TCHC llc - GRANBOIS CUSTOM

CODE COMPLIANCE:

ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AND AMENDMENTS IN USE AT THE TIME OF APPLICATION FOR PERMIT:

- INTERNATIONAL BUILDING CODE
- INTERNATIONAL RESIDENTIAL CODE
- WASHINGTON STATE AMENDMENTS
- INTERNATIONAL FIRE CODE
- INTERNATIONAL MECHANICAL CODE
- UNIFORM PLUMBING CODE
- WASHINGTON STATE ENERGY CODES
- INTERNATIONAL SWIMMING POOL AND SPA CODES
- LIQUEFIED PETROLEUM GAS CODE
- NATIONAL FUEL GAS CODE

GENERAL CONSTRUCTION NOTES:

ALL DIMENSIONS & NOTES ON THE ARCHITECTURAL DRAWINGS & ENGINEERING CALCULATIONS TAKE PRECEDENT OVER ALL GENERAL NOTES ON THIS SHEET.

FACTORY BUILT FIREPLACE & CHIMNEY TO BE UL LABELED AND TESTED IN ACCORDANCE TO UL 127. INSTALL PER MFR'S SPECS. OUTSIDE COMBUSTION AIR REQ'D. (MIN 6 SQ IN.) DUCTED DIRECTLY TO FIREBOX W/ OPERABLE OUTSIDE DAMPER, TIGHTLY FITTING FLUE DAMPER,AND TIGHT FITTING GLASS OR METAL DOORS OR FLUE DRAFT INDUCTION FAN.

LIMIT SHOWER FLOW TO 1.7 GPM OR LESS. LIMIT TOILETS TO 1.6 GPM OR LESS.

ALL SKYLIGHTS TO COMPLY WITH I.R.C. R308.6

ALL SIDELITES, SLIDING GLASS DOORS AND TUB/SHOWER ENCLOSURES TO COMPLY WITH I.R.C. R308.4

VENT DRYER, OVEN/RANGE AND EXHAUST FANS TO OUTSIDE. DRYER EXHAUST DUCTS SHALL NOT EXCEED A TOTAL COMB. HORIZ. AND VERT. LENGTH OF 14'-0", INCL. TWO 90d. ELBOWS. DEDUCT 2'-0" FOR EA. 90d. ELBOW IN EXCESS OF TWO. ALL EXHAUST DUCTS TO INSULATED TO A MIN. OF R-4.

TUB/SHOWER SURROUND WALLS TO HAVE FIBER-CEMENT BACKER BOARD AND FINISHED WITH A SMOOTH NON-ABSORBENT SURFACE TO A MINIMUM HEIGHT OF 72" ABOVE THE FLOOR.

PROVIDE SMOKE DETECTOR IN COMPLIANCE WITH I.R.C. R314 ALL SMOKE DETECTORS W/BATTERY BACKUP. SMOKE DETECTORS WILL SOUND AN AUDIBLE ALARM IN ALL SLEEPING ROOMS.

PROVIDE CARBON MONOXIDE DETECTOR IN COMPLIANCE WITH I.R.C. R315 OUTSIDE OF EACH SEPARATE SLEEPING AREA AND IN THE IMMEDIATE VICINITY OF ALL BEDROOMS. CARBON MONOXIDE DETECTOR SHALL MEET UL LISTING 2034 AND BE INSTALLED PER MFG LISTING.

EGRESS WINDOWS AT ALL BEDROOMS SHALL CONFORM TO THE FOLLOWING CRITERIA PER I.R.C. R310: MINIMUM NET CLEAR HEIGHT SHALL BE 24". MINIMUM NET CLEAR WIDTH SHALL BE 20". MAXIMUM FINISHED SILL HEIGHT ABOVE FLOOR SHALL BE 44". WHERE THE SILL OF A WINDOW IS GREATER THAN 72" ABOVE FINISH GRADE OR SURFACE BELOW THE MINIMUM SILL HEIGHT ABOVE FINISH FLOOR SHALL BE 24" (R312.2.1).

FIRE STOPS SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS FROM VERTICAL TO HORIZONTAL SPACES, INCLUDING THE STAIR, TUB, SHWR, FIREPLACE, ETC. PER I.R.C. R302.11.

ASSUMED DESIGN LOADS

ALL ASSUMED DESIGN LOADS ARE PER THE CURRENT EDITION OF THE INTERNATIONAL BUILDING CODE (UNLESS NOTED BY ENGINEER)

UNIFORM SNOW LOAD	40 PSF
SEISMIC ZONE CATEGORY	D
WEATHERING	MODERATE
FROST LINE DEPTH	18"
TERMITE INFESTATION RISK	SLIGHT TO MODERATE
RISK OF DECAY	SLIGHT TO MODERATE
WINTER DESIGN TEMPERATURE	22° F
FLOOD HAZARD INDEX	MAY 12, 1974 - AMENDED NOV 9 1999
AIR FREEZING INDEX	170
MEAN ANNUAL TEMPERATURE	51° F

PLUMBING / MECHANICAL / ELECTRICAL INSTALLATION

ALL PLUMBING, MECHANICAL AND ELECTRICAL PERMITS SHALL BE OBTAINED SEPARATELY FROM THE BUILDING PERMIT AS NECESSARY AND SHALL BE APPLIED FOR BY THE APPROPRIATELY LICENSED SUBCONTRACTOR DIRECTLY.

TUB WASTE OPENINGS IN FRAMED CONSTRUCTION TO CRAWL SPACES AT OR BELOW THE FIRST FLOOR SHALL BE PROTECTED BY THE INSTALLATION OF APPROVED METAL COLLARS OR METAL SCREEN SECURELY FASTENED TO THE ADJOINING STRUCTURE WITH NO OPENING GREATER THAN 1/2 INCH (12.7mm) IN THE LEAST DIMENSION PER UPC 313.12.4

THE MAXIMUM HOT WATER TEMPERATURE DISCHARGING FROM THE BATH TUB AND WHIRLPOOL BATH TUB FILLER SHALL BE LIMITED TO 120° FAHRENHEIT. THE WATER HEATER THERMOSTAT SHALL NOT BE CONSIDERED A CONTROL FOR MEETING THIS PROVISION PER UPC 414.5

GAS-FIRED FURNACES INSTALLED WITHIN THE INTERIOR THERMAL ENVELOPE SHALL BE DIRECT-VENTED OR 94% EFFICIENT, UNLESS INSTALLED IN A ROOM OR SPACE THAT OPENS ONLY INTO A BEDROOM OR BATHROOM, AND SUCH ROOM OR SPACE IS USED FOR NO OTHER PURPOSE AND IS PROVIDED WITH A SOLID WEATHER-STRIPPED DOOR EQUIPPED WITH AN APPROVED SELF-CLOSING DEVICE PER IRC G2406.2. ALL COMBUSTION AIR SHALL BE TAKEN DIRECTLY FROM THE OUTDOORS IN ACCORDANCE WITH SECTION G2407.6, AND SAID ROOM OR SPACE SHALL BE INSULATED PER WSEC.

ENERGY CODE REQUIREMENTS

SHALL COMPLY WITH THE CURRENT EDITION OF THE WSEC PRESCRIPTIVE REQUIREMENTS

LARGE DWELLING UNIT: GREATER THAN 5,000 S.F.	7 CREDITS
TABLE R406 OPTIONS	
SYSTEM TYPE = OPTION 2 (HEAT PUMP)	1.0 CREDITS
EFFICIENT BUILDING ENVELOPE = OPTION 1.3	0.5 CREDITS
AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION = OPTION 2.3	1.5 CREDITS
HIGH EFFICIENCY HVAC EQUIPMENT = OPTION 3.5	1.5 CREDITS
HIGH EFFICIENCY HVAC DISTRIBUTION = OPTION 4.2	1.0 CREDITS
EFFICIENT WATER HEATING = OPTION 5.4	1.5 CREDITS
TOTAL PROVIDED	7 CREDITS

SEE SUBMITTED ENERGY FORMS FOR MORE DETAILS

A RESIDENTIAL ENERGY CERTIFICATE COMPLYING WITH (WSEC 401.3) IS REQUIRED TO BE COMPLETED BY THE DESIGN PROFESSIONAL OR BUILDER AND PERMANENTLY POSTED WITHIN 3 FEET OF THE ELECTRICAL PANEL PRIOR TO FINAL INSPECTION.

AIR LEAKAGE TESTING (WSEC 402.4.1.2) SHALL BE PERFORMED IN THE PRESENCE OF THE BUILDING OFFICIAL OR THEIR DULY APPOINTED REPRESENTATIVE. THE RESULTS SHALL BE RECORDED ON THE ENERGY COMPLIANCE CERTIFICATE.

AIR LEAKAGE SHALL BE REDUCED TO A MAXIMUM OF 5 AIR CHANGES PER HOUR (PER R402.1.2 OF 218 WSEC), AND THE WHOLE HOUSE VENTILATION REQUIREMENTS SHALL BE MET WITH A HEAT RECOVERY VENTILATION SYSTEM WITH MINIMUM SENSIBLE HEAT RECOVERY EFFICIENCY OF 0.70.

ALL DUCTS AND AIR HANDLERS AND FILTER BOXES SHALL IN ACCORDANCE WITH (WSEC 403.2.1 THROUGH 403.2.3). JOINTS AND SEAMS SHALL COMPLY WITH THE CURRENT I.R.C. AND I.M.C. A DUCT LEAKAGE TEST SHALL BE PERFORMED BY A QUALIFIED TECHNICIAN AND A DUCT LEAKAGE AFFIDAVIT SHALL BE POSTED NEXT TO THE ELECTRICAL PANEL.

AT LEAST 90% OF ALL INTERIOR LUMINARIES AND ALL EXTERIOR LUMINARIES SHALL BE HIGH EFFICACY (WSEC 404.1). HIGH EFFICACY LUMINARIES ARE DEFINED AS, A LIGHTING FIXTURE THAT DOES NOT CONTAIN A MEDIUM SCREW BASE SOCKET (E24/E26) AND WHOSE LAMPS OR OTHER LIGHT SOURCE HAVE A MINIMUM EFFICIENCY OF, 60 LUMENS PER WATT FOR LAMPS OVER 40 WATTS, 50 LUMENS PER WATT FOR LAMPS OVER 15 WATTS AND UP TO 40 WATTS, 40 LUMENS PER WATT FOR LAMPS OF 15 WATTS OR LESS.

LUMINAIRES PROVIDING OUTDOOR LIGHTING (WSEC 505.2) AND PERMANENTLY MOUNTED TO A RESIDENTIAL BUILDING OR OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY LUMINAIRES UNLESS CONTROLLED BY A MOTION SENSOR WITH INTREGAL PHOTOCONTROL PHOTOSENSOR.

HOT WATER TANK WILL HAVE A MINIMUM E.F. OF 0.91 IN ACCORDANCE TO WSEC TABLE 406.2 ENERGY CREDIT OPTION 5b AND SHALL BE LABELED PER ASHRAE STD. NO. 90A-80,

EACH DWELLING UNIT IS REQUIRED TO HAVE AT LEAST ONE PROGRAMMABLE THERMOSTAT FOR THE REGULATION OF TEMPERATURE.

VENTILATION / AIR QUALITY REQUIREMENTS:

SOURCE SPECIFIC VENTILATION REQUIREMENTS

- BATHROOMS AND POWDER ROOM FANS TO BE 50 CFM.
  KITCHEN EXHAUST FANS TO BE 100 CFM.
  -EXHAUST FANS SHALL BE FLOW RATED AT .25 W.G. STATIC PRESSURE
- EXHAUST DUCTS SHALL:
  -BE INSULATED TO R-4 IN UNCONDITIONED SPACE
  -BE EQUIPPED WITH A BACKDRAFT DAMPER
  -TERMINATE OUTSIDE THE BUILDING
  -COMPLY WITH M1505.4.4(2) PER 2018 IRC

FAN CFM	MAX FLEX DIA.	MAX FT.	MAX SMOOTH DIA.	MAX FT.
50	4"	25'	4"	70'
50	5"	90'	5"	100'
50	6"	+100'	6"	+100'
80	4"	not allowed	4"	20'
80	5"	15'	5"	100'
80	6"	90'	6"	+100'
100	5"	not allowed	5"	50'
100	6"	15'	6"	+100'
125	6"	15'	6"	+100'
125	7"	70'	7"	+100'

WHOLE HOUSE VENTILATION REQUIREMENTS:

- AN INTERMITTENT WHOLE HOUSE EXHAUST FAN SHALL BE LOCATED IN THE CEILING AND SHALL BE SIZED TO PROVIDE THE MINIMUM VENTILATION RATE SPECIFIED IN TABLE M1507.3.3 (1)
- EXHAUST FANS MUST BE FLOW RATED AT .25 W.G. AND MAX. 1.0 SONE RATING.
- AIR LEAKAGE SHALL BE REDUCED TO A MAXIMUM OF 2 AIR CHANGES PER HOUR, AND THE WHOLE HOUSE VENTILATION REQUIREMENTS SHALL BE MET WITH A HEAT RECOVERY VENTILATION SYSTEM WITH MINIMUM SENSIBLE HEAT RECOVERY EFFICIENCY OF 0.70. IN ACCORDANCE WITH WSEC TABLE 406.2 ENERGY CREDIT OPTION 2b.
- A READILY ACCESSIBLE 24 HOUR CLOCK TIMER SHALL BE INSTALLED AND WIRED TO REGULATE THE WHOLE HOUSE EXHAUST FAN. THE TIMER SHALL BE SET TO CYCLE THE FAN AT LEAST 180 MIN. EVERY 4 HOURS AND THE CYCLE "RUN TIME" SHALL PROVIDE ENOUGH VENTILATION DURING THAT PERIOD TO EQUAL THE CONTINUOUS VENTILATION RATE PER TABLE M1507.3.3 (1).
- INTERIOR DOORS SHALL BE INSTALLED SO AS NOT TO IMPEDE THE MOVEMENT OF FRESH AIR TO ALL HABITABLE ROOMS (1/2" UNDERCUT U.N.O.).
- AN AIR TRANSFER GRILLE SHALL BE PROVIDED ABOVE OR WITHIN UTILITY ROOM DOOR TO PROVIDE SUFFICIENT MAKE-UP AIR FOR EXHAUST AS REQUIRED
- OUTDOOR AIR INLETS SHALL BE LOCATED IN EACH HABITABLE ROOM AND PROVIDE AT LEAST 4 SQUARE INCHES OF FREE AREA OPENING. INLETS SHALL BE SCREENED AND SHALL NOT DRAW AIR FROM PROHIBITED LOCATIONS LISTED UNDER IRC M1602.2.

WHOLE HOUSE VENTILATION CALCULATIONS:

HEATED SQUARE FOOTAGE = 7,168

NUMBER OF BEDROOMS = 6

MIN. VENTILATION RATE PER TABLE M1507.3.3 (1) = 135

CALCULATION PER M1507.3.3 (2) = 135 X 1.3 = 175.5

PROVIDE A WHOLE-HOUSE FAN WITH THE MINIMUM CAPACITY OF 175.5 CFM THAT OPERATES FOR 180 MINUTES EVERY 4 HOUR CYCLE.

MOISTURE CONTROL

WALLS SEPARATING CONDITIONED SPACES FROM UNCONDITIONED SPACES SHALL HAVE A VAPOR RETARDER INSTALLED ON THE WARM SIDE OF THE WALL USING FACE INSULATION OR FRICTION FIT WITH 6MIL POLYETHYLENE OR CLASS III VAPOR RETARDER P.V.A. (I.R.C. R702.7.1)

SEAL, CAULK, GASKET, FLASH OR WEATHER STRIP: AROUND WINDOW AND DOOR FRAMES (PER MFG INSTALLATION SPECIFICATIONS), AT EXTERIOR JOINTS, OPNG'S BTWN WALL AND ROOF AND WALL PANELS, OPNG'S AT UTILITY PENETRATIONS THROUGH WALLS, FLOORS, AND ROOFS, ALL OTHER OPNG'S IN BLD'G ENVELOPE.

CATHEDRAL CEILING (NO ATTIC) - VAPOR RETARDER SHALL HAVE A DRY CUP PERM RATE OF 1.0 OR LESS

ALL EXTERIOR DOORS OR ACCESS HATCHES TO ENCLOSED UNHEATED AREAS MUST BE WEATHER STRIPPED.

SHEET INDEX

NOTE: FIRE SPRINKLERS REQ'D.

PROJECT TEAM

DESIGNER:
TCHC, LLC. DBA: BDR CUSTOM LLC
P.O. BOX 50208
BELLEVUE, WA 98015
CONTACT: JIM DWYER
TEL: 425-495-7101

CIVIL ENGINEER:
CORE DESIGN INC.
12100 NE 195th ST, SUITE 300
BOTHELL, WA 98011
CONTACT: SHERI MURIATA, P.E.
TEL: 425-885-7877

STRUCTURAL ENGINEER:
LONGITUDE 120 STRUCTURAL ENGINEERS
13150 91st PL. NE.
KIRKLAND, WA 98034
CONTACT: MANS THURFJELL
TEL: 425-636-3313

REVISIONS

No.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-

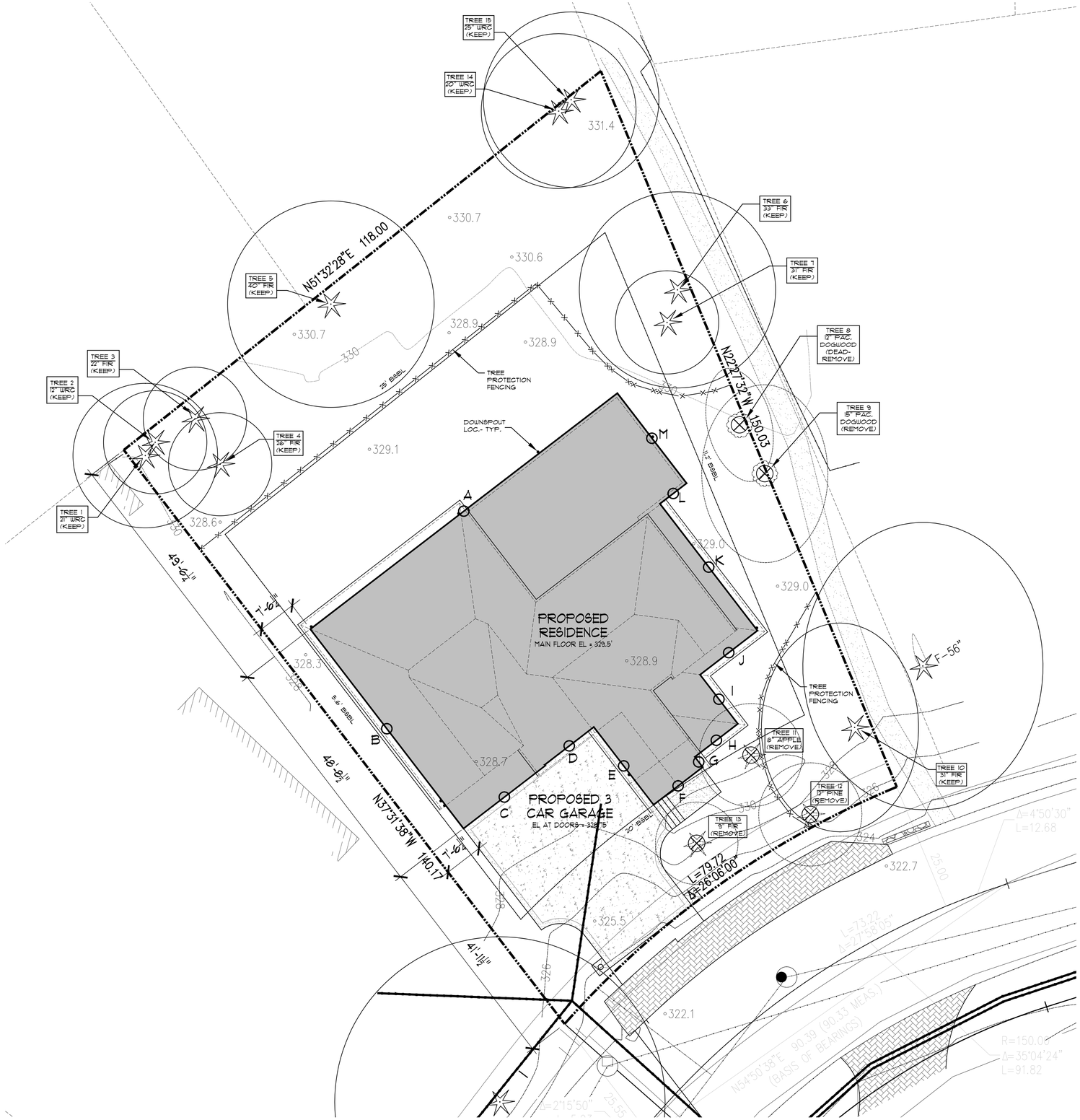
TCHC, LLC. (DBA: BDR Custom)
P.O. Box 50208
Bellevue, WA 98015
(425) 885-5400

GRANBOIS RESIDENCE
8440 SE 82nd St, Mercer Island

GENERAL NOTES
SHEET INDEX
PROJECT TEAM

DESIGN: JMD
DRAWN: JMD
ISSUE DATE: APR 7 2023
PLAN No: -
SHEET COVER

Cover General Notes



SITE PLAN

SCALE: 1" = 10'-0"

TAX PARCEL#:

#362560-0120

ADDRESS/ LEGAL:

8440 SE 82nd St, Mercer Island, WA. 98040

Legal: ISLAND POINT ADD #2 AND UND INT IN COMMUNITY TR

LOT COVERAGE:

LOT AREA (PER SURVEY):	13,806 S.F.
ALLOWABLE LOT COVERAGE = 40%	5,522 S.F.
MAIN STRUCTURE ROOF AREA:	2,784 S.F.
COVERED PATIOS & DECKS:	1,275 S.F.
VEHICULAR USE (DRIVEWAY, PAVED ACCESS, UNCOVERED WALKS)	1,237 S.F.
TOTAL PROJECT IMPERVIOUS AREA	5,296 S.F.
PROPOSED LOT COVERAGE AREA	38.3 %

GROSS FLOOR AREA:

MAX ALLOWABLE GFAR = 40%	5,522 S.F.
MAIN FLOOR:	2,388 S.F.
UPPER FLOOR (NET):	2,376 S.F.
GARAGE:	748 S.F.
PROPOSED GFAR = 5,512 S.F.	39.9%

HARDSCAPE:

MAX ALLOWABLE = 9%	1,242.5 S.F.
NEW HARDSCAPE (WALKWAYS AND UNCOVERED PATIOS) = 1.28%	177 S.F.

CITY OF MERCER ISLAND HEIGHT RESTRICTION

AVERAGE BUILDING ELEVATION

MIDPOINT	ELEV	WALL SEGMENT	LENGTH	MIDPOINT x LENGTH (Axa)
A	329.0	a	15'	24,675
B	328.5	b	48.1'	15,997.85
C	328.5	c	20'	6,570
D	328.5	d	12'	3,942
E	328.5	e	19'	6,241.5
F	329.0	f	12'	3,948
G	329.0	g	2.5'	822.5
H	329.0	h	10.5'	3,454.5
I	329.0	i	12'	3,948
J	329.0	j	14'	4,606
K	329.0	k	31'	10,199
L	329.0	l	6.7'	2204.3
M	329.0	m	22.3'	7336.1
			285.7'	93,945.45

TOTAL MIDPOINT x LENGTH = 93,945.45

TOTAL WALL LENGTH = 285.7'

93,945.45 / 285.7 = 328.82'

AVERAGE BUILDING ELEVATION = 328.82'

MAX BUILDING HEIGHT = 328.82' + 30' = 358.82'

HOME BUILDING HEIGHT = 358.02'

(SEE ELEVATION SHEETS A5.0 & A5.1)

LOT SLOPE CALCULATION:

HIGHEST ELEVATION POINT:	331.4'
LOWEST ELEVATION POINT:	324.0'
ELEVATION DIFFERENCE:	7.4'
HORIZ. DIST. BETWEEN PTS:	165.75'
LOT SLOPE:	4.46%

(ELEV. DIFFERENCE DIVIDED BY HORIZ. DIST. MULTIPLIED BY 100)

TREE RETENTION CALCULATION:

SEE ARBORIST REPORT

⊗ TREES TO BE REMOVED

REFER TO SITE SURVEY AND ARBORIST REPORT FOR TREE TYPE AND SIZE

DRAINAGE SWALE NOTE

PROVIDE DRAINAGE SWALE @ HOUSE PERIMETER FOR SITE DRAINAGE AWAY FROM RESIDENCE AND AWAY FROM ADJACENT PROPERTIES.

FOUNDATION STAKING NOTE

PRIOR TO STAKING FOUNDATION, A LICENSED SURVEYOR MUST VERIFY THAT THE DIMENSIONS SHOWN ON ARCHITECT'S/ DESIGNER'S FOUNDATION PLAN PROPERLY CLOSE. ANY DISCREPANCY SHALL BE IMMEDIATELY REPORTED TO DESIGNER PRIOR TO PRECEDING WITH THE WORK.

REVISIONS

No.	DATE	DESCRIPTION
1	.	.
2	.	.
3	.	.

TCHC, LLC. (DBA: BDR Custom)
P.O. Box 50208
Bellevue, WA 98015
(425) 889-5400

BDR Granbois Custom
8440 SE 82nd St. Mercer Island, 98040

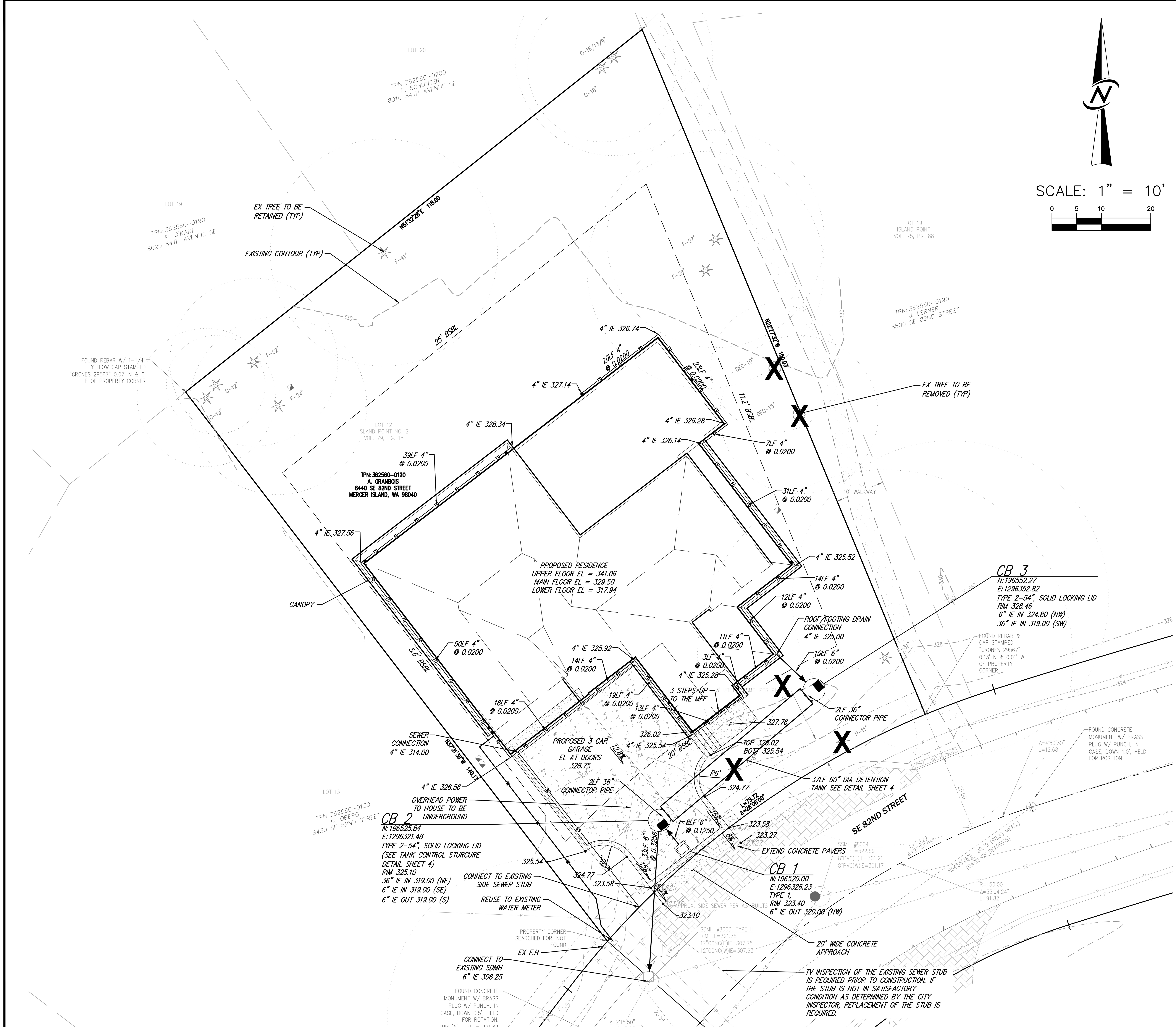
SITE PLAN/ AVG BLDG ELEV/ LOT COVERAGE

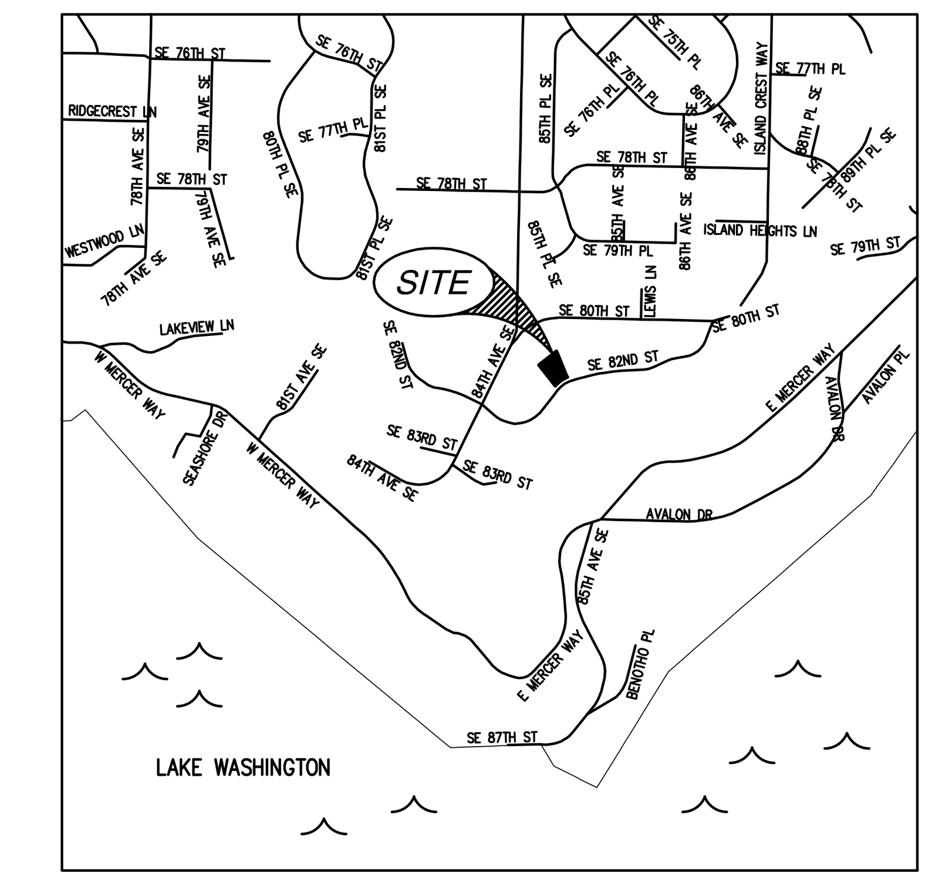
DESIGN: JMD
DRAWN: JMD
ISSUE DATE: 7 APR 2023
PLAN No: .

