SHEAR WALL SCHEDULE

SOLID BLOCKING TO

FRAMING CONTINUOUS

10d-F NAILS @ 8" O.C.

TYP. AT BUILT-UP STUDS

WHERE OCCURS

MATCH HOLDOWN STUDS

PER PLAN, (2) 2x MIN.

HOLDOWN STRAP PER

SHEATHING PER PLAN

WHERE NOTED ON PLAN)

PLAN (EACH SIDE

_ _ _ _ _ _

	SHEAR WALL SCHEDULE								
				BOTTOM PLATE ATTACHMENT			TOP PLATE ATTACHMENT		
SHEAR WALL TYPE	SHEAR WALL SHEATHING	PANEL EDGE FRAMING	PANEL EDGE NAILING 3	2x BOTTOM PLATE CONNECTION TO RIM JOIST OR BLOCKING ANCHOR BOLTING OF SILL PLATE TO CONNECTION TO TOP CONCRETE BELOW (4)(5)		CONNECTION TO RIM OF SILL PLATE TO CONNECTION TO T JOIST OR BLOCKING CONCRETE BELOW (4)(5)	OF SILL PLATE TO		· ·
		27	BELOW	3x PLATE	2x PLATE	INTERIOR WALL	EXTERIOR WALL		
SM-6	7/16" APA ONE-SIDE SHTG.	2x	0.148"\$\psi \cdot 2 \frac{1}{4}"\$ @ 6" 0.C.	O.148"Φx314" @ 6" O.C.	5%"Ф @ 48" O.C.	5%"Ф @ 48" O.C.	A35 @ 16" O.C.	LTP4 @ 16" O.C.	
SM-4	7/16" APA ONE-SIDE SHTG.	3x OR (2) 2x	O.148"Φx2½" @ 4" O.C. 8	0.148"Фx3¼" @ 4" О.С.	%"Φ @ 32" <i>O.</i> C.	5⁄8"Ф @ 24" O.C.	A35 @ 2" <i>O.</i> C.	LTP4 @ 12" O.C.	
SM-3	7/16" APA ONE-SIDE SHTG.	3x OR (2) 2x	O.148"Φx2½" @ 3" O.C.	0.148"Фx3¼" @ 3" 0.С. Ф	%"Ф @ 32" <i>O.</i> C.	%"Ф @ 24" O.C.	A35 @ 8" O.C.	LTP4 @ 8" O.C.	
SM-2	7/16" APA ONE-SIDE SHTG.	3x OR (2) 2x	O.148"Φx2½" @ 2" O.C. 8	(2) ROWS Ο.148"Φx31¼" @ 4" Ο.C.	%"Φ @ 24" <i>O.</i> C.	5g"中 @ 16" O.C.	A35 @ 6" O.C.	LTP4 @ 8" O.C.	

NOTES:

SHEAR WALL SCHEDULE - IOD NAILS

SCALE: NONE

STRAP END

LENGTH

"A"

3'-8"

SCALE: NONE

PRE-BENT HOLDOWN STRAP

PER PLAN (WRAP AROUND

MIN. NUMBER

OF NAILS

EACH END

(15) 8d

(38) 16d SINKERS

(49) 16d SINKERS

BEAM BELOW, CENTER

BEGINNING OF NAILS

STRAP ON STUDS)

