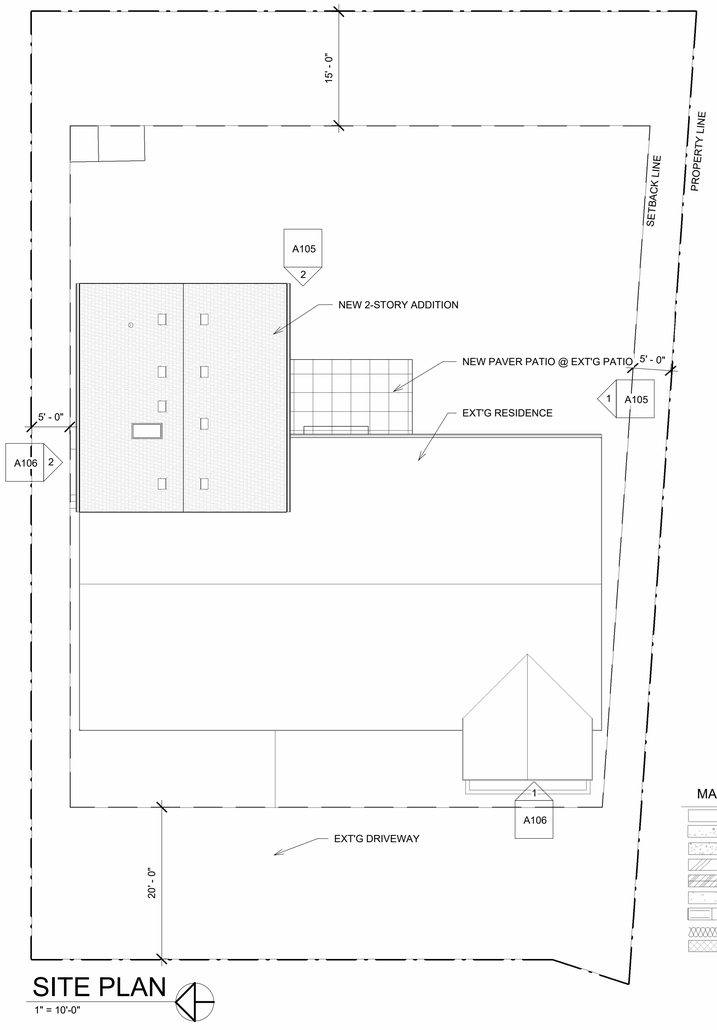


SITE PLAN

1" = 10'-0"

MATERIALS LEGEND

- NEW WALL
- CONCRETE
- GYPSUM BOARD
- METAL
- PLYWOOD
- SAND
- EARTH
- BATT INSULATION
- RIGID INSULATION

SCOPE OF WORK:
ADDITION OF A 2-STORY, 2-BEDROOM, 2-BATHROOM STRUCTURE, WHICH WILL INCLUDE REDMODEL OF THE EXISTING KITCHEN AND MUD/LAUNDRY ROOM.

IMPERVIOUS AREA:

EXT'G HOUSE:	2344 SF
EXT'G GARAGE:	500 SF
GARAGE ADDITON:	N/A SF
DRIVEWAY:	400 SF
	3244 SF= **32%**

(INCLUDES ADDITION OF 495 SF)

GOVERNING BUILDING CODES:
International Building Code, 2021 Edition (IBC)
International Residential Code, 2021 Edition (IRC)
Uniform Plumbing Code, 2021 Edition (UPC)
National Electrical Code, 2021 Edition (NEC)
International Mechanical Code, 2021 Edition (IMC)
International Fuel Gas Code, 2021 Edition (IFGC)
National Fire Protection Assiciation 99, 2021 Edition (NFPA 99)
International Energy Conservation Code, 2021 Edition (IECC)
International Fire Code, 2021 Edition (IFC)
Mercer Island Building Code (Current)

LOT COVERAGE:

GROSS LOT AREA:	9967 SF
NET LOT AREA:	9967 SF
ALLOWED LOT COVERAGE:	3987 SF
TOTAL EXT'G LOT COVERAGE:	3543 SF
TOTAL NEW LOT COVERAGE:	542 SF
PROPOSED LOT COVERAGE AREA:	**40 %**

HARDSCAPE:

EXT'G HARDSCAPE FRONT YARD:	280 SF
EXT'G HARDSCAPE REAR YARD:	220 SF
PATIO ADDITION:	213 SF
TOTAL:	**713 SF**
	= 7%

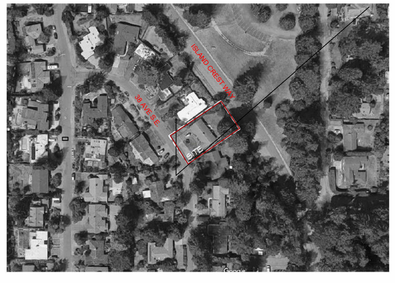
GROSS FLOOR AREA:

BUILDING AREA EXT'G:	2344 SF
BUILDING AREA NEW:	1102 SF
TOTAL:	**3446 SF**

PROPOSED GROSS FLOOR AREA: 3446 SF = 35%

BUILDING HEIGHT:

ALLOWABLE BUILDING HEIGHT:	30.00 FT
PROPOSED BUILDING HEIGHT:	20.75 FT
BENCHMARK ELEVATION:	284.91 FT
HIGHEST ELEVATION POINT OF LOT:	292.88 FT
LOWEST ELEVATION POINT OF LOT:	286.00 FT
ELEVATION DIFFERENCE:	**6.88 FT**
	= 4 % SLOPE



VICINITY MAP

1NOT TO SCALE

1. **Ownership of Documents:** The drawings and specifications herein are the property of Annex Design Services, LLC, and are intended for use solely on the project specified. These documents may not be reproduced, altered, or used on other projects without the written consent of Annex Design Services, LLC.
2. **Codes and Regulations:** All work shall comply with the latest edition of the International Building Code (IBC), local building codes, and all other applicable laws, ordinances, and regulations at the time of construction. It is the contractor's responsibility to ensure that all work is in compliance with the current standards and regulations.
3. **Site Verification:** Before commencing any work, the contractor is responsible for verifying all dimensions and conditions on-site. Any discrepancies found between the site conditions and the construction documents must be reported to Annex Design Services, LLC immediately for resolution.
4. **Materials and Workmanship:** All materials and workmanship must meet or exceed the quality standards set forth in the contract documents. Only materials specified in these documents are to be used, unless otherwise approved in writing by Annex Design Services, LLC. Substitutions or alternates must be submitted to and approved by Annex Design Services, LLC before their use.
5. **Safety and Protection:** The contractor shall adhere to all federal, state, and local safety laws and regulations, ensuring the safety of all workers and the public. The contractor is responsible for implementing and maintaining all necessary safety measures and protections throughout the duration of the project.
6. **Coordination:** The contractor is responsible for the coordination of all trades and subcontractors involved in the project. This includes scheduling, work sequence, and the resolution of any conflicts between trades. The contractor must ensure that all work is performed in accordance with the construction documents and in a manner that avoids interference with the work of other contractors.
7. **Changes and Clarifications:** All requests for information (RFIs), change orders, and clarifications must be submitted to Annex Design Services, LLC in a timely manner. Unauthorized changes to the design, materials, or layout will not be accepted and must be corrected at the contractor's expense.
8. **As-Built Drawings:** The contractor is required to provide Annex Design Services, LLC with a complete set of as-built drawings upon completion of the project, reflecting all changes made during construction.
9. **Utility Services:** The contractor shall coordinate with all utility companies for the provision of services and ensure all utility installations comply with local codes and regulations. This includes obtaining necessary permits and inspections.
10. **Inspection and Testing:** All materials and installation methods are subject to inspection and testing by authorized personnel at any stage of the construction process. The contractor must provide access to work areas for this purpose and shall arrange for re-testing of work that fails to meet specified standards at no additional cost.
11. **Environmental Compliance:** The contractor shall comply with all environmental laws and regulations, including those related to waste disposal, air quality, and noise levels. Measures must be taken to minimize the environmental impact of construction activities.
12. **Warranty:** All workmanship, materials, and equipment are warranted to be free from defects for a period of one year from the date of substantial completion, unless otherwise specified. Any defects found during this period shall be rectified by the contractor at their own expense.
13. **Conflict of Documents:** Should there be a conflict between drawings and specifications, the matter shall be brought to the attention of Annex Design Services, LLC for resolution. In general, written dimensions on drawings shall take precedence over scaled measurements, and detailed drawings shall take precedence over general drawings.
14. **Submittals:** The contractor is responsible for submitting shop drawings, product data, samples, and other submittals required by the contract documents in a timely manner. Approval of submittals by Annex Design Services, LLC does not relieve the contractor of their responsibility to meet all requirements of the contract documents.
15. **Protection of Work and Property:** The contractor must protect all work and property from damage during construction. This includes providing temporary coverings for exposed areas, securing loose materials, and repairing any damage caused by construction activities.
16. **Clean-Up:** The contractor shall maintain a clean and orderly work site throughout the duration of the project. Upon completion, the contractor is responsible for removing all construction debris, cleaning the project area, and leaving the site in a condition acceptable to the owner.
17. **Project Signage:** No signage other than that approved by Annex Design Services, LLC shall be displayed on the project site. This includes signs related to construction, subcontractors, financing, or leasing.
18. **Change Orders:** All changes to the contract, including alterations, additions, or omissions, must be executed through formal change orders approved by Annex Design Services, LLC and may result in adjustments to the contract price and/or time.
19. **Security:** The contractor is responsible for securing the project site and materials during non-working hours. Loss or theft of materials or equipment shall not excuse the contractor from fulfilling contractual obligations.
20. **Final Acceptance:** Final acceptance of the project by Annex Design Services, LLC and the owner will occur upon completion of all work in accordance with the contract documents, including the resolution of any punch list items and the submission of all necessary documentation, such as warranties, maintenance manuals, and as-built drawings.

GENERAL NOTES

1" = 10'-0"

PROJECT DATA:

ADDRESS: 3818 83rd Ave S, Mercer Island

PARCEL NUMBER : 122404-9103

Lot Size: 9967

Zoning: R-9.6

Use Code: Single Family(Res Use/Zone)

Legal Description: POR OF SE 1/4 OF SE 1/4 & LOT 5 BLK 2 LUCAS HILL DIV # 2 DAF-BEG SE COR TH N 89-05-27 W 333.91 FT TH N 01-12-58 E 396.63 FT TH S 89-05-27 E 20 FT TH N 01-12-58 E 114.63 FT TH N 18-00-20 W 50.75 FT TO TPOB TH N 18-00-20 W 10 FT TH N 35-58-22 W 69.04 FT TH N 54-01-38 E 125 FT TH S 35-58-22 E 82.57 FT TH 4.43 FT ALG ARC OF CURVE TO RGT A RAD OF 915.37 FT SD RAD BEARING S 54-01-38 W TH S 57-47-53 W 128.18 FT TO TPOB

PRIOR PERMIT NOTES

Previous addition approved under **Permit No. 2110-132.**
Date: **2-10-2021**

ENERGY CODE NOTES

PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH 2021 WASHINGTON STATE ENERGY CODE – RESIDENTIAL PER THE PRESCRIPTIVE REQUIREMENTS FOR ALL CLIMATE ZONES PER TABLE R402.1.1 AND FUEL NORMALIZATION CREDITS PER TABLE 406.2 AND ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS PER TABLE 406.3. INCLUDING:

Fenestration U-Factor (b): **0.28**

Skylight U-Factor (b): **0.50**

Glazed Fenestration SHGC (b, e): **NR**

Ceiling R-Value (e): **49**

Wood Frame Wall R-Value (g, h): **21 Intermediate Framing**

Floor R-Value: **38**

Wall Below-Grade R-Value (c, h): **N/A**

Slab on Grade R-Value & Depth (d, f): **10, 2'**

a. R-Values are minimums. U-Factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the compressed R-Value of the insulation from Appendix Table A101.4 shall not be less than the R-Value specified in the table.

b. N/A

c. N/A

d. R-10 continuous insulation is required under heated slab on grade floors.

e. For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.

f. N/A

g. N/A

h. INT. (Intermediate Framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS
Per Section R406.3 of the Energy Code – small additions less than 500 square feet requires 1.5 energy credits.

FUEL NORMALIZATION
Efficient combustion heating equipment meeting minimum NAECA Points: 0.0

PROPOSED ENERGY CREDITS:

Efficient Building Envelope 1.3: 0.5 points

Vertical fenestration U-Value maximum of 0.28
Floor insulation of R-38

Efficient Water Heating Options 5.3: 1.0 points
Energy Star rated gas or propane water heater with a minimum UEF of 0.91

SHEET INDEX

SHEET #	SHEET NAME
C100	COVER SHEET
G0.03	CIVIL SHEET
G0.03.1	BOUNDARY AND TOPOGRAPHIC SURVEY
A100.1	DEMOLITION PLAN
A100	FIRST FLOOR PLAN
A101	SECOND FLOOR PLAN
A102	FIRST FLOOR FURNITURE PLAN
A103	ROOF PLAN
A104	SECTIONS
A105	ELEVATIONS
A106	ELEVATIONS
A112	SECOND FLOOR FURNITURE PLAN
A113	FIRE PLAN
E101	ELECTRICAL PLAN
S0.0	STRUCTURAL SPECIFICATIONS
S1.0	NEW & EXISTING FOUNDATION PLAN
S1.1	SECOND FLOOR & EXISTING ROOF FRAMING PLAN
S1.2	UPPER ROOF FRAMING PLAN
S2.0	GENERAL DETAILS
S3.0	FOUNDATION DETAILS - SHEET 1
S3.1	FOUNDATION DETAILS - SHEET 2
S4.0	FLOOR AND ROOF FRAMING DETAILS - SHEET 1
S4.1	FLOOR AND ROOF FRAMING DETAILS - SHEET 2

CASCADIA DESIGN-BUILD NW

OWNER
John-Sun Cha & Esther Koo
3818 83rd Ave SE
Mercer Island, WA 98040
347.742.3867

DESIGN FIRM
Cascadia Design-Build NW, LLC
PO Box 455
Bellevue, WA 98009
Contact: Brad@CascadiaDesign-Build.com

CONTRACTOR
Cascadia Design-Build NW, LLC
PO Box 455
Bellevue, WA 98009
Contact: Brad@CascadiaDesign-Build.com

STRUCTURAL ENGINEER
Murar Engineering and Design, Incorporated
1501 N 13th St
Suite 202
Boise, ID 83702
208.343.4125
contact@murarengineering.com

MECHANICAL CONSULTANT
Address
Address
Phone
Fax
e-mail

MECHANICAL CONSULTANT
Address
Address
Phone
Fax
e-mail

ELECTRICAL CONSULTANT
Address
Address
Phone
Fax
e-mail

PLUMBING CONSULTANT
Address
Address
Phone
Fax
e-mail

No.	Description	Date

KOO & CHA ADDITION

COVER SHEET

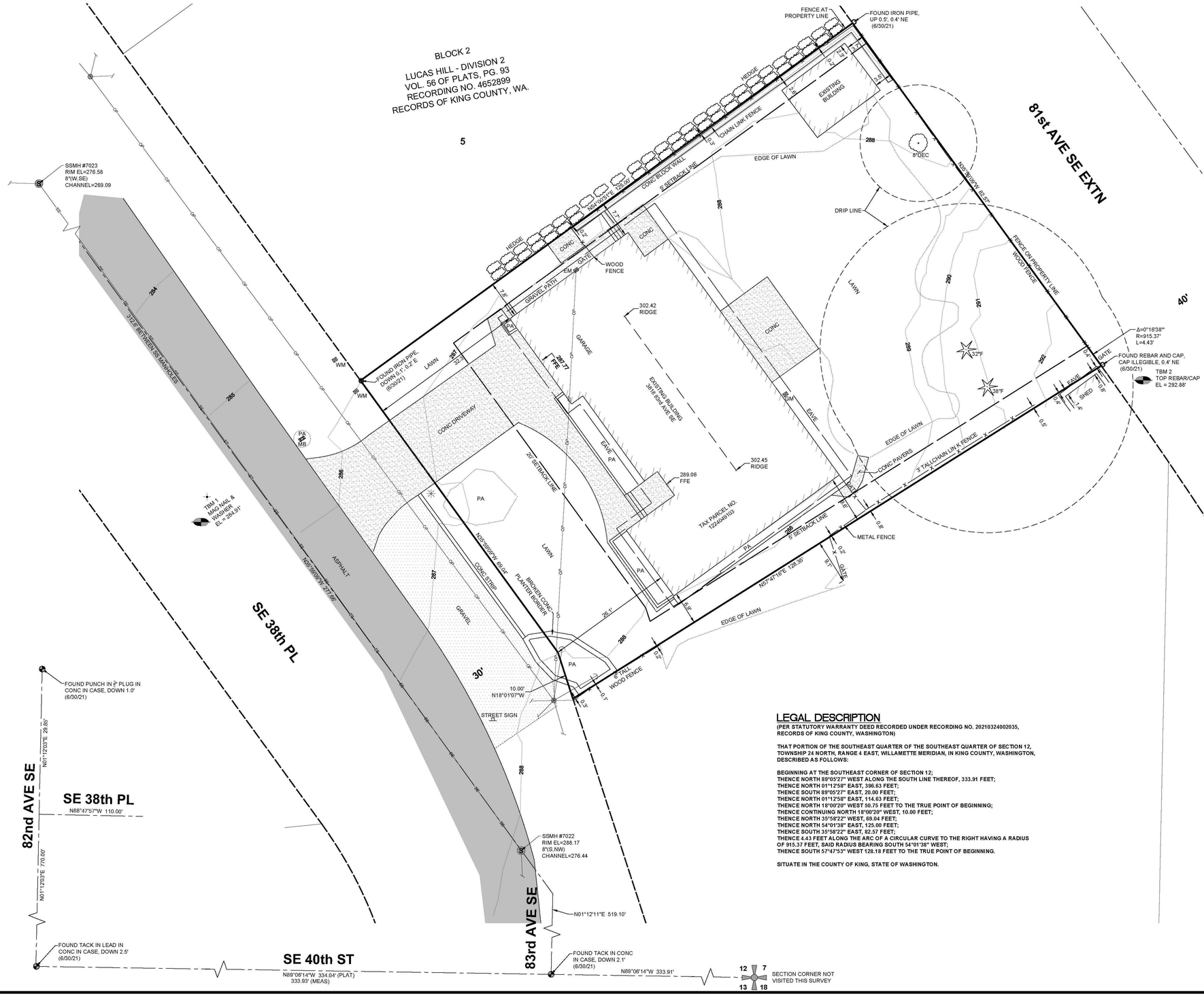
Project number	2025008
Date	08/23/2025
Drawn by	jvl
Checked by	bth

C100

Scale 1/4"=1'-0" U.N.O.

10/23/2025 12:03:30 AM

SE I/4 OF THE SE 1/4, SEC. 12, TWP. 24 N., RNG. 4 E., W.M.