SHEET SITE

Site Plan

NW1/4 OF THE NW1/4, SEC. 31, TWP. 24 N., RGE. 5 E., W.M.





VICINITY MAP

NO SCALE

OWNER

ANDREW AND TRACI GRANDBOIS

LEGAL DESCRIPTION

LOT 12, ISLAND POINT NO. 2, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 79 OF PLATS, PAGE(S) 18 AND 19, RECORDS KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

SITE STATISTICS

SETBACKS:	
ZONE:	R-9.6
FRONT:	20'
REAR:	25'
SIDE:	5.5'/11.2'
SITE ADDRESS:	8440 SE 82ND ST, MERCER ISLAND, WA 98040
TAX PARCEL NUMBER:	362560-0120

LOT COVERAGE

LOT AREA (PER SURVEY)	13,806 SF
ALLOWABLE LOT COVERAGE = 40%	5,522 SF
MAIN STRUCTURE ROOF AREA	4,122 SF
UNCOVERED PATIOS WALKS & DRIVEWAY	1,138 SF
TOTAL PROJECT IMPERVIOUS AREA	5,260 SF
PROPOSED LOT COVERAGE AREA	38.0%

UNDERGROUND LOCATOR SERVICE
CALL BEFORE YOU DIG!
1-800-424-5555

NO.	REVISIONS	DATE

SHERI HIDEKO MURATA, STATE OF WASHINGTON, 41846, REGISTERED PROFESSIONAL ENGINEER
4/5/23

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

UTILITY PLAN
GRANBOIS CUSTOM

TCHC, LLC. (BDA: BDR CUSTOM)

P.O. BOX 50208
BELLEVUE, WA 98015

DATE	APRIL 2023 (1ST SUB)
DESIGNED	SHERI H. MURATA, P.E.
DRAWN	JOCELYN R. CASENAS
APPROVED	SHERI H. MURATA, P.E.

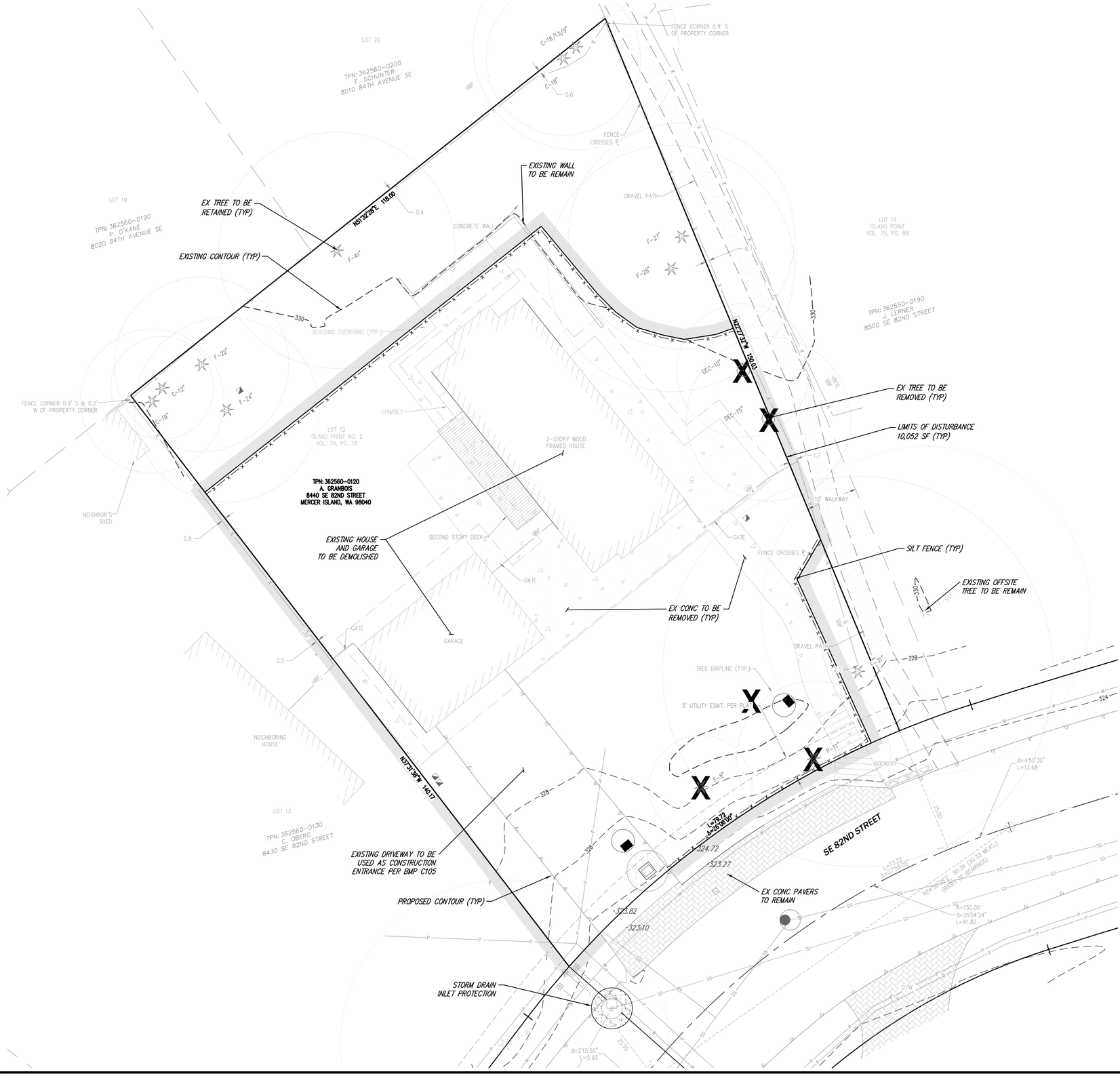
SHERI H. MURATA, P.E.
PROJECT MANAGER

SHEET	OF
1	3

PROJECT NUMBER 22293

4/5/2023 2:10 PM J:\2022\22293\ENGINEERING\FINAL\SHEETS\22293 UP.DWG

NW1/4 OF THE NW1/4, SEC. 31, TWP. 24 N., RGE. 5 E., W.M.



SCALE: 1" = 10'

0 5 10 20

LEGEND

- FOUND SURVEY MONUMENT, AS NOTED
- FOUND SURVEY MARKER, AS NOTED
- SEWER MANHOLE
- CATCH BASIN TYPE I
- CATCH BASIN TYPE II
- FIRE HYDRANT
- WATER METER
- IRRIGATION METER
- POWER TRANSFORMER
- TELEPHONE PEDESTAL
- TV PEDESTAL
- MAILBOX KIOSK
- EVERGREEN TREE
- DECIDUOUS TREE
- FIR
- CEDAR
- PINE
- DECIDUOUS
- PROPERTY LINE
- DRIVEWAY
- VERTICAL BOARD FENCE
- HORIZONTAL BOARD FENCE
- SEWER LINE
- STORM DRAINAGE LINE
- WATER LINE
- UNDERGROUND POWER LINE
- FENCE LINE
- EDGE OF ASPHALT
- CONCRETE
- GRAVEL
- BRICK

UNDERGROUND LOCATOR SERVICE
CALL BEFORE YOU DIG!
1-800-424-5555

NO.	REVISIONS	DATE

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

4/5/23

TESC PLAN
GRANBOIS CUSTOM

TCHC, LLC. (BDA: BDR CUSTOM)
P.O. BOX 50208
BELLEVUE, WA 98015

DATE	APRIL 2023 (1ST SUB)	
DESIGNED	SHERI H. MURATA, P.E.	
DRAWN	JOCELYN R. CASENAS	
APPROVED	SHERI H. MURATA, P.E.	SHERI H. MURATA, P.E. PROJECT MANAGER

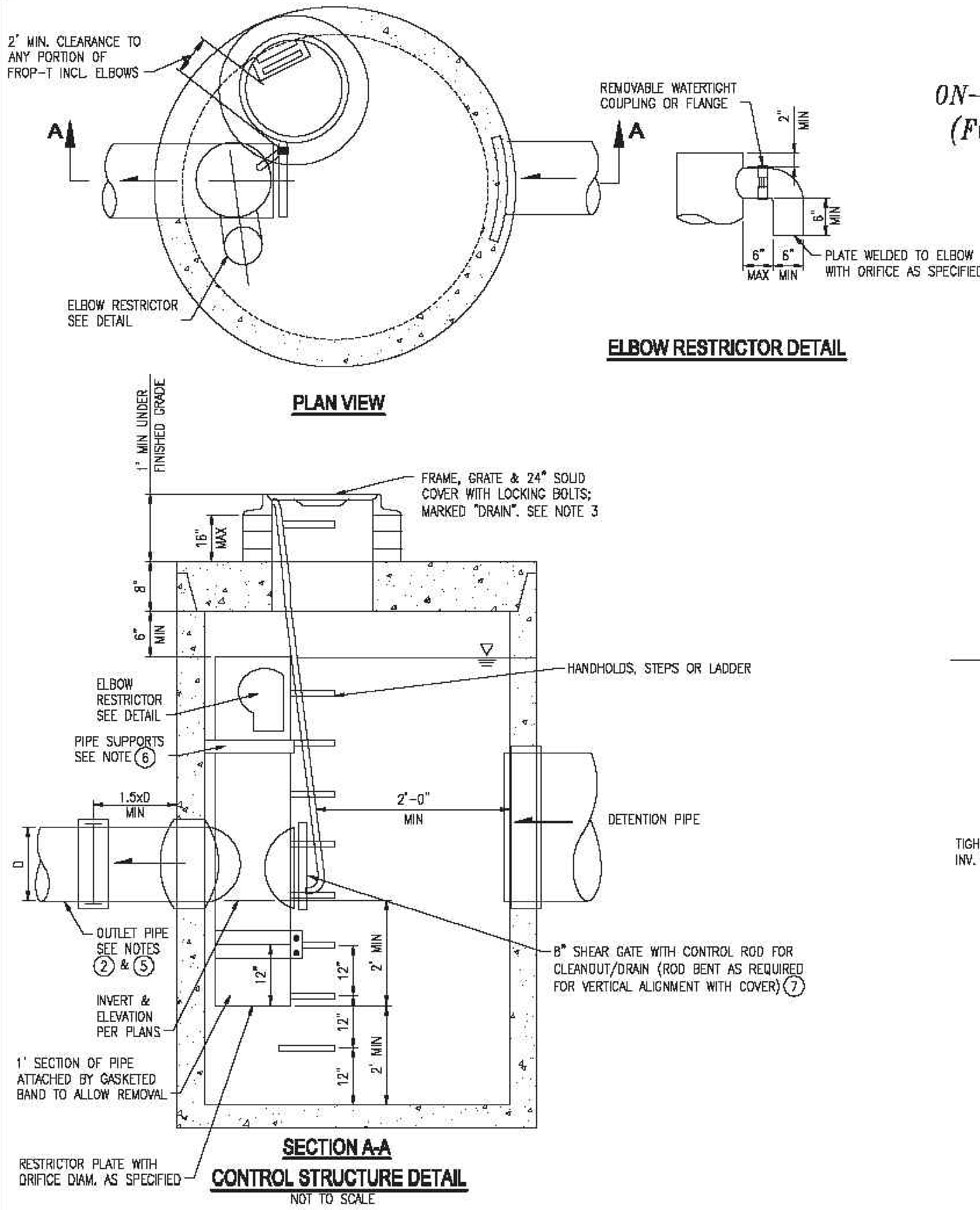
SHEET	OF
2	3

PROJECT NUMBER
22293

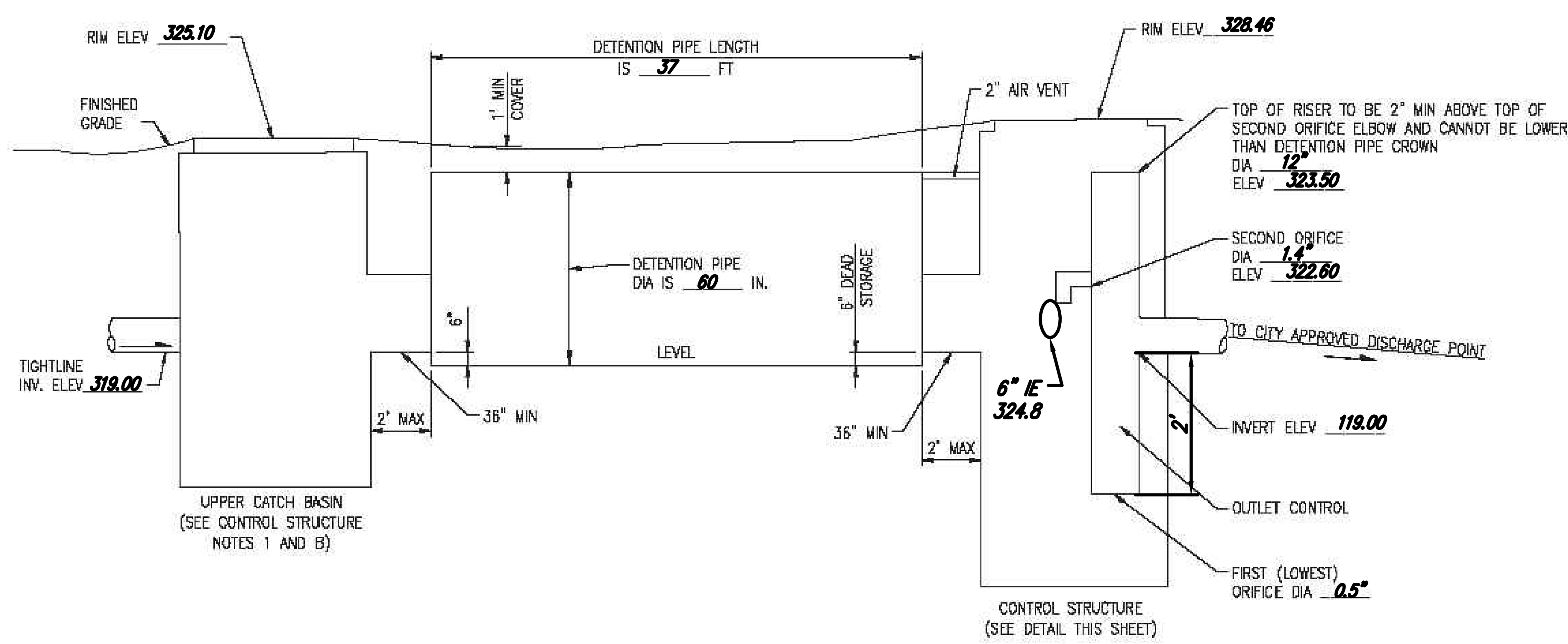
4/5/2023 2:10 PM J:\2022\22293\ENGINEERING\FINAL SHEETS\22293 TESC.DWG

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

OWNER: ANDREW AND TRACI GRANDBOIS	ADDRESS: 8440 SE 82ND ST, MERCER ISLAND, WA 98040	PREPARED BY: SHERI MURATA, P.E.
PERMIT #:		PHONE: 425-885-7877
		DATE: 4/5/23
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 5,260 SF	DETENTION PIPE DIA (INCH): 60	DETENTION PIPE LENGTH (FT): 37
SOIL TYPE: C	PIPE MATERIAL: CMP	ORIFICE #1 DIA 0.5" INCH, ELEV 317.00
		ORIFICE #2 DIA 1.4" INCH, ELEV 322.60



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. STANLESS 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 ZG32A; 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 (206-275-7605) 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 (LCPE), 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.

TREE PROTECTION AREA (TPZ)

KEEP OUT!

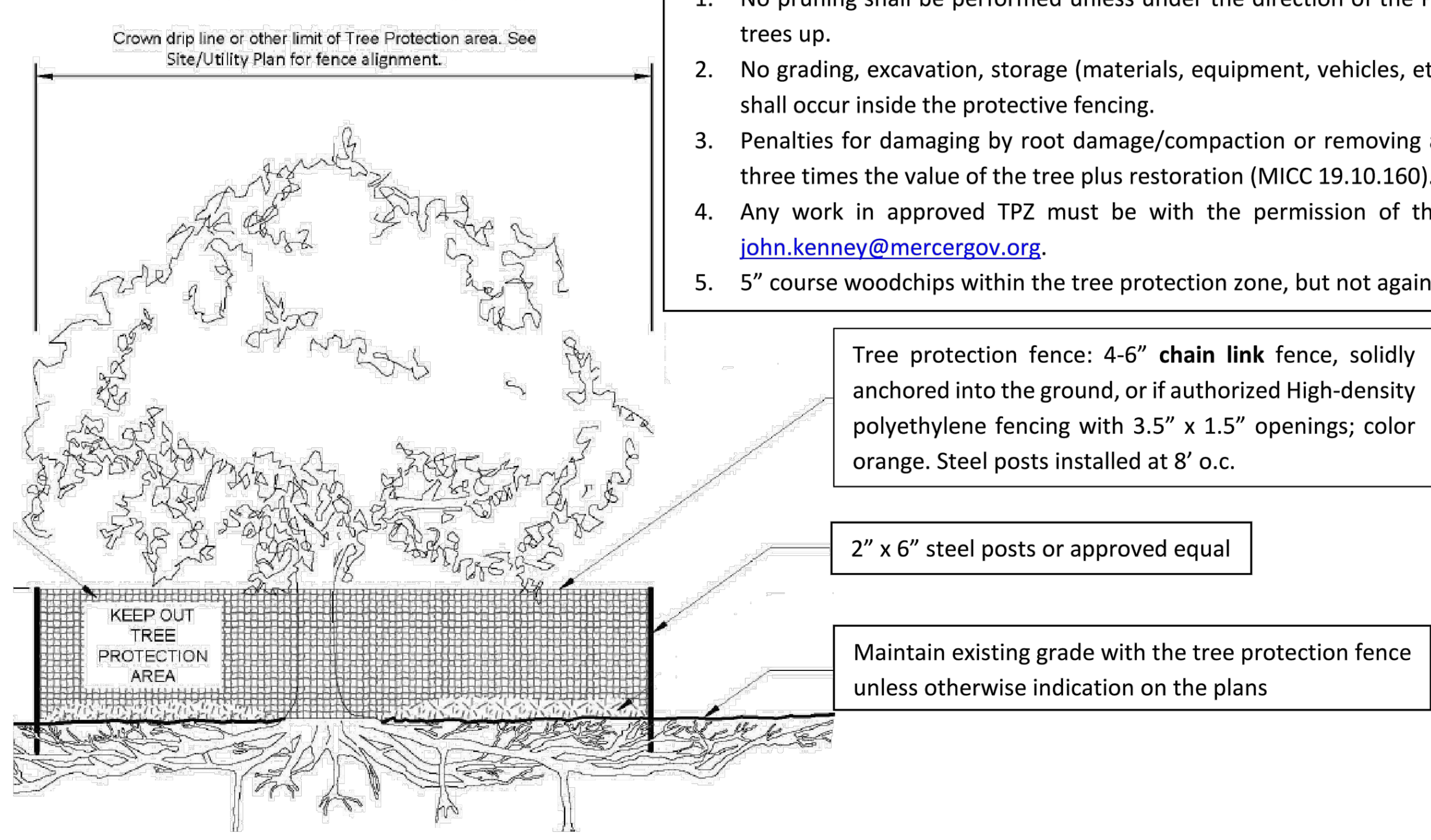
DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

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/financial penalties
3. Arborist reports recommending mitigation

Notes

1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
3. Penalties for damaging by root damage/compaction or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.160).
4. Any work in approved TPZ must be with the permission of the City Arborist (206) 275-7713, john.kenney@mercergov.org.
5. 5" course woodchips within the tree protection zone, but not against the tree trunk.

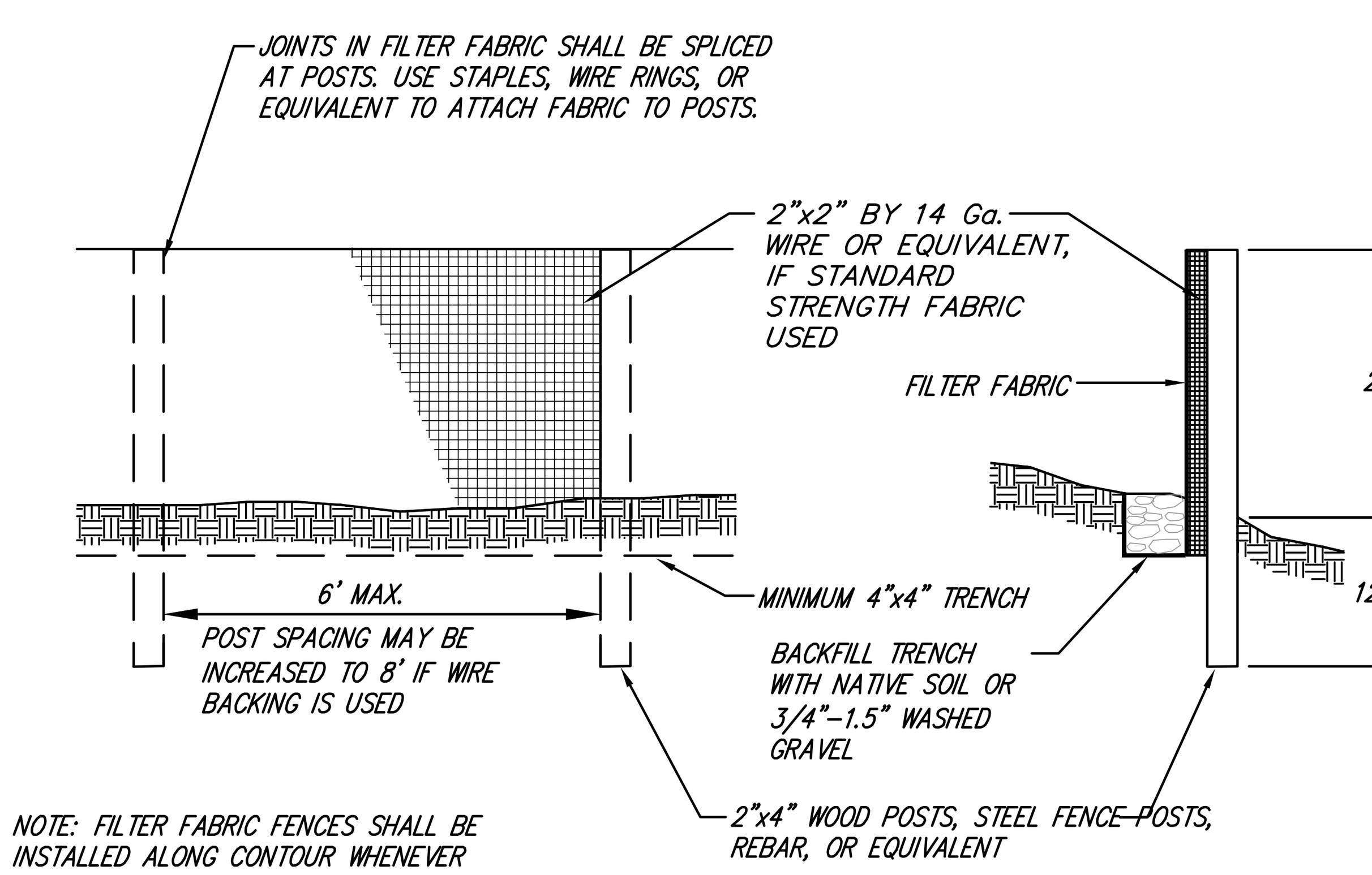


Tree protection fence: 4-6" **chain link** fence, solidly anchored into the ground, or if authorized High-density polyethylene fencing with 3.5" x 1.5" openings; color orange. Steel posts installed at 8' o.c.

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



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

FILTER FABRIC FENCE DETAIL

NO SCALE

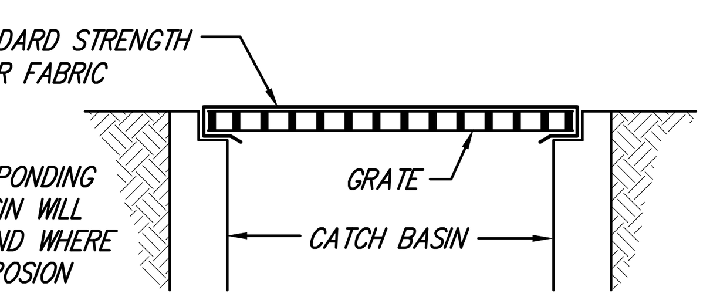
(SEE BMP T5.13 POST CONSTRUCTION SOIL QUALITY AND DEPTH IN THE 2014 DOE MANUAL FOR THE FULL DESIGN REQUIREMENT)

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:

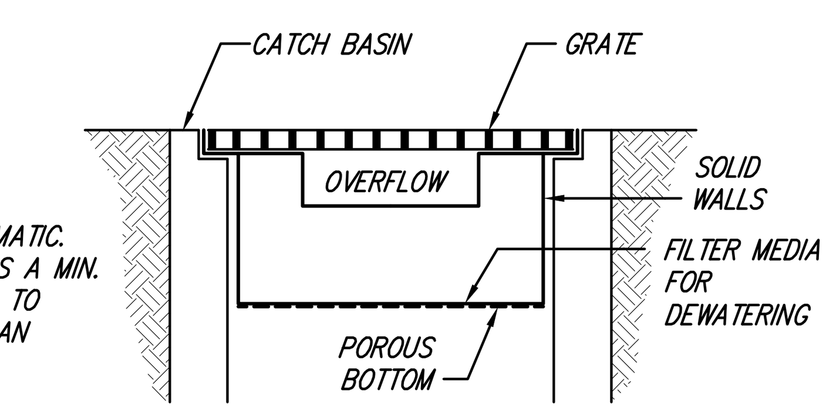
1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE 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.
2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL
3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
   a. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BIORETENTION (BMP T7.30), 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.
   b. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A.) ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173- 350-220.



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.

FILTER FABRIC PROTECTION



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

CATCH BASIN INSERT

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

UNDERGROUND LOCATOR SERVICE
CALL BEFORE YOU DIG!
1-800-424-5555

DATE	REVISIONS	NO.