INTO POST

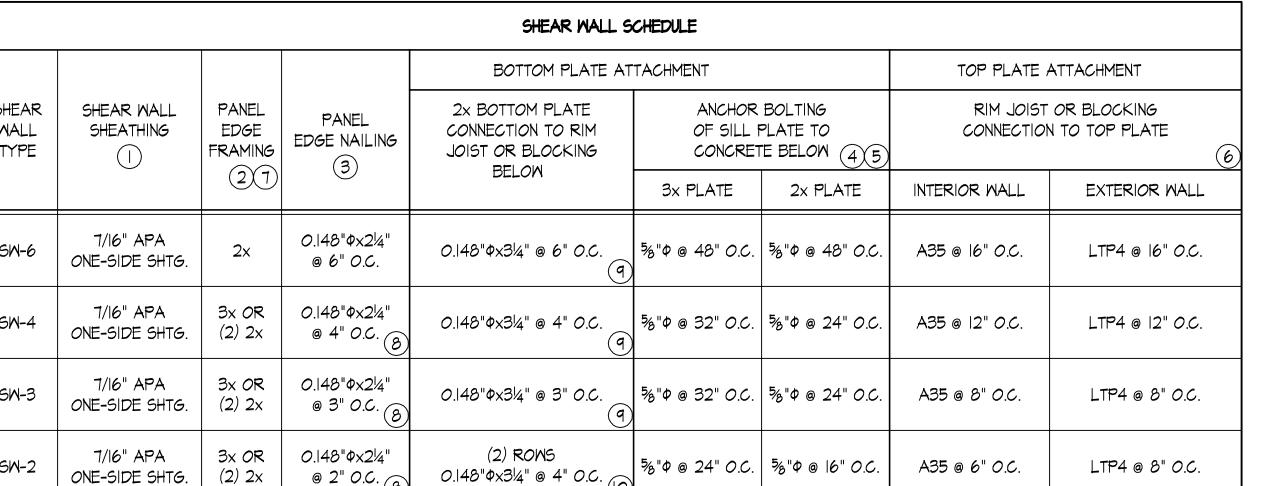
HOLDOWN

STRAP

CS|6

MSTC66

- (I) INSTALL PANEL SHEATHING EITHER HORIZONTALLY OR VERTICALLY FOR THE ENTIRE LENGTH OF THE WALL PER PLAN. WALL STUD SPACING SHALL BE 16" O.C. MAXIMUM.
- ALL INTERMEDIATE WALL STUDS SHALL BE PER PLAN. PROVIDE BACKING FRAMING AT ALL PANEL EDGES INCLUDING HORIZONTAL BLOCKING PER THE SCHEDULE.
- (3) PROVIDE NAILING TO ALL PANEL EDGES, TOP & BOTTOM PLATES AND HORIZONTAL BLOCKING. PROVIDE THE SAME NAILING PATTERN TO EACH MULTIPLE STUD OF THE BUILT-UP HOLD DOWN POST. NAIL PANEL TO INTERMEDIATE FRAMING MEMBERS W/ 0.148" \$\phi \times 2-1/4" @ 12" O.C.
- (4) EMBED CAST-IN-PLACE 5/8" ANCHOR BOLTS 7" MIN. (OR EMBED ADHESIVE ANCHOR BOLTS 5 1/2" IN (E) CONCRETE; SEE STRUCTURAL NOTES). PROVIDE PLATE WASHER 3" x 3" x 1/4" AT EACH ANCHOR BOLT. SILL PLATES SHALL BE TREATED PER GENERAL NOTES, AND SHALL BE 2x OR 3x PER THE SCHEDULE. SEE DETAIL I/S4.0 FOR OTHER REQUIREMENTS.
- (5) PROVIDE HOT DIPPED GALVANIZED NAILS, BOLTS, OR METAL PLATES FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED MEMBERS.
- (6) PROVIDE O.131" × 1-1/2" LONG NAILS FOR CLIPS DIRECTLY ATTACHED TO FRAMING MEMBERS; PROVIDE O.131" × 2-1/2" LONG NAILS FOR CLIPS INSTALLED OVER FLOOR OR WALL SHEATHING ON FRAMING MEMBERS. SEE 6/54.1 FOR TOP PLATE SPLICE.
- ALTERNATIVE TO 3x STUDS IS (2) 2x STUDS NAILED TOGETHER WITH 0.148" \$\phi x 3" LONG NAILS WITH THE SAME SPACING AS THE PANEL EDGE NAILING PER THE SCHEDULE (STAGGER).
- 8) STAGGER THE PANEL EDGE NAILS PER 2/54.0.
- 9 RIM JOIST/BLOCKING MINIMUM WIDTH OF 1^34 ". STAGGER NAILS PER 2/54.0 WHERE SPACING IS LESS THAN 6" O.C.
- \bigcirc RIM JOIST/BLOCKING MINIMUM WIDTH OF 134" AT EXTERIOR WALLS, 31/2" AT INTERIOR WALLS. STAGGER NAILS SIMILAR TO 2/54.0.





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APPROVAL:

SCALE: NONE

CONNECTORS

TO HOLDOWN

STUDS

(6) 1/4"x21/2" SDS

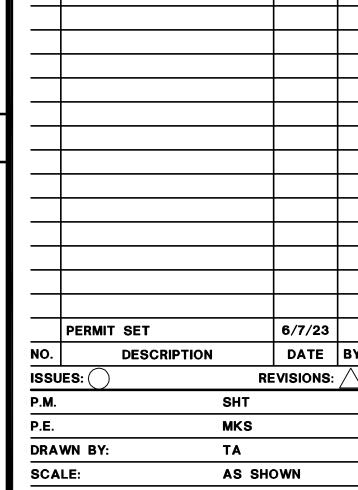
(10) 1/4"x21/2" SDS

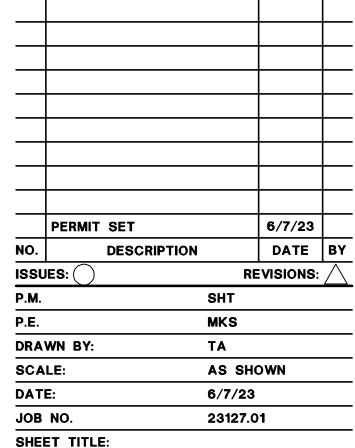
(14) 1/4"x21/2" SDS

(20) 1/4"x21/2" SDS

(30) 14"x21/2" SDS

SCALE: NONE

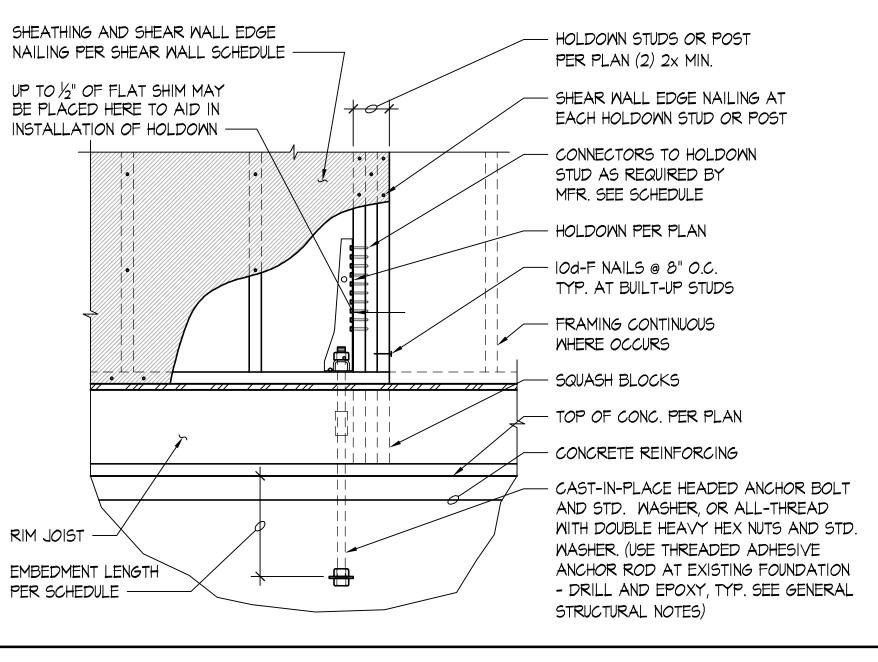




TYPICAL WOOD DETAILS

SHEET NO.

S4.0



ANCHOR BOLT ANCHOR HOLDOWN IN CONCRETE EMBED LENGTH HDU2 %"Ф %"Φ HDU4 HDU5 %"Ф *%*"Φ HDU8 HDUII Ι"Φ PROVIDE HOT DIPPED GALVANIZED NAILS, BOLTS, OR METAL PLATES FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED MEMBERS.