NORTH

0 5' 10' 20'

SCALE: 1" = 10'

LEGEND

- SEWER MANHOLE
- WM WATER METER
- EM POWER METER
- POWER POLE
- GUY ANCHOR
- LANDSCAPE LIGHT
- GM GAS METER
- SIGN
- MB MAILBOX
- MONUMENT, FOUND AS NOTED
- PROPERTY CORNER, FOUND AS NOTED
- FFE FINISH FLOOR ELEVATION
- PA PLANTER AREA
- DECIDUOUS TREE (DEC)
- CONIFEROUS TREE (F=FIR)
- HEDGE
- ASPHALT PAVING
- CONCRETE PAVING
- GRAVEL PATH

VERTICAL DATUM

NAVD 88

BASED ON GPS OBSERVATIONS.

SITE BENCH MARKS:

TBM 1: MAG NAIL & WASHER, 40' SW OF NW PROPERTY CORNER, ELEVATION = 284.91'

TBM 2: TOP OF REBAR & CAP FOUND AT SE PROPERTY CORNER, ELEVATION = 292.88'

GENERAL NOTES

1. HORIZONTAL DATUM: WASHINGTON COORDINATE SYSTEM, NORTH ZONE, NAD83-2011, EPOCH 2010.00 COORDINATES.

BASIS OF BEARINGS IS NORTH 89°06'14" WEST ALONG THE CENTERLINE OF SE 40th STREET BETWEEN MONUMENTS FOUND IN PLACE AT 83rd AVE SE AND 82nd AVE SE.

2. PRIMARY CONTROL POINTS AND ACCESSIBLE MONUMENT POSITIONS WERE FIELD MEASURED UTILIZING GLOBAL POSITIONING SYSTEM (GPS) SURVEY TECHNIQUES USING TRIMBLE EQUIPMENT. MONUMENT POSITIONS THAT WERE NOT DIRECTLY OBSERVED USING GPS SURVEY TECHNIQUES WERE TIED INTO THE CONTROL POINTS UTILIZING TRIMBLE ELECTRONIC TOTAL STATIONS FOR THE MEASUREMENT OF BOTH ANGLES AND DISTANCES. THIS SURVEY MEETS OR EXCEEDS THE STANDARDS SET BY WAC 332-130-090.

3. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON JUNE 30, 2021 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME.

4. SANITARY SEWER HAVE BEEN ASBUILT THROUGH FIELD MEASUREMENTS OF THE LOCATION OF THE ACCESS STRUCTURES, THE TOP ELEVATION OF THE STRUCTURES, AND THE INVERT ELEVATIONS OF ANY PIPES ENTERING OR LEAVING THE STRUCTURES. IT IS STANDARD PRACTICE TO SHOW THE PIPES CONNECTING THESE STRUCTURES AS STRAIGHT LINES. THIS IS ONLY AN ASSUMPTION AND THE ACTUAL LOCATION OF THE PIPING MUST BE VERIFIED IN THE FIELD BY THE CONSTRUCTION CONTRACTOR PRIOR TO ANY CONSTRUCTION.

5. NO EASEMENTS, RESTRICTIONS OR RESERVATION OF RECORD WHICH WOULD BE DISCLOSED BY TITLE REPORT ARE SHOWN.

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDED UNDER RECORDING NO. 20210324002035, RECORDS OF KING COUNTY, WASHINGTON)

THAT PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 12, TOWNSHIP 24 NORTH, RANGE 4 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SECTION 12;
THENCE NORTH 89°05'27" WEST ALONG THE SOUTH LINE THEREOF, 333.91 FEET;
THENCE NORTH 01°12'58" EAST, 396.63 FEET;
THENCE SOUTH 89°05'27" EAST, 20.00 FEET;
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SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

BOUNDARY AND TOPOGRAPHIC SURVEY

SUN CHA RESIDENCE

JOHN-SUN CHA

3818 83rd AVE SE, MERCER ISLAND, WA.

DAVID EVANS AND ASSOCIATES INC.
20300 Woodinville Snohomish Rd. NE, Ste A
Woodinville Washington 98072
Phone: 425.415.2000

JOHN JOEL CARTON — STATE OF WASHINGTON — 50078 — REGISTERED PROFESSIONAL LAND SURVEYOR

REVISIONS:	APPD.
ADD SETBACK LINES	7/07/21

DATE: JULY 2, 2021
DESIGN:
DRAWN:
CHECKED:
REVISION NUMBER:

SCALE: 1"=10'

PROJECT NUMBER:
OWDV01770001

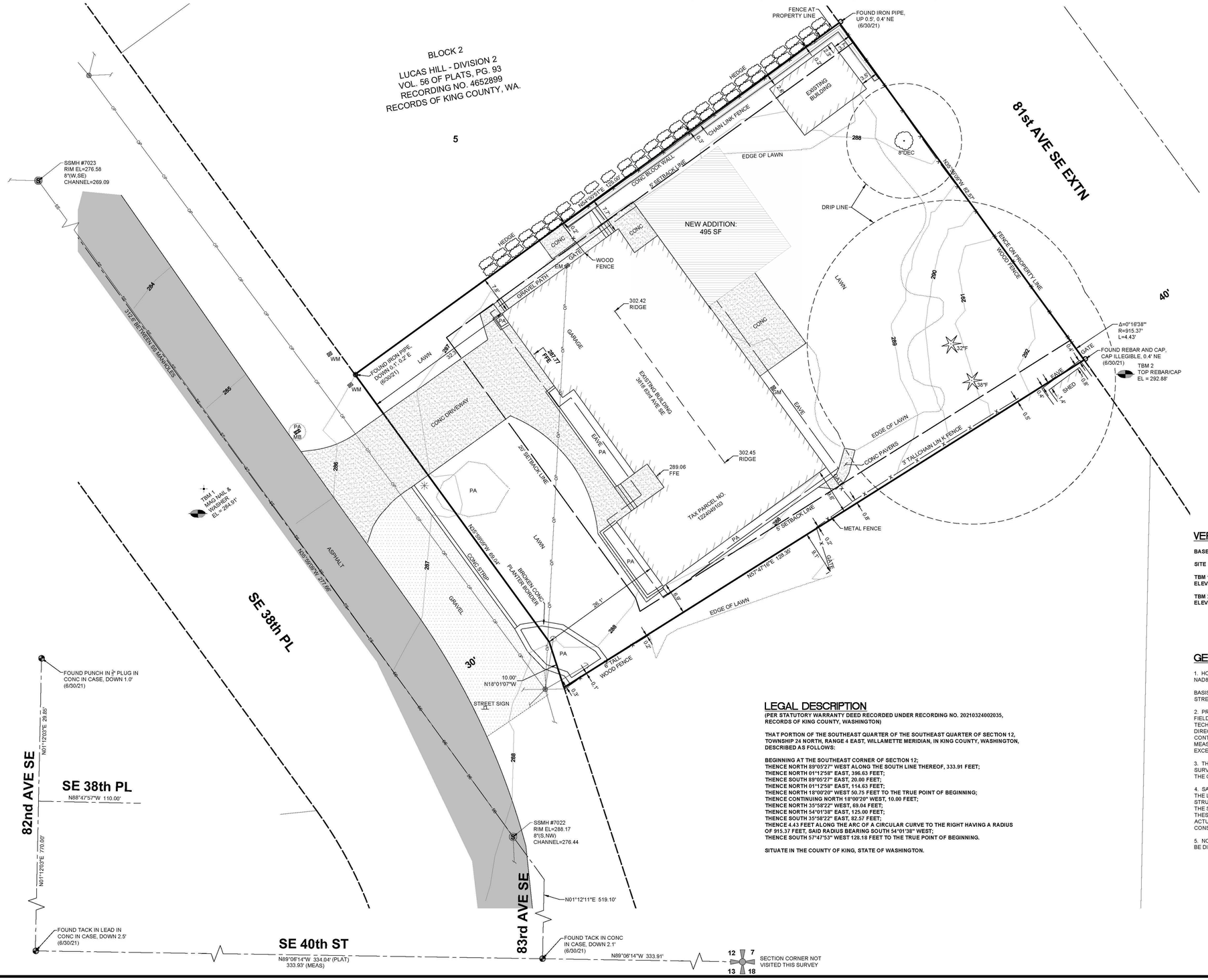
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SHEET NO.
G0.03

REVIEWED FOR CODE COMPLIANCE
March 14, 2022
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CITY OF MERCER ISLAND, WASHINGTON

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SE I/4 OF THE SE 1/4, SEC. 12, TWP. 24 N., RNG. 4 E., W.M.



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0 5' 10' 20'

SCALE: 1" = 10'

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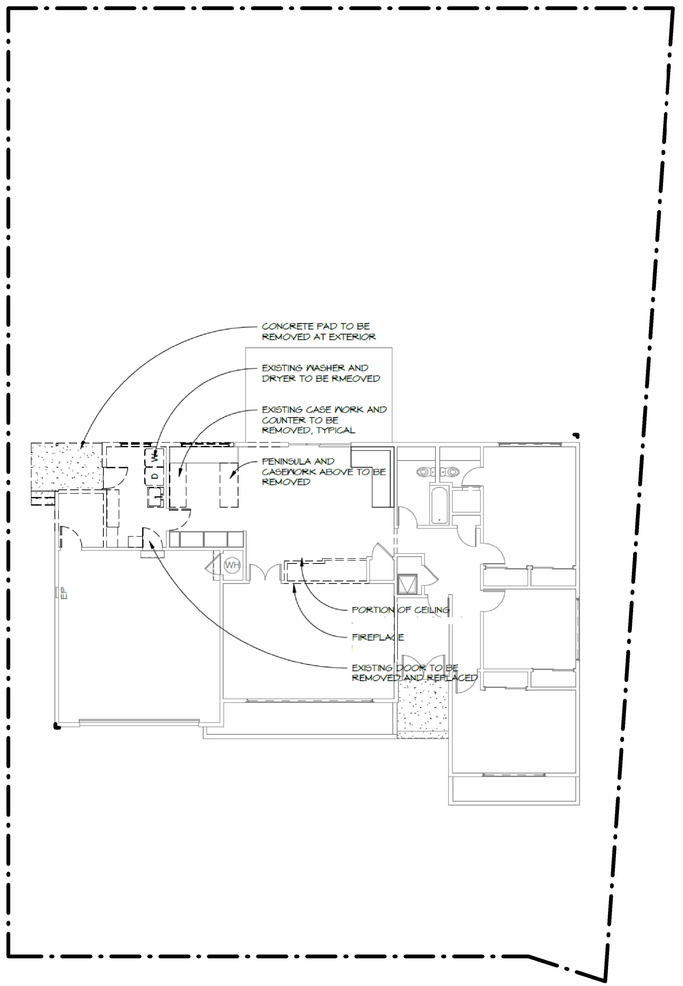
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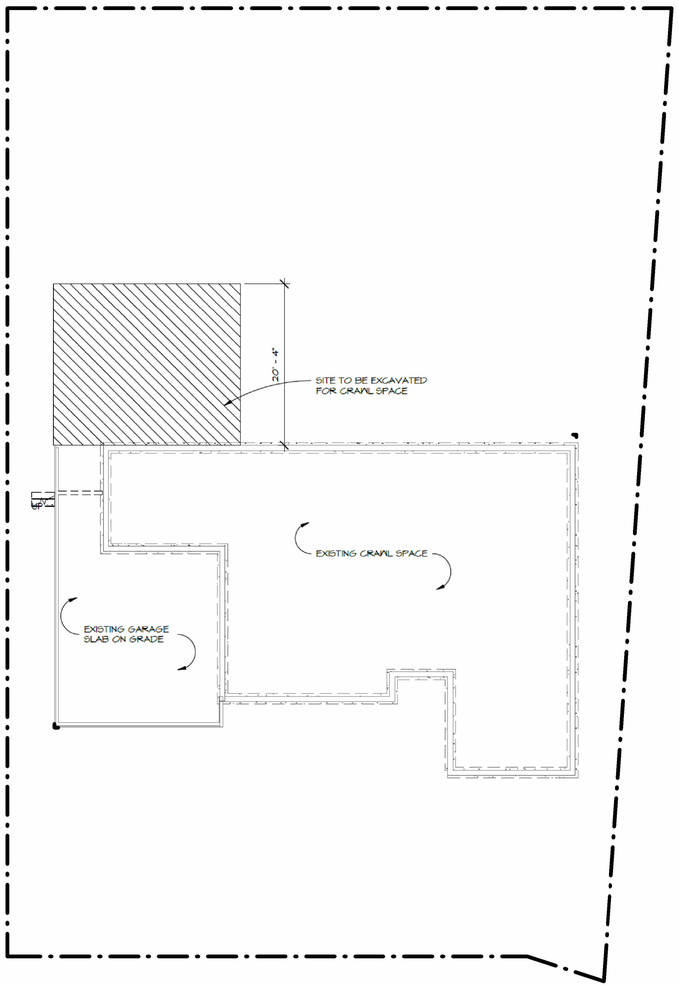
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SITE COPY

Plot Date: 7/7/2021 10:19 AM By: Charles Cornwall
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DEMOLITION PLAN - LEVEL 1

1" = 10'-0



DEMOLITION PLAN - FOUNDATION

1" = 10'-0

DEMOLITION PLAN NOTES:

1. PROPERTY PROTECTION: PROTECT FROM DAMAGE EXISTING FINISH WORK THAT IS TO REMAIN IN PLACE AND BECOMES EXPOSED DURING DEMOLITION OPERATIONS ITEMS TO REMAIN THAT ARE DAMAGED DURING DEMOLITION ARE TO BE BROUGHT BACK TO LIKE-NEW CONDITION.
2. SITE CLEANUP: UPON COMPLETION OF DEMOLITION WORK REMOVED TOOLS, EQUIPMENT, AND DEMOLISH MATERIALS FROM SITE.
3. MATERIAL SALVAGE: SALVAGE ALL REMOVED DOORS, WINDOWS, CASEWORKS, FIXTURES, RANGE, AND REFRIGERATOR. CONTRACTOR TO VERIFY WITH OWNER WHAT ITEMS TO BE RELOCATED, RECYCLED, OR SOLD.
4. OTHER DISCIPLINES: SEE RCP, MECHANICAL, PLUMBING ,AND ELECTRICAL DRAWINGS FOR DEMOLITION SPECIFIC TO THIS DISCIPLINES.
5. DEMO SUBCONTRACTORS: ARE TO MAKE THEMSELVES FAMILIAR WITH ALL AREAS WHERE DEMOLITION WILL OCCUR. SUBCONTRACTORS ARE RESPONSIBLE FOR REMOVAL OF ANYTHING REQUIRED TO COMPLETE THE SCOPE SHOWN.
6. DUMPSTER LOCATION: VERIFY DUMPSTER LOCATION WITH OWNERS.

CASCADIA DESIGN-BUILD NW

OWNER
John-Sun Cha & Esther Koo
3818 83rd Ave SE
Mercer Island, WA 98040
347.742.3867

DESIGN FIRM
Cascadia Design-Build NW, LLC
PO Box 455
Bellevue, WA 98009
Contact: Brad@CascadiaDesign-Build.com

CONTRACTOR
Cascadia Design-Build NW, LLC
PO Box 455
Bellevue, WA 98009
Contact: Brad@CascadiaDesign-Build.com

STRUCTURAL ENGINEER
Murar Engineering and Design, Incorporated
1501 N 13th St
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No.	Description	Date

KOO & CHA ADDITION

DEMOLITION PLAN

Project number	2025008
Date	08/23/2025
Drawn by	JVL
Checked by	BTH

C102

Scale 1/4"=1'-0" U.N.O.

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FLOOR PLAN NOTES:

BATHROOM NOTES

1. Fireblocking: Tubs and showers require fireblocking as per R302.11.
2. Shower Space: Minimum clear space inside the shower is 30" x 30".
3. Shower Door: Shower door must be a minimum of 22" wide and open outward if hinged.
4. Clear Space Outside Shower: Requires a 30" wide x 24" deep clear space outside the shower door.
5. Shower Enclosures: Enclosures must be made of safety glass.
6. Shower Walls: Non-absorbent surface required up to 6 feet in height within the shower.
7. Tile Backing: Use cement board or cement fiber board for tile backing in showers.
8. Vapor Barrier: Vapor barrier is not permitted behind water-resistant gypsum board (W.P. GWB) at exterior walls.
9. Shower Flow: Shower flow restrictor limited to 2.5 gallons per minute (GPM).
10. Valve Type: Tub or shower control valves must be pressure balanced or thermostatic mixing type.
11. Toilet Flush: Toilets must have a maximum flush volume of 1.6 gallons per flush.
12. Toilet Space: Requires 15" clear space on each side from the center of the toilet and 21" clear space in front.
13. Towel Bars: Install 2x10 blocking for towel bars up to 48" above the floor or below sill height if at a window.
14. Toilet Paper Holders: Install blocking for toilet paper holders.
15. Insulation: Insulate exterior walls adjacent to showers and tubs.
16. Air Barrier: Install an air barrier separating showers and tubs from exterior walls.

EGRESS WINDOWS PER R310

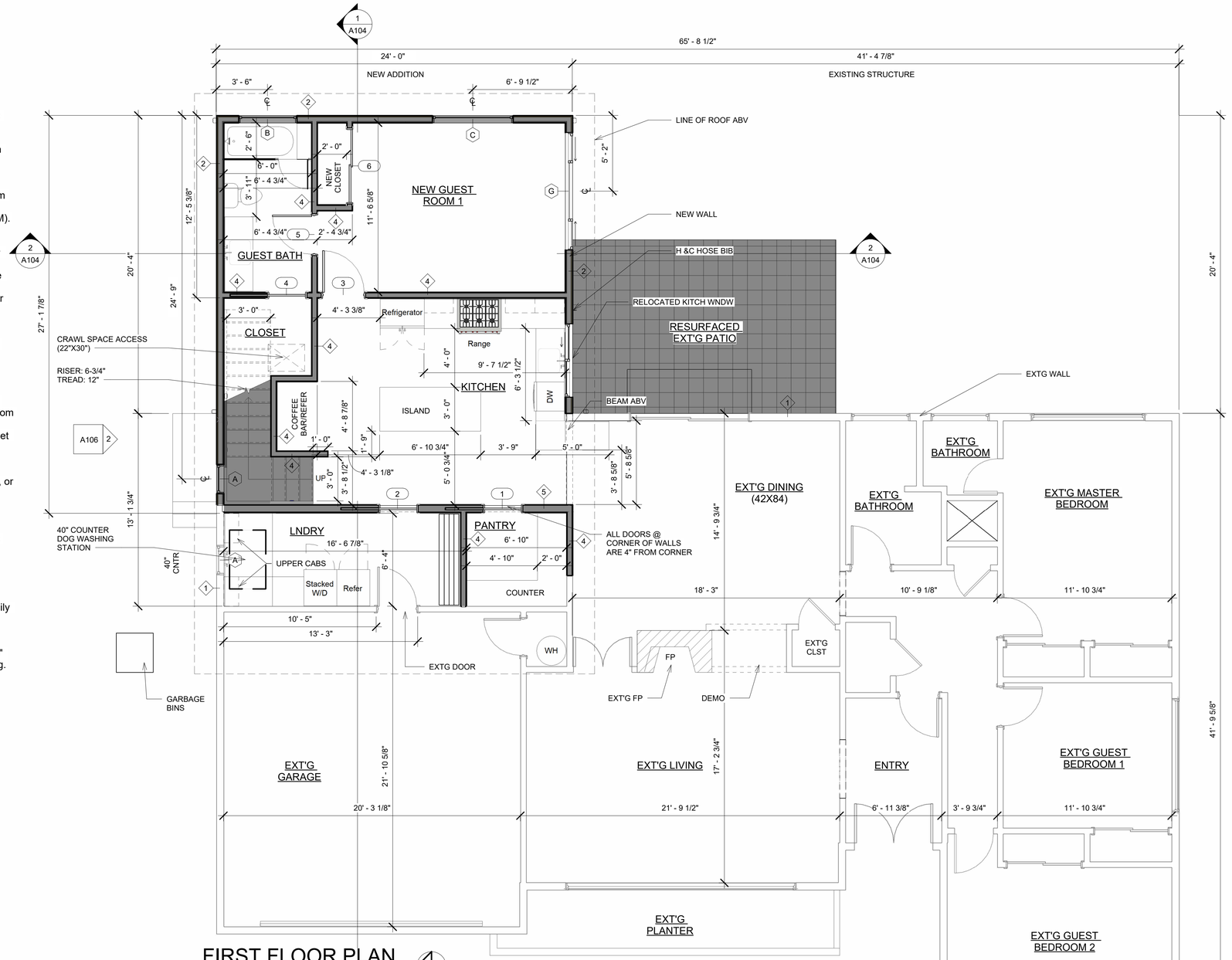
1. Window Height: Emergency escape and rescue openings must have a sill height no more than 44 inches measured from the finished floor to the bottom of the clear opening.
2. Window Size: Minimum net clear opening of 5.7 square feet (5.0 square feet at grade floor).
3. Window Height: Minimum net clear opening height of 24 inches.
4. Window Width: Minimum net clear opening width of 20 inches.
5. Operability: Windows must be operable from the inside without keys, tools, or special knowledge.