4/5/23

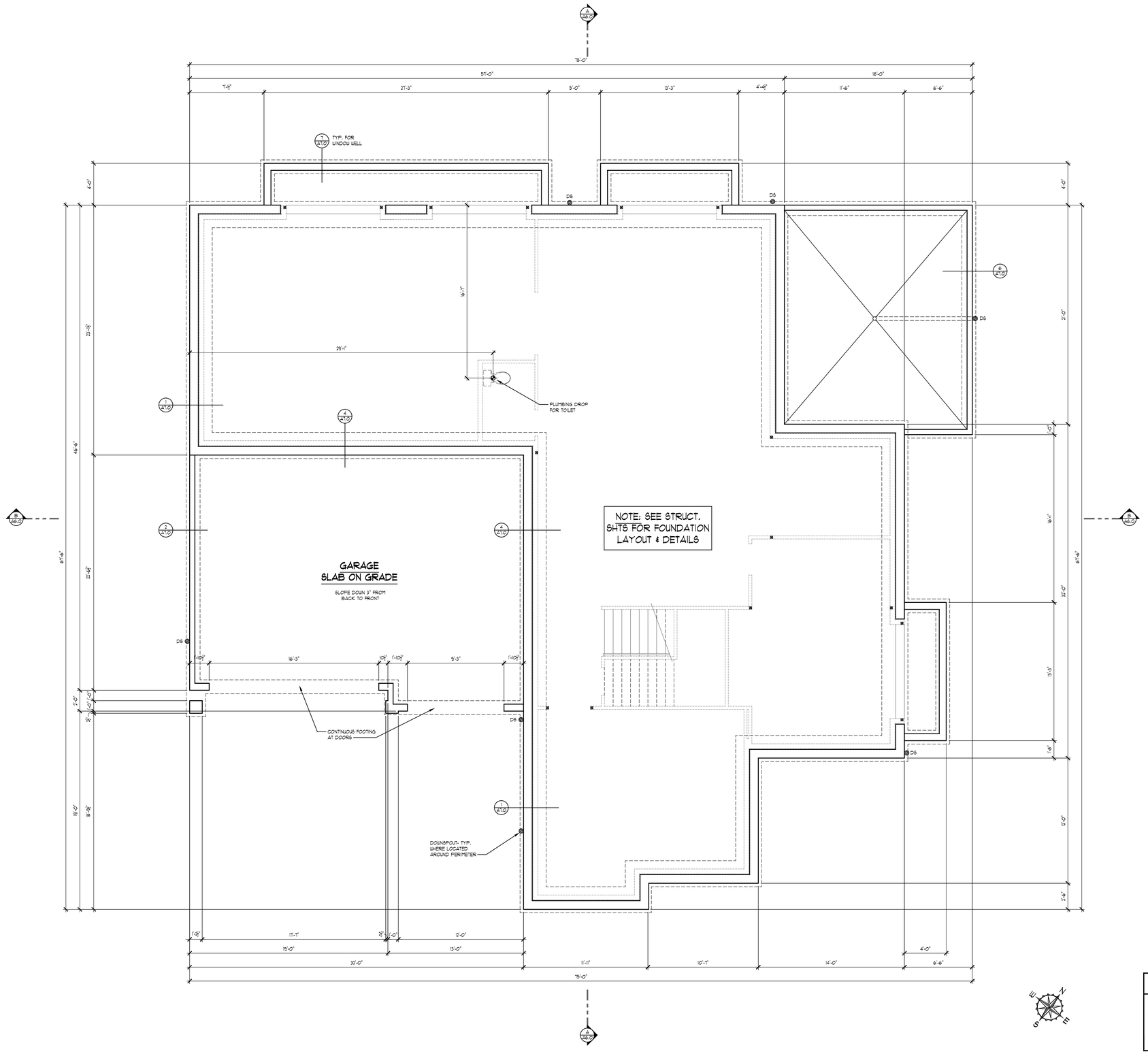
CORE DESIGN
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING
12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

DETAILS
GRANBOIS CUSTOM
TCHC, LLC. (BDA: BDR CUSTOM)
P.O. BOX 50208
BELLEVUE, WA 98015

DATE	APRIL 2023 (1ST SUB)
DESIGNED	SHERI H. MURATA, P.E.
DRAWN	JOCELYN R. CASENAS
APPROVED	SHERI H. MURATA, P.E.
	SHERI H. MURATA, P.E. PROJECT MANAGER

SHEET	OF
3	3

PROJECT NUMBER
22293



ARCHITECTURAL FOUNDATION PLAN

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

BUCKOUTS

WATER	MIN. 4" DIA. HOLE 30" (FOR 24" REQ'D EARTH COVER) BELOW T.O.U.
SEWER	(NON-SEPTIC SYSTEMS) - 6"ø SLEEVE 30" BELOW T.O.U., LOC. AWAY FROM DECKS AND PATIOS AND A MIN. OF 10' (HORIZ.) FROM WATER SUPPLY.
DRAIN TILE LOCATION	OUTLINE AT LOW POINT OF EXCAVATION USE A 4"ø SLEEVE - THRU FOOTING

SYMBOLS & LEGEND

◉	DOWNSPOUT LOCATION

REVISIONS

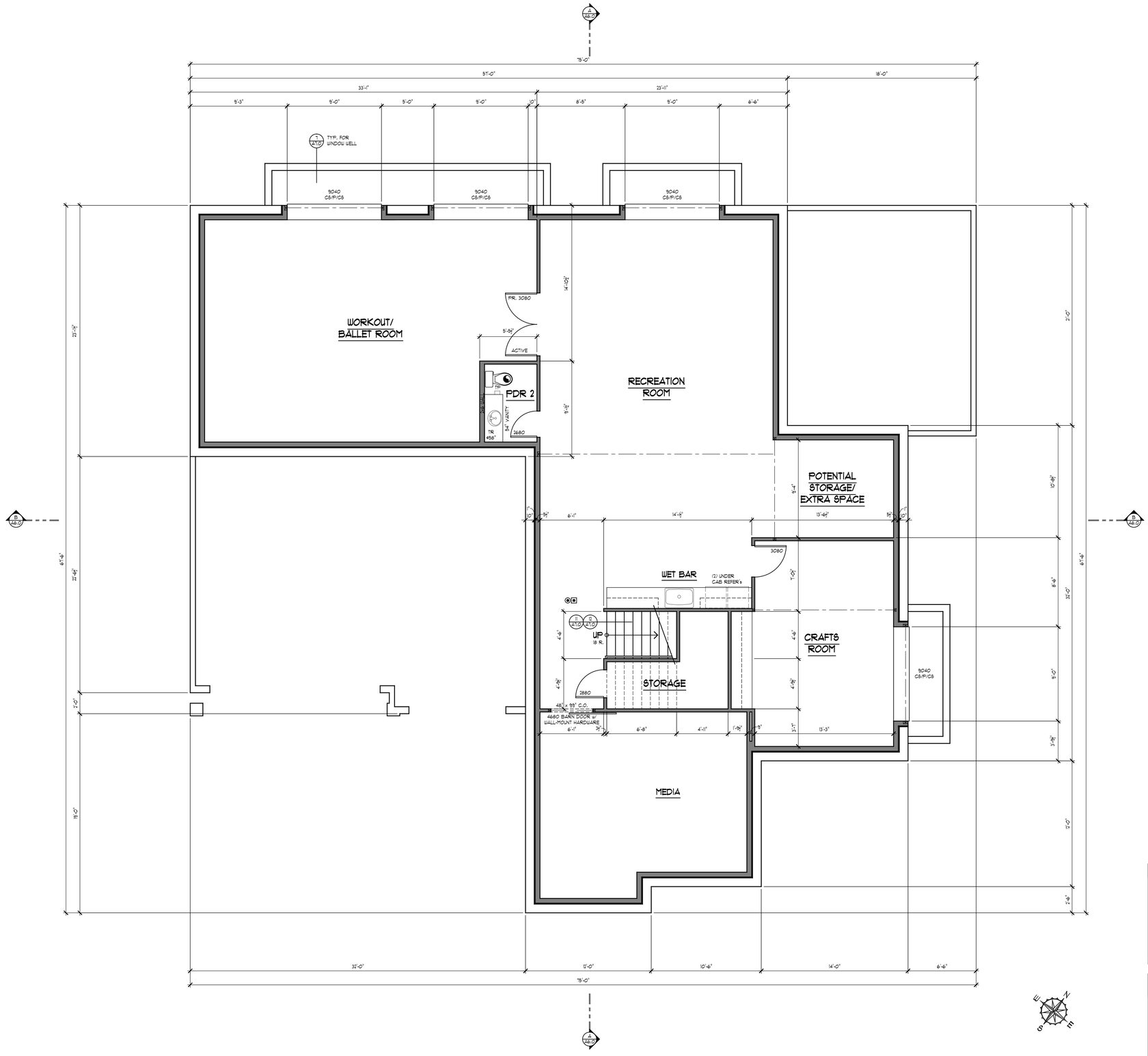
No.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-

TCHC, LLC. (DBA: BDR Custom)
P.O. Box 50208
Bellevue, WA 98015
(425) 889-5400

GRANBOIS RESIDENCE
8440 SE 82nd St, Mercer Island

ARCHITECTURAL FOUNDATION PLAN

DESIGN: JMD
DRAWN: JMD
ISSUE DATE: APR 7 2023
PLAN No: -
SHEET A0.0



LOWER FLOOR PLAN

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

SYMBOL LEGEND

	MIN 50 CFM FAN, VENT TO OUTSIDE
	INTERMITTENT WHOLE HOUSE FAN - SEE SHEET A0.0 FOR SIZE AND RUN TIME
	SMOKE DETECTOR, INTERCONNECTED & HARD WIRED W/ BATTERY BACKUP.
	CARBON MONOXIDE COMBO DETECTOR, INTERCONNECTED & HARD WIRED W/ BATTERY BACKUP
	VENEER SIDING, SEE ELEVATIONS

FLOOR PLAN NOTES

1. LOWER & MAIN FLOOR PLATE HEIGHTS AT 10'-0", U.N.O.
2. UPPER FLOOR PLATE HEIGHT AT 9'-0", U.N.O.
3. ALL EXTERIOR WALLS ARE 2x6 AT 16"oc U.N.O.
4. ALL INTERIOR WALLS ARE 2x4 AT 16"oc U.N.O.
5. ALL HEADERS ARE 8'-1 1/2" U.N.O. VERIFY w/ ELEVS.
6. ALL STAIRS TO HAVE UNIFORM RISERS.
7. GLASS ENCLOSURE DOORS TO BE LABELED CATEGORY II
8. PROVIDE W.R. BACKER BOARD AT TUBS/SHWRS TO 70" A.F.F.
9. VERIFY ALL WINDOW SIZES & PATTERNS WITH BUILDER
10. SEE COVER SHEET FOR ENERGY SPECIFICATIONS & VENTILATION REQUIREMENTS
11. ENTRY DOOR FROM GARAGE TO BE 20 MIN RATED SOLID CORE

No.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-

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P.O. Box 50208
Bellevue, WA 98015
(425) 889-5400

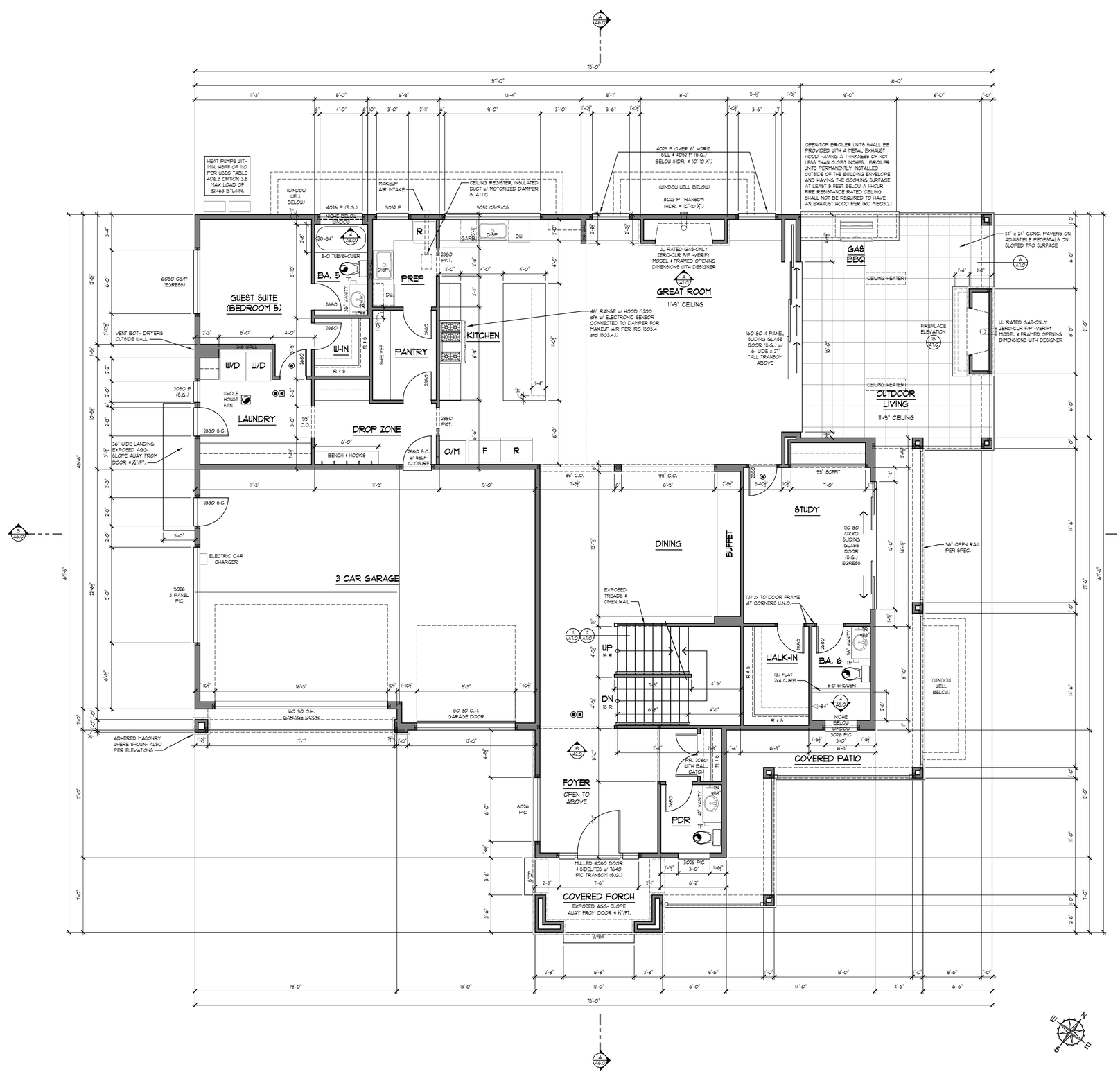
GRANBOIS RESIDENCE

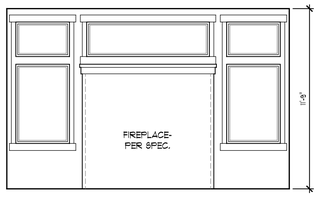
8440 SE 82nd St, Mercer Island

LOWER FLOOR PLAN

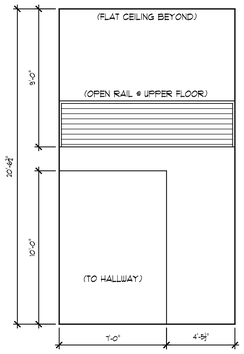
DESIGN: JMD
DRAWN: JMD
ISSUE DATE: APR 7 2023
PLAN No: -

SHEET A1.0





A INTERIOR ELEVATION AT GREAT ROOM



B INTERIOR ELEVATION AT FOYER

AREA SUMMARY

LOWER FLOOR:	2547 S.F.
MAIN FLOOR:	2388 S.F.
UPPER FLOOR:	2233 S.F.
TOTAL AREA:	7,168 S.F.
GARAGE:	748 S.F.
OUTDOOR LIVING:	389 S.F.
OTHER COVERED PORCHES	488 S.F.

SYMBOL LEGEND

	MIN 50 CFM FAN, VENT TO OUTSIDE
	INTERMITTENT WHOLE HOUSE FAN - SEE SHEET A0.0 FOR SIZE AND RUN TIME
	SMOKE DETECTOR, INTERCONNECTED & HARD WIRED W/ BATTERY BACKUP
	CARBON MONOXIDE COMBO DETECTOR, INTERCONNECTED & HARD WIRED W/ BATTERY BACKUP
	VENEER SIDING, SEE ELEVATIONS

FLOOR PLAN NOTES

1. LOWER & MAIN FLOOR PLATE HEIGHTS AT 10'-0", U.N.O.
2. UPPER FLOOR PLATE HEIGHT AT 9'-0", U.N.O.
3. ALL EXTERIOR WALLS ARE 2x6 AT 16" oc U.N.O.
4. ALL INTERIOR WALLS ARE 2x4 AT 16" oc U.N.O.
5. ALL HEADERS ARE 8'-1 1/2" U.N.O. VERIFY w/ ELEVS.
6. ALL STAIRS TO HAVE UNIFORM RISERS.
7. GLASS ENCLOSURE DOORS TO BE LABELED CATEGORY II
8. PROVIDE W.R. BACKER BOARD AT TUBS/SHWRS TO 70" A.F.F.
9. VERIFY ALL WINDOW SIZES & PATTERNS WITH BUILDER
10. SEE COVER SHEET FOR ENERGY SPECIFICATIONS & VENTILATION REQUIREMENTS
11. ENTRY DOOR FROM GARAGE TO BE 20 MIN RATED SOLID CORE

MAIN FLOOR PLAN

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

REVISIONS		
No.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-

TCHC, LLC. (DBA: BDR Custom)
P.O. Box 50208
Bellevue, WA 98015
(425) 890-5400

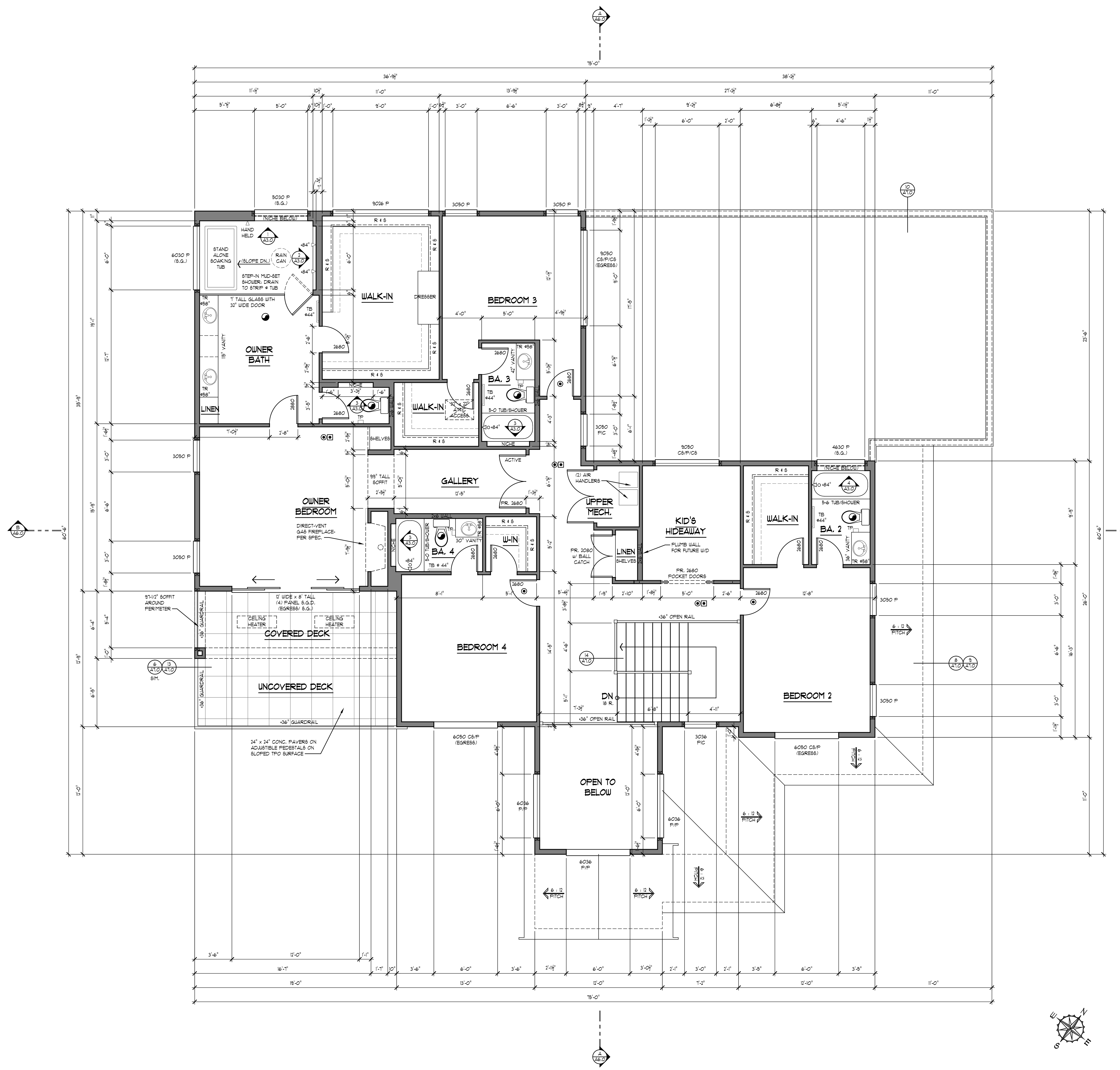
GRANBOIS RESIDENCE

8440 SE 82nd St, Mercer Island

MAIN FLOOR PLAN

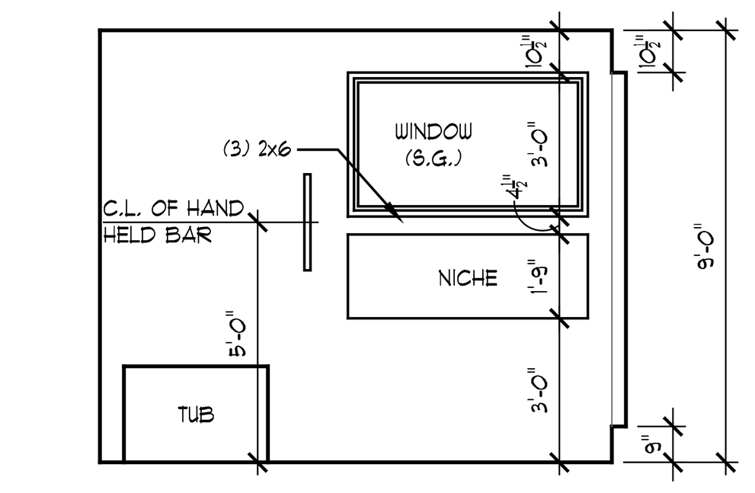
DESIGN: JMD
DRAWN: JMD
ISSUE DATE: APR 7 2023
PLAN No: -
SHEET A2.0

A3.0 Upper Floor Plan

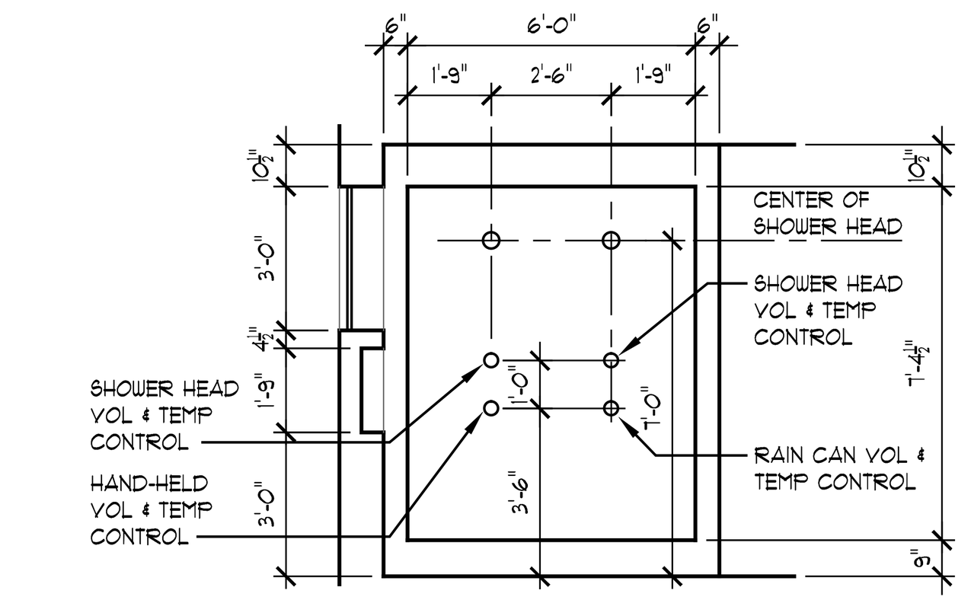


UPPER FLOOR PLAN

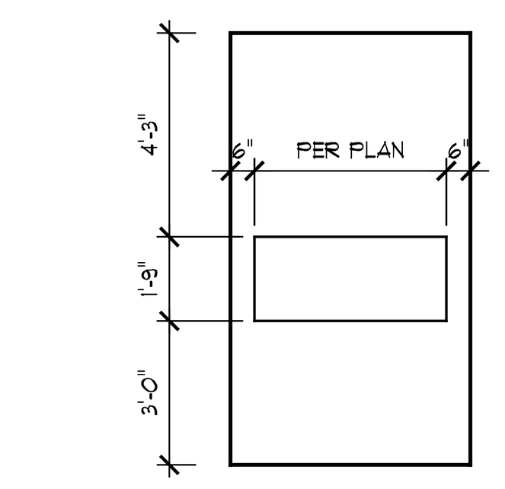
SCALE: 1/4" = 1'-0"



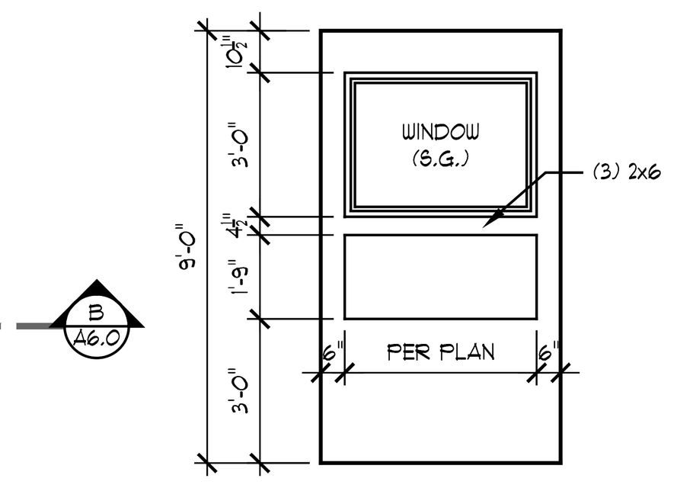
1 OWNER BATH ELEVATION



2 OWNER BATH ELEVATION



3 BATH NICHE DETAIL



4 BATH NICHE DETAIL

SYMBOL LEGEND

◐	MIN 50 CFM FAN, VENT TO OUTSIDE
◐ (boxed)	INTERMITTENT WHOLE HOUSE FAN - SEE SHEET A0.0 FOR SIZE AND RUN TIME
⊙	SMOKE DETECTOR, INTERCONNECTED & HARD WIRED W/ BATTERY BACKUP
▣	CARBON MONOXIDE COMBO DETECTOR, INTERCONNECTED & HARD WIRED W/ BATTERY BACKUP
▨	VENEER SIDING, SEE ELEVATIONS

FLOOR PLAN NOTES

1. LOWER & MAIN FLOOR PLATE HEIGHTS AT 10'-0", U.N.O.
2. UPPER FLOOR PLATE HEIGHT AT 9'-0", U.N.O.
3. ALL EXTERIOR WALLS ARE 2x6 AT 16"oc U.N.O.
4. ALL INTERIOR WALLS ARE 2x4 AT 16"oc U.N.O.
5. ALL HEADERS ARE 8'-1 1/2" U.N.O; VERIFY w/ ELEVS.
6. ALL STAIRS TO HAVE UNIFORM RISERS.
7. GLASS ENCLOSURE DOORS TO BE LABELED CATEGORY II
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11. ENTRY DOOR FROM GARAGE TO BE 20 MIN RATED SOLID CORE

REVISIONS

No.	DATE	DESCRIPTION
1	-	-
2		
3		

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GRANBOIS RESIDENCE
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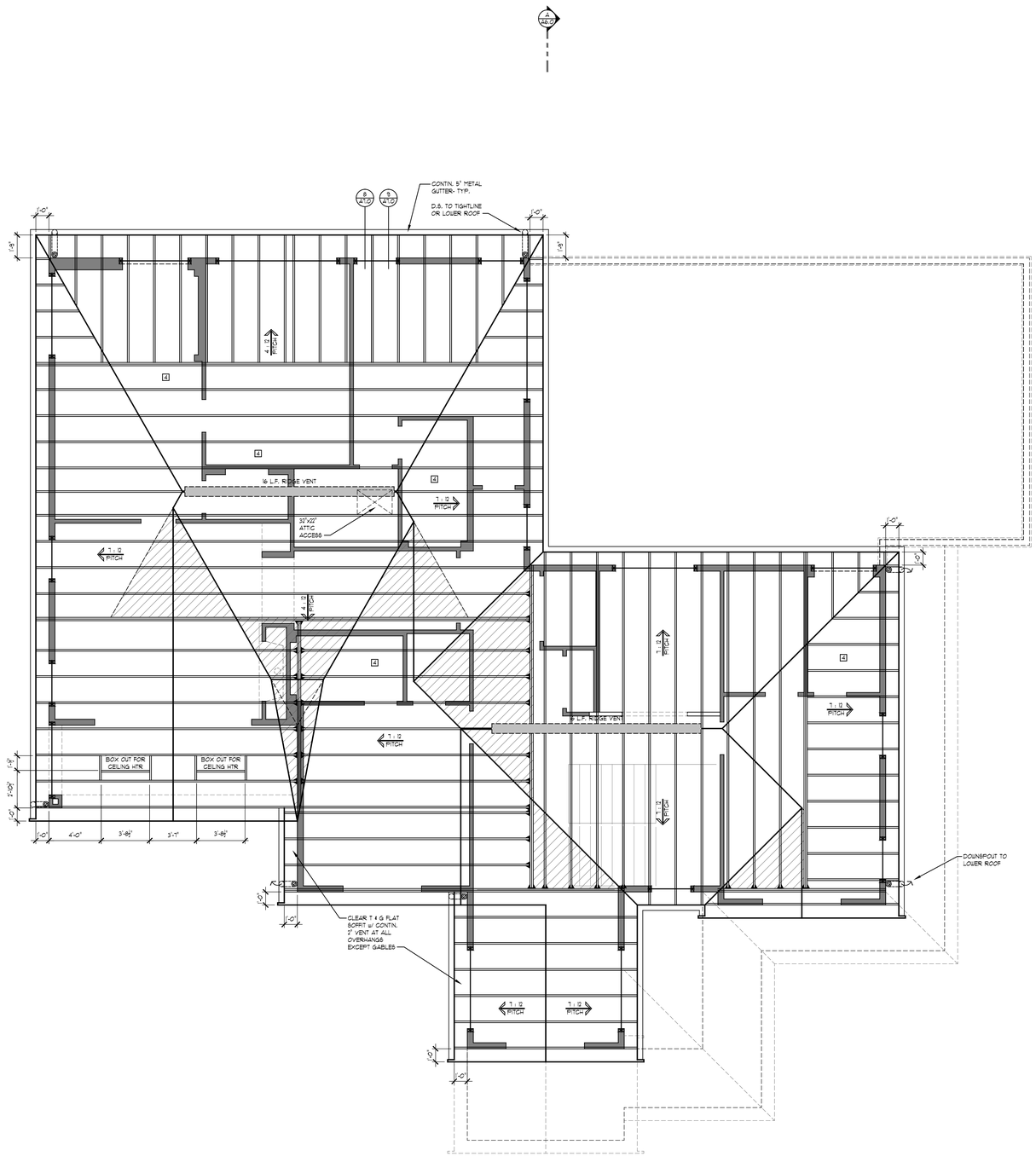
UPPER FLOOR PLAN

DESIGN: JMD
DRAWN: JMD
ISSUE DATE: APR 7 2023
PLAN No: -

SHEET A3.0



SEE STRUCTURAL SHEETS FOR FRAMING LAYOUT, DETAILS AND HARDWARE

ATTIC VENTILATION

2378 SQ. FT. / 300 = 7.93 NET SQ. FT. OF VENTILATION REQUIRED

0	EAVE BLOCK VENTS PROVIDED (.055 SQ. FT. EA)	0 SQ. FT.
60	2" CONT SOFFIT VENTS PROVIDED (.067 SQ. FT. PER L.F.)	4.02 SQ. FT.
0	LOW ROOF VENTS WITHIN 36" OF EAVES (.50 SQ. FT. EA)	0 SQ. FT.
32	RIDGE VENTS PROVIDED (.125 SQ. FT. PER L.F.)	4.0 SQ. FT.
0	ROOF VENTS PROVIDED (.50 SQ. FT. EA)	0 SQ. FT.
0	GABLE VENTS PROVIDED (.50 SQ. FT. EA)	0 SQ. FT.
TOTAL VENTILATION PROVIDED (SEE PLAN FOR LOCATIONS)		8.02 SQ. FT.