TYPICAL HOLDOWN TO CONCRETE AT RIM JOIST

TYPICAL FLOOR TO FLOOR HOLDOWN STRAP & FLOOR TO HEADER HOLDOWN STRAP

FACE NAIL

INTO BEAM -

- HEADER PER PLAN

STRAP EACH END OF

(MRAP AROUND BEAM

HEADER TO MATCH

HOLDOWN STRAP

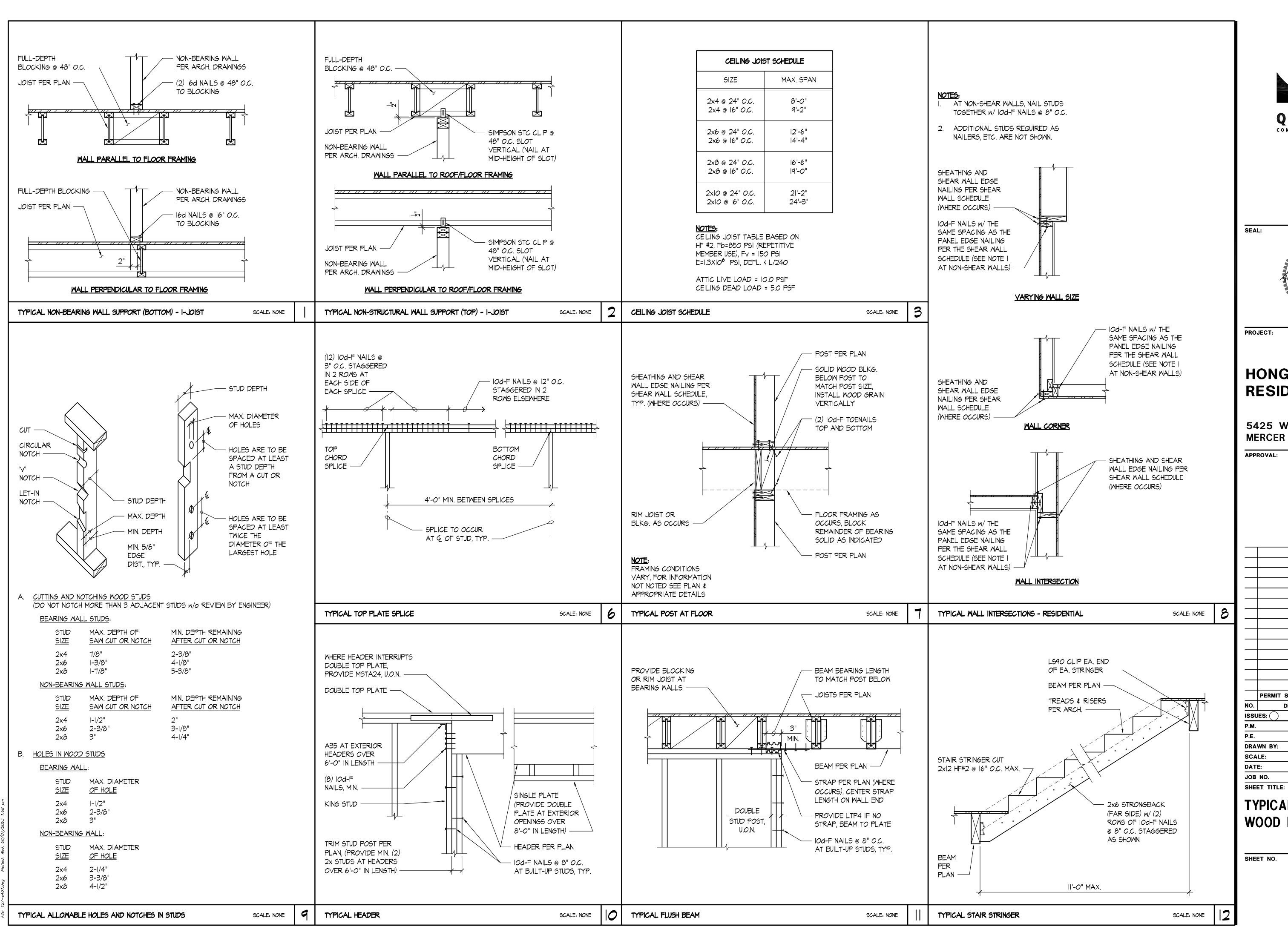
HOLDOWN STUDS

OR POST PER PLAN,

AND 10/54.1

ABOVE)

(2) 2x MIN.





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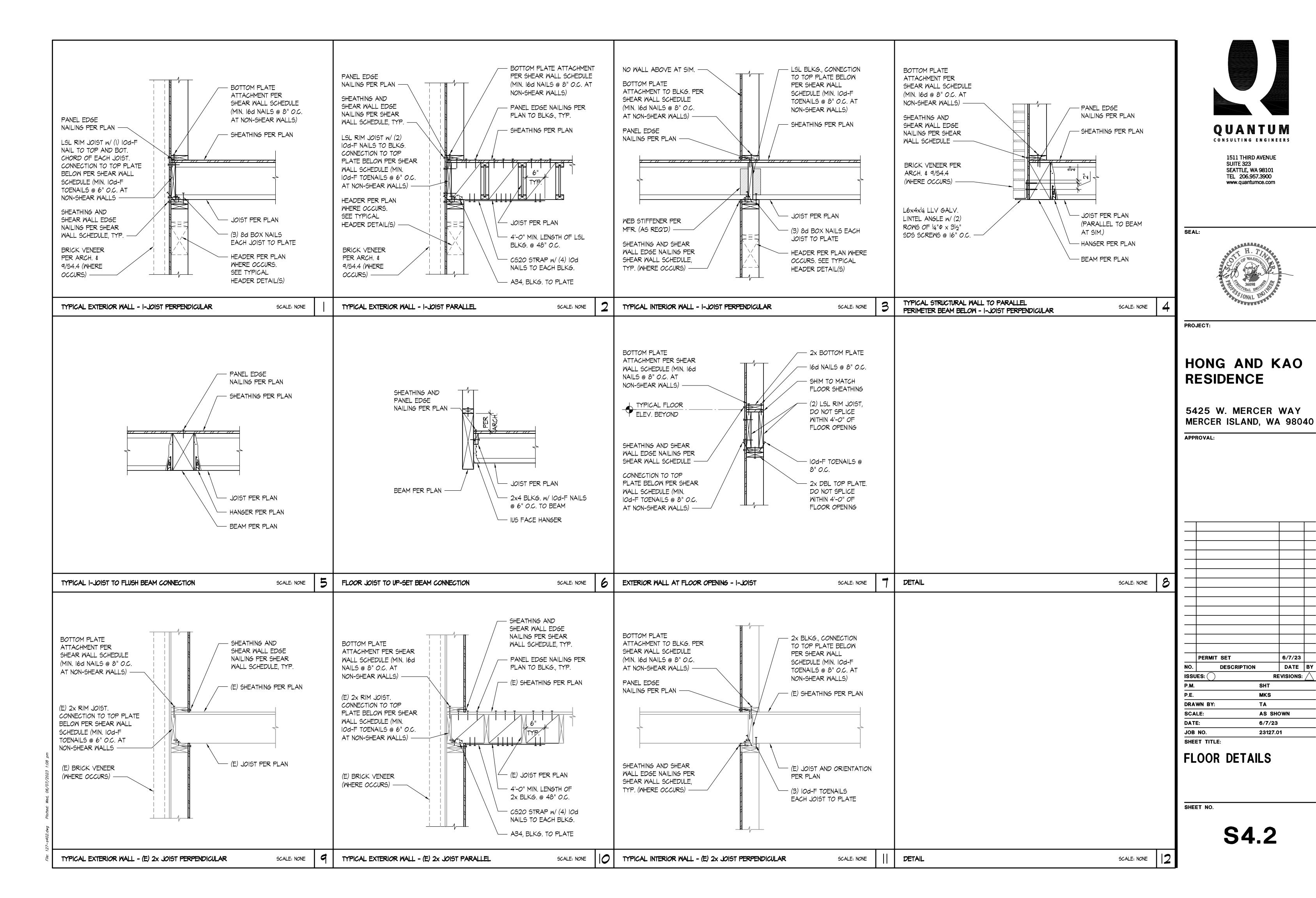
TYPICAL WOOD DETAILS