WINDOWS & DOORS NOTES

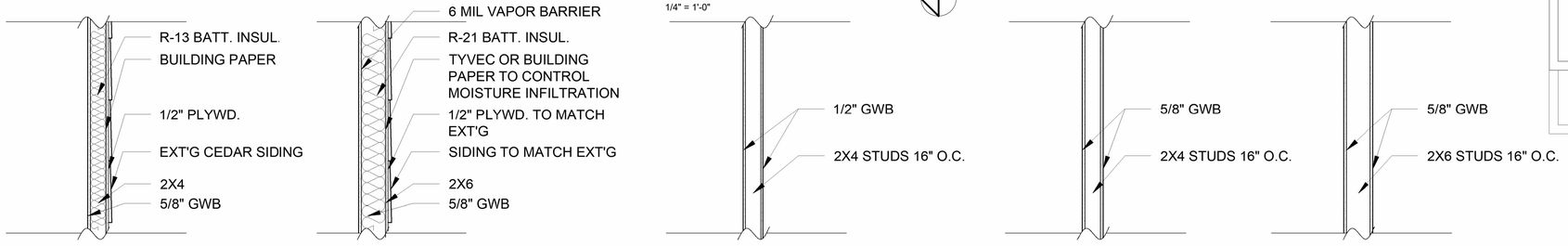
1. Rough Openings: Contractor to verify rough opening dimensions for doors and windows before ordering.

ATTIC ACCESS PER R807.1

1. Access Opening Size: 22" x 30" minimum rough framed opening.
2. Location: Access opening located in the center of the garage or other readily accessible location.
3. Door: Insulate and weatherstrip the access door.
4. Insulation Dam: 12" high insulation dam required.
5. Attic Ladder Space: Compact attic ladder requires a minimum height of 28" and a minimum depth of 44" inside the attic, above and behind the opening.



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



1 EXISTING EXTERIOR WALL
SCALE: 3/4"=1'-0"

2 NEW EXTERIOR WALL
SCALE: 3/4"=1'-0"

3 EXISTING INTERIOR STUD WALL
SCALE: 3/4"=1'-0"

4 NEW 2X4 INTERIOR WALL
SCALE: 3/4"=1'-0"

5 NEW 2X6 INTERIOR WALL
SCALE: 3/4"=1'-0"

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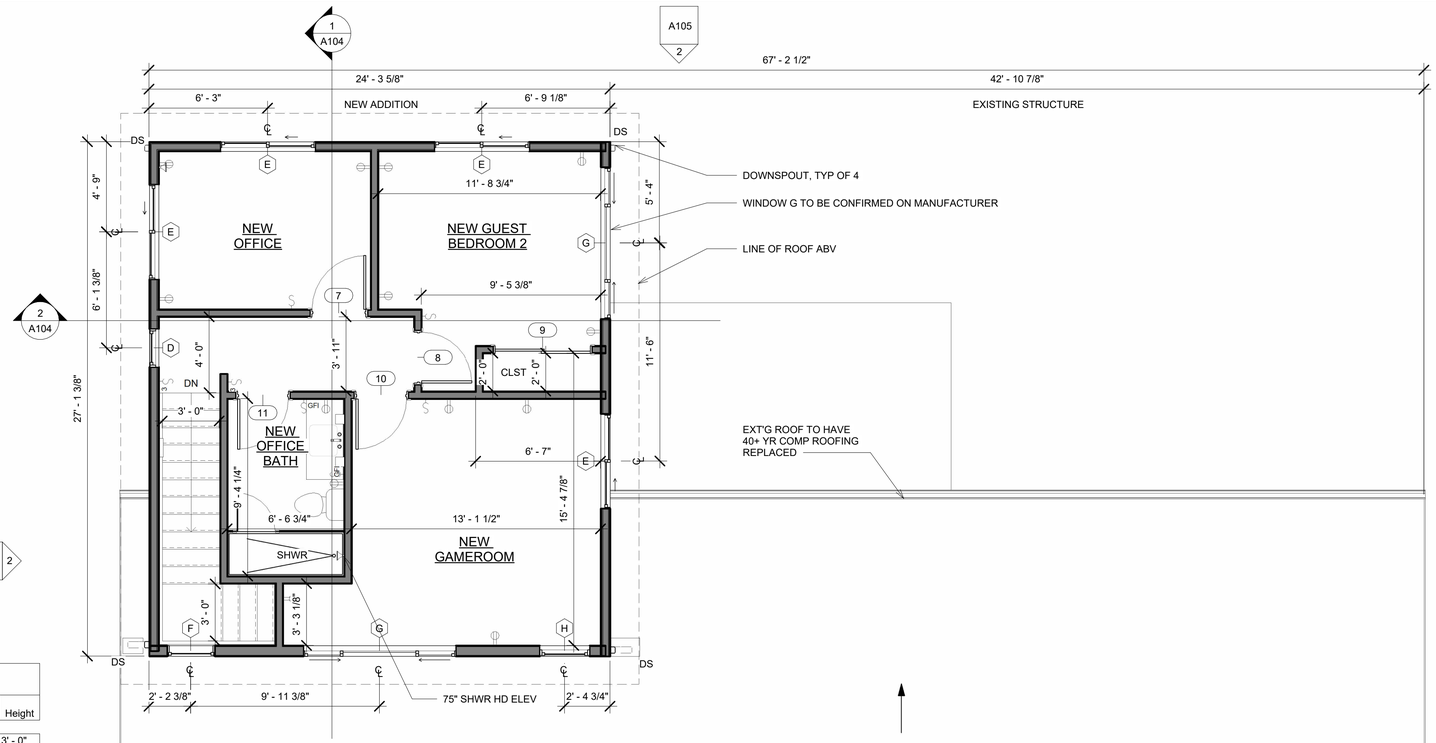
No.	Description	Date

KOO & CHA ADDITION
FIRST FLOOR PLAN

Project number	2025008
Date	08/23/2025
Drawn by	jvl
Checked by	bth

A100

Scale 1/4"=1'-0" U.N.O.



SECOND FLOOR PLAN

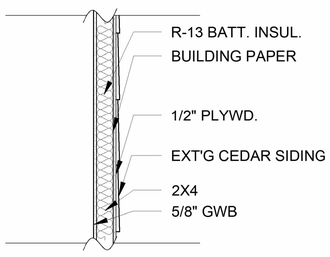
1/4" = 1'-0"

WINDOW SCHEDULE									
Type Mark	Rough Width	Rough Height	Count	Type Comments	Model	Manufacturer	U-VALUE (MAXIMUM)	Width	Height
A	2' - 0 1/2"	3' - 0 1/2"	2	Fixed	TBD	Simonton	.29	2' - 0"	3' - 0"
B	4' - 0 1/2"	1' - 0 1/2"	3	Fixed	TBD	Simonton	.29	4' - 0"	1' - 0"
C	5' - 6 1/2"	1' - 0 1/2"	1	Slider	TBD	Simonton	.29	5' - 6"	1' - 0"
D	2' - 0 1/2"	3' - 0 1/2"	1	Single Hung	TBD	Simonton	.29	2' - 0"	3' - 0"
E	5' - 0 1/2"	3' - 0 1/2"	5	Slider	TBD	Simonton	.29	5' - 0"	3' - 0"
F	2' - 6 1/2"	3' - 0 1/2"	1	Casement	TBD	Simonton	.29	2' - 6"	3' - 0"
G	8' - 0 1/2"	3' - 0 1/2"	3	Slider/Fixed/Slider	TBD	Simonton	.29	8' - 0"	3' - 0"
H	2' - 7 3/4"	3' - 0 1/2"	1	Single Hung	TBD	Simonton	.29	2' - 7 1/4"	3' - 0"

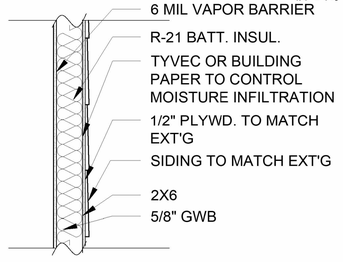
*WINDOWS TO BE CONFIRMED TO MANUFACTURER

DOOR SCHEDULE								
Mark	Type Comments	Count	Manufacturer	Model	Width	Height	Rough Width	Rough Height
1	Pocket/ Hollow	1	JELDWEN	K3580 8-Lite over 1-Panel	2' - 7"	6' - 8"	5' - 3"	7' - 0 1/2"
2	Pocket/ Hollow	1	JELDWEN	TBD	2' - 7"	6' - 8"	5' - 3"	7' - 0 1/2"
3	Solid Core	1	JELDWEN	TBD	2' - 10"	6' - 8"	3' - 0"	6' - 9"
4	Pocket/ Hollow	1	JELDWEN	TBD	2' - 7"	6' - 8"	5' - 3"	7' - 0 1/2"
5	Hollow Core	1	JELDWEN	TBD	2' - 8"	6' - 8"	2' - 10"	6' - 9"
6	Sliding/ Hollow Core	1	JELDWEN	TBD	5' - 0"	6' - 8"	5' - 2"	6' - 9"
7	Hollow Core	1	JELDWEN	TBD	2' - 10"	6' - 8"	3' - 0"	6' - 9"
8	Hollow Core	1	JELDWEN	TBD	2' - 8"	6' - 8"	2' - 10"	6' - 9"
9	Sliding/ Hollow Core	1	JELDWEN	TBD	5' - 0"	6' - 8"	5' - 2"	6' - 9"
10	Hollow Core	1	JELDWEN	TBD	2' - 8"	6' - 8"	2' - 10"	6' - 9"
11	Hollow Core	1	JELDWEN	TBD	2' - 8"	6' - 8"	2' - 10"	6' - 9"

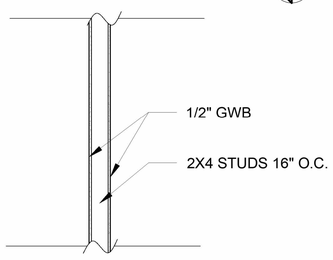
*DOOR PRICES TO BE CONFIRMED TO MANUFACTURER



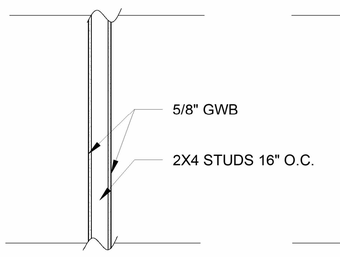
1 EXISTING EXTERIOR WALL
SCALE: 3/4"=1'-0"



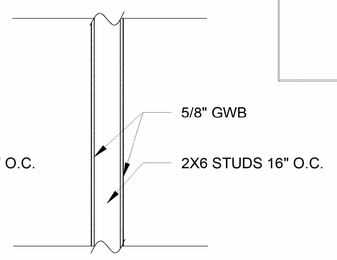
2 NEW EXTERIOR WALL
SCALE: 3/4"=1'-0"



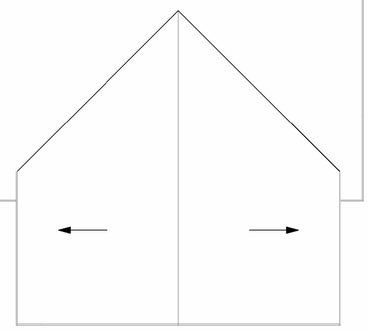
3 EXISTING INTERIOR STUD WALL
SCALE: 3/4"=1'-0"



4 NEW 2X4 INTERIOR WALL
SCALE: 3/4"=1'-0"



5 NEW 2X6 INTERIOR WALL
SCALE: 3/4"=1'-0"



1
A106

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KOO & CHA ADDITION

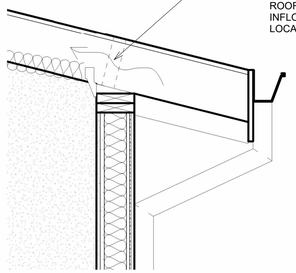
SECOND FLOOR PLAN

Project number	2025008
Date	08/23/2025
Drawn by	JVL
Checked by	BTH

A101

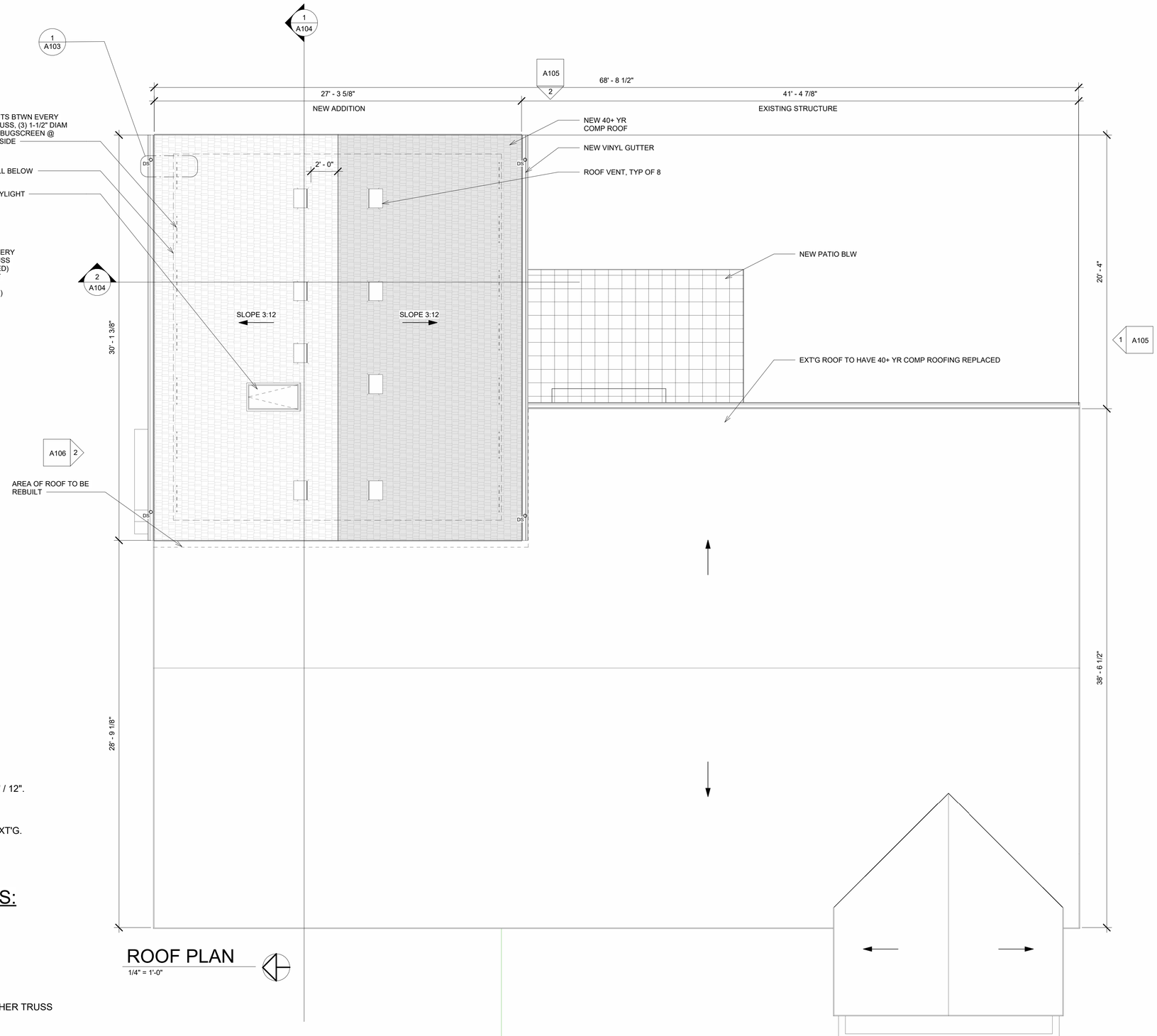
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INFLOW VENTS DETAIL

1" = 1'-0"



ROOF PLAN

1/4" = 1'-0"

ROOF NOTES:

1) NEW ROOF TO MATCH EXT'G ROOF PITCH OF 4.25" / 12".

2) CONTRACTOR TO FIELD VERIFY PLATE HEIGHTS.

3) 40-YR ARCHITECTURAL COMP. ROOF TO MATCH EXT'G.

VENTILATION CALCULATIONS:

VENTILATION TO BE 1/150 OF ROOF AREA PER R806.2

ROOF AREA = 822 SF
1/150 X 822 = 5.48 SF OF VENTILATION NEEDED

(8) 16"X8" VENTS PROVIDED = 7.1 SF

INFLOW VENTS PROVIDED O/ TOP PLATE AT EVERY OTHER TRUSS
(STAGGERED, 14 TOTAL) > 7.66 SQ. FT.