SYMBOLS & LEGEND

5 : 12 PITCH	ROOF PITCH INDICATOR, PER PLAN
DS	DOWNSPOUT LOCATION
	RIDGE VENTING
	4" FLAPPER ROOF VENT- BATH & DRYER

ARCHITECTURAL ROOF PLAN

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

REVISIONS		
No.	DATE	DESCRIPTION
1	-	
2		
3		

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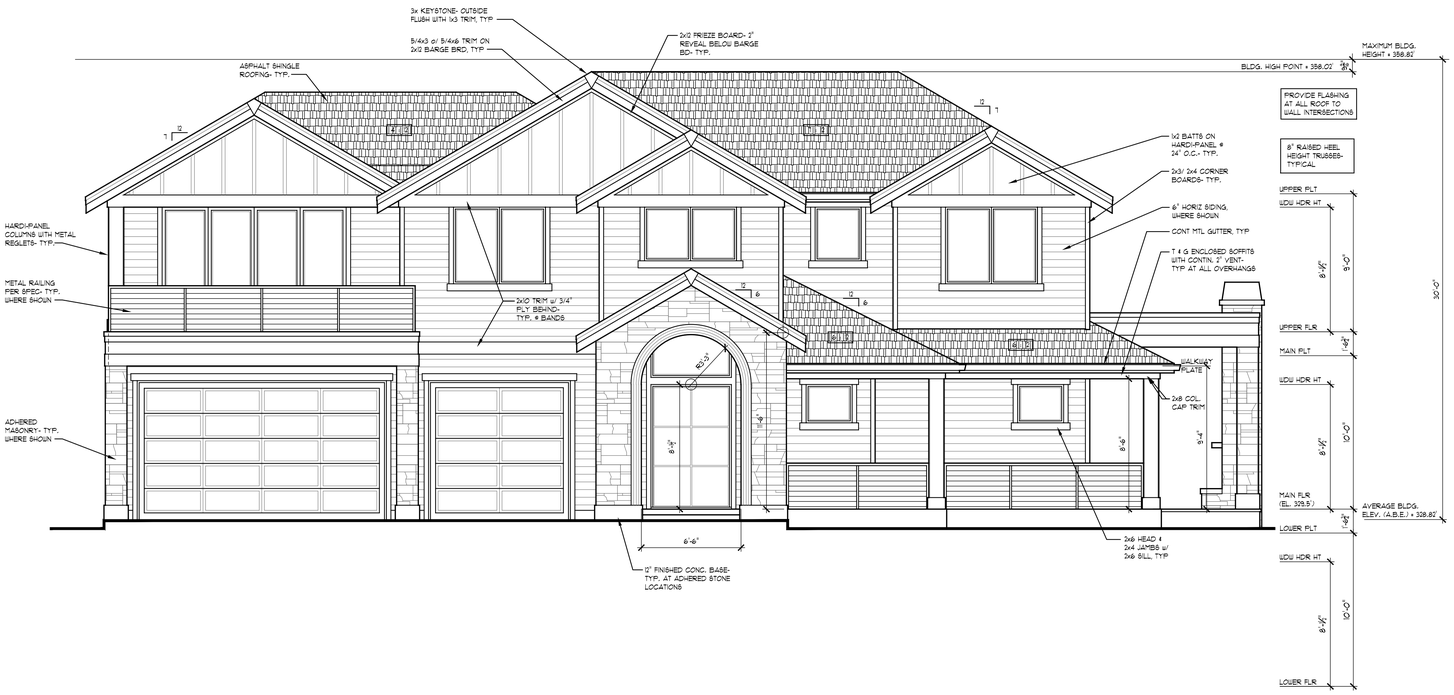
GRANBOIS RESIDENCE

8440 SE 82nd St, Mercer Island

ARCHITECTURAL ROOF PLAN

DESIGN: JMD
DRAWN: JMD
ISSUE DATE: APR 7 2023
PLAN No: -
SHEET A4.0



FRONT (SOUTHEAST ELEVATION

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

REAR (NORTHWEST) ELEVATION

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

A5.0 Elevations

REVISIONS

No.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-

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Bellevue, WA 98015
(425) 890-5400

GRANBOIS RESIDENCE

8440 SE 82nd St, Mercer Island

ELEVATIONS

DESIGN: JMD
DRAWN: JMD
ISSUE DATE: APR 7 2023
PLAN No: -

SHEET A5.0

SIDE (NORTHWEST) ELEVATION

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

SIDE (SOUTHEAST) ELEVATION

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

REVISIONS

No.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-

TCHC, LLC. (DBA: BDR Custom)
P.O. Box 50208
Bellevue, WA 98015
(425) 889-5400

GRANBOIS RESIDENCE

8440 SE 82nd St, Mercer Island

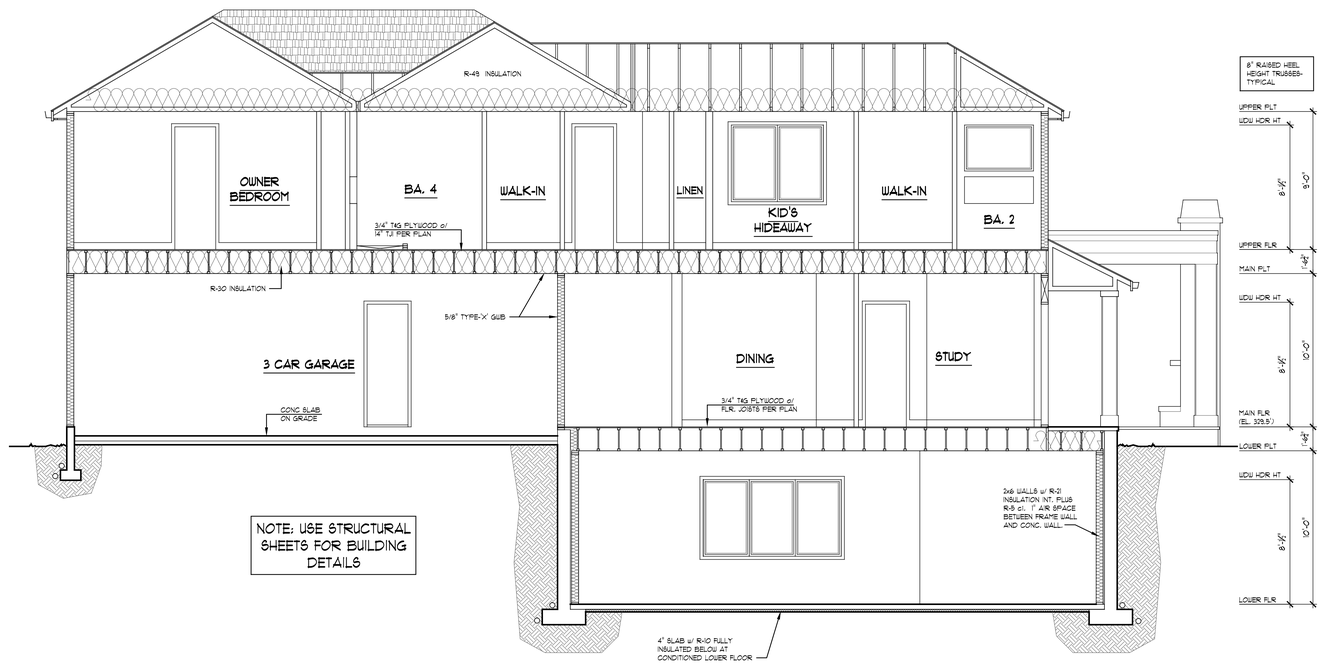
ELEVATIONS

DESIGN: JMD
DRAWN: JMD
ISSUE DATE: APR 7 2023
PLAN No: -

SHEET A5.1

BUILDING SECTION A-A

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



BUILDING SECTION B-B

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

A6.0 Sections

REVISIONS

No.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-

TCHC, LLC. (DBA: BDR Custom)
P.O. Box 50268
Bellevue, WA 98015
(425) 889-5400

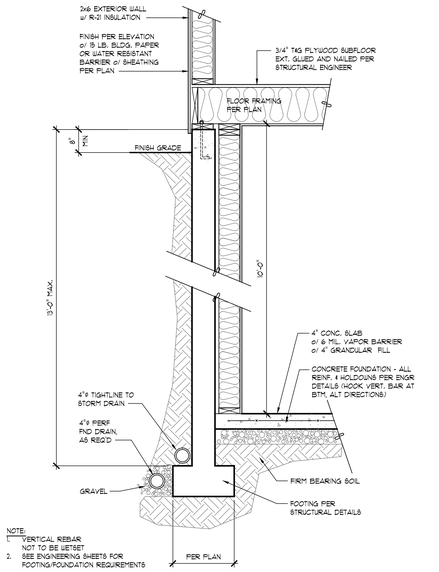
GRANBOIS RESIDENCE

8440 SE 82nd St, Mercer Island

BUILDING SECTION AND DETAILS

DESIGN: JMD
DRAWN: JMD
ISSUE DATE: APR 7 2023
PLAN No: -

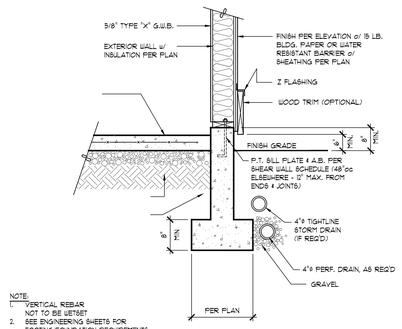
SHEET A6.0



NOTE:
1. VERTICAL REBAR NOT TO BE LIETSET
2. SEE ENGINEERING SHEETS FOR FOOTING/FOUNDATION REQUIREMENTS

PONY WALL/ FOUNDATION 1

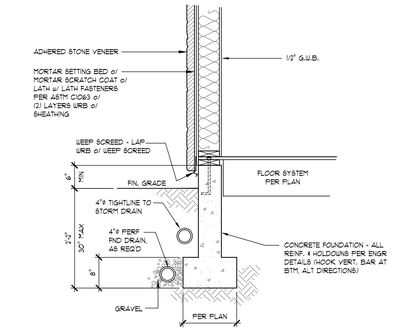
3/4" = 1'-0"



NOTE:
1. VERTICAL REBAR NOT TO BE LIETSET
2. SEE ENGINEERING SHEETS FOR FOOTING/FOUNDATION REQUIREMENTS

TYP. GARAGE FOUNDATION 2

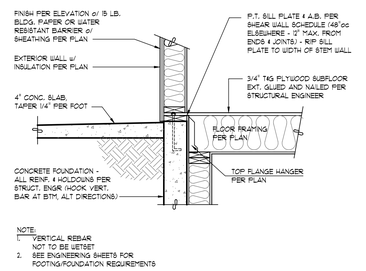
3/4" = 1'-0"



NOTE:
1. VERTICAL REBAR NOT TO BE LIETSET
2. SEE ENGINEERING SHEETS FOR FOOTING/FOUNDATION REQUIREMENTS

TYPICAL STONE VENEER DETAIL 3

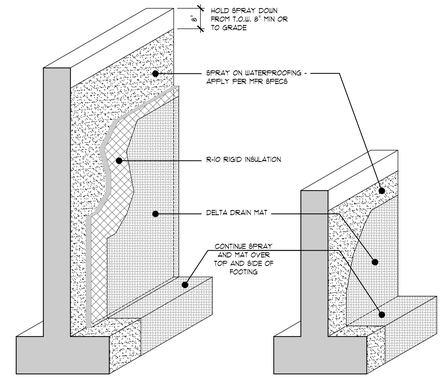
3/4" = 1'-0"



NOTE:
1. VERTICAL REBAR NOT TO BE LIETSET
2. SEE ENGINEERING SHEETS FOR FOOTING/FOUNDATION REQUIREMENTS

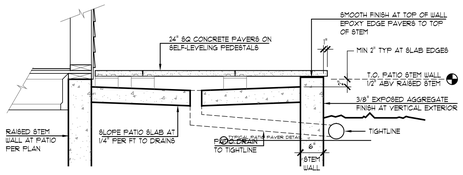
GARAGE TO HOME 4

3/4" = 1'-0"



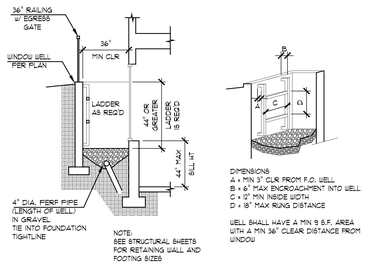
FOUNDATION WATERPROOFING 5

3/4" = 1'-0"



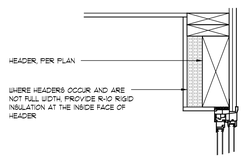
TYPICAL DECK PAVER DETAIL 6

3/4" = 1'-0"



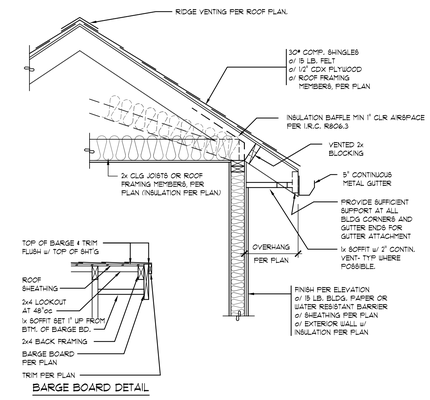
TYPICAL WINDOW WELL DETAIL 7

NTS



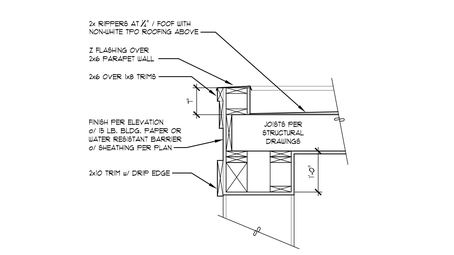
INSULATED HEADER 8

NTS



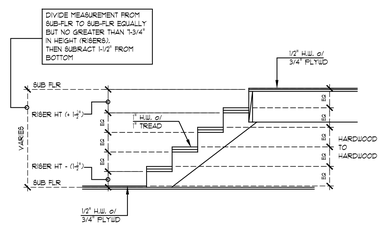
TYPICAL ROOF EAVE AND VENTING 9

3/4" = 1'-0"



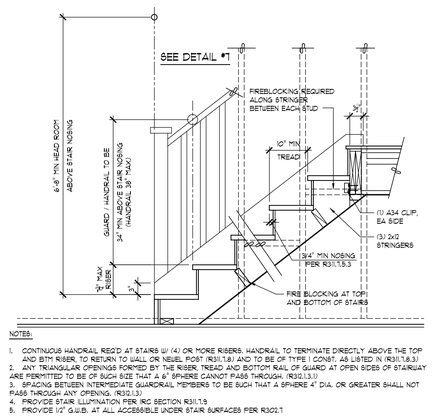
PARAPET ROOF DETAIL 10

3/4" = 1'-0"



TYPICAL STAIR RISER OFFSET FOR FINISH FLOOR 11

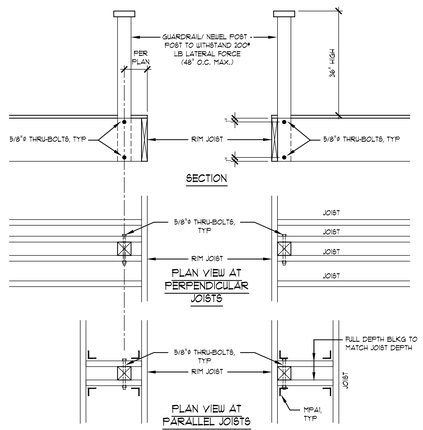
1/2" = 1'-0"



NOTES:
1. CONTINUOUS HANDRAIL REQ'D AT STAIRS W/ (4) OR MORE RISERS. HANDRAIL TO TERMINATE DIRECTLY ABOVE THE TOP AND BTM RISER, TO RETURN TO WALL OR NEUEL POST (R311.7.8) AND TO BE OF TYPE I CONST. AS LISTED IN (R311.7.8.3).
2. ANY TRIANGULAR OPENINGS FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF GUARD AT OPEN SIDES OF STAIRWAY ARE PERMITTED TO BE OF SUCH SIZE THAT A 6" SPHERE CANNOT PASS THROUGH. (R312.1.3.1)
3. SPACING BETWEEN INTERMEDIATE GUARDRAIL MEMBERS TO BE SUCH THAT A SPHERE 4" DIA. OR GREATER SHALL NOT PASS THROUGH ANY OPENING. (R312.1.3)
4. PROVIDE STAIR ILLUMINATION PER IRC SECTION R311.7.9
5. PROVIDE 1/2" G.W.B. AT ALL ACCESSIBLE UNDER STAIR SURFACES PER R302.7

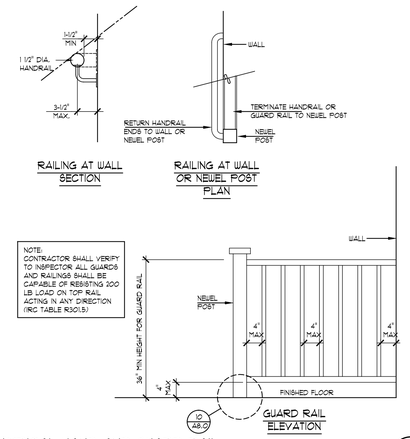
TYPICAL INTERIOR STAIR 12

3/4" = 1'-0"



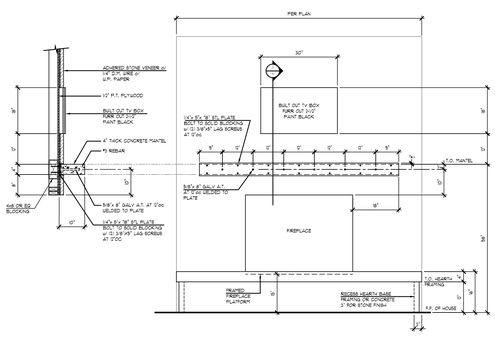
TYPICAL GUARD RAIL POST MOUNTING (INTERIOR AND EXTERIOR) 13

3/4" = 1'-0"



TYPICAL HAND AND GUARD RAIL 14

3/4" = 1'-0"



OUTDOOR FIREPLACE DETAIL 15

3/4" = 1'-0"

No.	DATE	REVISIONS DESCRIPTION
1	-	
2	-	
3	-	

TCHC, LLC. (DBA: BDR Custom)
P.O. Box 50208
Bellevue, WA 98015
(425) 890-5400

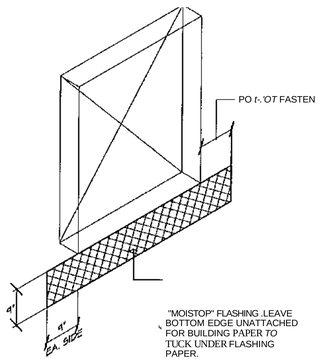
GRANBOIS RESIDENCE

8440 SE 82nd St, Mercer Island

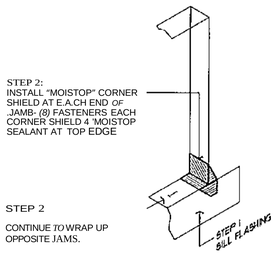
STANDARD DETAILS

DESIGN: JMD
DRAWN: JMD
ISSUE DATE: APR 7 2023
PLAN No:

SHEET A7.0



STEP: 1
INSTALLED BY FRAMER



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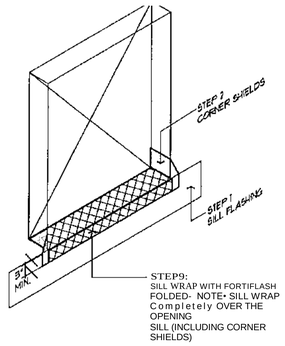

STEP 3
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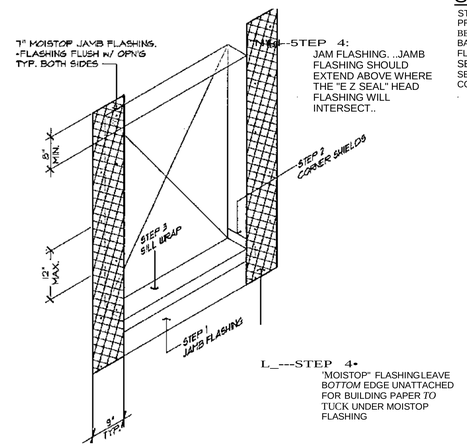

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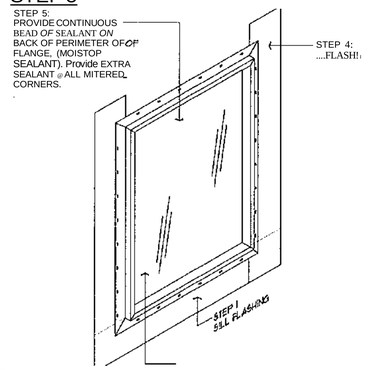

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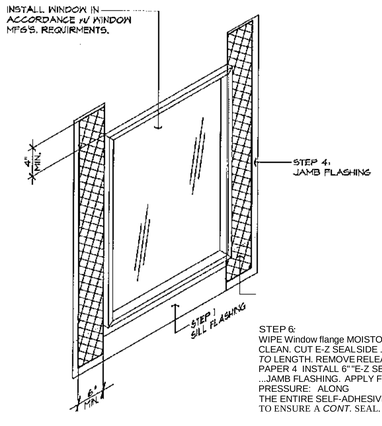

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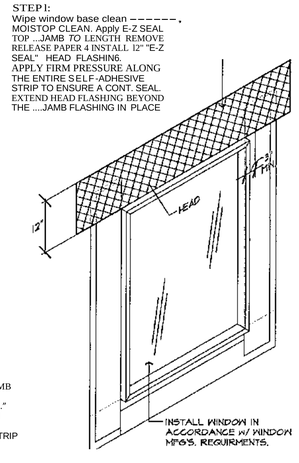
INSTALLED BY SIDER



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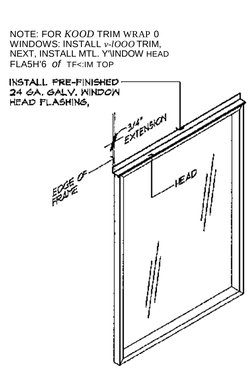

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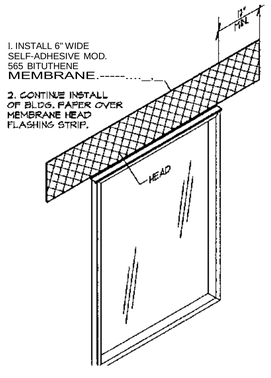

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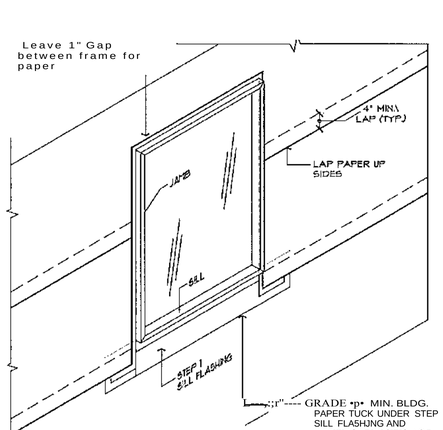


STEP IO
INSTALLED BY SIDER

A7.1 Details

REVISIONS

No.	DATE	DESCRIPTION
1	-	-
2		
3		

TCHC, LLC. (DBA: BDR Custom)
P.O. Box 50208
Bellevue, WA 98015
(425) 889-5400

GRANBOIS RESIDENCE
8440 SE 82nd St, Mercer Island

Water Instusion Details

DESIGN: JMD
DRAWN: JMD
ISSUE DATE: APR 7 2023
PLAN No:

SHEET
A7.1

GRANBOIS RESIDENCE

S230110-1

PROJECT INFORMATION

PROJECT ADDRESS
8440 SE 82ND ST
MERCER ISLAND, WA 98040

ARCHITECT
BDR CUSTOM, LLC
5000 CARILLON POINT STE 500
KIRKLAND, WA 98033
PHONE: (425) 889-5400
CONTACT: JIM DWYER

STRUCTURAL ENGINEER
L120 ENGINEERING & DESIGN
13150 91ST PL NE
KIRKLAND, WA 98034
PHONE: (425) 636-3313
EMAIL: MTHURFJELL@L120ENGINEERING.COM
CONTACT: MANS THURFJELL, PE

CODES

ENGINEERED PER:
2018 (IRC) INTERNATIONAL RESIDENTIAL CODE
2018 (IBC) INTERNATIONAL BUILDING CODE

SHEET INDEX

MANS R. THURFJELL
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER

LONGITUDE ONE TWENTY° ENGINEERING & DESIGN

REVISIONS

△	DESCRIPTION	DATE	BY
-			

PROJECT NAME
GRANBOIS RESIDENCE
8440 SE 82ND ST,
MERCER ISLAND

PROJECT NUMBER
S230110-1

DRAWN BY - MR

CHECKED BY - MRT

SHEET DATE - 03/15/2023

SCALE
24X36 SHEET:1/4"=1'-0"

DESCRIPTION
COVER SHEET

SHEET
S-0

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA

CODE: 2018 IBC/IRC & AMENDMENTS AS ADOPTED BY THE REVIEWING AGENCY/COUNTY.

ROOF .....25 PSF SNOW (GROUND)

FLOORS

RESIDENTIAL.....40 PSF

BALCONY/DECK.....60 PSF

BASIC WIND SPEED .....100 MPH, EXPOSURE B, KZT=1.90

SEISMIC

MAPPED SPECTRAL ACCELERATION, Ss..... 1.64

MAPPED SPECTRAL ACCELERATION, S1..... 0.62

SOIL SITE CLASS.....D

GENERAL CONDITIONS

1. THE CONTRACTOR SHALL EXAMINE THE STRUCTURAL DRAWINGS AND SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES HE MAY FIND BEFORE PROCEEDING WITH THE WORK.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ARCHITECT/ENGINEER SHALL IMMEDIATELY BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.
3. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
4. IN CASE OF CONFLICT, NOTES AND DETAILS OF THESE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE "GENERAL NOTES" AND/OR "STANDARD DETAILS".
5. IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION SHALL BE THE SAME AS FOR SIMILAR WORK.
6. WORKING DIMENSIONS SHALL NOT BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON THESE DRAWINGS.
7. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND THE STRUCTURAL ENGINEER OF ANY CONDITION WHICH IN HIS OPINION MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS TO THE STRUCTURE.
8. THE CONTRACTOR SHALL SUPERVISE AND DIRECT HIS WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS DURING CONSTRUCTION.
9. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, AND ALL OTHER REGULATING AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK.
10. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE THE NOTES, DRAWINGS, AND/OR SPECIFICATIONS DIFFER, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
11. REFER TO THE ARCHITECTURAL DRAWINGS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR THE STRUCTURAL DRAWINGS.
12. NOTIFY ENGINEER OF ALL FIELD CHANGES PRIOR TO INSTALLATION.
13. DISCREPANCIES FOUND BETWEEN STRUCTURAL DRAWINGS AND OTHER DOCUMENTS ARE TO BE NOTED IN WRITING TO THE ENGINEER PRIOR TO CONSTRUCTION.
14. ALL CONSTRUCTION SHALL BE DONE WITH MATERIALS, METHODS, AND WORKMANSHIP ACCEPTED AS GOOD PRACTICE BY THE CONSTRUCTION INDUSTRY IN CONFORMANCE TO THE PROVISIONS OF THE "INTERNATIONAL BUILDING CODE" (IBC), AND STANDARDS REFERENCED THEREIN.

FOUNDATION

1. FOUNDATION DESIGN PARAMETERS ASSUMED PER REPORT PROVIDED BY GEOTECH CONSULTANTS DATED 2/28/23:
   - FOOTING BEARING PRESSURE: 3500 PSF
   - LATERAL EARTH PRESSURE:
     - ACTIVE: 35 PCF (FREE) H*10 PCF (RESTRAINED)
     - PASSIVE: 300 PCF
     - COEFFICIENT OF BASE FRICTION: 0.5
2. SUBGRADE PREPARATION, DRAINAGE PROVISIONS, AND OTHER RELEVANT SOIL CONSIDERATIONS ARE TO BE IN ACCORDANCE WITH THE JURISDICTIONAL REQUIREMENTS.
3. ALL FOUNDATIONS ARE TO BEAR ON COMPETENT NATIVE SOILS OR STRUCTURAL FILL. STRUCTURAL FILL IS TO BE COMPACTED TO 95% DENSITY PER ASTM D-1557.

CONCRETE

1. REFERENCE STANDARDS: ACI-301, ACI-318, IBC.
   MINIMUM CONCRETE STRENGTH (28 DAYS):
   - FOOTINGS AND STEM WALLS.....2,500 PSI - 5 SACK MIX
   - BASEMENT FOUNDATION RETAINING WALLS.....2,500 PSI - 5.5 SACK MIX
   - SLAB-ON-GRADE.....2,500 PSI - 5 SACK MIX
   - SLAB-ON-GRADE.....EXPOSED WEATHERING SURFACES.....3,000 PSI - 5.5 SACK MIX

   AIR-ENTRAINMENT 2.5% TO 5.5% FOR EXPOSED CONCRETE.
2. MIXING: COMPLY WITH ACI-301. DO NOT EXCEED THE AMOUNT OF WATER SPECIFIED IN THE APPROVED MIX. PROPORTIONS OF AGGREGATE TO CEMENT SHALL BE SUCH AS TO PRODUCE A DENSE WORKABLE MIX WHICH CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER
3. PLACING: COMPLY WITH ACI-301. PROVIDE A 3/4 INCH CHAMFER ALL EXPOSED CONCRETE EDGES, UNLESS INDICATED OTHERWISE ON ARCHITECTURAL DRAWINGS.
4. SLUMP: 4" PLUS OR MINUS ONE INCH. DO NOT ADD WATER TO MIX TO INCREASE SLUMP. GREATER SLUMP, ACCELERATED SET, OR HIGH EARLY STRENGTH MAY BE ACHIEVED BY USING APPROVED ADMIXTURES.
5. CURING: COMPLY WITH ACI-301. KEEP CONCRETE MOIST FOR SEVEN DAYS MINIMUM.
6. JOINTING: PROVIDE ADEQUATE JOINTING TO MINIMIZE EFFECTS OF VOLUME CHANGE. JOINTS SHOWN MAY BE ADJUSTED AT CONTRACTOR'S OPTION, WITH PRIOR APPROVAL FROM ENGINEER.
7. WEATHER EXTREMES: COMPLY WITH ACI 305R FOR HOT WEATHER. COMPLY WITH ACI 306R FOR COLD WEATHER.
8. WATER/CEMENT RATIO SHALL NOT EXCEED 0.50 (BY WEIGHT), TYPICAL.