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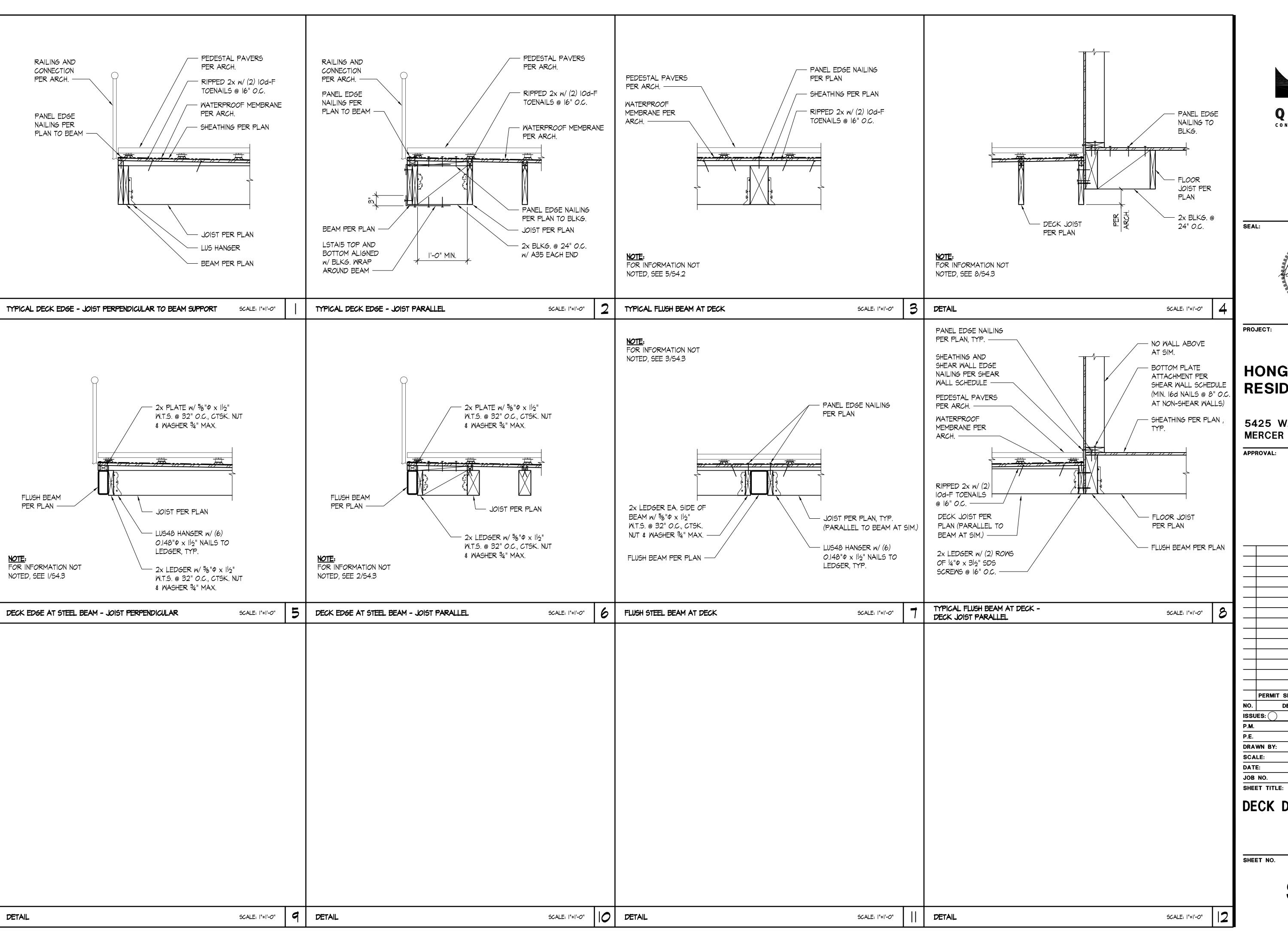
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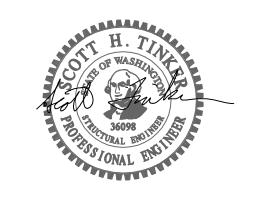
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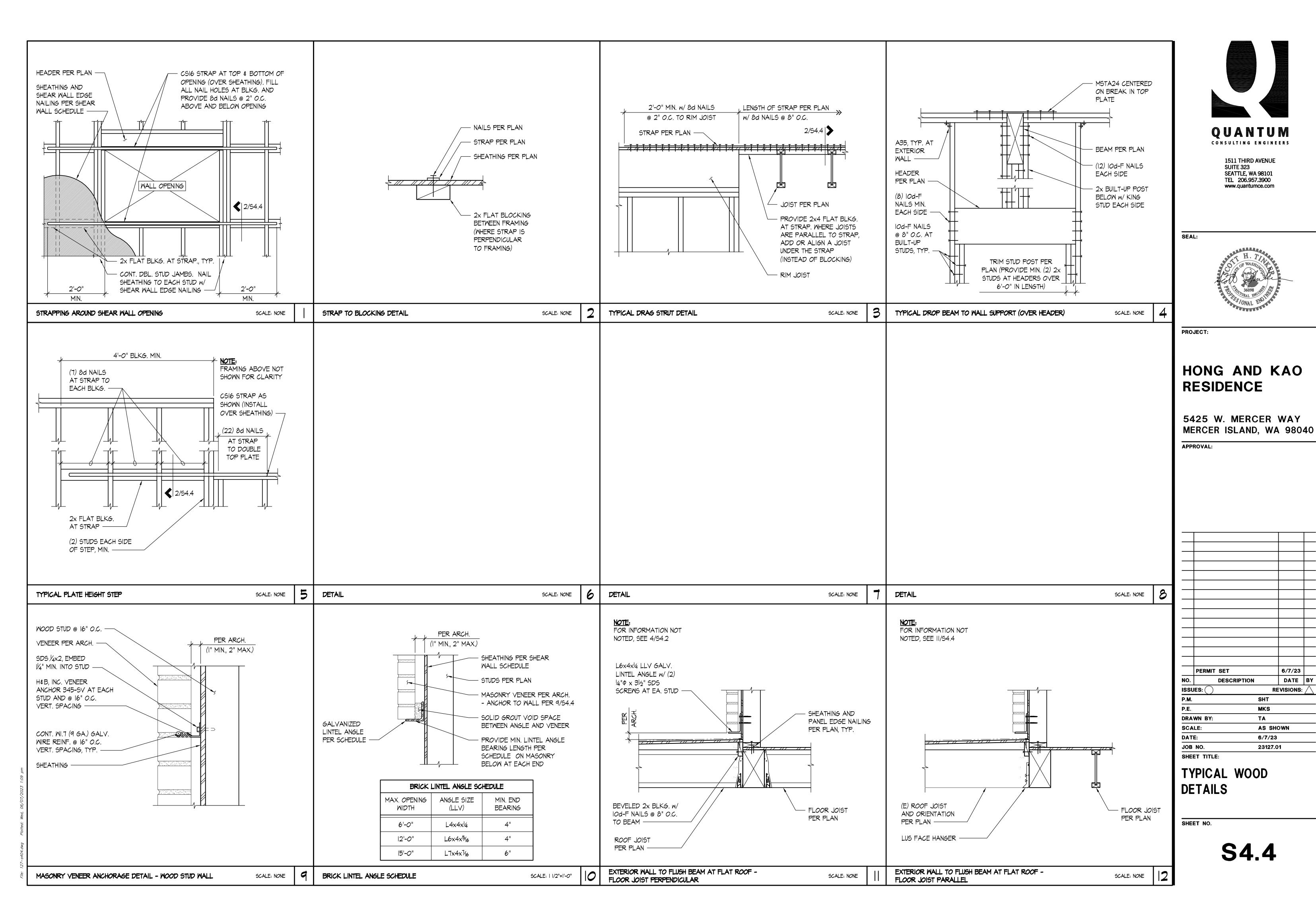
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DECK DETAILS