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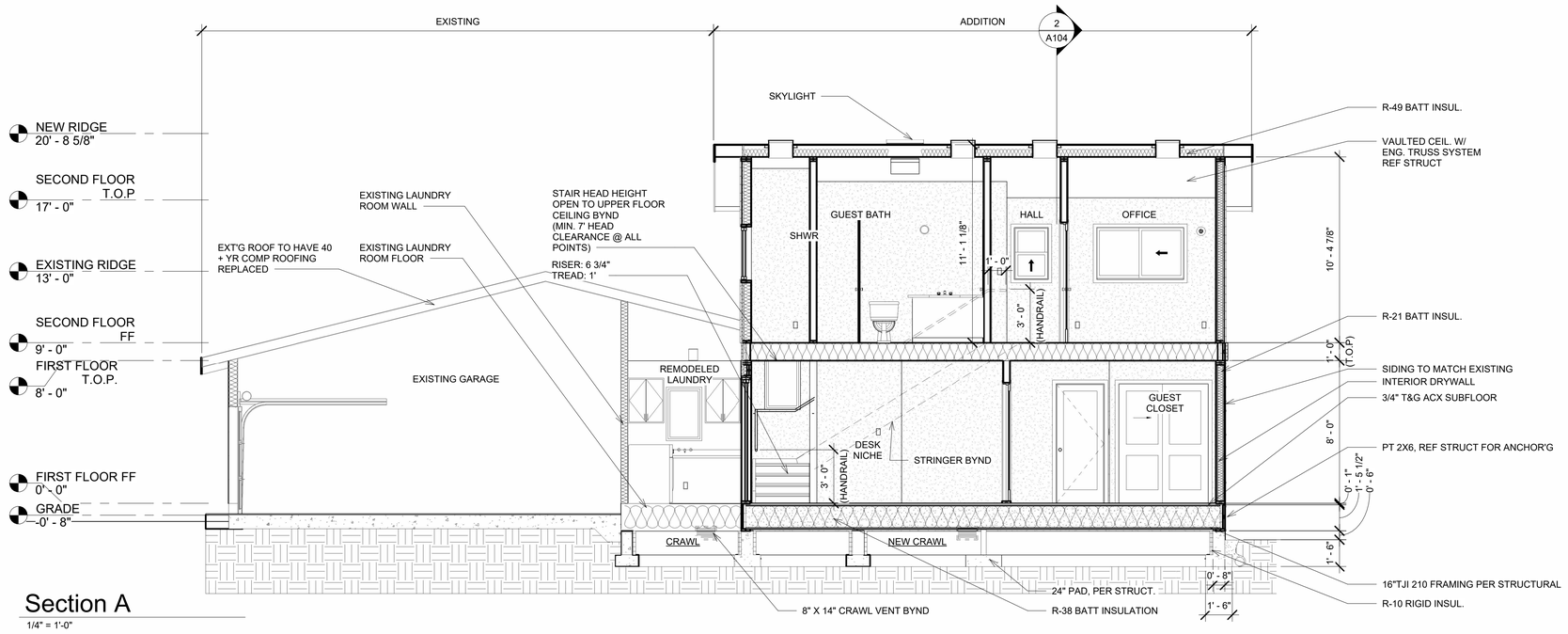
KOO & CHA ADDITION

ROOF PLAN

Project number	2025008
Date	08/23/2025
Drawn by	JVL
Checked by	BTH

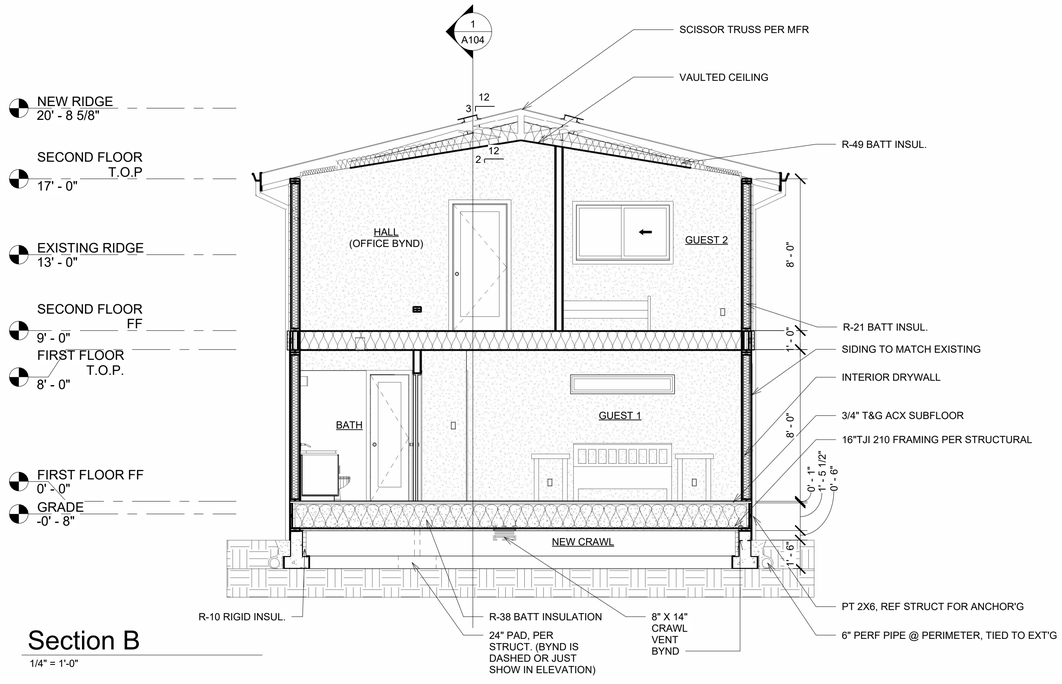
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Scale 1/4"=1'-0" U.N.O.



Section A

1/4" = 1'-0"



Section B

1/4" = 1'-0"

UNDERFLOOR VENTILATION
PER R408.2, THE OPENINGS FOR VENTILATION OF THE CRAWL SPACE MAY BE 1/1500 OF THE AREA OF THE SPACE, PROVIDED A CLASS I VAPOR RETARDER COVERS THE ENTIRE SPACE (6" OVERLAP W/ TAPED SEAMS AND 6" UP WALLS AT ALL EDGES

VENTILATION CALCULATION
UNDER-FLOOR AREA= 450 SF
1/1500 OF 450 = 0.3 SF
PROPOSED VENTILATION=2.5 SF (3 VENTS)

VENTILATION CALCULATION
UNDER-FLOOR AREA= 127. 13 SF
1/1500 OF 127.13 = 0.085 SF
PROPOSED VENTILATION=2.5 SF (3 VENTS)

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KOO & CHA ADDITION SECTIONS

Project number	2025008
Date	08/23/2025
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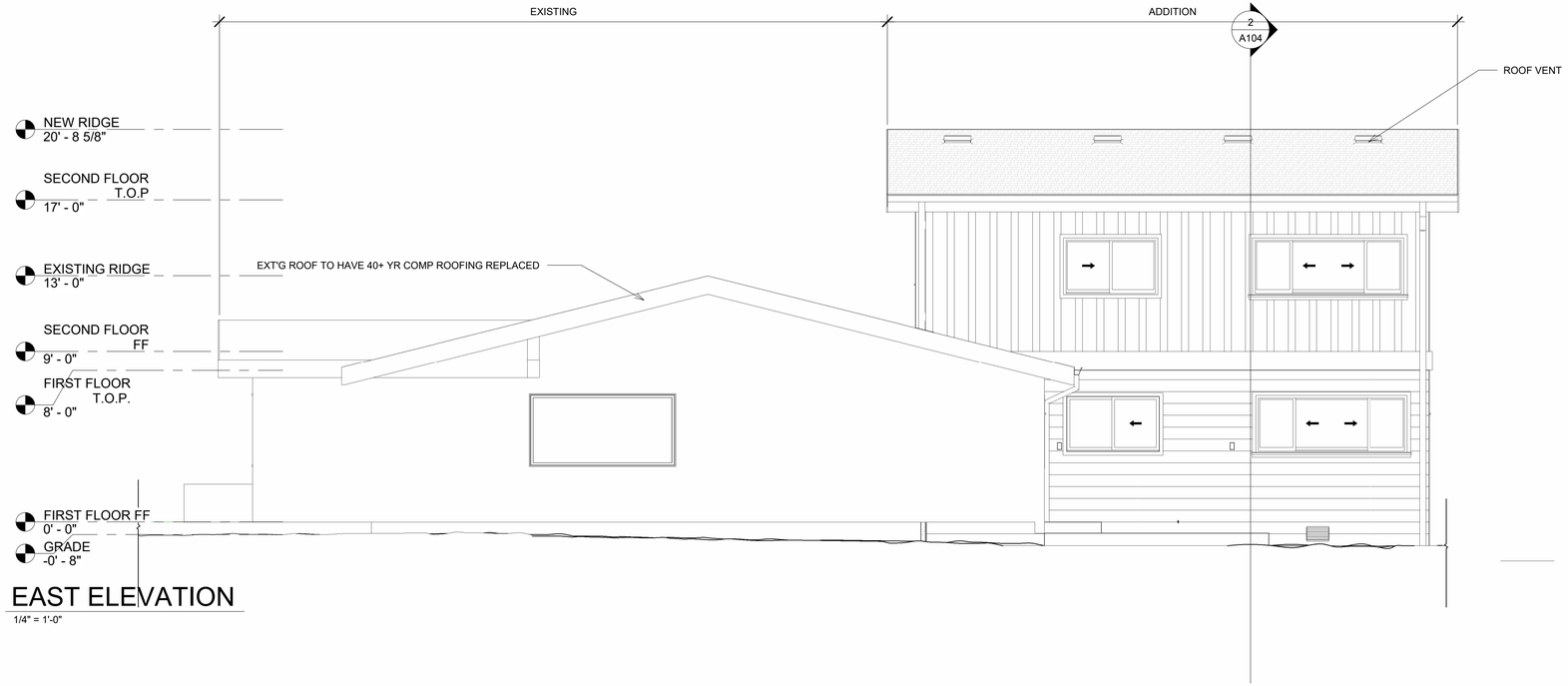
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NORTH ELEVATION

1/4" = 1'-0"



EAST ELEVATION

1/4" = 1'-0"

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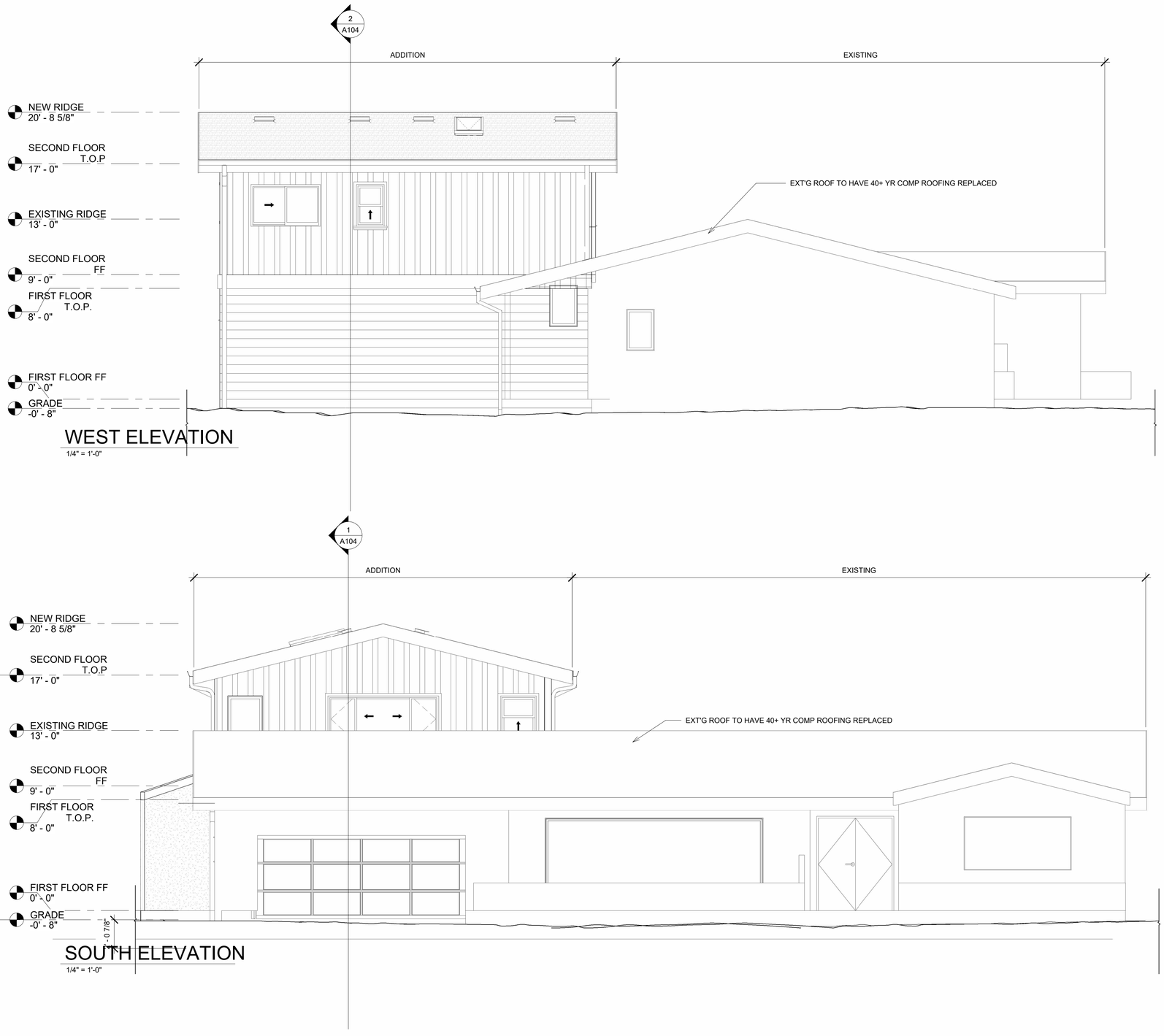
No.	Description	Date

KOO & CHA ADDITION ELEVATIONS

Project number	2025008
Date	08/23/2025
Drawn by	JVL
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Scale 1/4"=1'-0" U.N.O.



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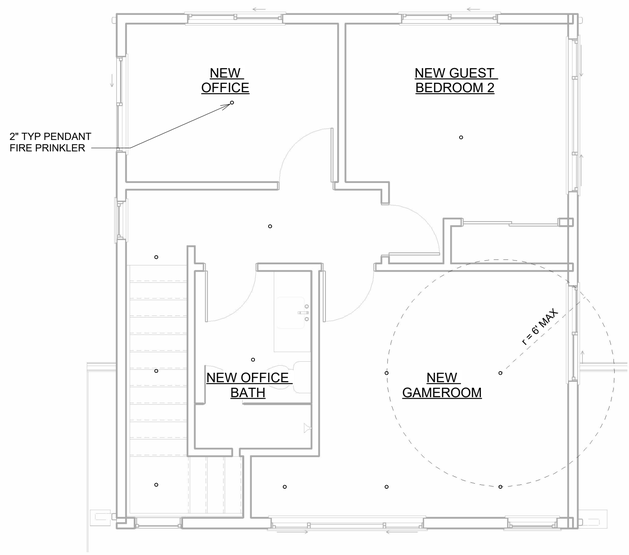
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FIRST FLOOR FIRE PLAN

1/4" = 1'-0"



SECOND FLOOR FIRE PLAN

1/4" = 1'-0"

FIRE SPRINKLER GENERAL NOTES

1. NFPA 13D Fire Sprinkler System in compliance with NFPA 13D and CoMI standards shall be installed throughout the residence. A separate FIRE permit is required.
2. SYSTEM IS DESIGNED TO CONTROL FIRE LONG ENOUGH FOR OCCUPANT ESCAPE AND IS NOT INTENDED TO FULLY EXTINGUISH A FIRE
3. WATER SUPPLY SHALL PROVIDE A MINIMUM OF **7 MINUTES** OF DISCHARGE
4. DESIGN FLOW SHALL BE BASED ON TWO MOST REMOTE SPRINKLER HEADS OPERATING SIMULTANEOUSLY AT 13 GPM EACH:

   TOTAL = **26 GPM**
5. REQUIRED VOLUME:

   26 GPM × 7 MINUTES = **182 GALLONS**

1. CALCULATION IS BASED ON A 2000 SF RESIDENCE, ADEQUATE FOR THE PROPOSED 1200 SF RESIDENCE
2. MAIN DISTRIBUTION LINES SHALL BE 1" DIAMETER MINIMUM
3. BRANCH LINES SHALL BE 1/2" DIAMETER MINIMUM
4. PIPE SIZE SHALL BE VERIFIED BY HYDRAULIC CALCULATIONS TO ENSURE ADEQUATE PRESSURE AND FLOW THROUGHOUT
5. SYSTEM SHALL MAINTAIN A MINIMUM OPERATING PRESSURE OF 7 PSI AT THE MOST REMOTE SPRINKLER
6. ALL SPRINKLER HEADS SHALL BE LOCATED WITHIN 6 FEET RADIUS OF VERTICAL SURFACES IN HABITABLE AREAS

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No.	Description	Date

KOO & CHA ADDITION

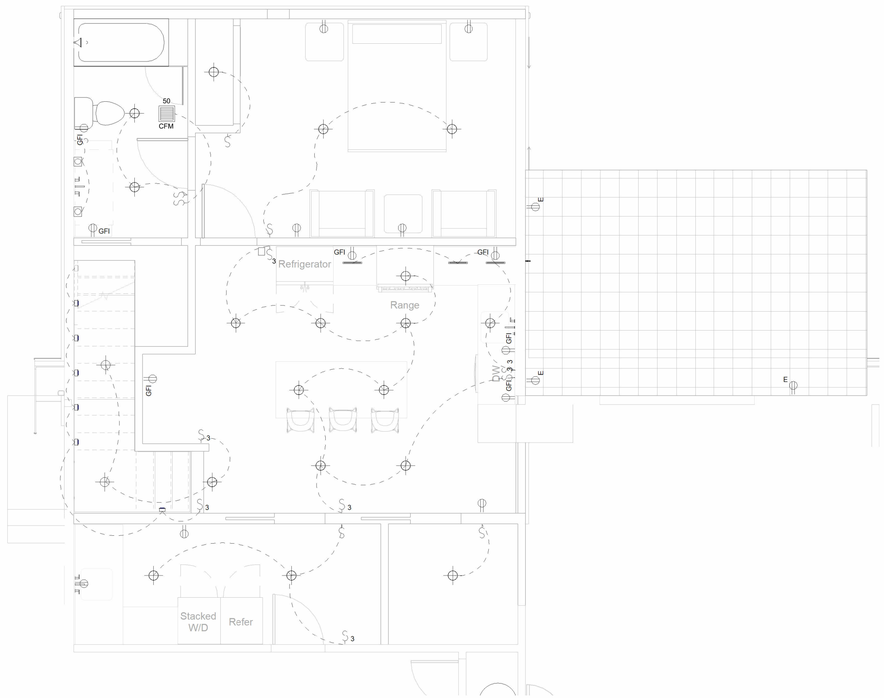
FIRE PLAN

Project number	2025008
Date	08/23/2025
Drawn by	jvl
Checked by	bth

A113

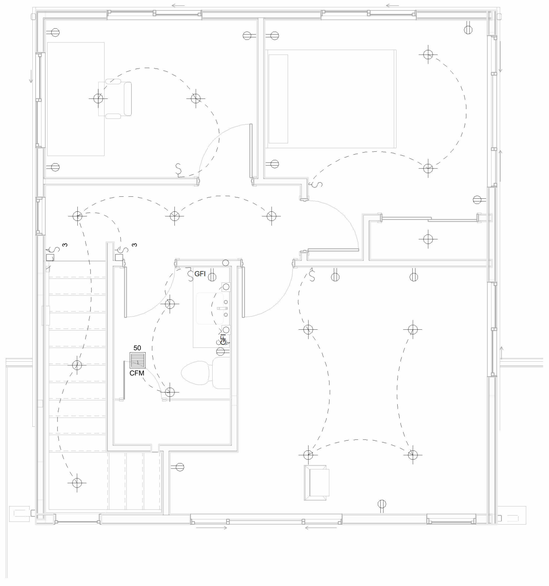
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FIRST FLOOR ELECTRICAL PLAN

1/4" = 1'-0"



SECOND FLOOR ELECTRICAL PLAN

1/4" = 1'-0"

ELECTRICAL SYMBOL KEY

- 4" RECESSED LED
- 120V RECEPTACLE
- E — GFI EXTERIOR
- GFI — GFI RECEPTACLE
- 240 — 240V RECEPTACLE
- EXHAUST FAN/LIGHT COMBO 50 CFM.
- S — SINGLE SWITCH
- 3 — 3 WAY SWITCH
- D — DIMMER SWITCH
- SD/CO — SMOKE DETECTOR / CARBON MONOXIDE
- SD — SMOKE DETECTOR
- RESTROOM BULB SCONCE
- PENDANT LIGHT
- GB — GARBAGE DISPOSAL
- 2 X 4 LED
- GARAGE DOOR OPENER
- WALL SCONCE
- T — THERMOSTAT
- 5 1/2" X 48" LED
- 50 CFM — EXHAUST FAN
- CABINET LIGHTS
- STAIRS LIGHTS

MECHANICAL NOTES

1. HVAC/MECHANICAL PERMIT TO BE DEFERRED SUBMITTAL BY MECHANICAL CONTRACTOR
2. NEW HVAC DEDUCTING TO BE TIED AS AN EXTENSION TO EXISTING HVAC DUCTWORK
3. HVAC TO BE DEDUCTED THROUGH CRAWLSPACE AND SECOND FLOOR FRAME.
4. ALL HVAC ENERGY AND OTHER SPECIFICATION TO BE COMPLIANT WITH THE INTERNATIONAL RESIDENTIAL CODE AND LOCAL CODES.
5. SEE WSEC NOTES FOR TYPE AND SIZING OF HVAC UNIT.