REINFORCING STEEL

1. REFERENCE STANDARDS: ACI "DETAILING MANUAL" (SP-66); CRSI MANUAL OF STANDARD PRACTICE (MSP-1)
2. MATERIALS:
   REINFORCING STEEL: ASTM A615, GRADE 60
3. SPLICES:
   LAP CONTINUOUS REINFORCING BARS 48 BAR DIAMETERS, UNLESS OTHERWISE NOTED. PROVIDE CORNER BARS FOR ALL HORIZONTAL REINFORCEMENT.
4. COVER:
   FOOTINGS .....3 INCHES
   SLABS.....2 INCHES
5. FORMED SURFACES:
   WEATHER FACE ...1-1/2 INCHES, #5 BARS AND SMALLER 2 INCHES, # 6 BARS AND LARGER
   INTERIOR FACE ...3/4 INCH FOR SLABS AND WALLS 1-1/2 INCHES FOR BEAMS AND COLUMNS

STRUCTURAL AND MISC. STEEL

1. REFERENCE STANDARDS: DESIGN, FABRICATION AND ERECTION ARE TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
2. MATERIALS:
   BOLTS - ASTM A307, UNLESS OTHERWISE NOTED
   WF BEAMS - ASTM A572-50 (Fy = 50,000 PSI)
   HSS ROUND COLUMNS - ASTM A500 Gr. B (Fy = 42,000 PSI)
   HSS RECTANGULAR COLUMNS - ASTM A500 Gr. B (Fy = 46,000 PSI)
   ALL OTHER STEEL - ASTM A36 (Fy = 36,000 PSI)

STRUCTURAL STEEL WELDING

1. CONFORM TO THE AWS CODES D1.1 AND D1.3. ALL WELDING TO BE DONE ONLY BY WABO CERTIFIED WELDERS AND HAVE SPECIAL INSPECTION BY WABO CERTIFIED INSPECTION AGENCY OR BE DONE BY WABO CERTIFIED FABRICATION SHOP. EITHER SPECIAL INSPECTION REPORT OR WABO FABRICATION SHOP CERTIFICATION SHOULD BE AVAILABLE ON SITE FOR THE BUILDING INSPECTOR. WELDS NOT SPECIFIED ARE TO BE 1/4" CONTINUOUS FILLET MINIMUM. USE DRY E70 ELECTRODES.

DIMENSIONAL LUMBER

1. MEET REQUIREMENTS OF PS 20-70 AND NATIONAL GRADING RULES FOR SOFTWOOD DIMENSIONAL LUMBER. BEAR STAMP OF WWPA.
2. MINIMUM DIMENSIONAL LUMBER GRADES TO BE:

WALL STUDS:	2x, HF STUD GRADE, 3x HF #2
WALL PLATES:	2x HF STANDARD GRADE
	2x, 3x PRESSURE TREATED HF STANDARD GRADE AT FOUNDATION
JOISTS:	2x6 HF STUD GRADE
	2x8 AND UP HF #2
BEAMS, HEADERS:	6x DF#2; 4x DF#2, WWPA GRADING.
POSTS:	4x, 6x, DF #2

   LUMBER NOT NOTED TO BE HF #2.
3. PROVIDE STANDARD CUT WASHERS FOR NUTS BEARING AGAINST WOOD, AND 1/4"x3" HOT-DIPPED GALVANIZED SQUARE PLATE WASHERS FOR ALL ANCHOR BOLTS.
4. ALL SILLS OR PLATES RESTING ON CONCRETE OR MASONRY, WHICH IS IN CONTACT WITH OR RESTING ON FOUNDATIONS, SHALL BE PRESSURE TREATED HEM FIR OR BETTER. ALL BEARING WALL PLATES SHALL HAVE 5/8"Ø ANCHOR BOLTS PLACED A MAXIMUM 9" FROM THE END OF A PLATE AND SPACED AT INTERVALS SHOWN ON THE SHEARWALL SCHEDULE (MAXIMUM 4'-0" O.C. SPACING). ALL TREATED PRESSURE TREATED WOOD MEMBERS SHALL COMPLY WITH AWP4 U1 AND AWP4 M4 STANDARDS.
5. CAST-IN-PLACE ANCHOR BOLTS SHALL HAVE A MINIMUM 7" EMBEDMENT. ALTERNATE 5/8"Ø EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT II ANCHORS EMBED 7", OR APPROVED ALTERNATE.
6. BOLTS IN WOOD BEAMS SHALL NOT BE LESS THAN 7 DIAMETERS FROM THE END AND 4 DIAMETERS FROM THE EDGE OF THE MEMBER.
7. NAILS: NAILING IN ACCORDANCE WITH IBC TABLE 2304.10.1. 16D NAILS MAY BE 16D SINKERS (0.148 x 3-1/4") UNLESS NOTED OTHERWISE.
8. PRESURE TREATED WOOD: ALL NAILS INTO PT WOOD SHALL BE HOT DIPPED GALVANIZED PER ASTM A153 OR STAINLESS STEEL. ALL METAL CONNECTORS IN CONTACT WITH PT WOOD SHALL BE HOT DIPPED GALVANIZED AND MEET ASTM A653 CLASS G185 (1.85 oz OF ZINC PER SQ FT MINIMUM) OR TYPE 304 / 316 STAINLESS STEEL. SIMPSON Z-MAX CONNECTORS MEET THIS REQUIREMENT. FASTENERS AND CONNECTORS USED TOGETHER SHALL BE OF THE SAME TYPE (E.G. HOT DIPPED NAILS WITH HOT DIPPED HANGERS)

MANUFACTURED TIMBER

PRODUCT	APPLICATION	WIDTHS
LSL RIMBOARD (1.3E)	RIMBOARD OR STAIR STRINGER	1 ¼"
TIMBERSTRAND LSL (1.3E)	HEADER, BEAM, OR COLUMN < 9" DEPTH	3 ½"
TIMBERSTRAND LSL (1.55E)	RIMBOARD, HEADER, OR < 9" DEPTH BEAM	1 ¾",3 ½"
TIMBERSTRAND LSL (1.3E)	WALL STUD 2X4 & 2X61	½"
(1.5E)	WALL STUD > 2X6	1 ½"
MICROLLAM LVL (1.9E)	HEADER, BEAM	1 ¾"
PARALLAM PSL (2.2E)	HEADER, BEAM	3 ½", 5 ¼", 7"
PARALLAM PSL (1.8E)	COLUMN	3 ½", 5 ¼", 7"

WOOD STRUCTURAL CONNECTIONS

1. ALL FRAMING ANCHORS, POST CAPS, BASES, HANGERS, STRAPS, ETC., SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY OR ENGINEER APPROVED EQUAL.

BRICK VENEER ANCHORAGE

1. D/A 2135 SEISMIC VENEER ANCHORS BY DUR-O-WAL OR APPROVED EQUAL AT WOOD STUD WALL.
2. D/A 5213 SEISMIC VENEER ANCHORS BY DUR-O-WAL OR APPROVED EQUAL AT CONCRETE WALL.
3. PLACE ANCHORS AT 16" O.C. VERTICAL AND 16" HORIZONTAL. PROVIDE #9 GA HORIZONTAL JOINT REINFORCING WIRE . ATTACH TO WOOD STUDS WITH #8 CORROSION RESISTANT SCREWS AND TO CONCRETE WITH 1/4"Ø EXPANSION ANCHORS.
4. AT ALL OPENINGS LARGER THAN 16" IN EITHER DIRECTION, ANCHORS TO BE SPACED WITHIN 12" OF THE OPENING AT ALL SIDES.
5. USE TYPE N MORTAR COMPLYING WITH ASTM C270

GLU-LAMINATED TIMBER

1. GLU-LAMINATED WOOD BEAMS, DOUGLAS FIR COAST REGION, KILN DRIED, AITC SPECIFICATION 24F-V4 FOR SIMPLE SPANS (TYPICAL), AND 24F-V8 FOR CANTILEVER-SPANS (WHERE SPECIFIED). PROVIDE AITC STAMP ON TIMBER AND SUBMIT CERTIFICATE TO ARCHITECT AND ENGINEER. MATERIALS MUST BE OBTAINED FROM AN AITC APPROVED FABRICATOR. ALL GLU-LAM BEAMS SHALL FIT SNUG AND TIGHT IN THEIR CONNECTIONS AND DEVELOP FULL BEARING AS INDICATED. NO SUBSTITUTION OF OTHER SPECIES. GLU-LAM ADHESIVE TO BE "WET- USE" TYPE. PROVIDE 2000 FT RADIUS CAMBER, U.N.O.
2. MANUFACTURER'S CERTIFICATE SHALL BE PRESENTED TO THE BUILDING INSPECTOR PRIOR TO INSTALLATION.

WOOD SHEATHING

1. ROOF SHEATHING: 7/16" MINIMUM THICKNESS APA RATED PRP-108 PERFORMANCE STANDARD, EDGE SEALED PANELS DESIGNED TO SPAN 24 INCHES EITHER PARALLEL OR PERPENDICULAR TO LONG AXIS OF PANEL WITH 35 PSF LIVE LOAD. LAY UP WITH MINIMUM 1/8" CLEAR BETWEEN PANELS TO ALLOW FOR EXPANSION. NAIL 6 INCHES ON CENTER ALONG EDGES, AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS. USE 10D COMMON NAILS, U.N.O. PROVIDE EXP-1 RATING.
2. FLOOR SHEATHING: 3/4" NOMINAL APA RATED PANELS, PRP-108 PERFORMANCE STANDARD, NAILED AND GLUED. CONFORM TO IBC IDENTIFICATION INDEX 40/20 FOR SUPPORTS TO 20 INCHES ON CENTER. ADHESIVES ARE TO CONFORM TO APA SPECIFICATION AFG-01. PROVIDE T&G EDGES AT LONG PANEL EDGES. LAY UP WITH MINIMUM 1/8" CLEAR BETWEEN PANELS TO ALLOW FOR EXPANSION. NAIL 6 INCHES ON CENTER AT END SUPPORTS AND 10 INCHES ON CENTER AT INTERMEDIATE SUPPORTS. USE 10D COMMON NAILS. PROVIDE EXP-1 RATING.
3. WOOD SHEARWALL SHEATHING: PLYWOOD OR OSB APA RATED PRP-108 PERFORMANCE STANDARD PER IBC STD 23-2 OR 23-3 TYPE C-C OR C-D. USE EXTERIOR ADHESIVES. USE 8d COMMON NAILS. PROVIDE EXP-1 RATING. ALL VERTICAL JOINTS OF PANEL SHEATHING SHALL OCCUR OVER STUDS. HORIZONTAL JOINTS SHALL OCCUR OVER BLOCKING EQUAL IN SIZE TO THE STUDDING. REFER TO SHEAR WALL SCHEDULE FOR PANEL THICKNESS.
4. NAILING SPECIFICATIONS: CONFORM TO IBC SECTION 2304.10 "CONNECTIONS AND FASTENERS." UNO ON PLANS, NAILING PER TABLE 2304.10.1, AND FOR ROOF/FLOOR DIAPHRAGMS AND SHEARWALLS SHALL BE PER DRAWINGS. NAILS SHALL BE DRIVEN FLUSH AND SHALL NOT FRACTURE THE SURFACE OF SHEATHING. ALTERNATE NAILS MAY BE USED BUT ARE SUBJECT TO REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER. SUBSTITUTION OF STAPLES FOR THE NAILING OF RATED SHEATHING IS SUBJECT TO REVIEW BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.

SHOP DRAWINGS AND SUBMITTALS

1. SUBMIT 2 SETS OF PRINTS AND 1 SET OF REPRODUCIBLES FOR REVIEW FOR:
   A) REINFORCING STEEL C) GLU-LAMINATED BEAMS
   B) MISCELLANEOUS STEEL D) PRE-MANUFACTURED WOOD TRUSSES
2. SUBMIT 3 COPIES FOR REVIEW PRIOR TO FABRICATION FOR:
   A) CONCRETE DESIGN MIX
   B) CONCRETE INSERTS
   C) EPOXY ADHESIVES

INSPECTIONS

1. REFERENCE STANDARDS: IBC 110.
   INSPECTIONS ARE TO BE PERFORMED BY THE BUILDING OFFICIAL. INSPECTIONS REQUIRED ARE AS FOLLOWS:
2. SOIL: VERIFY SUBGRADE IS DRY DENSE AND DOES NOT HAVE STANDING WATER PRIOR TO POURING FOOTINGS.
3. CONCRETE: INSPECTIONS REQUIRED ONLY FOR DESIGN MIXES SPECIFIED GREATER THAN 2500 PSI.
   TAKE CONCRETE CYLINDERS AS REQUIRED. VERIFY SLUMP AND STRENGTH.
4. REINFORCING: VERIFY ALL REINFORCING IS PLACED IN ACCORDANCE WITH APPROVED PLANS. CHECK FOR REQUIRED COVER, SIZE AND GRADE.
5. WOOD: DIAPHRAGM NAILING, BLOCKING AND HOLD-DOWN CONNECTIONS.

ALTERNATES:

1. ALTERNATE ASSEMBLIES AND MATERIALS WILL BE CONSIDERED FOR REVIEW. ENGINEER MAY REQUEST PAYMENT FOR REVIEW; CONTRACTOR WILL BEAR BURDEN FOR ADDITIONAL PAYMENT AT NO ADDITIONAL COST TO OWNER.

SETTLEMENT SHRINKAGE:

1. DUE TO CROSS GRAIN WOOD SHRINKAGE, THIS BUILDING IS EXPECTED TO SETTLE APPROXIMATELY 3/8 INCH PER STORY. ALL PLUMBING AND MECHANICAL DUCTS SHALL BE DESIGNED WITH FLEXIBLE JOINTS OR OTHERS MEANS TO APPROPRIATELY ACCOMMODATE THIS NORMAL SETTLEMENT. ALL INTERIOR AND EXTERIOR SHEATHING AND FINISHES SHALL BE INSTALLED SUCH THAT NO DAMAGE WILL OCCUR. SHRINKAGE IS EXPECTED IN THE DEPTH OF THE FLOOR PLATES AND NOT IN THE LENGTH OF THE WALL STUDS.

JOBSITE SAFETY:

1. THE ENGINEER AND/OR ARCHITECT HAVE NOT BEEN RETAINED OR COMPENSATED TO PROVIDE DESIGN AND/OR CONSTRUCTION REVIEW SERVICES RELATED TO THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES FOR THE CONTRACTOR TO PERFORM HIS WORK. THE UNDERTAKING OF PERIODIC SITE VISITS BY THE ENGINEER AND/OR ARCHITECT SHALL NOT BE CONSTRUED AS SUPERVISION OF ACTUAL CONSTRUCTION NOR MAKE HIM RESPONSIBLE FOR PROVIDING A SAFE PLACE FOR THE PERFORMANCE OF WORK BY THE CONTRACTOR, SUBCONTRACTORS, SUPPLIERS OR THEIR EMPLOYEES, OR FOR ACCESS, VISITS, USE, WORK, TRAVEL, OR OCCUPANCY BY ANY PERSON.

ABBREVIATIONS

AB	ANCHOR BOLT
ABV	ABOVE
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
AYC	ALASKAN YELLOW CEDAR
BB	BOX BEAM
BF	BOTTOM FLUSH
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
BP	BOTTOM PLATE
BRG	BEARING
BTWN	BETWEEN
BSMT	BASEMENT
B/W	BOTTOM OF WALL
CANT	CANTILEVER
CJ	CONTROL JOINT
CLG.	CEILING
CLJ	CEILING JOIST
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CTR	CENTER
DET	DETAIL
DF	DOUGLAS FIR (SOUTH)
DFL	DOUGLAS FIR LARCH
DIM	DIMENSION
DJ	DOUBLE JOIST
DIA	DIAMETER
DN	DOWN
DS	DOWN SPOUT
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
ELEV	ELEVATION
EN	EDGE NAILING (PANEL)
EOR	ENGINEER OF RECORD
EQ	EQUAL
ES	EACH SIDE
EW	EACH WAY
FB	FLUSH BEAM
FIN	FINISH
FL	FLOOR
FLSHG	FLASHING
FND	FOUNDATION
FP	FIREPLACE
FT	FOOT
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GLB	GLULAM BEAM
GR	GRADE
GYP	GYPSUM WALL BOARD
HDG	HOT-DIPPED GALVANIZED
HDR	HEADER
HF	HEM FIR
HGT	HEIGHT
HT	HEIGHT
IN	INCH
JT	JOINT
MAX	MAXIMUM
MIN	MINIMUM
MISC	MISCELLANEOUS
NB	NON-BEARING
NO	NUMBER
OC	ON CENTER
PL	PLATE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
RAF	RAFTER
REF	REFERENCE
REINF	REINFORCEMENT
REQD	REQUIRED
REQS	REQUIREMENTS
SF	SQUARE FOOT
SHTG	SHEATHING
SIM	SIMILAR
SPF	SPRUCE PINE FIR
STD	STANDARD
SYP	SOUTHERN YELLOW PINE
T/	TOP OF
T/BM	TOP OF BEAM
T/CONC	TOP OF CONCRETE
T/PL	TOP OF PLATE
T/SLAB	TOP OF SLAB
T/ST	TOP OF STEEL
T/W	TOP OF WALL
TF	TOP FLUSH
TJ	TRIPLE JOIST
TP	TOP PLATE
TR	THREADED ROD
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UPA	UNDER POST ABOVE
UWA	UNDER WALL ABOVE
VCB (V.C.B.)	VERTICAL CRUSH BLOCKING
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
WC	WESTERN CEDAR
WP	WATERPROOF
WWF	WELDED WIRE FABRIC

HANS R. THURFJELL
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER

LONGITUDE ONE TWENTY°
ENGINEERING & DESIGN

REVISIONS

△	DESCRIPTION	DATE	BY
-			

PROJECT NAME

GRANBOIS RESIDENCE
8440 SE 82ND ST,
MERCER ISLAND

PROJECT NUMBER

S230110-1

DRAWN BY - MR

CHECKED BY - MRT

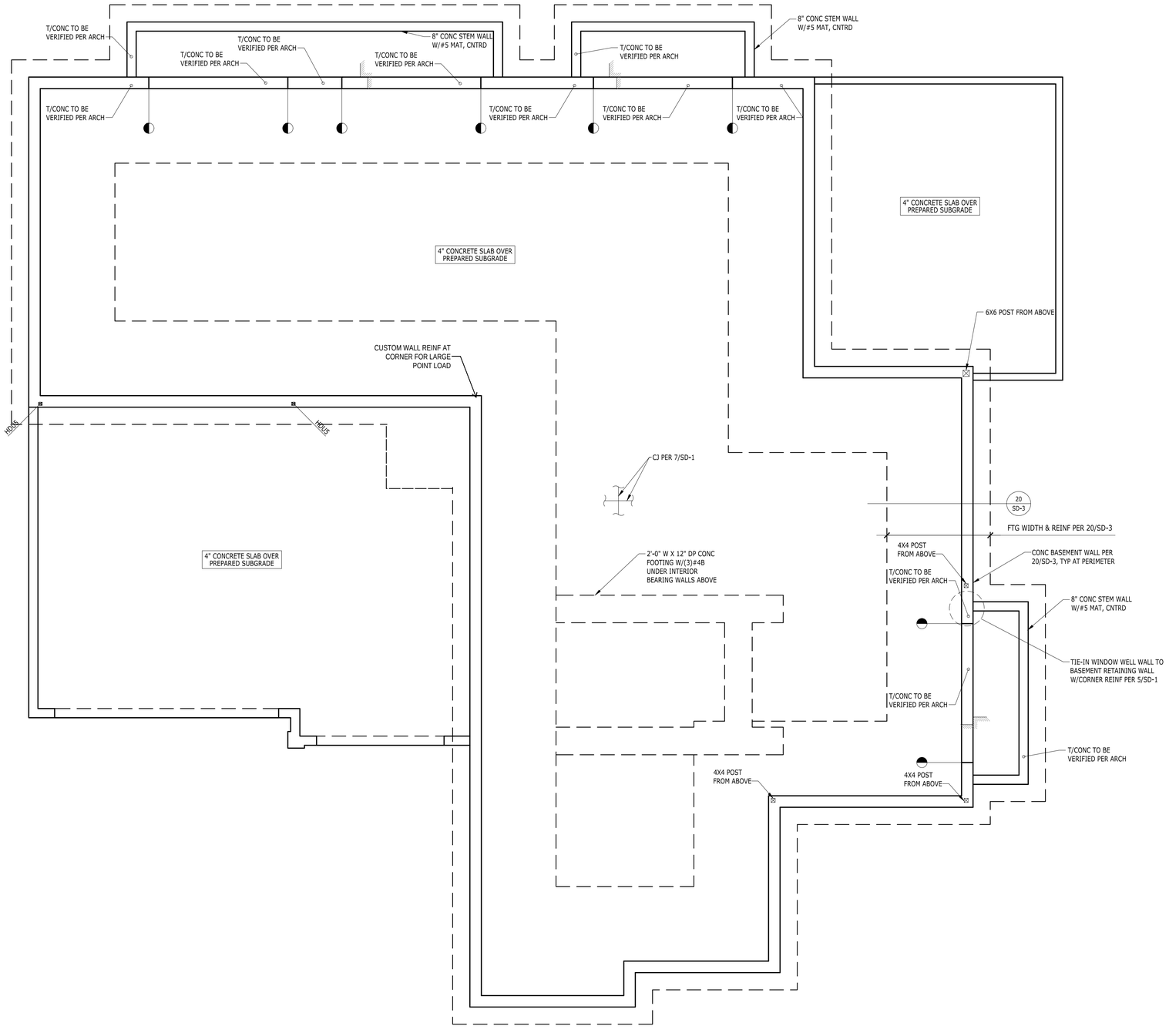
SHEET DATE - 03/15/2023

SCALE

24X36 SHEET:1/4"=1'-0"

DESCRIPTION: STRUCTURAL GENERAL NOTES

SHEET: S-1



FOUNDATION PLAN

FOUNDATION NOTES

1. GENERAL STRUCTURAL NOTES AND ABBREVIATIONS PER SHEET S-1.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCH. PROVIDED DIMENSIONS ARE TO FACE OF CONCRETE STEM WALL OR CENTER OF INDIVIDUAL FOOTING. OUTSIDE FACE OF STEM WALL ALIGNS WITH OUTSIDE FACE OF STUD WALL UNO. STHD HOLDOWNS ARE DIMENSIONED TO CENTER OF STRAP. HDU/HD/HTT HOLDOWNS ARE DIMENSIONED TO CENTER OF ANCHOR BOLT.
3. VERIFY ALL T/CONC ELEVATIONS ON ALL CONCRETE INCLUDING PARTIAL HEIGHT RETAINING WALLS. CONCRETE TO EXTEND MIN 8" ABOVE FINISHED GRADE. PROVIDE 1" RECESS AT DOUBLE SIDED SHEARWALLS TO ACCOMODATE 3X SILL PLATE.
4. FOOTINGS ARE TO BEAR ON COMPETENT NATIVE SOIL OR STRUCTURAL FILL CAPABLE OF SUPPORTING THE ASSUMED BEARING PRESSURE PER GENERAL NOTES. REFERENCE GEOTECHNICAL REPORT (IF AVAILABLE) FOR SUBGRADE PREPARATION, FILL REQUIREMENTS, FOOTING DRAINS, AND OTHER REQUIREMENTS. REFERENCE ARCH SET (OR OTHERS IF APPLICABLE) FOR FOOTING DRAINS AROUND PERIMETER OF BUILDING.
5. PRIOR TO POURING CONCRETE CONTRACTOR SHALL LOCATE AND VERIFY LOCATIONS OF ALL FOUNDATION OPENINGS, PENETRATIONS, AND SLOPES.
6. ALL WOOD LOCATED WITHIN 8" OF FINISHED GRADE, EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED. ALL FASTENERS IN CONTACT WITH FIRE-RETARDANT OR PRESSURE-TREATED WOOD SHALL BE COVERED IN PROTECTIVE COATING (I.E. HDG OR SIM).
7. SILL ANCHOR BOLTS (J-BOLTS) SHALL BE ASTM F1554 (36KSI) HDG, ASTM A307 (36KSI) HDG OR SIM. ANCHOR BOLTS TO BE 5/8"Ø X 7" MIN EMBEDMENT. SPACING PER SHEARWALL SCHEDULE (72" O.C. MAX). EACH ANCHOR BOLT TO HAVE STANDARD HDG NUT AND WASHER INSTALLED OVER 3"X3"X1/4" HDG PLATE WASHER WITH AND EDGE OF THE PLATE WASHER LOCATED WITHIN 1/2" OF SHEATHED FACE OF WALL. FOR TWO-SIDED SHEARWALLS W/ 2X6 WALL FRAMING USE 4X4X1/4" PLATE WASHERS OR STAGGER ANCHOR BOLTS SO THAT EVERY OTHER PLATE WASHER IS LOCATED WITHIN 1/2" OF EACH FACE OF THE WALL.
8. HOLDOWNS BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURER SPECIFICATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION. HOLDOWN THREADED RODS SHALL BE ASTM F1554 (36KSI) HDG UNO. EMBEDDED END OF THREADED ROD TO HAVE 3"X3"X1/4" HDG PLATE WASHER BETWEEN TWO HAND-TIGHTENED HDG STANDARD NUTS.
9. CJ INDICATES CONTROL JOINT.
10. FIRE-PROOFING AND MOISTURE-PROOFING REQUIREMENTS BY OTHERS.
11. EXTERIOR STAIRS AND STEEL-FRAMED STAIRS BY OTHERS.
12. TYPICAL DETAILS:
    - 1/SD-1 TYP STEMWALL
    - 2/SD-1 TYP INTERIOR FOOTING
    - 3/SD-1 TYP CRAWLSPACE VENT
    - 4/SD-1 TYP FOOTING STEP
    - 5/SD-1 TYP CORNER BARS REQ'T
    - 7/SD-1 TYP CONSTRUCTION JOINT
    - 8/SD-1 TYP BAR BEND AND HOOK DETAIL
    - 9/SD-1 TYP STHD HOLDOWN INSTALLATION
    - 10/SD-1 TYP STHD HOLDOWN SECTION
    - 11/SD-1 TYP HOLDOWN INSTALLATION
    - 12/SD-1 TYP PONY WALL DETAIL

HOLDOWN SCHEDULE			
MODEL	ANCHOR	EMBEDMENT	MIN END POST
CS16/CS14	-	-	1-2X EA
MST#	-	-	2-2X OR 3X
STHD14/STHD14RJ	-	-	2-2X OR 3X
HDU2	5/8" TR	12"	2-2X OR 3X
HDU5	5/8" TR	12"	2-2X
HDU8	7/8" TR	12"	3-2X
HDU11	1" TR	12"	6X6
HDU14	1" TR	15"	6X6
HD19	1 1/4" TR	15"	6X6

FOUNDATION LEGEND

- INDICATES STEP AT T/FOUNDATION
- INDICATES STEP AT B/FOUNDATION
- TANK WALL (TOP OF WALL NOT TO STEP WITHIN HATCHED REGION)
- STHD14 (EXAMPLE) - HOLDOWN BY SIMPSON (STHD/HDU/HD/HTT, TYP)
- 24 X 24 X 10 (EXAMPLE) - FOOTING CENTERED ON POST (L X W X T)

HANS R. THURFJELL
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER

LONGITUDE ONE TWENTY°
ENGINEERING & DESIGN

REVISIONS

△	DESCRIPTION	DATE	BY
-			

PROJECT NAME
GRANBOIS RESIDENCE
8440 SE 82ND ST,
MERCER ISLAND

PROJECT NUMBER
S230110-1

DRAWN BY - MR

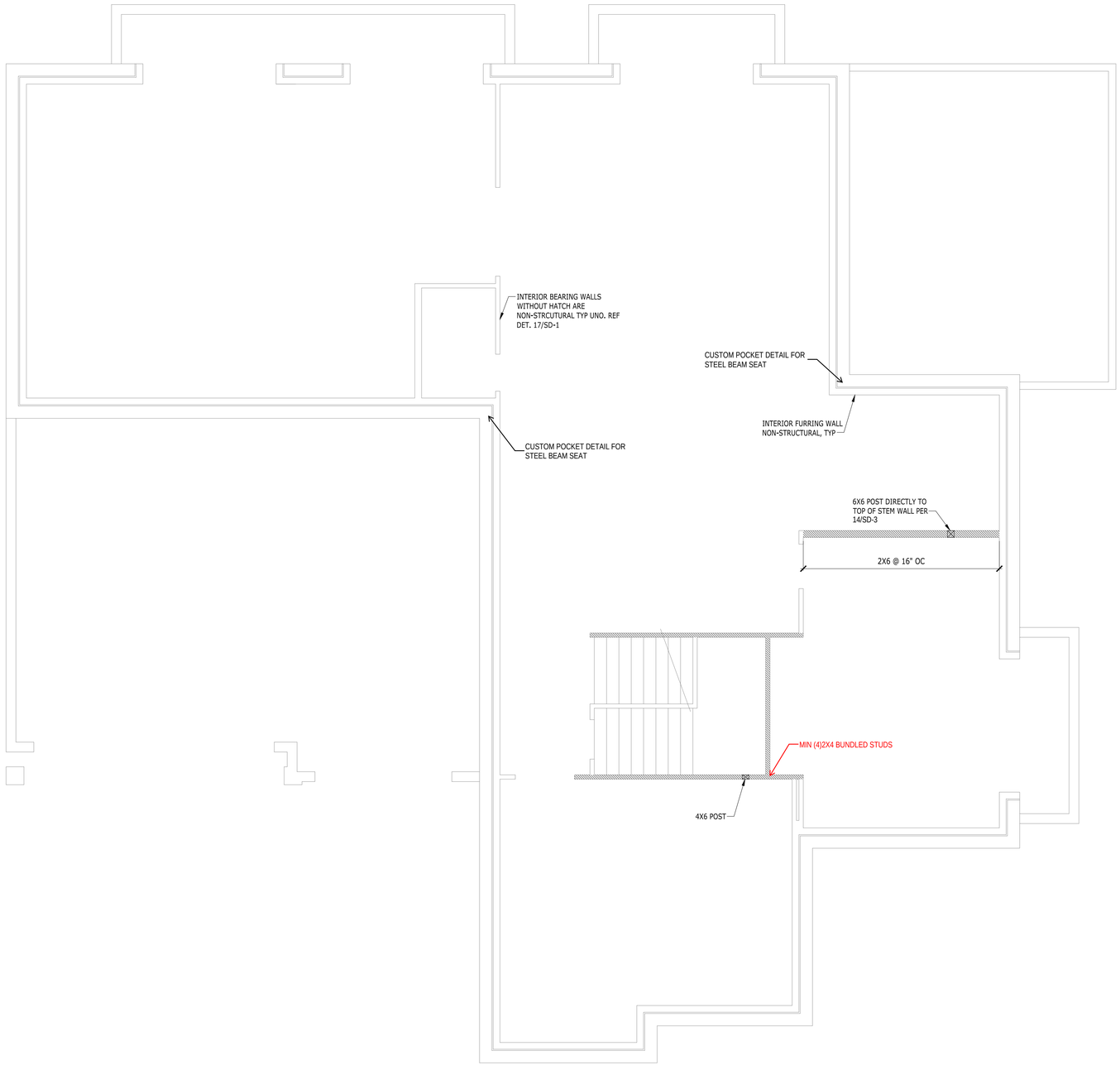
CHECKED BY - MRT

SHEET DATE - 03/15/2023

SCALE
24X36 SHEET:1/4"=1'-0"