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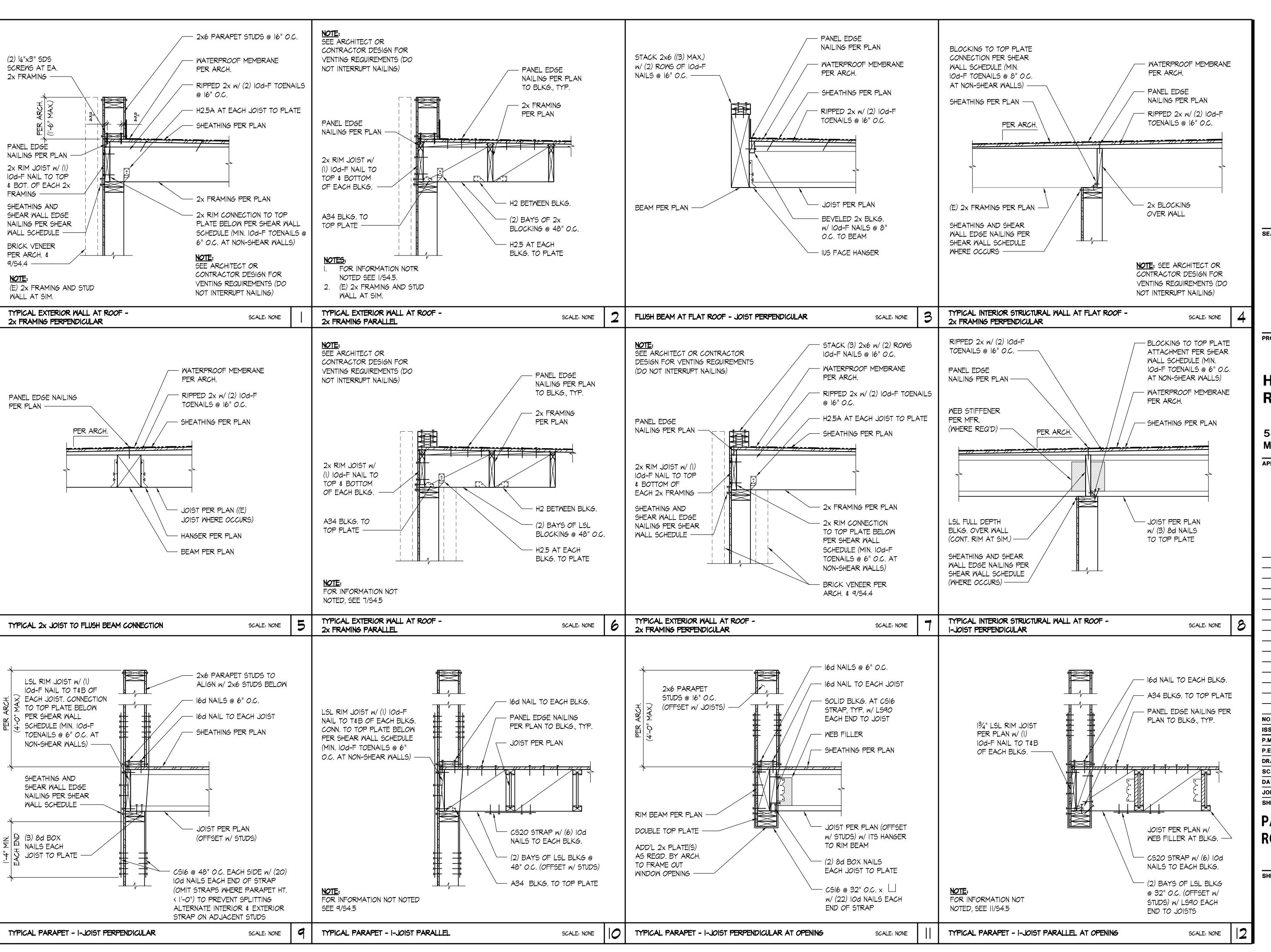
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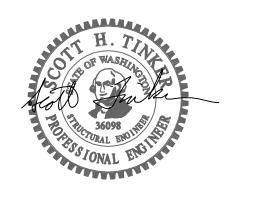
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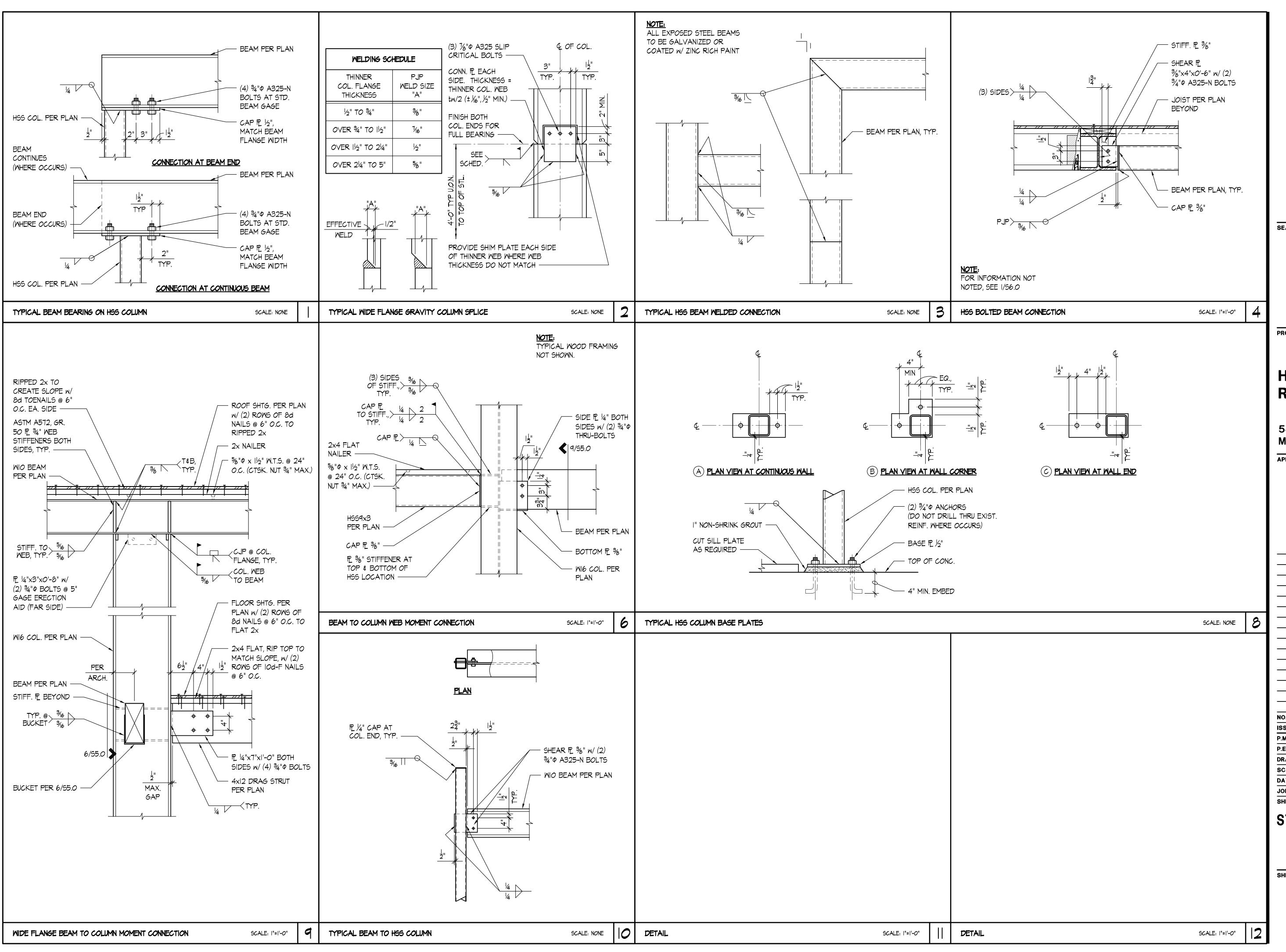
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PARAPET & FLAT ROOF DETAILS