ELECTRICAL LEGEND

SMOKE ALARM PER R314 AS AMENDED & LISTED PER UL 217 AND NFPA 72. SMOKE ALARMS TO BE PROVIDED IN NEW DWELLING UNITS, AND WHERE ALTERATIONS, REPAIRS OR ADDITIONS REQUIRING A PERMIT OCCUR, OR WHERE ONE OR MORE SLEEPING UNITS ARE ADDED OR CREATED IN EXISTING DWELLINGS. WORK INVOLVING THE EXTERIOR SURFACES OF THE DWELLING, AND INSTALLATION, ALTERATION OR REPAIRS OF PLUMBING, ELECTRICAL OR MECHANICAL SYSTEMS ARE EXEMPT FROM THE REQUIREMENTS OF THIS SECTION. SMOKE ALARMS TO BE INTERCONNECTED EXCEPT WHERE ALTERATIONS OR REPAIRS DO NOT EXPOSE THE STRUCTURE UNLESS THERE IS AN ATTIC, CRAWL SPACE OR BASEMENT AVAILABLE FOR ACCESS. SMOKE ALARMS ARE TO BE POWERED BY THE BUILDING WIRING WITH BATTERY BACKUP. BATTERY POWER IS ALLOWED IN BUILDINGS WITHOUT COMMERCIAL POWER OR WHEN INSTALLED PER R314.2.2. SMOKE DETECTORS SHAL BE INSTALLED NOT LESS THAN 3 FT HORIZONTALLY FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAINS A TUB OR SHOWER. R314. IONIZATION SMOKE ALARMS: SHALL NOT BE INSTALLED LESS THAN 20 FT HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE. IONIZATION SMOKE ALARMS WITH AN ALARM-SILENCING SWITCH SHALL NOT BE INSTALLED LESS THAN 10 FT HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE. PHOTO ELECTRIC SMOKE ALARMS: SHALL NOT BE INSTALLED LESS THAN 6 FT HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE. R314.

CARBON MONOXIDE ALARM PER R315 AS AMENDED & LISTED PER UL 2034. COMBINATION CARBON MONOXIDE SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE w/ UL 2034 AND UL 217. INSTALL OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EACH LEVEL OF THE DWELLING AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE A FUEL BURNING APPLIANCE IS LOCATED WITHIN A BEDROOM OR ITS ATTACHED BATHROOM, A CARBON MONOXIDE ALARM SHALL BE INSTALLED WITHIN THE BEDROOM. CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WITH BATTERY BACKUP. CARBON MONOXIDE ALARMS MAY BE BATTERY POWERED IN BUILDINGS WITHOUT COMMERCIAL POWER OR WHEN INSTALLED DURING ALTERATIONS, REPAIRS AND ADDITIONS PER R315.2.2.

50 CFM MIN. EXHAUST FAN - VENT TO EXTERIOR.

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No.	Description	Date

KOO & CHA ADDITION
ELECTRICAL PLAN

Project number	2025008
Date	08/23/2025
Drawn by	JVL
Checked by	BTH

E101

Scale 1/4"=1'-0" U.N.O.

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SECTION 1

I. DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STRUCTURAL ENGINEERS WET SIGNATURE IS AFFIXED TO DRAWINGS.

II. ANY DISCREPANCIES IN THE DRAWINGS, NOTES AND SPECIFICATIONS SHALL BE REPORTED TO OWNERS REPRESENTATIVE FOR CLARIFICATION. THE CONTRACTOR SHALL VERIFY AND COORDINATE DIMENSIONS PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION.

III. THE CONTRACTOR IS RESPONSIBLE FOR ALL BRACING AND SHORING DURING CONSTRUCTION.

IV. CONTRACTOR TO SUBMIT A REQUEST TO ENGINEER/ARCHITECT FOR ANY SUBSTITUTION OF MATERIALS OR PRODUCTS SPECIFIED ON THE DRAWINGS.

V. THE FOLLOWING NOTES APPLY UNLESS SHOWN OTHERWISE

VI. THESE DRAWINGS HAVE BEEN PREPARED SOLELY FOR THE USE IN THE CONSTRUCTION OF A PROPOSED BUILDING TO WHICH THESE NOTES ARE ATTACHED. THE DRAWINGS SHALL NOT BE USED IN WHOLE OR IN PART, FOR FABRICATION OR CONSTRUCTION AT ANY OTHER LOCATION WITHOUT THE WRITTEN CONSENT OF THE ENGINEER

SECTION 2

CODE: INTERNATIONAL BUILDING CODE 2021 WITH MERCER ISLAND AND THE STATE OF WASHINGTON PROVISIONS

I. ROOF LOADING:

DEAD LOAD		20 PSF
SNOW LOAD		25 PSF
TOTAL LOAD		45 PSF

II. FLOOR LOADING:

DEAD LOAD	10 PSF
LIVE LOAD	40 PSF

III. 1500 PSF BEARING PRESSURE ASSUMED PER IBC TABLE 1804.2 CLASS 4 MATERIAL(S).

IV. SPECIAL INSPECTION REQUIRED

V. WIND LOADING: 98 MPH (3 SECOND GUST) EXPOSURE C, Kzt = 1.0. PER IBC FIGURE 1609

VI. SEISMIC LOADING: SEISMIC CATEGORY D, SITE CLASS Sd PER IBC. 35% SNOW LOAD USED IN SEISMIC DESIGN. SEISMIC DESIGN PARAMETERS AS FOLLOWS.

A. RISK CATEGORY: II
B. SEISMIC IMPORTANCE FACTOR, Ie: 1.0
C. MAPPED RESPONSE PARAMETERS, Ss & S1: Ss=1.41, S1=0.491
D. SITE CLASS: D
E. DESIGN RESPONSE PARAMETERS, Sds & Sd1: Sds=1.12 Sd1=0.59
F. SEISMIC DESIGN CATEGORY: D
G. SEISMIC RESPONSE COEFICIENT(s), Cs: 0.17g WHEN R=6.5
H. RESPONSE MODIFICATION COEFFICIENT(s), R: R=6.5 (LIGHT FRAME WOOD SHEAR WALLS)

SECTION 3 – CONCRETE

I. GENERAL REQUIREMENTS

STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI. (VALUE USED FOR DESIGN = 2,500 PSI) MINIMUM CEMENT CONTENT SHALL BE 5 SACKS/CU.YD. MAXIMUM SIZE AGGREGATE SHALL BE 3/4" SLUMP NOT TO EXCEED 4".

II. CAST IN PLACE CONCRETE

A. CONCRETE FORM WORK TO BE OF ADEQUATE SIZE AND STRENGTH. PROPERLY BRACED TO PREVENT SAGGING OR BULGING. PROTECT ALL CONCRETE FROM EXCESSIVE TEMPERATURES. REFER TO DRAWING FOR DIMENSIONS OF CONCRETE MEMBERS AND SIZE AND LOCATION OF ALL ENFORCEMENT.

B. FOOTINGS

NO FOOTING SHALL BE PLACED ON DISTURBED SOIL (IF DISTURBED, COMPACT SOIL IN 6" LIFTS TO 90% OF MAXIMUM DRY DENSITY PER ASTM D1557). FOOTINGS SHALL BE STEPPED DOWN ONE (1) VERTICALLY TO ONE AND ONE HALF (1–1/2) HORIZONTALLY.

C. FOUNDATION WALLS

REINFORCE PER DRAWINGS. DO NOT BACKFILL WALLS UNTIL MAIN FLOOR IS FRAMED AND SHEATHED AND CONCRETE HAS CURED A MINIMUM OF 7 DAYS. USE HAND OPERATED COMPACTION EQUIPMENT ADJACENT TO NEWLY PLACED CONCRETE BASEMENT WALLS.

D. CONCRETE PADS AND THICKENED SLABS

REFER TO DRAWINGS AS TO SIZE AND REINFORCEMENT.

E. CONCRETE SLABS

SLABS ON GRADE, AS NOTED ON THE DRAWINGS, TO BEAR ON 6" COMPACTED GRAVEL BASE.

F. REINFORCEMENT

1. TYPICAL REINFORCEMENT SHALL BE ASTM A615, GRADE 60 FOR ALL BARS. ALL REBAR LAPPED 30 TIMES BAR DIAMETER OR 24" WHICHEVER IS GREATER. REBAR AT FOOTING TO HAVE 3" CLEAR COVER WHEN CAST AGAINST EARTH, 2" WHERE EXPOSED TO AIR OR BACKFILL (U.N.O. ON DRAWING). PROVIDE CORNER BARS WITH 18" LEGS AT THE CORNERS OF ALL WALL AND FOOTINGS, SIZE AND PLACEMENT TO MATCH HORIZONTAL REINFORCEMENT.

2. DEFORMED NONPRESTRESSED LONGITUDINAL REINFORCEMENT RESISTING EARTHQUAKE–INDUCED MOMENT, AXIAL FORCE, OR BOTH, IN SPECIAL MOMENT FRAMES, SPECIAL STRUCTURAL WALLS, AND ALL COMPONENTS OF SPECIAL STRUCTURAL WALLS INCLUDING COUPLING BEAMS AND WALL PIERS SHALL BE ASTM A706, GRADE 60 FOR ALL BARS.

G. ANCHOR BOLTS

ANCHOR BOLTS TO BE ASTM A307, 1/2" x 10" EMBEDDED IN FOUNDATION WALLS @ 48" O.C. (MAX) U.N.O. (SEE FOUNDATION PLAN FOR REQUIREMENTS AT SHEAR WALL). BOLTS TO BE WITHIN 12" (MAX.) & 4" (MIN) TO ENDS OF SILL PLATES (COORDINATE WITH GENERAL CONTRACTOR) MINIMUM OF TWO ANCHOR BOLTS PER SILL PLATE

1. ALL POSTS SUPPORTED BY ISOLATED FOOTINGS TO HAVE POST ANCHORS UNLESS BRACED IN STUD WALLS.

2. REFER TO DRAWINGS FOR HOLDOWN REQUIREMENTS. INSTALL REQUIRED EMBEDDED ITEMS PER MANUFACTURER'S CATALOG TO ENGAGE HOLDOWNS

3. 0.229"x3"x3" SQUARE STEEL PLATE WASHERS SHALL BE PLACED BETWEEN SILL PLATE AND NUT PER IBC 2308.3.1.1.

4. ⅝"ø TITEN ANCHORS w/ 5" EMBED w/ SQ PL 0.229"x3"x3" CAN BE SUBSTITUTED FOR CAST IN PLACE A.BOLTS

H. CONSTRUCTION AND CRACK CONTROL JOINTS

ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE DUST, CHIPS AND OTHER FOREIGN MATERIAL PRIOR TO PLACING ADJACENT CONCRETE. CRACK CONTROL JOINTS IN SLABS SHALL HAVE A MAXIMUM SPACING OF 14'–0" IN BOTH DIRECTIONS AND AT RE–ENTRANT CORNERS.

J. VAPOR BARRIER

VAPOR BARRIER TO BE 10 MIL POLYETHYLENE SHEET PLACED ON UNDISTURBED SOIL. VAPOR BARRIER UNDER SLAB ON GRADE IF REQUIRED, IF SLAB WILL HAVE FLOOR COVERING APPLIED, PLACED ON COMPACTED GRAVEL WITH POLYETHYLENE VAPOR BARRIER AND CONCRETE.

K. EMBEDDED ITEMS FOR HD TYPE HOLDOWNS TO BE ASTM A307 HEX HEADED BOLT IN THE DIAMETER AS SPECIFIED BY THE MANUFACTURER FOR THE HD. ALL BOLTS TO HAVE 3" MIN. CONCRETE SIDE COVER. EMBEDDMENT DEPTHS ARE 15" FOR BOLTS UP TO AND INCLUDING 3/4" DIA, 24" DEPTH FOR BOLTS OVER 3/4". TYPICAL REINFORCEMENT TO PASS UNINTERRUPTED ALONGSIDE HOLDOWN AS APPLICABLE COUPLER NUTS MAY BE USED TO EXTEND THE HOLDOWN ANCHOR THROUGH THE FLOOR PLATE TO THE SHEAR WALL CHORD.

L. EPOXY ANCHORS

EPOXY GROUTED ANCHORS SHALL CONFORM TO SIMPSON CO. ET EPOXY–TIE ADHESIVE FOR TEMPERATURES ABOVE 40 F, ET22C. EPOXY–TIE ADHESIVE FOR TEMPERATURES OF 25° F TO 40° F OR ENGINEER APPROVED EQUIVALENT. INSTALL PER MANUFACTURER'S INSTRUCTIONS, WIRE BRUSH AND BLOW OUT HOLES.

SECTION 4 – FRAMING LUMBER

I. SAWN STRUCTURAL LUMBER

A. SAWN LUMBER SHALL BE DOUGLAS FIR–LARCH (DF–L) NO. 1 (U.N.O.). STUD GRADE MAY BE USED FOR STUDS.

B. WOOD IN CONTACT WITH CONCRETE AND WITHIN 8" OF GRADE SHALL BE PRESSURE TREATED. WOOD IN CONTACT WITH THE INTERIOR FACE OF STEM WALLS AND BELOW GRADE SHALL BE PRESSURE TREATED. WOOD SLEEPERS AND SILLS IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED. PROVIDE MILD STEEL PLATE WASHERS AT ALL BOLT HEADS AND NUTS BEARING ON WOOD.

C. METAL HANGERS AND CONNECTORS SHALL BE FULLY NAILED OR BOLTED UNLESS OTHERWISE NOTED ON THE DRAWINGS. METAL HANGERS OR CONNECTORS SHOWN ON THE DRAWINGS SHALL BE MANUFACTURED BY SIMPSON COMPANY. METAL HANGERS OR CONNECTORS BY OTHER MANUFACTURES MAY BE CONSIDERED WHERE LOAD CAPACITY AND DIMENSIONS ARE EQUAL OR BETTER. ALL SUBSTITUTIONS MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW.

D. PROVIDE SOLID BLOCKING BELOW ALL BEARING WALLS. PROVIDE SOLID VERITCAL BLOCKING IN FLOOR SPACE TO MATCH STUD BUNDLE OR SOLID COLUMN ABOVE AND BELOW. VERTICAL BLOCKING AT WOOD "I" JOISTS SHALL BE 1/16" LONGER THAN JOIST IS DEEP. MINIMUM POST TO BE TWO 2x STUDS BEARING AT EACH END OF HEADER U.N.O. FOR BEAMS FRAMING PERPENDICULAR TO BEARING WALLS PROVIDE FULL WIDTH BEAM POCKET WITH FILLER AS REQUIRED AND KING STUD BOTH SIDES. STITCH STUD BUNDLES TOGETHER WITH 16d COMMON @ 18" O.C. MAXIMUM (U.N.O.) WHERE FLOOR BEAMS ARE FRAMED FLUSH WITHIN FLOOR AND TOP FLANGE HANGERS ARE SPECIFIED. BEAMS ARE TO BE BLOCKED UP TO JOIST HEIGHT WITH FULL WIDTH DF–L SPACER AS REQUIRED.

II. STRUCTURAL GLUED–LAMINATED TIMBER

ALL GLUED–LAMINATED TIMBER SHALL BE COMBINATION 24F–V4 FOR SIMPLY SUPPORTED BEAMS, COMBINATION 24F–V8 FOR BEAMS CONTINUOUS OVER SUPPORTS, AND COMBINATION L2 FOR COLUMNS (U.N.O.) FABRICATION TO BE IN ACCORDANCE WITH AITC A190.1 AND ASTM D3737, PROVIDE WET–USE ADHESIVES MAXIMUM MOISTURE CONTENT SHALL BE 15%. PROVIDE MILD STEEL PLATE WASHERS AT ALL BOLT HEADS AND NUTS BEARING ON WOOD. WOOD BEARING ON OR WITH 1" OF MASONARY OR CONCRETE SHALL BE TREATED WITH AN APPROVED PRESERVATIVE. SEAL END GRAIN OF ALL EXTERIOR EXPOSED BEAMS INCLUDING NON–LOAD BEARING ARCHITECTURAL BEAMS.

III. WOOD SHEATHING

A. ALL WOOD SHEATHING SHALL BE RATED EXPOSURE 1, APA RATED "SHEATHING" WITH THICKNESS, VENEER GRADES AND SPAN RATING AS SHOWN HEREIN OR ON DRAWINGS.

1. ROOF SHEATHING
19/32" WITH MINIMUM (40/20) SPAN RATING

2. EXTERIOR WALL AND SHEAR WALL SHEATHING
15/32" WITH MINIMUM (24/0) SPAN RATING

B. ROOF AND FLOOR SHEATHING TO BE LAID UP WITH FACE GRAIN PERPENDICULAR TO SUPPORTS AND END JOINTS STAGGERED 4'–0" O.C. INSTALL ROOF SHEATHING WITH 1/8" SPACE AT ALL PANEL EDGES. NAIL ROOF SHEATHING WITH 10d @ 6" O.C. AT SUPPORTED PANEL AND 12" O.C. AT INTERMEDIATE FRAMING, FLOOR SHEATHING WITH 10d @ 6" O.C. AT SUPPORTED PANEL EDGES AND 10" O.C. FIELD, U.N.O. HOLES ARE NOT PERMITTED IN DIAPHRAMS UNLESS REVIEWED BY ENGINEER.