DESCRIPTION: FOUNDATION PLAN

SHEET: S-2



BASEMENT WALL FRAMING AND SHEAR WALL PLAN

WALL FRAMING AND SHEAR WALL NOTES

1. GENERAL STRUCTURAL NOTES AND ABBREVIATIONS PER SHEET S-1.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCH.
3. LUMBER GRADE PER GENERAL STRUCTURAL NOTES.
4. ALL BUNDLED STUDS SPECIFIED PER PLAN SHALL BE CONNECTED TOGETHER WITH 16d @ 6"O.C.
5. EXTERIOR WALL STUDS SHALL BE 2X6 @ 16"O.C. (≤10'), 2X6 @ 12"O.C. (>10') UNO. INTERIOR WALL STUDS SHALL BE 2X4 @ 16"O.C. UNO. REFER TO ARCH SET FOR WALL THICKNESS REQUIREMENTS AT PLUMBING STACKS. ALL INTERIOR NON-BEARING WALLS TO BE FRAMED MIN 0.25" UNDER FLOOR SYSTEM.
6. PROVIDE ONE KING STUD AND ONE JACK STUD MINIMUM AT EVERY HEADER UNO. JACK STUDS SHOULD BE CONTINUOUS TO THE FOUNDATION AND SHALL HAVE VERTICAL CRUSH BLOCKING WITHIN THE FLOOR FRAMING DEPTH MATCHING THE WIDTH OF JACK STUDS.
7. SHEARWALL SHEATHING AND NAILING REQUIREMENTS PER SHEARWALL SCHEDULE. ALL EXTERIOR WALLS SHALL BE TYPE SW6 UNO.
8. ALL SHEATHING PANEL EDGES TO OCCUR OVER STUDS, PLATES, RIMS OR HORIZONTAL BLOCKING. PANEL EDGE NAILING PER SHEARWALL SCHEDULE, FIELD NAILING AT 12" O.C. UNO.
9. PROVIDE MIN TWO 2X STUDS AT EACH END OF SHEARWALL UNO. PROVIDE PANEL EDGE NAILING INTO EACH STUD AT END OF WALL.
10. SHEARWALL PANEL EDGE STUDS INDICATE THE MINIMUM STUD WIDTH AT ABUTTING PANEL EDGES. TWO 2X STUDS ARE AN ACCEPTABLE ALTERNATE FOR 3X STUDS. TWO 2X STUDS ARE TO BE NAILED TOGETHER WITH TWO ROWS 10d NAILS AT 6" O.C (4" O.C. @ SW2 AND 2W2). AT DOUBLE SIDED SHEARWALLS VERTICAL PANEL EDGES TO BE STAGGERED ON OPPOSITE SIDES OF THE WALL EXCEPT END OF SHEARWALL.
11. LTP4 INSTALLED OVER PLYWOOD SHALL USE 8d COMMON NAILS (.131Ø X 2.5") LTP4 INSTALLED DIRECTLY AGAINST FRAMING MAY USE 8d SHORT (.131X 1.5") RBC INSTALLED DIRECTLY AGAINST FRAMING USE 10d SHORT (.148X 1.5").
12. WINDOW STRAP INDICATES THAT A WINDOW IS INCORPORATED WITHIN THE SHEAR WALL. REFER TO FORCE-TRANSFER AROUND OPENING DETAIL FOR FRAMING REQUIREMENTS.
13. STHD HOLDOWNS ARE DIMENSIONED TO CENTER OF STRAP. HDU/HD HOLDOWNS ARE DIMENSIONED TO CENTER OF ANCHOR BOLT.
14. SILL ANCHOR BOLTS (J-BOLTS) SHALL BE ASTM F1554 (36KSI) HDG, ASTM A307 (36KSI) HDG OR SIM. ANCHOR BOLTS TO BE 5/8"Ø X 7" MIN EMBEDMENT. SPACING PER SHEARWALL SCHEDULE (72" O.C. MAX). EACH ANCHOR BOLT TO HAVE STANDARD HDG NUT AND WASHER INSTALLED OVER 3"X3"X1/4" HDG PLATE WASHER WITH AND EDGE OF THE PLATE WASHER LOCATED WITHIN 1/2" OF SHEATHED FACE OF WALL. FOR TWO-SIDED SHEARWALLS W/ 2X6 WALL FRAMING USE 4X4X1/4" PLATE WASHERS OR STAGGER ANCHOR BOLTS SO THAT EVERY OTHER PLATE WASHER IS LOCATED WITHIN 1/2" OF EACH FACE OF THE WALL.
15. ALL HANGERS TO BE MANUFACTURED BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION. REFER TO TYPICAL HANGER SCHEDULE FOR HANGER SIZE UNO ON PLAN OR DETAILS.
16. FIRE-PROOFING AND MOISTURE-PROOFING REQUIREMENTS BY OTHERS.
17. TYPICAL DETAILS:
    - 9/SD-1 TYP STHD HOLDOWN INSTALLATION
    - 10/SD-1 TYP STHD HOLDOWN SECTION
    - 11/SD-1 TYP HOLDOWN INSTALLATION
    - 12/SD-1 TYP PONY WALL DETAIL
    - 14/SD-1 TYP BEAM-TO-BEAM AND BEAM-TO-BLKG DRAG CONNECTION
    - 15/SD-1 TYP BEAM-TO-T/PL DRAG CONNECTION
    - 16/SD-1 TYP BEAM-TO-BLKG-TO-T/PL CONNECTION
    - 17/SD-1 TYP NON-BEARING WALL FRAMING
    - 20/SD-1 TYP TOP PLATE SPLICE
    - 1/SD-2 TYP NOTCHES AND HOLES IN WOOD STUDS
    - 2/SD-2 FORCE-TRANSFER AROUND WINDOWS DETAIL
    - 3/SD-2 TYP HEADER FRAMING

FRAMING AND SHEATHING LEGEND

- STHD14 (EXAMPLE) - HOLDOWN BY SIMPSON (STHD/MST/HDU/HD, TYP)
- INTERIOR BEARING WALL
- #K / #J - INDICATES THE NUMBER OF KING AND JACK STUDS
- INDICATES SHEARWALL LOCATION (SW# - SHEAR WALL MARK)
- CS16 - HORIZONTAL STRAP (EXAMPLE)
- HEADER
- SW6 (A.1) - SHEAR WALL CALLOUT
  - REFERENCE TO WALL DESIGNATION IN THE CALCULATION PACKAGE
  - REFERENCE TO SHEAR WALL TYPE PER SHEAR WALL SCHEDULE
- 3 1/8" X 9" GLB (FH-5) - EXAMPLE
  - REFERENCE TO BEAM OR TRUSS CALCULATION IN CALCULATION PACKAGE
  - BEAM OR TRUSS MEMBER

SHEAR WALL SCHEDULE

WALL	SHEATHING	PANEL EDGE NAILING (COMMON (GALV) NAILS)	PANEL EDGE STUDS	ANCHOR BOLTS 5/8"Ø EMBED 7"	RIM CONNECTION		
					AT MUD SILL/ PLATE	AT ROOF EAVE TOP PLATE	AT SILL PLATE (SINKER NAIL .148Ø x 3 1/4")
SW6	7/16" APA PLY ONE SIDE	8d AT 6" O.C.	2x	48" O.C. IN 2x PLATE	LTP4 AT 24" O.C.	RBC AT 16" O.C.	16d AT 6" O.C.
SW4	7/16" APA PLY ONE SIDE	8d AT 4" O.C.	2x	32" O.C. IN 2x PLATE	LTP4 AT 16" O.C.	RBC AT 12" O.C.	16d AT 4" O.C.
SW3	7/16" APA PLY ONE SIDE	8d AT 3" O.C.	3x	16" O.C. IN 2x PLATE	LTP4 AT 16" O.C.	RBC AT 8" O.C.	16d AT 3" O.C.
SW2	7/16" APA PLY ONE SIDE	8d AT 2" O.C.	3x	12" O.C. IN 2x PLATE	LTP4 AT 12" O.C.	RBC AT 8" O.C.	16d AT 2" O.C.
2W4	7/16" APA PLY TWO SIDES	8d AT 4" O.C. EA SIDE	3x	24" O.C. IN 3x PLATE	LTP4+A35 @ 16" O.C. EA SIDE	N.A. AT ROOF EAVE	(2) ROWS 16d AT 4" O.C.
2W3	7/16" APA PLY TWO SIDES	8d AT 3" O.C. EA SIDE	3x	16" O.C. IN 3x PLATE	LTP4+A35 @ 16" O.C. EA SIDE	N.A. AT ROOF EAVE	(2) ROWS 16d AT 3" O.C.
2W2	7/16" APA PLY TWO SIDES	8d AT 2" O.C. EA SIDE	3x	16" O.C. IN 3x PLATE	LTP4+A35 @ 12" O.C. EA SIDE	N.A. AT ROOF EAVE	(2) ROWS 16d AT 2" O.C.

NOTES: 1) FOR NON-SHEAR WALL, PROVIDE ANCHOR BOLTS @ 72" O.C.

MANS R. THURFJELL
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
LONGITUDE ONE TWENTY°
ENGINEERING & DESIGN

REVISIONS

△	DESCRIPTION	DATE	BY
-			

PROJECT NAME
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8440 SE 82ND ST,
MERCER ISLAND

PROJECT NUMBER
S230110-1

DRAWN BY - MR

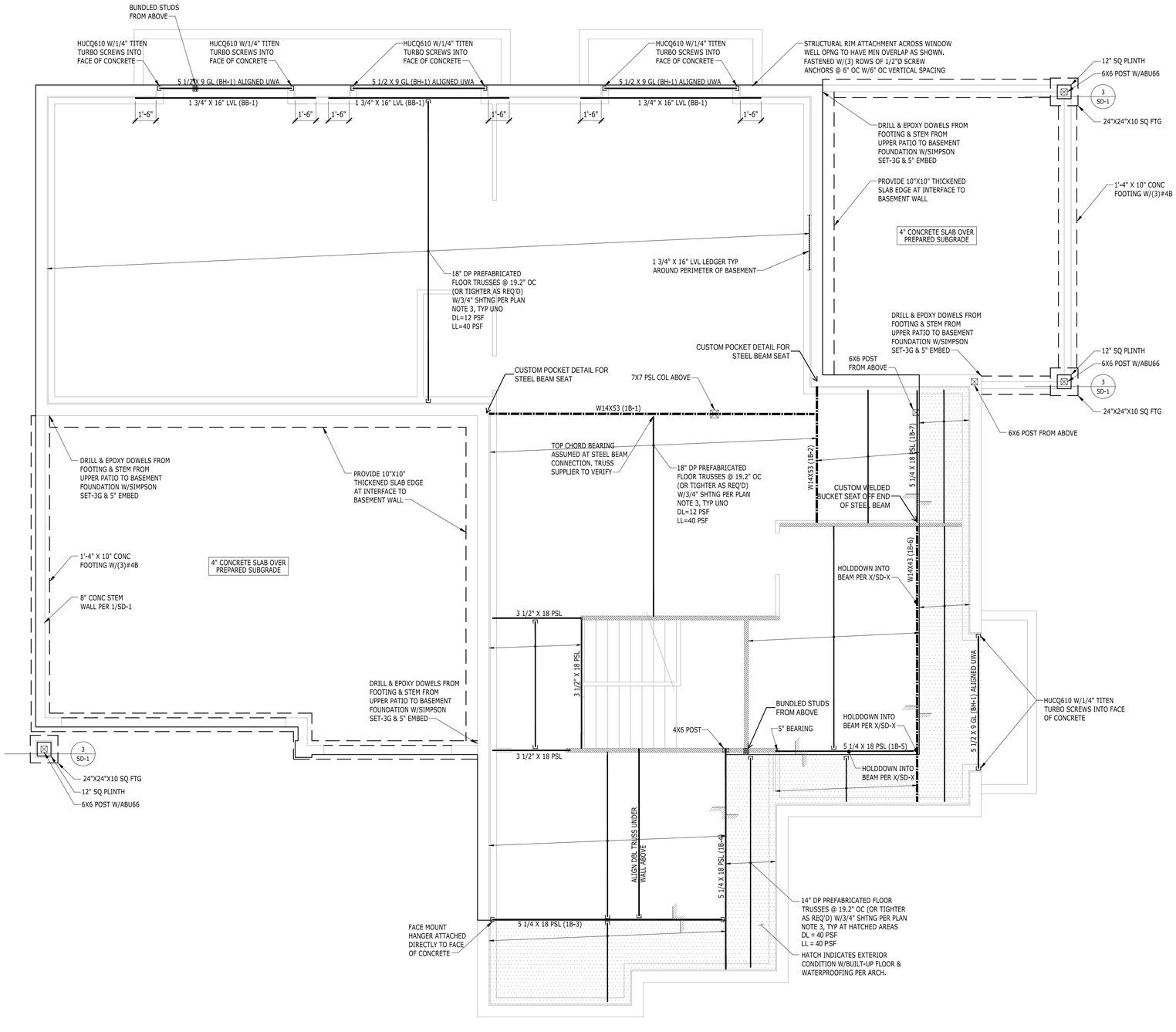
CHECKED BY - MRT

SHEET DATE - 03/15/2023

SCALE
24X36 SHEET:1/4"=1'-0"

DESCRIPTION: BASEMENT WALL FRAMING AND SHEAR WALL PLAN

SHEET: S-3

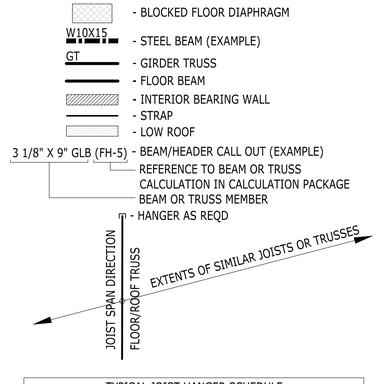


FIRST FLOOR FRAMING PLAN

FLOOR FRAMING NOTES

1. GENERAL STRUCTURAL NOTES AND ABBREVIATIONS PER SHEET S-1.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCH.
3. FLOOR SHEATHING PER GENERAL NOTES. ALL SHEATHING TO BE GLUED AND NAILED TO FRAMING PER MANUFACTURER RECOMMENDATIONS. USE 8d COMMON NAILS (0.131" X 2 1/2") @ 6" O.C. AT PANEL EDGES AND AT ALL FRAMING DESIGNATED "WITH EDGE NAILING" OR "W/EN", AND 12" O.C. IN THE FIELD, UNO. PANEL EDGE JOINTS TO BE STAGGERED BETWEEN ADJACENT PANELS OF SHEATHING. PROVIDE GAP BETWEEN PANELS TO ALLOW FOR NATURAL EXPANSION/CONTRACTION (1/8" GAP TYP).
4. LOCATE ALL OPENINGS AND PENETRATIONS AND VERIFY NO CONFLICT WITH FLOOR FRAMING. MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS BY OTHERS.
5. ALL WOOD LOCATED WITHIN 8" OF FINISHED GRADE, EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED. ALL FASTENERS IN CONTACT WITH FIRE-RETARDANT OR PRESSURE-TREATED WOOD SHALL BE COVERED IN PROTECTIVE COATING (I.E. HDG OR SIM).
6. ALL BEAMS SHALL BE SUPPORTED BY MIN TWO STUDS BELOW EACH END, UNLESS NOTED OTHERWISE ON PLAN. ALL BEAMS SHALL BE FRAMED FLUSH WITH JOISTS UNO. "DROPPED BEAM" OR "DB" INDICATES T/BEAM EQUAL B/JOISTS. "TOP FLUSH" OR "TF" INDICATES T/BEAM EQUAL T/JOISTS AND B/BEAM EXTENDING BELOW B/JOISTS. "BOTTOM FLUSH" OR "BF" INDICATES B/BEAM EQUAL B/JOISTS AND T/BEAM EXTENDING ABOVE T/JOISTS.
7. ALL NON-BEARING WALLS TO BE FRAMED MIN 0.25" UNDER FLOOR SYSTEM.
8. STUD QUANTITIES, POST SIZE, HOLDOWN, AND SHEARWALL REQUIREMENTS PER WALL FRAMING AND SHEARWALL PLAN BELOW.
9. ALL POSTS ABOVE THE FLOOR FRAMING SHALL BE BLOCKED WITHIN THE FLOOR DEPTH ("VERTICAL GRAIN BLKG", "VERTICAL CRUSH BLKG", OR "VCB"). BLOCKING WIDTH SHALL MATCH WIDTH OF POST OR BUNDLED STUDS ABOVE AND EXTEND FULL FLOOR DEPTH.
10. HORIZONTAL STRAPS INDICATED ON FRAMING PLANS SHALL BE CENTERED OVER THE TOP PLATE, BEAM, OR BLOCKING. STRAP LENGTH PER PLAN.
11. ALL TIES AND HANGERS TO BE MANUFACTURED BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION. REFER TO TYPICAL HANGER SCHEDULE FOR HANGER SIZE UNO ON PLAN OR DETAILS.
12. ENGINEERED FLOOR JOISTS AND FLOOR TRUSSES TO BE DESIGNED BY OTHERS. REFER TO STRUCTURAL GENERAL NOTES FOR SUBMITTAL INFORMATION, AND DESIGN CRITERIA.
13. FIRE-PROOFING AND MOISTURE-PROOFING REQUIREMENTS BY OTHERS.
14. TYPICAL DETAILS:
    - 13/SD-1 TYP DROPPED BEAM AT CUT PLATES
    - 14/SD-1 TYP BEAM-TO-BEAM AND BEAM-TO-BLKG DRAG CONNECTION
    - 15/SD-1 TYP BEAM-TO-T/PL DRAG CONNECTION
    - 16/SD-1 TYP BEAM-TO-BLKG-TO-T/PL CONNECTION
    - 17/SD-1 TYP NON-LOAD BEARING WALL FRAMING
    - 18/SD-1 TYP FRAMING AT INTERIOR BEARING WALL
    - 19/SD-1 TYP FRAMING AT INTERIOR FLUSH BEAM

FRAMING LEGEND



TYPICAL JOIST HANGER SCHEDULE			
TJI210			
11 7/8"	2-PLY 11 7/8"	14"	2-PLY 14"
IUS2.06/11.88	MIU4.28/11	IUS2.06/14	MIU4.28/14
2X10			
1-PLY		2-PLY	
LUS210		LUS210-2	

TYPICAL BEAM HANGER SCHEDULE				
LVL / LSL / PSL				
	1 3/4"	3 1/2"	5 1/4"	7"
11 7/8"	HUS1.81/10	HHUS410	HGUS5.50/12	HGUS7.25/12
14"	HUS1.81/10	HHUS410	HGUS5.50/14	HGUS7.25/14

MARK R. THURFJELL
STATE OF WASHINGTON
PROFESSIONAL ENGINEER
LONGITUDE ONE TWENTY°
ENGINEERING & DESIGN

REVISIONS

△	DESCRIPTION	DATE	BY
-			

PROJECT NAME
GRANBOIS RESIDENCE
8440 SE 82ND ST,
MERCER ISLAND

PROJECT NUMBER
S230110-1

DRAWN BY - MR

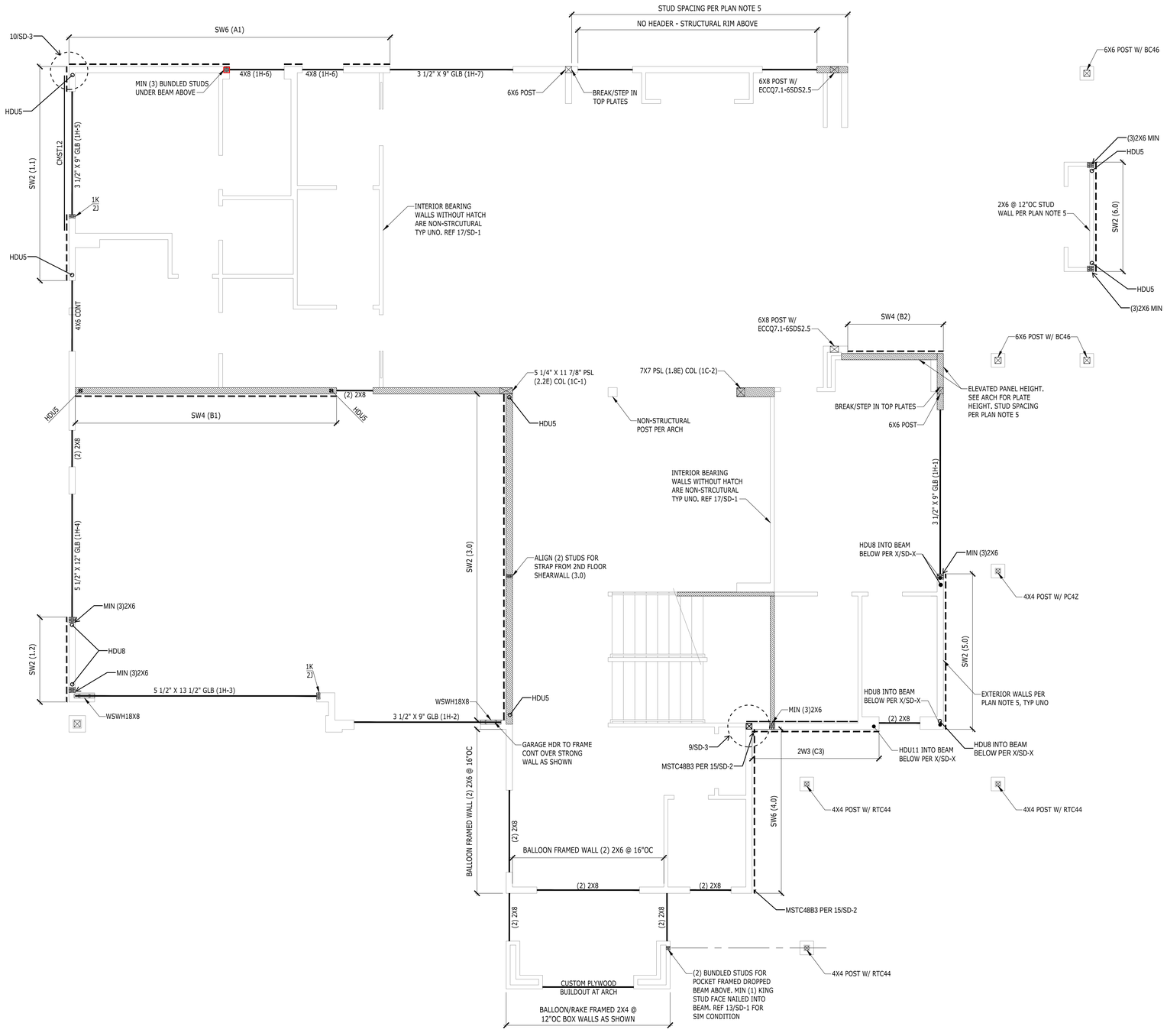
CHECKED BY - MRT

SHEET DATE - 03/15/2023

SCALE
24X36 SHEET:1/4"=1'-0"

DESCRIPTION
FIRST FLOOR FRAMING PLAN

SHEET
S-4



FIRST FLOOR WALL FRAMING AND SHEAR WALL PLAN

SHEAR WALL SCHEDULE

WALL	SHEATHING	PANEL EDGE NAILING (COMMON (GALV) NAILS)	PANEL EDGE STUDS	ANCHOR BOLTS 5/8"Ø EMBED 7"	RIM CONNECTION		
					AT MUD SILL/ PLATE	AT ROOF EAVE TOP PLATE	AT SILL PLATE (SINKER NAIL .148Ø x 3 1/4")
SW6	7/16" APA PLY ONE SIDE	8d AT 6" O.C.	2x	48" O.C. IN 2x PLATE	LTP4 AT 24" O.C.	RBC AT 16" O.C.	16d AT 6" O.C.
SW4	7/16" APA PLY ONE SIDE	8d AT 4" O.C.	2x	32" O.C. IN 2x PLATE	LTP4 AT 16" O.C.	RBC AT 12" O.C.	16d AT 4" O.C.
SW3	7/16" APA PLY ONE SIDE	8d AT 3" O.C.	3x	16" O.C. IN 2x PLATE	LTP4 AT 16" O.C.	RBC AT 8" O.C.	16d AT 3" O.C.
SW2	7/16" APA PLY ONE SIDE	8d AT 2" O.C.	3x	12" O.C. IN 2x PLATE	LTP4 AT 12" O.C.	RBC AT 8" O.C.	16d AT 2" O.C.
2W4	7/16" APA PLY TWO SIDES	8d AT 4" O.C. EA SIDE	3x	24" O.C. IN 3x PLATE	LTP4+A35 @ 16" O.C. EA SIDE	N.A. AT ROOF EAVE	(2) ROWS 16d AT 4" O.C.
2W3	7/16" APA PLY TWO SIDES	8d AT 3" O.C. EA SIDE	3x	16" O.C. IN 3x PLATE	LTP4+A35 @ 16" O.C. EA SIDE	N.A. AT ROOF EAVE	(2) ROWS 16d AT 3" O.C.
2W2	7/16" APA PLY TWO SIDES	8d AT 2" O.C. EA SIDE	3x	16" O.C. IN 3x PLATE	LTP4+A35 @ 12" O.C. EA SIDE	N.A. AT ROOF EAVE	(2) ROWS 16d AT 2" O.C.

NOTES: 1) FOR NON-SHEAR WALL, PROVIDE ANCHOR BOLTS @ 72" O.C.