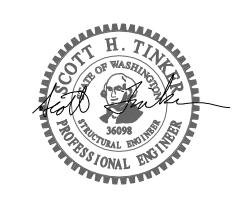
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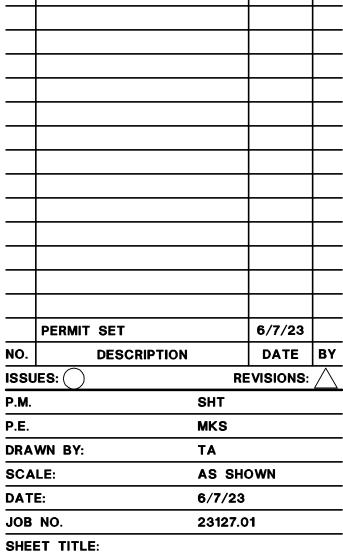


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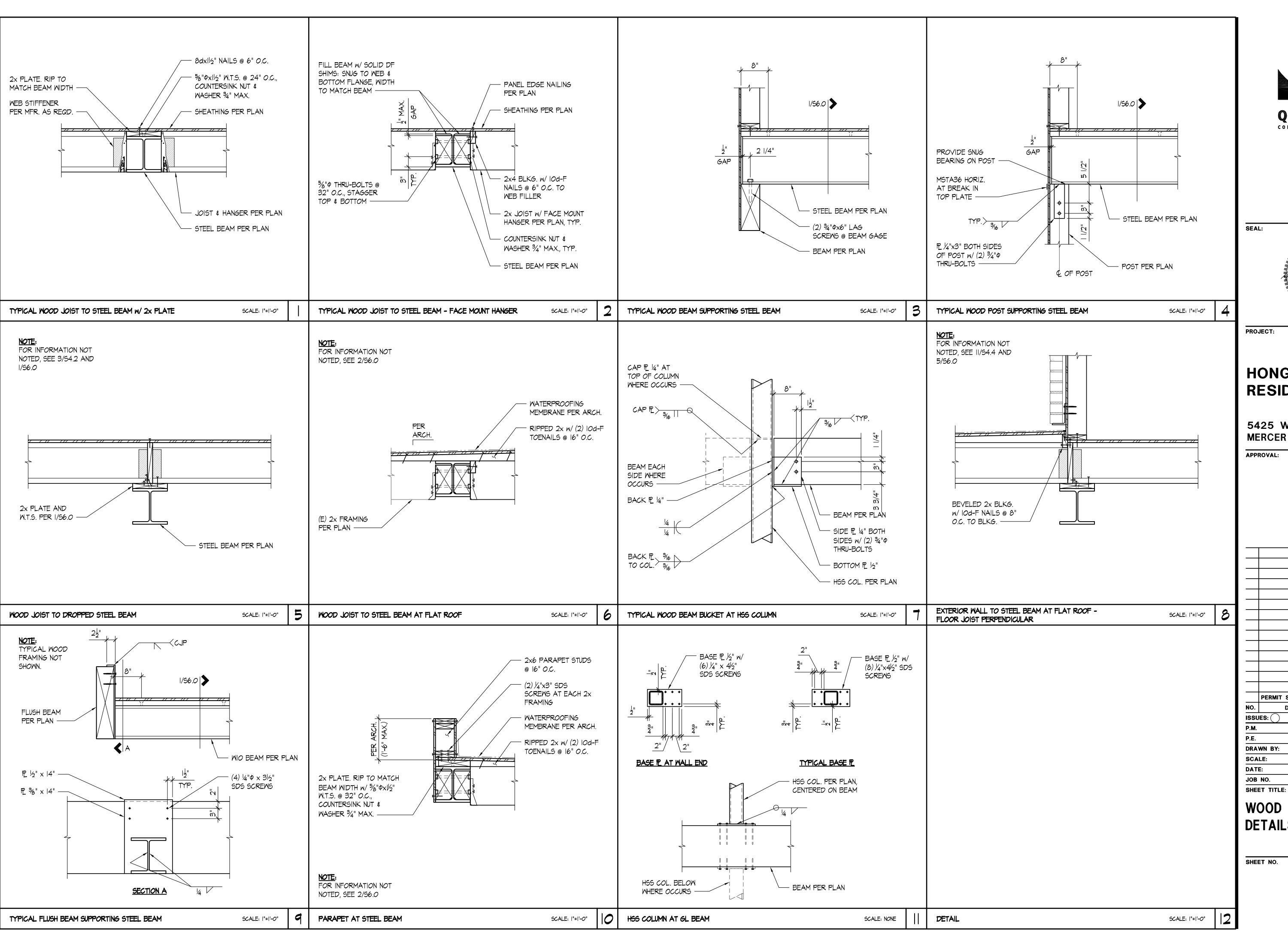
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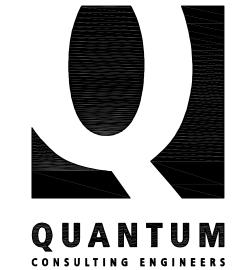


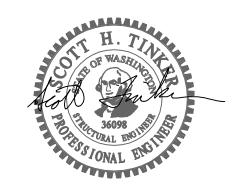
STEEL DETAILS

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WOOD AND STEEL **DETAILS**

S6.0