C. NAIL EXTERIOR WALL SHEATHING WITH 8d @ 6" O.C. EDGES AND 12" O.C. FIELD, U.N.O. IN SHEARWALL SCHEDULE OFFSET VERTICAL JOINTS 4'–0" O.C. INSTALL WITH 1/8" GAP AT BUTT ENDS.

IV. WOOD SHEARWALLS

1. NO. 16 GAUGE STAPLES WITH MINIMUM 7/16" OF CROWN AND 1–1/2" LENGTH MAY BE USED AS 3 STAPLES FOR 2 NAILS IN LIEU OF 8d NAILS. WHERE SUBSTITUTING FOR 10d NAILS USE 2 STAPLES FOR EACH NAIL.

2. WHERE PLYWOOD PANELS ARE APPLIED TO BOTH SIDES OF SHEARWALL, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS, OR FRAMING MEMBERS SHALL BE 3" (NOMINAL) WIDE AND NAILS ON EACH SIDE SHALL BE STAGGERED.

3. ALLOWABLE SHEAR VALUES IN SHEARWALL TABLE ARE FOR DOUGLAS FIR FRAMING MEMBERS (GROUP II). NO SUBSTITUTION OF LESSER GROUPS WILL BE ALLOWED. FASTENERS EXPOSED TO WEATHER SHALL BE ZINC COATED BY HOT DIP GALVANIZING, MECHANICALLY DEPOSITED, OR ELECTRO–DEPOSITED.

SECTION 5 SPECIAL INSPECTION

SPECIAL INSPECTION, AS SPECIFIED IN CHAPTER 17, SECTION 1704, 1705 OF THE 2018 IBC, IS REQUIRED AS NOTED FOR THE FOLLOWING ITEMS. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE TO THE SPECIAL INSPECTOR PRIOR TO INSPECTION.

I. CONCRETE CONSTRUCTION
PER IBC 1705.3 SPECIAL INSPECTION NOT REQUIRED FOR:
– ISOLATED SPREAD CONCRETE FOOTING OF BUILDINGS THREE STORIES OR LESS THAT ARE FULLY SUPPORTED ON EARTH OR ROCK PER EXCEPTION 1.
– CONTINUOUS CONCRETE FOOTINGS SUPPORTING WALLS OF BUILDINGS THREE STORIES OR LESS ABOVE THE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK, WHICH SUPPORT LIGHT FRAME CONSTRUCTION OR WHERE THE SPECIFIED F'C USED IN THE DESIGN OF THE CONCRETE IS NOT MORE THAN 2500 PSI PER EXCEPTION 2.1 OR 2.2.
– NONSTRUCTURAL SLABS SUPPORTED DIRECTLY ON GROUND PER EXCEPTION 3.
– CONCRETE FOUNDATION WALLS CONSTRUCTED IN ACCORDANCE WITH TABLE 1807.1.6.2 PER EXCEPTION 4.
– CONCRETE PATIOS, DRIVEWAYS AND SIDEWALKS ON GRADE PER EXCEPTION 5.
PER SECTION 1705.3 SPECIAL INSPECTION REQUIRED PER TABLE 1705.3
1. REINFORCING AR WELDING, PERIODICALLY VERIFY WELDABILITY OF REINFORCING BAR OTHER THAN A706, INSPECT SINGLE PASS WELD, MAX ⅝"– REQUIRED FOR THE ANCHOR RODS AT THE BUILDING COLUMNS. CONTINUOUSLY INSPECT ALL OTHER WELDS THEN NOTED ABOVE.
2. ANCHORS CAST IN CONCRETE – PERIODICALLY INSPECT
3. POST INSTALLED ANCHORS– CONTINUOUSLY INSPECT ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR UPWARDLY INCLINED. PERIODICALLY INSPECT ALL OTHER ANCHORS.
4. DESIGN MIX – PERIODICALLY INSPECT REQUIRED DESIGN MIX USED.
5. PRIOR TO CONCRETE PLACEMENT CONTINUOUSLY INSPECT SPECIMENS MADE FOR STRENGTH TESTS, PERFORM SLUMP AND AIR TESTS AND TEMPERATURE OF THE CONCRETE.
6. CONCRETE AND SHOT–CRETE PROPER APPLICATION TECHNIQUES. INSPECT ON A PERIODIC BASIS.–
7. MAINTENANCE OR SPECIFIED CURING TEMPERATURE AND TECHNIQUES – PERIODIC INSPECTION.
8. FORMWORK SHAPE, LOCATION AND DIMENSIONS INSPECT ON A PERIODIC BASIS

II. WOOD CONSTRUCTION
1. PER SECTION 1705.11 PERIODIC SPECIAL INSPECTION IS REQUIRED FOR ELEMENTS OF THE MAIN WIND FORCE RESISTING SYSTEM FOR NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF ELEMENTS OF THE MAIN WIND FORCE RESISTING SYSTEM (INCLUDING SHEAR WALLS, DIAPHRAGMS, DRAG STRUTS, BRACES AND HOLD DOWNS. – EXCEPTION. NOT REQUIRED FOR ELEMENTS THAT HAVE A NAIL OF SPACING GREATER THAN 4 INCHES ON CENTER.

KEVIN M. MURAR
STATE OF WASHINGTON
36351
REGISTERED
PROFESSIONAL ENGINEER

EXPIRES 5/18/2026

STRUCTURAL SPECIFICATIONS

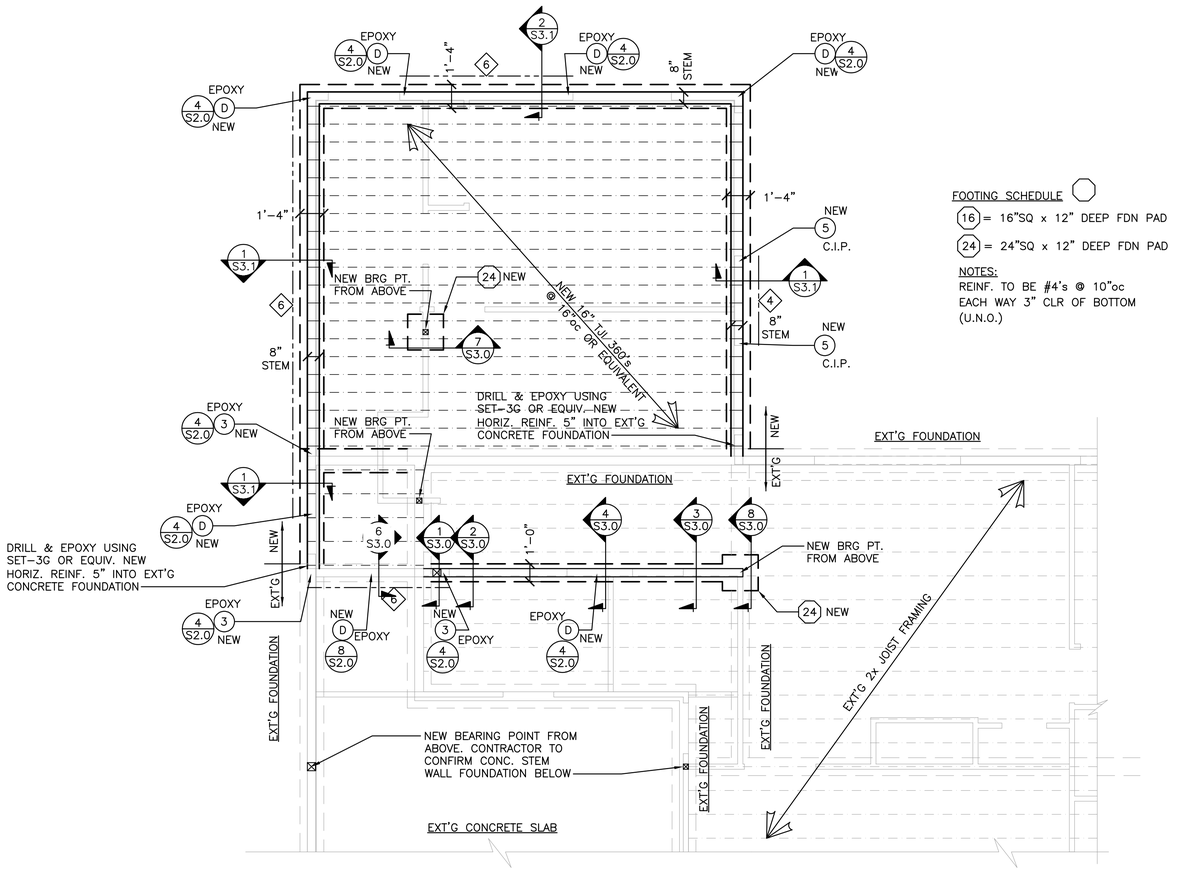
REVISION	DATE
FOR PERMIT	2025/AUGUST/8

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FILE NAME	C:\...\2025...ANNEX...CHA &...
SCALE	1/4" SCALE
SHEET	S0.0

STRUCTURAL SPECIFICATIONS



FOOTING SCHEDULE

(16) = 16"SQ x 12" DEEP FDN PAD

(24) = 24"SQ x 12" DEEP FDN PAD

NOTES:
REINF. TO BE #4's @ 10"oc EACH WAY 3" CLR OF BOTTOM (U.N.O.)

HOLD DOWN SCHEDULE

(CB) = CMSTC16 TO BELOW. SEE DETAIL 9/S4.0

(CA) = CMSTC16 ATTACHING DBL 2x STUDS ABOVE & DBL 2x STUDS BELOW RIM BOARD AT FLOOR ON THIS LEVEL, STRAP MAY TERMINATE AROUND BEAM, SEE PLAN. SEE TYPICAL STRAP CONN. DETAILs 9 & 10/S2.0

(D) = DTT2Z W/ CAST IN PLACE A.BOLT OR EPOXY SEE DETAILS 4 & 8/S2.0

(3) = HDUE3 W/ CAST IN PLACE A.BOLT OR EPOXY SEE DETAILS 4 & 8/S2.0

(5) = HDU5 W/ CAST IN PLACE A.BOLT. CAN NOT EPOXY. SEE 3/S2.0

NOTE:
C.I.P. = CAST IN PLACE A.BOLTS
EPOXY = HOLD DOWN RODS ALLOWED TO BE EPOXIED SEE DETAILS 4 & 8/S2.0 FOR ADDT'L SPECS.

FOUNDATION NOTES

1. THE ENGINEER HAS PREPARED THIS DRAWING BASED ON THE DIMENSIONS, ELEVATIONS AND TOP OF CONCRETE PROVIDED BY THE ARCHITECT/DESIGNER. IT REMAINS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS ELEVATIONS AND TOP OF CONCRETE PRIOR TO COMMENCING CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL WORK MATERIALS AND SAFETY IN CONFORMANCE WITH INTERNATIONAL BUILDING CODE (IBC) AND OSHA STANDARDS.
3. FRAMING CONDITIONS MAY DEVELOP DURING CONSTRUCTION FOR WHICH NO SPECIFIC DETAIL OR TYPICAL CONSTRUCTION APPLIES. NOTIFY ENGINEER PRIOR TO PROCEEDING IF UNCLEAR.
4. ALIGN HOLD DOWNS WITH END OF SHEARWALL STUDS ABOVE. ATTACH TO DOUBLE STUDS UNLESS NOTED OTHERWISE (UNO). USE HOLD DOWN EMBED AND PLACEMENT PER MANUFACTURER.
5. DO NOT BACKFILL WALL UNTIL FLOOR IS FRAMED AND SHEATHED AND CONCRETE HAS CURED 7 DAYS (MINIMUM).
6. ANCHOR BOLTS (½"ø EMBED 7") SHALL BE PLACED A MAXIMUM SPACING OF 48"oc ANCHOR BOLTS TO BE INSTALLED 12" FROM ENDS. TWO ANCHOR BOLTS MINIMUM ARE REQUIRED PER SILL. ANCHOR BOLTS AT SHEAR WALLS PER SHEAR WALL SCHEDULE.
7. ½"ø w/ 5" EMBED TITEN HD SCREW ANCHORS CAN BE SUBSTITUTED FOR ANCHOR BOLTS
8. ALL WOOD IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED FIR.
9. ALL POSTS FROM THE UPPER LEVELS MUST BE ALIGNED WITH, AND MATCH THE POSTING BELOW TO THE FOUNDATION UNLESS TRANSFERRED.
10. SEE DRAWING SHEETS S2 SERIES FOR GENERAL DETAILS NOT CALLED OUT HERE.

ABBREVIATION LIST

° – DEGREE
Ø – DIAMETER
A.B. – ANCHOR BOLT
ARCH – ARCHITECT
APA – AMERICAN PLYWOOD ASSOCIATION
BLK'G – BLOCKING
BM – BEAM
BOT – BOTTOM
C.I.P. – CAST IN PLACE
CLR – CLEAR
COL – COLUMN
CONT – CONTINUOUS
D.F. – DOUGLAS FIR
DIM – DIMENSION
EA – EACH
E.W. – EACH WAY
EXT – EXTERIOR
FDN – FOUNDATION
FRMG – FRAMING
FT – FOOT, FEET
FTG – FOOTING
FND – FOUNDATION
GWB – GYPSUM BOARD
HD – HOLD DOWN
HDR – HEADER
HORIZ – HORIZONTAL
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N.T.S. – NOT TO SCALE
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U.N.O. – UNLESS NOTED OTHERWISE
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SHEAR WALL SCHEDULE (#)

WHERE PANELS ARE APPLIED ON BOTH FACES OF A SHEAR WALL AND NAIL SPACING IS LESS THAN 6"oc ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. ALTERNATIVELY, THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS SHALL BE 3" NOMINAL OR GREATER AT ADJOINING PANEL EDGES AND NAILS AT ALL PANEL EDGES SHALL BE STAGGERED. SPACING OF ANCHOR BOLTS TO BE HALVED WHEN PANELS ARE APPLIED ON BOTH FACES OF A SHEAR WALL.

SHEAR WALL MARK	SHEATHING MATERIAL	FIELD NAILING[3]	EDGE NAILING[3]	BOTTOM PLATE	STUDS AT EDGE NAILING	ANCHOR BOLT[4]
(6)	15/32" SHT'G	8d's @ 12"oc	8d's @ 6"oc	2x	2x	½"x10" @ 48"oc
(4)[2A]	15/32" SHT'G	8d's @ 12"oc	8d's @ 4"oc	2x	3x	½"x10" @ 27"oc

NOTE
1. ALL SHEAR WALLS LISTED MAY NOT BE USED ON THIS PROJECT.
2. DOUBLE STUDS AND DOUBLE PLATES MAY BE SUBSTITUTED FOR 3x STUDS
   A. WHEN 8d NAILS OR STAPLES ARE SPACED AT 3" OR LESS, EDGE & PANEL SPLICE MEMBERS TO BE 3x FRAMING MEMBERS OR DOUBLE STUDS.
3. NAILS OR STAPLES
   A. 8d's = 2½"x0.131" COMMON OR 2¾"x0.113" GALVANIZED BOX NAILS, 1½" 16 GAUGE STAPLES
   B. 1½" 16 GAUGE STAPLES CAN BE SUBSTITUTED FOR 8d COMMONS OR 8d BOX NAILS WITH (3) STAPLES FOR EVERY (2) 8d's.
   C. STAPLES TO HAVE 7/16" MIN CROWN WIDTH AND INSTALLED WITH THEIR CROWNS PARALLEL TO THE LONG DIM OF THE FRAMING MEMBER.
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   A. 0.229"x3"x3" SQUARE STEEL PLATE WASHERS SHALL BE PLACED BETWEEN SILL PLATE AND NUT PER IBC 2308.3.1.1
   B. ½"ø w/ 5" EMBED TITEN HD SCREW ANCHORS w/ SQ PL 0.229"x3"x3" CAN BE SUBSTITUTED FOR ANCHOR BOLTS
   C. THE EDGE OF THE SQ PL WASHER SHALL BE PLACED PARALLEL WITHIN ½" OF THE SHEATHING AT SHEAR WALLS.
   D. SQ PL WASHERS w/ 11/16"x1¾" MAXIMUM DIAGONAL SLOT MAY BE USED IF A STANDARD CUT PL WASHER IS PLACED BETWEEN THE NUT AND THE SQ PL WASHER.
5. STUDS AT ENDS OF SHEAR WALLS TO BE PER HOLD DOWN REQUIREMENTS.

NEW & EXISTING FOUNDATION PLAN

SCALE 1/4" = 1'-0"

0 1 2 3 4 5 10 15

NORTH

KEVIN M. MURAR STATE OF WASHINGTON 36351 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 5/18/2026

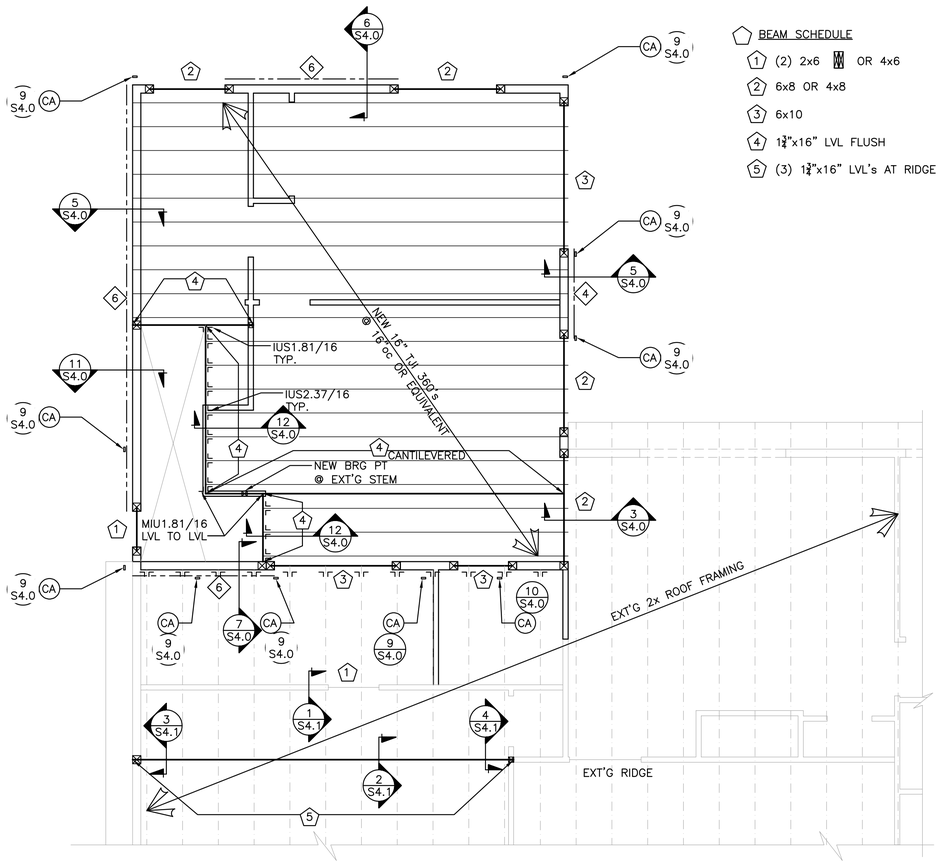
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NEW & EXISTING FOUNDATION PLAN