WALL FRAMING AND SHEAR WALL NOTES

1. GENERAL STRUCTURAL NOTES AND ABBREVIATIONS PER SHEET S-1.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCH.
3. LUMBER GRADE PER GENERAL STRUCTURAL NOTES.
4. ALL BUNDLED STUDS SPECIFIED PER PLAN SHALL BE CONNECTED TOGETHER WITH 16d @ 6"O.C.
5. EXTERIOR WALL STUDS SHALL BE 2X6 @ 16"O.C. (≤10'), 2X6 @ 12"O.C. (>10') UNO. INTERIOR WALL STUDS SHALL BE 2X4 @ 16"O.C. UNO. REFER TO ARCH SET FOR WALL THICKNESS REQUIREMENTS AT PLUMBING STACKS. ALL INTERIOR NON-BEARING WALLS TO BE FRAMED MIN 0.25" UNDER FLOOR SYSTEM.
6. PROVIDE ONE KING STUD AND ONE JACK STUD MINIMUM AT EVERY HEADER UNO. JACK STUDS SHOULD BE CONTINUOUS TO THE FOUNDATION AND SHALL HAVE VERTICAL CRUSH BLOCKING WITHIN THE FLOOR FRAMING DEPTH MATCHING THE WIDTH OF JACK STUDS.
7. SHEARWALL SHEATHING AND NAILING REQUIREMENTS PER SHEARWALL SCHEDULE. ALL EXTERIOR WALLS SHALL BE TYPE SW6 UNO.
8. ALL SHEATHING PANEL EDGES TO OCCUR OVER STUDS, PLATES, RIMS OR HORIZONTAL BLOCKING. PANEL EDGE NAILING PER SHEARWALL SCHEDULE, FIELD NAILING AT 12" O.C. UNO.
9. PROVIDE MIN TWO 2X STUDS AT EACH END OF SHEARWALL UNO. PROVIDE PANEL EDGE NAILING INTO EACH STUD AT END OF WALL.
10. SHEARWALL PANEL EDGE STUDS INDICATE THE MINIMUM STUD WIDTH AT ABUTTING PANEL EDGES. TWO 2X STUDS ARE AN ACCEPTABLE ALTERNATE FOR 3X STUDS. TWO 2X STUDS ARE TO BE NAILED TOGETHER WITH TWO ROWS 10d NAILS AT 6" O.C (4" O.C. @ SW2 AND 2W2). AT DOUBLE SIDED SHEARWALLS VERTICAL PANEL EDGES TO BE STAGGERED ON OPPOSITE SIDES OF THE WALL EXCEPT END OF SHEARWALL.
11. LTP4 INSTALLED OVER PLYWOOD SHALL USE 8d COMMON NAILS (.131Ø X 2.5") LTP4 INSTALLED DIRECTLY AGAINST FRAMING MAY USE 8d SHORT (.131X 1.5") RBC INSTALLED DIRECTLY AGAINST FRAMING USE 10d SHORT (.148X 1.5").
12. WINDOW STRAP INDICATES THAT A WINDOW IS INCORPORATED WITHIN THE SHEAR WALL. REFER TO FORCE-TRANSFER AROUND OPENING DETAIL FOR FRAMING REQUIREMENTS.
13. STHD HOLDOWNS ARE DIMENSIONED TO CENTER OF STRAP. HDU/HD HOLDOWNS ARE DIMENSIONED TO CENTER OF ANCHOR BOLT.
14. SILL ANCHOR BOLTS (J-BOLTS) SHALL BE ASTM F1554 (36KSI) HDG, ASTM A307 (36KSI) HDG OR SIM. ANCHOR BOLTS TO BE 5/8"Ø X 7" MIN EMBEDMENT. SPACING PER SHEARWALL SCHEDULE (72" O.C. MAX). EACH ANCHOR BOLT TO HAVE STANDARD HDG NUT AND WASHER INSTALLED OVER 3"X3"X1/4" HDG PLATE WASHER WITH AND EDGE OF THE PLATE WASHER LOCATED WITHIN 1/2" OF SHEATHED FACE OF WALL. FOR TWO-SIDED SHEARWALLS W/ 2X6 WALL FRAMING USE 4X4X1/4" PLATE WASHERS OR STAGGER ANCHOR BOLTS SO THAT EVERY OTHER PLATE WASHER IS LOCATED WITHIN 1/2" OF EACH FACE OF THE WALL.
15. ALL HANGERS TO BE MANUFACTURED BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION. REFER TO TYPICAL HANGER SCHEDULE FOR HANGER SIZE UNO ON PLAN OR DETAILS.
16. FIRE-PROOFING AND MOISTURE-PROOFING REQUIREMENTS BY OTHERS.
17. TYPICAL DETAILS:
    - 9/SD-1 TYP STHD HOLDOWN INSTALLATION
    - 10/SD-1 TYP STHD HOLDOWN SECTION
    - 11/SD-1 TYP HOLDOWN INSTALLATION
    - 12/SD-1 TYP PONY WALL DETAIL
    - 14/SD-1 TYP BEAM-TO-BEAM AND BEAM-TO-BLKG DRAG CONNECTION
    - 15/SD-1 TYP BEAM-TO-T/PL DRAG CONNECTION
    - 16/SD-1 TYP BEAM-TO-BLKG-TO-T/PL CONNECTION
    - 17/SD-1 TYP NON-BEARING WALL FRAMING
    - 20/SD-1 TYP TOP PLATE SPLICE
    - 1/SD-2 TYP NOTCHES AND HOLES IN WOOD STUDS
    - 2/SD-2 FORCE-TRANSFER AROUND WINDOWS DETAIL
    - 3/SD-2 TYP HEADER FRAMING

FRAMING AND SHEATHING LEGEND

- STHD14 (EXAMPLE) - HOLDOWN BY SIMPSON (STHD/MST/HDU/HD, TYP)
- - INTERIOR BEARING WALL
- #K / #J - INDICATES THE NUMBER OF KING AND JACK STUDS
- - INDICATES SHEARWALL LOCATION (SW# - SHEAR WALL MARK)
- CS16 - HORIZONTAL STRAP (EXAMPLE)
- - HEADER
- SW6 (A.1) - SHEAR WALL CALLOUT
  - REFERENCE TO WALL DESIGNATION IN THE CALCULATION PACKAGE
  - REFERENCE TO SHEAR WALL TYPE PER SHEAR WALL SCHEDULE
- 3 1/8" X 9" GLB (FH-5) - EXAMPLE
  - REFERENCE TO BEAM OR TRUSS CALCULATION IN CALCULATION PACKAGE
  - BEAM OR TRUSS MEMBER

MANS R. THURFJELL
STATE OF WASHINGTON
PROFESSIONAL ENGINEER
LONGITUDE ONE TWENTY°
ENGINEERING & DESIGN

REVISIONS

△	DESCRIPTION	DATE	BY
-			

PROJECT NAME
GRANBOIS RESIDENCE
8440 SE 82ND ST,
MERCER ISLAND

PROJECT NUMBER
S230110-1

DRAWN BY - MR

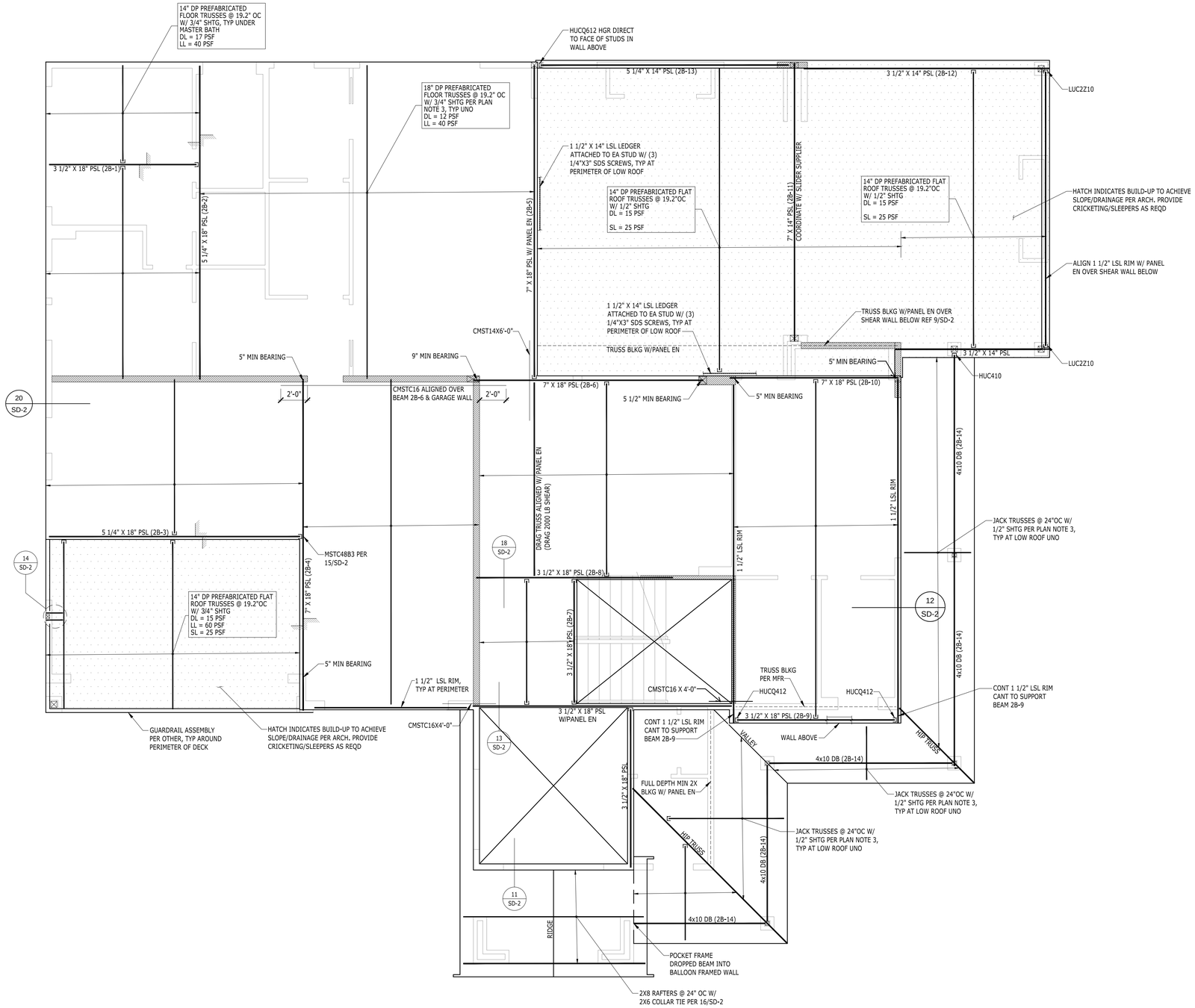
CHECKED BY - MRT

SHEET DATE - 03/15/2023

SCALE
24X36 SHEET:1/4"=1'-0"

DESCRIPTION
FIRST FLOOR WALL FRAMING AND SHEAR WALL PLAN

SHEET
S-5



SECOND FLOOR FRAMING PLAN

FLOOR FRAMING NOTES

1. GENERAL STRUCTURAL NOTES AND ABBREVIATIONS PER SHEET S-1.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCH.
3. FLOOR SHEATHING PER GENERAL NOTES. ALL SHEATHING TO BE GLUED AND NAILED TO FRAMING PER MANUFACTURER RECOMMENDATIONS. USE 8d COMMON NAILS (0.131" X 2 1/2") @ 6" O.C. AT PANEL EDGES AND AT ALL FRAMING DESIGNATED "WITH EDGE NAILING" OR "W/EN", AND 12" O.C. IN THE FIELD, UNO. PANEL EDGE JOINTS TO BE STAGGERED BETWEEN ADJACENT PANELS OF SHEATHING. PROVIDE GAP BETWEEN PANELS TO ALLOW FOR NATURAL EXPANSION/CONTRACTION (1/8" GAP TYP).
4. LOCATE ALL OPENINGS AND PENETRATIONS AND VERIFY NO CONFLICT WITH FLOOR FRAMING. MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS BY OTHERS.
5. ALL WOOD LOCATED WITHIN 8" OF FINISHED GRADE, EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED. ALL FASTENERS IN CONTACT WITH FIRE-RETARDANT OR PRESSURE-TREATED WOOD SHALL BE COVERED IN PROTECTIVE COATING (I.E. HDG OR SIM).
6. ALL BEAMS SHALL BE SUPPORTED BY MIN TWO STUDS BELOW EACH END, UNLESS NOTED OTHERWISE ON PLAN. ALL BEAMS SHALL BE FRAMED FLUSH WITH JOISTS UNO. "DROPPED BEAM" OR "DB" INDICATES T/BEAM EQUAL B/JOISTS. "TOP FLUSH" OR "TF" INDICATES T/BEAM EQUAL T/JOISTS AND B/BEAM EXTENDING BELOW B/JOISTS. "BOTTOM FLUSH" OR "BF" INDICATES B/BEAM EQUAL B/JOISTS AND T/BEAM EXTENDING ABOVE T/JOISTS.
7. ALL NON-BEARING WALLS TO BE FRAMED MIN 0.25" UNDER FLOOR SYSTEM.
8. STUD QUANTITIES, POST SIZE, HOLDOWN, AND SHEARWALL REQUIREMENTS PER WALL FRAMING AND SHEARWALL PLAN BELOW.
9. ALL POSTS ABOVE THE FLOOR FRAMING SHALL BE BLOCKED WITHIN THE FLOOR DEPTH ("VERTICAL GRAIN BLKG", "VERTICAL CRUSH BLKG", OR "VCB"). BLOCKING WIDTH SHALL MATCH WIDTH OF POST OR BUNDLED STUDS ABOVE AND EXTEND FULL FLOOR DEPTH.
10. HORIZONTAL STRAPS INDICATED ON FRAMING PLANS SHALL BE CENTERED OVER THE TOP PLATE, BEAM, OR BLOCKING. STRAP LENGTH PER PLAN.
11. ALL TIES AND HANGERS TO BE MANUFACTURED BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION. REFER TO TYPICAL HANGER SCHEDULE FOR HANGER SIZE UNO ON PLAN OR DETAILS.
12. ENGINEERED FLOOR JOISTS AND FLOOR TRUSSES TO BE DESIGNED BY OTHERS. REFER TO STRUCTURAL GENERAL NOTES FOR SUBMITTAL INFORMATION, AND DESIGN CRITERIA.
13. FIRE-PROOFING AND MOISTURE-PROOFING REQUIREMENTS BY OTHERS.
14. TYPICAL DETAILS:
    - 13/SD-1 TYP DROPPED BEAM AT CUT PLATES
    - 14/SD-1 TYP BEAM-TO-BEAM AND BEAM-TO-BLKG DRAG CONNECTION
    - 15/SD-1 TYP BEAM-TO-T/PL DRAG CONNECTION
    - 16/SD-1 TYP BEAM-TO-BLKG-TO-T/PL CONNECTION
    - 17/SD-1 TYP NON-LOAD BEARING WALL FRAMING
    - 18/SD-1 TYP FRAMING AT INTERIOR BEARING WALL
    - 19/SD-1 TYP FRAMING AT INTERIOR FLUSH BEAM

FRAMING LEGEND

- BLOCKED FLOOR DIAPHRAGM
- W10X15 - STEEL BEAM (EXAMPLE)
- GT - GIRDER TRUSS
- FLOOR BEAM
- INTERIOR BEARING WALL
- STRAP
- LOW ROOF
- 3 1/8" X 9" GLB (FH-5) - BEAM/HEADER CALL OUT (EXAMPLE)
  - REFERENCE TO BEAM OR TRUSS CALCULATION IN CALCULATION PACKAGE
  - BEAM OR TRUSS MEMBER
- HANGER AS REQD
- JOIST SPAN DIRECTION / FLOOR/ROOF TRUSS
- EXTENTS OF SIMILAR JOISTS OR TRUSSES

TYPICAL JOIST HANGER SCHEDULE			
TJI210			
11 7/8"	2-PLY 11 7/8"	14"	2-PLY 14"
IUS2.06/11.88	MIU4.28/11	IUS2.06/14	MIU4.28/14
2X10			
1-PLY		2-PLY	
LUS210		LUS210-2	

TYPICAL BEAM HANGER SCHEDULE				
LVL / LSL / PSL				
	1 3/4"	3 1/2"	5 1/4"	7"
11 7/8"	HUS1.81/10	HHUS410	HGUS5.50/12	HGUS7.25/12
14"	HUS1.81/10	HHUS410	HGUS5.50/14	HGUS7.25/14

MARK R. THURFJELL
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER

LONGITUDE ONE TWENTY°
ENGINEERING & DESIGN

REVISIONS

△	DESCRIPTION	DATE	BY
-			

PROJECT NAME
GRANBOIS RESIDENCE
8440 SE 82ND ST,
MERCER ISLAND

PROJECT NUMBER
S230110-1

DRAWN BY - MR

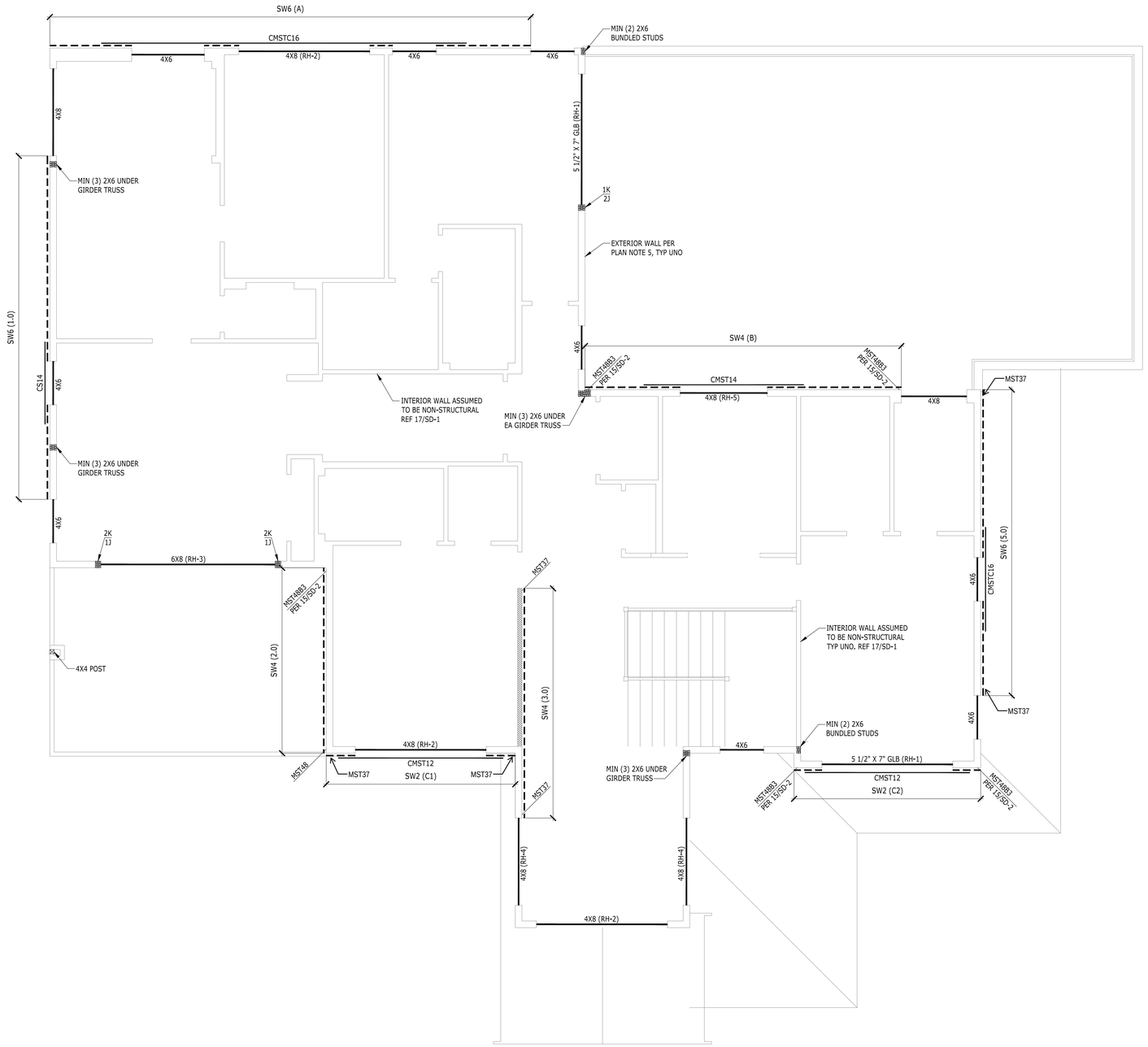
CHECKED BY - MRT

SHEET DATE - 03/15/2023

SCALE
24X36 SHEET:1/4"=1'-0"

DESCRIPTION
SECOND FLOOR FRAMING PLAN

SHEET
S-6



SECOND FLOOR WALL FRAMING AND SHEAR WALL PLAN

WALL FRAMING AND SHEAR WALL NOTES

1. GENERAL STRUCTURAL NOTES AND ABBREVIATIONS PER SHEET S-1.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCH.
3. LUMBER GRADE PER GENERAL STRUCTURAL NOTES.
4. ALL BUNDLED STUDS SPECIFIED PER PLAN SHALL BE CONNECTED TOGETHER WITH 16d @ 6"O.C.
5. EXTERIOR WALL STUDS SHALL BE 2X6 @ 16"O.C. (≤10'), 2X6 @ 12"O.C. (>10') UNO. INTERIOR WALL STUDS SHALL BE 2X4 @ 16"O.C. UNO. REFER TO ARCH SET FOR WALL THICKNESS REQUIREMENTS AT PLUMBING STACKS. ALL INTERIOR NON-BEARING WALLS TO BE FRAMED MIN 0.25" UNDER FLOOR SYSTEM.
6. PROVIDE ONE KING STUD AND ONE JACK STUD MINIMUM AT EVERY HEADER UNO. JACK STUDS SHOULD BE CONTINUOUS TO THE FOUNDATION AND SHALL HAVE VERTICAL CRUSH BLOCKING WITHIN THE FLOOR FRAMING DEPTH MATCHING THE WIDTH OF JACK STUDS.
7. SHEARWALL SHEATHING AND NAILING REQUIREMENTS PER SHEARWALL SCHEDULE. ALL EXTERIOR WALLS SHALL BE TYPE SW6 UNO.
8. ALL SHEATHING PANEL EDGES TO OCCUR OVER STUDS, PLATES, RIMS OR HORIZONTAL BLOCKING. PANEL EDGE NAILING PER SHEARWALL SCHEDULE, FIELD NAILING AT 12" O.C. UNO.
9. PROVIDE MIN TWO 2X STUDS AT EACH END OF SHEARWALL UNO. PROVIDE PANEL EDGE NAILING INTO EACH STUD AT END OF WALL.
10. SHEARWALL PANEL EDGE STUDS INDICATE THE MINIMUM STUD WIDTH AT ABUTTING PANEL EDGES. TWO 2X STUDS ARE AN ACCEPTABLE ALTERNATE FOR 3X STUDS. TWO 2X STUDS ARE TO BE NAILED TOGETHER WITH TWO ROWS 10d NAILS AT 6" O.C (4" O.C. @ SW2 AND 2W2). AT DOUBLE SIDED SHEARWALLS VERTICAL PANEL EDGES TO BE STAGGERED ON OPPOSITE SIDES OF THE WALL EXCEPT END OF SHEARWALL.
11. LTP4 INSTALLED OVER PLYWOOD SHALL USE 8d COMMON NAILS (.131Ø X 2.5") LTP4 INSTALLED DIRECTLY AGAINST FRAMING MAY USE 8d SHORT (.131X 1.5") RBC INSTALLED DIRECTLY AGAINST FRAMING USE 10d SHORT (.148X 1.5").
12. WINDOW STRAP INDICATES THAT A WINDOW IS INCORPORATED WITHIN THE SHEAR WALL. REFER TO FORCE-TRANSFER AROUND OPENING DETAIL FOR FRAMING REQUIREMENTS.
13. STHD HOLDOWNS ARE DIMENSIONED TO CENTER OF STRAP. HDU/HD HOLDOWNS ARE DIMENSIONED TO CENTER OF ANCHOR BOLT.
14. SILL ANCHOR BOLTS (J-BOLTS) SHALL BE ASTM F1554 (36KSI) HDG, ASTM A307 (36KSI) HDG OR SIM. ANCHOR BOLTS TO BE 5/8"Ø X 7" MIN EMBEDMENT. SPACING PER SHEARWALL SCHEDULE (72" O.C. MAX). EACH ANCHOR BOLT TO HAVE STANDARD HDG NUT AND WASHER INSTALLED OVER 3"X3"X1/4" HDG PLATE WASHER WITH AND EDGE OF THE PLATE WASHER LOCATED WITHIN 1/2" OF SHEATHED FACE OF WALL. FOR TWO-SIDED SHEARWALLS W/ 2X6 WALL FRAMING USE 4X4X1/4" PLATE WASHERS OR STAGGER ANCHOR BOLTS SO THAT EVERY OTHER PLATE WASHER IS LOCATED WITHIN 1/2" OF EACH FACE OF THE WALL.
15. ALL HANGERS TO BE MANUFACTURED BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION. REFER TO TYPICAL HANGER SCHEDULE FOR HANGER SIZE UNO ON PLAN OR DETAILS.
16. FIRE-PROOFING AND MOISTURE-PROOFING REQUIREMENTS BY OTHERS.
17. TYPICAL DETAILS:
    - 9/SD-1 TYP STHD HOLDOWN INSTALLATION
    - 10/SD-1 TYP STHD HOLDOWN SECTION
    - 11/SD-1 TYP HOLDOWN INSTALLATION
    - 12/SD-1 TYP PONY WALL DETAIL
    - 14/SD-1 TYP BEAM-TO-BEAM AND BEAM-TO-BLKG DRAG CONNECTION
    - 15/SD-1 TYP BEAM-TO-T/PL DRAG CONNECTION
    - 16/SD-1 TYP BEAM-TO-BLKG-TO-T/PL CONNECTION
    - 17/SD-1 TYP NON-BEARING WALL FRAMING
    - 20/SD-1 TYP TOP PLATE SPLICE
    - 1/SD-2 TYP NOTCHES AND HOLES IN WOOD STUDS
    - 2/SD-2 FORCE-TRANSFER AROUND WINDOWS DETAIL
    - 3/SD-2 TYP HEADER FRAMING

FRAMING AND SHEATHING LEGEND

- STHD14 (EXAMPLE) - HOLDOWN BY SIMPSON (STHD/MST/HDU/HD, TYP)
- INTERIOR BEARING WALL
- #K / #J - INDICATES THE NUMBER OF KING AND JACK STUDS
- INDICATES SHEARWALL LOCATION (SW# - SHEAR WALL MARK)
- CS16 - HORIZONTAL STRAP (EXAMPLE)
- HEADER
- SW6 (A.1) - SHEAR WALL CALLOUT
  - REFERENCE TO WALL DESIGNATION IN THE CALCULATION PACKAGE
  - REFERENCE TO SHEAR WALL TYPE PER SHEAR WALL SCHEDULE
- 3 1/8" X 9" GLB (FH-5) - EXAMPLE
  - REFERENCE TO BEAM OR TRUSS CALCULATION IN CALCULATION PACKAGE
  - BEAM OR TRUSS MEMBER

SHEAR WALL SCHEDULE

WALL	SHEATHING	PANEL EDGE NAILING (COMMON (GALV) NAILS)	PANEL EDGE STUDS	ANCHOR BOLTS 5/8"Ø EMBED 7"	RIM CONNECTION		
					AT MUD SILL/ PLATE	AT ROOF EAVE TOP PLATE	AT SILL PLATE (SINKER NAIL .148Ø x 3 1/4")
SW6	7/16" APA PLY ONE SIDE	8d AT 6" O.C.	2x	48" O.C. IN 2x PLATE	LTP4 AT 24" O.C.	RBC AT 16" O.C.	16d AT 6" O.C.
SW4	7/16" APA PLY ONE SIDE	8d AT 4" O.C.	2x	32" O.C. IN 2x PLATE	LTP4 AT 16" O.C.	RBC AT 12" O.C.	16d AT 4" O.C.
SW3	7/16" APA PLY ONE SIDE	8d AT 3" O.C.	3x	16" O.C. IN 2x PLATE	LTP4 AT 16" O.C.	RBC AT 8" O.C.	16d AT 3" O.C.
SW2	7/16" APA PLY ONE SIDE	8d AT 2" O.C.	3x	12" O.C. IN 2x PLATE	LTP4 AT 12" O.C.	RBC AT 8" O.C.	16d AT 2" O.C.
2W4	7/16" APA PLY TWO SIDES	8d AT 4" O.C. EA SIDE	3x	24" O.C. IN 3x PLATE	LTP4+A35 @ 16" O.C. EA SIDE	N.A. AT ROOF EAVE	(2) ROWS 16d AT 4" O.C.
2W3	7/16" APA PLY TWO SIDES	8d AT 3" O.C. EA SIDE	3x	16" O.C. IN 3x PLATE	LTP4+A35 @ 16" O.C. EA SIDE	N.A. AT ROOF EAVE	(2) ROWS 16d AT 3" O.C.
2W2	7/16" APA PLY TWO SIDES	8d AT 2" O.C. EA SIDE	3x	16" O.C. IN 3x PLATE	LTP4+A35 @ 12" O.C. EA SIDE	N.A. AT ROOF EAVE	(2) ROWS 16d AT 2" O.C.

NOTES: 1) FOR NON-SHEAR WALL, PROVIDE ANCHOR BOLTS @ 72" O.C.

MANS R. THURFJELL
STATE OF WASHINGTON
PROFESSIONAL ENGINEER
LONGITUDE ONE TWENTY°
ENGINEERING & DESIGN

REVISIONS

△	DESCRIPTION	DATE	BY
-			

PROJECT NAME
GRANBOIS RESIDENCE
8440 SE 82ND ST,
MERCER ISLAND

PROJECT NUMBER
S230110-1

DRAWN BY - MR

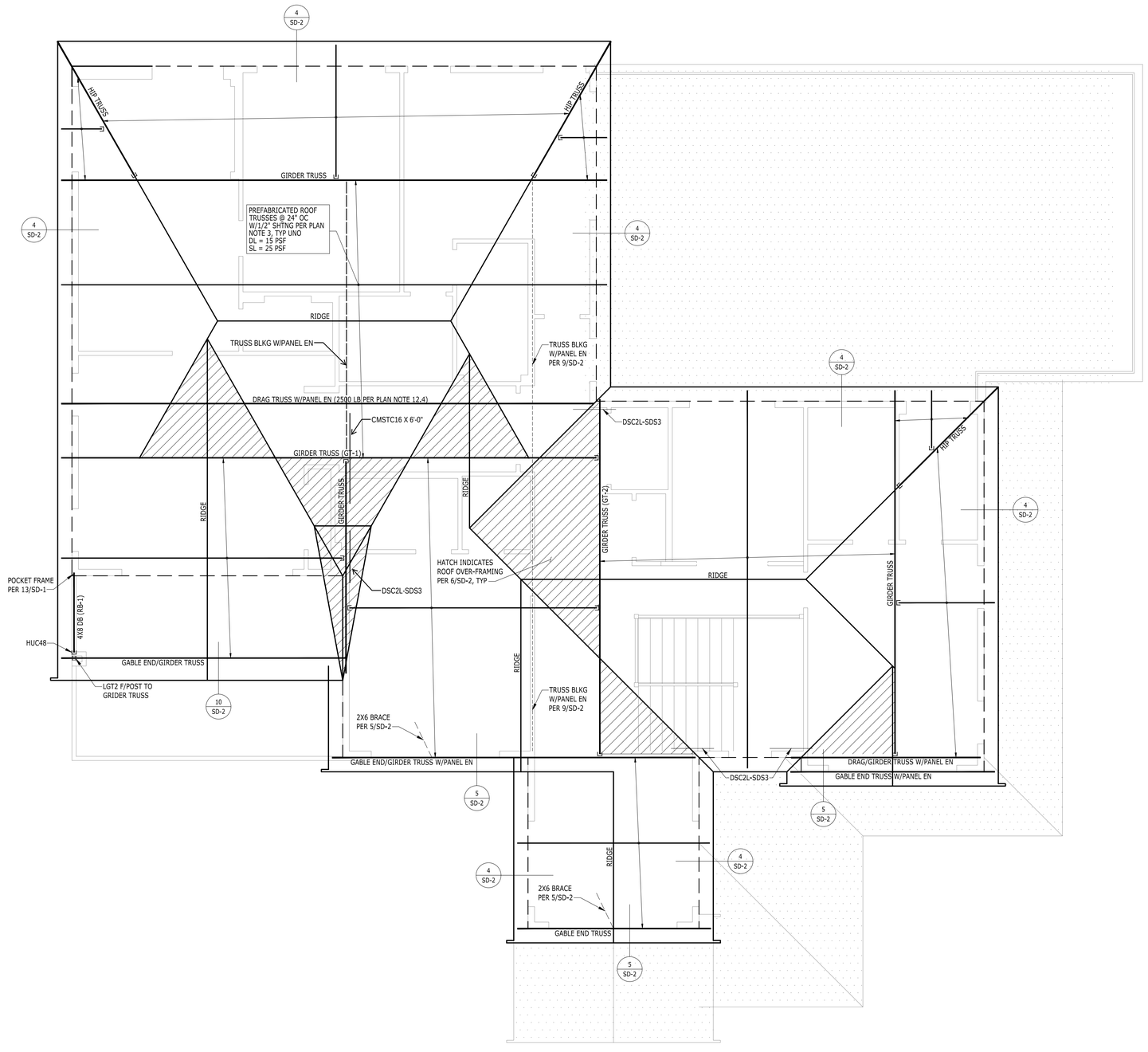
CHECKED BY - MRT

SHEET DATE - 03/15/2023

SCALE
24X36 SHEET:1/4"=1'-0"