CHA & KOO REMODEL
3818 83rd AVE SE
MERCER ISLAND, wa 98040

DESIGNED BY
EMJ
FILE NAME
C:\...\2025...ANNEX...CHA &...
SCALE
1/4" SCALE
SHEET
S1.0



BEAM SCHEDULE

1. (2) 2x6 OR 4x6
2. 6x8 OR 4x8
3. 6x10
4. 1¾"x16" LVL FLUSH
5. (3) 1¾"x16" LVL's AT RIDGE

HOLD DOWN SCHEDULE

(CB) = CMSTC16 TO BELOW. SEE DETAIL 9/S4.0

(CA) = CMSTC16 ATTACHING DBL 2x STUDS ABOVE & DBL 2x STUDS BELOW RIM BOARD AT FLOOR ON THIS LEVEL, STRAP MAY TERMINATE AROUND BEAM, SEE PLAN. SEE TYPICAL STRAP CONN. DETAILs 9 & 10/S2.0

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2. REFER TO LATERAL BRACING PRIOR TO FRAMING
3. PROVIDE (2) STUDS UNDER ALL BEARING POINTS U.N.O. PROVIDE SOLID BLOCKING AT ALL POINT LOADS TO FOUNDATION. SOLID BLOCK BETWEEN ALL FLOOR CAVITIES, MATCHING COLUMN SIZE ABOVE.
4. UNLESS OTHERWISE NOTED, PROVIDE (1) KING STUD AND (1) TRIMMER AT EACH SIDE OF ALL OPENINGS.
5. TRUSS–TO–TRUSS CONNECTIONS PROVIDED BY TRUSS MFR. TRUSS MFR. SHALL VERIFY ALL DIMENSIONS OFF OF FDN PLAN AND FLOOR PLAN PRIOR TO TRUSS FABRICATION AND NOTIFY ENGINEER OF ANY LAYOUT CHANGES.
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SECOND FLOOR & EXISTING ROOF FRAMING PLAN

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NORTH

KELVIN M. MURAR — STATE OF WASHINGTON — 36351 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 5/18/2026

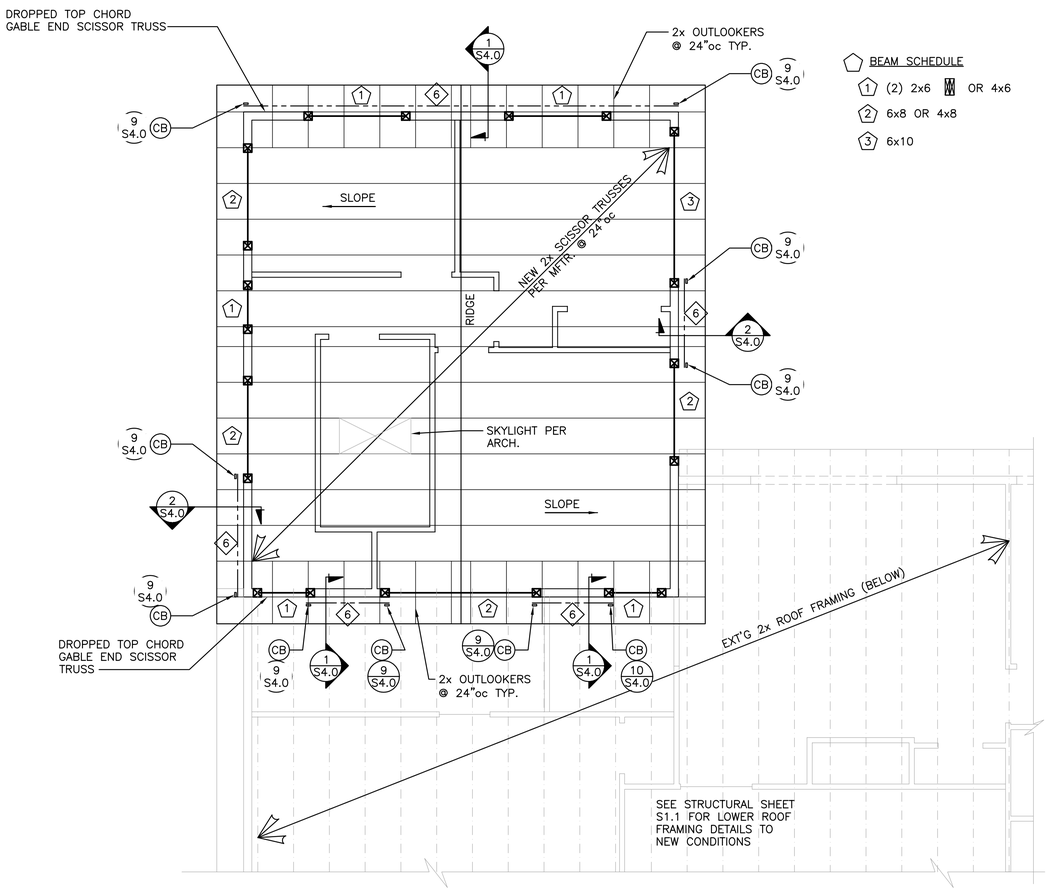
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CHA & KOO REMODEL
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MERCER ISLAND, wa 98040

DESIGNED BY: EMJ
FILE NAME: C:\...\2025...ANNEX...CHA &...
SCALE: 1/4" SCALE
SHEET: S1.1



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KEVIN M. MURAR
STATE OF WASHINGTON
36351
REGISTERED
PROFESSIONAL ENGINEER
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NORTH

UPPER ROOF FRAMING PLAN

SCALE 1/4" = 1'-0"

0 1 2 3 4 5 10 15

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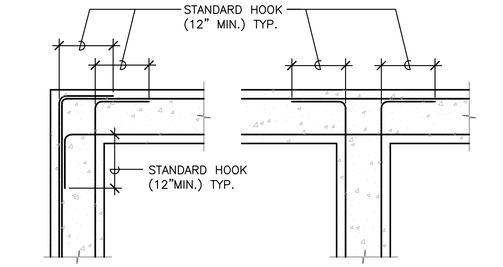
CHA & KOO REMODEL
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DESIGNED BY
EMJ

FILE NAME
C:\...\2025...ANNEX...CHA &...

SCALE
1/4" SCALE

SHEET
S1.2



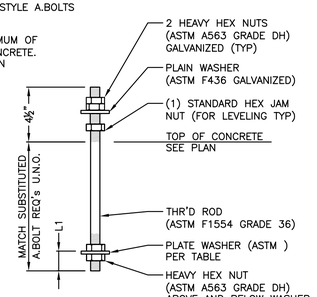
COND. AT CORNER COND. AT INTERSECTION

NOTE:
IF SUBSTITUTING PAB ANCHOR BOLTS WITH THR'D ROD SHOWN, THR'D ROD LENGTH AND EMBED LENGTH TO MATCH MFTR REQ'S FOR PAB STYLE A.BOLTS

NOTE:
GALVANIZED TO A MINIMUM OF 3" BELOW TOP OF CONCRETE. STEEL GRADE PER PLAN

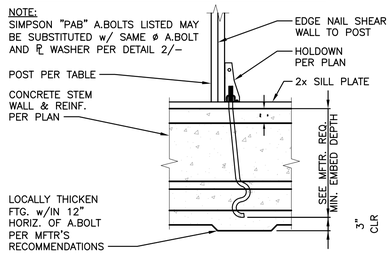
NOTE:
SET ANCHOR BOLTS WITH TEMPLATE OF BASE PLATE.

PLATE WASHER TABLE		
BOLT ø	L1	PLATE WASHER SIZE
½"	1⅛"	⅜"x1½"x1½"
⅝"	1⅜"	½"x1¾"x1¾"
¾"	1½"	½"x2¼"x2¼"
⅞"	1⅝"	⅝"x2½"x2½"
1"	1⅞"	⅝"x3"x2¾"
1⅛"	2"	⅝"x3¼"x3¼"



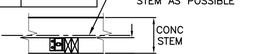
SUMMARY OF C.I.P. HOLDOWN A.BOTS & POSTS			
HOLD DOWN	STEM WALL		WOOD POST AT HOLD DOWN
	MIDWALL/CORNER	END WALL	
DTT2Z	PAB4-12	PAB4-12	(1) 2x
HDUE3	SSTB24	SSTB24	(2) 2x
HDU4	SB5/8"x24	SB5/8"x24	(2) 2x
HDU5	SB5/8"x24	SB5/8"x24	(2) 2x
HDU8	SB7/8"x24	PAB7	(2)2x6 OR 4x6
HDU11	PAB8	PAB8	6x6 OR 4x8
HDU14	PAB8	PAB8	6x6 OR 4x8

NOTE:
SIMPSON "PAB" A.BOLTS LISTED MAY BE SUBSTITUTED w/ SAME ø A.BOLT AND ▱ WASHER PER DETAIL 2/–



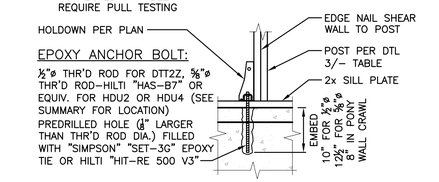
SUMMARY OF EPOXIED HOLDOWNS		
LOCATION	6" STEM	8" STEM
EXT. CORNERS	NONE	DTT2Z
EXT. WALLS NOT AT CORNERS	DTT2Z	DTT2Z, HDUE3
CRAWL (CNTR'D ON FTG)	DTT2Z, HDUE3	DTT2Z, HDUE3

NOTE:
1. 14" WIDE AND 10" DEEP MIN CRAWL FTG, ELSE PULL TESTING REQUIRED
2. ALL OTHER EPOXIED HD's NOT LISTED IN TABLE REQUIRE PULL TESTING



PLAN VIEW

PLACE HOLDOWN ANCHOR AS CLOSE TO CNTR OF STEM AS POSSIBLE



EPOXY ANCHOR BOLT:
½"ø THR'D ROD FOR DTT2Z, ⅝"ø THR'D ROD–HILTI "HAS–B7" OR EQUIV. FOR HDU2 OR HDU4 (SEE SUMMARY FOR LOCATION)
PREDRILLED HOLE (⅛" LARGER THAN THR'D ROD DIA.) FILLED WITH "SIMPSON" "SET–3G" EPOXY TIE OR HILTI "HIT–RE 500 V3"

SECTION VIEW

1 3/4" SCALE

2 THR'D ROD ANCHOR 3/4" SCALE

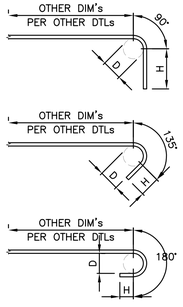
3 CAST–IN–PLACE HD A.BOLT 3/4" SCALE

4 STEM WALL EPOXIED HD's 3/4" SCALE

NOTE: ALL BAR BEND DIAMETERS AND END LENGTHS MUST CONFORM TO THE CRSI MANUAL OF STANDARD PRACTICE

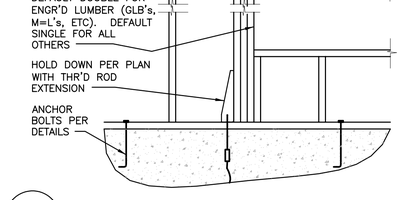
STANDARD HOOKS FOR DEFORMED BARS

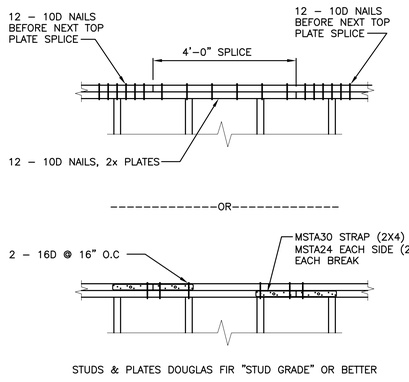
BAR SIZE	D	H	
		90°	180°
#3	2¼"	4½"	2½"
#4	3"	6"	2½"
#5	3¾"	7½"	2½"
#6	4½"	9"	3"
#7	5¼"	10½"	3½"
#8	6"	12"	4"
#9	9"	13½"	4½"
#10	10"	15"	5"



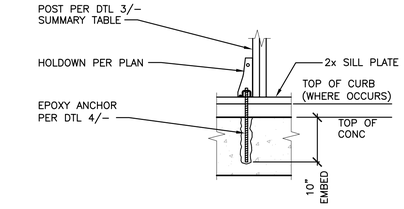
STANDARD STIRRUPS, TIES & HOOPS

BAR SIZE	D	H		
		90°	135°	180°
#3	1½"	3"	3"	2½"
#4	2"	3"	3"	2½"
#5	2½"	3¾"	3¾"	2½"
#6	4½"	9"	4½"	3"
#7	5¼"	10½"	5¼"	3½"
#8	6"	12"	6"	4"





STUDS & PLATES DOUGLAS FIR "STUD GRADE" OR BETTER

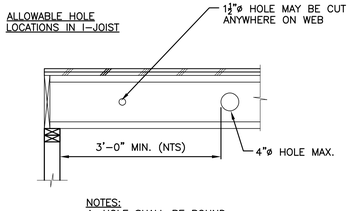


5 3/4" SCALE

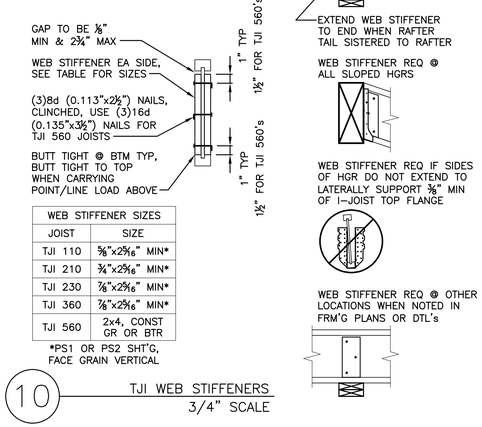
6 3/4" SCALE

7 3/4" SCALE

8 THKN'D SLAB EPOXIED HD's 3/4" SCALE

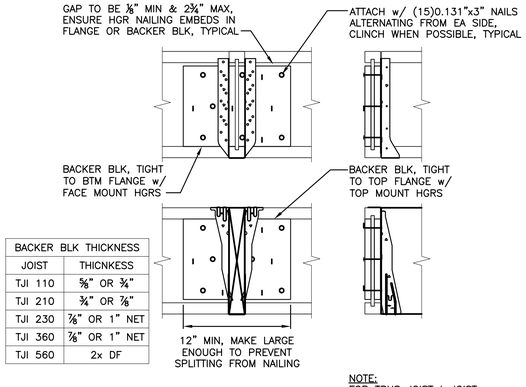


NOTES:
A. HOLE SHALL BE ROUND.
B. DO NOT CUT OR NOTCH FLANGES
C. HOLE MAY BE LOCATED ANYWHERE WITHIN WEB. LEAVE ⅛" MINIMUM WEB AT TOP AND BOTTOM OF HOLE.



WEB STIFFENER SIZES	
JOIST	SIZE
TJI 110	⅝"x2⁹⁄₁₆" MIN*
TJI 210	¾"x2⁹⁄₁₆" MIN*
TJI 230	⅞"x2⁹⁄₁₆" MIN*
TJI 360	⅞"x2⁹⁄₁₆" MIN*
TJI 560	2x4, CONST GR OR BTR

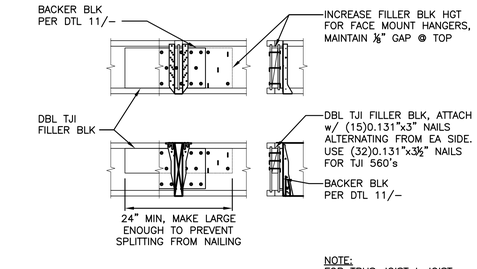
*PS1 OR PS2 SHT'G, FACE GRAIN VERTICAL



BACKER BLK THICKNESS	
JOIST	THICNKESS
TJI 110	⅝" OR ¾"
TJI 210	¾" OR ⅞"
TJI 230	⅞" OR 1" NET
TJI 360	⅞" OR 1" NET
TJI 560	2x DF

NOTE:
FOR TRUS JOIST I–JOIST PRODUCTS ONLY, SEE MFTRs RECOMMENDATIONS IF OTHER BRAND USED

FILLER BLK SIZE				
TJI	110		210	
DEPTH	9½" OR 11⅞"	14" OR 16"	9½" OR 11⅞"	14" OR 16"
FILLER BLK	2x6	2x8	2x6 + ⅜" SHT'G	2x8 + ⅜" SHT'G
TJI	230 OR 360		560	
DEPTH	9½" OR 11⅞"	14" OR 16"	9½" OR 11⅞"	14" OR 16"
FILLER BLK	2x6 + ½" SHT'G	2x8 + ½" SHT'G	DBL 2x6	DBL 2x8



NOTE:
FOR TRUS JOIST I–JOIST PRODUCTS ONLY, SEE MFTRs RECOMMENDATIONS IF OTHER BRAND USED

9 3/4" SCALE

10 TJI WEB STIFFENERS 3/4" SCALE

11 TJI BACKER BLOCK 3/4" SCALE

12 TJI FILLER BLOCK 3/4" SCALE

GENERAL DETAILS

REVISION	DATE
FOR PERMIT	2025/AUGUST/8

MURAR ENGINEERING & DESIGN INC
1501 N 13th st. STE 202
BOISE, IDAHO 83702
PHONE : 208-343-4125
FAX: 866-855-9379
EMAIL: CONTACT@MURARENGINEERING.COM

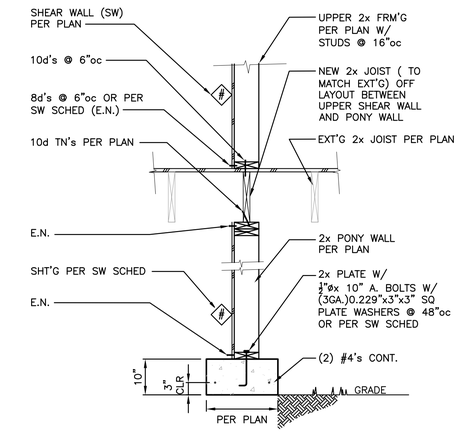
KEVIN M. MURAR
STATE OF WASHINGTON
36351
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 5/18/2026

GENERAL DETAILS

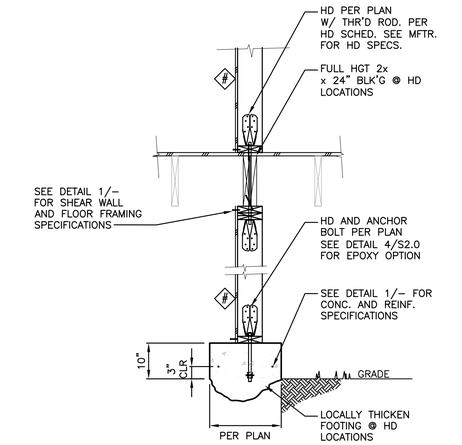
CHA & KOO REMODEL
3818 83rd AVE SE
MERCER ISLAND, wa 98040

DESIGNED BY
EMJ
FILE NAME
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1/4" SCALE
SHEET
S2.0

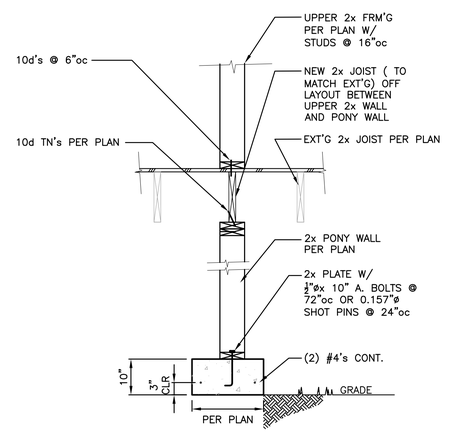
GENERAL DETAILS



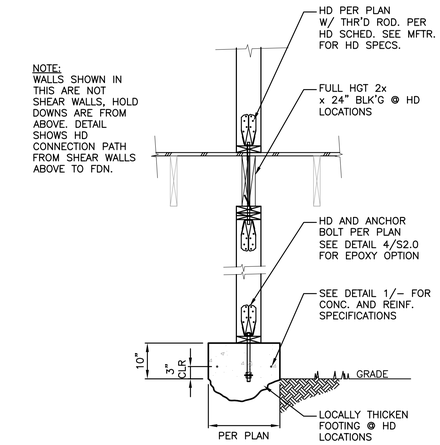
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2 3/4" SCALE



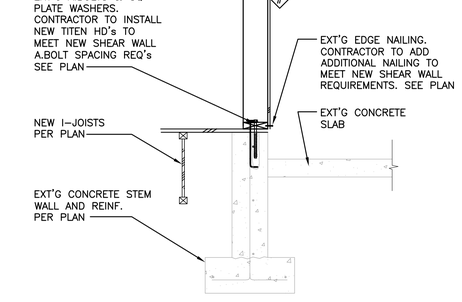
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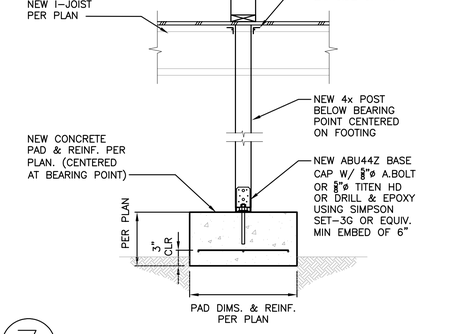
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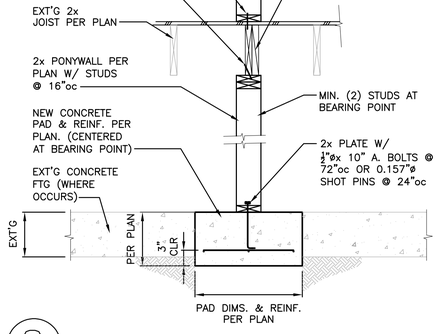
5 3/4" SCALE



6 3/4" SCALE



7 3/4" SCALE



8 3/4" SCALE

NOT USED

9 3/4" SCALE

NOT USED

10 3/4" SCALE

NOT USED

11 3/4" SCALE

NOT USED

12 3/4" SCALE

FOUNDATION DETAILS - SHEET 1

REVISION	DATE
FOR PERMIT	2025/AUGUST/8

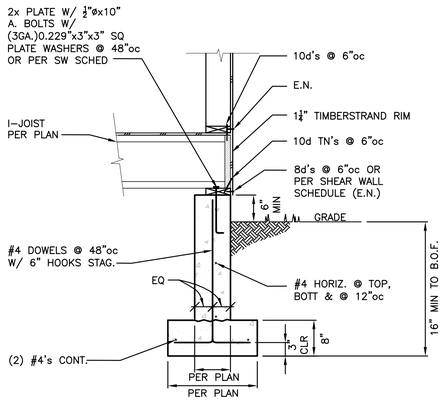
MURAR ENGINEERING & DESIGN INC
1501 N 13th st. STE 202
BOISE, IDAHO 83702
PHONE : 208-343-4125
FAX: 866-855-9379
EMAIL: CONTACT@MURARENGINEERING.COM

FOUNDATION DETAILS - SHEET 1

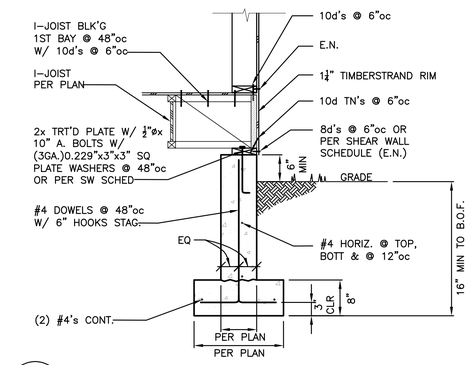
CHA & KOO REMODEL
3818 83rd AVE SE
MERCER ISLAND, wa 98040

KEVIN M. MURAR STATE OF WASHINGTON 38351 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 5/18/2026

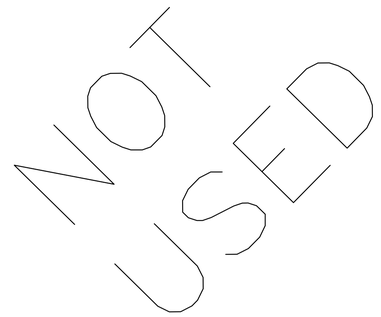
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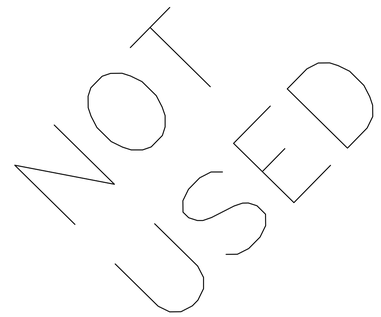
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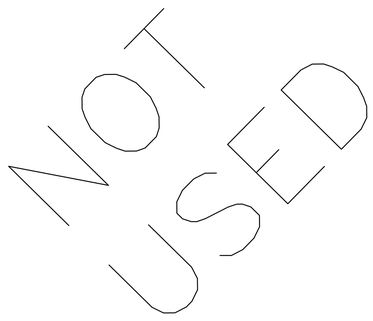
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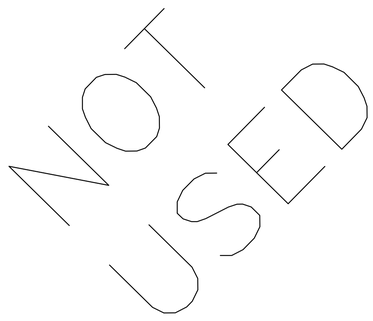
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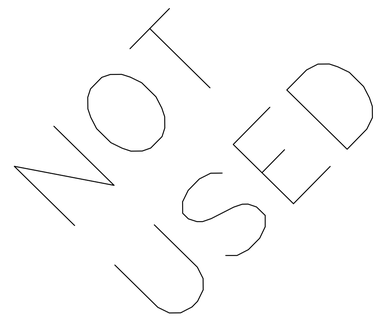
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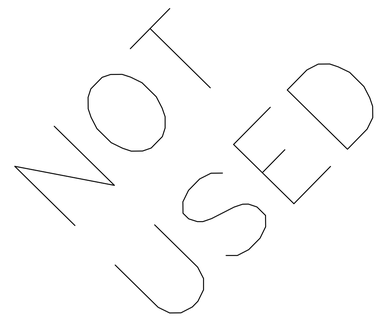
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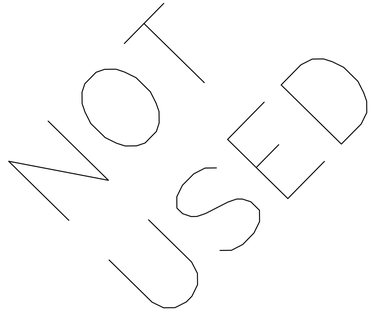
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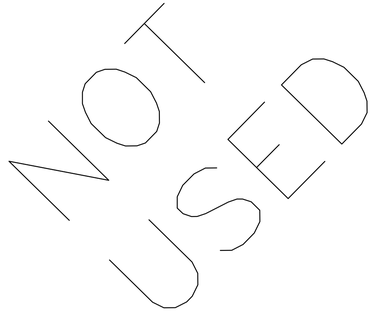
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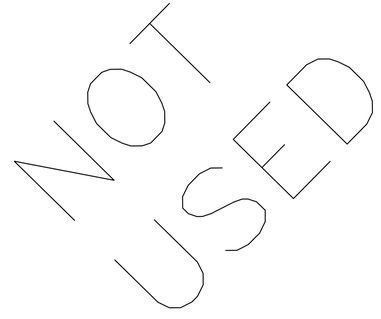
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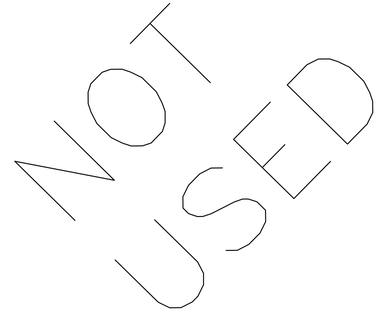
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10 3/4" SCALE



11 3/4" SCALE



12 3/4" SCALE



EXPIRES 5/18/2026

FOUNDATION DETAILS - SHEET 2

REVISION	DATE
FOR PERMIT	2025/AUGUST/8

MURAR ENGINEERING & DESIGN INC
1501 N 13th st. STE 202
BOISE, IDAHO 83702
PHONE : 208-343-4125
FAX: 866-855-9379
EMAIL: CONTACT@MURARENGINEERING.COM

FOUNDATION DETAILS - SHEET 2

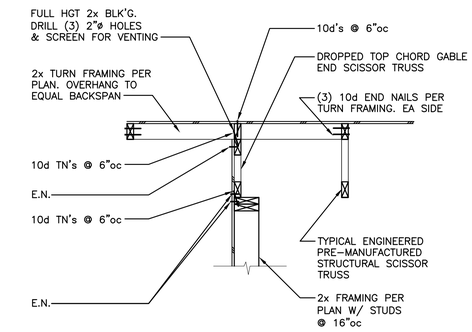
CHA & KOO REMODEL
3818 83rd AVE SE
MERCER ISLAND, wa 98040

DESIGNED BY
EMJ

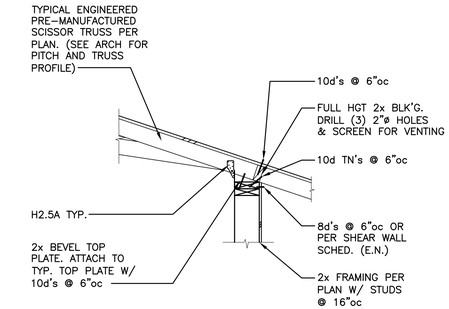
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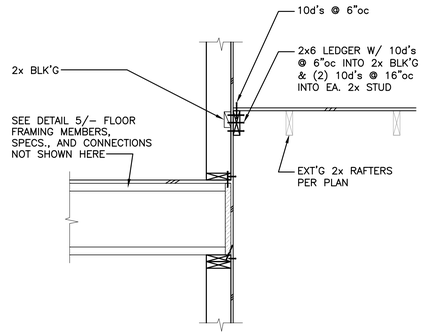
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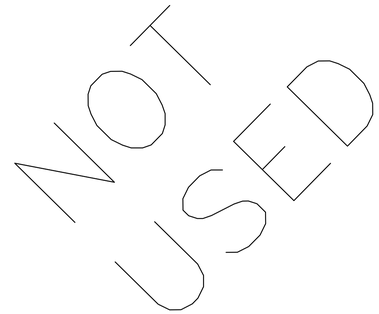
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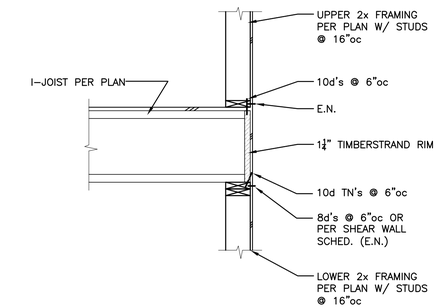
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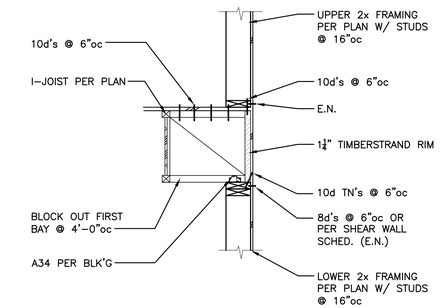
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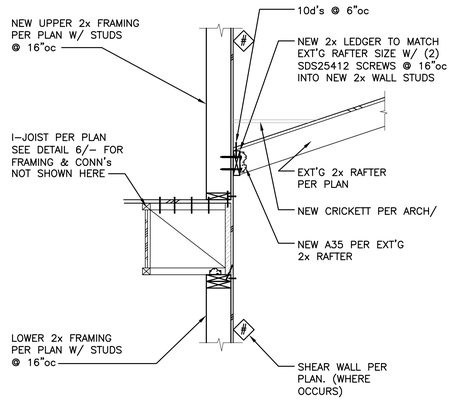
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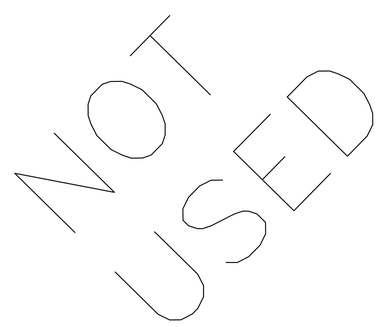
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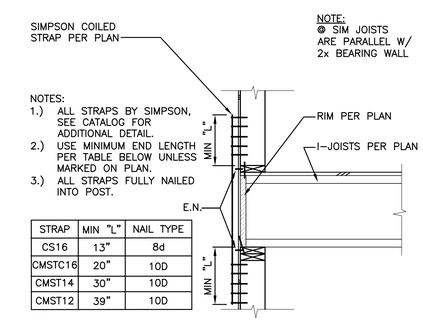
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7 3/4" SCALE

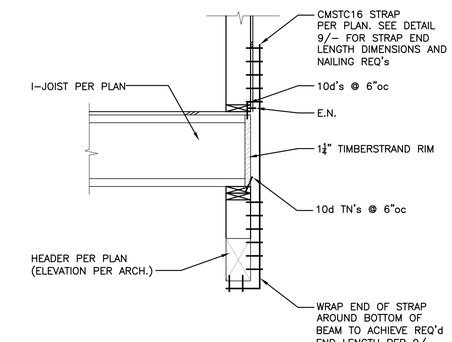


8 3/4" SCALE

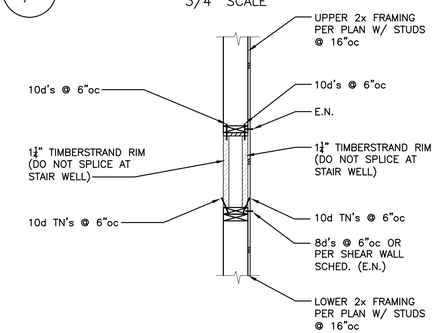


STRAP	MIN "L"	NAIL TYPE
CS16	13"	8d
CMSTC16	20"	10D
CMST14	30"	10D
CMST12	39"	10D

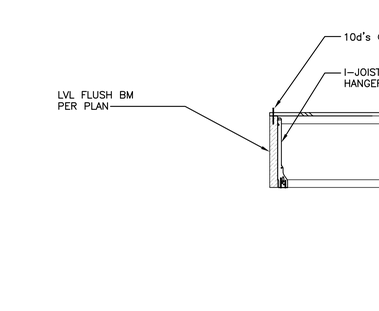
9 3/4" SCALE



10 3/4" SCALE



11 3/4" SCALE



12 3/4" SCALE

MURAR ENGINEERING & DESIGN INC
1501 N 13th st. STE 202
BOISE, IDAHO 83702
PHONE : 208-343-4125
FAX: 866-855-9379
EMAIL: CONTACT@MURARENGINEERING.COM

REVISION	DATE
FOR PERMIT	2025/AUGUST/8

KEVIN M. MURAR
STATE OF WASHINGTON
36351
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 5/18/2026

FLOOR & ROOF FRAMING DETAILS - SHEET 1

CHA & KOO REMODEL
3818 83rd AVE SE
MERCER ISLAND, wa 98040

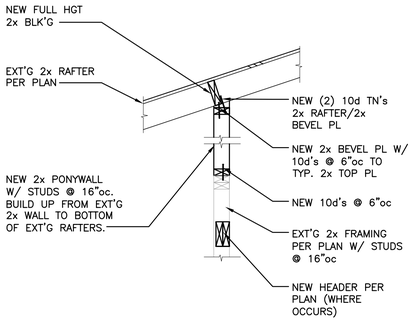
DESIGNED BY
EMJ

FILE NAME
C:\...\2025...ANNEX...CHA &...

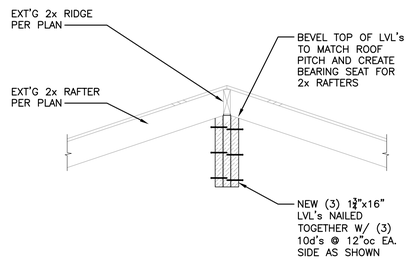
SCALE
1/4" SCALE

SHEET
S4.0

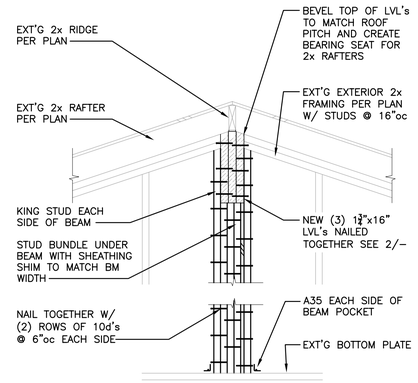
FLOOR & ROOF FRAMING DETAILS - SHEET 1



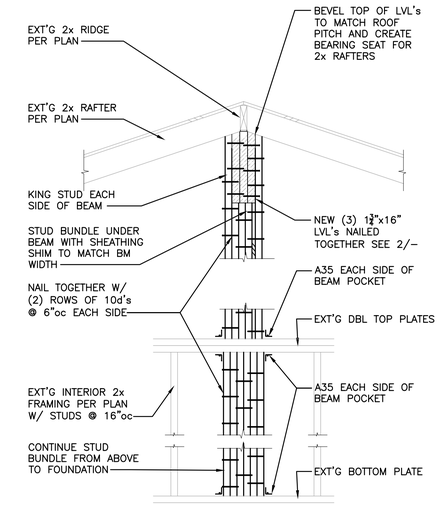
1 3/4" SCALE



2 3/4" SCALE



3 3/4" SCALE



4 3/4" SCALE

NOT USED

5 3/4" SCALE

NOT USED

6 3/4" SCALE

NOT USED

7 3/4" SCALE

NOT USED

8 3/4" SCALE

NOT USED

9 3/4" SCALE

NOT USED

10 3/4" SCALE

NOT USED

11 3/4" SCALE

NOT USED

12 3/4" SCALE

FLOOR & ROOF FRAMING DETAILS - SHEET 2

REVISION	DATE
FOR PERMIT	2025/AUGUST/8

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FLOOR & ROOF FRAMING DETAILS - SHEET 2

CHA & KOO REMODEL
3818 83rd AVE SE
MERCER ISLAND, wa 98040

DESIGNED BY	EMJ
FILE NAME	C:\...\2025...ANNEX...CHA &...
SCALE	1/4" SCALE
SHEET	S4.1