DESCRIPTION
SECOND FLOOR WALL FRAMING AND SHEAR WALL PLAN

SHEET
S-7



ROOF FRAMING PLAN

ROOF FRAMING NOTES

1. GENERAL STRUCTURAL NOTES AND ABBREVIATIONS PER SHEET S-1.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCH.
3. ROOF SHEATHING PER GENERAL NOTES. ALL SHEATHING TO BE GLUED AND NAILED TO FRAMING PER MANUFACTURER RECOMMENDATIONS. USE 8d COMMON NAILS (0.131" X 2 1/2") @ 6" O.C. AT PANEL EDGES AND AT ALL FRAMING DESIGNATED "WITH EDGE NAILING" OR "W/EN", AND 12" O.C. IN THE FIELD, UNO. PANEL EDGE JOINTS TO BE STAGGERED BETWEEN ADJACENT PANELS OF SHEATHING. PROVIDE GAP BETWEEN PANELS TO ALLOW FOR NATURAL EXPANSION/CONTRACTION (1/8" GAP TYP).
4. ALL ROOF TRUSSES SHALL BE SPACED NO FURTHER APART THAN 24" O.C. AND SHALL BE CONNECTED TO TOP PLATE WITH H2.5 TIE UNO.
5. ALL GIRDER TRUSSES SHALL BE CONNECTED TO TOP PLATE WITH TWO H6 TIES UNO.
6. LOCATE ALL OPENINGS AND PENETRATIONS AND VERIFY NO CONFLICT WITH ROOF FRAMING. MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS BY OTHERS.
7. ALL BEAMS AND GIRDER TRUSSES SHALL BE SUPPORTED BY MIN TWO STUDS BELOW EACH END, UNLESS NOTED OTHERWISE ON PLAN. ALL BEAMS SHALL BE FRAMED FLUSH WITH JOISTS UNO. "DROPPED BEAM" OR "DB" INDICATES T/BEAM EQUAL B/JOISTS. "TOP FLUSH" OR "TF" INDICATES T/BEAM EQUAL T/JOISTS AND B/BEAM EXTENDING BELOW B/JOISTS. "BOTTOM FLUSH" OR "BF" INDICATES B/BEAM EQUAL B/JOISTS AND T/BEAM EXTENDING ABOVE T/JOISTS.
8. ALL NON-BEARING WALLS TO BE FRAMED MIN 0.25" UNDER FLOOR SYSTEM.
9. STUD QUANTITIES, POST SIZE, HOLDOWN, AND SHEARWALL REQUIREMENTS PER WALL FRAMING AND SHEARWALL PLAN BELOW.
10. HORIZONTAL STRAPS INDICATED ON FRAMING PLANS SHALL BE CENTERED OVER THE TOP PLATE, BEAM, OR BLOCKING. STRAP LENGTH PER PLAN UNO.
11. ALL HANGERS TO BE MANUFACTURED BY SIMPSON STRONG-TIE. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS. ALTERNATIVE SOLUTIONS SHALL BE SUBMITTED TO EOR FOR APPROVAL PRIOR TO INSTALLATION. REFER TO TYPICAL HANGER SCHEDULE FOR HANGER SIZE UNO ON PLAN OR DETAILS. HANGERS FOR ROOF TRUSSES BY OTHERS.
12. ENGINEERED ROOF JOISTS AND ROOF TRUSSES TO BE DESIGNED BY OTHERS. REFER TO STRUCTURAL GENERAL NOTES FOR SUBMITTAL INFORMATION, AND DESIGN CRITERIA.
    - 12.1. STANDARD DEAD AND LIVE LOADS SHALL BE USED FOR TRUSS DESIGN. REFERENCE STRUCTURAL GENERAL NOTES FOR MORE INFORMATION.
    - 12.2. CHANGES TO LAYOUT MUST BE SUBMITTED TO THE ARCHITECT AND EOR FOR REVIEW AND APPROVAL.
    - 12.3. TRUSS SUBMITTAL PACKAGE TO BE PROVIDED TO EOR FOR REVIEW. REFERENCE STRUCTURAL GENERAL NOTES FOR SUBMITTAL REQUIREMENTS.
    - 12.4. (XXX LBS SHEAR/DRAG) INDICATES SHEAR TRANSFER LOAD. SHEAR TRUSS SHALL BE DESIGNED TO BE ABLE TO TRANSFER SPECIFIED LATERAL LOAD APPLIED AT THE TOP CHORD TO THE BOTTOM CHORD AND INTO SHEARWALL BELOW.
    - 12.5. ROOF TRUSSES SHOULD BE DESIGNED FOR ADDITIONAL LOADS WHERE APPLICABLE AS SPECIFIED BY THE ARCHITECT (I.E. MECHANICAL UNITS, ROOF DECKS AND PATIOS, GREEN ROOFS, SOLAR UNITS AND ETC).
    - 12.6. TRUSS DESIGN FOR BEARING AT TOP PLATES TO BE DESIGNED FOR COMPRESSION PERPENDICULAR TO GRAIN.
13. FIRE-PROOFING AND MOISTURE-PROOFING REQUIREMENTS BY OTHERS.
14. ROOF COVERINGS AND ROOFING MATERIAL BY OTHERS.
15. ROOF DRAINAGE BY OTHERS.
16. ATTIC VENTILATION BY OTHERS.
17. FOR TYPICAL INSTALLATION DETAILS REFERENCE TO:
    - 13/SD-1 TYP DROPPED BEAM AT CUT PLATES
    - 14/SD-1 TYP BEAM-TO-BEAM AND BEAM-TO-BLKG DRAG CONNECTION
    - 15/SD-1 TYP BEAM-TO-T/PL DRAG CONNECTION
    - 16/SD-1 TYP BEAM-TO-BLKG-TO-T/PL CONNECTION
    - 17/SD-1 TYP NON-LOAD BEARING WALL FRAMING
    - 4/SD-2 TYP HIP ROOF FRAMING
    - 5/SD-2 TYP GABLE END ROOF FRAMING
    - 6/SD-2 TYP ROOF OVERFRAMING
    - 7/SD-2 TYP INTERIOR SHEAR TRUSS
    - 8/SD-2 TYP INTERIOR OFFSET SHEAR TRUSS
    - 9/SD-2 TYP TRUSS BLOCKING

FRAMING LEGEND

- GIRDER OR GABLE END TRUSS
- INTERIOR BEARING WALL
- ROOF OVERFRAMING

3 1/8" X 9" GLB (FH-5) - EXAMPLE
- REFERENCE TO BEAM OR TRUSS CALCULATION IN CALCULATION PACKAGE
- BEAM OR TRUSS MEMBER

- HANGER AS REQD

FLOOR/ROOF TRUSS OR JOIST SPAN DIRECTION

EXTENTS OF SIMILAR JOISTS OR TRUSSES

MARK R. THURFJELL
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER

LONGITUDE ONE TWENTY°
ENGINEERING & DESIGN

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-			

PROJECT NAME

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S230110-1

DRAWN BY - MR

CHECKED BY - MRT

SHEET DATE - 03/15/2023

SCALE

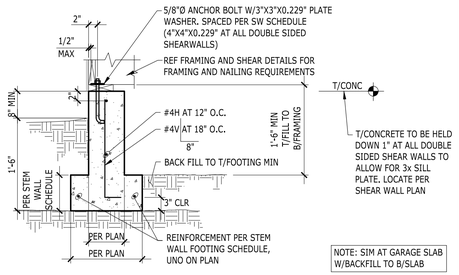
24X36 SHEET:1/4"=1'-0"

DESCRIPTION: ROOF FRAMING PLAN

SHEET: S-8

STEM WALL FOOTING SCHEDULE

FOOTING WIDTH PER PLAN	FOOTING DEPTH	REINFORCEMENT	
		LONGITUDINAL	TRANSVERSE
1'-4"	8"	(2)#4, CONT	N/A
2'-0"	8"	(3)#4, CONT	N/A
2'-6"	10"	(3)#4, CONT	#4@12"O.C

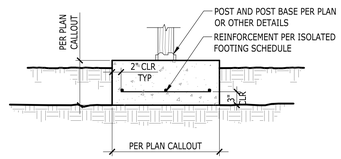


NOTE: SIM AT GARAGE SLAB W/BACKFILL TO B/SLAB

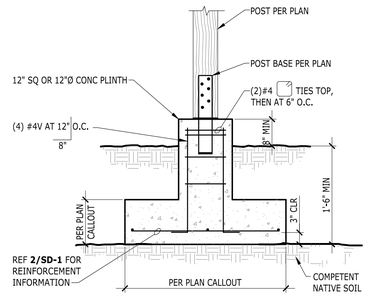
1 STEM WALL AT EXTERIOR

ISOLATED FOOTING SCHEDULE

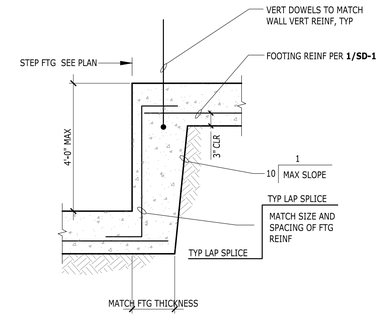
FOOTING SIZE PER PLAN	REINFORCEMENT
24" X 24" X 10"	(3)#4, EA WAY, BTM
30" X 30" X 10"	(4)#4, EA WAY, BTM
36" X 36" X 12"	(5)#4, EA WAY, BTM
42" X 42" X 12"	(5)#4, EA WAY, BTM
48" X 48" X 12"	(6)#4, EA WAY, BTM



2 ISOLATED INTERIOR FOOTING



3 ISOLATED EXTERIOR FOOTING

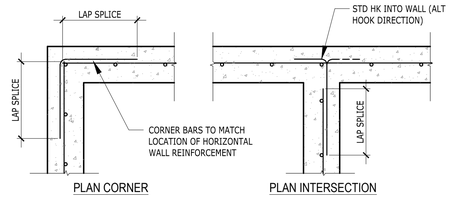


4 STEP AT WALL FOOTING

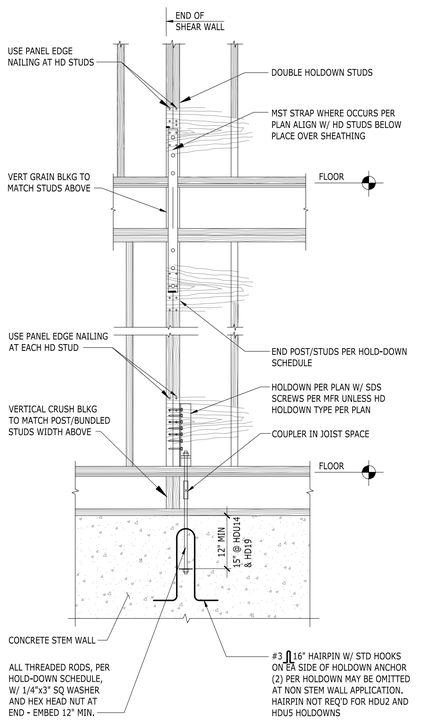
LAP SPLICE AND STANDARD HOOK LENGTH FOR CORNER BARS

BAR SIZE PER WALL	LAP SPLICE LENGTH	STD HOOK LENGTH
#4	2'-6"	0'-8"
#5	3'-0"	0'-10"
#6	3'-8"	1'-0"
#8	5'-0"	1'-3"

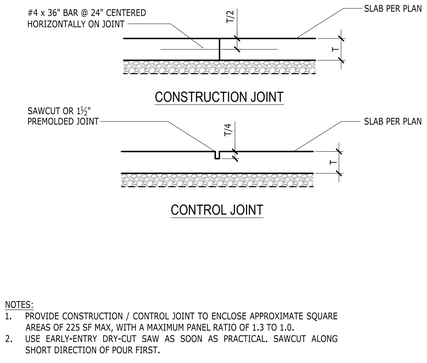
IF INTERSECTING WALLS HAVE DIFFERENT SIZE OF HORIZONTAL REINFORCEMENT, CORNER BARS MATCHING LARGER REINFORCEMENT SIZE AND SPACING TO BE USED



5 CORNER BARS AT CONCRETE WALLS

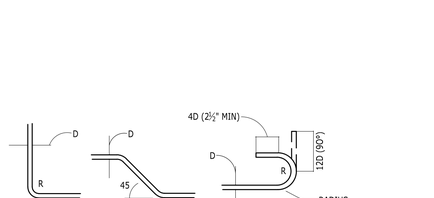


11 HOLDOWN DETAIL



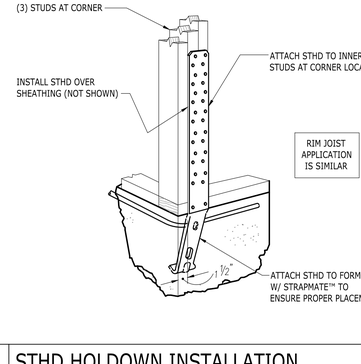
NOTES:
1. PROVIDE CONSTRUCTION / CONTROL JOINT TO ENCLOSE APPROXIMATE SQUARE AREAS OF 225 SF MAX, WITH A MAXIMUM PANEL RATIO OF 1.3 TO 1.0.
2. USE EARLY-ENTRY DRY-CUT SAW AS SOON AS PRACTICAL. SAWCUT ALONG SHORT DIRECTION OF POUR FIRST.

7 CONSTRUCTION/CONTROL JOINT DETAILS

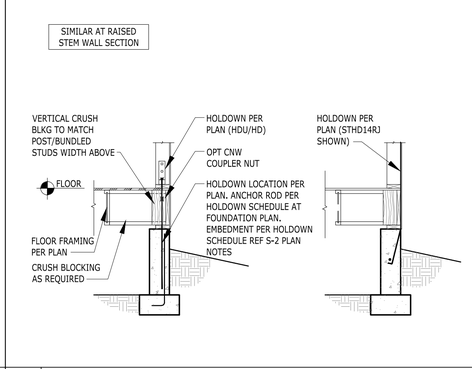


D = BAR DIAMETER

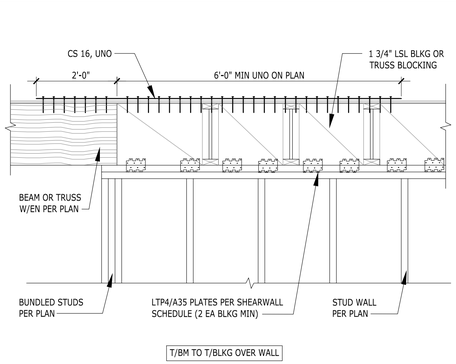
8 BAR BEND AND HOOK DETAILS



9 STHD HOLDOWN INSTALLATION

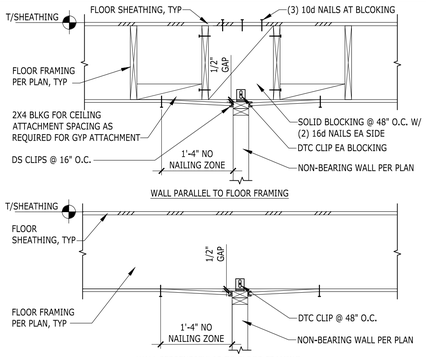


10 FOUNDATION SECTION AT HOLDOWN

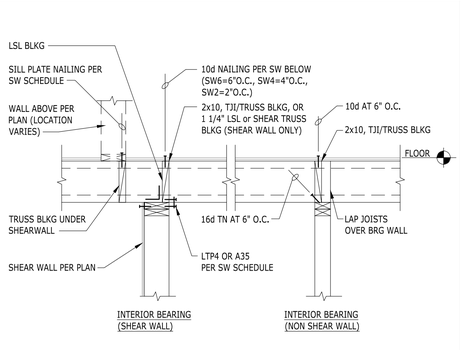


T/BM TO T/BLKG OVER WALL

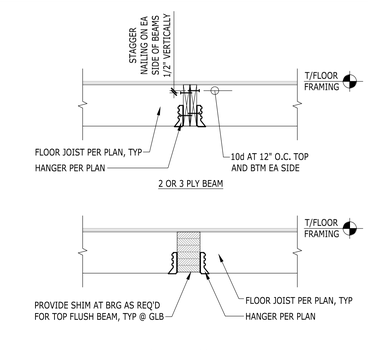
16 TENSION TIE T/BEAM TO T/BLKG



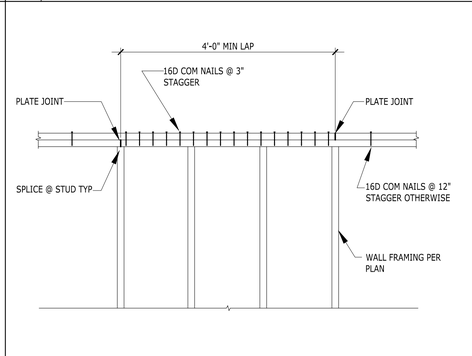
17 CEILING FRAMING AT NON-BEARING WALL



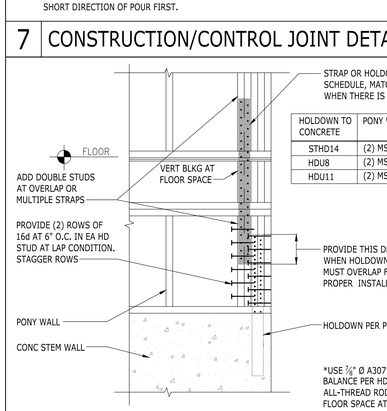
18 FLOOR FRAMING AT INTERIOR BEARING WALL



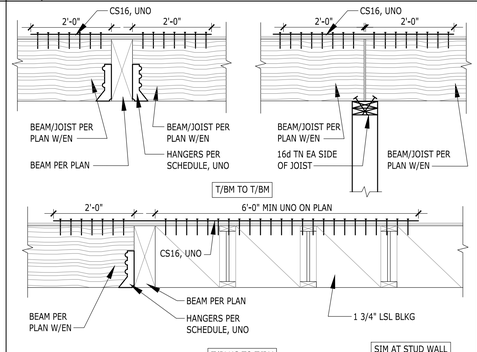
19 JOISTS TO FLUSH BEAM CONNECTION



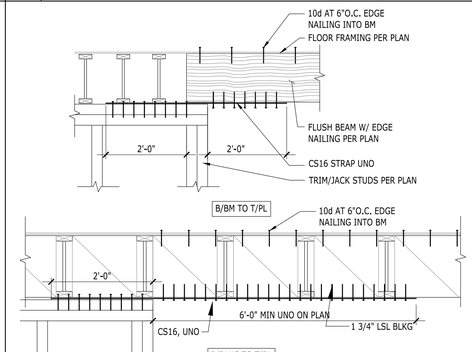
20 ELEVATION TOP PLATE SPLICE



13 BEAM AT DISCONTINUOUS TOP PLATES



14 TENSION TIE AT FLOOR FRAMING



15 TENSION TIE AT FLOOR FRAMING

MANS R. THURJELL
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER

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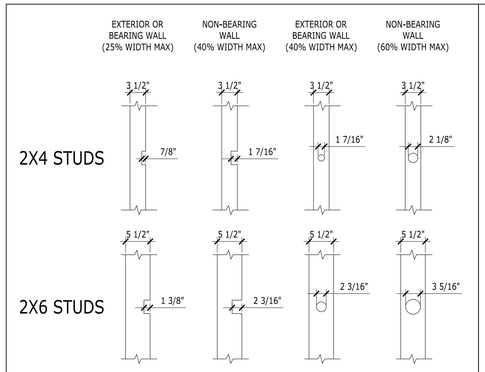
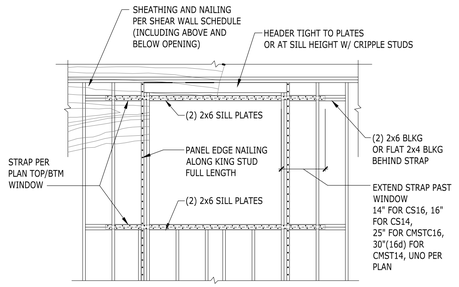
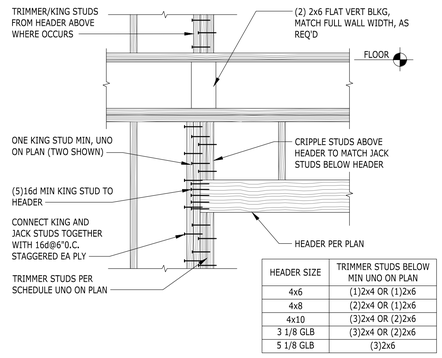
STRUCTURAL DETAILS
SHEET
SD-1



1 ALLOWABLE STUD NOTCHING AND BORING

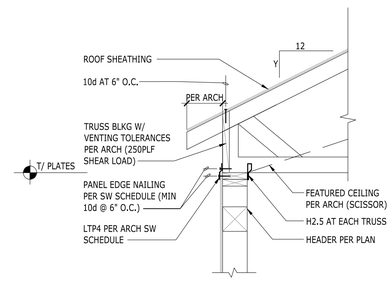


2 STRAPS AROUND WINDOWS

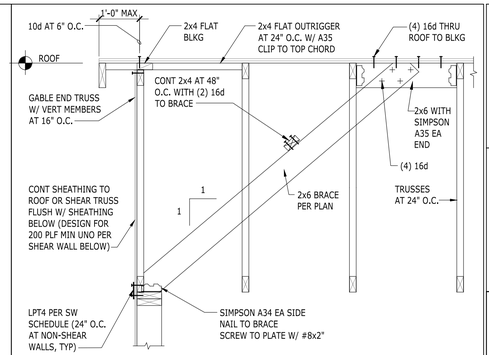


HEADER SIZE	TRIMMER STUDS BELOW MIN UNO ON PLAN
4x6	(1)2x4 OR (1)2x6
4x8	(2)2x4 OR (1)2x6
4x10	(3)2x4 OR (2)2x6
3 1/8 GLB	(3)2x4 OR (2)2x6
5 1/8 GLB	(3)2x6

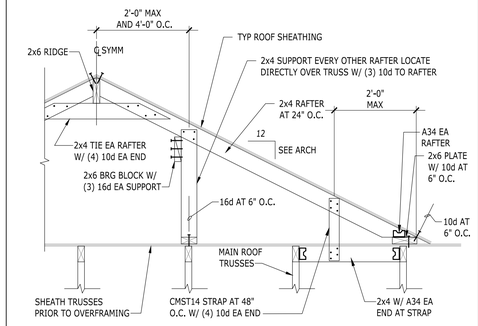
3 TYPICAL HEADER FRAMING



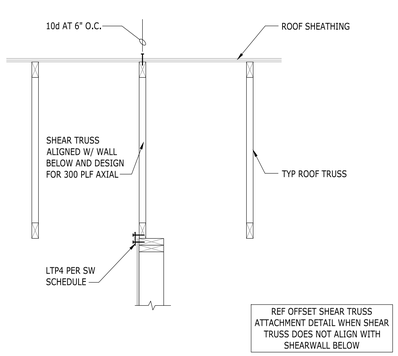
4 TALL HEEL ROOF TRUSS



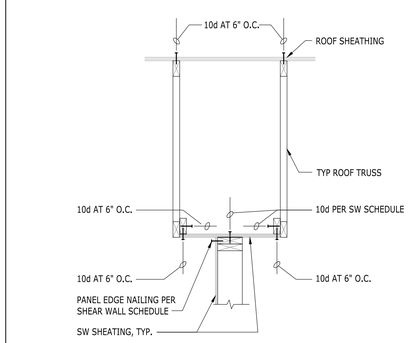
5 GABLE END FRAMING



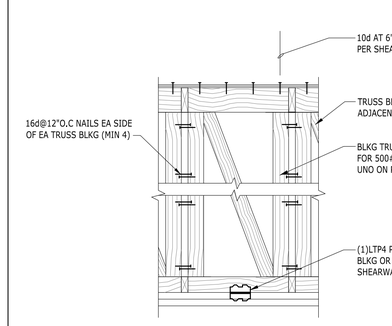
6 ROOF OVERFRAMING



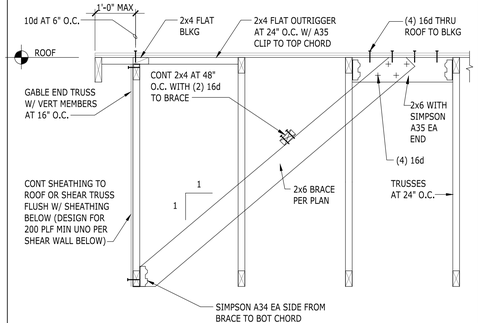
7 PARALLEL TRUSS AT SHEAR WALL



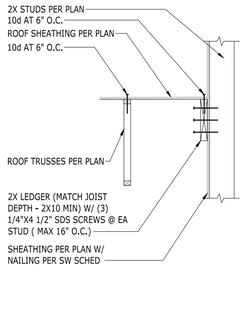
8 OFFSET SHEAR TRUSS ATTACHMENT



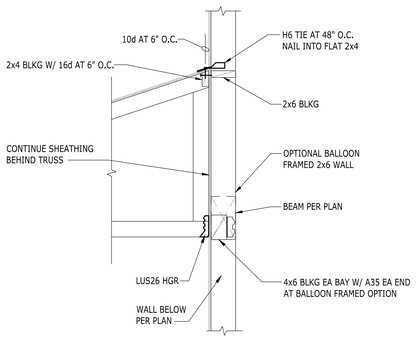
9 TYPICAL TRUSS BLOCKING



10 GABLE END FRAMING OVER DECK

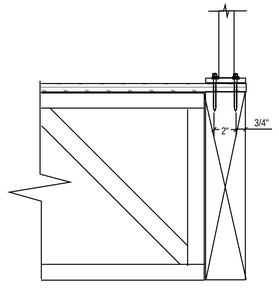


11 LOW ROOF FRAMING (PARALLEL)



12 LOW ROOF SECTION

13



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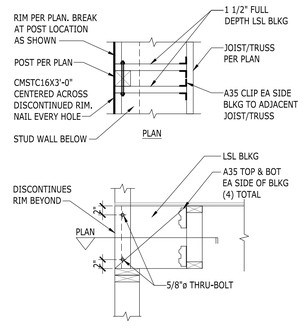
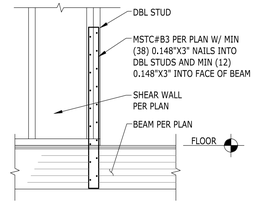


15



16

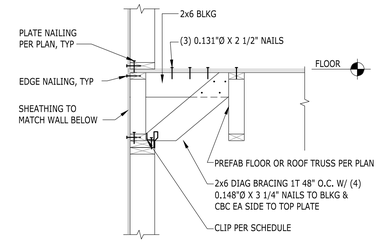
17

18

19

14 POST THROUGH DECK CONNECTION

15 MSTC HOLDOWN AT BEAM



20 SHEAR TRANSFER AT EXTERIOR WALL

MARS R. THURFJELL
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER

LONGITUDE ONE TWENTY°
ENGINEERING & DESIGN

REVISIONS

△	DESCRIPTION	DATE	BY
-			

PROJECT NAME

GRANBOIS RESIDENCE
8440 SE 82ND ST,
MERCER ISLAND

PROJECT NUMBER

S230110-1

DRAWN BY - MR

CHECKED BY - MRT

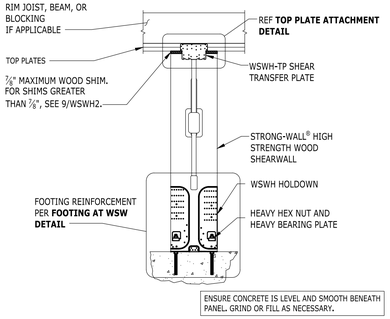
SHEET DATE - 03/15/2023

SCALE

24X36 SHEET:1/4"=1'-0"

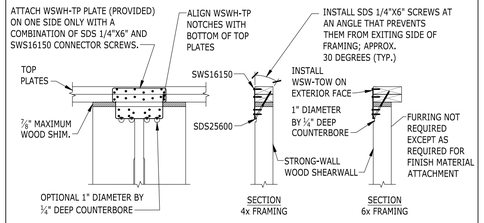
DESCRIPTION: STRUCTURAL DETAILS

SHEET: SD-2

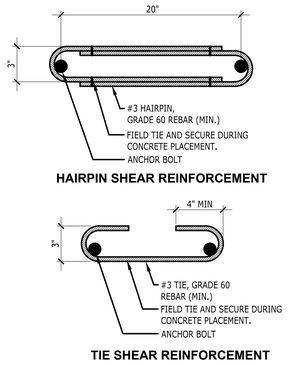


2 WSWH SIMPSON STRONG WALL

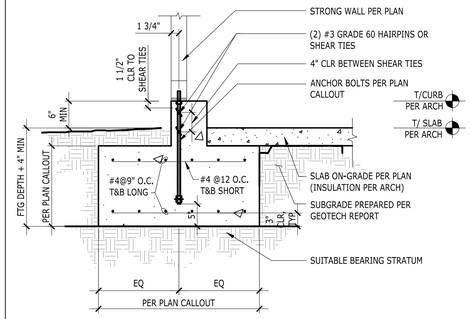
WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	14	2
WSWH-TP18	26	4
WSWH-TP24	46	8



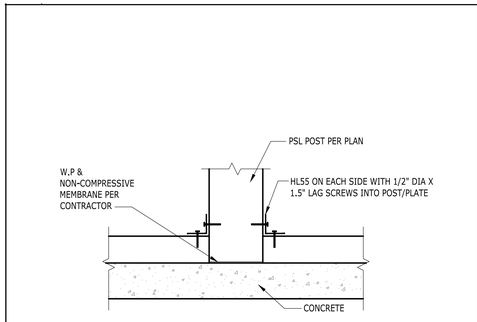
3 WSWH TOP PLATE ATTACHMENT



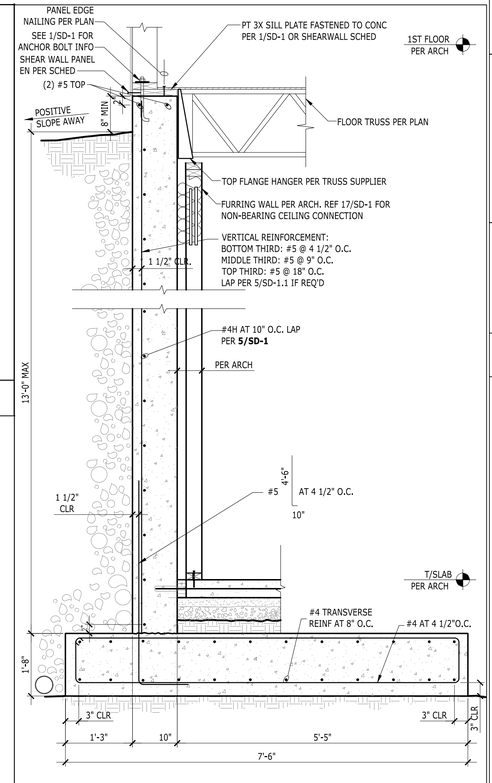
4 SHEAR REINFORCEMENT AT WSWH WALL



5 FOOTING AT WSWH WALL



14 PSL POST TO PLATE/CONCRETE DETAIL



20 13'-0" MAX WALL AT EXTERIOR

MANS R. THURFJELL
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER

LONGITUDE ONE TWENTY° ENGINEERING & DESIGN

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DESCRIPTION
STRUCTURAL DETAILS

SHEET
SD-3